



Strategic Plan 2014–2018

Updated January 2016

Southwest Florida
Water Management District



MESSAGE FROM THE CHAIR

District committed to meeting its core water resources mission

The Southwest Florida Water Management District (District) serves its stakeholders, the citizens of the 16-county west central Florida region, by managing and protecting the region's water resources to ensure their continued availability while maximizing the benefits to the public. Our core areas of responsibility are water supply, water quality, natural systems and flood protection.

The District is a solution-oriented agency that emphasizes scientific and technical excellence while also providing high quality service to its customers. Our ongoing commitment is to be responsive to our stakeholders as we meet our responsibilities.

The region faces many water resource challenges as our communities continue to grow and the water resources remain limited. This Strategic Plan provides the road map for meeting those challenges by identifying what needs to be accomplished, how it will get done, and how success will be measured.

Two years ago we revamped our five-year plan to more specifically target priorities in each of our four planning regions. In the Northern Region our priorities are improving our coastal spring systems and improving water use efficiencies to ensure a long-term sustainable water supply. In the Tampa Bay region, we are focused on recovering water resources impacted by water withdrawals and improving water bodies such as Tampa Bay. The priorities in the Heartland and Southern regions include meeting the goals of the Southern Water Use Caution Area Recovery Strategy and improving priority water bodies.

As we enter the third year of the plan, we have accomplished many of our objectives. Some of the larger accomplishments include:



Michael A. Babb
Governing Board Chair

- working closely with local, regional and state agencies to develop a regional water supply plan for the Central Florida Water Initiative, a five-county region that spans three water management districts
- completing construction on both the Lake Hancock Lake Level Modification project to help increase flows in the upper Peace River and the Lake Hancock Wetland Treatment System to improve water quality entering into the Peace River and Charlotte Harbor
- assisting the Peace River Manasota Regional Water Supply Authority to complete three phases of the Regional Integrated Loop System
- partnering with the Withlacoochee Regional Water Supply Authority to develop a regional water supply plan

While much has been done, many water resource challenges remain. Funded primarily through property taxes, the District is responsible to the taxpayers to protect their investment in water management. The District has been able to reduce its operational expenses by more than 40 percent over the last seven fiscal years. Funds saved through these efficiency measures are used for projects such as springs restoration, alternative

water supply development, water quality improvements and flood protection.

The District is continually looking for ways to reduce costs, improve effectiveness and maximize the taxpayer investment in our mission. We will continue to use developing technology to deliver a better value to our citizens by increasing efficiencies in all areas.

Governing Board

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Charlotte, Sarasota Counties

Kelly S. Rice
Citrus, Lake, Levy, Sumter Counties

The Governing Board establishes policies for the District. Board members are unpaid citizen volunteers appointed by the Governor and confirmed by the Florida Senate. At printing, there is one vacant Board seat.

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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 98 local governments spread over approximately 10,000 square miles, with a total population estimated to be 4.9 million in 2014. For planning purposes, the District is divided into four regions:

Northern, Tampa Bay, Heartland, and Southern. (See *District Planning Regions map*.)

Governing Board

A 13-member board governs the District. The 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 diverse backgrounds and interests. Board members, who must live in the District, serve four-year terms.

Budget

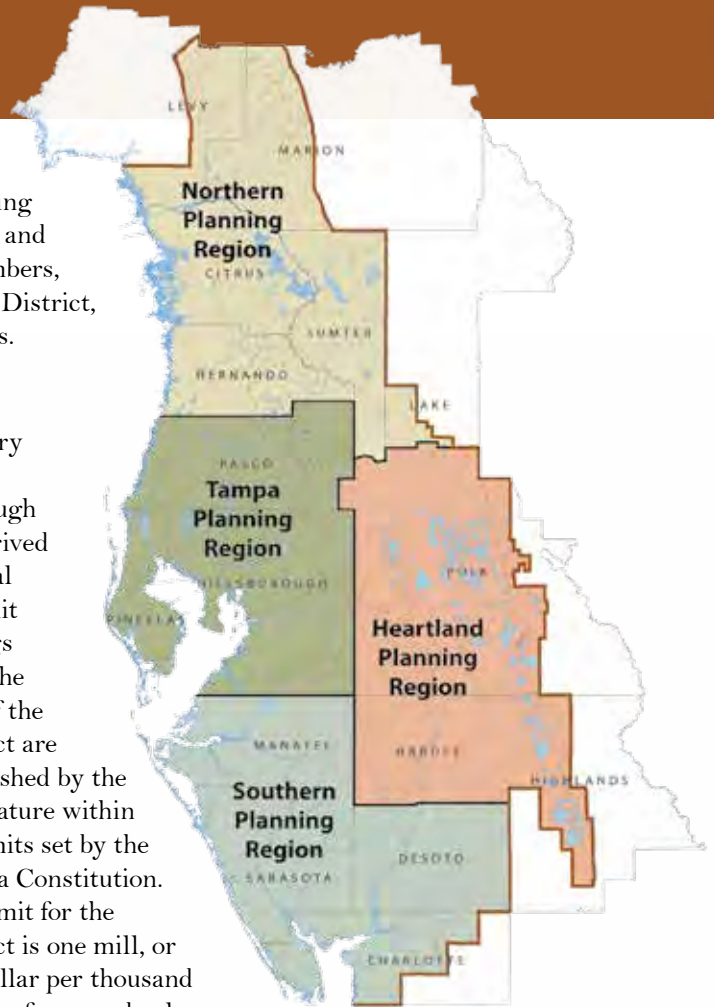
The District's primary funding source is ad valorem taxes, although revenues are also derived from state and federal appropriations, permit fees, interest earnings and other sources. The taxing capabilities of the

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 2015 is 0.3658 mill. More information about budgeting is included in this document's Core Business Practices section.

