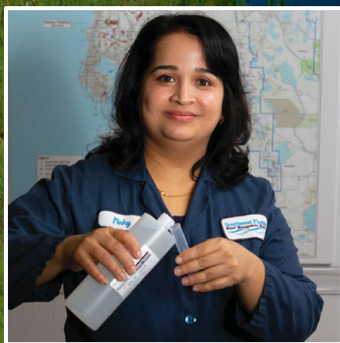


2023–2027 Strategic Plan

Adopted
2/28/2023

Southwest Florida
Water Management District



Message from the Chair

The citizens of Florida and our future depend on available and healthy drinking water. Healthy natural water resources, for recreational purposes, are of equal importance. Florida is a state defined by its water resources. When people think of Florida, they envision our fine sand beaches, our scenic rivers, our natural wonders like first-magnitude springs and our many lakes. Water provides us with life, recreation, and the opportunity to prosper.

Growing up in Minnesota, land of (at least) 10,000 lakes, ingrained in me a love of water resources and the outdoors. Today, as a Floridian, I am blessed daily with the richness of our natural resources. I want to ensure that this heritage is available for future generations. That's the main reason I asked to serve on the Southwest Florida Water Management District (District) Governing Board.

My approach to business, public service or any endeavor is to employ common sense solutions and to always challenge the status quo. Life changes. Circumstances change. Complacency is the enemy of progress. During my five-plus years on the Governing Board, I've come to appreciate that the true strength of the District has been its ability to adapt, to continuously gather new data, reassess direction and adjust course as necessary.

When over-reliance on groundwater began impacting the aquifers and environment, the District shifted gears, focusing on conservation and the development of alternative water resources. We've been able to significantly reduce groundwater withdrawals, promote environmental recovery and still meet the demands of growth. And today the District leads the state with the lowest per capita water usage.

I'm an advocate of Culture to accomplish great things. I'm tremendously impressed with the knowledge, enthusiasm, approach and responsiveness of the District leadership, staff, and my fellow Board members.



Joel Schleicher
Chair

That resiliency is needed as the District's responsibilities affect every person in the region. The District manages water resources across 16 counties with a functional population of nearly 7 million people. The District's functional population is projected to grow to nearly 8.4 million by 2040. The District's mission is to ensure water supply needs are met, protect the water resources, and reduce the risks of flooding.

As one of the fastest growing states, Florida's water supply needs are growing. Yet, the District is able to proactively continue to quench the thirst of our expanding population while also protecting our precious water resources. We can prosper economically and protect the environment. However, to be successful, we must wisely use our time, taxpayer dollars, and our people. That's why we have a Strategic Plan – which includes evaluating opportunities 20 years in the future.

The District's Strategic Plan provides clarity and direction regarding our mission and our priorities. The Plan identifies who we are, what we do, and how we do it. It also highlights a five-year plan of action to focus our resources and maximize benefits for both the public and environment.

The Plan prioritizes water resource issues in each of our four planning regions. For example, in our Northern Planning Region one of the objectives is to enhance our five first-magnitude springs, implementing projects to improve water quality and natural systems. One critical initiative helps fund projects that move residents off traditional septic tanks and onto sewer systems, thereby reducing nutrient pollution into the springs. As another example, in the Heartland and Southern regions, we are helping Polk, Manatee, Sarasota, Charlotte and DeSoto counties to develop 40-50 million gallons a day of drinking water to meet the growing needs of their residents, tourists, and economy.

Across all planning regions, reclaimed water is a critical component to ensuring a sustainable water supply. Reclaimed water is wastewater that has been treated and reused beneficially. Once again, the District is a national leader in the use of reclaimed water, beneficially reusing 52 percent of our wastewater, compared to only 7 percent nationally. Through our conservation, reuse efforts and the development of alternative water sources, we have been able to reduce not only groundwater pumping but also overall water use, even with our ever-growing population.

While this Plan focuses on a roadmap for the next 5 years, the District's planning efforts extend over 20 years and more. Some of our most critical documents are our Regional Water Supply Plans (RWSP) for each of the District's four planning regions. Each RWSP identifies how much water is being used and for what purposes, the projected needs over the next 20 years, and the potential sources and costs to meet those needs.

To preserve the availability of the less expensive groundwater, we look for alternative water sources. The District expects to contribute more than \$600 million to regional water supply authorities over the next 10 years for the development of alternative water resources.

Message from the Chair

Meeting the District’s mission clearly does not come without well thought out and implemented investments. The District’s ability to fund these projects and meet its responsibilities is dependent on excellent fiscal stewardship of taxpayer dollars. The District continually looks for means of improved costs/effectiveness, and maximizing taxpayer investment in our mission, including the use of developing technology. Our ultimate stakeholders are the taxpayers. They deserve to know their taxes are used wisely to maximize the public benefit. We are proud that all the above accomplishments have been achieved while also reducing the District’s millage rate for 10 years in a row for an aggregate reduction of 42.5%.

The success of the District rests on the pillars of sound science, adaptive management, and inclusion. Science guides our decision-making processes. We also recognize that we must remain open to new information, to new ideas, to new approaches, and adapt as necessary to achieve the best outcomes.

In the end, the success of our mission rests not only on the District staff and Governing Board; but, also on our ability to collaborate with our stakeholders. The greatest successes are those partnerships where we work together toward shared interests while respecting different perspectives.

I am honored to have been selected by the Governor to serve on the Governing Board and humbled to be chosen by my peers to serve as Chair! Our mission is critical to the future of Florida, and I am confident that we have the resources, resilience, and resolve to succeed!!



Joel Schleicher
Governing Board Chair

Governing Board

The Governing Board establishes policies for the District. Board members are unpaid citizen volunteers appointed by the Governor and confirmed by the Florida Senate.



Joel Schleicher
Chair
Charlotte, Sarasota



Ed Armstrong
Vice Chair
Pinellas



Michelle Williamson
Secretary
Hillsborough



John Mitten
Treasurer
Hernando, Marion



Kelly S. Rice
Former Chair
Citrus, Lake, Levy, Sumter



Ashley Bell Barnett
Polk



Jack Bispham
Manatee



John Hall
Polk

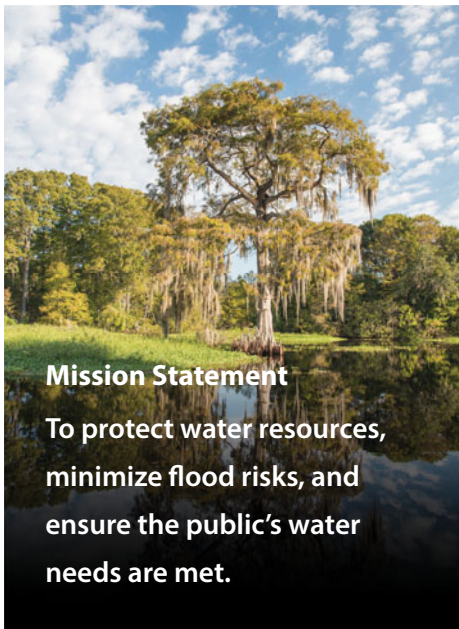
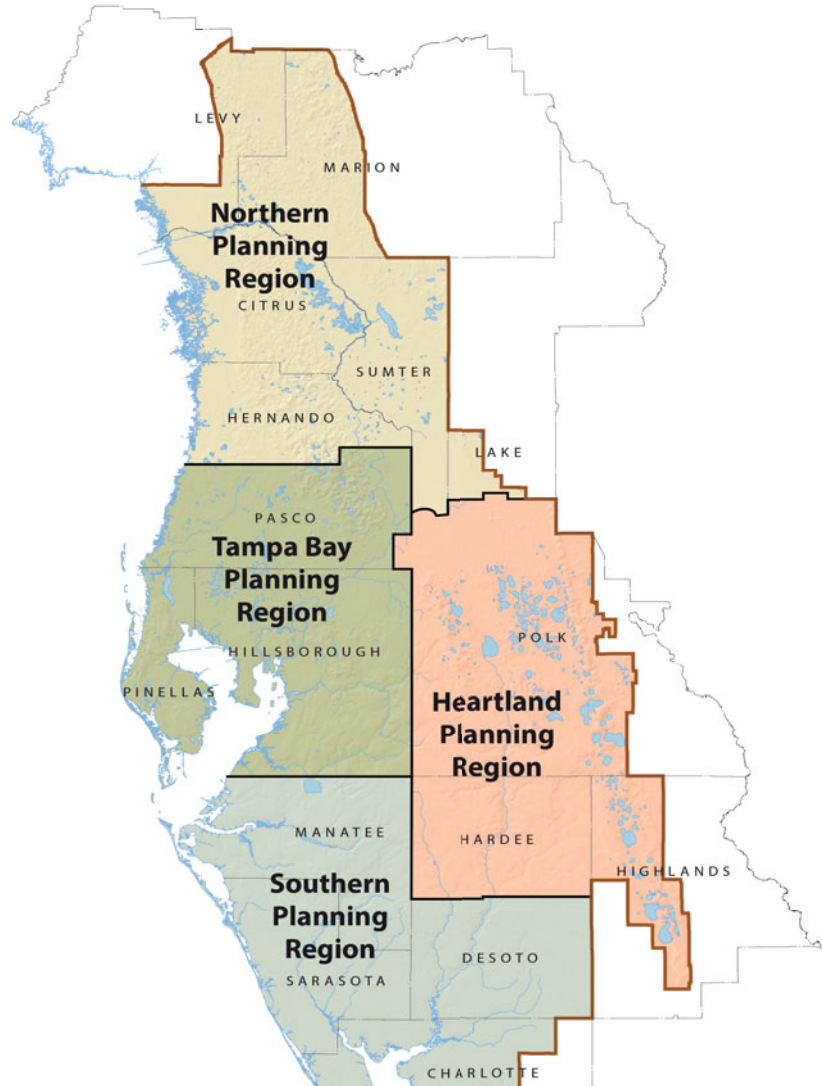
Table of Contents

Overview	4–5
Strategic Initiatives	6–9
Regional Priorities and Objectives	10–21
Core Business Processes	22–23

Overview

The Southwest Florida Water Management District (District) is a science-based organization responsible for managing and protecting water resources in west-central Florida. The District's job is to ensure there are adequate water supplies to meet the needs of current and future users while protecting and restoring water and related natural resources. (See Mission Statement.)

