Alaska Remote Maintenance Worker Program
Department of Environmental Conservation, Division of Water
555 Cordova St
Anchorage, AK 99501
Main: 907 269-7605
Fax: 907 269-7509

ANNUAL REPORT

Federal Fiscal Year 2024

Repairing the glycol line in Hooper Bay

Prepared by the

Alaska Department of Environmental Conservation

Division of Water

Technical Assistance Programs

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CONTENTS

EXECUTIVE SUMMARY

- The Remote Maintenance Worker Program provides technical assistance and training to operators of rural water and wastewater systems in nearly 200 Alaskan communities.
- Eleven full-time and two half-time RMWs are employed by regional health corporations and funded through grants administered by the Alaska Department of Environmental Conservation's (ADEC) Technical Assistance. ADEC employs three additional RMWs and an RMW Program Coordinator.
- In FFY24, the RMW Program was funded by two 25/75 state/federal matching grants; the Environmental Protection Agency contributed $2,226,684, and the US Department of Agriculture, Rural Development provided $265,000. The State of Alaska contributed $645,004 in matching funds, for a total of $3.137 million.
- In FFY24, 14 plus two part-time RMWs accomplished the following:
  - Provided over 2049 hours of hands-on training and technical assistance to 119 communities.
  - Completed 209 routine village trips to 112 communities.
  - Completed 59 emergency trips.
  - Fielded 7,882 phone calls from communities requesting assistance.
- Eighty RMW-supported communities had properly certified primary operators at the close of FFY24, and 36 villages also had backup operators certified at the correct level.
- No communities supported by the RMW Program experienced a catastrophic failure of their water or wastewater system.

RMW Bob White assisting with chlorine testing in Hooper Bay

THE REMOTE MAINTENANCE WORKER PROGRAM

The Remote Maintenance Worker (RMW) Program was initiated in 1981 to provide onsite training and technical assistance to operators of water and wastewater utilities in rural Alaskan communities. State and federal agencies had been expending considerable funds to design and construct safe sanitation facilities in rural Alaska, only to have systems fall into disrepair or fail due to insufficient local technical skills, lack of preventive maintenance, and improper operations. By employing skilled and knowledgeable RMWs to provide training and assistance to community operators, the RMW Program strives to build local operational capacity and avert the catastrophic failure of utility systems.

The State of Alaska, Environmental Protection Agency (EPA), US Department of Agriculture - Rural Development (USDA-RD), and the Indian Health Service (IHS) have invested over two billion dollars in rural Alaskan villages to provide safe drinking water and sanitary sewage disposal. Since its inception, the RMW Program has worked diligently to protect this investment. Today, the program includes 11 plus two half-time RMWs serving nearly 200 communities throughout the State. Five regional health corporations provide RMW service through grants administered by the State, and three additional RMWs are employed directly by the Alaska Department of Environmental Conservation (ADEC).

The Mission of the RMW Program is: *To develop the capacity of rural Alaskans to operate and maintain their local sanitation facilities in a manner that protects the health of rural residents and the village environment, while safeguarding state, federal, and community investments in water and sewer infrastructure.*

In support of this mission, RMWs offer relevant on-the-job and classroom training; provide routine onsite preventive maintenance assistance to local operators to ensure that sanitation facilities and system components do not fail prematurely; and respond to water and sewer emergencies to maintain service and prevent catastrophic infrastructure failures. Further, RMWs promote the importance of the utility operator's role in protecting public health in an effort to elevate the status of the position to one deserving merit within the community. In coordination with the Rural Utility Business Advisor Program (RUBA), housed in the Alaska Department of Commerce, Community, and Economic Development (DCCED), RMWs strive to bring operators, administrators, and community leaders together to address the overall capacity of the utilities including technical, managerial, and financial aspects.

FEDERAL FISCAL YEAR 2024 ACCOMPLISHMENTS

The RMW Program is funded by grants from the EPA and USDA-RD, each of which requires a 25% State match. As a whole, the program received $3.13 million in Federal Fiscal Year 2024 (FFY24); $2,226,684 in EPA funds, $265,000 in USDA-RD funds, and $645,004 in State matching funds.

A total of $2,429,695 in RMW grants were awarded to the following regional non-profit health corporations: Bristol Bay Area Health Corporation (BBAHC), Maniilaq Association (MA), Norton Sound Health Corporation (NSHC), Tanana Chiefs Conference (TCC), and the Yukon Kuskokwim Health Corporation (YKHC). Additionally, the State continued to provide RMW service to the Aleutian, Pribilof, and Kodiak Islands, Kenai Peninsula area, Southcentral, and Southeast Alaska.

A historical perspective of RMW grant funding to regional non-profit health corporations is presented in Appendix A. For RMW services provided through grants to regional non-profit health corporations, the cost for the 92 primary communities served in FFY24 was approximately $27,100 per community. For RMW services provided through ADEC, the cost for the 57 primary communities served in FFY24 was approximately $17,000 per community.

Reporting Period

The outcomes within this report will show data for the FFY24, ending September 30, 2024.

Technical Assistance Outputs

RMW sub-grants require RMWs to provide a basic level of service that emphasizes routine training trips, preventive maintenance, emergency response, and other capacity building technical assistance activities. Grant requirements aimed at building local capacity include developing, revising, and implementing preventive maintenance plans; providing classroom instruction to village operators that will prepare them for certification exams; providing hands-on, on-the-job training; and participating in community-level meetings that target overall utility management capacity improvements.

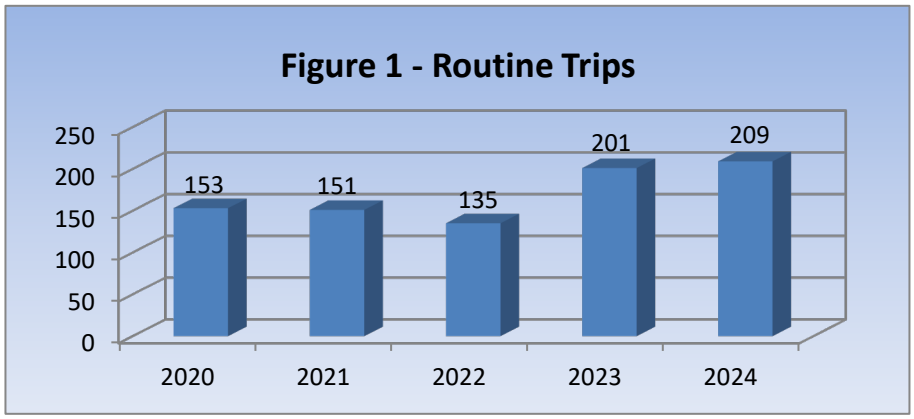
The following measurable outputs related to onsite and technical assistance were completed in FFY24:

Routine Trips

Within each region, RMWs are assigned to provide support to specific communities. The majority of the communities served are considered “primary,” meaning that they receive regular and routine RMW assistance. Additionally, each region has a small number of “advisory” communities to which RMWs provide support. Advisory communities generally do not have community water or wastewater systems, utilize individual drinking water wells and onsite wastewater systems, and/or have very few residents. Other advisory communities may have the capacity to successfully operate their utilities without regular RMW assistance. RMWs are expected to visit each of their assigned primary communities based on the needs of the community. This allows flexibility for the RMWs to make trips to communities where their services are most needed. Unexpected emergencies, weather delays, and scheduling conflicts are all common obstacles to completing routine trips.

In FFY24, the RMW Program expected to make 350 routine trips. In total, the RMWs made 209 routine trips during this reporting cycle. The reduced number of trips is attributable to the loss of RMW staff in the DEC, NSHC, and TCC regions.

***Throughout the report, 2020-2024 reflect Federal Fiscal Years.**



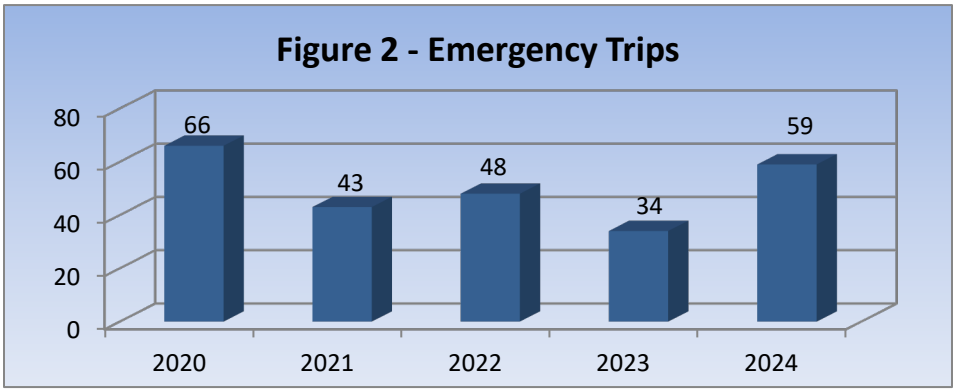
Routine Trips

Projected: 350
Achieved: FFY24 209
5 Year Average: 170

Emergency Trips

Emergency trips are made to address situations that would otherwise result in the failure of some or all of a community sanitation system. By focusing on proper operations and maintenance, RMWs strive to reduce the need for emergency trips. However, turnover of both operators and system managers, as well as high operational costs coupled with a lack of local economy, often hinder the best RMW efforts. Further, emergencies are often precipitated by extreme natural conditions; common circumstances that warrant RMW emergency trips are spring flooding and winter freeze-ups.

It is difficult to project the number of emergency trips that will be required during any given year; however, the five-year average between SFY20 and FFY24 is 50 per year. During this reporting period, RMWs made 59 emergency trips. The increase in emergency trips is attributable to the extreme cold weather events that occurred consistently throughout the FFY24 winter.



Emergency Trips

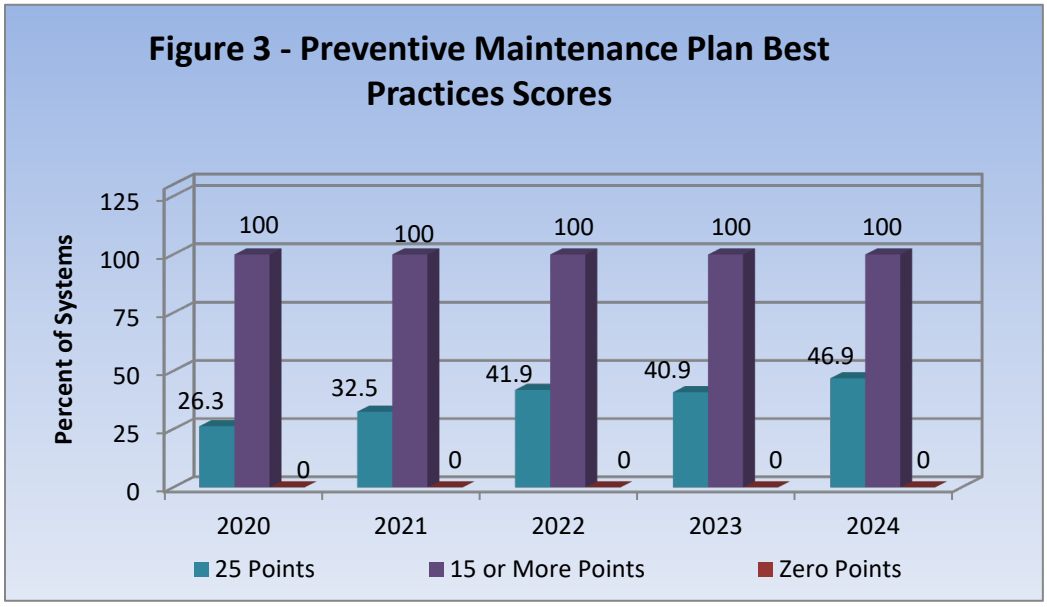
Projected: <50
Necessary: 59
5 Year Average: 50

Preventive Maintenance Plans

Preventive maintenance (PM) plans are critical tools for ensuring proper maintenance of water and wastewater systems. In turn, PM plans help protect public health, improve system reliability, and prolong the lifespan of aging systems. Additionally, PM plans serve as an important management tool for community administrators when determining staffing requirements, as well as actual operation and maintenance costs. Historically, RMWs have assisted operators in developing and revising PM plans, particularly following system modifications.

With the implementation of the Operations and Maintenance Best Practices (Best Practices), RMWs have been tasked with assisting 175 communities in the development of adequate and appropriate PM plans, as well as confirming that the required PM is completed. Communities that have a written PM plan, perform PM on schedule, and submit completed records to the RMW quarterly for verification receive 25 Best Practices points. Utilities that have a written PM plan, but PM performance and record keeping are not consistent receive 15 points. Utilities that either have no PM plan, or do not perform PM, receive no points.

During this reporting period, 90% of RMW supported communities were expected to achieve PM scores of at least 15, with 10% expected to achieve scores of 25. At the end of the reporting period, 175 of 175 communities (100%) scored 15 PM points or more and 82 (46.9%) scored 25 points. No communities received zero points.



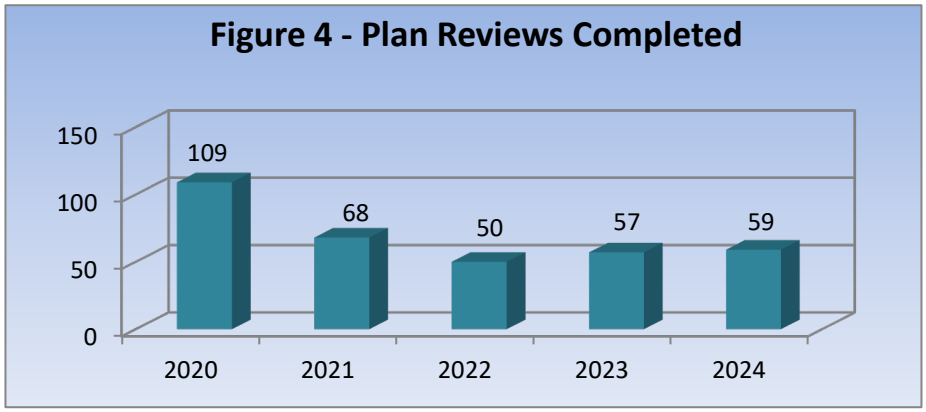
PM Plans

Projected: 90% score of 15+
Achieved: 100% scored 15+
Projected: 10% score 25
Achieved: 46.9% scored 25

Plan Review

RMWs offer a unique perspective to the plan review process for utility system construction projects, combining their understanding of the communities and their hands-on experience with water and wastewater treatment in rural Alaska. Whenever possible, RMWs participate in plan reviews, primarily providing comments from the operations and maintenance perspective.

The RMW Program anticipated participating in 50 plan reviews but completed 59.



Plan Reviews

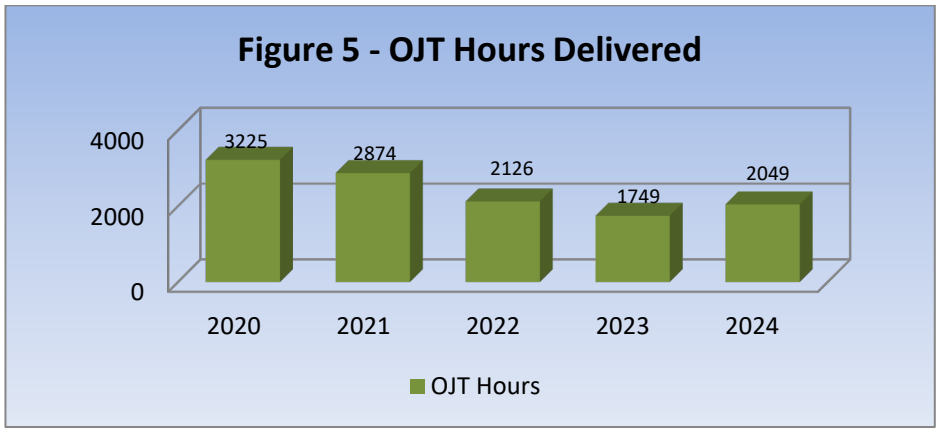
Projected: 50
Achieved: 59
5 Year Average: 69

Operator Training and Certification Outputs

Grantees are obligated to work directly with local operators and utility managers to address operator certification requirements. The following are measurable outputs completed by the RMWs during FFY24 related to operator training and certification:

On-the-Job Training (OJT)

During both routine and emergency visits, RMWs work directly with operators to impart the knowledge necessary for the proper operation and maintenance of their utilities. This one-on-one guidance within the context of the operator's own plant is one of the most valuable aspects of the RMW Program. The RMW Program projected to deliver 2,500 hours of OJT to operators. Due to RMW turnover, the RMWs administered a total of 2,049 hours of OJT during the reporting period.



OJT Hours

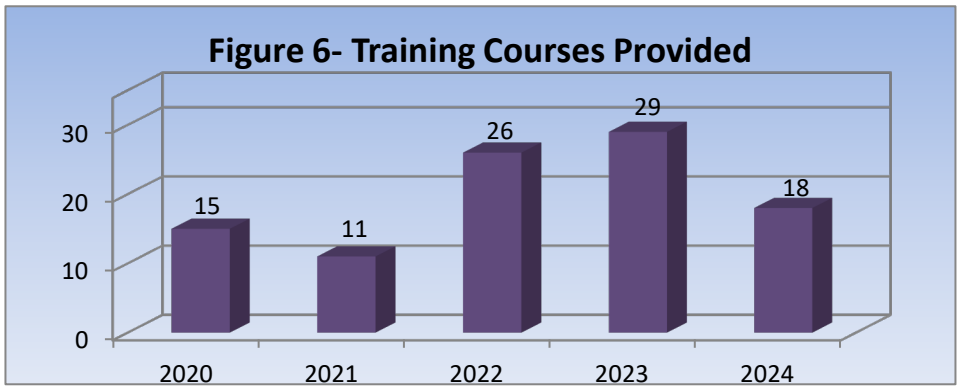
Projected: 2,500
Achieved: 2,049
5 Year Average: 2,405

Training Courses

RMWs are required to coordinate and deliver entry-level training courses within their region to help operators prepare for taking certification exams. The RMWs anticipated providing ten training courses but offered 18 courses. In FFY24, RMW offered the following trainings.

- Lift Station Operations
- Introduction to Small Water Systems
- Electrical Controls 1 (x3)
- Pumps and Pumping Systems
- Wastewater Collection, Pumps & Lagoons
- Wastewater Stabilization Ponds
- Electrical Components and Controls
- Small Water Treatment (x2)
- Level 1 Water Treatment and Distribution
- Plumbing and Pipefitting Basics
- Level 1 Water Treatment
- Electrical Controls 2
- Boiler Maintenance and Troubleshooting
- Water Treatment Plant Preventative Maintenance
- Water Distribution Pipe Breaks and Repairs

The decline from 29 trainings provided in 2023 to 18 in 2024 is due to RMW turnover in several of the regions.



Trainings

Projected: 10
Achieved: 18
5 Year Average: 19.8

FFY24 Baseline and Program Outcomes

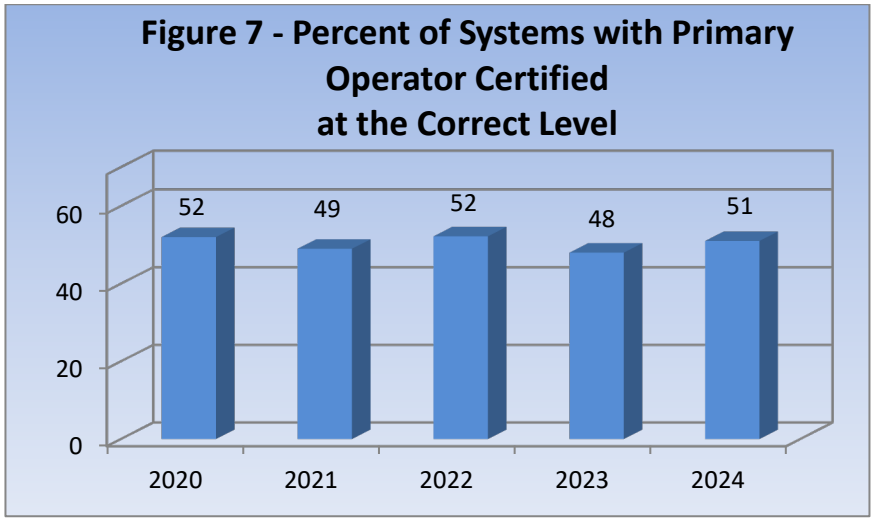
Building upon the baseline data established at the end of FFY23 (see Appendix B), the FFY24 RMW Grant Work Plan defined anticipated outcomes for the year. End-of-year data for FFY24 was summarized (see Appendix C), and the following is a comparison between the projected and the end-of-year outcomes.

System Failures

The RMW Program experienced no catastrophic system failures in the RMW-supported villages due to operations and maintenance (O&M) deficiencies. The lack of catastrophic system failures was largely the result of operator preventive maintenance training by RMWs, constant communication between the RMWs and operators, and timely response by RMWs when assistance was requested.