Core Mission

Florida Statutes, primarily Chapter 373, authorizes 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 the water resources 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, environment, economy and quality of life.
- **Natural Systems Goal:** Preserve, protect and restore natural systems to support their natural hydrologic and ecologic 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 10 Strategic Initiatives:

- Regional Water Supply Planning
- Alternative Water Supplies
- Reclaimed Water
- Conservation
- Water Quality Assessment and Planning
- Water Quality Maintenance and Improvement
- Minimum Flows and Levels Establishment and Recovery
- Natural Systems Conservation and Restoration
- Floodplain Management
- Emergency Flood Response

The Strategic Initiatives section of this document will provide additional information on each of the Initiatives, including goals and strategies.

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.

Vision and Values

Every organization has an identity that is forged not only by what it does, but by how it conducts itself. The qualities identified in this Vision include being dynamic, efficient, ethical, collaborative, competent and committed to the vitality of the state and its environment.

To achieve this Vision, the District has established five Core Values that set the tone and the direction for its employees:

- Service Excellence
- Teamwork & Collaboration
- Self Management
- Professional Integrity
- Professional and Technical Excellence

(See Vision/Values chart for more information.)

These Core Values are further defined in, and serve as the foundation of, the District's annual employee evaluation process, embedding these principles in the fabric of the organization and making them meaningful to employees in their daily activities.

Core Business Processes

In addition to adhering to its adopted values, the District must excel in seven core business processes to successfully achieve its strategic initiatives:

- Water Resources Planning
- Innovative Projects
- Regulation
- Long-Range Financial Planning
- Land and Structure Operations
- Knowledge Management
- Public Engagement

These business processes are explained in more detail in the Core Business Processes section.

VISION

The District is a dynamic and efficient public organization led and staffed by ethical, collaborative and highly competent people who provide superior service to our community. As stewards of Florida's water and related natural resources, we find our work rewarding and are driven by a desire to sustain the vitality of our state and its precious environment.

CORE VALUES

Beliefs setting the tone and direction for our employees

Service Excellence

We are a solution-oriented agency committed to achieving results and efficiently meeting the needs of the public and the water resources.

Teamwork & Collaboration

We communicate and work together effectively to achieve our common goals.

Self Management

We set challenging goals for our personal achievement and hold ourselves accountable for the results.

Professional Integrity

We operate transparently and apply our processes, rules and regulations in a consistent manner.

Professional and Technical Excellence

We use our expert knowledge, technology and other available resources to achieve high-quality work.

STRATEGIC INITIATIVES

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 for all 16 counties within the District. This is a collaborative 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. As of 2015, the District has helped to develop more than 212 million gallons daily (mgd) of alternative water supplies.

Strategies

- Develop surface water capture, desalination and brackish groundwater systems
- Partner with the agricultural community to provide alternative water supplies
- Continue to leverage District funds to facilitate the development of alternative water supplies
- Continue to support research into aquifer storage and recovery viability
- Promote conjunctive use approaches 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 source 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. As of 2014 (latest data available), more than 151 mgd of reclaimed water was being beneficially reused in the District, accounting for more than 13 percent of overall water use.

Strategies

- Increase availability by increasing storage capacity
- Increase availability by promoting interconnects
- 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
- Augment reclaimed water with traditional sources when appropriate
- Provide regulatory incentives to increase beneficial use and offsets
- Increase benefits by promoting recharge and environmental enhancement projects

4. Conservation

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

The District fosters water stewardship awareness and sustainable behaviors among the people who live, work and play within the District's boundaries. 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
- Utilize regulatory programs to establish effective conservation practices

STRATEGIC INITIATIVES

Water Quality

1. Water Quality 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 data. Good decisions require reliable information.

Strategies

- Continue to develop and maintain long-term water quality monitoring networks to collect, analyze and distribute accurate water quality information
 - Coastal Groundwater 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

2. Water Quality 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. Through fiscal year 2013, District projects had provided water quality treatment for approximately 120,000 acres of watershed, resulting in the reduction

of an estimated 120 tons per year of nitrogen to area waters. Examples of these efforts include partnerships for best management practices (BMPs) implementation such as the Facilitating Agricultural Resource Management Systems (FARMS) Program, focused on the agriculture community, and the Watershed Management Program, addressing watershed improvements; well abandonment assistance offered by the Quality of Water Improvement Program (QWIP); and the restoration of surface waters performed by the Surface Water Improvement and Management (SWIM) and the Springs and Environmental Flows programs.

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 process. In addition, water quality assistance is accomplished through data and information sharing and the implementation of improvement projects.

Strategies

- Use cooperative funding to support local government efforts in development and implementation of basin management action plans (BMAPS)
- Continue to monitor the USEPA Numeric Nutrient Criteria process
- Promote Florida-Friendly Landscaping™ principles and other behaviors that help protect water quality
- Participate in the development and implementation of the statewide stormwater management criteria to enhance an active environmental resource permitting (ERP) program



Rainbow Springs

- Utilize regulatory programs to promote water quality protection and improvement
- Continue to promote partnerships through District water quality programs such as the SWIM and the FARMS programs

STRATEGIC INITIATIVES

Natural Systems

1. Minimum Flows and Levels Establishment and Recovery

Goal Statement: To prevent significant harm and reestablish the natural ecosystem, determine MFLs and, where necessary, develop and implement recovery plans.

Minimum flows and levels (MFLs) for aquifers, surface watercourses, and other surface water bodies identify the limit at which 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. MFLs are used for permitting or planning decisions concerning how much water may be safely withdrawn from a water body.

Through fiscal year 2015, the District has set 204 minimum flows and levels on rivers, lakes, aquifers and wetlands. The District's process for establishing MFLs includes independent scientific peer review and opportunities for interested stakeholders to participate in public review. The District also assesses potential water supply/resource problems and evaluates water use permit applications to ensure no violation of established MFLs occurs. In addition, MFLs are monitored and evaluated for compliance. This includes determining the need for recovery, implementing strategies to prevent flows or levels from falling below established MFLs, and assessing the recovery of water bodies where significant harm has occurred. To date, the District has developed three regional recovery strategies associated with Water Use Caution Areas (Northern Tampa Bay, Southern and Dover/Plant City) and two water body-specific plans that cover the water resources currently known to not meet established MFLs.

