ALASKA CAPACITY DEVELOPMENT INTERIM STRATEGY

STATE OF ALASKA'S INTERIM STRATEGY FOR IMPROVING THE TECHNICAL, MANAGERIAL, AND FINANCIAL CAPACITY OF PUBLIC DRINKING WATER SYSTEMS

Updated May 2020

Introduction

This document is an interim update to the Alaska Capacity Development Strategy and includes the capacity development strategy elements required by section 1420(c) of the Safe Drinking Water Act (SDWA).

This interim strategy includes the following key updates:

- Categorization of public water systems to better understand where assistance can be most effectively targeted.
- Enhanced discussion of the multiple programs involved in capacity development efforts statewide.
- Current initiatives for assessing system capacity that were not in place prior to the 2013 strategy update.
- Descriptions of current efforts underway to improve system capacity.

In addition to these updates, the State of Alaska continues to prioritize small systems and supports efforts to bring systems with violations back into compliance in concurrence with earlier versions of the Alaska Capacity Development Strategy.

This document is intended to provide the framework for a comprehensive strategy update that will commence pending Region 10 Environmental Protection Agency (EPA) review and approval. The comprehensive strategy update will adhere to EPA requirements, including the 2018 America's Water Infrastructure Act (AWIA), Section 2012 requirements for asset management, incorporate stakeholder feedback, and align current State of Alaska capacity efforts with forthcoming and preferred strategy initiatives.

History of the Alaska Capacity Development Strategy

In the 1996 SDWA Amendments, Congress required state drinking water primacy programs to prevent the creation of new nonviable community and non-transient non-community water systems, and to develop a strategy to address the capacity of all existing water systems. Capacity refers to the capabilities required of a public water (PWS) system to achieve and maintain compliance with the drinking water regulations. The three elements of capacity - technical, managerial, and financial – are typically referred to as "TMF" and are defined as:

1. *Technical capacity* refers to the ability of the water system to meet standards of engineering and structural integrity necessary to serve customer needs. Additionally, technical capacity includes the operator's aptitude for obtaining proper certification and applying the necessary knowledge and skills to safely operate the system. Technically capable water systems are constructed, operated, and maintained according to accepted standards.
2. *Managerial capacity* refers to the ability of the management structure to effectively maintain operation of the water system, including ownership accountability, staffing and organization, and effective external linkages.
3. *Financial capacity* refers to the ability of the water system to raise and properly manage the money it needs to operate effectively over the long term.

In 1999 and 2000, a Citizen Advisory Board (CAB) was convened to advise the Alaska Department of Environmental Conservation (DEC) on challenges and opportunities to improve the technical, managerial, and financial capabilities of Alaska's public water systems. A Report of Findings (2000)

presented the results of these meetings, and summarized 14 recommendations to improve and support TMF capabilities. The DEC Drinking Water (DW) Program finalized the State Capacity Development Strategy in 2000, based on the Report of Findings, public input, state and federal requirements, and departmental resources.

Historically, the DEC DW Program was responsible for implementing the Capacity Development Program. In 2017, the Technical Assistance and Financing (TAF) Program was created within the DEC Division of Water to bring together various capacity building programs. TAF is composed of the State Revolving Fund, Remote Maintenance Worker, Capacity Development, and Operator Certification Programs. Additionally, two full time positions, the Capacity Development Coordinator and the Financial Capacity Analyst, were created to implement capacity building efforts statewide.

Over the past two decades, the State of Alaska has continuously refined capacity development efforts. After implementing previous versions of the Alaska Capacity Development Strategy, this interim strategy update is reflective not only of agency and regulatory changes, but also of a more established Alaska Capacity Development Program with staff experienced in capacity development initiatives. While the DEC TAF Program is currently tasked with updating the strategy, many different State of Alaska programs have a hand in implementation. Please review Appendix A for an overview of the State's organizational structure and programs primarily involved with this effort.