The District encompasses all or part of 16 counties, from Levy County in the north to Charlotte County in the south. It extends from the Gulf of Mexico east to the highlands of central Florida. The District contains 97 local governments spread over approximately 10,000 square miles, with an estimated 5.4 million permanent residents in 2020. This figure does not include seasonal residents and tourists. For planning purposes, the District is divided into four regions: Northern, Tampa Bay, Heartland and Southern. (See District Planning Regions map.)



Mission Statement

To protect water resources, minimize flood risks, and ensure the public's water needs are met.

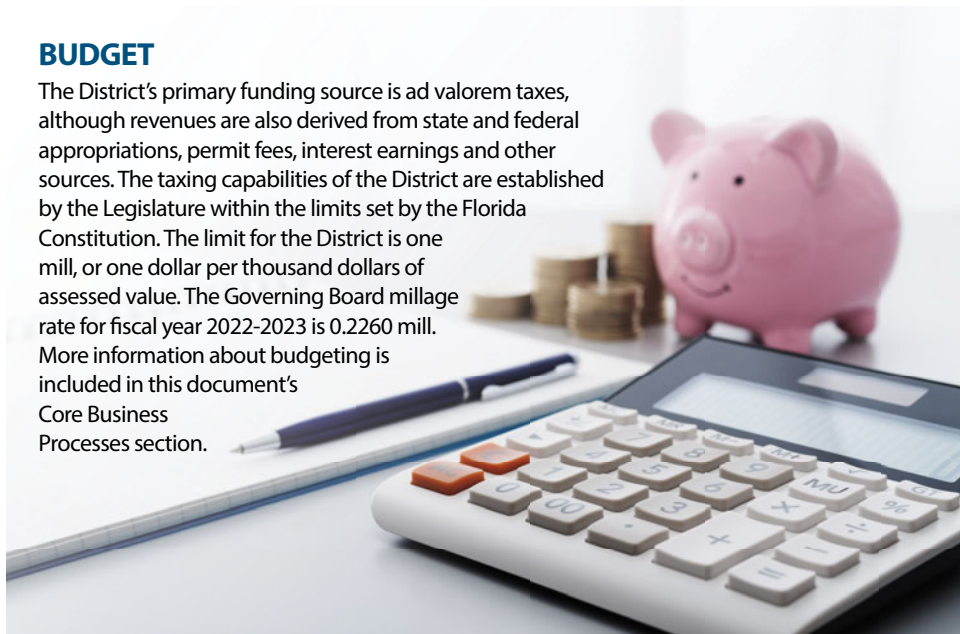


GOVERNING BOARD

A 13-member Governing Board establishes policies and sets the budget for the District. Appointed by the Governor and confirmed by the Senate, Governing Board members are unpaid volunteers representing varied backgrounds and interests. Board members, who must live in the District, serve four-year terms.

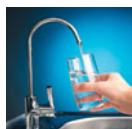
BUDGET

The District's primary funding source is ad valorem taxes, although revenues are also derived from state and federal appropriations, permit fees, interest earnings and other sources. The taxing capabilities of the District are established by the Legislature within the limits set by the Florida Constitution. The limit for the District is one mill, or one dollar per thousand dollars of assessed value. The Governing Board millage rate for fiscal year 2022-2023 is 0.2260 mill. More information about budgeting is included in this document's Core Business Processes section.



CORE MISSION

Florida Statutes, primarily Chapter 373, authorize the District to direct a range of initiatives, programs and actions. These responsibilities can be grouped under four general areas, which form the District's core mission: water supply, water quality, natural systems and flood protection. The District has established a goal for each of these areas of responsibility:



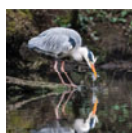
Water Supply Goal:

Ensure an adequate supply of water to provide for all existing and future reasonable and beneficial uses while protecting and maintaining water resources and related natural systems.



Water Quality Goal:

Protect and improve water quality to sustain the water resources, environment, economy and quality of life.



Natural Systems Goal:

Preserve, protect and restore natural systems to support their natural hydrologic and ecological functions.



Flood Protection Goal:

Minimize flood damage to protect people, property, infrastructure and investment.

Strategic Initiatives

The District is implementing a wide array of programs and projects to meet these four goals. These activities are grouped under 11 Strategic Initiatives:

- Regional Water Supply Planning
- Alternative Water Supplies
- Reclaimed Water
- Water Conservation
- Water Quality Assessment and Planning
- Water Quality Maintenance and Improvement
- Minimum Flows and Levels (MFLs) Establishment and Monitoring
- Conservation and Restoration
- Floodplain Management
- Flood Protection Maintenance and Improvement
- Emergency Flood Response

Regional Priorities

While the Strategic Initiatives identify activities implemented throughout the District, the water resource needs vary from one planning region to another. The top water resource priorities for each region, along with measurable objectives, are identified in the Regional Priorities section of this document.

Core Business Processes

In addition to adhering to its adopted values, the District must excel in eight core business processes to successfully achieve its Strategic Initiatives:

- Water Resources Planning and Monitoring
- Innovative Projects
- Financial Sustainability
- Regulation
- Land Management
- Structure Operations
- Knowledge Management
- Engagement

Water Supply

1. Regional Water Supply Planning

Goal Statement: Identify, communicate and promote consensus on the strategies and resources necessary to meet future reasonable and beneficial water supply needs.

The District's regional water supply planning effort provides the framework for future water supply management decisions and is a statutory requirement where current water sources are not adequate to supply existing and future uses while sustaining natural resources (F.S., 373.709(1)). This is a collaborative, transparent effort involving local governments, utilities, the agricultural community, business representatives, environmental organizations and other stakeholders.

STRATEGIES

- Develop accurate and reliable demand projections
- Identify sufficient regional water supply sources to meet projected demands
- Encourage the development and use of regional water supply authorities to plan and coordinate water supply solutions
- Incorporate adaptive management processes in water supply planning
- Coordinate with other water management districts on water supply and regulation approaches
- Proactively coordinate with water supply utilities
- Demonstrate the District's financial commitment to assist in the development of regional water supply needs

2. Alternative Water Supplies

Goal Statement: Increase development of alternative sources of water to ensure groundwater and surface water sustainability.

Alternative water supply (AWS) refers to any nontraditional source of water that reduces the region's dependency on fresh groundwater. From 1990 through 2020, the District has helped to develop more than 389 million gallons per day (mgd) of alternative water supplies, including reuse and water conservation benefits and new potable water sources.

STRATEGIES

- Develop alternative water supply sources that include surface water capture, desalination and brackish groundwater systems
- Continue to promote partnerships with agriculture through District programs such as the Facilitating Agricultural Resource Management Systems (FARMS) Program
- Partner with regional entities to provide alternative water supplies
- Continue to leverage District funds to facilitate the development of alternative water supplies
- Continue to support research and development of aquifer storage and recovery technology
- Promote conjunctive use of surface and groundwater resources through regulation and funding incentives

3. Reclaimed Water

Goal Statement: Maximize beneficial use of reclaimed water to offset potable water supplies and restore water levels and natural systems.

Reclaimed water is wastewater that has received at least secondary treatment and disinfection and is used for a beneficial purpose, such as irrigation, manufacturing processes or power generation. By offsetting demand for groundwater and surface water, this alternative water supply reduces stress on environmental systems, provides economic benefits by delaying costly water system expansions and reduces the need to discharge wastewater effluent to surface waters. More than 212 mgd of reclaimed water is being beneficially reused in the District, accounting for more than 16 percent of overall water use. In addition, the District's Governing Board recently identified potable reuse as a priority for the District to achieve its goal of 75 percent reuse of available wastewater by 2040.

STRATEGIES

- Increase availability by increasing storage capacity
- Increase availability by promoting interconnects between reclaimed water utilities
- Leverage District funds to maximize efficient and beneficial use of reclaimed water
- Improve efficiency through measures such as metering and volume-based pricing
- Continue to support reclaimed water research, monitoring and public education



Reclaimed Water (Hillsborough County).

- Partner with cooperators for the development of potable reuse projects, with priority for regional entities
- Promote the beneficial use of reclaimed water and the offset of traditional water supplies through the existing regulatory framework
- Promote the use of reclaimed water for potable recharge and environmental enhancement projects

4. Water Conservation

Goal Statement: Enhance efficiencies in all water-use sectors to ensure beneficial use.

Water conservation is achieved through education, financial incentives and various regulatory and non-regulatory programs. Per capita water usage in the District has regularly ranked as the lowest in the state.

STRATEGIES

- Promote water conservation through public engagement programs
- Support research and implementation of conservation techniques and practices
- Promote water-conserving rate structures
- Utilize financial incentives to further encourage effective conservation practices through District programs such as the WISE program
- Utilize regulatory programs to establish effective conservation practices
- Continue to promote partnerships with agriculture through District programs such as the FARMS Program

Water Quality

1. Assessment and Planning

Goal Statement: Collect and analyze data to determine local and regional water quality status and trends to support resource management decisions and restoration initiatives.

Those who manage Florida's water resources must have access to accurate and timely information to support good management decisions. The District's water quality monitoring programs and networks help provide these data.