Strategies

- Update MFL priority list and schedule annually
- Establish water body-specific MFLs through:
 - Data collection
 - Data analysis and reporting
 - Independent scientific peer review and public review
 - Rule adoption
- Continue to incorporate MFLs in District water use permit application review processes and compliance monitoring
- Monitor and report hydrologic conditions to ensure compliance with MFLs
- Continue to review and refine scientific methodologies used in establishing MFLs
- Implement adopted recovery strategies
- Incorporate MFL recovery and prevention strategies into the Regional Water Supply Plan development process

2. Conservation and Restoration

Goal Statement: Identify critical environmentally sensitive ecosystems and implement plans for protection or restoration.

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. Through 2013, nearly 30,000 acres of habitat had 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, land is restored and managed to maintain

ecological and hydrological functions. Restoration initiatives, such as the Surface Water Improvement and Management (SWIM) Program, are overseen by the District to restore priority water bodies. Numerous recreation and educational opportunities are offered on District lands to enhance conservation land stewardship.

The District also regularly tracks land and water resource alterations through its aerial land use/land cover, wetland and seagrass mapping efforts. Staff is able to monitor changes and offer feedback to better link land and water resources for developments of regional impact (DRI) and local government comprehensive plan amendments. The District's environmental resource permit (ERP) program helps protect water resources.

Strategies

- Evaluate acquisition opportunities, placing priority on ecological value, inholdings, additions, core conservation areas, realistic landowner expectations, and leveraging partnership dollars
- Promote innovative restoration projects and partnerships
- Promote conservation of land through recreation and education opportunities
- 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
- Utilize management tools to enhance maintenance of conservation lands

STRATEGIC INITIATIVES

Flood Protection

1. Floodplain Management

Goal Statement: Develop better floodplain information and implement floodplain management programs to maintain storage and conveyance and to minimize flood damage.

The District's Watershed Management Program (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.

The District's environmental resource permit (ERP) program protects floodplain and historic basin storage and ensures that new development does not increase the rate of stormwater runoff onto neighboring properties.

Strategic acquisition allows land to fulfill natural functions of storing and accommodating excess water and reduces the risk of flooding damage by preserving floodplains. The District also maintains and operates four major canal and conveyance systems and 81 flood control and water conservation structures as an important strategy in floodplain management. Extensive areas of the District depend upon the maintenance and operation of these facilities.

Strategies

- Implement the WMP, collect and analyze data and develop and distribute accurate floodplain information

- Implement the ERP program using WMP floodplain information
- Identify floodplain management and flood protection value associated with land acquisition opportunities
- Operate, maintain and upgrade water management structures and associated facilities
- Increase public awareness of floodplains

2. Emergency Flood Response

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

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 (EOC) and Emergency Operations Organization (EOO) 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,

equipment and staff and help to determine and implement solutions to flooding problems for major conveyance systems.

The enhancement and modernization of District water management facilities includes the automation and upgrading of water conservation and flood control structures with remote control and equipping mission-critical structures with digital video monitoring. Emergency notification sirens have been installed at two high-hazard District water control facilities — Medard Reservoir in Hillsborough County and G-90 in Highlands County. With these sirens, downstream residents can be warned to evacuate should either of the facilities fail.

Strategies

- Continue to promote the National Incident Management System (NIMS) and Incident Command System (ICS) as the District's incident management system
- Establish redundant control systems for all mission-critical infrastructure
- Use technology, including automation, to the fullest extent to ensure optimal response capabilities
- Train staff in NIMS/ICS structure and exercise the District's CEMP and high hazard structure Emergency Action Plans
- Provide emergency assistance to local governments and agencies as requested

REGIONAL PRIORITIES AND OBJECTIVES

Northern Region — Springs

PRIORITY:

Improve Rainbow River, Crystal River/Kings Bay, Homosassa River, Chassahowitzka River and Weeki Wachee Springs and River

OBJECTIVES:

- Complete natural systems restoration plans with targets and implement identified projects for each priority spring system
- Implement plans and projects for water quality, critical shoreline, wetlands and/or submerged habitats in each priority water body or springshed

Narrative:

Among the most precious water resources in the District are the more than 150 documented springs, and the rivers, bays, and estuaries that are fed by them. Over the past half century virtually all of these spring-fed systems have experienced significant ecological changes caused by both natural variability and human activities.

Most individual springs cluster around 16 groups of springs. The five largest are classified as first-magnitude groups (flow rates of 100 cubic feet per second or greater). These are the Rainbow Springs, Crystal River/Kings Bay, Homosassa Springs, Chassahowitzka Springs and Weeki Wachee Springs.

The District recognizes the need to manage all springs within its boundaries but places a priority on the five first-magnitude spring groups, which fall within the northern area of the District. These five spring groups collectively discharge more than one billion gallons per day.

Four of the five groups discharge into the Gulf coastal waters, home to the second longest seagrass area in the United States.

With an estimated 700,000 acres, the Springs Coast seagrass area is one of the largest seagrass areas in the world. These coastal groups are also critical manatee habitat providing thermal refuge during the winter months. Kings Bay is the largest natural thermal refuge for manatees in the United States.

These groups are important not only for their ecological value but also for their economic impact on the communities that call these areas home. Four of the five first-magnitude systems have state parks associated with them that draw over one million non-resident visitors annually. This translates into \$46 million in direct economic impact.

More than 900 jobs are generated by state parks associated with these springs groups. According to the United States Fish and Wildlife Service, Kings Bay supports 42 small businesses through kayaking and diving tours alone.

