



# STATE OF ALASKA

Department of Environmental Conservation

Triennial Capacity Development Report to the Governor

State Fiscal Years 2021 – 2023

October 2023



For more information or additional copies of this publication, contact:



Capacity Development Program  
Department of Environmental Conservation  
555 Cordova St  
Anchorage, Alaska 99501  
907-465-5066

This report satisfies a requirement of the Safe Drinking Water Act in which states must produce a report for their governor on the effectiveness of capacity develop efforts.

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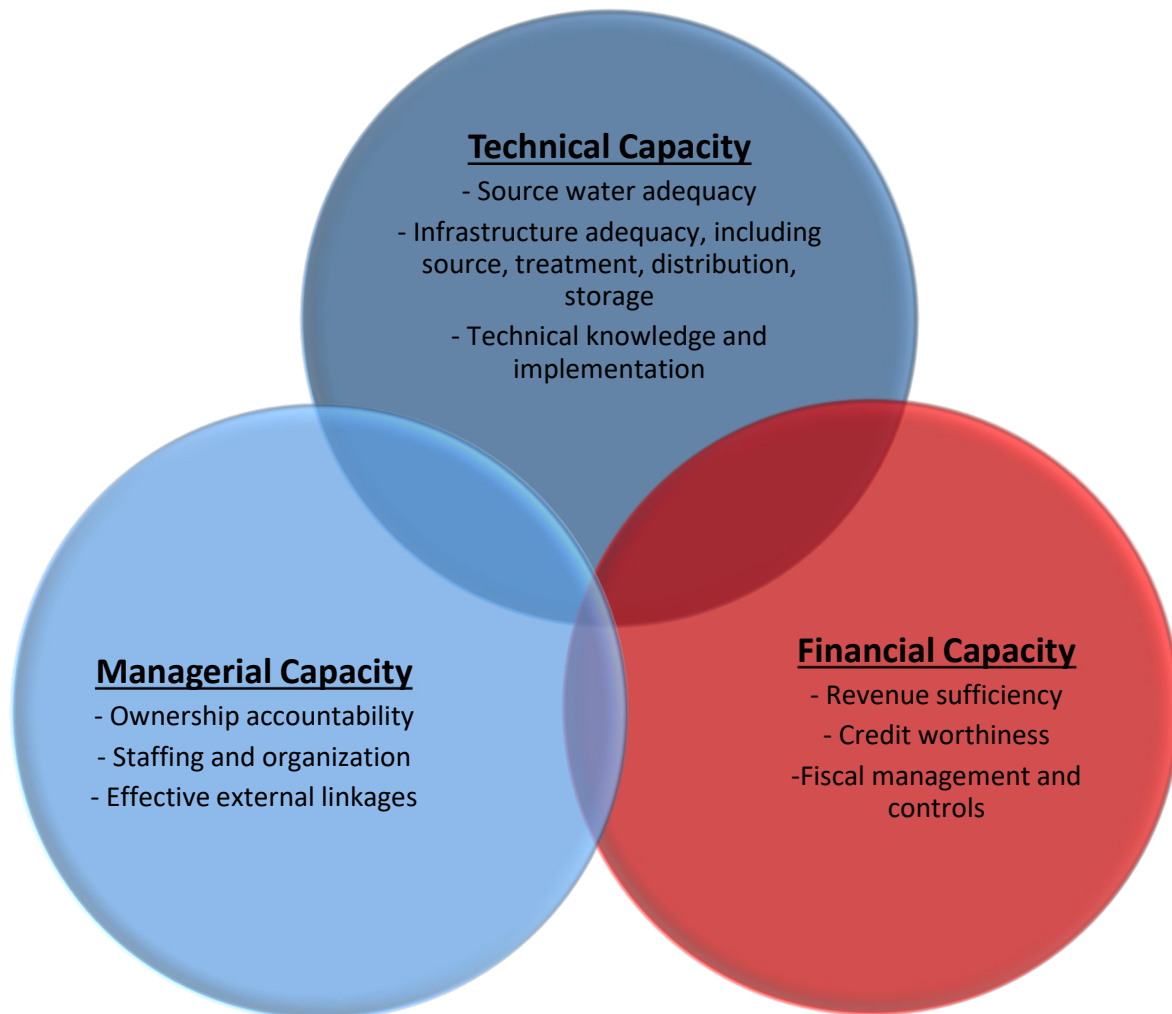
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## INTRODUCTION

This report is the triennial Report to the Governor prepared by the Alaska Department of Environmental Conservation (DEC) as required by the provisions of the federal Safe Drinking Water Act (SDWA). In accordance with Section 1420(c) of the SDWA, Alaska is required to develop and implement a capacity development strategy to assist public drinking water systems in acquiring and maintaining the capacity to reliably deliver safe drinking water. Capacity development is the dynamic process through which systems can enhance their capacity. The three elements of capacity - technical, managerial, and financial (TMF) - are the interrelated processes required to achieve and maintain long-term sustainability and to ensure consistent compliance with the SDWA.

**Figure 1. Technical, Managerial, and Financial Capacity**





<b>Technical capacity</b>	The physical and operational ability of a public water system to meet SDWA requirements.
<b>Managerial capacity</b>	The ability of a water system to conduct its affairs in such a manner to achieve and maintain compliance with SDWA requirements, including the system’s institutional and administrative capabilities.
<b>Financial capacity</b>	The ability of a public water system to acquire and manage sufficient financial resources to allow the system to achieve and maintain compliance with SDWA.

Congress established the goals of the capacity development program in 1996 with the following statutory requirements for states:

- Ensure that all new community water systems and nontransient noncommunity water systems demonstrate technical, managerial, and financial capacity for each National Primary Drinking Water Regulation (§1420(a)).
- Develop and implement a strategy to assist public water systems in acquiring and maintaining technical, managerial, and financial capacity (§1420(c)).
- No assistance shall be provided to a public water system that does not have the technical, managerial, and financial capability to ensure compliance with requirements of the SDWA (§1452(a)(3)(A)(i)).
- No assistance shall be provided to a public water system that is in significant noncompliance with the requirements of the SDWA (§1452(a)(3)(A)(ii)).

Working within this framework, the goal of Alaska’s capacity development strategy is to improve the capabilities of public water systems throughout the state.

The following report documents the efficacy of Alaska’s capacity development strategy, and the accomplishments, improvements, and challenges that DEC has experienced in the past three state fiscal years (SFY) (July 1, 2020 – June 30, 2023).

## Alaska’s Capacity Development Program

The U.S. Environmental Protection Agency (EPA) has delegated primacy to DEC for enforcement of the provisions the SDWA. Within DEC, the Division of Water’s Capacity Development Program is tasked with implementation of the State’s Capacity Development Strategy. DEC employs a collaborative and flexible approach to providing technical assistance, so while the Capacity Development Program is responsible for overseeing the capacity development strategy, other state programs also offer capacity assistance. Coordination among these various programs allows technical assistance providers to address some of the unique challenges faced in Alaska and enhances their ability to provide and direct services where they are most needed.

The Capacity Development Program is funded using a portion of the local assistance set-aside from the annual Drinking Water State Revolving Fund Federal Capitalization Grant.

Alaska’s capacity development activities have spanned over two decades. Highlights are documented below.

