State of Nevada

2019 Annual Capacity Development Report
To the
US Environmental Protection Agency

State Fiscal Year 2019
(July 1, 2018 – June 30, 2019)

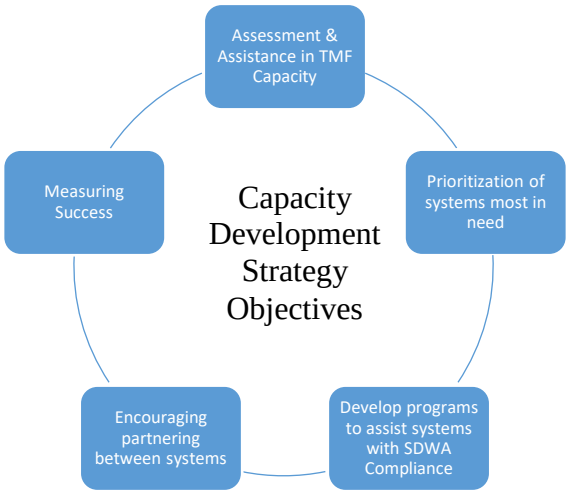
September 2019

Nevada Division of Environmental Protection
Bureau of Safe Drinking Water & Office of Financial Assistance

Contents

Background

The Nevada Division of Environmental Protection (NDEP) implements the state's capacity development program –https://ndep.nv.gov/water/financing-infrastructure/capacity-development. The following annual capacity development report describes the efforts conducted by NDEP's Office of Financial Assistance (OFA), Bureau of Safe Drinking Water (BSDW), and contracted Technical Assistance (TA) provider – Nevada Rural Water Association (NvRWA) – from July 1, 2018 through June 30, 2019 to further the Capacity Development Program.



The Capacity Development Program is funded primarily with set-aside monies from the Drinking Water State Revolving Fund (DWSRF). In developing and implementing this program, the NDEP accomplished tasks in the following areas:

A. New Systems Program Annual Reporting Criteria
B. Existing System Strategy

A. New Systems Program Annual Reporting Criteria

1. *Has the state's legal authority (statutes/regulations) to implement the New Systems Program changed within the previous reporting year?*

   Nevada's legal authority to implement the New Systems Program did not change during state fiscal year (SFY) 2019.

2. *Have there been any modifications to the state's control points?*

   There have been no modifications to Nevada's control points during SFY 2019.

3. *List new systems (PWSID & Name) in the state within the past three years and their ETT scores.*

   Table 1 shows the new systems in the state within the past three years and their Enforcement Targeting Tool (ETT) scores from the second quarter of calendar year 2019.

ACTIVITY DATE	COUTNY	TYPE	PWS ID	PWS Name	Pop Srvd	ETT Score
6/4/2019	WASHOE	NC	NV0002609	DOLLAR GENERAL	123	
5/28/2019	WASHOE	NC	NV0004135	ECOLOGICA CORPORATION	25	
5/2/2019	CHURCHILL	NTNC	NV0001185	LOGOS CHRISTIAN ACADEMY	25	
4/18/2019	DOUGLAS	NC	NV0002518	TOPAZ SUMMIT SPRING	25	
3/7/2019	CLARK	NTNC	NV0001162	BALLYS	7850	
1/16/2019	WASHOE	NC	NV0004076	THE LODGE AT GALENA	142	
12/14/2018	WASHOE	NC	NV0000318	WASHOE LAKE STATE PARK NORTH BOAT RAMP	25	
12/5/2018	LINCOLN	NC	NV0004106	PAHRANAGAT NATIONAL WILDLIFE REFUGE FWS	25	
11/27/2018	CLARK	C	NV0000124	SUNRISE ACRES WATER ASSOCIATION	231	
11/6/2018	WASHOE	NC	NV0000700	KRUSE FEED AND HARDWARE	1000	10
9/17/2018	LYON	NC	NV0004118	WALKER RIVER STATE REC AREA PITCHFORK	120	
8/31/2018	CLARK	NTNC	NV0001155	BERKLEY	672	
6/13/2018	HUMBOLDT	NC	NV0002094	DIAMOND INN BAR	25	
3/21/2018	CLARK	C	NV0000699	NEVADA STATE VETERANS HOME BOULDER CITY	708	
3/15/2018	CLARK	NTNC	NV0001167	RIO RESORT AND CASINO	7132	
12/6/2017	CLARK	NTNC	NV0001165	VENETIAN PALAZZO	19387	
12/1/2017	WASHOE	NC	NV0004125	SIERRA SAFARI ZOO	35	
8/16/2017	NYE	NC	NV0004027	ASH MEADOWS NATIONAL WILDLIFE REFUGE FWS	25	
8/2/2017	NYE	NC	NV0004026	BASE CAMP US AIR FORCE	25	

Table 1. New water systems within Nevada in the last 3 years.

B. Existing System Strategy

1. *In referencing the state's approved existing systems strategy, which programs, tools, and/or activities were used, and how did each assist existing Public Water Systems (PWS) in acquiring and maintaining Technical, Managerial, and Financial (TMF) capacity? Discuss the target audience these activities have been directed towards.*

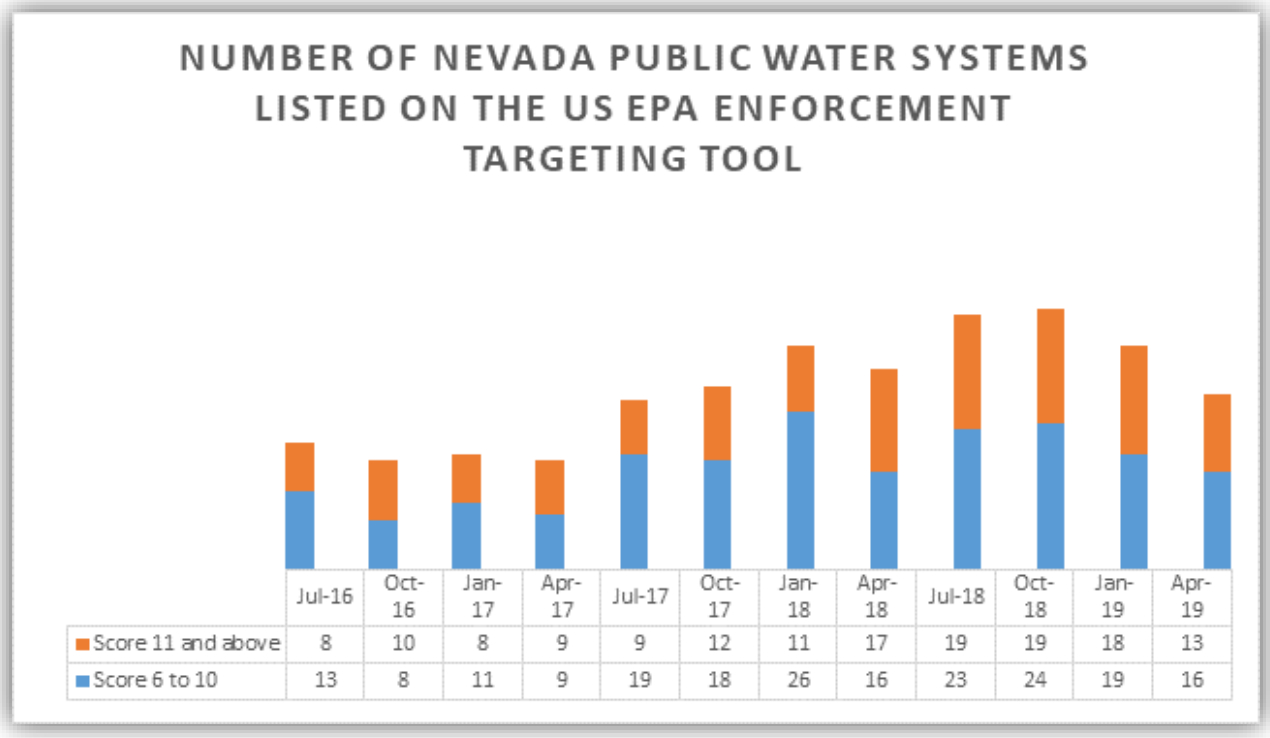
Capacity Development Goals		
To protect public health by ensuring consistent compliance with drinking water standards	To enhance performance beyond compliance through measures that bring about efficiency, effectiveness and service excellence	To promote continuous improvement through monitoring, assessment and strategic planning

The backbone of the Capacity Development Strategy is supported by efforts to help water systems develop and maintain capacity. Many water systems throughout Nevada have increased their capacity through the TA program. In SFY 2019, NDEP contracted with NvRWA to provide technical assistance to small water systems. The TA program provides "targeted" assistance by focusing on specific issues or problem areas. Specific assistance to small water systems is shown in Attachment 1. Some of the more recent program highlights are described below.

<u>Compliance with the Safe Drinking Water Act</u>

Nevada's state capacity development coordinators and TA providers work closely with state enforcement staff and review the ETT list provided each quarter to identify systems that lack TMF capacity. We determine steps to help the system return to compliance in a timely manner. With

funding provided through the DWSRF small systems TA contract, NvRWA focuses on systems under the 11-point threshold to help get them off and keep them off the ETT list altogether. As shown in Figure 1, Nevada continues to track progress in assisting water systems return to compliance through this process.