The District takes an ecosystem-level approach to springs management by minimizing human impacts on flow regimes, improving water quality and clarity, and restoring natural habitats. The District's Springs Management Plan lays out a general restoration strategy for the five-year period 2015–2019. This plan is a living document with adaptive management at its core, and builds upon earlier comprehensive watershed management and years of Districtwide expertise designing and implementing projects. The District, in partnership with the various stakeholders, implements projects to conserve and restore the ecological balance of our spring systems and tracks its performance against the goals identified in the management plan.

Development of SWIM plans for the five first-magnitude springs is one of several initiatives discussed in the Springs Management Plan. The revised Rainbow SWIM plan was approved in November 2015. The Crystal River/Kings Bay plan is under way, with completion scheduled for January 2016.

Rainbow River watershed, located in Marion and Levy counties, covers a surface area of 73-square miles and discharges 493 mgd into the Withlacoochee River. The river is designated an Outstanding Florida Water, Aquatic Preserve and a SWIM priority water body.

Main challenges facing the Rainbow River are elevated nitrate concentrations, reduced water clarity, long-term stream flow reduction and altered aquatic vegetation communities.

The Rainbow River SWIM Plan includes quantifiable objectives for improving the systems. These objectives include targets for water clarity, submerged aquatic vegetation coverage, nitrate concentrations, and the minimum flows for the springs and river systems.

Crystal River/Kings Bay watershed is 364 square-miles and situated in Citrus County. This hydrologically unique water body is made up of more than 30 springs, and tidally-influenced Kings Bay is its headwater. The system is designated as an Outstanding Florida Water and a SWIM priority water body.

Primary challenges for the Crystal River/Kings Bay watershed are reduced water clarity, altered aquatic vegetation, elevated nitrate concentrations and sea level rise.

Quantifiable objectives in the Crystal River/Kings Bay SWIM Plan include water clarity, nitrogen, phosphorus and chlorophyll concentrations, coverage of desirable and invasive aquatic vegetation and natural shoreline, enhancement of disturbed shoreline and minimum flows for the springs and river systems.

SWIM Plans for the remaining water bodies, **Chassahowitzka, Homosassa and Weeki Wachee rivers**, are to be completed in 2016–2017. Each management plan will identify priority management actions, ongoing and proposed projects and quantifiable objectives for determining success.

REGIONAL PRIORITIES AND OBJECTIVES

Northern Region — Water Supply

PRIORITY:

Ensure long-term sustainable water supply

OBJECTIVES:

- **Increase conservation**
 - Achieve and maintain 150 gallon per day compliance per capita with all public supply utilities by December 31, 2019
 - Reduce 2011 regional average compliance per capita of 133 by 15 percent to 113
- **Maximize beneficial use of reclaimed water**
 - Achieve 75 percent utilization of all wastewater flows and a 75 percent resource benefit by 2040. As of 2014, the Northern Region had a utilization rate of 63 percent and resource benefit of 71 percent
 - Increase beneficial reuse flow to 21 mgd by 2035. As of 2014, the Northern Region had 12.85 mgd of reuse flow
 - Increase reclaimed water quality discharge to rapid infiltration basins (RIBs) in springsheds
- **Partner with Withlacoochee Regional Water Supply Authority to promote regional water supply planning and development**

Narrative:

The District's 2015 Regional Water Supply Plan shows that demand for water in the Northern Planning Region through 2035 and beyond could be met with fresh groundwater if the region's considerable potential for reuse and conservation were realized.

Public supply use, which accounts for about 50 percent of the water use in the Northern Planning Region, has significant potential for water savings. In 2011, public supply water use in the northern region averaged 133 gallons per person per day (gpcd). This figure represents a 35 percent reduction from water usage in 2000. However, it's still significantly higher than the other three planning regions. In 2015, there were four utilities in the northern region with compliance per capita figures higher than 150 gpcd, which will be the maximum allowed starting on December 31, 2019. The public supply water use averaged 121 gpcd in 2015. This per capita is still significantly higher than that experienced in the other regions.

The District's goals are to ensure that all utilities fall below the maximum per capita usage and to reduce the regional per capita usage 15 percent by 2020. 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.



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 Region — MFL Recovery



PRIORITY:

Implement Minimum Flow and Level Recovery Strategies

OBJECTIVES:

- **Northern Tampa Bay Water Use Caution Area (NTBWUCA) Recovery Strategy**
 - Recover minimum flows for rivers, lakes, wetlands, and other water bodies
 - By 2018, complete an assessment to determine whether Tampa Bay Water's reduction to 90 mgd of groundwater withdrawal from the Central Wellfield System provides necessary recovery for impacted rivers, lakes and wetlands
 - Complete the permitting, final design and construction of Blue Sink and Morris Bridge Sink projects for the Lower Hillsborough River recovery
 - Conduct a 5-year assessment of the adopted MFL for the Lower Hillsborough River
 - Increase use of reuse for recharge and MFLs
- **Dover/Plant City Water Use Caution Area (DPCWUCA) Recovery Strategy**
 - Ensure compliance with the DPCWUCA area minimum aquifer level of 10 ft NGVD for the Upper Floridan aquifer at the District's DV-1 Suwannee monitor well
 - Reduce January 2010 withdrawal quantities by 10 percent by January 2015 and by a total of 20 percent by January 2020
 - Establish automatic flow meter reporting equipment on 960 agricultural withdrawal points
- **Southern Water Use Caution Area (SWUCA) Recovery Strategy**
 - Achieve a net reduction up to 50 mgd in groundwater in SWUCA by 2025 with 40 mgd achieved through FARMS
 - Recover the SWUCA saltwater intrusion minimum aquifer level of 13.1 ft 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



Narrative:

The District sets minimum flows and levels on priority water bodies. An MFL is the limit at which withdrawals would be significantly harmful to the water resources or ecology. 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.

In the Tampa Bay Region, the District has identified recovery strategies associated with MFLs in three WUCAs: Northern Tampa Bay, Dover/Plant City, and Southern.