STRATEGIES

- Continue to develop and maintain long-term water quality monitoring networks to collect, analyze and distribute accurate water quality information
 - Coastal Groundwater Quality, Inland Water Quality and Water Use Permit Monitoring Networks
 - Springs and Aquifer Nutrient Monitoring Networks
 - Surface Water Quality Monitoring Networks
- Continue to support the District's internal data governance process
- Continue to promote partnerships through District water quality programs
- Assess the utilization of new technologies to improve accuracy and availability of water quality data

2. Maintenance and Improvement

Goal Statement: Develop and implement programs, projects and regulations to maintain and improve water quality.

The District develops and implements projects, programs and regulations to maintain and improve water quality consistent with the Governor's Executive Order 19-12, which instructs the water management districts to review budgets and prioritize available funding to focus on projects that will help address harmful algal blooms and maximize nutrient reductions. Examples of these efforts include partnerships for best management practices (BMPs) implementation such as the FARMS Program, focused on the agriculture community, and the Watershed Management Program (WMP), addressing watershed improvements; and the Surface Water Improvement and Management (SWIM) and Springs initiatives programs that implement nutrient removal and other water quality improvement projects.

The District also acquires and manages land for water resources conservation/protection purposes through its land resources program and regulates stormwater management through the Environmental Resource Permitting (ERP) process. Additionally, data and information are shared with counties, cities and the state for projects to improve water quality.



Collecting water testing samples on the Chassahowitzka River.

STRATEGIES

- Use cooperative funding to support local government efforts to improve District priority water bodies
- Continue to support, review and track Florida Department of Environmental Protection (DEP) Total Maximum Daily Load (TMDL) and Basin Management Action Plans (BMAP) processes for District priority water bodies
- Promote Florida-Friendly Landscaping™ principles and other behaviors that protect water quality
- Participate in the development and implementation of the statewide stormwater management criteria to enhance the District's ERP program
- Use regulatory programs to promote water quality protection and improvement
- Continue to promote partnerships through District water quality programs such as the SWIM and FARMS programs and the Quality of Water Improvement Program
- Support cooperative funding and implementation of prioritized septic and package plant retrofit projects within the Northern region to reduce nutrient concentrations in springs priority focus areas



Weeki Wachee River.

Natural Systems

1. Minimum Flows and Levels Establishment and Monitoring

Goal Statement: Establish and monitor MFLs, and where necessary, develop and implement recovery/prevention strategies to recover water bodies and prevent significant harm.

Minimum flows and levels identify the limit or water level at which further withdrawals would be significantly harmful to the water resources or ecology of the area. Rivers, streams and springs require minimum flows, while minimum levels are set for lakes, wetlands and aquifers. Minimum flows and levels are used for permitting or planning decisions concerning how much water may be safely withdrawn from or near a water body.

Through fiscal year 2022, the District has established MFLs for 203 water bodies. The District's process for establishing MFLs includes an annual update of water bodies prioritized for MFLs development, extensive

data collection, analysis and reporting, public review, independent scientific peer review and rule adoption. The District routinely assesses potential water supply/resource concerns and evaluates water use permit applications to ensure violations of established MFLs do not occur. In addition, water bodies with established MFLs are monitored and assessed annually to determine the need for strategies to recover or prevent flows or levels from falling below established MFLs. All necessary recovery or prevention strategies are included in the District's Regional Water Supply Plan (RWSP).

As of 2022, nearly 95 percent of the established MFLs were being met. To address water bodies where MFLs are not being achieved, the District is implementing recovery strategies for the Southern Water Use Caution Area (SWUCA) and the lower Hillsborough River. In addition, the District has successfully implemented recovery strategies for the Northern Tampa Bay Water Use Caution Area (NTBWUCA) and lower Alafia River and determined the NTBWUCA and the Dover/Plant City Water Use Caution Area (DPCWUCA) recovery strategies are no longer necessary.

STRATEGIES

- Update the MFLs priority list and schedule annually
- Establish MFLs through:
 - Data collection
 - Data analysis and reporting
 - Independent scientific peer review and public review
 - Board approval and rule adoption
- Continue to incorporate MFLs in District water use permit application review processes and compliance monitoring
- Monitor and report hydrologic conditions to support status assessments for water bodies with established MFLs
- Continue to review and refine scientific methods used for establishing MFLs
- Develop, adopt and implement MFLs recovery and prevention strategies
- Incorporate MFLs recovery and prevention strategies into the RWSP development process

2. Conservation and Restoration

Goal Statement: Restoration and management of natural ecosystems for the benefit of water and water-related resources.

The Conservation and Restoration Strategic Initiative preserves, protects and restores natural systems to support natural hydrologic

and ecologic functions. The major components of this initiative include land acquisition and management, ecosystem monitoring and restoration, education and regulation. To date, over 43,000 acres of habitat have been restored through District programs and partnerships with state and local governments.

Acquisition and management of land are critical to the District's conservation and restoration objectives. Once acquired, altered land is restored, if necessary, and managed to maintain ecological and hydrological functions. The District monitors its lands to ensure continued compliance with its mission and initiatives.

Restoration initiatives, such as the SWIM Program, are overseen by the District to restore natural systems associated with priority water bodies.

The District also regularly tracks land and water resource alterations through its aerial land use/land cover, wetland and seagrass mapping efforts. Through reviews such as local government plan amendments and large-scale development proposals, Florida Coastal Management applications and related activities, staff can offer feedback to better link land and water resources. In addition, the District's ERP program helps protect water resources.

STRATEGIES

- Evaluate acquisition opportunities, placing priority on water resource benefits by contributing to water resource projects, additions linking conservation areas, management efficiencies such as inholdings, and leveraging partnership dollars
- Promote innovative restoration projects and partnerships
- Regulate to avoid impacts or minimize and mitigate unavoidable impacts
- Partner to continue wetland, lake and river monitoring and analysis
- Provide technical assistance to state, regional and local governments for linking land and water issues and concerns
- Apply adaptive land management strategies to maintain and enhance District conservation lands



Great Blue Heron on the Hillsborough River.

Flood Protection

1. Floodplain Management

Goal Statement: Collect and analyze data to determine local and regional floodplain information, flood protection status and trends to support floodplain management decisions and initiatives.

The WMP identifies, prioritizes and addresses flood-related water resource issues within a watershed. Information developed through the WMP is used by local governments, the District and state and federal governments in regulatory and advisory floodplain management programs.

STRATEGIES

- Implement the WMP, collect and analyze data and develop and distribute accurate floodplain information
- Continue to promote partnerships at the local, state and federal level
- Increase public awareness of floodplains and flood risk
- Provide system-based data to support the operation of District flood control and water conservation structures
- Document levels after flood events to ensure up-to-date modeling and historic records

2. Maintenance and Improvement

Goal Statement: Develop and implement programs, projects and regulations to maintain and improve flood protection, and operate District flood control and conservation structures to minimize flood damage while preserving the water resource.

The District's ERP program uses WMP information and regulations to protect floodplain and historic basin storage and ensure that new development does not increase flood levels or the rate of stormwater runoff onto neighboring properties.

Strategic property acquisition allows land to fulfill natural functions of storing and accommodating excess water and reduces the risk of flood damage by preserving floodplains. The District also maintains and operates four major canal and conveyance systems and 84 flood control and water conservation structures as an important flood protection strategy. Extensive areas of the District depend upon the maintenance and operation of these facilities.

The District's WMP identifies flood risk and efficient alternatives to reduce the risk of flood damages. The District's Cooperative Funding Initiative (CFI) encourages implementation

of selected intermediate and regional system improvement projects to reduce flood risk and to maximize opportunities to provide water quality improvements. Implementation of local system improvements is primarily the responsibility of the local government.

STRATEGIES

- Implement the ERP program using WMP floodplain information to maintain current levels of flood protection
- Identify floodplain management and flood protection value associated with land acquisition opportunities
- Use cooperative funding to support local government efforts to reduce the risk of flood damages by improving intermediate and regional flood protection systems
- Operate and maintain District flood control and water conservation structures, canals, dams, levees and associated facilities
- Develop and implement an asset management program for District flood control and water conservation structures and associated facilities

3. Emergency Flood Response

Goal Statement: Provide effective and efficient assistance to state and local governments and the public to minimize flood damage during and after major storm events, including operation of District flood control and water conservation structures.

Through its emergency flood response initiative, the District prepares for, responds to, recovers from and mitigates the impacts of critical flooding incidents. To ensure adequate preparation, the District has developed an emergency operations program and maintains a Comprehensive Emergency Management Plan (CEMP), which provides guidelines for pre-incident preparation, post-incident response and recovery, deployment and annual exercises. The District's Emergency Operations Center and emergency response staff are critical to incident response.

All water management districts are members of the State Emergency Response Team and serve as support agencies to the state. The District provides emergency assistance to local governments and the public. District regulatory flood investigation teams assist local governments with emergency construction authorizations and help to determine and implement solutions to flooding problems.



Tampa Bypass Canal in Hillsborough County.

The enhancement and modernization of District water management facilities includes upgrading of mission-critical water conservation and flood control structures with remote operation and equipping structures with digital video monitoring.

