State of Utah

Capacity Development Strategy for New and Existing Systems

Utah Department of Environmental Quality

Division of Drinking Water

Salt Lake City, UT

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Table of Contents

Section 1 – Introduction

1.1 Authority

The Capacity Development Program was created by the Safe Drinking Water Act Amendments of 1996. According to Section 1420(a), states are to *"ensure that all new community water systems and nontransient, noncommunity water systems commencing operations after October 1, 1999 demonstrate technical, managerial, and financial capacity with respect to each national primary drinking water regulation in effect, or likely to be in effect, on the date of commencement of operations."*

The Utah Drinking Water Board operates under authority granted in 1981, and upheld through subsequent reauthorizations, under Utah Code Title 19 Chapter 4, the Utah Safe Drinking Water Act. The Utah Drinking Water Board is a 9-person board appointed by the Governor. The Board is empowered to adopt rules governing the design, operation, and maintenance of Utah's public drinking water systems.

1.2 Program Rule

The Utah Capacity Development Program is codified in Utah Administrative Code Rule *R309-800 Capacity Development Program.* The most recent version of the rule is available on the Division of Drinking Water's "Drinking Water Laws and Rules" webpage. The Utah Department of Environmental Quality, Division of Drinking Water (DDW, the Division) is the primacy agency for the federal Safe Drinking Water Act (SDWA) and implements and oversees the rules authorized by the Drinking Water Board. The program rule applies to new and existing drinking water systems and has been updated to meet the requirements of the America's Water Infrastructure Act (AWIA) of 2018, specifically to encourage water systems to develop and implement asset management programs.

Public Involvement

In order to implement the updated Capacity Development Strategy, Utah DDW was required to update its existing Capacity Development Program Rule to include references to asset management as required by AWIA. Utah DDW staff began updating the existing rule early in 2022. Proposed revisions were sent to a variety of individuals from stakeholder communities potentially impacted by changes to the rule and the strategy, including water systems, technical assistance providers, and consulting engineers. Comments were reviewed and evaluated, and appropriate changes were made to the proposed rule. The updated rule is expected to be adopted by the Drinking Water Board at its March 2023 meeting.

1.3 State Capacity Development Strategy Document

Utah developed its initial Capacity Development Strategy in 1999 but has not reviewed

or modified it since then. In addition to the provisions set out in the America's Water Infrastructure Act (AWIA) of 2018 that require states to review and update their Capacity Development Strategies to include encouraging systems to prepare and implement asset management programs, there have been numerous regulatory, industry, and economic changes in the past 20 years that Utah DDW considered when reviewing and updating the state's Capacity Development Program Rule and Strategy Document. Utah DDW has completely updated this strategy document and its drinking water regulations to meet AWIA requirements as well as update the state's approach to capacity development.

This completely revised strategy document outlines programs, methods, and tools the Utah DDW will employ to ensure that new and existing public drinking water systems have or develop adequate technical, managerial, and financial capacity to operate and maintain viable, sustainable utilities to provide Utah's citizens and visitors with adequate supplies of quality drinking water. The revisions include recommending and encouraging all drinking water systems to develop and implement an asset management program, including an asset management plan.

The Capacity Development Strategy must include six distinct elements that all work together to aid water utilities in developing and maintaining this capacity. These six elements are defined in Section 1420(c)(2) of the Safe Drinking Water Act as modified by AWIA Section 2012 and include the following:

A. Methods or criteria to prioritize public water systems
B. Factors that encourage or impair capacity development
C. How the State will use the authority and resources of the SDWA
D. How the State will establish a baseline and measure improvements in capacity
E. Procedures to identify interested parties
F. Methods to promote, encourage, and assist systems to develop asset management programs, including asset management plans

These six elements are further defined and discussed in Section 4 of this strategy document.

To comply with AWIA's capacity development strategy update requirements states must complete the following steps:

- Solicit and consider public comments on the six strategy elements
- Describe which, if any, elements were excluded from the strategy and why
- Describe how the elements included in the strategy constitute a strategy to aid systems develop or improve technical, managerial, and financial capacity
- Describe how the state will implement this strategy and evaluate progress to improving water system capacity
- Document and report on the state's efforts to encourage and assist systems

develop and implement asset management programs in the state's annual report to EPA and triennial report to the Governor

