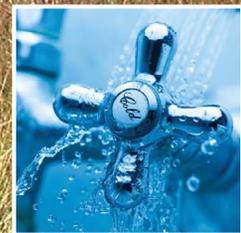


DRAFT 1/7/2019

# Consolidated Annual Report

March 1, 2019



Southwest Florida  
*Water Management District*

WATERMATTERS.ORG · 1-800-423-1476

# Consolidated Annual Report

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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 and activities. Anyone requiring reasonable accommodation as provided for in the Americans with Disabilities Act should contact the District's Human Resources Office, 2379 Broad Street, Brooksville, Florida 34604-6899; telephone (352) 796-7211, ext. 4706 or 1-800-423-1476 (FL only), ext. 4706; TDD (FL only) 1-800-231-6103; or email to [ADACoordinator@swfwmd.state.fl.us](mailto:ADACoordinator@swfwmd.state.fl.us).

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# Executive Summary

Section 373.036, F.S. requires the water management districts to prepare a “Consolidated Water Management District Annual Report” consisting of several reporting documents that had historically been submitted separately. The legislation requires the consolidated report to be submitted by March 1 of each year to the Governor, DEP, the President of Senate and the Speaker of the House of Representatives. In addition, copies must be provided, “... to the chairs of all legislative committees having substantive or fiscal jurisdiction over the districts and the governing body of each county in the district having jurisdiction or deriving any funds for operations of the district. Copies of the consolidated report must be made available to the public, either in printed or electronic format.”

This consolidated report is a significant communication tool for the District. The report’s components were formerly individually distributed at various times of the year. The consolidation results in streamlining the reporting documents in one package. It also allows greater efficiency in comparing different reporting mechanisms.

Descriptions and highlights from the chapters that make up the 2019 Consolidated Annual Report follow:

***The Water Management District Performance Measures Annual Report*** consists of 14 performance measures that assess the District’s progress in implementing activities related to its core areas of responsibility: Water Supply, Flood Protection, Water Quality and Natural Systems. Noteworthy metrics in this report include a steady increase in the quantity of wastewater reused, from 104 million gallons per day (mgd) in 1995 to 228 mgd in 2017. Since 1994, the District has provided over \$1 billion in funding for water supply development assistance with an estimated 473 mgd of water supply made available by completed projects. There has been a decline in the uniform residential per capita water use from 76 gpcd, when first measured in 2008, to 71 gpcd in 2017. Over the past four years, maintenance of District works has lagged due to the implementation of new inspection and maintenance requirements and work associated with major flooding events, including hurricane Irma. Finally, the District continues to demonstrate effective maintenance control of exotic invasive aquatic plant species on its managed lakes and rivers. Aside from 2006, coverage has been less than five percent since the mid-1990s.

***The Minimum Flows and Levels Annual Priority List and Schedule (DEP approval pending)*** The District’s expenditures for minimum flows and levels (MFLs) adoption have changed from approximately \$1 million in fiscal year 1998 to a peak of \$4.9 million in 2009 and \$1.4 million in 2018. As of FY2018, 210 MFLs, including 33 that have been reevaluated and revised as necessary, and those for all five Outstanding Florida Springs within the District and one water reservation, have been adopted. By the end of 2027, 18 new MFLs and one new reservation are scheduled for adoption, and 75 existing MFLs are scheduled for reevaluation.

***The Minimum Flows and Levels/Water Quality Grade for Projects Report*** This document satisfies new reporting called for in Section 373.036(7)(b)9, F.S. The report contains grades for each watershed, water body or water segment expected to be impacted by a project listed in the Five-Year Water Resource Development Work Program. Two grades are provided: 1) a grade that reflects the severity of a water quality impairment, and 2) a grade that represents the level of violation of an adopted minimum flow or minimum level. A total of 122 projects from the Work Program are listed with the corresponding impacted watershed, water body or water segment, the water quality impairment grade and the minimum flow or level grade.

***The Annual Five-Year Capital Improvements Plan*** includes projected revenues and expenditures for planned improvements for FY2018-19 through FY2022-23. Some of the major highlights for FY2018-19 include:

Research, Data Collection, Analysis and Monitoring: \$688,826 budgeted for coring, drilling, testing and construction of monitor wells at Regional Observation and Monitor-well Program (ROMP) sites and special project sites within the Central Florida Water Initiative (CFWI) region.

Land Acquisition: \$17,000,000 budgeted for land acquisition under the Florida Forever program. These funds represent \$4.2 million in prior year appropriations from the Florida Forever Trust Fund (FFTF) and

\$12.8 million generated from the sale of land or real estate interests.

Facilities Construction and Major Renovation: \$1,450,000 budgeted for renovations at the Tampa Facility for space utilization to maximize efficiency of square footage.

Works: \$500,000 budgeted for modifications to the Tsala Apopka Golf Course Water Conservation Structure to increase the flow capacity to allow for inflow from the Withlacoochee River to be equally shared between the three pools within the Tsala Apopka Chain-of-Lakes. The structure is in Citrus County. - \$500,000 budgeted for the refurbishment of the Wysong Water Conservation Structure's pneumatic gate that has exceeded its life expectancy and the adjacent boat lock that is showing signs of severe corrosion. The structure is in Citrus County. - \$400,000 budgeted for major repairs to the toe drain and spillway of flood control Structure S-353 located on the Tsala Apopka Outfall Canal between the Withlacoochee River and the Hernando Pool.

***The Alternative Water Supplies Annual Report*** This report describes alternative water supply projects funded, as well as the quantity of new water to be created as a result of these projects. The report also accounts for other funding sources, such as grants or the use of District lands or facilities to implement regional water supply plans. Fiscal year 2019 marks the 33rd year of District alternative water supply funding, which to date has resulted in the funding of 375 reclaimed water projects that are anticipated to make available more than 252 mgd of capacity. In FY2019 alone, the District has budgeted more than \$32 million for alternative water supply projects forecasted to provide more than 48 mgd of water supply. In addition to funding alternative source infrastructure, the District continues to participate in studies and research with utilities and entities such as the Water Environment and Reuse Foundation. The scientific substantiation of alternative water sources increases the District's confidence in meeting its mission to find and maintain adequate and ecologically sustainable resources.

***The Five-Year Water Resource Development Work Program*** The Work Program describes the District's implementation strategy for the Water Resource Development component of the District's 2015 Regional Water Supply Plan and the CFWI 2014 Regional Water Supply Plan (RWSP). This 18th edition of the Work Program covers the period from FY 2019 to 2023. The Work Program presents the data collection and analyses activities and more narrowly defined "projects" that the District is financially and technically undertaking to enhance the water available to meet projected demands. To meet Subsection 373.536(6) F.S., the Work Program includes the anticipated five-year funding for Water Supply Development Assistance projects that are developed by cooperating water providers and qualify for District financial assistance, and an appendix of projects that help to implement Basin Management Action Plans. The Work Program outlines activities and projects that will make available 113.9 mgd of water upon completion, including reuse water and new potable supply. These benefits are associated with approximately \$77.6 million budgeted for FY2019.

***The Polk Regional Water Cooperative Status Report*** This annual report provides a status on Polk Regional Water Cooperative projects receiving priority state funding. For the inaugural 2017 report, the Cooperative and its members identified 18 prioritized projects and requested FY2018-19 funding by the Florida Legislature, however, no funding was received. For this 2018 report, a prioritized list of 3 Cooperative and 11 local member government projects are being submitted for FY2019-20 funding consideration by the Florida Legislature. A total of \$37,495,624 would be required to implement all 14 projects, with \$27,150,375 committed in local member government funding and \$1,974,875 committed in District funding for these projects. The remaining \$8,370,375 for the 14 priority projects is being requested from the state and their implementation is subject to approval of state funding for the FY2019-20 budget year.

***The Florida Forever Work Plan*** In 2008, the Florida Legislature reauthorized the Florida Forever program. The reauthorized Florida Forever Act continues Florida's successful land acquisition initiative that has included the Save Our Rivers and Preservation 2000 programs, providing funding to state agencies, water management districts and local governments. Florida Forever funds allocated to the water management districts are used for land acquisition (including acquisition of less-than-fee interests), water resource development and water body restoration. Over the life of the program, at least 50 percent of the funds allocated to each water management district must be used for land acquisition.

As required by Section 373.199(7), F.S., the District is required to file an annual update of its Florida Forever Work Plan. The Work Plan identifies conservation lands, lands necessary for water resource development

projects and waterbody restoration projects that meet acquisition criteria outlined in the Florida Forever Act (259.105, F.S.). No modifications have been made to the 2019 Work Plan, other than updating acres owned, managed and surplus and funds budgeted.

***The Mitigation Donation Annual Report*** This report identifies all cash donations, if any, accepted during the preceding fiscal year for wetland mitigation purposes. Like last year, there were no donations received.

***The 2019-2023 Strategic Plan (updated February 2019), and the 2018 Strategic Plan Annual Work Plan*** The Strategic Plan is the guiding document for the District, identifying targets and how success will be achieved and measured. The plan identifies 11 Districtwide strategic initiatives, including 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 establishment and monitoring, natural systems conservation and restoration, flood protection maintenance and improvement, floodplain management and emergency flood response and 36 regional priorities/objectives. The plan has a five-year time horizon, and is updated on an annual basis. Significant updates to the plan were made for 2019.

The Strategic Plan Annual Work Plan details progress on efforts implementing priorities and objectives of the Strategic Plan. Notable accomplishments for 2018 include the completion (or near completion) of several springs' projects that improve water quality and provide other benefits. An example of this is Rogers Park Low Impact Development Project (Hernando) that constructed BMPs that redirected stormwater runoff and provided water quality treatment for stormwater runoff from a parking area adjacent to the Weeki Wachee River. This year, 12 septic to sewer conversion projects were reviewed by the Springs Coast Steering Committee and submitted to DEP for funding consideration. Four projects totaling \$21 million (i.e., State, District and local funds) were awarded. For the Tampa Bay region, as of October 1, 2018, progress in the Dover/Plant City Water Use Caution Area includes the installation of AMR devices on 838 of the targeted agricultural withdrawals points, approximately 96 percent of the total, and the installation/reimbursement for 532 flow meters, approximately 97 percent of the total required. In the Heartland region, work on the 2020 RWSP for the CFWI has commenced and planning activities are under way. Also, stormwater management construction projects were completed this year for lakes June-in-Winter and McCoy. For the Southern region, the assessment for groundwater levels for 2017 shows the SWUCA's Most Impacted Area (MIA) level at 12.8 feet. Efforts are under way to restore the level at 13.1 feet. In addition, in the three southern regions, the second, five-year assessment was completed for the Southern Water Use Caution Area recovery strategy.

Consolidated **Annual Report**  
March 1, 2019

2018 *Water Management District*  
**Performance Measures** *Annual Report*



Southwest Florida  
*Water Management District*

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# Water Management Performance Measures

Government, like any meaningful enterprise, needs to measure the results of its actions to ensure that services provided are effective and efficient. The purpose of any measurement process must be aimed at accomplishing sound resource management while improving accountability. If measures are successfully developed, and communicated, they can be expected to:

- Provide better information for decision making;
- Document to taxpayers their dollars are being spent wisely;
- Spot potential problems before they become crises; and
- Coordinate effective resource management among agencies.

The water management districts and the DEP jointly developed these performance measures. They are organized around the four primary areas of responsibility of the districts: Water Supply, Water Quality, Natural Systems and Flood Protection. Base years, assumptions and data sources for each measure were mutually agreed upon as one means of achieving consistency among districts. The time frames associated with each measure may vary, based upon the availability of data. A number of measures are provided for the areas of responsibility. The concept is that a few key measures for each of the District's responsibilities will be tracked over time to identify trends as they are reported annually. These measures will continue to be refined and coordinated with other agencies and the public, and periodic assessments will be necessary to ensure a measuring system that provides true accountability.

## Summary of Water Management Performance Measures

### *Water Supply Measures*

**Objective 1: Increase available water supplies and maximize overall water use efficiency to meet identified existing and future needs.**

- a. Percentage of domestic wastewater reused
- b. Uniform gross per capita water use (Public Supply) by District and water supply planning regions
- c. Uniform residential per capita water use (Public Supply) by District and water supply planning regions
- d. Within each water supply planning region: 1) the estimated amount of water supply to be made available through the water resource development component of the Regional Water Supply Plan; 2) percent of estimated amount under development; and 3) percent of estimated amount of water actually made available
- e. Within each water supply planning region, the estimated additional quantities of water supply made available through District water supply development assistance

**Objective 2: Prevent contamination of water supplies.**

- a. Percentage of surface water supply sources for which water quality fully attains the designated use

### *Water Quality Measures*

**Objective 1: Protect and improve surface water quality.**

- a. Percentage of surface waters with healthy nutrient levels
- b. Percentage of surface waters with healthy biological conditions

**Objective 2: Protect and improve groundwater quality.**

- a. Improving, degrading and stable trends in nitrate concentrations in springs

## ***Natural Systems Measures***

### **Objective 1: Maintain the integrity and functions of water resources and related natural systems.**

- a. Number of MFLs, by water body type, established annually and cumulatively
- b. Percentage of MFLs established in accordance with previous year's schedule
- c. For the previous fiscal year, the total acres of wetlands or other surface waters authorized by Environmental Resource Permit (ERP) to be impacted and the number of acres required to be created, enhanced, restored and preserved

### **Objective 2: Restore degraded water resources and related natural systems to a naturally functioning condition.**

- a. Acres of invasive nonnative aquatic plants in inventoried public waters

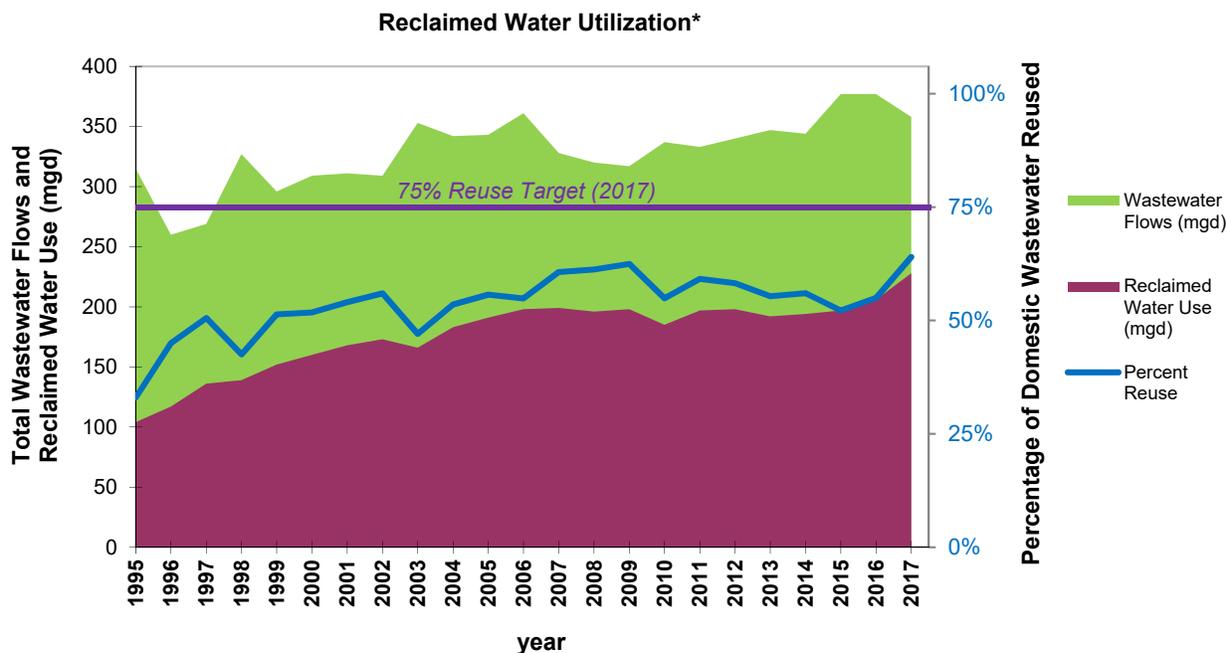
## ***Flood Protection Measures***

### **Objective 1: Minimize damage from flooding.**

- a. Percentage of District works maintained on schedule

### Water Supply Measure 1a: Percentage of domestic wastewater reused

The State and the District emphasize the beneficial use of reclaimed water as part of water supply planning strategies. This water resource has become an important alternative for potable quality supplies for such beneficial uses as irrigation, industrial processing, power generation and environmental enhancement. This measure is intended to reflect the quantity of reclaimed water available and reused.



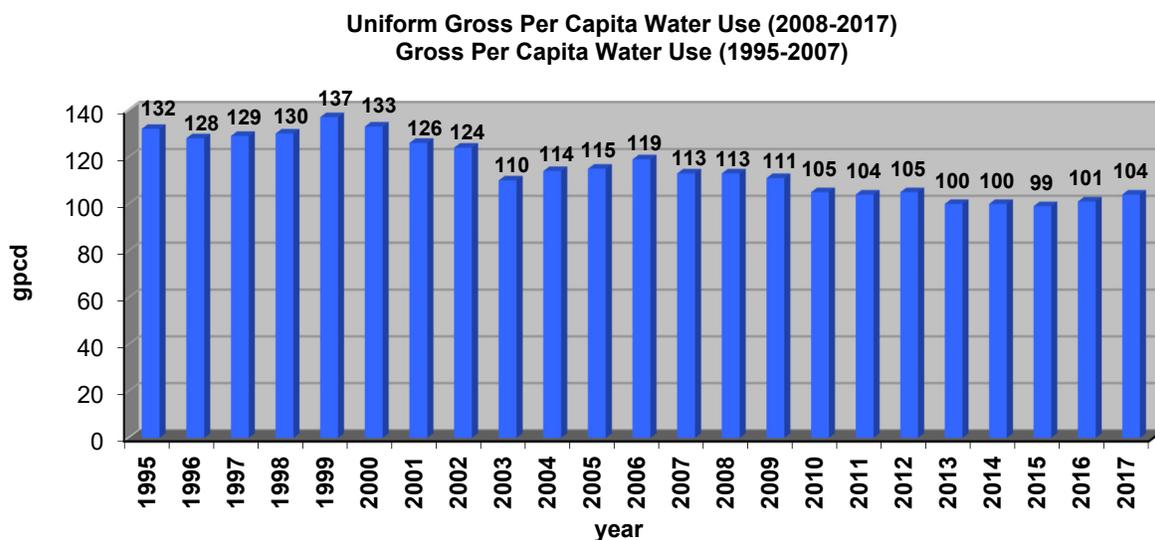
Source: 2017 Reuse Inventory (Draft), Florida Department of Environmental Protection, 2018.

The amount of domestic wastewater reused in the District has increased, from 104 million gallons per day (mgd) in 1995 to 228 mgd in 2017, based on available data. The percentage of wastewater reused has also increased, reaching 64 percent in 2017. The data shows that there has been relatively stable growth in wastewater plant flows (i.e., reclaimed water available) and the amount of reclaimed water used over the past 23 years. The long-term increase in reclaimed water flows is associated with the increased number of online reuse projects. Newly completed reuse projects resulted in several thousand additional customers connected in 2017, including large numbers within Manatee and Sarasota counties. Districtwide, reclaimed water customer numbers exceed 139,000. This represents an increase of more than 410 percent since 2000.

\* Data reflects the DEP’s definition of reclaimed water, which includes rapid infiltration basins (RIBs) and sprayfields. The reduced reuse percentages in 1995, 1998, 2003 and 2015 reflect elevated wastewater treatment plant flows associated with increased infiltration and inflow of stormwater into sanitary sewer systems. The reduced reuse percentage in 2010 is primarily due to a decrease in residential utilization likely associated with the economic downturn and foreclosure crisis. The 75 percent reuse target is based on 2017 wastewater flows and is applied Districtwide. District estimates of “beneficial” reuse for other planning and tracking exercises may vary based upon regional water supply goals.

### **Water Supply Measure 1b: Uniform gross per capita water use (Public Supply) by District and water supply planning regions**

Public supply represents one of the largest water use sectors and is experiencing sustained year-to-year growth. Public supply water use includes the water distributed by most public and private water utilities. This measure is intended to show the trend of such use, recognizing that water conservation can serve as a significant source of “new water” to meet public needs. In 2008, the DEP and the water management districts established uniform statewide methods of measuring per capita for public water supply for the purposes of consistent statewide assessment of water conservation performance, reporting, program evaluation and for public communication. The Uniform Gross Per Capita is defined as utility service area finished water use divided by utility service area residential population and is reported for 2008-2017. Other years (1995-2007) were generated using an earlier methodology for gross per capita public supply use, calculated by dividing the total publicly-supplied water used (in gallons per day) by the functional population (includes seasonal and tourist) served.

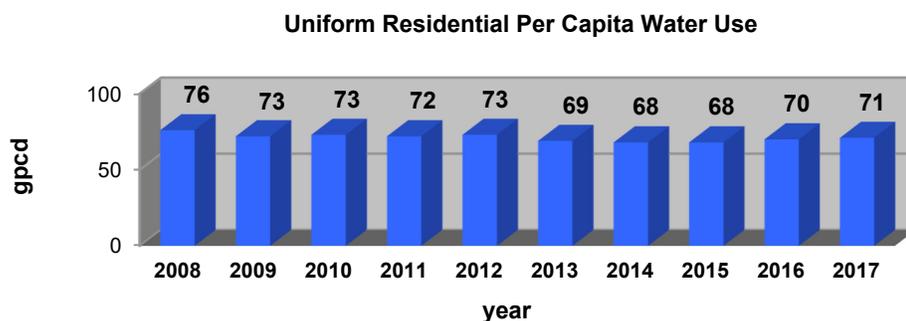


*Source: SWFWMD Estimated Water Use Reports, 1995-2016, draft 2017.*

The graphic reports gross per capita water use for the last 23 years. While it is recognized that many factors influence water use (e.g., rainfall), there has been a clear trend toward reduced per capita rates. This trend can be attributed in part to the increasing availability of reuse systems, water conservation programs, enhanced public awareness and related efforts. The per capita figures for 1999 and 2000 are reflective of the severe drought experienced Districtwide and resulting higher demand levels, in contrast to the per capita reduction in 2001 and 2002 “wet years.” Years 2003 to 2007 reflect a general trend toward lower per capita use rates. Years 2008 to 2017, which are based on uniform per capita water use, continue to show a general downward trend. This is credited to the continued increase in non-residential reclaimed water use and the implementation of conservation practices.

### **Water Supply Measure 1c: Uniform residential per capita water use (Public Supply) by District and water supply planning regions**

This measure accounts for the portion of publicly supplied water that is used for residential purposes only. The uniform residential per capita is defined as the utility service area finished water used by dwelling units (not connections) divided by the utility service area residential population. The DEP and the five water management districts agreed on this per capita definition in 2008, and to include the data in the annual progress report. This is the tenth reporting year for the residential uniform per capita measure.



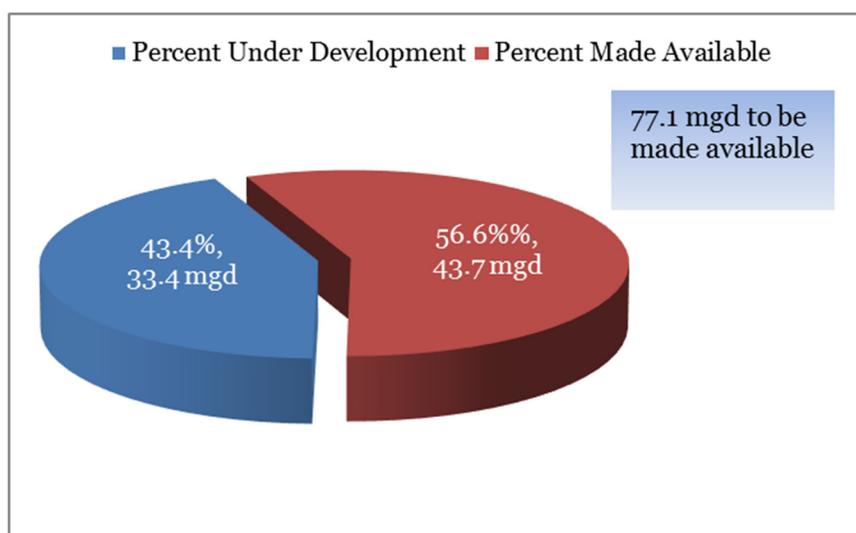
*Source: SWFWMD Estimated Water Use Reports, 2008-2016, draft 2017.*

To ensure a sustainable water supply, utilities are tapping alternative sources and emphasizing conservation. Opportunities exist for all public supply users to conserve, including residential users, which make-up a significant portion of the public supply customers. The District has devoted considerable resources to encourage the implementation of water conserving rate structures and indoor/outdoor practices for residential water users. These efforts have resulted in a uniform residential per capita water use decline of five gallons per day since the methodology was implemented in 2008. Additionally, the District has implemented improvements to the reporting process to further ensure data accuracy.

**Water Supply Measure 1d: Within each water supply planning region: 1) the estimated amount of water supply to be made available through the water resource development component of the Regional Water Supply Plan (RWSP); 2) percent of estimated amount under development; and 3) percent of estimated amount of water actually made available**

The District is charged with expanding the "water pie" to assure future water supply availability. This can be done, in part, through water resource development. Projects receiving District funding assistance are categorized as either Water Resource Development (WRD) or Water Supply Development assistance. This measure is intended to document progress toward WRD. The District typically has the lead role in identifying and implementing WRD efforts.

**Water Resource Development**

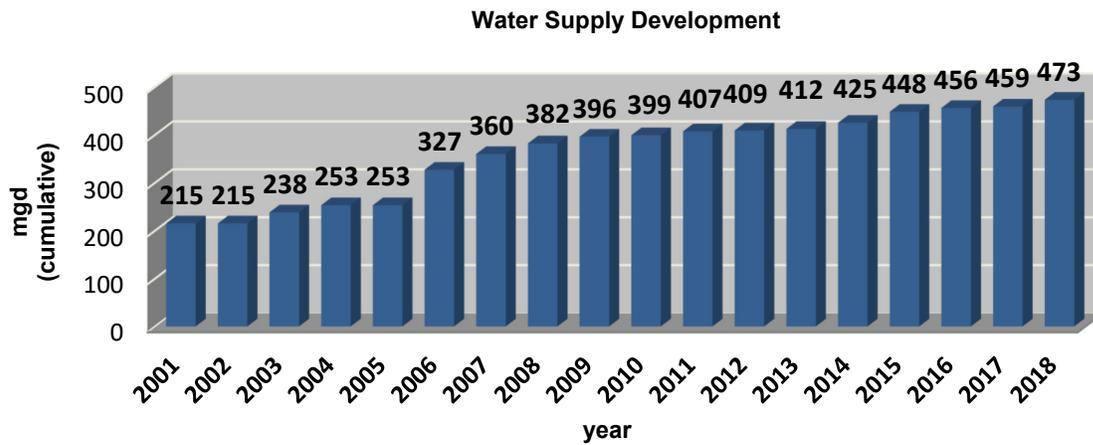


Source: SWFWMD 2019 Five-Year Water Resource Development Work Program, District Water Resources Staff, 2018

The District’s WRD component takes two forms: activities and projects. The WRD “activities” are routine efforts that include hydrologic data collection, the evaluation and establishment of Minimum Flows and Levels (MFLs), watershed management planning, the Quality of Water Improvement Program that plugs abandoned wells to protect water quality, and stormwater storage and conveyance best management practice implementation. The District’s WRD “projects” have particular goals and schedules and are intended to enhance the amount of water available for reasonable-beneficial uses and for natural systems. Current WRD projects include alternative water supply research and pilot projects, agricultural water conservation projects, and environmental restoration/MFL recovery projects. The water quantities produced or conserved by many WRD projects are difficult to measure until the projects are completed and the benefits are realized. Based on the WRD projects undertaken and quantified since 2003, a total of 43.7 mgd has already been made available.

**Water Supply Measure 1e: Within each water supply planning region, the estimated additional quantities of water supply made available through District water supply development assistance**

The Water Supply Development (WSD) component of the District’s RWSP identifies water supply options from which regional authorities, local governments, private utilities, and other water users can choose to meet their individual needs. The options are provided as reasonable concepts that water users may pursue for their water supply planning efforts. Water users are primarily responsible for developing these options and are encouraged to apply for funding assistance from the District. Some options are large scale alternative water supply projects that would likely be implemented by a regional water supply authority or a group of users. Other options, such as reclaimed water infrastructure and conservation programs, could be implemented by individual utilities and other users.

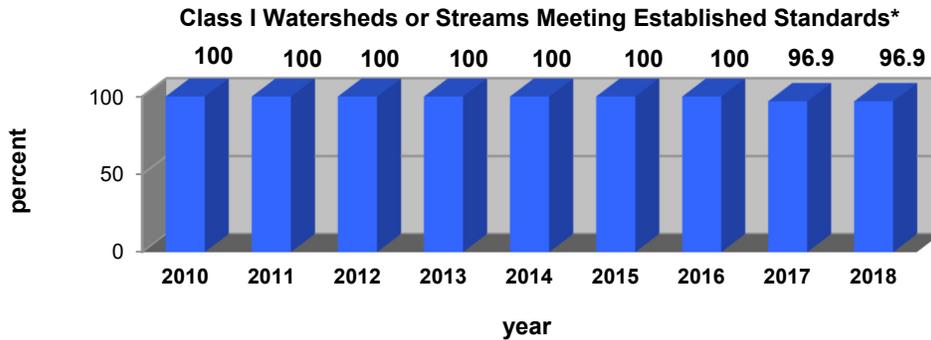


Source: District Water Resources Staff, 2018.

This graphic shows water supply made available or developed on a cumulative basis through WSD funding assistance. An estimated 473 mgd has been made available by completed projects. From 1994 through 2018, the District provided in excess of \$1 billion in project funding to develop and conserve water supplies. District funds are typically matched on a 50/50 cost-share basis with the partnering entity. Major WSD accomplishments in FY2018 included completion of the Polk Power Station Reclaimed Water Interconnects and the Town of Dunedin’s San Christopher Reclaimed Water Storage and Pumping Station.

**Water Supply Measure 2a: Percentage of surface water supply sources for which water quality fully attains the designated use**

Protecting and maintaining high quality water for human use is a critical component of water management. It is essential these sources be monitored and maintained in a high-quality state for future water supply use. Under Florida’s water quality monitoring programs, surface water bodies are regularly assessed to determine whether designated uses are being attained.



Source: Florida Department of Environmental Protection, 2010-2018.

Of the 62 Class I water body identification units (WBIDs) in the District, 32 water bodies were assessed in 2018. Data indicate these surface waters are currently meeting their designated use, except for iron impairment in one water body.

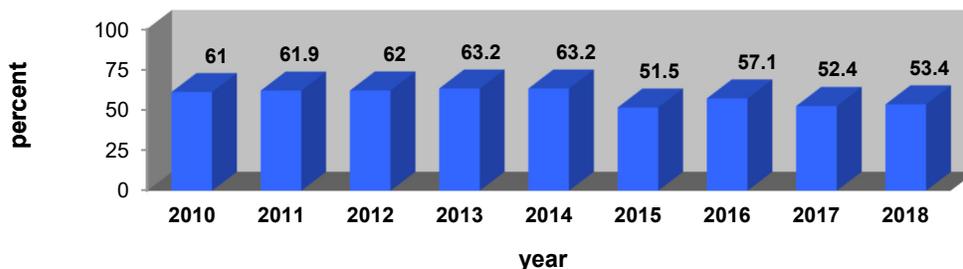
Since the 2010 reporting period, the methodologies utilized for determining whether a Class I Water is meeting its designated use have been based on assessment of toxic parameters (metals, pesticides, chemicals and un-ionized ammonia). In 2015, DEP implemented new reporting criteria for this metric. Since the differences between the old and new reporting criteria are minimal, comparisons to prior years can still be made.

*\*The data provided by DEP in 2014 is the same as that provided in 2013, as DEP was developing new reporting criteria that went into effect in 2015.*

## **Water Quality Measure 1a: Percent of surface waters with healthy nutrient levels**

The District has an abundance of surface waters used for a variety of purposes by the people who live and work here, by those who are visiting, and by the fish and wildlife that depend on these waters. Excessive nutrient loading remains the largest single threat to these resources. While nutrients are essential to life and ecosystem functions, excessive nutrients can cause nuisance algal and plant growth, oxygen depletion, loss of water clarity, loss of desirable species, loss of biodiversity, flavor effects on drinking water, increased probability of human and animal pathogens and other water quality impairments. This measure documents the percentage of surface waters with healthy nutrient levels.

**Watersheds or Streams with Healthy Nutrient Levels\***



*Source: Florida Department of Environmental Protection, 2010-2018.*

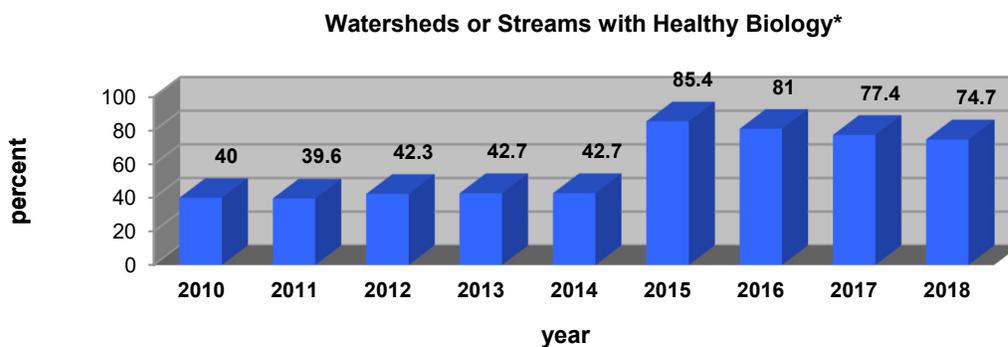
Of the total water bodies with sufficient data to satisfy assessment criteria (559 WBIDS out of 1,438 WBIDS Districtwide), 53.4 percent were determined to be healthy for nutrients in 2018.

In 2015, DEP implemented new reporting criteria. Under the new reporting criteria, nine nutrient-related parameters are utilized to determine waters with healthy levels of nutrients. For previous assessments, only two nutrient-related parameters (elevated Chlorophyll concentrations or trophic State Indices) were used. The expansion in the number of parameters evaluated has resulted in an increase in the number of water bodies determined to have unhealthy nutrient levels. Consequently, comparisons to years prior to 2015 can no longer be made.

*\*The data provided by DEP in 2014 is the same as that provided in 2013, as DEP was developing new reporting criteria that went into effect in 2015.*

## **Water Quality Measure 1b: Percentage of surface waters with healthy biological conditions**

Biological conditions are included in the broader definition of water quality. These conditions are indicators of water body health, and include investigations of dissolved oxygen, habitat conditions and the health of aquatic insect communities. Most importantly, the conditions provide cumulative information on all activities occurring within the watershed and can be used to establish baseline characteristics, characterize the overall condition of a watershed, identify potential problem pollutants, target more intensive diagnostic sampling and to support land use planning and management. This measure addresses the percentage of assessed watersheds or stream reaches with healthy biological conditions.



*Source: Florida Department of Environmental Protection, 2010-2018.*

The DEP primarily uses the Stream Condition Index (SCI) and Biological Reconnaissance (BioRecon) to evaluate the biological conditions in flowing surface waters. Of the 174 watersheds or stream reaches assessed in 2018 within the District, 44 watersheds or stream reaches were determined to be impaired based on biological assessments. The numbers for the previous eight years are as follows: 2017 (159 assessed/36 impaired), 2016 (84 assessed/16 impaired), 2015 (48 assessed/7 impaired), 2014 (157 assessed/90 impaired), 2013 (157 assessed/90 impaired), 2012 (163 assessed/94 impaired), 2011 (164 assessed/99 impaired), 2010 (191 assessed/116 impaired).

In 2015, DEP implemented new reporting criteria for this metric. The primary differences between the old and the new reporting criteria include the number and frequency of the water bodies assessed, the basin(s) targeted for the assessment, and the quality of the data being used in the assessment. These changes have resulted in a decrease in the number of water bodies determined to have unhealthy biological conditions. Consequently, comparisons to years prior to 2015 can no longer be made. The difference in the percentage of healthy water bodies during years 2010-2014 is believed to be largely due to the number and frequency of the water bodies assessed, as well as the basin(s) targeted for the assessment.

*\*The data provided by DEP in 2014 is the same as that provided in 2013, as DEP was developing new reporting criteria that went into effect in 2015.*

## Water Quality Measure 2a: Improving, degrading and stable trends for nitrate concentrations in springs

Increasing levels of nitrate in Upper Floridan aquifer groundwater discharging from springs continues to be of concern in the District and statewide. While not yet posing significant human health impacts, increasing nitrate concentrations stimulate the growth of aquatic vegetation which can alter the ecological function of springs and receiving water bodies. This measure is intended to identify District springs where nitrate concentrations are increasing (degrading), decreasing (improving), or remaining stable.

The following table depicts nitrate trend analyses for 47 selected springs within the District. The 2018 trends are derived by utilizing the Wilcoxon Rank-Sum test to compare data from the temporal groups of January 2011–December 2014 (Group 1) against January 2015–August 2018 (Group 2).

**Trends in Nitrate\* Concentrations in Selected Springs** (Source: District Data Collection Bureau, 2018)

Spring	Wilcoxon P-Statistic	No. of Samples Group 1	Median Nitrate (mg/l) Group 1	No. of Samples Group 2	Median Nitrate (mg/l) Group 2	Wilcoxon Trend
ALLIGATOR SPRING (GUM SPRING 01A)	0.003149	13	1.50	13	1.63	DEGRADING
BAIRD SPRING	0.002325	16	0.281	15	0.311	DEGRADING
BELTONS MILLPOND MAIN SPRING	0.140010	16	0.178	14	0.124	IMPROVING
BETEE JAY SPRING	0.173954	16	0.445	13	0.466	DEGRADING
BIG KING SPRING	0.003704	15	0.769	14	1.73	DEGRADING
BLUEBIRD SPRING VENT	0.072601	4	0.731	7	0.659	IMPROVING
BOBHILL SPRING	0.001671	16	0.723	15	0.618	IMPROVING
BUCKHORN MAIN SPRING	0.000396	16	1.94	15	2.12	DEGRADING
CANAL 485A SPRING 1B	0.163315	16	1.30	14	1.35	DEGRADING
CATFISH SPRING	0.003648	16	0.360	15	0.386	DEGRADING
CHASSAHOWITZKA 1 SPRING	0.452126	16	0.633	15	0.633	STABLE
CHASSAHOWITZKA MAIN SPRING	0.123055	16	0.592	15	0.582	IMPROVING
CITRUS-BLUE SPRING	0.118435	16	0.776	15	0.842	DEGRADING
COTTONMOUTH SPRING	0.350238	8	0.338	4	0.281	IMPROVING
CRAB CREEK SPRING	0.235302	16	0.622	15	0.629	DEGRADING
FENNEY SPRING	0.000112	15	0.427	14	0.135	IMPROVING
GUM SPRINGS 1	0.000623	11	1.29	13	1.60	DEGRADING
GUM SPRINGS 2	0.001932	16	1.40	14	1.515	DEGRADING
GUM SPRINGS MAIN	0.000031	15	1.44	14	1.58	DEGRADING
HALLS RIVER HEAD MAIN SPRING	0.000755	7	0.265	10	0.451	DEGRADING
HEALTH SPRING	0.514217	16	4.05	15	4.34	DEGRADING
HIDDEN RIVER 2 SPRING	0.000173	16	0.908	15	0.942	DEGRADING
HIDDEN RIVER HEAD SPRING	0.001659	16	0.927	15	0.969	DEGRADING
HILLSBOROUGH RIVER CRYSTAL SWAMP 1	0.564579	15	2.19	13	2.16	IMPROVING
HOMOSASSA 1 SPRING	0.000017	17	0.641	15	0.689	DEGRADING
HOMOSASSA 2 SPRING	0.000355	17	0.618	15	0.651	DEGRADING
HOMOSASSA 3 SPRING	0.000073	17	0.661	15	0.704	DEGRADING
HUNTERS SPRING	0.109197	16	0.609	13	0.656	DEGRADING
JENKINS CREEK SPRING	1.000000	16	0.784	15	0.799	DEGRADING
LITHIA MAIN SPRING	0.781861	16	2.58	15	2.52	IMPROVING
LITTLE KING SPRING	0.003859	16	0.578	14	1.07	DEGRADING
LITTLE WEEKI WACHEE SPRING	0.848050	11	0.798	14	0.812	DEGRADING
MAGNOLIA CIRCLE SPRING	0.052663	16	0.564	15	0.644	DEGRADING
MAGNOLIA SPRING	0.000018	16	0.607	15	0.541	IMPROVING
PARKER ISLAND SPRING	0.453240	16	0.190	14	0.190	STABLE
RAINBOW 1 SPRING	0.004967	16	2.30	14	2.52	DEGRADING
RAINBOW 4 SPRING	0.000003	16	2.10	14	2.38	DEGRADING
RAINBOW 6 SPRING	0.001526	16	1.39	14	1.48	DEGRADING
RAINBOW BRIDGE SEEP NORTH	0.007906	16	1.69	13	1.84	DEGRADING
RAINBOW BUBBLING SPRING	0.000005	16	1.72	13	1.93	DEGRADING
RAINBOW SWAMP 3 SPRING	0.041009	16	1.71	13	1.67	IMPROVING
RUTH SPRING	0.797189	16	0.663	15	0.673	DEGRADING
TARPON HOLE SPRING	0.058796	15	0.237	13	0.224	IMPROVING
TROTTER MAIN	0.003853	16	0.706	15	0.733	DEGRADING
WEEKI PRESERVE SPRING	0.313466	16	0.190	15	0.250	DEGRADING
WEEKI WACHEE SPRINGS NR BROOKSVILLE	0.065833	16	0.899	15	0.882	IMPROVING
WILSON HEAD SPRING	0.000467	16	0.500	15	0.423	IMPROVING

\* The sum of nitrite and nitrate is used to represent nitrate.

The Wilcoxon Rank-Sum test was used to determine whether there is a significant difference between spring water quality data populations grouped by time periods. It is a non-parametric statistical test that is used to determine whether one independent group of observations tends to contain larger values than another independent group. The Wilcoxon Rank-Sum test calculates a p-value, a significance level obtained by the data. If the calculated p-value is less than 0.05, the 95 percent confidence level, the groups are considered significantly different.

Water quality, with respect to nitrate for these 47 selected springs in the District, exhibits a stable to declining trend overall. When compared to last year's report, the trend for 25 springs remained the same, while 15 continue to degrade and 6 continue to improve. A breakdown of the changes in trend shows that 5 changed from stable to improving, 1 changed from degrading to improving, and 1 newly-listed (Bluebird Vent Spring) is improving. In addition, 13 changed from stable to degrading and 2 changed from improving to degrading.

Nitrate concentrations in springs may fluctuate based on a variety of factors including land use change, climate, irrigation practices, etc. Above normal rainfall over the last two years may be indicative of the change in water quality metrics shown in the current results.

Various DEP initiatives support funding for investigations and implementation of strategies to improve water quality in Florida's springs, including recognition of the significance of public education. The District also supports cooperative funding initiatives and restoration efforts, such as storm water improvement projects and conversion of septic systems to sewer collection and treatment systems in spring basins.

### ***Natural Systems Measure 1a: Number of MFLs, by water body type, established annually and cumulatively***

The District maintains and annually updates a “Minimum Flows and Levels Priority List and Schedule” that identifies water bodies for which the District plans to establish minimum flows and minimum water levels (MFLs). The list and schedule is based on the importance of the waters to the State or region and includes those waters which are experiencing or may reasonably be expected to experience adverse impacts. The District continues to make progress in MFLs establishment.

By the end of FY2018, the District had established (i.e., adopted by rule) MFLs for 127 lakes, 41 wetlands, 23 river segments, 10 springs or spring complexes, 7 aquifer sites north of Tampa Bay, a single aquifer site in the Dover/Plant City area, and the Floridan aquifer system in the most impacted area of the Southern Water Use Caution Area (SWUCA) for a total of 210 established MFLs. The District had also adopted revised MFLs for 1 river segment and 29 lakes, completed reevaluations indicating that adopted MFLs for 1 river segment and 2 lakes did not require revision, and determined that MFLs development for the intermediate aquifer system in the SWUCA was not technically feasible. The following table lists the number of MFLs that have been developed annually and cumulatively by the District during the past 15 years.

**Lakes/Wetlands, Rivers/Streams, Springs and Aquifers with MFLs**

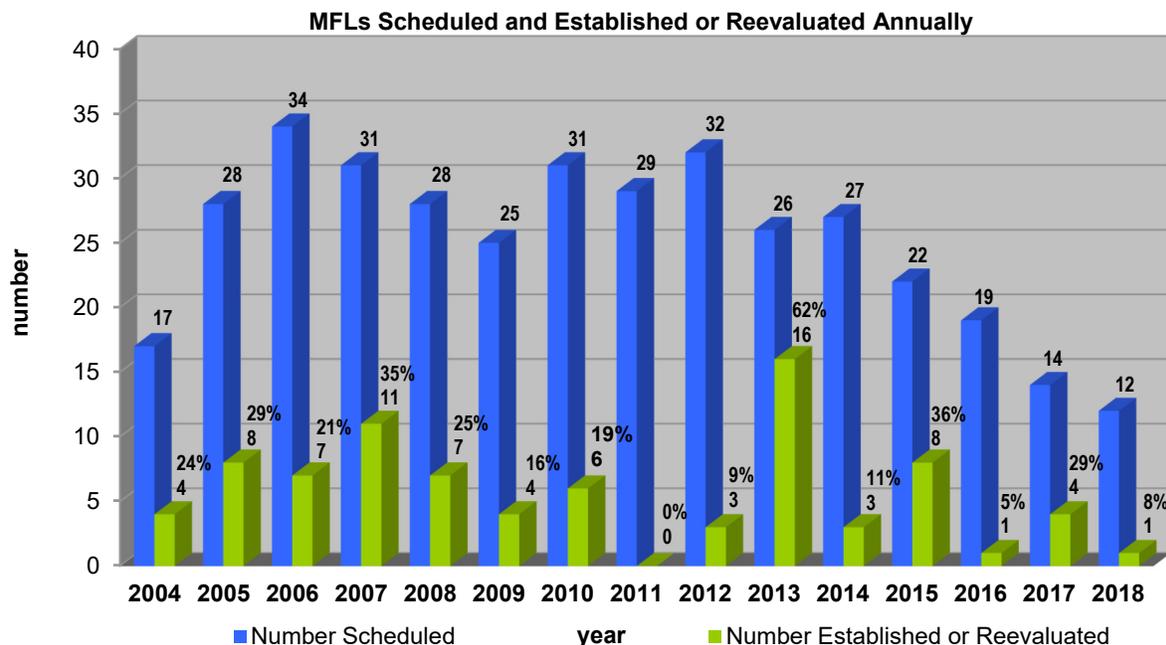
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
<b>Lakes and Wetlands</b>															
Cumulatively	99	104	128	144	145	145	147	147	149	157	160	161	161	163	168
Annually	29	5	24	16	1	0	2	0	2	8	3	1	1	2	5
<b>River/Stream Segments</b>															
Cumulatively	1	4	7	10	11	13	16	16	17	19	19	19	19	21	23
Annually	0	3	3	3	1	2	3	0	1	2	0	0	0	2	2
<b>Springs*</b>															
Cumulatively	0	0	0	2	7	9	9	9	9	15	15	15	16	10	10
Annually	0	0	0	2	5	2	0	0	0	6	0	0	1	2	0
<b>Aquifers (Wells or Systems)</b>															
Cumulatively	7	7	8	8	8	8	9	9	9	9	9	9	9	9	9
Annually	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0

Source: SWFWMD Springs & Environmental Flows Staff, 2018.

\* The decrease in cumulatively adopted springs MFLs for FY2017 relative to FY2016 is associated with a revised approach for counting springs and spring groups.

### **Natural Systems Measure 1b: Percentage of MFLs established or reevaluated in accordance with previous year’s schedule**

The District’s Minimum Flows and Levels Priority List and Schedule identifies lakes, wetlands, river/streams, springs and aquifers for which MFLs are to be established and reevaluated. The list and schedule is updated annually and submitted to the DEP for approval. The following graphic shows the number of water bodies scheduled for MFLs establishment and/or reevaluation on an annual basis along with the number adopted and/or reevaluated for the past 15 years to provide a means for tracking progress in MFLs establishment.



Source: SWFWMD Springs & Environmental Flows Staff, 2018.

The 2017 (2017-2018) MFLs Priority List identified a total of 12 MFLs scheduled for establishment or reevaluation during calendar year 2018, including 8 lakes and 4 river segments. Revised MFLs were adopted for 1 of these priority water bodies (Lake Alice) in FY2018. Board approval for initiation of rulemaking associated with revised MFLs for 6 more of the priority water bodies (lakes Allen, Brant, Dosson, Harvey, Sunshine and Virginia) occurred in FY2018, and approval for initiation of rulemaking is anticipated by the end of calendar year 2018 for an additional priority water body (Lake Pierce) reevaluated in 2018.

Rulemaking for 10 priority water bodies scheduled for MFLs adoption (lakes Aurora, Damon, Easy, Eva, Lowery, and the upper and lower segments of the Pithlachascotee River) or reevaluation (lakes Deer, Round and Saddleback) in 2017 was also completed by the end of FY2018.

MFLs adoption was delayed for 4 of the 12 priority water bodies scheduled for reevaluation or establishment in calendar year 2018, including the lower segments of Shell Creek and the Braden, Manatee and Peace rivers. Factors causing the delays included the need for continued discussions with stakeholders and additional data collection and analysis. Despite these delays, the progress of this program is considered good.

***Natural Systems Measure 1c: For the previous fiscal year, the total acres of wetlands or other surface waters authorized by Environmental Resource Permit (ERP) to be impacted and the number of acres required to be created, enhanced, restored and preserved***

The ERP Program evaluates surface water management systems for impacts to natural systems (surface water and wetlands), water quality, and water quantity (flood protection) from various development projects. Impacts to surface waters and wetlands, unless specifically exempted, must be eliminated or reduced and, if unavoidable, mitigated. The intent of mitigation is to replace the functions of the impacted natural systems, whether involving water quality treatment, flood protection, wildlife habitat or other factors. This measure addresses the extent to which natural systems are impacted, and the extent to which impacted systems are replaced.

Environmental Resource Permit Results (Acres)*													
Wetlands	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Impacted (temporary & permanent)	571	851	743	840	492	535	492	478	594	856	746	760	925
Created/ Restored	670	334	656	923	1016	1088	285	127	156	432	206	207	549
Enhanced	581	653	823	380	1995	1743	269	293	189	100	251	482	367
Preserved	7612	7206	4418	3811	3641	3948	4248	1809	2079	1363	2054	4046	4020

Source: SWFWMD Environmental Resource Permitting Database, October 2018.

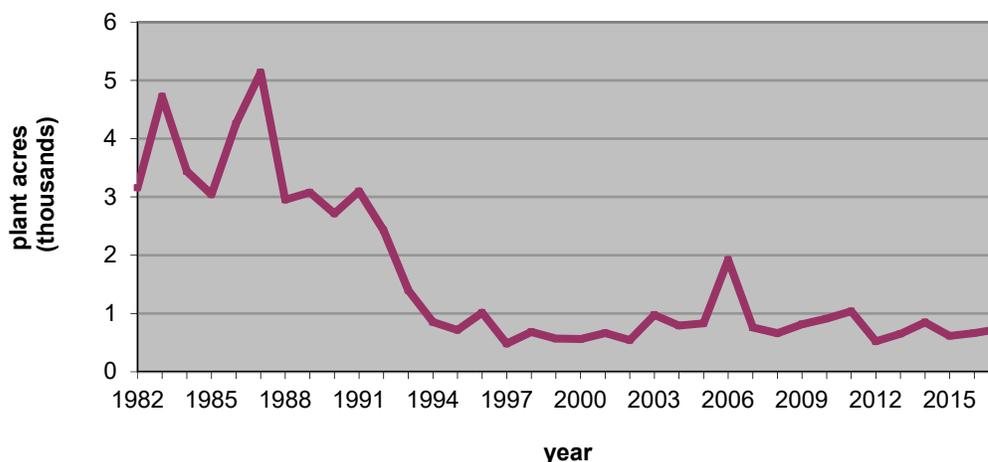
The District's ERP Program shows a strong preference for avoiding wetland impacts as the best means to retain the functions of these important systems. Although the replacement requirement for unavoidable wetland impacts is based on functional value, the combination of creating, restoring and enhancing wetlands more than offset acres impacted in years 2006-2012.

