



# **STATE OF NEVADA** **CAPACITY DEVELOPMENT** **STRATEGY**

**For New and Existing  
Public Water Systems**

March 2022

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# Acronyms

**AMP:** Asset Management Plan

**BIL:** Bipartisan Infrastructure Law

**BSDW:** Bureau of Safe Drinking Water

**CDS:** Capacity Development Strategy

**DWSRF:** Drinking Water State Revolving Fund

**EPA:** Environmental Protection Agency

**ETT:** Enforcement Targeting Tool

**FFY:** Federal Fiscal Year

**IUP:** Intended Use Plan

**NAC:** Nevada Administrative Code

**NDEP:** Nevada Division of Environmental Protection

**NIFS:** Nevada Infrastructure Financial System

**NRS:** Nevada Revised Statute

**NvRWA:** Nevada Rural Water Association

**OFA:** Office of Financial Assistance

**PWS:** Public Water System

**PWSS:** Public Water System Supervision

**RCAC:** Rural Community Assistance Corporation

**SDWA:** Safe Drinking Water Act of 1996, as amended

**SFY:** State Fiscal Year

**TA:** Technical Assistance

**TMF:** Technical, Managerial, and Financial (capacity)

# Executive Summary

The Nevada Capacity Development Strategy provides a pathway for new and existing public water systems (PWS) to obtain the support needed to provide safe drinking water throughout the State. With improved capacity, systems can deliver clean water without impacts to service or to the environment. The 2022 Strategy follows the guidance of the U.S. Environmental Protection Agency (EPA) and is an update to the initial Capacity Development Strategy created in 2000. The Capacity Development Strategy is a vital tool to help the Nevada Division of Environmental Protection (NDEP) monitor, educate, and regulate PWSs. This way, systems in Nevada can develop the technical, managerial, and financial (TMF) capacity required to provide water that complies with the Safe Drinking Water Act (SDWA). The SDWA also authorizes the Drinking Water State Revolving Fund (DWSRF), which requires an implementation strategy for states to continue to receive federal funding to support PWSs.

The Strategy outlines the goal of the capacity development program, as well as the regulatory and financial support needed to implement this program. Systems needing to build capacity require financial and human resources to do so. The 2021 Bipartisan Infrastructure Law (BIL) has enhanced Nevada's financial resources to address these issues. Nevada must also capitalize on skilled professionals that will help these systems build capacity with a methodical metric of urgency. The Strategy also outlines how technical assistance (TA) providers can help systems develop the necessary capacity to address issues with infrastructure, rural locations, funding, and more.

NDEP considers the Capacity Development Strategy to be a living program. As the need for PWSs to develop capacity grows, so too does the effort to improve TMF capacity and stakeholder involvement. An important update in the 2022 Strategy was the push to gather input from PWS operators and stakeholders, who provided comments on how to improve NDEP's efforts. The 2022 Strategy also considered Asset Management Plans (AMPs) as another important step in developing system capacity.

NDEP recognizes the training and resources required for new and current systems to operate effectively and overcome issues with capacity. The Strategy outlines ways to monitor and track benchmarks of success; these benchmarks help NDEP understand what implementation strategies work for PWSs and which do not. NDEP will also review its Intended Use Plan (IUP) annually to routinely incorporate new innovations and perspectives. Through continued engagement with stakeholders, the Strategy can continue to serve as an important guide for developing capacity.

NDEP will continue to work with stakeholders to review and update the Strategy, helping it remain an effective tool for supporting PWSs in Nevada. All efforts to enhance and improve capacity will be summarized in an annual report that will be made available to the EPA and the public. Additionally, NDEP is committed to preparing a report to Nevada's governor no later than two years after adopting a capacity development strategy — and every three years after that. These reporting requirements will help track capacity development progress and improve transparency between PWSs and NDEP. Ultimately, the efforts outlined in this Strategy will improve capacity development well into the future, while continuing to protect drinking water in the state today.



# SCOPE AND PURPOSE

# Capacity Development Goals

**1** To protect public health by ensuring consistent compliance with drinking water standards

**2** To enhance performance beyond compliance through measures that encourage efficiency, effectiveness, and service excellence

**3** To promote continuous improvement through monitoring, assessment, and strategic planning

Capacity development is essential for PWSs to continue to provide safe and reliable drinking water to their customers. Per the SDWA, the DWSRF loan program helps PWSs finance the infrastructure needed to deliver clean drinking water and comply with federal requirements. The SDWA<sup>1</sup> also directs the EPA to withhold a state's funding allotment unless that state develops and implements a capacity development program aimed at helping existing PWSs acquire and maintain TMF capacity.

The 2022 Nevada Capacity Development Strategy describes how NDEP plans to build capacity in PWSs in the state. By implementing this program NDEP can assist current PWSs and secure full grant allotments from the EPA to support capacity development for future systems. With improved capacity, a PWS can ensure a community's water needs are met and that the environment is protected.

<sup>1</sup> Section 1420(c)



Nevada is unique; of its 606 PWSs, about 75% are considered very small (serve 500 people or fewer). According to the EPA, only about 56% of systems nationwide are small<sup>1</sup>.

Small systems in Nevada do not have the money to spend on capacity improvement. Many are run by part-time or volunteer staff, with limited training or availability. System rates have also been kept low by relying on unpaid or underpaid staff. Because of this, systems simply do not generate enough revenue to maintain, repair, or replace infrastructure.

By updating the Capacity Development Strategy, NDEP can look for solutions that fit the unique challenges Nevada faces when developing capacity for PWSs.

<sup>1</sup> EPA Document 816-R-10-022 (July 2011)



# NEVADA'S STRATEGY FOR CAPACITY DEVELOPMENT



# STRATEGY ELEMENT:

## Stakeholder Involvement

In order to update the 2000 Capacity Development Strategy, significant input was needed from the community. NDEP considered a broad range of people involved with state, county, and local governments – as well as non-profit entities – to participate as stakeholders on the Strategy. These groups and individuals were solicited for their knowledge of the issues PWSs face here in Nevada and their ability to assist other systems in increasing capacity. Appendix C lists NDEP’s outreach efforts to build a list of representatives that could help address drinking water system needs.

A survey was created so stakeholders and PWSs could provide input on a number of issues. Those surveyed were asked to provide responses and general comments on the following topics:

- Relevancy rating of the current Strategy (created in 2000)
- External issues
- Technical issues
- Sample and analytical issues
- Managerial issues
- Financial issues
- Financial assistance
- Regulatory issues
- Impairments
- Enhancements
- Asset Management Plans
- Success factors
- Prioritizing PWS funding

Survey questions are provided in Appendix A. The survey responses are provided in Appendix B. A list of stakeholders contacted to participate in the survey is provided in Appendix C. The list identifies stakeholders who completed the survey.

Once the stakeholders submitted their responses, the survey results were emailed to all PWSs in the State for further review and comments.

## 2022 Capacity Development Strategy

After preparing the Strategy, NDEP presented a working version at an in-person stakeholder workshop on September 29, 2021. Stakeholders provided comments on the Strategy, including the suggestion to obtain input directly from water operators on what concerns them about their systems. After obtaining all comments, a revised draft was sent out for a 30-day public comment period. The Strategy was finalized after the comment period and presented to EPA in March 2022.



From the responses to the survey, NDEP identified five major concerns:



### **Personnel and Management:**

Attracting and maintaining staff to meet water quality and quantity requirements for the system



### **Financial Sustainability:**

Generating enough income to maintain the system for the community



### **PWS Characteristics:**

Each system's geographic, geological, socio-economic, and infrastructure conditions that pose opportunities and challenges to sustainability



### **Planning:**

The systems' ability and desire to prepare for future needs



### **Source Water Quality and Quantity:**

Hydrogeologic issues that can limit safe and reliable resources

NDEP's response to address these major concerns is detailed on page 12.





# STRATEGY ELEMENT:

## Use of Authority and Resources for Implementation

NDEP's mission is to protect and preserve the waters of the state. To this end, NDEP requires resources and regulatory authority from the State to help PWSs conform with SDWA requirements. Support from state and federal sources have helped NDEP develop programs to assist systems in building capacity. For instance, NDEP has partnered with TA providers who have the skills and resources necessary to help PWSs develop their TMF capacity. These partnerships ensure that systems maintain compliance with federal and State requirements.

### State Regulations/Authorities for New and Existing PWSs:

- State primary and secondary source water quality standards (NAC 445A.453 to 445A.457)
- Sanitary survey evaluations (NAC 445A.4655 to 445A.4665)
- Laboratory certification (NAC 445A.542 to 445A.54296)
- Operation of community or non-transient water system (NAC 445A.591 to 445A.5926; NRS 445A.860)
  - » *Systems constructed after October 1, 1999*
- Permits to operate privately owned systems (NAC 445A.595 to 445A.614, NRS 445A.885 to 445A.910)
  - » *Systems constructed after June 30, 1991*
- Operator certifications (NAC 445A.617 to 445A.652)
- Regulations for maintaining TMF capacity for operations (NAC 445A.591 to 445A.5926) and for DWSRF funding (NRS 445A.67563)

### State Programs/Resources for New and Existing PWSs:

- Sanitary surveys
- Operator Certification Program
- Wellhead Protection Program
- Backflow Prevention Program
- Integrated Source Water Protection Program
- Water conservation and planning
- Drinking Water Intended Use Plan
- Enforcement




# STRATEGY ELEMENT:

## Enhancements and Impairments to Capacity Development

From the responses gathered in the survey, NDEP identified five core elements of capacity development that most strategies or concerns fall under. Stakeholders provided detailed input that incorporated institutional, regulatory, or financial factors on these five elements. The input received can be defined in one of two ways:

1. **Enhancement:** existing strategies that works well for capacity development and will continue to be beneficial
2. **Impairment:** areas that needs improvement and will be a focus for future capacity development

Personnel and Management 	
Enhancements	Impairments
<ul style="list-style-type: none"><li>• In person and computer-based State exams for operators</li><li>• Training and resources</li><li>• Independent vendor assistance</li><li>• Managerial and physical consolidation to support sustainability</li><li>• Collaboration between PWSs</li><li>• Interagency and program collaboration to enhance training and solicit water operators</li><li>• Develop an apprenticeship style training and instructional program for water operators</li></ul>	<ul style="list-style-type: none"><li>• Operators not passing certification tests</li><li>• Employee turnover and retention (attracting and retaining)</li><li>• Lack of prospective employees</li><li>• Training not engaging, accessible, or on-demand</li><li>• Limited resources to attract and retain operators, managers, and office staff</li><li>• Lack of managerial support for staff</li><li>• Difficult DWSRF application process</li></ul>

Stakeholders identified personnel as one of the top elements of the Capacity Development Strategy that needs further improvement. There are many factors that influence the challenges personnel and management face with PWSs. NDEP recognizes there is no single approach to solve these issues. NDEP plans to collaborate with TA vendors and PWSs to understand the best approach for each area or system, while encouraging qualified candidates to operate and manage these systems. NDEP will also work to develop stronger relationships between PWSs and different agencies that can provide funding or training resources.



## Financial Sustainability

### Enhancements

- Consolidation
- TA programs
- Training and resources
- DWSRF funding conditions. For SRF loans, this includes:
  - Capital reserve account
  - Ability to fund future projects
  - Sustainable rates
  - Rate analyses

### Impairments

- Lack of consolidation
- Limited incomes in rural communities
- Resistance to rate changes
- Lack of support for projects and staffing
- Lack of financial support for operators/managers
- Cost of lab work and distance to labs for rural PWSs
- Lack of spare parts for smaller systems
- Inventory affordability
- Lack of resources
- Cost to address system deficiencies
- Lack of public awareness of the cost of water
- Insufficient rates to maintain systems
- Need for increased financial planning

Stakeholders recognized there are some PWS boards that are reluctant to raise rates on their users, especially those users who are on fixed incomes. Through education and training, NDEP hopes to reach out to these communities and demonstrate the importance of a sustainable rate for their systems. NDEP also hopes to work with these communities to provide other types of assistance. Consolidation could be a solution for the community to pool resources, but system location may make this solution prohibitive.



## PWS Characteristics

### Enhancements

- TA programs
- DWSRF funding
- Consolidation
- Training and resources:
  - Guidance documents
  - One-on-one training for technical issues
  - Board training
- Funding sources for small/disadvantaged PWSs

### Impairments

- Population changes
- Rural system locations
- Compliance with water quality standards
- Condition of infrastructure
- Storage capacity or deteriorating storage
- Deteriorating distribution system
- Lack of investment in repairs/maintenance
- Lack of redundant systems
- Cybersecurity vulnerabilities
- Rural operators' pay/certifications
- Lack of core system plans

A system's infrastructure, location, and number of users all play a part in determining where capacity development is most needed. For instance, there are some communities in Nevada that are declining in population and too far away from another system to physically consolidate. While these systems must operate on their own, the possibility of consolidating management remains. NDEP hopes to utilize solutions like this to assist other disadvantaged systems with their capacity needs.



## Planning

### Enhancements

- Independent vendor assistance
- DWSRF funding
- Training and resources
- Required planning documents
- Networking with other regulatory and financial entities
- Nevada Infrastructure Financial System (NIFS)

### Impairments

- Lack of Asset Management Plans
- Lack of system maps or asset locations
- Natural and man-made disasters
- Lack of public support
- Minimal board and manager involvement
- Cybersecurity vulnerabilities
- Lack of planning knowledge

Knowledge of what a system has in assets and what is needed to sustain its level of service to the community is important for long-term planning. Stakeholders have recognized that boards, managers, and the public have not fully planned for continued system sustainability. NDEP will continue to offer training and vendor assistance to help with public outreach, board training, and managerial involvement in the planning process. This training is also important for funding future projects, as the DWSRF will require planning documents when conducting managerial capacity evaluations for future loans.



## Source Water Quality and Quantity

### Enhancements

- Water Resource Plan development
- Water Conservation Plan development
- Physical consolidation for increased water quantity and quality
- Funding for projects
- Source Water Protection Plan
- 319(h) Watershed Plan

### Impairments

- Drought / climate change
- Water quality changes
- Rule changes
- Funding for projects
- Site inspection response and communication
- Cost of compliance/testing
- Lack of affordable testing facilities

Source water has been an ongoing concern in Nevada, especially when it comes to water that serves the quality and quantity needs of local communities. NDEP has made it a priority to mitigate the impacts of the State's limited supply as much as possible, mainly through education, public outreach, and conservation efforts. Proper planning can tell PWSs what resources they have and how to manage them effectively for water quality. Protecting water at its source ensures communities will have a sustainable water supply. Funding from the DWSRF to protect source water is available for systems but may not be enough to help the number of systems that need to address water deficiencies.



# STRATEGY ELEMENT:

## Asset Management Plans

Asset Management is a planned and systematic method of managing and monitoring all the required physical components of a mechanical system and the desired level of service for a community. For PWSs, major components include:

- Pumping equipment
- Water distribution/storage
- Protection and treatment systems
- Backflow prevention
- Cross-connection systems
- Computers, software, etc.

