



FLORIDA DEPARTMENT OF Environmental Protection

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Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Shawn Hamilton
Secretary

September 28, 2023

The Honorable Ron DeSantis
Governor of Florida
Plaza Level 01, The Capitol
400 South Monroe Street
Tallahassee, Florida 32399

Dear Governor DeSantis:

Pursuant to Section 1420(c)(3) of the 1996 Amendments to the federal Safe Drinking Water Act (SDWA), each state is required to triennially submit a report to the Governor on the efficacy of the Capacity Development (CD) Strategy and progress made toward improving the technical, managerial and financial capacity of public water systems in the state. The initial report was transmitted by the Florida Department of Environmental Protection (DEP) in 2005; subsequent reports were delivered in 2008, 2011, 2014, 2017 and 2020. This year's report is required to be transmitted to the Governor and made available to the public by Sept. 30, 2023.

The CD Strategy is an assistance program for public water systems. One component of the CD Strategy is the New Systems CD Program, which examines proposed new facilities and their ability to have the technical, managerial and financial capability to successfully operate and maintain a system and deliver safe drinking water. One goal of this program is to provide assistance to small drinking water systems to improve their technical, managerial and financial abilities to operate in compliance with the federal and state SDWA. This report includes information related to (1) the New Systems CD Program; and (2) selected existing program enhancements relating to public water systems (e.g., DEP's water system inspection program, and technical assistance provided by Florida Rural Water Association). This report will be posted on DEP's website.

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If you have any questions, please contact John A. Coates, Director of DEP's Division of Water Resource Management, at 850-245-8709.

Sincerely,

A handwritten signature in blue ink, appearing to read "Shawn Hamilton". The signature is fluid and cursive, with a large initial "S" and "H".

Shawn Hamilton
Secretary

Enclosure

cc: Jessica Kramer, Deputy Secretary of Regulatory Programs, DEP
Alex Kernan, Director, Office of Legislative Affairs, DEP
John Coates, Director, Division of Water Resource Management, DEP



Florida's Strategy to Improve Public Water Supply

Division of Water Resource Management

Source and Drinking Water Program

Florida Department of Environmental Protection

September 2023



Florida’s Strategy to Improve Public Water Supply

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Executive Summary

As part of its responsibility as the U.S. Environmental Protection Agency's (EPA) local administrator of the federal Safe Drinking Water Act (SDWA)¹, the Florida Department of Environmental Protection (DEP) is required to submit a triennial report to the Governor that describes how the agency has been implementing the Capacity Development Program, which is an assistance program for drinking water facilities throughout Florida. This report is intended to demonstrate the efficacy of DEP's Capacity Development Strategy as well as highlight the progress made toward improving the technical, managerial and financial capacities of public water systems in Florida. Each program element listed in this report is part of a framework of capacity development-related efforts. This framework results in many opportunities for systems to enhance their capacity, thus continually improving the abilities of public water systems to manage their resources, operate their systems and protect the health of Florida residents and visitors.

One component of the Capacity Development Program examines proposed new facilities and their potential to successfully operate and maintain a system and deliver clean drinking water to the public they serve. Permit approval for new facilities is based upon each system's ability to demonstrate adequate capacity development.

Another main component of the Capacity Development Program assists small drinking water systems with improving their ability to operate in compliance with the federal and state SDWA. DEP is responsible for performing sanitary surveys and compliance inspections on all public water systems to ensure each system is running efficiently and provides safe, quality drinking water to residents and visitors of Florida. Based on observations made during these inspections, follow-up actions may include a combination of enforcement and referral to technical assistance providers that, in turn, work with the individual utilities to bring the systems back into compliance.

DEP collaborates closely with certified operators, professional engineers (PEs) and training professionals from the Florida Rural Water Association (FRWA), all of whom are available to provide technical assistance. These individuals visit hundreds of small drinking water

¹ Pub. L. 104-182, "Safe Drinking Water Act Amendments of 1996" (1996).

facilities each year to assist in identifying and eliminating potential problems before they affect the facility's performance. These individuals work with representatives of facilities to improve the operation of their systems so that they may achieve and maintain compliance.

Pursuant to the SDWA requirements, as amended by Section 2012 of America's Water Infrastructure Act (AWIA), DEP's Capacity Development Strategy was revised and approved by EPA on Dec. 20, 2022. Updates include a description of how the state will encourage public water systems to develop asset management plans and assist in training operators or other relevant persons in implementing them.

For more information, please visit [DEP's website](#) and [EPA's website](#).

Introduction

Pursuant to Section 1420(c)(3)² of the federal SDWA Amendments of 1996, states are required to “submit to the Governor a report that shall also be available to the public on the efficacy of the strategy and progress made toward improving the technical, managerial and financial capacity of public water systems in the State.” These triennial reports have been submitted to the Governor of Florida since 2005. The current report is due to Governor Ron DeSantis by Sept. 30, 2023. The current triennial capacity development report is posted on DEP’s website and is available to the public at [Triennial Capacity Development Report](#).

“Technical capacity” refers to the provision and operation of source, treatment, storage, pumping and distribution structures. “Managerial capacity” includes the institutional and administrative capabilities enabling a water system to achieve and maintain compliance with requirements. “Managerial capacity” can be assessed by evaluating issues that include sufficiency of maintenance for equipment, record keeping, operating procedures, staffing, and relationships with customers or other outside entities. “Financial capacity” is the ability of a water system to acquire and manage sufficient financial resources to enable the system to achieve and maintain compliance with requirements.