	Jul-16	Oct-16	Jan-17	Apr-17	Jul-17	Oct-17	Jan-18	Apr-18	Jul-18	Oct-18	Jan-19	Apr-19
Score 11 and above	8	10	8	9	9	12	11	17	19	19	18	13
Score 6 to 10	13	8	11	9	19	18	26	16	23	24	19	16

Figure 1. ETT Tracking Over Time

Focused Technical Assistance under EPA Grant

In SFY 2019, BSDW worked with the EPA Small Systems TA providers (NvRWA, Environmental Finance Center Network [EFCN], and the Rural Community Assistance Corporation [RCAC]) to bring additional, focused training into Nevada. A major focus of both NvRWA and RCAC in SFY 2019 was to help small systems 1) better understand and address arsenic non-compliance and treatment maintenance, 2) address MCL violations at Community Water Systems, 3) address lead action level exceedances, and 4) advise schools with compliance problems.

As a part of round 5 of the cooperative agreement grant with the EPA, the EFCN held two workshops in Nevada:

- Controlling Costs at Small Water Systems: Two Strategies to Help, August 2018, Pahrump, NV
- Effective Communication for Small Water Systems – Tribal Drinking Water Symposium, May 2019, Reno, NV

Found Systems Program Technical Assistance

A Public Water System (PWS) is a drinking water system that serves more than 25 people regularly and/or has more than 15 service connections. As communities and businesses grow, many drinking water systems cross this minimum threshold in a given year and require permitting. In some instances, however, systems are constructed or even begin operations without knowing that they fall under regulatory requirements enforced by NDEP. Such systems continue to operate outside of the regulatory program. Systems meeting either of these situations have been dubbed 'Found Systems,' and a special program for capacity development was implemented in SFY 2016 to facilitate these systems to be aware of and comply with the appropriate regulatory program. The Found Systems continue to be assisted with funds from the DWSRF 10% set-aside. BSDW expects that the number of Found Systems will fluctuate with changing economies.

The BSDW contracts NvRWA to provide special TMF capacity assistance for these systems. The goal of the program is to first determine if the Found System meets the definition of a PWS. Systems possibly meeting the definition of a community water system rank highest on the list for review and/or assistance. If the system meets appropriate criteria, BSDW staff conducts a Sanitary Survey, and NvRWA assists the system in completing the work necessary to document the PWS infrastructure. They then assist the PWS to produce a written corrective action plan for deficiencies revealed in the sanitary survey and provide the necessary TA for proceeding with proper permitting and water quality monitoring.

The highlights of SFY 2019 include bringing the number of potential Found Systems down from forty-one (41) targets to fourteen (14) undetermined targets. Three (3) Found Systems were issued a permit, fifteen (15) systems are currently working towards compliance and permitting. Since the Found System project began, the number of systems designated for continuous verification has remained in the eighties. Eighty-three (83) systems from the original list have been deemed not a PWS.

Nevada's Contracted Technical Assistance

In past years, accurate and complete maps and asset information were limited. In addition, some systems lacked Operation & Maintenance, Emergency Response, Cross Connection Control and Capital Improvement plans. Nevada has made special efforts to assist systems with these common deficiencies while also continuing to provide assistance to systems in the areas of compliance issues, distribution and treatment training, and other TMF capacity development initiatives. Figure 2 provides a graphical summary of technical assistance by type:

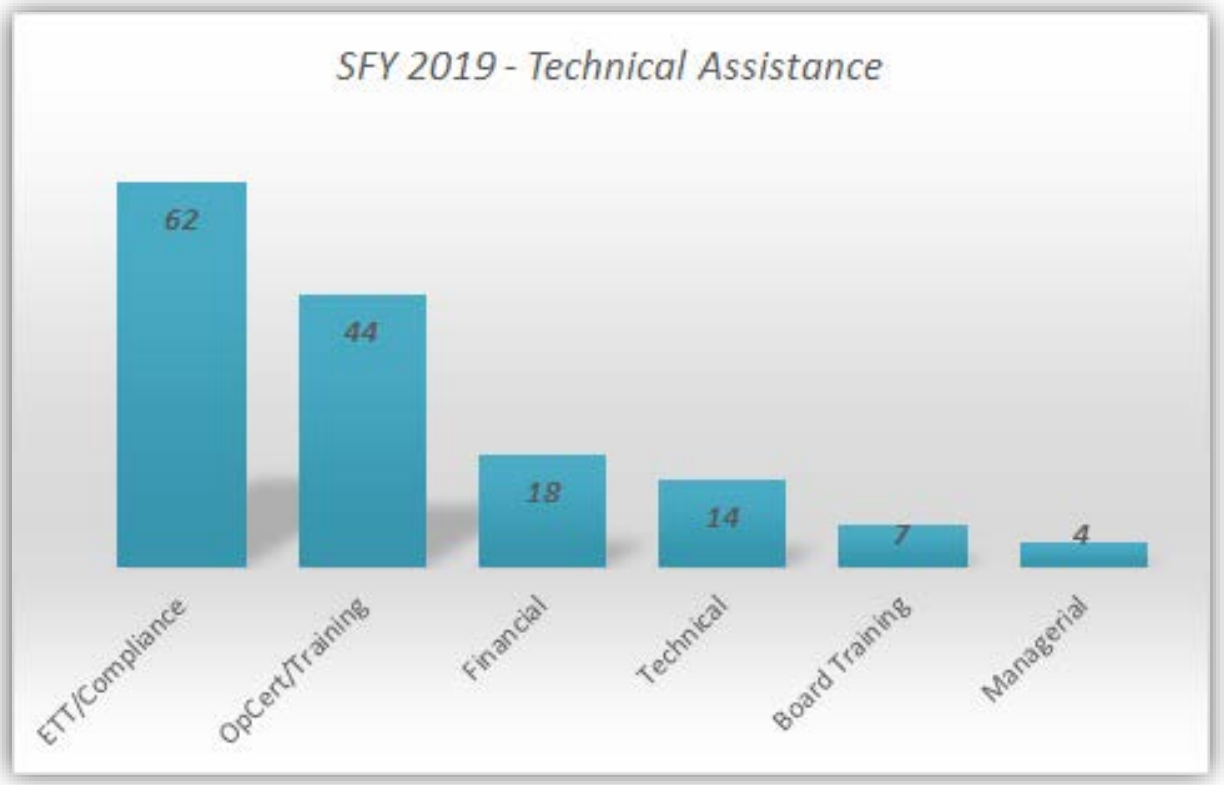


Figure 2. Technical Assistance Summary

Capacity Assessments

A capacity assessment is a valuable tool used by water systems to measure strengths and identify weaknesses. It is also used by NDEP and TA providers to outline the most appropriate assistance for water systems. In addition, the DWSRF uses capacity assessments to determine eligibility for loans. One (1) system participated in capacity assessments in FY 2019 as a part of their loan process. Nevada's current capacity assessment form is available at: https://ndep.nv.gov/uploads/water-financing-srf-capacitydevelopment-docs/nv_tmf_capacity_survey_fy12.pdf .

Cross-Connection Control, Emergency Restoration, Operation/Maintenance, Water Conservation, & Sampling Site Plans

Public Drinking Water systems in Nevada are required to have site-specific plans approved by BSDW for cross-connection control, operations and maintenance, and restoration of services in an emergency. Water systems are also required to have a water conservation plan that must be updated every five years and approved by the Nevada State Engineer's Office. In the past year, NvRWA assisted forty-nine (49) small water systems with these plans. This was accomplished by working closely with system personnel so that they could gain working knowledge and ownership of their site-specific plans. Many of these systems are very small and are primarily transient, non-community systems.

Developing operation and maintenance plans and cross-connection control plans provides the systems' staff with an opportunity to systematically examine the needs of their customers and their own facilities. Nationwide, cross-connections represent the single largest source of contamination of drinking water. However, it is challenging to transition a system unaware of program requirements to a costly device installation and testing scenario; understandably, this transition may also affect local businesses. Our future efforts will continue to be multi-phased to adapt to these challenges, employing updated plans, additional training for system staff and local governing boards, public education, and community-focused implementation strategies.

An important focus for the capacity development program is assistance with emergency response and restoration. Emergency restoration plans provide a framework for dealing with emergencies. The planning exercise is valuable in itself, as participants gain greater understanding of system vulnerabilities and begin to develop action plans for dealing with unusual conditions. Another outcome of this planning process is an enhanced understanding of system responsibilities under the Public Notification Rule. Furthermore, TA providers increase water systems' preparedness by conducting tabletop exercises that test the resilience of an emergency response plan.

BSDW and NvRWA staff actively work with both community and non-community water systems to develop or update site sampling plans for compliance with the Revised Total Coliform Rule and the related Groundwater Rule. Developing these plans requires working with system personnel to educate them on the nuances of each Rule, identifying appropriate sample locations, and establishing appropriate sampling schedules. Expanded capacities among these system personnel include: competency about how the rule applies to their system; actions to take in case of positive coliform or *E. coli* results; timely interaction with the primacy agency; knowledge of the concepts of representative sampling; and the ability to modify their plans as their system grows in the future. With the development of these site sampling plans, the small systems have an additional tool at their disposal in the event of a water related emergency or the presence of Total Coliform or *E. coli* bacteria in the water system, including effective public notification language and methods.