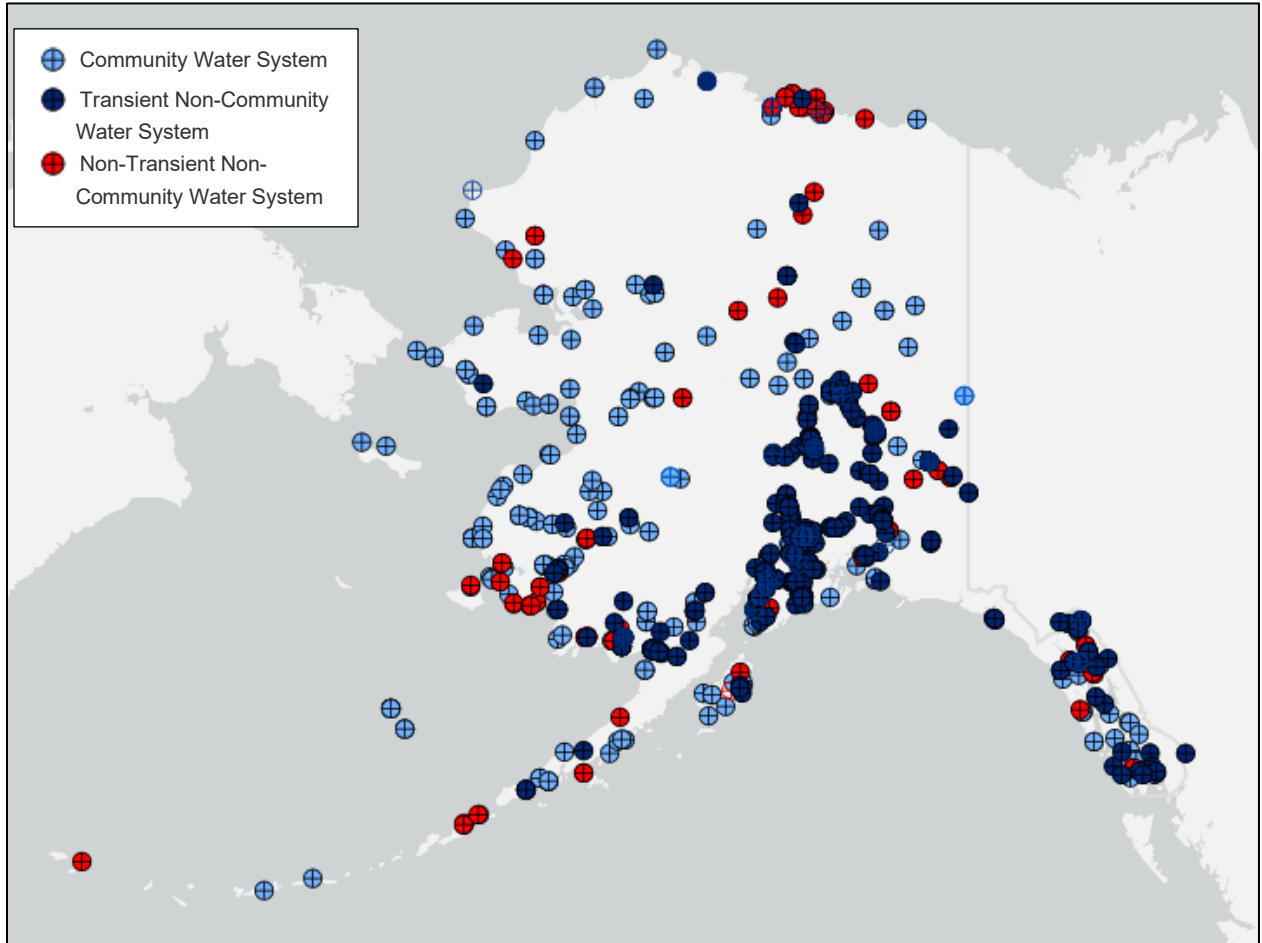


Capacity Development Program reports are available at: <https://dec.alaska.gov/water/technical-assistance-and-financing/capacity-development/>

## Public Water Systems in Alaska

At the end of SFY23, there were 1,331 active public drinking water systems distributed across Alaska.

**Figure 2. Public Drinking Water System Distribution**



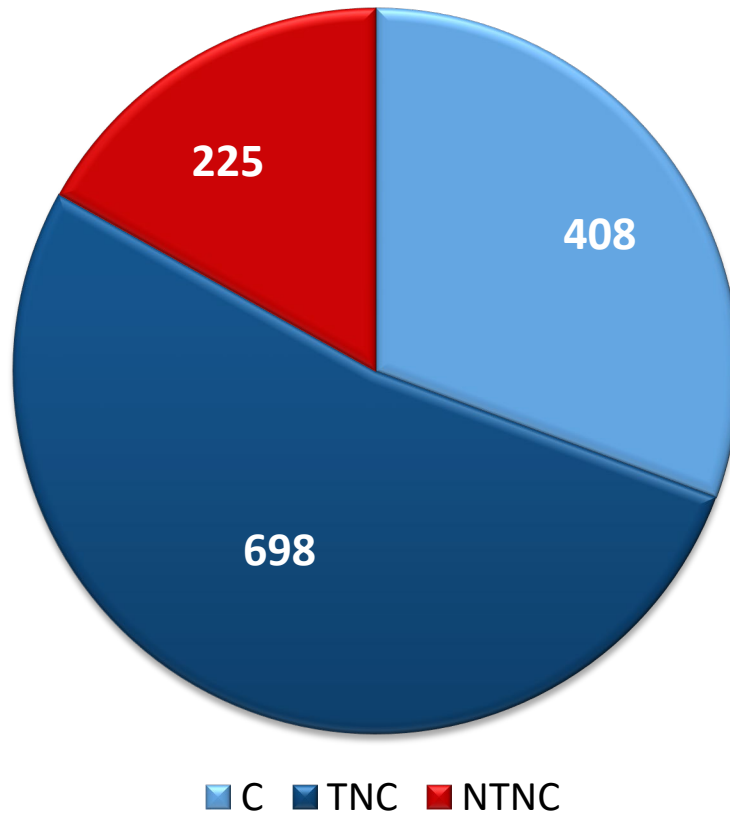
Public water systems are broken into three different categories of service:

**Community (C)** Public water systems that have at least 15 service connections used by year-round residents or regularly serve at least 25 year-round residents, such as a municipal water system serving a town or village, or a mobile home park.

**Transient Non-Community (TNC)** Public water systems that serve an average of at least 25 people at least 60 days per year, such as campgrounds, hotels, and restaurants.

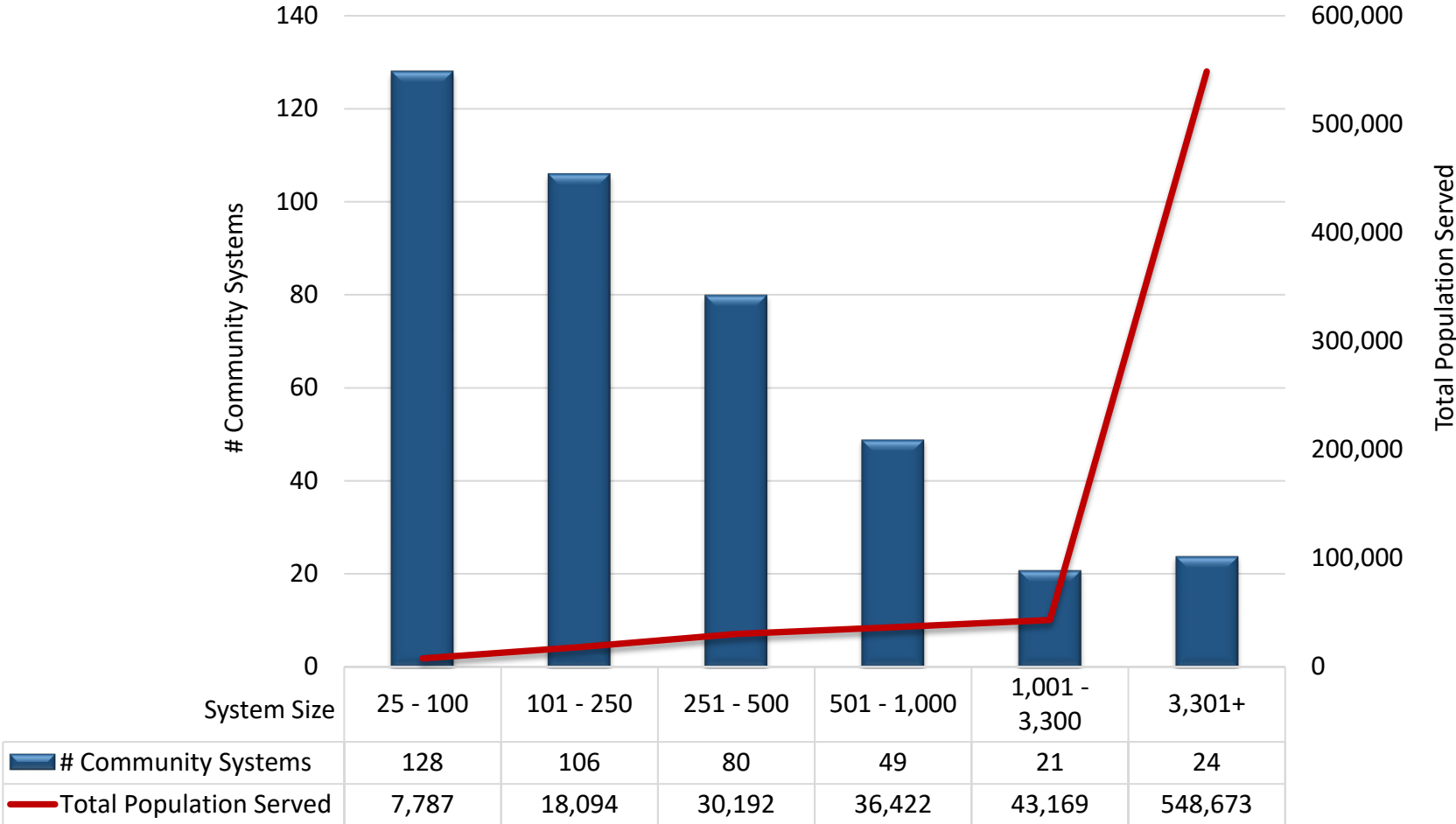
**Non-Transient Non-Community (NTNC)** Public water systems that serve at least 25 of the same people daily at least 6 months of the year, such as churches, schools, and office buildings.



**Figure 3. Public Drinking Water System Classifications**

The strategy for existing systems and the control points for new system capacity are focused on community and non-transient non-community systems. In Alaska, 89% of community water systems are small systems that serve populations of 1,000 or less. Small community systems face significant difficulty in maintaining their infrastructure and responding to new rules because of the size of the population served. A small customer base often results in a lack of revenue needed to hire and retain experienced managers and operators, and to adequately maintain and upgrade the drinking water system. High turnover rates among all positions critical to the success of a water system further exacerbate the capacity issues faced by small community systems. Compounding this issue, many systems are in rural areas of the state and experience the increased costs of living associated with limited accessibility and a smaller pool of qualified and trained individuals to work in the system. Accordingly, Alaska's capacity development strategy is primarily focused on assisting small community water systems, but any system that requests assistance will receive program support.