\* Acreages are rounded to whole numbers and have been adjusted from 2014 forward to match the data reported in the DEP Wetland Gain/Loss Report. In FY2012, the methodology for reporting the ERP wetland acres was adjusted to reflect only the UMAM mitigation acres needed to offset the wetland impact functional loss. Prior to FY2012, the data included acres not impacted in the "Preserved" total. The "Preserved" total now only includes acres preserved by a conservation easement that was included as part of the required mitigation. Short form modifications to mitigation banks, which are reported in earlier years, are also now excluded.

## ***Natural Systems Measure 2a: Acres of invasive nonnative aquatic plants in inventoried public waters***

The protection and management of natural surface waters cannot be accomplished without effectively managing troublesome exotic aquatic plant species that can reduce the abundance and diversity of beneficial native plant populations, negatively impact fish and wildlife habitat, hinder navigation and recreational use, degrade water quality, impede water flow and increase sedimentation rates. Aquatic plant management operations conducted by the District on publicly accessible natural waters are funded by and coordinated with the Florida Fish and Wildlife Conservation Commission (FWC) under the Cooperative Aquatic Plant Control Program. This measure is intended to monitor how well the District is managing invasive plant species on public waterways under its jurisdiction.

**Invasive Aquatic Plant Species on District-Managed Lakes/Rivers**



*Source: Florida Fish and Wildlife Conservation Commission Invasive Plant Management Section's Annual Survey Database, 2017.*

Significant progress has been made managing populations of invasive aquatic plant species (e.g., hydrilla, water hyacinth and water lettuce) on the public waters managed by the District during the period depicted (1982-2017). These species, which are the primary invasive species managed on an annual basis on these waters, have been managed at maintenance levels since 1994. In 2017, a total of 733 acres of these invasive aquatic plant species were detected on the 25,500 acres of District-managed lakes and rivers. This represents less than a three percent coverage and reflects a continuation of effective maintenance control. Some variation in plant acreages is expected on a year-to-year basis since ecological conditions, such as water levels, may result in increased or decreased growth potential or affect planned control operations. It is not realistic to expect complete eradication. The goal is "maintenance control" where targeted plants are regularly monitored and maintained at the lowest feasible level. Additionally, the management philosophy for hydrilla has been evolving since control of the aquatic plant management program was transferred to the FWC. On some waters, the FWC supports allowing increased coverage of hydrilla if it will benefit the primary use of a water body such as waterfowl hunting.

***Flood Protection Measure 1a: Percentage of District works maintained on schedule***

The District maintains a total of 88 structures, including water conservation structures, salinity barriers, canals and flood control structures. This total includes seven new structures added in 2018 for the Lake Hancock pump station in Polk County. It is essential these facilities be maintained to optimally perform the respective functions. Information contained in the Structure Operations Five-Year Maintenance Plan serves as the guideline for scheduling maintenance on District works.

<b>Year</b>	<b>Number of Structures</b>	<b>Percent of Structures Maintained on Schedule</b>
2014	81	100
2015*	81	76
2016*	81	80
2017*	81	81
2018*	88	75

*Source: SWFWMD Operations Staff, 2018.*

In FY2018, inspections and assessments were completed for the S-551 flood control structure on Lake Tarpon in Pinellas County and various flood control structures in Hillsborough County, including the Trout Creek Structure and S-159, S-160 and S-163 on the Tampa Bypass Canal. Repairs on the S-159 and S-353 flood control structures were also completed. The S-353 structure is located on the Hernando Pool of the Tsala Apopka Chain of Lakes in Citrus County and discharges into the Withlacoochee River.

Conversion of the District’s structures to remote operation is ongoing. There are currently 48 structures with remote operational capability.

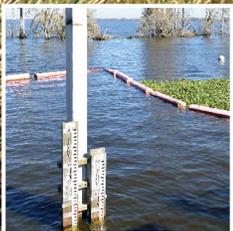
The District uses a five-year plan to address all needed routine and preventative maintenance on District structures, including the necessary budgets to accomplish the work. Additionally, the District is developing a 20-year capital improvement plan (CIP) for its 18 flood control structures. The CIP is scheduled for completion in FY2021.

*\* In FY2015-2018, some structures were not maintained on schedule due to implementation of new inspection and maintenance requirements and staff work associated with hurricane Irma and several other major flooding events.*

Consolidated **Annual**  
**Report**  
March 1, 2019

# 2018 Priority List and Schedule

*for the Establishment of Minimum Flows,  
Minimum Water Levels and Reservations*



Southwest Florida  
*Water Management District*

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# **SOUTHWEST FLORIDA WATER MANAGEMENT 2018 PRIORITY LIST AND SCHEDULE**

## **Overview**

Pursuant to Sections 373.036(7) and 373.042(3), Florida Statutes (F.S.), the Southwest Florida Water Management District is required to annually update its priority list and schedule for the establishment of minimum flows and minimum water levels, submit the updated list and schedule to the Florida Department of Environmental Protection (DEP) by November 15<sup>th</sup> for approval, and include the approved list and schedule in the District's Consolidated Annual Report by March 1<sup>st</sup>. Minimum flows and minimum water levels are rules established by the state water management districts or DEP that define the limit at which further withdrawals would be significantly harmful to the water resources or ecology of the area. In addition to prioritized minimum flows and water levels, the priority list and schedule must include reservations proposed for establishment. Reservations are rules that reserve water from use by permit applications, as necessary for the protection of fish and wildlife or public health and safety.

The District prepared this 2018 priority list and schedule to address all relevant statutory directives, and guidance concerning minimum flow, minimum water level and water reservation prioritization included in Rules 62-40.473, and 62-40.474 within the State Water Resource Implementation Rule (Chapter 62-40, Florida administrative Code (F.A.C.)).

District water bodies with adopted and effective minimum flow, minimum water level or reservation rules are itemized in this 2018 priority list and schedule. These water bodies include all first magnitude springs and all second magnitude springs within the District that occur within state or federally owned lands purchased for conservation purposes. Water bodies with previously established minimum flows or water levels that have been reevaluated and revised as necessary are identified. Water bodies that may be affected by withdrawals occurring in water management districts adjacent to the Southwest Florida Water Management District are also identified to support coordination of regulatory activities among the districts and DEP. The listings provided in this document for established minimum flows, minimum water levels, and reservations do not supersede information incorporated into District Water Levels and Rates of Flow (Chapter 40D-8, F.A.C.) and Consumptive Use of Water (Chapter 40D-2, F.A.C.) rules.

Minimum flows, minimum water levels and reservations proposed for establishment and reevaluation through 2027 are provided in tabular form in this 2018 priority list and schedule. Designation of water body type (aquifer, estuary, lake, river, river-estuary, spring and as appropriate, spring magnitude, which is associated with the rate of spring discharge) are provided along with location information. Water bodies that are part of a larger system, e.g., a spring group associated with a river, are listed by water body name and system. The District's intent regarding completion of voluntary, independent, scientific peer review is identified for each water body. Voluntary scientific peer review is proposed for all prioritized spring and river segments identified for minimum flow establishment based on the expected level of complexity of the minimum flows, and the anticipated degree of public concern regarding their development. None of the prioritized lake minimum levels are expected to be subjected to voluntary scientific peer review, based on anticipated use of previously peer-reviewed methodologies for development of the minimum water levels. Prioritized water bodies that may be affected by withdrawals occurring in other water management districts, i.e., are potentially subject to cross-boundary impacts, are identified. The status of rulemaking for each prioritized water body is also provided. These listings are not intended as a request for the adoption of a minimum flow or level by the DEP.

## **Southwest Florida Water Management District Water Bodies with Adopted and Effective Minimum Flow and Minimum Water Level Rules, Including Those That Have Been Reevaluated**

- Alafia River (upper segment) <sup>a</sup>
- Alafia River (lower segment)/Lithia-Buckhorn Spring Group
- Anclote River (lower segment)
- Anclote River (upper segment)
- Braden River (upper segment)
- Chassahowitzka River/Chassahowitzka Spring Group (OFS) <sup>b</sup> and Blind Spring
- Citrus County Lakes – Ft. Cooper, Tsala Apopka – Floral City, Inverness and Hernando Pools
- Crystal River/Kings Bay Spring Group (OFS) <sup>b</sup>
- Crystal Springs
- Dona Bay/Shakett Creek System
- Dover/Plant City Water Use Caution Area Minimum Aquifer Level
- Gum Slough Spring Run<sup>a</sup>
- Hernando County Lakes – Hunters, Lindsey, Mountain, Neff, Spring, Tooke, Weekiwachee Prairie, Whitehurst
- Highland County Lakes – Angelo <sup>a</sup>, Anoka <sup>a</sup>, Damon <sup>a</sup>, Denton <sup>a</sup>, Jackson <sup>a</sup> (reevaluated), Little Lake Jackson <sup>a</sup> (reevaluated), June-in-Winter <sup>a</sup>, Letta <sup>a</sup> (reevaluated), Lotela <sup>a</sup> (reevaluated), Placid <sup>a</sup>, Tulane <sup>a</sup>, Verona <sup>a</sup>
- Hillsborough County Lakes – Alice (reevaluated), Allen, Barbara, Bird (reevaluated), Brant, Calm, Carroll, Charles, Church, Crenshaw, Crescent, Crystal (reevaluated), Cypress, Dan (reevaluated), Deer (reevaluated), Dosson, Echo, Ellen, Fairy [Maurine], Garden, Halfmoon, Hanna, Harvey, Helen, Hobbs (reevaluated), Hooker, Horse (reevaluated), Jackson, Juanita (reevaluated), Keene, Kell, Little Moon (reevaluated), Merrywater (reevaluated), Mound, Platt, Pretty, Rainbow (reevaluated), Raleigh, Reinheimer, Rogers, Round (reevaluated), Saddleback (reevaluated), Sapphire, Starvation, Stemper (reevaluated), Strawberry, Sunset (reevaluated), Sunshine, Taylor, Virginia, Wimauma
- Hillsborough County Wetland Sites – CBRWF #32, Cosme WF Wetland, CR1, CR2, CR3, CR4, CR5, CR6, EWWF NW-44, MBWF Clay Gully Cypress, MBWF Entry Dome, MBWF Unnamed, MBWF X-4, S21 WF NW-53 East
- Hillsborough River (lower segment) (reevaluated)
- Hillsborough River (upper segment)
- Homosassa River/Homosassa Spring Group (OFS) <sup>b</sup>
- Levy County Lake – Marion
- Marion County Lakes – Bonable, Little Bonable, Tiger
- Myakka River (lower segment)
- Myakka River (upper segment)
- Northern Tampa Bay – 7 Wells – Upper Floridan aquifer/Saltwater Intrusion
- Pasco County Lakes – Bell, Big Fish (reevaluated), Bird, Buddy (reevaluated), Camp (reevaluated), Clear, Crews, Green, Hancock, Iola, Jessamine, King, King [East], Linda, Middle, Moon (reevaluated), Padgett (reevaluated), Parker aka Ann, Pasadena (reevaluated), Pasco, Pierce, Unnamed #22 aka Loyce
- Pasco County Wetland Sites – CBARWF Q-1, CBARWF Stop #7, CBARWF T-3, CBARWF TQ-1 West, CBRWF A, CBRWF #4, CBRWF #16, CBRWF #20, CBRWF #25, CC Site G, CCW-11, CCW-12, CCW-17, CC W-41, NPWF #3, NPWF #21, SPWF NW-49, SPWF NW-50, SPWF South Cypress, STWF Central Recorder, STWF Eastern Recorder, STWF D, STWF M, STWF N, STWF S-75, STWF Z
- Peace River (lower segment) (reevaluated)
- Peace River (middle segment)
- Peace River (three upper segments – "low" minimum flows)
- Pinellas County Wetland Site – EWWF Salls Property Wetland 10S/10D
- Pithlachascotee River (lower segment)
- Pithlachascotee River (upper segment)

- Polk County Lakes – Annie <sup>a</sup>, Aurora <sup>a</sup>, Bonnie <sup>a</sup>, Clinch <sup>a</sup> (reevaluated), Crooked <sup>a</sup> (reevaluated), Crystal <sup>a</sup>, Dinner <sup>a</sup>, Eagle <sup>a</sup> (reevaluated), Easy <sup>a</sup>, Eva <sup>a</sup>, Hancock, Lee <sup>a</sup>, Lowery <sup>a</sup>, Mabel <sup>a</sup>, McLeod <sup>a</sup> (reevaluated), North Lake Wales <sup>a</sup>, Parker, Starr <sup>a</sup> (reevaluated), Venus <sup>a</sup>, Wailes <sup>a</sup> (reevaluated)
- Rainbow River/Rainbow Spring Group (OFS) <sup>a, b, c</sup>
- Sulphur Springs
- Sumter County Lakes – Big Gant <sup>a</sup>, Black <sup>a</sup>, Deaton <sup>a</sup>, Miona <sup>a</sup>, Okahumpka <sup>a</sup>, Panasoffkee <sup>a</sup>
- Southern Water Use Caution Area – Upper Floridan aquifer <sup>a</sup>
- Tampa Bypass Canal
- Weeki Wachee River/Weeki Wachee Spring Group (OFS) <sup>b</sup>

### **Southwest Florida Water Management District Water Bodies with Adopted and Effective Reservation Rules**

- Morris Bridge Sink (water reserved to contribute to achieving or maintaining minimum flows adopted for the lower Hillsborough River for the protection of fish and wildlife)

## Southwest Florida Water Management District Minimum Flows and Levels to be Adopted in 2018

<b>New or Re-evaluation</b>	<b>Waterbody Name or Compliance Point</b>	<b>System Name <sup>e</sup></b>	<b>Waterbody Type</b>	<b>County(s)</b>	<b>Voluntary Peer Review to be Completed?</b>	<b>Cross-Boundary Impacts from Adjacent Water Mgmt. District?</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Rulemaking Status <sup>f</sup></b>
Reevaluation	Allen, Lake	Allen, Lake	Lake	Hillsborough	No	No	28.1572	-82.4888	N/A
Reevaluation	Brant Lake	Brant Lake	Lake	Hillsborough	No	No	28.1264	-82.4723	N/A
Reevaluation	Dosson, Lake	Dosson, Lake	Lake	Hillsborough	No	No	28.1231	-82.5255	Notice of Proposed Rule Published
Reevaluation	Harvey, Lake	Harvey, Lake	Lake	Hillsborough	No	No	28.1638	-82.4858	N/A
Reevaluation	Sunshine, Lake	Sunshine, Lake	Lake	Hillsborough	No	No	28.1197	-82.5260	Notice of Proposed Rule Published
Reevaluation	Virginia, Lake	Virginia, Lake	Lake	Hillsborough	No	No	28.1614	-82.4887	N/A
Reevaluation	Pierce, Lake	Pierce, Lake	Lake	Pasco	No	No	28.3209	-82.5128	N/A

## Southwest Florida Water Management District Minimum Flows and Levels to be Adopted in 2019

New or Re-evaluation	Waterbody Name	System Name <sup>e</sup>	Waterbody Type	County(s)	Voluntary Peer Review to be Completed?	Cross-Boundary Impacts from Adjacent Water Mgmt. District?	Latitude	Longitude	Rulemaking Status <sup>f</sup>
Reevaluation	Calm Lake	Calm Lake	Lake	Hillsborough	No	No	28.1425	-82.5823	N/A
Reevaluation	Charles, Lake	Charles, Lake	Lake	Hillsborough	No	No	28.1160	-82.4809	N/A
Reevaluation	Church Lake	Church Lake	Lake	Hillsborough	No	No	28.1034	-82.6004	N/A
Reevaluation	Echo Lake	Echo Lake	Lake	Hillsborough	No	No	28.1076	-82.6036	N/A
Reevaluation	Linda, Lake	Linda, Lake	Lake	Pasco	No	No	28.1890	-82.4787	N/A
Reevaluation	Pasco Lake	Pasco Lake	Lake	Pasco	No	No	28.3843	-82.4868	N/A
Reevaluation	Sapphire, Lake	Sapphire, Lake	Lake	Hillsborough	No	No	28.1407	-82.4815	N/A
Reevaluation	Chassahowitzka River	Chassahowitzka River	River-Estuary	Citrus, Hernando	Yes	No	28.7155	-82.5773	N/A
Reevaluation	Chassahowitzka Spring Group (OFS) <sup>b</sup>	Chassahowitzka River	Spring-1 <sup>§</sup>	Citrus, Hernando	Yes	No	28.7155	-82.5762	N/A
Reevaluation	Blind Spring	Chassahowitzka River	Spring-2 <sup>§</sup>	Citrus, Hernando	Yes	No	28.6579	-82.6346	N/A
Reevaluation	Homosassa River	Homosassa River	River-Estuary	Citrus	Yes	No	28.7973	-82.5889	N/A
Reevaluation	Homosassa Spring Group (OFS) <sup>b</sup>	Homosassa River	Spring-1 <sup>§</sup>	Citrus	Yes	No	28.7996	-82.5889	N/A
New <sup>c</sup>	Rainbow River	Rainbow River	River	Marion	Yes <sup>d</sup>	Yes	29.0492	-82.4478	N/A
New <sup>c</sup>	Rainbow Spring Group (OFS) <sup>b</sup>	Rainbow River	Spring-1 <sup>§</sup>	Marion	Yes <sup>d</sup>	Yes	29.1025	-82.4478	N/A
Reevaluation	STWF Central Recorder	STWF Central Recorder	Wetland	Pasco	No	No	28.2444	-82.5961	N/A
Reevaluation	STWF Z	STWF Z	Wetland	Pasco	No	No	28.2372	-82.5858	N/A
Reevaluation	STWF Eastern Recorder	STWF Eastern Recorder	Wetland	Pasco	No	No	28.2458	-82.5656	N/A
Reevaluation	MBWF Entry Dome	MBWF Entry Dome	Wetland	Hillsborough	No	No	28.1161	-82.3069	N/A
Reevaluation	MBWF X-4	MBWF X-4	Wetland	Hillsborough	No	No	28.1239	-82.3372	N/A
Reevaluation	MBWF Clay Gully Cypress	MBWF Clay Gully Cypress	Wetland	Hillsborough	No	No	28.1231	-82.3456	N/A

<b>New or Re-evaluation</b>	<b>Waterbody Name</b>	<b>System Name<sup>e</sup></b>	<b>Waterbody Type</b>	<b>County(s)</b>	<b>Voluntary Peer Review to be Completed?</b>	<b>Cross-Boundary Impacts from Adjacent Water Mgmt. District?</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Rulemaking Status<sup>f</sup></b>
Reevaluation	MBWF Unnamed	MBWF Unnamed	Wetland	Hillsborough	No	No	28.1056	-82.3456	N/A
Reevaluation	EWWF NW-44	EWWF NW-44	Wetland	Hillsborough	No	No	28.1681	-82.6311	N/A
Reevaluation	EWWF Salls Property Wetland 10S/10D	EWWF Salls Property Wetland 10S/10D	Wetland	Pinellas	No	No	28.1672	-82.6828	N/A
Reevaluation	SPWF NW-49	SPWF NW-49	Wetland	Pasco	No	No	28.1836	-82.5075	N/A
Reevaluation	SPWF South Cypress	SPWF South Cypress	Wetland	Pasco	No	No	28.1814	-82.5081	N/A
Reevaluation	SPWF NW-50	SPWF NW-50	Wetland	Pasco	No	No	28.1883	-82.5078	N/A
Reevaluation	CBRWF #25	CBRWF #25	Wetland	Pasco	No	No	28.2350	-82.3589	N/A
Reevaluation	CBRWF #32	CBRWF #32	Wetland	Hillsborough	No	No	28.1681	-82.3672	N/A
Reevaluation	CBRWF #20	CBRWF #20	Wetland	Pasco	No	No	28.2039	-82.3553	N/A
Reevaluation	CR1	CR1	Wetland	Hillsborough	No	No	28.1325	-82.1211	N/A
Reevaluation	CR2	CR2	Wetland	Hillsborough	No	No	28.1206	-82.1197	N/A
Reevaluation	CR3	CR3	Wetland	Hillsborough	No	No	28.1108	-82.1206	N/A
Reevaluation	NPWF #3	NPWF #3	Wetland	Pasco	No	No	28.3161	-82.5750	N/A
Reevaluation	NPWF #21	NPWF #21	Wetland	Pasco	No	No	28.2897	-82.5750	N/A

## Southwest Florida Water Management District Minimum Flows and Levels to be Adopted in 2020

New or Re-evaluation	Waterbody Name	System Name <sup>e</sup>	Waterbody Type	County(s)	Voluntary Peer Review to be Completed?	Cross-Boundary Impacts from Adjacent Water Mgmt. District?	Latitude	Longitude	Rulemaking Status <sup>f</sup>
Reevaluation	Cypress, Lake	Cypress, Lake	Lake	Hillsborough	No	No	28.1256	-82.5647	N/A
Reevaluation	Garden, Lake	Garden, Lake	Lake	Hillsborough	No	No	28.1318	-82.6309	N/A
Reevaluation	Halfmoon Lake	Halfmoon Lake	Lake	Hillsborough	No	No	28.0971	-82.5481	N/A
Reevaluation	Jackson, Lake	Jackson, Lake	Lake	Hillsborough	No	No	28.1375	-82.6300	N/A
Reevaluation	Strawberry (North Crystal) Lake	Strawberry (North Crystal) Lake	Lake	Hillsborough	No	No	28.1395	-82.4748	N/A
Reevaluation	Peace River (lower segment)	Peace River (lower segment)	River-Estuary	Hardee, DeSoto, Charlotte	Yes	Yes	27.2206	-81.8764	N/A
New	Shell Creek (lower segment)	Shell Creek (lower segment)	River	Charlotte	Yes	Yes	26.9844	-81.9358	N/A
Reevaluation	CC W-41	CC W-41	Wetland	Pasco	No	No	28.3125	-82.3736	N/A
Reevaluation	CC W-11	CC W-11	Wetland	Pasco	No	No	28.2981	-82.3842	N/A
Reevaluation	CC W-12	CC W-12	Wetland	Pasco	No	No	28.2925	-82.3947	N/A
Reevaluation	CC W-17	CC W-17	Wetland	Pasco	No	No	28.2856	-82.3947	N/A
Reevaluation	CC Site G	CC Site G	Wetland	Pasco	No	No	28.2725	-82.4050	N/A
Reevaluation	STWF D	STWF D	Wetland	Pasco	No	No	28.2553	-82.6347	N/A
Reevaluation	STWF S-75	STWF S-75	Wetland	Pasco	No	No	28.2503	-82.5628	N/A
Reevaluation	STWF M	STWF M	Wetland	Pasco	No	No	28.2436	-82.5719	N/A
Reevaluation	STWF N	STWF N	Wetland	Pasco	No	No	28.2425	-82.5522	N/A
Reevaluation	S21 WF NW-53 East	S21 WF NW-53 East	Wetland	Hillsborough	No	No	28.1211	-82.5142	N/A
Reevaluation	Cosme WF Wetland	Cosme WF Wetland	Wetland	Hillsborough	No	No	28.1008	-82.5908	N/A
Reevaluation	CBRWF #16	CBRWF #16	Wetland	Pasco	No	No	28.2083	-82.3719	N/A
Reevaluation	CBRWF A	CBRWF A	Wetland	Pasco	No	No	28.2067	-82.3744	N/A
Reevaluation	CBRWF #4	CBRWF #4	Wetland	Pasco	No	No	28.2289	-82.3653	N/A
Reevaluation	CBARWF TQ-1 West	CBARWF TQ-1 West	Wetland	Pasco	No	No	28.3436	-82.4864	N/A
Reevaluation	CBARWF T-3	CBARWF T-3	Wetland	Pasco	No	No	28.3478	-82.4956	N/A
Reevaluation	CBARWF Stop #7	CBARWF Stop #7	Wetland	Pasco	No	No	28.3436	-82.4744	N/A
Reevaluation	CBARWF Q-1	CBARWF Q-1	Wetland	Pasco	No	No	28.3461	-82.4697	N/A

<b>New or Re-evaluation</b>	<b>Waterbody Name</b>	<b>System Name<sup>e</sup></b>	<b>Waterbody Type</b>	<b>County(s)</b>	<b>Voluntary Peer Review to be Completed?</b>	<b>Cross-Boundary Impacts from Adjacent Water Mgmt. District?</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Rulemaking Status<sup>f</sup></b>
Reevaluation	CR4	CR4	Wetland	Hillsborough	No	No	28.1142	-82.0981	N/A
Reevaluation	CR5	CR5	Wetland	Hillsborough	No	No	28.0981	-82.0822	N/A
Reevaluation	CR6	CR6	Wetland	Hillsborough	No	No	28.1258	-82.0994	N/A

### Southwest Florida Water Management District Minimum Flows and Levels to be Adopted in 2021

New or Re-evaluation	Waterbody Name	System Name <sup>e</sup>	Waterbody Type	County(s)	Voluntary Peer Review to be Completed?	Cross-Boundary Impacts from Adjacent Water Mgmt. District?	Latitude	Longitude	Rulemaking Status <sup>f</sup>
New	Braden River (lower segment)	Braden River (lower segment)	River-Estuary	Manatee	Yes	No	27.4411	-82.4878	N/A
New	Manatee River (lower segment)	Manatee River (lower segment)	River-Estuary	Manatee	Yes	No	27.5133	-82.3672	N/A

### Southwest Florida Water Management District Minimum Flows and Levels to be Adopted in 2022

New or Re-evaluation	Waterbody Name	System Name <sup>e</sup>	Waterbody Type	County(s)	Voluntary Peer Review to be Completed?	Cross-Boundary Impacts from Adjacent Water Mgmt. District?	Latitude	Longitude	Rulemaking Status <sup>f</sup>
New	Little Manatee River (lower segment)	Little Manatee River (lower segment)	River-Estuary	Hillsborough	Yes	No	27.6708	-82.3528	N/A
New	Little Manatee River (upper segment)	Little Manatee River (upper segment)	River	Hillsborough, Manatee	Yes	No	27.6708	-82.3528	N/A

### Southwest Florida Water Management District Minimum Flows and Levels to be Adopted in 2023

<b>New or Re-evaluation</b>	<b>Waterbody Name</b>	<b>System Name<sup>e</sup></b>	<b>Waterbody Type</b>	<b>County(s)</b>	<b>Voluntary Peer Review to be Completed ?</b>	<b>Cross-Boundary Impacts from Adjacent Water Mgmt. District?</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Rulemaking Status<sup>f</sup></b>
New	Charlie Creek	Charlie Creek	River	Hardee, Polk	Yes	No	27.3747	-81.7967	N/A
New	Horse Creek	Horse Creek	River	Hardee, DeSoto	Yes	No	27.1992	-81.9886	N/A
Reevaluation	Southern Water Use Caution Area Saltwater Intrusion Minimum Aquifer Level (SWIMAL)	Southern Water Use Caution Area Saltwater Intrusion Minimum Aquifer Level (SWIMAL)	Aquifer	Hillsborough, Manatee, Sarasota	Yes	Yes	27.5603	-82.4013	N/A

### Southwest Florida Water Management District Minimum Flows and Levels to be Adopted in 2024

New or Re-evaluation	Waterbody Name	System Name <sup>e</sup>	Waterbody Type	County(s)	Voluntary Peer Review to be Completed?	Cross-Boundary Impacts from Adjacent Water Mgmt. District?	Latitude	Longitude	Rulemaking Status <sup>f</sup>
New	Withlacoochee River (lower segment)	Withlacoochee River (lower segment)	River-Estuary	Citrus, Levy	Yes	No	29.0208	-82.6381	N/A
New	Withlacoochee River (upper segment, U.S. Geological Survey Holder gage to U.S. Geological Survey Wysong gage)	Withlacoochee River (upper segment, U.S. Geological Survey Holder gage to U.S. Geological Survey Wysong gage)	River	Citrus, Marion, Sumter	Yes	Yes	28.9886	-82.3497	N/A
New	Withlacoochee River (upper segment, U.S. Geological Survey Wysong gage to U.S. Geological Survey Croom gage)	Withlacoochee River (upper segment, U.S. Geological Survey Wysong gage to U.S. Geological Survey Croom gage)	River	Citrus, Sumter, Hernando	Yes	Yes	28.8231	-82.1833	N/A
New	Withlacoochee River (upper segment, upstream of U.S. Geological Survey Croom gage)	Withlacoochee River (upper segment, upstream of U.S. Geological Survey Croom gage)	River	Hernando, Sumter, Pasco, Lake, Polk	Yes	Yes	28.5925	-82.2222	N/A

## Southwest Florida Water Management District Minimum Flows and Levels to be Adopted in 2025

<b>New or Re-evaluation</b>	<b>Waterbody Name</b>	<b>System Name<sup>e</sup></b>	<b>Waterbody Type</b>	<b>County(s)</b>	<b>Voluntary Peer Review to be Completed?</b>	<b>Cross-Boundary Impacts from Adjacent Water Mgmt. District?</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Rulemaking Status<sup>f</sup></b>
Reevaluation	Peace River (upper segment, U.S. Geological Survey Zolfo Springs gage to U.S. Geological Survey Ft. Meade gage)	Peace River (upper segment, U.S. Geological Survey Zolfo Springs gage to U.S. Geological Survey Ft. Meade gage)	River	Hardee, Polk	Yes	No	27.5042	-81.8011	N/A
Reevaluation	Peace River (upper segment, U.S. Geological Survey Ft. Meade gage to U.S. Geological Survey Bartow gage)	Peace River (upper segment, U.S. Geological Survey Ft. Meade gage to U.S. Geological Survey Bartow gage)	River	Polk	Yes	No	27.7511	-81.7822	N/A
Reevaluation	Peace River (upper segment, upstream of U.S. Geological Survey Bartow gage)	Peace River (upper segment, upstream of U.S. Geological Survey Bartow gage)	River	Polk	Yes	No	27.9019	-81.8175	N/A
New	Prairie Creek	Prairie Creek	River	Charlotte, DeSoto	Yes	No	26.9903	-81.8947	N/A
New	Shell Creek (upper segment)	Shell Creek (upper segment)	River	Charlotte	Yes	No	26.9750	26.9750	N/A

## Southwest Florida Water Management District Minimum Flows and Levels to be Adopted in 2026

New or Re-evaluation	Waterbody Name	System Name <sup>e</sup>	Waterbody Type	County(s)	Voluntary Peer Review to be Completed?	Cross-Boundary Impacts from Adjacent Water Mgmt. District?	Latitude	Longitude	Rulemaking Status <sup>f</sup>
New	Cypress Creek	Cypress Creek	River	Hillsborough, Pasco	Yes	No	28.0889	-82.4092	N/A
Reevaluation	Gum Slough Spring Run	Gum Slough Spring Run	Spring-2 <sup>g</sup>	Sumter	Yes	Yes	28.9511	-82.2500	N/A

## Southwest Florida Water Management District Minimum Flows and Levels to be Adopted in 2027

New or Re-evaluation	Waterbody Name	System Name <sup>e</sup>	Waterbody Type	County(s)	Voluntary Peer Review to be Completed?	Cross-Boundary Impacts from Adjacent Water Mgmt. District?	Latitude	Longitude	Rulemaking Status <sup>f</sup>
Reevaluation	Crystal River	Crystal River	River-Estuary	Citrus	Yes	Yes	28.9064	-82.6239	N/A
Reevaluation	Kings Bay Spring Group (OFS) <sup>b</sup>	Crystal River	Spring-1 <sup>g</sup>	Citrus	Yes	Yes	28.9064	-82.6239	N/A
New	North Prong Alafia River	North Prong Alafia River	River	Hillsborough, Polk	Yes	No	27.8836	-82.1003	N/A
New	South Prong Alafia River	South Prong Alafia River	River	Hillsborough, Polk	Yes	No	27.7965	-82.1178	N/A
Reevaluation	Rainbow River	Rainbow River	River	Marion	Yes	Yes	29.0492	-82.4478	N/A
Reevaluation	Rainbow Spring Group (OFS) <sup>b</sup>	Rainbow River	Spring-1 <sup>g</sup>	Marion	Yes	Yes	29.1025	-82.4478	N/A

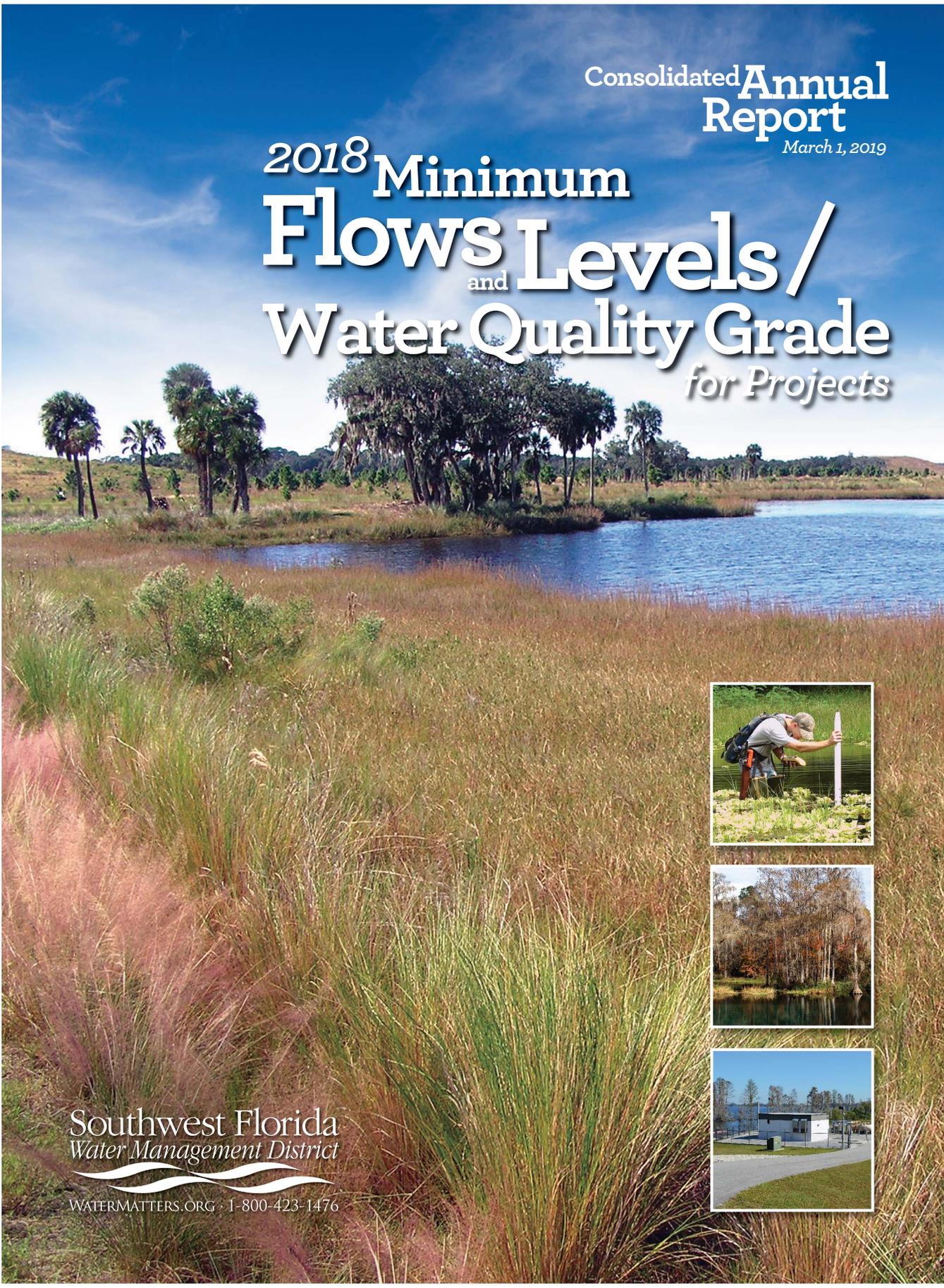
## Southwest Florida Water Management District Reservations Priority List

Waterbody Name	Waterbody Type	County(s)	Proposed Year for Reservation	Rulemaking Status <sup>f</sup>
Hancock, Lake/Peace River (upper segment)	Lake, River	Polk	2020	N/A

- <sup>a</sup> Water body may be affected by groundwater withdrawals in an adjacent water management district.
- <sup>b</sup> OFS = Outstanding Florida Spring.
- <sup>c</sup> Emergency rule in 40DER17, F.A.C. for the Rainbow River/Rainbow Spring Group in effect until related rule proposed in rule 40D-8-041, F.A.C., becomes effective.
- <sup>d</sup> Voluntary peer review completed.
- <sup>e</sup> System name identifies larger system that the water body is associated with for minimum flows rule development.
- <sup>f</sup> Last rulemaking action taken: Notice of Rule Development published; Notice of Proposed Rule published; Rule challenge pending; Rule adopted, Ratification not required; Rule adopted, Awaiting ratification; Rule adopted, Ratified. N/A indicates formal rulemaking has not been initiated.
- <sup>g</sup> Magnitude provided for springs and spring groups (Spring-1 = discharge ≥ 100 cubic feet per second; Spring-2 = discharge ≥ 10 to 100 cubic feet per second).

Consolidated **Annual**  
**Report**  
*March 1, 2019*

# 2018 **Minimum** **Flows and Levels /** **Water Quality Grade** *for Projects*



Southwest Florida  
*Water Management District*

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# MFL/Water Quality Grade for Projects

## Overview

Section 373.036(7)(b)9., F.S., provides that the Consolidated Annual Report shall contain a “grade for each watershed, water body, or water segment in which a project listed under subparagraph 8 is located representing the level of impairment and violations of adopted minimum flow or minimum water level. The grading system must reflect the severity of the impairment of the watershed, water body, or water segment.

Table 1 lists the projects contained within the 2018 Five-Year Water Resource Development Work Plan, the watershed, water body, or water segment, the project impacts, and a grade of two items. 1) the water quality level of impairment and 2) the level of violation of a minimum flow or minimum water level.

### Level of Impairment Grade

The Level of Impairment grade is represented as follows:

**Impaired – High:** This grade is assigned if the water body is impaired for one or more parameters other than mercury and is based on a consideration of other factors, including the number of impairments, the presences of Outstanding Florida Waters, the proximity to ongoing or planned restoration activities, the ecological priority of the water for endangered and threatened species, environmental justice concerns, and the amount of anthropogenic land use and local aquifer vulnerability.

**Impaired:** This grade is assigned if the water body is impaired for one or more parameters other than mercury.

**Not Impaired:** This grade is assigned if the water body is not impaired for any parameters other than mercury.

The DEP provided the impairment grades based upon Total Maximum Daily Loads (TMDL) based Water Body IDs (WBIDs). Projects that impact specific WBIDs were identified in Table 1 for that WBID. As an example, a project that replaced disposal of treated waste water in a spray field or Rapid Infiltration Basin (RIB) with beneficial use of reclaimed water utilized the impairment grade associated with the WBID where the spray field or RIB were originally located. It is important to note that projects contained within a Water Resource Development Work Program are focused on water use/conservation, with the exception of the projects contained in Appendix A – District Projects for Implementing Basin Management Action Plans.

### Level of Violation of Adopted MFL

The water body was evaluated based on the relative magnitude of the MFL violation and rated as close, moderately close, or not close to meeting the MFL. In evaluating this element, the District's considered the magnitude of the variance from the MFL, the magnitude of the ecological impact, the time frame for recovery, and the time frame from completion of the projects.

The water body was also evaluated based on the regional significance of the water body and rated as Tier 1, Tier 2 or Tier 3 with Tier 1 being the highest rating for regional significance and Tier 3 being the lowest rating. In evaluating the element, the Districts considered the water body's size and geographical extent, anticipated timeframe from recovery, ecological importance, recreational uses, navigation, threatened/endangered species, wildlife utilization, aesthetics, and historical and archeological significance.

Level 0: This grade is assigned if the water body is meeting the MFL, but is projected to not meet the MFL within 20 years (that is, the water body is in prevention).

Level I: This grade is assigned if the water body is close to meeting the MFL and the water body is rated as a Tier 3 or Tier 2 for regional significance; or the water body is moderately close to meeting the MFL and the water body is rated a Tier 3 for regional significance.

Level II: This grade is assigned if the water body is close to meeting the MFL and the water body is rated a Tier 1 for regional significance; or the water body is moderately close to meeting the MFL and the water body is rated a Tier 2 for regional significance; or the water body is not close to meeting the MFL and the water body is rated a Tier 3 for regional significance.

Level III: This grade is assigned if the water body is moderately close to meeting the MFL and the water body is rated a Tier 1 for regional significance; or the water body is not close to meeting the MFL and the water body is rated a Tier 2 or Tier 1 for regional significance.

The majority of the projects in the Water Resource Development Work Program will directly assist in a recovery strategy for a Water Use Caution Area (WUCA). The projects are anticipated to impact all water bodies that are included within the WUCA. As an example, the Southern Water Use Caution Area covers a 5,100 square mile area over all or parts of eight counties. There are a total of 22 water bodies (one aquifer level, two river segments, and 19 lakes) that are not achieving their established minimum flow or level in this region. Because the basis for not meeting these MFL's are due to groundwater withdrawals within the confined Upper Florida aquifer in the SWUCA, a project within this area is anticipated to impact the entire area. Therefore, all the impacted waterbodies within a WUCA have been included for each project.

Water Resource Development Projects				
Project Number	Water Resource Development Projects	Watershed, Water Body, Water Segment	Level of Water Quality Impairment	Level of Violation of Adopted MFL
<b>1) Alternative Water Supply Feasibility Research and Pilot Projects (Programmatic Code 2.2.1.1)</b>				
N287	South Hillsborough Aquifer Recharge Program (SHARP)	SWUCA Water Bodies Hillsborough Bay Upper 1558E Palm River 1536E McKay Bay 1584B	WBID 1558E - Impaired WBID 1536E - Impaired - High WBID 1584B - Impaired	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 5 water bodies Level 3 - 11 water bodies
N842	Bradenton Aquifer Protection Recharge Well	SWUCA Water bodies Manatee River - 1848A	WBID 1848A - Not Impaired	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 5 water bodies Level 3 - 11 water bodies
N854	PRMRWSA Partially Treated Water ASR	SWUCA Water Bodies	None*	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 5 water bodies Level 3 - 11 water bodies
N855	Southern Hillsborough Aquifer Recharge Expansion (SHARE) Phase 1	SWUCA Water Bodies Hillsborough Bay Upper 1558E and 1558D Palm River 1536E McKay Bay 1584B	WBID 1558E - Impaired WBID 1536E - Impaired - High WBID 1584B - Impaired	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 5 water bodies Level 3 - 11 water bodies
N912	Braden River Utilities ASR Feasibility	SWUCA Water Bodies Whitaker Bayou 1936 Tampa Bay 1558A	WBID 1936 - Impaired WBID 1558A - Impaired	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 5 water bodies Level 3 - 11 water bodies
P280	Hydrogeologic Investigation of LFA in Polk County	SWUCA Water Bodies	None*	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 5 water bodies Level 3 - 11 water bodies
P925	Optical Borehole Imaging Data Collection from LFA Wells	SWUCA Water Bodies	None*	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 5 water bodies Level 3 - 11 water bodies
P926	Sources/Ages of Groundwater in LFA Wells	SWUCA Water Bodies	None*	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 5 water bodies Level 3 - 11 water bodies
<b>2) Facilitating Agricultural Resource Management Systems (FARMS) (Programmatic Code 2.2.1.2)</b>				
H015	FARMS Well Back-Plugging Program	SWUCA Water Bodies Shell Creek 2041 Prairie Creek 1962	WBID 2041 - Impaired WBID 1962 - Not Impaired	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 5 water bodies Level 3 - 11 water bodies

H017	FARMS Projects	SWUCA Water Bodies NTBWUCA Water Bodies DPCWUCA Water Bodies Shell Creek 2041 Prairie Creek 1962	WBID 2041 - Impaired WBID 1962 - Not Impaired	SWUCA/NTBWUCA/DPCWUCA water bodies Level 1 - 19 water bodies Level 2 - 13 water bodies Level 3 - 27 water bodies
H529	Mini-FARMS Program	SWUCA Water Bodies NTBWUCA Water Bodies DPCWUCA Water Bodies Shell Creek 2041 Prairie Creek 1962	WBID 2041 - Impaired WBID 1962 - Not Impaired	SWUCA/NTBWUCA/DPCWUCA water bodies Level 1 - 19 water bodies Level 2 - 13 water bodies Level 3 - 27 water bodies
H579	IFAS BMP Implementation Team	SWUCA Water Bodies NTBWUCA Water Bodies DPCWUCA Water Bodies Shell Creek 2041 Prairie Creek 1962	WBID 2041 - Impaired WBID 1962 - Not Impaired	SWUCA/NTBWUCA/DPCWUCA water bodies Level 1 - 19 water bodies Level 2 - 13 water bodies Level 3 - 27 water bodies
H730	FARMS - Tamiami Citrus-64 Grove	SWUCA Water Bodies Bee Branch 1827 Charlie Creek 1763A Lower Peace River 1623C	WBID 1827 - Not Impaired WBID 1763A - Impaired WBID 1623C - Impaired	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 5 water bodies Level 3 - 11 water bodies
H747	FARMS - Brenner Groves, LLC	NTBWUCA Water Bodies DPCWUCA Water Bodies	None*	NTBWUCA/DPCWUCA water bodies Level 1 - 13 water bodies Level 2 - 8 water bodies Level 3 - 16 water bodies
H751	FARMS - Marion Co Equine Compost Fac Pilot	Northern District/Springs Coast	None*	None**
H756	FARMS - QC Prairie River Ranch	SWUCA Water Bodies Hawthorne Creek 1997 Joshua Creek 1950A	WBID 1997 - Impaired WBID 1950A - Not Impaired	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 5 water bodies Level 3 - 11 water bodies
H757	FARMS - KLM Farms LLC	SWUCA Water Bodies	None*	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 5 water bodies Level 3 - 11 water bodies
H758	FARMS - Doe Hill Citrus Phase 2	SWUCA Water Bodies Cow Slough 1964	WBID 1964 - Impaired	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 5 water bodies Level 3 - 11 water bodies
H760	FARMS - Farmland Reserve Inc - Sun City	SWUCA Water Bodies Cockroach Bay 1778	WBID 1778 - Impaired - High	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 5 water bodies Level 3 - 11 water bodies
H761	FARMS - QC Pelican Grove LLC	SWUCA Water Bodies Prairie Creek 1962 Lower Peace River 1623C	WBID 1962 - Not Impaired WBID 1623C - Impaired	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 5 water bodies Level 3 - 11 water bodies

H763	FARMS - Ocean Breeze Properties LLC	SWUCA Water Bodies Cockroach Bay 1778	WBID 1778 - Impaired - High	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 5 water bodies Level 3 - 11 water bodies
H764	FARMS - Council Growers Inc.	SWUCA Water Bodies Little Manatee River 1742A1	WBID 1742B - Impaired WBID 1742A1 - Impaired - High	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 5 water bodies Level 3 - 11 water bodies
H766	FARMS - Reynolds Farms Inc - Anne's Block	SWUCA Water Bodies Lake Francis 1938G Lake June in Winter 1938Z	WBID 1938G - Not Impaired WBID 1938Z - Not Impaired	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 5 water bodies Level 3 - 11 water bodies
H767	FARMS - Dixie Groves & Cattle Comp	SWUCA Water Bodies Prairie Creek1962 Lower Peace River 1623C	WBID 1962 - Not Impaired WBID 1623C - Impaired	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 5 water bodies Level 3 - 11 water bodies
H769	FARMS - Hi Hat Ranch LLLP	SWUCA Water Bodies Cow Pen Slough 1924 Sarasota Bay 2002	WBID 1924 - Impaired WBID 2002 - Impaired	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 5 water bodies Level 3 - 11 water bodies
H770	FARMS - Bethel Farms LLLP - Hog Bay Farm	SWUCA Water Bodies Brandy Branch 1939 Horse Creek Above Peace River 1787A	WBID 1939 - Impaired WBID 1787A - Not Impaired	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 5 water bodies Level 3 - 11 water bodies
H771	FARMS - 734 LMC Groves LLC - Lily Grove	SWUCA Water Bodies Brandy Branch 1939 Horse Creek Above Peace River 1787A	WBID 1939 - Impaired WBID 1787A - Not Impaired	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 5 water bodies Level 3 - 11 water bodies
P429	FARMS Meter Accuracy Support	SWUCA Water Bodies NTBWUCA Water Bodies DPCWUCA Water Bodies Shell Creek 2041 Prairie Creek 1962	WBID 2041 - Impaired WBID 1962 - Not Impaired	SWUCA/NTBWUCA/DPCWUCA water bodies Level 1 - 19 water bodies Level 2 - 13 water bodies Level 3 - 27 water bodies
<b>3) Environmental Restoration/Minimum Flows and Levels Recovery (Programmatic Code 2.2.1.3)</b>				
H008	MFL Recovery - Lake Hancock Design/Permit/Mitigation to Raise Lake	SWUCA water bodies Upper Peace above Bowlegs 1623J	WBID 1623J - Impaired - High	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 5 water bodies Level 3 - 11 water bodies
H089	Upper Myakka /Flatford Swamp Hydrologic Restoration and Implementation	SWUCA water bodies Upper Myakka 1877B	WBID 1877B - Not Impaired	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 5 water bodies Level 3 - 11 water bodies

H400	Lower Hillsborough River Recovery Strategy	Lower Hillsborough River 1443E	WBID 1443E - Impaired - High	Level 2
H404	Pump Stations on Tampa Bypass Canal, Morris Bridge Sink	Lower Hillsborough River 1443E	WBID 1443E - Impaired - High	Level 2
N554	Lake Jackson Watershed Hydrology Investigation	Lake Jackson 1860D	WBID 1860D - Impaired	Level 1
<b>Surface Water Projects</b>				
<b>Water Supply Development Assistance - Surface Water Projects (Programmatic Budget 2.2.2.1)</b>				
	None			
<b>Regional Potable Interconnects</b>				
<b>Water Supply Development Assistance - Regional Potable Water Interconnects (Programmatic Budget 2.2.2.2)</b>				
H094	Polk County Partnership (S)***			
N416	PRMRWSA - Regional Loop System, Phase 1 DeSoto to Punta Gorda (S)	SWUCA Water Bodies	None*	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 5 water bodies Level 3 - 11 water bodies
N823	PRMRWSA - Regional Integrated Loop System Phase 3B (S)	SWUCA Water Bodies	None*	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 5 water bodies Level 3 - 11 water bodies
N965	Interconnects - Tampa Bay Water - Tampa Bypass Canal Gates Automation	NTB Water Bodies	None*	NTBWUCA water bodies Level 1 - 13 water bodies Level 2 - 7 water bodies Level 3 - 16 water bodies
N998	Interconnects - Tampa Bay Water - Regional Facility Site Pump Station Expansion	NTB Water Bodies	None*	NTBWUCA water bodies Level 1 - 13 water bodies Level 2 - 7 water bodies Level 3 - 16 water bodies
***H094 Polk County Partnership dollars have been redistributed to the PRWC Projects ((N882, N905, and N928)				