EPA defines “Capacity Development” as “a process for water systems to acquire and maintain adequate technical, managerial and financial (TMF) capacity. TMF capacity enables water systems to have the capability to consistently provide safe drinking water to the public.”³

The 1996 amendments to the SDWA also provided for two categories of effort involving capacity development: New Systems Capacity Development and the Capacity Development Strategy for Existing Systems. New Systems Capacity Development is described in the Capacity Development Program for New Public Water Systems subsection of this report and is part of Florida’s overall Capacity Development Strategy for new and existing systems.

The Public Water System Supervision (PWSS) Program within DEP submitted its original

² Pub. L. 104-182, 110 Stat. e. “Safe Drinking Water Act Amendments of 1996” (1996).

³ EPA, Building the Capacity of Drinking Water Systems, <https://www.epa.gov/dwcapacity/learn-about-capacity-development>

Capacity Development Strategy to EPA in May 2000 and was approved in September of the same year. Pursuant to the SDWA requirements, as amended by Section 2012 of AWIA, DEP's Capacity Development Strategy was revised and approved by EPA on Dec. 20, 2022. The 2022 revisions to the strategy include a description of how the state will encourage public water systems to develop asset management plans and assist in training operators or other relevant persons in implementing them. Implementation of the strategy involves a wide range of programs and activities to help ensure that public water systems improve their TMF capabilities through the combined efforts of DEP, FRWA and Southeastern Rural Community Assistance Project (SERCAP), with direct contact and various training opportunities for the facilities and their operators.

DEP continues to explore the reasons for any lack of TMF capacity within the water systems, identify solutions to improve the TMF capacity, and allocate resources with priority given to those systems that are most in need. Communication with public water systems helps them understand the rules and requirements for the TMF commitment needed to own a water system that consistently provides a sufficient quantity of safe water in a cost-effective manner both now and in the future. Once technical capacity is assessed during the permitting process and DEP identifies technical assistance needs, the systems are prioritized based on their lack of resources to correct problems or failure to make significant progress in doing so. Then they are referred to technical assistance providers such as FRWA and SERCAP. Care is taken to eliminate threats to public health posed by poor water quality, and systems with a history of acute health risk violations receive the highest priority for assistance. Please refer to the technical assistance section for more details.

DEP is committed to continuing to seek innovative approaches to asset management and new technologies to encourage TMF capacity for long-term sustainability at all of Florida's water systems. The state's strategy involves a wide range of programs and activities to help ensure that public water systems improve their TMF capabilities, many of which existed before the formal Capacity Development Program was established. The following organizations and programs have been instrumental in implementing Florida's Capacity Development Strategy.

- Florida Department of Health (DOH) Public Drinking Water Program.
- Florida Rural Water Association.

- DEP Drinking Water State Revolving Fund Program (DWSRF).
- DEP Operator Certification Program.
- Florida Public Service Commission (PSC).
- Florida's five water management districts.
- Florida Department of Commerce, Small Cities Community Development Block Grant Program.
- Florida Division of Emergency Management.
- DEP Plant Operations Excellence Awards Program.

Contact information for the above organizations and programs is included in Appendix A.

Some of Florida's actions to assist existing systems are described in the "Public Water System Supervision Program Enhancements Relating to the Capacity Development Strategy for Existing Public Water Systems" subsection of this report.

For the purpose of this report, the term "Department" refers to the organizations that administer the PWSS Program: DEP's Source and Drinking Water Program, DOH's headquarters office, and the six approved DOH County Health Departments that have received delegation to administer the program in their counties.

Systems referred to as "Subpart H" are those systems regulated under 40 CFR § 141.3 that use surface water or groundwater under the direct influence (UDI) of surface water. In general, water UDI of surface water is not sufficiently protected from contamination by surface water. Direct influence is determined for individual sources in accordance with criteria established by DEP in Rule 62-555.817, Florida Administrative Code (F.A.C.).

Public Drinking Water System Supervision Program Implementation

Capacity Development Program for New Public Water Systems

Capacity development is an initiative to ensure that drinking water systems acquire and maintain adequate TMF to enable them to consistently provide safe drinking water.

When amending the SDWA in 1996, the U.S. Congress mandated that states set up programs to ensure the capacity of new community water systems (CWSs) and new non-

transient, non-community water systems (NTNCWSs). In general, CWSs serve year-round residents, and NTNCWSs typically serve businesses and schools. Florida's program fulfills the congressional requirement.

Consistent with the EPA definition of "new system," section 62-555.525(1)(a) and (b), F.A.C., defines "new systems" for purposes of capacity development as the following:

- Entirely new CWSs or NTNCWS constructed or commencing operations on or after Oct. 1, 1999.
- Water systems that previously did not meet the definition of a CWS or NTNCWS but that grow to become a CWS or NTNCWS through an infrastructure expansion constructed, or placed into operation, on or after Oct. 1, 1999. Water systems that previously did not meet the definition of a CWS or the definition of a NTNCWS but that grow to become a CWS or NTNCWS by adding users without expanding their infrastructure are not considered "new systems" for the purposes of capacity development.

Florida's program requires that new NTNCWSs and new CWSs undergo a capacity assessment by DEP. These systems must demonstrate acceptable capacity to receive a construction permit or clearance for use.