STRATEGIES

- Continue to promote an effective and efficient incident management system
- Establish resiliency for all mission-critical infrastructure
- Train staff in National Incident Management System /Incident Command System structure
- Exercise the District's CEMP, high hazard structure Emergency Action Plans and Flood Event Guidelines
- Provide emergency assistance to local governments and agencies

Regional Priorities and Objectives

Northern Planning Region - Springs

PRIORITY:

Improve the Chassahowitzka River, Crystal River/Kings Bay, Homosassa River, Rainbow River, Weeki Wachee River, and associated springs

OBJECTIVES:

- Implement water quality and natural systems projects identified in the SWIM plans for the five first-magnitude spring systems
- Assist with septic to sewer conversions and package plant retrofits within the five first-magnitude spring priority focus areas
- Monitor status and trends associated with targets in each SWIM plan to assess the ecological condition of the spring systems
- Continue support of the Springs Coast Steering Committee (SCSC)
- Implement MFLs to protect spring flow through monitoring and reporting hydrologic conditions, and through their consideration in water use permit reviews and water supply planning

HIGHLIGHT:

The water resources in the District include more than 200 documented springs, and the rivers, bays, and estuaries that are fed by them. The five largest spring groups within the District are concentrated in the Northern region along the Springs Coast. These five first-magnitude (flow rates of 100 cubic feet per second or greater) spring groups form the headwaters of the Chassahowitzka River, Crystal River/Kings Bay, Homosassa River, Rainbow River and Weeki Wachee River. All five systems are listed as a District SWIM priority water body, and by the state as Outstanding Florida Waterways and Outstanding Florida Springs. In addition, the District has established MFLs to help protect each of these systems.

The Crystal River/Kings Bay, Homosassa, Chassahowitzka and Weeki Wachee rivers flow into a region of the Gulf of Mexico known as the Springs Coast. The estuaries and nearshore coastal waters of the Springs Coast contain over 500,000 mapped acres of seagrass habitats making it one of the largest expanses of seagrass in the world. Along with seagrass, the nearshore coastal waters of the Springs Coast include many species of attached algae, sponges, corals and hard bottom habitat supporting numerous ecologically and economically important species such as bay scallop, grouper, tarpon and manatee. The District's seagrass mapping program has been

the single most relied upon metric for tracking the overall health of our Springs Coast estuaries. Springs Coast seagrass mapping occurs every four years using a combination of aerial imagery and intensive field surveys.

The rivers, bays and springs of this region have experienced ecological changes caused by both natural and human impacts. Issues facing these coastal resources include sea-level rise, reduced water clarity and changes in the aquatic vegetation and nutrient enrichment. In addition, spring flow is highly dependent upon seasonal rainfall patterns. The District has established, and continues to evaluate, MFLs for its first-magnitude springs and other water bodies in the region to prevent significant harm that could occur as a result of water withdrawals.

In 2014, the District together with local, regional and state partners formed the SCSC. The committee's mission is to build consensus and partnerships to improve and manage each of the five first-magnitude spring systems through effective development and implementation of SWIM plans. All first-magnitude spring groups now have approved SWIM plans.



Chassahowitzka River in Citrus County.

Each SWIM plan is a living document with adaptive management at its core. These plans identify management actions, projects that address the issues facing each system and specific quantifiable objectives and indicators to assess overall progress and help guide the SCSC. In the August 2017 workshop, the District's Governing Board prioritized combining District funds with state and local funds for projects that would convert septic systems to central sewer

to benefit springs. The Board also identified the need to protect the District's investment by ensuring controls are in place to prevent additional pollution from new septic systems.

In addition to the management plan development and implementation, the FARMS Program continues to work with agricultural producers to implement BMPs to reduce groundwater use and nutrient loading in springheds.

Quantifiable objectives and indicators are established for each first-magnitude spring system.

Chassahowitzka River Spring Group

- Water clarity
- Nitrate concentration
- Minimum flows
- Coverage of desirable submerged aquatic vegetation
- Coverage of invasive aquatic vegetation

Crystal River/Kings Bay Spring Group

- Water clarity
- Nitrate concentration
- Phosphorus concentration
- Chlorophyll concentration
- Minimum flows
- Coverage of desirable submerged aquatic vegetation
- Coverage of invasive aquatic vegetation
- No net loss of shoreline in natural condition
- Enhancement of disturbed shoreline

Homosassa River Spring Group

- Water clarity
- Nitrate concentration
- Minimum flows
- Coverage of desirable benthic habitat
- Coverage of invasive aquatic vegetation
- No net loss of shoreline in natural condition

Rainbow River Spring Group

- Water clarity
- Nitrate concentration
- Minimum flows
- Coverage of desirable submerged aquatic vegetation
- Coverage of invasive aquatic vegetation

Weeki Wachee River Spring Group

- Water clarity
- Nitrate concentration
- Minimum flows
- Coverage of desirable submerged aquatic vegetation
- Coverage of invasive aquatic vegetation

Regional Priorities and Objectives

Northern Planning Region – Water Supply

PRIORITY:

Ensure long-term sustainable water supply

OBJECTIVES:

- Increase water conservation
 - Achieve and maintain 150-gallon daily compliance per capita with all public supply utilities
 - Achieve and maintain average unadjusted gross per capita water use 148 gallons per capita per day (gpcd) by 2025
 - This represents a 5.4 percent savings of 4.35 mgd from the 2011-2015 average
 - Achieve 75 percent utilization of all wastewater flows and a 75 percent resource benefit by 2040 and assist in the implementation of potable reuse
 - As of 2021, the Northern region had 20.7 mgd of wastewater flow and 24.8 mgd of reuse for a utilization rate greater than 100 percent through imports of additional sources from outside the District
- Increase the use of reclaimed water for potable, recharge and environmental enhancement projects
- Continue to partner with the Withlacoochee Regional Water Supply Authority to promote regional water supply planning and development

HIGHLIGHT:

The District's 2020 RWSP shows that demand for water in the Northern region through 2040 and beyond could be met with fresh groundwater if the region's considerable potential for reuse and conservation is realized. The District will be updating the RWSP for the Northern Region in 2025.

Public supply use, which accounts for about 50 percent of the water use in the Northern region, has significant potential for water savings. In 2021, there were five utilities in the Northern region with compliance per capita figures higher than 150 gpcd. The District's goals are to ensure that all utilities fall below the maximum compliance per capita usage and to further reduce the regional average per capita in accordance with the RWSP. The District's plan to assist public supply utilities is to minimize the need for additional groundwater supplies by maximizing the use of available reclaimed water and implementing comprehensive water conservation measures and best management practices.



Reuse pipeline construction site.

The District promotes regional approaches to water supply planning and development. The benefits of regional systems include economies of scale, better ability to manage environmental impacts, improved system reliability, operational flexibility and emergency backup capability. Larger regional systems are also able to take advantage of conjunctive use, wherein both groundwater and alternative sources are available and can be managed to mimic natural hydrologic cycles.

In the Northern region, the District is partnering with the Withlacoochee Regional Water Supply Authority to promote regional water supply planning and development. This most recently includes cooperatively funding regional water conservation efforts and an update to the Authority's Master Water Supply Plan.

Regional Priorities and Objectives

Tampa Bay Planning Region – Lower Hillsborough River MFLs Recovery and MFL Monitoring

PRIORITY:

Implement the lower Hillsborough River MFLs Recovery Strategy and monitor other MFLs

OBJECTIVES:

■ Northern Tampa Bay Water Use Caution Area

- Complete annual assessments and the third required five-year evaluation of results achieved from implementation of the MFLs recovery strategy adopted for the lower Hillsborough River
- Achieve 75 percent utilization of all wastewater flows and a 75 percent resource benefit by 2040 and assist in the implementation of potable reuse
 - As of 2021, the Tampa Bay Region had 236 mgd of wastewater flow and 116 mgd of reuse for a utilization rate of nearly 50 percent
- Increase the use of reclaimed water for potable, recharge and environmental enhancement
- Achieve and maintain a reduction in 2011-2015 regional average unadjusted gross per capita (94 gpcd) water use by 5.3 percent to 89 gpcd by 2025. This represents savings of 16.25 mgd
- Assist Tampa Bay Water in the development of 20 mgd of alternative supply sources, and 11 mgd of water conservation savings
- Maintain regulatory programs associated with the NTBWUCA

- Continue to monitor the environmental conditions through annual assessments of established MFLs

■ Dover/Plant City Water Use Caution Area

- Maintain achievement of the DPCWUCA area minimum aquifer level for the Upper Floridan aquifer by continuing to implement cold protection permitting procedures, assess their status annually and promote FARMS projects that reduce cold protection groundwater uses
- Continue to monitor the aquifer system through annual assessment of the established DPCWUCA minimum aquifer level

■ Southern Water Use Caution Area

- Achieve 40 mgd offset in groundwater withdrawals in the SWUCA by 2025
- Achieve the SWUCA saltwater intrusion minimum aquifer level for the Upper Floridan aquifer to slow the rate of saltwater intrusion in the Most Impacted Area (MIA)
- Ensure that there are sufficient water supplies for all existing and projected reasonable-beneficial uses
- Continue to monitor recovery of the environmental conditions in the SWUCA through annual assessments of MFLs and five-year recovery status reviews

water resources within the NTBWUCA called for reduced pumping from Tampa Bay Water's regional wellfields and providing financial incentives for construction of alternative water supply projects. To date, these efforts have produced more than 140 mgd of new alternative water sources and allowed for groundwater withdrawals to be reduced by more than 60 mgd. In addition, Tampa Bay Water has formed a regional water conservation program called Tampa Bay Water Wise. This program offers a variety of incentives for water conservation Best Management Practices (BMPs) with the long-term goal of conserving 11 mgd.

In 2010, the District determined that more information was needed to fully evaluate the effects of the reductions on MFLs recovery and initiated a second phase of the NTBWUCA recovery strategy through adoption of a comprehensive plan that would sunset in 2020. The plan included continued monitoring and evaluation of environmental mitigation for withdrawal impacts and continued water conservation activities by Tampa Bay Water's member governments. Comprehensive recovery assessments completed by Tampa Bay Water and the District in 2020, as well as MFL status assessments completed by the District in 2020 and 2021, identified substantial recovery of hydrologic and ecologic conditions associated with strategy implementation and rainfall

HIGHLIGHT:

The District sets MFLs on priority water bodies. An MFL is the limit or water level at which further withdrawals would be significantly harmful to the water resources or ecology of the area. If the existing flow or level of a water body is below, or is projected to fall below, the applicable minimum flow or level within 20 years, a recovery or prevention strategy must be implemented.