Asset Management Plans (AMP) help identify a system's equipment and determine the equipment's criticality, nature of risk, and reliability. Managing these assets helps the system plan for repairs, maintenance, and replacements, and helps avoid unplanned breakdowns that can lead to interruptions in service. AMPs can also address natural assets, often referred to as "green" assets. This holistic management approach can help PWSs achieve the greatest financial, environmental, and social benefit for their water infrastructure. Adding green assets into the existing AMP framework also helps prevent remediation and/or treatment costs. A PWS that uses an AMP can make capital improvements, maintain its level of service, sustain its infrastructure, and acquire long-term funding and critical assets.

Beginning with SFY 2018 IUP, Nevada required a fiscal sustainability plan for all principal forgiveness loans in the DWSRF. The requirement was added as a loan condition that must be satisfied before the final loan draw and were limited to principal forgiveness loans. These loans are mainly provided to the more vulnerable, less financially independent systems and Nevada considered this as a part of their required TMF capacity. A fiscal sustainability plan incorporates four of the five core questions of an AMP, with Level of Service being the one question not addressed in that report. The stakeholder survey included questions about expanding requirements for AMPs and best practices for encouraging all systems to develop an AMP.

Stakeholders understand the value of asset planning and were in favor of AMPs as long as they do not excessively burden a PWS with additional costs. Additional funding in the BIL will help NDEP direct TA providers to prepare AMP's for many systems at no cost to the PWS.

NDEP understands the importance of developing AMPs. Through training and outreach, PWSs can use these concepts to increase their prioritization for loans, better manage the reliability of their systems, and improve customer confidence and satisfaction. AMP development will be part of NDEP's annual report on capacity development and the triennial report to the Governor.



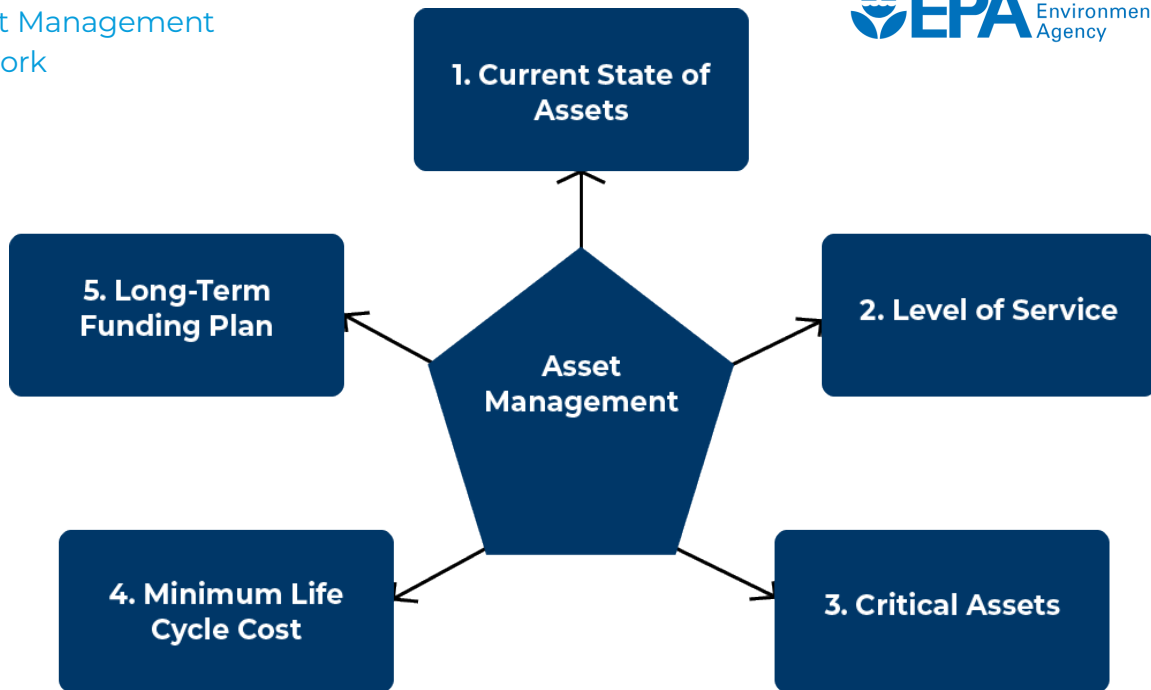
NDEP will encourage PWSs to develop AMPs through several approaches identified by stakeholders. Guidance materials detailing the benefits of AMPs will be shared with all PWSs. TA providers will also be asked to train systems to prepare their own AMPs through:

- General workshops and training
- Updated guidance information
- Direct assistance for AMP development to meet DWSRF loan requirements
- Requiring asset management improvements if TA targets sanitary survey deficiencies
- Encouraging asset management where feasible in permitting and DWSRF requirements
- Incorporating AMP reviews for new water systems and during five-year updates for PWSs constructed after October 1, 1999 (per NAC 445A.5922 and NAC 445A.5923)



## The 5 CORE QUESTIONS

An Asset Management  
Framework



### 1. **CURRENT STATE OF ASSETS:**

- Developing asset inventory
- Assessing inventory status
- Cost analyses
- System mapping

### 3. **CRITICAL ASSETS:**

- Asset analyses
- Equipment failure prevention
- Determining repair costs or asset failure costs
- Making critical asset lists
- Conducting improved asset control

### 5. **LONG-TERM FUNDING PLAN:**

- Developing avenues of funding
- Trainings on application processes
- Increasing knowledge of loan requirements

### 2. **LEVELS OF SERVICE:**

- Trainings on regulatory compliance requirements
- Communicating the levels of service to the public
- Creating meaningful and achievable service objectives

### 4. **MINIMUM LIFE CYCLE COST:**

- Capital improvement planning
- Managing repair/replacement cycles for equipment
- Conducting sanitary surveys



# STRATEGY ELEMENT:

## Prioritizing Public Water Systems

Many of Nevada's PWSs have been in operation for decades. The stages of a system's deterioration varies; that is why the State uses a prioritization process for funding capacity development, which takes into account the welfare of the public, the state of the water system, and the urgency to act. This triage approach helps NDEP prioritize systems based on their specific needs.

Systems needing funding are prioritized by:

1. Acute public health concerns
2. Chronic public health concerns
3. Systems with a sanitary survey deficiency
4. Systems needing capacity building for regulatory compliance
5. Systems actively seeking funding from federal, State, and local funders
6. All other systems





# STRATEGY ELEMENT:

## Benchmarks for Success

The Capacity Development Strategy is a living document. The Strategy must be adaptable to ensure the methods used continue to be beneficial for PWSs. To measure the success of TMF capacity development, NDEP will continue to engage stakeholders and conduct surveys to assess program effectiveness. NDEP will also increase outreach efforts to inform both operators and the public about what it takes to make a system sustainable. NDEP will report on its successes to EPA and the public in an annual report. NDEP is further committed to preparing a report to Nevada's Governor not later than two years after adopting a capacity development strategy, and every three years thereafter.

### BENCHMARKS FOR SUCCESS ARE BASED ON THE FIVE CORE ELEMENTS OF CAPACITY

#### Personnel and Management

- Water operator certification testing, surveys, and system staffing
- Participation at career fairs



#### Financial Sustainability

- Training and outreach events provided on financial sustainability
- Water rate studies completed



#### PWS Characteristics

- Enforcement Response Policy's Enforcement Tracking Tool (ETT) score
- Number of PWSs with a sanitary survey showing no significant deficiencies
- Health based violations that were returned to compliance



#### Planning

- Developing and reviewing plans (Asset Management Plan, Emergency Response Plan, Cross-Connection Control Plan, Operation/Maintenance Plan, etc.)
- Number of systems developing maps
- Population/PWSs protected under Source Water Protection Plan



#### Source Water Quality and Quantity

- DWSRF projects addressing redundancy, treatment, and consolidation
- Number of consolidations for capacity development



# STRATEGY IMPLEMENTATION

The Capacity Development Strategy is a framework to guide NDEP's efforts to provide TMF capacity to PWSs across Nevada. Using critical issues identified by stakeholders, NDEP will focus efforts on areas with the greatest concern. That effort includes recruiting and retaining qualified water system operators and management staff. This will require substantial training and funding opportunities for new and current PWSs, as well as innovative solutions to help overcome issues with infrastructure or location.

NDEP will also continue its partnership with TA providers to develop TMF capacity for systems with the greatest need for assistance. This includes training operators and managers on how to develop core system plans to become better prepared for potential hardships and educating systems on the benefits of consolidating resources, either physically or managerially. These collaborative efforts can help PWSs continue to provide safe drinking water to all Nevadans.

Critical implementation strategies include:

#### Personnel and Management



- Coordination meetings between TA vendors, water system managers, and NDEP to develop best practices for workforce development
- Additional training for boards and management staff on PWS responsibilities
- Attending conferences or completing courses to build rapport between coordinating agencies and better assist PWS operators
- Feedback surveys for operators taking the operator certification test to find out what resources they need to be successful
- Conducting virtual outreach to monitor PWSs between required inspections
- Streamlining the application process for DWSRF funding using an online platform

#### Financial Sustainability



- Additional training on the cost of service required for a particular system
- Coordination meetings with TA vendors, small systems, and NDEP to address obstacles to success in funding system needs
- Capacity surveys will include questions that target AMPs, levels of service, and community outreach for the system's cost of service
- DWSRF funding will require sufficient rates to cover all operations, maintenance, debt service, and reserve requirements for the current system

### PWS Characteristics



- Coordination meetings between TA vendors, water system managers, and NDEP to discuss consolidation (physical or managerial) that will build long-term capacity
- Encourage projects in the DWSRF program that support redundancy and security within the system
- Training board members on the need for public participation and engagement with system operations
- Capacity surveys will include questions that target unique technical system issues such as water pressures, sanitary survey deficiencies, water loss, and backflow prevention

### Planning



- Increasing points awarded to systems on the DWSRF priority list for developed AMPs
- Require AMPs for construction projects applying for DWSRF principal forgiveness loans
- Require an AMP for new water systems and during five-year updates for PWSs constructed after October 1, 1999
- Include questions on the capacity survey that address the development of AMPs and the public outreach on their use

### Source Water Quality and Quantity



- Increased outreach to water systems on Water Conservation Plans
- Increased outreach to water systems on Source Water Protection Plans
- Encourage projects in DWSRF program that support redundancy for water sources and treatment
- Capacity surveys will include questions that target source water quality and quantity
- Coordination meetings between TA vendors, water system managers, and NDEP to discuss consolidation (physical or managerial) that will build long-term capacity



## **ATTACHMENT A:**

# **Stakeholder Survey Questions**

# NV Capacity Development Strategy Stakeholder Survey

Please respond by June 18, 2021

\* Required

1. What is your name? \*

2. How relevant are the problems, solutions, and resources listed in the strategy when it comes to building capacity in Nevada? \*

0	1	2	3	4	5	6	7	8	9	10
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No longer relevant

Very relevant to today

3. Please explain the reason for your score. \*

#### 4. External problems for systems \*

*The current strategy identifies external problems that systems face. Please indicate if you feel these elements are critical, not critical, or whether they are not a factor when developing this strategy.*

	Critical	Neutral	Not Critical
Declining population	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Increasing population	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Geography / distance between systems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Geology/hydrogeology of system area	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of public education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Size of system to support needs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Natural disasters (e.g. fire, flood, earthquake)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Man-made emergencies (e.g. assaults, cyberattacks, bombings)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Biological disasters	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Drought/declining supply	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Communication infrastructure (e.g. no internet)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fluctuating population	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inconsistent revenues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Emerging contaminants (e.g. algae blooms, perfluoroalkyl and polyfluoroalkyl substances (PFAS), microplastics)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Critical

Neutral

Not Critical

Staffing issues  
(employee turn-around,  
limited pool of  
prospective employees  
willing to work in  
remote communities,  
limited budget for  
salaries)



Limited resources  
typical to very small  
systems that could  
benefit from resource  
pooling across other  
PWSs



5. Please list any comments you have on the external problems in Nevada. Include any additional items we did not include in the survey and why they would be a problem. \*

## 6. Technical issues \*

*Please select all the technical issues that should remain or be added as a part of the strategy. Select all that apply. Include in the "other" box any technical problems we did not include in this list.*

- ☐ Aging infrastructure of primary system
- ☐ Source of water
- ☐ Treatment water quality
- ☐ Storage capacity
- ☐ Redundant systems
- ☐ Certified operator
- ☐ Regulation knowledge
- ☐ Lack of Knowledge regarding regulation development
- ☐ Familiarity with operation and maintenance manuals
- ☐ How small systems deal with breaks or other problems
- ☐ Lack of maps
- ☐ Add to strategy: Cross-connection control plans
- ☐ Add to strategy: Emergency response plans
- ☐ Add to strategy: Loss of pressure repairs and boil water orders
- ☐ Add to strategy: Understanding technical capacity
- ☐ Add to strategy: Documenting and proving technical capacity
- ☐

Other

7. Please provide comment on any of the technical issues that should be addressed in the strategy. \*

8. What would you consider the top three priorities for technical assistance? \*

## 9. Sampling and analysis obstacles \*

*Please select all the sampling and analysis obstacles that should remain or be added as a part of the strategy. Select all that apply. Include in the "other" box any analysis obstacles we did not include in this list.*

- ☐ Cost of testing
- ☐ Lack of overnight express delivery
- ☐ Access to local labs
- ☐ Communication issues with coordinating sampling runs
- ☐ No or unreliable phone line/internet
- ☐ Staff changes resulting in continuity problems
- ☐

Other

## 10. Please provide comment on any of the sampling and analysis obstacles that should be addressed in the strategy. \*

*Please list any comments you have on any sampling and analysis obstacles.*

## 11. Managerial challenges \*

*Please select all the managerial challenges that should remain or be added as a part of the strategy. Select all that apply. Include in the "other" box any managerial challenges we did not include in this list.*

- ☐ Board training: Regulations for operations
- ☐ Board training: Open meeting laws/public notices
- ☐ Management training: Regulations for operations
- ☐ Management training: Public notice requirements
- ☐ Staffing: Sharing of professional staff members
- ☐ Staffing: Raising level of professionalism
- ☐ Staffing: Operators/board/manager/office
- ☐ Staffing: Motivating existing staff
- ☐ Staffing: Motivating new staff to join
- ☐ Operator training/certification
- ☐ Water quality treatment understanding
- ☐ Regionalization/management of multiple systems
- ☐ Long-term planning (5+ years)
- ☐ Add to strategy: Contract management, procurement process, and oversight
- ☐ Add to strategy: Project management and oversight
- ☐ Add to strategy: Asset management plans
- ☐ Add to strategy: Training on threat detection and mitigation
- ☐ Add to strategy: Understanding managerial capacity
- ☐ Add to strategy: Documenting and proving managerial capacity
- ☐