Compliance Assistance & Other General Technical Assistance

NvRWA helped ten (10) systems to better understand their sanitary survey results, write corrective action plans, and work to address deficiencies. There was a variety of situations that triggered this assistance: an immediate coliform positive result, disinfection followed by sampling for coliform, lead and copper reporting, disinfection byproducts compliance, water quality or monitoring issues, and development of standard operating procedures. Where sanitary deficiencies or water quality/monitoring issues needed to be addressed, discussions during examination of the deficiency instilled a greater understanding of the concept of sanitation for public health protection.

NvRWA also assisted six (6) systems with a Level 1 assessments triggered under the Revised Total Coliform Rule.

Assistance was also provided to eighteen (18) systems to address equipment problems and general operations. Working closely with the staff at each system, NvRWA provided hands-on

assistance and/or guidance with troubleshooting, made recommendations for repairs, and helped to identify parts, materials, or actions needed. By working alongside experienced TA providers, system operators gained a deeper knowledge of troubleshooting techniques and the equipment installed in their facilities (including where to obtain supplies).

Because the success or failure of a water system often depends on the knowledge and experience of its board, the board — working through the operations staff — is ultimately responsible for ensuring that they distribute water that is safe to drink. Seven (7) systems received training and assistance at the board and administrative levels to enhance understanding of their roles in keeping small drinking water systems financially viable and in compliance. Training ranged from basic governing responsibilities to developing sustainable rate structures.

Operator Training and Certification

Nevada currently has 593 public water systems. These systems include: 197 community water systems; 146 non-transient, non-community water systems; and 250 transient, non-community water systems. Nevada requires all community and non-transient, non-community public water systems to have certified operators: a total of 343 systems. Transient, non-community water systems that use surface water or groundwater under the direct influence of surface water must also be operated by a certified operator. There were two (2) transient system meeting this criteria in SFY 2019. As presented in the NDEP, BSDW Annual Operator Certification Report – SFY 2019, compliance with the operator certification requirements for all water systems statewide is at 98.6 percent. Information and resources are available on Nevada's Drinking Water Operator Certification Program website at https://ndep.nv.gov/water/operator-certification/drinking-water .

NvRWA is instrumental in providing training to small, rural water systems. With funding from the DWSRF TA contract, NvRWA provides operator training using remote video-conferencing. This method has been very successful in part because it meets the needs of a very specific audience: the very small system operators (those that serve between 25-100 customers). The sessions are broadcast to sites all over the state and offer the advantage of being interactive training that is relevant and cost-effective — requiring minimal travel for the participants. In SFY 2019, NvRWA conducted eleven (11) interactive videoconference trainings. These sessions provided a total of 33 hours of training to participants. Sessions were broadcast monthly and included a wide array of topics (e.g., corrosion control, hot tapping, financial planning, water rights). A listing of all training sessions for SFY 2019 is included in Attachment 1.

In addition to video-conferencing, NvRWA hosts an annual spring conference in Reno to provide training and general information to water system operators, managers, and board members. The class sessions and vendor displays at this conference give operators information on basic and state-of-the-art equipment and methods in the industry as well as focused training in distribution and treatment systems. The conference also helps to prepare operators for certification testing. The DWSRF TA contract with NvRWA provides scholarship money to operators to assure that they are able to attend the spring conference and gain the benefits of the certification training and testing. The TA contract also provides scholarship money for board members to attend this conference, which includes a board tract for those that want to learn more about the operations

of a water system. In order to help meet local small system needs, training for Backflow Assembly Tester certification has also been funded using this method. In SFY2019, $40,773 was provided from the 15% set-aside funds to send fifty-three (53) operators and board members to the conference.

NDEP has also funded NvRWA to provide both group and individual operator training at the operator's water system. In forty-four (44) on-site sessions, NvRWA provided 140 hours of training to water systems throughout the state. Training topics are selected depending on system needs, and often system managers request specific topics. These sessions are open to any interested individual, and staff from nearby systems often participate. Specific assistance to small water systems in SFY 2019 is shown in Attachment 1. This and other training has been instrumental in helping individuals become certified, including many new distribution operators and treatment operators who needed new certifications as a result of arsenic or other treatment types being implemented at their systems.

The Nevada Water and Wastewater Operators Forum (Forum) is hosted by the BSDW and supports the protection of human health and the environment through collaboration among water and wastewater system operators and the NDEP. The Forum provides a regular mechanism for communication among the regulated community of certified operators, the American Water Works Association, NDEP, the Nevada Water Environment Association, and others. BSDW hosts a webpage for the Forum at https://ndep.nv.gov/water/operator-certification/operators-forum and supports the administrative needs of the entity.

Financial Sustainability

Nevada's capacity development efforts support the EPA's sustainable infrastructure priorities:

- Better Management
- Full Cost Pricing
- Water & Energy Efficiency
- The Watershed Approach

First introduced as an amendment to the Clean Water Act under the 2014 Water Resources Reform and Development Act, fiscal sustainability plans (FSP) were required for all CWSRF loans involving the repair, replacement, or expansion of a publicly owned treatment works. As part of the 2019 DWSRF Intended Use Plan, NDEP included the same requirement for a FSP for DWSRF loan recipients receiving principal forgiveness loans for construction projects. This is Nevada's initial approach to encouraging public water systems to develop asset management plans as required under the America's Water Infrastructure Act of 2012 (AWIA).

Principal forgiveness loan recipients must maintain a fiscal sustainability plan that:

- Includes an inventory of critical assets that are part of the system;
- Evaluates the condition and performance of inventoried assets or asset groupings;
- Documents the useful life of the assets;
- Contains a plan for maintaining, repairing, and as necessary, replacing the assets;
- Contains a plan for funding maintenance, repair, and replacement; and

- Evaluates and implements water and energy conservation efforts.

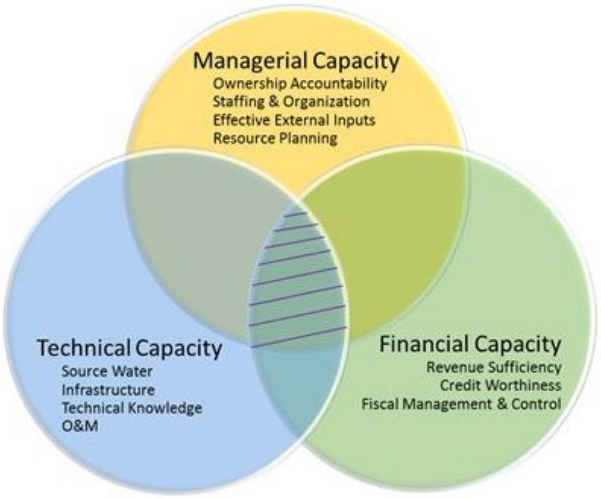
Loan applicants must certify as part of the loan contract that the recipient has, or will develop, a FSP prior to the final draw on the loan. In addition, FSPs must be re-evaluated by the governing board every five (5) years thereafter. NvRWA created a FSP workbook using Microsoft Excel and provided seventeen (17) small or very small systems with technical assistance in developing a FSP during SFY 2019.

In another effort to develop fiscal responsibility in small systems, Nevada's DWSRF 2019 Intended Use Plan also required that those same DWSRF principal forgiveness loan recipients set aside funds into a reserve account for capital replacement. The annual contribution to this account is based upon the system's short-lived assets (15 years or less) amortized on a straight-line basis.

- Short-lived assets may include pumps, meters, and data collection equipment like telemetry, alarms, and SCADA units.
- Utilities may only use these reserve funds for capital improvements. Importantly, these improvements are not restricted to the system's short lived assets. Expenses that qualify as capital expenditures may also include: bringing a new facility into service; planning or designing a new facility that will enhance the existing system; or extending the life or enhancing the value of an asset with better quality materials or system upgrades.
- Utilities cannot use these reserve funds for inventory items, for maintenance, or for operation expenses.
- Utilities cannot use the funds in the reserve account for the purpose of expanding their system.
- Utilities must clearly identify their annual contribution to this fund—along with the fund balance—in their financial statements.

Nevada has recognized that good management is critical to a well-functioning utility. In terms of full cost pricing, Nevada's TA providers have completed a number of rate studies for water systems over the years and presented the findings to the public and the governing boards. In SFY 2019, NvRWA assisted two (2) communities with rate studies. The DWSRF (as well as the State funded grant program) requires, as a condition of funding, that a water system implement a rate structure sufficient to ensure financial strength, solvency, and sustainability.

TMF Success Stories



Success Story: Transient Recreational Water Systems under Same Management Statewide
In this success story, the 21 transient water systems, one of which was a surface water system, were experiencing issues addressing compliance. With 105 outstanding deficiencies between the systems – including untested backflow devices, treatment technique violations, and the lack of O&M manuals – they were being poorly operated and were unsustainable. When on-site managers finally realized the dire situation, they indicated that "they did not know how bad it had gotten."

Technical assistance resources from NVRWA were established to assist with the problems and get the water systems on a new path, and one point of contact was established within BSDW to provide technical assistance for all 21 systems. BSDW conducted annual face-to-face meetings with all upper-level and regional management to highlight the issues and had more frequent conversations, at least quarterly, with staff responsible for operations and compliance. Through the coordinated technical assistance efforts, the water systems have shown significant strides in complying with public water system regulations and improved the operation and maintenance of their water systems. Working closely with NvRWA, all systems now have up-to-date O&M manuals and are fully trained in system operation, even the surface water system. Over a two-year concentrated effort by BSDW and NvRWA, outstanding deficiencies dropped from 80% to 18% with some of the systems in full compliance. Continued communication will serve to enhance their programs and build capacity for the future.