Reclaimed Water Projects				
Water Supply Development Assistance - Reclaimed Water Projects (Programmatic Budget 2.2.2.3)				
N339	Winter Haven #3 Reclaimed Interconnect, Storage, Pumping	SWUCA Water Bodies Peace Creek Drainage Canal 1539	WBID 1539 - Impaired - High	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 5 water bodies Level 3 - 11 water bodies
N536	Auburndale Polytechnic Reclaimed Water Storage and Transmission	SWUCA Water Bodies Lake Agnes Outlet 1466A	WBID 1466A - Not Impaired	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 5 water bodies Level 3 - 11 water bodies
N556	Charlotte County Reclaimed Water Expansion Phase 3	SWUCA Water Bodies	None*	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 5 water bodies Level 3 - 11 water bodies
N696	Hernando County US19 Reclaimed Transmission, Phase 1	Mud River - Salt Creek 1382A Weeki Wachee Spring Run 1382F	WBID 1382A - Not Impaired WBID 1382F - Impaired - High	None**
N711	Lakewood Ranch Stewardship District Reclaimed Water Transmission	SWUCA Water Bodies Whitaker Bayou 1936	WBID 1936 - Impaired	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 5 water bodies Level 3 - 11 water bodies
N755	Hillsborough Integrated Resource Feasibility/Design Phase 3	NTBWUCA Water Bodies	None*	NTBWUCA water bodies Level 1 - 13 water bodies Level 2 - 7 water bodies Level 3 - 16 water bodies
N772	Polk County NERUSA Loughman/Ridgewood Reclaimed Water Transmission	SWUCA Water Bodies Big Creek East Watershed 1406	WBID 1406 - Impaired	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 5 water bodies Level 3 - 11 water bodies
N776	Hillsborough County 19th Ave Reclaimed Transmission Main	NTBWUCA Water Bodies Palm River 1536E Tampa Bay Upper 1558C	WBID 1536E - Impaired - High WBID 1558C - Not Impaired	NTBWUCA water bodies Level 1 - 13 water bodies Level 2 - 7 water bodies Level 3 - 16 water bodies
N778	Pasco Bexley South Reclaimed Transmission Phase 2	NTBWUCA Water Bodies Magnolia - Aripeka Springs 1391B Direct Runoff to Gulf 1400	WBID 1391B - Impaired - High WBID 1400 - Not Impaired	NTBWUCA water bodies Level 1 - 13 water bodies Level 2 - 7 water bodies Level 3 - 16 water bodies
N791	Pasco Starkey Ranch Reclaimed Transmission Project C	NTBWUCA Water Bodies Magnolia - Aripeka Springs 1391B Direct Runoff to Gulf 1400	WBID 1391B - Impaired WBID 1400 - Not Impaired	NTBWUCA water bodies Level 1 - 13 water bodies Level 2 - 7 water bodies Level 3 - 16 water bodies

N792	Pasco Reclaimed Water Transmission Main Ridge Golf Course	NTBWUCA Water Bodies Magnolia - Aripeka Springs 1391B Direct Runoff to Gulf 1400	WBID 1391B - Impaired WBID 1400 - Not Impaired	NTBWUCA water bodies Level 1 - 13 water bodies Level 2 - 7 water bodies Level 3 - 16 water bodies
N796	City of Winter Haven Reuse and Aquifer Recharge Feasibility	SWUCA Water Bodies Peace Creek Drainage Canal 1539	WBID 1539 - Impaired - High	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 5 water bodies Level 3 - 11 water bodies
N804	Hillsborough County Sun City Golf Courses RW Expansion	NTBWUCA Water Bodies Palm River 1536E Tampa Bay Upper 1558C	WBID 1536E - Impaired - High WBID 1558C - Not Impaired	NTBWUCA water bodies Level 1 - 13 water bodies Level 2 - 7 water bodies Level 3 - 16 water bodies
N805	Tarpon Springs Westwinds/ Grassy Pointe Reclaimed System	Anclote River Tidal 1440	WBID 1440 - Impaired	Level 3
N817	Hillsborough Countywide Reclaimed Water Major User Connect	NTBWUCA Water Bodies SWUCA Water Bodies Old Tampa Bay 1558i	WBID 1558i - Impaired	SWUCA/NTBWUCA water bodies Level 1 - 19 water bodies Level 2 - 12 water bodies Level 3 - 27 water bodies
N837	Pasco County Cypress Preserve Reclaimed Water Transmission	NTBWUCA Water Bodies Magnolia - Aripeka Springs 1391B Direct Runoff to Gulf 1400	WBID 1391B - Impaired - High WBID 1400 - Not Impaired	NTBWUCA water bodies Level 1 - 13 water bodies Level 2 - 7 water bodies Level 3 - 16 water bodies
N862	Polk County Utilities NERUSA CR 547 Reclaimed Water Transmission Phase 1	SWUCA Water Bodies Big Creek East Watershed 1406	WBID 1406 - Impaired	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 5 water bodies Level 3 - 11 water bodies
N863	Hillsborough County Summerfield Sports Complex	NTBWUCA Water Bodies Palm River 1536E Tampa Bay Upper 1558C	WBID 1536E - Impaired - High WBID 1558C - Not Impaired	NTBWUCA water bodies Level 1 - 13 water bodies Level 2 - 7 water bodies Level 3 - 16 water bodies
N868	Polk County Utilities NERUSA Ernie Caldwell Blvd Reclaimed Water Transmission	SWUCA Water Bodies Big Creek East Watershed 1406	WBID 1406 - Impaired	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 5 water bodies Level 3 - 11 water bodies
N881	Arcadia Golf Course Reclaimed Water Storage Reservoir	SWUCA Water bodies Lower Peace River 1623C	WBID 1623C - Impaired	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 5 water bodies Level 3 - 11 water bodies
N888	Haines City Rapid Infiltration Basin and Reuse Improvements Study	SWUCA Water Bodies Lake Eva 15101	WBID 15101 - Impaired High	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 5 water bodies Level 3 - 11 water bodies

N898	Haines City Reclaimed Water Tank and Pump Stations Project	SWUCA Water Bodies	None*	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 5 water bodies Level 3 - 11 water bodies
N899	Polk County Utilities Reclaimed Water Recharge Study in DPC WUCA & NW Polk Study	DOVER WUCA MAL Itchepackagesassa 1495A	WBID 1495A - Impaired	None**
N918	Polk County Utilities NERUSA FDC Grove Road Reclaimed Water Transmission	SWUCA Water Bodies Big Creek East Watershed 1406	WBID 1406 - Impaired	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 5 water bodies Level 3 - 11 water bodies
N920	West Villages District Reclaimed Water transmission to South Sarasota County	SWUCA Water Bodies	None*	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 5 water bodies Level 3 - 11 water bodies
N983	RW - Hernando Co - Airport Water Reclamation Facility RW Main and Pumping Station	Mud River - Salt Creek 1382A Weeki Wachee Spring Run 1382F	WBID 1382A - Not Impaired WBID 1382F - Impaired - High	None**
P130	Crystal River/Duke Energy Reclaimed Water Interconnection (Springs)	Crystal River 1341	WBID 1341 - Impaired	None**
Q005	RW - Trop North Amer - Tropicana Industrial RW Construction	SWUCA Water Bodies	None*	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 5 water bodies Level 3 - 11 water bodies
Q021	RW - Pasco Co - Cypress Preserve RW Transmission Main - Grand Live Oak Blvd	NTBWUCA Water Bodies	None*	NTBWUCA water bodies Level 1 - 13 water bodies Level 2 - 7 water bodies Level 3 - 16 water bodies
Q022	RW - Bowling Green - RW Transmission Line	SWUCA Water Bodies	None*	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 5 water bodies Level 3 - 11 water bodies
Q028	RW - Tampa - Tampa Augmentation Project Feasibility/Testing Phase II	Hillsborough Bay Upper 1558E	WBID 1558E - Impaired	NTBWUCA water bodies Level 1 - 13 water bodies Level 2 - 7 water bodies Level 3 - 16 water bodies
<b>Brackish Groundwater Projects</b>				
<b>Water Supply Development Assistance - Brackish Groundwater Development Projects (Programmatic Budget 2.2.2.4)</b>				

N600	Punta Gorda Reverse Osmosis Project - Brackish Wellfield Investigation	SWUCA Water Bodies	None*	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 1 water bodies Level 3 - 14 water bodies
N780	Punta Gorda Reverse Osmosis Project - Facility Construction	SWUCA Water Bodies	None*	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 1 water bodies Level 3 - 14 water bodies
N882	PRWC West Polk County Lower Floridan Deep Wells	SWUCA Water Bodies	None*	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 1 water bodies Level 3 - 14 water bodies
N905	PRWC Southeast Wellfield Lower Floridan	SWUCA Water Bodies	None*	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 1 water bodies Level 3 - 14 water bodies
N976	Brackish GW Dev - Belleair - Hydrogeologic Investigation for a Brackish GW Water Supply	NTBWUCA Water Bodies	None*	NTBWUCA water bodies Level 1 - 13 water bodies Level 2 - 7 water bodies Level 3 - 16 water bodies
<b>Aquifer Recharge and Aquifer Storage and Recovery Projects</b>				
<b>Water Supply Development Assistance - Aquifer Recharge &amp; Aquifer Storage and Recovery Projects (Programmatic Budget 2.2.2.5)</b>				
K269	Sarasota County North Reclaimed Water ASR	SWUCA Water Bodies	None*	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 1 water bodies Level 3 - 14 water bodies
N665	City of Clearwater Groundwater Replenishment Project Phase 3	NTBWUCA Water Bodies Old Tampa Bay 1558H Stevenson Creek Fresh Segment 1567C	WBID 1558H - Impaired WBID 1567C - Impaired	NTBWUCA water bodies Level 1 - 13 water bodies Level 2 - 7 water bodies Level 3 - 16 water bodies
<b>Water Conservation Projects</b>				
<b>Water Supply Development Assistance - Conservation Rebates, Retrofits, Etc. Projects (Programmatic Budget 2.2.2.7)</b>				
B015	Conservation - Water Incentives Supporting Efficient (WISE) Program	SWUCA Water Bodies NTBWUCA Water Bodies DPCWUCA Water Bodies	None*	SWUCA/NTBWUCA/DPCWUCA water bodies Level 1 - 19 water bodies Level 2 - 13 water bodies Level 3 - 27 water bodies
N714	Conservation - Polk Co - Landscape/Irrigation Eval Program	SWUCA Water Bodies	None*	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 1 water bodies Level 3 - 14 water bodies
N757	Bay Laurel Irrigation Controller/ET Sensor Upgrade	NTBWUCA Water Bodies	None*	NTBWUCA water bodies Level 1 - 13 water bodies Level 2 - 7 water bodies Level 3 - 16 water bodies

N757	Conservation - Bay Lural Center CDD - Irrigation Controller/ET Sensor Upgrade	Northern District/Springs Coast	None*	None**
N779	Marion County Toilet Rebate Program, Phase 4	Northern District/Springs Coast	None*	None**
N815	City of Arcadia South Distribution Looping Project	SWUCA Water Bodies	None*	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 1 water bodies Level 3 - 14 water bodies
N819	City of St. Petersburg Toilet Rebate Program, Phase 16	NTBWUCA Water Bodies	None*	NTBWUCA water bodies Level 1 - 13 water bodies Level 2 - 7 water bodies Level 3 - 16 water bodies
N820	Polk County Landscape & Irrigation Evaluation Program	SWUCA Water Bodies	None*	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 1 water bodies Level 3 - 14 water bodies
N840	Venice Advanced Metering Analytics Project	SWUCA Water Bodies	None*	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 1 water bodies Level 3 - 14 water bodies
N845	Pasco County Florida Water Star Pilot Project	NTBWUCA Water Bodies	None*	NTBWUCA water bodies Level 1 - 13 water bodies Level 2 - 7 water bodies Level 3 - 16 water bodies
N846	Polk County Landscape and Irrigation Evaluation	SWUCA Water Bodies	None*	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 1 water bodies Level 3 - 14 water bodies
N852	Pasco County ULV Toilet Rebate Program Phase 11	NTBWUCA Water Bodies	None*	NTBWUCA water bodies Level 1 - 13 water bodies Level 2 - 7 water bodies Level 3 - 16 water bodies
N860	Citrus County Water Sense Labeled Irrigation Controller Account Credit	Northern District/Springs Coast	None*	None**
N875	St Petersburg Florida Water Star Rebate Pilot Project	NTBWUCA Water Bodies	None*	NTBWUCA water bodies Level 1 - 13 water bodies Level 2 - 7 water bodies Level 3 - 16 water bodies

N876	New Port Richey Toilet Rebate Program Phase 4	NTBWUCA Water Bodies	None*	NTBWUCA water bodies Level 1 - 13 water bodies Level 2 - 7 water bodies Level 3 - 16 water bodies
N877	Manatee County Toilet Rebate Project Phase 11	SWUCA Water Bodies	None*	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 1 water bodies Level 3 - 14 water bodies
N890	St Petersburg Residential Clothes Washer Rebate Pilot Project	NTBWUCA Water Bodies	None*	NTBWUCA water bodies Level 1 - 13 water bodies Level 2 - 7 water bodies Level 3 - 16 water bodies
N909	St Petersburg Sensible Sprinkling Program Phase 8	NTBWUCA Water Bodies	None*	NTBWUCA water bodies Level 1 - 13 water bodies Level 2 - 7 water bodies Level 3 - 16 water bodies
N921	Bay Laurel Center CDD Irrigation Controller/ET Sensor Upgrade Project	Northern District/Springs Coast	None*	None**
N922	Bay Laurel Center CDD Florida Water Star Rebate Pilot	Northern District/Springs Coast	None*	None**
N948	Conservation - PRWC - Indoor Water Conservation Incentives	SWUCA Water Bodies	None*	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 1 water bodies Level 3 - 14 water bodies
N955	Conservation - St. Petersburg - Toilet Rebate Program Phase 17	NTBWUCA Water Bodies	None*	NTBWUCA water bodies Level 1 - 13 water bodies Level 2 - 7 water bodies Level 3 - 16 water bodies
N958	Conservation - Citrus Co - Water Sense Labeled Irrigation Controller Installation Phase 2	Northern District/Springs Coast	None*	None**
N961	Conservation - St. Petersburg - Satellite Based Potable Water Leak Detection	NTBWUCA Water Bodies	None*	NTBWUCA water bodies Level 1 - 13 water bodies Level 2 - 7 water bodies Level 3 - 16 water bodies
N971	Conservation - PRWC - Outdoor Best Management Practices	SWUCA Water Bodies	None*	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 1 water bodies Level 3 - 14 water bodies

N972	Conservation - Tampa - Water Use Information Portal Implementation	NTBWUCA Water Bodies	None*	NTBWUCA water bodies Level 1 - 13 water bodies Level 2 - 7 water bodies Level 3 - 16 water bodies
N973	Conservation - Winter Haven - Consumption/Conservation Programs Data Management Software	SWUCA Water Bodies	None*	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 1 water bodies Level 3 - 14 water bodies
N979	Conservation - North Port - Water Distribution System Looping	SWUCA Water Bodies	None*	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 1 water bodies Level 3 - 14 water bodies
N982	Conservation - Manatee Co - Toilet Rebate Phase 12	SWUCA Water Bodies	None*	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 1 water bodies Level 3 - 14 water bodies
N988	Conservation - Hillsborough Co - Soil Moisture Sensor - Rain Shutoff Device Study and Education	NTBWUCA Water Bodies SWUCA Water Bodies	None*	SWUCA/NTBWUCA water bodies Level 1 - 19 water bodies Level 2 - 12 water bodies Level 3 - 27 water bodies
N992	Conservation - Venice - Toilet Rebate and Retrofit - Phase 6	SWUCA Water Bodies	None*	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 1 water bodies Level 3 - 14 water bodies
N996	Conservation - Lake Hamilton - Distribution System Looping	SWUCA Water Bodies	None*	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 1 water bodies Level 3 - 14 water bodies
N999	Conservation - Marion Co - Toilet Rebate Program - Phase 5	Northern District/Springs Coast	None*	None**
P920	PRWC Outdoor BMPs	SWUCA Water Bodies	None*	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 1 water bodies Level 3 - 14 water bodies
P921	PRWC Indoor Conservation Incentives	SWUCA Water Bodies	None*	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 1 water bodies Level 3 - 14 water bodies
P922	PRWC Florida Water Star Builder Rebate Program	SWUCA Water Bodies	None*	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 1 water bodies Level 3 - 14 water bodies

Q014	Conservation - Pasco Co - Toilet Rebate - Phase 12	NTBWUCA Water Bodies	None*	NTBWUCA water bodies Level 1 - 13 water bodies Level 2 - 7 water bodies Level 3 - 16 water bodies
Q018	Conservation - NSCUDD - Rain Sensor Inspect/Replacement Program	Northern District/Springs Coast	None*	None**
Q020	Conservation - Braden River Util. - Soil Moisture Sensor Rebate Program Phase 2	SWUCA Water Bodies	None*	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 1 water bodies Level 3 - 14 water bodies
Q040	Conservation - WRWSA - Regional Irrigation System Audit Program Phase 5	Northern District/Springs Coast	None*	None**
Q041	Conservation - New Port Richey - Toilet Rebate - Phase 5	NTBWUCA Water Bodies	None*	NTBWUCA water bodies Level 1 - 13 water bodies Level 2 - 7 water bodies Level 3 - 16 water bodies
<b>Water Supply Planning Projects</b>				
<b>Water Supply Planning (Programmatic Budget 1.1.1)</b>				
N928	PRWC Peace Creek Integrated Water Supply Plan	SWUCA Water Bodies	None*	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 1 water bodies Level 3 - 14 water bodies
N945	WS Planning - WRWSA - Regional Water Supply Plan Update 2018	Northern District/Springs Coast	None*	None**
N946	WS Planning - PRMRWSA - Integrated Reg Water Supply Master Plan 2018	SWUCA Water Bodies	None*	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 1 water bodies Level 3 - 14 water bodies
P179	WS Planning - Florida Framework for Potable Reuse	NTBWUCA Water Bodies SWUCA Water Bodies	None*	SWUCA/NTBWUCA water bodies Level 1 - 19 water bodies Level 2 - 12 water bodies Level 3 - 27 water bodies
P180	WS Planning - National Framework for Potable Reuse	NTBWUCA Water Bodies SWUCA Water Bodies	None*	SWUCA/NTBWUCA water bodies Level 1 - 19 water bodies Level 2 - 12 water bodies Level 3 - 27 water bodies

Q023	WS Planning - PRWC - Water Demand Management Plan	SWUCA Water Bodies	None*	SWUCA water bodies Level 1 - 6 water bodies Level 2 - 1 water bodies Level 3 - 14 water bodies
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None\* - Project has no water quality impact on a surface water body

None\*\* - Project is in an area with no MFL recovery strategy and is not expected to fall below a minimum flow or level in 20 years

Consolidated **Annual Report**  
March 1, 2019

# Five-Year Capital Improvements Plan

2018-19 through 2022-23



Southwest Florida  
Water Management District

WATERMATTERS.ORG · 1-800-423-1476



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# Introduction

The Five-Year Capital Improvements Plan (CIP) includes projected revenues and expenditures for capital improvements for FY2018-19 through FY2022-23. As directed by Section 373.536(6)(a)3, Florida Statutes, the CIP is presented in a manner comparable to the fixed capital outlay format set forth in Section 216.043, Florida Statutes. The format for this report was jointly developed by the Executive Office of the Governor, the Department of Environmental Protection, and the water management districts. Capital improvement projects may be budgeted in three standard program categories. Those programs and their activities and sub-activities are represented below:

## **1.0 Water Resource Planning and Monitoring**

- 1.1 District Water Management Planning
  - 1.1.1 Water Supply Planning
  - 1.1.2 Minimum Flows and Minimum Water Levels
  - 1.1.3 Other Water Resources Planning
- 1.2 Research, Data Collection, Analysis and Monitoring
- 1.3 Technical Assistance
- 1.4 Other Water Resources Planning and Monitoring Activities
- 1.5 Technology and Information Services

## **2.0 Land Acquisition, Restoration and Public Works**

- 2.1 Land Acquisition
- 2.2 Water Source Development
  - 2.2.1 Water Resource Development Projects
  - 2.2.2 Water Supply Development Assistance
  - 2.2.3 Other Water Source Development Activities
- 2.3 Surface Water Projects
- 2.4 Other Cooperative Projects
- 2.5 Facilities Construction and Major Renovations
- 2.6 Other Acquisition and Restoration Activities
- 2.7 Technology and Information Services

## **3.0 Operation and Maintenance of Works and Lands**

- 3.1 Land Management
- 3.2 Works
- 3.3 Facilities
- 3.4 Invasive Plant Control
- 3.5 Other Operation and Maintenance Activities
- 3.6 Fleet Services
- 3.7 Technology and Information Services

The activity under program 1.0 Water Resource Planning and Monitoring that may include capital improvement projects is 1.2 Research, Data Collection, Analysis and Monitoring. The activities and sub-activities under program 2.0 Land Acquisition, Restoration and Public Works that may include capital improvement projects are 2.1 Land Acquisition, 2.2.1 Water Resource Development Projects, 2.2.3 Other Water Source Development Activities, 2.3 Surface Water Projects, 2.5 Facilities Construction and Major Renovations, and 2.6 Other Acquisition and Restoration Activities. The activities under program 3.0 Operation and Maintenance of Works and Lands that may include capital improvement projects are 3.1 Land Management and 3.2 Works.

The purpose of the CIP is to project future needs and anticipated future funding requirements to meet those needs. *(The District uses a pay-as-you-go approach and does not incur bonded debt.)* The CIP contains only those projects that will be owned and capitalized as fixed assets by the District.

The CIP includes expenditures for basic construction costs (permits, inspections, communications requirements, utilities, outside building, site development, etc.) and other related capital project costs (land, survey, existing facility acquisition, professional services, etc.).

The District's current capital improvement projects are budgeted under the following program activities: 1.2 Research, Data Collection, Analysis and Monitoring; 2.1 Land Acquisition; 2.5 Facilities Construction and Major Renovations, and 3.2 Works.

Standard definitions for these programs and activities used by all five water management districts for CIP preparation follow:

### ***1.0 Water Resource Planning and Monitoring***

This program incorporates all water management planning, including water supply planning, development of minimum flows and minimum water levels, and other water resources planning; research, data collection, analysis, and monitoring; and technical assistance (including local and regional plan and program review).

**1.2 Research, Data Collection, Analysis and Monitoring** – Activities that support district water management planning, restoration, and preservation efforts, including water quality monitoring, data collection and evaluation, and research.

### ***2.0 Land Acquisition, Restoration and Public Works***

This program includes the development and construction of all water resource development projects, water supply development assistance, water control projects, support and administrative facilities construction, cooperative projects, land acquisition (i.e., Florida Forever Program), and the restoration of lands and water bodies.

**2.1 Land Acquisition** – The acquisition of land and facilities for the protection and management of water resources. This activity does not include land acquisition components of "water resource development projects" or "surface water projects."

**2.5 Facilities Construction and Major Renovations** – Design, construction, and significant renovation of all district support and administrative facilities. The proposed work for the facilities improvement program includes project management, permitting, and conceptual, preliminary, and detailed engineering for the development and preparation of contract plans and specification for the construction of planned replacement, improvement, or repair to the district's administrative and field facilities.

### ***3.0 Operation and Maintenance of Works and Lands***

**3.2 Works** – The maintenance of flood control and water supply system infrastructure, such as canals, levees, and water control structures. This includes electronic communication and control activities.

## Southwest Florida Water Management District

### Five-Year Capital Improvements Plan

#### Fiscal Year 2018-19 through Fiscal Year 2022-23

#### 1.0 WATER RESOURCE PLANNING AND MONITORING

##### 1.2 RESEARCH, DATA COLLECTION, ANALYSIS AND MONITORING

REVENUES	FY2018-19	FY2019-20	FY2020-21	FY2021-22	FY2022-23
Ad Valorem Revenue	\$882,826	\$1,863,418	\$429,138	\$1,616,795	\$865,200
<b>TOTAL</b>	<b>\$882,826</b>	<b>\$1,863,418</b>	<b>\$429,138</b>	<b>\$1,616,795</b>	<b>\$865,200</b>
EXPENDITURES	FY2018-19	FY2019-20	FY2020-21	FY2021-22	FY2022-23
Aquifer Exploration and Monitor Well Drilling Program	\$688,826	\$1,669,418	\$235,138	\$1,422,795	\$671,200
Data Collection Site Acquisitions	194,000	194,000	194,000	194,000	194,000
<b>TOTAL</b>	<b>\$882,826</b>	<b>\$1,863,418</b>	<b>\$429,138</b>	<b>\$1,616,795</b>	<b>\$865,200</b>

#### 2.0 LAND ACQUISITION, RESTORATION AND PUBLIC WORKS

##### 2.1 LAND ACQUISITION

REVENUES	FY2018-19	FY2019-20	FY2020-21	FY2021-22	FY2022-23
(1) Prior Year State Appropriations - Florida Forever Trust Fund	\$4,200,000	\$0	\$0	\$0	\$0
(1) Balance from Prior Years - District Investment Account	12,800,000	-	-	-	-
<b>TOTAL</b>	<b>\$17,000,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
EXPENDITURES	FY2018-19	FY2019-20	FY2020-21	FY2021-22	FY2022-23
Florida Forever Work Plan Land Purchases	\$17,000,000	\$0	\$0	\$0	\$0
<b>TOTAL</b>	<b>\$17,000,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

##### 2.5 FACILITIES CONSTRUCTION AND MAJOR RENOVATIONS

REVENUES	FY2018-19	FY2019-20	FY2020-21	FY2021-22	FY2022-23
Balance from Prior Years	\$2,701,000	\$474,400	\$298,900	\$494,000	\$449,000
<b>TOTAL</b>	<b>\$2,701,000</b>	<b>\$474,400</b>	<b>\$298,900</b>	<b>\$494,000</b>	<b>\$449,000</b>
EXPENDITURES	FY2018-19	FY2019-20	FY2020-21	FY2021-22	FY2022-23
DISTRICTWIDE:					
Districtwide Roof and HVAC Replacement, Facility Renovation and Pavement	\$501,000	\$474,400	\$298,900	\$494,000	\$449,000
Tampa Facility Space Utilization	1,450,000	-	-	-	-
Brooksville Building 4 Additional Generator	400,000	-	-	-	-
Brooksville Building 5 Generator	350,000	-	-	-	-
<b>TOTAL</b>	<b>\$2,701,000</b>	<b>\$474,400</b>	<b>\$298,900</b>	<b>\$494,000</b>	<b>\$449,000</b>

#### 3.0 OPERATION AND MAINTENANCE OF WORKS AND LANDS

##### 3.2 WORKS

REVENUES	FY2018-19	FY2019-20	FY2020-21	FY2021-22	FY2022-23
Ad Valorem Revenue	\$1,312,254	\$140,000	\$140,000	\$140,000	\$140,000
Balance from Prior Years	212,746	-	-	-	-
<b>TOTAL</b>	<b>\$1,525,000</b>	<b>\$140,000</b>	<b>\$140,000</b>	<b>\$140,000</b>	<b>\$140,000</b>
EXPENDITURES	FY2018-19	FY2019-20	FY2020-21	FY2021-22	FY2022-23
Tsala Apopka Golf Course Water Conservation Structure Modification	\$500,000	\$0	\$0	\$0	\$0
Wysong Water Conservation Structure Refurbishment	500,000	-	-	-	-
Structure Gate System Upgrade Program	70,000	140,000	140,000	140,000	140,000
S-353 Flood Control Structure Spillway Rehabilitation	400,000	-	-	-	-
S-353 Flood Control Structure Gates 2 and 3 Lift Mechanism Modification	55,000	-	-	-	-
<b>TOTAL</b>	<b>\$1,525,000</b>	<b>\$140,000</b>	<b>\$140,000</b>	<b>\$140,000</b>	<b>\$140,000</b>
<b>TOTAL CAPITAL EXPENDITURES</b>	<b>\$22,108,826</b>	<b>\$2,477,818</b>	<b>\$868,038</b>	<b>\$2,250,795</b>	<b>\$1,454,200</b>

#### Notes:

- (1) As of September 30, 2018, the District has approximately \$17 million available for land acquisitions through the Florida Forever program. The funds consist of \$12.8 million being held in a District investment account with its use restricted to land purchases that would be eligible for Florida Forever funding. These funds were generated from the sale of land or real estate interests. The District also has \$4.2 million of prior year allocations from the Florida Forever Trust Fund available and its release is subject to approval by the Department of Environmental Protection. For FY2018-19, \$17 million has been allocated for planning purposes. Funding for FY2019-20 and beyond is subject to future state appropriations from the Florida Forever program and proceeds from the sale of land or real estate interests.

**Program:** Water Resource Planning and Monitoring

**Activity:** Research, Data Collection, Analysis and Monitoring

**Project Title:** Aquifer Exploration and Monitor Well Drilling Program

**Type:** Monitor Well Construction and Associated Activities

**Physical Location:** District's 16-County Region

**Square Footage/Physical Description:** Monitor Wells

**Expected Completion Date:** Ongoing

**Historical Background/Need for Project:** This an ongoing program for coring, drilling, testing, and construction of monitor wells at Regional Observation and Monitor well Program (ROMP) sites and special project sites including the Central Florida Water Initiative (CFWI) region. The ROMP was established in 1974 to construct a Districtwide network of groundwater monitoring wells to provide key information concerning existing hydrologic conditions of groundwater sources (s. 373.145 Florida Statutes). In recent years, the ROMP has been expanded to include the drilling and construction (and associated data collection activities) of numerous wells associated with key special projects such as the Northern Tampa Bay Water Use Caution Area wellfield recovery monitoring, Northern Water Resources Assessment Project, Southern Water Use Caution Area and CFWI. Exploratory drilling and intensive data collection efforts are performed by District staff, and well construction is generally performed under contract with outside vendors. Drilling and testing will be performed at key well sites to characterize the hydrogeology from land surface to the salt water interface or base of the potable aquifer zone within the Upper Floridan aquifer. Certain sites will also include exploratory data collection activities to characterize the middle confining units and Lower Floridan aquifers. Each well site will have permanent monitor wells installed into the surficial, intermediate, Upper Floridan and Lower Floridan aquifers, as needed. In addition, most well sites will have temporary observation wells installed for conducting aquifer performance tests. The data collected during construction of the well sites will be used in numerous District initiatives including: models for water supply development, rulemaking for minimum flows and minimum water levels, and long-term water level and water quality monitoring.

**Plan Linkages:** Strategic Plan, CFWI Data Management and Investigations Team (DMIT) FY2017-2025 Hydrogeologic Work Plan, FY2016-2022 Geohydrologic Data Work Plan

**Area(s) of Responsibility:** Water Supply, Water Quality and Natural Systems

**Alternative(s):** The alternative to contracted well construction services would be for the District to own and maintain equipment and increase staffing to perform the services.

**Basic Construction Costs (includes permits, inspections, communications requirements, utilities, outside building, site development, other):** The estimated cost of contracted well construction and related activities associated with upper and lower Floridan aquifers, wetland and lake monitoring includes contracted well construction of permanent and temporary wells and associated materials such as casings and cement. Funding for future years pending Governing Board approval through the annual budget process.

FY2018-19 - \$688,826

FY2019-20 - \$1,669,418

FY2020-21 - \$235,138

FY2021-22 - \$1,422,795

FY2022-23 - \$671,200

**Other Project Costs (includes land, survey, existing facility acquisition, professional services, other):** For FY2018-19, \$194,000 is budgeted separately for acquisition of perpetual easements in support of the District's network of groundwater monitoring wells under *Data Collection Site Acquisitions*. This includes the purchase of perpetual easements and associated ancillary costs such as appraisals, title insurance, environmental site assessments, and documentary stamps.

**Anticipated Additional Operating Costs/Initial (includes salaries, benefits, equipment, furniture, expenses):** District staff time and travel costs associated with this project are to be determined and are excluded from the funding table below.

**Anticipated Additional Operating Costs/Continuing:** Several wells are planned to be installed over a five-year period within the District. Below are the annual costs associated with planned well construction and materials such as casings and cement.

<b>FY2018-19</b>	<b>FY2019-20</b>	<b>FY2020-21</b>	<b>FY2021-22</b>	<b>FY2022-23</b>
\$688,826	\$1,669,418	\$235,138	\$1,422,795	\$671,200

**Program:** Water Resource Planning and Monitoring

**Activity:** Research, Data Collection, Analysis and Monitoring

**Project Title:** Data Collection Site Acquisitions

**Type:** Land and Interests in Land Acquired for Data Collection Sites

**Physical Location:** District's 16-County Region

**Square Footage/Physical Description:** To Be Determined

**Expected Completion Date:** Ongoing

**Historical Background/Need for Project:** The District acquires perpetual easements for sites necessary to assess groundwater sustainability and development of water supply solutions and to preserve existing sites necessary to construct a Districtwide network of groundwater monitoring wells. The District relies upon a network of groundwater monitoring wells to provide information on water levels and water quality of various aquifer systems. The data obtained from these wells is utilized for a large variety of tasks including potentiometric surface map construction, salt water intrusion and other contaminant status reporting site-specific project work to establish and modify minimum levels, and assessment of current water supplies. Regulation of the Floridan and the intermediate aquifers depend on the data collected from these sites. District computer models also rely heavily on water level information.

**Plan Linkages:** Strategic Plan; Watershed Management Plans; Southern Water Use Caution Area; Regional Water Supply Plan; Five-Year Water Resource Development Work Program

**Area(s) of Responsibility:** Water Supply and Water Quality

**Alternative(s):** An alternative to obtaining permanent easements for key well sites that are used for minimum flows and minimum water levels (MFLs) and having an extensive history of data collection critical for performance monitoring of the MFLs program, as well as other District initiatives would be to obtain new sites. The cost to obtain a permanent easement on an existing well site is generally lower than the cost to replace that well site because the new site will still need to have some form of title interest, including well construction costs to replace the wells. In addition, the heterogeneity of the aquifer systems might impact the new well location and not allow for a good comparison of data from a destroyed well site to the new well site.

**Basic Construction Costs (includes permits, inspections, communications requirements, utilities, outside building, site development, other):** The cost of well construction and related activities associated with upper and lower Floridan aquifers, wetland and lake monitoring is budgeted separately under *Aquifer Exploration and Monitor Well Drilling Program*. It includes contracted well construction of permanent and temporary wells and associated materials such as casings and cement.

**Other Project Costs (includes land, survey, existing facility acquisition, professional services, other):** For FY2018-19, \$194,000 is budgeted for acquisition of perpetual easements in support of the District's network of groundwater monitoring wells. This includes the purchase of perpetual easements and associated ancillary costs such as appraisals, title insurance, environmental site assessments, and documentary stamps.

It is projected that the same level of funding (\$194,000) will be required annually from FY2019-20 through FY2022-23. Funding for future years is pending Governing Board approval through the annual budget process.

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**Anticipated Additional Operating Costs/Initial (includes salaries, benefits, equipment, furniture, expenses):** District staff time and travel costs associated with this initiative are to be determined and are excluded from the funding table below.

**Anticipated Additional Operating Costs/Continuing:** No additional continuing operating costs are anticipated.

<b>FY2018-19</b>	<b>FY2019-20</b>	<b>FY2020-21</b>	<b>FY2021-22</b>	<b>FY2022-23</b>
\$194,000	\$194,000	\$194,000	\$194,000	\$194,000

**Program:** Land Acquisition, Restoration and Public Works

**Activity:** Land Acquisition

**Project Title:** Florida Forever Work Plan Land Purchases

**Type:** Lands Acquired through the Florida Forever Program

**Physical Location:** District's 16-County Region

**Square Footage/Physical Description:** To Be Determined

**Expected Completion Date:** Ongoing

**Historical Background/Need for Project:** The District has recognized land acquisition as one of its primary tools for achieving its statutory responsibilities. Section 373.139, Florida Statutes, authorizes the District to acquire fee simple or less-than-fee interests in the lands necessary for flood control, water storage, water management, conservation and protection of water resources, aquifer recharge, water resource and water supply development, and preservation of wetlands, streams and lakes. The District purchases land and interests in land through fee simple land acquisition and acquisition of less-than-fee simple interests (e.g., conservation easements) under the state's Florida Forever program. The Florida Forever program provides funding for land acquisition and capital improvements to state agencies, the water management districts (WMDs) and local governments. The authorized uses for the Florida Forever Trust Fund (FFTF) for the WMDs include land acquisition, the Surface Water Improvement and Management (SWIM) program, water resource development, and regional water supply development and restoration. An important aspect to the WMDs expenditures of Florida Forever funds is that at least 50 percent of the allocation from the FFTF must be spent on land acquisition.

It is projected that the District will have an estimated \$17 million available for land acquisitions (fee or less-than-fee) under the Florida Forever program. This includes \$4.2 million of prior-year allocations held by the State of Florida in the FFTF. The release of these funds is subject to approval by the Florida Department of Environmental Protection. The remaining \$12.8 million is held in the District's investment accounts. These funds were generated from the sale of land or real estate interests.

**Plan Linkages:** Strategic Plan; Watershed Management Plans; SWIM Plans; Southern Water Use Caution Area

**Area(s) of Responsibility:** Natural Systems

**Alternative(s):** The alternatives to purchasing necessary land or interests to achieve statutory responsibilities would be to place additional regulations and restrictions on lands requiring protection. Many of these alternatives are not within the District's authority.

**Basic Construction Costs (includes permits, inspections, communications requirements, utilities, outside building, site development, other):** No construction costs are associated with this request.

**Other Project Costs (includes land, survey, existing facility acquisition, professional services, other):** For FY2018-19, \$17 million is budgeted for land acquisition under the Florida Forever program (\$4.2 million funded in prior year appropriations from the FFTF and \$12.8 million funded from the sale of land or real estate interests). This includes the purchase of land and associated ancillary costs such as appraisals, title insurance, environmental site assessments, and documentary stamps.

**Anticipated Additional Operating Costs/Initial (includes salaries, benefits, equipment, furniture, expenses):** District staff time and travel costs associated with this program are to be determined and are excluded from the funding table below.

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**Anticipated Additional Operating Costs/Continuing:** The District acquires real estate interests for projects that would enhance its existing ownership responsibilities or provide management benefits. Depending on the size of the property, location and interest acquired, the operating costs may be increased or decreased and are evaluated at the time of acquisition.

<b>FY2018-19</b>	<b>FY2019-20</b>	<b>FY2020-21</b>	<b>FY2021-22</b>	<b>FY2022-23</b>
\$17,000,000	\$0	\$0	\$0	\$0

**Program:** Land Acquisition, Restoration and Public Works

**Activity:** Facilities Construction and Major Renovations

**Project Title:** Districtwide Roof and HVAC Replacement, Facility Capital Renovation and Pavement

**Type:** Facility Improvements and Renovations

**Physical Location:** Brooksville, Tampa, Sarasota and Lake Hancock Offices

**Square Footage/Physical Description:** Facility Improvements and Renovations as Required

**Expected Completion Date:** Ongoing

**Historical Background/Need for Project:** Starting in FY2001-02, the Governing Board created an ongoing program to invest in the replacement and repair of District facility roofs; and heating, ventilation, and air conditioning (HVAC) systems to be capitalized. Staff has developed a multi-year schedule for roof improvements, HVAC system replacements, and renovation projects which allows planning for building improvements and minimizes the opportunity for building damage. The HVAC systems will meet U.S. Green Building Council's (USGBC) Leadership in Energy and Environmental Design (LEED) initiatives for reducing energy consumption which will reduce the carbon footprint.

The District currently owns and maintains over 781,000 square feet of parking lot and driveway pavement at its four office locations. This pavement and the associated stormwater management systems represent a significant capital investment. The District hired an engineering firm to conduct an inventory and inspection of these areas. The inspection found that preventative maintenance treatment would need to be performed to extend the life of the paved surfaces by approximately seven to ten years. This work will include repairs of depressions and potholes, double micro surfacing and crack sealing, and applied cold in-place recycling of existing pavement and new hot mix pavement depending on the condition of the existing asphalt.

**Plan Linkages:** Strategic Plan

**Area(s) of Responsibility:** Water Supply, Water Quality, Flood Protection and Natural Systems

**Alternative(s):** If the Districtwide roof and HVAC replacement, facility capital renovation, and pavement projects are not funded, the facilities maintenance costs are expected to increase significantly as additional maintenance activities are required to prevent leaks and keep facilities in an operative order. Not funding the projects would allow for degraded and deteriorated conditions requiring extensive restoration, such as moisture damage to buildings and expanded pavement cracks, resulting in higher costs than currently proposed. Districtwide roof and HVAC replacement, facility capital renovation, and pavement projects are prioritized in a proactive effort to avoid damage and unnecessary costs while maximizing the life of the equipment and materials.

**Basic Construction Costs (includes permits, inspections, communications requirements, utilities, outside building, site development, other):** Available pricing in 2018 is used for budget planning purposes. Funding for future years pending Governing Board approval through the annual budget process.

FY2018-19

- Capital Renovations (\$106,000)
- Pavement Repair/Resurfacing (\$50,000)
- HVAC Replacements (\$195,000)

\* The balance of \$150,000 to be allocated to future projects as identified.

FY2019-20

- HVAC Replacements (\$324,400)

\* The balance of \$150,000 to be allocated to future projects as identified.

FY2020-21

-HVAC Replacements (\$148,900)

\* The balance of \$150,000 to be allocated to future projects as identified.

FY2021-22

- HVAC Replacements (\$344,000)

\* The balance of \$150,000 to be allocated to future projects as identified.

FY2022-23

- HVAC Replacements (\$299,000)

\* The balance of \$150,000 to be allocated to future projects as identified.

**Other Project Costs (includes land, survey, existing facility acquisition, professional services, other):** To be determined.

**Anticipated Additional Operating Costs/Initial (includes salaries, benefits, equipment, furniture, expenses):** These costs are excluded from the funding table below.

**Anticipated Additional Operating Costs/Continuing:** To be determined.

<b>FY2018-19</b>	<b>FY2019-20</b>	<b>FY2020-21</b>	<b>FY2021-22</b>	<b>FY2022-23</b>
\$501,000	\$474,400	\$298,900	\$494,000	\$449,000

**Program:** Land Acquisition, Restoration and Public Works

**Activity:** Facilities Construction and Major Renovations

**Project Title:** Tampa Facility Space Utilization

**Type:** Facility Improvements and Renovations

**Physical Location:** Tampa Office

**Square Footage/Physical Description:** Buildings 1, 2, and 6

**Expected Completion Date:** 09/2020

**Historical Background/Need for Project:** The Tampa Office is centrally located within the District and has approximately 46,000 square feet of office and meeting space. Due to growth in statutorily-mandated services provided by the District, the current office and public meeting space is now insufficient. In 2016, Woodroffe Corporation Architects was authorized to prepare a Staff Space Needs Analysis to determine the Tampa Office space requirements. The review process included meeting with departments to determine existing versus anticipated space needs for personnel and meeting space based on the adopted business plan. The intent is to maximize space utilization where the cost does not outweigh the gain.

As a result of the Staff Space Needs Analysis, the Tampa Office has the opportunity to recapture certain areas such as the Data Center to meet its pressing needs and provide additional meeting spaces with the following: 1) increase use of senior management offices with the capacity to meet with four to five individuals; 2) floater/visitor office sharing; 3) shift spaces to improve departmental efficiencies; and 4) capture spaces that can be reduced in size.

**Plan Linkages:** Strategic Plan

**Area(s) of Responsibility:** Water Supply, Water Quality, Flood Protection and Natural Systems

**Alternative(s):** If the Tampa Facility Space Utilization project is not funded, the District will continue to operate with the existing office space and will be required to house staff at alternate locations or begin meeting offsite.

**Basic Construction Costs (includes permits, inspections, communications requirements, utilities, outside building, site development, other):** Available pricing in 2018 is used for budget planning purposes. For FY2018-19, \$1,450,000 is budgeted for this project.

**Other Project Costs (includes land, survey, existing facility acquisition, professional services, other):** No other project costs associated with this request have been identified.

**Anticipated Additional Operating Costs/Initial (includes salaries, benefits, equipment, furniture, expenses):** To be determined.

**Anticipated Additional Operating Costs/Continuing:** To be determined.

FY2018-19	FY2019-20	FY2020-21	FY2021-22	FY2022-23
\$1,450,000	\$0	\$0	\$0	\$0

**Program:** Land Acquisition, Restoration and Public Works

**Activity:** Facilities Construction and Major Renovations

**Project Title:** Brooksville Building 4 Additional Generator

**Type:** Facility Enhancements

**Physical Location:** Brooksville Office

**Square Footage/Physical Description:** One Generator (Minimum 1,250 kilowatts), Building 4

**Expected Completion Date:** 09/2019

**Historical Background/Need for Project:** In order for staff to continue working through a power outage or major storm event to minimize downtime and optimize response to public needs, generators are installed at District facilities. The size and number of generators for a single building are based on the tasks and capacity of the staff occupying the building and the purpose of the building.

Building 4 at the Brooksville Office currently has one generator that allows for low power usage for a limited time period. Since the removal of staff from Building 1 two years ago, the dynamics of the staff occupying Building 4 has changed tremendously and now requires an additional generator to allow staff to continue working with minimal or no disruption. This work will include purchase and installation of a new generator including conduit, wiring and a concrete slab.

**Plan Linkages:** Strategic Plan

**Area(s) of Responsibility:** Water Supply, Water Quality, Flood Protection and Natural Systems

**Alternative(s):** If the additional generator is not installed at Building 4 of the Brooksville Office, the District will continue to operate with the existing utilities and be required to request staff work from alternate locations during extended periods of power outage.

**Basic Construction Costs (includes permits, inspections, communications requirements, utilities, outside building, site development, other):** Available pricing in 2018 is used for budget planning purposes. For FY2108-19, \$400,000 is budgeted for the Building 4 generator at the Brooksville Office.

**Other Project Costs (includes land, survey, existing facility acquisition, professional services, other):** No other project costs associated with this request have been identified.

**Anticipated Additional Operating Costs/Initial (includes salaries, benefits, equipment, furniture, expenses):** To be determined.

**Anticipated Additional Operating Costs/Continuing:** To be determined.

FY2018-19	FY2019-20	FY2020-21	FY2021-22	FY2022-23
\$400,000	\$0	\$0	\$0	\$0

**Program:** Land Acquisition, Restoration and Public Works

**Activity:** Facilities Construction and Major Renovations

**Project Title:** Brooksville Building 5 Generator

**Type:** Facility Enhancements

**Physical Location:** Brooksville Office

**Square Footage/Physical Description:** One Generator (Minimum 1,000 kilowatts), Building 5

**Expected Completion Date:** 09/2019

**Historical Background/Need for Project:** In order for staff to continue working through a power outage or major storm event to minimize downtime and optimize response to public needs, generators are installed at District facilities. The size and number of generators for a single building are based on the tasks and capacity of the staff occupying the building and the purpose of the building.

Building 5 at the Brooksville Office does not currently have a generator. Since the move of District paper records storage on-site, the purpose of Building 5 has changed tremendously and now requires backup power to allow access to and proper storage of the records during power outages. This work will include purchase and installation of a new generator including conduit, wiring and a concrete slab.

**Plan Linkages:** Strategic Plan

**Area(s) of Responsibility:** Water Supply, Water Quality, Flood Protection and Natural Systems

**Alternative(s):** If the generator is not installed at Building 5 of the Brooksville Office, the District will continue to operate with the existing utilities and access to paper records will be prevented during periods of power outage.

**Basic Construction Costs (includes permits, inspections, communications requirements, utilities, outside building, site development, other):** Available pricing in 2018 is used for budget planning purposes. For FY2018-19, \$350,000 is budgeted for the Building 5 generator at the Brooksville Office.

**Other Project Costs (includes land, survey, existing facility acquisition, professional services, other):** No other project costs associated with this request have been identified.

**Anticipated Additional Operating Costs/Initial (includes salaries, benefits, equipment, furniture, expenses):** To be determined.

**Anticipated Additional Operating Costs/Continuing:** To be determined.

FY2018-19	FY2019-20	FY2020-21	FY2021-22	FY2022-23
\$350,000	\$0	\$0	\$0	\$0

**Program:** Operation and Maintenance of Works and Lands

**Activity:** Works

**Project Title:** Tsala Apopka Golf Course Water Conservation Structure Modification

**Type:** Structure Modification

**Physical Location:** Citrus County

**Square Footage/Physical Description:** Golf Course Conservation Structure

**Expected Completion Date:** 09/2019

**Historical Background/Need for Project:** Structure Operation Guidelines for the Tsala Apopka Chain-of-Lakes require inflows from the Withlacoochee River to be equally shared between the three pools. The Golf Course Structure is the main conveyance for water flowing between the Floral City and Inverness Pools of Tsala Apopka. The Withlacoochee River Watershed Initiative identified this structure as the limiting factor when passing water through the system, during both low water times when water is needed and during flooding conditions when water must be released. This project includes feasibility, design and construction to increase the flow capacity of the Golf Course Structure.

**Plan Linkages:** Strategic Plan, Withlacoochee River Watershed Initiative

**Area(s) of Responsibility:** Flood Protection

**Alternative(s):** The alternative to modifying the gate system of the Golf Course Structure would be to keep the structure as is, limiting the effectiveness of flood control for the Tsala Apopka Chain-of-Lakes.

**Basic Construction Costs (includes permits, inspections, communications requirements, utilities, outside building, site development, other):** The estimated cost of the structure modification is \$620,000 which includes feasibility, design, permitting and construction.

FY2017-18 - \$120,000

FY2018-19 - \$500,000

**Other Project Costs (includes land, survey, existing facility acquisition, professional services, other):** No other project costs associated with this request have been identified.

**Anticipated Additional Operating Costs/Initial (includes salaries, benefits, equipment, furniture, expenses):** District staff time and travel costs associated with this project are to be determined and are excluded from the funding table below.

**Anticipated Additional Operating Costs/Continuing:** To be determined.

FY2018-19	FY2019-20	FY2020-21	FY2021-22	FY2022-23
\$500,000	\$0	\$0	\$0	\$0

**Program:** Operation and Maintenance of Works and Lands

**Activity:** Works

**Project Title:** Wysong Water Conservation Structure Refurbishment

**Type:** Refurbishment

**Physical Location:** Citrus County (Withlacoochee River)

**Square Footage/Physical Description:** Wysong Dam

**Expected Completion Date:** 09/2020

**Historical Background/Need for Project:** The Wysong Water Conservation Structure is an adjustable crest weir located in the Withlacoochee River, which is a navigable water way. It is raised or lowered as needed to set overflow elevations in order to maintain an optimum upstream water level in Lake Panasoffkee. Adjacent to the structure is the Wysong Boat Lock. The lock allows for small boat traffic to move up or downstream of the structure. The existing structure and lock configurations were completed in 2002. Both the structure and lock consist of large air bags that raise and lower the steel gates. Aging (16 years) air bags and pneumatic components are leaking, requiring refill by the compressor multiple times a day. Also, the structure and lock (steel) gates are showing signs of severe corrosion. The gates are constructed of galvanized steel, but the coating is corroded. This project will include a dewatering and rehabilitation plan, offer optional structure and lock replacement designs and provide for permitting and preparation of a cost analysis for both rehabilitation and replacement of the structure and lock.

**Plan Linkages:** Strategic Plan

**Area(s) of Responsibility:** Natural Systems

**Alternative(s):** The alternative would be to leave the structure as is, risking failure of the lift system and the inability to control elevations. There would be no increase in the life of the structure.

**Basic Construction Costs (includes permits, inspections, communications requirements, utilities, outside building, site development, other):** The estimated cost of the project is \$570,000 which includes a dewatering and rehabilitation plan, optional structure and lock replacement designs, permitting, and a cost analysis for both refurbishment and replacement of the structure and lock.

FY2017-18 - \$70,000

FY2018-19 - \$500,000

**Other Project Costs (includes land, survey, existing facility acquisition, professional services, other):** No other project costs associated with this request have been identified.

