

Florida's Strategy to Improve Public Water Supply

Division of Water Resource Management

Florida Department of Environmental Protection

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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; a framework that results in many opportunities for systems to improve their capacity and 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.

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 is assistance to small drinking water systems with improving their ability to operate in compliance with the federal and state SDWA. The Department is responsible for performing sanitary surveys and compliance inspections on all public water systems to ensure each system is (1) running efficiently; and (2) 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 works 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 facilities each year to assist in identifying and eliminating potential problems *before* they affect the facility's performance. They work

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

with representatives of facilities to improve the operation of their systems so that they may achieve and maintain compliance.

For more information, please visit DEP's website at: <https://floridadep.gov/water/source-drinking-water/#7-aids>, and EPA's website at: <https://www.epa.gov/dwcapacity/learn-about-small-drinking-water-systems>.

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.

"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

² Pub.L. 104-182, 110 Stat. c. "Safe Drinking Water Act Amendments of 1996" (1996).

³ EPA, Building the Capacity of Drinking Water Systems, <https://www.epa.gov/dwcapacity/learn-about-small-drinking-water-systems>.

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 Capacity Development Strategy to EPA in May 2000; it was approved in September 2000. Florida's strategy involves a wide range of programs and activities to help ensure that public water systems improve their technical, managerial and financial capabilities. Many of the organizations and programs included in the strategy existed before the formal Capacity Development Program was established. The following organizations and programs have been instrumental in implementing Florida's Capacity Development Strategy since initial EPA approval:

- Florida Department of Health (DOH) Public Drinking Water Program
- Florida Rural Water Association (FRWA)
- DEP Drinking Water State Revolving Fund Program (DEP-DWSRF)
- DEP Operator Certification Program
- Florida Public Service Commission (PSC)
- Florida's five Water Management Districts
- Florida Department of Economic Opportunity, 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. Additional information is available on DEP's Division of Water Resource Management website at:
www.floridadep.gov/water.

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 seven 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 of surface water (UDI).” In general, water under the direct influence 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 technical, managerial and financial capabilities 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,” subsection 62-555.525(1)(a) and (b), F.A.C., define “new systems” for purposes of capacity development as follows:

- Entirely new CWSs or NTNCWS constructed, or commencing operations, on or after October 1, 1999; and
- 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 October 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 in order to receive a construction permit or clearance for use.

The following excerpt from subsection 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 is as follows:

- 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 Financial and Managerial Operation Plan. (A copy of the form used to prepare this Plan is included in this report as Appendix B).

- 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 October 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 May 31, 2020, there were 5,078 active public water systems in Florida: 1,609 CWSs, 776 NTNCWSs, and 2,693 transient, non-community water systems (TNCs). The Department conducts activities to assist all of Florida's 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

⁴ Rule 62-555.357(2), F.A.C.

⁵ Rule 62-555.357(3), F.A.C.

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. Finished water storage;
5. Pumps, pump facilities, and controls;
6. Monitoring and reporting and data verification;
7. System management and operation; and
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 Drinking Water State Revolving Fund (DWSRF) grant conditions. Surveys are performed using a format that includes the eight federally specified elements. This information on the eight required elements is input 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 has also 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, they are conducted in less detail than a sanitary survey, and include an assessment of at least the following:

1. Compliance issues;
2. Sanitary hazards;
3. Wells and pumps;
4. Treatment (primarily disinfection);
5. Operation and maintenance; and
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, systems correct deficiencies soon after they are notified. Systems use the inspection results, 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 event offers training to all new and interested inspectors. This week-long course includes both a classroom session and an onsite facility inspection of a water system. 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, systems whose sanitary survey inspection results are "out of compliance" may be referred to the FRWA if the inspector determines that the system might benefit from technical assistance. 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 been under the DWSRF grant or contract with DEP to provide technical assistance to public water systems serving less than ten thousand persons. Originally, there were only three FRWA Drinking Water “Circuit Riders” providing this technical assistance. Over the years, additional positions have been added 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 Ground Water Technician, six Asset Management Technicians, one DWSRF Program Liaison, one Drinking Water Security/Vulnerability Assessment Technician, and additional supporting financial/managerial staff. Appendix C 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’s residents.

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. Circuit Riders are certified operators; the assistance they provide usually relates to the technical aspects of water system operations. They also provide assistance with rate studies and other financial or managerial matters. Most Circuit Rider technical assistance visits help water systems remain in or achieve compliance. From June 2019 through May 2020, the Circuit Riders made 4,906 technical assistance visits.