Other

12. Please provide comment on any of the managerial challenges that should be addressed in the strategy. \*

13. What would you consider the top three priorities for managerial assistance? \*

## 14. Financial hurdles \*

*Please select all the financial hurdles that should remain or be added as a part of the strategy. Select all that apply. Include in the "other" box any financial hurdles we did not include in this list.*

- ☐ Financing options
- ☐ Limited growth to pay for current or new system
- ☐ Rates (insufficient to support system)
- ☐ Investments in repairs and maintenance
- ☐ Investments in capital projects
- ☐ Water quality and its effect on rates
- ☐ Lack of pay for rural systems/operators/managers
- ☐ Rate setting: Skills and calculations
- ☐ Rate setting: Political and public support
- ☐ Cost of monitoring and compliance
- ☐ Cost of business is too high
- ☐ Compound problems: Breaks takes money away from training
- ☐ Cost sharing: Systems too small to support themselves
- ☐ Add to strategy: Capital project funding options (not enough)
- ☐ Add to strategy: Capital project funding options (too many requirements)
- ☐ Add to strategy: Understanding financial capacity
- ☐ Add to strategy: Documenting and proving financial capacity
- ☐

Other

15. Please provide any comment on any of the financial hurdles that should be addressed in the strategy. \*

*Please list any comments you have on any financial hurdles.*

16. What would you consider the top three priorities for financial assistance? \*

## 17. Regulatory difficulties \*

*Please select all the regulatory difficulties that should remain or be added as a part of the strategy. Select all that apply. Include in the "other" box any regulatory difficulties we did not include in this list.*

- ☐ Inter- and intrastate agency communication
  - ☐ Consistency among regulators
  - ☐ Water quality (SDWA) and its effect on rates
  - ☐ Cost of monitoring/compliance
  - ☐ Regulation knowledge
  - ☐ Reciprocity between states for training and certifications
  - ☐ Too many regulations
  - ☐ Lack of waivers for some contaminants
  - ☐ Cross-connection control that is practicable
  - ☐ Where to go to for assistance on compliance
  - ☐ Confusion about testing and certification
  - ☐ How to meet environmental regulations for projects
  - ☐ Small systems unaware of regulatory requirements
  - ☐ Add to the strategy: PFAS regulations and information
  - ☐ Add to the strategy: Cost to address deficiencies
  - ☐ Add to the strategy: Lack of knowledge on who to contact for water system repairs
  - ☐ Add to the strategy: Lack of available contractors in rural Nevada
  - ☐
- Other

18. Please provide comment on any regulatory difficulties that should be addressed in the strategy. \*

## 19. Impairments to capacity development \*

*Please select all the impairments to capacity development that should remain or be added as a part of the strategy. Select all that apply. Include in the "other box any impairments we did not include in this list.*

- ☐ Lack of economy of scale
- ☐ Lack of planning (rates, needs, staffing)
- ☐ Inadequate training for technical staff
- ☐ Inadequate training for management and governing boards
- ☐ Inadequate training for financial staff
- ☐ Lack of diversification
- ☐ Cost of compliance
- ☐ Distrust of government (federal)
- ☐ Distrust of government (state)
- ☐ Distrust of government (local)
- ☐ State not advocating for systems
- ☐ Poor master planning
- ☐ Geographical location for regionalization
- ☐ Reciprocity for training and certifications
- ☐ Lack of more than one certification program
- ☐ Funding to meet new regulations
- ☐ Funding for testing and analysis
- ☐ Lack of knowledge for funding resources
- ☐ Lack of knowledge for technical assistance
- ☐ Inability to repay loans
- ☐ Operator availability and/or retention
- ☐ Communication (mailing not effective or efficient)

- ☐ Communication (resources available)
- ☐ Public education support/consumer confidence reports
- ☐ Conflicts with regulations
- ☐ Add to strategy: Communication (no internet access)
- ☐

Other

20. Please provide comment on any of impairments to capacity development that should be addressed in the strategy. \*

*Please list any comments you have on any impairments. Include any solutions you may have to resolving any impairment to improve capacity among water systems.*

## 21. Enhancements to Capacity Development \*

*Please select all the enhancements to capacity development that should remain or be added as a part of the strategy. Select all that apply. Include in the "other box" any enhancements we did not include in this list.*

- ☐ Good technical support
- ☐ Good communication with state representatives
- ☐ Availability of money for assistance
- ☐ Number of technical assistance providers
- ☐ Economic diversification
- ☐ Consumer confidence reports
- ☐ Good master planning
- ☐ Operator certification requirements
- ☐ Infrastructure for Nevada Communities (INC)
- ☐ Regulations encourage action to improve
- ☐ Funding encourages action to improve
- ☐ Facilitate avenues for PWSs for collaboration and resource pooling
- ☐

Other

22. Please provide comment on any enhancements to capacity development that should be addressed in the strategy. \*

## 23. Asset management plans \*

*Congress has mandated that each state will add to their capacity development strategy how the state will encourage public water systems to develop asset management plans that include best practices for asset management. States must further include how we will assist public water systems in training operators or other relevant and appropriate persons in implementing such asset management plans.*

*Asset management plans focus on five core questions:*

*What is the current state of my assets?*

*What is my required "sustainable" level of service?*

*Which assets are critical to sustained performance?*

*What are my minimum life-cycle costs?*

*What is my best long-term funding strategy?*

*Nevada has already started requiring fiscal sustainability plans for systems receiving principal forgiveness funding from the state revolving fund. These plans are similar to asset management plans but do not evaluate the sustainable level of service that a system should provide to its customers. In your opinion, what should Nevada do to encourage public water systems to develop an asset management plan?*

☐ Change the requirement on principal forgiveness loans from fiscal sustainability plans to asset management plans?

☐ Add as a loan condition for all SRF loans

☐ Adding points on the SRF priority list

☐ Include in the sanitary survey

☐ Provide a guidance document

☐

Other

24. Please provide comment on incorporating asset management plans into the strategy. \*

25. Success factors \*

*How should Nevada determine if our strategy is successful?*

*We have a number of tools today that help evaluate a systems capacity and determine if they are meeting the health requirements.*

*1) Enforcement Target Tool (ETT) List*

*2) Capacity Development Survey*

*Should Nevada consider the following as success factors for capacity development?*

- ☐ Providing technical assistance early to prevent listing on the ETT
- ☐ Remaining off ETT list for 3 years
- ☐ Remaining off ETT list for 6 years
- ☐ No deficiencies noted on previous two sanitary survey reports
- ☐ Increasing their capacity survey points by more than 20%
- ☐ Number of non-compliant systems consolidated
- ☐ Number of systems developing plans (Operations & Maintenance, Cross Connection Controls, Emergency Response Plans, Asset Management Plans)
- ☐ Surveys to gather feedback from the beneficiaries of capacity assistance

☐

Other

## 26. System ranking criteria \*

*How should Nevada rank systems that need capacity development with the limited funds available to the programs?*

*A) Acute public health concerns*

*B) Chronic public health concerns*

*C) Systems with a sanitary survey deficiency*

*D) Systems needing capacity building for regulatory compliance*

*E) Systems actively seeking funding from federal, state, and local funders*

*F) All other systems*

☐ A, B, C, D, E, F

☐

Other

## 27. Additional comments \*

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 Microsoft Forms

## **ATTACHMENT B:**

# **Stakeholder Survey Results**



NEVADA DIVISION OF  
**ENVIRONMENTAL  
PROTECTION**

# 2021 CAPACITY DEVELOPMENT STRATEGY

## Survey Results





# | *OVERVIEW*

The 2021 Capacity Development Strategy Survey Results gives us insight into the challenges water systems in Nevada face, as well as the goals for these systems going forward.

## **Survey Sections**

**Relevancy (2000 Capacity Development Strategy) — Page 2**

**External Issues — Page 4**

**Technical Issues — Page 6**

**Sample and Analytical Issues — Page 8**

**Managerial Issues — Page 9**

**Financial Issues — Page 11**

**Financial Assistance Priorities — Page 13**

**Regulatory Issues — Page 15**

**Impairments (Capacity Development) — Page 17**

**Enhancements (Capacity Development) — Page 19**

**Asset Management Plans — Page 19**

**Success Factors — Page 20**

**Ranking System — Page 20**

**Additional Comments — Page 21**

# | RELEVANCY

## 2000 Capacity Development Strategy

Stakeholders mostly felt neutral about how relevant the 2000 Capacity Development Strategy is to today's water systems.

The previous strategy was ranked on a scale from 1 to 10, with 1 being “*Not Relevant*” and 10 being “*Very Relevant*.”

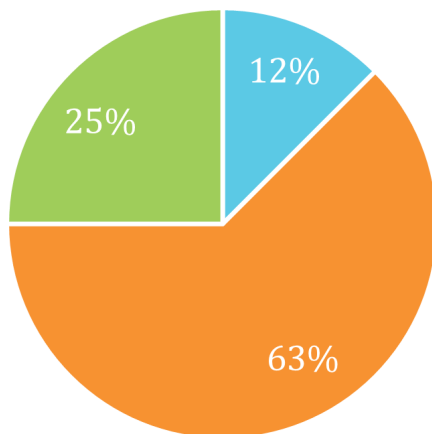
- Score of 1-6: **Detractor**
- Score of 7-8: **Passive**
- Score of 9-10: **Promoter**

In total, there were:

- **Detractors:** 4
- **Passive:** 10
- **Promoters:** 2

The Net Promoter Score (NPS) of the 2000 Capacity Development Strategy was calculated at -12, meaning that generally, stakeholders do not find the strategy to be relevant today. This highlights the need for an updated strategy that tackles the issues water systems are currently facing.

Relevancy Rating  
(2000 Capacity Development Strategy)



■ Promoters ■ Passive ■ Detractors



# Relevancy

## Stakeholder Comments

### Detractors

“Seems outdated.”

“I believe capacity is relevant in Nevada as water systems continue to grow physically, financially, and in population.”

“It does need to be updated.”

“Report is outdated and needs updating. However, a lot of the items identified in the strategy are still a concern for water systems.”

---

### Promoters

“The problems, solutions, and resources identified in the Capacity Development Strategy (2000) remain relevant today.”

“The training of operators and boards is usually an ongoing issue due to staff/board turn over. Dealing with politics and financial issues is also still relevant today. Planning should be an ongoing task to address changes in needs as improvements are made or new issue arise.”

---

### Passive

“I consider building capacity as important. However, we need to put effort into maintenance and training or no matter how much we grow we will be unable to keep qualified persons in need positions.”

“While capacity is important, it is not the foremost important issue facing utilities. A score of 7 seems reasonable.”

“With my so far limited involvement in the process, the prioritization system seems to work well. Including stakeholders in the strategy is a must and very beneficial. The availability of funding is necessary for the small systems as well.”

“I think they are still relevant but can be improved.”

“I believe the strategy techniques are still reasonable. The plan need to be updated on a regular basis.”

“The majority of these elements remain relevant problems in small systems, but some more problems have become apparent that may need to replace these.”

“I think the strategy and implementation techniques are still reasonably relevant in principle. The plan could be updated to include advancements in technology including emphases on SCADA and training/education via internet (remotely).”

“The strategy addresses myriad challenges all associated with maintaining compliance and providing safe drinking water.”

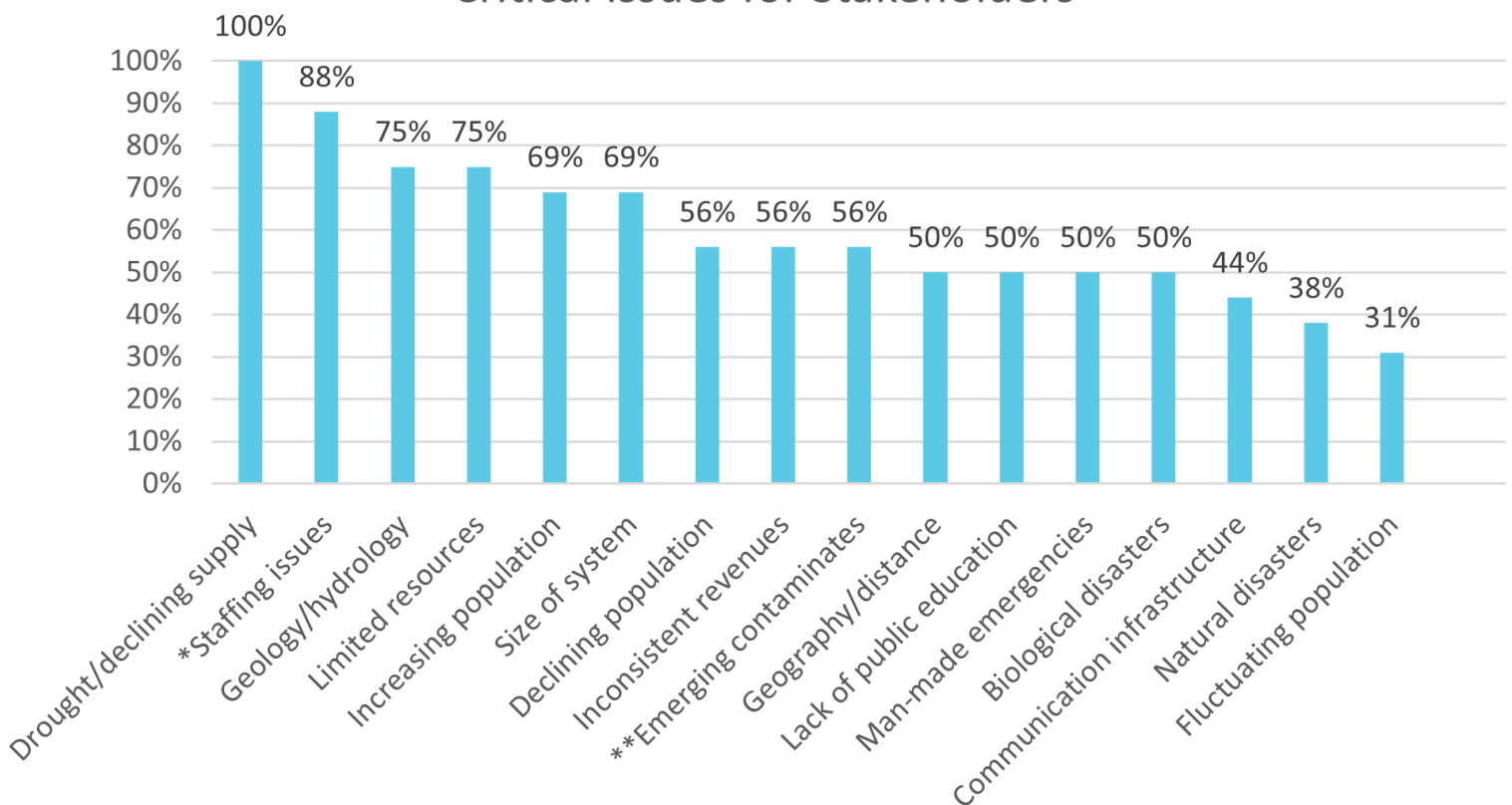
“It seems that there is always turn over in the smaller systems. New people come in and need to be trained on how to operate a system properly and safely.”