Additionally, the District can designate a water use caution area (WUCA) when the Governing Board determines that regional action is necessary to address cumulative water withdrawals which are causing or may cause adverse impacts to the water and related natural resources or the public interest. WUCA rules enhance the protection and recovery of the water resources. Three WUCAs have been identified for portions of the Tampa Bay planning region: NTBWUCA, DPCWUCA and SWUCA.

Through fiscal year 2022, the District has adopted MFLs for 121 priority water bodies in the NTBWUCA and, MFLs for all but one of these water bodies, the lower Hillsborough River, are being met. Also within the region, the single MFL established for the DPCWUCA is being met. In the Tampa Bay planning region, the District will continue implementation of the MFL recovery strategy for the lower Hillsborough River and the recovery strategy for the SWUCA, which extends into the region and includes water bodies in other planning regions that are not being met.

The **NTBWUCA**, which encompasses all of Pinellas and Pasco counties, and those portions of Hillsborough County north of Highway 60, was established to address adverse impacts caused by ground and surface water withdrawals. The first phase of the District's recovery strategy for restoring



Regional Priorities and Objectives

conditions. Collectively these evaluations indicated that as of 2021, 120 of the 121 established MFLs in the NTBWUCA were being achieved, with the exception being MFLs established for the lower Hillsborough River. Based on these findings, the District's Governing Board repealed the comprehensive recovery plan for the NTBWUCA in 2021 and re-adopted the Hillsborough River Recovery Strategy for continued implementation.

The recovery strategy for the lower Hillsborough River addresses the augmentation of the river with water from a variety of sources, including Sulphur Springs, Blue Sink, Morris Bridge Sink and the Tampa Bypass Canal. Since 2007, up to 11 cubic feet per second (cfs) of water has been diverted from the Tampa Bypass Canal to the Hillsborough River Reservoir when necessary, and 75 percent of this diverted volume has been subsequently delivered to the lower river below the City of Tampa dam. To further support recovery of the lower river, the City of Tampa has been supplying up to 18 cfs of flow from Sulphur Springs and up to 3 cfs from Blue Sink to the base of the dam through implementation of projects cooperatively completed with the District. An update on the status of the Hillsborough River Recovery Strategy is provided to the Governing Board annually. In addition, two comprehensive five-year recovery assessments have been completed and a third and final five-year assessment will be completed in 2023.

The DPCWUCA extends over an approximate 260-square-mile area in northeast Hillsborough County and eastern Polk County and overlaps with portions of the NTBWUCA and the SWUCA. The DPCWUCA was established in 2011 to address impacts from groundwater pumping for cold protection. To protect crops from freeze events, common management practice for many farmers with agricultural commodities, including strawberries, blueberries, citrus and nurseries, involves pumping groundwater for cold protection when air temperatures drop to near freezing. Substantial groundwater use during these times lowers groundwater levels and can impact residential wells and contribute to sinkhole development. During a historic 11-day freeze event in January 2010, numerous residential wells in the Dover/Plant City area were impacted, and sinkholes were reported. As a result, the District developed and adopted a minimum aquifer level and recovery strategy for the DPCWUCA in 2011 to significantly reduce

and monitor groundwater pumping during future freeze events that may cause impacts to existing legal users.

The objectives of the DPCWUCA Recovery Strategy were, by 2020, to have reduced groundwater pumped for cold protection by 20 percent relative to that pumped during the 2010 weather event and to achieve the minimum aquifer level. Recovery mechanisms identified in the strategy include non-regulatory and regulatory approaches. Non-regulatory mechanisms associated with the strategy include cost-share assistance through the FARMS Program to incentivize the implementation of BMPs to offset groundwater withdrawals for cold protection. The strategy's regulatory measures addressed groundwater withdrawal impacts, alternative water supplies, frost/freeze protection methods and resource recovery. These rules along with the non-regulatory mechanisms were intended to promote the continued maintenance of the minimum aquifer level recovery.

An assessment completed in 2020 indicated the 2010 weather event that precipitated adoption of the DPCWUCA minimum aquifer level and recovery strategy may be expected about once every 570 years. In addition, use of updated modeling and evaluation of declining historic and projected agricultural land use and water use indicated the minimum aquifer level was being achieved and the recovery strategy was not needed. Based on these findings, the District repealed the DPCWUCA recovery strategy in 2022, continues to implement the DPCWUCA rules and associated projects, and will annually assess the status of the currently met minimum aquifer level.

The **SWUCA** extends over 5,100 miles in eight District counties and includes the southern portion of Hillsborough County. Within the SWUCA, depressed aquifer levels have caused saltwater intrusion along the coast, contributed to reduced flows in the upper Peace River and lowered lake levels in areas of Polk and Highlands counties. Groundwater withdrawals have been identified as the primary cause of the depressed aquifer levels throughout the groundwater basin, with drawdowns in some areas exceeding 50 feet.

The District adopted the SWUCA Recovery Strategy in 2006 to recover MFLs that were concurrently established with the strategy. The major goals for the recovery strategy are



Weather station in Hillsborough County.

reducing the rate of saltwater intrusion in the MIA, restoring minimum flows in the upper Peace River and restoring minimum levels to the lakes in the Ridge area, which extends roughly 90 miles along the center of the state in Polk and Highlands counties. Through fiscal year 2022, the District has adopted MFLs for 46 priority water bodies in the SWUCA and approximately 78 percent of these MFLs are being met.

Within the Tampa Bay planning region, the District is helping to fund the Hillsborough County South Hillsborough Aquifer Recharge Project (SHARP). This project's goal is to expand the use of reclaimed water to recharge nonpotable portions of the Upper Floridan aquifer to improve aquifer water levels in the MIA of the SWUCA and to slow the rate of saltwater intrusion.

Primary elements of the SWUCA Recovery Strategy for this region include:

- Updating the RWSP to identify how to address increasing water needs while minimizing impacts to the water resources and related natural systems
 - The District approved a plan update in 2020 and will update it again in 2025
 - Providing financial incentives for conservation, creation of alternative supplies and regional interconnections
 - Monitoring and reporting
-

Regional Priorities and Objectives

Tampa Bay Planning Region – Improve Water Bodies

PRIORITY:

Improve Tampa Bay and lakes Seminole, Tarpon and Thonotosassa

OBJECTIVES:

- Develop and implement natural system projects that restore critical shoreline, coastal uplands and intertidal systems and freshwater wetlands
- Develop and implement water quality projects to reduce nutrient loading
- Update the Tampa Bay, Lake Tarpon and Lake Thonotosassa SWIM plans

HIGHLIGHT:

Tampa Bay is designated as an “Estuary of National Significance” and a District SWIM priority water body. The 373-square-mile bay is Florida’s largest open-water estuary. Its 2,200-square-mile watershed contains more than two million residents.

Three main challenges exist in the Tampa Bay watershed. Coastal uplands and wetlands have been altered and lost. Nonnative animal and plant species have spread, and water quality has been degraded from pollutants and nutrient loading.

The District is working with the Tampa Bay Estuary Program and local governments to update the comprehensive conservation and management plan and the Tampa Bay SWIM Plan. These plans will be used to identify water quality and natural systems improvement projects to protect and restore Tampa Bay.

A success indicator is the baywide seagrass acreage target of 40,000 acres set by the Tampa Bay Estuary Program. This target is based on seagrass acreage estimates from 1950s aerial photography. From 2014 to 2018, this target had been met. However, in 2020, the baywide seagrass acreage decreased below the target to 34,298 acres, levels not seen since 2012. The District’s seagrass mapping program has been the most relied upon metric for tracking the overall health of our estuaries, including Tampa Bay. Seagrass habitat is mapped every two years using a combination of aerial imagery and intensive field surveys. In addition, the District SWIM Program and local cooperators have restored over 7,430 acres of coastal habitats as of December 2021. The District and its partners have provided water quality projects treating more than 132 square miles of contributing area to Tampa Bay.

Lake Seminole is a 684-acre freshwater lake in west-central Pinellas County that was created in the 1940s by the impoundment of an arm of Long Bayou, a brackish water segment of Boca Ciega Bay. The lake’s watershed encompasses approximately 3,500 acres, of which almost 90 percent is developed. Water quality concerns in Lake Seminole began in the 1960s, as urbanization of the watershed increased and worsened in the 1980s and 90s.

Lake Seminole was included in the DEP’s draft verified list of impaired waters in 2006 for nutrients and trophic state index (i.e., for nutrients). Due to its impaired status, Pinellas County developed a Reasonable Assurance (RA) Plan in 2007, which was submitted to DEP. This RA Plan established the trophic state index and chlorophyll-a as the success indicators for Lake Seminole. Control of excessive nutrients entering the lake and the fate of the nutrients that do reach the lake (e.g., internal nutrient recycling) was expected to help achieve the targets. In 2004, Pinellas County adopted the Lake Seminole Watershed Management Plan to identify and implement projects to reduce nutrient concentrations in the lake and to meet targeted water quality goals.

These projects included retrofitting stormwater outflows from five of the highest nutrient loading sub-basins, which were completed, and removing nutrient rich sediments from the lake. In 2017, the Pinellas County Board of County Commissioners approved funding, matched with District funding, to dredge



Great Blue Heron on Lake Seminole in Pinellas County.

nutrient-rich sediment from the lake. Dredging of this sediment is completed and the project is currently in the close-out phase.



Dredging on Lake Seminole in Pinellas County.