The following excerpt from section 62-555.525(3), F.A.C., includes the fundamental requirements that new water systems must meet for purposes of the Capacity Development Program:

- (3) Demonstrations of financial, managerial, and technical capacity for "new systems" shall contain the following:*
 - (a) Documentation that the owner of the "new system" holds, or will hold, an operator license sufficient to fulfill the staffing requirements in Chapter 62-699, F.A.C., or that the "new system" employs, or will employ, licensed operators to fulfill the staffing requirements in Chapter 62-699, F.A.C.*
 - (b) A demonstration that the "new system" has, or will have, the capability to conduct the monitoring and reporting required under Chapter 62-550, F.A.C., and the capability to maintain the records required under Chapter*

62-550, F.A.C.

- (c) *A demonstration that the “new system” has, or will have, the capability to meet the operation and maintenance requirements in this chapter.*
- (d) *A demonstration of financial and managerial capacity.*

A summary of the requirements of Florida's New Systems Capacity Development Program for typical cases includes the following:

- New CWSs and NTNCWSs are subject to an assessment of their capacity as part of the permitting process. Technical capacity is assessed through review of engineering documentation during the construction permitting process.
- The Department will deny the permit application of any system that does not document acceptable technical capacity. Financial and managerial capacities are assessed through review of a required New Water System Capacity Development Financial and Managerial Operation Plan. A copy of DEP form 62-555.900(20) that is used to prepare this plan is available online at [New Water System Capacity Development Financial and Managerial Operations Plan Webpage](#). The Department inspects each newly constructed CWS and NTNCWS for compliance with drinking water rules before allowing it to begin operation. No system is allowed to operate until any deficiencies are corrected.
- CWSs and NTNCWSs that began operating on or after Oct. 1, 1999, are required to submit an updated Capacity Development Financial and Managerial Operation Plan to the Department three years after operations begin.
- Systems regulated by the PSC, which already imposes equivalent financial requirements, are not required to complete additional financial information for the Department.

As noted above, the Department will deny the construction permit for a drinking water system or will not otherwise allow that system to operate if it fails to demonstrate acceptable capacity. A new system must submit an updated Financial and Managerial Operation Plan three years after the commencement of operations to demonstrate that it has maintained

adequate capacity.⁴ DEP's rules also require a capacity demonstration by new systems that change ownership.⁵ Systems not meeting capacity requirements will be subject to enforcement.

Public Water System Supervision Program Enhancements Relating to the Capacity Development Strategy for Existing Public Water Systems

Development Strategy for Existing Public Water Systems

As of June 2023, there were 5,004 active public water systems in Florida: 1,597 CWSs; 764 NTNCWSs; and 2,643 transient, non-community water systems (TNCs). The Department conducts activities to assist all Florida public water systems in complying with rules and regulations. These activities include water system inspections, technical assistance by both the Department and FRWA, and the EPA Region 4 Area Wide Optimization Program (AWOP).

Water System Inspection Program

DEP's sanitary survey process aids public water systems in achieving and maintaining capacity. In accordance with the federal and state SDWA and grant conditions, the Department is responsible for performing sanitary surveys on CWSs and NTNCWSs every three years and on TNCs every five years. As a programmatic PWSS goal, the Source and Drinking Water Program strives to conduct compliance inspections during every year that a sanitary survey is not required.

The Department complies with 40 CFR § 142.16(b)(3), which contains requirements for enhanced sanitary surveys for Subpart H systems (again, these are systems that use or treat surface water either directly or from groundwater wells deemed under the direct influence of surface water).

During a sanitary survey, Department inspectors are required to inspect and address the following eight elements:

1. Drinking water source.
2. Drinking water treatment.
3. Distribution system.

⁴ Rule 62-555.357(2), F.A.C.

⁵ Rule 62-555.357(3), F.A.C.

4. Finished water storage.
5. Pumps, pump facilities and controls.
6. Monitoring and reporting and data verification.
7. System management and operation.
8. Operator compliance with state requirements.

The Department's sanitary survey inspections for groundwater systems are regulated under 40 CFR § 142.16(o)(2)(iii), and by the DWSRF grant conditions. Surveys are performed using a format that includes the eight federally specified elements. This information on the eight required elements is entered into the Public Water System (PWS) database in a way that can be reported to the federal Safe Drinking Water Information System (SDWIS). If an element is found to have a deficiency, it is identified on the "Details" page in PWS, along with any corrective action taken, including the date on which the deficiency was addressed. To formalize ground water survey requirements, DEP has adopted and incorporated the federal Ground Water Rule into Rule 62-550.828, F.A.C.

The Source and Drinking Water Program also has identified deficiencies deemed to be "significant" and administers the rigorous corrective action procedures specified in 40 CFR § 141.31(d). The elements of the Department's compliance inspections differ from system to system, dependent upon system type, size, complexity and compliance history. Generally, the compliance inspections are conducted in less detail than a sanitary survey, and at a minimum they include an assessment of the following:

1. Compliance issues.
2. Sanitary hazards.
3. Wells and pumps.
4. Treatment (primarily disinfection).
5. Operation and maintenance.
6. Water quality.

The Department furnishes the system with a record of the inspection results along with recommendations. If there are deficiencies, the length of time the system is given to correct those deficiencies is stated. If the system does not correct the stated deficiencies within the allotted time, the Department begins enforcement to ensure the deficiencies are corrected. In

most cases, deficiencies are corrected soon after the systems are notified. Systems use the inspection results and the Department's technical and regulatory expertise and recommendations as resources to continually improve. Department representatives may provide advice on water quality sampling or other topics. In addition, the Department may refer the system to FRWA for assistance in setting rates, board member training or how to use available management tools.

The inspection program is a significant tool the Department uses to ensure the capacity of public water systems. The annual Sanitary Survey School events offer training to all new and interested inspectors. These weeklong courses include both classroom sessions and on-site facility inspections of water systems. The sanitary survey forms are updated periodically with capacity development in mind. Internal audits of each office's inspection programs are performed annually.