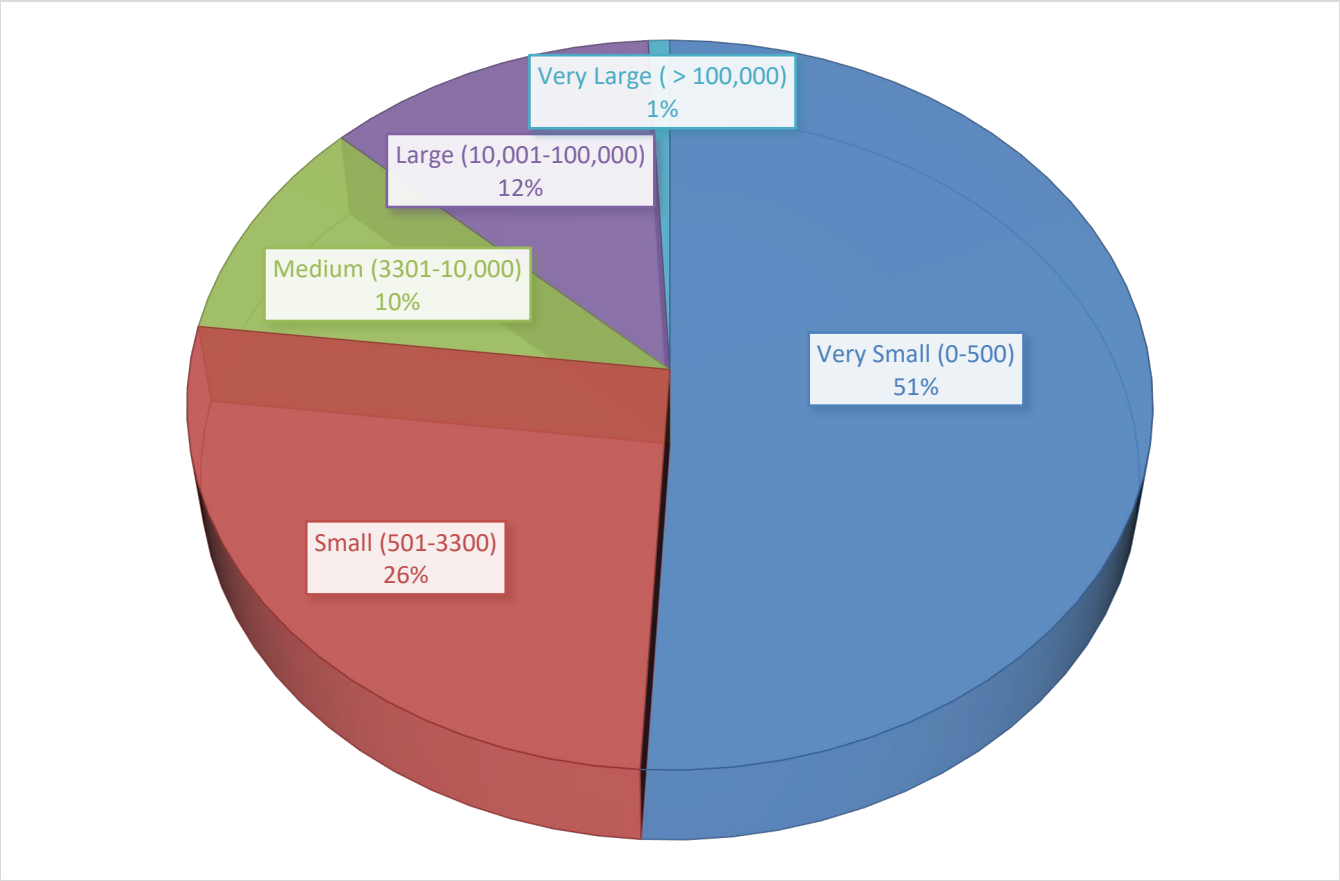
Furthermore, to comply with the AWIA asset management mandate in the updated capacity development program strategy Utah DDW has completed the following:

- Solicited and considered public comments on encouraging the development and implementation of AM plans and training and how it can best be incorporate to boost TMF capacity
- Described which elements may not need to be updated according to AWIA's asset management requirements
- Described how asset management can strengthen water utility's technical, managerial, and financial capabilities
- Described how Utah DDW will encourage water utility's to develop and implement asset management plans, how the updated strategy will be implemented, and how training programs and utility progress will be tracked and evaluated

By incorporating asset management into the strategy Utah DDW will be better able to document and report on the state's effort to encourage and assist water utilities to develop and implement asset management plans and create training in its annual program report to EPA and the triennial program report to the Governor.

1.4 Water System Demographics

As of November 30, 2022, there were 1,056 public water systems serving drinking water to Utah's residents and visitors. 507 of those systems are community water systems, and like many other states, most of Utah's community water systems serve populations fewer than 3,300.