Integrated Source Water Protection/Wellhead Protection
Public water systems and local communities throughout Nevada are working to protect drinking water supplies from contamination. Nevada assists them through implementing a multi-faceted Integrated Source Water Protection Program (ISWPP). It is Nevada's belief that effective source water protection must be developed and administered by the community in conjunction with local water suppliers. A local plan is a long-term commitment on the part of the community to

protect its drinking water sources from becoming contaminated or polluted by various land use activities.

Since July 2016, BSDW has administered the ISWPP, which previously resided in the Bureau of Water Pollution Control. ISWPP helps communities develop and implement Community Source Water Protection Plans (CSWPPs). Local CSWPPs are developed through a county-wide planning and coordination approach, which encourages all public water systems within a specific county to work together to examine shared water resources, evaluate community development impacts to water sources, and discuss how to collectively manage potential risks from a broader perspective.

The ISWPP's multi-jurisdictional approach provides opportunities for public water systems — ranging from very small taverns and mobile home parks to larger districts and municipalities — to pool resources and promote community-wide awareness and implementation of the plan. This ultimately increases opportunities for small public water systems with limited resources and/or capacity to be included under a more comprehensive CSWPP and implementation effort.

The current ISWPP schedule and funding allocations allow every public water system in the State of Nevada an opportunity to participate in the planning process over the 12 to 15-year cycle. In addition, the program plans to provide assistance for up to three counties at a time; approximately two years of technical assistance (including team building, plan development and implementation, and promoting public acceptance of the plan) is dedicated for each county .

Currently, 301 of the 592 regulated public water systems in Nevada (51%) are covered under a source water or wellhead protection plan. Of those, 276 have significantly implemented some elements of SWP strategies.

To date, the following communities have participated in and completed countywide protection plans under the ISWPP:

County	**Implementation Activities**
Douglas	Public education and outreach, GIS mapping, well abandonment, integration of Source Water Protection Plan into local master planning documents and development/planning tool development
White Pine	Integration of Source Water Protection Plan into local master planning documents, public education and outreach
Nye	Public education and outreach, GIS mapping, technical training, facilitate local agency coordination to facilitate source water protection activities

Lyon	Local source water protection code development & updates, well abandonment
Carson City	Public education and outreach, trail improvement project: Kings Canyon Trail and Waterfall, GIS mapping, multi-agency coordination to facilitate source water protection activities
Churchill	Public education and outreach, GIS mapping, Integration of Source Water Protection areas into local planning procedures, orphan well survey in source water protection areas, and development of sustainability code which incorporates protection of source water protection areas.
Humboldt	Public education and outreach, GIS mapping, Integration of Source Water Protection Areas into local planning consideration, continued technical assistance on Grass Valley Nitrate Study area.

The BSDW is continuing to leverage funding and technical assistance from the BWQP Nonpoint Source Program (NPS) to assist the communities and public water systems within Washoe County to develop a regional Source Water Protection and Watershed Management plan. This coordination has been encouraged through a national initiative by the Association of State Drinking Water Administrators (ASDWA), the Association of Clean Water Administrators (ACWA), and the Environmental Protection Agency (EPA) to better integrate Clean Water Act and Safe Drinking Water Act programs. Washoe County is Nevada's second largest county based on population.

BWQP and BSDW staff met and determined that there was overlap between the planning efforts for Source Water Protection and Nonpoint Source Program, as was directed in the 2015 NPS State Management Plan. Therefore, through the ISWPP's contract, tasks were included to develop the stakeholder group and initiate a regional approach towards a comprehensive water quality plan that includes both watershed and source water protection components.

EPA Regions 8, 9, and 10 collaborate to facilitate the Western State's Source Water Protection Forum. The most recent forum was hosted by the State of Idaho in Boise this past June 2018. Nevada will be hosting the next forum in the fall of 2019. The event focus is to bring the Western States, the Navajo Nation, USEPA, and Source Water Protection partners together to share and discuss solutions to source water and groundwater protection challenges in the west.

For more information on Nevada's ISWPP visit our website at:

https://ndep.nv.gov/water/source-water-protection

Vulnerability Assessment and Monitoring Waiver Programs

The Vulnerability Assessment Program is an update to the 2003 Source Water Assessment Program and has its roots in the original vulnerability assessment program, approved by EPA in 1995, which was performed during the initial permitting process of a PWS. Vulnerability assessments include locating sources, identifying potential sources of contaminants within a 3000-foot radius of wells/springs, evaluating source water susceptibility to contamination, and reviewing prior sampling results. The program requires summaries of the assessments to be reported to the public in the annual Consumer Confidence Reports for CWSs. Based on initial assessment of the source water vulnerability determination, a PWS may qualify for chemical monitoring relief (IOC, VOC, and SOC) as approved by EPA in 1995. Eligible PWSs are also required to provide updates to the assessment data and apply for waiver renewal every 3 years.

The 2011 updated BSDW Vulnerability Assessment and Monitoring Waiver programs share information collected under those program efforts with the ISWPP to document Potential Contaminant Sources (PCS) for public water systems. The Vulnerability Assessment Reports (VARs) note PCS and rank them based on their potential to adversely affect a water supply source. Project efforts were funded by the American Recovery and Reinvestment Act set-asides and continued with a combination of resources, DWSRF set-aside funding and leveraging technical assistance from the ISWPP/Wellhead Protection staff. BSDW completed updating VARs for 248 eligible community water systems (159 CWSs) and non-transient non-community (89 NTNC) water systems by January 2019. PWSs with complete VARs also qualify for chemical monitoring waivers based on the vulnerability of the source water as determined in the reports. In April 2019, BSDW requested all eligible CWSs to submit waiver renewal applications (updated Form B) by June 30, 2019 in order to be considered for chemical monitoring waivers in calendar year 2020. Ninety-seven percent (97%, or 154/159) of CWSs submitted the updated form B. In July 2019, BSDW requested waiver renewal applications from the remaining 89 eligible NTNC systems. These systems must submit an updated form B by the end of November 2019 in order to be considered for chemical monitoring waiver renewal in calendar year 2020. It is anticipated chemical monitoring waiver renewal and updated monitoring assessment plans (MAPs) will be completed for eligible PWSs by the end of calendar year 2019.

Funding

The Environmental Finance Center has pointed out that financial management is a major challenge for small drinking water systems. The DWSRF provides low interest loans to both publicly and privately owned water utilities to meet this need. As part of the DWSRF, Nevada has a “disadvantaged community” program to address low-income areas that have infrastructure deficiencies that pose a health threat. The Nevada Administrative Code defines a disadvantaged community as an area served by a public water system in which the median household income is less than 80 percent of the state median household income. Starting in 2009, the federal appropriations for the DWSRF required that the state use a percentage of its grant to provide additional subsidy to eligible recipients in the form of forgiveness of principal, negative interest loans, grants, or any combination of these. Water systems that qualify for the disadvantaged

program may be eligible for this additional subsidy. The additional subsidy requirements allowed for the resolution of many of the acute and chronic health risk needs. With the most serious health risks addressed, NDEP has expanded subsidy eligibility criteria to include small system consolidation with larger systems, capital project planning documents, and consideration of funding to small systems with populations less than 10,000 as described in the Intended Use Plan. The subsidy program provided funding to seven (7) projects totaling approximately $2.98 million dollars in SFY 2019. The terms and amount of the additional subsidy are determined on a case-by-case basis based on the individual community's needs and financial situation.

As a whole, Nevada recognizes that the needs associated with infrastructure deficiencies are increasing even as many federal and state funding resources are dwindling. With this in mind, collaboration between the major funding agencies in the state began in 2006 and continues today. A "pre-application" common to all of the funders makes coordination and communication between the funding agencies and applicants simple and allows the funding agencies to suggest funding solutions that are most appropriate for the communities while leveraging all of the funding available in the state. Along with participating in the annual funders' roundtable session, the DWSRF co-sponsored a booth with BSDW at the March 2019 NvRWA Conference. These activities gave water systems the opportunity for more one-on-one time to discuss their system needs and potential funding opportunities. The DWSRF/CWSRF program flyer is included as Attachment 2.

Challenges

Drought

Being the driest state in the U.S., Nevada has long recognized the value of efficient water use and reuse. In accordance with EPA sustainable priorities, the Nevada Division of Water Resources requires that every water system submit a Water Conservation Plan that includes measures to evaluate the effectiveness of the plan. These plans have been required since July 1992 with updates every 5 years. TA providers have helped multiple communities prepare and update these plans. In addition to user-based conservation measures, systems are being educated to audit and chart the amounts of water produced and sold on a monthly basis. Once usage patterns are established, changes in use may prompt managers to implement leak detection studies. NvRWA trains water system staff on electronic and acoustic leak detection equipment specifically to enhance their technical capacity by being up-to-date on detection technologies, while also locating any leaks real-time. Perhaps most understated, such control of leakage in water systems does more than save water; it cuts energy costs.

Through the summer of 2016, ongoing drought led to a drop in groundwater levels, sometimes affecting the operation of wells or reducing flow from springs. While wet winters in SFY 2017, 2018, and 2019 improved both surface and groundwater levels, the history of drought periods in Nevada is well documented, and the improvement of system capacity includes discussions on predicting potential drought impacts and planning responses before the situation becomes critical.