Regional Priorities and Objectives

Lake Tarpon extends over 2,532 acres, making it the largest freshwater lake in the Tampa Bay area. The lake is designated as an Outstanding Florida Water, a fish management area and a District SWIM priority water body. Overall, Lake Tarpon can be described as a water body with excellent sport fishing and healthy submerged aquatic vegetation (SAV) habitat.

Despite its healthy status, the lake is currently listed by DEP as being impaired for chlorophyll-a (a measure of phytoplankton abundance) based on exceedance of the state's Numeric Nutrient Criteria (NNC). However, the lake is in compliance with water quality standards for both total nitrogen (TN) and total phosphorus (TP), creating a disconnect between chlorophyll-a and nutrient concentrations. In recent years, Pinellas County and the District have co-funded technical projects to examine this disconnect.

The Lake Tarpon Water Quality Management Plan was completed in 2017. One of the many findings of this report was that chlorophyll-a concentrations were a function of residence time and lake levels and not nutrient loading. In 2018, Pinellas County completed a Lake Tarpon Paleolimnological Study to provide historical context for the lake's status. That study concluded that relatively high concentrations of chlorophyll-a existed in the lake prior to human impacts and are a result of natural phenomena, not increased nutrient pollution. Based on these studies and guidance from DEP, Pinellas County is discussing submitting a petition to DEP to consider a Type III Site Specific Alternative Criteria (SSAC).

The findings of these studies will be incorporated into the next SWIM Plan update, which is under development. Two technical stakeholders' workshops were held to coordinate the District's update to the SWIM plan with the activities of agencies and local governments that manage water resources in the Lake Tarpon watershed. Revisions to success indicators identified for Lake Tarpon are being considered based on the outcome of the County's SSAC petition as part of the SWIM Plan update.

Lake Thonotosassa, the largest natural lake in Hillsborough County with a surface area of greater than 800 acres, is popular for recreational use as it is one of the few natural lakes in the area with public access. The lake discharges into the Hillsborough River, which is used for the City of

Tampa's municipal water supply and the lake is designated as a District SWIM priority water body.

Four main challenges exist in the Lake Thonotosassa watershed. Nutrient loadings from the watershed have caused extreme nutrient enrichment resulting in algal blooms within the lake. Habitat quality and species diversity have declined. Nonnative plant species are more abundant, while availability of desirable sport fish has decreased.

The District completed a nutrient source tracking project with Hillsborough County to identify nutrient sources in the watershed. Areas with high nutrient loadings were prioritized for projects, such as stormwater improvement projects, maintenance/control of exotic plants, enhancement of wetland and aquatic habitats and public education and awareness of stormwater pollution prevention. As part of this implementation, the District's FARMS and SWIM programs are coordinating with the Florida Department of Agriculture and Consumer Services to work with agriculture operations in the watershed to implement BMPs. During 2018 and 2019, the District participated in DEP's development of a nutrient TMDL for Lake Thonotosassa, which was adopted by DEP in July 2019.



Lake Tarpon in Pinellas County.



Lake Thonotosassa in Hillsborough County.

Regional Priorities and Objectives

Heartland Planning Region – SWUCA Recovery

PRIORITY:

Implement SWUCA Recovery Strategy

OBJECTIVES:

- Achieve 40 mgd of offsets in groundwater withdrawals in the SWUCA by 2025
- Achieve the SWUCA saltwater intrusion minimum aquifer level (SWIMAL) for the Upper Floridan aquifer to slow the rate of saltwater intrusion in the MIA
- Assist in recovering the minimum flows for the upper Peace River through implementation of the Lake Hancock Lake Level Modification project
- Recover minimum levels for Polk County and Highlands County lakes by 2025
- Ensure a sustainable water supply
 - Achieve and maintain daily 150-gallon compliance per capita with all public supply utilities
 - Achieve and maintain a reduction in 2011-2015 regional average unadjusted gross per capita (111 gpcd) water use by 4.3 percent to 106 gpcd by 2025. This represents a water savings of 3.8 mgd
 - Assist Polk Regional Water Cooperative (PRWC) in the development of 30 mgd of alternative water supply sources and implementation of conservation programs identified in its demand management plan
 - Increase percentage of total water use supplied by alternative sources
 - Maximize the water conservation potential for the region
 - Maximize regional interconnects among public supply utilities
 - Complete the Lower Floridan aquifer study in Polk County to assess its viability as an alternative water supply source and to gain a better understanding of the Lower Floridan aquifer characteristics and groundwater quality
 - Complete the next updates for the District and Central Florida Water Initiative (CFWI) RWSP by 2025
 - Achieve 75 percent utilization of all wastewater flows and a 75 percent resource benefit by 2040 and assist in the implementation of potable reuse
 - As of 2021, the Heartland region had 39.5 mgd of wastewater flow and 23.9 mgd of reuse for a utilization rate of 60 percent

HIGHLIGHT:

Most of the District's Heartland region falls within the eight-county SWUCA, which encompasses approximately 5,100 square miles. In the SWUCA, depressed aquifer levels have caused saltwater intrusion along the coast, contributed to reduced flows in the upper Peace River and lowered lake levels in areas of Polk and Highlands counties.

Groundwater withdrawals were identified as the primary cause of the depressed aquifer levels throughout the groundwater basin, with drawdowns in some areas exceeding 50 feet.

Through fiscal year 2022, the District has adopted MFLs for 46 priority water bodies in the SWUCA and approximately 78 percent of these MFLs are being met. An MFL is the limit or water level at which further withdrawals would be significantly harmful to the water resources or ecology of the area. The District adopted the SWUCA Recovery Strategy to achieve those MFLs that are not being met by reducing the rate of saltwater intrusion in the MIA, restoring flows to the upper Peace River and increasing water levels at lakes in the Ridge area, which extends roughly 90 miles along the center of the state in Polk and Highlands counties.

Primary SWUCA Recovery Strategy elements for this region include:

- Updating the RWSP to identify how to address growing regional water needs while minimizing impacts to water resources and related natural systems
 - The District approved a plan update in 2020 and will update it again in 2025
- Providing financial and regulatory incentives for conservation, construction of alternative supplies and regional interconnections
- Monitoring and reporting

The District has been successful in multiple efforts associated with its SWUCA goals. Partnering with the Peace River Manasota Regional Water Supply Authority, the District has assisted in developing a sustainable water supply to meet the needs of a four-county region within the SWUCA. The District has also assisted with the creation of the PRWC and is helping to fund its evaluation and development of AWS projects, including conservation. The FARMS Program and other conservation efforts have reduced Upper Floridan groundwater withdrawals in the SWUCA, which has helped to increase groundwater levels in the MIA.



Peace River in Hardee County.

Regional Priorities and Objectives

The SWIMAL elevation established for the Upper Floridan aquifer in the MIA must be met or exceeded for five consecutive years for recovery. This elevation was met or exceeded from 2018 through 2021 and if met again in 2022 the SWIMAL will, for the first time, be achieved. Achieving the SWIMAL is an important step towards slowing the rate of saltwater intrusion in the region.

The District's Lake Hancock Lake Level Modification Project became fully operational in 2014 and a reservation was established in 2020 for water stored in Lake Hancock and released to lower Saddle Creek to help recover minimum flows in the upper Peace River. Implementation of the project and the reservation supported achievement of MFLs established for all three upper river sites in 2020 and again in 2021. Recovery in the upper Peace River has also led to improvements in low-flow conditions in the lower portion of the river. Ridge lake water levels have increased several feet since the 1990s, but some lake MFLs in the SWUCA continue to not be met. Reevaluation of these MFLs by 2025 using new, peer review wetland criteria will support future assessment of recovery needs.

While the southern two-thirds of Polk County is included in the SWUCA, all of Polk County is part of the designated CFWI planning area. The CFWI planning area covers five counties, including Polk, Orange, Osceola, Seminole and the southern portion of Lake. The boundaries of the St. Johns River, South Florida and Southwest Florida water management districts meet in the planning area.

The District is collaborating with the other water management districts, the state and local governments and utilities to identify a sustainable water supply for the CFWI planning region. Key successes in meeting the water resource challenges of the area have included refinement of a shared groundwater model to determine regional resource availability and the publication of the second CFWI RWSP in 2020. Ongoing efforts include coordination and planning for water resource data collection needs and establishment of consistent rules among the three water management districts with jurisdiction in the CFWI planning area.

As part of the CFWI planning area, the need for development of 30 mgd of AWS sources by 2040 in the Polk County area was identified. The District assisted in the establishment

of the PRWC in 2016 as a collaborative entity to address water supply needs among its member governments and is currently coordinating with the PRWC on the development of AWS projects and maximizing water conservation efforts to meet projected 2040 water supply demands. Such efforts include, but are not limited to, implementation of a long-term demand management plan, ongoing District investigation of the Lower Floridan aquifer as a potential alternative water supply source and provision of \$40 million in initial funding to the PRWC to assist in implementation of identified projects. In 2017, co-funding agreements were executed that assigned \$11.5 million of the initial funding for Phase I of three projects. At its April 2018 meeting, the Governing Board approved an additional \$5 million per year (fiscal years 2019–23) for Phase II implementation of the selected projects. The PRWC has completed preliminary design and has entered into Phase II implementation for both the Southeast and West Polk Lower Floridan Aquifer Wellfield projects. Water conservation efforts and demand management plans will help to extend the resources developed through these expensive AWS projects.



Construction of the P-11 structure replacement was completed in April 2013.

Regional Priorities and Objectives

Heartland Planning Region – Improve Water Bodies

PRIORITY:

Improve Winter Haven Chain of Lakes and Ridge Lakes

OBJECTIVE:

- Implement plans and projects for water quality and natural systems improvement

HIGHLIGHT:

The **Winter Haven Chain of Lakes** is a system of 19 interconnected lakes in Polk County. Designated as a District SWIM priority water body, the chain encompasses a 32-square-mile watershed and is made up of two major groups with five lakes in the northern chain and 14 in the southern chain. The lakes are interconnected through the construction of canals to promote recreational access.