These small systems often lack sufficient capacity to meet drinking water quality and quantity standards and mitigate challenges and account for the majority of the compliance violations issued by Utah DDW. To improve system capacity, Utah DDW encourages all drinking water systems to develop and implement asset management programs. Utah DDW works closely with technical assistance providers to develop asset management training courses and provide asset management training to the state's water utilities.

Section 2 – State Capacity Development Program Strategy – New Systems

Section 1420(a) of the SDWA requires that states ensure that all new community water systems (CWS) and non-transient non-community water systems (NTNCWS), beginning operations after October 1, 1999, demonstrate they have adequate technical, managerial, and financial capacity to comply with both state and federal drinking water requirements. AWIA modified the SDWA to require that states encourage water utilities to develop and implement asset management programs. Utah's legal authority to implement SDWA provisions is codified in Utah Code Title 19 Chapter 4, the Utah Safe Drinking Water Act. The Utah Drinking Water Board is empowered by this statute to adopt rules governing the design, operation, and maintenance of Utah's public drinking water systems, including capacity development. The Board has adopted Drinking Water Rule R309-800 establishing a state Capacity Development Program. Utah DDW has revised this rule to include a section on asset management and encouraging water utilities to incorporate asset management as a means to improve system capacity.

Utah's capacity development program rule requires all proposed new systems, or newly discovered systems, to demonstrate adequate technical, managerial, and financial capacity through one of two methods:

1. Proposed new systems must submit a capacity development business plan, defined in R309-800-6(1), to Utah DDW for review and approval before it may serve drinking water to the public. The capacity development business plan requirement has been updated to require proposed systems include an asset management plan.
2. Newly discovered systems must either submit completed Capacity Assessment Worksheets or a Capacity Development Business Plan, whichever best suits the systems situation, to Utah DDW for review and approval. The Capacity Assessment Worksheets have been updated to include questions regarding asset management.

Both methods, updated to include asset management, provide water system owners the opportunity to understand the financial and operational commitment necessary to owning and operating a viable, sustainable public water system. They also provide Utah DDW staff an opportunity to discuss these commitments and regulatory requirements, as well as encourage asset management, with owners or prospective owners as well as determine a system's capabilities and capacity to meet the requirements of the SDWA and Utah's drinking water rules.

Section 3 – State Capacity Development Program Strategy – Existing Systems

All water systems that are rated unapproved or that are in significant non-compliance with SDWA requirements or Utah drinking water rules are subject to assessment under the Capacity Development Program Rule. Each existing system subject to assessment

shall be evaluated based on the Capacity Development Criteria defined in R309-800-4(2) and the five core component framework for asset management plans in R309-800-5(3). The assessment shall also consider any other information, documents, and knowledge currently available to Utah DDW including, but not limited to, historical system documents, database records, sanitary survey results, local health department records, operator certification records, consumer confidence reports, capacity assessment and asset management self-evaluations, or Utah DDW staff knowledge.

Section 4 – Capacity Development Program Elements; SDWA 1420(c)(2)(A-F)

A. Methods or Criteria to Prioritize Water Systems

Utah DDW developed and defined a list of specific violations with a corresponding point value based on the severity of the infraction. The list is codified in Utah Administrative Code *Rule R309-400 Water System Rating Criteria (Improvement Priority System)*. This rule establishes the system by which the Division assigns compliance ratings to public water systems (PWSs) and prioritizes enforcement action and technical assistance to those systems. Asset management will be incorporated into Utah DDW's ranking system to evaluate water utilities compliance with state capacity development program and asset management regulations and help them understand asset management's importance to a system's overall capabilities.

DDW evaluates a PWS's compliance record and based on the total number of deficiency points, rates the system as "approved," or "not approved." The PWS classification determines how many deficiency points the PWS may accumulate before being assigned a "not approved" status. Community Water Systems may accumulate 150 deficiency points, Non-transient, Noncommunity Water Systems may accumulate 120 deficiency points, and Transient Noncommunity Water Systems may accumulate 100 deficiency points before being rated "not approved."

A "not approved" rating remains in place until the threat to public health is alleviated or the violation is corrected. However, a water system may qualify for a "corrective action" status, if the PWS submits the following three items:

- A written agreement stating a willingness to comply with the requirements of the Administrative Rules.
- A compliance schedule outlining the necessary construction or changes needed to correct any physical deficiencies or monitoring failures.
- Proof of financial ability to correct the deficiencies.

The "corrective action" rating remains in place until the system has resolved all compliance issues impacting the system's status.