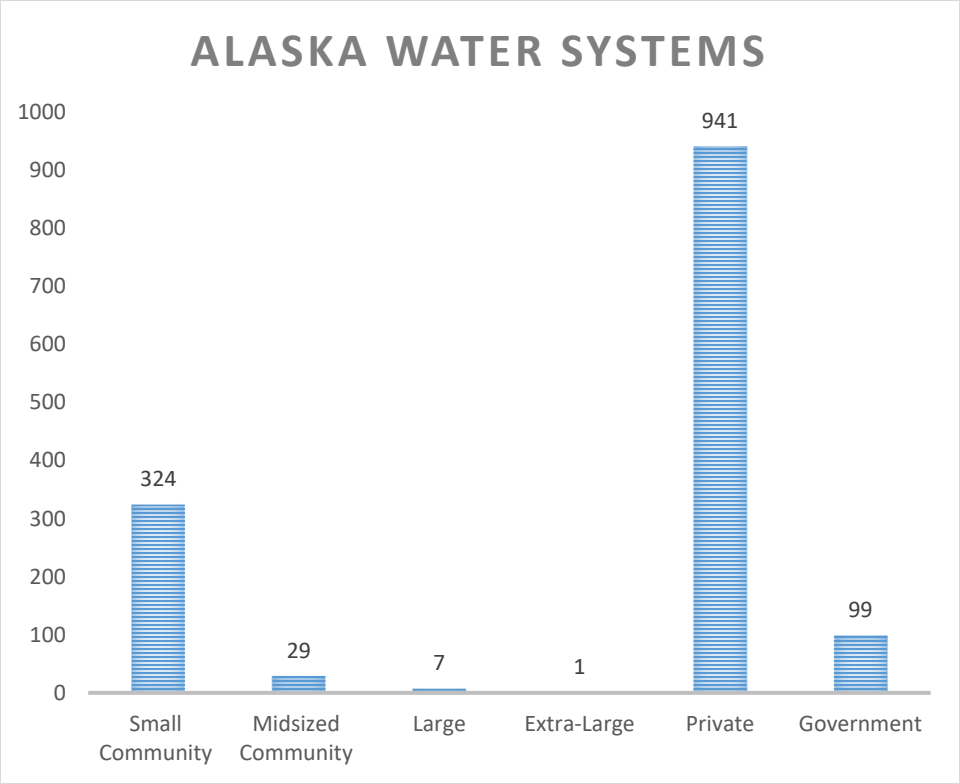
Legal Authority

Alaska Statutes AS 42.05.711, AS 46.03.020, 46.03.036, 46.03.039, and AS 46.03.720 establish the State's authority over public drinking water systems. Additionally, the regulations in the Alaska Administrative Code provide the State with sufficient authority to ensure water existing systems are working towards acquiring and maintaining technical, managerial and financial capacity, including Regulatory Commission of Alaska regulations, 3 AAC 52.700 – 749; DEC regulations for Construction Grants, 18 AAC 73; Water and Wastewater Operator Certification and Training regulations, 18 AAC 74; Alaska Clean Water and Drinking Water Revolving Fund regulations, 18 AAC 76; and Drinking Water regulations, 18 AAC 80.

Public Water System Categorization

The first step of the Capacity Development interim strategy update is to review the current landscape of Alaska's PWSs to better understand where assistance can be most effectively targeted. There are currently 1,401 PWSs in the state of Alaska. These systems have been organized into six categories:

1. Small Community Systems – public systems serving a population of less than 1,000.
2. Midsized Community Systems – public systems serving a population between 1,001 and 10,000.
3. Large Systems – any system serving a population between 10,001 and 100,000.
4. Extra Large Systems – any system serving a population of more than 100,001.
5. Private Systems – private systems serving a population of 10,000 or less.
6. Government Systems – government systems serving a population of 10,000 or less.



Small Community Systems

There are 324 small community systems in Alaska. These systems receive a significant amount of technical assistance from the State of Alaska, as well as federal funding agencies such as the Indian Health Service, EPA, and USDA Rural Development.

Small communities face the greatest difficulty in maintaining their water system 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 experienced managers and operators, and to adequately maintain and upgrade their drinking water source, transmission, treatment, storage facilities, and distribution systems. Compounding this issue, many systems are located in rural areas of the State and experience the increased costs of living associated with limited accessibility. A smaller pool of qualified and trained individuals to work in the system and high turnover rates among all positions critical to the success of a water system further exacerbate the capacity issues faced by small community systems.

Midsized Community, Large, and Extra-Large Systems

There are 29 midsized community systems, 7 large systems, and 1 extra-large system in Alaska. These systems receive less targeted technical assistance than small community systems. With larger customer bases, these systems have a greater ability to generate the revenue needed to support their TMF capabilities.

The Municipality of Anchorage is the only extra-large system in Alaska with a population served of 221,351. This utility is self-sufficient and does not require extensive targeted technical assistance. Accordingly, future technical assistance endeavors may include midsized and large systems, but will not target the Municipality of Anchorage.

Private and Government Systems

There are 941 private systems and 99 federal or state government systems in Alaska. Over 97% of these systems serve a small population base (<1,000). As with small community systems, small private and government systems may have difficulty in maintaining infrastructure and retaining staff. Given the size and predominance of private and government PWS types, the TAF Program will review options for private and government systems for future targeted assistance efforts during the comprehensive strategy update.

Methods and Criteria for Assessing Capacity

Operations and Maintenance Best Practice Scoring

DEC's Facilities Programs (comprised of Village Safe Water (VSW) and TAF programs), in collaboration with the Rural Utility Business Advisor (RUBA) Program and the Alaska Native Tribal Health Consortium (ANTHC), have developed criteria for assessing the capacity of rural water and wastewater utilities.

The criteria is referred to as Operations and Maintenance Best Practices (Best Practices) and it has been used for determining eligibility and prioritization for community sanitation projects since mid-2015. Rural utilities are scored twice per year on each TMF category.

Technical:

- Operator Certification – The Capacity Development and Operator Certification Program reviews the certification status of utility operators to determine whether certification levels match or exceed the level of the water system.
- Preventative Maintenance Plan – The Remote Maintenance Worker (RMW) Program determines whether a utility has a preventative maintenance plan in place and if maintenance is occurring and recorded.
- Compliance – The Drinking Water (DW) Program reviews the number of Monitoring and Reporting violations incurred by each system during the previous calendar year.

Managerial:

- Utility Management Training – The RUBA Program reviews whether someone in a management position with the utility has attended an approved Utility Management course within the last five years.
- Meetings of the Governing Body – The RUBA Program reviews whether the utility operator is regularly presenting a report on the status of the utility to the governing body.