As part of DEP's capacity development efforts, if a system's sanitary survey inspection results are out of compliance it may be referred to the FRWA if the inspector determines that technical assistance may be beneficial. This helps ensure that the FRWA will have the opportunity to assist the systems in need.

Technical Assistance – Florida Rural Water Association

Since 1990, FRWA has provided technical assistance to public water systems serving fewer than 10,000 persons under the DWSRF grant or contract with DEP. Originally, there were only three FRWA drinking water "circuit riders" providing this technical assistance. Additional positions have been added over the years, and FRWA currently serves these small systems with six circuit riders; one professional engineer (PE); one assistant engineer; one trainer; one state source water technician; one state groundwater technician; five asset management technicians; one DWSRF program liaison; a utility assessment technician; and additional supporting financial/managerial staff. Appendix B includes a description of activities performed for DEP by FRWA under the DEP grant agreements. FRWA makes many important contributions to DEP's permitting, compliance and enforcement activities on behalf of the water utilities. Systems have the opportunity to work with FRWA to resolve potential compliance problems before they impact the environment or the safety of Florida residents. FRWA also helps solve compliance issues for systems on the Enforcement Tracking Tool

(ETT) and Health Based Action Plan Tracking Tool (HAT) lists.

The services provided under the grant agreement with DEP are free to public water systems with a few exceptions, such as loaning of equipment. Systems may request assistance directly from FRWA, FRWA may volunteer to help systems, or DEP may refer systems to FRWA for assistance. It is not necessary for a system to be a member of FRWA to receive assistance under DEP's grant agreement.

Each month, the FRWA circuit riders travel to water systems throughout the state. These circuit riders are typically certified operators, and the assistance they provide usually relates to the technical aspects of water system operations. FRWA also assists with rate studies and other financial or managerial matters in order to cover the three TMF pillars of capacity development.

Most circuit rider technical assistance visits help water systems remain in or achieve compliance. From June 2022 through May 2023, the circuit riders made 5,720 technical assistance visits.

The FRWA water trainer position provides comprehensive technical assistance and training to water systems using surface water and groundwater with complex treatment. From June 2022 through May 2023, this position has developed, established and held more than 24 in-person water treatment plant operator sessions for groundwater and surface water plants with a total of 2,561 attendees. During this time, 1,228 operators earned continuing education units to help them maintain their operator licenses. The sessions help to reduce the shortage of effective water treatment operators at facilities and support protection of public health.

In addition, the FRWA water trainer developed, scheduled and held seven water distribution operator training sessions and three drinking water certification review classes. An initial plan to train operators on how to evaluate and calculate compliance with the disinfection requirements in section 62-555.350(6), F.A.C., was developed, and assistance in the evaluation of disinfection byproducts compliance issues was provided to DEP.

FRWA's financial and managerial staff provides assistance with these aspects of capacity development. From June 2022 through May 2023, this staff completed the following.

- Certified five utility professionals under the Water University/National Rural Water Association [Utility Management Certification Program](#) for improving managerial capacity, competency and effectiveness among utility managers.
- Utilized experienced and effective professionals to provide in-person training for board members to increase their competency and understanding of fiduciary responsibilities necessary to provide the public with safe and reliable drinking water.
- Developed and held asset management workshops to increase knowledge of preventative maintenance and prudent safeguarding of public infrastructure.
- Developed, established and published standard utility management policies for setting policies and procedures that enable utilities to fulfill their missions.
- Assisted numerous systems in setting rates and impact fees that account for the actual cost of services and provide for continuing preventive maintenance without relying on governmental grants or loans to replace infrastructure.
- Prepared water audits (analyses of water losses and unaccounted-for water) at 35 systems to reduce the potential for lost revenues.
- Assisted systems in finding dependable sources for grants and loans for utility projects, including short-term, interim and long-term financing options. Project sponsors may fax a completed Drinking Water Project Request Form (available on the FRWA website) to FRWA staff. FRWA leads a funding group composed of representatives from funding authorities such as the Florida Small Cities Community Development Block Grant (CDBG) Program, DEP's DWSRF and the U.S. Department of Agriculture Rural Development (USDA-RD). The FRWA loan program provides interim construction funding for communities that have received a permanent loan commitment from USDA-RD or DEP's DWSRF. The funding entities meet quarterly then the appropriate entity contacts each applicant. When needed, direct, hands-on assistance was provided by completing applications and associated documents for all programs.
- Assisted with long-range planning/capacity analysis for eight systems. This process evaluates the remaining treatment capacity as a management tool to

address timing of future expansions, regulatory compliance, impact fees, planning, funding, engineering design, permitting and construction.

- Provided assistance with many operation and compliance concerns to help utilities stay effective, including the following:
 - Customer relations and services.
 - Public notices.
 - Consumer confidence reports.
 - Operation and maintenance manuals.
 - Emergency response planning.
 - Enhanced management tools and software.

From June 2022 through May 2023, FRWA's source and groundwater technicians promoted water conservation and implementation recommendations through source water and wellhead plans at 161 systems. Included in these plans are best management practices (BMPs) for contaminants that are in source water protection areas; proper septic tank preventive maintenance information; information on household hazardous materials; information on the use of best fertilizers to prevent water pollution; assistance and information for motor oil recycling days; assistance and information for prescription drug take-back days; and information on how to properly dispose of unused prescription drugs.