Nevada's drought forum consists of members of local water municipalities, state government, higher education, and climate experts. It is tasked with examining water policies currently in effect around the state and recommending any changes. Information and updates on the drought and activities related to the Forum are available at http://drought.nv.gov/.

The Future

As the capacity development program grows and evolves, lessons learned have resulted in a program that continues to improve and better serve the needs of Nevada's water systems. From the beginning of the program, Nevada has maintained that the Capacity Development Strategy is a 'living' document and will be revised as needed. Although the Strategy document itself has not been revised, the method of strategy implementation has evolved.

Furthermore, while all systems are unique, the vast majority of water systems in Nevada still need particular assistance with managerial and financial principles and planning. Full cost pricing is required in order for a water system to fully function as it should. Operation and maintenance activities, such as valve exercising and line flushing, are also important to extending the life of the infrastructure and maintaining high water quality.

Proper management of infrastructure assets is critical to sustainability. Although the concept of managing assets is relatively simple, many water utilities do not understand how to design and implement an effective asset management program. Managing a utility effectively requires a proactive approach to managing infrastructure assets. The primary objective of asset management is to maintain system assets while meeting long-term service requirements in a reliable and cost-effective manner. Future TA efforts will include continued assistance as required by AWIA to:

- develop a comprehensive record of all assets & create a tailored fiscal sustainability plan,
- perform all required maintenance tasks,
- helping the system understand its financial situation and guarantee proper rates are in place to keep the water system sustainable without sacrificing the level of service expected by customers, and
- create, at a minimum, a short-lived asset reserve.

There are requirements and issues that will continue to challenge many Nevada water systems in the coming years. Among them are the Stage 2 Disinfectants and Disinfection Byproducts Rule, the Groundwater Rule, the Revised Total Coliform Rule, impacts caused by growing or declining populations, the need to conserve the State's precious water resources, and finding qualified professionals in the water industry.

In SFY 2019, OFA worked with the Southwest Environmental Finance Center (EFC) to develop a workshop entitled *Funding Your Water System Construction Project*. The workshop is planned to be presented as a two-part series – 3 hours each – live in Carson City and live-streaming to locations around the state including: Fallon, Elko, Ely, and Las Vegas. With a focus on the SRF funding and requirements, Part 1 of the workshop is scheduled for July 2019 and included:

understanding your current level of service, importance of upfront planning, working with your engineers, project alternatives evaluation, and the funding application process. With the same live format, Part 2 of the workshop will be held in August 2019 and will include all of the steps important to a successful project including: setting and measuring project milestones and tracking project activities, outputs and outcomes, loan/grant management requirements, and asset management. Presenter Heather Himmelberger of the Southwest EFC, planned real-world examples that illustrate the topics and help the audience relate to the material. The workshop will be recorded so that it may be viewed by those who could not attend the live presentations.

The focus of TA over the next two years will be on the critical issues that are identified above and also on general assistance to small water systems and new operators. In SFY 2019, OFA put out a new Request for Proposal to find qualified vendor(s) to provide comprehensive assistance in technical, managerial, and financial capacity-building and training in one-on-one and group scenarios. Three (3) TA vendors were selected to provide assistance for the SFY 2020-2021 time frame. These vendors include (detailed services are shown in Attachment 3):

- NvRWA: technical capacity assistance, operator certification training, and outreach
- Rural Community Assistance Corporation (RCAC): managerial capacity assistance, financial capacity assistance, and outreach
- Farr West Engineering (FWE): water rights assistance, mapping; and health and safety training.

The requirements in the sub-grants for these TA vendors will improve the metrics for measuring the success of the assistance provided and help direct the available funding in the future.

2. *Based on the existing system strategy, how has the State continued to identify systems in need of capacity development assistance?*

   Compliance problems, sanitary survey deficiencies, requests for TA, and capacity surveys are all used to identify systems in need of capacity development assistance.

3. *During the reporting period, if statewide PWS capacity concerns or capacity development needs (TMF) have been identified, what was the State's approach in offering and/or providing assistance?*

   TA has been offered by NDEP staff and through third party contractors (see TA section above).

4. *If the State performed a review of implementation of the existing systems strategy during the previous year, discuss the review and how findings have been or may be addressed.*

   Nevada evaluates the effectiveness of the existing systems strategy on an ongoing basis and adjusts the program when needed improvements are identified.

5. *Did the State make any modifications to the existing system strategy?*

No changes to Nevada's Capacity Strategy were made during SFY 2019.

ATTACHMENT 1 – Technical Assistance to Small Systems
Provided by Nevada Rural Water Association
Using DWSRF 2% & 15% Set-Aside

Technical Assistance provided by Nevada Rural Water Association (Components A & B)

The following list identifies the initiation of technical assistance. Completion of assistance may take longer than one quarter.

	Water System Name	Water System No.	Assistance Type	Description of Assistance
	Jul-Sep 2018			
1	Heyday Inn	NV0004037	ETT/Compliance	Assisted with Level 1 Assessment & demonstrated proper sampling techniques
2	Alamo Sewer & Water GID	NV0000005	Technical	Reviewed future arsenic mitigation project & funding with GM
3	Caliente Public Utilities	NV0000013	Technical	Reviewed pipeline project & issues with funding; discussed alternatives for connection fees
4	Moapa Valley Water District	NV0000160	ETT/Compliance	Reviewed compliance challenges - especially NSF61
5	Pioche Public Utilities	NV0000186	Technical	Reviewed pending project to rehabilitated tank & replace ~200' of transmission line from tank
6	Crystal Trailer Park	NV0000193	ETT/Compliance	Assisted owner with final edits to O&M Plan; Plan is ready for submission to Washoe Co
7	Wadsworth MHP	NV0000281	Technical	Assisted with IDC for new colorimeter
8	Blue Diamond Saloon	NV0000323	ETT/Compliance	Assisted with Water Conservation Plan
9	Kruses Feed & Hardware	NV0000700	ETT/Compliance	Assisted with second Level 1 Assessment
10	Valmy Petroleum Inc.	NV0002112	ETT/Compliance	Assisted with O&M Plan updates
11	Tatuado Wild Side Tavern	NV0002575	ETT/Compliance	Assisted with sampling plan
12	Camp Galilee	NV0004035	ETT/Compliance	Assisted with O&M Plan updates
13	Spencer W Kimball PWS	NV0004071	ETT/Compliance	Assisted with O&M Plan
14	Sierra Safari Zoo	NV0004125	ETT/Compliance	Assisted with O&M Plan
15	Beatty Water & Sanitation Dist	NV0000009	Managerial	Assisted with customer service problems
16	Topaz Ranch Estates GID GID	NV0000239	Managerial	Provided system with funding agency contacts
17	Elk Point Country Club	NV0000271	OpCert/Training	Assisted new staff with certification studies
18	NDOT Searchlight Welcome Ctr	NV0001101	ETT/Compliance	Reviewed sanitary survey with operator to determine actions needed
19	Logan Creek Estates GID	NV0002050	Board Training	Training: Open Meeting Law (5 people, 1 system, 1 hour)
	Blue Diamond Saloon	NV0000323	ETT/Compliance	Assisted system with sanitary survey and a actions needed
	Heyday Inn	NV0004037	Technical	Assisted owner in finding information on system well
	Carvers Smokey Valley RV & MHP	NV0000218	ETT/Compliance	Assisted with O&M Plan
20	West Reno Water Company	NV0000709	ETT/Compliance	Assisted with O&M Plan
21	Green Valley Grocery	NV0002119	ETT/Compliance	Reviewed sanitary survey with owner & operator to determine actions needed; assisted with O&M Plan
22	EP Minerals LLC Clark	NV0003075	ETT/Compliance	Assisted system with CCCP
23	Pick & Shovel Investments	NV0004063	ETT/Compliance	Assisted with O&M Plan, CCCP, & ERP
	Spencer W Kimball PWS	NV0004071	ETT/Compliance	Assisted system with SOPs for disinfection with hypochlorite
24	Riverside Resort	NV0001042	OpCert/Training	Consulted with system regarding appropriate operator certification requirements
25	Tonopah Public Utilities	NV0000237	OpCert/Training	Training: D1/D2 (2 people, 1 system, 3 hours)
26	Hawthorne Utilities	NV0000073	OpCert/Training	Training: T1/T2 (9 people, 2 systems, 4 hours)
27	City of Yerington	NV0000255	OpCert/Training	Training: T1/T2 (5 people, 2 systems, 4 hours)
	Hawthorne Utilities	NV0000073	OpCert/Training	Training: T1/T2 (5 people, 2 systems, 4 hours)
	City of Yerington	NV0000255	OpCert/Training	Training: T1/T2 (3 people, 3 systems, 4 hours)
	Hawthorne Utilities	NV0000073	OpCert/Training	Training: T1/T2 (9 people, 2 systems, 4 hours)
	City of Yerington	NV0000255	OpCert/Training	Training: T1/T2 (6 people, 4 systems, 4 hours)
28	Gold Canyon Café	NV0000881	ETT/Compliance	Assisted with O&M Plan, ERP, & CCCP
29	Rosie's Place	NV0000951	ETT/Compliance	Assisted with O&M Plan, ERP, & CCCP
30	Best Western Topaz Lake Inn	NV0002041	ETT/Compliance	Assisted with O&M Plan and sanitary survey follow-up
	Crystal Trailer Park	NV0000193	ETT/Compliance	Assisted with Water Conservation Plan
	West Reno Water Company	NV0000709	ETT/Compliance	Assisted with Water Conservation Plan
31	Sutcliff Mobile Park	NV0000765	ETT/Compliance	Assisted with Water Conservation Plan
	Topaz Ranch Estates GID GID	NV0000239	Managerial	Reviewed budget & 2014 PER with system manager for possible upcoming project
	Hawthorne Utilities	NV0000073	OpCert/Training	Training: T1/T2 (6 people, 2 systems, 4 hours)
	City of Yerington	NV0000255	OpCert/Training	Training: T1/T2 (8 people, 5 systems, 4 hours)
	Hawthorne Utilities	NV0000073	OpCert/Training	Training: T1/T2 (8 people, 2 systems, 4 hours)
	City of Yerington	NV0000255	OpCert/Training	Training: T1/T2 (10 people, 7 systems, 4 hours)
	Oct-Dec 2018			
32	Wellington Station Resort	NV0000243	ETT/Compliance	Assisted with O&M Plan, CCCP, & ERP
33	Rancho Vista 4	NV0002571	ETT/Compliance	Assisted with Level 1 Assessment
	Tatuado Wild Side Tavern	NV0002575	Technical	Reviewed disinfection procedures after water system repairs/modifications
34	Trout Canyon Land & Water Users Assoc	NV0004060	ETT/Compliance	Conducted pre-sanitary survey with contract operator, Board members, & other residents
35	Amargosa Town Complex	NV0005037	ETT/Compliance	Assisted with Level 1 Assessment
36	Brandos Sports Bar	NV0000321	ETT/Compliance	Assisted with O&M Plan, CCCP, & ERP
37	Crosby's Lodge	NV0000717	ETT/Compliance	Assisted with Water Conservation Plan & reviewing possible status change from Community to T-NC
38	Stagecoach Market	NV0004040	ETT/Compliance	Assisted with O&M Plan, CCCP, & ERP
39	Gardnerville Ranchos GID	NV0000066	Managerial	Assisted with research on billing software
	Topaz Ranch Estates GID	NV0000239	ETT/Compliance	Assisted with O&M Plan, CCCP, & ERP