Operator Certification

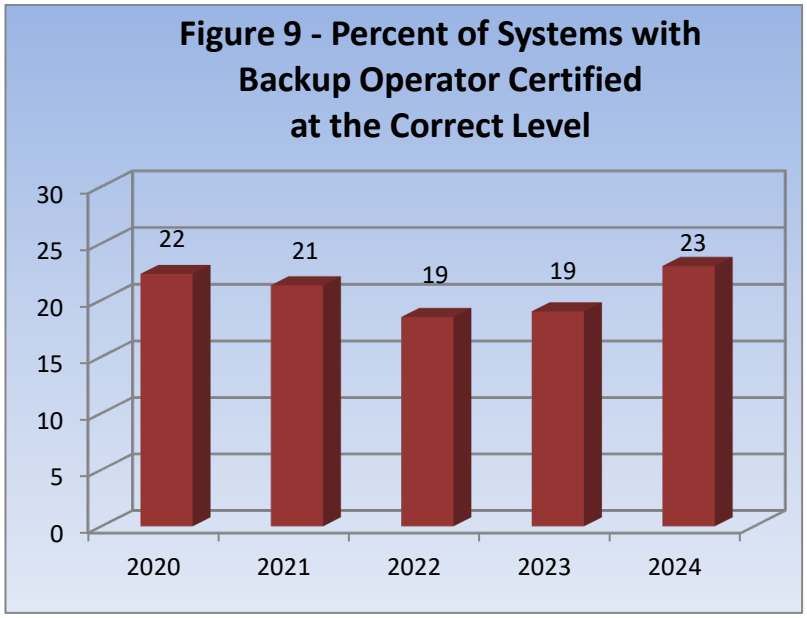
The RMW Program aimed to ensure that a minimum of 60% of RMW supported communities have a primary operator certified at the required water treatment level. At the end of the reporting period, 51% of the communities had properly certified primary operators. Eighty village systems have operators certified at the correct level of their plant as of the end of the reporting period; an additional 43 systems have primary operators certified at some level.



Certification

Baseline: 47.8% (75 of 157)
End-of-year Target: 60%
Outcome: 51% (80 of 157)

The RMW Program also aimed to ensure that a minimum of 25% of RMW supported communities have a backup operator certified at the required water treatment level. At the end of the reporting period, 36 systems had backup operators certified at the correct level of the plant, and another 51 systems had backup operators certified at some level.

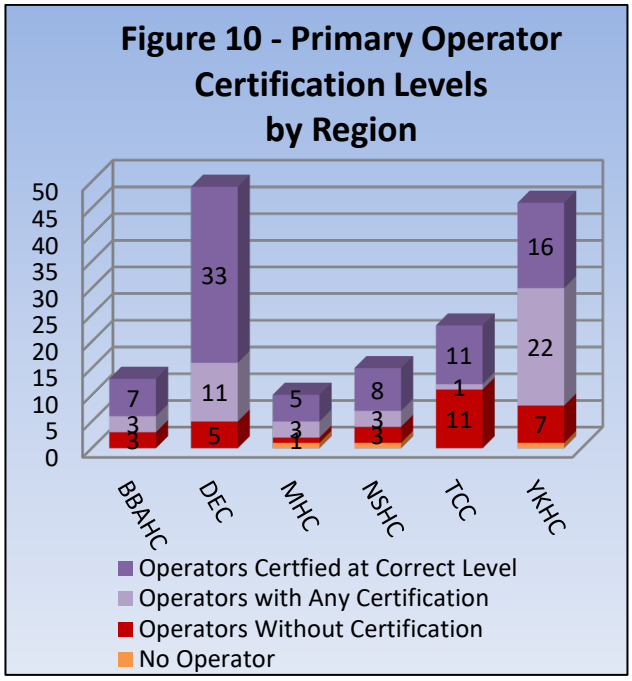


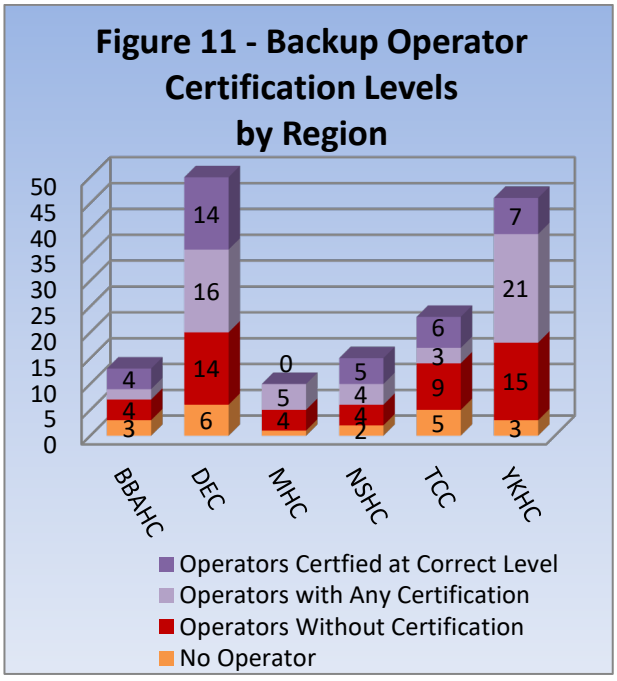
Backup Operator Certification

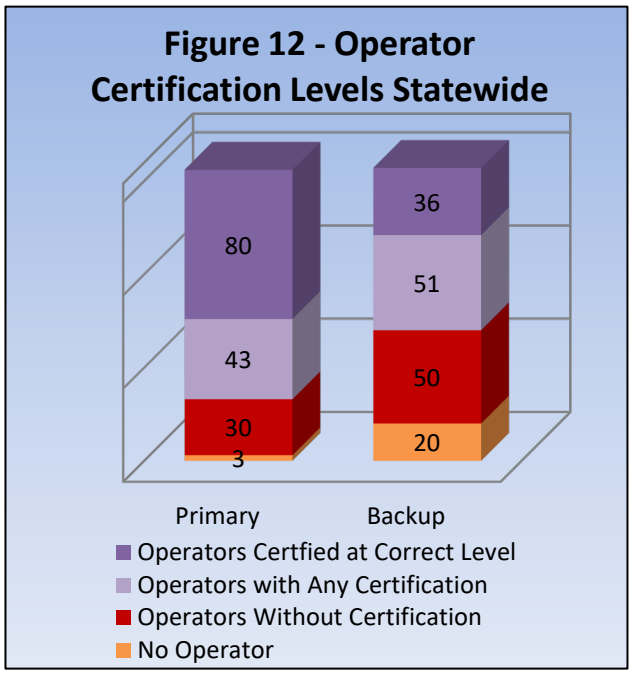
Baseline: 18.5% (29 of 157)
End-of-year Target: 25.0%
Outcome: 22.9% (36 of 157)

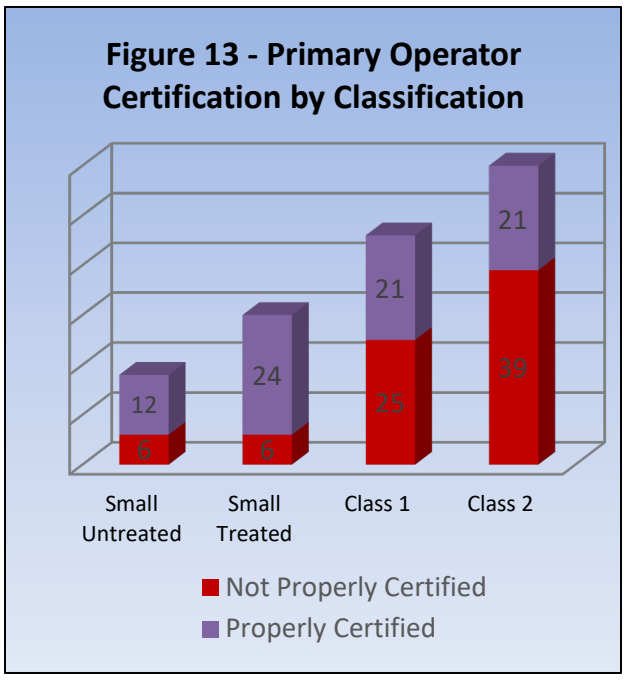
Operator certification requirements are directly related to the complexity of the water system. Many rural Alaskan communities rely on water sources that require complex treatment and, therefore, an operator with a high level of certification. More than half of the communities served

by the RMW Program have water treatment systems that require an operator at a Level 1 or higher. In addition to successfully completing the required certification exams, operators must have some post-secondary education to attain these certification levels. *Figure 13* demonstrates that non-compliance with operator certification requirements increases as system classification increases.

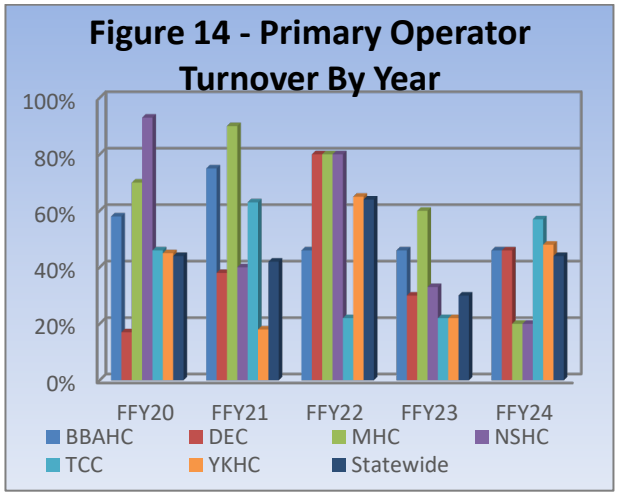


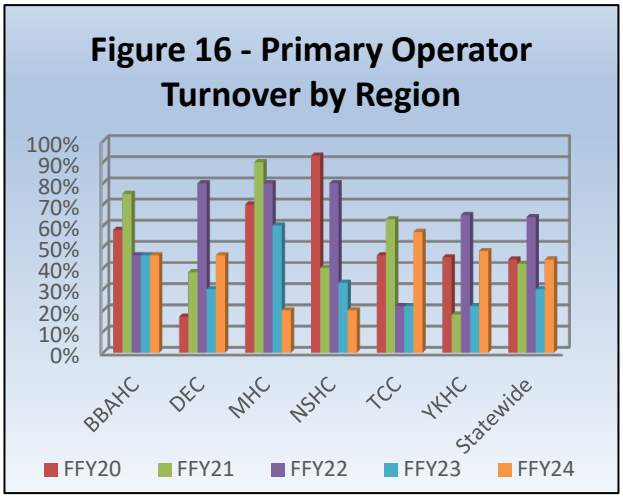


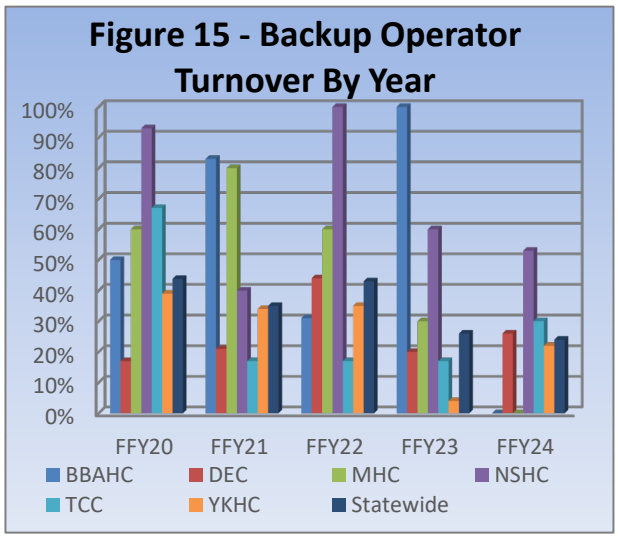


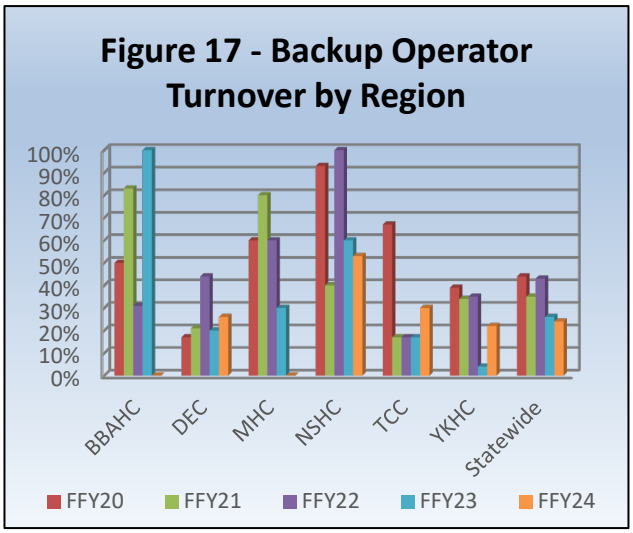


Operator turnover has been and continues to be a significant obstacle in increasing the operational capacity of rural utilities. During FFY24, 44% of RMW supported communities experienced at least one change in primary operator; 24% also experienced a change in backup operator. In many cases, these communities had several instances of turnover in both the primary and backup operator positions. Turnover varied from region to region, with some experiencing as much as 57% turnover in primary operators and 53% in backup operators. Statewide, communities experiencing turnover of primary operators increased from 30% in FFY23 to 44% in FFY24; turnover of backup operators decreased from 26% to 24%.







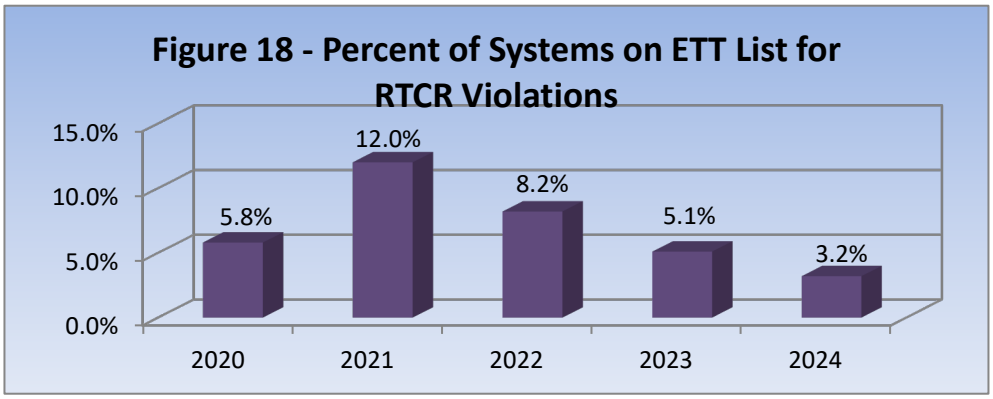


For certificates that expired on December 31, 2023, six primary drinking water operators from RMW-supported communities lost their certifications due to a lack of required Continuing Education Units (CEUs). In these cases, both the RMWs and the Operator Certification and Training Program contacted the operators to encourage them to take appropriate measures to retain certification. Other factors that impact operator certification may be beyond the control of the RMW Program.

Compliance

Remote Maintenance Workers spend considerable time working directly with operators to ensure they possess the knowledge and skills to safely operate and maintain their systems. In addition, RMWs dedicate significant time and effort to assisting water system personnel, from operators to administrators, in meeting regulatory monitoring and reporting requirements.

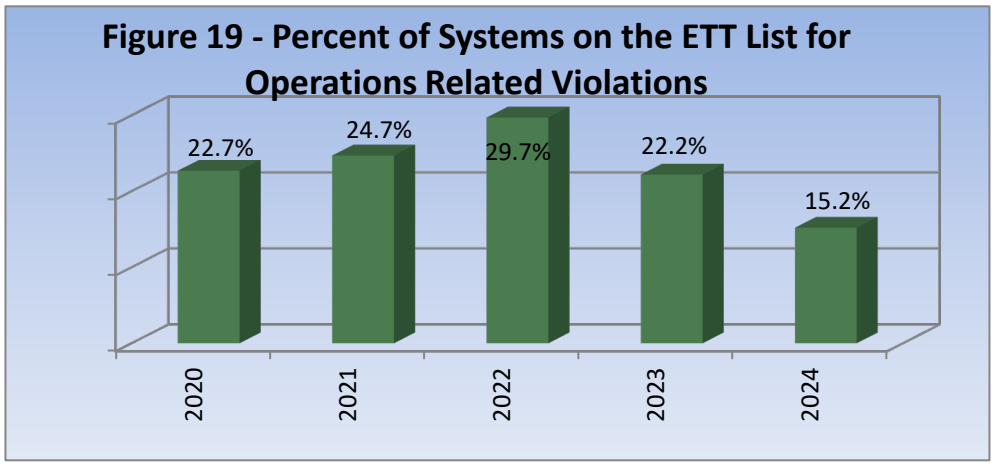
The RMW Program projected that less than one percent (1%) of RMW-supported villages would be on the Enforcement Targeting Tool (ETT) list for violation of the Revised Total Coliform Rule (RTCR) at the end of FFY24. At the close of the year, Emmonak, Nightmute, Platinum, Port Protection, and Tuntutuliak were on the ETT List for failure to monitor and report as required by the RTCR. This represents 3.2% of RMW served communities. In FFY24, the number of systems subject to ETT listing was reduced to 157 as the community of Newtok's system was decommissioned.



TCR ETTs

Baseline: 5.1% (8 of 158)
End-of-year Target: < 1%
Outcome: 3.2% (5 of 157)

The RMW Program projected that less than ten percent (10%) of RMW-supported villages would be on the ETT list for any operation-related violations not related to the RTCR. Twenty-four systems, or 17.1% of RMW-supported systems, were on the ETT List for violations, including failure to conduct quarterly or annual chemical monitoring, maintain adequate chlorine residual, or report daily chlorine and turbidity monitoring results. The reported communities included Alakanuk, Chignik Lake, Clark's Point, Crooked Creek, Deering, Diomede, Emmonak, Gulkana, Hooper Bay, Kongiganak, Kotlik, Kwethluk, Kwigillingok, Lower Kalskag, Mertarvik, Napaskiak, Nightmute, Nondalton, Nunam Iqua, Platinum, Port Protection, Shageluk, Tuntutuliak, and Wales.

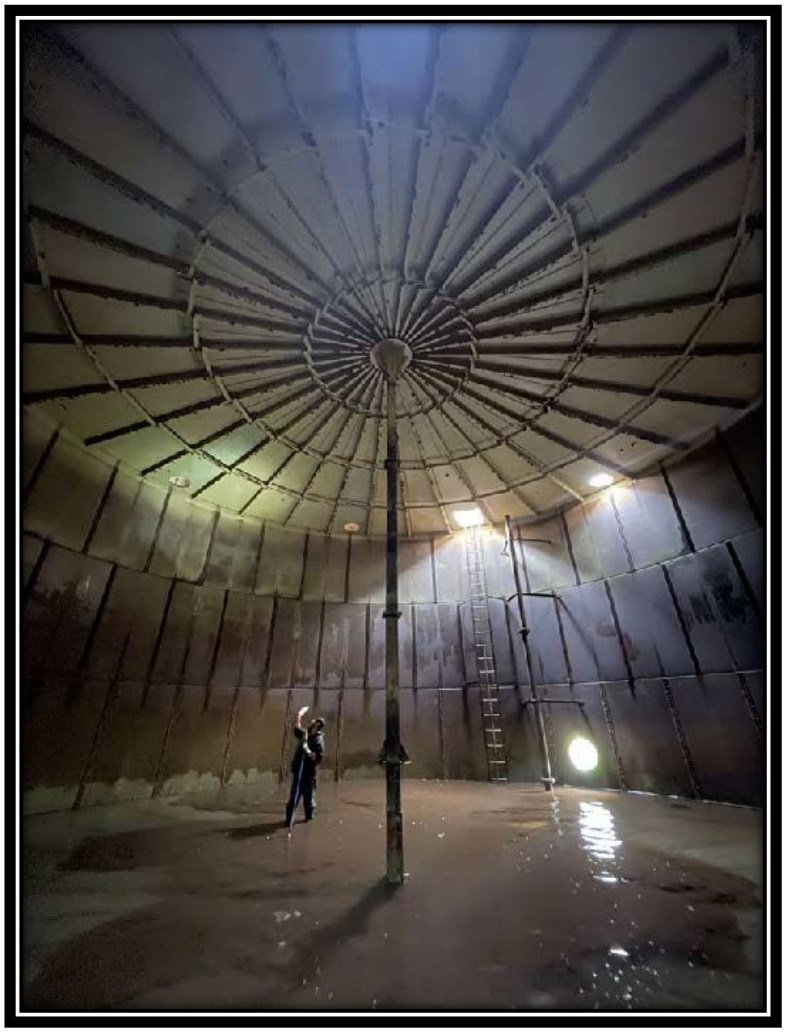


Operation-Related ETTs

Baseline: 22.2% (35 of 158)
End-of-year Target: < 10%
Outcome: 15.2% (24 of 158)

Many factors that affect a community's capacity to deliver water and wastewater services in rural Alaska are beyond the control of the RMW program. These factors often create situations that make progress difficult to quantify. Maintaining the ground that has been gained since program inception or from one year to the next is often considered a success. Turnover of community leaders and operators, poor economic health of rural communities, competing forms of village government, local institutional deficiencies, and socioeconomic factors can be formidable roadblocks to progress. Another factor that directly impacts the success of sanitation systems and the RMW Program is the necessity for many systems to become increasingly more complex in response to new regulatory requirements. This often results in operators having significant technical capacity deficits. In addition, increasing energy costs often diminish the amount of local funds available for adequate operations and maintenance.