**Anticipated Additional Operating Costs/Initial (includes salaries, benefits, equipment, furniture, expenses):** District staff time and travel costs associated with this project are to be determined and are excluded from the amounts referenced below.

**Anticipated Additional Operating Costs/Continuing:** No additional continuing operating costs are anticipated.

FY2018-19	FY2019-20	FY2020-21	FY2021-22	FY2022-23
\$500,000	\$0	\$0	\$0	\$0

**Program:** Operation and Maintenance of Works and Lands

**Activity:** Works

**Project Title:** Structure Gate System Upgrade Program

**Type:** Structure Enhancements

**Physical Location:** Hillsborough and Pinellas Counties

**Square Footage/Physical Description:** Gate Lift Mechanisms

**Expected Completion Date:** 09/2024

**Historical Background/Need for Project:** The purpose of this project is to design a drum and cable lift mechanism to replace the current hydraulic cylinder lift system on the Tampa Bypass Canal and Lake Tarpon Structure(s). The flood control structures were constructed by the United States Army Corp of Engineers (USACE) in the late 1970's. The gates are operated by hydraulic cylinders which use oil to pressurize one side of the cylinder to lift or lower the gate. This was the best technology available at the time. The newer technology, which is a drum and cable system, will improve the reliability and repeatability of gate operations and dramatically decrease the necessary maintenance.

**Plan Linkages:** Strategic Plan

**Area(s) of Responsibility:** Flood Protection

**Alternative(s):** The alternative would be to leave the hydraulic lift mechanisms in place, risking failure of the lift system and continually increasing annual maintenance expenses, as the hydraulic cylinders continue to age. Eventually, the hydraulic cylinders and components of the system such as piping, valves, pumps and motors will need to be replaced.

**Basic Construction Costs (includes permits, inspections, communications requirements, utilities, outside building, site development, other):** The estimated cost of the design phase of the project is \$840,000 which includes design, permitting and preparation of a cost analysis for replacement.

FY2017-18 - \$70,000  
 FY2018-19 - \$70,000  
 FY2019-20 - \$140,000  
 FY2020-21 - \$140,000  
 FY2021-22 - \$140,000  
 FY2022-23 - \$140,000  
 FY2023-24 - \$140,000

**Other Project Costs (includes land, survey, existing facility acquisition, professional services, other):** To be determined.

**Anticipated Additional Operating Costs/Initial (includes salaries, benefits, equipment, furniture, expenses):** District staff time and travel costs associated with this project are to be determined and are excluded from the amounts referenced below.

**Anticipated Additional Operating Costs/Continuing:** To be determined.

FY2018-19	FY2019-20	FY2020-21	FY2021-22	FY2022-23
\$70,000	\$140,000	\$140,000	\$140,000	\$140,000

**Program:** Operation and Maintenance of Works and Lands

**Activity:** Works

**Project Title:** S-353 Flood Control Structure Spillway Rehabilitation

**Type:** Rehabilitation

**Physical Location:** Lake Tsala Apopka Outfall Canal

**Square Footage/Physical Description:** S-353 Flood Control Structure

**Expected Completion Date:** 09/2019

**Historical Background/Need for Project:** The S-353 structure was built in the late 1960's and is the District's oldest structure. It is located on the Lake Tsala Apopka Outfall Canal (C-331), between the Withlacoochee River and the Hernando Pool. The purpose of the structure is threefold: 1) discharge excess water from the Hernando Pool in order to maintain water levels that are in line with the District's goals for management of the pool; 2) control discharges during flood events in order to avoid exceeding desirable stages in Lake Tsala Apopka; and 3) restrict discharge during flood events to that which will not cause damaging velocities downstream. Based on engineering inspections, it has been recommended the toe drains located at the base of the spillway be repaired. Additionally, as part of the toe drain inspection, an anomaly (void) was found under the spillway. Designs and specifications were provided by inspecting engineers for the repair of the toe drains and the grouting of the void.

**Plan Linkages:** Strategic Plan

**Area(s) of Responsibility:** Flood Protection

**Alternative(s):** The alternative is to delay repairs which could result in additional costs due to continuing damage to the spillway's dysfunctional toe drains and possible increased costs from failure to contain the void.

**Basic Construction Costs (includes permits, inspections, communications requirements, utilities, outside building, site development, other):** The estimated cost of the S-353 structure spillway rehabilitation is \$400,000 which includes design, permitting and construction.

**Other Project Costs (includes land, survey, existing facility acquisition, professional services, other):** To be determined.

**Anticipated Additional Operating Costs/Initial (includes salaries, benefits, equipment, furniture, expenses):** To be determined.

**Anticipated Additional Operating Costs/Continuing:** To be determined.

FY2018-19	FY2019-20	FY2020-21	FY2021-22	FY2022-23
\$400,000	\$0	\$0	\$0	\$0

**Program:** Operation and Maintenance of Works and Lands

**Activity:** Works

**Project Title:** S-353 Flood Control Structure Gates 2 and 3 Lift Mechanism Modification

**Type:** Structure Modifications

**Physical Location:** Lake Tsala Apopka Outfall Canal

**Square Footage/Physical Description:** S-353 Flood Control Structure

**Expected Completion Date:** 06/2019

**Historical Background/Need for Project:** Structure S-353 was built in the late 1960's and is the District's oldest structure. It is located on the Lake Tsala Apopka Outfall Canal (C-331) between the Withlacoochee River and the Hernando Pool. The lift systems on Gates 2 and 3 need to be replaced and upgraded from a single stem lift system to dual stem lift system. This modification will increase the performance of the gates, eliminate the gate jamming in its frame, and allow for remote operation. The project includes component replacement, assembly, calibration and testing.

**Plan Linkages:** Strategic Plan

**Area(s) of Responsibility:** Flood Protection

**Alternative(s):** The alternative is to replace the lift mechanisms with the same single stem lift system which would prevent the District's ability to remotely operate the structure during flood events when response time is critical.

**Basic Construction Costs (includes permits, inspections, communications requirements, utilities, outside building, site development, other):** The estimated cost of replacing the S-353 structure gates 2 and 3 lift mechanisms is \$55,000 for component replacement, assembly, calibration and testing.

**Other Project Costs (includes land, survey, existing facility acquisition, professional services, other):** No other project costs associated with this request have been identified.

**Anticipated Additional Operating Costs/Initial (includes salaries, benefits, equipment, furniture, expenses):** District staff time and travel costs associated with this project are to be determined and are excluded from the amounts referenced below.

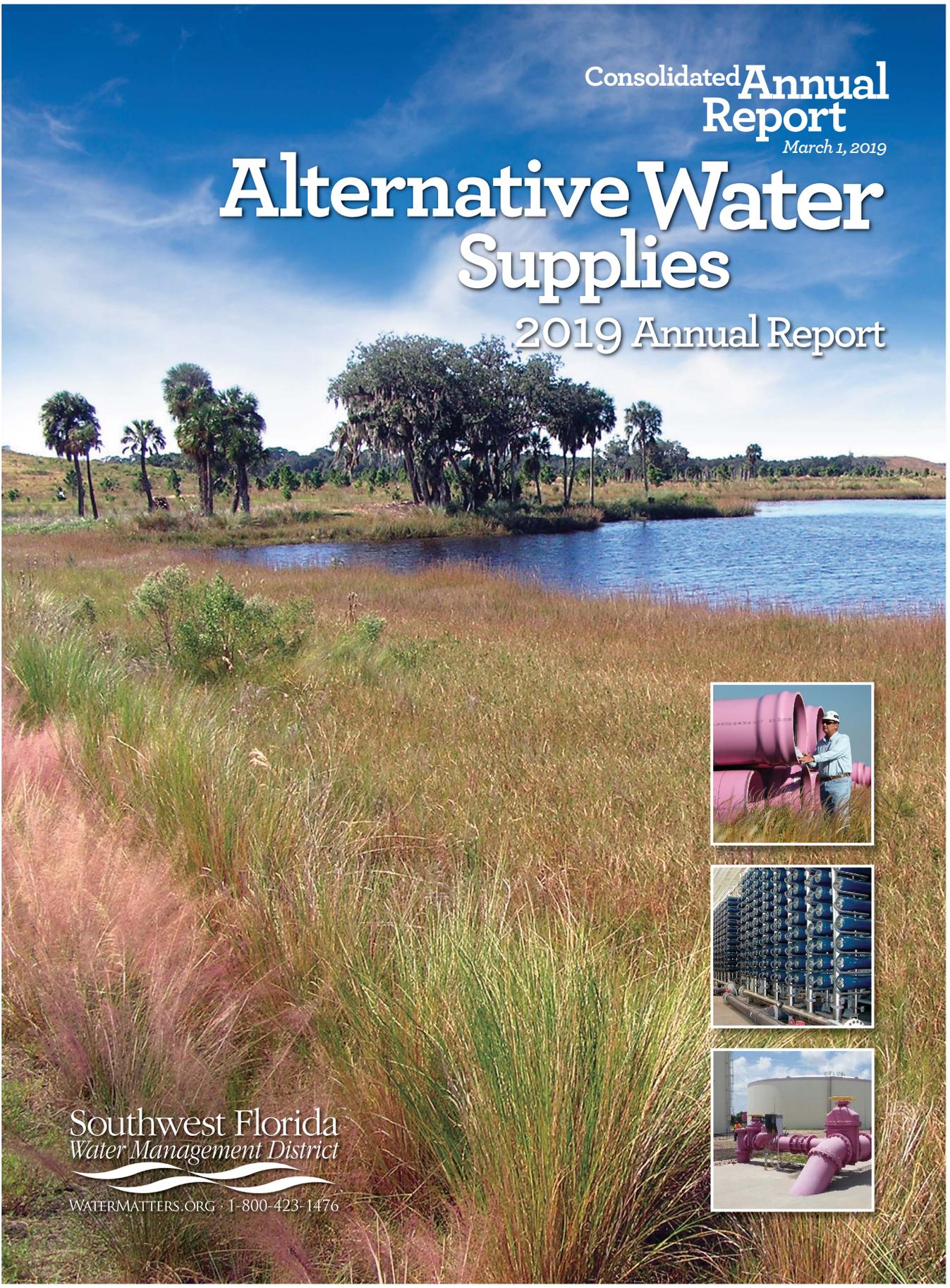
**Anticipated Additional Operating Costs/Continuing:** To be determined.

FY2018-19	FY2019-20	FY2020-21	FY2021-22	FY2022-23
\$55,000	\$0	\$0	\$0	\$0

Consolidated **Annual**  
**Report**  
March 1, 2019

# Alternative Water Supplies

2019 Annual Report



Southwest Florida  
*Water Management District*

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## Introduction

Where Water Resource Caution Areas have been designated, Section 373.707(2), Florida Statutes (F.S.), requires the governing boards of the water management districts to include in their annual budgets an amount for the development of alternative water supply systems, including reclaimed water systems. The above section, as well as 2005 legislation related to the Water Protection and Sustainability Trust Fund (Subsection 373.707(8)(n), F.S.), further requires that each district submit an annual alternative water supply report to the Governor, the President of the Senate, and the Speaker of the House of Representatives by March 1 of each year. This report describes all funded projects and accounts for funds provided through grants, matching grants, revolving loans and the use of Southwest Florida Water Management District (District) lands or facilities. The District has designated Water Resource Caution Areas and has implemented alternate water supply funding pursuant to the Florida Statutes. This report is submitted pursuant to the related statutes (Sections 373.707, 373.036, and 403.890, F.S.). Because of the unique organization of the District and its past accomplishments in the areas of water conservation and alternative water source development, the following is provided as background information.

## Background

The District has been providing local funds for regional water resource-related projects since its creation in 1961. Originally, the focus of the District had been on funding flood control projects. In the late 1980s, the priorities began to shift to the identification and funding of projects that focus on water conservation and the development of alternative water sources. Currently, staff and financial resources are focused on issues of water quality, natural systems improvement, flood protection and water supply including water conservation and alternative water source development.

Before the late 1980s, participation in local water resource projects, both financial and staff support, was primarily driven by requests from local governments. Recognizing the ability to support local governments by providing solutions to the growing issues surrounding water supply, the District adopted a more proactive role in addressing local non-regulatory water issues. In response to the need for a set system for receiving project assistance requests and criteria regarding timing, project eligibility, funding and other conditions for participation, the *Cooperative Funding Initiative* was established in recognition of the growing need for a structured approach to maximize the District's effectiveness in choosing and funding water resource projects and budgeting for their completion.

Prior to mid-2011, the District was unique among Florida's water management districts in that, beyond the similar structure of the governing boards, it had eight basins with jurisdictional boundaries encompassing the major watersheds making up the District. Each basin included a Basin Board which allocated funding to projects within that basin. In 2011, the structure of the District was changed to be consistent with the other water management districts, with the Governing Board taking over the responsibilities of the Basin Boards, including the funding of alternative water supply projects. Presently, the Governing Board continues to provide funding for alternative water supply development through the *Cooperative Funding Initiative*.

The District is involved in many other programs besides those specifically defined in the statute, which are also saving significant amounts of water. Some program examples are leak detection, drought tolerant landscaping, ultra-low-flow toilet rebates, water saving ordinance development, industrial and residential water audits, landscape irrigation system efficiency, the Facilitating Agricultural Resource Management Systems (FARMS) Program, and many others, including major public education efforts.

This Alternative Water Supply Report provides a background summary of the District's current and historical accomplishments in alternative water supply development, as well as a few areas of water conservation that will provide the recipients of this report with an understanding of the effectiveness of the District's programs.

Figure 1. SWFWMD Map



## Cooperative Funding Initiative

A structured program for funding requests for local water resource projects was established in the District in 1987. Since then, the District has continued to offer cooperative funding assistance for water supply projects, and to refine its water supply funding policies in response to changing goals and priorities.

The District's Cooperative Funding Initiative (CFI) program is a key program for building water supply partnerships. This program allows local governments to share costs for projects that assist in creating sustainable water resources, enhance conservation efforts, or meet other defined water management goals. The CFI generally covers up to 50 percent of the cost of eligible water supply projects. All CFI funding decisions are made by the Governing Board. Because of the District's significant water supply funding investment in local and regional cooperators, the District has made noteworthy strides in the areas of water conservation and alternative water sources development.

### Summary of Reuse Projects

The District is a national leader in developing water reuse as an alternative water supply. The CFI program and other District cost sharing programs have been a key mechanism for promoting the development of reclaimed water infrastructure. Table 1 shows the significant historical financial contributions and alternative water quantities made available as a result of District participation in approximately 375 reuse projects since fiscal year (FY) 1987.

**Table 1. Summary of Reuse Projects**

District Funded Reclaimed Water Projects	Reuse to be Provided (mgd)	Water Resource Benefit (mgd)	Storage Capacity (mg)	Miles of Pipe	Budgeted District Funding (up to FY2019)	Total Project Cost
375	180	132	1,367	1,017	\$434,343,000	\$963,384,000

Sources: Reuse and Conservation Projects Summary Report FY2012 (SWFWMD, 2011), FY2013 through FY2019 District budgets.

Note: Budgeted funding total is per Governing Board and Basin Board annual budgets from FY1987-FY2019 and does not include future funding commitments.

## New Water Sources Initiative

In 1993, the District Governing Board recognized the need to accelerate the development of alternative water sources to address the water resource impacts identified in the Southern Water Use Caution Area and the Northern Tampa Bay Water Use Caution Area. The Governing Board initiated the New Water Sources Initiative (NWSI) program with a \$10 million commitment beginning in FY1994. The program solicited requests for large, regionally significant projects that would develop non-traditional (other than groundwater) sources to replace existing use or provide for future growth. This program was in addition to the Cooperative Funding Initiative and continued through FY2007 following the completion of the Tampa Bay Water Partnership Agreement funding obligations.

Eligible NWSI projects generally received 25 percent of their funding from the District's Governing Board, 25 percent from appropriate Basin(s) and the remaining 50 percent from the local cooperator(s). The 22 completed projects funded through the NWSI program were administered pursuant to legislative directives to promote and fund alternative source development. The NWSI projects received more than \$60 million in District funding to provide as much as 206 million gallons per day (mgd) of water resource benefits, reduce groundwater withdrawals, rehydrate stressed lakes and wetlands, increase groundwater recharge, enhance wildlife habitat and improve flood control.

## Water Supply and Resource Development Projects

As a means to facilitate the implementation options identified in the *District Regional Water Supply Plan* (SWFWMD, 2001) or similar projects, the Governing Board and the previous Basin Boards initiated another funding opportunity in FY2001 to address large-scale water supply and resource development projects with multiple cooperators and regional benefits. The Water Supply and Resource Development (WSRD) projects received funding from the Governing Board, multiple Basins, and local cooperators.

Depending upon the size and scope of the project, some WSRD projects also involved additional state and federal funding. The funding shares were reflective of the proportional benefits anticipated to be realized by each of the basins, and the collective Basin Board funding was then matched by the Governing Board. As such, eligible WSRD projects generally received 25 percent of funding from the District's Governing Board, 25 percent from the collective Basin Boards and the remaining 50 percent from local cooperators. The WSRD funding mechanism was replaced by District Initiatives after the dissolution of the Basin Boards in 2011.

## District Initiatives

District Initiatives are funded in cases where a project is of great importance or a regional priority. Funding may be provided as 50 percent cooperative shares for regional water supply development projects similarly to the NWSI and WSRD programs. The District can also increase its percentage match and, in some cases, provide total funding for the project. Examples of these initiatives include Water Resource Development projects such as: (1) the Quality of Water Improvement Program (QWIP) to plug deteriorated, free-flowing wells that waste water and cause inter-aquifer contamination; (2) the Water Loss Reduction Program to conserve water by having District staff inspect meters and detect leaks in public water system pipelines; (3) data collection and analysis to support major District initiatives such as the MFL program; (4) the FARMS program and other various agricultural research projects designed to increase the water-use efficiency of agricultural operations; and (5) WRD investigations and MFL Recovery projects which may not have local cooperators.

## Springs Restoration

DEP Springs Restoration funding is a special legislative appropriation that has provided revenue for protection and restoration of major springs systems. The District has allocated Springs Restoration funding to implement projects to restore aquatic habitats, to reduce groundwater withdrawals and nutrient loading within first-magnitude springsheds, and to improve the water quality and quantity of spring discharges. Projects include the reestablishment of aquatic and shoreline vegetation near spring vents, installation of wastewater infrastructure to allow for the removal of septic tanks and increase reclaimed water production and implementation of other BMPs within springshed basins. The first year of the appropriation was FY2014, when the District received \$1.3 million from DEP to allocate for springs restoration. To date, projects within the District have been allocated over \$63.4 million in Springs Restoration funding from DEP, including \$19.8 million for FY2019. Springs funding has been allocated for several septic to sewer and wastewater improvement projects in priority focus areas which can improve reclaimed water availability.

## FARMS Program

The **Facilitating Agricultural Resource Management Systems (FARMS)** Program is an agricultural best management practices (BMP) cost-share reimbursement program that involves both water quantity and water quality. This public/private partnership program was developed by the District and the Florida Department of Agriculture and Consumer Services in 2003. The purpose of the FARMS Program is to implement production-scale agricultural BMP projects that will provide water resource benefits including: water quality improvement; reduction of Upper Floridan aquifer withdrawals; conservation; and restoration or augmentation of the area's water resources and ecology. Since 2003, the District has co-funded \$31.6 million dollars towards \$69.6 million dollars in total project costs for 200 FARMS projects resulting in 28 mgd of water resource benefits.

## Water Protection and Sustainability Trust Fund

Large areas of Florida do not have sufficient traditional water resources to meet the future needs of the state's growing population and the needs of the environment, agriculture and industry. In 2005, the Florida Legislature recognized the need to accelerate the development of alternative water sources, and consequently passed legislation creating the Water Protection and Sustainability Trust Fund (WPSTF). The legislation focused on encouraging cooperation in the development of alternative water supplies and improving the linkage between local governments' land use plans and water management districts' regional water supply plans.

The state of Florida allocated \$100 million in FY2005-2006, with \$25 million allocated to the District. In FY2007, the state funding was \$60 million, with \$15 million allocated to the District. In FY2008, the state funding was \$51.4 million, with \$13 million allocated to the District. In FY2009, the state

funding was reduced due to economic conditions, with \$750 thousand allocated to the District. From FY2010 to FY2019, there were no state funds allocated for WPSTF. Annual WPSTF funding may potentially resume pending availability in future state budgets. Funding will be expended on a reimbursement basis for construction costs of alternative water supply development projects as defined in the legislation. The legislation also requires that a minimum of 80 percent of the WPSTF funding must be related to projects identified in a district water supply plan. The District's Regional Water Supply Plan is utilized in the identification of most WPSTF-eligible projects.

Projects were evaluated for funding based on consideration of the 12 factors described in Subsections 373.707(8)(f) and (g), F.S., and additional District evaluation factors as appropriate. Funding for each project is equivalent to up to 40 percent of construction costs. Projects funded through this program may also receive funding from other sources such as the Governing Board, multiple Basin Boards, federal agencies and local cooperators.

The state did not allocate any WPSTF-related funds in FY2019. The District anticipates that, should the state resume funding, projects will be identified through the District's ongoing cooperative funding programs, which have been funding alternative water supply development for two decades. Additional projects, developed in cooperation with regional water supply authorities and their member governments, are also anticipated to be identified in the future to be eligible to receive funds. The scope and breadth of the WPSTF projects is immense, as evident by the 41 projects funded with total project costs of \$651 million, \$275 million in District funding and \$53.75 million in WPSTF funding that resulted in more than 60 mgd of water provided of which more than 40 mgd in potable water supplies, and the more than 20 mgd in reclaimed water supply.

## Partnership Agreements

The Northern Tampa Bay New Water Supply and Groundwater Withdrawal Reduction Agreement (NTB Partnership Agreement) provided for the development of new and alternative water supplies and reduction of pumpage from Tampa Bay Water's Northern Tampa Bay wellfields.

### NTB Background

Floridians rely on groundwater, pumped from underground aquifers, as their principal water supply source. In the Tampa Bay region, an over-reliance on groundwater resulted in adverse environmental impacts to lakes, wetlands, and its ecology. This led to years of conflict between water regulators, water suppliers and property owners. Many of these conflicts were aired in administrative hearings and the court systems for years without resolution.

Seeking a cooperative solution to the region's water problems, the District collaborated with Tampa Bay Water (formerly known as the West Coast Regional Water Supply Authority), and its six-member governments (Hillsborough, Pinellas and Pasco counties and the cities of Tampa, St. Petersburg, and New Port Richey) for the development of new water supplies and phased reduction of pumping from the 11 central system wellfields. Discussions of the plan began in 1997. After many months of negotiations, the "Partnership Agreement" was executed by all parties on May 27, 1998.

### NTB Partnership Agreement

The Partnership Agreement had four objectives: (1) Develop at least 85 mgd of new water supply by December 31, 2007, of which 38 mgd must be produced by December 31, 2002; (2) Reduce groundwater pumpage at 11 wellfields from 158 mgd to 121 mgd by 2002 and to 90 mgd by 2008; (3) End existing and minimize future litigation; and (4) Provide funding to assist in the development of the new alternative supply.

The Partnership Agreement was completed in 2010 and met the objectives set forth. The Recovery Strategy required that groundwater withdrawals from Tampa Bay Water's Consolidated Wellfield system would be reduced to rates that could not exceed 90 mgd on a 12-month moving average basis

by 2008. To compensate for this reduction in groundwater withdrawals, greater reliance would be placed on using alternative public water supplies, such as surface water and the seawater desalination facility.

In keeping with the intent of the Recovery Plan, TBW now obtains surface water supplies from the Tampa Bay Canal, the Hillsborough and Alafia Rivers, maintains a 15.5 billion-gallon offline reservoir, and maintains a 25 mgd capacity seawater desalination plant on Tampa Bay.

In 2010, the District adopted a second phase of recovery for the NTBWUCA, entitled the Comprehensive Environmental Resources Recovery Plan for the NTBWUCA (Rule 40D-80.073, F.A.C.), or the “Comprehensive Plan.” Among other actions, the Comprehensive Plan requires TBW to assess the water resources of the area and identify any remaining unacceptable adverse impacts caused by the 90 mgd of groundwater permitted to be withdrawn from their wellfields. The plan also requires TBW to develop a plan to address any identified unacceptable adverse impacts by 2020. Some new projects could result from this analysis.

## **Additional Tampa Bay Water Project Agreements**

In FY2006-FY2011, the District provided an additional \$126 million in grant funding for the \$247 million Tampa Bay Water System Configuration II Project, which developed 25 mgd of new surface water supplies.

### **A Partnership Agreement in Polk County**

In 2012, the District began coordinating with Polk County on a Partnership Agreement (H094) that is modeled after the NTB Partnership Agreement. The Polk partnership agreement will provide financial assistance, permit coordination, development of new and alternative water supplies and the regionalization of water supplies in Polk County. The goal is to provide an annual average of at least 30 mgd in new alternative water supplies from eligible projects to be used by Polk and its municipalities by December 31, 2041.

## **FY2019 Annual Report Information**

As defined in the Florida Statutes, alternative water supplies are “salt water; brackish surface and groundwater; surface water captured predominately during wet-weather flows; sources made available through the addition of new storage capacity for surface or groundwater; water that has been reclaimed after one or more public supply, municipal, industrial, commercial, or agricultural uses; the downstream augmentation of water bodies with reclaimed water; stormwater; and any other water source that is designated as nontraditional for a water supply planning region in the applicable regional water supply plan.” Pursuant to the requirements of the statutes, the following tables and associated narrative identify alternative water supply projects, associated funding, and provide a short description of their benefits.

### **SWFWMD Budgeted Project Funding**

Table 2 summarizes the total annual budgeted District funding for alternative water supply category projects for the past ten fiscal years (FY2010-2019). The funding of projects requiring large capital investments with construction spanning several years is usually spread out over multiple fiscal years to maximize annual funding availability for multiple regional projects and cooperators. Please note that the funding totals presented in the following sections are based on the approved FY2019 Budget and may reflect updates to project costs from previous years. Funding totals are provided per Board approved budgets and do not include District project management expenses.

*Notes: The funding amounts shown, as in subsequent tables, represent only District related contributions; equal or exceeding matching funds are provided by the cooperator. Projects included in these tables include only projects related to “water supply” benefits and do not include Natural System Enhancement (i.e. wetland*

*and lake restoration projects).*

## **Funding Classification**

Table 3 classifies the FY2010-2019 budgeted amounts into funding types. As indicated, the District's funding focus has been on matching programs.

**Table 2. District Budgeted Amounts**

Alternative Water Supply	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019
Reclaimed Wastewater	\$19,672,706	\$17,088,388	\$15,380,739	\$19,294,703	\$21,691,124	\$21,824,760	\$19,118,417	\$12,075,819	\$10,768,312	\$7,459,498
Surface Water/ Stormwater*	\$1,310,000	\$115,000	\$210,000	\$250,000	\$1,809,909	\$2,100,000	\$1,305,000	\$1,920,000	\$1,462,947	\$7,393,700
Desalination of Brackish Water	\$14,674,875	\$5,674,256	\$300,000	\$5,417,120	\$8,100,000	\$16,005,355	\$10,060,000	\$12,713,050	\$17,575,000	\$14,300,682
Indirect Potable Reuse	\$0	\$1,056,999	\$486,374	\$893,125	\$1,475,000	\$1,554,000	\$8,306,000	\$2,617,910	\$10,827,500	\$2,985,000
Desalination of Seawater	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>District Totals</b>	<b>\$35,657,581</b>	<b>\$23,934,643</b>	<b>\$16,377,113</b>	<b>\$25,854,948</b>	<b>\$33,076,033</b>	<b>\$41,484,115</b>	<b>\$38,789,417</b>	<b>\$29,326,779</b>	<b>\$40,633,759</b>	<b>\$32,138,880</b>
<b>Allocated WPSTF</b>	<b>\$0</b>									
<b>Grand Totals</b>	<b>35,657,581</b>	<b>\$23,934,643</b>	<b>\$16,377,113</b>	<b>\$25,854,948</b>	<b>\$33,076,033</b>	<b>\$41,484,115</b>	<b>\$38,789,417</b>	<b>\$29,326,779</b>	<b>\$40,633,759</b>	<b>\$32,138,880</b>

\* Surface Water Projects included in funding totals beginning in FY2017

**Table 3. Funding Classification**

Funding Type	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019
Direct Grants	\$0	\$0	\$0	\$2,000,000	\$132,000	\$0	\$994,000	\$1,244,550	\$1,000,000	\$2,385,690
Matching Grants	\$35,657,581	\$23,934,643	\$16,377,113	\$23,854,948	\$32,944,033	\$41,484,115	\$37,795,417	\$28,082,229	\$39,633,759	\$29,753,190
Revolving Loans	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Use of District Land/ Facilities	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>District TOTALS</b>	<b>\$35,657,581</b>	<b>\$23,934,643</b>	<b>\$16,377,113</b>	<b>\$25,854,948</b>	<b>\$33,076,033</b>	<b>\$41,484,115</b>	<b>\$38,789,417</b>	<b>\$29,326,779</b>	<b>\$40,633,759</b>	<b>\$32,138,880</b>

## Alternative Source Type: Wastewater Reuse

Table 4 lists Cooperative Funding Initiative, NWSI, WSRD and WPSTF reuse projects that will receive funding in FY2019. The table also identifies District funds allocated in FY2019 by the Governing Board, based on the District's FY2019 Budget. The total funding commitment represents previous and projected year funding by the District. Funding of projects requiring large capital investments with construction spanning several years is usually spread out over multiple fiscal years. Table 4 also includes the projected alternative supply (gallons per day) provided by the project. The Appendix of this report contains a brief description of the projects identified in Table 4.

**Table 4. Alternative Source Type: Wastewater Reuse**

Project Name	Project Number	FY2019 District Funding	FY2019 WPSTF	Total FY19 Funding	Total District Commitment (Multi-Year)**	Total Project Cost	Water Provided* (gpd)
Pasco Starkey Ranch Reclaimed Water Transmission Project - Phase C	N791	\$108,873	\$0	\$108,873	\$456,800	\$913,600	290,000
Polk County NERUSA CR 547 Reclaimed Water Transmission Project	N862	\$384,750	\$0	\$384,750	\$434,750	\$869,500	377,000
Pasco County Cypress Preserve Phase 1	N837	\$140,000	\$0	\$140,000	\$157,500	\$315,000	190,000
Haines City Reclaimed Water Tank and Pump Stations Project	N898	\$1,125,000	\$0	\$1,125,000	\$4,620,000	\$6,160,000	Storage
Braden River Utilities Reclaimed Water ASR Feasibility and Pilot	N912	\$790,625	\$0	\$790,625	\$2,997,500	\$5,995,000	Storage
Hernando County Airport Reuse Study Project	N983	\$375,000	\$0	\$375,000	\$375,000	\$750,000	Study
Tropicana Industrial Reuse	Q005	\$2,350,000	\$0	\$2,350,000	\$2,350,000	\$4,800,000	500,000
Pasco County Cypress Preserve Phase 2 Transmission	Q021	206,500	\$0	\$206,500	\$206,500	\$413,000	Trans
Bowling Green Mosaic Mine Reuse	Q022	\$833,250	\$0	\$833,250	\$833,250	\$1,111,000	140,000
City of Tampa T.A.P. Testing Phase	Q028	\$1,145,500	\$0	\$1,145,500	\$1,145,500	\$2,291,000	Study
<b>Totals (10)</b>		<b>\$7,459,498</b>	<b>\$0</b>	<b>\$7,459,498</b>	<b>\$13,576,800</b>	<b>\$23,618,100</b>	<b>1,497,000</b>

\*\*Total District commitment represents projects that have been or will be funded over multiple years and may include prior WPSTF, WRAP, SPRINGS or other funding.

\*Represents the total water supply delivered upon project completion. Notes: 1. Table 4 does not include Natural System Enhancement projects that do not have associated water supply benefits. 2. Table 4 does not include Indirect Potable Reuse projects, which are included in Table 7.

## Alternative Source Type: Surface Water and Stormwater

Table 5 identifies the surface water and stormwater supply projects that will receive funding in FY2019. The table also identifies the total funding commitment of the District, including previous funding and projected future funding. As previously stated, funding of projects requiring large capital investments with construction spanning several years is spread out over multiple years. Table 5 also includes the projected alternative water supply provided by the projects. The Appendix of this report contains a brief description of the projects identified in Table 5.

**Table 5. Alternative Source Type: Surface Water and Stormwater**

Project Name	Project Number	FY2019 District Funding	FY2019 WPSTF	Total FY19 Funding	Total District Commitment (Multi-Year)**	Total Project Cost	Water Provided (gpd)
PRMRWSA Regional Integrated Loop System - Phase 3B	N823	\$5,700,000	\$0	\$5,700,000	\$8,100,000	\$16,700,000	7,000,000
Bradenton Aquifer Protection Recharge Well	N842	\$1,000,000	\$0	\$1,000,000	\$2,525,000	\$5,050,000	TBD
PRMRWSA Partially Treated Water ASR	N854	\$375,000	\$0	\$375,000	\$3,765,000	\$7,755,000	Storage
TBW Tampa Bypass Canal Gates	N965	\$210,700	\$0	\$210,700	\$516,000	\$1,032,000	TBD
TBW Regional Pump Station Expansion	N998	\$108,000	\$0	\$108,000	\$1,200,000P	\$2,400,000	Pumping
<b>Totals (5)</b>		<b>\$7,393,700</b>	<b>\$0</b>	<b>\$7,393,700</b>	<b>\$14,096,000</b>	<b>\$32,937,000</b>	<b>7,000,000</b>

\*\*Total District commitment represents projects that have been or will be funded over multiple years and may include prior WPSTF, WRAP, SPRINGS or other funding.

\* Represents the total water supply delivered upon project completion.

## Alternative Source Type: Desalination of Brackish Water

Table 6 identifies the desalination of brackish water projects that will receive funding in FY2019. The table also identifies the total funding commitment of the District, including previous funding and projected future funding. The funding of most projects requiring large capital investments with construction spanning several years is spread out over multiple fiscal years. Table 6 also includes the projected alternative water supply provided by the projects. The Appendix of this report contains a brief description of the projects identified in Table 6.

**Table 6. Alternative Source Type: Desalination of Brackish Water**

Project Name	Project Number	FY2019 District Funding	FY2019 WPSTF	Total FY19 Funding	Total District Commitment (Multi-Year)**	Total Project Cost	Water Provided (gpd)
City of Punta Gorda Groundwater RO***	N780	\$6,575,000	\$0	\$6,575,000	\$15,650,000	\$39,400,000	4,000,000
Belleair Brackish Investigation	N976	\$339,992	\$0	\$339,992	\$509,987	\$1,019,975	Study
Hydrogeological Investigation of LFA in Polk County	P280	\$2,385,690	\$0	\$2,385,690	\$12,000,000	\$12,000,000	Study
Polk Partnership	H094	\$5,000,000	\$0	\$5,000,000	\$160,000,000	\$320,000,000	30,000,000
<b>Totals (4)</b>		<b>\$14,300,682</b>	<b>\$0</b>	<b>\$14,300,682</b>	<b>\$188,159,987</b>	<b>\$372,419,975</b>	<b>34,000,000</b>

\*\*\* Project total for N780 includes a brackish groundwater investigation funded as N600.

\*\*Total District commitment represents projects that have been or will be funded over multiple years and may include prior WPSTF, WRAP, SPRINGS or other funding.

\* Represents the total water supply delivered upon project completion.

## Alternative Source Type: Indirect Potable Reuse

Table 7 identifies the indirect potable reuse projects that will receive funding in FY2019. The table also identifies the total funding commitment of the District, including previous funding and projected future funding. Similar to the funding of other alternative water projects, the funding of projects requiring large capital investments with construction spanning several years is usually spread out over multiple fiscal years. Table 7 also includes the projected alternative water supply provided by the projects. The Appendix of this report contains a brief description of the projects identified in Table 7.

**Table 7. Alternative Source Type: Indirect Potable Reuse**

Project Name	Project Number	FY2019 District Funding	FY2019 WPSTF	Total FY19 Funding	Total District Commitment (Multi-Year)**	Total Project Cost	Water Provided* (gpd)
Clearwater Groundwater Replenishment Project Phase 3	N665	\$500,000	\$0	\$500,000	\$16,358,000	\$32,716,000	2,400,000
South Hillsborough Aquifer Recharge Expansion (SHARE) - Phase 1	N855	\$2,235,000	\$0	\$2,235,000	\$4,850,000	\$9,700,000	4,000,000
Polk County Reclaimed Water Recharge Study in Dover/Plant City WUCA & Northwest Polk Areas	N899	\$250,000	\$0	\$250,000	\$594,000	\$1,189,000	Study
<b>Totals (3)</b>		<b>\$2,985,000</b>	<b>\$0</b>	<b>\$2,985,000</b>	<b>\$21,802,000</b>	<b>\$43,605,000</b>	<b>6,400,000</b>

\*\*Total District commitment represents projects that have been or will be funded over multiple years and may include prior WPSTF, WRAP, SPRINGS or other funding.

\* Represents the total water supply delivered upon project completion.

## Conclusion

The District has developed an aggressive alternative water supply development program through the efficient utilization of the resources available to its Governing Board and provided by the Florida Legislature. The District is committed to identifying and assisting with effective solutions to the water resource problems by providing technical and financial support in developing alternative water supplies. The District has a long history of commitment to cooperative efforts with state and local governments, private industry, and the public at large through the sponsoring of research, conservation, natural system and water quality improvements and a special emphasis on the development of alternative water supplies. The District is confident in its mission to find and maintain adequate and ecologically sustainable water supplies within its boundaries.

## Appendix (Projects with FY2019 Funding)

**Project Name:** FARMS - Facilitating Agricultural Resource Management Systems(H017)

**Type of Alternative Supply:** Variety of Types

**Cooperator:** Variety of Cooperators

**Locale:** District-wide

**Project Description:** The FARMS program is an agricultural Best Management Practice (BMP) cost-share reimbursement program. The program is a public/private partnership developed by the District and the Florida Department of Agriculture and Consumer Services (FDACS). The purpose of the FARMS initiative is to provide an incentive to the agricultural community, within the District, to implement agricultural BMPs that will provide resource benefits that include water quality improvement; reduced Upper Floridan aquifer withdrawals; and/or conserve, restore, or augment the area's water resources and ecology.

**Project Name:** Polk County Partnership (H094)

**Type of Alternative Supply:** Water Supply LFA/Brackish

**Cooperator:** Utilities within Polk County

**Locale:** Polk County

**Project Description:** This project includes support of regional cooperation within Polk County and the development of regional AWS projects that can achieve 30 mgd of base supply. The District Governing Board adopted Resolution No. 15-07 providing timing and guidance for this project, including \$40 million to be provided in \$10 million increments based on achievement of certain milestones.

**Project Name:** Clearwater Groundwater Replenishment Project Phase 3 (N665)

**Type of Alternative Supply:** Indirect potable

**Cooperator:** City of Clearwater

**Locale:** Pinellas County

**Project Description:** The project consists of design, third party review, permitting and construction for the full-scale water purification plant, and the injection and monitor well systems at Clearwater's Northeast Water Reclamation Facility to recharge 2.4 mgd annual average of purified reclaimed water.

**Project Name:** Punta Gorda RO Facility (N780)

**Type of Alternative Supply:** Brackish

**Cooperator:** City of Punta Gorda

**Locale:** Charlotte, Desoto, Manatee, and Sarasota Counties

**Project Description:** The project consists of the design, wellfield study, third party review, permitting, and construction of a 4 mgd brackish groundwater reverse osmosis (RO) facility co-located at the City's existing 10 mgd Shell Creek surface water treatment facility. Components include the RO facility, water blending facility, including 2 mg tank, raw water supply wellfield, and a concentrate disposal well. The benefit is to ensure the availability of the alternative water supply from the Shell Creek facility that is currently hampered by poor water quality, as well as protecting natural systems by increasing flow reliability to the lower Shell Creek Estuary.

**Project Name:** Pasco Starkey Ranch Reclaimed Water Transmission Project - Phase C (N791)

**Type of Alternative Supply:** Wastewater Reuse

**Cooperator:** Pasco County

**Locale:** Pasco County

**Project Description:** Design, permitting and construction of approximately 5,700 feet of 12 to 16-inch reclaimed water transmission mains and other necessary appurtenances to supply residential, commercial and institutional customers in the Phase C area of the Starkey Ranch development. The project will supply approximately 0.29 mgd of reclaimed water for irrigation to mixed-use customers in the Northern Tampa Bay Water Use Caution Area (NTBWUCA).

**Project Name:** PRMRWSA Regional Integrated Loop System - Phase 3B(N823)

**Type of Alternative Supply:** Surface Water

**Cooperator:** PRMRWSA

**Locale:** Sarasota County

**Project Description:** The project is for eligible FY17 design of the Regional Loop System Phase 3B Interconnect including basis of design, 30% design, third party review, and additional design needed in FY17. This interconnect is part of the PRMRWSA 's Regional Integrated Loop System to extend the system approximately 4.2 miles from its current northern terminus along Cow Pen Slough northward to Clark Road (SR-72) in central Sarasota County. The project may include 7 mgd of pumping, chemical trim, metering, and 5 mg storage facilities as determined by the basis of design. District funding is for eligible FY17 design work including third party review as this project has a conceptual construction estimate greater than \$5 million dollars. If constructed, the project will develop a component of the Regional Integrated Loop System that will supply an estimated 7 mgd of alternative water supplies to promote regional resource management efforts and support water supply goals within the Southern Water Use Caution Area.

**Project Name:** City of Bradenton Aquifer Protection Recharge Well (N842)

**Type of Alternative Supply:** Surface Water

**Cooperator:** City of Bradenton

**Locale:** Manatee County

**Project Description:** The project is for the 30% design and third-party review of one recharge well in the Avon Park High Producing Zone of the Upper Floridan aquifer and associated facilities to help prevent nutrient loading to the Manatee River and Tampa Bay and to replenish groundwater in the MIA.

**Project Name:** PRMRWSA Partially Treated Water ASR Feasibility(N854)

**Type of Alternative Supply:** Surface Water

**Cooperator:** PRMRWSA

**Locale:** Desoto County

**Project Description:** The project is for the site feasibility testing, 30% design and third-party review of a partially treated water aquifer storage and recovery project located at the PRMRWSA aquifer storage and recovery (ASR) facility.

**Project Name:** South Hillsborough Aquifer Recharge Expansion (SHARE) (N855)

**Type of Alternative Supply:** Indirect potable

**Cooperator:** Hillsborough County

**Locale:** Hillsborough County

**Project Description:** Third Party Review (TPR) of the County's 30% design, design and permitting, and initiation of construction for Phase 1 of the South Hillsborough Aquifer Recharge Expansion (SHARE) project.

**Project Name:** Pasco County Cypress Preserve Reclaimed Water Phase I Project (N837)

**Type of Alternative Supply:** Wastewater Reuse

**Cooperator:** Pasco County

**Locale:** Pasco County

**Project Description:** The design, permitting and construction of approximately 3,000 feet of 10 to 14-inch reclaimed water transmission mains and other necessary appurtenances to supply approximately 557 single family homes, 284 multi-family homes, and approximately 15 acres of common areas in the Cypress Preserve community.

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**Project Name:** Polk County NERUSA CR 547 Reclaimed Water Transmission Project (N862)

**Type of Alternative Supply:** Wastewater Reuse

**Cooperator:** Polk County Utilities

**Locale:** Polk County

**Project Description:** Design, permitting and construction of approximately 6,900 feet of 10 - 16-inch reclaimed water transmission mains and other necessary appurtenances to supply approximately 1,060 residential irrigation customers in the Williams Preserve, Greenfield Village and Shell Property Areas of NERUSA.

**Project Name:** Haines City Reclaimed Water Tank and Pump Stations Project Study (N898)

**Type of Alternative Supply:** Wastewater Reuse

**Cooperator:** Haines City

**Locale:** Polk County

**Project Description:** The project is for conceptual sizing, preliminary design, 30% design and third-party review of an expansion to the City's reclaimed water storage and pumping infrastructure. The infrastructure may include a reclaimed water storage tank, a low-pressure reuse transfer pump station, a high-pressure reuse pump station, telemetry controls and other necessary appurtenances to supply existing reuse customers and to enable future expansions of the City's reuse system.

**Project Name:** Polk County Reclaimed Water Recharge Study in Dover/Plant City WUCA & Northwest Polk Areas (N899)

**Type of Alternative Supply:** Indirect potable

**Cooperator:** Polk County

**Locale:** Polk County

**Project Description:** This feasibility study by Polk County is to develop a reclaimed water project concept to utilize up to 1.5 mgd of reclaimed water for aquifer recharge or other innovative methods to supplement groundwater supplies in Polk County's Northwest Regional Utility Service Area (NWRUSA).

**Project Name:** Braden River Utilities Reclaimed Water ASR Feasibility (N912)

**Type of Alternative Supply:** Wastewater Reuse

**Cooperator:** Braden River Utilities

**Locale:** Manatee County

**Project Description:** Third party review and reclaimed water Aquifer Storage and Recovery (ASR) feasibility studies at two sites each including the construction of an ASR well, two storage zone wells and one upper zone monitoring well; partial infrastructure consisting of simplified control systems, temporary piping, pumps and other associated infrastructure necessary to sufficiently and cost-effectively perform two cycle tests in accordance with Florida Department of Environmental Protection permit requirements.

**Project Name:** Tampa Bay Water Bypass Canal Gate Automation (N965)

**Type of Alternative Supply:** Surface Water

**Cooperator:** Tampa Bay Water

**Locale:** Hillsborough County

**Project Description:** The project is for the design, permitting and construction of a project that will equip existing manual weir gates located on top of the larger flood control gates with remote-controlled motorized actuators at the Tampa Bypass Canal Structures 160, 161, and 162.

**Project Name:** Belleair Brackish

Feasibility (N976)

**Type of Alternative Supply:** Brackish

**Cooperator:** Belleair

**Locale:** Pinellas County

**Project Description:** The project is for a hydrogeologic investigation to determine the feasibility of developing a brackish groundwater wellfield and deep injection well in the Upper Floridan aquifer.

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**Project Name:** Hernando County Airport Reclaimed Water Storage/Pumping/Trans/Treatment Project (N983)

**Type of Alternative Supply:** Wastewater Reuse

**Cooperator:** Hernando County

**Locale:** Hernando County

**Project Description:** This project is for 30% design and third-party review of a reclaimed water project which if constructed would include the design, permitting and construction of approximately 63,000 feet of reclaimed water transmission mains, a 3 million gallon storage tank, a 3 mgd pump station, 3 mgd filtration components and other necessary appurtenances to build major reuse system infrastructure to support near-term and future expansions and to interconnect the Airport WWTP's new reuse system with Hernando County's existing reclaimed water system near US19 in the Southwest portion of the County.

**Project Name:** Tampa Bay Water Regional Pump Station Expansion (N998)

**Type of Alternative Supply:** Surface Water

**Cooperator:** Tampa Bay Water

**Locale:** Hillsborough County

**Project Description:** The project is for the design, permitting and construction of a project that will increase Tampa Bay Water's pumping capacity of alternative water supply by 10-12 MGD average and 20-22 MGD maximum at the Regional Facility Site High Service Pump Station.

**Project Name:** Tropicana Industrial Reclaimed Water Project (Q005)

**Type of Alternative Supply:** Wastewater Reuse

**Cooperator:** Tropicana

**Locale:** Manatee County

**Project Description:** The design, permitting and construction of approximately 6,300 feet of reclaimed water transmission mains, 0.5 MGD membrane treatment systems, 0.08 MG of storage, 0.5 MGD pumping and other necessary appurtenances to supply ultra-pure industrial reclaimed water for power generation, cooling water and other non-potable process uses at the Tropicana Bradenton Juice Facility.

**Project Name:** Pasco County Cypress Preserve Phase 2 Reclaimed Water Transmission Project (Q021)

**Type of Alternative Supply:** Wastewater Reuse

**Cooperator:** Pasco County

**Locale:** Pasco County

**Project Description:** The design, permitting and construction of reclaimed water transmission mains and other necessary appurtenances to supply approximately 557 single family homes, 284 multi-family homes, and approximately 15 acres of common areas in the Cypress Preserve community.

**Project Name:** Bowling Green Reclaimed Water Mosaic Mine Project (Q022)

**Type of Alternative Supply:** Wastewater Reuse

**Cooperator:** City of Bowling Green

**Locale:** Hardee County

**Project Description:** Construction of 15,000 feet of transmission mains to Wauchula's existing reuse system serving Mosaic South Pasture Mine.

**Project Name:** Tampa Augmentation Project Feasibility Phase 2 Project (Q028)

**Type of Alternative Supply:** Wastewater Reuse

**Cooperator:** City of Tampa

**Locale:** Hillsborough County

**Project Description:** This phase of the project (Phase 2) will focus on continuing additional needed feasibility steps identified through the Phase 1 project. The overall project goal is to implement a recharge/recovery system to treat, store and recover Advanced Wastewater Treatment (AWT) quality reclaimed water in the aquifer for subsequent delivery to the Hillsborough River Reservoir or directly to the water intake system of the David L. Tippin Water Treatment Facility (DLTWTF).

**Project Name:** Hydrogeological Investigation of the Lower Floridan Aquifer in Polk County (P280)

**Type of Alternative Supply:** Brackish

**Cooperator:** Polk Regional Water Cooperative

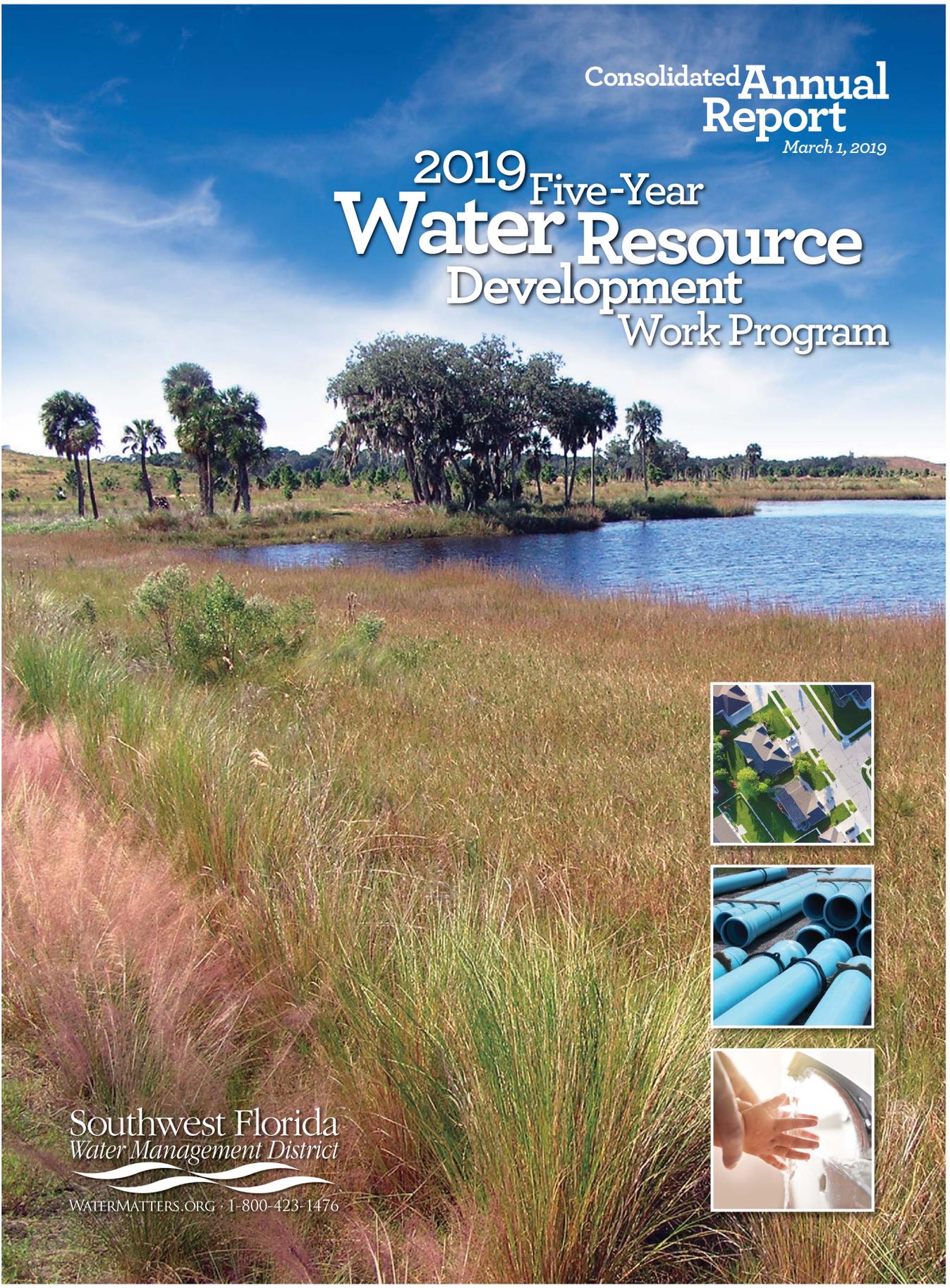
**Locale:** Polk County

**Project Description:** This project explores the Lower Floridan aquifer in Polk County to assess its viability as an alternative water supply source as well as to gain a better understanding of the LFA characteristics and groundwater quality in Polk County. Funding is available for three sites. Multiple sites have been identified at alternate or future sites. The sites are on properties owned by Polk County and its cities. At each site, if the tests on the initial exploration monitor well drilled are positive, a test production well will be constructed at the site. In addition, an aquifer performance test (APT) will be performed on the test production well to obtain transmissivity and leakance information as well as to determine the quality of the formation water. At each site, if the exploratory monitor well does not have sufficient porosity and permeability or suitable water quality, it will become a permanent monitor well, of the LFA for the District. In addition, if the test production well is sufficient for use as a production well it may be a candidate for addition to a regional water supply authority in Polk County. The Crooked Lake site is the exception, as the future potential use of a test/production well is for monitoring purposes.