Technical Assistance provided by Nevada Rural Water Association (Components A & B)

The following list identifies the initiation of technical assistance. Completion of assistance may take longer than one quarter.

	Water System Name	Water System No.	Assistance Type	Description of Assistance
	Oct-Dec 2018			
	Alamo Sewer & Water GID	NV0000005	OpCert/Training	Training: Disinfection (3 people, 1 system, 4 hours)
40	Ely Municipal Water Dept	NV0000038	Board Training	Training: Board Training (6 people, 1 system, 1 hour)
	Ely Municipal Water Dept	NV0000038	Board Training	Training: Board Training (8 people, 1 system, 1.5 hours)
41	California National Historic Trails Ctr	NV0001091	Technical	Assisted system with wind-blown debris in underground storage tanks due to overflow pipe orientation & covers
42	Gas Store West	NV0002587	ETT/Compliance	Assisted with Water Conservation Plan
	Heyday Inn	NV0004037	Technical	Followed up with owner to assure items from the Level 1 Assessment were being completed (well vent & APBs installed still need backflow test)
	Camp Galilee	NV0004035	ETT/Compliance	Assisted with O&M Plan, CCCP, & ERP
43	Nevada State Veterans Home Boulder City	NV0000699	ETT/Compliance	Assisted with O&M Plan, CCCP, & ERP
44	Humboldt River Ranch Assoc	NV0001125	ETT/Compliance	Assisted with Water Conservation Plan
45	Holbrook Station RV and MHP	NV0002046	Technical	Assisted with cross-connection control issues
46	Asia Union Electronic Chemicals - Reno	NV0000879	OpCert/Training	Training: D1/D2 (4 people, 1 system, 4 hours)
	Topaz Ranch Estates GID	NV0000239	Financial	Assisted manager with spreadsheet to develop labor costs & service connection costs; assisted with a FSP
47	Mountain View MHP	NV0003081	ETT/Compliance	Assisted with CCCP
48	Lahontan Dam State Park	NV0002028	ETT/Compliance	Assisted new operator with CT calculation reports, distribution chlorine monthly monitoring, & filter systems monthly monitoring
49	Wildhorse Resort	NV0002080	ETT/Compliance	Assisted with O&M Plan, CCCP, & ERP
	Gardnerville Rachos GID	NV0000066	Financial	Assisted with a FSP
50	Town of Minden	NV0000168	Financial	Assisted with a FSP
	Tonopah Public Utilities	NV0000237	Financial	Assisted with a FSP
51	Storey County Water District	NV0000240	Financial	Assisted with a FSP
52	Old River Water Company	NV0000303	Financial	Assisted with a FSP
53	Round Mountain PUC	NV0004074	Financial	Assisted with a FSP
	Asia Union Electronic Chemicals - Reno	NV0000879	OpCert/Training	Training: D1/D2 (4 people, 1 system, 4 hours)
	Asia Union Electronic Chemicals - Reno	NV0000879	OpCert/Training	Training: D1/D2 (4 people, 1 system, 4 hours)
	Jan-Mar 2019			
54	Sandwinds Restaurant Sports Bar	NV0000306	ETT/Compliance	Assisted system with understanding the corrective action requirements identified in sanitary survey
55	Carmens Mexican Restaurant	NV0000341	ETT/Compliance	Assisted with O&M Plan, CCCP, & ERP
56	Desert Investment Group LTD	NV0000736	ETT/Compliance	Assisted with O&M Plan, CCCP, & ERP; System also has a nitrate issue & is investigating the use of RO
57	Marlette Water System	NV0000004	Technical	Assisted system with planning a treatablity study
58	Carlin Utilities	NV0000014	Financial	Assisted with a FSP
	Hawthorne Utilities	NV0000073	Financial	Assisted with a FSP
59	West Wendover Water System	NV0000246	Financial	Assisted with a FSP
60	Roark Estates Water Assoc	NV0000319	Financial	Conducted a MHI survey to assist with DWSRF determination of 'disadvantaged' system
61	South Crestview Homeowners	NV0000351	Financial	Assisted with a FSP
62	Baker Water and Sewer GID	NV0000863	Financial	Assisted with a FSP
63	Jackpot Water System	NV0000088	Board Training	Training: Board - Open Meeting Law (4 people, 1 system, 1 hour)
	Topaz Ranch Estates GID	NV0000239	OpCert/Training	Training: D1/D2 (6 people, 2 systems, 3 hours)
	Topaz Ranch Estates GID	NV0000239	OpCert/Training	Training: D1/D2 (5 people, 2 systems, 3 hours)
	Trout Canyon Land & Water Users Assoc	NV0004060	Board Training	Training: Board - Working Through a Project (4 people, 1 system, 1 hour)
	Topaz Ranch Estates GID	NV0000239	OpCert/Training	Training: D1/D2 (7 people, 3 systems, 3 hours)
	Topaz Ranch Estates GID	NV0000239	OpCert/Training	Training: D1/D2 (7 people, 3 systems, 3 hours)
	Hawthorne Utilities	NV0000073	OpCert/Training	Training: T1/T2 (4 people, 2 systems, 3 hours)
64	Silver Springs Mutual Water Company	NV0000223	OpCert/Training	Training: T3 (3 people, 1 system, 3 hours)
65	Truckee Meadows Water Authority	NV0000190	OpCert/Training	Training: D1/D2 (21 people, 5 systems, 3.25 hours)
66	City of Elko	NV0000272	OpCert/Training	Training: D1/D4 (11 people, 3 systems, 3 hours)
67	McDermitt Water System	NV0000162	OpCert/Training	Training: D1/D2 (7 people, 5 systems, 3 hours)
	Sandwinds Restaurant Sports Bar	NV0000306	ETT/Compliance	Assisted with O&M Plan, CCCP, & ERP
68	Keystone Center	NV0000932	ETT/Compliance	Assisted system with sampling plan
69	OK Mobile Home Park	NV0000052	ETT/Compliance	Assisted with water conservation plan
70	Panaca Farmstead Water Association	NV0000187	ETT/Compliance	Assisted with water conservation plan
	Roark Estates Water Assoc	NV0000319	Financial	Assisted with a FSP
	Roark Estates Water Assoc	NV0000319	ETT/Compliance	Assisted with water conservation plan
	Silver Springs Mutual Water Company	NV0000223	OpCert/Training	Training: T3 (4 people, 1 system, 3 hours)
71	Low Low Liquor Cigarettes and Goodies	NV0000917	ETT/Compliance	Assisted with Level 1 Assessment
72	Lovelock Meadows Water District	NV0000161	Financial	Assisted with a FSP
73	Ruth Water District	NV0000164	Financial	Assisted with a FSP
74	Kingston Town Water Utilities	NV0000265	Financial	Assisted with a FSP

Technical Assistance provided by Nevada Rural Water Association (Components A & B)

The following list identifies the initiation of technical assistance. Completion of assistance may take longer than one quarter.