“I think many of the problems are still relevant. The solutions are mostly relevant, but regulatory changes have occurred so the terminology and scoring methodology are outdated. Some of the solutions were not fully implemented or transferred during staff retirements. The resources have expanded over the years.”

# | *EXTERNAL ISSUES*

Stakeholders selected from a list of potential external issues for water systems in Nevada, and rated them as either *Critical*, *Neutral*, or *Non-Critical*. All stakeholders agree that the potential for drought is a critical concern for water systems. Many are also concerned with staff turnover, as well as local geology and available resources.

Critical Issues for Stakeholders



\* Employee turnover, limited pool of prospective employees willing to work in remote communities, limited budget for salaries

\*\* Algae blooms, perfluoroalkyl and polyfluoroalkyl substances (PFAS), microplastics

# Items Not Discussed in Strategy

## Suggestions from Stakeholders

“The income of a retiring community in rural or small water systems.”

“The elderly are on limited incomes and there is little to no new growth in rural communities or even available housing. This will limit a system’s ability to increase budgets to make improvements because if the fixed income people can’t pay, they just do without. This then hurts the community and the system. Everyone loses.”

“I think man-made emergencies (ransomware, domestic and foreign terrorists cyber attacks) and climate change (drought) are the most pressing external problems in Nevada today. I have observed that the PWS operators are very good at networking with their area counterparts. This is critical to maintaining sustainability throughout Nevada.”

“Nevada has many rural public water systems.”

“The distance to travel to some of our maintained systems can be excessive, especially in an emergency. The ability to have good communication with the system to identify issues timely is a must. A public outreach program helping people understand how inexpensively we get water might be good.”

“New regulations for contaminants or increasing levels of existing MCLs is a big concern for small systems.”

“Consolidating systems would help with costs, but a lot of Nevada’s systems are too geographically distant to connect.”

“One critical issue that remains is the public perception related to the cost of water. It is often very politically challenging for water systems to raise rates or to keep rates where they should be to cover the cost of providing water.”

“Emerging contaminants may be a problem, but it’s difficult to know to what extent they will impact Nevada until additional monitoring occurs.”

“Drought management of limited supplies, possibly through conservation and increased storage.”

“The biggest problem I see is the small pool of people in a small town that are able to work for a utility and pass the required testing to get certified.”

“Cyber security in small systems is going to be an increasingly challenging problem in the coming years.”

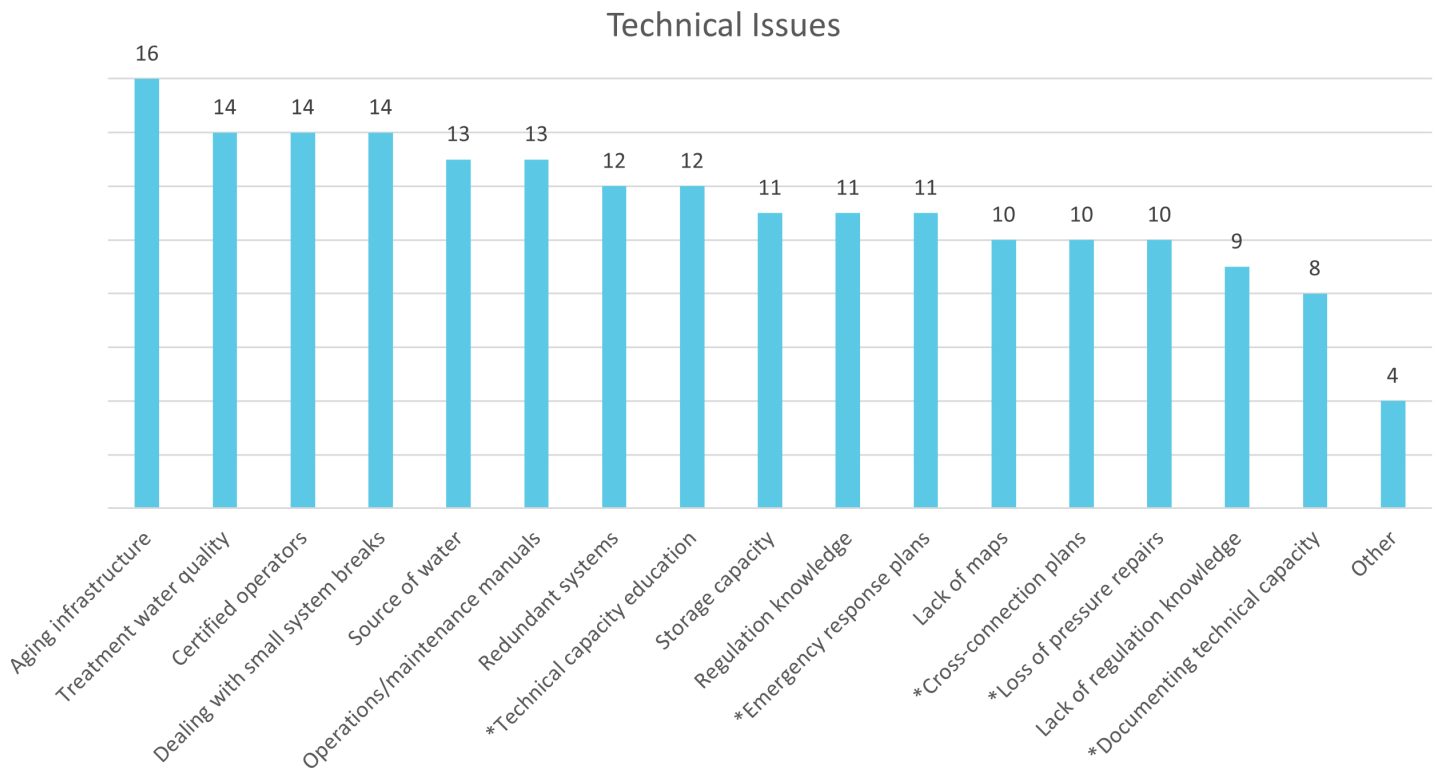
“Operators aging out of the work force.”

“Mentorship programs to encourage young people to be interested in the water industry.”



# | TECHNICAL ISSUES

Stakeholders all agree that aging infrastructure is an issue that water systems in Nevada face. There is also concern about keeping operators certified, and keeping operations and maintenance manuals updated. These concerns highlight the importance of effective technical assistance in helping identify potential gaps in capacity.



\*Technical issues to add to 2021 Strategy

## Technical Issues

### Top Issues for Stakeholders

1. Aging infrastructure
2. Treatment water quality
3. Certified operators
4. Dealing with small system breaks
5. Operations/maintenance manuals

## Other Comments

1. Lack of knowledge: valve flushing and maintenance
2. Addressing customer complaints
3. Drought management
4. Cyber security
5. Growing with regulation changes

# Technical Issues

## Comments from Stakeholders

“Planning for smaller systems is important but they require training and guidance before its an emergency.”

“Get them dreaming and encourage them (I know the money is a critical fact, but working with the small systems is just as critical and most of them understand their community’s needs).”

“Smaller systems can have difficulty with changing regulations. Guidance and training will be needed for small systems (small PWSs too dependent on the board or administration).”

“Aging infrastructure is an important technical issue that needs to be addressed. Much of the drinking water infrastructure in Southern Nevada is nearing the end of its usual life and requires significant investment as we move forward. In addition, source of water is an issue as Lake Mead and groundwater levels decline.”

“Knowing what you need and making sure it works when working with a project. Too many times, operators are ignored or they don’t know enough to make informed choices when the system is improved upon. This causes issues that seem to last for years. Examples: pumps not doing what they were designed to do, wrong size.”

“We know regulation changes are coming, but smaller systems are depending on it not being the current board or administration’s problem. There needs to be a mind changing/growing happening. This again is an area where we could guide systems. I honestly don’t have an idea yet on how to, but it is something that should be brought up.”

“ERP and O&M are greatly needed.”

“With growth in Nevada and an extended drought reducing a somewhat fixed supply of water source, treatment and storage are going to emerge more strongly as primary issues.”

“Managers/operators are also more accountable when their boards understand the challenges and support solutions.”

“Training and implementation: O&M is incomplete; time not taken to resolve/implement. I believe that by working with everyone through a process, it should be the system and the safety of the customers being the priority.”

“Encourage physical consolidation when possible for systems that do not have the ability to maintain their system to enforcement standards.”

“I think that the cross-connection control plans should be stressed more, as this is one really great way to protect your system from becoming contaminated.”

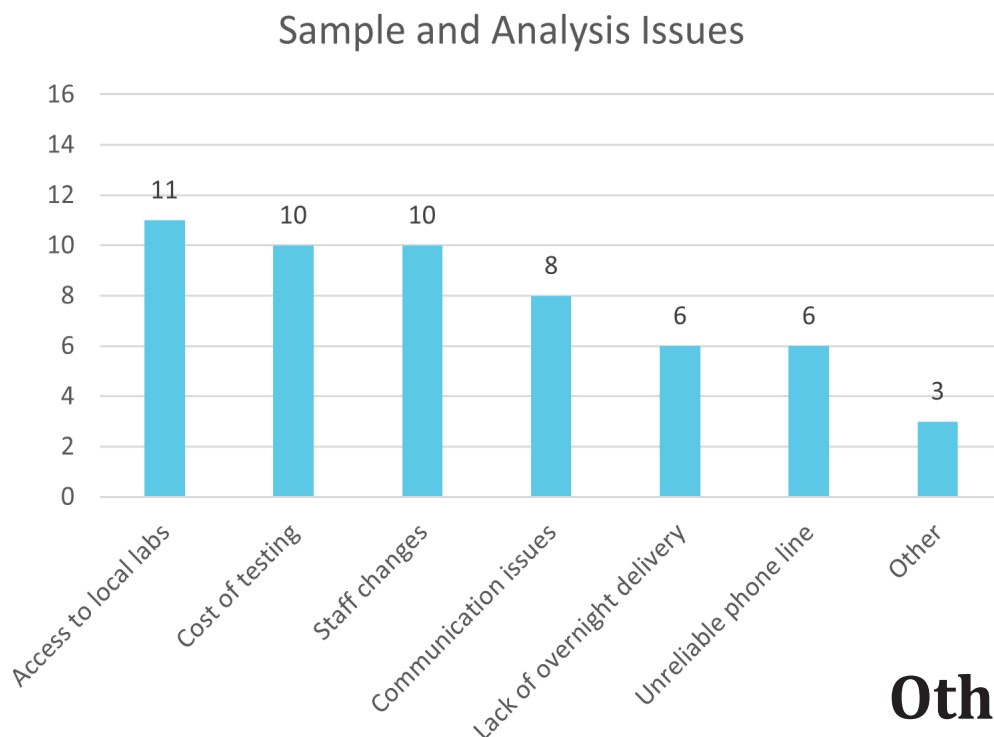
“Board training and understanding of basic utility operations and assets would help them be better decision makers and support managers/operators.”

“Small systems have a very challenging time maintaining spare inventory and redundant treatment equipment.”

“As operators retire, it’s important to repeat trainings on technical issues and not assume that everyone received the training last year.”

# | *SAMPLE AND ANALYSIS ISSUES*

Stakeholders acknowledged that costs and availability can make sampling and analysis difficult for rural water systems.



## Sample and Analysis Issues

### Comments from Stakeholders

“Small systems that can’t make improvements struggle to pay some of the \$3000.00 test that are required.”

“Although ‘access to local labs’ and ‘no reliable phone line/internet’ are not issues in Southern Nevada, they are still prevalent issues in Northern Nevada and in the rural areas.”

“We have no labs in rural Nevada and coordination for transportation of samples can be daunting at times.”

“The biggest challenge I see is understanding the myriad of regulations, i.e. what needs to be tested and when.”

## Other Comments

1. Chain of custody form (lack of understanding)
1. Sample collection/preservation methods

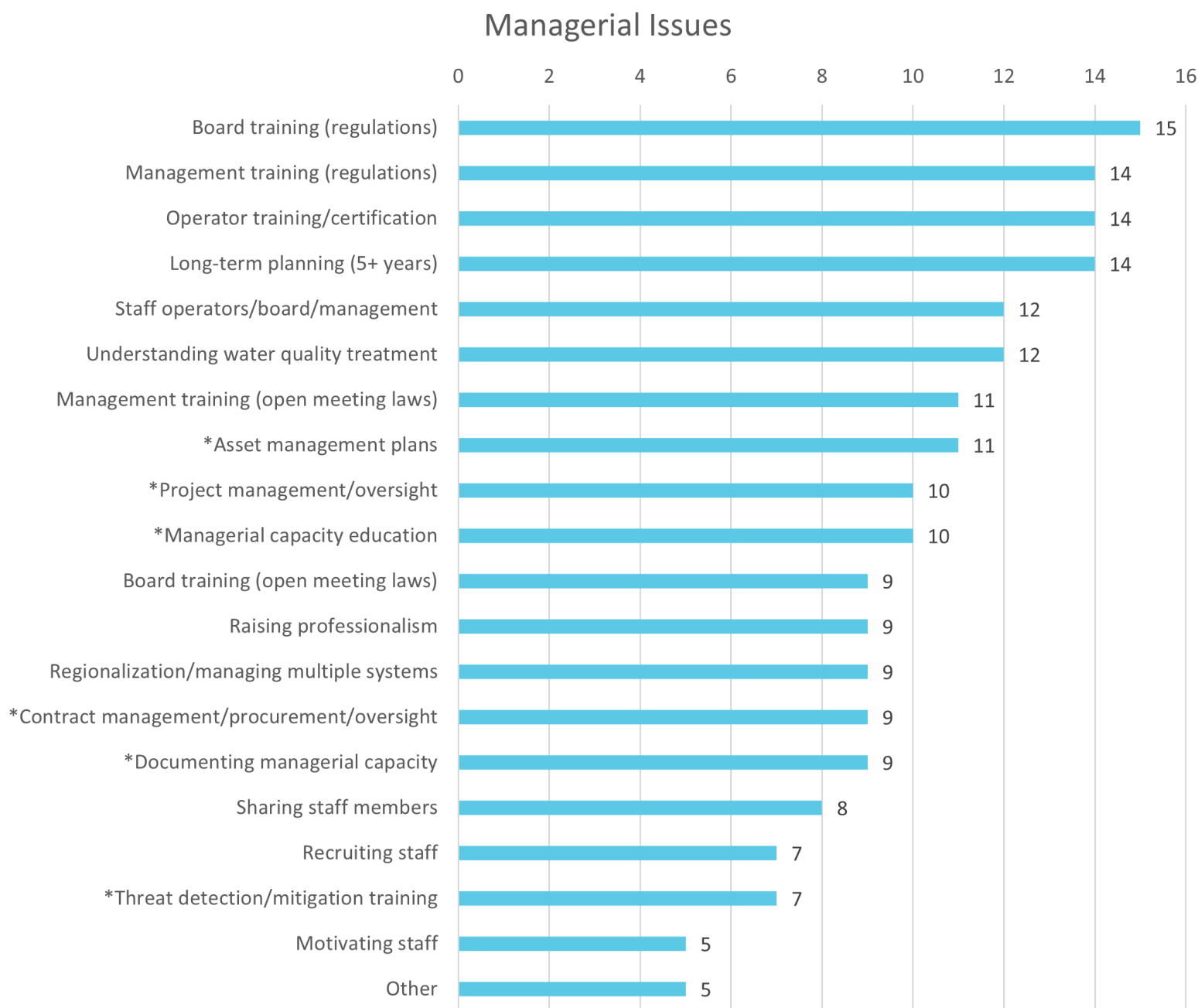
“For a lot of systems in Nevada, just the driving to and from a lab can be an all day task. This is after the sample has been taken already.”