The FRWA Water Trainer position provides comprehensive technical assistance and training to water systems using surface water and groundwater systems with complex treatment. From June 2019 through May 2020, this position has:

- Developed, established, and held more than 29 in-person water treatment plant operator sessions for ground water and surface water plants, with 2,208 attendees; 1,716 operators earned Continuing Education Units to help them maintain their operator licenses. These sessions help reduce the shortage of effective water treatment operators at facilities and support protection of public health.

- Developed, established and held nine water distribution operator training sessions, including two Drinking Water Certification Review classes.
- Developed an initial plan to train operators on how to evaluate and calculate compliance with the disinfection requirements in subsection 62-555.350(6), F.A.C.
- Assisted DEP in the evaluation of disinfection byproducts compliance issues.

FRWA's Financial and Managerial staff provide assistance with financial and managerial capacity development. From June 2019 through May 2020, this staff has:

- Certified six utility professionals under the [Water University/National Rural Water Association Utility Management Certification Program](https://wateruniversity.org/) (<https://wateruniversity.org/>) 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 one asset-management workshop 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 preventative maintenance without relying on governmental grants/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 comprised 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.

- Assisted with long-range planning/capacity analysis for eight systems. This is the evaluation of 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 utility operation and compliance concerns to help utilities stay effective, including:
 - Customer relations/services;
 - Public Notices;
 - Consumer Confidence reports;
 - Operation and Maintenance manuals;
 - Emergency Response Planning; and
 - Enhanced management tools and software.

From June 2019 through May 2020, FRWA's Source and Ground Water technicians promoted water conservation and implementation recommendations through source water and wellhead plans at 217 systems. Included in these plans are: best management practices (BMPs) for contaminants that are in source water protection areas; proper septic tank preventative maintenance information; information on household hazardous materials; information on the best fertilizers to prevent pollution of our waters; 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.

Two engineering positions assist approximately 128 water systems statewide annually. They assist systems with challenges related to minor permitting, compliance, water quality, security, health,

environmental issues, capacity analysis, areas of operation, maintenance and management, and issues related to providing safe, ample, and reliable water to all people in Florida.

Activities include:

- 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 providing 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, preventative maintenance, operation and maintenance, conservation and customer relations/services.

The two FRWA engineers assisted systems on 132 projects from June 2019 through May 2020. This includes the completion of multiple projects for the same system.

Between June 2019 and May 2020, the FRWA held 95 in-person training sessions with 3,388 attendees. Available training sessions are listed on the FRWA website at <https://www.frwa.net/>. Examples of training sessions currently provided include: Financial Resiliency for Small Water Systems; Effective Utility Management; Water Distribution Certification; and Comprehensive Safety Training. 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. Examples of 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.

The 2020 Focus on Change events added to the FRWA legacy of presenting informative and successful training sessions to industry professionals. This year marked the thirtieth anniversary of the partnership between FRWA and DEP. The annual series of six single-day conferences provides an expanse of information to attendees. DEP representatives presented information on the latest regulatory changes and provisions, and representatives from DEP and other entities held both joint and break-out sessions on topics such as disaster preparedness and drinking water disinfection byproducts. Over 1,500 attendees participated in the 2020 events at six locations throughout Florida (Pompano Beach, Punta Gorda, Ocala, Haines City, Lake City, and Panama City).

FRWA employs a Training/Technical Assistance Specialist, funded by EPA, who conducts training sessions on compliance subjects throughout the state.

In 2019, FRWA enhanced emergency response resources with the purchase of a truck with a mounted crane and an equipment trailer to be used to deliver equipment to systems in need. FRWA also acquired several additional generators to better meet the needs of utilities during an emergency.

In September of 2019, FRWA received the 2019 National Rural Water Association's Outstanding Achievement in Member Services. The award was presented during the annual Tribute to Excellence awards ceremony at the WaterPro Conference in Nashville, Tennessee. FRWA was selected from Rural Water Associations nationwide for this annual award.