Utah DDW uses this rating system to identify and prioritize which systems are most in need of technical assistance, training, or other help with respect to technical,

managerial, financial, or asset management capacity. This assistance may include any of the following:

- site visits
- administrative orders
- penalties
- on-site training
- hearings
- court action

Utah DDW may provide this assistance using internal staff or by employing a third-party technical assistance provider, such as the Rural Water Association of Utah (RWAU) or Rural Community Assistance Corporation (RCAC). The Action Compliance Strategy Meeting is a quarterly meeting where DDW staff meets with technical assistance provider staff and local health department (LHD) representatives to discuss out-of-compliance water systems and what assistance those systems may need to improve their capacity and return to compliance with SDWA and national water quality standards, including assistance with capacity development and asset management. A new compliance list is generated for each meeting to ensure that those systems requiring immediate attention are prioritized to receive timely technical assistance.

Utah DDW will provide “not approved” systems or systems that have an Enforcement Targeting Tool score of 11 or greater copies of the capacity assessment worksheets to help them evaluate the status of their technical, managerial, and financial capacity as well as asset management plans and programs. Technical Assistance Providers and Utah DDW staff involved in prioritizing systems for training and assistance opportunities will be trained in capacity development and asset management to ensure these utilities receive regular training and updates on capacity development and asset management. This will encourage systems to understand the importance of overall capacity and asset management’s role in that capacity.

Capacity assessment worksheets are required of all water systems seeking financial assistance through the Drinking Water SRF program. Utah DDW may also require a capacity assessment and asset management self-evaluation in other situations where such an evaluation is deemed helpful for systems to develop technical, managerial, financial, and asset management capacity. These evaluations will provide additional criteria to help Utah DDW prioritize those water utilities most in need of technical assistance.

B. Factors That Impair or Enhance Capacity

Many factors have the potential to either enhance or impair a water system’s capacity. Division staff and technical assistance providers have held numerous discussions

regarding which factors are most likely to affect capacity. While capacity is measured through technical, managerial, and financial aspects, oftentimes a specific factor will have influence across multiple aspects.

For instance, adequate user rates and rate structures is one factor that both Division and technical assistance provider staff identified as having significant impacts on all aspects of system capacity, including asset management. Without adequate resources water systems will lack the financial wherewithal to hire and train appropriate staff which could negatively impact both technical and managerial capacity and maintaining asset management programs. In addition, there may be insufficient funds to pay bills on time which could negatively impact credit worthiness, and therefore negatively impact financial capacity. In addition, encouraging water utilities to develop and implement asset management programs and plans may enhance their technical, managerial, and financial resiliency. However, developing and implementing asset management programs may also be an impairment to water utilities due to additional work for system staff, Utah DDW staff, and TA providers.

Appendix A contains tables of identified factors that have the potential to impact water system technical, managerial, financial, and asset management capacity as well as whether that impact is positive or negative.

C. Using SDWA Authorities and Resources

4.C.1 Assist PWSs with Compliance

The Division has implemented a number of programs and activities, including asset management, to assist water systems achieve and maintain compliance with SDWA, national drinking water standards, and state drinking water rules. A few of these programs are described below.

- The engineering plan review and operating permit program.
    - Water systems are required to submit engineering plans and specifications to the Division for review and approval prior to beginning construction on any facility improvement or expansion.
    - The Division's Permitting Section reviews the submitted plans to assure compliance with the Division's construction rules (codified in Drinking Water Rules R309-500 through -550, which are available on Utah DDW's website.
    - The Permitting Section typically responds with plan approval or denial within 30 days of receiving the submittal, depending on project complexity and size.
    - This program allows Utah DDW to assess a system's technical capacity as it relates to infrastructure construction.

- The Drinking Water State Revolving Fund financial assistance program.
    - The Division's Technical Assistance Section provides oversight to two revolving fund financial assistance programs.
        - The state-funded program receives an annual allotment from the state sales tax revenue, capped at approximately $3,600,000 per year.
            - This financial assistance is available only to political subdivisions of the state (municipalities, water districts, etc.).
        - The federal revolving fund program receives an annual capitalization grant from USEPA based on Congressional allocation and varies from year to year.
            - Financial assistance from this program is available to both publicly and privately-owned water systems.
    - Financial assistance is available for planning or construction of infrastructure improvement projects designed to help water systems achieve or maintain compliance with SDWA requirements, national drinking water regulations, and state drinking water rules. Eligible planning activities also include preparing asset management plans.
    - Eligible water systems are also prioritized based on plans to improve technical, managerial, and financial capacity, including developing and implementing asset management programs.

- The source water assessment and protection program.
    - The source water assessment program assesses the risk of accidental contamination of all drinking water sources.
    - Encouraging water utilities to implement asset management programs and properly inventorying and maintaining their sources will provide another tool to help them improve their source protection programs.
    - Utah's source protection rules require that each public drinking water supplier prepare a source protection plan. The plan must describe and delineate source protection zones and describe protections in place to protect source waters from accidental contamination.
    - All source protection plans must be reviewed and approved by Division source protection staff.