REGIONAL PRIORITIES AND OBJECTIVES

Tampa Bay Region — MFL Recovery

The **Northern Tampa Bay Water Use Caution Area** was established to address adverse impacts to water resources from groundwater pumping. The WUCA encompasses all of Pinellas and Pasco counties, and those portions of Hillsborough County north of Highway 60. The first phase of the District's recovery strategy for restoring water resources called for reducing pumping from Tampa Bay Water's regional well-fields and providing financial incentives for construction of alternative water supply projects. In the Northern Tampa Bay WUCA, these efforts have produced 149 mgd of new alternative water sources and allowed for groundwater withdrawals to be reduced by more than 60 mgd.

Significant hydrologic recovery has resulted from these reductions. However, more information is needed to fully evaluate the effects of the reductions on MFL recovery. Therefore, the District initiated a second phase of the recovery strategy through adoption of a comprehensive plan that includes continued monitoring and evaluation of environmental mitigation for withdrawal impacts and continued water conservation activities by Tampa Bay Water's member governments.

One of the water resources impacted in the NTBWUCA is the Hillsborough River. The recovery strategy for the lower Hillsborough River calls for the augmentation of the river from a variety of sources, including Sulphur Springs, Blue Sink, Morris Bridge Sink and the Tampa Bypass Canal. Since December 2007, the District has transferred 11 cubic feet per second of water from the Tampa Bypass Canal to the Hillsborough River Reservoir and pumped 75 percent of this volume over the City of Tampa dam when necessary. To further support recovery of the lower river, the City of Tampa has been

supplying up to 18 cubic feet per second of flow from Sulphur Springs to the base of the City of Tampa dam. Projects to develop additional augmentation quantities for the lower Hillsborough River are planned at Blue and Morris Bridge sinks.

The **Dover/Plant City Water Use Caution Area** was established to address impacts from groundwater pumping for frost/freeze protection. To protect crops from freeze events, a best management practice for many farmers with agricultural commodities including strawberries, blueberries, citrus, and nurseries is to pump groundwater and irrigate when temperatures drop to near freezing. Substantial irrigation use during these times strains the aquifer system which lowers groundwater levels and can also impact residential wells and contribute to sinkhole development.

During the historic 11-day January 2010 freeze event, many residential wells were impacted and sinkholes were reported. Moreover, significant freeze events resulting in well failures and sinkholes have occurred three times over the past 10 years. As a result, the District has developed and adopted a comprehensive management plan to significantly reduce and monitor in real time groundwater pumping during future freeze events that may cause impacts to existing legal users.

A southern portion of Hillsborough County is included in the **Southern Water Use Caution Area**. In the eight-county 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 were

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

The District has adopted MFLs for 41 priority water bodies in the SWUCA. As of 2013, approximately half of the established MFLs are not being met. The District adopted the SWUCA Recovery Strategy to recover flows and levels to established MFLs, including reducing the rate of saltwater intrusion by achieving the proposed minimum aquifer level, restoring minimum flows in the upper Peace River, and restoring minimum levels to the priority lakes in the Highlands Ridge area.

Some of the primary Recovery Strategy elements for the SWUCA include:

- Updating the Regional Water Supply Plan to identify how to address growing regional water needs while minimizing impacts to the water resources and natural systems. The District approved the updated plan in November 2015.
- Providing financial incentives for conservation, creation of alternative supplies and regional interconnections.
- Resource monitoring, reporting and cumulative impact analysis. The cumulative impact analysis evaluates changes in permitted and used groundwater quantities and water resource development projects benefiting the Upper Floridan aquifer in and around the MIA.

REGIONAL PRIORITIES AND OBJECTIVES

Tampa Bay Region — Improve Water Bodies

PRIORITY:

Improve Lake Thonotosassa, Tampa Bay, Lake Tarpon and Lake Seminole

OBJECTIVES:

- Complete plans and implement natural system projects that restore critical shoreline, coastal upland and Intertidal habitats
- Implement plans and projects for water chemistry, critical shoreline, wetlands and/or submerged habitats in each priority water body
- Complete the Old Tampa Bay Water Quality and Habitat Assessment and begin implementation of priority projects **(PROJECT COMPLETED)**



Lake Thonotosassa shoreline.

Narrative:

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. The lake is designated as a District priority water body through its implementation of the state SWIM program.

Four main challenges exist in the Lake Thonotosassa watershed. Nutrient loadings from the watershed have caused extreme nutrient enrichment resulting in algal blooms. Habitat quality and

species diversity have declined. Nonnative plant species are more abundant, while availability of desirable sport fish has declined.

The District is partnering with other government agencies to identify nutrient sources in the watershed. Areas with high nutrient loadings will be 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 and the importance of water quality and wetlands.

Success indicators include meeting numeric targets for nitrogen, chlorophyll and phosphorus identified in the Lake Thonotosassa SWIM Plan.

Tampa Bay is designated as an “Estuary of National Significance” and a 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 2 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. Water quality has been degraded from pollutants and nutrient loading.

The District is working with other government agencies on a comprehensive conservation and management plan, implementation of water quality improvement projects, and restoration of the balance between coastal upland, wetland and intertidal habitats.

Success indicators include coverage of submerged vegetation and wetlands, and meeting targets for chlorophyll, nitrogen and phosphorus concentrations identified in the Tampa

REGIONAL PRIORITIES AND OBJECTIVES

Tampa Bay Region — Improve Water Bodies

Bay SWIM Plan. Through efforts of the region, this year, the program met its goal of recovering seagrasses to the acreage observed in the 1950s. In addition, the bay's nitrogen loading is on the decline, and the District SWIM program and local cooperators restored 4,500 acres of coastal habitats as of 2013.

Lake Tarpon is the largest freshwater lake in the Tampa Bay area with 2,532 acres of surface area. The lake is designated as an Outstanding Florida Water, a Fish Management Area and a SWIM priority water body.

The main challenge for the Lake Tarpon watershed is extreme nutrient enrichment resulting in water and habitat quality declines.