Financial:

- Budget – The RUBA Program determines whether a utility has a realistic budget adopted and if it is being implemented.
- Revenue – The RUBA Program determines whether a utility is collecting sufficient revenue.
- Worker's Compensation Insurance – The RUBA Program reviews whether a utility has a worker's compensation policy in place for employees.
- Payroll Liability Compliance – The RUBA Program reviews the utility's tax obligations and liabilities.

Each of these nine criteria are evaluated and scored using the scoring criteria included in Appendix B for a total possible score of 100 points.

Communities work collaboratively with DEC and RUBA staff to provide the documentation required for Best Practices scoring. Community members are encouraged to actively work with project managers, RMWs, RUBA staff, and others to build and maintain capacity as reflected by the Best Practices score. A number of resources are available on the DEC website, such as sample preventative maintenance plans and financial reports, and operator training opportunities. Additionally, assistance with QuickBooks and taxes, as well as management and financial trainings are offered via the RUBA Program to assist utilities build capacity.

Technical assistance providers statewide use the Best Practices score to prioritize capacity building efforts. This tool can be used to identify areas for improvement, ranging across all TMF categories.

Drinking Water State Revolving Fund Loan Assessments

The SDWA Amendments of 1996 allowed states to establish a Drinking Water State Revolving Fund (DWSRF) program to assist public water system owners with financing infrastructure upgrades needed to protect public health and achieve and maintain compliance with SDWA requirements. The DWSRF authorizes grants to states to capitalize revolving loan funds and also provide "Assistance to Disadvantaged Communities" which may include forgiveness of loan principal [(SDWA Amendments of 1996, Section 1452(d)].

DEC uses DWSRF loans to assist eligible public water system owners with infrastructure improvements. Interested system owners apply for assistance, and DEC staff from a variety of programs collaboratively and cooperatively review, score, and rank water system projects for funding.

To receive loan fund assistance, a utility must demonstrate sufficient TMF capacity to operate the system in compliance with state and federal regulations. This includes the completion of a Capacity Assessment Worksheet (Appendix C) and a Financial Capacity Assessment.

A full time Financial Capacity Analyst position is on staff to review these capacity assessments. If a utility cannot demonstrate sufficient capacity, DEC and other technical assistance providers may prioritize assistance to these communities to help them achieve capacity in a reasonable time.

Sanitary Surveys

Sanitary surveys are required for PWSs every 3 or 5 years depending on the system classification. The survey covers all aspects of the system including all water sources, the transmission system, each individual water treatment process utilized at the facility, and the water storage and distribution system. These inspections are completed by DEC-Approved Sanitary Survey Inspectors, which includes both DW Program staff and third-party Sanitary Survey Inspectors who are approved by DEC but not employed by the State of Alaska.

Depending on the complexity of the public water system, the survey can easily exceed 300 questions, and includes information specific to TMF capacity. Any deficiencies of the water source(s), facilities, equipment, operation, maintenance, or monitoring requirements are documented during the inspection. The survey includes questions regarding potential health hazards that may be found during the inspections. Any deficiencies identified during the inspection must be corrected within a specified timeframe. Systems with sanitary survey deficiencies are prioritized for capacity assistance.

Sanitary survey inspections help PWSs strengthen their operational and managerial processes, as well as their infrastructure, by identifying 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 PWS staff and Drinking Water Program; and identifying and correcting deficiencies, thereby reducing risks to public health.

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. This list is generated quarterly by EPA based on the PWS information transferred to them from the State of Alaska's DW Program database. The ETT displays a total score based on the violations received by PWS which have not been returned to compliance.

EPA has assigned a point value to each violation with a higher weight placed on health-based violations.

The DW Program 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. Currently, the DEC 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 the systems back into compliance.

Capital Improvement Program Funding

DEC's VSW Program administers a Capital Improvement Program (CIP) that funds planning, design and construction of sanitation improvements in rural Alaskan communities. Prior to construction, recipients of CIP grant funding are required to demonstrate sufficient TMF capacity to operate and maintain their sanitation system in the long term. As discussed above, Best Practices scoring criteria was implemented in 2015 as a method of evaluating capacity. A minimum total score of 60, including two points in each of the Payroll Liability and Workers Compensation Insurance categories, must be achieved and maintained to receive CIP construction funding.

In some instances, communities are awarded CIP grants but their Best Practices score drops below the minimum threshold before funding is released or midway through the project. In such cases, the community is identified for targeted technical assistance. This Targeted Technical Assistance (TTA) is a collaborative effort between community members, DEC staff, RUBA staff, regional health organization staff and project engineers, formalized by a Memorandum of Agreement (MOA).

Under TTA MOAs, each community identifies representatives to work proactively with technical assistance providers to build capacity in order to achieve and maintain the minimum score so that construction funding can be released. Each MOA is effective throughout the duration of construction on the project, as long as the community participates in monthly meetings and develops an action plan to achieve and maintain the minimum Best Practices score.

In addition to the communities with projects already funded through CIP, DEC anticipates that there will be communities with funded design projects that do not meet the Best Practices threshold to apply for future CIP construction funding. Using the current TTA model as a guide, DEC will continue to work collaboratively with other technical assistance providers to identify and support these communities in building and demonstrating the capacity required to be eligible for project funding.