From June 2022 through May 2023, two FRWA engineering positions assisted approximately 222 water systems with challenges related to minor permitting, compliance, water quality, security, health, environmental issues, capacity analysis, areas of operation, maintenance and management and other issues related to providing safe, ample and reliable water to all people in Florida. Activities included the following.

- Assisting with water resource development, alternative water supply projects and water supply and treatment issues.
- Assisting in compliance with SDWA and federal and state rules, including provision of regulatory updates.
- Designing and permitting projects for small drinking water systems to correct capacity

development or compliance problems.

- Reviewing plans and specifications submitted to DEP's DWSRF for cost effectiveness and efficiency.
- Providing technical advice on water treatment, water quality and hydraulics, and troubleshooting system problems.
- Assisting with utility capital improvement planning, feasibility, cost estimates, emergency response planning, asset management, preventive maintenance, operation and maintenance, conservation, and customer relations or services.

FRWA's engineering program has expanded over the years with hundreds of project requests each year. This has resulted in the establishment of relationship/partnerships with nearly 20 engineers as sub-consultants that design, permit and oversee many compliance-related projects. Two in-house FRWA engineers support this program, which was established by DEP to focus on capacity building and problem solving.

Between June 2022 and May 2023, FRWA held 54 in-person training sessions with 3,046 attendees. Available training sessions are listed on the [FRWA website](#). Examples of training sessions currently provided include Financial Resiliency for Small Water Systems; Effective Utility Management; Water Distribution Certification; and Comprehensive Safety Training. In addition, examples of online courses currently offered for operators include Advanced Math; Applied Confined Space Safety; Basic Environmental Chemistry; Chemical Feed Systems and Pump Calibrations; Chlorinator Maintenance; Corrosion Control Treatment Optimization; Disinfection Byproducts; Drinking Water Filtration; Hazard Communications; Maintaining Water Quality in the Distribution System; Small Water Systems; Surface Water Treatment; and Valve and Hydrant Maintenance. Other online courses currently offered include Basic Board and Council Training and Basic Clerk Training. FRWA also partners with industry associations, universities and other agencies to develop and provide additional training.

This year marked the 33rd anniversary of the partnership between FRWA and DEP, and the 2023 Focus on Change events added to the FRWA legacy of presenting informative and successful training sessions to industry professionals. This annual series of six single-day

conferences provides a volume of valuable information to attendees. DEP representatives presented on the latest regulatory changes and provisions, addressing topics such as disaster preparedness and drinking water disinfection byproducts. Over 1,300 attendees participated in the 2023 series held in six locations throughout Florida (Pompano Beach, Punta Gorda, Ocala, Haines City, Lake City and Panama City).

FRWA also employs a training/technical assistance specialist, funded by EPA, who conducts training sessions on compliance subjects throughout the state.

Additional Programs to Aid Water Utilities in Florida

Apprenticeship Program

Launched in October 2019, the FRWA Apprenticeship Program assists water and wastewater utilities in developing skilled and trained employees through apprenticeships. Apprenticeship is a proven method of enhancing employee skills and technical knowledge to provide the future work force with the technical training and on-the-job learning needed to become effective certified operators. These sessions help reduce the shortage of effective water treatment operators at facilities and support protection of public health.

The Apprenticeship Program is approved through the U.S. Department of Labor and the Florida Department of Education (DOE). Both new hires and current employees are eligible for the two-year program. Working with the U.S. Department of Veterans Affairs and various workforce development programs throughout the state, the program will continue to aid in maintaining diversity and opportunity within the aging water operator workforce.

In addition, the Pre-Apprenticeship Program geared toward developing the water industry works with high-school programs statewide. Outreach through the DOE, workforce development agencies and various technical programs helps to increase understanding and opportunities for youth to pursue careers in the industry.

Operator Licensure by Reciprocity

Although not directly related to workforce training or support that is provided to help Florida utilities with capacity development and planning efforts, the Florida legislature in 2023 passed Senate Bill 162, which was adopted as Chapter 2023-204, Laws of Florida (LOF), to

provide criteria for the licensure by reciprocity of drinking water treatment plant, water distribution system, and domestic wastewater treatment plant operators in Florida. This legislation updated existing Florida statutes to establish minimum criteria for issuing an operator license by reciprocity for an applicant that has a comparable license issued by another state, the federal government, or certain other territorial or tribal governments. These new statutory provisions will ultimately help ensure that Florida has a sufficient supply of adequately trained and licensed operators, particularly for those people that work in a technical capacity to support public water systems in Florida.

WATER Tracker (Water Assistance Tracking and Emergency Response)

FRWA is prepared to provide services in the event of a natural disaster. These services include tracking of events; coordination of equipment and assistance; pre-deployment of equipment, assets and personnel; response and restoration services; and tracking of assets (emergency backup generators, pumps, motors, etc.). FRWA has been coordinating with DEP and Florida Water/Wastewater Agency Response Network (FlaWARN) to develop a system to better serve Florida's water and wastewater systems during emergency operations.

A new system named WATER Tracker was designed to combine the needs of FlaWARN, DEP's response center, and FRWA's resource and response tracking for emergency events such as hurricanes, natural disasters, acts of terrorism and any unplanned events that can disrupt Florida's drinking water and wastewater operations. These activities are conducted in concert with the DEP's coordination with missions assigned by the state Emergency Operations Center. WATER Tracker allows Florida's drinking water and wastewater utilities to report detailed operational status, identify specific resource needs and post available resources during disruptive emergency events. Knowledge of the operational status and reported needs of each utility are imperative to assess damage, mobilize resources and distribute aid.