Success indicators include improvement in numeric targets for chlorophyll, nitrogen and phosphorus concentrations identified in the Lake Tarpon SWIM Plan.

The District is working in partnership with other government agencies to further assess Lake Tarpon and develop an updated plan that identifies projects and programs to reduce nutrient loading to the lake.

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 Seminole watershed encompasses approximately 3,500 acres, of which almost 90 percent is developed as urban land uses.

Lake Seminole is currently listed by the Florida Department of Environmental Protection as an impaired water body. The primary pollutants associated with this impairment are nutrients, which have resulted in hyper-eutrophic

conditions and poor water quality.

Improvement targets for chlorophyll, nitrogen and phosphorus concentrations are identified as measures of success in the Lake Seminole SWIM Plan. The control of excessive nutrients entering the lake and the fate of the nutrients that do reach the lake (e.g., internal nutrient recycling) would help in achieving 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 the five highest nutrient loading sub-basins with alum treatment systems, treating and redirecting a portion of flows in the Lake Seminole Bypass Canal into Lake Seminole, and removing organic muck sediments. The District has been partnering with the county on these projects.



Lancaster Tract Restoration Project created several new wetland areas and also formed a freshwater pond to collect and treat stormwater entering the site. Lancaster Tract now provides improved water quality entering Tampa Bay.

REGIONAL PRIORITIES AND OBJECTIVES

Heartland Region — SWUCA Recovery

PRIORITY:

Implement Southern Water Use Caution Area Recovery Strategy

OBJECTIVES:

- Achieve a net reduction of up to 50 mgd of groundwater use in SWUCA by 2025 with 40 mgd of offsets achieved through agricultural reductions via the Facilitating Agricultural Resource Management Systems (FARMS) Program
- Recover the SWUCA saltwater intrusion minimum aquifer level of 13.1 ft NGVD for the Upper Floridan aquifer to slow the rate of saltwater intrusion in the Most Impacted Area
- Recover 87 to 89 percent of the minimum flows for three segments of the upper Peace River through implementation of the Lake Hancock Lake Level Modification project
- Recover minimum levels at seven Polk County lakes and nine Highland County lakes by 2025
- Ensure a sustainable water supply
 - Achieve and maintain the 150-gallon-per-day compliance per capita with all public supply utilities
 - Reduce 2011 regional average per capita of 104 gallons per capita daily by 5 percent to 99 by 2020
 - Assist Polk County and its municipalities in the development of 30 mgd of alternative supply sources through the creation of a regional water supply entity
 - Increase percentage of total water use supplied by alternative sources
 - Maximize the water conservation potential for the region
 - Maximize 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
 - Develop a Regional Water Supply Plan for the Central Florida Water Initiative by 2014 **(COMPLETED)**
 - Achieve 75 percent utilization of all wastewater flows and a 75 percent resource benefit by 2040. As of 2014, the Heartland Region had a utilization rate of 34 percent and resource benefit of 91 percent
 - Increase beneficial reuse flow to 53 mgd by 2040. As of 2014, the Heartland Region had about 11 mgd of reuse flow
 - Complete the TECO's SW Polk Power Station Interconnects of reclaimed water from the Cities of Lakeland and Mulberry and Polk County by 2017. Once fully operational, this project is anticipated to provide a resource benefit of 17 mgd



Narrative:

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.

The District has adopted MFLs for 41 priority water bodies in the SWUCA. An MFL is the limit at which withdrawals would be significantly harmful to the water resources or

REGIONAL PRIORITIES AND OBJECTIVES

Heartland Region — SWUCA Recovery

ecology. As of 2013, approximately half of the established MFLs were not being met. The District adopted the SWUCA Recovery Strategy to recover flows and levels to established MFLs, including reducing the rate of saltwater intrusion by achieving the proposed minimum aquifer level, restoring minimum flows to the upper Peace River, and restoring minimum levels to priority lakes in the Ridge area, which extends roughly 90 miles along the center of the state in Polk and Highlands counties.

Some of the primary Recovery Strategy elements for the SWUCA include:

- Updating the Regional Water Supply Plan to identify how to address growing regional water needs while minimizing impacts to the water resources and natural systems. The District approved the updated plan in November 2015.
- Providing financial and regulatory incentives for conservation, construction of alternative supplies and regional interconnections. District funding sources include the Cooperative Funding and Water Supply and Resource Development initiatives.
- Resource monitoring, reporting and cumulative impact analysis. The Recovery Strategy includes the continuous monitoring of trends in resource conditions and permitted and actual water use. The cumulative impact analysis evaluates changes in permitted and used groundwater quantities and water resource development projects benefiting the Upper Floridan aquifer in and around the Most Impacted Area.
- Developing and implementing water resource projects to aid in reestablishing minimum flows to rivers, recover levels in Ridge lakes, and enhance recharge. A project focus area is to increase the wet-

weather storage in the upper Peace River watershed.

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 in the south. The District's cooperatively funded FARMS program has helped the agricultural community reduce its use of groundwater from the Upper Floridan aquifer. The FARMS program combined with other conservation efforts have helped to reduce Upper Floridan groundwater withdrawals by more than 50 mgd, one of the targets established by the SWUCA Recovery Plan. The District's Lake Hancock Lake Level Modification Project will be operational in 2015 to help meet the minimum flows for the upper Peace River.

Challenges remain in reducing the rate of saltwater intrusion along the coast and meeting minimum levels for Ridge lakes in Highlands and Polk counties.

While the southern portion of Polk County is included in the SWUCA, all of Polk County is part of a designated Central Florida Water Initiative (CFWI) region that is reaching sustainable groundwater limits, facing increased demands on water resources, and involves overlapping regulatory programs.

The CFWI region covers five counties, including Polk, Orange, Osceola, Seminole and southern portions of Lake. The boundaries of the St. Johns River, South Florida and Southwest Florida water management districts meet in the area.