Program Initiatives Designed to Improve Capacity

Capacity Development and Operator Certification Program

The Capacity Development and Operator Certification (CDOC) Program develops training programs, administers examinations, certifies operators of community water and wastewater systems, and coordinates capacity development activities statewide.

Guidebooks and Exam Preparation Guidance

The CDOC Program actively engages with operators to improve certification exam outcomes. CDOC Program staff have developed a pre-test for operators to take prior to attending training programs to

gauge their level of preparedness. Operators are encouraged to take the pre-test to identify areas of focus for studying.

The American Water Works Association's (AWWA) Principles and Practices of Water System Operations (WSO) series is the leading operator certification training, aligned with current Association of Boards of Certification (ABC) Need-to-Know criteria and offering training based on experience and certification level. The CDOC Program identifies operators who would benefit from additional study materials and offers WSO Level 1 and Level 2 books free of charge. CDOC is developing a study plan that involves online quizzes for each chapter of the WSO books to assist operators. An operator can work with CDOC to develop a study plan that includes taking quizzes at predetermined times to help set a pace for study and to identify areas that require a more in-depth review.

Course in a Box

In order to help Alaskan operators better prepare for their jobs and for certification exams, CDOC contracted the development of introductory and intermediate courses that utilize the AWWA WSO Water Treatment Grade 1 and 2 manuals as the base texts. The intention of these courses is to address the unique needs and requirements of water treatment operations in Alaska, while also providing broadly applicable knowledge required for ABC certification exams.

These "Course in a Box" are available to Alaskan trainers, municipalities, regional health corporations, and other interested parties who intend to conduct trainings for operators. The materials can be used to conduct 4-day trainings for both introductory and intermediate operators, and include PowerPoint presentations and associated required media, instructions for interactive learning tasks, lists of suggested exhibits for hands-on learning, and tools for assessing operator knowledge before, during, and after a course.

Train the Trainer

In addition to efforts to develop training materials to improve technical capacity, DEC recognizes the need for qualified and effective in-state trainers to present the materials to operators. CDOC works to identify and reach out to industry professionals, as well as current and former operators, who would make good trainers. To assist the individuals refine their presenting and training skills, CDOC has arranged train the trainer events.

Water System Excellence Award Program

In an effort to express appreciation and recognition for the systems, and operators, that have achieved compliance with DEC regulations, CDOC has initiated an annual utility recognition program. 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. Through this effort, CDOC hopes 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.

Systems receive recognition at the Alaska Water Wastewater Management Association annual statewide conference, on the DEC website and via letter. Additional recognition categories will be added in the future for systems who maintain the Ursa Major tier for multiple years in a row.

System-Specific Training and Certification (S^2TC)

While many of Alaska's rural operators may be fully competent in maintaining and operating a utility, many are challenged to pass the certification exams. In order to address the issue of competent but uncertified operators, the CDOC Program has contracted with the University of Alaska to develop the System-Specific Training and Certification (S^2TC) training materials. The S^2TC effort involves the creation of training and exam modules for different treatment and distribution components of a PWS.

Once completed, these modules will serve as the basis for an alternative approach to certification exams that will only be available to operators who are effectively operating and maintaining a utility but have repeatedly failed traditional ABC certification exams. Operators will be administered the training modules that apply to their specific system. These operators will be required to prepare and submit a facility description to ensure the correct training modules are provided. Each module is intended to educate and test an operator on information that is specific to the technology used in his/her utility. In these limited cases, successful completion of the S^2TC modules applicable to the system 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.

Welcome Packet for New Hires

CDOC is developing an informational packet for new rural community leaders who are managers of their community water systems. This "Welcome Packet" is intended to be a convenient reference for new leaders that informs them of their key responsibilities related to their public water system and contact information for staff from RUBA, RMW, OpCert, and DW programs assigned to provide assistance. Once completed, the welcome packet will be posted as appropriate on State websites and will be sent to new community leaders. Based on the success of the initial packet, CDOC may create a series of similar materials highlighting key concepts that can be sent in a sequential fashion to avoid overwhelming leaders at a time when they are learning about their many diverse responsibilities that come with their new position.

Remote Maintenance Worker Program

The RMW Program delivers training and technical assistance to rural utility operators in nearly 200 Alaskan communities. RMWs assist with building and maintaining technical capacity by providing a number of services to rural Alaskan operators. Each RMW is assigned up to 15 communities in a specific geographical regional, allowing them to develop both a thorough knowledge of the water and wastewater systems, as well as strong working relationships with the operators and managers of the systems.

On-Site Training

One of the most important aspects of the RMW Program is the on-site, on-the-job training in the proper operation and monitoring of utilities and compliance with state and federal regulations. RMWs strive to make at least one on-site visit to assigned communities each year. Often during routine trips, problems are discovered that, if left unattended, could result in serious system problems.

RMWs are able to offer targeted, system specific assistance that allows operators to improve the sampling, troubleshooting, maintenance, and mechanical repair skills needed to adequately run a community's utility, and provide the training and materials needed to assist operators in preparing for certification examinations.

Additionally, RMWs are able to present to local government officials their insight and recommendations concerning operation and maintenance (O&M) requirements, issues, and costs, as well as operator training needs.

Preventative Maintenance Plans and Reporting Preparation

RMWs work with operators to develop and revise preventive maintenance plans and train them in accurate record keeping and reporting.