**Figure 4. Community Drinking Water System vs. Population Served**



## ASSESSMENT OF STRATEGY EFFICACY

The primary objective of Alaska’s Capacity Development Strategy is to assist public water systems in acquiring and maintaining TMF capacity. The implementation of this capacity development objective is detailed below, with an emphasis on achievements from the last three state fiscal years.

### New Systems

DEC conducts plan reviews for all new water systems, as well as proposed modifications to existing water systems. In all instances, the water system must submit design drawings stamped by a Professional Engineer registered in the State, as well as a capacity assessment form. Systems are required to demonstrate that personnel, source water quality and availability, design plans, and treatment systems provide sufficient technical capacity. A Certificate of Public Convenience and Necessity for Regulatory Commission of Alaska (RCA) regulated utilities, or detailed business plans and DEC assessment forms, including managerial contacts, ownership, staffing, and effective linkage information are required to demonstrate financial and managerial capacity.

The review of submissions is a collaborative effort between DEC’s Drinking Water (DW) and Capacity Development programs. The DW Program’s engineering staff review the plans to ensure they are sound, provide adequate treatment, and comply with regulatory requirements, and the Capacity Development Program evaluates financial and managerial capacity. Per Alaska Statute §46.03.720(b) and 18 AAC 80.207, an Approval to Construct will not be issued until an applicant demonstrates adequate TMF capacity.

Appendix A includes a table with the new systems activated during the reporting period. No C or NTNC new systems were on the ETT list during the reporting period.

### Coordination

#### QUARTERLY TECHNICAL ASSISTANCE PROVIDER MEETINGS

During this reporting period, the Capacity Development Program resumed quarterly Alaska Water Technical Assistance Providers Meetings. These meetings bring together the various agencies that provide technical assistance to communities throughout Alaska, including the EPA, Alaska Native Tribal Health Corporation (ANTHC), DEC, the Alaska Department of Commerce, Community, and Economic Development’s Rural Utility Business Advisor (RUBA), Rural Community Assistance Corporation (RCAC), and tribal regional health organization (RHOs). By convening these groups quarterly, DEC works to share regulatory updates and requirements, coordinate efforts, reduce duplicative efforts, and identify funding sources.

#### ANNUAL REGIONAL COORDINATION MEETINGS

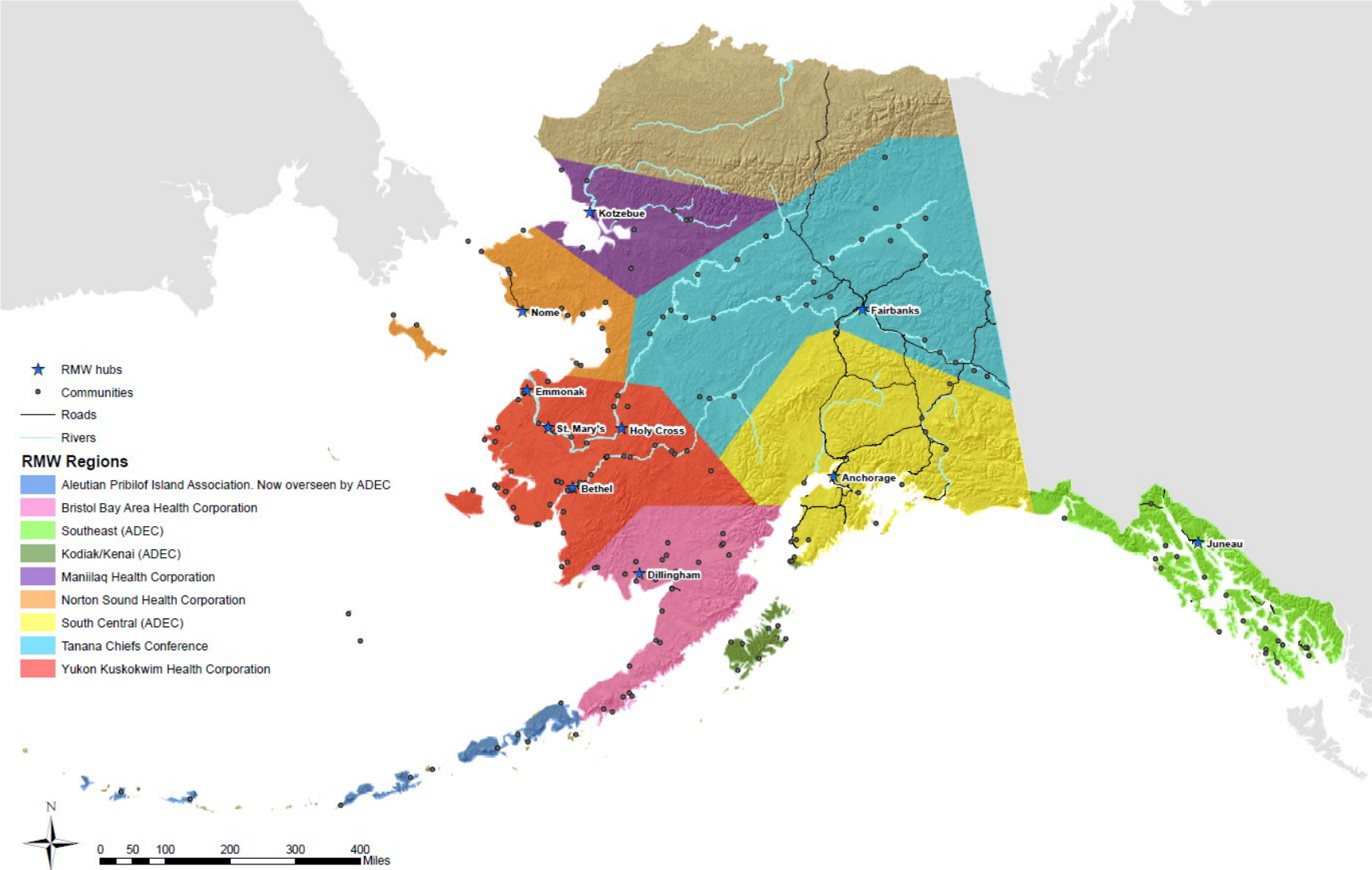
The Capacity Development Program coordinates annual regional meetings that bring together representatives of the regulatory programs and technical assistance providers that work to support rural community sanitation needs. Participants include DEC’s Capacity Development, Operator Certification, Remote Maintenance Worker (RMW), Village Safe Water (VSW), Drinking Water, Wastewater, and Solid Waste program staff, RUBA program staff, ANTHC engineering staff, and RHO environmental health staff.

Five RHOs partner with DEC to provide onsite training and technical assistance to operators of water and wastewater utilities in rural Alaskan communities under the RMW Program for the regions shown in Figure 5.

Region	Meeting Location	Number of Communities
<b>Yukon-Kuskokwim Health Corporation</b>	Bethel	50
<b>Tanana Chiefs Conference</b>	Fairbanks	31
<b>Bristol Bay Area Health Corporation</b>	Dillingham	21
<b>Department of Environmental Conservation</b>	Anchorage	59
<b>Maniilaq Association</b>	Kotzebue	11
<b>Norton Sound Health Corporation</b>	Nome	15

Each year, participants review and evaluate the current capacity status of all rural communities within a region to ensure that all community needs are identified, and a plan is developed to address them. The goal of these meetings is to coordinate effective and consistent communication between the agencies aiding rural communities with their sanitation infrastructure needs, to capture community needs for funding purposes, and to establish interagency collaboration on technical assistance efforts to communities.

Figure 5. Regional Coordination Meetings – Regions Served



## Public Outreach

### CONFERENCES

The Capacity Development Program will work to build capacity through public outreach and formal presentations at statewide professional conferences. Three Capacity Development Program staff attended and presented at the 2023 Alaska Water Wastewater Management Association (AWWMA) Conference. Additionally, in August 2022, the Program Manager overseeing the Technical Assistance Programs attended the National Capacity Development and Operator Certification Workshop to present and sit on the Targeting Underserved and Disadvantaged Systems panel.

### ALASKA CAPACITY DEVELOPMENT SURVEY

Unprecedented Federal funding has been allocated towards water and sanitation improvements in Alaska's communities over the next five years. TMF capacity are the cornerstones for successful implementation of that investment. The passage of the Bipartisan Infrastructure Law (BIL) renewed energy among rural Alaska communities, RHOs, State and Federal agencies, technical assistance providers and others to improve TMF capacity in the communities and utilities that will benefit from the BIL investments. On behalf of technical assistance providers across the state, DEC contracted with Agnew::Beck Consulting to conduct an anonymous survey to yield input from water and wastewater industry stakeholders about the existing capacity development resources available to utilities.

Two online surveys were developed and administered to collect valuable feedback from utility owners, operators, administrators, and from technical assistance providers, system funders, and regulators. This survey effort had two overarching goals: to solicit feedback to inform decisions about allocating resources for the Capacity Development Program, and to increase awareness of available tools and opportunities to build TMF capacity for water and wastewater systems statewide.

During SFY23, survey results were analyzed and cross tabulated to identify key findings and trends among responses and a summary report was drafted for DEC review. The final report outlining the key findings and recommendations from the survey effort and appendices with the raw data and analyses conducted will be completed in SFY24. The Capacity Development Program will utilize the final report to target program efforts on the training and resource needs identified by the water and wastewater industry.