The RMW Program has established goals that are realistic yet challenging to meet. While not all of the targets were met in FFY24, no significant deterioration in previous progress occurred. These results should be considered successful.



DEC RMW Tanner Cote assisting with cleaning the Hydaburg water tank

FEDERAL FISCAL YEAR 2024 PROGRAM HIGHLIGHTS

RMW Staffing Changes

In October 2023, the Bristol Bay Area Health Corporation filled one of the two vacant RMW positions by hiring Larry Small. Tyke Olsen filled the second position in April 2024

In September 2024, ADEC RMW Spencer Singleton notified the program of his resignation and had taken a position with the Anchorage Water and Wastewater Utility. The ADEC RMW Program Coordinator immediately began the recruitment process.

In January 2024, the Norton Sound Health Corporation RMW program hired Monti Tarawneh to fill a position vacated in July 2023. Monti brings a wealth of technical knowledge and innovative problem-solving skills to the table. His passion for creating sustainable solutions aligns perfectly with RMW's mission to deliver reliable and efficient water services to rural Alaskan communities.

In June 2024, the TCC RMW supervisor, Noah Tsigonis, accepted another position. The same month, RMW Lee Meckel accepted the RMW supervisory position. Unfortunately, in September 2024, Mr. Meckel discontinued work with TCC, and Mr. Tsigonis resumed the supervisory duties. Recruitment to fill the vacant RMW position is ongoing.

The FFY24 Mid-Year report noted that the YKHC RMW program hired Nick Sanders to fill their vacant position.

BBAHC RMWs Larry Small and Tyke Olsen

YKHC RMW Nick Sanders

Program Activity

From August to October 2024, the RMW Program participated in agency coordination meetings for four RMW regions of the state (Maniilaq, NSHC, TCC) and for the ADEC served communities. The meetings were conducted in a hybrid format, allowing participants to attend in person or virtually. They provided an opportunity to coordinate with agencies that work with rural Alaskan communities on sanitation-related issues. Other agencies participating in the meetings included regional tribal health corporation sanitarians; RUBA; the ADEC Drinking Water, Wastewater, and Solid Waste Programs; and Village Safe Water (VSW) and Alaska Native Tribal Health Consortium (ANTHC) engineers and other related program staff. During the meetings, RMWs described each rural community system's status, received input from other programs and agencies regarding community-specific issues, updated classification, and operator information, and discussed options available to communities for achieving compliance.

Following the Maniilaq and NSHC meetings, RMW staff, along with staff from the State's Capacity Development, Operator Certification, and the Rural Utility Business Advisory Programs, traveled to a rural community to meet with the community's operator and local government staff and discuss the needs of the community's sanitation utility.

Matt Hall (ADEC), Brandi Adams (ADEC), Tammy Helms (ADEC RMW Manager), Bruce Nelson (Maniilaq RMW), Fatima Ochante (ADEC), Randy Walker (ARUC), and Chris Cox (Maniilaq RMW Supervisor) in Kivalina

Fatima Ochante (ADEC), Theo Graber (RUBA), Brandi Adams (ADEC), Tammy Helms (ADEC RMW Manager), and Monti Tarawneh (NSHC RMW) in flight to Gambell

To support rural Alaskan communities and their sanitation utilities, the RMW program partnered with the Capacity Development and Operator Certification Programs and the Drinking Water, Wastewater, and RUBA Programs to create a 2024 Monthly Calendar as a helpful resource. This calendar includes important dates and reminders for water plant operators, clerks, and bookkeeping staff. It also provides reference pages with important contact information and descriptions of key programs that support Alaska's public water systems. The calendar was published in November 2023, and two copies were mailed to rural communities- one for office staff and one for water plant staff.

As mentioned in the Mid-Year Report, the RMW program has continued to issue the Weekly Winter Issues Reports throughout the FFY24 winter. The reports provide summaries of weather-related issues that communities are experiencing and that RMWs are assisting in resolving. The reports are sent to over 100 recipients, including the ADEC Commissioners' office, ADEC Directors, RMW supervisors, VSW, ANTHC engineers, legislators, the Governor's office and Division of Homeland Security and Emergency Management, and other technical assistance providers. This report has increased agency communication on assistance and response efforts.

Successes

Bristol Bay Area Health Corporation (BBAHC)

In FFY24, BBAHC made an active effort to increase routine contact and communication with water and wastewater utility operators in the region and improve the documentation of that routine work. Documented phone consultations rose from an average of 29/quarter in FY23 to 135/quarter in FY24. This outreach resulted in doubling the compliance rate on PM submissions from four systems in FY23 to 8 systems in FY24. This had a significantly positive impact on the routine operation and maintenance of many of the region's systems and reduced the need for emergency travel for the RMWs. Additionally, in New Stuyahok, due to the RMWs developing active relationships with the new system operators, several outstanding problems were resolved, and "emergencies" were mitigated by off-site consultations with operators and ARUC representatives. The continued improvement in water and wastewater operations at New Stuyahok represents a major accomplishment for the FFY24 grant cycle.

In October of 2023, the BBAHC RMW program received a call that the Togiak south lift station had lost the neutral for its service drop, resulting in 190 volts to one leg and 50 to the other of the 120/240-volt system. This caused multiple components in the lift station to fail. In November of 2023, the Alaska Village Electric Cooperative repaired the neutral, restoring proper voltage to the lift station. Despite this fix, operators had to manually run and drain the station 2 to 3 times daily, 7 days a week, to keep it operational.

In May of 2024, both BBAHC RMWs made a routine visit to Togiak and found several ongoing issues with the south lift station. The RMWs took corrective actions. Thanks to these actions, the south lift station is once again operational. The village of Togiak was able to cancel their order for a new control panel – saving the community $13,000 and the operators significant hours of labor.

RMW Tyke Olson providing operators training on changing a Safe Relay in the control box of the Togiak South Lift Station

Alaska Department of Environmental Conservation (ADEC)

In November 2023, the Hydaburg water operator contacted the ADEC RMW Program to report that a massive landslide had occurred and blocked access to the dam and intake. There was no power to the pump house; therefore, the operator could not make water. Once the landslide had been cleared and the operator was able to make it to the pump house, the assigned RMW assisted the operator in troubleshooting a power issue. A blown fuse in the transformer was found, an onsite lineman made the repair, and the system was returned online.

On February 13, 2024, ADEC RMWs were notified by the community of Anderson that 250 feet of the main sewer line and five service connections were frozen. An ADEC RMW was dispatched to the community to assist with jetting operations to thaw the sewer mains and service lines. However, on February 20, water infiltration overwhelmed the lift station, causing water to back up and freeze in the main and service lines once again. An ADEC RMW was again dispatched to the community and assisted the local operator in jetting three sections of the main, along with siphoning 9000 gallons of water out of the lift station via vac truck and moving it to the sewage lagoon. On February 22, all sewer mains and service lines were functioning. Additionally, with RMW assistance, problems with the community's large jetter were diagnosed and temporarily repaired.

RMW Spencer Singleton assisting the Anderson operator in jetting service lines

Maniilaq Association

The Maniilaq region continues to remain stable. This is partly due to the Community Utility Assistance Program (CUAP), which is a partnership between the Northwest Arctic Borough, ANTHC, and the Maniilaq Association. This program has reduced most residential customers' water and sewer utility rates by about two-thirds. It also reduces the number of water/sewer emergencies by providing training and support for operators and administrators. During this reporting period, the Maniilaq RMW Program partnered with the CUAP Program with funding from the Northwest Arctic Borough to purchase new heat exchangers for the water plant in Kivalina. The local water plant operators installed the new heat exchangers with assistance from the Maniilaq RMW.

The community of Kiana's terminal lift station pumps failed in the spring of 2024. The failure of the pumps resulted in the sewer force main freezing. During a filter training trip to the community, the RMW extended his trip to assist the water plant operators in thawing out the sewer force main. After two days of jetting and countless mosquito bites, the RMW was able to help the community thaw the force main. Once thawed, the RMW also helped rebuild the failed lift station pumps so that the sewer could be pumped to the lagoon.

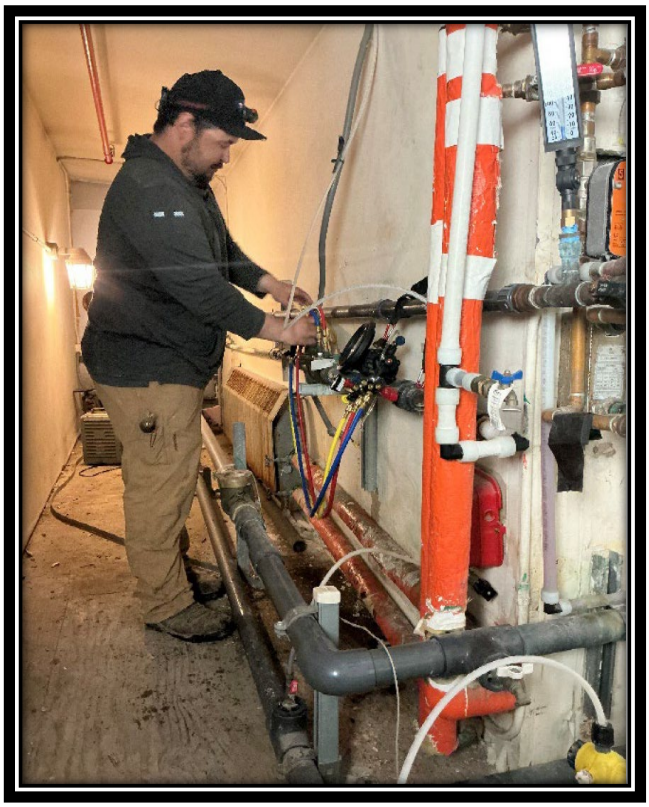
Hooking up the Hosty to have hot water for jetting through the ice in the force main- Kiana Spring 2024.

Norton Sound Health Corporation (NSHC)

In FFY24, the NSHC RMW Program put significant emphasis on reviewing Engineering Assessments from previous years, along with the current plan review and sanitary surveys. This deliberate effort aimed to deepen the RMWs understanding of system functionality and preemptively address any expected design or maintenance challenges.

Additionally, they collaborated closely with the communities, and efforts were focused on improving their Best Practice score through targeted initiatives and strategic planning. By engaging with community members and stakeholders, a comprehensive approach was undertaken to identify areas for enhancement and implement effective practices that align with community needs and goals. This collaborative effort aimed to boost the Best Practice score and foster a sustainable and inclusive approach to community development and progress.

NSHC RMW Monti Tarawneh assisting with sampling in Gambell



RMW Shyler Johnson working on a backflow preventer device in Teller

The new RMW, Monti Tarawneh, has successfully fit the NSHC RMW team. His presence on the team has inspired his colleagues and strengthened the bond between RMW and the communities it serves. His ability to communicate effectively with all stakeholders, from government officials to local residents, has helped build trust and foster collaboration. The entire NSHC RMW team is committed to excellence and dedication to improving the quality of life for all residents in the region. Together, this dynamic team is poised to continue positively impacting water and wastewater management in the communities they serve.

Tanana Chiefs Conference (TCC)

SFY24 has been an exciting year for the TCC RMW Program. Thanks to the hard work of each of the TCC RMWs, there has been a significant improvement in the number of preventative maintenance records received. This has not only allowed communities to score better in the Best Practices scoring but also allowed the program to keep current on the status of the RMW-assigned utilities more frequently.

The TCC RMW Program began working with communities to provide permission for the local laboratory to share sample results directly with TCC. This has allowed the RMWs to remain vigilant in reacting to changes in water quality and contaminants within the villages.
As the climate continues to change across Alaska, TCC witnessed the emergence of new and increasingly severe emergencies within their region. A few of these challenges include the degradation of permafrost, incomplete freezing of rivers, and heightened volatility in river breakup events.

In January 2024, the interior experienced a cold snap with temperatures dropping to -40F, requiring all three RMWs to travel simultaneously to respond to emergencies. During this time, TCC received an emergency call from the new operator out in Hughes. The operator relayed that he could not keep up with water demand due to a leak in the main. While digging, the leak became worse, and the pressure pumps used all the water in the water storage tank. One RMW was able to make it out of the village he was working in at the time to travel to Hughes, where he teamed up with local workers to begin digging, plugging leaks, and jetting frozen lines between the well and water storage tank so that they could make water as fast as possible to ensure that the remaining water in the distribution loops would not freeze. Once enough water was in the tank, the ground crew and RMW primed the pressure tanks and circulation lines before they froze.

TCC RMWs Scot Deminetieff and Duane Burnham in Ruby

TCC RMW Scot Demientieff assisting the Hughes operator

Yukon Kuskokwim Health Corporation (YKHC)

In FFY 2024, the YKHC RMW Program saw a significant increase in RMW workload due to the commissioning of two new water treatment plants. Both facilities encountered operational challenges throughout the winter, requiring considerable RMW assistance. As several additional water treatment plants are scheduled to come online in the coming years, proactive measures are necessary to ensure a smoother startup process and minimize future resource constraints.

The YKHC RMWs have been working to encourage communities to participate in a testing program with a laboratory of their choice. This initiative aims to help communities achieve compliance with their testing requirements. If successful, YKHC hopes this effort will lead to several communities being removed from the SNC list in the coming year.

During this reporting period, a critical situation arose in Chevak following a breach in the community's sewer lagoon berm. The lack of equipment for sand excavation and bag filling hampered initial response efforts, as manual sandbag filling proved to be labor-intensive. Recognizing the urgency, YKHC RMW Kamuck promptly collaborated with Chevak officials to develop a solution. The plan involved utilizing sandbags in conjunction with bentonite clay to effectively seal the breach. Following the successful stockpiling of sandbags and the arrival of necessary supplies, RMW Kamuck deployed to Chevak to spearhead the repair efforts. Under Kamuck's guidance, the team constructed a core of sandbags within the breach. Subsequently, bentonite clay, a material known for its sealing properties, was meticulously applied over the core. Finally, an additional layer of sandbags was strategically placed to cap the clay seal, effectively halting water flow through the breach. Through this successful intervention, the compromised sewer lagoon was restored to full functionality. RMW Kamuck's swift action, coupled with their technical expertise, played a vital role in safeguarding public health within the Chevak community. This incident highlights the importance of readily available resources and qualified personnel in ensuring the resilience of critical infrastructure.

Also, during this reporting period, the Hooper Bay community faced challenges with their vacuum pump control system, resulting in inefficient operation. Upon request, YKHC RMWs Kamuck and White promptly deployed to investigate the issue. Initial investigation revealed that a recent energy upgrade project had inadvertently introduced control scheme inconsistencies. The project involved the installation of variable frequency drives (VFDs) for the vacuum pumps. However, the existing soft starters were not removed, resulting in a series of configuration that caused unexpected control problems.

Through meticulous analysis, Kamuck and White identified the need to eliminate the redundant soft starters. Subsequently, they reprogrammed the VFDs to optimize control. This crucial intervention successfully restored functionality to both vacuum pumps, enabling them to operate in the intended lead-lag configuration. The implemented solution yielded significant benefits. The RMW's prompt response, combined with the expertise of Kamuck and White, ensured the successful resolution of the vacuum pump control issues in Hooper Bay. This case exemplifies the value of expert intervention in optimizing critical infrastructure for enhanced efficiency and cost savings.

Additionally, during 2024, YKHC RMWs participated in virtual water and sewer project planning throughout the Yukon Kuskokwim Delta. Each RMW provided technical assistance during all phases of construction projects. Examples of involvement included design review, commenting on blueprints, construction plan review, village council meetings, and attending final inspections. Additionally, RMWs worked to comment on all enhanced PER (EPER) planning meetings.

YKHC RMW Bob White assisting the Hooper Bay operator with chlorine testing

RMW Bruce Nelson instructing a pipe fitting class

RMW Allen Paukan assisting with a training class

RMWs Nick Sanders and Willie Kamuck

A LOOK FORWARD AT FEDERAL FISCAL YEAR 2025

After opting out of the RMW program in FFY15, the Aleutian Pribilof Islands Association, Inc. submitted a grant application to reinstate the RMW program for their region for FFY25. The APIA RMW will serve nine primary and three advisory communities in the Aleutian region that ADEC RMWs have been serving.

The RMW Program will continue its commitment to improving efficiency and effectiveness while fostering partnerships with organizations that support rural Alaskan communities, including VSW, RUBA, Operator Certification, and ANTHC. The program remains dedicated to identifying innovative methods to assist communities and enhance local capacity.

In preparation for new systems expected from the Infrastructure Investment and Jobs Act and to address the critical need for operator training, the RMW Program has partnered with the ADEC Capacity Development Program to establish a Cooperative Training Facility. This facility includes a pilot water treatment plant and classroom space. This space provides a collaborative environment for technical assistance providers to deliver and host training.

Additionally, ADEC RMWs will support the Technical Assistance Programs System Specific Training and Certification pilot program. The System Specific Training and Certification (S_2TC) program consists of 15 written training modules, each targeting a specific water system component, and a written certification exam accompanying each training module. An operator will be given a subset of modules relevant to their system and must pass all corresponding exams. An operator who completes the program will earn a non-transferable certification for the specific system they operate. This program has the potential to certify those operators who are qualified to ensure public health in their community and who were unable to pass the standardized exams. Further, this program would provide ADEC a tool to ensure they have exhausted all options to certify a local operator before requiring the owner of the water system to seek operational alternatives or risk enforcement action.

The RMW Program will also prioritize communication and collaboration by sharing updates on freeze-ups, recoveries, and other utility and public health issues with engineers and agencies supporting rural Alaska community water systems.

Appendix A

RMW Grant Funding History

RMW GRANT FUNDING HISTORY
(X $1,000)

Fiscal Year	*APIA*	*BBHAC*	*MHC*	*NSHC*	*SEARHC*	*TCC*	*YKHC*	*TOTAL*
FY 82	--	--	--	--	--	--	150.0	150.0
FY 84	--	100.0	--	186.0	--	--	100.0	386.0
FY 85	--	100.0	--	182.0	--	180.1	100.0	562.1
FY 86	--	70.0	--	186.0	--	150.0	100.0	506.0
FY 87	--	78.36	--	126.2	--	128.9	47.7	381.2
FY 88	--	72.0	72.0	72.0	72.0	144.0	72.0	504.0
FY 89	--	100.0	77.0	78.0	72.0	186.0	72.0	585.0
FY 90	--	88.7	70.2	72.9	70.0	162.0	74.0	537.8
FY 91	--	88.7	70.2	72.9	70.0	162.0	134.2	598.0
FY 92	--	111.2	92.7	95.4	92.5	207.0	200.4	799.2
FY 93	--	109.2	91.0	93.7	90.8	203.3	196.8	784.8
FY 94	--	109.2	91.0	93.7	91.45	203.3	296.15	884.8
FY 95	--	102.7	85.5	88.1	86.0	191.1	278.4	831.8
FY 96	--	102.7	95.5	88.1	86.0	191.1	278.4	841.8
FY 97	--	102.6	95.6	88.2	85.9	191.1	278.4	841.8
FY 98	--	178.5	96.9	99.5	86.1	292.8	369.5	1,123.3
FY 99	--	178.5	96.9	99.5	86.1	292.8	369.5	1,123.3
FY 00	--	178.5	91.9	104.5	91.1	292.8	359.5	1,118.3
FY 01	--	178.5	86.9	104.5	91.1	297.8	364.5	1,123.3
FY 02	128.6	225.1	105.4	118.5	89.9	370.9	454.8	1,493.0
FY 03	136.4	238.9	96.6	135.0	97.8	370.9	453.9	1,529.5
FY 04	136.4	238.9	96.6	135.0	98.9	370.9	453.9	1,530.6
FY 05	138.9	218.6	96.6	137.7	99.8	377.4	461.1	1,530.0
FY 06	144.9	218.6	101.6	137.7	99.8	377.4	450.1	1,530.0
FY 07	154.2	229.9	106.3	146.7	105.7	401.7	485.2	1,629.7
FY 08	171.2	229.9	106.3	169.9	115.9	426.0	480.2	1,699.4
FY 09	174.3	229.9	114.8	177.2	119.8	446.0	509.0	1,771.0
FY 10	182.8	234.0	120.6	183.0	125.8	430.0	516.8	1,793.0
FY 11	204.3	257.2	137.5	209.0	143.4	436.0	455.0	1,842.4
FY 12	205.7	288.4	122.7	200.2	149.9	426.9	539.2	1,933.0
FY 13	201.7	281.4	134.8	179.5	176.2	427.5	547.2	1,948.3
FY 14	164.0	275.8	146.8	186.8	139.5	425.9	604.2	1,943.0
FY 15	--	288.3	152.4	192.9	139.8	454.1	627.1	1,854.6
FY 16	--	204.1	162.1	99.9	12.6	555.6	706.5	1,740.8
FY 17	--	115.7	187.6	249.2	--	578.7	794.8	1,926.0
FY 18	--	187.2	162.7	200.0	--	572.4	764.3	1,886.6
FY 19	--	252.7	166.5	285.2	--	543.8	825.6	2,073.8
FY 20	--	202.5	174.7	277.4	--	521.0	899.7	2,075.3
FY 21	--	226.1	179.6	286.2	--	615.2	886.9	2,194.0
FY 22	--	223.5	193.5	290.4	--	633.3	909.0	2,249.7
FY 23	--	237.8	201.3	299.5	--	769.2	921.0	2,428.8

Appendix B

FFY22 End of Year

Summary &

FFY23 Baseline Data

RMW Program
FFY 22 End of Year Outcomes FFY 23 Baseline Data

RMW Service Area	Total # of Villages Supported	# of Advisory Communities	# of Systems Subject to ETT Listing	# of Systems Required to Have Certified Ops	Primary Operator Certified at Correct Level	Backup Operator Certified at Correct Level	Primary Operator Turnover	Backup Operator Turnover	PM Score 25	PM Score 15	PM Score 0	Villages on ETT List for RTCR	Villages on ETT List for Ops-Related Vios
BBAHC	21	9	13	13	9	5	6	4	4	8	0	1	4
DEC	72	15	51	50	35	9	40	22	33	21	0	4	13
Maniilaq	10	0	10	10	5	2	8	6	8	3	0	0	0
NSHC	15	0	15	15	8	4	12	15	6	9	0	0	4
TCC	28	4	23	23	13	3	5	4	6	19	0	0	4
YKHC	51	5	46	46	12	6	30	16	13	37	0	8	21
Totals	197	33	158	157	82	29	101	67	70	97	0	13	46
				Percentages:	52.2%	18.5%	64.3%	42.7%	41.9%	58.1%	0.0%	8.2%	29.1%

Enforcement Targeting Tool (ETT) information was taken from the April 2022 SNC List.