The District is collaborating with the other water management districts and local governments to identify a sustainable water supply for the region. The keys to meeting the water resource challenges of the CFWI region include developing:

- One shared groundwater model to determine availability (completed)
- One coordinated strategy for MFL prevention & recovery (ongoing)
- One Regional Water Supply Plan (completed)
- Consistent rules among the permitting agencies (ongoing)

Polk County has a need to develop 30 mgd of water supply sources by 2035. The District is assisting Polk County and its municipalities in establishing a regional water supply entity.

REGIONAL PRIORITIES AND OBJECTIVES

Heartland Region — Improve Water Bodies

PRIORITY:

Improve Winter Haven Chain of Lakes and Ridge Lakes

OBJECTIVES:

- Implement plans and projects for water chemistry, critical shoreline, wetlands and/or submerged habitats in each priority water body
- Reduce nitrogen load from Lake Hancock into Charlotte Harbor via the Peace River by 27 percent through the Lake Hancock Wetland Treatment System (**CONSTRUCTION COMPLETED**)
- Complete Surface Water Resource Assessments (SWRA) for the Peace Creek Canal Watershed and develop operational levels for the Winter Haven Chain of Lakes structures to optimize natural systems and water quality improvement while maintaining flood protection services (**COMPLETED**)

Narrative:

The **Winter Haven Chain of Lakes** is a system of 19 interconnected lakes in Polk County. Designated as a 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 were 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 other government agencies to reduce non-point source pollutant loadings through pollutant reduction goals and stormwater management, to restore upland and aquatic habitats while preserving plant and wildlife populations, and to implement ecologically and environmentally sound land-use practices.

Success will be measured by water quality improvements including reductions in non-point source loading of phosphorous, decreases in nonnative or undesirable species, and increases in native aquatic and upland vegetation. More information is available in the SWIM plan for the Winter Haven Chain of Lakes.

As of 2013, water quality improvement projects have been implemented for eight lakes (Conine, Howard, May, Lulu, Hartridge, Jessie, Cannon, and Mariana). In addition, twelve low impact development (LID) best management practices (BMPs) have been installed within the downtown area of the City of Winter Haven.

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

Declining water quality and lake levels are challenges for the lakes along the Ridge. Common water quality impacts include stormwater runoff, wastewater effluent, residential and fertilizer applications, agricultural runoff, groundwater pollution, shoreline habitat degradation and hydrologic alterations.



Lake Isis, Highlands County

Success indicators are reductions in chlorophyll, nitrogen and phosphorus concentrations. Through the District's Ridge Lakes Restoration Initiative, emphasis is placed on protective lake management strategies. Stormwater treatment is identified as a high priority, as well as enhancement and restoration of natural systems and further flood protection.

REGIONAL PRIORITIES AND OBJECTIVES

Southern Region — SWUCA Recovery

PRIORITY:

Implement Southern Water Use Caution Area Recovery Strategy

OBJECTIVES:

- Achieve a net reduction of up to 50 mgd of groundwater use in SWUCA by 2025 with 40 mgd of offsets obtained through agricultural reductions via the Facilitating Agricultural Resource Management Systems (FARMS) Program
- Recover the SWUCA saltwater intrusion minimum aquifer level of 13.1 ft NGVD for the Upper Floridan aquifer to slow the rate of saltwater intrusion in the Most Impacted Area
- Ensure a sustainable water supply
 - Achieve and maintain 150 gallon per day compliance per capita with all public supply utilities
 - Reduce 2011 regional average compliance per capita of 87 gallons per capita daily by 5 percent to 83 by 2020
 - Develop ASR options for potable and reclaimed water supply
 - Increase percentage of total water use supplied by alternative sources
 - Complete Feasibility Study for Flatford Swamp Hydrologic and Adaptive Management Restoration by 2014 **(COMPLETED)**
 - Assist the Peace River Manasota Regional Water Supply Authority in completing construction on three of the eight planned phases of the Regional Integrated Loop System project by 2014 **(COMPLETED)**

- Providing financial incentives for conservation, development of alternative supplies and regional interconnections. District funding sources include the Cooperative Funding and Water Supply and Resource Development initiatives.
- Resource monitoring, reporting and cumulative impact analysis. The Recovery Strategy includes the continuous monitoring of trends in resource conditions and permitted and actual water use. The cumulative impact analysis evaluates changes in permitted and used groundwater quantities and water resource development projects benefiting the Upper Floridan aquifer in and around the MIA.

Narrative:

The entire Southern Planning 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 were identified as the primary cause of the depressed aquifer levels throughout the groundwater basin, with drawdowns in some areas exceeding 50 feet.

The District has adopted MFLs for 41 priority water bodies in the SWUCA. As of 2013, approximately half of the established MFLs are not being met.

The District adopted the SWUCA Recovery Strategy to recover flows and levels to established MFLs, including reducing the rate of saltwater intrusion by achieving the proposed minimum aquifer level, restoring minimum flows to the upper Peace River, and restoring minimum levels to the priority lakes in the Ridge area, which extends roughly 90 miles along the center of the state in Polk and Highlands counties.

Some of the primary Recovery Strategy elements for the SWUCA include:

- Updating the Regional Water Supply Plan to identify how to address growing regional water needs while minimizing impacts to the water resources and natural systems. The District approved the updated plan in November 2015.

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. The District's cooperatively funded FARMS program has helped the agricultural community reduce its use of groundwater from the Upper Floridan aquifer. The FARMS program combined with other conservation efforts have helped to reduce Upper Floridan groundwater withdrawals by more than 50 mgd, one of the targets established by the SWUCA Recovery Plan. The District's Lake Hancock Lake Level Modification Project will be operational in 2015 to help meet the minimum flows for the upper Peace River.

Much progress has been made in the region, but challenges remain to reduce the rate of saltwater intrusion along the coast and move toward meeting minimum levels for the Ridge lakes.