	Water System Name	Water System No.	Assistance Type	Description of Assistance
	Apr-Jun 2019			
75	Sullivans Pub	NV0000829	ETT/Compliance	Assisted with sanitary survey deficiencies, O&M Plan, CCCP, ERP, RTCR Sample Site Plan
	Crystal Trailer Park	NV0000193	ETT/Compliance	Assisted with water conservation plan
76	Verdi Meadows Utility Company, Inc.	NV0000196	Technical	Assisted with hydrant flow testing
	Tonopah Public Utilities	NV0000237	ETT/Compliance	Assisted with water conservation plan updates
77	Tower Pizza	NV0000319	ETT/Compliance	Assisted with water conservation plan, O&M Plan, CCCP, ERP, RTCR Sample Site Plan
78	Oasis Springs	NV0000921	ETT/Compliance	Assisted with water conservation plan
	Hawthorne Utilities	NV0000073	OpCert/Training	Training: D1/D2 (2 people, 2 systems, 3 hours)
79	Bea's Hardware		ETT/Compliance	Assisted with O&M Plan
80	Tolas Waterworks Coop	NV0000055	ETT/Compliance	Assisted with water conservation plan
	Gas Store West	NV0002587	ETT/Compliance	Assisted with a Level 1 Assessment
	Verdi Meadows Utility Company, Inc.	NV0000196	Technical	Assisted with IDC for new colorimeter
	Silver Springs Mutual Water Company	NV0000223	Financial	Assisted with a FSP
81	Washoe Lake State Park	NV0000793	Technical	Assisted with iron & manganese treatment system start-up
82	Lattin Farms	NV0000938	ETT/Compliance	Assisted with O&M Plan, CCCP, & ERP
	City of Yerington	NV0000255	OpCert/Training	Training: Operator Certification Exam Prep (3 people, 3 systems, 3 hours)
83	Edgewood Water Company	NV0000235	OpCert/Training	Training: Operator Certification Exam Prep (2 people, 1 system, 3 hours)
	City of Yerington	NV0000255	OpCert/Training	Training: Operator Certification Exam Prep (4 people, 4 systems, 3 hours)
	Hawthorne Utilities	NV0000073	OpCert/Training	Training: Operator Certification Exam Prep (2 people, 1 system, 3 hours)
	City of Yerington	NV0000255	OpCert/Training	Training: Operator Certification Exam Prep (4 people, 4 systems, 3 hours)
	Edgewood Water Company	NV0000235	OpCert/Training	Training: Operator Certification Exam Prep (1 person, 1 system, 3 hours)
	Silver Springs Mutual Water Company	NV0000223	Board Training	Training: Board Basics (5 people, 1 system, 1.75 hours)
	Hawthorne Utilities	NV0000073	OpCert/Training	Training: Operator Certification Exam Prep (3 people, 2 systems, 3 hours)
	City of Yerington	NV0000255	OpCert/Training	Training: Operator Certification Exam Prep (4 people, 4 systems, 3 hours)
	Hawthorne Utilities	NV0000073	OpCert/Training	Training: Operator Certification Exam Prep (3 people, 2 systems, 3 hours)
	City of Yerington	NV0000255	OpCert/Training	Training: Operator Certification Exam Prep (5 people, 5 systems, 3 hours)
	Edgewood Water Company	NV0000235	OpCert/Training	Training: Operator Certification Exam Prep (1 person, 1 system, 3 hours)
84	A1 Fuel Stop	NV0000915	ETT/Compliance	Assisted with O&M Plan, CCCP, & ERP
	Holbrook Station RV and MHP	NV0002046	ETT/Compliance	Reviewed recent sanitary survey & corretive actions with owner to assure the system is back in compliance
85	Welcome Station RV Park LLC	NV0002079	ETT/Compliance	Assisted with water conservation plan
86	Boonies	NV0002090	ETT/Compliance	Assisted with sanitary survey responses & CCCP
	Gas Store West	NV0002587	Technical	Assisted system with well shock chlorination
87	The Hubb	NV0003035	ETT/Compliance	Assisted with sanitary survey deficiencies, O&M Plan, CCCP, & ERP
	Hawthorne Utilities	NV0000073	OpCert/Training	Training: Operator Certification Exam Prep (5 people, 2 systems, 3 hours)
	City of Yerington	NV0000255	OpCert/Training	Training: Operator Certification Exam Prep (4 people, 3 systems, 3 hours)
	Edgewood Water Company	NV0000235	OpCert/Training	Training: Operator Certification Exam Prep (2 people, 2 systems, 3 hours)
	Hawthorne Utilities	NV0000073	OpCert/Training	Training: Operator Certification Exam Prep (2 people, 2 systems, 3 hours)
	City of Yerington	NV0000255	OpCert/Training	Training: Operator Certification Exam Prep (11 people, 5 systems, 3 hours)
88	Canyon GID	NV0005056	Board Training	Training: Board training (5 people, 1 system, 1 hour)

*86 of the 88 water systems assisted are small (<10,000) water systems

General Training provided by Nevada Rural Water Association (Component C)

Course Title	Date	Contact Hours	Number of Participants	Number of Systems	Locations
Ice Pigging - Cleaning Mains with Ice	*7/20/2018*	*3.00*	*16*	*13*	*Videoconference to multiple locations*
Cross-Connection Control	*8/24/2018*	*3.00*	*57*	*30*	*Videoconference to multiple locations*
The Do's & Don'ts of Tracer Wire Systems	*9/28/2018*	*3.00*	*22*	*16*	*Videoconference to multiple locations*
Nevada Water 101 Water Rights	*11/2/2018*	*3.00*	*33*	*20*	*Videoconference to multiple locations*
Corrosion Control & Flushing Programs	*11/30/2018*	*3.00*	*35*	*26*	*Videoconference to multiple locations*
Hot Tapping, Repair Couplings & Basic Waterworks Products	*12/7/2018*	*3.00*	*28*	*11*	*Videoconference to multiple locations*
The Flow of Water Through History	*1/21/2019*	*3.00*	*48*	*30*	*Videoconference to multiple locations*
Well Maintenance & Rehabilitation	*2/22/2019*	*3.00*	*23*	*11*	*Videoconference to multiple locations*
Water Math, Certification Levels 1 & 2	*4/26/2019*	*3.00*	*9*	*5*	*Videoconference to multiple locations*
Financial Planning: Understand the Planning Cycle	*5/31/2010*	*3.00*	*13*	*11*	*Videoconference to multiple locations*
Meter Reading New Technology	*6/29/2019*	*3.00*	*15*	*9*	*Videoconference to multiple locations*
YTD Total		***33***	***299***	***182***	

ATTACHMENT 2 – DWSRF/CWSRF Program Flyer

What can the Office of Financial Assistance do for you?

What is the benefit of obtaining funding through the Office?

The following table illustrates the potential cost savings of obtaining a loan with the Office verses traditional financing. The Loan assumes a public entity taking a 20 year loan with a market rate of 4%.

Size of Loan	Interest Savings
2,000,000	175,034
10,000,000	608,759
50,000,000	3,043,795

Communities meeting certain requirements could qualify for principal forgiveness loans.

Searchlight new drinking water source

Mountain City pond rehabilitation

What cannot be funded by the Office?

- Construct or rehabilitate a dam
- Purchase water rights
- Construct or rehabilitate a reservoir except finished water reservoirs or those that are part of a treatment process
- Monitoring costs and laboratory fees
- Operating and Maintenance costs
- Projects mainly for fire protection
- Projects solely for future growth (DW only)
- Refinancing loans for private systems
- Projects for systems that fail to meet financial, managerial, and technical capacity.

Want more information?

Financing Infrastructure Website:

https://ndep.nv.gov/water/financing-infrastructure

Program Manager:

Jason B. Cooper
775.687.9531
j.cooper@ndep.nv.gov

NDEP

NEVADA DIVISION OF ENVIRONMENTAL PROTECTION

Office of Financial Assistance for Drinking Water and Clean Water Project

Do you own or operate a public or private water system that needs funding to meet EPA standards, rehabilitate an aging system, or improve an existing system for efficiency and environmental changes?

Office of Financial Assistance: 775.687.9436

Minden Gardnerville Sanitation District wastewater energy co-generation enhancement

Las Vegas finished water reservoir rehabilitation

Green Infrastructure Projects

Projects that address green infrastructure, water or energy efficiency improvements or other environmentally innovative activities receive incentives in the Program.

- Greywater and Blackwater Reuse
- Wet Weather Management Systems
- Stormwater Harvesting and Reuse
- Permanent Riparian Buffers
- Green Energy that Provides Significant Energy Savings.

Drinking Water systems can receive technical support <u>at no charge</u> to help with:

- Emergency planning
- Sanitary Survey Deficiencies
- Cross Connection Controls
- Asset Management
- Budgeting and Rate Setting
- Board and Staff Training
- Digital Mapping

What can be funded with Drinking Water funds?

- Safe Drinking Water Act (SDWA) exceedances and prevention of future SDWA exceedances
- Well rehabilitation and drilling
- Rehabilitation of failing systems
- Consolidation and interties to other systems
- Storage, treatment, transmission, distribution, and SCADA
- Preliminary Engineering Reports, planning and design
- Security
- Energy efficiency upgrades
- Climate change remediation

This list is not all-inclusive

To date, Nevada has obligated well over $200 million in loans, benefitting approximately 100 projects in 53 separate jurisdictions across Nevada. Contract amounts have ranged from $20,000 to $21.9 million. No minimum or maximum loan amount is established to obtain funding.

What can be funded with Clean Water funds?

- Clean Water Act (CWA) exceedances and prevention of future CWA exceedances
- Rehabilitation of failing systems
- Septic to sewer conversion
- Collection, interceptors, treatment, pumping stations, and SCADA.
- Preliminary Engineering Reports, planning and design.
- Energy efficiency upgrades
- Landfill foreclosure, stream bank restoration, and wetland flood prevention, and other nonpoint source pollution mitigation.