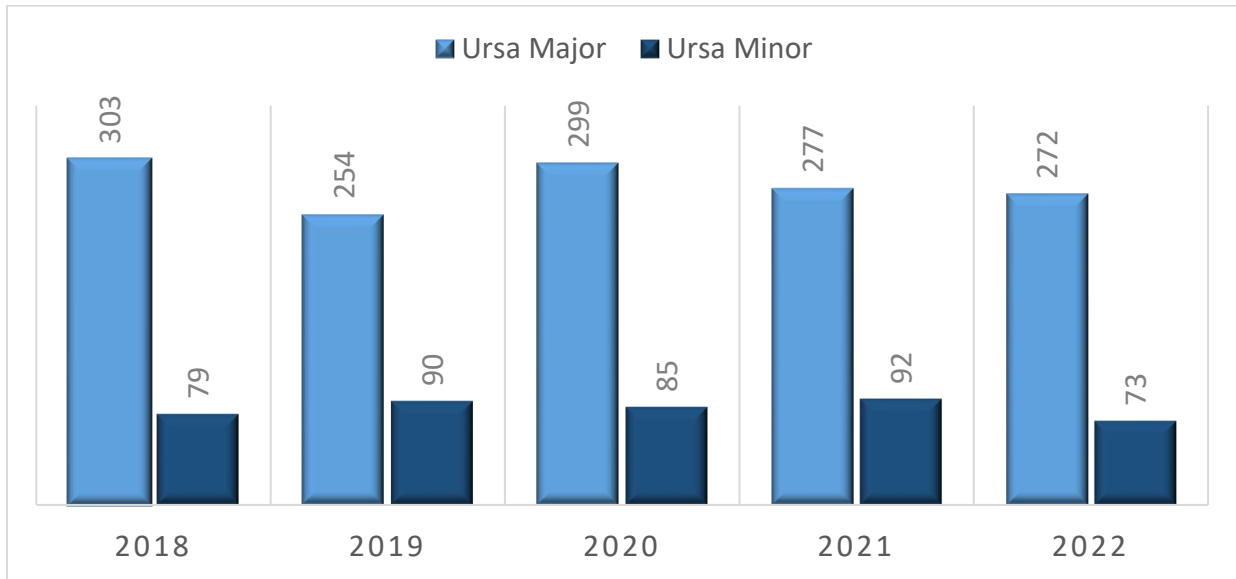
### WATER SYSTEM EXCELLENCE AWARD PROGRAM

To express appreciation and recognition for the systems, and operators, that have achieved compliance with DEC regulations, DEC initiated an annual utility recognition program in 2018. Awardees are recognized annually at statewide water and wastewater professional conferences. This program aims to increase the visibility of systems and operators who have demonstrated their commitment to providing safe drinking water, as community appreciation is essential to maintaining TMF capacity. By increasing visibility, DEC hopes that the positive recognition will contribute to employee retention and community support and encourage improvements in systems that are not currently recognized.



The Water System Excellence Award is comprised of two tiers: Ursa Major and Ursa Minor. A water treatment system or water distribution system will be awarded Ursa Major if it has maintained four quarters of Operator Certification compliance and has no open, unresolved, or incurred Drinking Water violations during a calendar year. Ursa Minor is awarded to a system that has maintained four quarters of Operator Certification compliance and has no more than one open, unresolved or incurred Drinking Water violation during a calendar year, or three quarters of Operator Certification compliance and no open, unresolved or incurred Drinking Water violations during a calendar year. Example of the award certificates provided to recipients are included in Appendix B.

**Figure 6. Water System Excellence Awards**



## TMF Support Materials

### RURAL COMMUNITY CALENDARS

To support rural communities and utilities, DEC produces an annual calendar for rural community utility staff and mails hundreds of calendars out each year. The calendar contains important reminders each month for operators, clerks, and bookkeepers, such as deadlines for sampling, preventative maintenance reports, and taxes. Photos of communities and systems are included to highlight the diversity of Alaska’s small systems and landscapes. Hundreds of calendars were mailed to rural communities each year of the report period.

Calendars provide TMF assistance in rural communities where turnover is high and communication with technical assistance staff may be limited due to distance and connectivity issues. Sampling compliance, routine maintenance and booking and reporting requirements are all targeted with this effort. A contacts page is also included at the end of the calendar which lists the various programs, contact numbers, and a brief overview of the services offered by the state. Accordingly, the calendars are also a tool to encourage utility staff to reach out to with any questions and to maintain contact with technical assistance providers.

Figure 7. 2023 Rural Community Calendar Excerpt

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

Water systems in rural communities suffer from frequent turnover at all levels of the utility, creating an environment where management, administrative staff, and operators may not be aware of the TMF resources available to them. To address knowledge gaps created by this staff turnover, DEC is creating a “welcome packet” binder for new utility operators and managers.

The *Quick Reference Guide for Rural Community Sanitation Utilities* gives an overview of the various programs that provide technical assistance to support rural water utilities. Included in this packet are brief descriptions of how each of these programs can help and how to contact them. Also included are samples of commonly used reports and documents needed by water and wastewater utility staff along with QR codes for quick online access, and “How Do I” pages that include simple instructions about common tasks and processes necessary to operate a small water utility. These welcome packet binders provide a valuable central resource for water system staff in rural water utilities across the state, offer a direct link between rural communities and technical assistance staff, and are a simple, consolidated resource that can be easily accessed by utility staff. During SFY23, the Capacity Development Program worked to finalize editing and formatting these reference materials. Binders with this information will be assembled and mailed to communities during SFY24 and digital versions will also be available online.

## OPERATOR SAMPLING TOOLKIT

Compliance with sampling and monitoring is a recurring challenge in Alaska. Remote systems often experience shipping delays due to limited infrastructure and inclement weather which can result in reporting violations. Additionally, the expensive cost of shipping samples can become more burdensome if operators are unfamiliar with proper sampling procedures and samples are rejected by the receiving laboratory. While small systems in urban areas may not experience the same issues related to shipping, systems such as mobile home parks may rely on volunteers who are unfamiliar with the sampling procedures to conduct the required monitoring.

To address capacity needs related to small system sampling and monitoring compliance, the Capacity Development Program is creating an operator sampling toolkit. This tool kit includes an easy-to-read wall chart and companion booklet with instructions tailored to Alaska’s public water systems. The wall chart is a large format visual reference for each type of sample, to assist with bottle identification, where and when to take the sample, and details for transportation. The companion booklet includes more detailed information with specific instructions to successfully collect and ship water samples. The goal of this tool kit is to help operators stay in compliance and protect the public health by simplifying the water sampling process. During SFY23, the Capacity Development Program worked to finalize editing and formatting these reference materials. The wall chart and companion booklets will be sent to communities in SFY24.

## Training Development

### SMALL UNTREATED AND SMALL TREATED WATER SYSTEMS TRAINING COURSES

Small untreated (SU) and small treated (ST) water systems are community or non-transient non-community water systems that serve fewer than 500 people, contain fewer than 100 service connections, and either add no chemicals or one chemical for treatment, respectively. In Alaska, 62% of systems that require a certified operator are classified as either SU or ST.

Until recently, operators seeking assistance in passing the SU or ST certification exam had access to online courses that were hosted by the water/wastewater program at the University of Alaska, Southeast (UAS) in Sitka; however, the UAS program was eliminated, and along with it, the SU and ST online courses. Additionally, the DEC-approved correspondence course available to operators uses manuals that were developed in 2002. To address the training gap created by the elimination of the UAS online courses and to “refresh” the 2002 manuals, DEC solicited proposals for the development of a small untreated and small treated online training course, study modules, and consolidation of the SU and the ST manuals into one single manual. During SFY23, DEC worked with AspireAlaska to host the online courses and finalize edits to the manual. The final manual will be used in Small Treated courses in the fall of SFY24, and the online courses will be available to the public on the AspireAlaska training platform in SFY24.

### SYSTEM-SPECIFIC TRAINING AND CERTIFICATION (S<sup>2</sup>TC) PROGRAM

Operators of water treatment systems are required to be certified at levels equal to system classification. To become certified, operators must pass validated exams and document required operations experience. DEC administers national ABC exams purchased from Water Professionals International. Select operators have

been unable to pass the ABC exams, even after significant preparation through course work and coaching. Reasons given include test anxiety and the reality that ABC exams cover a wide variety of water treatment topics, many of which don't apply to the system under the operator's control. However, it has long been maintained that many of these operators, while unable to pass the ABC exams, possess the knowledge and skills needed to safely operate their water systems.

To address this challenge faced by capable and experienced operators, DEC is developing the S<sup>2</sup>TC Program. This program involves the creation of training modules for different treatment and distribution components of a Public Water System (PWS). Once completed, these modules will serve as the basis for an alternative approach to certification exams that will only be offered to operators who are effectively operating and maintaining a utility but have repeatedly failed certification exams. Operators identified by DEC to participate in this program will be required to prepare and submit a facility description to determine which modules will be administered. Each module is intended to educate and test an operator on information that is specific to the technology used in their utility. In these limited cases, successful completion of the S<sup>2</sup>TC Program will replace the requirement of passing the standard certification exam and certification will be specific to that system. The training modules will also be made available as study materials for all operators.