“Rural communities benefit from courier services and local labs. To the extent that these may be expanded would be helpful.”

“Having trainers discuss proper sample collection benefits of documenting sampling conditions and completing paperwork are critical to understanding data.”

# | *MANAGERIAL ISSUES*

The consensus from stakeholders was that training — especially for boards and managers overseeing Nevada water systems — is critical in improving capacity. Stakeholders also noted that training methods need to be updated and improved to remain effective



\*Managerial issues to add to 2021 Strategy

# Managerial Issues

## Top Issues for Stakeholders

1. Board/management training
2. Operator training/certification
3. Long-term planning (5+ years)
4. Staffing
5. Understanding water quality treatment

# Other Comments

1. Training operators to present PWS needs of board/management
2. Contract operators have back up for vacation/emergencies
3. Recruiting new staffing
4. Understanding rates
5. Board/staff communications

# Managerial Issues

## Comments from Stakeholders

"I have noticed that operators talk to the boards about needs; the boards hear 'I want money' and then the conversation ends. Both sides frustrated."

"Educational segments directed at boards (which change frequently) would help boards better understand factors affecting operation of the system and strengthen board decisions made in support of what managers and operators are seeing in the field."

"We, Carson City, are having a hard time getting operators to pass the certification exams."

"There seems to be no difference between the levels anymore which makes it hard for those who are new to the field."

Management needs to understand rates cannot stay the same (or go down), yet keep a system going."

"Encourage managerial consolidation when possible for systems that do not have the capability of managing their system."

"Staffing, recruitment, development, and retention are all major issues for small systems."

"Long-term planning is a second priority for most small systems."

"Training is an ongoing task."

"Often boards only know what managers report to them. This limits a boards ability to support staff and provide managers with more direction."

"Poor management can lead to poor board decision-making, with uninformed boards who do not know what questions to ask their managers."

"Regular board training is critical to a well-managed system. This could be a requirement for receiving funding from NDEP for water projects."

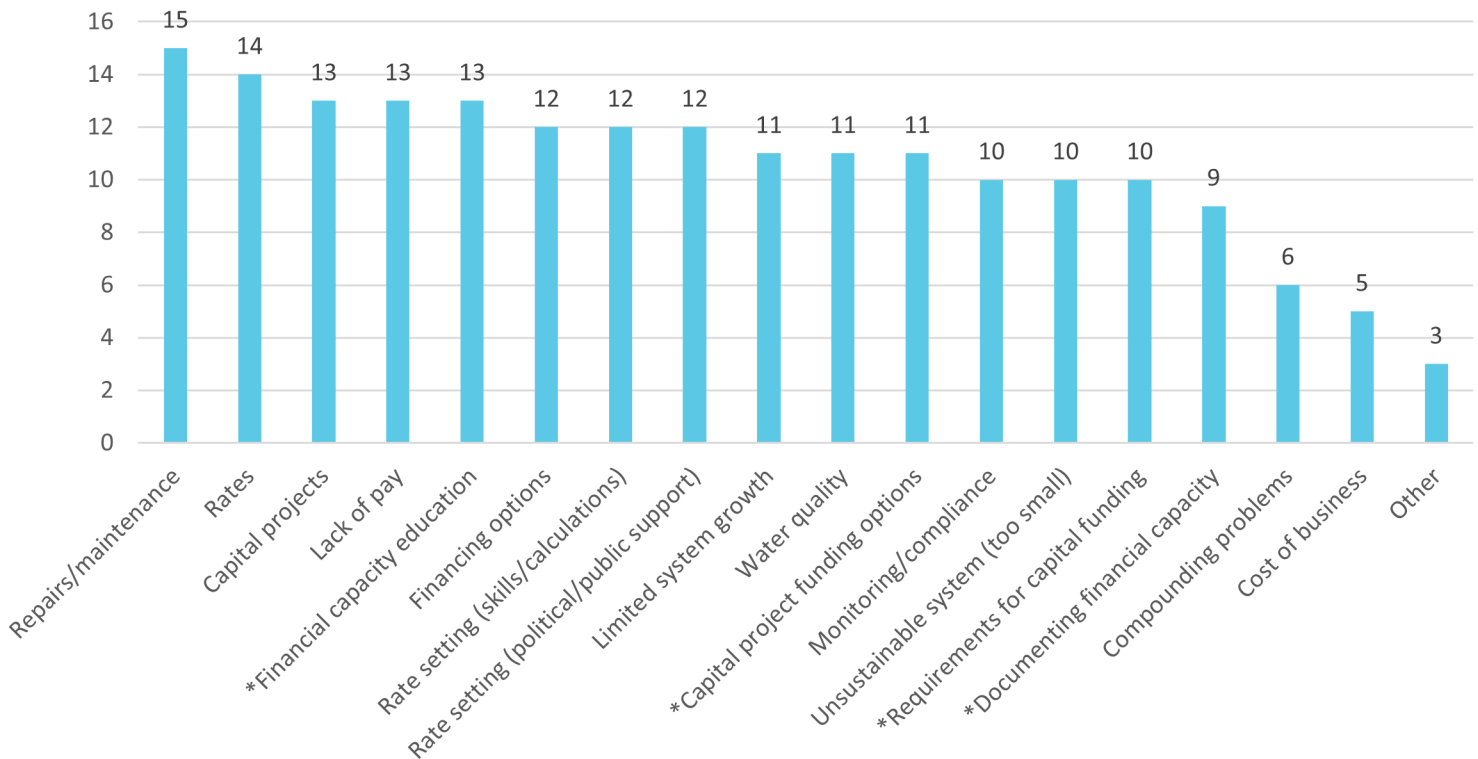
"Convincing an employee who has no desire to get certified to take and pass the testing."

"Boards change frequently, so operators are constantly in a situation of having to re-educate."

# | *FINANCIAL ISSUES*

Most stakeholders agree that repairing and maintaining water systems can be costly. There is also concern that insufficient rates will limit a system's capacity development. Stakeholders expressed that educating boards about system costs (as well as where to apply for financial assistance) will help address funding issues.

Financial Issues



\*Financial issues to add to 2021 Strategy

## Financial Issues

### Top Issues for Stakeholders

1. Repairs/maintenance
2. Rates
3. Capital projects
4. Lack of pay
5. Financial capacity education

## Other Comments

1. Other avenues of funds
2. Environmental justice
3. On-demand training and training innovations

# Financial Issues

## Comments from Stakeholders

“DWSRF and the USDA are two of the sources that most systems go to. However, if they haven’t put in for extra tax revenue, do they know how or even where to go?”

“Have the programs found a way to help them bring in annual increases where they won’t be on the communities bad list?”

“The lack of pay for some rural operators is a problem.”

“I have seen many an operator get certified in a small system and then go to a much larger system and start out with more pay.”

“I understand this is a necessary evil, but in the cities most people just pay it. In rural areas, you have a contingent of people who will cause issues and the others that can’t afford to pay.”

“The adding of a income threshold for water payments could be used, but most boards lack understanding. These are areas of training.”

“Capital planning is a big issue for a variety of reasons; the most common being hesitancy to charge sufficient rates, and perceived challenges in funding administration.”

“A system needs to understand need for projects and how rate changes can assist with the cost.”

“There are many financial and planning hurdles that are difficult to understand and explain to public water systems.”

“Having a person who can be available to address these questions and help PWSs navigate the funding options and requirements would be very beneficial in getting resources into the hands of PWSs.”

“The application process for DWSRF, CWSRF, and Capital Improvement Grant funding is pretty onerous.”

“A revised, shorter application process would be a welcome enhancement. I think this is a barrier for smaller systems who need the financial assistance. Many of the forms are duplicative.”

“An educational program helping the public understand what we pay for water — relative to other luxuries — might help systems generate sufficient revenue to better manage water systems.”

“Funding and expertise to improve and innovate TA approaches.”

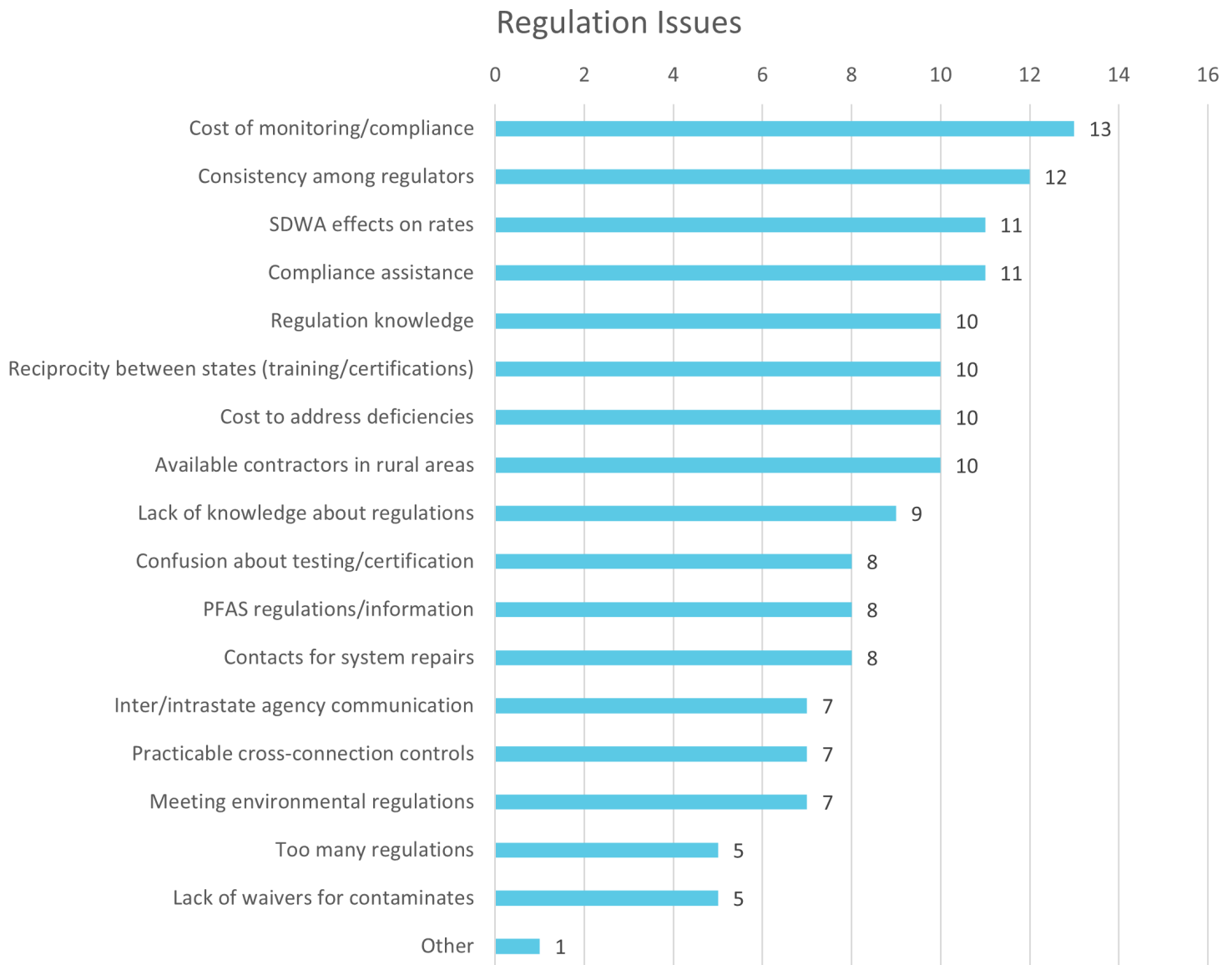
“Help communities understand the value of water and the cost to provide the level of service they desire.”

“I agree that a surcharge should be included to help fund future capital projects.”

“The cost of water is very reasonable, especially in the context of other goods and services — especially where water is essential to human life.”

# | REGULATORY ISSUES

Stakeholders answered that they are mostly concerned with the costs associated with compliance, as well as adequate training for boards and management. There is also weariness about over-regulation and the lack of consistency between regulators.



## Regulatory Issues

### Top Issues for Stakeholders

1. Cost of monitoring/compliance
2. Consistency among regulators
3. Compliance assistance

## Other Comments

1. Organized location to get information on regulatory requirements

# Regulatory Issues

## Comments from Stakeholders

“Regulations will always be improving.”

“The cost of these changes puts enormous financial burdens on small systems in rural Nevada.”

“Compliance issues are not thought of as a priority by boards; they only see the money.”

“While PFAS are not a concern in Southern Nevada at present, the topic should be addressed in the strategy going forward.”

“The more information that can be provided in an easy to access manner would be helpful to operators.”

“Keeping regulators trained and providing them with opportunities to present with Cap Dev trainers will keep the messaging consistent.”

“Regulators need to better understand their authorities and limit those to public health concerns.”

“Regulators should not be entering into the engineering or construction side of the equation, except where it affects public health.”

“Intrusion by regulators can have an adverse effect on project cost, especially for small systems where basic improvements are satisfactory.”

“We have issues with the local fire marshals having unrealistic expectations of systems that are cost prohibitive.”

“I would like to see something that would let the customer know how much it costs to make sure that the water is safe to drink and all the testing that is done to do that.”

“Operators only see that they can’t do something that is required, and then they live in a constant state of what if or when.”

“We should do what we can to communicate regulation requirements and make available information that is easy to understand.”

“Systems struggle with getting conflicting information at times, or who to contact for information.”

“Innovative and accessible regulatory training and education for boards, management and staff.”

“Unfunded federal and State mandates.”