This list is not all-inclusive

To date, Nevada has obligated well over $400 million in loans, benefitting approximately 80 projects in 37 separate jurisdictions across Nevada. Contract amounts have ranged from $43,005 to $46.5 million. No minimum or maximum loan amount is established to obtain funding.

ATTACHMENT 3 – Specific TA Vendor Services

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. Vendors must respond to this scope of work with available personnel, skill, experience, and expertise in each area.

2. Technical Assistance to Water Systems – NvRWA / FW

2.1. PWS Compliance - NvRWA

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.

2.2. Prioritized PWS and ETT Score - NvRWA

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:

2.2.1. Address the violations leading to noncompliance;
2.2.2. Return the system to compliance in a timely manner.

2.3. Sampling, Water Quality Testing and Troubleshooting - NvRWA

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

2.3.1. Developing and implementing sampling plans;
2.3.2. Conducting field measurement and water parameters;
2.3.3. Developing and implementing water sampling procedures for compliance;
2.3.4. Testing for chlorine residuals;
2.3.5. Measuring well drawdown;
2.3.6. Instrumentation;
2.3.7. Calculating proper chemical addition and chemical pump;
2.3.8. Treatment train operations
2.3.9. Water quality and/or equipment troubleshooting; and
2.3.10. Identifying a source or vendor to secure parts, equipment, tools, and supplies etc.

2.4. Sanitary Surveys and Deficiency Resolution - NvRWA

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.

2.5. Revised Total Coliform Rule Level 1 Assessment - NvRWA

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:

2.5.1. Investigating the water system to identify sanitary defects;
2.5.2. Submitting the Level 1 Assessment documentation;
2.5.3. Locating resources to fix noted sanitary defects;
2.5.4. Developing a timeline that ensures the 30-day corrective action timeline is met; and
2.5.5. Submitting an extension request if needed.

2.6. Digital Mapping and GPS Asset Location - FW

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

2.7. Developing and/or updating their digital maps or GIS system and attribute tables of system components;
2.8. 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
2.9. Identifying and integrating their GIS system with other management software that can assist in planning for repair and replacement of assets.

3. Managerial Assistance to Water Systems – RCAC / FW

3.1. PNR and CCR - RCAC

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

3.1.1. 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
3.1.2. 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.

3.2. O&M Manuals - RCAC

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

3.2.1. 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**;**
3.2.2. Submitting any updates of water system assets to BSDW in order to maintain an accurate SDWIS database.

3.3. CCCP - RCAC

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

3.3.1. Development and implementation of a CCCP;
3.3.2. Public outreach efforts to improve the public's understanding of the need and importance of such a program;
3.3.3. Follow up to assure that all cross-connection control devises are tested annually and that the system is maintaining proper documentation of all devised and test results.

3.4. ERP and Emergency Assistance - RCAC

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

3.4.1. Preparing new or updating existing system- and site-specific ERPs; and
3.4.2. Evaluating system security and necessary upgrades including but not limited to:
3.4.2.1. Fencing;
3.4.2.2. Locks;
3.4.2.3. SCADA;
3.4.2.4. Alarms; and
3.4.2.5. Security cameras
3.4.3. Provide training and emergency assistance in implementing ERPs when systems face natural disasters, critical system component failures and risks to public health.

3.5. Water and Energy Conservation - RCAC

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

3.5.1. Completing, updating, and implementing water conservation plans in compliance with the requirements of the DWR;
3.5.2. Metrics to be used by the systems to analyze the effectiveness of the plan;
3.5.3. Developing and implementing feasible water conservation measures and public awareness campaigns;
3.5.4. Water loss audits to assist system personnel in resolving unaccounted-for water;
3.5.5. Energy conservation opportunities including but not limited to:
3.5.5.1. Energy efficient equipment;
3.5.5.2. Alternative power generation; and
3.5.5.3. Off-peak power use.

3.6. TMF Capacity Survey - RCAC

The awarded vendor(s) may be required to assist 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.

3.7. Labor Management - RCAC

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

3.7.1. Personnel policies;
3.7.2. Job descriptions;
3.7.3. Contracts for operations, maintenance and/or administration

3.8. Water Rights Management - FW

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

3.8.1. Reviewing and understanding water rights and associated documentation;
3.8.2. Determining if water quantity and water rights are sufficient for existing and projected future population; and
3.8.3. Properly recording and submitting pumpage documentation to DWR.

3.9. Records Management - RCAC

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:

3.9.1. Well pumpage;
3.9.2. Valve exercising;
3.9.3. Hydrant/dead-end flushing; and
3.9.4. Backflow prevention assembly testing.

3.10. Contracts Management - RCAC

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

3.10.1. Technical services solicitations;
3.10.2. Review of bid specifications/construction contracts;
3.10.3. Project documentation included but not limited to:
3.10.3.1. Certified payroll review;
3.10.3.2. Funding draws; and
3.10.3.3. Reporting as required by federal, state, and/or funding agencies.

4. Financial Assistance to Water Systems - RCAC

4.1. Budgeting and Rate Setting - RCAC

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

4.1.1. 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);
4.1.2. 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;
4.1.3. Establishing sufficient rates to support their unique system. User rates must be sufficient to cover:
4.1.3.1. 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;
4.1.3.2. Debt service requirements on all loans and bonds of the system: and
4.1.3.3. All required reserve accounts of the system, including a short-lived asset reserve and any debt service required by the loan/bond agreements.

4.2. FSP - RCAC

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

4.2.1. Asset information including;
4.2.1.1. An inventory; and
4.2.1.2. Date of installation.
4.2.1.3. A map showing their location;
4.2.1.4. Original price;
4.2.1.5. Anticipated life span;
4.2.1.6. Replacement costs;
4.2.1.7. An evaluation of their condition and performance; and
4.2.1.8. An analysis of the criticality of each asset.
4.2.2. An evaluation of water and energy conservation efforts with existing assists and planned replacement assets; and

4.2.3. A plan for maintaining, repairing and replacing assets and for funding such activities.

4.3. Income Surveys - RCAC

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.

4.4. Bookkeeping and Public Accounting - RCAC

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

4.4.1. Understanding bookkeeping entries for transactions the water system must record and process on a day-to-day basis, including but not limited to:

- 4.4.1.1. Payroll and related expenses;
- 4.4.1.2. Contract transactions;
- 4.4.1.3. Purchasing;
- 4.4.1.4. Asset acquisitions, disposals and transfers;
- 4.4.1.5. Operating expenses; and
- 4.4.1.6. Items of income

4.4.2. Understanding their requirements to prepare financial statements in conformity to GAAP for local governments as they pertain to their specific structure; and

4.4.3. Educate and train water system staff on terminology used in the public sector accounting profession such as but not limited to:

- 4.4.3.1. Cash versus accrual accounting
- 4.4.3.2. Asset depreciation
- 4.4.3.3. Current versus noncurrent assets and liabilities;
- 4.4.3.4. Net assets;
- 4.4.3.5. Restricted reserves; and
- 4.4.3.6. Enterprise funds.

4.5. Understanding Financial Reports - RCAC

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.

4.6. Internal Controls - RCAC

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

4.6.1. Understanding the importance of internal controls in their accounting framework;

4.6.2. 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

4.6.3. 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.

4.7. Organization - RCAC

The awarded vendor(s) may be require to:

4.7.1. Assist water system staff in understanding the organizational and governing structure and responsibility; and

4.7.2. 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.

4.8. Grants / Loans Management - RCAC

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

4.8.1. Identifying potential funding opportunities and applications for grants and loans for capital improvement projects and other activities eligible under specific financial programs; and

4.8.2. Identifying opportunities for saving through loan refinancing.

5. Training – RCAC / NvRWA / FW

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.

5.1. Board Training - RCAC

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

5.1.1. Training board members on open meeting law rules in the State of Nevada;

5.1.2. Board member roles and responsibilities;

5.1.3. Public notice requirements;

5.1.4. Water system management;

5.1.5. Understanding of operational requirements and documents; and

5.1.6. Financial reports including annual operating and capital budgets.

5.2. Clerical and Office Staff Training - RCAC

The awarded vendor(s) may be required to assist water systems with training staff on customer service, time management, organizational support, and basic computer programs such as Microsoft Office products or email. In certain situations, based on specific system needs, the vendor may be asked to provide basic technical training on copying, scanning, printing, filing, and records maintenance may also be required to ensure compliance with all required reporting and system management.

5.3. Operator Certification Training - NvRWA

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.

5.4. Security and Health Threat Training - FW

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.

6. Outreach – NvRWA / RCAC

6.1. Water System – NvRWA / RCAC

The awarded vendor(s) may be required to assist with periodic public water system outreach efforts that provide refresher training to system board members, managers, and operators the responsibilities of owning and operate a public water system. The vendor may propose one or more efficient and effective approach(es) to provide outreach and training in order to accomplish this task.

6.2. Future Water System Operators – NvRWA / RCAC

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.

6.3. Project and Other Funding Outreach – NvRWA / RCAC

The awarded vendor(s) may be required to assist with outreach to water system boards or other elected officials on the type and availability of funding for capital improvement projects. The vendor may propose one or more effective approach(es) to provide outreach and training in order to accomplish this task.