During SFY23, the Capacity Development Program worked to finalize edits to five modules for S<sup>2</sup>TC Program. Two communities, both of which have long-standing operators who have not passed certification exams despite repeated attempts, have been identified for beta testing during SFY24.

#### SMALL SYSTEM NON-RURAL ASSISTANCE

Recognizing the prevalence of assistance available to small rural water systems, the Capacity Development Program developed targeted assistance for small non-rural community water systems that serve under 500 people. These systems do not receive support from many of the programs that assist rural Alaskan systems but have many of the same TMF assistance needs. During this reporting period, the Capacity Development Program selected the Consumer Confidence Rule as a target area for small non-rural system assistance.

The goal of this project is to assist and encourage eligible community public water systems to meet their Consumer Confidence Rule reporting requirements by offering outreach, an educational guide, and a companion short class to teach water system personnel how to create and deliver their own consumer confidence reports (CCRs) using the EPA's CCR iWriter tool.

The Capacity Development Program identified potential candidates using the ETT list and worked with the DW Program to confirm systems with outstanding ETT violations. Working collaboratively, both programs identified five systems for this targeted outreach and assistance. The Capacity Development Program also collaborated with the DEC Operator Certification program to award CEUs for the training.

During SFY23, the Capacity Development Program engaged in outreach communications with the five identified systems and conducted one online training on the CCR iWriter resulting in CEU credit. This effort resulted in the successful submission of four CCR reports and certifications, and seven violations returned to compliance.

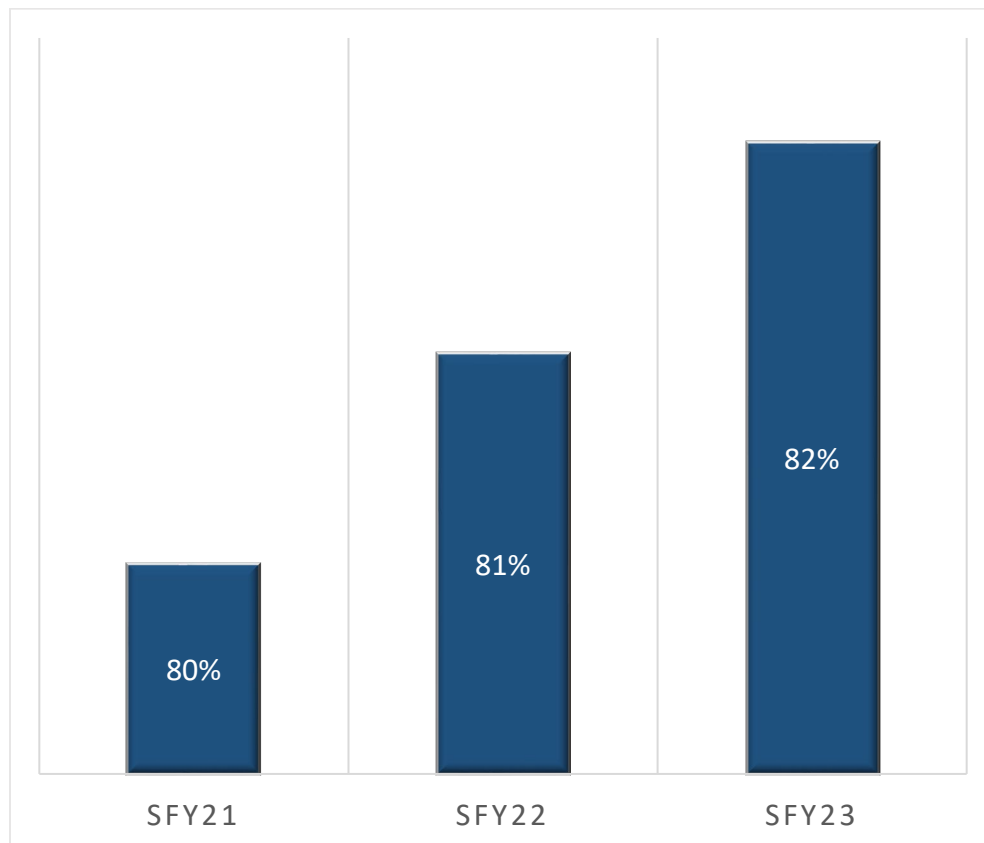
## PROGRESS IN TMF CAPACITY STATEWIDE

### Operator Certification Compliance

The Operator Certification Program maintains a quarterly schedule of analyzing and ranking the operator certification compliance status of systems; systems that rank the highest (based on factors such as system type, population served, source water, and system classification) are targeted for capacity assistance. This data may be used as a baseline for measuring statewide improvements in technical capacity.

Operator certification compliance trended upward during the reporting period.

**Figure 8. Percent of Systems with Operator Certified at the Correct Level**



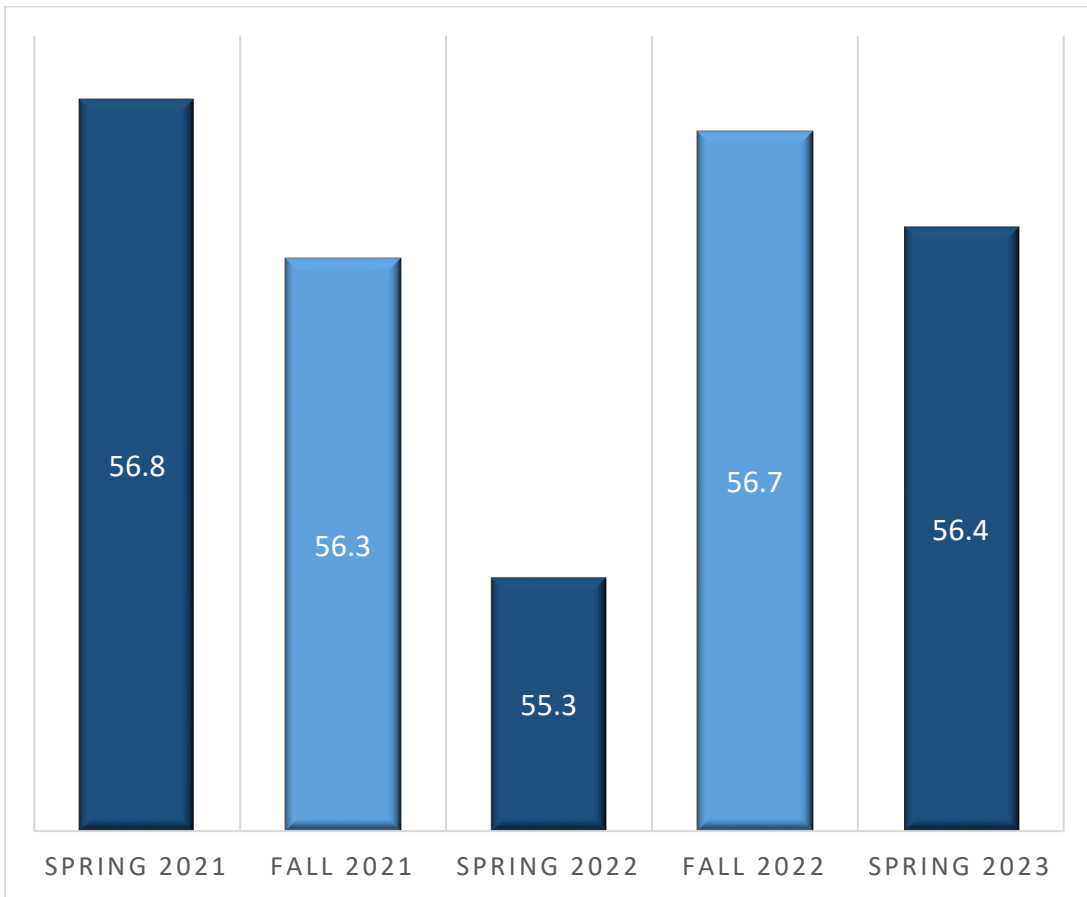
### Operations and Maintenance Best Practices

The Operations and Maintenance Best Practices (O&M Best Practices) is a tool used to assess the capacity of rural water utilities. Rural utilities are scored biannually on technical, managerial, and financial categories comprising nine criteria. The scoring criteria is included in Appendix C. O&M Best Practices scores are used to determine eligibility and priority of sanitation projects proposed for funding across a variety of funding sources. Scores are also used by agencies and technical assistance providers to identify and prioritize systems

that require support. The ongoing work and outreach with community leaders regarding Best Practices scoring, tools for communities, and access to funding sources incentivizes rural communities to acquire and maintain TMF capacity.

During the reporting period, the average O&M Best Practices score generally trended downward (Figure 8). Communities are encouraged to actively work with technical assistance providers and agency staff to improve system capacity, and by extension, their O&M Best Practices score. Resources, such as an Operations and Maintenance Best Practices Scoring Guide, sample preventative maintenance plans and financial reports, operator trainings, management and financial trainings, and assistance with QuickBooks and taxes are offered by the state to assist communities with the capacity building efforts. However, COVID-19 impacts on travel for in-person training, on-site technical assistance, networking opportunities and closed offices may account for the downward trend during this reporting period as communities were not able to actively seek these types of assistance.