Consolidated **Annual Report**

March 1, 2019

2019 Five-Year  
**Water Resource Development**  
Work Program



Southwest Florida  
*Water Management District*

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# Introduction/Purpose

The Water Management Districts are required to prepare a Five-Year Water Resource Development Work Program (Work Program) as a part of its annual budget reporting process. The Work Program describes the District's implementation strategy relating to water resource development (WRD) and water supply development (including alternative water supply development) components over the next five years. The Work Program must be submitted annually to the Governor, the President of the Senate, the Speaker of the House of Representatives, the chairs of all legislative committees and subcommittees having substantive or fiscal jurisdiction over the Districts, the Secretary of the Department of Environmental Protection (DEP), and the governing board of each county. Pursuant to Subsection 373.536(6)(a)4, Florida Statutes (F.S.), the Work Program must:

- Address all the elements of the water resource development component in the District's approved Regional Water Supply Plans (RWSPs), as well as the water supply projects proposed for District funding and assistance;
- Identify both anticipated available District funding and additional funding needs for the second through fifth years of the funding plan;
- Identify projects in the Work Program which will provide water;
- Explain how each water resource and water supply project will produce additional water available for consumptive uses;
- Estimate the quantity of water to be produced by each project;
- Provide an assessment of the contribution of the District's RWSPs in supporting the implementation of minimum flows and minimum water levels (MFLs) and water reservations; and
- Ensure sufficient water is available to timely meet the water supply needs of existing and future reasonable-beneficial uses for a 1-in-10-year drought event and to avoid the adverse effects of competition for water supplies.

This report represents the District's 18<sup>th</sup> Work Program and covers the period from fiscal year (FY) 2019 through FY2023. In the summer of 2018, the DEP provided a guidance document and template spreadsheets to improve the consistency among the Water Management Districts' Work Program submittals. This Work Program utilizes the DEP guidance, and therefore several changes from prior year Work Programs will be apparent. This Work Program is consistent with the planning strategies of the District's 2015 Regional Water Supply Plan (RWSP) and the Central Florida Water Initiative 2014 Regional Water Supply Plan (CFWI Plan).

The water resource and water supply development components of the District's Work Program are presented in three sections:

- WRD Data Collection and Analysis Activities that include routinely funded programmatic efforts by the District to monitor and support the health of natural systems, evaluate and establish MFLs, conduct watershed management planning, and to improve water quality and stormwater storage and conveyance.
- WRD Projects that are undertaken by the District and/or partnering entities for the research of alternative water supplies, the Facilitating Agricultural Resource Management Systems (FARMS) projects to conserve and improve agricultural resources, and environmental restoration efforts including MFLs recovery projects.
- Water Supply Development Projects, which are usually lead by other entities with District funding assistance, to develop and deliver new alternative potable water supplies, reclaimed water and reuse, aquifer storage and recovery (ASR) and aquifer recharge systems, and numerous conservation projects to help manage water needs.

Also included is an overview of funding mechanisms, a summary of the adequacy of District expenditures to ensure the availability of water for reasonable-beneficial uses and natural systems, and an appendix listing projects funded by the District to implement Basin Management Action Plans (BMAPs).

# Water Resource Development

Water resource development is defined in Section 373.019(24), F.S., as “the formulation and implementation of regional water resource management strategies, including the collection and evaluation of surface water and groundwater data; structural and nonstructural programs to protect and manage water resources; the development of regional water resource implementation programs; the construction, operation, and maintenance of major public works facilities to provide for flood control, surface and underground water storage, and groundwater recharge augmentation; and related technical assistance to local governments, government-owned and privately owned water utilities, and self-suppliers to the extent assistance to self-suppliers promotes the policies as set forth in s. 373.016.”

The intent of WRD activities and WRD projects is to enhance the amount of water available for reasonable-beneficial uses and for natural systems. The District is primarily responsible for implementing WRD activities and projects; however, additional funding and technical support may come from state, federal, and local entities.

## WRD Data Collection and Analysis Activities

Data collection and analysis activities are a critical part of the water resource development component implemented by the District. The District has budgeted approximately \$36.0 million in FY2019 to implement and continue activities to collect scientific data necessary to manage water resources and evaluate new water supplies, support the evaluation and establishment of MFLs, conduct watershed management plans, improve groundwater quality, and implement best management practices (BMPs) for stormwater storage and conveyance. These activities are summarized in **Table 1**. Because budgets for the years beyond FY2019 have not yet been developed, future funding estimates for activities continuing through FY2023 are set equal to FY2019 funding.

Funding for these activities is primarily from the District's Governing Board; in some cases, additional funding is provided by water supply authorities, local governments, the Florida Fish and Wildlife Conservation Commission (FWC), and the United States Geological Survey (USGS). Each item was included in the District's Tentative Budget Submission Appendix C and can be referenced by the sub-activity code. Each activity is further described below

### **Hydrologic Data Collection**

The District has a comprehensive monitoring program for hydrologic conditions that includes the assembly of information on key indicators as rainfall, surface water and groundwater levels, water quality, and stream flows. The program includes data collected by District staff and permittees as well as data collected as part of the District's cooperative funding program with the USGS. Data collected allows the District to gage changes in the health of water resources, monitor trends in conditions, identify and analyze existing or potential resource problems, and develop programs to correct existing problems and prevent future problems from occurring. The data collection activities support District flood control structure operations, water use and environmental resource permitting and compliance, MFLs evaluation and compliance, the Surface Water Improvement and Management (SWIM) program, the Southern Water Use Caution Area (SWUCA) recovery strategy, the Northern Tampa Bay Water Use Caution Area (NTBWUCA), the Dover/Plant City Water Use Caution Area (DPCWUCA), water supply planning in the District and CFWI regions, modeling of surface water and groundwater systems, and many resource evaluations and reports.

The categories of hydrologic data that are collected and monitored by District staff are discussed below. The District also evaluates the hydrologic data submitted by Water Use Permit (WUP) holders to ensure compliance with permit conditions and to assist with monitoring and documenting hydrologic conditions.

- a) Surface Water Flows and Levels. Funding supports data collection at the District's 815 surface water level gauging sites, and cooperative funding with the USGS for discharge and water-level data collection at 161 river, stream, and canal sites. The USGS data are available to District staff and the public through the District's Water Management Information System (WMIS) and through the USGS Florida Water Science Center Web Portal.

**Table 1. FY2019 - FY2023 Water Resource Development Data Collection and Analysis Activities**

<b>WRD Data Collection and Analysis Activities</b>	<b>Budget Reference<sup>1</sup></b>	<b>FY2019 Costs (\$)</b>	<b>FY2020 Costs (\$)</b>	<b>FY2021 Costs (\$)</b>	<b>FY2022 Costs (\$)</b>	<b>FY2023 Costs (\$)</b>	<b>Total Costs (\$)</b>	<b>Funding Source<sup>2</sup></b>
1) Hydrologic Data Collection								
a) Surface Water Flows & Levels	1.2.1, p.65	\$2,497,814	\$2,497,814	\$2,497,814	\$2,497,814	\$2,497,814	\$12,489,070	District, other WMDs, USGS, DEP, FWC
b) Geologic (includes ROMP)	1.2.1, p.65	\$2,058,566	\$2,058,566	\$2,058,566	\$2,058,566	\$2,058,566	\$10,292,830	
c) Meteorologic Data	1.2.1, p.65	\$270,832	\$270,832	\$270,832	\$270,832	\$270,832	\$1,354,160	
d) Water Quality	1.2.1, p.65	\$1,507,453	\$1,507,453	\$1,507,453	\$1,507,453	\$1,507,453	\$7,537,265	
e) Groundwater Levels	1.2.1, p.65	\$1,155,407	\$1,155,407	\$1,155,407	\$1,155,407	\$1,155,407	\$5,777,035	
f) Biologic Data	1.2.1, p.65	\$1,234,886	\$1,234,886	\$1,234,886	\$1,234,886	\$1,234,886	\$6,174,430	
g) Data Support	1.2.1, p.65	\$3,571,158	\$3,571,158	\$3,571,158	\$3,571,158	\$3,571,158	\$17,855,790	
2) Minimum Flows and Levels Program								
a) Technical Support	1.1.2, p.60	\$798,500	\$798,500	\$798,500	\$798,500	\$798,500	\$3,992,500	District, other WMDs, USGS, DEP, FWC
b) MFL Establishment	1.1.2, p.60	\$675,000	\$675,000	\$675,000	\$675,000	\$675,000	\$3,375,000	
c) Re-evaluation, etc.	1.1.2, p.60	\$1,008,182	\$1,008,182	\$1,008,182	\$1,008,182	\$1,008,182	\$5,040,910	
3) Watershed Management Planning	1.1.3, p.54	\$5,401,793	\$5,401,793	\$5,401,793	\$5,401,793	\$5,401,793	\$27,008,965	District, Local Cooperators
4) Quality of Water Improvement Program	2.2.3, p.85	\$663,175	\$663,175	\$663,175	\$663,175	\$663,175	\$3,315,875	District
5) Stormwater Improvements-Implementation of Storage and Conveyance BMPs	2.3.1, p.87	\$15,139,680	\$15,139,680	\$15,139,680	\$15,139,680	\$15,139,680	\$75,698,400	District, USGS
<b>Totals</b>		<b>\$35,982,446</b>	<b>\$35,982,446</b>	<b>\$35,982,446</b>	<b>\$35,982,446</b>	<b>\$35,982,446</b>	<b>\$179,912,230</b>	

Source: SWFWMD FY2019 Tentative Budget Submission.

<sup>1</sup> Budget Reference contains the Budget Sub-Activity Code and the printed page number in the Tentative Budget Submission where project is referenced as a major budget item.<sup>2</sup> Acronyms: WMDs - Water Management Districts, USGS - United States Geological Survey, DEP - Florida Department of Environmental Protection, FWC - Florida Fish and Wildlife Conservation Commission, ROMP - District Regional Observation and Monitor-well Program, BMPs - Best Management Practices.

- b) Geohydrologic Data Well Network. The Geohydrologic Data Well Network is a monitor well network that supports various projects throughout the District including the CFWI, Water Resource Assessment Projects, recovery strategies, the Springs Team, sea level rise and other salt-water intrusion assessments, and development of alternative water supplies. The network includes the Regional Observation and Monitor-well Program (ROMP) which has been the District's primary means for hydrogeologic data collection since 1974. Data from monitor well sites are used to evaluate seasonal and long-term changes in groundwater levels and quality, as well as the interaction and connectivity between groundwater and surface water bodies. Lithologic and hydrogeologic information is collected during construction of new well sites.
- c) Meteorologic Data. The meteorologic data monitoring program consists of measuring rainfall totals every 15 minutes at 145 near real-time rain gauges and 40 recording rain gauges. The funding is for costs associated with measurement of rainfall including sensors, maintenance, repair and replacement of equipment. Funding allows for the operation of a mixed-forest wetland evapotranspiration (ET) station by the USGS that directly measures actual ET, and one District site for reference ET. Funding provides for District participation in a cooperative effort between the USGS and all five Florida water management districts to map statewide potential and reference ET using data measured from the Geostationary Operational Environmental Satellites (GOES). Funding also includes a collaborative effort between the five districts to provide high-resolution radar rainfall data for modeling purposes.
- d) Water Quality Data. The District's Water Quality Monitoring Program (WQMP) collects data from water quality monitoring networks for springs, streams, lakes, and coastal and inland rivers. Many monitoring sites are sampled on a routine basis, with data analysis and reporting conducted on an annual basis. The Coastal Groundwater Quality Monitoring network, which involves sample collection and analysis from approximately 380 wells across the District, is used to monitor the saltwater intrusion and/or the upwelling of mineralized waters into potable aquifers.
- e) Groundwater Levels. The funding provides for the maintenance and support of 1,605 monitor wells in the data collection network, including 840 wells that are instrumented with data loggers that record water levels once per hour, and 765 that are measured manually by field technicians once or twice per month.
- f) Biologic Data. The District monitors ecological conditions as they relate to both potential water use impacts and changes in hydrologic conditions. Funding for biologic data collection includes support for routine monitoring of approximately 190 wetlands to document changes in wetland health and assess level of recovery in impacted wetlands. Funding also supports SWIM Program efforts for mapping and monitoring of seagrasses in Tampa Bay, Sarasota Bay, Charlotte Harbor, the Springs Coast, and mapping of estuarine hard bottom in Tampa Bay.
- g) Data Support. This item provides administrative and management support for the WQMP, hydrologic and geohydrologic staff support, support for the chemistry laboratory, and support for the District's Supervisory Control and Data Acquisition (SCADA) system.

### ***Minimum Flows and Levels Program (MFLs)***

Minimum Flow and water levels are hydrologic and ecological standards that can be used for permitting and planning decisions concerning how much water may be withdrawn from or near a water body without causing significant harm to water resources or ecology of the area. Chapter 373.042, F.S., requires the state water management districts or the DEP to establish MFLs for aquifers, surface watercourses, and other surface water bodies to identify the limit or level at which further withdrawals would be significantly harmful. Rivers, streams, estuaries, and springs require minimum flows; while minimum levels are developed for lakes, wetlands, and aquifers. MFLs are adopted into District rules, Chapter 40D-8, Florida Administrative Code (F.A.C.), and are used in the District's WUP and water supply planning programs.

The District's process for establishing MFLs includes opportunities for interested stakeholders to review and comment on proposed MFLs and participate in public meetings. The process for establishing MFLs for flowing water bodies also includes an independent scientific peer review process. Stakeholder input and peer review findings are considered by the Governing Board when deciding whether to adopt proposed MFLs. District monitoring programs provide data for evaluating compliance with the adopted MFLs, determining the need for recovery or prevention strategies and assessing the recovery of water bodies where significant harm has occurred.

As of August 2018, the District has preliminarily planned to establish and monitor 210 MFLs including MFLs for 23 river segments, 10 springs or spring groups, 127 lakes, 41 wetlands, 7 wells in the NTBWUCA, and the Upper Floridan aquifer in the Most Impacted Area (MIA) of the SWUCA and in the DPCWUCA. The District is scheduling the establishment or reevaluation of 78 additional MFLs through FY2023. The District's annual MFL Priority List and Schedule and Reservations List and Schedule is reviewed by DEP in November and is published in the Consolidated Annual Report. The proposed and approved schedules can also be found on the District's webpage at:

<https://www.swfwmd.state.fl.us/projects/mfl/documents-and-reports>

### ***Watershed Management Planning***

The District addresses flooding problems in existing areas by preparing and implementing Watershed Management Plans (WMPs) in cooperation with local governments. The WMPs define flood conditions, identify flood level of service deficiencies, and evaluate BMPs to address those deficiencies. The WMPs include consideration of the capacity of a watershed to protect, enhance, and restore water quality and natural systems while achieving flood protection. The plans identify effective watershed management strategies and culminate in defining floodplain delineations and constructing selected BMPs.

Local governments and the District combine their resources and exchange watershed data to implement the WMPs. Funding for local elements of the WMPs is provided through local governments' capital improvement plans and the District's Cooperative Funding Initiative. Additionally, flood hazard information generated by the WMPs is used by the Federal Emergency Management Agency (FEMA) to revise Flood Insurance Rate Maps. This helps to better define flood risk and is used extensively for land use planning by local governments and property owners. Since the WMPs may change based on growth and shifting priorities, the District also cooperates with local governments to update the WMPs when necessary, giving decision-makers opportunities throughout the program to determine when and where funds are needed.

### ***Quality of Water Improvement Program (QWIP)***

The QWIP was established in 1974 through Chapter 373, F.S., to restore groundwater conditions altered by well drilling activities for domestic supply, agriculture, and other uses. The program's primary goal is to preserve groundwater and surface water resources through proper well abandonment. Plugging abandoned artesian wells eliminates the waste of water at the surface and prevents mineralized groundwater from contaminating surface water bodies. Thousands of wells constructed prior to current well construction standards were often deficient in casing, which interconnected aquifer zones and enabled poor-quality mineralized water to migrate into zones containing potable-quality water.

Plugging wells involves filling the abandoned well with cement or bentonite. Isolation of the aquifers is reestablished, and the mixing of varying water qualities and free flow is stopped. Prior to plugging an abandoned well, geophysical logging is performed to determine the reimbursement amount, the proper plugging method, and to collect groundwater quality and geologic data for inclusion in the District's database. The emphasis of the QWIP is primarily in the SWUCA where the Upper Floridan aquifer is confined. Historically, the QWIP has proven to be a cost-effective method to prevent waste and contamination of potable ground and surface waters.

### ***Stormwater Improvements - Implementation of Storage and Conveyance BMPs***

The District's WMPs and SWIM programs implement stormwater and conveyance BMPs for preventative flood protection to improve surface water quality, particularly in urban areas, and enhance surface and groundwater resources. The BMPs involve construction of improvements identified and prioritized in the development of watershed management plans. Most of the activities are developed through cooperative funding with a local government entity, DEP, or other state funding. As stormwater is a primary contributor of water quality degradation in older urban areas, the District seeks opportunities to retrofit or improve these systems to reduce impacts to receiving waters. FY2019 funding includes new storage and conveyance projects in the Tampa Bay area, particularly in Pasco County, as well as several continuing Tampa Bay projects, and several new projects in the springsheds of first-magnitude springs.

## WRD Projects

The District has budgeted for 33 WRD “projects” that have particular goals and schedules. At the start of FY2019 (October 1, 2018), the District has allocated approximately \$14.6 million in the budget for these projects. If a project received funding in prior years and is still ongoing, it remains in the Work Program until completion. District funding for a number of the projects is matched to varying degrees by local cooperators including municipalities, state agencies, private agricultural operations, and others. The total cost of these projects, including the cooperator shares, is approximately \$132 million. It’s estimated that approximately 72 million gallons per day (mgd) of additional water supply will be produced or conserved. The projects are listed in **Table 2** and are consistent with Programmatic Code 2.2.1 in the District’s FY2019 budget. The WRD projects are organized into three groups:

### ***Alternative Water Supply Feasibility Research and Pilot Projects***

These projects are research and/or pilot projects designed to further the development of the innovative alternative water sources described in the RWSP. The projects for investigation of the Lower Floridan aquifer are primarily District-led initiatives. The ASR and Aquifer Recharge projects may involve both technical and financial assistance from the District.

### ***Facilitating Agricultural Resource Management Systems (FARMS)***

The FARMS Program is an agricultural BMP cost-share reimbursement program. The program is a public/private partnership developed by the District and the Florida Department of Agriculture and Consumer Services (FDACS). The program provides incentives to the agricultural community within the District to implement agricultural BMPs that will provide resource benefits, including the reduction of groundwater withdrawals from the Upper Floridan aquifer, improvement of ground and surface water quality impacted by groundwater withdrawals, and improvement of natural-system functions within wetlands and watersheds.

The FARMS Program operates under Rule 40D-26 F.A.C. to fund projects that provide these benefits while assisting in the implementation of the District’s RWSP. This plan identifies strategic initiatives and regional priorities to meet the District’s water management goals. These goals are based on improving and/or maintaining the water resource conditions of several regions within the District. Five primary goals for the FARMS Program are to:

1. Improve surface water quality in the Shell, Prairie, and Joshua Creek watersheds;
2. Improve natural systems in the Upper Myakka River Watershed and restore hydro-periods to Flatford Swamp;
3. Reduce groundwater use by 40 million gallons per day (mgd) in the SWUCA;
4. Reduce groundwater use for Frost/Freeze Protection within the DPCWUCA by 20 percent per freeze event;
5. Reduce Upper Floridan aquifer groundwater use and nutrient loading impacts in the Springs Coast.

The FARMS projects implement FDACS-approved BMPs that offset groundwater use with surface water and/or increase the overall efficiency of irrigation water use. Many projects have the added benefit of reducing agricultural impacts to surface water features. Properly implemented BMPs protect and conserve water resources and may increase crop production.

### ***Environmental Restoration and MFL Recovery Projects***

These projects include MFL recovery projects for the upper Peace River, The lower Hillsborough River, Lake Jackson in Highlands County, and the Salt Water Intrusion Minimum Aquifer Level (SWMIAL) for the SWUCA Recovery Strategy. The SWMIAL Recovery project has the additional benefit of utilizing excess runoff that has adversely impacted the Flatford Swamp in the upper Myakka River watershed.

At the DEP’s guidance, additional project details are available in spreadsheet format. The DEP will present Work Program project data from each of the water management districts on their website for public review, in accordance with Section 373.536(6)(b), F.S. The detailed spreadsheet includes project descriptions, schedules, cooperator and state funding levels, and the water bodies and planning regions supported. The District’s proposed Work Program spreadsheet is available online at:

<https://www.swfwmd.state.fl.us/resources/plans-reports/water-resource-development-work-program>

**Table 2. FY2019 - FY2023 District Funding and Total Project Cost for Water Resource Development Projects**

WRD Projects (WUCA, Project Number) <sup>1</sup>	Total Prior District Funding	FY2019 District Cost	FY2020 District Cost	FY2021 District Cost	FY2022 District Cost	FY2023 District Cost	Total Cost District + Cooperator	Funding Source <sup>1 2</sup>	Quantity developed/ conserved <sup>1</sup>	
<b>1) Alternative Water Supply Feasibility Research and Pilot Projects (Programmatic Code 2.2.1.1)</b>										
a)	South Hillsborough Aquifer Recharge Program (SHARP) (N287)	\$1,382,500	\$0	\$0	\$0	\$0	\$2,765,000	District, Hillsborough County	2 mgd	
b)	Bradenton Aquifer Protection Recharge Well (N842)	\$500,000	\$1,000,000	\$900,000	\$100,000	\$25,000	\$0	\$5,025,000	District, City of Bradenton	5 mgd
c)	PRMRWSA Partially Treated Water ASR (N854)	\$120,500	\$375,000	\$3,269,500	\$0	\$0	\$0	\$7,755,000	District, PRMRWSA	3 mgd
d)	Southern Hillsborough Aquifer Recharge Expansion (SHARE) Phase 1 (N855)	\$2,265,000	\$2,235,000	\$350,000	\$0	\$0	\$0	\$9,700,000	District, Hillsborough County	4 mgd
e)	Braden River Utilities ASR Feasibility (N912)	\$1,945,625	\$790,625	\$261,250	\$0	\$0	\$0	\$5,995,000	District, Braden River Utilities	TBD
f)	Hydrogeologic Investigation of LFA in Polk County (P280)	\$9,605,386	\$2,385,690	\$0	\$0	\$0	\$0	\$11,991,076	District	NA
g)	Optical Borehole Imaging Data Collection from LFA Wells (P925)	\$100,200	\$0	\$0	\$0	\$0	\$0	\$167,000	District, USGS	NA
h)	Sources/Ages of Groundwater in LFA Wells (P926)	\$368,300	\$0	\$0	\$0	\$0	\$0	\$555,800	District, USGS	NA
<b>2) Facilitating Agricultural Resource Management Systems (FARMS) (Programmatic Code 2.2.1.2)</b>										
a)	FARMS Projects (H017) <sup>3</sup>	Annual Request	\$6,000,000	\$6,000,000	\$6,000,000	\$6,000,000	\$6,000,000	\$30,000,000	District, FDACS, State, private farms	40 mgd <sup>3</sup>
a.1)	FARMS - Tamiami Citrus-64 Grove (H730)	\$655,000	\$0	\$0	\$0	\$0	\$0	\$1,310,000	District, Tamiami Citrus, LLC	0.2 mgd
a.2)	FARMS - Brenner Groves (H747)	\$258,495	\$0	\$0	\$0	\$0	\$0	\$386,462	District, Brenner Groves	0.013 mgd
a.3)	FARMS - Marion County Equine Compost Facility Pilot (H751)	\$100,000	\$0	\$0	\$0	\$0	\$0	\$200,000	District, FDACS	NA
a.4)	FARMS - QC Prairie River Ranch (H756)	\$436,448	\$0	\$0	\$0	\$0	\$0	\$581,896	District, DeSoto Grove Ventures	0.1 mgd
a.5)	FARMS - KLM Farms (H757)	\$221,938	\$0	\$0	\$0	\$0	\$0	\$295,917	District, KLM Farms, LLC	0.069 mgd
a.6)	FARMS - Doe Hill Citrus Phase 2 (H758)	\$262,000	\$0	\$0	\$0	\$0	\$0	\$552,000	District, J.R. Paul Properties, Inc.	0.085 mgd
a.7)	FARMS - Farmland Reserve Inc - Sun City (H760)	\$196,300	\$0	\$0	\$0	\$0	\$0	\$266,300	District, Farmland Reserve Inc	0.055 mgd
a.8)	FARMS - QC Pelican Grove (H761)	\$560,000	\$0	\$0	\$0	\$0	\$0	\$902,000	District, QC Pelican Grove	0.035 mgd
a.9)	FARMS - Ocean Breeze Properties (H763)	\$79,030	\$0	\$0	\$0	\$0	\$0	\$105,372	District, Ocean Breeze Properties	0.017 mgd
a.10)	FARMS - Council Growers Inc (H764)	\$576,600	\$0	\$0	\$0	\$0	\$0	\$924,500	District, Council Growers Inc.	0.142 mgd

WRD Projects (WUCA, Project Number) <sup>1</sup>		Total Prior District Funding	FY2019 District Cost	FY2020 District Cost	FY2021 District Cost	FY2022 District Cost	FY2023 District Cost	Total Cost District + Cooperator	Funding Source <sup>1 2</sup>	Quantity developed/ conserved <sup>1</sup>
a.11)	FARMS - Reynolds Farms Inc - Anne's Block (H766)	\$99,749	\$0	\$0	\$0	\$0	\$0	\$133,379	District, Estate of Anne D Reynolds	0.033 mgd
a.12)	FARMS - Dixie Groves & Cattle Company (H767)	\$254,000	\$0	\$0	\$0	\$0	\$0	\$467,000	District, Dixie Groves & Cattle Company	0.12 mgd
a.13)	FARMS - Hi Hat Ranch (H769)	\$111,739	\$0	\$0	\$0	\$0	\$0	\$148,985	District, Hi Hat Ranch, LLLP	0.11 mgd
a.14)	FARMS - Bethel Farms - Hog Bay Farm (H770)	\$191,662	\$0	\$0	\$0	\$0	\$0	\$280,552	District, Bethel Farms, LLLP	0.06 mgd
a.15)	FARMS - 734 LMC Groves - Lily Grove (H771)	\$74,184	\$0	\$0	\$0	\$0	\$0	\$104,389	District, Alico, Inc.	0.027 mgd
b)	Mini-FARMS Program (H529) <sup>3</sup>	Annual Request	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$750,000	District, FDACS	2 mgd
c)	IFAS BMP Implementation Team (H579) <sup>3</sup>	Annual Request	\$0	\$0	\$0	\$0	\$0	\$0	District, IFAS	NA
d)	FARMS Well Back-Plugging Program (H015) <sup>3</sup>	Annual Request	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$150,000	District	NA
e)	FARMS Meter Accuracy Support (P429) <sup>3</sup>	Annual Request	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$125,000	District	NA
<b>3) Environmental Restoration/Minimum Flows and Levels Recovery <sup>4</sup> (Programmatic Code 2.2.1.3)</b>										
a)	MFL Recovery Lake Hancock Design, Permit, Mitigation to Raise Lake (H008)	\$6,882,240	\$0	\$0	\$0	\$0	\$0	\$6,882,240		2.7 mgd
b)	MIA Recharge SWIMAL Recovery at Flatford Swamp (H089)	\$19,845,504	\$1,445,000	\$1,440,000	\$3,000,000	\$3,000,000	\$3,000,000	\$31,730,504	District	6.0 mgd
c)	Lower Hillsborough River Recovery Strategy (H400)	\$5,464,712	\$0	\$0	\$0	\$0	\$0	\$10,857,462	District, City of Tampa	3.1 mgd
d)	Pump Stations on Tampa Bypass Canal, Morris Bridge Sink (H404) <sup>3</sup>	Annual Request	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$750,000	District	3.9 mgd
e)	Lake Jackson Watershed Hydrology Investigation (N554)	\$260,000	\$0	\$0	\$0	\$0	\$0	\$360,000	District, Highlands County, City of Sebring	NA
<b>WRD Project Totals</b>		<b>\$52,817,112</b>	<b>\$14,586,315</b>	<b>\$12,575,750</b>	<b>\$9,455,000</b>	<b>\$9,380,000</b>	<b>\$9,355,000</b>	<b>\$132,217,834</b>		<b>71.7 mgd<sup>4</sup></b>

<sup>1</sup> Acronyms: TBD - to be determined, NA - not applicable, mgd - million gallons per day, FDACS - Florida Department of Agriculture and Consumer Services, IFAS - University of Florida Institute of Agricultural Sciences, MIA - Most Impacted Area of the SWUCA, SWIMAL - Salt Water Intrusion Minimum Aquifer Level, USGS - United States Geological Survey.

<sup>2</sup> Funding identified as the State of Florida is described in the *Funding Sources* section of this report.

<sup>3</sup> Future funding budget estimates for which specific time frames are not yet determined are distributed evenly over future years.

<sup>4</sup> The FARMS lead program (H017) and the subprojects are collectively counted as 40 mgd.

## Water Supply Development Assistance

Water supply development is defined as the design, construction, operation, and maintenance of public or private facilities for water collection, production, treatment, transmission, or distribution for sale, resale, or end use (Section 373.019(26), F.S.). Regional water supply authorities, local governments, and public and privately-owned water utilities typically have the lead role in implementing water supply development projects (Section 373.705, F.S.). The District provides funding assistance to these entities for projects that are consistent with the District's Strategic Plan, Water Management Plans, Surface Water Improvement and Management Plans, and the District and CFWI RWSPs. Final decisions regarding the funding of projects are the exclusive responsibility of the District's Governing Board. The District's primary funding mechanism for water supply development assistance is the Cooperative Funding Initiative (CFI) Program, which is described in the Funding Sources section of this Work Program.

The District has 89 budgeted or ongoing water supply development projects in FY2019, including 6 water supply planning projects that support water supply development. As shown in **Table 3-h**, the District is funding approximately \$27.0 million in FY2019 for water supply development assistance. The project budgets shown are consistent with the District's Programmatic Budget under activity codes 2.2.2 (water supply development) and 1.1.1 (water supply planning). The water supply projects are listed in **Table 3-a to 3-g**, grouped by the following budget sub-categories and sorted by project code number:

- Surface Water Projects (none ongoing in FY2019)
- Regional Potable Water Interconnect Projects
- Reclaimed Water Projects
- Brackish Groundwater Development Projects
- ASR and Aquifer Recharge Projects (note: some have reclaimed water components)
- Conservation Projects
- Water Supply Planning Projects

Most water supply development projects are funded within one year, but large projects may have construction budgets over multiple years to coincide with each year's predicted expenses. Since the District's budget is adopted on an annual basis, the future funding for ongoing projects is estimated based on projected costs and schedules. Additional future funding will be needed for new projects that aren't yet proposed through the CFI Program. The District anticipates new reclaimed water and conservation projects will require funding levels similar the FY2019. The amount needed for new regional interconnects and water treatment facilities can vary greatly from year to year, peaking as large infrastructure projects move from design to construction phases. Significant new funding that may be proposed in the FY2020-23 timeframe for expansions of the PRMRWSA Regional Loop System, next phases of the Tampa Augmentation Project and the PRWC Southeast Wellfield, Tampa Bay Water's System Configuration 3 Projects, and multiple new aquifer recharge projects.

The listed projects that have no FY2019 or future funding are ongoing with prior year funding. Projects are omitted from the Work Program when they are completed.

At the DEP's guidance, additional project details are available in spreadsheet format. The DEP will present Work Program project data from each of the water management districts on their website for public review, in accordance with Section 373.536(6)(b), F.S. The detailed spreadsheet includes project descriptions, schedules, cooperator and state funding levels, and the waterbodies and planning regions supported. The District's proposed Work Program project spreadsheet is available online at:

<https://www.swfwmd.state.fl.us/resources/plans-reports/water-resource-development-work-program>

**Table 3-a. Surface Water Projects** (No ongoing projects this fiscal year)

Project Number	Water Supply Development Assistance - Surface Water Projects (Programmatic Budget 2.2.2.1)	Prior District Funding	FY2019 Funding	FY2020 Funding	FY2021 Funding	FY2022 Funding	FY2023 Funding	Total Project Cost	Supply (mgd)
<b>Total Surface Water Projects</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>0.000</b>

**Table 3-b. Regional Potable Interconnects**

Project Number	Water Supply Development Assistance - Regional Potable Water Interconnects (Programmatic Budget 2.2.2.2)	Prior District Funding	FY2019 Funding	FY2020 Funding	FY2021 Funding	FY2022 Funding	FY2023 Funding	Total Project Cost	Supply (mgd)
H094	Polk County Partnership <sup>1</sup>	\$40,000,000	\$5,000,000	\$0	\$0	\$0	\$0	\$42,000,000	NA
N416	PRMRWSA Regional Loop System Phase 1 DeSoto to Punta Gorda	\$6,000,000	\$0	\$0	\$0	\$0	\$0	\$12,000,000	NA
N823	PRMRWSA Regional Integrated Loop System Phase 3B	\$1,230,000	\$5,700,000	\$1,170,000	\$0	\$0	\$0	\$16,700,000	NA
N965	TBW Tampa Bypass Canal Gates Automation	\$0	\$210,700	\$305,300	\$0	\$0	\$0	\$1,032,000	NA
N998	TBW Regional Facility Site Pump Station Expansion	\$0	\$108,000	\$1,092,000	\$0	\$0	\$0	\$2,400,000	NA
<b>Total Regional Interconnect Projects</b>		<b>\$47,230,000</b>	<b>\$11,018,700</b>	<b>\$2,567,300</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$74,132,000</b>	<b>0.000</b>

**Table 3-c. Reclaimed Water Projects**

Project Number	Water Supply Development Assistance - Reclaimed Water Projects (Programmatic Budget 2.2.2.3)	Prior District Funding	FY2019 Funding	FY2020 Funding	FY2021 Funding	FY2022 Funding	FY2023 Funding	Total Project Cost	Benefit (mgd)
N339	Winter Haven #3 Reclaimed Interconnect, Storage, and Pumping	\$2,750,000	\$0	\$0	\$0	\$0	\$0	\$9,466,000	0.300
N536	Auburndale Polytechnic Reclaimed Water Storage and Transmission	\$1,500,000	\$0	\$0	\$0	\$0	\$0	\$3,000,000	1.500
N556	Charlotte County Reclaimed Water Expansion Phase 3	\$4,715,000	\$0	\$0	\$0	\$0	\$0	\$9,430,000	2.230
N696	Hernando County US19 Reclaimed Water Transmission, Phase 1	\$9,000,000	\$0	\$0	\$0	\$0	\$0	\$12,000,000	1.700
N711	Lakewood Ranch Stewardship District Reclaimed Water Transmission	\$2,300,000	\$0	\$0	\$0	\$0	\$0	\$4,600,000	1.000
N755	Hillsborough County Integrated Water Resource Feasibility/Design Phase 3	\$450,000	\$0	\$0	\$0	\$0	\$0	\$900,000	TBD
N772	Polk County NERUSA Loughman/Ridgewood Reclaimed Water Transmission	\$1,252,500	\$0	\$0	\$0	\$0	\$0	\$2,505,000	0.345
N776	Hillsborough County 19th Ave Reclaimed Water Transmission Main	\$2,713,671	\$0	\$0	\$0	\$0	\$0	\$5,427,342	1.200
N778	Pasco County Bexley South Reclaimed Water Transmission Phase 2	\$112,500	\$0	\$0	\$0	\$0	\$0	\$225,000	0.200
N791	Pasco County Starkey Ranch Reclaimed Water Transmission Project C	\$347,927	\$108,873	\$0	\$0	\$0	\$0	\$913,600	0.430
N792	Pasco County Reclaimed Water Transmission Main Ridge Golf Course	\$1,250,000	\$0	\$0	\$0	\$0	\$0	\$2,500,000	0.680

Table 3-c. Reclaimed Water Projects (continued)

Project Number	Water Supply Development Assistance - Reclaimed Water Projects (Programmatic Budget 2.2.2.3)	Prior District Funding	FY2019 Funding	FY2020 Funding	FY2021 Funding	FY2022 Funding	FY2023 Funding	Total Project Cost	Benefit (mgd)
N796	City of Winter Haven Reuse Interconnect and Aquifer Recharge	\$150,000	\$0	\$0	\$0	\$0	\$0	\$300,000	0.500
N804	Hillsborough County Sun City Golf Courses RW Expansion	\$739,779	\$0	\$0	\$0	\$0	\$0	\$2,989,779	1.500
N805	City of Tarpon Springs Westwinds/Grassy Pointe Reclaimed Water System	\$297,708	\$0	\$0	\$0	\$0	\$0	\$595,417	0.070
N817	Hillsborough County Countywide Reclaimed Water Major User Connect	\$500,000	\$0	\$0	\$0	\$0	\$0	\$1,000,000	0.350
N837	Pasco County Cypress Preserve Reclaimed Water Transmission	\$17,500	\$140,000	\$0	\$0	\$0	\$0	\$315,000	0.190
N862	Polk County Utilities NERUSA CR 547 Reclaimed Water Transmission Phase 1	\$50,000	\$384,750	\$0	\$0	\$0	\$0	\$869,500	0.377
N863	Hillsborough County Summerfield Sports Complex	\$77,500	\$0	\$0	\$0	\$0	\$0	\$155,000	0.065
N868	Polk County Utilities NERUSA Ernie Caldwell Blvd Reclaimed Water Transmission	\$1,056,500	\$0	\$0	\$0	\$0	\$0	\$2,113,000	0.414
N881	Arcadia Golf Course RW Storage Reservoir	\$225,000	\$0	\$0	\$0	\$0	\$0	\$300,000	0.100
N888	Haines City Rapid Infiltration Basin and Reuse Improvements	\$112,500	\$112,500	\$0	\$0	\$0	\$0	\$300,000	N/A
N898	Haines City Reclaimed Water Tank and Pump Stations Project	\$225,000	\$1,125,000	\$3,270,000	\$0	\$0	\$0	\$6,160,000	N/A
N899	Polk County Utilities Reclaimed Water Recharge Study in DPC WUCA & NW Polk	\$250,000	\$250,000	\$94,500	\$0	\$0	\$0	\$1,189,000	1.500
N918	Polk County Utilities NERUSA FDC Grove Road Reclaimed Water Transmission	\$848,000	\$0	\$0	\$0	\$0	\$0	\$1,696,000	0.142
N920	West Villages District Reclaimed Water transmission to South Sarasota County	\$356,000	\$0	\$0	\$0	\$0	\$0	\$712,000	0.250
N983	Hernando Co Airport Water Reclamation Facility RW Main and Pumping Station	\$0	\$375,000	\$1,200,000	\$3,212,500	\$3,212,500	\$0	\$16,000,000	2.000
P130	City of Crystal River/Duke Energy Reclaimed Water Interconnection	\$4,290,000	\$0	\$0	\$0	\$0	\$0	\$6,573,625	0.440
Q005	Trop North Amer Tropicana Industrial RW Construction	\$0	\$2,350,000	\$0	\$0	\$0	\$0	\$4,800,000	0.500
Q021	Pasco Co Cypress Preserve RW Transmission Main - Grand Live Oak Blvd	\$0	\$206,500	\$0	\$0	\$0	\$0	\$413,000	TBD
Q022	Bowling Green RW Transmission Line	\$0	\$833,250	\$0	\$0	\$0	\$0	\$1,111,000	0.140
Q028	Tampa Augmentation Project Feasibility/Testing Phase II	\$0	\$1,145,500	\$0	\$0	\$0	\$0	\$2,291,000	TBD
<b>Total Reclaimed Water Projects</b>		<b>\$35,587,085</b>	<b>\$7,031,373</b>	<b>\$4,564,500</b>	<b>\$3,212,500</b>	<b>\$3,212,500</b>	<b>\$0</b>	<b>\$100,850,263</b>	<b>18.123</b>

**Table 3-d. Brackish Groundwater Projects**

Project Number	Water Supply Development Assistance - Brackish Groundwater Development Projects (Programmatic Budget 2.2.2.4)	Prior District Funding	FY2019 Funding	FY2020 Funding	FY2021 Funding	FY2022 Funding	FY2023 Funding	Total Project Cost	Supply (mgd)
N600	Punta Gorda Reverse Osmosis Project - Brackish Wellfield Investigation	\$1,500,000	\$0	\$0	\$0	\$0	\$0	\$3,000,000	Study
N780	Punta Gorda Reverse Osmosis Project - Facility Construction	\$7,575,000	\$6,575,000	\$0	\$0	\$0	\$0	\$29,200,000	4.000
N882	PRWC West Polk County Lower Floridan Deep Wells <sup>2</sup>	\$4,650,000	\$0	\$0	\$0	\$0	\$0	\$9,300,000	5.000
N905	PRWC Southeast Wellfield Lower Floridan <sup>3</sup>	\$5,900,000	\$0	\$0	\$5,755,887	\$37,523,952	\$48,150,204	\$11,800,000	10.000
N976	Belleair Hydrogeologic Investigation for a Brackish GW Water Supply	\$0	\$339,992	\$169,995	\$0	\$0	\$0	\$1,019,975	Study
<b>Total Brackish Groundwater Projects</b>		<b>\$19,625,000</b>	<b>\$6,914,992</b>	<b>\$169,995</b>	<b>\$5,755,887</b>	<b>\$37,523,952</b>	<b>\$48,150,204</b>	<b>\$54,319,975</b>	<b>19.000</b>

**Table 3-e. Aquifer Recharge and Aquifer Storage and Recovery Projects**

Project Number	Water Supply Development Assistance - Aquifer Recharge & ASR Projects (Programmatic Budget 2.2.2.5)	Prior District Funding	FY2019 Funding	FY2020 Funding	FY2021 Funding	FY2022 Funding	FY2023 Funding	Total Project Cost	Supply (mgd)
K269	Sarasota County North Reclaimed Water ASR	\$1,686,382	\$0	\$0	\$0	\$0	\$0	\$3,207,900	1.000
N665	City of Clearwater Groundwater Replenishment Project Phase 3	\$11,685,600	\$500,000	\$4,172,400	\$0	\$0	\$0	\$32,716,000	2.400
<b>Total Aquifer Recharge/ASR Projects</b>		<b>\$13,371,982</b>	<b>\$500,000</b>	<b>\$4,172,400</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$35,923,900</b>	<b>3.400</b>

**Table 3-f. Water Conservation Projects**

Project Number	Water Supply Development Assistance - Conservation Rebates, Retrofits, Etc. Projects (Programmatic Budget 2.2.2.7)	Prior District Funding	FY2019 Funding	FY2020 Funding	FY2021 Funding	FY2022 Funding	FY2023 Funding	Total Project Cost	Benefit (mgd)
B015	Water Incentives Supporting Efficient (WISE) Program	\$0	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	Annual Request	0.007
N714	Polk County Landscape/Irrigation Eval Program	\$27,500	\$0	\$0	\$0	\$0	\$0	\$55,000	0.028
N757	Bay Laurel Irrigation Controller/ET Sensor Upgrade	\$41,678	\$0	\$0	\$0	\$0	\$0	\$83,356	0.024
N779	Marion County Toilet Rebate Program Phase 4	\$32,000	\$0	\$0	\$0	\$0	\$0	\$64,000	0.010
N815	Arcadia South Distribution Looping Project	\$236,250	\$0	\$0	\$0	\$0	\$0	\$315,000	0.026
N819	City of St. Petersburg Toilet Rebate Program Phase 16	\$50,000	\$0	\$0	\$0	\$0	\$0	\$100,000	0.010
N820	Polk County Landscape & Irrigation Evaluation Program	\$41,400	\$0	\$0	\$0	\$0	\$0	\$82,800	0.042
N840	Venice Advanced Metering Analytics Project	\$11,000	\$0	\$0	\$0	\$0	\$0	\$22,000	0.004
N845	Pasco County Florida Water Star Pilot Project	\$35,000	\$0	\$0	\$0	\$0	\$0	\$70,000	0.013
N846	Polk County Landscape and Irrigation Evaluation	\$42,500	\$0	\$0	\$0	\$0	\$0	\$85,000	0.042
N852	Pasco County ULV Toilet Rebate Program Phase 11	\$50,000	\$0	\$0	\$0	\$0	\$0	\$100,000	0.014
N860	Citrus County Water Sense Labeled Irrigation Controller Account Credit	\$16,875	\$0	\$0	\$0	\$0	\$0	\$33,750	0.017

**Table 3-f. Water Conservation Projects (continued)**

Project Number	Water Supply Development Assistance - Conservation Rebates, Retrofits, Etc. Projects (Programmatic Budget 2.2.2.7)	Prior District Funding	FY2019 Funding	FY2020 Funding	FY2021 Funding	FY2022 Funding	FY2023 Funding	Total Project Cost	Benefit (mgd)
N875	St Petersburg Water Star Rebate Pilot Project	\$24,850	\$0	\$0	\$0	\$0	\$0	\$49,700	0.009
N876	New Port Richey Toilet Rebate Program Phase 4	\$7,470	\$0	\$0	\$0	\$0	\$0	\$14,940	0.002
N877	Manatee County Toilet Rebate Project Phase 11	\$113,250	\$0	\$0	\$0	\$0	\$0	\$226,500	0.040
N890	St Petersburg Residential Clothes Washer Rebate Pilot Project	\$12,350	\$0	\$0	\$0	\$0	\$0	\$24,700	0.002
N909	St Petersburg Sensible Sprinkling Program Phase 8	\$50,000	\$0	\$0	\$0	\$0	\$0	\$100,000	0.056
N921	Bay Laurel Center CDD Irrigation Controller/ET Sensor Upgrade Project	\$43,760	\$0	\$0	\$0	\$0	\$0	\$87,520	0.023
N922	Bay Laurel Center CDD Water Star Rebate Pilot	\$26,250	\$0	\$0	\$0	\$0	\$0	\$52,500	0.010
N948	PRWC Indoor Water Conservation Incentives	\$0	\$78,000	\$0	\$0	\$0	\$0	\$156,000	0.092
N955	St. Petersburg Toilet Rebate Program Phase 17	\$0	\$25,000	\$0	\$0	\$0	\$0	\$50,000	0.007
N958	Citrus County Water Sense Labeled Irrigation Controller Installation Phase 2	\$0	\$16,875	\$0	\$0	\$0	\$0	\$33,750	0.011
N961	St. Petersburg Satellite Based Potable Water Leak Detection	\$0	\$60,000	\$0	\$0	\$0	\$0	\$120,000	0.110
N971	PRWC Outdoor Best Management Practices	\$0	\$96,250	\$0	\$0	\$0	\$0	\$192,500	0.113
N972	Tampa Water Use Information Portal Implementation	\$0	\$150,000	\$0	\$0	\$0	\$0	\$300,000	0.133
N973	Winter Haven Consumption/Conservation Programs Data Management Software	\$0	\$30,000	\$30,000	\$0	\$0	\$0	\$120,000	0.016
N979	North Port Water Distribution System Looping	\$0	\$352,000	\$0	\$0	\$0	\$0	\$704,000	0.036
N982	Manatee County Toilet Rebate Phase 12	\$0	\$75,500	\$0	\$0	\$0	\$0	\$151,000	0.264
N988	Hillsborough Soil Moisture Sensor Rain Shutoff Device Study and Education	\$0	\$25,000	\$0	\$0	\$0	\$0	\$50,000	0.013
N992	Venice Toilet Rebate and Retrofit Phase 6	\$0	\$29,450	\$0	\$0	\$0	\$0	\$58,900	0.005
N996	Lake Hamilton Distribution System Looping	\$0	\$124,610	\$0	\$0	\$0	\$0	\$521,000	0.020
N999	Marion County Toilet Rebate Program Phase 5	\$0	\$16,000	\$16,000	\$0	\$0	\$0	\$64,000	0.010
P920	Polk Regional Water Cooperative Outdoor BMPs	\$166,075	\$0	\$0	\$0	\$0	\$0	\$332,150	0.053
P921	Polk Regional Water Cooperative Indoor Conservation Incentives	\$121,275	\$0	\$0	\$0	\$0	\$0	\$242,550	0.087
P922	Polk Regional Water Cooperative Florida Water Star Builder Rebate Program	\$350,000	\$0	\$0	\$0	\$0	\$0	\$700,000	0.066
Q014	Pasco County Toilet Rebate Phase 12	\$0	\$50,000	\$0	\$0	\$0	\$0	\$100,000	0.140
Q018	NSCUDD Rain Sensor Inspect/Replacement Program	\$0	\$20,000	\$0	\$0	\$0	\$0	\$40,000	0.010
Q020	Braden River Util. Soil Moisture Sensor Rebate Program Phase 2	\$0	\$154,000	\$0	\$0	\$0	\$0	\$308,000	0.055
Q040	WRWSA Regional Irrigation System Audit Program Phase 5	\$0	\$72,500	\$0	\$0	\$0	\$0	\$145,000	0.039
Q041	New Port Richey Toilet Rebate Phase 5	\$0	\$7,470	\$0	\$0	\$0	\$0	\$14,940	0.002
<b>Total Conservation Rebates, Retrofits, Etc.</b>		<b>\$1,499,483</b>	<b>\$1,432,655</b>	<b>\$96,000</b>	<b>\$50,000</b>	<b>\$50,000</b>	<b>\$50,000</b>	<b>\$5,970,556</b>	<b>1.660</b>

**Table 3-g. Water Supply Planning Projects**

Project Number	Water Supply Development Assistance - Water Supply Planning (Programmatic Budget 1.1.1)	Prior District Funding	FY2019 Funding	FY2020 Funding	FY2021 Funding	FY2022 Funding	FY2023 Funding	Total Project Cost	Supply (mgd)
N928	PRWC Peace Creek Integrated Water Supply Plan <sup>4</sup>	\$950,000	\$0	\$500,000	\$0	\$0	\$0	\$1,900,000	TBD
N945	WRWSA Regional Water Supply Plan Update	\$150,000	\$0	\$0	\$0	\$0	\$0	\$300,000	NA
N946	PRMRWSA Integrated Reg Water Supply Master Plan	\$225,000	\$0	\$0	\$0	\$0	\$0	\$450,000	NA
P179	Florida Framework for Potable Reuse	\$40,000	\$0	\$0	\$0	\$0	\$0	\$110,000	NA
P180	National Framework for Potable Reuse	\$10,000	\$0	\$0	\$0	\$0	\$0	\$70,000	NA
Q023	PRWC Water Demand Management Plan	\$0	\$85,000	\$85,000	\$0	\$0	\$0	\$340,000	NA
<b>Total Planning Projects</b>		<b>\$1,375,000</b>	<b>\$85,000</b>	<b>\$585,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$3,170,000</b>	<b>0.000</b>

**Table 3-h. Summary of Funding for Water Supply Development Projects**

Water Supply Development Assistance Project Totals (Programmatic Budget 2.2.2)	Prior District Funding	FY2019 Funding	FY2020 Funding	FY2021 Funding	FY2022 Funding	FY2023 Funding	Total Project Cost	Supply (mgd)
Surface Water Projects	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0.000
Regional Potable Water Interconnects	\$35,730,000	\$11,018,700	\$2,567,300	\$0	\$0	\$65,632,000	\$74,132,000	0.000
Reclaimed Water Projects	\$35,587,085	\$7,031,373	\$4,564,500	\$3,212,500	\$3,212,500	\$0	\$100,850,263	18.123
Brackish Groundwater Development Projects	\$38,885,082	\$6,914,992	\$169,995	\$5,755,887	\$37,523,952	\$48,150,204	\$54,319,975	19.000
Aquifer Recharge and ASR Projects	\$12,689,764	\$500,000	\$4,172,400	\$0	\$0	\$0	\$35,923,900	3.400
Conservation Rebates, Retrofits, Etc. Projects	\$1,499,483	\$1,432,655	\$96,000	\$50,000	\$50,000	\$50,000	\$5,970,556	1.660
Water Supply Planning Projects	\$1,375,000	\$85,000	\$585,000	\$0	\$0	\$0	\$3,170,000	0.000
<b>Total Funding</b>	<b>\$118,688,550</b>	<b>\$26,982,720</b>	<b>\$12,155,195</b>	<b>\$9,018,387</b>	<b>\$40,786,452</b>	<b>\$113,832,204</b>	<b>\$274,366,694</b>	<b>42.183</b>

Acronyms: ASR - aquifer storage and recovery, BMPs - best management practices, ET - Evapotranspiration, mgd - million gallons per day, NERUSA/NWRUSA - The Northeast/Northwest Regional Utility Service Areas of Polk County Utilities, PRMRWSA - Peace River Manasota Regional Water Supply Authority, PRWC - Polk Regional Water Cooperative, TECO - Tampa Electric Company, WRWSA - Withlacoochee Regional Water Supply Authority.