Attachment D identifies primary and advisory communities, as well as those subject to ETTC Listing and Operator Certification Requirements with the exception of the eight North Slope Borough communities.

Appendix C

FFY23 End of Year

Summary &

FFY24 Baseline Data

RMW Program

FFY 23 End of Year Outcomes FFY 24 Baseline Data

RMW Service Area	Total # of Villages Supported	# of Advisory Communities	# of Systems Subject to ETT Listing	# of Systems Required to Have Certified Ops	Primary Operator Certified at Correct Level	Backup Operator Certified at Correct Level	Primary Operator Turnover	Backup Operator Turnover	PM Score 25	PM Score 15	PM Score 0	Villages on ETT List for RTCR	Villages on ETT List for Ops-Related Vios
BBAHC	21	9	13	13	8	5	6	13	4	8	0	1	4
DEC	72	15	51	50	29	9	15	10	36	18	0	1	5
Maniilaq	10	0	10	10	5	1	6	3	7	3	0	0	3
NSHC	15	0	15	15	9	4	5	9	5	10	0	0	2
TCC	28	4	23	23	12	3	5	4	6	19	0	0	3
YKHC	51	5	46	46	12	7	10	2	12	39	0	6	18
Totals	197	33	158	157	75	29	47	41	70	97	0	8	35
				Percentages:	47.8%	18.5%	29.9%	26.1%	41.9%	58.1%	0.0%	5.1%	22.2%

Enforcement Targeting Tool (ETT) information was taken from the October 2023 ETT List.

Attachment D identifies primary and advisory communities, as well as those subject to ETTC Listing and Operator Certification Requirements with the exception of the eight North Slope Borough communities.

Appendix D

RMW Community Summary

Category	Community	RMW Region	RMW	Primary/ Advisory	PWS Type	WT Class	WD Class	WWC Class	WWT Class	Primary Operator	Backup Operator	PM Score	ETT	Turn Over Primary	Turn Over Backup
Primary Communities which require a Certified Operator and are subject to ETT Listing	Adak	DEC	Singleton	P	C	ST				ST	NONE	25			
	Akhiok	DEC	Singleton	P	C	1				WT1	WTP	15			
	Akiachak	YKHC	White	P	C	2			SP	WT1	NO CERT	15			
	Akiak	YKHC	White	P	C	2				WT1	WDP	25			
	Akutan	DEC	Singleton	P	C	ST				ST	NONE	15			
	Alakanuk	YKHC	Vacant	P	C	2	2	1	SP	NO CERT	NO CERT	15	OPS (SW, N, DBP, LCR, VOC)		
	Allakaket	TCC	Meckel	P	C	1				NO CERT	NO CERT	15			
	Ambler	MHC	Nelson	P	C	SU				ST	NO CERT	25		1	1
	Anchor Point	DEC	Russell	P	C	1				WT2	WT1				
	Angoon	DEC	Russell	P	C	2	1	1		NO CERT	NO CERT	15	OPS (SW, N, VOC, DBP)		
	Anvik	YKHC	Werba	P	C	ST				NO CERT	NONE	15	OPS (GWR, A, DBP, LCR, IOC, VOC)		
	Arctic Village	TCC	Meckel	P	C	2				WT2	NO CERT	25	OPS (GWR, CCR)		
	Atka	DEC	Singleton	P	C	2				ST	NO CERT	25			1
	Atmautluak	YKHC	Vacant	P	C	1				NO CERT	NO CERT	15		2	
	Beaver	TCC	Demientieff	P	C	1				WT1	NO CERT	15		1	
	Brevig Mission	NSHC	Vacant	P	C	ST				ST	NONE	15		3	1
	Buckland	MHC	Nelson	P	C	2				WT2	NO CERT	25			
	Chalkyitsik	TCC	Burnham	P	C	2				NO CERT	NO CERT	15			
	Chefornak	YKHC	Paukan	P	C	SU				ST	NO CERT	15			
	Chenega	DEC	Russell	P	C	2				WT1	ST	15		1	1
	Chevak	YKHC	Paukan	P	C	1	2	1	SP	WT1	WT1	15			
	Chignik Bay	BBAHC	Small	P	C	2				NO CERT	NONE	25		1	1
	Chignik Lagoon	BBAHC	Small	P	C	ST				ST	ST	25		1	4
	Chignik Lake	BBAHC	Small	P	C	SU				NO CERT	NO CERT	15	RTCR, OPS (GWR,N, LCR)		
	Chuathbaluk	YKHC	Werba	P	C	ST				ST	ST	15			
	Circle	TCC	Meckel	P	C	ST				ST	NONE	25			
	Clark's Point	BBAHC	Small	P	C	SU				NO CERT	NONE	15	OPS (AS, N, LCR, IOC, VOC)	2	
	Coffman Cove	DEC	Cote	P	C	2	1	1		WT2	NO CERT	25			
	Cold Bay	DEC	Russell	P	C	ST				WTP	ST	25			1
	Crooked Creek	YKHC	Werba	P	C	1				NO CERT	NO CERT	15	RTCR, OPS (GWR, N, DBP, LCR, VOC)		
	Deering	MHC	Nelson	P	C	2				ST	NO CERT	25	OPS (LCR)		
	Diomede	NSHC	Vacant	P	C	ST				ST	NONE	15	OPS (N, VOC)		
	Eek	YKHC	White	P	C	2				WT1	NO CERT	15	OPS (N, DBP, LCR, VOC)	1	
	Egegik	BBAHC	Small	P	C	1				NO CERT	NO CERT	15			
	Elim	NSHC	Johnson	P	C	ST				ST	ST	15			
	Emmonak	YKHC	Vacant	P	C	2	2	1	SP	ST	NO CERT	15			
	False Pass	DEC	Russell	P	C	2				NO CERT	NONE	25			
	Fort Yukon	TCC	Burnham	P	C	2	2	1	SP	WT3	WT1	25			
	Galena	TCC	Demientieff	P	C	2	2		SP	NONE	WTP	15			
	Galena 2	TCC	Demientieff	P	C	2				WTP	NONE	15			
	Gambell	NSHC	Vacant	P	C	2	2	1	SP	ST	ST	15			
	Golovin	NSHC	Johnson	P	C	2				NO CERT	NO CERT	15			
	Goodnews Bay	YKHC	White	P	C	1				WT1	WT1	25			
	Grayling	YKHC	Werba	P	C	ST				NO CERT	NO CERT	15	RTCR, OPS (SW, N, DBP, LRC, CCR)	1	
	Gulkana	DEC	Cote	P	C	2				WT1	NONE	25		3	
	Holy Cross	YKHC	Werba	P	C	ST				ST	ST	15			
	Hoonah	DEC	Russell	P	C	2	1	1	1	WT2	WT1	25		1	
	Hooper Bay	YKHC	Paukan	P	C	2	2	1	SP	WT2	ST	15		1	
	Hughes	TCC	Meckel	P	C	1				NO CERT	NO CERT	15		1	2
	Huslia	TCC	Meckel	P	C	1				WT2	WT1	15			
	Hydaburg	DEC	Cote	P	C	2	1	1		WD1	NO CERT	25			
	Igiugig	DEC	Singleton	P	C	1				ST	NO CERT	25			
	Kake	DEC	Russell	P	C	2	1	1		WT1	NO CERT	25			1
	Kaltag	TCC	Demientieff	P	C	1				WTP	NO CERT	25			
	Karluk	DEC	Singleton	P	C	ST				ST	ST	25			
	Kasaan	DEC	Cote	P	C	1				WTP	WT1	25			
	Kiana	MHC	Nelson	P	C	1	2	1	SP	WT1	ST	25			

Category	Community	RMW Region	RMW	Primary/ Advisory	PWS Type	WT Class	WD Class	WWC Class	WWT Class	Primary Operator	Backup Operator	PM Score	ETT	Turn Over Primary	Turn Over Backup
Primary Communities which require a Certified Operator Drinking Water and are subject to ETT Listing	Kipnuk	YKHC	Vacant	P	C	2			SP	NO CERT	NO CERT	25			
	Kivalina	MHC	Nelson	P	C	ST				WTP	ST	15	SW		
	Klawock	DEC	Cote	P	C	2	1	1	1	WT1	NONE	25			
	Klukwan	DEC	Russell	P	C	2				NO CERT	NO CERT	15			1
	Kobuk	MHC	Nelson	P	C	1				ST	NO CERT	25		2	1
	Kokhanok	DEC	Singleton	P	C	ST				WDP	NONE	25			
	Koliganek	BBAHC	Small	P	C	SU				ST	ST	25			1
	Kongiganak	YKHC	Paukan	P	C	2			SP	ST	ST	15			
	Kotlik	YKHC	Vacant	P	C	2	2	1	SP	WT1	ST	15			1
	Koyuk	NSHC	Johnson	P	C	ST				ST	ST	15			2
	Koyukuk	TCC	Demientieff	P	C	1				NO CERT	NO CERT	15			
	Kwethluk	YKHC	White	P	C	2	2	1	SP	ST	ST	25	OPS (DBP, LCR)		
	Kwigillingok	YKHC	Paukan	P	C	2				ST	NO CERT	15	OPS (SW, N, DBP, LCR, VOC)		
	Larsen Bay	DEC	Singleton	P	C	1				WTP	NO CERT	25		1	
	Lower Kalskag	YKHC	Werba	P	C	1				ST	ST	15			
	Manokotak	BBAHC	Small	P	C	SU				ST	SU	15			1
	Manokotak Heights	BBAHC	Small	A	C	SU				ST	SU		OPS (AS, LCR, IOC, VOC, SOC)		
	Marshall	YKHC	Vacant	P	C	1	2	1	SP	ST	NO CERT	15	OPS (N, VOC)		
	McGrath	DEC	Singleton	P	C	2	2			NO CERT	NONE	15		1	3
	Mekoryuk	YKHC	Paukan	P	C	1				ST	ST	25			1
	Mertarvik	YKHC	Paukan	P	C	ST				ST	NO CERT	15	RTCR, OPS (N, LCR, VOC, Rads)	1	
	Minto	TCC	Meckel	P	C	3				ST	ST	15			
	Mountain Village	YKHC	Vacant	P	C	1	2	1	SP	ST	ST	15			
	Nanwalek	DEC	Russell	P	C	1				NO CERT	NONE	15	OPS (N, A, DBP, LCR, VOC)	1	
	Napakiak	YKHC	White	P	C	1				ST	NO CERT	15			
	Napaskiak West	YKHC	White	P	C	1				ST	NONE	15			
	Nelson Lagoon	DEC	Russell	P	C	2				NO CERT	NO CERT	15	RTCR, OPS (DBP, VOC)		
	Nenana	TCC	Burnham	P	C	1	2	1	2	WT1	WTP	15			
	New Kasigluk	YKHC	White	P	C	2				ST	ST	15			
	New Stuyahok	BBAHC	Small	P	C		2			NO CERT	NO CERT	15		1	4
	Newhalen	DEC	Singleton	P	C	SU				SU	SU	25			
	Newtok	YKHC	Paukan	P	C	2				ST	ST	15	OPS (SW, N, DBP, LCR, VOC, SOC)		
	Nightmute	YKHC	Paukan	P	C	SU				NO CERT	NONE	15	RTCR, OPS (GWR, LCR)	2	
	Nikolaevsk	DEC	Cote	P	C	2				WT1	NO CERT	25			1
	Noatak	MHC	Nelson	P	C	1	2	1	SP	WT1	ST	25			
	Nondalton	DEC	Singleton	P	C	ST				NO CERT	NO CERT	25	OPS (DBP, LCR, VOC, SOC)		
	Noorvik	MHC	Nelson	P	C	2	2	1	SP	ST	ST	25		1	
	Northway	TCC	Demientieff	P	C	ST				ST	ST	25			1
	Nulato	TCC	Meckel	P	C	ST				ST	NONE	25			
	Nunam Iqua	YKHC	Vacant	P	C	2				WT1	WT1	15	OPS (DBP)		
	Nunapitchuk	YKHC	White	P	C	2				ST	ST	25			
	Old Harbor	DEC	Cote	P	C	2				NO CERT	NO CERT	25	RTCR, OPS (N, SW, DBP, LCR, VOC)	2	
	Old Kasigluk	YKHC	White	P	C	1			SP	ST	NONE	15			
	Ouzinkie	DEC	Cote	P	C	2				WT2	WDP	25			
	Pelican	DEC	Russell	P	C	2				WT2	NO CERT	25			
	Perryville	BBAHC	Small	P	C	ST				ST	NO CERT	15			1
	Pilot Station	YKHC	Vacant	P	C	1	2	1	SP	ST	NO CERT	15			
	Pitka's Point	YKHC	Vacant	P	C	ST				ST	ST	15		2	
	Platinum	YKHC	White	P	C	SU				NO CERT	NO CERT	15	RTCR, OPS (SW, N, LCR, VOC, IOC, SOC, CCR)		
	Port Alexander	DEC	Cote	P	C	ST				ST	ST	15			
	Port Graham	DEC	Russell	P	C	2				WT2	WT1	25			
	Port Lions	DEC	Cote	P	C	2	1	1		WT1	WTP	25			1
	Port Protection	DEC	Cote	P	C	SU				SU	NO CERT	25			
	Quinhagak	YKHC	White	P	C	2	2	1	SP	WTP	ST	15	OPS (SW, LCR)		
	Rampart	TCC	Meckel	P	C	1				WT1	WT1	15			
	Ruby	TCC	Burnham	P	C	1				NO CERT	NONE	15		2	
	Russian Mission	YKHC	Vacant	P	C	SU				NO CERT	NO CERT	15			

Category	Community	RMW Region	RMW	Primary/ Advisory	PWS Type	WT Class	WD Class	WWC Class	WWT Class	Primary Operator	Backup Operator	PM Score	ETT	Turn Over Primary	Turn Over Backup
Primay Communities which require a Certified Operator and are subject to ETT Listing	Sand Point	DEC	Russell	P	C	2	2	1	SP	WT2	WT1	25			
	Savoonga	NSHC	Vacant	P	C	1	2	1	SP	WT2	WT1	25			
	Saxman	DEC	Cote	P	C	2	1	1		WTP	ST	25		2	
	Scammon Bay	YKHC	Vacant	P	C	2	2	1	SP	WT1	ST	15	OPS (N, DBP, LCR)		
	Selawik	MHC	Nelson	P	C	2	2	1	SP	WT1	NO CERT	15		2	
	Seldovia	DEC	Cote	P	C	2	1	1		WT4	WT1	25		1	
	Shageluk	YKHC	Werba	P	C	ST				ST	ST	15	RTCR, OPS (N, DBP, LCR, VOC)		
	Shaktoolik	NSHC	Johnson	P	C	2				ST	NO CERT	15		1	2
	Shishmaref	NSHC	Vacant	P	C	2			SP	WT1	ST	15			1
	Shungnak	MHC	Nelson	P	C	1				NO CERT	NO CERT	15	OPS (N, LCR, VOC)		1
	Sleetmute	YKHC	Werba	P	C	ST				ST	NO CERT	15	OPS (SW, DBP, LRC, VOC)		
	South Naknek	BBAHC	Small	P	C	SU				SU	NONE	15			
	St. George	DEC	Singleton	P	C	SU				SU	SU	25			
	St. Mary's	YKHC	Paukan	P	C	2	2	1	SP	WT3	ST	25			
	St. Michael	NSHC	Johnson	P	C	ST				WT1	ST	15			2
	St. Paul	DEC	Singleton	P	C	1	1	1		WT1	NONE	25			
	Stebbins	NSHC	Johnson	P	C	1				WT1	NO CERT	25			
	Stevens Village	TCC	Burnham	P	C	ST				ST	NONE	15			
	Takotna	DEC	Russell	P	C	ST				NO CERT	NO CERT	15			
	Tanacross	TCC	Demientieff	P	C	SU				ST	NONE	15		1	
	Tanana	TCC	Meckel	P	C	2				WTP	NO CERT	15	OPS (N, DBP, LCR, VOC)		
	Tatitlek	DEC	Russell	P	C	ST				WT1	NO CERT	25			
	Teller	NSHC	Vacant	P	C	ST				WT1	ST	15			
	Tetlin	TCC	Demientieff	P	C	SU				SU	SU	15			1
	Thorne Bay	DEC	Cote	P	C	2	1	1	1	WT2	NO CERT	25			
	Togiak	BBAHC	Small	P	C	1	2	1	SP	WT2	WT1	25		1	1
	Toksook Bay	YKHC	Paukan	P	C	1	2	1	SP	WT2	WT1	25			
	Tuluksak	YKHC	White	P	C	1				ST	ST	15			
	Tuntutuliak	YKHC	Vacant	P	C	1				NO CERT	NO CERT	15	OPS (GWR, N, A, LCR, VOC)		
	Twin Hills	BBAHC	Small	P	C	SU				SU	NO CERT	15	OPS (N, LCR, VOC)		
	Tyonek	DEC	Singleton	P	C	1				WT1	ST	25			
	Unalakleet	NSHC	Johnson	P	C	2	2	1	SP	ST	NO CERT	25		1	
	Venetie	TCC	Burnham	P	C	ST				NO CERT	NONE	15	OPS (N, SW, DBP, LCR, VOC)		
	Voznesenka	DEC	Cote	P	C	1				WT1	WTP	25			
	Wales	NSHC	Vacant	P	C	ST				ST	NO CERT	25	OPS (N, IOC, VOC, SOC, RADs)		1
	White Mountain	NSHC	Johnson	P	C	ST				ST	ST	25			
	Yakutat	DEC	Singleton	P	C	1	1	1	1	WT1	NO CERT	25			
Primary Communities which do not require a Certified Operator Drinking Water and are not subject to ETT Listing	*Naknek*	BBAHC	Small	A				1	SP	WWC1	WWT1				
	Alatna	TCC	Meckel	P	NP					NA	NA	15			
	Anderson	DEC	Singleton	P	NP					NA	NA	25			
	Aniak	YKHC	Werba	P	NP			1	SP	WWSP	NO CERT	25			
	Chiniak	DEC	DEC	A	NP					NA	NA				
	Dot Lake	TCC	Demientieff	P	NP					NA	NA	15			
	Nikolai	DEC	Russell	P	NP					NA	NA	15			
	Nikolski	DEC	DEC	A	NP					NA	NA				
	Ninilchik	DEC	Cote	P	NP					NA	NA	15			
	Tununak	YKHC	Paukan	P	NP					NA	NA	15			
Federally Regulated System	Metlakatla	DEC	Cote	P	NP					NA	NA	15			