**Figure 9. O&M Best Practices Average Scores, Spring 2021 – Fall 2023**





## PRIORITIZATION OF SYSTEMS

The State continues to work collaboratively and to use a variety of indicators for identifying existing systems in need of capacity development assistance.

### Enforcement Targeting Tool (ETT)

The Enforcement Targeting Tool (ETT) tracks PWSs that are deemed by EPA to be significantly out of compliance with the SDWA regulations. DEC utilizes the EPA's quarterly ETT as an indicator of capacity and focuses attention on those PWSs that, based on the severity and frequency of their violations, are defined as significantly out of compliance.

### Sanitary Surveys

Sanitary surveys are required for PWSs every 3 or 5 years, depending on the system category. Systems with sanitary survey deficiencies are prioritized for capacity assistance.

### Operator Quarterly Ranking

The Operator Certification Program maintains a quarterly schedule of analyzing and ranking the operator certification compliance status of systems; systems that rank the highest (based on factors such as system type, population served, source water, and system classification) are targeted for capacity assistance.

### O&M Best Practices

For rural systems, the O&M Best Practices score is a comprehensive measure of capacity that is updated biannually. Communities with scores below minimum funding thresholds are prioritized for technical assistance from several programs, including the RMW and RUBA programs.

### Technical Assistance Provider Coordination

Various agencies and staff provide technical assistance to communities throughout Alaska. By convening these groups quarterly, and annually for rural systems, DEC works to identify and target systems most in need of capacity assistance.

### Financial Capacity Assessments

Financial Capacity Assessments are used to determine if a community is eligible for State Revolving Fund (SRF) loan funds. Different aspects, such as operating income, cash flows, debt, and affordability, are reviewed to assess the overall financial health of a community and can identify systems in need of capacity development assistance.

## ASSET MANAGEMENT ASSISTANCE

DEC is in the early stages of incorporating asset management into the capacity development strategy but has taken advantage of the water utility support system already in place in Alaska to educate and inform public

water systems about what asset management is and how it can stabilize and protect water utilities and the public health.

During this reporting period, the asset management assistance supported and encouraged by DEC included introduction to asset management workshops presented at the annual Alaska Rural Water Association (ARWA) and AWWMA conferences. In 2022, these workshops provided utility owners with insight on the significance of using asset management tools to maintain their water system infrastructure. In 2023, the Capacity Development Program AWWMA presentation included information and updates on asset management. Asset management trainings are also listed on DEC's annual training calendar webpage as they become available and qualify participants for continuing education units (CEUs).

In SFY22, the SRF Program introduced the Sustainable Infrastructure Planning Projects (SIPP) funding opportunity to assist small water system in financing planning and related activities that promote sustainable infrastructure. Up to \$75,000 in loan principal forgiveness is currently offered to disadvantaged communities to implement SIPP projects including development of asset management plans, feasibility studies, consolidation studies, water rate analysis, leak detection studies, and water system master plans. In SFY23, the SRF Program incorporated asset management into the project evaluation and scoring process for all proposed loan projects to further incentivize the development and implementation of asset management plans and activities. SRF applicants can now receive a total of thirty points in the asset management scoring category. The Capacity Development Program assisted the SRF Program by conducting outreach and completing the asset management inventory and plan reviews for the eight systems that submitted asset management application materials. Scoring determinations for applications were based on the EPA's *Reference Guide for Asset Management Tools*.

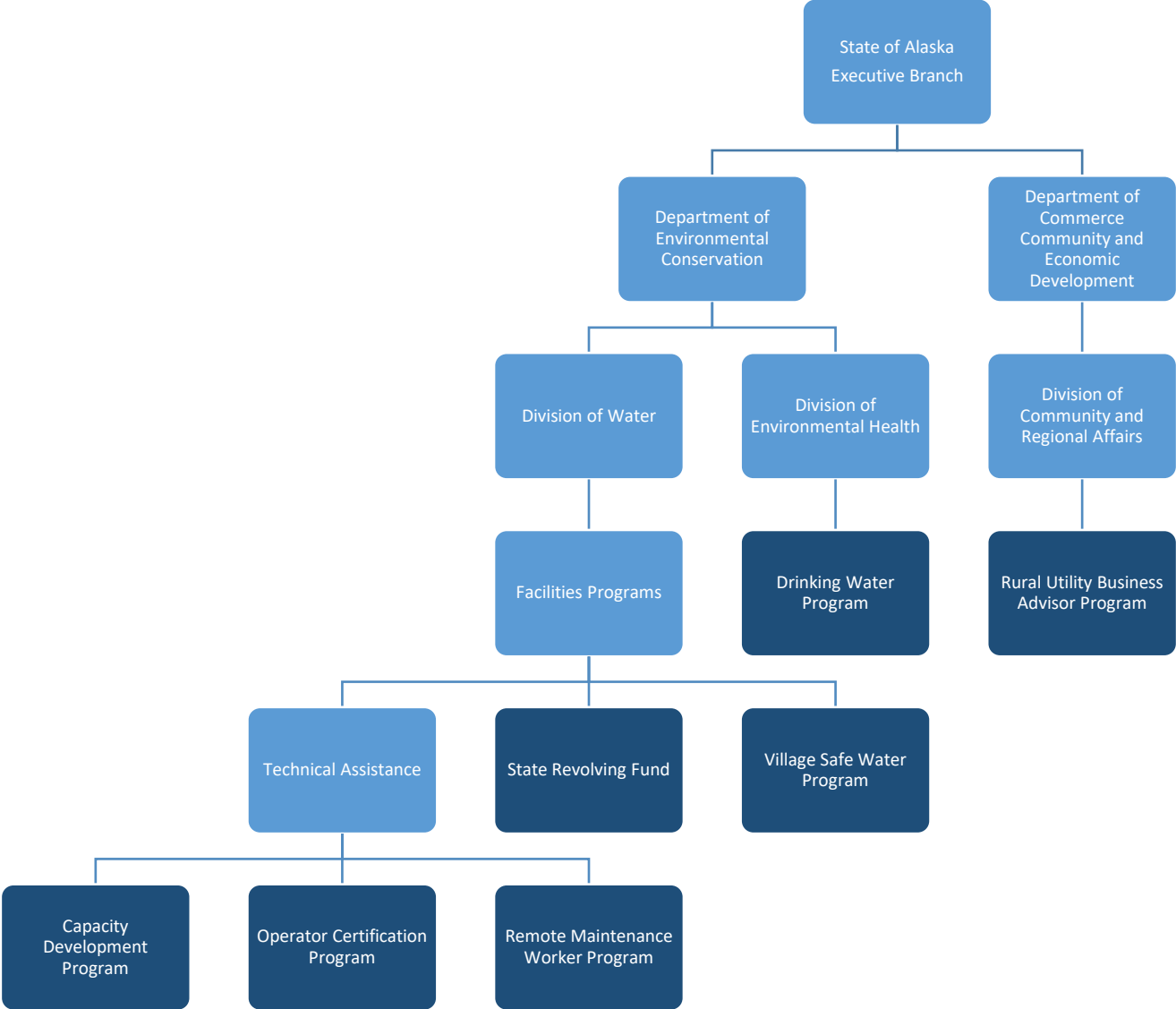
Barriers to adopting asset management activities include limited resources to adequately reach all systems needing assistance, while barriers for systems may include obtaining buy-in and support from public water system management and staff, difficulty incorporating asset management into existing data management systems, and the perceived redundancy of creating and maintaining an additional planning/tracking system. DEC is committed to aiding systems that actively seek to develop or implement asset management plans. Through outreach and education DEC will provide utilities with an understanding of why effective asset management is essential to sustaining water infrastructure and will encourage asset management using the EPA five-core-question framework as a proactive and intentional management tool.

Future opportunities being explored by the Capacity Development Program include the creation of asset management tools, trainings, workshops, and guidance documents, and tools and techniques for assisting systems with inventory creation, system mapping, maintenance scheduling, and financial planning. The Capacity Development Program will expand outreach and assistance efforts as asset management becomes a common element of how water and wastewater systems are designed, operated, and maintained in Alaska.

## ADDITIONAL EFFORTS

As previously discussed, capacity development activities are a collaborative effort in Alaska. The state programs highlighted below all have a hand in supporting Alaska's capacity efforts.

Figure 10. State of Alaska Programs Supporting Capacity Development



## Drinking Water (DW) Program

The DW Program is responsible for enforcing federal health-based standards, established by the EPA as required by SDWA. The DW Program utilizes the EPA's quarterly ETT to focus attention on those public water systems that, based on the severity and frequency of their violations, are defined as significantly out of compliance with the SDWA requirements. During the reporting period, ETT scores were used as indicators of capacity and to prioritize compliance assistance and enforcement for public water systems statewide. Currently, the DW Program and other technical assistance providers work with communities who receive an ETT score of 11 or higher to determine what steps are needed to bring a system back into compliance.

The DW Program conducts sanitary survey inspections help public water systems strengthen operational and managerial processes, as well as strengthen infrastructure, by identifying barriers or obstacles that prevent systems from doing their best to provide safe drinking water to their customers; providing operator education, technical assistance and training; increasing communication between the public water system staff and DW Program; and identifying and correcting deficiencies, thereby reducing risks to public health.