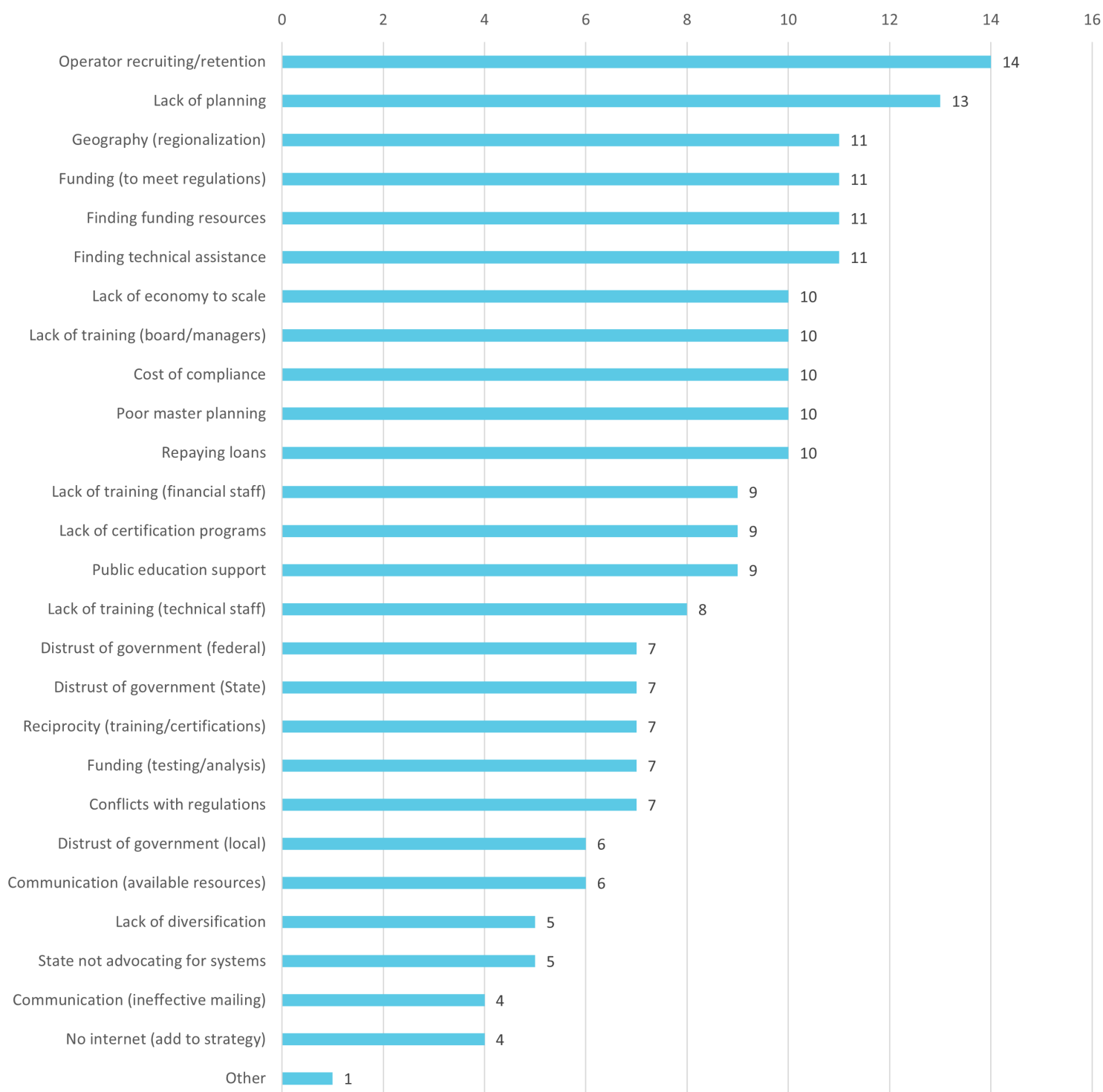


# IMPAIRMENTS

## Capacity Development

Stakeholders singled out finances as a reason that small systems have trouble retaining qualified staff. This lack of funding, as well as a lack of necessary training, is keeping these systems from developing capacity.

Impairments (Capacity Development)



# Impairments (Capacity Development)

## Top Issues for Stakeholders

1. Operator recruiting/retention
2. Lack of planning
3. Geography (regionalization)
4. Funding (meeting regulations)
5. Finding funding resources

## Other Comments

1. Limited funding opportunities to assist private water systems

# Impairments (Capacity Development)

## Comments from Stakeholders

“Money again is the issue, or lack thereof. Operators have to pay to get and retain certifications, and that costs money. Most companies are not paying for the travel or time of the employee, and testing sites have limited hours and days. This is creating issues for all.”

“Repaying loans — a tender subject. What happens when you put in a \$2 million dollar system, then everyone moves? No more revenue and no more loan payments.”

“The disparity in incomes (rural areas vs. metropolitan) is significant and definitely an impairment to capacity development.”

“An overall lack of resources impacts small systems. This can take the form of difficulty recruiting an operator, to understanding what financial and technical assistance is available.”

“Innovation in training for boards, staff, operators, managers, and the public would benefit many Nevada communities.”

“Most of the systems we deal with have operators that have other jobs and/or inherited these systems, and don’t really want to spend the time or money on them.”

“Helping them trust their regulators and realize we are trying to help them and work with them is key.”

“There are many questions on the test for wastewater treatment that pertain to large systems with more technical operations that a rural operator will never see or deal with.”

“The biggest barrier to capacity development is a system’s limited ability to hire and retain quality management and technical staff. This is especially so for smaller systems in smaller communities.”

“In my experience, most impairments to capacity building are related to lack of training, education, and expertise. The need to be in violation to use certain funding sources does not help build capacity to avoid non-compliance.”

“Evolving EPA strategic performance measures that rank PWS non-compliance.”

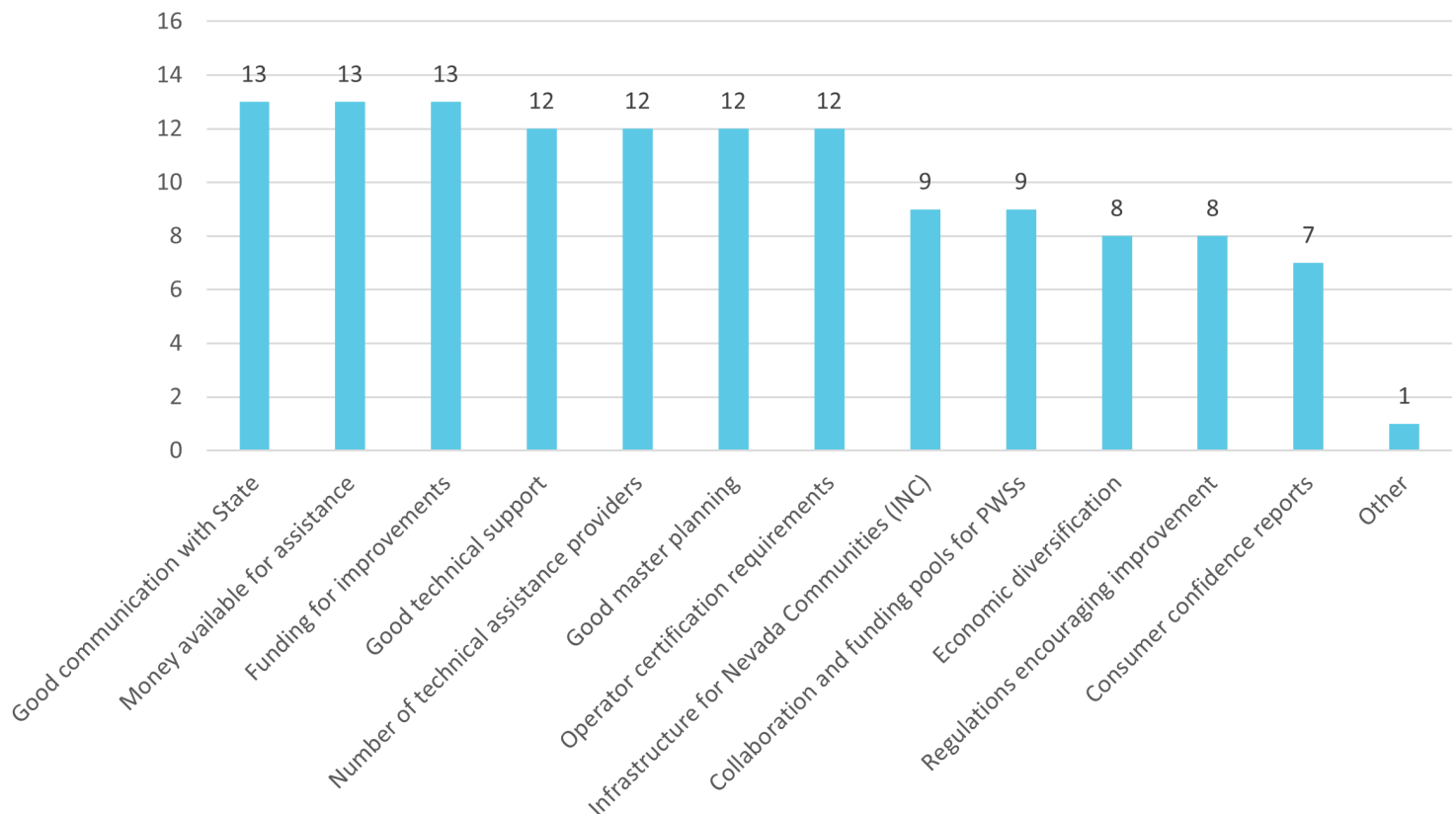
“Having staff resources at the State level to maximize the funding opportunities.”

# ENHANCEMENTS

## Capacity Development

Stakeholders acknowledge that targeted technical assistance can give water systems the help needed to improve capacity. Many also noted that improved training practices can increase a system's access to funding, and keep the system in compliance.

Enhancements (Capacity Development)



## Enhancements (Capacity Development)

### Top Issues for Stakeholders

1. Good communication with State
2. Money available for assistance
3. Funding for improvements

### Other Comments

1. Ranking system (ease of use) annually
2. Training resources catalogued (easy to use)

# Enhancements (Capacity Development)

## Comments from Stakeholders

"I always enjoyed a working relationship and the assistance I had with my former contact at NDEP, it was a learning curve and I believe the system truly benefited. However, I realize now that apparently I am the only one that felt that way (on the system's side)."

"When I left my former system, they chose to go with persons who should have known what they were doing. But lack of training and so forth has left the system in a dangerous spot. The reality that some just don't care or want to know how to improve or work the system, with all of its quirks, is unbelievable to me as an operator."

"I asked a question recently about a permit and was considered an operator who doesn't know what's what. I was told that I should already know. This was by NDEP and my boss."

"Making sure that the CCR is correct and has enough information to educate the customer about what the utility is doing to make sure that their water is safe to drink."

"Using funding and coordinated technical assistance to encourage improvement in PWSs is a highly effective method of encouragement."

"I believe the collaboration and resource pooling would be very beneficial."

"A ranking system that helps everyone (PWSs, OFA, BSDW, TA providers) identify and target capacity development would be helpful."

"Encouraging TA providers to innovate training approaches and platforms so that training is more engaging, accessible, and on-demand."

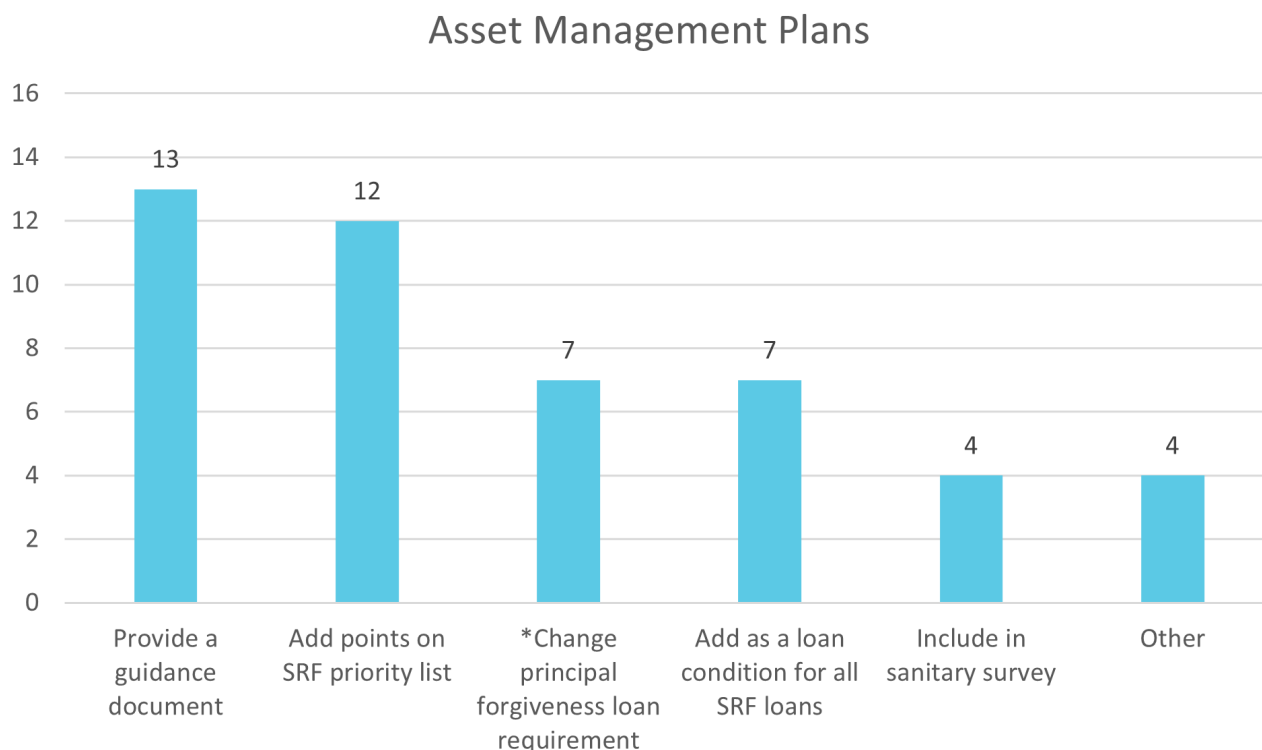
"We should do what we can to encourage compliance and share information that will help all water systems in the State."

"Not all systems have the money or technical experience needed to improve their capacity."



# | ASSET MANAGEMENT PLANS

Asset management (AM) plans are now federally required to be included in the Capacity Development Strategy. Stakeholders see asset management plans as a key element for systems to maintain, improve, and elevate their services and reliability. Stakeholders considered the best ways to incorporate these plans into future capacity development strategies.