- The Sanitary Survey program.
    - Utah state regulations require that a sanitary survey be conducted at least every three years on all public water systems. These surveys assess

water system construction, operations, and record keeping and identify potential conditions that may present a public health risk.

- Sanitary surveys are conducted either by Division of Drinking Water personnel, Utah Department of Environmental Quality District Engineers, local health officials, or other qualified individuals authorized in writing by the Division Director.
- This program allows Utah DDW to assess a system's technical capacity based on infrastructure/asset condition at the time of the site visit. Systems that exhibit inadequate or aging infrastructure may require additional training on technical capacity and asset management to encourage them to improve compliance with SDWA and Utah's drinking water rules.

4.C.2 Encourage Partnerships Between PWSs

Utah DDW encourages partnerships between water systems through a number of different avenues. These partnerships provide additional opportunities to encourage and advocate for systems to develop and implement asset management programs.

The Utah Water Quality Alliance

The Alliance consists of the largest surface water suppliers in Utah, as well as small- and medium-sized systems that operate water treatment plants. The Alliance meets quarterly and provides training to water system staff as well as networking opportunities for PWSs. The Alliance's goals include assisting drinking water utilities with water quality optimization projects, updating utilities on regulatory updates and new regulations, a commitment to continuous drinking water quality enhancement. Utah DDW will encourage Alliance members to be leaders in develop their own plans and then develop training programs that may benefit all systems in the state. Alliance members may also provide technical assistance to smaller systems that will now include assistance with asset management.

Alliance members work together to find ways to improve monitoring source water and treated water quality, optimize water treatment processes and enhance treatment plant performance in removing contaminants, evaluate new technologies, participate in drinking water research, provide input in the federal and state regulations, and assist smaller water utilities to produce drinking water of the best quality for the citizens of the State of Utah. As these larger systems develop and implement asset management programs their leadership and experience may encourage other systems to also develop and implement these programs. Utah DDW will encourage members of the Alliance to provide mentoring and training to smaller system staff helping them see the benefits of asset management and encouraging them to develop their own programs.

Utah WARN

The Utah Water/Wastewater Agency Response Network's (WARN) mission is to support and promote statewide emergency preparedness, disaster response, and mutual assistance matters for public and private water and wastewater utilities. The Utah WARN website provides members with emergency planning, contact, and recovery information, before, during, and after an emergency. Members of WARN can also promote and encourage asset management programs as a means to mitigate emergency situations as well as enhance all utility's ability to quickly and fully recover from emergency situations.

System Consolidation and Regionalization

The Division encourages water systems to investigate and implement regionalization or consolidation efforts to the extent possible. Regionalization or consolidation may take on a number of different forms, from merging system infrastructure, to sharing source capacity, to managerial cooperation where multiple neighboring systems share management and operational staff to reduce costs and take advantage of economies of scale and improve buying power. As systems regionalize or consolidate an active asset management program with an up-to-date asset management plan can ease the process of transitioning to a new management style or structure as well as provide invaluable information on system infrastructure, including operations and maintenance schedules and records.

4.C.3 Assist PWSs through Operator Training and Certification

According to state statute, Utah water systems serving more than 800 people, systems required by federal statute, and all systems that use physical or chemical treatment processes to alter the water's characteristics, must have a certified operator. Utah DDW has the ability to encourage all regulated water utilities to implement asset management programs by including appropriate asset management training opportunities for continuing education credits as well as including asset management questions on certification tests.

Utah DDW's Operator Certification Program website (https://deq.utah.gov/drinking-water/operator-certification) provides individuals with information about the Operator Certification Program, details on how to become a certified water operator, certification application and renewal forms and their associated fees, information on upcoming continuing education opportunities, continuing education course forms, as well as a frequently asked questions section. Utah DDW will include information on asset management resources on this website and will work with technical assistance providers to ensure the most helpful, up-to-date information resources (including web links, guidebooks and reference documents, spreadsheets, etc.) are included on the website

Continuing education courses are offered by a number of different entities, including Rural Water Association of Utah, Rural Community Assistance Corporation, the

American Water Works Association Intermountain Section (AWWA-IMS), individual water systems, and various online providers. All courses submitted for operator certification continuing education unit credits must be reviewed and approved, or pre-approved, by the Utah Operator Certification Commission Secretary.

Utah DDW regularly works with technical assistance providers and those training the State's water supply operators to include courses on asset management programs and plans. Utah DDW staff also develop training material and participate in training courses for asset management.