<sup>1</sup> The H094 Polk County Partnership provides \$65M in reserves for PRWC Projects. \$23M has been transferred to projects N882, N905, and N928; and balance was deducted from "Total Project Cost" to avoid double-counting.

<sup>2</sup> Project N882's current CFI agreement cost is shown in "Total Project Cost" but the total cost is estimated at approximately \$89M with future phases.

<sup>3</sup> Project N905's current CFI agreement cost is shown in "Total Project Cost" but the total cost is estimated at approximately \$293M with future phases.

<sup>4</sup> Project N928's current CFI agreement cost is shown in "Total Project Cost" but the cost of future options are estimated at approximately \$63M.

## Funding Sources

The District provides significant financial assistance for water resource development and water supply development projects through the District's Cooperative Funding Initiative, which consists of the cooperative funding program and other District Initiatives. The financial assistance is provided primarily to governmental entities, but private entities may also participate in these programs. Portions of state funding are allocated to the District through the DEP and legislative appropriations for the Springs Initiative, the Florida Forever Program, the Water Protection and Sustainability Program, the District's West-Central Florida Water Restoration Action Plan, and the District's FARMS Program. These sources are described below.

### District Funding

The District's FY2019 budget includes nearly \$65.9 million for CFI projects and District grants, including \$1.5 million for projects where the District is the lead party. The District's funds leveraged with its partners will result in a total regional investment of approximately \$129 million in FY2019.

**Cooperative Funding Initiative** - The District's primary funding mechanism is the Cooperative Funding Initiative (CFI), which includes funding for major regional water supply and water resource development projects and localized projects throughout the District's 16-county jurisdiction. The CFI is a matching grant program that enables the Governing Board, through its regional sub-committees, to jointly participate with local governments and other entities to incentivize proper development, use, and protection of the regional water resources of the District. Projects of mutual benefit are generally funded 50 percent by the District and 50 percent by the public or private cooperators. Communities or counties qualifying under the Rural Economic Development Initiative (Section 373.0656, F.S.) may be eligible for greater matching shares. Projects with construction costs exceeding \$5 million will undergo a third-party review at the 30 percent design stage to confirm costs, schedules, and ability to meet its resource benefits. Results of the third-party review are presented to the Governing Board before the project can proceed. Any state and federal funds received for the projects are applied directly against the project costs, with both parties benefitting equally. The CFI has been highly successful; since 1988, the District has provided over \$3.2 billion in incentive-based funding assistance for a variety of water projects addressing its four areas of responsibility: water supply, natural systems, flood protection, and water quality.

**District Initiatives** - District Initiatives are funded in cases where a project is of great importance or a regional priority. The District can increase its percentage match and, in some cases, provide total funding for the project. Examples of projects funded as District Initiatives in the FY2019 budget include the Hydrologic Investigation in Polk County, the FARMS Well Back-Plugging and Meter Accuracy Programs, and the MIA Recharge SWIMAL Recovery at the Flatford Swamp.

### State Funding

**DEP Springs Initiative** - The DEP Springs Initiative is a special legislative appropriation that has provided revenue for protection and restoration of major springs systems. From FY2013 through FY2018, the District has allocated approximately \$39 million of DEP Springs Initiative funding to projects that restore aquatic habitats and reduce groundwater withdrawals and nutrient loading within first-magnitude springsheds to improve the water quality and quantity of spring discharges. The District's FY2019 budget anticipates \$11.75 million of DEP Springs Initiative funds to four projects that will improve water quality by providing sewer connections to homes with septic tanks in priority focus areas. These projects are listed in the Work Program Appendix A - Projects for Implementing BMAPs.

**The Florida Forever Program** - The 1999 Florida Forever Act was a \$10 billion, 10-year statewide program. In 2008, the Legislature passed a bill to extend the Florida Forever program for 10 more years at \$300 million annually and reduced the water management districts' annual allocation from \$105 million to \$90 million, with \$22.5 million (25 percent) to be allocated to the District, subject to annual appropriation. The appropriations were limited during the economic recession, and the District hasn't received any new Florida Forever funding since FY2012. Eligible projects under the Florida Forever program include land acquisition, land and water body restoration, ASR facilities, surface water reservoirs, and other capital improvements.

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**Florida Forever Trust Fund** - The state's Florida Forever Trust Fund holds prior-year funds for this District and other water management districts. The funds have been generated through the sale of easements to the U.S. Department of Agriculture/Natural Resources Conservation Services (NRCS) for the Wetland Reserve Program and the sale of land or easements for rights-of-way. The funds are available for potential land acquisitions consistent with the guidance provided by the DEP. As the start of FY2019, the District has \$4.2 million from the prior-year funds held in the Trust Fund. The District conducts a biennial Surplus Lands Assessment to identify and sell lands that do not meet the District's core mission. The proceeds from sold lands are used to purchase other lands that provide substantive environmental benefits.

**State Funding for the FARMS Program** - Operating under Chapter 40D-26, F.A.C., the FARMS Program, through the District, utilizes additional state funding when available. Since the inception of the program, the District has received \$6.4 million in state appropriations and \$1.3 million from the FDACS. No funding was provided by state appropriations from FY2010 through FY2019.

**NRCS Environmental Quality Incentive Program (EQIP)** - The EQIP provides technical, educational, and financial assistance to eligible farmers and ranchers to address soil, water, and related natural resource concerns on their lands. The program assists farmers and ranchers in compliance with federal, state of Florida, and tribal environmental laws that encourage environmental enhancement. In addition to the EQIP, the FARMS Program has partnered with NRCS through the Agriculture Water Enhancement Program and the Florida West Coast Resource Conservation and Development Council to bring additional NRCS cost-share funding to the SWUCA. The District's FARMS Program works cooperatively with these programs on both financial and technical levels and has coordinated dual cost-share projects whenever possible. The maximum funding for using both FARMS and EQIP is 75 percent of the total project cost.

## Summary/Conclusions

The Work Program presented herein is adequate to ensure water is available to timely meet the water supply needs of existing and future reasonable-beneficial uses for a 1-in-10-year drought event and to avoid the adverse effects of competition for water supplies. Over the next five years, this Work Program outlines the District's commitment to ensure the availability of adequate water supplies for all reasonable-beneficial uses and to maintain the function of natural systems. It additionally illustrates the contributions of the District in support of MFLs and water reservations.

This Work Program outlines activities and projects that will make available 113.9 mgd of water upon completion, including reuse water and new potable supply. These benefits are associated with approximately \$77.6 million budgeted for FY2019. The proposed funding for the 5-year Work Program is approximately \$446.5 million through FY 2019-23. **Table 4** below summarizes the funding categorized in the Work Program as WRD data collection and analysis activities, WRD Projects, and Water Supply Development Projects.

**Table 4. Work Program Summary**

WRD Data Collection and Analysis Activities	Sum of Current Year District Funding (FY2019)	Sum of Five-Year District Funding (F2019-23)	Sum of Water Made Available (mgd)
Water Resource Development - Data Collection and Analysis Activities (Table 1)	\$35,982,446	\$179,912,230	NA
Water Resource Development - Projects (Table 2)	\$14,586,315	\$55,352,065	71.7
Water Supply Development - Projects (Table 3-h)	\$26,982,720	\$211,274,958	42.2
<b>Totals</b>	<b>\$77,551,481</b>	<b>\$446,539,253</b>	<b>113.9</b>

At the DEP's guidance, specific project details are provided in spreadsheet format. The DEP will present Work Program project data from each of the water management districts on their website for public review, in accordance with Section 373.536(6)(b), F.S. The detailed spreadsheet includes project schedules, cooperator and state funding levels, and the waterbodies and planning regions supported. The District's proposed Work Program projects spreadsheet is available online at:

<https://www.swfwmd.state.fl.us/resources/plans-reports/water-resource-development-work-program>

The WRD and water supply projects set forth a commitment to develop projects associated with the implementation MFLs, recovery/prevention strategies, and water reservations. The majority of projects are located within the SWUCA or NTBWUCA and support their recovery strategies by reducing impacts to the Upper Floridan aquifer. These projects represent 109.6 mgd of the 113.9 mgd above. The remaining projects are located in the District's Northern Planning Region, where a proactive, preventative approach is taken to optimize available water resources.

The data collection and analysis activities are a critical part of the WRD component implemented by the District. These activities support the District's MFLs programs. At the beginning of FY2019, the District has established and continues to monitor 210 MFLs and has scheduled the establishment or revaluation of 78 MFLs through FY2023. The District's annual MFLs Priority List and Schedule and Reservations List and Schedule is published in the Consolidated Annual Report, and can also be found on the District's webpage at:

<https://www.swfwmd.state.fl.us/projects/mfl/documents-and-reports>

Other data collection and analysis activities include conducting watershed management planning, the QWIP program to preserve water resources through proper well abandonment, and the Implementation of stormwater storage and conveyance BMPs.

# Appendix A

## District Projects for Implementing Basin Management Action Plans

Basin Management Action Plans (BMAPs) provide technical direction for restoring impaired waters by reducing pollutant loadings to meet the allowable loadings established in a Total Maximum Daily Load (TMDL). In 2016, the Florida Legislature amended Section 373.036, F.S., to require the identification of all specific projects that implement a BMAP or a recovery or prevention strategy in the Work Program. The Work Programs have historically identified water resource development projects that support MFL recovery and prevention but haven't included projects primarily intended to implement BMAPs. Consistent with Section 373.036, F.S., and in a manner coordinated with DEP and the five water management Districts, this Appendix A of the Work Program provides a five-year funding outlook for projects specifically identified in an adopted BMAP.

The District is budgeting for four BMAP projects, each benefitting the water quality of first-magnitude springs priority focus areas (PFAs) in the District's Northern Planning Region.

### Kings Bay/Crystal River Priority Focus Area

- Crystal River - Indian Water Septic to Sewer Phase II (W430)
- Citrus County Cambridge Greens Septic to Sewer (W432)
- Crystal River Southern Septic to Sewer Project (W434)

### Chassahowitzka, Homosassa Springs Priority Focus Area

- Citrus County Old Homosassa West Septic to Sewer Project (WH04)

The projects are categorized under the District's Programmatic Budget activity code 2.3.1 - Surface Water Management. District funding shares are presented in **Table A-1**. Additional funding is anticipated from the DEP and local cooperator shares. Consistent with the District's CFI policy, projects with construction costs exceeding \$5 million will undergo a third-party review at the 30 percent design stage to confirm costs, schedules, and resource benefits. Project details are available in the Work Program spreadsheet available online at:

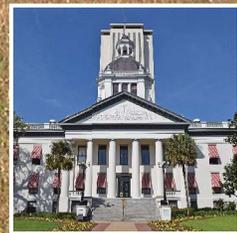
<https://www.swfwmd.state.fl.us/resources/plans-reports/water-resource-development-work-program>

**Table A-1. Projects for Implementing BMAPs.**

Projects for Implementing BMAPs	FY2019 Funding	FY2020 Funding	FY2021 Funding	FY2022 Funding	FY2023 Funding	Total Project Cost	Funding Sources
Crystal River - Indian Water Septic to Sewer Phase II (W430)	\$300,000	\$825,000	\$0	\$0	\$0	\$4,500,000	DEP, City of Crystal River
Citrus County Cambridge Greens Septic to Sewer (W432)	\$100,000	\$762,500	\$762,500	\$0	\$0	\$6,500,000	DEP, Citrus County
Crystal River Southern Septic to Sewer Project (W434)	\$112,500	\$112,500	\$1,400,000	\$0	\$0	\$6,500,000	DEP, City of Crystal River
Citrus County Old Homosassa West Septic to Sewer Project (WH04)	\$100,000	\$700,000	\$700,000	\$0	\$0	\$6,000,000	DEP, Citrus County
<b>Total</b>	<b>\$612,500</b>	<b>\$2,400,000</b>	<b>\$2,862,500</b>	<b>\$0</b>	<b>\$0</b>	<b>\$23,500,000</b>	

Consolidated **Annual**  
**Report**  
March 1, 2019

# 2018 Polk Regional Water Cooperative Status Report



Southwest Florida  
*Water Management District*

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# Polk Regional Water Cooperative Status Report

The Polk Regional Water Cooperative (PRWC) was created in 2016 through Interlocal Agreement and consists of Polk County and 15 municipal member governments. The PRWC was formed to provide for regional cooperation on the development and delivery of water resources to meet future water demands within Polk County. The majority of the PRWC jurisdiction is located within the District's Southern Water Use Caution Area, while the entirety of its jurisdiction is located within the Central Florida Water Initiative (CFWI) planning area.

In 2017, the Florida Legislature passed the Heartland Headwaters Protection and Sustainability Act (HB 573) to recognize the critical importance of Polk County's aquifers to the economic and ecological health of the region as headwaters for six of Florida's major river systems. The Act requires the development of a comprehensive annual report to be completed by the PRWC and submitted to the Governor, President of the Senate, Speaker of the House, Department of Environmental Protection and water management districts by December 1 of each year. In addition, the Act further requires the PRWC to coordinate with the appropriate water management district to provide a status report on projects receiving priority state funding and to include such status report in the consolidated water management district annual report (Section 373.463(3), Florida Statutes). This section of the District's Consolidated Annual Report serves as the PRWC status report for 2018.

For the PRWC's initial submission for state funding in 2017, a total of 27 member-submitted projects were identified for consideration and ranking. A prioritized list of 3 PRWC and 15 local member government projects ultimately submitted for state funding support in FY2018-19. Unfortunately, due to other pressing priorities with the Florida Legislature, no funding was provided for these projects in FY2018-19.

For FY2019-20, a prioritized list of 3 PRWC and 11 local member government projects are being submitted for funding consideration by the Florida Legislature. Table 1 lists the ranked 3 PRWC and 11 local member government projects, including total project cost, requested state funding, local member government funding and other funding sources. A detailed description of each project is included in the Heartland Headwaters Protection and Sustainability Act Annual Comprehensive Water Resources Report recently published and available from the PRWC. For FY2019-20, \$37,495,624 will be required to implement all 14 identified projects, with \$27,150,375 committed in local member government funding and \$1,974,875 committed in District funding for these projects. The remaining amount of \$8,370,375 for the 14 priority projects is being requested from the state and their implementation is subject to approval of state funding for the FY2019-20 budget year.

**Table 1. FY2019-20 Project Cost and Rank**

Priority Ranking	Project Name	Member Government	Estimated Completion Date	Total Project Cost (All Years)	Total Project Cost (FY19-20)	State Funding Requested (FY19-20)	Local Govt. Funding (FY19-20)	Other Funds (FY19-20)
CFWI	West Polk Lower Floridan Aquifer Project - Phase 1	PRWC/Lakeland	December 2021	\$9,261,870	\$1,866,156	\$622,052	\$622,052	\$622,052
CFWI	Peace Creek Integrated Water Supply Plan - Phase 1	PRWC/Winter Haven	August 2020	\$1,892,210	\$566,313	\$188,771	\$188,771	\$188,771
CFWI	Southeast Wellfield Lower Floridan Aquifer Project - Phase 1	PRWC/Polk BoCC	December 2021	\$11,751,620	\$3,492,156	\$1,164,052	\$1,164,052	\$1,164,052
<b>Subtotal for Projects Submitted to the CFWI</b>				<b>\$22,905,700</b>	<b>\$5,924,625</b>	<b>\$1,974,875</b>	<b>\$1,974,875</b>	<b>\$1,974,875</b>
1	Auburndale /Winter Haven/Polk County Interconnect	City of Auburndale	July 2020	\$331,000	\$331,000	\$165,500	\$165,500	
2	Auburndale/Lakeland Interconnect	City of Auburndale	December 2019	\$500,000	\$500,000	\$250,000	\$250,000	
3	Pollard Road Water Plant	City of Winter Haven	June 2020	\$4,900,000	\$4,900,000	\$2,450,000	\$2,450,000	
4	Winter Haven Reuse Water Interconnect	City of Winter Haven	June 2020	\$3,000,000	\$3,000,000	\$1,500,000	\$1,500,000	
5	Winter Haven Master Force Main Replacement	City of Winter Haven	June 2020	\$3,000,000	\$3,000,000	\$1,500,000	\$1,500,000	
6	UV Disinfection System Replacement	City of Auburndale	October 2019	\$650,000	\$650,000	\$300,000	\$350,000	
7	Allred WWTF Automated Headworks	City of Auburndale	July 2020	\$300,000	\$300,000	\$100,000	\$200,000	
8	Allred WWTF Centrifuge Replacement	City of Auburndale	July 2020	\$300,000	\$300,000	\$100,000	\$200,000	
9	Elevated Water Tank	City of Auburndale	October 2019	\$90,000	\$90,000	\$30,000	\$60,000	
NR	Williams Water Treatment Plant Clearwell Reliability	City of Lakeland	October 2020	\$13,000,000	\$6,500,000	\$0	\$6,500,000	
NR	English Oaks Force Main Completion	City of Lakeland	October 2021	\$17,836,170	\$12,000,000	\$0	\$12,000,000	
<b>Subtotal for Non-CFWI Local Projects</b>				<b>\$43,907,170</b>	<b>\$31,571,000</b>	<b>\$6,395,500</b>	<b>\$25,175,500</b>	<b>\$0</b>
<b>Total for All PRWC Member Projects</b>				<b>\$66,812,870</b>	<b>\$37,495,625</b>	<b>\$8,370,375</b>	<b>\$27,150,375</b>	<b>\$1,974,875</b>
<p>Note:</p> <p>CFWI - These are the highest priority projects in the region and funding support for these projects is being sought through the Central Florida Water Initiative request submitted by DEP.</p> <p>NR - Indicates that these projects are being implemented by the identified local government using their own funds or other non-state matching funds.</p>								

Source: Heartland Headwaters Protection and Sustainability Act Annual Comprehensive Water Resources Report, PRWC, 2018.

Consolidated **Annual**  
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*March 1, 2019*

# Florida Forever Work Plan *Annual Update 2019*



Southwest Florida  
*Water Management District*

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# Introduction

In 2008, the Florida Legislature reauthorized the Florida Forever program. The reauthorization continues Florida's successful land acquisition initiative that has included the Save Our Rivers and Preservation 2000 programs. As required by Section 373.199(7), Florida Statutes (F.S.), this report is the District's annual update of its original Florida Forever Work Plan.

The District's approach to the Florida Forever Work Plan is to provide a discussion of those eligible projects that the District could fund through the Florida Forever program over a five-year period and may receive future Florida Forever funding under the Florida Forever Act, Section 259.105, F.S.; depict eligible properties on the maps included in this report; and to report on progress and changes since the report's last update.

The Florida Forever Act provides for the issuance of up to \$3 billion in bonds through 2020 to state agencies, water management districts and local governments. Water management district funding is to be used for land acquisition (including less-than-fee purchases), water resource development and waterbody restoration. Over the life of the program, at least 50 percent of the funds allocated to the water management districts must be spent on land acquisition.

The annual update is organized into eight sections including the introduction, modifications to last year's Florida Forever Work Plan, land acquisitions completed during fiscal year 2018, land acquisition status, lands surplus during fiscal year 2018, summaries of land management activities, five-year resource management budget information, and project maps and lands identified for potential acquisition by planning region.

Florida Forever funds must contribute to achieving the following goals, found in Section 259.105, F.S.:

- Enhance the coordination and completion of land acquisition projects.
- Increase the protection of Florida's biodiversity at the species, natural community, and landscape levels.
- Protect, restore, and maintain the quality and natural functions of land, water, and wetland systems of the state.
- Ensure that sufficient quantities of water are available to meet the current and future needs of natural systems and the citizens of the state.
- Increase natural resource-based public recreational and educational opportunities. Preserve significant archaeological or historic sites.
- Increase the amount of forestland available for sustainable management of natural resources.
- Increase the amount of open space available in urban areas.

The District will use its Florida Forever funding to support multiple land acquisition projects through FY2019. Figure 1 shows the allocation between land acquisition and capital improvement funding.

**Figure 1.** Expenditures, Budget and Projection for Capital Improvements and Land.

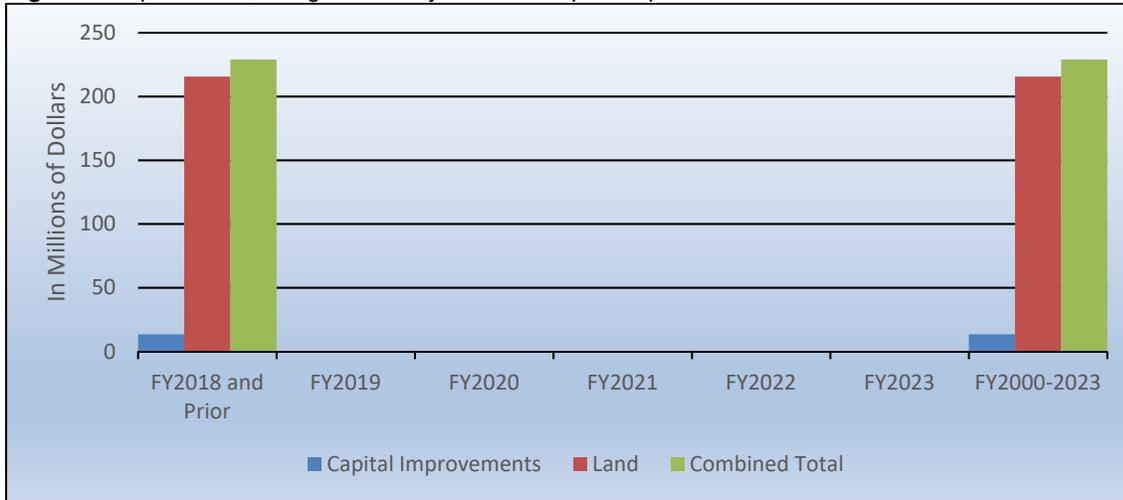


Table 1 provides expenditure, budget and projection by program and project over a five-year period. Individual water resource development and restoration projects are listed with projected Florida Forever funding provided for land acquisition and capital improvements. The budget for FY2018-2019 consists of \$4.44 million of the remaining prior year Florida Forever Trust Fund allocations.

**Table 1.** Florida Forever work plan project funding expressed in millions of dollars.

Project	FY2017-2018 & Prior		FY2018-2019		FY2019-2020		FY2020-2021		FY2021-2022		Total	
	Cap Imp	Land	Cap Imp	Land	Cap Imp	Land	Cap Imp	Land	Cap Imp	Land	Cap Imp	Land
Lake Hancock Lake Level Modification & Ecosystem Restoration		76.66									0.00	76.66
Lakes Horse, Raleigh and Rogers Recovery Project		0.06									0.00	0.06
Lake Hancock Outfall Treatment System	13.44	5.00									13.44	5.00
Conservation Land Acquisition		138.47									0.00	138.47
<b>Totals</b>	<b>13.44</b>	<b>220.19</b>									<b>13.44</b>	<b>220.19</b>

# Project Modifications and Additions to the SWFWMD Florida Forever Work Plan

No modifications have been made to the 2019 Work Plan, other than updating acres owned, managed and surplused; and funds budgeted.

## Restoration Projects

Listed below are the District restoration projects for which Florida Forever funding is utilized.

### Lake Hancock Outfall Treatment System

**Cooperators** – District, State of Florida and federal government

**Purpose** – The purpose of this project is to improve the quality of water discharging from Lake Hancock into South Saddle Creek, the outflow channel from Lake Hancock, by constructing a regional water quality treatment system. This treatment system will remove nutrients and pollutants that Lake Hancock and its watershed contribute to the Peace River and Charlotte Harbor, an estuary included in the National Estuary Program.

**Need** – Nitrogen has been identified as the primary target nutrient in restoring water quality in the Peace River and preventing degradation of Charlotte Harbor, a Surface Water Improvement and Management priority water body. Historical data has shown that the Saddle Creek drainage basin, one of nine sub-basins in the Peace River watershed, contributes approximately six percent of the total flow of the Peace River, yet contributes approximately 13 percent of the watershed's total annual nitrogen load. The Peace River ecosystem routinely suffers from algae blooms during periods of low flows and warm weather. These events not only affect the fish and wildlife associated directly with the river and estuary, but also affect the region's largest potable surface water supply system, operated by the Peace River/Manasota Regional Water Supply Authority. Many of the basins along the Peace River, including Lake Hancock, have been identified by the Florida Department of Environmental Protection as impaired under the Clean Water Act, requiring that Total Maximum Daily Loads be established. Water quality treatment of discharges from Lake Hancock has been identified as the most cost-effective means of reducing nitrogen loads into the Peace River and Charlotte Harbor. Additionally, improvements in the South Saddle Creek ecosystem will enhance a major greenway that extends from Charlotte Harbor through the Peace River watershed and Green Swamp and further north to the Ocala National Forest.

**Florida Forever Program Interest** – Florida Forever funds have been and will continue to be used for land acquisition and capital project expenditures for the water quality treatment project. Florida Forever land acquisition funding totals \$4.4 million, and a total of \$13,410,398 has been expended, and \$21,686 is encumbered within the Florida Forever Trust fund for capital project expenditures such as design, permitting and construction to significantly improve water quality entering the Peace River.

**Description** – Discharges from Lake Hancock will be diverted to a water quality treatment system located at the south end of the lake and near South Saddle Creek, the tributary between the lake and the Peace River. The District acquired the 3,500-acre, Old Florida Plantation planned development property, and portions of this tract of land are being utilized for the outfall treatment project. At the February 2006 Governing Board meeting, the Board approved the staff recommendation for a 27 percent nitrogen load reduction goal and to utilize constructed wetlands as the primary treatment component. The treatment wetland will require ongoing operation and maintenance.

## Schedule

Monitoring/Feasibility Study.....	2004-2007
Design and Permitting.....	2007-2010
Land Acquisition.....	2003-2004
Construction.....	2011-2014
Operation and Maintenance.....	Ongoing

**Table 2.** Lake Hancock Outfall Treatment System Funding.

Funding Source	Prior Years	FY2018-2019	Future Years	Totals
District	\$21,165,586	\$512,000	\$1,912,000	\$23,589,586
State Appropriation (ECO)	\$1,750,000			\$1,750,000
State Appropriations (WRAP)	\$1,000,000			\$1,000,000
State SWIM	\$655,140			\$655,140
Water Protection Sustainability Trust Fund	\$325,000			\$325,000
Water Management Lands Trust Fund	\$4,529,927			\$4,529,927
Requested Federal Funds	\$773,700			\$773,700
<b>Total</b>	<b>\$30,199,353</b>	<b>\$512,000</b>	<b>\$1,912,000</b>	<b>\$32,623,353</b>

*Note: This is a multi-year funded project. In fiscal years 2003, 2004, 2006, 2008, 2009 and 2010, \$30,199,353 was budgeted as follows: \$18,335,446 from Florida Forever for land acquisition (\$4,900,000) and capital project expenditures (\$13,435,446), \$2,750,000 from state appropriations (ECO & WRAP), \$773,700 from the United States Environmental Protection Agency (USEPA), \$1,890,070 from the Governing Board, \$940,070 from the Peace River Basin Board, \$655,140 from State SWIM, a reallocation of \$325,000 from the FY2006 and FY2007 Water Protection Sustainability Trust Fund, and a reallocation of \$4,529,927 from the FY2009 Water Management Lands Trust Fund. Operation and maintenance costs are not reflected in Table 2.*

**Project Status** – District staff have been successful in acquiring property at the desired location. District staff procured the services of an engineering consultant to evaluate treatment options and assist with design and permitting of the outfall treatment project. Treatment wetlands are the recommended technology based on costs, proven track record and ancillary benefits. Construction of the project began in September 2011 and was completed in June 2014. Operation to date has focused on vegetation recruitment across the site to achieve nutrient load reductions. Future activities include enhancements to increase recruitment and vegetative coverage across the open water portions of the system. The District is responsible for long-term operation and maintenance.

## District Land Acquisition Status

The following table depicts all lands owned in fee simple and less-than-fee (LTF) interests acquired by the District as of September 30, 2018.

**Table 5.** District Land Acquisition Status, acreages derived using geographic information system software.

Project	Total Fee Acres	Total Less-Than-Fee Acres	Total
Alafia River Corridor	4,498	1,498	5,996
Alafia River Reserve	334		334
Annutteliga Hammock	2,317		2,317
Bright Hour Watershed		32,247	32,247
Brooker Creek Headwaters Nature Preserve	1,039	67	1,106
Brooker Creek Preserve	1,635		1,635
Charlotte Harbor State Park	7,421		7,421
Chassahowitzka River & Coastal Swamps	5,678	4	5,682
Chito Branch Reserve	5,478		5,478
Cliff Stephens Park (Alligator Creek)	44		44
Conner Preserve	3,486		3,486
Crooked Lake	3,587		3,587
Cypress Creek Preserve	7,473	815	8,288
Deep Creek Preserve/Lower Peace River Corridor	2,084		2,084
Edward Medard Park and Reservoir	1,291		1,291
Edward W. Chance Reserve - Coker Prairie Tract	2,136		2,136
Edward W. Chance Reserve - Gilley Creek Tract	5,798	37	5,835
Flying Eagle Preserve	16,338	100	16,438
Green Swamp Wilderness Preserve - Colt Creek State Park	5,068		5,068
Green Swamp Wilderness Preserve - Green Swamp East Tract	67,282	4,428	71,710
Green Swamp Wilderness Preserve - Little Withlacoochee Tract	4,622	19,545	24,167
Green Swamp Wilderness Preserve - Green Swamp West Tract	36,659	4,970	41,629
Gum Slough - Half Moon Wildlife Management Area	4,164	5,827	9,991
Hálpata Tastanaki Preserve	8,189		8,189
Hidden Lake	589		589

<b>Project</b>	<b>Total Fee Acres</b>	<b>Total Less-Than-Fee Acres</b>	<b>Total</b>
Hillsborough River Corridor	276	79	355
Jack Creek	1,287		1,287
Jerry Lake	80		80
Lake Hancock - Circle B Bar Reserve	1,268		1,268
Lake Hancock - Marshall Hampton Reserve	1,167		1,167
Lake Hancock Project	4,800	1,179	5,979
Lake Lowry	394		394
Lake Marion Creek Horseshoe Scrub Tract	290		290
Lake Panasoffkee	9,881	5,486	15,367
Lake Tarpon Outfall Canal	161	101	262
Lake Tarpon Sink Enclosure	10		10
Lake Thonotosassa	144		144
Little Manatee River - Southfork Tract	971		971
Little Manatee River - Upper and Lower Tracts	6,605		6,605
Lower Cypress Creek		290	290
Lower Hillsborough Wilderness Preserve	16,085	3	16,088
Lower Manatee River Floodway	42		42
Masaryktown Canal	170		170
Myakka Conservation Area	4,747	18,283	23,030
Myakka Conservation Area - Lewis Longino Preserve		3,422	3,422
Myakka River - Deer Prairie Creek Preserve	6,136		6,136
Myakka River - Flatford Swamp Preserve	2,357	1,088	3,445
Myakka River - Schewe Tract	3,993		3,993
Myakka River State Park - Myakka Prairie Tract	8,248		8,248
Myakka State Forest	8,565	15	8,580
Panasoffkee/Outlet	813		813

<b>Project</b>	<b>Total Fee Acres</b>	<b>Total Less-Than-Fee Acres</b>	<b>Total</b>
Peace Creek Canal System	3	18	21
Potts Preserve	9,375	3	9,378
Prairie/Shell Creek	609		609
Rainbow River	112	12	124
RV Griffin Reserve	5,919		5,919
Sawgrass Lake Park	398		398
Starkey Wilderness Preserve	19,639	114	19,753
Structure Sites/Office Sites	96	28	124
Tampa Bay - Clam Bayou	84		84
Tampa Bay - Ekker Preserve	84		84
Tampa Bay - Frog Creek	119		119
Tampa Bay - Schultz Preserve	132		132
Tampa Bay - TECO Tract	2,516		2,516
Tampa Bay - Terra Ceia Preserve State Park	1,463		1,463
Tampa Bay - Terra Ceia/Huber	287		287
Tampa Bypass Canal/Harney Canal	1,376	321	1,697
Three Sisters Springs	57		57
Tsala Apopka Outfall Canal	3	141	144
Two-Mile Prairie - Tsala Apopka Connector	487		487
Two-Mile Prairie - Withlacoochee State Forest	2,898		2,898
Upper Hillsborough Preserve	9,551	7,802	17,353
Upper Saddle Creek	38		38
Weeki Wachee Springs State Park	539		539
Weekiwachee Preserve	11,271		11,271
Wysong Park	4	1	5
<b>Total</b>	<b>342,760</b>	<b>107,924</b>	<b>450,684</b>

## Surplus Lands

The following table depicts lands surplus by the District during fiscal year 2018.

**Table 6.** Surplus Lands, acreage derived using geographic information system software and Footprints (real estate) database.

Project	County	Acres Surplused	Compensation	Parent Tract Funding Source	Comments
Weeki Wachee Preserve-WW6	Hernando	0.5	\$57,000	P2000/2000/Florida Forever/Water Management Lands Trust Fund	Sold fee simple title
Weeki Wachee Preserve-WW7	Hernando	2	\$130,200	Preservation 2000	Sold fee simple title
Lower Peace River/Deep Creek-DC1	DeSoto	21	\$340,000	Water Management Lands Trust Fund	Sold fee simple title
Green Swamp Wilderness Preserve-East Tract-GSE6	Lake	248	\$590,000	Water Management Lands Trust Fund	Sold fee simple title
Tampa Bay Estuarine Ecosystem/TECO Tract-TBE4	Hillsborough	8	\$214,000	Florida Forever	Sold fee simple title
Frog Creek-FC1	Manatee	8	\$317,000	Florida Forever	Sold fee simple title
<b>Total</b>		<b>287.5</b>	<b>\$1,648,200</b>		

## Land Management Activities

The District has developed numerous management partnerships that match land use to agency mission. For example, Colt Creek State Park was purchased with District, State and Polk County Florida Forever funds, yet it is managed as a state park. Hunting at the Green Swamp is via a wildlife management area with the Florida Fish and Wildlife Conservation Commission. Approximately 95 percent of the District's conservation lands have an approved management plan. The following is a brief description of land management activities for properties owned by the District.

### ***Alafia River (including Alafia River Corridor, Chito Branch Reserve and Alafia River Reserve)***

– The Alafia River Corridor contains parcels of land along the Alafia River corridor from Bell Shoals Road and extends upstream to the headwaters of the river. The river's natural floodplain is a mixture of hardwood swamps and upland hammocks. Acquisition of the land within Hillsborough County was co-funded by the District and the County with fee simple title conveyed to the District. In 1996, the District entered into a lease agreement with Hillsborough County that designated the County as manager of lands jointly purchased by the County and the District. Recreational improvements provided by Hillsborough County include hiking trails, equestrian trails, fishing, primitive and group camping. Project lands in Hillsborough County acquired by the District for the C.W. "Bill" Young Reservoir are jointly managed by the District and

Tampa Bay Water and are known as the Chito Branch Reserve. In Polk County, the District and the County have co-funded and co-own the Alafia River Reserve. Polk County is responsible for a park site on the property and the District is responsible for resource management and trail development.

***Annutteliga Hammock*** – The Annutteliga Hammock project is in Hernando and Citrus counties, generally within a regional area located between Homosassa Springs to the northwest, the Withlacoochee State Forest to the northeast, Brooksville to the southeast and Weeki Wachee Springs to the southwest. The Annutteliga Hammock area supports an important and unique assemblage of high quality temperate upland hardwood forest and exceptional caliber sandhills along the Brooksville Ridge. Preservation of the remaining large contiguous areas of the hammock region will protect some of the best remaining examples of those community subtypes that are the most endangered or rarest along the Brooksville Ridge. Since lands acquired to date are for the most part not contiguous, recreational use is limited to foot traffic and equestrian riding on more than eight miles of marked trails. Land management activities consist of security, prescribed burning, resource monitoring, exotic species control, and public use/recreational development and monitoring.

***Bright Hour Watershed*** – The project area consists of extensive, high quality prairie, hammock, marsh and slough systems that provide water management benefits for a traditionally water-poor region. Hydrologic values include protection of the headwaters of several important creek systems, such as Prairie and Shell creeks. Water storage, conveyance and flood control are also provided by the watershed's poorly drained landscape. Habitat protection for numerous rare plant and animal species and globally imperiled, high quality natural communities is amply afforded by this project. Since the District does not hold fee simple title, land management activities consist of monitoring the terms of the conservation easements.

***Brooker Creek*** – The Brooker Creek Headwaters Nature Preserve located in Hillsborough County remains as islands of undeveloped natural and rural lands in the changing landscape of northwest Hillsborough County. The lands include several extensive and interconnected cypress swamps, which form the headwaters of Brooker Creek. These headwater swamps are an important water resource feature on their own, as well as for their contribution to downstream elements of the creek. Lands within the Brooker Creek Headwaters are managed by Hillsborough County. The County has developed and made available several miles of unimproved interior roads that are open to hikers. The dominant habitats within the Brooker Creek Preserve, located in Pinellas County, include cypress and mixed hardwood swamps along portions of Brooker Creek. As part of the area's natural drainage system, Brooker Creek is an important water resource feature. Local low-lying areas are drained by the creek's system of sloughs and swamps. Floodplain vegetation offers treatment of runoff prior to discharging into Lake Tarpon. Lands within the Brooker Creek project in Pinellas County are managed by Pinellas County. Recreational improvements/amenities available on the tract include equestrian trails, hiking trails and an interpretive foot trail. Land management activities primarily consist of coordination with the lead land managers.

***Charlotte Harbor State Park*** – The Charlotte Harbor Save Our Rivers project was jointly purchased between the District and the State of Florida's Conservation and Recreation Lands (CARL) program. Lands within the project area are characterized by a variety of natural lands including isolated freshwater marshes, tidal marshes and tidal swamps. Under a management agreement with the State, the Florida State Parks is the lead land manager for the project. Currently, the park offers canoeing and boating. Land management activities consist primarily of coordination with State Parks, the land manager.

***Chassahowitzka River and Coastal Swamps*** – The Chassahowitzka River and its expansive coastal swamps are located in western Citrus County. This project includes nearly two miles along the Chassahowitzka River and Chassahowitzka Springs, which forms the river's headwaters. The project is contiguous with the federally owned Chassahowitzka National Wildlife Refuge to the west, the State's Homosassa Reserve to the north and the Chassahowitzka Wildlife Management Area to the south. The project contains the Chassahowitzka River Campground, which is operated and maintained by Citrus County. Recreational activities/amenities are primarily managed by Citrus County and include canoe/boat launch, campsites (some with full hook-ups), canoe rental; picnic pavilions; restrooms; potable water; and primitive camp sites along the river. Hunting is managed by the

Florida Fish and Wildlife Conservation Commission. Land management activities consist of prescribed burning, resource monitoring, land maintenance, fence repair and recreational monitoring.

***Conner Preserve*** – The Conner Preserve is in Pasco County and includes the upper portion of Cypress Creek, a regionally important surface water feature and tributary creek of the Hillsborough River. Cypress Creek originates near I-75, east of CR 581 and north of CR 578 and has a contributing watershed of 74.5 square miles. Land use of the project area is primarily agricultural, dominated by several large cattle ranches. Land cover consists primarily of improved pasture, rangeland, live oak hammocks, pine flatwoods, xeric oak/longleaf pine, cypress domes and freshwater marshes/wet prairies. The project includes several shallow lakes, many of which include extensive marshes or open prairies. The project area itself is located between the District’s Cypress Creek Preserve and the Cross Bar/Al-Bar Ranch complex, representing two major public supply wellfields operated by Tampa Bay Water. Recreational activities/amenities available include primitive camping, 1.7 miles of hiking trails, and approximately 15 miles of shared-use trails for hiking, horseback riding and biking. Land management activities consist of prescribed burning, restoration, resource monitoring and recreational development/monitoring.

***Crooked Lake/Bowlegs Creek*** – Located in Polk County, the Crooked Lake/Bowlegs Creek project represents opportunities to protect important water resource ecosystems in the east central region of the District. Acquisition benefits include protecting important areas and habitat for aquifer recharge associated with the Lake Wales Ridge (Ridge) and protecting the water quality of Crooked Lake and the other Ridge lakes receiving flow from Crooked Lake (Lake Clinch and Lake Reedy). Crooked Lake is one of the largest lakes within the Ridge and is the only designated Outstanding Florida Water (OFW) in Polk County. The lake has good water quality because of existing shoreline vegetation coverage and relatively little urbanization. Although the alteration of natural lands throughout the region has resulted in habitat loss and fragmentation, this tract represents one of the few larger tracts remaining relatively intact and more importantly, is the last remaining large tract adjacent to a large Ridge lake. Lands within the project are jointly owned by the District and Polk County, and contain easements acquired by the United States Department of Agriculture/Natural Resources Conservation Services. Polk County manages the property.

***Cypress Creek Preserve*** – The Cypress Creek Preserve includes the heavily forested Cypress Creek swamp, formed by its namesake, Cypress Creek, as it flows to the Hillsborough River. As part of the tributary system to the Hillsborough River, the project serves both a water detention role and a water conveyance role. Additionally, the low-lying swamps provide treatment and assimilation of runoff waters. Recreational activities/amenities available include non-potable water, equestrian/group and primitive camping, 3.5 miles of hiking trails, and approximately 15.5 miles of shared-use trails for hiking, horseback riding and biking. Land management activities include prescribed burning, mowing, exotic species control, timber management, resource management, and public use and recreation development/maintenance.

***Edward W. Chance Reserve*** – In 2007, the former Lake Manatee Reserve, was dedicated and renamed as the Edward W. Chance Reserve, in honor of departed Governing Board member, Ed Chance. The Reserve extends over a large area which includes narrow floodplain forests and native pine lands surrounded by vast areas of rangeland, improved pastures, croplands, and citrus groves. Lands purchased within this project protect an existing regional water resource, protect floodplains, and restore adjoining wetlands in the headwaters. Recreational activities/amenities available include non-potable water, more than 10 miles of hiking trails and approximately 13 miles of shared-use trails for hiking, horseback riding and biking. Management units include the Coker Prairie and Gilley Creek Tracts. Land management activities include prescribed burning, mowing, exotic species control, timber management, resource management, public use and recreation development/maintenance.

***Flying Eagle Preserve*** – The Flying Eagle Preserve is located within the Lake Tsala Apopka region of Citrus County. The property includes over five miles of frontage on the Withlacoochee River and its forested floodplain. A broad expanse of mixed hardwoods and cypress swamps cover the floodplain along the river. Areas of hammocks and xeric oak scrub lands occur throughout the higher elevations of the interior portions. Scattered marshes and wet prairies complete the landscape. The Tsala Apopka system is important because it has been described as a primary recharge area for the Floridan aquifer. Recreational activities/amenities available at Flying Eagle include non-potable water, 4 miles of

hiking trails and approximately 18 miles of shared-use hiking, horseback riding and bicycle trails; and primitive and equestrian camping. Hunting, which is managed by the Florida Fish and Wildlife Conservation Commission, is also available.

### ***Green Swamp Wilderness Preserve (including Colt Creek State Park)***

– The Green Swamp Wilderness Preserve (GSWP) includes several efforts directed at protecting headwater swamps, floodplains and watershed areas in the Green Swamp region and along two of its principal river systems (Withlacoochee and Hillsborough). The GSWP is the District’s largest landholding which includes Green Swamp East, Green Swamp West, and Colt Creek State Park. The Green Swamp and its river systems are of hydrologic importance to central Florida, both in terms of surface water and ground water resources. Four river systems have their origin in the low-topography headwaters of the Green Swamp. Swamps, floodplains and headwaters serve as natural flood detention areas, while uplands serve as areas for recharge. Recreational amenities on District-managed lands in the GSWP include non-potable water, over 31 miles of hiking trails (including approximately 15 miles of the Florida National Scenic Trail) and 140 miles of shared-use hiking, horseback riding and bicycle trails. Primitive, equestrian and backcountry camping is also available. Hunting is managed by the Florida Fish and Wildlife Conservation Commission. Land management activities in the GSWP include prescribed burning, resource monitoring, natural systems restoration, mowing, exotic species control, security patrol, and public use and recreational development/maintenance.

***Gum Slough*** – Lands within the Gum Slough property are located within Marion and Sumter counties and are dominated by densely forested swamps and hammocks. Nearly 1,100 acres of forested hardwood swamps that line the Gum Slough run from a common boundary with state-owned lands to the east (Half-Moon Wildlife Management Area). The lands within the area offer protection to portions of the Withlacoochee River, Gum Slough and its various hydrologic characteristics. Recreational improvements/amenities available on the property are: non-potable water, shared-use trails available for hiking, bicycling and horseback riding, and woods roads available for hiking and hunting. The property is managed by the Florida Fish and Wildlife Conservation Commission.

***Hálpata Tastanaki Preserve*** – The Hálpata Tastanaki Preserve adjoins the Marjorie Harris Carr Cross Florida Greenway. Primary surface water features include five miles of floodplain along the northern bank of the Withlacoochee River. The isolated wetlands and marshes scattered throughout the site form the site’s internal drainage system and provide local surface water storage. The site of Fort Izard, an important battleground during the second Seminole War, is located within the projectlands. Recreational activities/amenities include approximately 4 miles of hiking trails and more than 12 miles of shared-use trails for hiking, horseback riding and bicycling. Land management activities include prescribed burning, natural systems restoration, timber management, exotic species control, resource monitoring, recreation development/maintenance and security.

***Hidden Lake*** – The Hidden Lake project is in the west-central Pasco County and is part of an interconnected system of lakes within the Rocky Sink/Boggy Creek basin of the Bear Creek Watershed. District ownership ensures protection of the lake and the surrounding forested wetlands and will help preserve water quality within the lake and sub-basin. Recreational use of the lands within the project is extremely limited due to development in the vicinity and the fact that the lands are essentially a “lake swamp.” Limited land management is required, primarily security patrols for illegal activities (dumping and archaeological digging).

***Jack Creek*** – The Jack Creek project, located in Highlands County, includes a significant part of Jack Creek, its 100-year floodplain and outlying forested areas associated with the creek system and local lake outflow wetlands. The project area also includes portions of sand pine scrub and mixed scrub—among Florida’s most unique threatened upland habitats. Jack Creek and its associated swamps serve as the natural drainage basin for the immediate area, as well as the water conveyance system for lakes in the area. Land management activities consist of prescribed burning, security patrols, public use/recreation maintenance and enhancements, exotic species control, mowing and monitoring for listed plants and animals. Recreational amenities/activities on the Jack Creek property are limited to 6.5 miles of hiking trails due to its remote location, environmental sensitivity and access constraints.

**Lake Hancock** – Lake Hancock is located southeast of the City of Lakeland and north of the City of Bartow in Polk County. At approximately 4,500 acres, Lake Hancock is the largest lake associated with the Peace River and the third largest lake in Polk County. A requirement of the statutorily-mandated minimum flow establishment is the development of a recovery strategy. Part of the proposed strategy for the upper Peace River is to restore storage in Lake Hancock and release some of the water during the dry season to help meet the flow requirements. Historically, Lake Hancock fluctuated more than a foot higher than it has during the past several decades. Lands acquired within this project will assist in reversing those impacts by replacing the District’s outfall structure so that water levels can be maintained at historical levels. The District and Polk County jointly acquired the Circle B Bar Reserve along the lake. The Reserve is managed by the County and provides hiking trails and picnic tables for recreationists. The County also manages the Marshall Hampton Reserve within the project area.

**Lake Panasoffkee** – The Lake Panasoffkee project is in Sumter County and is comprised of a large, contiguous area of relatively undisturbed lands along the eastern portion of the lake’s watershed. The project extends north to include Big Jones and Little Jones creeks, both tributaries to the lake. Wetlands dominate the area with extensive mixed hardwood and maple swamps, lake front marshes and willow areas. Lands within the project protect local and regional drainage features and provide storage and detention of surface waters, while providing important wildlife resources. Recreational activities/amenities include non-potable water, more than 15 miles of shared-use hiking, horseback riding and bicycle trails; group picnic pavilion, horse stalls, primitive and equestrian camping, restrooms and a campground host. The Florida Fish and Wildlife Conservation Commission manages hunting on the property. Land management activities include exotic species control, land security, cattle lease management, maintenance of facilities located on the property, public use, recreation development/maintenance, prescribed burning, timber management, natural systems restoration and resource monitoring.

**Little Manatee River** – The Little Manatee River project, located in Hillsborough and Manatee counties, contains parcels of land along the Little Manatee riverine corridor from downstream estuarine waters to the river’s headwaters. Dense forest dominates the land along the river’s floodplain with the adjoining uplands being comprised of a mixture of pine flatwoods, mixed hardwoods and shrub and brushlands. The District has entered into an interlocal agreement with Hillsborough County wherein the County has lead responsibility for lands jointly purchased by Hillsborough County and the District. Lands within Manatee County, known as the Southfork Tract, are managed by the District, and include approximately 6 miles of hiking trails. Recreational improvements/amenities made available by the County include: canoe landing sites adjacent to primitive campsites along the river, fishing, and hiking trails. District land management activities on the Southfork Tract consist of road stabilization, prescribed burning, natural systems restoration, mowing and recreational development/maintenance.