Emergency Assistance

Responding to emergencies is another hallmark of the RMW Program. Freeze-ups, floods, leaks, sewage discharges and other situations can result in extended service disruption or threaten public health. RMWs are available to provide immediate assistance to utilities in emergency situations.

Regional Training Workshops

In addition to one-on-one training and local response, RMWs facilitate regional training workshops for operators and provide classroom instruction to prepare operators for State certification exams.

Drinking Water Program

The DW Program's mission is to protect the health of the people of Alaska by establishing, maintaining, and enforcing standards for safe and reliable drinking water. The DW Program focuses on providing a high level of technical and compliance assistance to the owners and operators of PWSs in Alaska.

Compliance Assistance

DW Program staff provide a customized annual compliance monitoring schedule for each PWS early in the calendar year. This Monitoring Summary is a significant compliance assistance activity which supports TMF capacity, as it assists PWSs to schedule and budget for required compliance monitoring.

The DW Program also maintains and supports web resources that provide information to PWS owners, operators, and consulting engineers on financial and managerial tools, capacity assessments, as well as compliance and monitoring assistance information. Additionally, an array of Drinking Water related information and resources is available on the DW Program website.

Technical and On-Site Inspections

DW Program staff conduct on-site sanitary surveys. Inspectors review the management and operations of the PWS and identify areas for improvement. Technical assistance is provided during, and as a result of, the inspection, both to correct noted deficiencies and to improve the operation of the system.

The DW Program also provides training and quality assurance/quality control oversight of the third-party State of Alaska approved Sanitary Survey Inspectors. Additionally, the Alaska Rural Water Association (ARWA) employs sanitary surveyors to perform many surveys each year; the DW Program and ARWA collaborate to provide, and leverage, limited resources to communities throughout the state.

DW Program engineering staff conduct Filtration Avoidance Inspections for unfiltered surface water systems with approved waivers. These inspections include evaluations of the technical and managerial

aspects of the systems, with the overall goal to identify factors that could increase compliance and optimization of the system. The results of these inspections are sent to the PWS owners.

Village Safe Water Program

The VSW Program, within the DEC Division of Water, works with rural communities to develop sustainable sanitation facilities.

Project Oversight

The VSW Program employs a number of engineers responsible for project oversight. Engineers work directly with communities to identify project needs and assist with applications for funding.

Grant Funding

VSW funds grants to small communities for planning and construction projects, that once complete, improve the technical capacity of systems within the community.

Rural Utility Business Advisor Program

The goal of the RUBA Program is to increase the managerial and financial capacity of rural water and wastewater utility providers.

On-the-Job Assistance

One-on-one or small group training in the community is provided by RUBA staff for the local utility staff. Upon a community request, RUBA staff travel throughout all regions of the state to provide hands on capacity building assistance.

Training Materials

In addition to the technical, on-the-job assistance, the RUBA Program also maintains a number of useful publications on the RUBA website, ranging from plain English guides to regulations and utility accounting, to rate calculators and collections handbooks. RUBA staff also develop templates for utility budgets, monthly financial reports, and meeting minutes, and train local staff on the proper use and formatting of these tools.

32 Hour Utility Management Classes

The RUBA Program hosts 32-hour utility management courses in nine key areas: personnel management, organizational management, financial management, clerk management, elected officials management, introduction to rural utility management, operational management, planning management, and QuickBooks training.

Capacity Development Coordination

The *Report of Findings – On Improving the Technical, Managerial and Financial Capacity of Alaska's Public Water Systems* completed by the Citizen Advisory Board to the Alaska Department of Environmental Conservation, August 2000, identified a number of factors that that either encourage or impair the technical, managerial, and financial (TMF) capacity of public water systems.

The *Report of Findings* suggests that capacity is strongly impacted by the number of entities providing services at the Federal and State level. While the different resources are beneficial, issues arise due to lack of inter-agency and intra-agency communication and coordination.

DEC has taken measures to increase communication, collaboration and coordination with the entities involved in capacity development.

Regional Coordination Meetings

The TAF Program coordinates annual regional meetings that bring together representatives of all regulatory programs and technical assistance providers that address rural sanitation needs. Participants include the RMW, CDOC, VSW, DW, Wastewater, Solid Waste and RUBA program staff, along with ANTHC staff and environmental health staff from regional health corporations. At these meetings, participants review and evaluate the current capacity status of all rural communities within a region in an effort to ensure that no community is unintentionally neglected.

The goal of these meetings is to coordinate effective and consistent communication between the agencies providing assistance to rural communities for their sanitation infrastructure needs, to capture community needs for funding purposes, and to establish interagency collaboration on technical assistance efforts to communities.

Coordination with Other Technical Assistance Providers

There are numerous programs available in Alaska that relate to capacity development. The following is a list of programs, although not complete, that DEC staff work with to provide capacity development measures in one form or another:

Regulatory Commission of Alaska (RCA)

The Regulatory Commission of Alaska regulates public utilities by certifying qualified providers of public utility and pipeline services, ensuring that they provide safe and adequate services and facilities at just and reasonable rates, terms, and conditions. This keeps rates as low as possible while allowing the utility to earn a fair return.

Alaska Rural Water Association (ARWA)

ARWA provides a variety of services to small water and wastewater systems and operators throughout Alaska. Programs include onsite technical assistance and regional training to operators, formal training to operators and utility personnel through classroom-style seminars, development of source water protection plans to ensure the safety of water sources used primarily for drinking water, and outreach to communities about the importance of protecting their source water. ARWA also recognizes member systems and operators who have done outstanding work with annual awards.