Category	Community	RMW Region	RMW	Primary/ Advisory	PWS Type	WT Class	WD Class	WWC Class	WWT Class	Primary Operator	Backup Operator	PM Score	ETT	Turn Over Primary	Turn Over Backup
Subject to ETT Listing but does not require a certified operator	*Elfin Cove*	DEC	DEC	A	TNC	NA				NA	NA	15	*		
Advisory Communities which require a Certified Operators and are subject to ETT Listing	*Craig*	DEC	DEC	A	C	2	2	1	2	WT3	WT2	15			
	Kachemak Selo	DEC	DEC	A	C	ST				ST	NO CERT	15			
	King Cove	DEC	DEC	A	C	2	1	1		WT2	WT1	15			
	Oscarville	YKHC	McIntyre	A	C	1				NO CERT	NONE	15			
	Unalaska	DEC	DEC	A	C	2	3	2	2	WT2	NONE	15		2	
	Whittier	DEC	DEC	A	C	SU				WD2	ST	25			
Advisory Communities which do not require a Certified Operators and are not subject to ETT Listing	*Aleknagik*	BBAHC	Small	A	NP					NA	NA				
	Birch Creek	TCC	Lee	A	NP					NA	NA				
	Chistochina	DEC	DEC	A	NP					NA	NA		*		
	Eagle Village	TCC	Lee	A	NP					NA	NA				
	Ekwok	BBAHC	Small	A	NP					NA	NA				
	Healy Lake	TCC	Lee	A	NP					NA	NA				
	Iliamna	DEC	DEC	A	NP					NA	NA		*		
	Ivanof Bay	BBAHC	Small	A	NP					NA	NA				
	Levelock	BBAHC	Small	A	NP					NA	NA				
	Lime Village	YKHC	Werba	A	NP					NA	NA	25			
	Manley	TCC	Lee	A	NP					NA	NA				
	Pilot Point	BBAHC	Small	A	NP					NA	NA				
	Port Heiden	BBAHC	Small	A	NP					NA	NA				
	Portage Creek	BBAHC	Small	A	NP					NA	NA				
	Red Devil	YKHC	Werba	A	NP					NA	NA				
	Stony River	YKHC	Werba	A	NP					NA	NA	25			
	Ugashik	BBAHC	Small	A	NP					NA	NA				
Communities that have only privately owned water systems.	*Chitina*	DEC	DEC	A	NA										
	Copper Center	DEC	DEC	A	NA										
	Glennallen	DEC	DEC	A	NA										
	Gustavus	DEC	DEC	A	NA										
	Mentasta Lake	DEC	DEC	A	NA										
	Upper Kalskag	YKHC	Werba	A	NA							25			

Appendix E

FY23 RMW Directory

Remote Maintenance Worker (RMW) Directory SFY2024

Alaska Department of Environmental Conservation (ADEC)

Technical Assistance (TA) Programs
555 Cordova St.
Anchorage, AK 99501
Fax: 269-7509

Tammy Helms, TA Manager
tammy.helms@alaska.gov
907-269-7613

John Johnson, RMW Program Coordinator
john.johnson@alaska.gov
907-269-7605

Tanner Cote, RMW
tanner.cote@alaska.gov
907-269-7609

Matthew Russell, RMW
matthew.russell@alaska.gov
907-269-3067

Spencer Singleton, RMW
spencer.singleton@alaska.gov
907-269-7571

Coffman Cove	Anchor Point	Adak
Gulkana	Angoon	Akhiok
Hydaburg	Chenega	Akutan
Kachemak Selo	Cold Bay	Anderson
Kasaan	False Pass	Atka
Klawock	Hoonah	Iguigig
Metlakatla	Kake	Karluk
Nikolaevsk	Klukwan	Kokhanok
Ninilchik	Nanwalek	Larsen Bay
Old Harbor	Nelson Lagoon	McGrath
Ouzinkie	Nikolai	Newhalen
Port Alexander	Pelican	Nondalton
Port Lions	Port Graham	St. George
Port Protection	Sand Point	St. Paul
Saxman	Takotna	Tyonek
Seldovia	Tatitlek	Yakutat
Thorne Bay		
Voznesenka		

Advisory Communities

Anaktuvuk Pass	*Glennallen*	*Nuiqsut*
Atqasuk	*Gustavus*	*Point Hope*
Chitina	*Iliamna*	*Point Lay*
Chiniak	*Kaktovik*	*Unalaska*
Chistochina	*King Cove*	*Utquiagvik*
Copper Center	*Mentasta Lake*	*Wainwright*
Craig	*Nikolski*	*Whittier*
Elfin Cove		

Updated October 16, 2023

Bristol Bay Area Health Corporation (BBAHC)

P.O. Box 130
Dillingham, AK 99576
(888) 792-2242

George Larsen, RMW Supervisor
glarsen@bbahc.org
907-842-3396

Larry Small, RMW
lsmall@bbahc.org
907-967-2105

Chignik Bay
Chignik Lagoon
Chignik Lake
Clark's Point
Egegik
Koliganek
Manokotak
New Stuyahok
Perryville
South Naknek
Togiak
Twin Hills

Advisory Communities

Aleknagik
Ekwok
Ivanof Bay
Levelock
Naknek
Pilot Point
Portage Creek
Port Heiden
Ugashik

Maniilaq Association

P.O. Box 256
Kotzebue, AK 99752
(800) 431-3321
Fax: 442-7287

Chris Cox, RMW Supervisor
cocox@anthc.org
907-442-7352

Bruce Nelson, RMW
brnelson@anthc.org
907-442-7042

Ambler
Buckland
Deering
Kiana
Kivalina
Kobuk
Noatak
Noorvik
Selawik
Shungnak

Norton Sound Health Corporation (NSHC)

P.O. Box 966
Nome, AK 99762
(888) 559-3311
Fax: 443-7498

Richard Kuzuguk, RMW Supervisor
rkuzuguk@nshcorp.org
907-443-4584

Vacant RMW Position

Shyler Johnson, RMW
skjohnson@nshcorp.org
907-625-1231

Brevig Mission
Diomede
Gambell
Savoonga
Shishmaref
Teller
Wales

Elim
Golovin
Koyuk
St. Michael
Shaktoolik
Stebbins
Unalakleet
White Mountain

Tanana Chiefs Conference (TCC)

122 First Ave.
Fairbanks, AK 99701
(800) 478-6822
Fax: 443-7498

Noah Tsigonis, RMW Supervisor
noah.tsigonis@tananachiefs.org
907-452-8251 ext. 3431

Lee Meckel, RMW
lee.meckel@tananachiefs.org
907-452-8251 ext. 3265

Alatna
Allakaket
Arctic Village
Circle
Hughes
Huslia
Minto
Nulato
Rampart
Tanana

Scot Demientieff, RMW
scot.demientieff@tananachiefs.org
907-452-8251 ext. 3267

Beaver
Dot Lake
Galena
Kaltag
Koyukuk
Manley
Northway
Tanacross
Tetlin

Duane Burnham, RMW
duane.burnham@tananachiefs.org
907-452-8251 ext. 3266

Birch Creek
Chalkyitsik
Eagle Village
Fort Yukon
Healy Lake
Nenana
Ruby
Stevens Village
Venetie

Updated October 16, 2023

Yukon Kuskokwim Health Corporation (YKHC)

P.O. Box 528
Bethel, AK 99559
(800) 478-6599
Fax: 543-6425

Bob White, RMW Supervisor
robert_white@ykhc.org
907-543-6428 (land)
907-545-0916 (cell)

Allan Paukan, RMW
allan_paukan@ykhc.org
907-438-6124 (cell)

Alakanuk
Emmonak
Kotlik
Marshall
Mountain Village
Nunam Iqua
Pilot Station
Pitka's Point
Russian Mission
Saint Mary's

Bob White, RMW Supervisor
robert_white@ykhc.org
907-543-6428 (land)
907-545-0916 (cell)

Eek
Goodnews Bay
Napakiak
Napaskiak
Nunapitchuk
Platinum
Quinhagak

Bruce Werba, RMW
bruce_werba@ykhc.org
907-545-5063 (cell)
907-476-7225 (fax)

Aniak
Anvik
Chuathbaluk
Crooked Creek
Grayling
Holy Cross
Lower Kalskag
Shageluk
Sleetmute
Upper Kalskag

Willie Kamuck, RMW
willie_kamuck@ykhc.org
907-438-6026 (cell)

Chefornak
Chevak
Hooper Bay
Kipnuk
Mekoryuk
Mertarvik
Newtok
Nightmute
Scammon Bay
Toksook Bay
Tununak

Nicholas Sanders, RMW
nicholas_sanders@ykhc.org
907-543-6427 (land)
907-545-7371 (cell)

Akiachak
Akiak
Atmautluak
Kasigluk
Kongiganak
Kwethluk
Kwigillingok Village
Nunapitchuk
Oscarville
Tuluksak
Tuntutuliak

Updated October 16, 2023

Appendix F

2023 RMW Community Calendar

This calendar was created by the Remote Maintenance Worker,
Capacity Development, and Operator Certification Programs

with assistance from the Drinking Water, Wastewater, and Rural Utility Business Advisor Programs

2023 Monthly Calendar

Technical Assistance Programs

Chalkyitsik

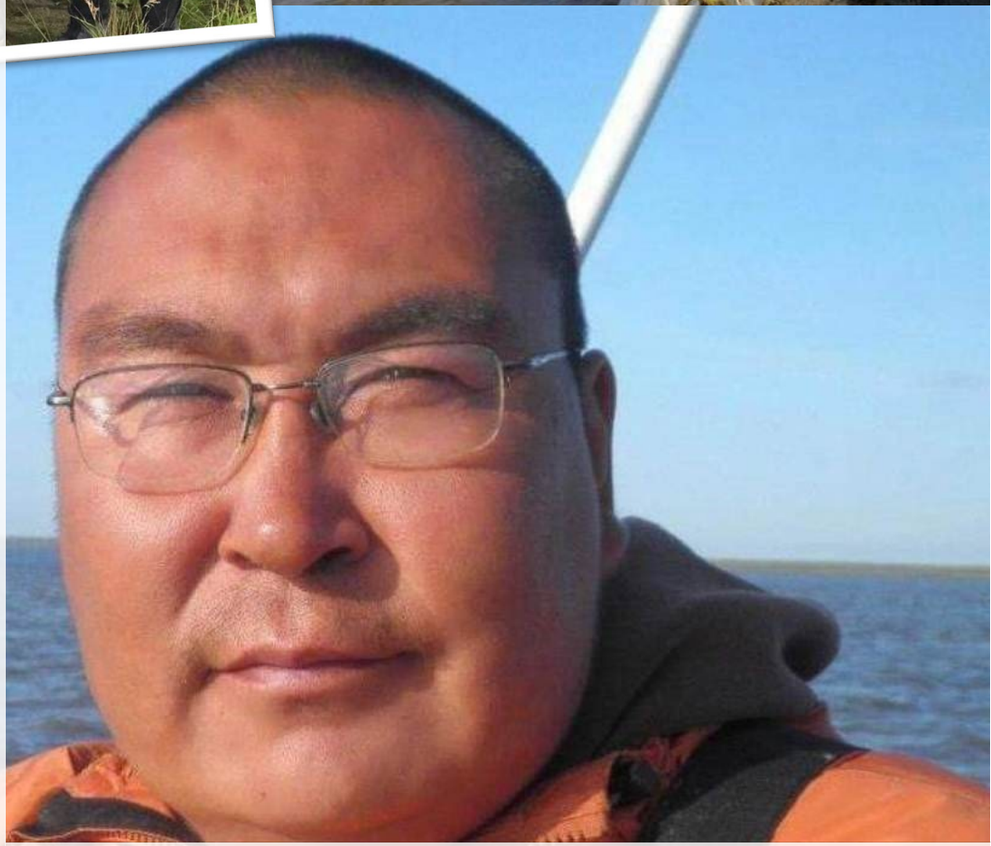
JANUARY 2023

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1 New Year's Day	2 Submit your December preventative maintenance records to your assigned RMW *WPO duty*	3 Submit the December Discharge Monitoring Report (if required) to DEC electronically through the NetDMR system *Responsible Official duty*	4 Take Coliform sample w/distribution residual *WPO duty*	5 Submit the December operator report to DEC *WPO duty*	6 Pay December payroll & child support liabilities *Clerk/Bookkeeper duty*	7
8	9	10	11	12	13	14
15	16 Martin Luther King Jr. Day	17 Check fuel levels and day tank in WTP *WPO duty*	18 Have you tested the backup generator? *WPO duty*	19 Have you reconciled the December bank statement? *Clerk/Bookkeeper duty*	20 Have you backwashed the filter? *WPO duty*	21
22	23 Monitor/maintain lift station *WPO duty*	24	25	26 Submit the December meeting minutes and financial reports to RUBA staff *Clerk/Bookkeeper duty*	27 Submit the Wastewater Permit Annual Report (if required) to DEC *Responsible Official duty*	28
29	30 IRS forms deadline for w-2, w-3, 1099 misc to be mailed *Clerk/Bookkeeper duty*	31 How many gallons of water did you treat this month? _____ *WPO duty*				

NOTES:

FEBRUARY

Su	Mo	Tu	We	Th	Fr	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28				



Billy Westlock

YKHC Remote Maintenance Worker (RMW)

Billy Westlock passed away in Emmonak on July 4, 2022. Billy worked as a Remote Maintenance Worker (RMW) with the Yukon-Kuskokwim Health Corporation for the past 19 years. As an RMW, Billy trained local water and wastewater operators how to safely operate their utilities. Billy primarily served the Lower Yukon communities, but often taught classes in Bethel and traveled around the region to assist RMWs and water plant operators in other Yukon-Kuskokwim Delta communities.

One of the key aspects of an RMW's job is to help in emergencies. It is often joked that RMW actually stands for "Real Miracle Worker." Billy certainly was a miracle worker. He helped operators troubleshoot hundreds of problems over the years, some with a short phone call and others in person. His quick thinking saved the day more than a few times. In 2018, one of the communities Billy worked with was running critically low on water. The raw water line to the river was frozen, and there wasn't enough glycol pressure to heat the line. Billy traveled out and worked with the operators to boost the pressure and thaw most of the river line. They then used a blow dryer to thaw the very end of the line and started making water again before the community ran out and the lines froze. In 2015, Billy responded to an emergency request for assistance following a series of brownouts that destroyed a community's sewage pumps. There were no replacement pumps anywhere in Alaska. Billy was able to remove all the burnt-out contacts and rebuild a functional pump, restoring sewer service to the entire town. Water or vacuum sewer leaks can cause an entire community to go without water. He could often find a vacuum sewer, water, or glycol leak that no one else could, and his quick action has saved millions of dollars in damages to utility systems and prevented countless illnesses by keeping water and wastewater services flowing. Billy pulled off dozens of miracles like those over the years.

In addition to being a gifted RMW, Billy loved to hunt, fish, and spend time with his family. He had an incredible sense of humor and was loved by all his coworkers. Our sincerest condolences to his friends and family. Billy will be missed tremendously.

FEBRUARY 2023

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
			1 Submit the January operator report to DEC *WPO duty* Take Coliform sample w/distribution residual *WPO duty*	2 Pay January payroll & child support liabilities *Clerk/Bookkeeper duty*	3 Submit the January Discharge Monitoring Report (if required) to DEC electronically through the NetDMR system *Responsible Official duty*	4
5	6 Submit your January preventative maintenance records to your assigned RMW *WPO duty*	7 Have you backwashed the filter? *WPO duty*	8	9 Have you reconciled the January bank statement? *Clerk/Bookkeeper duty*	10	11
12	13	14 Check fuel levels and day tank in WTP *WPO duty* Valentine's Day	15 Have you tested the backup generator? *WPO duty*	16 Elizabeth Peratrovich Day	17 Monitor/maintain lift station *WPO duty*	18
19	20 President's Day	21	22	23 Submit the January meeting minutes and financial reports to RUBA staff *Clerk/Bookkeeper duty*	24 Submit the Wastewater Permit Annual Report (if required) to DEC *Responsible Official duty*	25
26	27	28 How many gallons of water did you treat this month? _____ *WPO duty*				

Training Opportunities during the month:
Financial Management for Rural Utilities, Anchorage, February 6-10,2023 - RUBA

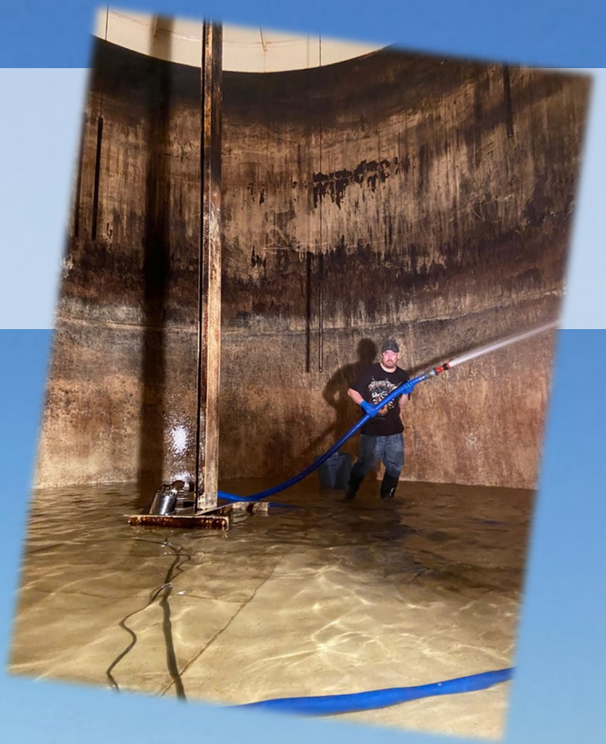
Need Free QuickBooks assistance? Call the RUBA sponsored QuickBooks Helpline 907-440-0242 Monday, Tuesday, and Thursday 10:00a-3:00p

NOTES:

MARCH

Su	Mo	Tu	We	Th	Fr	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

Galena



MARCH 2023

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
			1 Take Coliform sample w/distribution residual *WPO duty*	**2** Pay February payroll & child support liabilities *Clerk/Bookkeeper duty*	**3** Submit your February preventative maintenance records to your assigned RMW *WPO duty*	**4**
5	**6** Submit the February operator report to DEC *WPO duty*	**7** Submit the February Discharge Monitoring Report (if required) to DEC electronically through the NetDMR system *Responsible Official duty*	**8**	**9**	**10** Check fuel levels and day tank in WTP *WPO duty*	**11**
12 Daylight Savings Don't' forget to set your clocks 1 hour ahead	**13** Have you reconciled the February bank statement? *Clerk/Bookkeeper duty*	**14**	**15** Have you backwashed the filter? *WPO duty*	**16** Have you tested the backup generator? *WPO duty*	**17** Request monitoring summary if you have not received one from DEC *WPO duty* St. Patrick's Day	**18**
19	**20**	**21** Clean & calibrate SCD & Turbidimeter *WPO duty*	**22**	**23**	**24** Monitor/maintain lift station *WPO duty*	**25**
26	**27** Seward's Day	**28** Submit the February meeting minutes and financial reports to RUBA staff *Clerk/Bookkeeper duty*	**29** Begin quarterly Grant, IRS & Dept. of Labor reports *Clerk/Bookkeeper duty*	**30**	**31** How many gallons of water did you treat this month? _____ *WPO duty*	

Training Opportunities during the month:
Elected Officials Management for Rural Utilities
Online, March 2-10, 2023 - RUBA

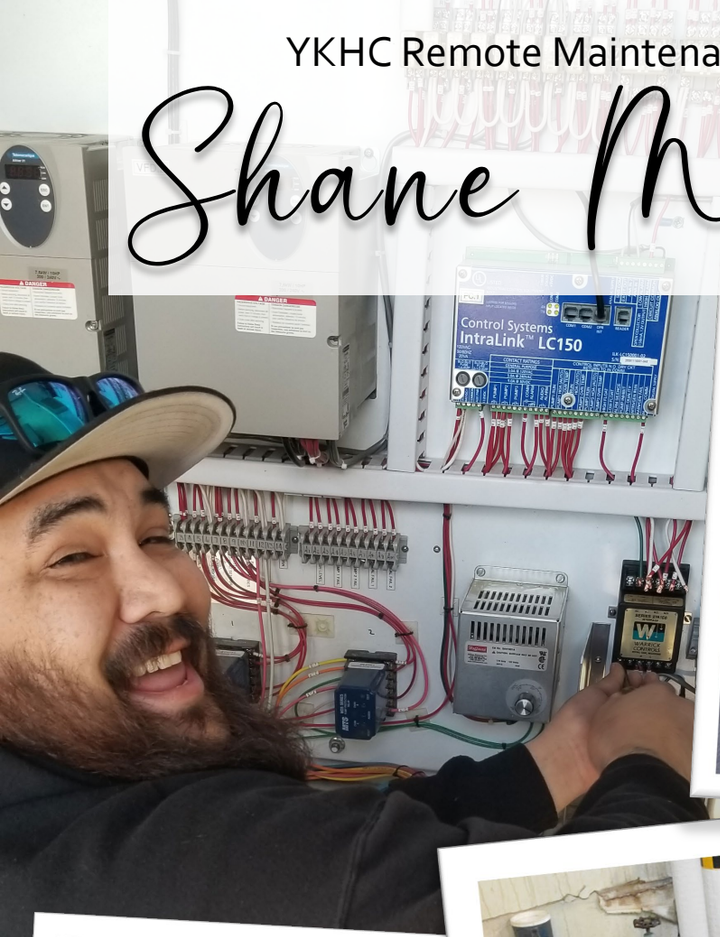
NOTES:

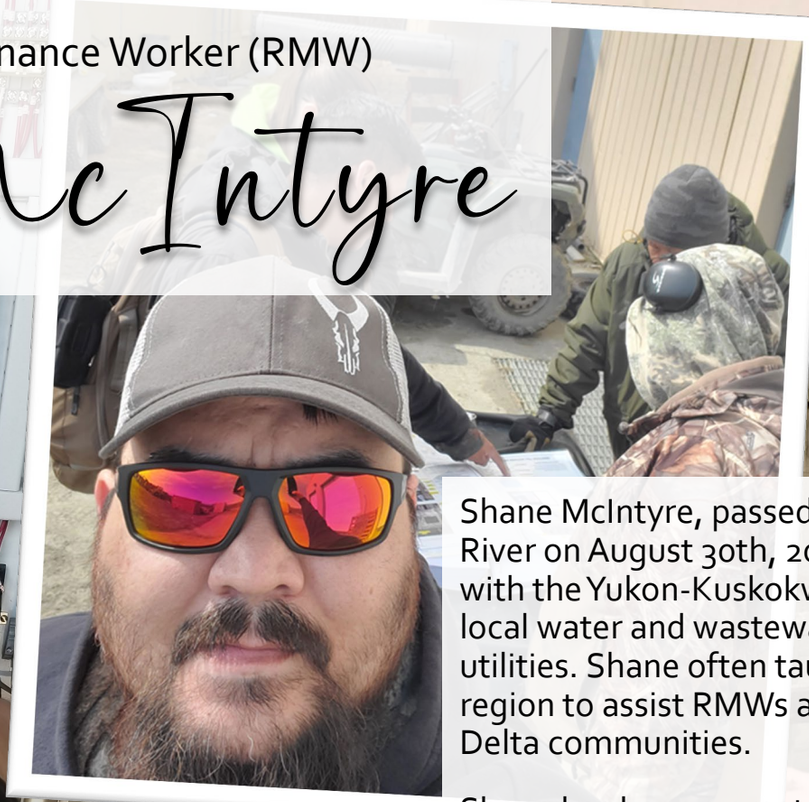
APRIL

Su	Mo	Tu	We	Th	Fr	Sa
30						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29

YKHC Remote Maintenance Worker (RMW)

Shane McIntyre





Shane McIntyre, passed away in a boating accident on the Kuskokwim River on August 30th, 2022. As a Remote Maintenance Worker (RMW) with the Yukon-Kuskokwim Health Corporation (YKHC), Shane trained local water and wastewater operators how to safely operate their utilities. Shane often taught classes in Bethel and traveled around the region to assist RMWs and water plant operators in Yukon-Kuskokwim Delta communities.