D. Establishing a Baseline and Measuring Improvements

Utah uses the IPS point system outlined in Utah Drinking Water Rule R309-400 to establish baseline water system regulatory compliance. The Division tracks changes to a water system's deficiency points in the WaterLink database and web application. The WaterLink web application was developed to provide a central access point for Division information related to water systems, including contacts, deficiencies, violations, infrastructure inventories, site visit information, engineering plan review and approval activities, operator certification records, and DWSRF project data.

Community Water Systems may accumulate 150 deficiency points, Non-transient, Noncommunity Water Systems may accumulate 120 deficiency points, and Transient Noncommunity Water Systems may accumulate 100 deficiency points before being rated "not approved."

Utah DDW plans on including the development and implementation of asset management plans as information the state will consider tracking. The state will send out an existing system technical, managerial, financial, and asset management self-assessment worksheets to any system designated as "not approved." Technical assistance providers will assist systems in completing these self-assessments and the state will review them. Systems will be required to develop at least a basic asset management plan prior to being approved to ensure continued compliance and technical, managerial, and financial capacity.

WaterLink is available on the Internet at: https://waterlink.utah.gov/deqWater/. Public access to general water system information is available from the basic WaterLink access page. Access to more specific information requires users to apply for a portal account.

Compliance improvement will be measured based on the number of systems either reducing their deficiency point count, returning to compliance and an "approved" status after being rated either "not approved" or "corrective action," entering voluntary compliance agreements, or applying for and using financial assistance to resolve

infrastructure deficiencies. Improvement may also be measured based on a system's position on EPA's ETT list.

Utah DDW will provide "not approved" systems copies of the capacity assessment worksheets to help them evaluate the status of their technical, managerial, and financial capacity as well as asset management plans and programs. Technical Assistance Providers and Utah DDW staff involved in prioritizing systems for training and assistance opportunities will be trained in capacity development and asset management to ensure these utilities receive regular training and updates on capacity development and asset management. This will encourage systems to understand the importance of overall capacity and asset management's role in that capacity.

E. Identifying Stakeholders

Stakeholders may include any party interested in evaluating or improving water system capacity. Stakeholders can include any or all of the following entities:

Regulatory Agencies

- Environmental Protection Agency
- Division of Drinking Water
- Local Health Department
- County and/or municipal governments
- Governing boards and bodies for privately-owned water systems

Technical Assistance Providers

- Rural Water Association of Utah
- American Water Works Association – Intermountain Section
- Rural Community Assistance Corporation
- Educational Institutions
- Environmental Finance Centers

Associations

- League of Cities and Towns.
- American Planning Association
- Utah City Engineers Association

This list is by no means all-encompassing, and many other groups may consider themselves stakeholders in addressing and improving water system capacity.

Another important stakeholder group that deserves consideration is the general public. A water system's user base is perhaps the most affected stakeholder group of any listed. The Division strongly encourages all of the state's water systems to be open and transparent with their users in all aspects of water system operation, maintenance, and construction.

Utah DDW will work closely with all stakeholder groups to promote and encourage technical, managerial, and financial capacity and asset management among Utah's water utilities. Utah DDW will encourage stakeholders to take an active role with utilities through training and discussion to answer questions and provide feedback to Utah DDW to continuously improve training and hands-on assistance to water utilities during site visits and assessments.

F. Promoting Asset Management

Section 2012 of the America's Water Infrastructure Act of 2018 requires that states include in their Capacity Development Program Strategies a description of how asset management will be promoted and encouraged within the state. Asset management can help water systems address aging water infrastructure, make sound financial decisions to maximize limited financial resources, make costs transparent, and support budgeting decisions. A proper asset management plan can improve a system's service and reliability, reduce risk and unexpected costs, and enhance communication with customers and stakeholders, in addition to many other benefits.

An asset management plan is the foundation for an effective asset management program and typically includes sections describing level of service goals, current performance metrics and measurements, future demand estimates, risk management, life cycle management plans (e.g., maintenance plans, rehabilitation and replacement plans), and financial forecasts.

The asset management framework is built on the following five core questions, the answers to which will form the basis of each section in the asset management plan.

1. What is the current state of the utility's assets?
2. What is the utility's required "sustainable" level-of-service?
3. Which assets are critical to sustained performance?
4. What are the utility's best "minimum life-cycle cost" capital improvement plan and operations and maintenance strategies?
5. What is the utility's best long-term financing strategy?

Utah DDW's technical assistance program will use DWSRF set asides and third-party contractors to provide training on these five core elements and promote and encourage asset management for all the state's public water systems. Asset management training will focus on helping systems understand asset management, developing asset management plans, identifying tools & techniques for inventory development, water system mapping methods, financial planning and implementation strategies including rate structures, billing policies and procedures, and proper budgeting methods. Other pertinent aspects of asset management plans and asset management programs will also be included based on water system input and comments.