**Lower Hillsborough Wilderness Preserve** – The Lower Hillsborough Wilderness Preserve includes several miles of the Hillsborough River and its broad floodplain. The project contains important areas of natural flood conveyance and storage and contains the Morris Bridge Wellfield. Recreational activities available include five developed park sites managed by Hillsborough County including such amenities as hiking, equestrian and bicycle trails, picnic pavilions, restrooms, boat launches and visitor centers. The District has also made available an additional 25 miles of equestrian trails. Hunting is managed by the Florida Fish and Wildlife Conservation Commission. Land management activities include exotic species control, land security, public use and recreation development/maintenance, prescribed burning, timber management, wildlife management, natural systems restoration and mowing.

**Lower Peace River Corridor (including Deep Creek) –**

Located in DeSoto County, lands within the project include an extensive network of tributaries, floodplain swamps and connected headwaters. Recreational activities available include non-potable water, approximately 2 miles of hiking trails; more than 6 miles of shared-use trails for hiking and horseback riding; and backcountry and equestrian camping. Land Management activities include prescribed burning, mowing, exotic species control, recreational amenity development/monitoring and security.

### ***Myakka River/Deer Prairie Creek/Myakka State Forest***

A majority of the lands within the Myakka River project were jointly purchased with the State of Florida's Conservation and Recreation Lands (CARL) program (Myakka State Forest) and Sarasota County (Deer Prairie Creek). Lands within the project area are characterized by a variety of natural lands and lands altered by development including mesic pine flatwoods, oak hammocks, shell mounds, prairie hammock and improved pasture. The project area includes portions of the Myakka River and its floodplain forests. Lands included within the Myakka State Forest are managed by the Florida Forest Service (FFS). The FFS has made the following recreational improvements/amenities available on the property: shared-use trails for bicycling, horseback riding and hiking, and primitive camping. Lands within Deer Prairie Creek are jointly managed by the District and Sarasota County. Land management activities include fencing, road maintenance, exotic species control, recreation development/maintenance, public use, prescribed burning and mowing.

### ***Myakka Conservation Area (including Myakka Prairie)***

The Myakka Conservation Area consists of oak/cabbage palm hammock dominated banks along the southern portions of the creek, isolated marshes and improved pastures within the upland portions and mixed natural lands scattered throughout. The property is characterized by the region's flat topography and includes landscapes of extensive shrub and brushlands, pine flatwoods and pastures. Numerous isolated freshwater marshes dot the site's flatlands. The main surface water feature, Myakkahatchee Creek, is a 21.5-mile long tributary creek of the Myakka River. Approximately 4,700 acres are managed by Sarasota County. The Myakka Prairie is adjacent to lands within the Myakka River State Park and is managed by the Florida State Parks. Recreational development/amenities on the property made available by the State Parks include hiking, bicycling and horseback riding trails. District land management activities primarily consist of exotic species control and conservation easement monitoring.

***Panasoffkee/Outlet Tract*** – Lands within the Panasoffkee/Outlet Tract extend over three miles along the eastern floodplain of the Withlacoochee River. For the most part, the areas are representative of the river's five-year floodplain, which include the regularly-flooded cypress and mixed hardwood forests, as well as some areas of temperate hammock. Preservation of these lands along the river will maintain their function and protect forested swamps important to the water resources and water quality of the river system. Recreational activities on the property include approximately 3 miles of hiking trails, fishing and boat access. Land management activities include prescribed burning, mowing, road maintenance, exotic species control, cattle lease management, public use and recreation development/maintenance.

***Potts Preserve*** – The Potts Preserve is located within the Lake Tsala Apopka region in eastern Citrus County and includes portions of the Hernando Pool. The Preserve's eastern boundary is formed along 5 1/2 miles of the Withlacoochee River and its associated floodplain. The lands are a mixture of lakes, ponds and marshes surrounding islands of oak forests and lands partially cleared for agriculture. The Tsala Apopka system is considered important as an area of recharge for the Floridan aquifer. Recreational activities/amenities available include non-potable water; approximately 12 miles of hiking trails; 8 miles of shared-use trails for hiking, horseback riding and bicycling; equestrian and backcountry camping; and boat launch. Hunting is also allowed on the property. Land management activities include public use and recreation development/maintenance, land security, prescribed burning, natural systems restoration and mowing.

***Prairie/Shell Creek*** – The Prairie/Shell Creek project is envisioned as a greenway corridor from the mouth of the Peace River to the District's Bright Hour Watershed project to the north and to the State's Babcock Ranch to the south. Recreational activities/amenities available include approximately 5 miles of hiking trails. Land management activities include prescribed burning, resource monitoring, resource protection and recreational development.

***Rainbow River*** – The District's Rainbow River project is located along the eastern bank of the Rainbow River below the head spring. The property is in Marion County adjacent to the Rainbow Springs State Park. Rainbow Springs is the seventh largest first magnitude spring in Florida and is the primary source of water for the Rainbow River which flows for approximately 5.7 miles until it discharges into the Withlacoochee River. The District's Rainbow River Ranch tract comprises

percent of the eastern bank of the Rainbow River and is the last major undeveloped property along the eastern bank of this natural river corridor. Its shoreline includes marshes, wetlands and giant bald cypress trees. The property will be managed by Florida Park Service as part of Rainbow Springs State Park. The District is developing two projects to restore natural communities and improve water quality.

### ***RV Griffin Reserve (including Lewis Longino Preserve)***

The RV Griffin Reserve is in DeSoto and Sarasota counties and includes lands supporting and surrounding the existing facilities at the Peace River/Manasota Regional Water Supply Authority treatment plant. Lands in the project area include mixed hardwood forests along the river; however, a majority of the lands consist of pine flatwoods, rangelands, pastures and pine plantations. The Reserve supports and protects present potable water supplies. The Water Supply Authority manages the approximately 6,000 acres owned in fee. Recreational activities/amenities include shared-use trails available for bicycling, horseback riding and hiking. The District monitors the conservation easement known as the Lewis Longino Preserve.

***Sawgrass Lake*** – Acquisition of the Sawgrass Lake project began in the 1970s to provide flood protection to the City of Pinellas Park. A water control structure was built to facilitate drainage canal improvements and to maintain desirable water level fluctuations in Sawgrass Lake and the surrounding swamp. The lake and swamp system provide natural water treatment to enhance the quality of water draining to Tampa Bay. In 1976, the District, Pinellas County and the Pinellas County School Board cooperatively agreed to establish a county park and an environmental education center on the site. The property is managed by Pinellas County and the Pinellas County School Board. Pinellas County has developed a wide array of recreational amenities on the property including: restrooms, potable water, elevated boardwalks, hiking trail, nature center, outdoor interpretive displays; and they offer interpretive tours by reservation. The School Board has established an environmental education program that serves area students from kindergarten through fifth grade.

***Starkey Wilderness Preserve*** – Located in Pasco County, lands within the Starkey Wilderness Preserve are a combination of pine flatwoods, sand pine scrub, oak forests, scattered marshes and cypress swamps. The project lands are a part of the contributing watershed of the Anclote River. The Starkey Wellfield and part of the J. B. Starkey Wilderness Park are located within the project limits. Recreation at the Starkey Wilderness Park is managed by Pasco County, while the District manages recreation on the Serenova and Anclote Ranch tracts. Recreational activities/amenities available at Starkey Wilderness Park include paved bicycle trails, equestrian trails, hiking/backpacking trails, cabin rental, primitive camping, horse corral, picnic pavilions, self-guided educational nature trail and restrooms. Recreational amenities on the Serenova tract include approximately 20 miles of shared-use hiking, horseback riding and bicycle trails; and equestrian and primitive camping. Land management activities on the Preserve include prescribed burning, natural systems restoration, exotic species control, land security, recreational development/management and mowing.

***Tampa Bay Estuarine Ecosystem*** – The Tampa Bay Estuarine Ecosystem project furthers the Tampa Bay Surface Water Improvement and Management (SWIM) plan. Approximately half the project consists of mangroves and salt marsh which dominate the northern project area along Bishop Harbor and the western area associated with the tidal bays of Moses Hole, Clambar Bay and Williams Bayou. The natural upland and wetland habitats within the project area provide natural water quality treatment of overland flows before reaching the receiving waters of Tampa Bay. A majority of lands within the Tampa Bay Estuarine Ecosystem project were jointly purchased with the State or local governments. Under an agreement with the State, Florida State Parks is the lead land manager for Terra Ceia Preserve State Park. Hillsborough County manages the Ekker Preserve and Schultz Preserve tracts; Pinellas County manages the Clam Bayou tract; Manatee County manages Pine Island; and the District manages the TECO, Frog Creek and Terra Ceia/Huber tracts.

***Two-Mile Prairie State Forest*** – Two-Mile Prairie State Forest lies along the southern bank of the Withlacoochee River at the northern end of the Tsala Apopka Lake system and includes a variety of upland plant communities characterized by well-drained soils. Wetlands and surface water features include several miles of the Withlacoochee River and isolated depression marshes. The project protects natural floodplain areas along portions of the southern bank of the river, while adjoining uplands provide buffer areas to protect the river from high intensity land uses. The lands within this

project were jointly purchased between the District and the State's Conservation and Recreation Lands (CARL) program. Under a management agreement with the State, the Florida Forest Service (FFS) is the leadland manager. Recreational improvements/amenities made available by the FFS include a trail network north of CR-491 for bicycling and horseback riding, canoeing and non-gas-powered boating, fishing, primitive camping, picnicking, and 2.8 miles of registered "trail walkers" trail. Land management activities consist of monitoring and coordinating with the FFS regarding their management of the tract.

***Upper Hillsborough Preserve*** – The Upper Hillsborough project, located in Pasco and Polk counties, includes the channel of the Withlacoochee and Hillsborough rivers, including a unique hydrologic feature - the Withlacoochee River/Hillsborough River overflow. At this point, a portion of the flow of the Withlacoochee River naturally conveys to the Hillsborough River north of U.S. Highway 98. Lands within this project protect the hydraulic features of the river systems along with extensive areas of forested wetland habitats. Recreational activities/amenities available include non-potable water; approximately 9 miles of hiking trails; more than 30 miles of shared-use hiking, horseback riding and bicycling trails; primitive and equestrian camping, and fishing. Hunting is managed by the Florida Fish and Wildlife Conservation Commission. Land management activities include prescribed burning, exotic species control, public use and recreational development/maintenance, land security and natural systems restoration.

***Upper Lake Marion Creek Watershed*** – The relatively undisturbed creek system of the Upper Lake Marion Creek Watershed flows north out of Lake Marion, joins Snell Creek and ultimately flows southeast to Lake Hatchineha. The entire Lake Marion Creek basin extends over 18,300 acres and includes portions of both the Southwest and South Florida water management districts. This district has entered into an agreement with the SFWMD to assist in the management of its lands since, due to the property's proximity to SFWMD-managed lands, the SFWMD can manage the property more cost-effectively. District land management consists primarily of coordination with the SFWMD.

***Upper Myakka River Watershed (Flatford Swamp)*** – The Upper Myakka River Watershed project is in Manatee County and includes forested floodplain swamps and marshes along the upper portions of the Myakka River watershed. The headwater swamps function as retention and detention areas for local drainage. Wetland forests and adjoining uplands provide treatment of surface runoff. Access to the property is limited to hiking since the project lands are often flooded, which is not conducive to recreational trail development. However, the property contains narrow flatwoods roads and jeep trails that can be used for hikers during dry weather.

***Upper Saddle Creek*** – The Upper Saddle Creek corridor is in Polk County between the state-owned Tenoroc Fish Management Area and Lake Hancock. The property lies upstream of Lake Hancock and the upper Peace River and adjoins Saddle Creek Park which is owned by Polk County. The property is part of and provides protection to the floodplain of Saddle Creek, the major tributary to Lake Hancock. The property is in a natural state characterized by dense, existing forestation with limited encroachment of exotic species. The District and Polk County jointly acquired and co-own the project lands. Polk County is responsible for management of the property.

***Weekiwachee Preserve*** – The Weekiwachee Preserve is in Hernando and Pasco counties and includes several miles of the Weeki Wachee River and extensive areas of hardwood swamps and hammocks. The Weeki Wachee Swamp extends several miles along the coastal portions of Hernando County and represents a regionally important wildlife area. The riverine swamps are environmentally sensitive areas, which play an important role in the river's conveyance system and in flood and storm abatement. As they approach their outfall at the Gulf of Mexico, the Weeki Wachee and Mud rivers form a complex system of productive estuarine marshes and lowlands. Recreational activities/amenities include approximately six miles of hiking trails and six miles of shared-use hiking and bicycling trails, and fishing. The Preserve is open to vehicular access two Saturdays of every month. Hunting is managed by the Florida Fish and Wildlife Conservation Commission. Land management activities include natural systems restoration, exotic species control, land security, public use and recreational development/maintenance, prescribed burning, road maintenance and mowing. The Weeki Wachee Springs State Park is managed by Florida State Parks.

## Progress of Funding, Staffing and Resource Management

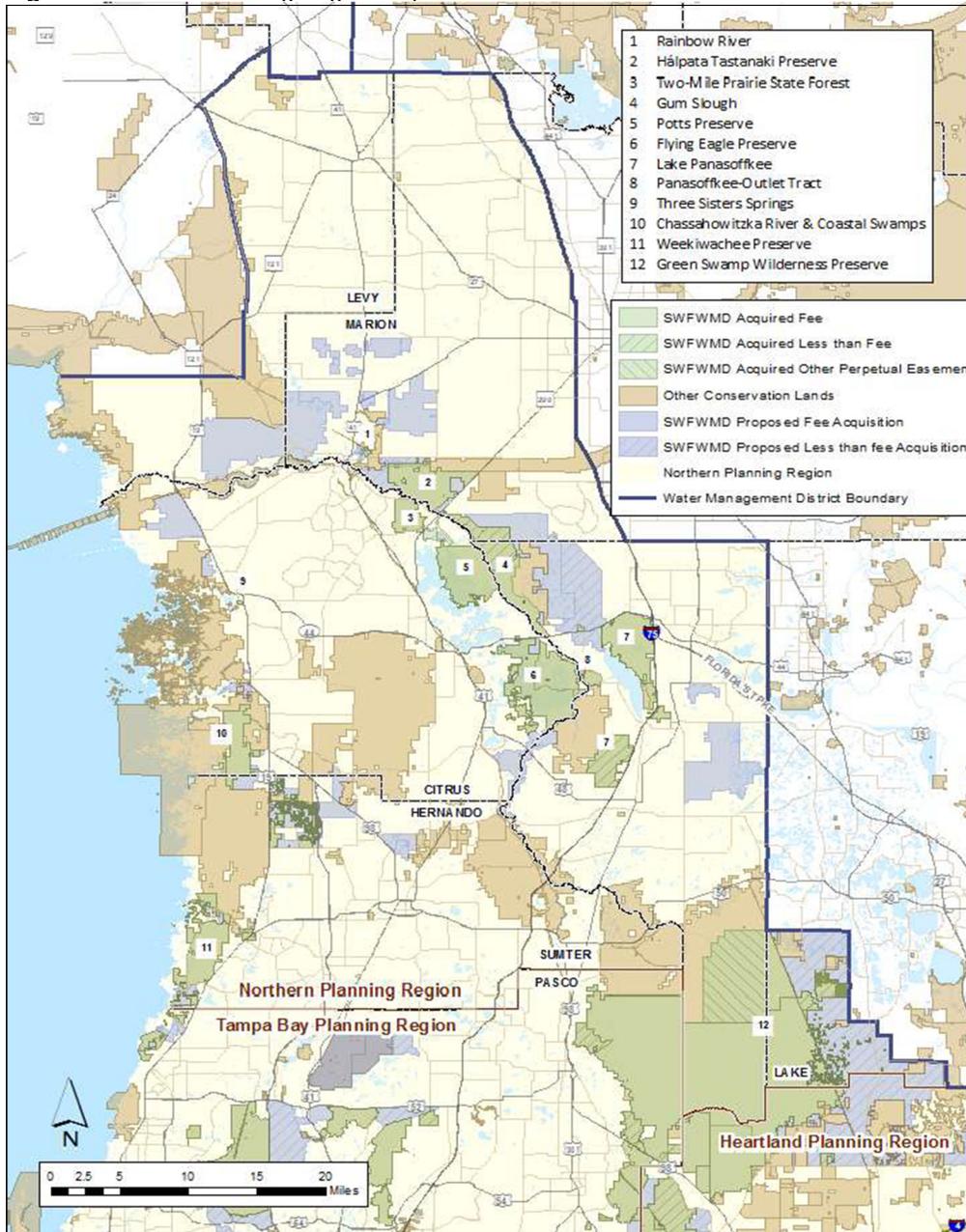
The following table depicts the District's budget for funding and staffing for resource management and public use.

**Table 7.** Progress of funding, staffing, and resource management.

Budget Area	FY2014-2015 Budget	FY2015-2016 Budget	FY2016-2017 Budget	FY2017-2018 Budget	FY2018-2019 Budget
FTEs	38	387	36	35	35
Resource Management and Public Use	\$4,021,524	\$5,717,499	\$6,540,333	\$5,680,146	\$5,200,297

# Florida Forever Land Acquisition Projects Northern Planning Region

**Figure 2.** Northern Planning Region Map.

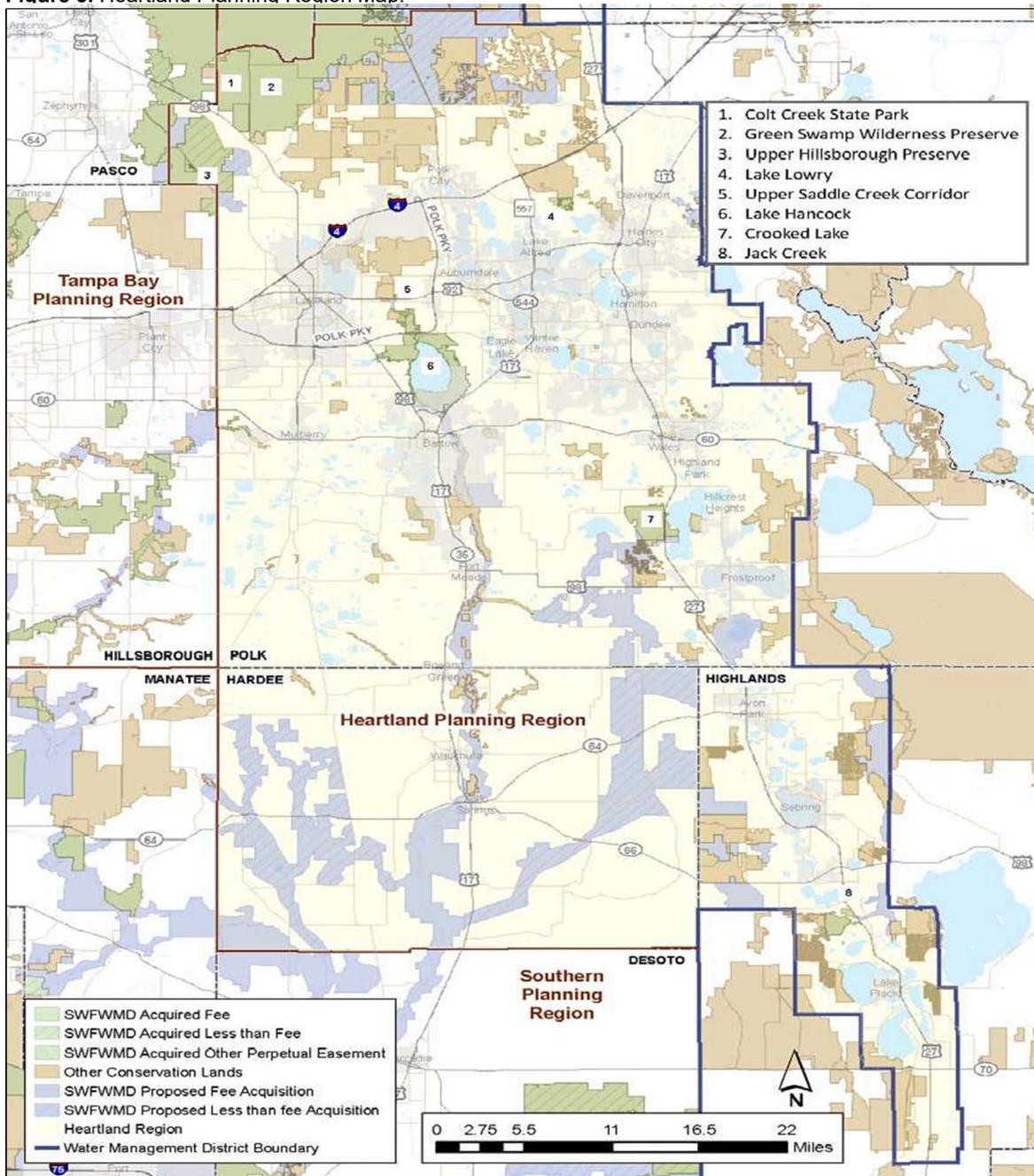


The lands eligible for acquisition within the Northern Planning Region are identified as follows:

- Approximately 92,400 acres identified for potential fee simple acquisition
- Approximately 45,600 acres identified for potential acquisition through less-than-fee techniques

# Heartland Planning Region

Figure 3. Heartland Planning Region Map.

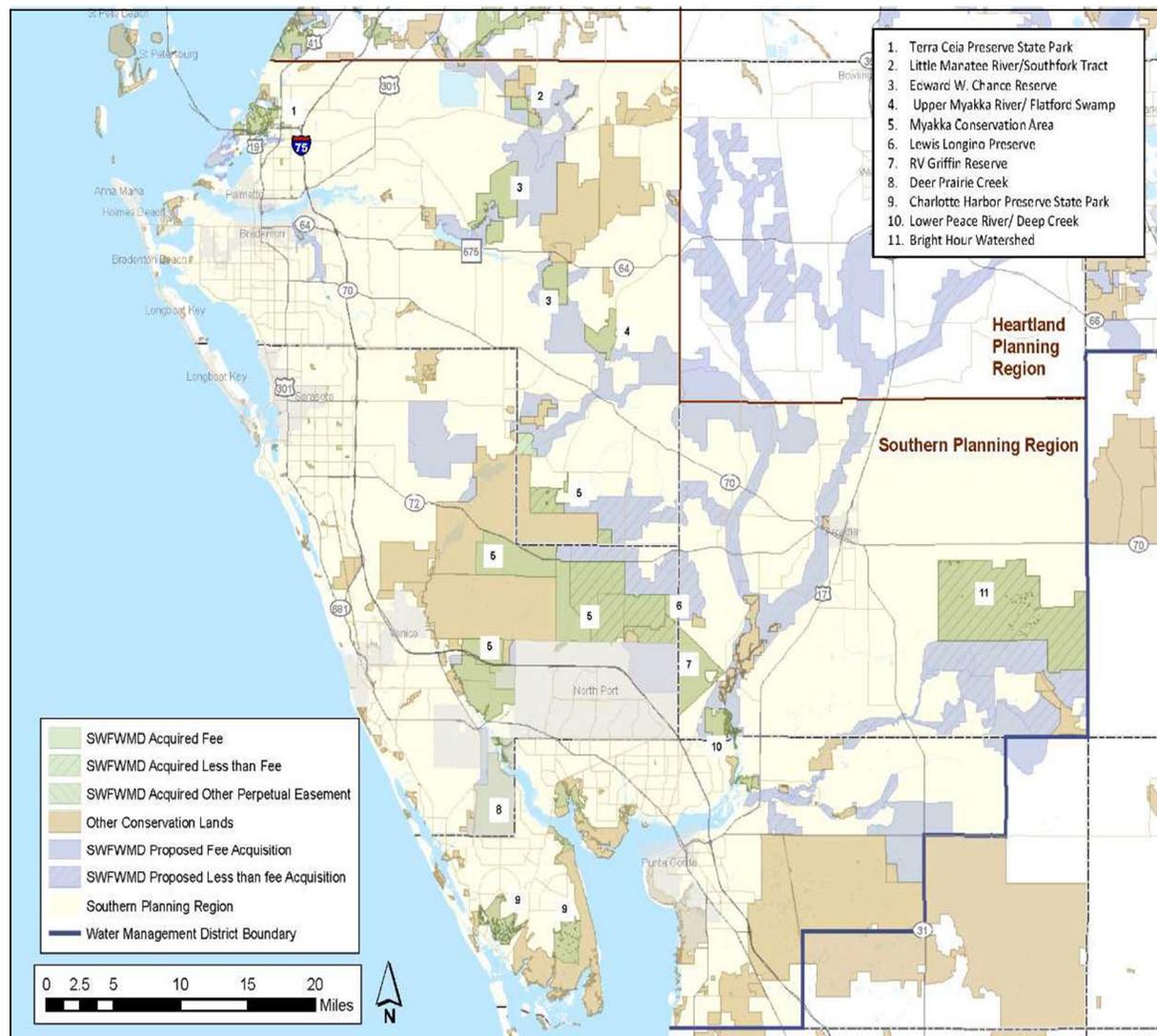


The lands eligible for acquisition within the Heartland Planning Region are identified as follows:

- Approximately 68,500 acres identified for potential fee simple acquisition
- Approximately 104,200 acres identified for potential acquisition through less-than-fee techniques

## Southern Planning Region

Figure 4. Southern Planning Region Map.



The lands eligible for acquisition within the Southern Planning Region are identified as follows:

- Approximately 120,000 acres identified for potential fee simple acquisition
- Approximately 53,700 acres identified for potential acquisition through less-than-fee techniques

# Tampa Bay Planning Region

Figure 5. Tampa Bay Planning Region Map.



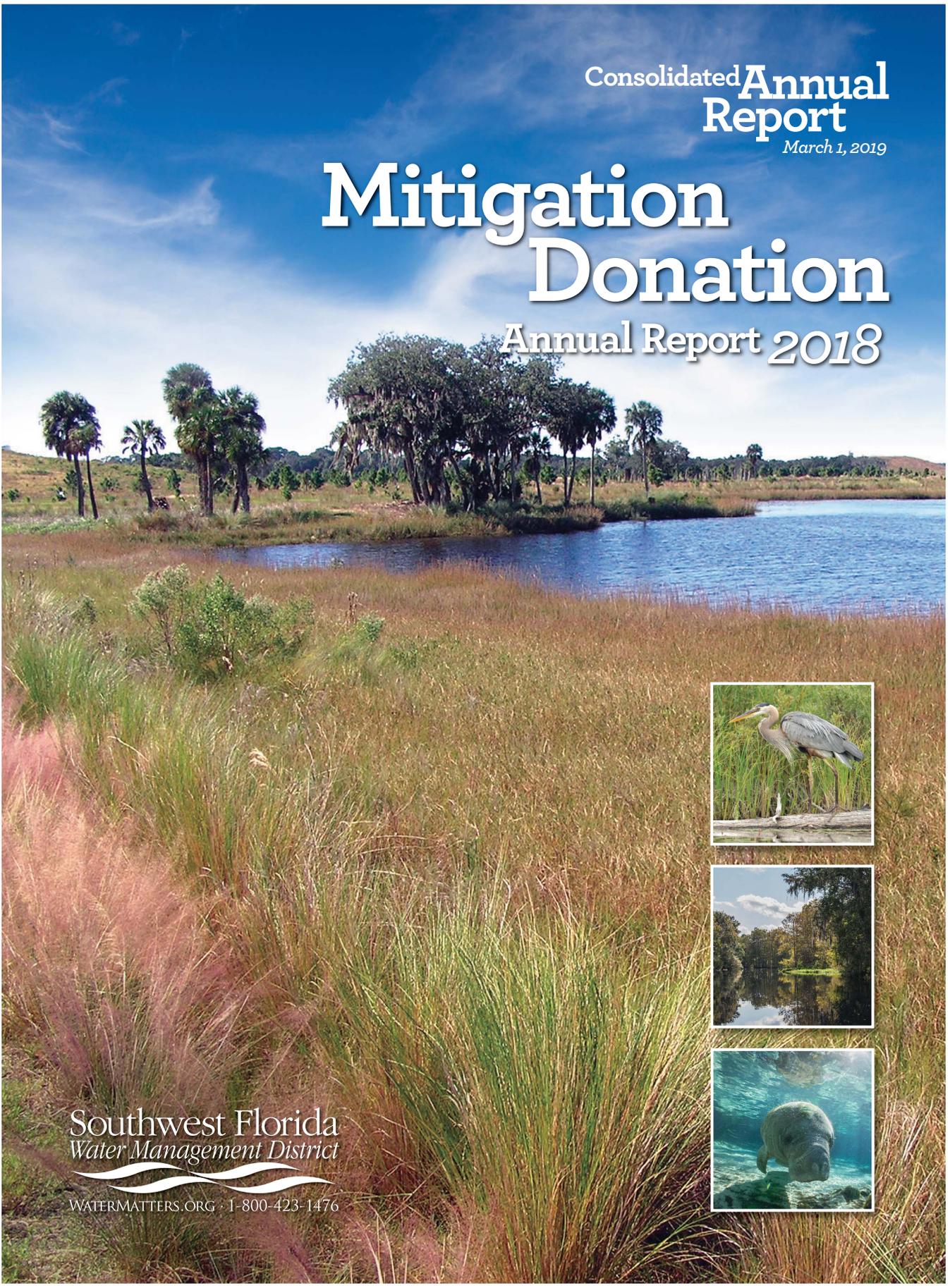
The lands eligible for acquisition within the Tampa Bay Planning Region are identified as follows:

- Approximately 31,900 acres identified for potential fee simple acquisition
- Approximately 17,700 acres identified for potential acquisition through less-than-fee techniques

Consolidated **Annual**  
**Report**  
*March 1, 2019*

# Mitigation Donation

Annual Report 2018



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**Brian J. Armstrong, P.G.**  
Executive Director

January 2, 2019

The Honorable Rick Scott  
Governor of Florida  
Plaza Level 05, The Capitol  
400 South Monroe Street  
Tallahassee, Florida 32399-0001

Subject: Annual Report on Cash Payments as Mitigation

Dear Governor Scott:

This letter is written pursuant to Section 373.414(1)(b)(2), Florida Statutes, which requires that each water management district report annually to the Executive Office of the Governor "all cash donations accepted under subparagraph 1 during the preceding calendar year for wetland mitigation purposes."

During the reporting period, the Southwest Florida Water Management District received no cash payments as mitigation, pursuant to 373.414(1)(b), Florida, Statutes.

Sincerely,

Brian J. Armstrong, P.G.  
Executive Director

cc: Secretary Noah Valenstein, DEP



# STRATEGIC PLAN

**2019-2023**

Updated February 2019

# Message from the Chair

Snow shoveling is a rite of passage for those growing up in the south suburbs of Chicago. That doesn't mean you have to like it, but it is a reality. Therefore, it should come as no surprise that upon graduating from Stetson University College of Law in St. Petersburg, I was pretty sure I wanted to stay here in sunny Florida. Some second job interviews in Chicago with twenty-five degrees below zero wind chill convinced me that Florida was where I needed to be. Thirty-three years later, I couldn't be happier with the way things have turned out, both personally and professionally. Florida is my home.

It was a great honor to be asked by the Governor to serve on the Governing Board of the Southwest Florida Water Management District. However, at that time, my working knowledge of water and water management was limited to basically turning a faucet on and water appearing, and turning the faucet off and water stopped. The good news was with such limited knowledge, I had no pre-conceived ideas nor any specific interest or bias other than giving back to the community and protecting the interest of the taxpayers.

Learning about water and water management has been an enjoyable and highly educational experience. My approach to this task has been consistent: Listen, gather facts and information. Be transparent and open. Get all sides of the story and gather as much information as you can. Once you've had the opportunity to analyze the information and process the opinions. Then you're able to provide a prospective of immediate as well as long term value. We must consider not only quantity but also quality. Do not allow the decisions to become personal. Make the best decision based on the facts and best interests of the constituents both on a short-term and long-term basis.

It's easy to understand how important water is: how it affects natural resources, the economy, tourism, recreation, agriculture, development, and enjoyment of life itself. What isn't as obvious, at least until you've had to make the difficult decisions, is how challenging water management can be in the short term and over the long term. Water affects everyone and everything in so many ways. There are multiple interests



**Jeffrey M. Adams, Chair**

sometimes with competing needs and desires on about any and all water issues.

Nothing about water management is easy. Everyone needs water and you have to make sure water remains plentiful. The water management decisions we make to address today's challenges must also ensure there's water for tomorrow, resources are protected, and we are not creating long-term flooding problems. In fact, that's the District's mission: To protect water resources, minimize flood risks, and ensure the public's water needs are met. A simple statement but yet an important complex challenge.

The District manages water resources over 16 counties with more than 5 million people. Our water resource challenges, like our water resources, are constantly evolving. With so much at stake, and taxpayer funding, it's critical we use our time, money and people wisely. The purpose of this Strategic Plan is to take this massive undertaking and provide clarity and direction. The Plan identifies who we are, what we do, how we do it, and looks out over a five-year planning horizon to highlight our priorities and determine where we should be focusing our resources to maximize those benefits to the public and environment.

The Plan prioritizes water resource issues in each of our four planning regions. For example, in our Northern Planning Region, we've prioritized improving our five first-

magnitude springs, developing plans and implementing projects to improve water quality and natural systems. One of the critical initiatives helps to fund projects that move residents off traditional septic systems to sewer systems, thereby reducing the pollution into the springs. In the Tampa Bay Region we've identified a series of flood protection projects in various watersheds to provide residents with flooding relief.

The District's ability to fund these projects and many others is due to our fiscal stewardship of the taxpayer's dollars. The District is continually looking for ways to reduce costs, improve effectiveness and maximize the taxpayer investment in our mission. We continue to utilize developing technology to obtain and deliver better value to our residents by increasing efficiencies in all areas.

Our innovative Cooperative Funding Initiative has been sharing the costs of water resource projects since 1988. The District has invested nearly \$1.6 billion which were matched with similar contributions from our funding partners for a total investment of approximately \$3.2 billion. Over the last five years this program has averaged \$53 million per year in projects.

Working with our partners over the years, we have accomplished great things. The Tampa Bay Region has one of the most diversified water supply systems in the world. The District is a national leader in recycling water, beneficially reusing 54 percent of its reclaimed water compared to a national average of 7 percent. The District's Tampa Bypass Canal is capable of moving up to 17 billion gallons of water a day to provide flood protection for the cities of Tampa and Temple Terrace. We successfully utilized the Tampa Bypass Canal for this purpose before and during Hurricane Irma. Through our Surface Water Improvement and Management (SWIM) Program, we have restored thousands of acres of environmentally sensitive lands.

As we collectively move forward, I hope to help the Board and District maximize our ability to meet our mission. The best path is to collect the data and follow the science. Then one must evaluate and analyze where the facts lead. Finally, making informed decisions which serve in the best interest of

the District today and into the future. One of the things I've learned as a Board member is the quality and professionalism of the District staff. The District is staffed with knowledgeable and caring individuals who work with the stakeholders on a daily basis. That's critical because no single person or organization can manage the water resources alone. It takes a collaboration among all of us, working together toward a common goal.

Sports has been an important part of my life. Sports teaches us how to work with others as teammates. It teaches us how to compete, to work towards goals and compete fairly. While it not only teaches us to win, but also how to lose. You don't have to like losing, but in life, you don't win all the time. Sports also teaches us that just because someone is wearing a different jersey (or has a different interest or opinion) doesn't make them bad or wrong. Likewise, those with different ideas, perceptions or opinions aren't always wrong or without value. Sports teaches us to be humble as the game itself can be very humbling. Sports teaches us that when teamwork is combined with hard work, anything can be accomplished.

My fellow Board members and District staff all share a passion for making a difference, for leaving this world a better place than they found it. I'm confident when it comes to managing the water resources, this team will never be out-worked or out-hustled.



**Jeffrey M. Adams**  
Governing Board Chair

## Governing Board



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

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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 5.3 million in 2018. 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 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 2018-19 is 0.2955 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, 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.

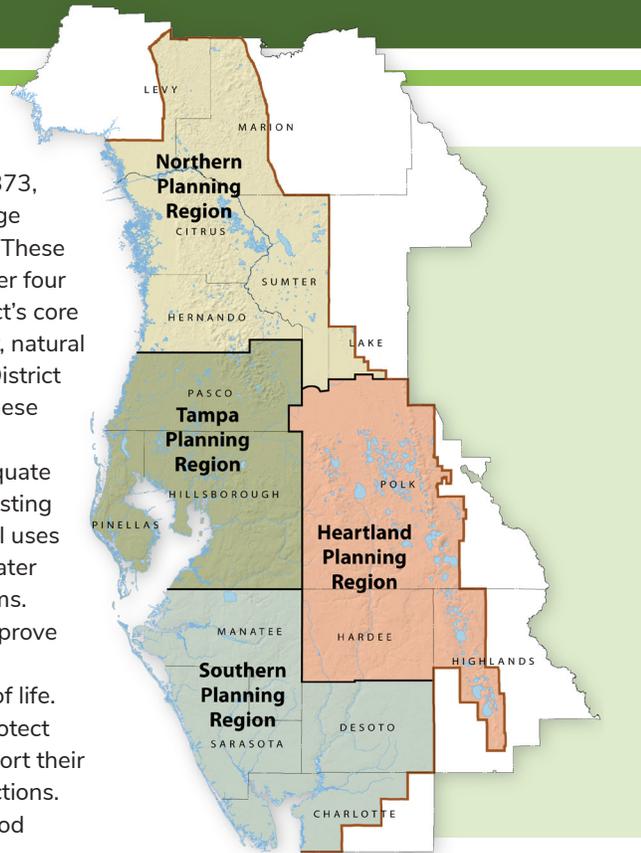
## Mission Statement

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

## 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
- Conservation
- Assessment and Planning
- Water Quality Maintenance and Improvement
- Minimum Flows and Levels (MFL) 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 seven core business processes to successfully achieve its Strategic Initiatives:

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

# 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 within the District, 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 September 2017, the District has helped to develop approximately 363 million gallons daily (mgd) of alternative water supplies,

including reuse and 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 reduce demand on traditional water supplies.**

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 191 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 indirect/direct 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
- Partner with cooperators for the development of indirect/direct 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 recharge and environmental enhancement projects

### 4. Conservation

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

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
- Continue to promote partnerships with agriculture through District programs such as the FARMS Program

# Strategic Initiatives

## 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 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. 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. 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 nitrogen 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 process. Additionally, data and information are shared with counties, cities and the state for projects to improve water quality.

#### STRATEGIES

- Use cooperative funding to support local government efforts to improve District priority water bodies
- Continue to 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 an active environmental resource permitting (ERP) program
- 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
- Support cooperative funding and implementation of prioritized septic and package plant retrofit projects within the Northern region



Rainbow River cleanup in Dunnellon.



Three Sisters Springs Wetland Treatment Project in Crystal River.

# Strategic Initiatives

## Natural Systems

### 1. MFLs 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 water levels for aquifers, surface watercourses, and other surface water bodies identify the limit 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. MFLs are used for permitting or planning decisions concerning how much water may be safely withdrawn from a water body.

Through fiscal year 2018, the District has set 210 MFLs on rivers, lakes, aquifers and wetlands. 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 to determine the need for recovery or implementation of strategies to prevent flows or levels from falling below established MFLs. As of 2017, approximately two-thirds of established MFLs were being met. To address priority water bodies where MFLs have not been met, the District is implementing three regional recovery strategies associated with Water Use Caution Areas (Northern Tampa Bay, Southern and Dover/Plant City) and two water body-specific plans, and included these strategies in its regional water supply planning process.

### STRATEGIES

- Update the MFLs 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 support status assessments for water bodies with established MFLs
- Continue to review and refine scientific methodologies used in establishing MFLs
- Develop, adopt and implement recovery and prevention strategies
- Incorporate MFLs recovery and prevention strategies into the Regional Water Supply Plan (RWSP) development process

### 2. Conservation and Restoration

*Goal Statement: Restoration and maintenance of natural ecosystem 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 ecological functions. The major components of this initiative include land acquisition and management, ecosystem monitoring and restoration, education and regulation. To date 41,824 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.

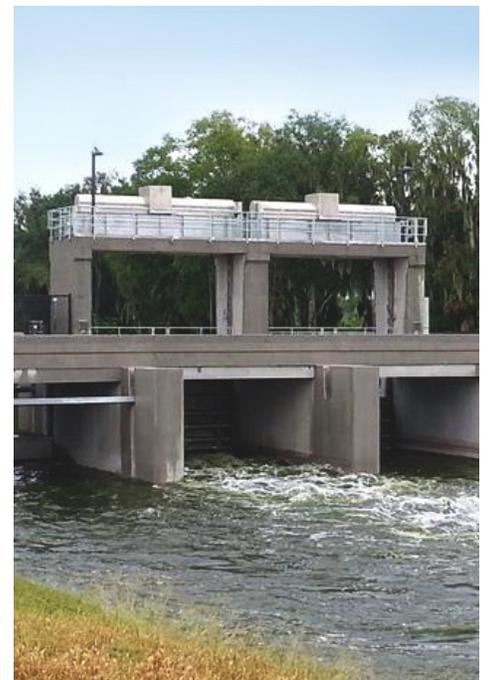
Restoration initiatives, such as the SWIM Program, are overseen by the District to

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 is able to 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, inholdings, additions, core conservation areas, realistic landowner expectations 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
- Utilize management tools to enhance maintenance of conservation lands



The District's P-11 Water Conservation Structure on Lake Hancock in Polk County.

# Strategic Initiatives

## 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 District's 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 88 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 encourages implementation of selected intermediate and regional system improvement projects to reduce flood risk. 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, maintain and upgrade 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.*

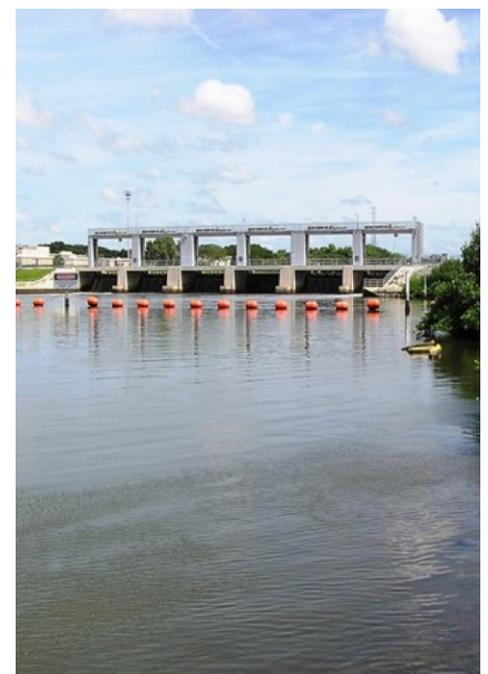
Through its emergency flood response initiative, the District prepares for, responds to, recovers from and mitigates the impacts of critical flooding incidents. To ensure adequate preparation, the District has developed an emergency operations program and maintains a Comprehensive Emergency Management Plan (CEMP), which provides guidelines for pre-incident preparation, post-incident response and recovery, deployment and annual exercises. The District's Emergency Operations Center (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, 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 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 redundant control systems for all mission-critical infrastructure
- Use technology to the fullest extent to ensure optimal response capabilities
- Train staff in NIMS/ICS structure
- Exercise the District's CEMP, high hazard structure Emergency Action Plans, and Flood Event Guidelines
- Provide emergency assistance to local governments and agencies



The District's S-160 Structure on the Tampa Bypass Canal in Hillsborough County.

# Regional Priorities and Objectives

## Northern Region – Springs

### PRIORITY:

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

### OBJECTIVES:

- Implement water quality and natural systems projects identified in the five SWIM plans
- Assist with septic to sewer conversion within the five first-magnitude spring areas
- Monitor status and trends associated with targets in each SWIM plan to assess the health of the spring systems
- Continue support of the Springs Coast Steering Committee (SCSC)

### 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. The five largest spring groups within the District are concentrated in the Northern region along the Florida Springs Coast. These five first-magnitude (flow rates of 100 cubic feet per second or greater) 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 District SWIM priority water bodies, and by the state as Outstanding Florida Waterways and Outstanding Florida Springs.

The Crystal River/Kings Bay, Homosassa River, Chassahowitzka River and Weeki Wachee River flow directly into the Gulf of Mexico, which is home to one of the largest seagrass habitats in the world. Along with seagrass, the nearshore coastal waters of the Florida 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 rivers, bays and springs have experienced ecological changes caused by both natural and human impacts. Issues

facing these coastal resources include sea-level rise, reduced water clarity, altered aquatic vegetation, nutrient enrichment and decreased flows.

In 2014, the District together with local, regional and state partners formed the SCSC. The SCSC'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. Led by District staff, all first-magnitude spring groups now have approved SWIM plans.

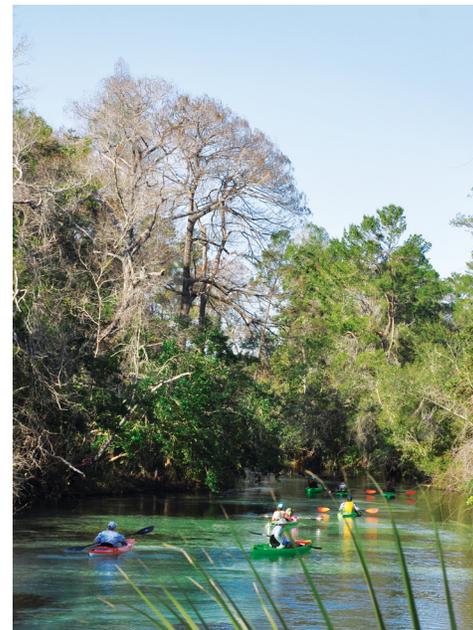
Each SWIM plan is a road map, a living document with adaptive management at its core. These plans identify management actions, projects that address the issues facing each system, and specific quantifiable objectives to assess overall progress and help guide the SCSC. In an August 2017 workshop, the District's Governing Board prioritized combining District funds with state and local funds for projects that would connect domestic 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 is working with producers to implement BMPs to reduce groundwater use and nutrient loading in springsheds. To date, the Governing Board has approved seven projects within the region, with an estimated offset of 0.1 mgd and an estimated nitrogen load reduction of 1,400 lbs per year.

Quantifiable objectives are established for each first-magnitude spring system for the following surface water quality and biological indicators.

#### Chassahowitzka River

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



Weeki Wachee River in Hernando County.

#### Crystal River/Kings Bay

- Water clarity
- Nitrate concentration
- Phosphorus
- Chlorophyll
- Coverage of desirable and invasive aquatic vegetation and natural shoreline
- Enhancement of disturbed shoreline
- Minimum flows

#### Homosassa River

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

#### Rainbow River

- Water clarity
- Nitrate concentration
- Submerged aquatic vegetation coverage
- Minimum flows

#### Weeki Wachee River

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

# Regional Priorities and Objectives

## Northern Region – Water Supply

### PRIORITY:

Ensure long-term sustainable water supply

### OBJECTIVES:

- Increase conservation
  - Achieve and maintain 150-gallon daily compliance per capita with all public supply utilities by December 31, 2019
  - Reduce 2011 regional average per capita water use by 10 percent by 2020
  - Achieve 75 percent utilization of all wastewater flows and a 75 percent resource benefit by 2040. (As of 2017, the Northern region had 20 mgd of wastewater flow and 13 mgd of reuse for a utilization rate of 65 percent.)
  - Improve the quality of water delivered to rapid infiltration basins (RIBs) in springsheds
  - Utilize high quality reclaimed water for aquifer recharge to support groundwater resources
- Partner with the 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 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 region, has significant potential for water savings. In 2011, compliance per capita public supply water use in the Northern region averaged 139 gallons per capita per day (gpcd). Usage increased slightly to 136 gpcd in 2016, representing a 2 percent reduction from 2011; however, this is still significantly higher than the other three planning regions. In 2016, there were five 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 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 usage by 10 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 – MFLs Recovery

### PRIORITY:

Implement MFLs Recovery Strategies

### OBJECTIVES:

- Northern Tampa Bay Water Use Caution Area (NTBWUCA) Recovery Strategy
  - Recover MFLs 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 construction of Morris Bridge Sink projects for the lower Hillsborough River recovery
  - Conduct a second five-year assessment of the adopted MFLs for the lower Hillsborough River
  - Achieve 75 percent utilization of all wastewater flows and a 75 percent resource benefit by 2040. (As of 2017, the Tampa Bay Region had 231 mgd of wastewater flow and 115 mgd of reuse for a utilization rate of 50 percent)
  - Increase reuse for recharge and MFLs
  - Reduce the 2011 regional average per capita water use by 2.5 percent by 2020
- 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 groundwater withdrawal quantities for frost/freeze protection by 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 the 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) of the SWUCA
  - Ensure that there are sufficient water supplies for all existing and projected reasonable-beneficial uses

### NARRATIVE:

The District sets MFLs on priority water bodies. An MFL is the limit 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.

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

The **NTBWUCA** was established to address adverse impacts to water resources from groundwater pumping. The NTBWUCA 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 wellfields and providing financial incentives for construction of



alternative water supply projects. In the NTBWUCA, these efforts have produced to date more than 140 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 MFLs 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. The draft results of the recovery assessment will be completed by 2018, with the final assessment to be completed by 2020. Tampa Bay Water's Consolidated Permit renewal in 2021 will be based on these results.

As of 2017, approximately one-third of the 129 adopted MFLs in the NTBWUCA are not being met. The Hillsborough River is one of the water resources impacted in the NTBWUCA. 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. As summarized in the first

# Regional Priorities and Objectives

## Tampa Bay Region – MFLs Recovery

of three required five-year assessments for recovery of the lower Hillsborough River, completed in March 2015, the District has, since December 2007, 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. A project to develop additional augmentation quantities for the lower Hillsborough River from Blue Sink was completed in September 2017. The District is also helping fund the City of Tampa's augmentation project to evaluate the use of reclaimed water to augment water supplies. A recharge/recovery system is being investigated to store and recover reclaimed water in the Floridan aquifer system for subsequent delivery to the Hillsborough River Reservoir.

The **DPCWUCA** 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 for irrigation 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 January 2010 11-day freeze event, many residential wells were impacted and sinkholes were reported. 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.

The recovery strategy's objective is to reduce groundwater withdrawals used for frost/freeze protection by 20 percent from January 2010 withdrawal quantities by January 2020. This reduction is intended

to lessen the potential that drawdown during a future frost/freeze event would lower the aquifer level at District Well DV-1 Suwannee below 10 feet NGVD (1929). Non-regulatory mechanisms include assistance in offsetting groundwater withdrawals for frost/freeze protection through FARMS. Tailwater recovery, chemical protectants, row covers and wind machines are examples of BMPs eligible for cost-share within the program.

The strategy's regulatory measures address groundwater withdrawal impacts, alternative water supplies, frost/freeze protection methods and resource recovery. In combination, these rules along with the non-regulatory mechanisms are intended to result in recovery of the minimum aquifer level.

Progress toward achieving the minimum aquifer level will be continuously evaluated. This evaluation will include an assessment of the reduction in groundwater withdrawals used for frost/freeze protection in the DPCWUCA and the resulting reduced impact on the minimum aquifer level. If by January 2020 a 20 percent reduction in groundwater withdrawals used for frost/freeze protection or the minimum aquifer level has not been achieved, the recovery strategy will be reassessed.

The **SWUCA** encompasses southern Hillsborough County. In the eight-county SWUCA, an area covering 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 46 priority water bodies in the SWUCA. As of 2017, approximately half of these 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.
- ▶ 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.



Weather station in Hillsborough County.