The source of drinking water is also a vitally important component of a public water system. DW Program staff work with the public and government agencies to provide accurate locational data for wells, intakes, and the respective drinking water source protection areas, and work with communities to promote voluntary protection efforts of their drinking water source.

## State Revolving Fund (SRF) Program

The SRF Program offers low-interest loans from the Drinking Water State Revolving Fund (DWSRF) to eligible PWS owners for infrastructure improvements. These loans assist PWS owners with financing the infrastructure upgrades needed to protect public health and achieve and maintain compliance with SDWA requirements. All SRF Program borrowers for drinking water projects are required to demonstrate sufficient TMF capacity to operate the system in compliance with state and federal regulations. If a utility is non-compliant, an assessment is made to determine if the proposed SRF-financed project will bring the system into compliance, thus assisting the system in acquiring a greater capacity.

The target audience for DWSRF loans has historically included municipally owned water systems serving mid to large size communities. To provide funding assistance to small, rural Alaska communities, the SRF Program initiated efforts to develop a Micro Loan program in SFY19. The Micro Loan program finances projects that would otherwise be challenging to fund through traditional grant programs, or to finance aspects of larger grant-funded projects that are ineligible through a grant.

Rural municipalities may be eligible to receive a low-interest Micro Loan of up to \$500,000 with a maximum of 90% principal forgiveness. The level of principal forgiveness depends on the affordability of the utility's user rates as well as the community's Operations and Maintenance Best Practices score. In addition to the direct support for technical capacity provided by infrastructure upgrades, the Micro Loans provide an incentive for public water systems to acquire and/or maintain TMF capacity. By relating the amount of

principal forgiveness to the O&M Best Practices score, an incentive is provided for communities to develop and maintain TMF capacity: the higher the O&M Best Practices score, the higher the principal forgiveness.

## Village Safe Water (VSW) Program

The VSW Program, within the DEC Division of Water, works to provide safe water and hygienic sewage disposal facilities in villages in the state. VSW is comprised of a team of engineers, project support specialist, procurement specialists, accountants, and grant administrators and administers millions of dollars in grants to fund water and sewer studies and the construction of sanitation facilities.

## Remote Maintenance Worker (RMW) Program

The RMW Program is a partnership between DEC and five regional health corporations to assist water systems in building and maintaining technical capacity by providing services to operators in nearly 200 rural Alaskan communities. During the reporting period, the RMW Program continued its work of providing capacity assistance through on-site, on-the-job training in the proper operation and maintenance of water systems and compliance with state and federal regulations.

RMWs offer targeted, system specific assistance to operators, allowing them to improve the sampling, troubleshooting, maintenance, and mechanical repair skills needed to adequately run a community's utility. RMWs work with operators to develop and revise operations and maintenance (O&M) and preventive maintenance plans, train them in accurate record keeping, and prepare the operation, maintenance, sampling, monitoring, and testing reports that are presented to the governing body concerning the status of the utility. Further capacity building efforts include informing local government officials of RMW findings and recommendations concerning operation and maintenance requirements and costs, plant O&M issues, and operator training needs. In addition to the one-on-one and local response, RMWs facilitate regional training workshops for operators in their region and provide classroom instruction to prepare operators for State certification exams.

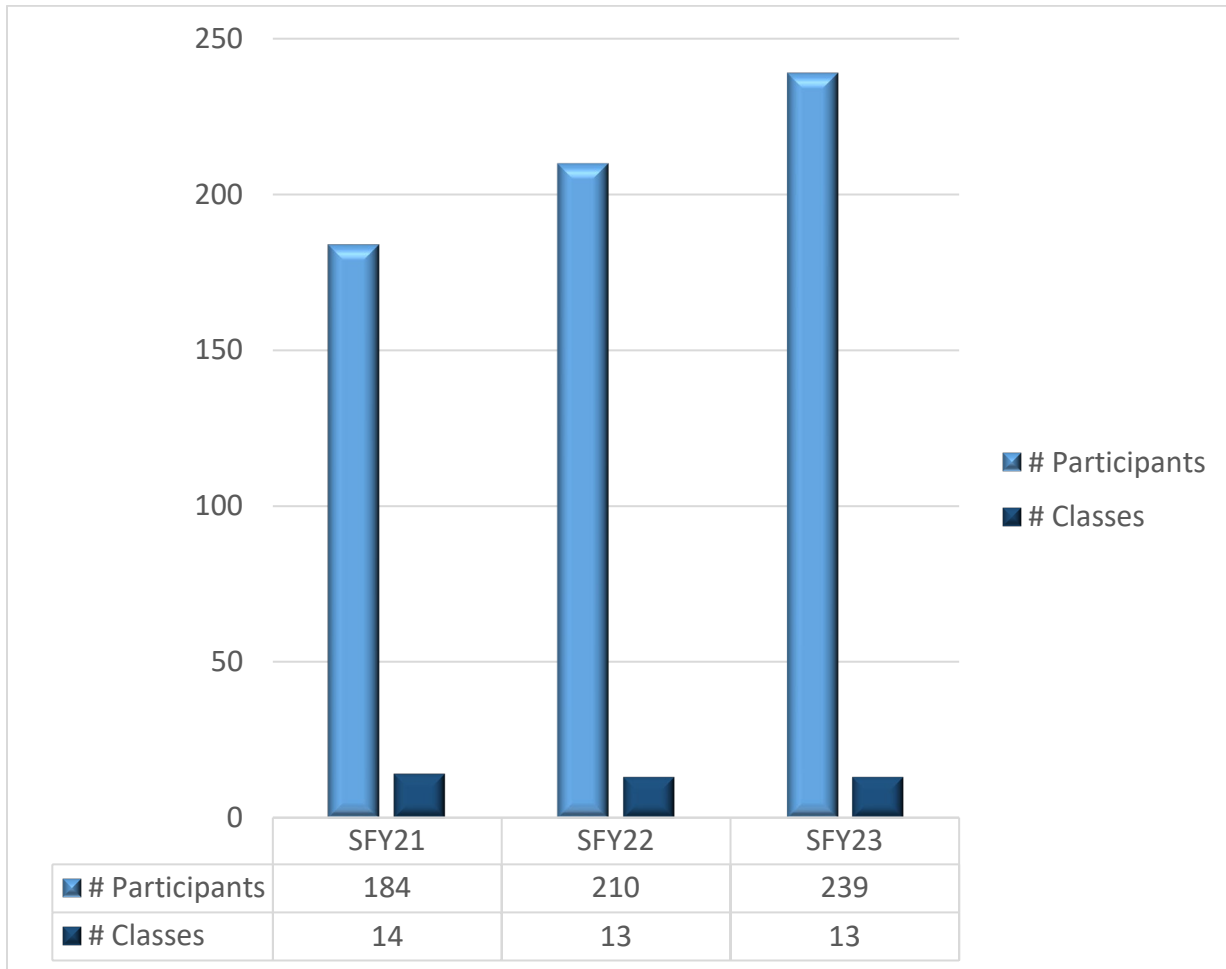
## Rural Utility Business Advisor (RUBA) Program

The RUBA Program is part of the Division of Community and Regional Affairs in the Department of Commerce, Community, and Economic Development. Local Government Specialist staff in the RUBA Program assist rural water utility providers with their financial and managerial capacity. While based in Anchorage, Bethel, Dillingham, Fairbanks, Juneau, Kotzebue, and Nome, RUBA staff can travel to communities to provide direct one-on-one assistance to utility staff. RUBA staff work alongside community members to identify strengths and weaknesses in their utility management and to develop plans to improve operations. During the reporting period, the RUBA Program added two financial specialist positions. It has been identified that financial management is the weakest area of utility management practices for rural Alaskan utilities. These two financial specialist positions, both Local Government Specialists (LGS), provide support to communities and LGSs across the state, and are stationed in the Bethel regional office, in recognition of that region's particular need. Additionally, RUBA staff play a key role in Best Practices implementation and scoring. Staff collect and review the documentation required for scoring and actively work with communities to improve

scores upon request. The RUBA program created an O&M Best Practices toolkit to help train rural utilities and partner agencies on how to maximize points on Operations and Maintenance Best Practices. The toolkit includes a PowerPoint presentation, Microsoft templates, sample model documents, and guides. The RUBA program created an [Operations and Maintenance Best Practices Dashboard](#) where communities and partner agencies can view all community O&M Best Practices scores over time in map-format.

RUBA in-person and online trainings are also provided on a cost reimbursable basis. The 32-hour RUBA classes cover many topics including a course targeted at clerks, a course targeted at elected officials, financial management, operations management, personnel management, and QuickBooks for rural utilities. These courses provide utility staff with the principles and practices necessary to manage small water and wastewater facilities in rural Alaska. In response to limited travel and COVID, the RUBA program converted week-long courses to an online format. During the peak of COVID in SFY21, almost all classes were provided online, and since then, classes are being provided both online and in person.