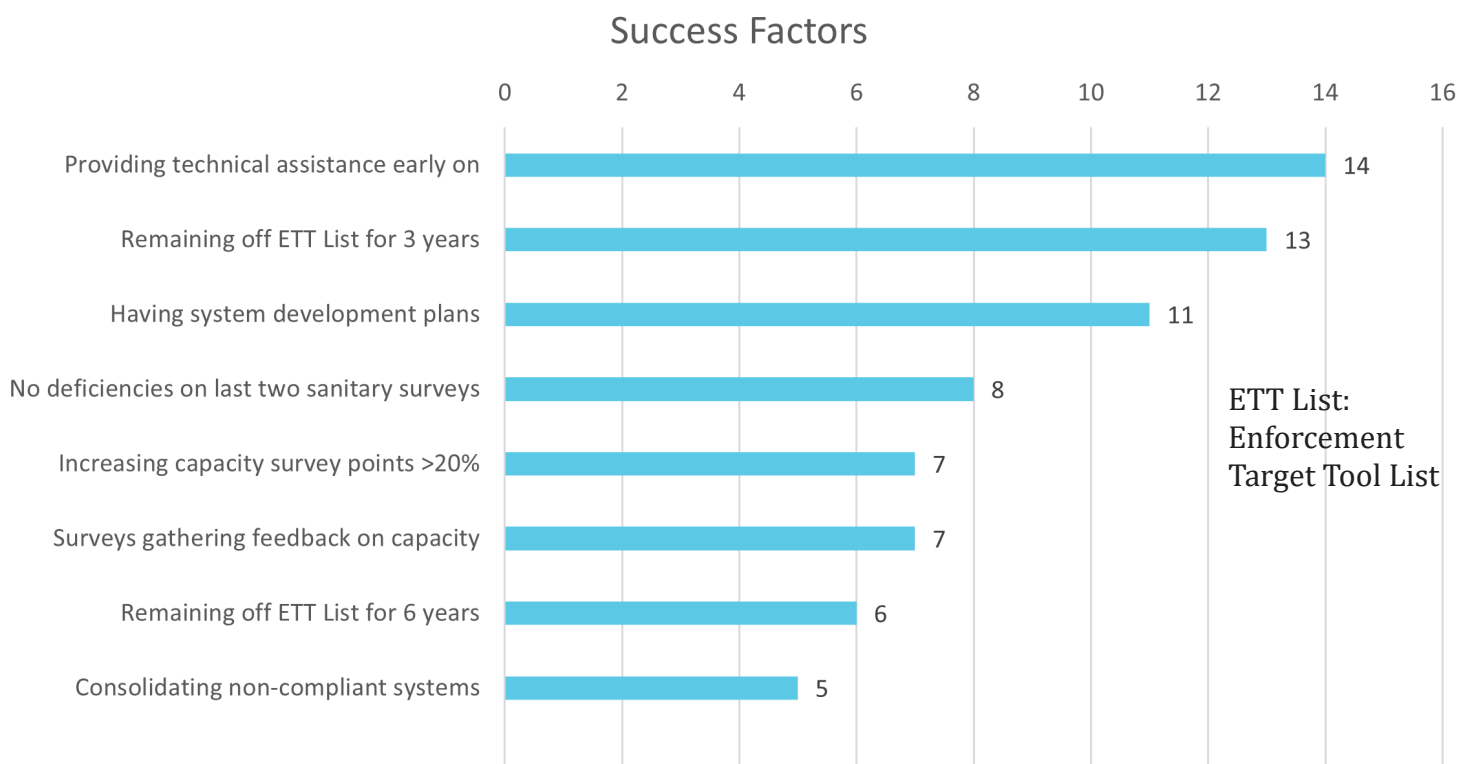
\*From fiscal sustainability plans to asset management plans

## Other Comments

1. Annual training: benefits of AM
2. Training: how to build AM plan
3. Asset Management platforms
4. Add AM to permit requirements
5. Provide funds for asset management

# | *SUCCESS FACTORS*

Stakeholders also considered several success factors to measure capacity development.



# | *RANKING SYSTEM*

Stakeholders considered how Nevada should rank systems that need capacity development — with the limited funds available to the program.

- A. Acute public health concerns
- B. Chronic public health concerns
- C. Systems with a sanitary survey deficiency
- D. Systems needing capacity building for regulatory compliance
- E. Systems actively seeking funding from federal, state, and local funders
- F. All other systems

**14 stakeholders selected all of the metrics. One indicated the ranking system did not need to be expanded, the other indicated that E and F were not applicable.**

# | *ADDITIONAL COMMENTS*

“Why do we continue to allow systems to expand their capacity while they are not able to take care of what they have?”

“If we limit the expansion or slow the growth of water systems... we can place funding where we need it most.”

“Any new regulations or requirements should address specific concerns... the regulations cannot eclipse the basic goal of providing adequate quality and quantity of water.”

“NDEP invests a lot through capacity development. This money is well spent, and I believe could go farther with innovation in TA provider approaches, to a variety of training and planning initiatives.”

“Making a detailed list of criteria and how that increases access to funds would be helpful.”

“We need to continually seek to operate in a balance between public health and affordability.”

“Any new regulations or requirements should address specific concerns and not be unnecessarily additive to what’s already existing”

“The previous strategy discussed operator certification requirements, and I think the next step in that area is related to continued training and addressing contract operator requirements to ensure compliance with holiday and emergency situations.”

“Suggest including new language in the introduction regarding the new requirements for the State Asset Management Initiatives.”

“Encouraging online, on-demand training tools, templates, and mapping tools would help boards and managers be more informed on all subjects related to water utility operations and management, and help them to better meet NDEP requirements and regulations.”



# **ATTACHMENT C:**

## **Invited Stakeholders**

## September 29<sup>th</sup> Capacity Development Strategy Workshop

### Attendees

Elise Akers	OFA Accountant
Bunny Bishop	Water NV
David Bruketta	Lyon County Public Works
Kyle Casci	NDEP Office of Financial Assistance
Jason Cooper	NDEP Office of Financial Assistance
Joseph Davis	Moapa Valley Water District
Eric Dominguez	NDEP Bureau of Safe Drinking Water
Sheryl Fontaine	NDEP Chief, Administrative Services
Kathy Flanagan	LVVWD
Gwen Jones	Lander County Sewer & Water District 2 (Austin)
Bridget Harris	RCAC
Linh Kieu	NDEP-Bureau of Safe Drinking Water
Sharada Maligireddy	NDEP-Office of Financial Assistance
Crystel Montecinos	NDEP-Bureau of Safe Drinking Water
Eddy Quaglieri	Carson City Public Works
Greg Reed	Gardnerville Ranchos GID
Shaun Richard	NV Public Utilities Commission
Kim Rigdon	NDEP Bureau of Safe Drinking Water
Andrea Seifert	NDEP Bureau of Safe Drinking Water
Cynthia Turiczek	NV Public Utilities Commission
Stacy Van Diest	Nevada Rural Water Association

December 8, 2021

Operator's Quarterly Forum

Presentation of Nevada's Capacity Development Strategy

Meaning and Questions to obtain input to strategy on TMF concerns.

Paul Strasdin	Professional Engineer
Rachel Weingart	BSDW
Jim Kerr	Elko County Public Works
Lance Goodman	NvRWA
Dale Johnson	City of Elko
Andrew Hickman	Roundhill GID
Katrina Pascual	NDEP Bureau of Water Pollution Control
Joe Mathein	Nevada Rural Water Association
Stevan Palmer	RCAC
Don Kalkoske	Star City Properties
Will Raymond	Truckee Meadows Water Authority

## September 29<sup>th</sup> Workshop inputs from participants

### Topics / Comments

#### Personnel / Management

##### Impairments:

- Seasoned operators are having tough time passing test for level 2 & 3
- Hard to pass lower level for D1, D2 and T1, T2
- Moving towards entry level trainee vs seasonal help
- Need help with training maybe from NvRWA
- Need help with test preparation for operators
- Need assistance with obtaining Learning Management System, maybe from NDEP
- Recruitment of new operators is getting harder, new hires move to higher paying systems
- Lack of staff for rural PWS
- Lack of resource materials for operators to study for tests
- Need more backflow courses
- Distribution maintenance does more smaller projects, not large projects
- Treatment questions are not generally for conventional treatments, more for complicated treatment issues on distribution tests
- Need more hands on exposure training like 'Shadow program' with other larger systems to learn different treatments (like the Henderson example)
- Operators in system don't have all day to train. Make 1 hour element training.
- Not having internal trainings to grow candidates for promotional opportunities

##### Proposed Enhancement:

- Have NvRWA get PWS together to share training events on sites- bridge gap show presentations on treatment processes, like treatment plant and micro-filtration plants
- More training on P/M

#### Financial Sustainability

##### Impairments:

- Small system have low rate base- difficult to increase rates to raise money
- Need rate payer assistance programs developed
- Boards need to be more educated on rates
- Elected officials need to be more educated on rates, target education on rate change needs and why change is needed.
- Comparison of PWS rates is not effective unless educated on "cost of service" aspects.

- Teaching about the differences of scale between different infrastructures metro vs rural
- Small rural systems could have longer pipe runs, more components, fixtures, connections
- Importance of public Outreach, informing public about rates.
- Rate campaigns needed
- Lack of assisted rate development software (Water Worth) or other software.
- Small PWS have greater burdens
- State mandates that cause increased compliance requirements that add costs to water systems, without providing source of funding. (unfunded mandates).
- Inflation and impacts on projects in progress

#### Enhancements:

- Comparisons of PWS data of similar water systems
  - Comparing their own system rates
  - Monitoring other systems

#### PWS Characteristics

##### Impairments:

- NDEP visits seen as burden to small systems
- Outreach is limited to compliance (Sanitary Survey)
- PWS fear visit from BSDW

#### Enhancements:

- Develop outreach, non-compliance
- How can BSDW bridge the gap? routinely communicate to PWS and get feedback (Survey)

#### Planning

##### Impairments:

- Asset Management – change the language not to mean a AMP needs to be complete before getting the SRF loan.
- SRF is more burdensome than other loan, grant types- PER, American Steel, Davis-Bacon
- Asset Management plan is a complicated requirement

#### Enhancement

- SRF has flexible scale for disadvantaged PWS
- EPA has written guidance, NDEP will link documents in their website
- Universities have AM plans, documents and tools as well

- T/A has targeted Financial Planning sessions as well as AMP sessions

Source Water, Quality and Quantity

Reuse Water: add reuse strategy

Stormwater- needs on rate structure very difficult, a lot of \$\$\$ \$100M

Increase survey respondents and get more operators involved if possible

Seeking December outreach during Operator Forum Meeting

## **ATTACHMENT D:**

### **Scope of Work in Capacity Development**

## **Scope of Work**

The following capabilities are anticipated to be required under the subgrant; however, this is not to be considered a comprehensive description of all required services.

### **1. Technical Assistance to Water Systems**

#### **1.1. PWS Compliance**

The awarded vendor(s) may be required to assist water systems with understanding of and compliance with legally enforceable standards and treatment techniques that apply to public water systems to protect public health and provide a safe and reliable drinking water supply. They include assistance to comply with state and federal drinking water regulations, including but not limited to, RTCR, Groundwater Rule, Disinfection Byproducts Rule, Arsenic Rule, LCR, SWTRs, and state enforceable secondary drinking water standards.

- 1.1.1. This task may include training for staff personnel and/or board members over the necessary PWS compliance components.
- 1.1.2. This task may include assisting the water system with TMF capacity surveys developed by NDEP to determine the system's TMF capacity, need for assistance and their eligibility for future funding from the DWSRF

#### **1.2. Prioritized PWS and ETT Score**

The awarded vendor(s) may be required to assist prioritized water systems, which have accrued ETT scores in the range of 6-10 points from non-compliance with state and federal requirements, to:

- 1.2.1. Address the violations leading to noncompliance;
- 1.2.2. Return the system to compliance in a timely manner.
- 1.2.3. This task may include training for staff personnel and/or board members over the necessary requirements to be removed from the ETT list.
- 1.2.4. This task may include assisting the water system with TMF capacity surveys developed by NDEP to determine the system's TMF capacity, need for assistance and their eligibility for future funding from the DWSRF
- 1.2.5.

#### **1.3. Sampling, Water Quality Testing and Troubleshooting**

The awarded vendor(s) may be required to help train and/or assist PWSs in:

- 1.3.1. Developing and implementing sampling plans;
- 1.3.2. Conducting field measurement and water parameters;
- 1.3.3. Developing and implementing water sampling procedures for compliance;
- 1.3.4. Testing for chlorine residuals;
- 1.3.5. Measuring well drawdown;
- 1.3.6. Instrumentation;
- 1.3.7. Calculating proper chemical addition and chemical pump;
- 1.3.8. Treatment train operations

- 1.3.9. Water quality and/or equipment troubleshooting; and
- 1.3.10. Identifying a source or vendor to secure parts, equipment, tools, and supplies etc.
- 1.3.11. This task may include training for staff personnel and/or board members over the necessary requirements sampling, testing, and troubleshooting.
- 1.3.12. This task may include assisting the water system with TMF capacity surveys developed by NDEP to determine the system's TMF capacity, need for assistance and their eligibility for future funding from the DWSRF

#### **1.4. Sanitary Surveys and Deficiency Resolution**

The awarded vendor(s) may be required to assist water systems in developing and implementing plans and taking the actions necessary to provide an appropriate response to sanitary surveys and Level 2 Assessment findings conducted by the BSDW. Guidance and instruction may be required to help the water system correct deficiencies and/or address sanitary defects. The goal is to bring the system back into compliance with state and federal regulatory requirements within the required timeframe.

- 1.4.1. This task may include training for staff personnel and/or board members over the sanitary survey deficiencies and responsible management of the system.
- 1.4.2. This task may include assisting the water system with TMF capacity surveys developed by NDEP to determine the system's TMF capacity, need for assistance and their eligibility for future funding from the DWSRF

#### **1.5. Revised Total Coliform Rule Level 1 Assessment**

The awarded vendor(s) may be required to assist water systems in performing a Level 1 Assessment. The vendor may be expected to assist the water system with:

- 1.5.1. Investigating the water system to identify sanitary defects;
- 1.5.2. Submitting the Level 1 Assessment documentation;
- 1.5.3. Locating resources to fix noted sanitary defects;
- 1.5.4. Developing a timeline that ensures the 30-day corrective action timeline is met; and
- 1.5.5. Submitting an extension request if needed.
- 1.5.6. This task may include training for staff personnel and/or board members over the Revised Total Coliform Rule.
- 1.5.7. This task may include assisting the water system with TMF capacity surveys developed by NDEP to determine the system's TMF capacity, need for assistance and their eligibility for future funding from the DWSRF

#### **1.6. Digital Mapping and GPS Asset Location**

The awarded vendor(s) may be required to assist water systems with:

- 1.7. Developing and/or updating their digital maps or GIS system and attribute tables of system components;
- 1.8. Identifying the appropriate GPS tools for field data collection and will provide training in the use of these tools. GIS software and platforms used must be widely available to computer and phone users and must be free of charge to the water system; and
- 1.9. Identifying and integrating their GIS system with other management software that can assist in planning for repair and replacement of assets.