Additional FRWA Programs to Aid Water Utilities in Florida:

Apprenticeship Program: The FRWA Apprenticeship Program, launched in October 2019, assists water and wastewater utilities to develop skilled and trained employees through apprenticeship. Apprenticeship is a tried and true method of enhancing employees' skills and technical knowledge. The goal is to provide future work force the technical training and on-the-job learning 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). New hires, as well as current employees, are eligible for the two-year program. Working with the Veteran's Administration and various Workforce Development Programs throughout the state, the program will aid in maintaining diversity and opportunity within the aging water operator workforce. FRWA's goal is to provide the future work force the technical training and on-the job learning needed to become effective and certified operators.

In addition, there is also a Pre-Apprenticeship Program geared towards developing the water industry through working with high school programs statewide. Outreach through the DOE, Workforce Development, and various technical programs is helping to increase understanding and opportunities for youth to enter the industry.

WATER (Water Assistance Tracking and Emergency Response) Tracker: Since July 1, 2019, 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. The original date to "go live" was scheduled to be June 1, 2020, but due to the unanticipated impact of the COVID-19 pandemic, the roll out of the new system, named WATER Tracker, was advanced to April 13, 2020.

Florida's WATER Tracker combines 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 the drinking water and wastewater operations for Florida. 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, along with the reported needs of a utility, are imperative to assess damage, mobilize resources and distribute aid.

Florida was spared any official hurricane or tropical storm landfalls during the 2019 hurricane season, although Nestor came ashore near St. Vincent Island on October 19, 2019 as a "post-tropical cyclone." The most memorable storm of the 2019 season was Hurricane Dorian. Working with DEP, FlaWARN and FRWA went into emergency response mode while this catastrophic Category 5 hurricane threatened Floridians for days as it crawled through the Bahamas. Fortunately, the storm only grazed Florida as it turned north, and its fatal eye wall passed fewer than 100 miles from the Atlantic coast.

Prior to the October 2018 impact of Hurricane Michael on the Panhandle of Florida, DEP, the Southeast Rural Community Assistance Project (SERCAP), and FlaWARN located staff in the Central DEP District Office. The purpose was to prepare for immediate post-storm contact with utilities in order to assess operational status and manage available resources for deployment. After the initial impact of Hurricane Michael, SERCAP, together with DEP and FlaWARN, assisted 63 systems impacted by wind damage, water damage, loss of electrical power, and/or loss of pressure. Staging areas were set up in Port St. Joe and Panama City. SERCAP continues to work with DEP and the Florida Department of Emergency Management (DEM) on recovery efforts in the aftermath of Hurricane Michael.

In September 2017, Hurricane Irma moved through Florida, impacting two-thirds of the water utilities in the state. FlaWARN received over 130 requests for assistance. South Florida was the hardest hit area of the state. Resources were staged at the City of Punta Gorda Utilities for expedient deployment of assets to Charlotte County, Collier County, and Lee County. After utilities in Palm Beach County were operational, FlaWARN members deployed a multi-utility crew across the state to help counties until power was restored. Emergency response efforts lasted over a month.

RevPlan: FRWA has partnered with Raftelis, an information technology company, to offer small water utilities in Florida a free online tool 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 the utility funding requirements and the impact rate increases may have on ratepayers. Numerous Florida water utilities have taken advantage of RevPlan for their financial planning and asset management integration.

DEP State Revolving Fund (SRF) Engineers and Project Liaison: The SRF Professional Engineers (PEs) work with SRF applicants for water and wastewater systems and the systems' engineers as they submit Requests for Inclusion (RFIs). The RFI process makes sure 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. They 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 periodic site visits to ensure compliance with SRF procedures and standards. The SRF Project Liaison also functions as an intermediary between stakeholders (such as sponsors, DEP, FRWA, engineers, consultants, etc.) involved in the funding process for utilities. DEP appropriates approximately \$250 million dollars each year to water, wastewater, storm water, and other projects through low-cost loans from the SRF. This assistance is designed to minimize project costs and delays, and to inform members/sponsors on what to anticipate throughout the process.

Energy Efficiency Program: On average, a water utility spends thirty percent 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 last 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 to FRWA members.

Drinking Water Security/Vulnerability Assessment Program: Due to several catastrophic events that have taken place 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 cyber security measures. Pursuant to a requirement in the American Water Infrastructure Act of 2018 (AWIA), FRWA was selected by DEP to conduct a drinking water and wastewater Security and Vulnerability Assessment program throughout Florida. Starting in September 2018, FRWA met with water 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 that have been developed with the drafting of the AWIA are a driving factor for the increased awareness and concern for improving our water resources and protecting Florida's utilities.