As the Primacy Agency, DEC provides input to ARWA on their annual work plans for federal grant funds. DEC collaborates with ARWA to provide insight on training needs across the state and to review the success of prior trainings. Additionally, CDOC and DWP staff present at the ARWA annual training conference, which provides operators with the opportunity to earn continuing education units.

Alaska Water and Wastewater Management Association (AWWMA)

AWWMA manages the activities of the Alaska Section of the American Water Works Association (AWWA) and Water Environment Federation. AWWA is an international, nonprofit, scientific and educational society dedicated to providing total water solutions assuring the effective management of water. AWWMA engages in ongoing efforts to recognize the importance of water and wastewater professionals by presenting operators and systems with annual awards in a number of different categories.

CDOC staff hold memberships with the AWWA and present at the annual AWWMA conference, which provides operators with the opportunity to earn continuing education units.

Tribal Health Organizations

The Indian Health Service, an agency within the Department of Health and Human Services, is responsible for providing federal health services to Alaska Natives. The Alaska Area is made up of several regional health care organizations (RHOs) that provide comprehensive health services to Alaska Natives.

DEC works in close collaboration with many RHOs in Alaska. DEC's RMW Program awards grants to the Bristol Bay Area Health Corporation, Maniilaq Association, Norton Sound Health Corporation, Tanana Chiefs Conference, and the Yukon-Kuskokwim Health Corporation to support maintenance specialist positions located in regional hubs. As discussed above, these organizations also take part in regional coordination meetings to review ongoing and planned projects for communities in each service region. Additionally, RMWs and Environmental Health Officers employed by RHOs assist DEC in assessing the operations and maintenance capacity of rural water and wastewater utilities for Best Practices scoring.

Alaska Native Tribal Health Consortium

ANTHC's Division of Environmental Health & Engineering (DEHE) is responsible for the design and construction of water and wastewater sanitation facilities. DEHE provides numerous technical and financial capacity building services in many rural villages that include onsite operator training, rate studies, preventative maintenance and emergency assistance.

Additionally, the Alaska Rural Utility Collaborative (ARUC) is an ANTHC program that aims to maximize the public health benefits of sanitation facilities and build local community capabilities. ARUC supports its member communities in setting water/sewer rates, billing local water and sewer customers, and providing guidance to local water plant operators.

University of Alaska

The University of Alaska has a number of programs that prepare students for sanitation work in Alaska, including civil and environmental engineering degree tracks; a Process Technology Program, which prepares students for employment as operations technicians in the process industry, including utilities, wastewater treatment facilities; and Career and Technical Education programs, which are designed to give students occupational training. Programs that support capacity development include tribal management, facility maintenance, and rural surface water quality testing.

The University engages in research related to water treatment and management, and has contracted with the State of Alaska for a variety of sanitation related studies.

Alaska Job Corps Center

Job Corps is a free education and training program for young adults and Water/Wastewater Management is one of the programs offered in Alaska. The program offers hands on training in many different types of water and wastewater management work at an on-site training facility, experience in a variety of water management settings, and instruction on water and wastewater regulations and monitoring. The program prepares graduates go to work as water and wastewater treatment operators, power plant distributors, utility planning specialists, or utility operations specialists.

Environmental Finance Center Network (EFCN)

The EFCN offers free assistance on financial and managerial topics to systems serving 10,000 or fewer people. As part of their federal grant awards, the EFCs are required to coordinate with state primacy agencies to ensure their activities are aligned with those of the state. For Environmental Finance Center

workshops scheduled in Alaska, CDOC provides logistical support to the EFCN with information about locations and timing for the greatest possible workshop turnout, and assists with distributing surveys and workshop details to operators across the state.

EPA Workgroups and Workshops

The State of Alaska participates in EPA activities as they become available and as state funding allows. Recent participation has included the Capacity Development and Operator Certification Collaborative Workgroup, a workgroup focused on discussing and improving collaboration between different state programs, as well as the Tribal Workforce Workgroup.

Measuring Success

Statewide, compliance data is a strong indicator of systems in need. As discussed previously, sanitary surveys, the ETT list, and Best Practices score are used to identify and prioritize systems for capacity assistance. Additionally, the CDOC 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 also targeted for capacity assistance. Improvements to capacity may be measured by changes in the number of deficiencies found through sanitary surveys, the number of systems on the ETT list, Best Practices scores, and the number systems with properly certified operators.