When disaster strikes, FRWA conducts damage assessments and dispatches personnel and equipment to assist those affected. In 2022, FRWA acquired a fleet of emergency response equipment to assist DEP in responding to emergency situations. FRWA's extensive list of emergency response inventory includes 39 large and small generators; diesel pickups and

towing equipment; fuel and fuel transfer tanks; bypass, submersible and trash pumps; flow meters; gas and liquid chlorinators and pumps; ground penetrating radar; geographic information system (GIS)/global positioning system (GPS) mapping/asset management devices and software; communications safety equipment; and a Vermeer vacuum trailer and a trailer equipped with tools, radio and satellite communications, plus bathroom and sleeping accommodations for four emergency response personnel. FRWA also assists with fuel management and moving generators from one system to another once power is restored. In addition, FRWA provides technical and emergency response following tropical storms and hurricanes by loaning equipment such as generators and pumps to water utilities in need.

In July and August of 2020 when Hurricane Isaias threatened Florida, FRWA responded by pre-staging emergency response equipment at West Palm Beach. Semitruck loads of generators and pumps were ready for use while the hurricane veered north. Fortunately, Hurricane Isaias only delivered a glancing blow to Florida's Atlantic Coast, and local water utilities cooperated to take care of their needs. In September 2020, FRWA deployed 25 generators and other emergency response equipment to assist water utilities impacted by Hurricane Sally in the western Panhandle. While much of the state was hunkered down on Sept. 28, 2022, weathering Hurricane Ian, FRWA personnel were busy loading tractor trailers with generators and equipment to help those systems impacted by the storm. After the storm passed, DEP and FRWA employees throughout the state began contacting systems to offer assistance and update their information in the Florida WATER Tracker database. Other staff members were also busy making in-person assessments.

Hurricane Ian left millions of customers without electricity and clean drinking water. FRWA responded in the aftermath of this devastating Category 5 hurricane by delivering generators to systems, enabling them to get back online, and by providing any assistance needed to help systems furnish their customers with clean drinking water. When Hurricane Nicole struck Florida in November 2022, the effects on water utilities were minimal. Very few systems saw any change from fully operational status. FRWA responded to a few systems by providing assessments, generators and other equipment. In April 2023, FRWA secured vacuum/pumper trucks for Broward County utilities to remove water during the extreme unprecedented flooding event.

RevPlan

FRWA has partnered with Raftelis, an information technology company, to offer small water utilities in Florida free online software called RevPlan. This tool is designed to assist utilities with asset and financial management to achieve financial resiliency and long-term sustainability. RevPlan is capable of identifying the various utility funding requirements over a five-year planning window. These funding requirements include capital funding, operating costs and debt repayment. RevPlan allows the utilities to identify any rate adjustments necessary to meet their funding requirements and the impact that rate increases may have on ratepayers. Numerous Florida water utilities have taken advantage of RevPlan for their financial planning and asset management integration.

Diamond Maps

FRWA has partnered with Diamond Maps, a GIS mapping system, to assist in mapping wastewater and drinking water systems for small, disadvantaged communities. The mapping includes field identification, the GPS location and physical condition of wastewater treatment systems, drinking water wells (or source areas), tanks, force mains, water mains, lift and pump stations, maintenance holes, meters, valves, hydrants, plus treatment and laboratory equipment. Additionally, Diamond Maps can create reports and work orders for the various components based on their age and condition, which allows for preventive maintenance and planning for replacement costs.

DEP State Revolving Fund (SRF) Engineers and Project Liaison

The SRF PEs work with SRF applicants for water and wastewater systems and the systems' engineers as they submit requests for inclusion (RFIs). The RFI process ensures that projects are correctly sized and meet the needs for the community. The PEs review and provide comments on the facility plans and business plans, and if necessary, develop plans for small communities. These PEs will also perform site visits as needed as well as attend conferences before, during and at the end of construction.

The SRF project liaison coordinates with and schedules three inspectors for periodic site visits to ensure compliance with SRF procedures and standards. In addition, this project liaison also functions as an intermediary between stakeholders (sponsors, DEP, FRWA, engineers, consultants, etc.) involved in the funding process for utilities. DEP distributes

approximately \$400 million each year to water, wastewater, stormwater and other projects through low-cost loans from the SRF. This assistance is designed to minimize project costs and delays and to inform members and sponsors about what to anticipate throughout the process.

Inspections

FRWA has been assisting the DEP SRF directly by performing SRF funded project inspections for adherence to program requirements. Over the last four years, this program has saved water utilities money by detecting problems early so consultants and construction contractors are able to implement solutions prior to project close-out. This also helps to minimize additional costs when problems that were caused by contractors which still need corrective action are resolved before they have been paid out.

Energy Efficiency Program

On average, a water utility spends 30% of its annual budget on energy costs. This expense continues to grow as new regulations require electric companies to reduce their impact on the environment. FRWA's Energy Efficiency Program helps a system reduce the cost of purchasing electricity by improving its energy efficiency. The process involves an on-site visit and a review of the system's electric bills for the past 12 months. The resulting report provides helpful tips and customized advice for each unique system. In addition, this can help systems secure funding from SRF or USDA-RD as well as inform them of other funding sources and incentives. This service – which typically costs \$15,000 – is free of cost to FRWA members.