Two main challenges exist in the Winter Haven Chain of Lakes watershed: nutrient loading from urban runoff and the loss of natural systems. The District is working with local governments through the cooperative funding program to reduce nutrient loadings by improving stormwater management and to restore natural systems.

Success will be measured by water quality improvements, including reductions in non-point source loading of nutrients and increases in restored natural systems. Additionally, it is envisioned that lakes with sufficient water quality data will be evaluated against the DEP's numeric nutrient criteria.

As of 2021, water quality improvement projects have been implemented for eight lakes (Conine, Howard, May, Lulu, Hartridge, Jessie, Cannon, and Mariana). In addition, more than 30 low impact development (LID) best management projects have been installed within the downtown area of the City of Winter Haven.

Approximately 130 lakes lie within the **Ridge Lakes** area, which extends roughly 90 miles along the center of the state in Polk and Highlands counties. The high number of deep sinkhole basin lakes makes this region uniquely different from the other lake regions in the District and throughout the state.

Declining water quality, due to nutrient loading from the watershed, remains a challenge for lakes in the Ridge Lakes area. Common water quality impacts include stormwater runoff, wastewater effluent, residential fertilizer

applications, agricultural runoff, shoreline habitat degradation and hydrologic alterations.

Through the District's Ridge Lakes Restoration Initiative, emphasis has been placed on protective lake management strategies. Stormwater treatment has been a high priority, as well as enhancement and restoration of natural systems and additional flood protection.

The District-led Ridge Lakes Plan update was completed in 2019. The project's purpose was to propose lake-specific action plans and conceptual designs for prioritized lakes. In addition, a general action plan was also developed for the non-prioritized lakes to provide a path forward to further efforts in the Ridge Lakes. Data needs are identified for lakes without sufficient water quality information. Of the 136 lakes studied, 21 are impaired or potentially impaired for one or more nutrients, 23 are not impaired and more than 94 lakes do not have enough water quality data to determine impairments. Improved monitoring plans were recommended for the 94 lakes with insufficient data. Conceptual designs for water quality improvement projects were prepared for 12 prioritized lakes. The plan will be used to work with local governments to develop projects and programs aimed at water quality improvements.



Lake Eloise in Polk County.



Lake Mirror in Polk County.

Regional Priorities and Objectives

Southern Planning Region – SWUCA Recovery

PRIORITY:

Implement SWUCA Recovery Strategy

OBJECTIVES:

- Achieve 40 mgd of offset in groundwater withdrawals in the SWUCA by 2025
- Achieve the SWUCA saltwater intrusion minimum aquifer level for the Upper Floridan aquifer to slow the rate of saltwater intrusion in the MIA
- Ensure a sustainable water supply
 - Achieve and maintain 150-gallon daily compliance per capita with all public supply utilities
 - Assist the Peace River Manasota Regional Water Supply Authority in the development of 21 mgd of alternative supply sources
- Achieve and maintain a reduction in 2011-2015 regional average unadjusted gross per capita (84 gpcd) water use by 5.2 percent to 79.7 gpcd by 2025, a water savings of 4.7 mgd
 - Maximize water conservation
 - Maximize public supply interconnects
 - Achieve 75 percent utilization of all wastewater flows and a 75 percent resource benefit by 2040. As part of this effort, assist in the implementation of potable reuse (As of 2021, the Southern region had 76 mgd of wastewater flow and 47 mgd of reuse for a utilization rate of 62 percent)
 - Develop ASR options for potable and reclaimed water supply
 - Increase the percentage of total water use supplied by alternative sources
 - Continue assessing the viability of using excess runoff in Flatford Swamp for improving groundwater levels in the MIA

HIGHLIGHT:

The entire Southern region of the District falls within the eight-county SWUCA. In the SWUCA, which encompasses approximately 5,100 square miles, depressed aquifer levels have caused saltwater intrusion along the coast, contributed to reduced flows in the upper Peace River and lowered lake levels in areas of Polk and Highlands counties.

Groundwater withdrawals have been identified as the primary cause of the depressed aquifer levels throughout the groundwater basin, with drawdowns in some areas exceeding 50 feet.

Through fiscal year 2022, the District has adopted MFLs for 46 water bodies in the SWUCA and approximately 78 percent of these MFLs are

being met. An MFL is the limit or water level at which further withdrawals would be significantly harmful to the water resources or ecology of the area. The District adopted the SWUCA Recovery Strategy to address MFLs not being met by reducing the rate of saltwater intrusion in the MIA, restoring flows to the upper Peace River and increasing water levels at lakes in the Ridge area, which extends roughly 90 miles along the center of the state in Polk and Highlands counties.

Primary SWUCA Recovery Strategy elements for this region include:

- Updating the RWSP to identify how to address growing regional water needs while minimizing impacts to the water resources and related natural systems
 - The District approved a plan update in 2020 and will update it again in 2025
- Providing financial incentives for conservation, development of alternative supplies and regional interconnections
- Monitoring and reporting

The District has been successful in multiple efforts associated with its SWUCA goals. Partnering with the Peace River Manasota Regional Water Supply Authority, the District has assisted in developing a sustainable water supply to meet the needs of a four-county region within the SWUCA. The District has also assisted with the creation of the PRWC and is helping to fund its evaluation and development of AWS, including conservation. The FARMS Program and other conservation efforts have reduced Upper Floridan groundwater withdrawals in the SWUCA, which in turn has helped to increase groundwater levels in the MIA.

The SWIMAL elevation established for the Upper Floridan aquifer in the MIA must be met or exceeded for five consecutive years. This elevation was met or exceeded for the past four years (2018 through 2021). Achieving compliance with the SWIMAL will be the first step in meeting the recovery strategy's goal to slow saltwater intrusion in the region.

Based on groundwater modeling, the District's Flatford Swamp MIA Recharge/SWIMAL Recovery project continues to show promise in helping to slow saltwater intrusion by recharging the Floridan aquifer system near



Peace River in Arcadia (DeSoto County)

the MIA. As of August 2020, test recharge and monitoring wells are completed and construction of surface facilities is under way.

The District's Lake Hancock Lake Level Modification project became fully operational in 2014 and a reservation was established in 2020 for water stored in Lake Hancock and released to lower Saddle Creek to help meet the minimum flows in the upper Peace River. Recovery in the upper Peace River, where MFLs established for all three sites in the river segment were achieved in 2020 and 2021 has led to improvements in low-flow conditions in the lower portion of the river. Ridge lake water levels have increased several feet since the 1990s, but some lake MFLs in the SWUCA continue to not be met. Reevaluation of these MFLs by 2025 using new, peer review wetland criteria will support future assessment of recovery needs.

Regional Priorities and Objectives

Southern Planning Region – Improve Water Bodies

PRIORITY:

Improve Charlotte Harbor, Sarasota Bay, Shell/Prairie/Joshua Creeks

OBJECTIVES:

- Develop plans and implement projects for water quality improvement
- Develop plans and implement projects to restore natural systems

HIGHLIGHT:

Charlotte Harbor is Florida's second largest open water estuary at 270 square miles. Generally considered one of the most productive estuarine ecosystems in southwest Florida, the harbor is designated an "Estuary of National Significance" and a SWIM priority water body.

Challenges for the 4,400-square-mile Charlotte Harbor watershed include alteration and loss of wetlands, an increase in nonnative plant species, water quality degradation from point and non-point source pollutants and seagrass loss.

The success indicator for this system (as reported in the November 2020 update to the Charlotte Harbor SWIM Plan) is to maintain seagrass cover for Charlotte Harbor proper and Lemon Bay, including Dona and Roberts Bay, at 2016 levels (23,503 acres). As of 2020, total mapped seagrass acreage was 17,811 acres. This represents a sharp decline since 2018 and the lowest acreage reported since the District began mapping seagrass habitat in 1988. The District's seagrass mapping program has been the most relied upon metric for tracking the overall health of our estuaries, including Charlotte Harbor and Lemon Bay. Seagrass habitat is mapped every two years using a combination of aerial imagery and intensive field surveys.

The District participates with other government agencies through the Coastal and Heartland National Estuary Partnership to update and implement the comprehensive conservation and management plan, and implement water quality and hydrologic alteration improvement projects to restore coastal upland, wetland and intertidal habitats.

As of December 2021, the District and its cooperators have completed 28 natural systems projects, which have restored approximately 4,907 acres of coastal habitats for Charlotte Harbor. The District and its partners have completed water quality projects treating



approximately 153 square miles of contributing area for the watershed. Construction of the District's Lake Hancock Outfall Treatment System has been completed. This initial phase of operation was focused on vegetation establishment and monitoring. Water quality and operational data are being collected to optimize system operation.

Sarasota Bay is designated as an "Estuary of National Significance" and a SWIM priority water body. Like Charlotte Harbor, challenges to this 150-square-mile watershed include changes to coastal uplands, loss of wetlands, increases in nonnative plant species and water quality degradation from point and

non-point source pollutants and more recently significant losses in seagrass habitat.

From 2008 to 2018, seagrass acreage for Sarasota Bay remained relatively consistent. However, in 2020, Sarasota Bay like its neighbors to the north and south, experienced significant declines, reducing seagrass acreage to levels not seen since 2006.



Lake Hancock Outfall Treatment System.

Regional Priorities and Objectives

As is the case for Charlotte Harbor, the District is working with other government agencies on initiatives for Sarasota Bay. These include updating the comprehensive conservation and management plan, implementation of water quality improvement projects and restoration of coastal upland, wetland and intertidal habitats. As of December 2021, the District and its partners have completed projects to provide water quality treatment for 133 square miles of watershed contributing to Sarasota Bay, including the Dona Bay project. Additionally, more than 925 acres of coastal habitats have been restored in Sarasota Bay.