In addition, Utah House Bill 269 *Capital Assets Related to Water*, was passed in the 2022 State Legislature and signed into law by the Governor. The law requires existing water providers to develop and implement a capital asset management plan before they can receive financial assistance from either state or federal funds. The law also requires that water providers participate in any infrastructure needs surveys or evaluations required by Utah DDW.

Utah DDW will send Capacity Assessment Worksheets to those systems ranked highest with respect to need for technical, managerial, financial, or asset management capacity assistance to ensure this foundation is established at the state's most vulnerable systems. Those systems that are, or may soon be, ranked "corrective action" or "not approved" or that are approaching an EPA ETT score of 11 will be targeted as high priority to receive the self-assessment worksheets. These self-assessment worksheets include the five core components of asset management and references to Utah DDW's website for additional capacity assessment and asset management information. Utah DDW believes that capacity assessment and asset management can benefit all public water systems regardless of ranking and will provide training to encourage the state's systems to complete the self-assessment capacity worksheets and develop and implement capacity assessment and asset management programs.

Copies of the capacity assessment worksheets are available in Appendix B and on the Utah DDW's website at:

https://documents.deq.utah.gov/drinking-water/construction/DDW-2018-009523.pdf

Public water systems seeking financial assistance from the Drinking Water State Revolving Fund program must complete the Worksheets and submit them to Utah DDW for review and comment before any financial assistance will be approved. However, all public water systems are encouraged to download these worksheets and determine their needs with respect to technical, managerial, and financial capacity or asset management. Upon request Utah DDW will review each system's responses on the self-assessment worksheets and help systems better understand how to resolve any issue discovered during that review.

Section 5 – Implementation Plan

The state will encourage not only prioritized systems but all systems to improve the safety of their water by developing and implementing asset management plans that will boost their overall technical, managerial, and financial capacity. Improving public water system awareness of technical, managerial, and financial capacity and asset management will ensure Utah's water utilities develop are resilient systems capable of serving sufficient quantities of quality drinking water. Efforts to improve Utah's drinking water systems technical, managerial, and financial capacity requires the combined efforts of Utah's drinking water professionals, industry leaders, water system managers

and staff, and regulatory bodies to develop criteria, training, and methods that promote technical, managerial, and financial capacity and asset management to ensure the true causes of deficiencies are addressed prior to compliance issues surfacing.

Utah DDW will encourage the state's water utilities to develop and implement asset management plans through compliance related activities and our rating system, by providing technical assistance to water systems that focuses on developing and applying asset management tools, emphasizing asset management in budgets and finances, including questions in certification exams and CEUs for operators, and creating a process to implement continuous improvement in all training courses on asset management for operators, owners, and managers.

Utah DDW has implemented a policy that requires public water systems requesting financial assistance through the DWSRF Program provide a copy of their asset management plan to DDW for review and approval. If a water system does not have an asset management plan, financial assistance is available to prepare one. Preparing the asset management plan may progress simultaneously with the system's infrastructure construction planning and engineering design process funded by the DWSRF program.

Utah DDW will evaluate our public water systems success in developing and implementing capacity development programs and asset management plans and programs as outlined in this policy. Based on that evaluation, Utah DDW will then put policies and procedures in place that apply to all drinking water systems and will assist those systems with capacity development an asset management through training and technical assistance.

Appendix A

Factors that Impact Capacity

Factors that Impact Capacity

Capacity Aspect	Factor	Measure	Impact
Technical	Source Adequacy	Valid Water Right	Systems with a legal right to the water they serve their users have additional control of that water including, source water protection and water quality, and available water quantity.
		Source Quantity	Sufficient source water quantity assures that the system is able to meet its water use needs to protect public health.
		Source Quality	Adequate source water quality helps systems better protect public health. It also reduces potential treatment costs related to treating water to drinking water standards.
		Source Protection	A system's control over source protection issues provides additional public health protection as well as potentially reducing treatment costs.
	Infrastructure Adequacy	Facility Condition	Properly maintained water system infrastructure provides an environment conducive to good water quality as well as preserving water quantities delivered to users.
		Facility Life Expectancy	When properly maintained, water infrastructure can have significant life expectancy. This can help water systems continue to provide sufficient quantities of quality drinking water to their users at reasonable rates.
		Capital Improvement Plan	A capital improvement plan allows a system to proactively plan for infrastructure improvement projects. These projects can include major facility repair and/or new construction for both anticipated growth and compliance with drinking water standards.