Reporting

1420(B)(2): Annual Capacity Development Report

A Capacity Development Report will be prepared annually, based on the capacity development activities completed within the federal fiscal year, as required by 1420(b)(2). This report will detail the capacity development efforts, and discuss their apparent effectiveness in improving the overall capacity of Alaska PWSs

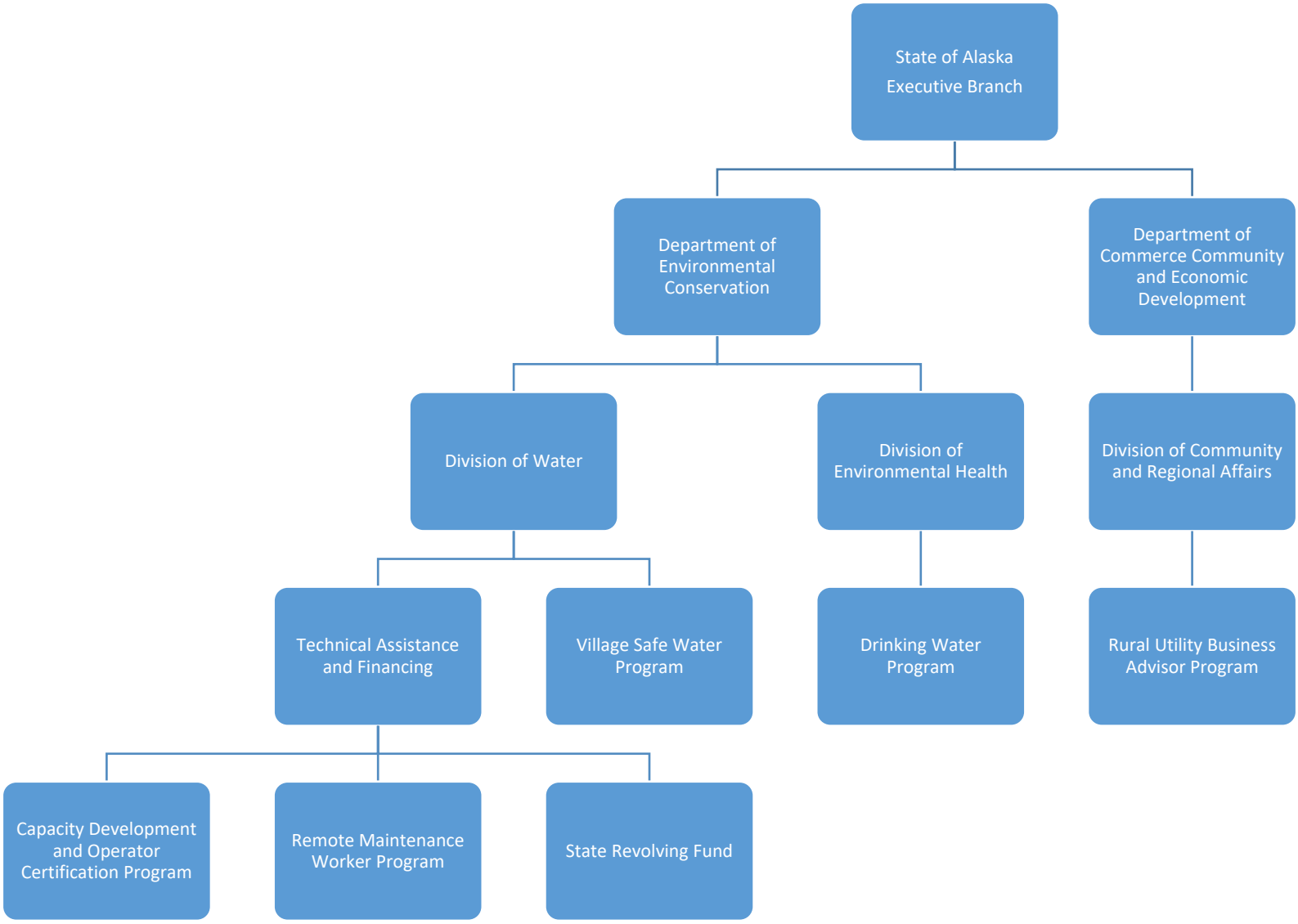
1420(C)(3): Tri-Annual Governor's Report

A report will be provided to the Governor every three years, summarizing the capacity development efforts, successes, challenges, and the potential improvements to the Strategy initiatives.

1420(B)(1): Tri-Annual Historic List

A report will be provided to EPA every three years, on community and non- transient non-community water systems that have a history of non-compliance, discussing the capacity development efforts that have been used to address their issues.

Appendix A:
State of Alaska Organization Chart



Appendix B:
Best Practices Scoring Criteria

Category		Best Practice	Points	
Technical	*Operator Certification*	Utility has more than one operator certified to the level of the water system	10	
		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	
	Preventive Maintenance Plan	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	
		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	
	Compliance	Utility had no Monitoring and Reporting violations during the past year	10	
		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	
		Total Technical Points	**45**	
Managerial	*Utility Management Training*	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	
	Meetings of the Governing Body	The utility owner's governing body meets routinely consistent with the local ordinance/bylaw requirements and receives a current report from the operator	5	
		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	
		Total Managerial Points	**10**	
Financial	*Budget*	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	
		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	
	Revenue	Utility is collecting revenue sufficient to cover the Utility's operating expenses and to contribute to a repair and replacement account	20	
		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	
	Worker's Compensation Insurance	Utility has had a workers' compensation policy for all employees for the past two years and has a current policy in place	5	
		Utility has a current workers' compensation policy in place for all employees	2	
		Utility has no workers' compensation policy	0	
	Payroll Liability Compliance	Utility has no past due tax liabilities and is current with all tax obligations	5	
		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	
		Total Financial Points	**45**	
		Total Points Possible	**100**	

Appendix C:
Capacity Assessment Worksheet

ALASKA DRINKING WATER FUND PROGRAM
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

CAPACITY ASSESSMENT WORKSHEET FOR POTENTIAL PROJECTS

The 1996 amendments to the federal Safe Drinking Water Act require Alaska to assess the capacity of potential recipients of loans from the Alaska Drinking Water Fund (ADWF). By capacity, EPA means the technical, financial and managerial capabilities of a water system for proper long-term operations. If a loan applicant is found lacking in these areas, we may not be able to provide financial assistance from the ADWF unless the capacity of the system is guaranteed.