REGIONAL PRIORITIES AND OBJECTIVES

Southern Region — Improve Water Bodies

PRIORITY:

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

OBJECTIVES:

- Implement plans and projects for water chemistry, wetlands, critical shoreline and/or submerged habitats in each priority water body
- Reduce nitrogen load from Lake Hancock into Charlotte Harbor via the Peace River by 27 percent through the Lake Hancock Wetland Treatment System (**CONSTRUCTION COMPLETED**)
- Develop and update plans and implement natural system projects that restore critical shoreline, coastal upland and intertidal habitats
- Complete Surface Water Resource Assessments for 45 percent of the Southern Region to assess the water quality of surface waters and identify potential best management practices needed to achieve standards
- Assist local governments with implementation of BMPs to achieve water quality standards

Narrative:

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

Success indicators include improved water quality, reductions in chlorophyll, nitrogen and phosphorus concentrations, and restoration of 18,436 acres of seagrasses, 4,354 acres of tidal marsh and 463 acres of saltern. More information is available in the District’s SWIM Plan for the harbor.

The District is working with other government agencies on a comprehensive conservation and management plan, implementation of water quality improvement projects, and restoration of the balance between coastal upland, wetland and intertidal habitats.

As of 2013, the District and its cooperators have completed 13 natural systems projects which have restored 1,083 acres of coastal habitats for Charlotte Harbor. Construction of the District’s Lake Hancock Outfall Treatment System has been completed. This project, when fully operational, will remove an estimated 85 tons of nitrogen annually discharged from Lake Hancock to the Peace River and, ultimately, Charlotte Harbor.

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

Success indicators include improved water quality, meeting chlorophyll, nitrogen and phosphorus concentration

REGIONAL PRIORITIES AND OBJECTIVES

Southern Region — Improve Water Bodies

targets, maintenance of seagrasses at 9,739 acres and restoration or creation of 18 acres of intertidal wetlands and 11 acres of wetlands annually.

Similar to efforts under way for Charlotte Harbor, the District is working with other government agencies on initiatives for Sarasota Bay. These initiatives include a comprehensive conservation and management plan, implementation of water quality improvement projects, and restoration of the balance between coastal upland, wetland and intertidal habitats.

As of 2013, the District and its cooperators have completed projects that have reduced nitrogen loading to Sarasota Bay by approximately 64 percent since 1988 and restored more than 900 acres of coastal habitats. Seagrass coverage has increased by 46 percent above that present in 1988.

The Shell, Prairie and Joshua Creek (SPJC) watersheds are located 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 their associated tributaries) are designated as Class I waters, which means they are designated for use as potable water supplies. These creeks converge at, and sustain, the City's reservoir.

Various source inputs, over an extended period of time, created the issues in the Shell, Prairie and Joshua creeks watersheds. The Shell Creek and Prairie Creek Watershed Management Plan was adopted in 2004 to improve water quality degraded by increased salinity and to achieve Class I surface



Sarasota Bay © Roger Wollstadt, Creative Commons

water standards throughout the watersheds.

The plan includes a multitude of regulatory, technical assistance, research and education programs being used in combination with incentives and other non-regulatory tools to form a comprehensive approach to address the full scope of water quality issues within Shell Creek, Prairie Creek, and Joshua Creek. The effort involves a substantial level of state, federal and private resources.

The signatories of the Plan agreed to assess sources of salinity to Shell Creek, Prairie Creek and Joshua Creek to optimize reductions in concentrations to waters of these watersheds emphasizing voluntary, incentive-based programs for protecting the environment and public health.

A key success indicator is the reduction in the amount of dissolved solids in water (i.e., specific conductance improvement) as identified in the SPJC Reasonable Assurance Plan. Since the implementation of management actions outlined within the SPJC Reasonable Assurance Plan, water quality (chloride, specific conductance, and Total Dissolved Solids) has significantly improved as measured at five reference sites.

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 seven core business processes. To successfully achieve our Strategic Initiatives and Regional Priorities, the District must excel in each of these.

Water Resources Planning

Water Resources Planning 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 providing technical assistance.

Examples include the Southern Water Use Caution Area Recovery Strategy Five-Year Assessment, Minimum Flows and Levels studies, Regional Water Supply Planning, Strategic Plan Update, Consolidated Annual Report and reviews of proposed Comprehensive Plan amendments and Developments of Regional Impact.

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 District's Core Mission goals in water supply, flood protection, water quality, and natural systems.

To ensure that these tax dollars are

used as efficiently and effectively as possible, the District created a Project Management Office. Comprising 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.

To best use available funds to meet its Core Mission, 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 monitors subsequent operational performance of permitted systems to protect the region's citizens and water resources.

The District is committed to protecting the water resources while also providing quality service in a timely, convenient and consistent

manner to the regulated community. The District's Regulatory 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 is also working with the other water management districts and the Florida Department of Environmental Protection to achieve statewide permitting consistency wherever possible while allowing for regional water resource differences.

Land Management and Structure Operations

Land Management and Structure Operations operate and maintain District lands and water control structures to restore and sustain natural systems and minimize flood damage.

In its 10,000-square-mile region the District owns 340,000 acres of land that provide various water resource benefits. These lands are managed to restore and sustain those ecosystems, store flood waters, recharge the aquifer, and treat water quality.

The District also operates 81 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 provide maximum



District staff work in a variety of fields and disciplines to conserve, protect and restore water resources in west-central Florida.

flood protection. Structure S-160 on the Tampa Bypass Canal is the largest flood control structure in the state.

Knowledge Management

As a science-based organization, high quality data are critical to making informed decisions that protect and enhance the water resources. Knowledge Management is the process of systematically and actively collecting, managing and leveraging an organization's information. As the region's knowledge leader for water resources information, the District collects a variety of scientific and socio-economic 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.

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 District promotes consistency of data collection activities by coordinating with local, regional and state entities through participation on statewide and regional Florida Water Resource

Monitoring 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 precious 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

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