Shane has been a great asset to the YKHC department, handling all the needs at the warehouse. He repaired and shipped equipment to villages all over the YKHC service area in addition to his regular duties working with water plant operators in his assigned villages. He was always looking for creative ways to solve problems and could be counted on to come up with a way to accomplish the task with whatever he could find laying around. Shane was a true "MacGyver", able to make things work out of what others saw as junk.

In 2022, Shane was instrumental in welding and mechanical work assisting with the Hooper Bay Sewage lagoon emergency repair. Shane also was also instrumental in the Tuluksak water system rebuild after they lost their water plant to a fire in 2021. Shane traveled by snow machine and truck to move and install the treatment system.

In addition to being a gifted RMW, Shane loved to hunt and fish, and spend time with his family. He had an incredible sense of humor and was loved by all his coworkers. The YKHC RMWs have an RMW group chat that is used daily whether off-duty or at work to discuss work and keep in touch with each other's lives daily, and Shane has been greatly missed. Our sincerest condolences to his friends and family. Shane will be missed enormously.

APRIL 2023

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
						1
2	3 Pay March payroll & child support liabilities *Clerk/Bookkeeper duty* Submit the March operator report to DEC *WPO duty*	4 Take Coliform sample w/distribution residual *WPO duty*	5 Submit your March preventative maintenance records to your assigned RMW *WPO duty*	6 Submit the March Discharge Monitoring Report (if required) to DEC electronically through the NetDMR system *Responsible Official duty*	7 Have you reconciled the March bank statement? *Clerk/Bookkeeper duty*	8
9 Easter	10 Start compiling data for annual CCR-request monitoring schedule from DEC *WPO duty*	11 Check fuel inventory *Clerk/Bookkeeper duty*	12	13 Start working on the FY24 Budget if you are on a State fiscal year! *Clerk/Bookkeeper duty*	14 Check fuel levels and day tank in WTP *WPO duty*	15
16	17 Monitor/maintain lift station *WPO duty*	18 Have you tested the backup generator? *WPO duty*	19 Have you backwashed the filter? *WPO duty*	20	21	22
23 How many gallons of water did you treat this month? _____ *WPO duty* 30	24	25	26	27 Submit the March meeting minutes and financial reports to RUBA staff *Clerk/Bookkeeper duty*	28 Have you flushed your distribution system/hydrants? *WPO duty*	29

2nd quarter of calendar fiscal year 2023 begins
3rd quarter of federal fiscal year 2023 begins
4rd quarter of state fiscal year 2023 begins

NOTES:

MAY

Su	Mo	Tu	We	Th	Fr	Sa
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

Hydaburg

MAY 2023

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	1 Take Coliform sample w/distribution residual *WPO duty*	**2** Pay April payroll & child support liabilities *Clerk/Bookkeeper duty*	**3** Submit the April operator report to DEC *WPO duty*	**4** Submit the April Discharge Monitoring Report (if required) to DEC electronically through the NetDMR system *Responsible Official duty*	**5** Submit your April preventative maintenance records to your assigned RMW *WPO duty*	**6**
7	**8** Have you reconciled the April bank statement? *Clerk/Bookkeeper duty*	**9**	**10** Have you backwashed the filter? *WPO duty*	**11**	**12** Have you submitted your Community Assistance Program application? *Applications are due by June 1, 2023* *Responsible Official duty*	**13**
14 Mother's Day	**15** Check fuel levels and day tank in WTP *WPO duty*	**16**	**17** Monitor/maintain lift station *WPO duty*	**18** Have you tested the backup generator? *WPO duty*	**19** Order fuel for summer *Clerk/Bookkeeper duty*	**20**
21	**22** Draft of FY24 Budget should be supplied to the Council if you operate on a State FY *Clerk/Bookkeeper duty*	**23** Flush system hydrants *WPO duty*	**24**	**25** Check chemical supplies/spare parts & re-order if needed *WPO duty*	**26** Submit the April meeting minutes and financial reports to RUBA staff *Clerk/Bookkeeper duty*	**27**
28	**29** Memorial Day	**30**	**31** How many gallons of water did you treat this month? _____ *WPO duty*			

Find your community's assigned LGS/RUBA staff on DCRA's website or contact the Resource Desk, resourcedesk@alaska.gov

NOTES:

JUNE

Su	Mo	Tu	We	Th	Fr	Sa
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
28	29	20	21	22	23	24
25	26	27	28	29	30	

Eek

JUNE 2023

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	June 30th is the last day of SFY 23 Is your SFY24 Budget approved?			**1** Take Coliform sample w/distribution residual *WPO duty*	**2** Submit your May preventative maintenance records to your assigned RMW *WPO duty*	**3**
4	**5** Submit the May operator report to DEC *WPO duty* Pay May payroll & child support liabilities *Clerk duty/Bookkeeper duty*	**6** Request data dump for CCR *WPO duty*	**7** Submit the May Discharge Monitoring Report (if required) to DEC electronically through the NetDMR system *Responsible Official duty*	**8** Visually inspect source water reservoir or intake gallery and clean intake screen *WPO duty*	**9**	**10**
11	**12** Have you reconciled the May bank statement? *Clerk/Bookkeeper duty*	**13**	**14** Flag Day	**15** Have you backwashed the filter? *WPO duty*	**16** Have you tested the backup generator? *WPO duty*	**17**
18	**19** Check fuel levels and day tank in WTP *WPO duty*	**20**	**21** Monitor/maintain lift station *WPO duty*	**22**	**23** Clean & calibrate SCD & Turbidimeter *WPO duty*	**24**
25	**26** Submit the May meeting minutes and financial reports to RUBA staff *Clerk/Bookkeeper duty*	**27** Begin quarterly grant, IRS & Dept. of Labor reports *Clerk/Bookkeeper duty*	**28**	**29**	**30** Deadline to provide information to RUBA and RMW staff for Operations & Maintenance Best Practices. CCR Report Due *WPO duty*	How many gallons of water did you treat this month? _____ *WPO duty*

NOTES:

JULY

Su	Mo	Tu	We	Th	Fr	Sa
30	31					1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29

Gulkana

JULY 2023

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
						1
2	3 Submit your June preventative maintenance records to your assigned RMW *WPO duty*	4 Independence Day	5 Take Coliform sample w/distribution residual *WPO duty* Pay June payroll & child support liabilities *Clerk/Bookkeeper duty*	6 Submit the June operator report to DEC *WPO duty*	7 Submit the June Discharge Monitoring Report (if required) to DEC electronically through the NetDMR system *Responsible Official duty*	8
9	10 Order fuel for the winter *Clerk/Bookkeeper duty*	11	12 Start working on the FY24 Budget if you are on a Federal fiscal year! *Clerk/Bookkeeper duty*	13 Operator certificate expiring in 2022? Check you mail for a renewal notice. *WPO duty*	14 Have you tested the backup generator? *WPO duty*	15
16	17 Have you backwashed the filter? *WPO duty*	18	19 Check fuel levels and day tank in WTP *WPO duty*	20 Have you reconciled the June bank statement? *Clerk/Bookkeeper duty*	21 Monitor/maintain lift station *WPO duty*	22
23 30	24 How many gallons of water did you treat this month? _____ *WPO duty* 31	25 Visually inspect the interior of water storage tank. Schedule cleaning and maintenance as needed *WPO duty*	26	27	28 Submit the June meeting minutes and financial reports to RUBA staff *Clerk/Bookkeeper duty*	29

1st quarter of state fiscal year 2024 begins
3rd quarter of calendar fiscal year 2023 begins
4th quarter of federal fiscal year 2023 begins

NOTES:

AUGUST

Su	Mo	Tu	We	Th	Fr	Sa
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		


OUZINKIE MUNICIPAL RESERVOIR
In Dedication to the Memory of
Kelly Dean Larson, P.E.
1969 to 2012
Senior Engineering Project Manager
Alaska Native Tribal Health Consortium
Ouzinkie Health Clinic Expansion March 2016
Ouzinkie Water Treatment Facility August 2013
Ouzinkie Sludge Treatment Facility June 2013
Ouzinkie Water Main Replacement Phase 2 November 2013
Ouzinkie Water Main Replacement Phase 1
In recognition of your tireless efforts on behalf of our community
to provide public health and sanitation facilities

Ouzinkie

AUGUST 2023

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		1 Take Coliform sample w/distribution residual *WPO duty*	**2** Submit the July operator report to DEC *WPO duty* Pay July payroll & child support liabilities *Clerk/Bookkeeper duty*	**3** Submit the July Discharge Monitoring Report (if required) to DEC electronically through the NetDMR system *Responsible Official duty*	**4** Submit your July preventative maintenance records to your assigned RMW *WPO duty*	**5**
6	**7** Start preparing for elections. Review your local ordinance/bylaws *Clerk/Bookkeeper duty*	**8**	**9** Have you reconciled the July bank statement? *Clerk/Bookkeeper duty*	**10**	**11**	**12**
13	**14** Remember to check fuel levels and the day tank *WPO duty*	**15**	**16** Monitor/maintain lift station *WPO duty*	**17**	**18** Have you tested the backup generator? *WPO duty*	**19**
20	**21**	**22** Check chemical supplies/spare parts & re-order if needed *WPO duty*	**23**	**24** Have you backwashed the filter? *WPO duty*	**25**	**26**
27	**28** Submit the July meeting minutes and financial reports to RUBA staff *Clerk/Bookkeeper duty*	**29**	**30**	**31** How many gallons of water did you treat this month? _____ *WPO duty*		

NOTES:

SEPTEMBER

Su	Mo	Tu	We	Th	Fr	Sa
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

Port Graham

SEPTEMBER 2023

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	Check in with your assigned RUBA staff for information on fall RUBA training courses				**1** Pay August payroll & child support liabilities *Clerk/Bookkeeper duty*	**2**
3	**4** Labor Day	**5** Take Coliform sample w/distribution residual *WPO duty* Submit the August operator report to DEC *WPO duty*	**6** Have you reconciled the August bank statement? *Clerk/Bookkeeper duty*	**7** Submit your August preventative maintenance records to your assigned RMW *WPO duty*	**8** Submit the August Discharge Monitoring Report (if required) to DEC electronically through the NetDMR system *Responsible Official duty*	**9**
10	**11** Check fuel levels and day tank in WTP *WPO duty*	**12** CCR certification page due to DEC by September 30 *WPO duty*	**13** Monitor/maintain lift station *WPO duty*	**14**	**15** Have you tested the backup generator? *WPO duty*	**16**
17	**18** Confirm fuel delivery for winter *Clerk/Bookkeeper duty*	**19** Have you backwashed the filter? *WPO duty*	**20**	**21** Clean & calibrate SCD & Turbidimeter *WPO duty*	**22** Begin quarterly grant, IRS & Dept. of Labor reports *Clerk/Bookkeeper duty*	**23**
24	**25**	**26** Submit the August meeting minutes and financial reports to RUBA staff *Clerk/Bookkeeper duty*	**27**	**28**	**29**	**30** How many gallons of water did you treat this month? _____ *WPO duty*

NOTES:

OCTOBER

Su	Mo	Tu	We	Th	Fr	Sa
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

Adak

OCTOBER 2023

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1	2 Take Coliform sample w/distribution residual *WPO duty* Pay September payroll & child support liabilities *Clerk/Bookkeeper duty*	3 Submit your September preventative maintenance records to your assigned RMW *WPO duty*	4 Submit the September Discharge Monitoring Report (if required) to DEC electronically through the NetDMR system *Responsible Official duty*	5 Submit the September operator report to DEC *WPO duty*	6	7
8	9	10 Do you have your winter fuel and supplies? *WPO duty*	11	12 Start working on the FY24 Budget if you are on a Calendar fiscal year! *Clerk/Bookkeeper duty*	13 Check fuel levels and day tank in WTP *WPO duty*	14
15	16 Have you reconciled the September bank statement? *Clerk/Bookkeeper duty*	17 Have you tested the backup generator? *WPO duty*	18 Alaska Day	19 Have you backwashed the filter? *WPO duty*	20	21
22	23 Monitor/maintain lift station *WPO duty*	24	25 Have you flushed your distribution system/hydrants? *WPO duty*	26 Submit the September meeting minutes and financial reports to RUBA staff *Clerk/Bookkeeper duty*	27 Check chemical supplies & re-order if needed *WPO duty*	28
29	30	31 How many gallons of water did you treat this month? _____ *WPO duty* Halloween		**1st quarter of federal fiscal year 2024 begins** **2nd quarter of state fiscal year 2024 begins** **4th quarter of calendar fiscal year 2023 begins**		

NOTES:

NOVEMBER

Su	Mo	Tu	We	Th	Fr	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

Tatitlek

NOVEMBER 2023

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
			1 Pay October payroll & child support liabilities *Clerk/Bookkeeper duty* Take Coliform sample w/distribution residual *WPO duty*	**2** Submit the October Discharge Monitoring Report (if required) to DEC electronically through the NetDMR system *Responsible Official duty*	**3** Submit the October operator report to DEC *WPO duty*	**4**
5 Daylight Savings Don't forget to set your clocks back 1 hour	**6** Submit your October preventative maintenance records to your assigned RMW *WPO duty*	**7**	**8** Calibrate lab instruments *WPO duty*	**9**	**10** Veteran's Day (observed)	**11** Veteran's Day
12	**13** Operator certificate expiring in 2022? Check your mail for a renewal notice *WPO duty"	**14**	**15** Have you tested the backup generator? *WPO duty*	**16** Have you backwashed the filter? *WPO duty*	**17** Monitor/maintain lift station *WPO duty*	**18**
19	**20** Have you reconciled the October bank statement? *Clerk/Bookkeeper duty*	**21** Check fuel levels and day tank in WTP *WPO duty*	**22**	**23** Thanksgiving	**24**	**25**
26	**27** Submit the October meeting minutes and financial reports to RUBA staff *Clerk/Bookkeeper duty*	**28**	**29**	**30** How many gallons of water did you treat this month? _____ *WPO duty*		

NOTES:

DECEMBER

Su	Mo	Tu	We	Th	Fr	Sa
31					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
19	18	19	20	21	22	23
24	25	26	27	28	29	30

Gambell

DECEMBER 2023

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
					1 Submit your November preventative maintenance records to your assigned RMW *WPO duty*	**2**
3	**4** Pay November payroll & child support liabilities *Clerk/Bookkeeper duty* Take Coliform sample w/distribution residual *WPO duty*	**5** Submit the November Discharge Monitoring Report (if required) to DEC electronically through the NetDMR system *Responsible Official duty*	**6** Submit the November operator report to DEC *WPO duty*	**7**	**8**	**9**
10	**11** Check with DEC Drinking Water program to ensure all required samples have been completed *WPO duty*	**12**	**13** Monitor/maintain lift station *WPO duty*	**14** Have you backwashed the filter? *WPO duty*	**15** Have you reconciled the November bank statement? *Clerk/Bookkeeper duty*	**16**
17	**18** Check fuel levels and day tank in WTP *WPO duty*	**19** Have you tested the backup generator? *WPO duty*	**20** Clean & calibrate SCD & Turbidimeter *WPO duty*	**21**	**22**	**23**
24	**25** Christmas Day	**26** Submit the November meeting minutes and financial reports to RUBA staff *Clerk/Bookkeeper duty*	**27** Begin quarterly grant, IRS & Dept. of Labor reports *Clerk/Bookkeeper duty*	**28** Check chemical supplies/spare parts & re-order if needed *WPO duty*	**29** **Deadline to provide information to RUBA and RMW staff for Operations & Maintenance Best Practices.**	**30** How many gallons of water did you treat this month? _____ *WPO duty* **31**

NOTES:

JANUARY 2024

Su	Mo	Tu	We	Th	Fr	Sa
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

Contacts

Alaska Department of Environmental Conservation

www.dec.alaska.gov

Drinking Water Program	(907) 269-7656 Anchorage (907) 451-2108 Fairbanks (907) 262-5210 Soldotna Website: https://dec.alaska.gov/eh/dw/
Operator Certification Program	(907) 465-1139 Juneau (907) 465-5140 Program Manager: Martin Suzuki Website: https://dec.alaska.gov/water/operator-certification/
Capacity Development	(907) 269-7806 Capacity Development Coordinator: Theo Graber Website: http://dec.alaska.gov/water/technical-assistance-and-financing/capacity-development/
Remote Maintenance Worker Program	(907) 269-7613 Program Manager: Tammy Helms (907) 269-7605 RMW Program Coordinator: John Johnson (907) 842-3396 Bristol Bay Region (907) 442-7352 Kotzebue Region (907) 443-3294 Nome Region (907) 452-8251 Fairbanks Region (907) 543-6423 Bethel Region Website: http://dec.alaska.gov/water/remote-maintenance/
Domestic Wastewater Program	(907) 269-7681 Anchorage Website: http://dec.alaska.gov/water/wastewater/domestic/
Facilities Program Manager	Carrie Bohan (907) 465-5143

Department of Commerce, Community, and Economic Development

www.commerce.alaska.gov

Rural Utilities Business Advisor (RUBA) Program	(907) 269-5939 Anchorage Website: https://www.commerce.alaska.gov/web/dcra/RuralUtilityBusinessAdvisorProgramRUBA.aspx

How they can help

Drinking Water Program

- Answer contaminant monitoring and sampling procedure questions.
- Respond to complaints of contaminated or damaged public drinking water wells and watersheds.
- Provide monitoring, compliance, and enforcement information on public drinking water systems.
- Approve new public water systems and modifications to existing ones.

Note – always contact your Drinking Water contact person BEFORE making any modifications to your water system.

Domestic Wastewater Program

- Issue permits to discharge treated domestic wastewater and provide information on the appropriate permit for your facility.
- Provide technical assistance on permit-related treatment options.
- Provide technical assistance to operators to optimize wastewater treatment at your facility.

Capacity Development

- Assist water and wastewater utilities in acquiring the skills and knowledge to operate safely and protect the public health.

Operator Certification Program

- Provide information about system classifications, operator certification standards, renewals, and continuing education units.
- Notify operators about opportunities for training and certification exams and assist with resources to improve test scores.

Remote Maintenance Worker (RMW) Program

- Provide over-the-shoulder training and technical assistance to local water and sewer operators in rural communities through a circuit rider program.
- Provide immediate response to emergency situations that threaten or impact community water and wastewater facilities.
- Provide regional classroom training for area utility operators.
- Maintain an inventory of emergency repair equipment to lend to communities.

Rural Utility Business Advisor (RUBA) Program

- Provide managerial and financial training and assist your community with business planning for your utility.
- Provide an assessment identifying strengths and weaknesses of your utility.
- Develop a proposed work plan and work with your community to implement the plan.
- Provide technical assistance on managerial and financial management.
- Provide regional based utility management courses.
- Develop new management tools to assist your utility.

Photo Credit

January **Chalkyitsik** Alfred Withrow	February **Billy Westlock Memorial** Written by Bob White RMW YKHC Supervisor	March **Galena** Lee Meckel	April **Shane McIntyre Memorial** Written by Bob White RMW YKHC Supervisor
May **Hydaburg** Tanner Cote Steve Evavold	June **Eek** Bob White	July **Gulkana** Tanner Cote	August **Ouzinkie** Tanner Cote
September **Port Graham** Clay Cook	October **Adak** Theo Graber	November **Tatitlek** Matthew Russell Theo Graber	December **Gambell** Richard Kuzuguk

Appendix G

2023 Winter Issues

Alaska Remote Maintenance Worker Program
Department of Environmental Conservation, Division of Water
555 Cordova St
Anchorage, AK 99501
Main: 907 269-7605
Fax: 907 269-7509

Master Report for FFY23
Winter Issues

The following is a summary of water and sewer freeze-ups or issues that rural communities experienced from October 2022 to June 2023. The summary details the issue, the community response, and how the Remote Maintenance Workers assisted. These updates were compiled by DEC and our partners on a weekly basis during the winter and spring breakup season.