Capacity Aspect	Factor	Measure	Impact
Technical (continued)	Technical Knowledge	Asset Management Program	A well-thought-out Asset Management Program, including an Asset Management Plan, allows water systems to minimize the total cost of owning and operating assets and provide customers with the level of service they desire. Asset Management is a key to developing and maintaining a sustainable utility.
		Certified Operator	Properly certified operators positively affect water system capacity by applying their knowledge to provide the system's users with water that complies with drinking water standards and the SDWA.
		Operator Knowledge	Operators with sufficient knowledge of drinking water regulations, operations and maintenance procedures, and customer service contribute significantly to a water system's technical capacity.
		System O&M Program	A robust system operations and maintenance plan allows system staff to plan and follow through on proactive system maintenance which can significantly improve staff efficiency, infrastructure condition and life expectancy, and reduce costs. A good plan also provides direction to staff on system policy, procedures, and best management practices for each facility within the system.
	Knowledge Application	Operating Standards	Properly applied standards help system maintain public health protections.
		O&M Program Implementation	Proactive O&M Programs prolong infrastructure life and preserve water quality and volume.

Capacity Aspect	Factor	Measure	Impact
Managerial	Ownership Accountability	Owner Clearly Identified	A clearly identified owner indicates that the water system takes its responsibilities seriously. A clearly identified owner is typically more willing to be actively involved in running a utility that complies with regulations and the SDWA.
		Owner Responsibility	Owners willing to take responsibility for system compliance are actively involved with system operations and ensure O&M policies and procedures are in place to maintain compliance and protect public health.
		Asset Management Program	A fully implemented Asset Management Program provides information utility management can use to ensure decisions affecting system O&M and capital facility repair and replacement are made with the best, up-to-date information.
	Staffing & Organization	System Staff Clearly Identified	A well-defined organizational structure with clear lines of authority and management can reduce staff and constituent confusion and contributes to a well-run water system. An organization chart provides a visual description of the system's structure as well as the management and reporting structure.
		Operators Certified	Drinking Water systems are required to have at least one certified operator responsible for day-to-day system operation and maintenance. These operators should be clearly identified in the systems organization chart and other management tools.
		Operational Expertise	A well-run system will properly maintain records related to system infrastructure, such as infrastructure maps, infrastructure construction/installation dates, maintenance work orders, monitoring schedules, and operational procedures and activities.

Capacity Aspect	Factor	Measure	Impact
Managerial (continued)	Effective External Linkages	Customer Interactions	A well-run water system will be transparent with its users, on both good news and bad. Effective communication with customers is critical to improving and maintaining managerial capacity.
		Regulator Interactions	One sign that a system has adequate managerial capacity is whether it views regulatory bodies as adversaries or resources. Better relationships with regulators can be a sign that a system is working to maintain or improve its managerial capacity.
		External Resources	This measure includes many different aspects including access to and willingness to use outside technical and financial assistance services. Systems with adequate managerial capacity will recognize and use assistance services offered by entities such as RWAU, AWWA, RCAC, DDW, the DWSRF program, etc.

Capacity Aspect	Factor	Measure	Impact
Financial	Sufficient Revenue	Revenue	Systems demonstrate adequate financial capacity through maintaining water rates sufficient to meet expenses. They will have appropriate rate and enforcement ordinances or bylaws, will regularly review rates and rate structures, will employ adequate budgeting policies and procedures, will have or establish debt and facility replacement reserve accounts, and will have emergency operating expense reserve accounts to carry them through challenging times.
		Expenses	Well run systems will track control expenses and will maintain sufficient revenue and reserve funds to cover expenses.
	Credit Worthiness	Paying bills on time	Systems demonstrate financial capacity by having sufficient revenue to meet their debt obligations in a timely manner, even in times of distress. Adequate rates and emergency operating fund accounts contribute to this measure.
		Access to Capital	A system's access to both public and private capital, as demonstrated by a good credit rating is a good indicator of a system's financial capacity.
	Fiscal Management	Adequate Records	A well-run system will have appropriate financial statements either prepared by a CPA or regularly audited by a CPA. An audit every three years is the recommended minimum.
		Appropriate Budgeting and Accounting	A system with adequate financial capacity will use generally accepted accounting principles.
		Effective Revenue Management	The operating ratio, coverage ratio, and debt service ratio will all be within accepted parameters.
		Asset Management Program	A fully implemented Asset Management Program provides information utility management can use to ensure budgeting decisions, especially those related to asset maintenance or replacement, are made using current information.

Appendix B

Capacity Assessment Worksheets
for Water Systems Applying for Financial Assistance
and System Self-Assessment