Shell, Prairie and Joshua Creek (SPJC) watersheds are in the southern region of the Peace River Basin. Combined, the SPJC watersheds comprise a surface area of 487 square miles, or approximately 20 percent of the Peace River Basin.

The City of Punta Gorda obtains its potable water supply from the Shell Creek in-stream reservoir. Prairie and Shell creeks (and associated tributaries) are designated as Class I waters, which means they are designated for use as potable water supplies.

Groundwater withdrawals for agricultural irrigation created mineralized water quality issues in the SPJC watersheds. The FARMS Program was created in 2003 with the goal of improving the watersheds' water quality. Through BMP implementation, the FARMS Program has partnered with producers to reduce groundwater use and capture runoff in tailwater recovery ponds and reuse the water for irrigation. This reduces the amount of mineralized groundwater used within the watershed and results in downstream water quality benefits.

A key success indicator is the reduction of total dissolved solids (TDS) in these surface waters. Through the implementation of FARMS Program projects and other initiatives, water quality concentrations for chloride, specific conductance and TDS measured at key surface water reference sites in the SPJC watersheds have significantly improved. Additionally, these FARMS Program projects have reduced approximately 13.9 mgd of groundwater use, which contributes to SWUCA recovery.



Newly created freshwater wetlands at Coral Creek, Phase 2 in Charlotte County.



District staff educating environmental students on the importance of water quality monitoring.



Prairie Creek in Charlotte County.

Core Business Processes

Managing and protecting the water resources of a 16-county area requires a highly skilled, motivated work force with the right tools, support and good information to make informed decisions and provide high-quality service to the residents of the District. All the various functions of this workforce have been evaluated and categorized into eight core business processes. To successfully achieve our Strategic Initiatives and Regional Priorities, the District must excel in each of these.

WATER RESOURCES PLANNING AND MONITORING

Water Resources Planning and Monitoring encompasses surface water and groundwater resource evaluations and other comprehensive planning efforts in partnership with local, state, regional, federal and other stakeholders. These responsibilities include identifying, collecting, analyzing and disseminating relevant and accurate data and mapping products and providing technical assistance.

Examples include the SWUCA Recovery Strategy Five-Year Assessment, MFLs studies, Regional Water Supply Planning, Strategic Plan update, Consolidated Annual Report and reviews of proposed comprehensive plan amendments and large-scale development, including developments of regional impact.



Prescribed burn conducted on District land.

INNOVATIVE PROJECTS

The District initiates and supports creative, collaborative projects to produce measurable benefits to the environment, water resources and the regional community. The projects address the core mission goals for water supply, flood protection, water quality and natural systems.

To ensure tax dollars are used as efficiently and effectively as possible, the District created a Project Management Office. Made up of a team of project managers, this office oversees District project processes to increase efficiency and maximize benefits.

FINANCIAL SUSTAINABILITY

The District's primary funding source is ad valorem taxes, which vary from year to year. In addition to paying for its operating costs, the District provides financial incentives through partnerships with public and private entities on projects that protect and restore the water resources of the region, such as promoting water conservation, developing alternative water supplies, enhancing natural systems and water quality, and promoting flood management activities.

The District operates on a pay-as-you-go basis that allows it to make more funding available for projects. The District targets at least 50 percent of its budget each year for water resources projects.

REGULATION

Regulation involves multiple permit activities that promote a fair allocation of the water resources, protect wetlands, enforce well construction standards and ensure that new activities do not increase the risk of flooding or degrade water quality. The permitting process also ensures operational performance monitoring of permitted systems to protect the region's citizens and water resources.

The District is committed to protecting its water resources and related natural systems while also providing quality service to the regulated community. The District's Regulation Division is structured to eliminate duplication, increase

efficiency and consistency, and reduce costs. Centralizing the permitting review process in the District's Tampa office ensures that permit applicants throughout the District are treated consistently. Improved online permitting services make it easier and more convenient to submit a permit application and access permit data.

The District also continues to work with the other water management districts and the DEP to achieve statewide permitting consistency wherever possible while allowing for regional water resource differences.

LAND MANAGEMENT

Land Management is responsible for maintaining District lands. In its 10,000-square-mile region, the District owns more than 450,000 acres of land that provide various water resource benefits. These lands are managed to restore and sustain natural systems, store flood waters, recharge the aquifer and improve water quality. District conservation lands are managed following an adaptive management strategy based on science to achieve land management goals. Land Management staff focus restoration efforts on imperiled natural communities where appropriate.

District lands are evaluated periodically to ensure that benefits are being achieved. Surplus is considered when lands are not necessary for statutory requirements, benefit fewer than two of the District's areas of responsibilities or present a management inefficiency for the District.

In addition, effective July 1, 2022, section 373.036(2)(e), F.S., requires the District to develop a list of critical wetlands to be acquired using funds from the Land Acquisition Trust Fund (Critical Wetland List). The statute requires the Critical Wetland List to be included in the District's Strategic Plan. In developing the Critical Wetland List, the District must consider the ecological value of the wetland, the effect of the wetland on water quality and flood mitigation, the ecosystem restoration value of the wetland, and the inherent susceptibility of the wetland to development due to its geographic location or

Core Business Processes

natural aesthetics. Before adopting or amending the Critical Wetland List, the District must notify the current property owners and allow them to request their property be removed.

The District does not plan to acquire conservation lands using funds from the Land Acquisition Trust Fund in Fiscal Year 2023. Therefore, the District has not developed a list of critical wetlands as described in section 373.036(2)(e), F.S. However, the District's Florida Forever Workplan identifies conservation lands and lands necessary for water resource development projects or waterbody restoration projects that meet eligibility criteria for acquisition. If the District determines that funds from the Land Acquisition Trust Fund are necessary to acquire lands, the Strategic Plan will be updated to include the list described in section 373.036(2)(e), F.S.

STRUCTURE OPERATIONS

Structure Operations maintains and operates 84 water control structures. Most of these structures are conservation structures that are operated to maintain water levels and provide limited flood relief. The larger flood control structures, like those associated with the Tampa Bypass Canal, are capable of quickly moving large quantities of water and are operated to maximize flood protection. Structure S-160 on the Tampa Bypass Canal is the largest flood control structure in the state.

KNOWLEDGE MANAGEMENT

As an information-based organization, high-quality data are critical to making informed decisions that protect and enhance the water resources. Knowledge Management is the practice of systematically and actively collecting, managing, sharing and leveraging an organization's data, information and processes.

As the region's knowledge leader for water resources information, the District collects a variety of regulatory, scientific and socio-economic and business data to support its Strategic Initiatives. While the focus of Knowledge Management activities is on meeting and supporting these initiatives, it is recognized that many public and private stakeholders also rely on this information to meet their business needs. Since FY2016, an emphasis has been placed on building awareness and expanding a culture of Knowledge Management throughout all business units within the agency, as well as improving the documentation, organization, review and storage of key business practices and related supporting documentation (governing



Tampa Bypass Canal.

documents). During FY2023, the District will continue efforts to organize governing documents to facilitate knowledge sharing, ensure the alignment of division/bureau practices with the Governing Board's policies and executive director procedures and allow for timely retrieval and review of existing governing documents. The focus also will cover streamlined processes for maintenance of updated documents.

Information technology and water resource data collection activities at the District are managed by a governance procedure, with oversight by a governance committee that includes members of the District's Executive Team. The information technology and data governance process monitors, informs, and controls the efficient and effective use of information technology and data collection to ensure these initiatives and associated resource expenditures are in alignment with the strategic direction and priorities of the District. The focus for the future will be on expanding governance processes across all business practices at the District to further supplement the District's Knowledge Management initiatives.

The District promotes consistency of data collection activities by coordinating with local, regional and state entities through participation on statewide, regional councils and interagency workgroups. The District is also working with the other water management districts and state agencies to implement common replacement standards for equipment; to develop common standards for sharing financial, geospatial,

scientific and permit information; and to establish frameworks for joint development of software applications.

ENGAGEMENT

Engagement is a key to retaining a highly skilled and motivated work force, the cornerstone of any successful organization. Keeping staff informed and involved promotes good morale and increases productivity. Additionally, engagement extends beyond internal staff.

To manage water resources effectively over a large region, engaging external publics, including citizens, media, elected officials, advisory committees and other stakeholders is also critical. Outreach and education engage these various groups to foster behaviors, secure funding and assist in developing laws that conserve, protect and sustain Florida's water and related natural resources. Also, through its planning and outreach processes the District collaborates with stakeholders and advisory committees to help meet those goals. Input from stakeholders and advisory committees is used by the Governing Board to make water resource decisions.

Engagement helps to communicate those shared interests, forging relationships that support collaboration to benefit the region's water and related resources, economic stability and quality of life.



Southwest Florida *Water Management District*

VISAY 3-8-2023

The Southwest Florida Water Management District (District) does not discriminate on the basis of disability. This nondiscrimination policy involves every aspect of the District's functions, including access to and participation in the District's programs, services and activities. Anyone requiring reasonable accommodation, or who would like information as to the existence and location of accessible services, activities, and facilities, as provided for in the Americans with Disabilities Act, should contact the Human Resources Office Chief, at 2379 Broad St., Brooksville, FL 34604-6899; telephone (352) 796-7211 or 1-800-423-1476 (FL only); or email ADACoordinator@WaterMatters.org. If you are hearing or speech impaired, please contact the agency using the Florida Relay Service, 1-800-955-8771 (TDD) or 1-800-955-8770 (Voice). If requested, appropriate auxiliary aids and services will be provided at any public meeting, forum, or event of the District. In the event of a complaint, please follow the grievance procedure located at WaterMatters.org/ADA.