Drinking Water Security/Vulnerability Assessment Program

Over the past 15 years, a few key presidential directives led to the development of a specific risk assessment for the water sector, along with guidelines for implementing both physical and cybersecurity measures. Pursuant to a requirement in the American Water Infrastructure Act of 2018, FRWA was selected by DEP to conduct a drinking water and wastewater Security and Vulnerability Assessment Program throughout Florida. Beginning in September 2018, FRWA met with utilities to improve the benchmarking of standards for both drinking water and wastewater utility businesses. The resulting reports not only serve to strengthen Florida's water systems in the areas of cybersecurity, intrusion, natural disasters, terrorism and

vandalism, but they also benefit other stakeholders because identifying areas of vulnerability within supervisory control and data acquisition (SCADA) systems will benefit many systems in Florida. The new regulations are a driving factor for the increased awareness and concern for improving our water resources and protecting Florida's utilities.

Lead in Schools

FRWA manages and operates Florida's Voluntary Lead Testing Program for Schools and Childcare Facilities for DEP. Partners in this effort include DOE, Florida's Department of Children and Families (DCF) and DOH. To date, over 300 schools in 11 counties have collected over 15,000 samples. Of these, relatively few results are elevated, with less than 2% of the samples resulting in values greater than 15 ppb. More than \$700,000 has been spent through this important program, which serves to protect children's health in Florida while reassuring parents and providing positive public relations for schools and childcare facilities that do not require remediation.

Lead Service Line

FRWA and DEP's SRF program are embarking on a joint program to help Florida water systems complete their lead service line inventory identification program. A pilot project with two small water systems was established to provide assistance in meeting regulatory requirements. Once these pilot projects are completed, no-cost assistance, records, evaluation and visual inspection will be funded through contractors. This will facilitate DEP's evaluation and approval of lead service level inventory spreadsheets.

Recommendations and Conclusions

DEP's Capacity Development Strategy is working effectively to ensure adequate capacity of Florida's public water systems. The programs discussed in this report are examples of successful strategy components. DEP continues to refine the components included in this triennial summary to meet the changing needs of Florida's population and infrastructure.

Initiatives such as the sanitary survey inspection program help systems achieve and maintain capacity through regular inspections, follow-up actions and technical assistance.

The technical assistance provided by FRWA enables systems to improve their viability

through non-regulatory means. DEP monitors the work funded by grants and coordinates closely with FRWA to ensure the continued safe delivery of drinking water to Florida's residents and visitors. Most of these services are free to the public, cover a wide range of technical, managerial and financial topics, and are provided on-site at the water system.

DEP's Source and Drinking Water Program plans to continue these programs, as they are directly related not only to capacity development but also to the program's core mission to ensure the provision of safe drinking water and effective management of the state's water resources. Each program element listed in this report is part of a framework of capacity development related efforts, a framework that results in many opportunities for systems to improve their capacity. Florida's Capacity Development Strategy is continually improving the abilities of public water systems to manage their resources, operate their systems and protect the health of Florida's residents and visitors.

Appendix A: Contact Information

Florida Department of Environmental Protection

Division of Water Resource Management

Source and Drinking Water Program

2600 Blair Stone Road, MS 3520

Tallahassee, FL 32399-2400

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[Source and Drinking Water Program](#)

Florida Department of Health

Bureau of Environmental Health, Water Programs

4052 Bald Cypress Way, Bin A-08

Tallahassee, FL 32399-1710

Bob Vincent, Environmental Administrator

Phone: 850-245-4240

Email: Bob.Vincent@FLhealth.gov

[Bureau of Environmental Health, Water Programs](#)

Florida Rural Water Association

2970 Wellington Circle W., Suite 101

Tallahassee, FL 32309

Gary Williams, Executive Director

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Email: Gary.Williams@FRWA.net

[Florida Rural Water Association](#)

Florida Department of Environmental Protection

Division of Water Restoration Assistance, Drinking Water State Revolving Fund Program

Water Restoration Program

3900 Commonwealth Blvd., MS 3505

Tallahassee, FL 32399-3000

Eric Meyers, Program Administrator

Phone: 850-245-2969

Email: Eric.V.Meyers@FloridaDEP.gov

[Drinking Water State Revolving Fund Program](#)

Florida Department of Environmental Protection

Division of Water Resource Management

Operator Certification Program

2600 Blair Stone Road, MS 3506

Tallahassee, FL 32399-2400

Keith Davie, Environmental Administrator

Phone: 850-245-8617

Email: Keith.Davie@FloridaDEP.gov

[Operator Certification Program](#)

Florida Public Service Commission

2540 Shumard Oak Blvd.

Tallahassee, FL 32399-0850

Tom Ballinger, Director of Division of Engineering

Phone: 850-413-6910

[Florida Public Service Commission](#)

Northwest Florida Water Management District

81 Water Management Drive

Havana, FL 32333-4712

Phone: 850-539-5999

[Northwest Florida Water Management District](#)

Suwannee River Water Management District

9225 County Road 49

Live Oak, FL 32060

Phone: 386-362-1001

[Suwannee River Water Management District](#)

St. Johns River Water Management District

P.O. Box 1429

Palatka, FL 32178-1429

Phone: 386-329-4500

[St. Johns River Water Management District](#)

Southwest Florida Water Management District

2379 Broad St.

Brooksville, FL 34604-6899

Phone: 352-796-7211

[Southwest Florida Water Management District](#)

*Florida Department of Environmental Protection
Florida's Strategy to Improve Public Water Supply*

South Florida Water Management District

3301 Gun Club Road

West Palm Beach, FL 33406

Phone: 561-686-8800

[South Florida Water Management District](#)

Florida Department of Commerce

Community Development Block Grant Program

107 E. Madison St.

Tallahassee, FL 32399

[Community Development Block Grant Program](#)