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 each examples of successful strategy components. DEP continues to refine the components included in this triennial summary to stay in synch with 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 effectively manage 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

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Florida Department of Health

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Florida Department of Environmental Protection

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Web: <https://floridadep.gov/wra/srf>

Florida Department of Environmental Protection

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Phone: 850-245-8384
Email: Ronald.McCulley@FloridaDEP.gov
Web: <https://floridadep.gov/water/certification-restoration>

Florida Public Service Commission

2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850
Tom Ballinger, Director of Division of Engineering
Phone: 850-413-6910
Web: <http://www.psc.state.fl.us>

Northwest Florida Water Management District

Headquarters Office
81 Water Management Drive
Havana, Florida 32333-4712
Phone: 850-539-5999
Web: <http://www.nwfwater.com/>

Suwannee River Water Management District

9225 CR 49
Live Oak, Florida 32060
Phone: 386-362-1001
Web: <http://www.srwmd.state.fl.us/>

St. Johns River Water Management District

Headquarters Office

P.O. Box 1429

Palatka, Florida 32178-1429

Phone: 386-329-4500

Web: <http://www.sjrwmd.com/>

Southwest Florida Water Management District

Headquarters Office

2379 Broad Street

Brooksville, Florida 34604-6899

Phone: 352-796-7211

Web: <http://www.swfwmd.state.fl.us/>

South Florida Water Management District

3301 Gun Club Road

West Palm Beach, Florida 33406-3089

Phone: 561-686-8800

Web: <https://www.sfwmd.gov/>

Florida Department of Economic Opportunity

Community Development Block Grant Program

107 E. Madison Street

Tallahassee, Florida 32399

Phone: 850-717-8417

Web: <http://www.floridajobs.org/community-planning-and-development/assistance-for-governments-and-organizations/florida-small-cities-community-development-block-grant-program>

Division of Emergency Management

2555 Shumard Oak Boulevard

Tallahassee, Florida 32399-2100

Phone: 850-413-4324

Web: <http://www.floridadisaster.org>

***Appendix B: DEP Form 62-555.900(20) – New Water System Capacity Development
Financial and Managerial Operations Plan***

[See next two pages for form]



NEW WATER SYSTEM CAPACITY DEVELOPMENT FINANCIAL AND MANAGERIAL OPERATIONS PLAN

INSTRUCTIONS: This operations plan shall be completed and submitted for the following public water systems, which are defined as "new systems" for the purposes of capacity development and which are hereinafter referred to as "new systems": entirely new community or non-transient non-community water systems constructed, or commencing operations, on or after October 1, 1999; and water systems that previously did not meet the definition of a community water system (CWS) or the definition of a non-transient non-community water system (NTNCWS) but that grow to become a CWS or NTNCWS through an infrastructure expansion constructed, or placed into operation, on or after October 1, 1999 (water systems that previously did not meet the definition of a CWS or the definition of an 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). Complete and submit one copy of this operations plan, including all required attachments, to the appropriate Department of Environmental Protection District Office or Approved County Health Department at the following times:

- with the construction permit application for the "new system" or for the infrastructure expansion creating the "new system;" or if the construction permit for the "new system" or infrastructure expansion creating the "new system" was issued by the Department prior to the effective date of Rule 62-555.525, F.A.C., (9-22-99), with the certification of construction completion for the "new system" or for the infrastructure expansion creating the "new system"; or, if a construction permit is not required for the "new system," within 90 days after commencing operations as a CWS or NTNCWS;
- within 90 days after the third anniversary of the "new system" commencing operations as a CWS or NTNCWS; and
- within 90 days after a change in ownership of the "new system" if the change in ownership occurs after the effective date of this form.

Complete all parts of this operations plan for "new systems" that will not be regulated by the Florida Public Service Commission (FPSC), and complete only Parts I, IV, V, VI, and VII of this operations plan for "new systems" that will be regulated by the FPSC. All information provided in this operations plan, including all attachments to this plan, shall be typed or printed in ink. Refer to the *New Water System Capacity Development Planning Manual* as adopted in Rule 62-555.335, F.A.C., for recommended formats to use when preparing attachments to this operations plan. The *New Water System Capacity Development Planning Manual* includes criteria the Department uses to evaluate information in operations plans and includes a description of how the Department uses information in operations plans.