**Figure 10. RUBA Trainings and Participants**





## REPORT AVAILABILITY

This report will be made available to the public on DEC's Capacity Development webpage:

<https://dec.alaska.gov/water/technical-assistance-and-financing/capacity-development/>

To request a hard copy, the public may contact:

Capacity Development Program  
Department of Environmental Conservation  
555 Cordova St  
Anchorage, Alaska 99501  
907-465-5066

## APPENDIX A: NEW SYSTEMS FOR SFY21-23

PWSID	System Name	PWS Type	Active	Source	Population	City	Startup Date	FY	ETT (Yes/No)
AK2392041	CLEAR SPACE FORCE STATION – LRDR	NTNC	A	GW	60	ANDERSON	7/1/2020	FY21	No
AK2314051	FT WAINWRIGHT / DRMO	NTNC	A	GW	35	Fairbanks	7/28/2020	FY21	No
AK2226055	PALMER LIFEWAYS DAYCARE	NTNC	A	GW	56	PALMER	8/1/2020	FY21	No
AK2382101	TCC UPPER TANANA HEALTH CLINIC - TOK	NTNC	A	GW	65	TOK	9/21/2020	FY21	No
AK2220496	THREE BEARS CORPORATE OFFICE	NTNC	A	GW	50	WASILLA	2/26/2021	FY21	No
AK2220495	TRAPPER CREEK WATERING POINT	C	A	GW	500	TRAPPER CREEK	3/19/2021	FY21	No
AK2226057	ARKOSE WOODS	C	A	GW	90	PALMER	7/1/2021	FY22	No
AK2121527	KETCHIKAN WATER, TRUCK 1	C	A	SWP	100	KETCHIKAN	5/11/2022	FY22	No
AK2220485	VIEW POINTE AT THE RANCH - PHASE 1 & 2	C	A	GW	50	PALMER	4/1/2022	FY22	No
AK2249263	HOMERUN OIL CO. WATER HAULER	C	A	SWP	100	HOMER	5/22/2023	FY23	No
AK2340882	KIVALINA K-12 SCHOOL	NTNC	A	SWP	217	KIVALINA	11/1/2022	FY23	No
AK2220500	KNIK-FAIRVIEW CCS EARLY LEARNING CENTER	NTNC	A	GW	128	WASILLA	11/21/2022	FY23	No
AK2220512	LIBERTY TAX BUILDING	NTNC	A	GW	125	WASILLA	4/1/2023	FY23	No
AK2220506	LUPINE MOB LLC	NTNC	A	GW	80	WASILLA	4/20/2023	FY23	No
AK2310421	NOAA-NESDIS-CDA STATION-Fox	NTNC	A	GW	40	Fox	1/4/2023	FY23	No
AK2220507	VALLEY VIEW TOWER	NTNC	A	GW	85	WASILLA	4/1/2023	FY23	No

APPENDIX B: WATER SYSTEM EXCELLENCE AWARDS

*Ursa Major*



*Water System Excellence Award*

*The Department of Environmental Conservation recognizes*

*Firstname Lastname*

*for achieving and maintaining stellar compliance with the  
Operator Certification Program*

*&*

*Drinking Water Program*

*in*



# *Ursa Minor*



## *Water System Excellence Award*

*The Department of Environmental Conservation recognizes*

*Firstname Lastname*

*for achieving and maintaining compliance with the  
Operator Certification Program*

*&*

*Drinking Water Program*

*in*



## APPENDIX C: BEST PRACTICES SCORING CRITERIA

Category	Best Practice	Points	Contacts	Additional Information	
Technical	<i>Operator Certification</i>	Utility has more than one operator certified to the level of the water system	10	Operator Certification Program	Regulations require that the primary operator of a water system be certified at level equal to the classification of a system. The classification of each water system can be found online at <a href="https://dec.alaska.gov/Applications/Water/OpCert/">https://dec.alaska.gov/Applications/Water/OpCert/</a> . For scoring purposes, the certification requirements considered will be for Water Treatment unless a system only requires a Water Distribution operator, in which case only Water Distribution certifications will be considered. Operators of Small Treated and Small Untreated systems who hold a Water Treatment certification at any level are considered to be certified to the level of the system. Wastewater Collection and Wastewater Treatment certifications will be considered if a community has a wastewater system but no water system. Systems that do not require a certified operator will receive full points.
		Primary operator is certified to the level of the water system and the backup operator holds some level of certification in water treatment or distribution	7		
		Primary operator is certified to the level of the water system and the backup operator holds no certification or there is no backup operator	5		
		Utility has one or more operators certified at some level in water treatment or distribution	3		
		Utility has no certified operators	0		
	<i>Preventive Maintenance Plan</i>	Utility has a written PM plan; PM is performed on schedule; records of completion are submitted on a quarterly basis and have been verified	25	Remote Maintenance Workers (RMWs)	A Preventive Maintenance Plan is a schedule of maintenance activities necessary for continued operation of the utility. At a minimum, the plan must include those activities required to prevent a loss of service. RMWs are available to assist in developing a PM Plans and training operators in proper maintenance. Utilities seeking 25 points must submit completed PM records to their assigned RMW on a quarterly basis. PM criteria apply to wastewater utilities if there is no public water system. Communities without a public water or wastewater system will receive full points.
		Utility has a written PM plan; performance of PM and record keeping are not consistent	15		
		Utility has no PM plan or performs no PM	0		
	<i>Compliance</i>	Utility had no Monitoring and Reporting violations during the past year	10	Drinking Water Program	Public water systems are required to collect water samples to demonstrate that the water meets drinking water quality standards and is safe for consumers. The Drinking Water Program provides each utility with an annual Monitoring Schedule each year. Sampling is a primary responsibility of the operator and sufficient funds for monitoring must be included in the budget. Communities without a public water system will receive full points.
		Utility had up to five Monitoring and Reporting violation during the past year	5		
Utility had more than five Monitoring and Reporting violation during the last year		0			
<b>Total Technical Points</b>		<b>45</b>			
Managerial	<i>Utility Management Training</i>	A person who holds a position of responsibility for management of the utility has completed a DCRA approved Utility Management course or other utility management training course within the last five years	5	RUBA	This person is not required to have the Utility Manager title, but must have some responsibilities pertaining to the management of the utility. This person must reside within the community and represent the utility, even in instances when the utility is managed by a third party.
	<i>Meetings of the Governing Body</i>	The utility owner's governing body meets routinely consistent with the local ordinance/bylaw requirements and receives a current report from the operator	5	Rural Utility Business Advisor (RUBA)	Meetings must be held as prescribed by ordinance or by rules and regulations of the governing body, with reasonable exceptions made for unforeseeable circumstances. A written or oral report from the operator or contracted utility manager must be recorded in the meeting minutes.
		The utility owner's governing body meets routinely consistent with the local ordinance/bylaw requirements	2		
		The utility owner's governing body does not meet	0		
<b>Total Managerial Points</b>		<b>10</b>			
Financial	<i>Budget</i>	Utility owner and the Utility have each adopted a realistic budget and budget amendments are adopted as needed; Accurate monthly budget reports are prepared and submitted to the governing body	15	RUBA	If the utility is managed or operated by a third party, the utility owner and the contractor must demonstrate appropriate budgeting and financial reporting practices. The utility owner must demonstrate appropriate budgeting for any utility subsidies and for the contracted services. The contracted manager must also demonstrate a realistic budget for the utility. When the utility is managed by a third party, monthly financial reports must be submitted to, and reflected in the meeting minutes of, the utility owner's governing body. Utilities not under contracted management must have a distinct budget for the utility operations in order to achieve the maximum score.
		Either the Utility or the Utility owner has adopted and implemented a budget, the other has not	13		
		Either the Utility or the Utility owner has adopted a budget, but it is not being implemented	10		
		Utility owner and the Utility have not adopted a budget	0		
	<i>Revenue</i>	Utility is collecting revenue sufficient to cover the Utility's operating expenses and to contribute to a repair and replacement account	20	RUBA	To receive full points, the reports must show that sufficient revenues - whether from user fees, explicitly identified subsidies, or a combination of both- are being collected to meet all the utility's associated expenses, and that the utility is budgeting for repair and replacement expenses and/or already has sufficient funds saved to cover foreseeable repair and replacement costs. 'Collection policy' means a set of procedures designed to ensure bills are paid on time and in full, and to collect on past-due payments. Sending customers a bill/statement each month showing the amount owed is not a collection policy. The collection policy must include a statement of action that will be taken if past-due amounts are not received.
		Utility is collecting revenue sufficient to cover expenses	15		
		Utility has a fee schedule and a collection policy that is followed	5		
		Utility has no fee structure or collection policy	0		
	<i>Worker's Compensation Insurance</i>	Utility has had a workers' compensation policy for all employees for the past two years and has a current policy in place	5	RUBA	All employees of the entity which owns the utility must be covered by workers' compensation insurance. In addition, all employees of a third party managing the utility must be covered, if applicable.
		Utility has a current workers' compensation policy in place for all employees	2		
		Utility has no workers' compensation policy	0		
<i>Payroll Liability Compliance</i>	Utility has no past due tax liabilities and is current with all tax obligations	5	RUBA	This criteria applies to the utility owner, as well as to a third party managing the utility, if applicable. Taxes considered include both Federal and State taxes. A utility representative must sign an IRS tax authorization form for this information to be verified for scoring purposes.	
	Utility owes back taxes, but has a signed payment agreement, is current on that agreement, and is up-to-date with all other tax obligations	2			
	Utility is not current with its tax obligations and/or does not have a signed repayment agreement for back taxes owed	0			
<b>Total Financial Points</b>		<b>45</b>			
<b>Total Points Possible</b>		<b>100</b>			