Bristol Bay Area Health Corporation (BBAHC) Region

- **New Stuyahok**- Ongoing leaks in the distribution system continue to cause significant water loss in the community. Some leaks have been found in the upper loop of the system, and it is assumed that there are additional unknown leaks in both the upper and lower loops because the wells are producing approximately 27 gpm and are still not able to fill the storage tank, making isolation difficult. Wastewater is backing up in the manholes in the lower loop of the system and being discharged under and around one home. Many homes in the lower loop are either missing arctic boxes or are in poor condition, and heat tape is not working. On November 15, BBAHC and DEC RMWs were onsite to assist operators with leak repairs. A portion of the water main that multiple abandoned lines were connected to was bypassed. On one abandoned connection, corporate stops were removed, and a power seal was put in place to eliminate the leak. Failed temporary repairs were replaced with permanent fixes on four residential homes in the lower loop. Replacement valves from ARUC were requested for the water treatment plant. On the home with leaking wastewater, the sewer lines sit at a lower elevation than the adjacent manhole, and one of the lines was open, causing the sewer leak under the home. The opening was capped off. The operator will need to snake and flush the lines from the lift station to this manhole to clear the blockage. On November 21, it was reported that the leaks had been repaired in both loops, the main repairs in loop1 had been backfilled, and both loops had water pressure restored. Special BacT samples will be taken next week for the removal of the Boil Water notice. RMWs will follow up after the Thanksgiving holiday to see if this work was completed. ARUC purchased supplies to construct 25 new arctic boxes and add working heat tape to prevent freeze-ups this winter. During the week of November 28, 2022, operators submitted the required BacT samples. Results were negative and are being submitted to ADEC for removal of the Boil Water Notice. The water storage tank was slowly gaining elevation at roughly 0.5 ft/day and had 7’ to reach normal operating status. The water storage tank rate of gain will be assessed to determine if there is a need to pursue a temporary connection of the new well drilled for the upcoming rebuild of the water treatment plant. Operators will continue to monitor the distribution system for new or previously unidentified leaks and make repairs as needed.

- **Manokotak-** The RMW received a call on February 22 from the operator informing him that the water storage tank level was low. The operator stated that the water table was low, and the well pumps were pumping intermittently. The following day the system lost pressure, and a boil water notice was issued. The operator shut off the water service overnight to allow the water storage

tank to recover, which helped. The community has continued this practice, which assists the aquifer in recovering. Historically, the community has experienced water shortages during the late winter and early spring from low water levels in the aquifer. A new well has been dug to address the issue and should be put into service soon. During the week of February 27 and March 6, the system continued to struggle with low well production. Local operators continued to shut off the water service to the community at night to fill the water storage tank. During the week of March 13, operators continued to shut off water service overnight to recover stored water levels. During the week of March 24, the community continued to manage the situation and will continue until spring thaw replenishes the aquifer.

DEC Region

- **Anderson**- Anderson's wastewater collection system is experiencing heavy groundwater infiltration. The infiltration levels fluctuate with the height of the groundwater, which is fed by the nearby Nenana River and the community is experiencing a period of high infiltration causing the lift station pumps to run continuously, increasing the risk of pump failure at a time of heavy demand. The operators and RMW are monitoring the situation and have spare parts and equipment on hand to service the pumps if needed. On January 19, the operator reported using his last rebuild kit and did not have a backup pump as it was damaged beyond repair. A new pump is approximately $10,000 and has an eight-week lead time. Adding a supplemental electric pump has helped the two main pumps in the LS wet well keep up with the flow. During the week of January 23, the Anderson operator reported water was coming out of the clean-out on Center Drive. Pumps were being used to reduce the influx of groundwater infiltration into the collection system. RMWs offered additional pumps and onsite assistance if needed**.** On February 2, the RMW supervisor and a VSW engineer traveled onsite to assist the community with the ongoing issue. RMWs traveled to Anderson on the morning of February 8 and began assisting city utility workers in a cooperative thawing effort. They thawed several hundred feet of collection line this week with all but four residential services now clear. The crew continues to work on thawing the remaining frozen service and main sections with help from RMW supplied equipment and a Vac-truck and Frost fighter heater loaned by the City of Nenana. After spending a week in Anderson helping the operators stabilize their system, RMWs returned to Anchorage and will continue to monitor the situation and support the operators remotely. The community has contracted with a service provide out of Fairbanks to assist with system flushing and lagoon reinforcement efforts. RMWs have sent additional equipment to Anderson to support their efforts. During the week of February 27, operators continued to flush service lines and thaw them as they occasionally froze. The system was flowing but still experiencing heavy groundwater infiltration. The RMW supervisor continued to be the point of contact to work with the community and local operators to monitor and support the remainder of the recovery effort.

- **McGrath-** On January 23, the City of McGrath reported losing over four feet of water overnight from their water storage tank. Locating the leaks has been difficult because of outside noise interference while using the leak detection equipment. They estimated they were losing about 69,000 gallons a day. The operator was working to repair a circulation pump in the water treatment plant that provides heated water to the circulating system. They do not have a backup pump and are waiting for a replacement. A teleconference was held on January 26 with the RMW and VSW programs in coordination with the McGrath City Council, city administrator, and local utility operators. The issues were discussed, and a priority plan was developed to assist the community. A DEC RMW planned to travel to the community the week of February 6 to assist with leak detection and repair efforts on the two main loops of the water distribution system. During the week of January 30, the RMW sent additional leak detection equipment to the community. The city needed to order the parts needed to make the repairs. Once the parts arrive, the RMW would travel to McGrath to assist with the repairs. Until then, he continued over-the-phone support to the operator. The water tank was holding steady at 16 feet. An issue that may slow the repair effort is the influx of spectators for the Iditarod that will run through the

community of McGrath the week of March 5. During the week of February 5, McGrath continued to be able to meet their water demands even with the leaks in the system. The community is currently using RMW supplied leak detection equipment to identify leaks and is waiting for 3" and 6" repair clamps to arrive. RMWs are scheduled to visit and assist with a leak detection and repair effort once the repair clamps arrive. The local operators were able to locate a repair a leak in the distribution system (approximately 60 GPM).

- **McGrath**- On April 20, the community reported a 200 gallon per minute water leak and was shutting down the downtown loop. They also stated they had the operators and equipment to make the repairs. The RMW assigned contacted the city and offered to provide assistance as needed. During the week of April 24, local operators were able to locate and repair the leak in distribution system.

- **Craig**- During the week of March 6, the community reported having issues with the filters in the water plant. The filter media was not allowing the operators to make clean water, which caused the water storage tank (WST) to drain completely, and a loss in pressure in the distribution occurred. The community went on a boil water notice (BWN). The operators were able to get two of the four filter trains cleaned and back online. The WST is currently at 4' and rising. Samples have been collected and submitted to lift the BWN. The community has also ordered new filter media to replace two filter trains. The community sent out notifications to minimize water usage until the storage tank reached the minimum fire suppression threshold of 20'.

- **Gulkana**- On November 29, the community of Gulkana reported a layer of ice at the top of the water storage tank, causing the tank level sensor to malfunction and the distribution circulation pumps not to kick on due to a false low tank level. The RMW informed the operator to make water to the level of the ice layer, which might help it thaw out. The RMW also informed the operator to run the distribution circulation pumps in hand mode until the level sensor is fixed. The RMW obtained the plans for the new tank heat exchanger and discussed this information with the operator. On December 1, it was reported that the issue had stabilized, and the local operator had replaced the transducer and was able to make water. He will attempt to install the tank heat exchanger with local help. On December 9, it was reported that the RMW had been in daily contact with the operator in Gulkana, providing over-the-phone assistance and encouragement. The operator had not yet installed the heat exchanger for the WST heat add. However, water circulates via a circ pump to help move heat through the system. The RMW may make a day trip next week if the operator requests assistance installing the new heat exchanger.

- **Gulkana**- On December 20, a DEC RMW was notified by the water operator there was a freeze in the transmission line from the water plant to the water storage tank. The heat exchanger for the tank add heat loop had not been operational. The operator was able to repair the heat exchanger, but the transmission line remained still frozen. The operator proceeded to jet the frozen line but was unsuccessful. The temperature in Gulkana were reported at -27, and temperatures were expected to drop to -45 during the week. On December 21, RMW assistance was requested to assist in thawing the line. The assigned RMW planned an emergency site visit to assist the community. Once onsite, the RMW was able to assist in thawing the transmission line. The Gulkana Village Council, Tribal Administrator, called the RMW Program Manager to personally thank RMW Tanner Cote and the RMW Program for the assistance stating, "Tanner has been an immense help and support to our community since he became assigned to our community... We cannot express our gratitude enough. Because of his quick actions none of the homes froze and we were able to get the plant running again".

- **St. George**- On October 23, the community partially lost water pressure to the upper part of the distribution system. The local water operator called their remote maintenance worker (RMW) and their drinking water representative at ADEC, and a boil water notice was reissued and posted by

the mayor. The RMW initiated an immediate repair response and began working closely with the operator and the mayor to troubleshoot the problem. Water was rotated through the distribution system by adjusting valves, so each part of town was supplied with water intermittently while the system was being repaired. A faulty well pump was identified as the primary issue, with a leak in the distribution system as a secondary issue. The operator, mayor, and several residents worked with remote assistance from the RMW to pull and replace the faulty well pump. The new pump was brought online, and water pressure was restored to Saint George on November 9. The city then used a leak detector sent out by the RMW program to find any secondary leaks. On November 15, a small leak in a 1" service line was identified, and the following day another distribution leak was found in the water main, which was repaired. Full flow and pressure to the Saint George public water system had been restored. The operator stated he would flush the system and submit three coliform samples for analysis to rescind the boil water notice.

- **Takotna**- On January 4, Takotna reported their well pump froze and broke. They replaced the pump with a new one, but it would not kick on. The operator troubleshot by checking all the lines and the power in lines. They narrowed down parts that might be broken and were working on replacing them. The RMW is continuing to monitor the situation and will provide assistance as needed. During the week of January 9, the parts needed to get the pump operational were ordered and received. The well pump is operational, in hand mode only, and the storage tanks are filled. The RMW will research why the pump is only working in hand mode and not auto and work with the operator to resolve the problem.

- **Tatitlek**- On November 12, the tribal administrator called the DEC RMW coordinator, informing him the community had less than 2ft of water in their water storage tank and had lost pressure to the upper services in the community due to a leak in the distribution system. The RMW assigned to the community was in contact with the local operator and was providing over-the-phone assistance. The operator was looking but had been unable to find the leak. The administrator stated they were requesting assistance and were looking into a disaster declaration. Later in the day, it was reported 22 cases of water were being distributed, and the community had crews walking around looking for the leak. On November 13, the water operator reported they had located the leak in the area of a housing construction site and were able to cap it off. They were making water and had 9 ft of water in the storage tank.

- **Glennallen**- On May 13, the community experienced severe flooding that affected their wastewater system. A sewer line that lays over the top of a large culvert was compromised and allowed water to seep out in the middle, eroding the ground around it away. Roughly 30' of the sewer line was exposed, with only the culvert to support the line causing the line to sag and deflect, pulling the joint further apart. An RMW traveled to Glenallen on May 15 to assess the situation and formulate a plan. The following day, with additional RMW support and local operators, the sewer line was lifted with an excavator in hopes of repairing the line. Unfortunately, the line was deemed too unstable for work to continue, and a temporary "band-aid" repair was made on the leak to slow down the flow.

Maniilaq Region

- **Kiana**- During the week of January 2, Kiana reported that the return side of the well intake line froze, causing a loss of circulation between the water treatment plant and the pump shack. The supply side of the circulation loop did not freeze, so the RMW team instructed the operator to shut off one well pump to reduce the flow rate from the two wells. They also reduced the flow to match the demand from the community, which will keep water flowing through the line and hopefully last through the rest of winter.

- **Buckland**- The treated water storage tank is currently down to half a foot of water, and the community is on a water conservation notice. The shortage was caused by a recurring issue with Manganese sludge buildup in and after their static mixers causing low and restricted flow through the filters. During the week of February 27, local water plant operators were jetting the intake plumbing and static mixers to restore full flow capacity but were having trouble finding the source of the obstruction. An RMW was en route to help the operator address the issue. On February 9, an RMW was on site to troubleshoot the issues with the water plant operator and discovered the contact tank was completely clogged with iron and manganese. They removed the contact tank and installed a pipe bypass, which addressed the water issue. Additionally, they doubled their filtration GPMs from 11 to 22, thus resolving the issue.

- **Ambler**- On March 11, it was reported flush hydrant had failed in Ambler, causing half the water storage tank to drain. Operators were able to locate the leak; however, making the repair requires digging. Equipment issues were delaying the ability of the operators to fix the issue. The RMW sent repair clamps needed to address the leak and a new generator to allow the jackhammer to function properly. The issue affects roughly half the customers along with the clinic. As a precaution, a Boil Water Notice was put in place. During the week of March 24, local operators were able to fix the initial leak on the flush hydrant. However, additional differential movement of the water main caused leaks on the other side of where the repair was done. Ultimately three different repairs on flush hydrants were needed and were completed.

- **Kivalina**- On March 28, the Maniilaq RMW program was notified that the heater that keeps the transfer pump thawed in the raw water tank was not operational, which caused the draw line from the raw water tank to freeze, and the community was out of water. The operator removed the burnt-out heater and installed two electric heaters. He also reset the heat trace breaker to the heat trace to thaw the frozen section of the line and start treating water again. The RMW provided remote assistance as needed. A Boil Water Notice was in effect until adequate pressure was restored, the water system was able to meet treatment requirements, and satisfactory total coliform results were received.

Norton Sound Health Corporation (NSHC) Region

- **Elim**- On December 23, the Elim operator contacted the NSHC RMW to report the sewer outfall froze, causing the manhole to leak. After discussing the issue with the operator, a jetter line and nozzle were sent to the community. During the week of January 9, it was reported that the water operator was able to jet the sewer manhole to increase flow to the outflow to resolve the issue.

- **Gambell**- On January 19, the NSHC RMW reported AVEC's power plant in Gambell was experiencing major issues, and all their generators were down. The backup generators at the WTP and well house are not working. Service lines are starting to freeze up. NSHC has sent out two 3000-watt generators to keep the circulation pumps running. During the week of January 23, it was reported that the water main loops were thawed and flowing, and the operators were working on thawing service lines. The power is on but not reliable. The City of Gambell approved the purchase of a backup generator for the water plant. This will prevent future issues from loss of power.

- **Gambell-** On February 11, Gampbell experienced a power outage resulting in a loss of flow and pressure in the distribution system which caused three service lines to freeze. A boil water notice was issued by DEC and an RMW responded. Two of the three individual services were thawed and service restored. The third service line was connected to a vacant home and had been isolated from the system. After the operator and RMW restored flow to the service lines the community took and submitted the required three distribution water samples.

- **Koyuk**- On April 21, the NSHC RMW reported the lift station was starting to overflow. The issue might be related to the freeze-up with West loop, and Merbok Storm event. The operator reported jetting efforts had failed due to the negative angle of the manhole. The RMW program sent out an Evenflo submersible pump with 200' of camlock flex hose to pump out to the creek from the lift station. Unfortunately, the sludge tanker, which would normally be used to resolve the issue, is buried in snow. On April 24, it was reported, the community was able to use the Bobcat to dig out the vacuum truck and haul five loads. Additionally, they pulled the pump from the wet well and found a 2" pipe from the main broke off. Operators used equipment the RMW program sent out to fill a 250 gallon tank and wash the wet well and remove the sludge. On April 27, the lift station pump had been restored and is no longer an issue. However, the manholes were still frozen, and operators were addressing the problems with a limited water supply. During the week of May 1, sewer main jetting operations resumed. During the week of May 8, the local operator reported all manholes in Koyuk were no longer overflowing. They did a minor repair on the lift station pump (cracked housing), and the lift station was back to normal operation. Crews were working to jet the sewer lines within the manholes, as well as resident lines to the sewer mains and the issue was no longer considered an emergency.

- **Unalakleet**- On May 3, the Unalakleet operator reported sewage overflowing from a manhole in the community. It appeared to have been overflowing for some time but had gone unnoticed until the spring thaw uncovered it. During the week of May 8, the community reported that the manhole was no longer overflowing.

- **Koyuk-** During a shutdown for a leak repair effort in mid-February, the West distribution loop froze. RMWs responded by sending out jetter hoses, and nozzles, and the operators were working to thaw the lines. During the week of February 27, operators continued thawing efforts with RMW supplied equipment, but the city halted the effort due to budget concerns. They decided they would wait until spring for the lines to thaw. In the interim, they implemented a water haul system to supply the affected residences with fresh water. During the week of March 6, the RMW attempted to travel to Koyuk but was delayed due to weather. The RMW spoke with the operator over the phone, and he stated they are making significant headway with the jetting operation and repairing leaks from the frozen lines. They requested another jetter, which was sent out of Nome, along with nozzle kits and extra garden hoses. During the week of March 24, the community continued with jetting and repairing lines on the west loop. Additionally, they had a large leak on the east loop; however, operators were able to find and repair the leak. NSHC held a meeting with the community on March 28. The community reported the bobcat they were using to dig was not functional. They have been using a jackhammer to dig in order to make the repairs. RMW's were continuing to monitor the situation. During the week of April 3, the community reported there were three new freeze-ups on the east loop due to a new leak. The heavy equipment needed to make repairs to the system was not working due to the cold weather. Additionally, parts were needed for the Bobcat. The mayor and council were willing to consider the option of waiting for warmer weather to clear the west loop due to continual refreezing and financial exhaustion. Local operators had been working nonstop to restore the domestic water mains. The mayor was meeting with the water operators to get a consensus on the council's direction. RMWs have provided leak detection equipment and jetter equipment to utilize for their efforts. During the week of April 10, the community reported no change in frozen mains. They were still at a standstill due to freezing temperatures. They did report getting the Bobcat running, so once temps warm up, they could begin digging to locate and repair the leaks in the main. The East loop was still on Boil Water Notice, and service lines were starting to freeze. During the week of April 17, the community reported they were able to dig out the pipe and repair the leak. They also repaired another service line leak involving the Norton Sound House property; at the service line, the operator suspected the leak was on the return of the service line. The service line was shut off until work weather was favorable. Another leak involved a fire hydrant; a jackhammer was used to dig out the area and repair that leak. The West loop was still considered an issue, however, the tank level was at 4.5psi,

with approximately 11' of water. During the week of April 24, the operators were jetting the water transmission line from the Oksinaluk well, which has a transmission line of 1.3 miles. NSHC sent fifty, five-gallon buckets with lids to support the water haul efforts. The NSHC RMWs continued over-the-phone assistance and equipment support for the operators in Koyuk. During the week of May 1, the operator reported that the Oksinaluk well transmission line had been cleared and water was flowing to the tank. They resumed jetting operations on the West loop. During the week of May 8, the Oksinaluk well was pumping 3,000 gallons per day, and the water storage tank was gaining capacity. Once crews finish jetting the sewer lines, they would begin jetting the West loop water main. During the week of May 14, jetting was ongoing for the West loop. Unfortunately, new leak was discovered on East loop water distribution line. RMWs were assisting with supplies needed to make repairs to the East loop. WST level was at 10.5', and well depth at the plant was at 22'. During the week of May 22, the NSHC RMW program provided the community with a leak detector and local operators were able to repair the leak of the East loop. Operators continued to make progress on the West loop. The water storage tank was gaining water.

- **Teller**- On April 17, the City of Teller notified the RMW program that the water storage tank was out of water. The mayor had the city fire truck, carrying 800 gallons of water, transfer water to residential homes with onsite storage tanks. Because this required drop pumps to transfer the water into the houses, the Norton Sound Health Corporation assisted with transfer pumps and other necessary equipment. On April 20, the RMW reported the community planned to transfer water to haul trucks directly from the coyote well house; then, the water would be delivered to residents, the clinic, and the school. NSHC initiated supplying an emergency water supply. During the week of April 24, there were no major changes on the issue. RMWs continued to provide remote assistance to the community. During the week of May 1, the assigned RMW reported the community continued to haul water directly from the Coyote Creek wells through supplies provided by the NSHC RMW program. The operator stated that without filtration at the water plant, the water source was aesthetically unpleasing due to the taste of sulfur. The community's preferred water source for drinking is directly from the creek, hauling ice or clean snow melt. Residents had the option to use the Coyote source for washing. DOT initiated two operators to assist with clearing the highway to Cape Wooly. A bottled water effort for the community was underway. During the week of May 8, the community reported that the water haul and flatbed truck continued to be used to haul water from the Coyote Creek Wells with the flush line set up. The Teller Highway had been cleared up to a clean snow source. Some residents continued to get water directly from the creek. Highway clearing efforts were up to mile 21, also known as Hightop Cripple. Residents in need of water had help from the community and local employees. During the week of May 14, there was no new information to report. During the week of May 22, the community reported water haul was ongoing. The transmission line was scheduled to be inspected in the future with the hope to resume fill and draw of the tanks.