- 1.10. This task may include training for staff personnel and/or board members over the need for mapping and asset identification.
- 1.11. This task may include assisting the water system with TMF capacity surveys developed by NDEP to determine the system's TMF capacity, need for assistance and their eligibility for future funding from the DWSRF

## **2. Managerial Assistance to Water Systems**

### **2.1. PNR and CCR**

The awarded vendor(s) may be required to assist water systems with:

- 2.1.1. Notices that alert consumers if there is a risk to public health, if the water does not meet drinking water standards, if the water system fails to test its water, or if the system has been granted a variance of exemption to a regulation; and
- 2.1.2. Their annual CCRs to increase consumer awareness of their drinking water quality and potential health risks and increase dialogue between the utilities and their consumers.
- 2.1.3. This task may include training for staff personnel and/or board members over the need for timely communication to the public for health risk violations.
- 2.1.4. This task may include assisting the water system with TMF capacity surveys developed by NDEP to determine the system's TMF capacity, need for assistance and their eligibility for future funding from the DWSRF

### **2.2. Manuals and Plans**

The awarded vendor(s) may be required to assist water systems in:

- 2.2.1. Creating, updating, and implementing their system O&M manuals for both distribution and treatment facilities to describe operational activities on a daily, monthly and yearly basis;
  - 2.2.1.1. Submitting any updates of water system assets to BSDW in order to maintain an accurate SDWIS database.
- 2.2.2. Development and implementation of a CCCP;
  - 2.2.2.1. Public outreach efforts to improve the public's understanding of the need and importance of such a program;
- 2.2.3. Preparing new or updating existing system- and site-specific ERPs; and
  - 2.2.3.1. Evaluating system security and necessary upgrades including but not limited to:
    - 2.2.3.1.1. Fencing;
    - 2.2.3.1.2. Locks;
    - 2.2.3.1.3. SCADA;
    - 2.2.3.1.4. Alarms; and
    - 2.2.3.1.5. Security cameras
  - 2.2.3.2. Provide training and emergency assistance in implementing ERPs when systems face natural disasters, critical system component failures and risks to public health.
- 2.2.4. The awarded vendor(s) may be required to assist water systems with completing, updating, and implementing water conservation plans in compliance with the requirements of the DWR;
  - 2.2.4.1. Metrics to be used by the systems to analyze the effectiveness of the plan;
  - 2.2.4.2. Developing and implementing feasible water conservation measures and public awareness campaigns;
  - 2.2.4.3. Water loss audits to assist system personnel in resolving unaccounted-for water;
  - 2.2.4.4. Energy conservation opportunities including but not limited to:

- 2.2.4.5. Energy efficient equipment;
- 2.2.4.6. Alternative power generation; and
- 2.2.4.7. Off-peak power use.
- 2.2.5. This task may include training for staff personnel and/or board members over the need for manuals, their use, and the need to keep them updated.
- 2.2.6. This task may include assisting the water system with TMF capacity surveys developed by NDEP to determine the system's TMF capacity, need for assistance and their eligibility for future funding from the DWSRF

## **2.3. Management and Operations**

- 2.3.1. The awarded vendor(s) may be required to assist the water system with personnel management;
  - 2.3.1.1. Personnel policies;
  - 2.3.1.2. Job descriptions;
  - 2.3.1.3. Contracts for operations, maintenance and/or administration
- 2.3.2. The awarded vendor(s) may be required to assist the water system with developing and implementing a records keeping/tracking program for routine maintenance including but not limited to:
  - 2.3.2.1. Well pumpage;
  - 2.3.2.2. Valve exercising;
  - 2.3.2.3. Hydrant/dead-end flushing; and
  - 2.3.2.4. Backflow prevention assembly testing.
- 2.3.3. The awarded vendor(s) may be required to assist the water system with contracts management:
  - 2.3.3.1. Technical services solicitations;
  - 2.3.3.2. Review of bid specifications/construction contracts;
  - 2.3.3.3. Project documentation included but not limited to:
    - 2.3.3.3.1. Certified payroll review;
    - 2.3.3.3.2. Funding draws; and
    - 2.3.3.3.3. Reporting as required by federal, state, and/or funding agencies.
- 2.3.4. The awarded vendor(s) may be required to:
  - 2.3.4.1. Assist water system staff in understanding the organizational and governing structure and responsibility; and
  - 2.3.4.2. Guide water systems to professionals authorized to prepare documentation and assist with reorganization (e.g., HOA), bylaws, federal non-profit application, ordinances/policies, and insurance etc.
- 2.3.5. This task may include training for staff personnel and/or board members over sound management of a water system, troubleshooting workflows, contracting, and being responsive to customer needs.
- 2.3.6. This task may include assisting the water system with TMF capacity surveys developed by NDEP to determine the system's TMF capacity, need for assistance and their eligibility for future funding from the DWSRF

## **2.4. Water Rights Management**

The awarded vendor(s) may be required to assist the water system with:

- 2.4.1. Reviewing and understanding water rights and associated documentation;
- 2.4.2. Determining if water quantity and water rights are sufficient for existing and projected future population; and
- 2.4.3. Properly recording and submitting pumpage documentation to DWR.

- 2.4.4. This task may include training for staff personnel and/or board members over the importance of water rights.
- 2.4.5. This task may include assisting the water system with TMF capacity surveys developed by NDEP to determine the system's TMF capacity, need for assistance and their eligibility for future funding from the DWSRF

### **3. Financial Assistance to Water Systems**

#### **3.1. Budgeting and Rate Setting**

The awarded vendor(s) may be required to assist water systems with:

- 3.1.1. Preparing a balanced budget (note that depreciation is not required to be fully funded in planning a budget under this subgrant scope of work, but the system must be educated on what depreciation means, why it is used, and how it benefits the system to fully fund depreciation);
- 3.1.2. Preparing a budget for 5-, 10-, and/or 20-year CIPs in order for the water system to develop rate strategies and identify potential funding available for necessary system renewal;
- 3.1.3. Establishing sufficient rates to support their unique system. User rates must be sufficient to cover:
  - 3.1.3.1. All operations and maintenance of the specific system of the community. This includes operation and maintenance of any planned construction project being proposed to a funding agency;
  - 3.1.3.2. Debt service requirements on all loans and bonds of the system: and
  - 3.1.3.3. All required reserve accounts of the system, including a short-lived asset reserve and any debt service required by the loan/bond agreements.
- 3.1.4. This task may include training for staff personnel and/or board members over the importance of budgeting and rate setting.
- 3.1.5. This task may include assisting the water system with TMF capacity surveys developed by NDEP to determine the system's TMF capacity, need for assistance and their eligibility for future funding from the DWSRF

#### **3.2. Fiscal Sustainability Plans (FSP) or Asset Management Plans**

The awarded vendor(s) may be required to assist the water systems with FSPs that include at a minimum:

- 3.2.1. Asset information including;
  - 3.2.1.1. An inventory; and
  - 3.2.1.2. Date of installation.
  - 3.2.1.3. Original price;
  - 3.2.1.4. Anticipated life span;
  - 3.2.1.5. Replacement costs;
  - 3.2.1.6. An evaluation of their condition and performance; and
  - 3.2.1.7. An analysis of the criticality of each asset.
- 3.2.2. An evaluation of water and energy conservation efforts with existing assists and planned replacement assets; and
- 3.2.3. A plan for maintaining, repairing and replacing assets and for funding such activities; and
- 3.2.4. Defined level of service goals for:
  - 3.2.4.1. Physical performance of the assets, and
  - 3.2.4.2. Customer expectations and satisfaction

- 3.2.5. This task may include training for staff personnel and/or board members over the importance of having an FSP or Asset Management Plan.
- 3.2.6. This task may include assisting the water system with TMF capacity surveys developed by NDEP to determine the system's TMF capacity, need for assistance and their eligibility for future funding from the DWSRF

### **3.3. Income Surveys**

The awarded vendor(s) may be required to assist water systems with conducting income surveys for the community in order to qualify for loans and grants from all funding agencies. The income survey must achieve a 98% contact rate and collect the household income of the residents sampled. The awarded vendor(s) will then determine the median household income from the data collected and certify to the data's authenticity.

### **3.4. Bookkeeping and Public Accounting**

The awarded vendor(s) may be required to assist water systems with:

- 3.4.1. Understanding bookkeeping entries for transactions the water system must record and process on a day-to-day basis, including but not limited to:
  - 3.4.1.1. Payroll and related expenses;
  - 3.4.1.2. Contract transactions;
  - 3.4.1.3. Purchasing;
  - 3.4.1.4. Asset acquisitions, disposals and transfers;
  - 3.4.1.5. Operating expenses; and
  - 3.4.1.6. Items of income
- 3.4.2. Understanding their requirements to prepare financial statements in conformity to GAAP for local governments as they pertain to their specific structure; and
- 3.4.3. Educate and train water system staff on terminology used in the public sector accounting profession such as but not limited to:
  - 3.4.3.1. Cash versus accrual accounting
  - 3.4.3.2. Asset depreciation
  - 3.4.3.3. Current versus noncurrent assets and liabilities;
  - 3.4.3.4. Net assets;
  - 3.4.3.5. Restricted reserves; and
  - 3.4.3.6. Enterprise funds.
- 3.4.4. The awarded vendor(s) may be required to assist water systems understand how to read a GAAP compliant financial report and notes to the financial statements, including the balance sheet, income statement, and statement of cash flows.
- 3.4.5. The awarded vendor(s) may be required to assist water systems with:
  - 3.4.5.1. Understanding the importance of internal controls in their accounting framework;
  - 3.4.5.2. Assessing the separation of duties and educate staff and the board of the water system on the risks involved by not following proper internal control procedures; and
  - 3.4.5.3. Preparing fiscal policies to segregate the duties of the individual responsible for recording the transactions from the individual authorizing payment, and the individual responsible for handling deposits.
- 3.4.6. This task may include training for staff personnel and/or board members over the importance of bookkeeping, transparency, internal controls, and sound accounting practices.

- 3.4.7. This task may include assisting the water system with TMF capacity surveys developed by NDEP to determine the system's TMF capacity, need for assistance and their eligibility for future funding from the DWSRF

#### **4. Training**

The awarded vendor(s) may be required to work with PWS and NDEP to develop and prioritize training needs for specific system(s). The vendor will provide all materials necessary for training and assist with securing a meeting location if necessary. A specific course curriculum for requested training must be submitted to NDEP for approval prior to holding the training session. Technical courses that qualify for CEUs must also be reviewed and approved by the Nevada Certified Drinking Water Operator Program.

##### **4.1. Board, Clerical, and Office staff Training**

The awarded vendor(s) may be required to assist water systems with board training not previously identified in another task in this scope of work.

##### **4.2. Operator Certification Training**

The awarded vendor(s) may be required to provide training to prepare water system staff in obtaining requisite certification within Nevada for distribution or treatment operation. Under certain conditions, training that qualifies for contact hours (CEUs) may be required, if approved through the Nevada Drinking Water Operator Certification Program, to help certified operators to maintain their credentials. The vendor may propose one or more efficient and effective approach(es) to provide training to Nevada operator in order to accomplish this task.

##### **4.3. Security and Health Threat Training**

The awarded vendor(s) may be required to assist water systems with training and preparedness to address security and health threats including physical, chemical, biological, or acts of God. The awarded vendor(s) may help provide regular training and refresher courses (scenarios), promote mutual assistance with nearby water systems, and utilize resources including the use of NVWARN and table top exercises to help water system staff develop capacity and maintain preparedness to address emergency response needs.

##### **4.4. Drinking Water State Revolving Fund Training**

The awarded vendor(s) may be required to assist water systems with training on various aspects of the Drinking Water State Revolving Fund. These components could include, but are not limited to:

- 4.4.1. Application Process
- 4.4.2. Davis-Bacon Wage Requirements
- 4.4.3. American Iron and Steel Requirements
- 4.4.4. Procurement Requirements
- 4.4.5. Project Management Requirements
- 4.4.6. Environmental review requirement and federal crosscutters

## **5. Outreach**

### **5.1. Project and Other funding Outreach**

The awarded vendor(s) may be required to assist public water systems identify potential funding opportunities and applications for grants and loans for capital improvement projects and other activities under specific financial programs . The vendor may propose one or more efficient and effective approach(es) to provide outreach and training in order to accomplish this task.

### **5.2. Future Water System Operators**

The awarded vendor(s) may be required to coordinate, work collaboratively with, and/or assist NDEP with outreach activities at schools or community functions to educate, encourage, and engage potential new water system operators on the opportunities, challenges, and benefits of a career in public water system operations and management. The vendor may propose different approaches to introduce and engage potential drinking water professional on the works being described.

# **ATTACHMENT E:**

## **Self-help Capacity Survey Focus**

## Self-Help Capacity Survey Focus

NDEP maintains a self-help survey for water systems to use in assessing their own capacity levels and identifying needs within their system. Determining the level of technical, managerial, and financial capacity can help water system personnel understand that they should be "operating the system like a business." Seeing the long-term implications can encourage the system to manage their operations sustainably so they can maintain funding and continue operating in the future. Many water systems throughout Nevada have increased their capacity through the technical assistance program. A capacity assessment can be a useful tool for the water system manager to measure strengths and identify weaknesses. It can also be a useful tool for state staff to provide the most appropriate assistance to a particular system.

The survey will contain the following elements to align with this strategy:

### Technical Capacity, or capability (NRS 445A.847):

*The system has the ability to:*

- 1. Obtain an adequate and reliable source of water that is necessary to provide the quantity and quality of water required by the system;*
- 2. Establish and maintain an adequate infrastructure for the treatment, storage and distribution of the quantity and quality of water required by the system; and*
- 3. Employ operators who have the technical knowledge and ability to operate the system.*

#### *Examples:*

- State and local requirements for water pressure
- State and local pipe size and looping requirements
- State and local requirements for fire flow and storage
- System mapping with location of all assets
- As-built drawings of major system components
- Redundancy and backup utilities
- Backflow prevention
- Routine maintenance and maintenance logs
- Water loss detection and procedures
- Water sampling, monitoring and reporting requirements
- Certified operator training and requirements
- Sanitary survey deficiencies

Managerial Capacity, or capability (NRS 445A.827):

*The system has the ability to conduct its administrative affairs in a manner that ensures compliance with all applicable standards based on;*

- 1. The accountability, responsibility and authority of the owner or operator of the system;*
- 2. The personnel and organization of the system; and*
- 3. The ability of the persons who manage the system to work with:*
  - a) Jurisdictional, regulatory and other governmental agencies;*
  - b) Trade and industry organizations; and*
  - c) The persons served by the system.*

*Examples:*

- Operations and maintenance manual
- Cross-connection control plan
- Emergency response plan
- State water conservation plan
- State water resource plan
- Consumer confidence reports
- Source water protection plan
- Asset management plan
- System security, including cybersecurity
- Governing board training on regulatory compliance
- Governing board training on open meeting laws and procedures
- Management training on regulatory compliance
- Staff training on operation requirements
- Documented operating policies and procedures
- Public involvement and outreach
- Staffing levels
- Recordkeeping
- Water rights management and water quantity evaluations
- Project management
- Contract procurement

Financial Capacity, or capability (NRS 445A.817):

*The system has the ability to:*

- 1. Pay the costs related to maintenance, operations, depreciation and capital expenses;*
- 2. Maintain creditworthiness; and*
- 3. Establish and maintain adequate fiscal controls and accounting methods required for the operation of the system.*

*Examples:*

- Annual budgets and planning
- Cash reserves
- User rate setting and review
- Billing and collections
- Financial reporting according to generally accepted accounting principles
- Financial audit
- Established internal controls
- Single audit reporting
- Staff training on accounting, auditing, and internal controls
- Board and manager training on cost of service
- Public outreach and resources on cost of service





## **CONTACT US**

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