I. General Information		
Public Water System (PWS) Name:		
PWS Identification Number:*		
PWS Type:	Community Water System (CWS)	Non-Transient Non-Community Water System (NTNCWS)
Number of Service Connections:†	Total Population Served: †	
PWS Owner:		
Contact Person:	Contact Person's Title:	
Contact Person's Mailing Address:		
City:	State:	Zip Code:
Contact Person's Telephone Number:	Contact Person's Fax Number:	
Contact Person's E-Mail Address:		

* This information is required only if the PWS has already commenced operations as a PWS (i.e., only if the PWS is an existing PWS).

† At the time the PWS commences operations as a CWS or NTNCWS or, for a PWS that has already commenced operations as a CWS or NTNCWS, at the time of submittal of this operations plan.

II. Projected or Actual Expenses

Attach an expenses plan showing all projected or actual water system expenses for a five-year planning period. If this operations plan is being submitted with a construction permit application or with a certification of construction completion or within 90 days after the "new system" commences operations as a CWS or NTNCWS, the five-year expenses plan shall start at the date the "new system" is expected to, or did, commence operations as a CWS or NTNCWS. If this operations plan is being submitted as an updated plan after the third anniversary of the "new system" commencing operations as a CWS or NTNCWS, the five-year expenses plan shall start at the date of said third anniversary. If this operations plan is being submitted as an updated plan after a change in ownership of the "new system," the five-year expenses plan shall start at the date ownership of the "new system" changes. Include only the following two types of information: (1) the nature of the expense (e.g., salary of an operator); and (2) the dollar amount of the expense. Show only expenses pertaining to the water system. Include expenses for operators, persons maintaining the water system between operator visits, purchased utilities, water treatment chemicals, supplies for routine upkeep, and analytical testing. Other expenses under 10% of the total projected or actual amount must be listed but need not be described.

III. Projected or Actual Income

Attach an income plan showing projected or actual income and funds used to pay for all water system expenses for a five-year planning period. If this operations plan is being submitted with a construction permit application or with a certification of construction completion or within 90 days after the "new system" commences operations as a CWS or NTNCWS, the five-year expenses plan shall start at the date the "new system" is expected to, or did, commence operations as a CWS or NTNCWS. If this operations plan is being submitted as an updated plan after the third anniversary of the "new system" commencing operations as a CWS or NTNCWS, the five-year income plan shall start at the date of said third anniversary. If this operations plan is being submitted as an updated plan after a change in ownership of the "new system," the five-year income plan shall start at the date ownership of the "new system" changes. Show only income and funds used to pay for water system expenses. Include only the following two types of information: (1) the nature of each source of income or funds (e.g., revenue from the sale of water to customers, interest income, funding from a city, receipt of a loan or grant, or a personal bank account); and (2) the dollar amount to be provided by each source of income or funds. Report all projected or actual amounts; however, a description of each amount under 10% of the total projected or actual amount is not necessary.

IV. Management Capacity

Attach a list of positions and employees, including position titles and responsibilities, licensure requirements for the positions, and employee names and qualifications. If a position is vacant, indicate the projected hiring date. Include the license class and number for operators. Indicate the positions/employees who are responsible for acting on behalf of the water system in case of emergency, to spend money, or to make other decisions. Provide telephone numbers and addresses for these responsible positions/employees. Show only position/employee information pertaining to the watersystem.

V. Plans, Manuals, and Programs

Depending upon type and size, water systems may be required to have written plans, manuals, and programs as described in Department rules or in the *New Water System Capacity Development Planning Manual*. Contact the State Emergency Response Commission (SERC) regarding Risk Management Plans, and contact the appropriate Department of Environmental Protection (DEP) District Office or Approved County Health Department (ACHD) regarding all other plans, manuals, and programs listed below.

Indicate below which plans, manuals, and programs the SERC or the appropriate DEP District Office or ACHD says will be required for your water system and the due dates for the required plans, manuals, and programs.

Plan, Manual, or Program	Required? (Y/N)			Initial Due Date (MM/YY)
Bacteriological Monitoring Plan				
Cross-Connection Control Program				
Disinfectants/Disinfection Byproducts Monitoring Plan				
Emergency Preparedness/Response Plan				
Operation & Maintenance Manual				
Risk Management Plan				
Sampling Plan for Lead and Copper Tap Samples and Water Quality Parameters				

VI. Alternate Means of Providing Water Service

Attach an explanation of why you are proposing to provide water service instead of connecting to another public water system. Include a list of the alternatives considered and the financial, managerial, and technical reasons for deciding to provide water service.