- **Brevig Mission**- On May 17, the local operator notified the NSHC RMW Program that sewer was coming out of the drain field. It was also reported the previous operators were unable to remove enough sludge the last time they cleaned the line due to the vacuum truck smoking from an unknown cause. RMW staff advised the operator to look at the vac truck and see if they can get it operational to pump down the sludge and get the drain field flowing. The RMW will continue to monitor the situation and provide further assistance if needed. During the week of May 22, the local operator reported that he was instructed to service the water service lines before addressing the drain field overflow. There was concern about pumping into the other cell, because it might clog up the other cell.

Tanana Chiefs Conference (TCC) Region

- **Beaver**- On December 22, TCC RMWs were informed that the water treatment plant and sewer system in Beaver had frozen due to power outages and issues with their fuel. Community staff

reported they have the situation under control but may need assistance based on what they find once the system thaws. During the week of December 26, RMWs traveled to the community to provide assistance, however, the operators were able to get the sewer thawed and the water treatment plant back online prior to the RMWs arrival. The RMW reviewed the plant with the operator and began working on faucet replacements to address their lead and copper exceedances.

- **Birch Creek**- On December 21, the Birch Creek tribal administrator, who was not in the community, reported she had received an email informing her that the raw water transmission main in the community had frozen. TCC RMWs attempted to call the community, but the phone lines were down in Birch Creek. Additionally, they emailed the operators asking for an update on the frozen main. On December 22, the phone lines were restored, and RMWs attempted to call the operators. However, they were unable to get ahold of the operators via email or phone. They planned to continue attempting to contact the operator to determine if any further response is needed from the RMW program. During the week of December 26, RMWs could not contact the operator in Birch Creek. However, community members reported that the water transmission main was still frozen. Temperatures in the region had warmed up, and RMWs were waiting to see if the glycol line was able to thaw the transmission main. It was reported there is no way to steam the transmission lines as there are no flush points along the transmission line. RMWs continued to attempt to contact the operator and determine if an RMW response was needed. During the week of January 2, RMW was able to contact the tribal administrator who had recently traveled to Birch Creek. The tribal administrator informed us that the operator was able to thaw the transmission line via the heat trace.

- **Chalkyitsik**- On November 14, the TCC RMWs were informed that the community had run out of water, draining approximately 50,000 gallons over a week. The backup water operator was under the impression he would be able to make water and get the system back online. Since the initial report, RMWs could not get an update from the community or operator until November 17, when the community responded, stating they were able to start making water. RMWs will follow up with the community on why they experienced the initial water loss.

- **Hughes**- On January 10, TCC RMWs were informed by the new Hughes operator that the water in the taps was discolored. After having group calls with ANTHC, and the operator, it was determined that the water treatment plant is not injecting chemicals. The operator was not able to rectify the chemical injection and requested RMW support. RMWs could not confirm seats on the airlines until January 23. Until then, RMWs will continue to provide over-the-phone assistance to the operator. During the week of January 16, the assigned RMW continued to maintain communication with the Hughes operator and assist him in finding the parts needed to make the repairs. RMWs arrived onsite on January 23 are were providing training to the operator and backup operators on water system operations and maintenance. Additionally, RMWs are assisting operators with mixing chemicals and understanding their injection process.

- **Huslia**- On January 8, TCC RMWs were informed there had been an issue with the community's power grid which took out their add heat VFD, causing the boiler circulation loops to stop working. The community set up electric heaters to keep the plant warm until RMWs could arrive onsite. Once the RMW arrived, he was able to get the pumps to work by bypassing the VFD. RMWs are continuing to look into long-term solutions, which will likely include replacing the VFD.

- **Northway**- On December 21, the TCC RMW program was notified that due to the extreme cold weather the raw water transmission line had frozen. The RMWs traveled to the community and assisted the operator in thawing efforts. The transmission line was thawed and the system was functioning normally again.

- **Nulato-** On November 6, the community reported there had been an electrical surge that knocked both wells, and multiple circulation pumps offline. Additionally, they reported that the boilers were offline and were concerned the water system could freeze. The following day, Nulato chartered a flight and brought out two electricians to work on the electrical systems. On November 8, an RMW traveled to the community to provide assistance. It was determined one of the transformers was bad, and the electricians were working to repair it. The RMW assisted in bringing two drinking water wells back online in manual mode, getting the water treatment system running on generator power until the electrical grid was repaired, and getting one of the boilers back online. Parts were ordered to bring the second boiler back online. In addition, the control panel for the wells was damaged during the power surge; the operator had ordered a replacement panel. During the week of November 14, one of the boilers was still nonfunctional. The wells were being run manually via generators. The electricians hired by the city determined that there were issues with the AVEC grid that needed to be repaired. The AVEC grid needs to be inspected and repaired before the wells can be taken off generator power. ANTHC, VSW, and TCC planned a meeting on November 18 to discuss whether the power line carrier controls for the well could be repaired or need to be replaced. During the week of November 21, it was reported one of the boilers was still having issues, but the second boiler was operating properly. The water treatment plant had been reconnected to the AVEC power grid. However, the well was still being operated in hand mode due to issues with the control systems. Coordination efforts were underway with the community, ANTHC, and VSW to repair the damaged control system to allow it to operate in auto mode.

- **Rampart**- On November 4, Rampart contacted the TCC RMW program to report that their sewer froze between their holding tank and the lagoon. They also reported the raw water transmission line wasn't flowing. However, the operator was confident he could get that back online. On November 9, he was able to get the water transmission line thawed and was able to make water again. Additionally, ANTHC staff were onsite to assist with the sewer issue. During the week of November 14, the operator attended an in-person TCC sponsored pumps and pump controls training. During the week of November 21, an TCC RMW traveled to the community to assist the operator in making the final repairs to the system.

- **Venetie-** On March 20, the local operator informed TCC RMW staff that the school had run entirely out of water due to a leak at an unknown location. From Mid-February to Early-March, the water utility pumped approximately 94,000 gallons of water to the school. The utility had stopped pumping water to the school due to the high water usage, which the utility believes contributed to the failure of one of their pressure distribution pumps. ANTHC assisted the community with securing a replacement for the pressure pump. On March 21, it was reported the community had reconnected the school water, and coliform samples were submitted to DEC.

- **Minto**- On April 6, the community reported the sewer line on main street had frozen. The community's steam truck had not arrived yet, so they were hiring a local pumping company out of Fairbanks to assist them. The RMW team assessed the situation and assisted as requested by the community. On April 8, The community reported the sewer line had been thawed, and the system was functioning normally.

- **Galena-** On April 17, TCC RMWs were informed by the city manager that the two wells on the city water treatment plant had stopped working and the community had approximately four feet of water in the tank. RMWs discussed the issue with the operator and diagnosed that one well motor burned up and one transmission line was frozen. The DEC Drinking Water Program approved hauling water from the old military treatment plant. Additionally, two RMWs traveled to the community to assist the operator in recovering the frozen transmission line. By the end of the day, had thawed over half of the transmission line. On April 21, the operator, with the support of the

RMW program, were able to get one of the wells producing water again. An RMW will make a return trip to continue work to bring the second well back online.

- **Circle**- During the week of May 14, the community experienced severe flooding. TCC RMWs were onsite May 18 to evaluate the extent of the damage and assist in bringing the system's well back online. A Boil Water Notice was issued. On May 19, it was reported the RMW assisted in getting the well and water treatment plant online. The pressure pumps were running however, they were submerged, and it was anticipated they might fail. A TCC RMW was onsite May 25, to check on the system and ensure it was still functioning correctly. Quotes and a list of replacement pumps were being developed for when the flood damaged pump motors eventually fail.

Yukon Kuskokwim Health Corporation (YKHC) Region

- **Alakanuk**- On December 26, the community lost the boiler heat overnight. The RMW noticed the outage via remote monitoring and notified the community. The community was able to get the boiler back up and running. However, after the issue was identified, they discovered vacuum on the downtown line was lost, and they had a really low return temperature on the glycol heat trace. They have increased the heat to the heat trace and are heating the valve boxes along the vacuum line to thaw it. The RMW program is continuing to monitor the issue and provide assistance as needed. During the week of January 2, YKHC RMWs provided over-the-phone assistance, which resulted in the operator being able to thaw the system.

- **Atmautluak**- On January 24, the community reported the sewer line from the water plant to the lift station had frozen. RMWs worked with local operators to develop a response plan to thaw the pipe. During the week of January 30, the community was able to thaw the sewer line with heat tape and the system was operational.

- **Crooked Creek-** On November 28, a power generation issue in Crooked Creek caused the community to, among other things, stop producing water. This has been an ongoing issue for at least a week. The main generator at the power plant needs new injectors. A mechanic went out on November 25 to replace them but discovered that the replacement parts were wrong. The correct parts could not be located in Alaska and had to be ordered from out of state. The mechanic was trying to clean and reinstall the old injectors so they could switch back to the main generator while waiting for the parts. The power plant has two smaller backup generators, but one has been disassembled and was not operational. The other is too small to hold the whole town. Five homes, the post office, and the phone system did not have power. The school was running off its backup generator. The RMW assisted the operator remotely in setting up a bypass to keep water pressure in the loop to the school. On November 30, it was reported power had been restored, and water was back to normal production.

- **Crooked Creek**- On December 24, the power generator shut down overnight, causing the water plant to lose power. When the water plant operator got to the plant, it was below 30 degrees. The RMW provided the operator with remote assistance in getting the boiler going and heat on in the plant. With the assistance of the RMW program, the community was able to save the water plant from any damage. However, the water line to the school froze during this time. The water plant operator turned on the electric heat trace on the school water line. The generator was still having problems, and the community was waiting on parts to solve the problem long-term. During the week of January 2, the operator returned to the village, and it was expected that with the warmer weather and the heat trace, the water line would thaw. During the week of January 9, the community reported everything had returned to normal operations, and the school line thawed and was back in service.

- **Crooked Creek**- The community has had issues with the power generation equipment over the last few months. As of January 16, the community power system was down. The water plant was being kept warm by the boiler and circulation pump running on a single-phase generator. It was unable to run the three phases required for the plant to be able to make water. It was reported they had about one day of water left in the tank. A meeting was scheduled to be held on January 18 between many agencies to address the issue. No parts have arrived for the generator; however, an electrician was on site and was able to get the generator running. The water plant had power for five hours. Unfortunately, they could not make water because the well line was frozen, and the heat tape did not thaw the line out until right before power was lost again. The needed parts for the power plant were expected on January 20, but no mechanic was scheduled to fly in to do the installation. The village operator was going to attempt the repair, and RMWs were standing by to assist as needed. During the week of January 23, the parts arrived for the power generation equipment and both generators were repaired. All power service had been returned to normal, and the water plant was producing water.

- **Hooper Bay**- On January 23, the community reported the power plant shut down for multiple outages over the course of three days. It was unclear whether it was line or generator related as there had been high winds. The outages caused damage to at least one city building as the boiler went out. It also damaged the waste heat system. Several city buildings, including the water plant, utilize the waste heat. The city is low in fuel in several of its tanks but plans to acquire more. YKHC RMWs were communicating with the community to find out how extensive the damage was and provide any needed assistance. On January 30, the RMW program reported the community was able to thaw the system due to the power outage. The water and sewer system is now fully functional.

- **Kongiganak**- On December 23, the community reported that the back door of the washeteria had been kicked in and was left open all night, causing a freeze-up in the washer water piping and attached apartment. The piping has been isolated, and a YKHC RMW was onsite working with the operator to bring full function back to the washeteria. On January 4, the operators had a backup at the washeteria drain. YKHC RMWs provided over the phone and had the operator check on the end of the pipe to see if it was frozen, which is a common problem on this system. They were also checking other locations in the line to figure out if it was just a location freeze or a total line freeze-up. The RMW program continued to monitor the issue and provide assistance as needed. During the week of January 9, operators were able to isolate the problem, thaw the sewer line, and make temporary repairs until permanent repairs could be made in the spring. The system is now operational.

- **Mountain Village**- On December 20, the Mountain Village water operator reported a break in the line at the "Cannery Well" and a frozen pipe in the middle pump house. The two issues drained the lower loop and caused a stop in circulation. A YKHC RMW made an emergency trip to Mountain Village and repaired the broken pipes. Additionally, a parts list was created so long-term repairs could be made to prevent the issues in the future.

- **Newtok**- On January 27, the Drinking Water Program was notified that the Newtok generator had burned and deemed a total loss. The school had no power and was closed. DEC staff made contact with the school principal. She stated that the town was using what little water was in storage tank, and pipes were being drained to prevent damage. On February 3, it was reported the community was producing water for residents; however, the school continues to be without power and water service.

- **Mountain Village**- On March 13, YKHC RMWs were notified that the wells had been unable to keep up with the community's water use. RMWs were planning an emergency visit to assist in hooking up a river intake line to keep the system from freezing due to lack of circulation. A

significant leak had been found, and local crews were working to repair it. DEC Drinking water was notified, and a Boil Water Notice was issued. During the week of March 24, an RMW traveled to the community to assist in repairing a large leak on the school service line. The repair allowed the community the ability to start building the water level in the tanks even with the well cavitation. The river line connected; however, they have not had to turn it on yet. The community will try to operate the rest of the season without the river pump, but it is ready if needed. During the week of March 27, the line repair had stabilized and allowed the tanks to refill.

- **Chevak**- On March 13, YKHC RMWs were notified the lagoon had been breached. It was a partial breach, with sewage leaking through a tunnel created through the wall of the lagoon. The berm had not completely collapsed, but it had lost significant material. It had been estimated approximately 500 cubic ft of material had been lost from the berm. The community was waiting for sandbags to arrive and was looking for a location to obtain thawed sand. During the weeks of March 20th and 27th, due to weather issues, the community continued to wait for the needed supplies. During the week of April 3, the supplies needed to make the repairs were received; however, recent storms had buried the berm breach, and crews were waiting for the storms to stop to clear the snow and make the needed repairs. During the week of April 10, due to continued winter storms and cold weather, the community decided to wait until after the ground thaws to address the sewer lagoon breach, as there is no usable sand source until after the sand thaws in the spring.

- **Nunapitchuk**- On the evening of December 9, the community reported an oil spill at the water plant, approximately 50 feet from the well. The spill was caused by vandalism. An estimated 50-100 gallons were spilled. The community was able to stop the spill, reattach the oil line, and get the heat back on in the water plant. The spill was contained, and DEC Spill Response was notified. Later in the week, more information was received from the community concerning the spill. It was clarified that the spill was estimated to be 25 gallons.

- **Tuluksak**- On November 28, 2022, it was reported the Tuluksak power plant had a generator failure, and the backup generator was not able to be turned on as they had a mechanic tearing it down for major service. The RMW program was notified because the power outage would be a prolonged outage and could cause the water system to freeze. The RMW contacted the water plant operator for an update on the situation. It was reported a temporary generator and heater had been brought to the water treatment plant, but it was only heating the building. Two YKHC RMW traveled to the community to assist the operator in saving the water system from freezing and establishing some sort of protection for the tank and distribution system. The RMWs were able to wire in an 8000-watt temporary generator to run the boiler, heat circulation pumps, lights, heat tape, and well pump. Additionally, they bypassed the filter and used the well to restore pressure in the system and keep it circulating. Water service was restored late in the evening. The washeteria experience some freeze-up damage as it had no heat for an extended period of time. The valves to the building were closed off to prevent any further water damage. On November 30, it was reported the power had been restored.

- **Tuluksak**- The RMW received a call from the water plant operator on February 13, who reported a leak in the distribution system, and only 1.5 feet of water remained in the storage tank. The RMW instructed the operator to isolate the distribution system, fill the storage tank with water, and then walk the distribution lines to look for visible signs of water. When the operator was unable to find any sign of water on the surface, the RMW traveled by snow machine to Tuluksak. After charging the distribution system, the operator and RMW were still unable to locate the leak but were able to narrow it down and isolate that section of the distribution system, thus containing the loss. RMWs worked with the school in the affected area and set up a water haul system to allow them to charge their water storage tank from the water plant and operate as a closed system. During the week of February 20, RMWs continued to assist and monitor the situation. The RMWs

and city were working to secure larger transfer pumps and a 2000-gallon storage tank to allow the school to fill its tanks less frequently. During the week of February 27, it was reported the community was still experiencing challenges with the temporary haul system, and RMWs were working to acquire better equipment to make the process easier. They continued to work on the leak detection efforts. During the week of March 6, the YKHC RMW program was working to mobilize equipment via the ice road to support the leak repair effort. During the week of March 24, it was reported the issue had stabilized. The school was doing well with the water haul system. They had received a new truck to haul water with. After the end of the school year, there will be an effort to locate and repair the leak.

- **Tuntutuliak**- On January 4, the community reported the well would not pump water. The RMW worked with the operator over the phone to test the controls and found they had a short on the pump wiring. The operator planned to pull the pump to redo the wire connection. The RMW program continued to monitor the issue and provide assistance as needed. During the week of January 9, two YKHC RMWs worked with the operator to troubleshoot the pump and locate a new one for the community to purchase. The RMWs will assist the operator with installation when the pump arrives. During the week of January 16, no updates were reported. The new pump arrived during the week of January 23; however, it did not contain the proper supplies to make a waterproof wire connection. The RMW program coordinated with the tribal council and a local vendor to pay for and secure the connection supplies needed for the new pump. The operator was hopeful the supplies would arrive by Friday, January 27. Once the operator had the supplies on hand, he planned to pull out the existing pump and replace it promptly while there was a break in the extreme temperatures and wind chill. During the week of January 30, the needed supplies arrived onsite. The operator was pulling out the existing broken pump and replacing it.

- **Kongiganak**- The community reported their raw water fill pump was damaged in a trailer accident, but parts had been ordered to fix the pump. RMWs were sending out a temporary replacement electric pump allowing the community to refill their raw water tank and continue making water uninterrupted. During the week of February 27, RMWs were on site and working with the operator to set up a pumping operation to start filling the raw water tank. On March 2, the RMW was on site and assisted in repairing and cleaning an older pump, then helped arrange the use of a hose from a neighboring community and the local school so that they could pump water from a nearby lake. The DEC Drinking water program was contacted for permission to pump from an alternate location, which was approved pending the posting of a Boil Water Notice. The community has pumped enough water to make it past break up when they can refill the tank.

- **Chefornak**- On March 13, Chefornak reported that their distribution system had frozen and requested jetting equipment to thaw it. RMWs shipped the requested equipment, and the operators began thawing and recovering efforts. During the week of February 27, the community reported they were experiencing jetter equipment failures during their thawing effort. RMWs were working to send out replacement equipment. During the week of March 6, response to the issue was ongoing. Local crews had the downtown portion thawed and circulating and were working their way through the system, thawing and looping the circulation to keep it from refreezing. During the week of March 13, the thawing effort was ongoing, and the community reported they were making progress in the effort. On March 23, an RMW arrived onsite to repair the jetter and assist with the thawing effort.

- **Napaskiak**- On May 11, the local operator reported that due to a generator fire at the Napaskiak Power Plant, the electrical supply to the village was damaged and left the water plant without power and unable to make water. However, they were delivering the water left in the tank in rationed quantities. The assigned RMW had been in communication with the community and had reminded them of the location of a backup generator and requested they move it to the water plant

so he could assist them in hooking it up. On May 18, it was reported the power was restored and systems had returned to normal operations.

- **Chefornak**- On May 17, the local operator reported the water distribution system was frozen. The YKHC RMW program was providing remote assistance. Local response was ongoing. Operators have the downtown portion thawed and circulating. They were working their way through the system, thawing and looping the circulation to keep it thawed. During the week of May 22, the system returned to normal operations.

- **Red Devil**- During the week of May 14, YKHC RMW staff were notified that the Kuskokwim River breached its banks and flooded some residential wells. In 2022, during a flood occurrence, a YKHC RMW traveled to the community and instructed several homeowners on well disinfection. This year, YKHC sent well disinfection instructions and chlorine to assist homeowners in disinfecting their wells, and an Environmental Health Officer Program was responding to check homeowner's needs. During the week of May 22, it was reported that the flood waters had receded.

- **Crooked Creek**- During the week of May 14, the Kuskokwim River breached the river banks and flooded the lower parts of the community, flooding several residences. The water has covered two private wells but did not affect the community water source. A YKHC RMW called and discussed the flood issues with the operator; no assistance was requested with the water system. The water system did lose pressure at the school briefly, triggering a Boil Water Notice as a precautionary measure until samples were taken. The two private wells owners were being offered assistance through the YKHC Environmental Health Officer Program with education about well disinfection after a flood. YKHC pre-emptively sent bottles of drinking water in the event they are needed. During the week of May 22, the community reported flood waters had receded and YKHC passed out flood information and chlorine to the owners of the two affected wells.

- **Russian Mission**- During the week of May 22, the lower part of the village was flooded under a couple of feet of water covering the runway and affecting a few homes in the lowest part of the village. The flood also rose above the floor level in the lowest lift station. YKHC RMWs were waiting for water to drop to assess the damage. During the week of May 29, it was reported the flood water had receded, however, the RMW was having difficulty contacting the operator to get a status update and determine if an onsite visit was necessary. On June 8, it was reported that the lift station was functioning normally.