Consequently, we are asking for detailed information from potential loan applicants to help us in this assessment. Such things as financial records, enterprise fund budgets and audits, along with detailed planning and engineering information for your system will help ensure our ability to provide you this loan for your project.

The following is an outline of our assessment process. Please carefully review and complete these worksheets and make sure the information you provide us is current and accurate.

TECHNICAL CAPACITY ASSESSMENT

We intend to use the following questions and answers to help us evaluate your systems technical capacity. These questions address the physical components of your drinking water system and are related to water treatment facilities, water sources, storage and pumping capacity and water distribution capacity. Pertinent technical documentation such as engineering feasibility studies and reports should be provided as appropriate.

1.) **Are the existing water treatment facilities adequate and functional?**
Please provide a description of the system and the proposed project.
Will this system likely meet federal and state drinking water regulations expected to be enacted within the next four years? *This includes the ICR, Groundwater Disinfection Rule and Enhanced Surface Water Treatment Rule.*

2.) **Is the existing water source developed and protected?**
Will this system likely meet future source protection requirements?

3.) **Is the current system able to meet peak demand flow and pressure in all points of the treatment and distribution system?**
What is the current peak demand and minimum pressure at peak demand?
Does the system experience seasonal or periodic difficulties?
When was the last leak detection survey? Please describe any corrections made.

4.) **Does the system employ, or have access to, the correct level of certified or qualified operators?**
Under State regulation, all water systems serving more than 500 people are classified as to complexity and require either a I,II,III or IV level operator or a qualified surface water system operator.
Please provide the name and certification number of your lead certified operator or operators in charge of your water treatment and water distribution systems.

5.) **Has the water system been out of compliance with federal or state drinking water regulations within the past year?**
Please provide any compliance or enforcement actions taken recently such as Notices-of-Violation (NOVs), Compliance-Order-By-Consent (COBCs), boil water notices and the most recent sanitary survey.

FINANCIAL CAPACITY ASSESSMENT

Financial capacity is assessed by examining the fiscal condition and financial management aspects of the system. Financial aspects relate to the systems ability to raise the necessary funds to ensure proper operation and maintenance, including long-term depreciation and reserve accounts. Financial management refers to the management of those fiscal aspects.

If a system is regulated by the Alaska Public Utilities Commission (APUC), information contained in the application for the current Certificate Of Public Convenience And Necessity or the annual APUC Report may help demonstrate financial capacity. A copy of the annual report to the APUC may also contain the necessary information related to financial capacity. For example, if a system is applying for the APUC certificate, a copy of the application package should be submitted for review with the ADWF loan application. If a system already has a current APUC Certificate, a copy of the annual report to the APUC should be submitted for review with the ADWF loan application.

For those systems that are not regulated by the APUC, have not completed an application package for certification by APUC, or have not submitted an annual report to the APUC, the following questions will help us evaluate the financial aspects of the system. These questions relate to total user charge revenues and total system expenses, other revenue streams, fairness and affordability of user charges, cash budgeting, preparation and use of annual and capital budgets, and periodic financial audits

1.) **Does the water system have user ordinances and a rate structure?**
How often are the rates reviewed or updated? When was the last update?

2.) **Does the water system revenue from user charges meet or exceed system expenses?**
Please submit your water utility budget documents that clearly show revenue and expenses.

3.) **Are other funds contributed to water system operations to offset expenses?**

4.) **How affordable are water system rates?**
What are the estimated residential rates per household (after the project) compared with the median household income and other similar system rates?

5.) **Does this system use an annual budget?**

6.) **Does the system include a cash budget within the annual budget for operations and emergency purposes?**

7.) **Does the system use a capital budget?**

8.) **Does this system use a capital improvement plan?**

9.) **Does this system undertake regular financial audits?**
Please provide the most recent financial audit of the water utility accounts, including any appropriate state single audit documents along with the auditor management letters.

10.) **How will this loan be repaid?**
Please describe how this loan debt will be retired. If user fees are proposed as the repayment source, how much will rates need to be increased to retire this loan?

MANAGERIAL CAPACITY ASSESSMENT

Managerial capacity is assessed by evaluating managerial qualifications and experience, organizational structure, the compliance history of the system, training programs offered, preventive maintenance programs, and documentation of ownership and responsibility.

The following questions help us to assess the systems managerial capacity and address the following aspects of system management:

1.) **How is the water system managed?**
Who is the system owner(s) and manager?
Does the system utilize personnel and policy procedures or manuals?
Does the system require or encourage continuing education for personnel?
What type of organizational structure exists?

2.) **Does the system have written operation and maintenance manuals?**

3.) **Does the system employ, as needed, the services of a professional engineer?**

4.) **Does the system have up-to date record or as-built drawings?**

5.) **Does the system implement a preventative maintenance program?**

6.) **Does the system have an emergency operating plan and safety program?**

7.) **What types of public outreach education programs are implemented?**

8.) **What professional organizations are operators & system managers members of?**