VII. Certification

I am duly authorized to sign this operations plan on behalf of the PWS identified in Part I of this operations plan. I certify that the information provided in this operations plan and on the attachments to this operations plan is true and accurate to the best of my knowledge and belief. I also certify that, for the five-year planning period covered by this operations plan, the PWS expects to collect, or already has, sufficient funds to equal or exceed its forecasted expenses, enabling the PWS to deliver drinking water meeting regulatory standards.

Signature and Date

Printed or Typed Name

Title

Appendix C: Florida Rural Water Association Activities

Drinking Water Permitting Program

PROGRAM AREA	TYPICAL RELATED SERVICES PROVIDED BY FRWA
Education for systems about Department requirements	Provides 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	- Provides assistance with completion of renewals of water management district consumptive use permits and DEP construction permits - Provides assistance with completion of permit applications related to the operations of drinking water systems - Provides assistance with completion of permit applications for certain projects in which the sanitary survey states that a part of the facility is in use without the proper permit - Provides 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.
Water source planning	Provides assistance, using non-Department sources of funding, to communities in the planning process to find new sources of water to replace sources that are no longer desirable
"Under the Direct Influence of Surface Water" technical assistance and well evaluation	Identifies 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	Provides assistance for systems applying for such funding

Drinking Water Compliance Program

PROGRAM AREA	TYPICAL RELATED SERVICES PROVIDED BY FRWA
Education for systems about Department requirements, including maximum contaminant level (MCL) and treatment technique requirements	- Provides individualized on-site training in topics such as bacteriological sampling - Conducts small-group training; FRWA Trainer holds at least a minimum number of such training sessions each month - Coordinates and sponsors "Focus on Change," the annual seminar series for operators and other interested persons held at several cities throughout Florida; seminar topics include those pertinent to drinking water and wastewater rules and operations - Provides training using funding from non-Department sources: 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 Department sanitary survey inspection, and corrosion control

PROGRAM AREA	TYPICAL RELATED SERVICES PROVIDED BY FRWA
Education for systems about Department requirements, including maximum contaminant level (MCL) and treatment technique requirements <i>(continued from previous page)</i>	• Conducts annual technical conference and joint technical conferences with other states; open to FRWA members and nonmembers • Consumer Confidence Reports (CCRs): provides individual assistance and training workshops held in addition to the Department workshops • Lead and copper: provides individual training 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) • Provides assistance with other compliance-related concerns, including Disinfection Byproduct Rule, Ground Water Rule, and other DEP and SDWA regulations
Long-term viability of water systems	• Conducts rate reviews; management assistance/training and reviews to improve water system viability • Provides assistance with obtaining SRF and other funding – refer to information above under permitting • Performs asset management plan projects for over 20 systems per year
Sanitary Surveys	Provides assistance for systems with sanitary survey deficiencies, referred by the Department to FRWA to correct the deficiencies through training; in addition, training classes provided for water system operators on how to best prepare for a sanitary survey
Groundwater protection and source water assessment program	Develops 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
Short-term viability of water systems	Provides individualized on-site assistance and training

Drinking Water Enforcement Program

PROGRAM AREA	RELATED SERVICES PROVIDED BY FRWA
Sanitary Survey Deficiencies	Provides 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	Provides assistance for systems that have failed to monitor, referred to FRWA by Department representatives to correct the deficiencies through training about rule requirements and field sampling procedures; provision of on-site services to help address problems which have systems on the Department Return to Compliance (RTC) list

Emergency Management Program

PROGRAM AREA	RELATED SERVICES PROVIDED BY FRWA
Drinking Water Drought management	Provide assistance for systems that have water shortages due to excessive well drawdown, referred to FRWA by DEP representatives to assist the Water Management Districts 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)	Provide assistance for systems that have suffered storm damage through on-site inspections and assisting systems to 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	Provides operator certification review training (see listing above under "Drinking Water Compliance Program" section) - Allows operators to earn continuing education units required for maintaining certification - Provides education for prospective operators to pass operator certification exams; this is a high-demand workforce in Florida
Operator Capability	Enables operators to improve in their abilities to operate water systems through provision of many services listed above under "Drinking Water Permitting Program," "Drinking Water Compliance Program," and "Drinking Water Enforcement Program" sections