Division of Emergency Management

2555 Shumard Oak Blvd.

Tallahassee, FL 32399-2100

Phone: 850-815-4000

[Division of Emergency Management](#)

Appendix B: Florida Rural Water Association Activities

Drinking Water Permitting Program

PROGRAM AREA	TYPICAL RELATED SERVICES PROVIDED BY FRWA
Education for systems about Department requirements.	Individualized on-site training in topics such as bacteriological sampling.
Completion of permitting documents – FRWA engineers provide simple permitting for many projects each year related to drinking water compliance.	<p>Assistance with completion of renewals of water management district consumptive use permits and DEP construction permits.</p> <p>Assistance with completion of permit applications related to the operations of drinking water systems.</p> <p>Assistance with completion of permit applications for certain projects when the sanitary survey states that a part of the facility is in use without the proper permit.</p> <p>Assistance in compliance related project permitting, preliminary engineering reports (PERs), and engineering related to effective and affordable projects to attain compliance and receive project funding.</p>
Water source planning.	Assistance (using non-Department sources of funding) to communities in the planning process to find new sources of water and replace sources that are no longer desirable.
"Under the Direct Influence of Surface Water" technical assistance and well evaluation.	Identification of well maintenance and rehabilitation methods for wells that the Department has determined to be under the direct influence of surface water.
Obtaining SRF and other funding.	Assistance for systems applying for such funding.

Drinking Water Compliance Program

PROGRAM AREA	TYPICAL RELATED SERVICES PROVIDED BY FRWA
<p>Education for systems about Department requirements, including maximum contaminant level (MCL) and treatment technique requirements.</p>	<p>Individualized on-site training in topics such as bacteriological sampling.</p> <p>Small-group training. FRWA trainer holds a minimum number of such training sessions each month.</p> <p>Coordination and sponsorship of the Focus on Change annual seminar series for operators and other interested persons. This series is held in several cities throughout Florida; seminar topics include those pertinent to drinking water and wastewater rules and operations.</p> <p>Training using funding from non-Department sources, including small group training sessions for operators and other interested persons on an as-needed basis throughout the state. Subjects of past sessions include operator certification review; water conservation and beneficial use; water chemistry; introduction to operations; how to prepare for a DEP sanitary survey inspection; and corrosion control.</p> <p>Annual technical conference and joint technical conferences with other states; open to FRWA members and nonmembers.</p> <p>Individual assistance and training workshops related to Consumer Confidence Reports (CCRs); these are held in addition to the Department workshops.</p> <p>Individual training related to lead and copper on measuring water quality parameters, conducting desktop studies using software, and making corrective action recommendations to systems. In some cases, FRWA has also assisted systems with permit applications, as mentioned above under "Drinking Water Permitting Program" section (this includes an emergency grant program for installing treatment).</p> <p>Assistance with other compliance related concerns, including the Disinfection Byproduct Rule, Groundwater Rule, and other DEP and SDWA regulations.</p>
<p>Long-term viability of water systems.</p>	<p>Rate reviews – management assistance/training and reviews to improve water system viability.</p> <p>Assistance with obtaining SRF and other funding (refer to information above under permitting).</p> <p>Asset management plan projects for over 20 systems per year.</p>
<p>Sanitary surveys.</p>	<p>Assistance for systems with sanitary survey deficiencies, referred to FRWA by DEP representatives to correct the deficiencies through training. In addition, training classes are provided for water system operators on how to best prepare for a sanitary survey.</p>
<p>Groundwater protection and source water assessment program.</p>	<p>Development of wellhead protection plans/source water plans for systems throughout the state (FRWA groundwater specialists). This is provided for in the groundwater protection component of the FRWA/DEP grant agreement and helps ensure several sources of drinking water are better protected from contamination.</p>
<p>Short-term viability of water systems.</p>	<p>Individualized on-site assistance and training.</p>

Drinking Water Enforcement Program

PROGRAM AREA	RELATED SERVICES PROVIDED BY FRWA
Sanitary survey deficiencies.	Assistance for systems that have sanitary survey deficiencies under enforcement, referred to FRWA by Department representatives to correct the deficiencies through training.
Monitoring problems/other.	Assistance for systems that have failed to monitor referred to FRWA by DEP representatives to correct the deficiencies through training about rule requirements and field sampling procedures. On-site services to help address problems for systems on the Department Return to Compliance (RTC) list.

Emergency Management Program

PROGRAM AREA	RELATED SERVICES PROVIDED BY FRWA
Drinking water drought management.	Assistance for systems that have water shortages due to excessive well drawdown, referred to FRWA by DEP representatives to assist the water management districts to identify systems in need of special assistance by taking field measurements of well pumping levels to establish regional trends. FRWA performs water audits, leak detection, conservation plans and other water use reduction activities.
Hurricane damage assessment (drinking water and wastewater facilities).	Assistance for systems that have incurred storm damage, with on-site inspections and helping systems maintain operational status. This can be from widespread storms or local storm systems.

Drinking Water/Domestic Wastewater Operator Certification and Staffing Program

PROGRAM AREA	RELATED SERVICES PROVIDED BY FRWA
Operator certification.	Operator certification review training (see listing above under "Drinking Water Compliance Program" section). This also allows operators to earn continuing education units required for maintaining certification. It also provides education for prospective operators to pass operator certification exams; this is a high-demand workforce in Florida.
Operator capability.	Many services that enable operators to improve in their ability to operate water systems. These are listed above under "Drinking Water Permitting Program," "Drinking Water Compliance Program" and "Drinking Water Enforcement Program" sections.