# Regional Priorities and Objectives

## Tampa Bay Region – Improve Water Bodies

### PRIORITY:

Improve Tampa Bay and Lakes Seminole, Tarpon and Thonotosassa

### OBJECTIVES:

- Implement natural system projects that restore critical shoreline, coastal upland and intertidal habitats in Tampa Bay
- Implement projects for water quality, critical shoreline, wetlands and/or submerged habitats in Tampa Bay and Lakes Seminole, Tarpon and Thonotosassa
- Initiate updates to the Lake Tarpon and Lake Thonotosassa SWIM Plans

### NARRATIVE:

**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, and 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 seagrasses identified by the Tampa Bay Estuary Program. The program has 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 5,806 acres of coastal habitats as of August 2018. The District and its partners have provided water quality projects treating more than 118 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 Seminole 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. Conditions in the lake worsened in the 1980s and 90s.

Lake Seminole, although not a SWIM priority water body, has been a water body of regional significance since 1992, when the District authorized funding for a diagnostic feasibility study of the watershed. Subsequently, 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 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. Five alum treatment system projects, including the Seminole Bypass Canal system, have been completed and are in operation. The County is performing BMP monitoring in accordance with the grant requirements. The project to remove organic muck sediments was authorized by the Pinellas County Board of County Commissioners in July of 2017.

Lake Seminole was included on the DEP’s draft verified list in 2006 for nutrients and trophic state index. The primary pollutants associated with this impairment are nutrients, which have resulted in hyper-eutrophic conditions and poor water quality. 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) would help in achieving the targets, which is consistent with implementation of the Lake Seminole Watershed Management Plan.

**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 Lake Tarpon has been high chlorophyll levels thought to be fueled by nutrient enrichment. This has resulted in less than desirable water quality and habitat quality declines.

Results from a project the District conducted with Pinellas County indicate that Lake Tarpon is meeting the numeric nutrient criteria for total nitrogen and phosphorus and that nutrient loading to the lake is not correlated with the elevated chlorophyll values observed. The County is implementing one of the project recommendations by conducting an evaluation of the sedimentation history (a paleolimnology study) to determine whether the lake has historically had elevated chlorophyll values. If this is the case, the numeric nutrient criterion established by the DEP for chlorophyll may not be appropriate for Lake Tarpon. Both the cooperatively-funded project with Pinellas County and the sediment evaluation will be used by the District to update the Lake Tarpon SWIM Plan, which is expected to begin by the end of 2018.

Success indicators included for Lake Tarpon are the numeric nutrient criteria established by DEP for total nitrogen, total phosphorus and chlorophyll.

**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.

# Regional Priorities and Objectives

## Tampa Bay Region – Improve Water Bodies

Four main challenges exist in this 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 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 FARMS and SWIM programs

will coordinate with the Florida Department of Agriculture and Consumer Services to work with farms and ranches in the watershed to implement BMPs specific to the commodity group. Success indicators include meeting numeric nutrient criteria established by the DEP for total nitrogen, chlorophyll and total phosphorus.



The Rock Ponds project involves the restoration of approximately 1,043 acres of various coastal habitats. This project, which is the largest habitat restoration effort for Tampa Bay to date, was completed in cooperation with Hillsborough County.

# Regional Priorities and Objectives

## Tampa Bay Region – Flood Protection

### PRIORITY:

Improve flood protection in Anclote, Hillsborough and Pithlachascotee rivers, Lake Tarpon, and Pinellas County coastal watersheds

### OBJECTIVES:

- Implement BMPs to reduce the impact of existing intermediate and regional system flooding in priority areas
  - Pithlachascotee River (Pasco County)
  - Anclote River (Pinellas/Pasco County)
  - Curlew Creek and Smith Bayou (Pinellas County)
  - City of St. Petersburg (Pinellas County)
- Develop watershed management plans for priority areas to better support floodplain management decisions and initiatives
  - Curlew Creek and Smith Bayou (Pinellas County)
  - Lake Tarpon (Pinellas County)
  - Anclote River (Pinellas/Pasco Counties)
  - Hammock Creek (Pasco County)
  - Lower Peninsula (Hillsborough County)
  - City of St. Petersburg (Pinellas County)
  - City of Tarpon Springs (Pinellas County)
  - City of Oldsmar (Pinellas County)
- Update watershed management plans and develop alternative analyses to improve flood protection
  - Hillsborough River/Tampa Bypass Canal (Hillsborough County)
  - Pemberton Baker (Hillsborough County)
  - Alafia River (Hillsborough County)
  - Stevenson Creek (Pinellas County)
  - City of Seminole (Pinellas County)
  - City of Safety Harbor (Pinellas County)
  - City of Dunedin (Pinellas County)

### NARRATIVE:

In recent years, the Tampa Bay region has experienced significant rainfall events resulting in local, intermediate and regional drainage system flooding. Flooding events in 2012, 2014, and 2015 have tested the existing stormwater infrastructure and have submerged areas that previously did not flood. In June 2012, Tropical Storm Debby produced 12 to 16 inches of rain over a 24-hour period in portions of western Pasco and Hernando counties. Flooding was most prevalent in the Peck Sink and Anclote River watersheds. In late July and early August of 2015, western portions of Pasco County experienced a 500-year storm event, receiving 12 to 30 inches of rain in a 20-day period. During this same period, northwest Hillsborough

County experienced similar rainfall totals and flooding. In 2016, Hurricane Hermine produced 15 inches of rain in Pinellas County and the coastal portions of Pasco County over a four-day period. These events speak to the importance of watershed management.

The District's 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 takes a watershed approach to managing water and water-related resources within its boundaries. By doing so, the characteristics of each watershed can be evaluated to reflect the

interconnected nature of Florida's water resources. The WMP provides a method to evaluate the capacity of a watershed to protect, enhance and restore water quality and natural systems while achieving flood protection.

The District has been working with cities and counties to develop a list of projects and a plan to implement projects over both the short and long-term. These projects are listed, updated and maintained in the District's WMP Five-Year Plan.

The District's ERP program protects floodplain and historic basin storage and ensures that new development does not increase flood levels or the rate of stormwater runoff onto neighboring properties. Information developed from the WMP is used by regulatory staff and industry consultants to identify flood-prone areas and to ensure that a proposed project design provides the required level of protection. Coordination among these groups begins during the pre-application process to identify minimum flood protection requirements, and continues as needed through the permit application review process. During flood events, District staff coordinate internally with regulatory and operations staff and externally with local governments to investigate flooding complaints and facilitate emergency measures needed to alleviate flood risks that pose an immediate threat to public health and safety.

In the Tampa Bay region, chronic flooding occurs primarily in areas that were developed prior to 1984, when the District's stormwater permitting rules went into effect. While much of this flooding is concentrated in highly developed urban areas, there are rural developments with no master stormwater system that also experience frequent flooding. District regulatory staff coordinate with the residents and local governments to provide guidance on permitting options for temporary and permanent flood relief measures. Some of these relief options can be co-funded through the District's Cooperative Funding Initiative.

# Regional Priorities and Objectives

## Heartland Region – SWUCA Recovery

### PRIORITY:

Implement SWUCA Recovery Strategy

### OBJECTIVES:

- Achieve a net reduction of up to 50 mgd of groundwater use in the SWUCA by 2025 with 40 mgd of offsets achieved through the 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 MIA
- 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 Highlands County lakes by 2025
- Ensure a sustainable water supply
  - Achieve and maintain daily 150-gallon compliance per capita with all public supply utilities by December 31, 2019
  - Reduce 2011 regional average water use per capita by 5 percent by 2020
  - Assist Polk Regional Water Cooperative (PRWC) in the development of 30 mgd of alternative supply sources
  - 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
  - Update the Regional Water Supply Plan for the Central Florida Water Initiative by 2020
  - Achieve 75 percent utilization of all wastewater flows and a 75 percent resource benefit by 2040. (As of 2017, the Heartland region had 36 mgd of wastewater flow and 21 mgd of reuse for a utilization rate of 58 percent)

### 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 Governing Board has approved the adoption of MFLs for 46 priority water bodies in the SWUCA. An MFL is the limit at which withdrawals would be significantly harmful to the water resources or ecology of the area. As of 2017, approximately half of these 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.
- 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 benefitting the Upper Floridan aquifer in and around the MIA.

- 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

# Regional Priorities and Objectives



Surface water pump station at Windmill Farms, Hardee County.



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 became fully operational in 2014 to help meet the minimum flows for the upper Peace River.

Other successes to date include completion of TECO's Southwest Polk Power Station Reclaimed Water Interconnect project. This project is anticipated to provide a near-term resource benefit of 10 mgd and long-term benefit of 17 mgd.

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 withdrawal limits, facing increased demands on water resources and inconsistencies among 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 CFWI 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 region. Key components in meeting the water resource challenges of the CFWI area have included the development of a shared groundwater model to determine regional resource availability and the publication of the initial CFWI Regional Water Supply Plan in 2015. Other ongoing efforts include coordination and planning for water resource data collection needs, development of a coordinated strategy for MFLs prevention and recovery within the CFWI area, establishment of consistent rules among the permitting agencies and development of a second RWSP in 2020.

As part of the CFWI Region, Polk County has a need to develop 30 mgd of water supply sources by 2035. The District assisted in the establishment of the PRWC in 2016 as a collaborative entity to address water supply needs among its member governments. The District is currently coordinating with the PRWC on the development of projects to meet the projected 2035 water supply demands. Such efforts include, but are not limited to, 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 (FY2019–23) for Phase II implementation of the selected projects.

# 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 quality, water-level, wetlands and/or submerged habitats in each priority water body
- Identify priority Ridge Lakes in need of further evaluation and data collection

### 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 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 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. Additionally, it is envisioned that lakes with sufficient water quality data will be evaluated against the DEP's numeric nutrient criteria. More information is available in the SWIM plan for the Winter Haven Chain of Lakes.

As of 2018, 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. 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.

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.

As of 2018, the District is initiating an evaluation of the Ridge Lakes to prioritize lakes for further evaluation to determine the projects and programs necessary to ensure that the Ridge Lakes meet the water quality objectives of the District. Success indicators will be measured by water quality improvements including reductions in non-point source loading of nutrients, decreases in nonnative or undesirable species and increases in native aquatic and upland vegetation. In addition, lakes with sufficient water quality data will be evaluated against the DEP's numeric nutrient criteria.



Lake Gwyn in Polk County.

# Regional Priorities and Objectives

## Southern Region – SWUCA Recovery

### PRIORITY:

Implement SWUCA Recovery Strategy

### OBJECTIVES:

- Achieve a net reduction of up to 50 mgd of groundwater use in the SWUCA by 2025 with 40 mgd offset achieved through the 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 MIA
  - Ensure a sustainable water supply
  - Achieve and maintain 150-gallon daily compliance per capita with all public supply utilities by December 31, 2019
  - Reduce 2011 regional average per capita water use by 2.5 percent by 2020
  - Maximize water conservation
  - Maximize public supply interconnects
  - Achieve 75 percent utilization of all wastewater flows and a 75 percent resource benefit by 2040. (As of 2017, the Southern region had 71 mgd of wastewater flow and 42 mgd of reuse for a utilization rate of 59 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
  - Assist the Peace River Manasota Regional Water Supply Authority in completing construction on the remaining planned phases of the Regional Integrated Loop System project by 2035

### NARRATIVE:

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 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 46 priority water bodies in the SWUCA as of 2017. Approximately half of these 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.
- ▶ 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.
- ▶ 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.

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 became fully operational in 2014 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.

# 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 quality, wetlands, critical shoreline and/or submerged habitats in each priority water body
- Develop and update plans and implement projects that improve water quality and restore critical shoreline, coastal upland and intertidal habitats
- 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 for 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.

The success indicator is the harbor-wide seagrass target of 18,436 acres adopted by the Charlotte Harbor National Estuary Program (CHNEP) for the District's area of the harbor. More information is available in the District's SWIM Plan for the harbor. The District participates with other government agencies through the CHNEP to update and implement the comprehensive conservation and management plan, implement water quality and hydrologic alteration improvement projects and restore the balance between coastal upland, wetland and intertidal habitats.

As of 2018, the District and its cooperators have completed 16 natural systems projects which have restored approximately 4,536 acres of coastal habitats for Charlotte Harbor. The District and its partners have provided water quality projects treating more than



147 square miles of contributing area for the watershed. 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 plant species and water quality degradation from point and non-point source pollutants.

The success indicator for Sarasota Bay is the seagrass target of 9,779 acres adopted by the Sarasota Bay Estuary Program. Similar to efforts under way for Charlotte Harbor, the District is working with other government agencies on initiatives for Sarasota Bay. These 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 2017, the District and its partners have completed projects to provide water quality treatment for 59 square miles of watershed contributing to Sarasota Bay and restored more than 925 acres of coastal habitats.

**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 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.

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 watershed's 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. The District has and will continue to monitor surface water quality at key locations in the watershed to detect changing trends related to mineralization of surface waters.

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 have significantly improved. Additionally, these FARMS Program projects have reduced approximately 10.5 mgd of groundwater use which contributes to SWUCA recovery.



Shell Creek in Charlotte County.



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

# 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 large-scale development, including 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 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. 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.

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 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 is also working 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 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 450,000 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 88 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 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 documents).

# Core Business Processes

During FY2018 and FY2019, the District will be organizing 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.

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.



Regulatory staff explaining stormwater management.

## 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.



District staff analyzing samples in lab.



Prescribed burn conducted on District land.



## Southwest Florida *Water Management District*



### Photo credits:

All photos: SWFWMD staff.

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 and activities. Anyone requiring reasonable accommodation as provided for in the Americans with Disabilities Act should contact the District's Human Resources Office Chief, 2379 Broad St., Brooksville, FL 34604-6899; telephone (352) 796-7211 or 1-800-423-1476 (FL only), ext. 4703; or email [ADACoordinator@WaterMatters.org](mailto: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).

# Strategic Plan Annual Work Plan Report

Section 373.036(2)(e)4 Florida Statutes (F.S.) indicates the water management districts may substitute an Annual Work Plan Report, included as an addendum to the annual Strategic Plan, for the statutorily-required District Water Management Plan. The annual work plan report must detail the implementation of the Strategic Plan for the previous fiscal year, addressing success indicators, deliverables and milestones. The Southwest Florida Water Management District (District) has decided to submit an annual Strategic Plan and Annual Work Plan Report in lieu of the District Water Management Plan.

The Annual Work Plan Report is intended to fulfill the statutory requirement by identifying the regional priorities and objectives in the Strategic Plan, and providing a discussion of the milestones, success indicators and deliverables achieved in FY2018 as they relate to the specific programs that implement the plan.

## Northern Region Priorities and Objectives

### Priority: Improve Northern Coastal Spring Systems

#### ***Objective: Implement water quality and natural systems projects identified in the five SWIM plans***

Surface Water Improvement Management (SWIM) plans have been approved for the Rainbow River, Crystal River/Kings Bay, Homosassa, Chassahowitzka and Weeki Wachee rivers. These plans identify and implement specific management actions and projects (i.e., programs, initiatives and Cooperative Funding Initiative) to address major issues facing the systems. The following table summarizes the status of projects for the five springs.

#### **Springs Projects and Initiatives Status**

<b>Resource</b>	<b>Completed</b>	<b>Ongoing</b>	<b>Proposed</b>
<b>Crystal River/Kings Bay</b>	<b>10</b>	<b>34</b>	<b>25</b>
<b>Rainbow River</b>	<b>9</b>	<b>29</b>	<b>8</b>
<b>Weeki Wachee River</b>	<b>4</b>	<b>24</b>	<b>19</b>
<b>Homosassa River</b>	<b>5</b>	<b>22</b>	<b>13</b>
<b>Chassahowitzka River</b>	<b>4</b>	<b>14</b>	<b>13</b>

*Source: District Springs and Environmental Flows staff, 2018*

The District has approved management plans for all five first-magnitude springs groups. These plans also serve as the SWIM plan for the corresponding water body. Each approved plan includes numeric targets called quantifiable objectives. These are long-term objectives used to develop and prioritize management actions and projects, thus promoting effective and efficient resource management. If the objectives are achieved, the expected result is a healthy spring ecosystem.

Accomplishments for springs in 2018 include the completion (or near completion) of projects that improve water quality and provide other natural resource benefits. The Rainbow River Stormwater improvement project (WRO4) improves the quality of stormwater infiltration to the groundwater by

modifying the bottom of three stormwater retention areas to enhance the removal of nitrogen. The City of Crystal River Best Management Practices (BMP) Analysis (W477) determines the best site locations for the implementation of stormwater BMPs for water quality improvements within the Kings Bay and Crystal River watersheds. A project within the Homosassa Springs State Wildlife Park, the Homosassa Springs Floating Wetland Project (P702), involves the installation of floating wetland islands to increase vegetated habitat and improved water quality treatment. In Hernando County, the Rogers Park Low Impact Development (LID) Project (P704) involved the construction of BMPs that redirect stormwater runoff and provide water quality treatment for stormwater runoff from a parking area adjacent to the Weeki Wachee River.

***Objective: Assist with septic to sewer conversion within the five first-magnitude spring areas***

Converting properties from the use of septic systems to waste water treatment facilities by constructing sewer line connections has been identified to improve the water quality of Florida springs. In an August 2017 workshop, the District's Governing Board prioritized combining District funds with state and local funds for projects that would connect domestic 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. The District has solicited and evaluated septic to sewer conversion projects through the Springs Coast Steering Committee (SCSC). In 2018, 12 projects were reviewed by the SCSC and submitted to DEP for funding consideration. Four projects, totaling \$21 million (State, District and local dollars), were awarded funding. The Pasco County Crews Lake Natural Systems Project (N635) will be used to complete construction of infrastructure providing reclaimed water that enhances wetlands in and adjacent to Crews Lake, reduces nitrogen loading to groundwater and benefits the quality and quantity of water flowing from Weeki Wachee Spring. Two projects in Citrus County received 2018 Springs funding. The Advanced Wastewater Treatment Upgrades to the existing Brentwood Wastewater Treatment Facility (P134) will provide advanced wastewater treatment and the Northwest Quadrant Sewer Extension (P137) will allow for sewer main expansion construction within the northwest quadrant of Citrus County that is primarily serviced by septic systems. Both Citrus County projects will reduce nitrogen groundwater loading and provide increased reclaimed water for beneficial use projects. The Zephyrhills Advanced Wastewater Project (N672) will upgrade an existing wastewater treatment facility to advanced treatment levels and reduce nitrogen loading to the Crystal Springs (Pasco County) springshed.

***Objective: Monitor status and trends associated with targets in each springs plan to assess the health of the spring systems***

The status and trends of District spring water quality and natural systems parameters are accomplished through ongoing data collection and analysis efforts. Each of the five first-magnitude springs in the District has multiple water quality stations which are sampled on a quarterly basis. At these stations, 26 water quality parameters are measured by the District. This information allows status and trend assessments to be completed on an annual basis. Findings are presented to the SCSC as part of annual updates and selected water quality data are presented on the District webpage for each spring. The natural systems of springs include the submerged aquatic vegetation (SAV) present in the springs and their associated rivers. The District assessed the types and quantity of SAV in the five first-magnitude spring systems. Similar to regional seagrass surveys, this information provides a periodic evaluation of the spring's natural systems health.

***Objective: Continue support of the Springs Coast Steering Committee***

The SCSC meets on a quarterly basis and is supported by the Springs Coast Management Committee (SCMC) and Technical Working Group (TWG). The initial focus of these groups was to create SWIM plans for each of the five first-magnitude springs in the District. These SWIM plans were finalized

between 2015 and 2017, and subsequently, the SCSC's and SMC's primary focus has been on soliciting and evaluating projects which will benefit the water quality, water quantity or natural systems of springs within the SWFWMD. The committees allow city, county and other local stakeholders to submit projects which are evaluated using DEP guidelines to be considered for State springs funding on an annual basis. In 2018, 12 projects requesting \$22.3 million in State springs funding were evaluated and recommended to DEP for State springs funding. Of those projects submitted, four received \$9.3 million in State springs funding.

## **Priority: Ensure Long-Term Sustainable Water Supply**

### ***Objective: Increase conservation***

The District has been making progress toward meeting the conservation and per capita goals for the Northern Region. In 2011, there were 14 utilities not in compliance. As of this report, only five utilities were not in compliance. The regional average compliance per capita in 2017 has decreased to 130 gpcd from 136 gpcd in 2016.

The District has also been active in promoting conservation in the Northern Region. These efforts include cooperatively funding three conservation projects with northern utilities in FY2018. These projects are estimated to conserve a total of 49,300 gpd, and have a District investment of \$86,900. Efforts associated with the District's Conservation Initiative are also significant. The Conservation Initiative aims to assist utilities with implementation of demand reduction initiatives, with the Northern Region and Polk County as priority areas, where the compliance per capita is greater than 150 gpd, or the utility is thought to be large enough to have a significant impact on the overall regional per capita.

Finally, the District operates a leak detection program to help public supply water utilities locate water leaks in utility water distribution systems. Among the services provided are comprehensive leak detection surveys (systematic or point) and meter accuracy testing (source and service). In 2018, staff worked with Northern Region utilities to conduct six leak detection surveys. These surveys identified water leaks totaling approximately 145,000 gpd. Since the program's inception, for the Northern Region, more than 530 water leaks have been identified, resulting in over 2.3 million gpd of water conserved.

### ***Objective: Maximize beneficial use of reclaimed water***

The Strategic Plan identifies the objectives of 75 percent reuse utilization and resource benefit by 2040. As of 2017 (latest data), with District assistance, this region has achieved 65 percent utilization and 72 percent resource benefit, exceeding the interim 2020 goals of 55 percent utilization and resource benefit. For 2017, the region had a beneficial reuse flow of 13.1 mgd, while the objectives are 12 mgd by 2020 and 24 mgd by 2040. The regional water supply planning process updates these targets as needed.

### ***Objective: Partner with the Withlacoochee Regional Water Supply Authority to promote regional water supply planning and development***

The District maintains an ongoing partnership with the Withlacoochee Regional Water Supply Authority (WRWSA) to promote regional water supply planning and development. In cooperation with the District, the WRWSA completed its Regional Water Supply Plan (RWSP) in 2014. This Plan evaluated water use demand for all use categories and identified projected increases of approximately 96.7 mgd from 2010 to 2035. The quantity of water available and demand reduction potential for the same period ranges from 175 to 195 mgd, indicating that demands for all use categories can be met through 2035.

Water supply development partnerships under way with WRWSA include the Regional Irrigation System Evaluation program. This initiative addresses outdoor water conservation. The District is also cooperatively funding the WRWSA's RWSP update in FY2018, the results of which will be reflected in the District's next five-year update of its RWSP scheduled for completion in 2020.

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# Tampa Bay Region Priorities and Objectives

## **Priority: Implement Minimum Flows and Level Recovery Strategies**

### ***Objective: Northern Tampa Bay Water Use Caution Area Recovery Strategy***

The Northern Tampa Bay Water Use Caution Area (NTBWUCA) was established to address adverse impacts to water resources from groundwater pumping. The “Comprehensive Environmental Resource Recovery Plan for the Northern Tampa Bay Water Use Caution Area” serves as the recovery plan for the NTBWUCA.

The 2018 minimum flows and water levels (MFL) status assessment, which was based on hydrologic data collected through 2017, indicated that MFLs for 7 of 7 groundwater levels, 28 of 41 wetlands, 3 of 3 freshwater river segments, 1 of 2 springs, 3 of 4 estuaries and 50 of 72 lakes within the NTBWUCA are currently met. That assessment also documented improved status of MFLs established for 8 lakes, 1 river segment, 1 estuary and 1 wetland in the NTBWUCA, and degraded status for 2 lakes and 1 spring.

As part of the recovery plan, Tampa Bay Water is required to develop and implement a “Permit Recovery Assessment Plan.” This plan will identify assessments to determine the beneficial impact of reducing groundwater withdrawals in regional wellfields. Additionally, Tampa Bay Water will identify remaining adverse impacts and evaluate potential options to address them. The results will be submitted with its water use permit renewal in 2020. The current permit contains a special condition requiring that draft results be submitted to the District in 2018. Tampa Bay Water and the District are currently meeting monthly to discuss analyses, review findings and assess project status. It is expected that these meetings will continue through 2020.

The 2018 MFLs status assessment, which was based on hydrologic data collected through 2017, indicated approximately one-third of the 129 adopted MFLs in the NTBWUCA are not met. The specific recovery strategy for one of these water bodies, the lower Hillsborough River, calls for augmentation of flows in the river below the Hillsborough River Reservoir using a variety of sources and projects. In accordance with the strategy, the District has, since November 2007, supported City of Tampa projects associated with diversion of water from Sulphur Springs to the base of the Hillsborough River Reservoir dam for lower river recovery. Additionally, since December 2007, the District, and more recently the City of Tampa has, when necessary, diverted water from the Tampa Bypass Canal and through the reservoir to the base of the dam. In support of these diversions, the District has worked with the City of Tampa on the transfer of ownership of District pumping facilities used for the diversions, executed easements and agreements for the facilities, and contributed to funding for the 2018 installation of a new water control gate in the dam for discharge of water to the lower river. The District has also provided funding for the City of Tampa’s Blue Sink Project, which was completed in 2017 to facilitate use of water from the sink for augmentation of the lower river. The District also continues to support the City’s investigation of the feasibility of the Tampa Augmentation Project for storage and recovery of reclaimed water in the Floridan aquifer system that could increase supplies to the reservoir and enhance lower river recovery.

The Morris Bridge Sink Project, which will be funded, owned and operated by the District, is also expected to assist in meeting MFLs in the lower Hillsborough River. The project involves pumping water from Morris Bridge Sink into the Tampa Bypass Canal for diversion to the lower river through the reservoir. A water use permit for the planned withdrawals from the sink was issued to the District by the DEP in 2016 and pre-withdrawal monitoring and reporting requirements continue to be addressed. Project design and permitting have been completed and completion of future project activities is contingent upon ongoing discussions between the District and the City of Tampa concerning the potential impact of

the City's proposed Tampa Augmentation Project on the need for the proposed Morris Bridge Sink Project.

The District continues to evaluate and monitor recovery of the MFLs established throughout the NTBWUCA, including those established for the lower Hillsborough River. In FY2015, the District completed the first of three-planned five-year recovery strategy assessments for the river. This first assessment documented hydrologic and other environmental improvements associated with the ongoing implementation of recovery strategy projects. Work is under way for the completion of a second assessment in 2018.

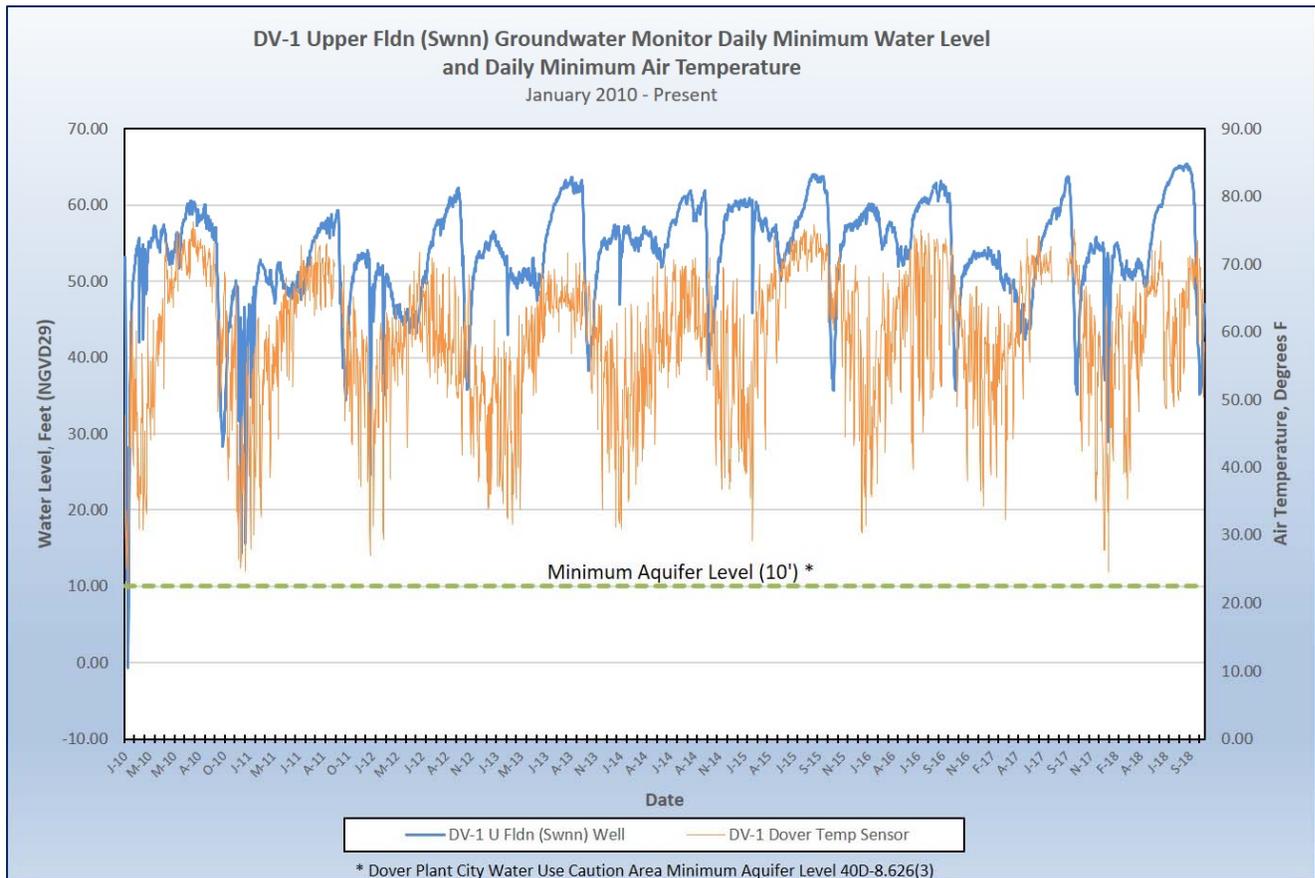
In addition, the District continues to encourage water reuse which helps with the achievement of MFLs through groundwater use reduction. The Strategic Plan identifies the objectives of 75 percent reuse utilization and resource benefit by 2040. As of 2017 (latest data), with District assistance, this region has achieved 50 percent utilization and 61 percent resource benefit, well on the way to meeting the interim 2020 goals of 55 percent utilization and resource benefit. For 2017, the region had a beneficial reuse flow of 115 mgd, while the objectives are 139 mgd by 2020 and 202 mgd by 2040. The regional water supply planning process updates these targets as needed.

***Objective: Dover/Plant City Recovery Strategy***

The Dover/Plant City Water Use Caution Area (DPCWUCA) was established to address impacts from groundwater pumping for frost/freeze protection. The District has developed and adopted a comprehensive management plan to reduce and monitor groundwater pumping during future freeze events.

The DPCWUCA's recovery strategy established a minimum aquifer level (MAL) of 10 feet at the DV-1 monitoring well. The graph below depicts the correlation between temperature and the water levels at DV-1. As temperature drops, farmers increase pumping for crop protection, affecting the aquifer. As depicted below, the aquifer level has not come close to the MAL since January 2010. The additional strategies addressed below help to ensure continued compliance with this target.

### Water Level and Air Temperature Tracking (January 2010-Present)



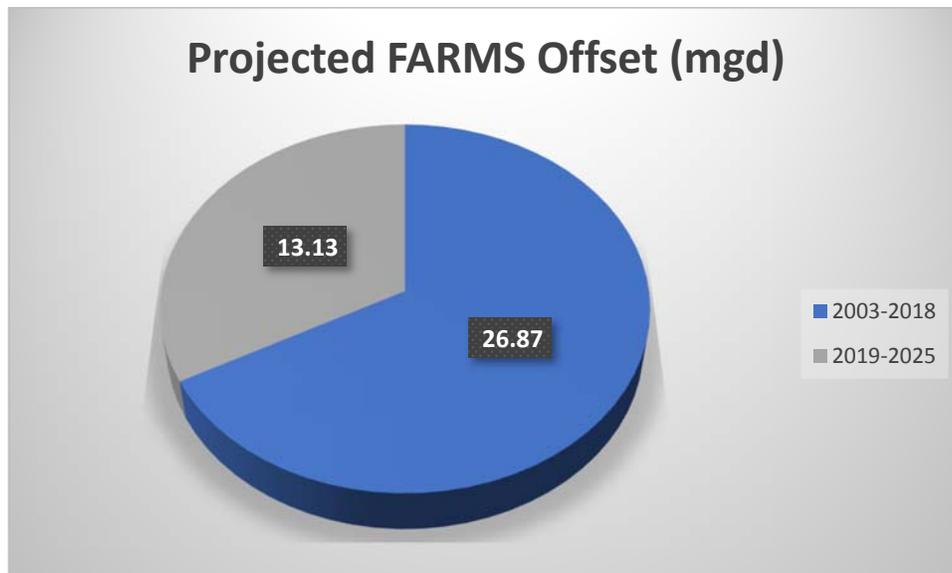
*Source: District Hydrologic Data staff, 2018*

One of the tactics in this strategy is to reduce January 2010 crop protection withdrawals by 20 percent by January 2020. An evaluation was completed in 2015 assessing the required 10 percent reduction in groundwater withdrawals for cold protection, and the resulting impact on the minimum aquifer level. This evaluation confirmed that there are no new cold protection groundwater withdrawals being allocated within the Minimum Aquifer Level Protection Zone, and the reductions in groundwater withdrawals in the water use caution area are continuing to occur, primarily because of declines in citrus cold protection. The continuation of this trend is anticipated.

The installation of automatic meter (AMR) devices is another critical component of the DPCWUCA recovery strategy. Metering is critical so that the recovery assessment can include an empirical evaluation of actual pumping reduction, as opposed to only a review of permitted quantities. At the time of rule development, there were approximately 626 unmetered agricultural withdrawal points in the DPCWUCA that required flow meters. At the start of the DPCWUCA AMR installation program, there were 961 agricultural withdrawal points that required AMR devices. As of October 1, 2018, 550 withdrawals require flow meter installation, and 869 withdrawals require AMR installation. The District has set an objective to achieve AMR installations on all 869 points by the end of 2018, including the 550 unmetered sites. The District is also providing reimbursements for the installation of flow meters, upon meeting certain criteria. Program progress to date includes the installation of AMR devices on 838 of the targeted agricultural withdrawal points, approximately 96 percent of the total, and the installation/reimbursement for 532 flow meters, approximately 97 percent of the total required.

**Objective: Southern Water Use Caution Area Recovery Strategy**

The District has a target of offsetting up to 50 mgd in groundwater withdrawals in the Southern Water Use Caution Area (SWUCA) in 2025, with 40 mgd to be achieved through the Facilitating Agricultural Resource Management Systems (FARMS) program. The District has offset approximately 26.87 mgd of groundwater in the SWUCA through FARMS projects that are operational, under construction and/or have contracts pending. The table below depicts current offsets and future FARMS targets for the period to 2025. The projection for 2019-2025 has been capped at the 40 mgd target.



*Source: District FARMS staff, 2018*

The two primary factors influencing water levels in the region are rainfall and groundwater withdrawals. Rainfall, the primary source of water to the hydrologic system in the groundwater basin, has been highly varied over the last several years. Since 2004 and 2005, when the region experienced several tropical storms, the area has received less than long-term average annual rainfall. Additionally, activities that use water, such as agricultural and landscape irrigation, require increased withdrawals to supplement lower rainfall amounts. Increases in groundwater withdrawals during these periods can cause water levels to decline further than would be expected given below average rainfall alone. Though recent rainfall has been below the long-term average, estimated groundwater withdrawals (including metered withdrawals) have generally declined due to changes in water use related activities in the basin, averaging about 570 mgd since 2006. Withdrawals from the Upper Floridan aquifer represent about 90 percent of total groundwater withdrawals in the area. Though total groundwater withdrawals in the region have decreased over the past 10 years, locally there are areas that have experienced increases in withdrawals, as well as a shift from one water use type to another.

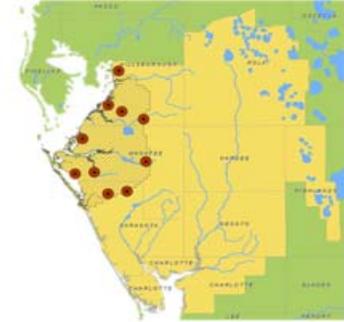
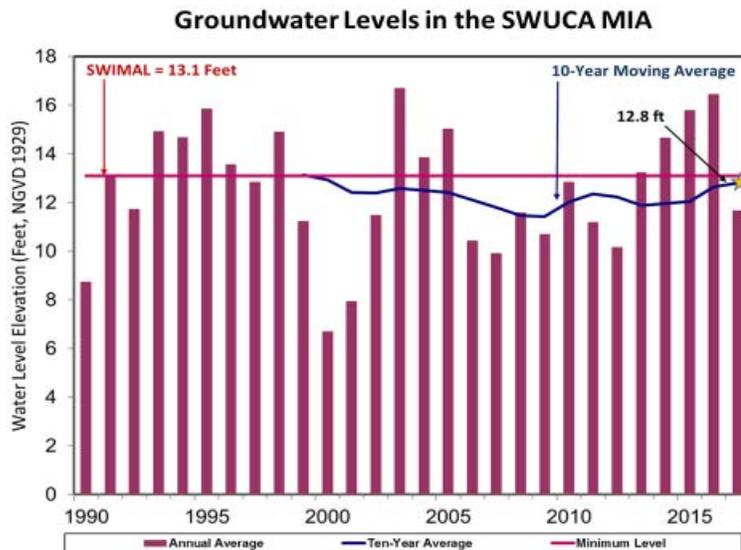
The first five-year assessment for the SWUCA Recovery effort was completed for the period 2007-11 in 2013, and the most recent assessment covering the period 2012-16 was finalized in April 2018. This assessment's major conclusions are as follows:

- Groundwater levels in the SWUCA have generally been stable with increasing levels in the north and decreasing levels in some southern areas.
- For 2014 through 2016, the annual rainfall has been above the long-term average, while the period 2006 through 2013 experienced annual rainfall over much of the basin mostly below the long-term average.
- Groundwater levels have continued to increase in the six sentinel wells used to monitor recovery progress. Monitoring results show the saltwater interface continues to move inland, but the goal to reduce the rate of saltwater intrusion through achieving the saltwater intrusion minimum aquifer level (SWIMAL) is showing promise.
- Concerning the upper Peace River's minimum flows, its success is closely tied to the Lake Hancock Lake Level Modification and Ecosystem Restoration project. The project was completed in June 2015 and is currently undergoing three to five years of testing and optimization to maximize flows.
- In addition, MFLs have been established on 41 water bodies. This includes the reevaluation of minimum levels on six Ridge Lakes. Of the 41 water bodies, MFLs are being met on 21 and 20 still unmet.
- The recovery's water supply goal is to ensure sufficient water supplies. Water supply demand is expected to increase 76 mgd by from 2015 to 2025. This is needed to meet projected increases in water use and to meet the SWIMAL. To address these demands, the District has initiated investigations of the Lower Floridan aquifer and was involved in the development and approval of the Central Florida Water Initiative (CFWI) RWSP in 2015. Further, the District assisted with creation of the Polk Regional Water Cooperative (PRWC) for the regional development of water supply. The PRWC initiated three projects to test and design new alternative water sources for its members in 2017. The District has also funded several components of Peace River Manasota Regional Water Supply Authority's (PRMRWSA) regional loop system.

Further, total potential savings up to 116 mgd (i.e., surface and ground water) have been identified through the year 2025, attributable to conservation and reclaimed water projects within the District. Some activities that provide substantial positive benefits are difficult to quantify, such as net benefit projects, redistribution of withdrawals, plugging of free-flowing wells, aquifer recharge projects, educational outreach and other similar efforts. Also provided are alternative potable water supply sources identified through the regional water supply planning process.

The SWIMAL for the most impacted area (MIA) is an important indicator of overall progress due to the regional nature of the aquifer and implications for requests for new groundwater withdrawals. One of the goals for this effort is the recovery of the SWIMAL of 13.1 feet by 2025.

The table below depicts progress on the SWIMAL in this recovery. The most recent measurement (2017) is 12.8 feet.



*Source: District Resource Evaluation staff, 2018*

## **Priority: Improve Lake Seminole, Lake Tarpon, Lake Thonotosassa and Tampa Bay**

**Objective: Implement plans and projects for water quality, critical shoreline, wetlands and/or submerged habitats in each priority water body**

The District's Tampa Bay water quality priorities include Lake Seminole and the SWIM water bodies, Lake Tarpon, Lake Thonotosassa and Tampa Bay. The District is continuing to work with local governments on projects to assess the conditions of these water bodies and to identify and implement projects to improve water quality and habitat. Specific projects and associated FY2018 milestones are discussed below.

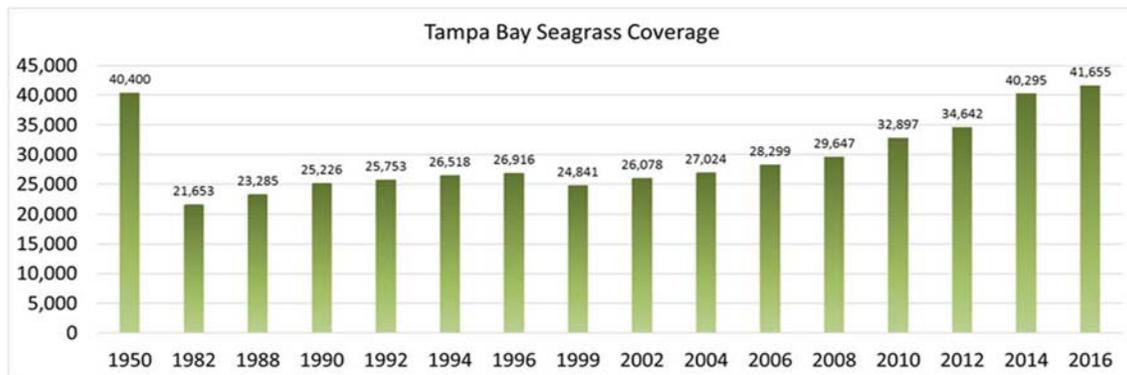
**Lake Seminole:** Lake Seminole is the only non-SWIM priority water body included as a regional priority for the Tampa Bay Region. A major concern for Lake Seminole is nutrients. The District cooperatively-funded a project with Pinellas County for the design, permitting and implementation of four water quality treatment systems to improve the quality of runoff currently entering Lake Seminole. The objective is to remove 2,055 pounds (lbs) of nitrogen per year. In FY2014, the District completed two of these projects, which removed 623 lbs of nitrogen per year. Another Lake Seminole project was completed in a previous fiscal year, bringing the total removal rate to 1,397 lbs per year. Construction of the last sub-basin BMPs was completed and operational in FY2018. In addition to these stormwater projects, Pinellas County selected a contractor to complete the cooperatively-funded Lake Seminole Sediment Removal project anticipated to remove approximately 900,000 lbs of total nitrogen from the lake. The DEP permit was issued in September 2018 and site preparation and dredging is expected to begin in early FY2019.

**Lake Tarpon:** The District and Pinellas County completed the Lake Tarpon Water Quality Management Plan in FY2017. One of the recommendations of the Plan was to evaluate potential site-specific alternative nutrient criteria for the lake since the water quality standard for chlorophyll-a was

not being met. To evaluate this option, the County is conducting a paleolimnology study to evaluate historic chlorophyll-a concentrations for comparison to recent values. Results of this study will be available in FY2019.

**Lake Thonotosassa:** The District, in coordination with Hillsborough County, completed a Nutrient Source Tracking Project in FY2017 and the primary sources of nutrients in the watershed were determined to be fertilizer and wastewater. The report recommended several stormwater treatment projects that would reduce nutrient loading to the lake. Another recommendation was collaboration with the Florida Department of Agriculture and Consumer Services (FDACS) to enroll in the BMPs Program and provide education and outreach regarding Lake Thonotosassa water quality. The District's FARMS program has been collaborating with FDACS. Findings and recommendations from the Nutrient Source Tracking Project will be considered in the update of the SWIM plan.

**Tampa Bay:** Tampa Bay has shown significant water quality improvement in recent years, as evidenced by growth in seagrass recovery, an indicator of overall bay health. Data for 1988-2016 (latest available) are presented below. The graph shows seagrass coverage has surpassed the goal of 38,000.



Source: District SWIM staff, 2018

- In 2014, seagrass acreage in Tampa Bay surpasses the Tampa Bay Estuary Program's 38,000-acre target
- 3% increase in seagrass acreage from 2014 to 2016
- SWIM has created 14 maps to track the progress of seagrass and bay health over time

The District's SWIM program continues its restoration work for Tampa Bay. In FY2018, the District has several ongoing restoration projects in Tampa Bay, including the Balm Boyette Habitat Restoration Project and the Kracker Avenue Restoration Project.

In FY2014, the District began tracking restoration by habitat type. The District supports the Tampa Bay Estuary Program's (TBEP) Habitat Restoration Master Plan. In 2008, TBEP identified 3,070 acres remaining to satisfy the 37,914-acre freshwater wetland restoration target, and 2,758 acres remaining to reach the estuarine wetland restoration target of 7,600 acres. The TBEP is working to update its Habitat Restoration Master Plan. Completion is anticipated in 2019. Following this, the District will reassess its habitat restoration priorities in Tampa Bay.

***Objective: Initiate updates to the Lake Tarpon and Lake Thonotosassa SWIM Plans***

In late FY2018, the District began the process to select a consultant to assist with the update to the Lake Tarpon SWIM Plan. This update will follow the process identified in Chapter 373.451, Florida Statutes for development of SWIM plans and will build on findings of the cooperatively funded Lake Tarpon Water Quality Management Plan developed with Pinellas County and Pinellas County's paleolimnology study of historic chlorophyll conditions in the Lake.

In FY2018, the District participated in the DEP's public meeting on the approach to develop a TMDL for Lake Thonotosassa. The District will continue to monitor and participate in the TMDL development process. The DEP's progress and findings will be considered in scheduling the Lake Thonotosassa SWIM Plan update.

# Heartland Region Priorities and Objectives

## **Priority: Implement Southern Water Use Caution Area Recovery Strategy**

***Objective: Achieve a net reduction of up to 50 million gallons daily of groundwater use in SWUCA by 2025 with 40 mgd of offsets achieved through agricultural reductions via the Facilitating Agricultural Resource Management Systems Program***

See Tampa Bay Regional Priorities and Objectives for a discussion on this objective.

***Objective: 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***

Although the SWUCA saltwater intrusion minimum aquifer level is not being met, the 2018 minimum flows and water levels (MFL) status assessment, which was based on hydrologic data collected through 2017, indicated that MFLs for 5 of 7 freshwater river segments, 1 of 1 spring group, 4 of 4 estuaries and 13 of 32 lakes within the SWUCA are currently met. That assessment also documented improved status of MFLs established for 1 lake in the SWUCA.

In addition, see Tampa Bay Regional Priorities and Objectives for information relating to this objective.

***Objective: Recover 87 to 89 percent of the minimum low flows for three segments of the upper Peace River through implementation of the Lake Hancock Lake Level Modification Project***

The Lake Hancock Lake Level Modification Project involved replacement of the control structure (P-11) to raise the normal operating level of the lake and allow for release of excess water during the dry season to increase the number of days the upper Peace River will meet minimum flows. Prior to structure replacement, the upper Peace River exceeded minimum low flow thresholds 70 percent of the days for the period 1975 to 2004. The District began operating the structure in 2016 to help achieve minimum low flows. For 2018 through October, provisional measured flows exceeded minimum flows 99.2 percent of the days. This figure reflects MFL exceedance across three USGS gage stations (i.e., Bartow, Ft Meade and Zolfo Springs). Long-term, it is projected that operation of the structure will result in actual flows greater than minimum low flows 87 to 89 percent of the days.

***Objective: Recover minimum levels at seven Polk County lakes and nine Highlands County lakes by 2025***

See Tampa Bay Regional Priorities and Objectives for a discussion on this objective.

***Objective: Ensure a sustainable water supply***

The District utilizes per capita water use to help ensure a sustainable water supply in the future and to measure progress in measuring conservation. Specifically, the goals are to achieve and maintain 150 gallons per day compliance per capita with all public supply utilities and to reduce the 2011 Heartland regional average compliance per capita by five percent by 2020. The District has been making progress toward meeting these per capita objectives in the Heartland. The region's average compliance per capita has declined seven percent since 2011 to 97 gpcd in 2017.

The progress in per capita water use can be attributed to water savings achieved through a combination of regulatory, economic, incentive-based and outreach measures, as well as technical assistance. The number of utilities above 150 gpcd has declined from four utilities above 150 in 2011 to only two in 2017.

In 2015, Polk County and its municipalities entered into an inter-local agreement to create the PRWC to promote regional cooperation in the development of new water supplies. A comprehensive water supply assessment was completed to assist the PRWC with evaluation of potential water supply projects for the development of up to 30 mgd of alternative water supply (AWS). In 2017, the PRWC selected three project options that had the potential to collectively provide 30 mgd: (1) West Polk County Deep Wells (N882); (2) Polk Southeast Wellfield (N905); and (3) Peace Creek Integrated Water Supply Plan (N928). The PRWC Board approved the projects and associated implementation agreements to begin work on phase one of each project. At its April 2018 meeting, the Governing Board approved an additional \$5 million per year for five years (2019-2023) for Phase II implementation of the selected projects. From FY2014-15 to FY2017-18, the District's Governing Board has allocated \$40 million for project development. Of this total, \$11.5 million has been approved for Phase I of three projects from the allocated funds.

The Lower Floridan aquifer (LFA) study is ongoing in Polk County. This project assesses the LFA's viability as an AWS and seeks to gain a better understanding of its characteristics and quality in Polk County. The District has executed agreements with three consultants for investigations near Crooked Lake and the cities of Frostproof and Lake Wales. Well construction and testing is proceeding at all three sites.

The District also approved the CFWI RWSP in November 2015. The CFWI region covers five counties, including Polk and southern Lake in the District, as well as Orange, Osceola and Seminole counties. The RWSP details how to best meet the regional water supply needs for the region to 2035. As part of this planning effort, the CFWI teams identified potential AWS, reclaimed water and conservation options. Several of the projects and conservation options are being implemented. Work on the 2020 RWSP for the CFWI has commenced and planning activities are under way.

The Strategic Plan identifies reuse objectives of 75 percent utilization and resource benefit by 2040. With District assistance, as of 2017 (latest data), this region has achieved 58 percent utilization and 90 percent resource benefit, exceeding the interim 2020 goals of 55 percent utilization and resource benefit. As of 2017, the region has a beneficial reuse flow of 20.5 mgd, while the objectives are 23 mgd by 2020 and 42 mgd by 2040. The regional water supply planning process updates these targets as needed.

## **Priority: Improve Ridge Lakes, Winter Haven Chain of Lakes and Peace Creek Canal**

### ***Objective: Implement plans and projects for water quality, critical shoreline, wetlands and/or submerged habitats in each priority water body***

An assessment of the Ridge Lakes was completed in 2003 for development of management strategies. Assessments were performed for 105 lakes (i.e., 61 in Highlands County, 44 in Polk County). Initial studies identified 26 lakes as threatened by the direct discharge of untreated stormwater. Of these 26 lakes, 11 were selected for additional analysis and implementation activity based on a variety of factors (cost, land ownership, feasibility, etc.). Since that time, projects have been completed on lakes Isis, Tulane, Clinch, Verona, Clay and Menzie. Construction of BMPs for lakes June-in-Winter and McCoy began in August 2017 and was completed in February 2018.

In FY2018, the District, in cooperation with Highlands County, began a watershed study to determine pollutant sources and loading in the Lake June-In-Winter watershed. The study includes developing a prioritized list of BMPs and natural system restoration projects to improve water quality. The final recommendations are anticipated to be provided in FY2020. The City of Avon Park initiated design for stormwater treatment BMPs for Lake Verona in FY2018. Implementation of this BMP project is anticipated in FY2019.

The District continues to partner with local governments to implement projects to improve water quality in the Winter Haven Chain of Lakes. Most of downtown Winter Haven is located within the Northern and Southern Chain of Lakes watersheds, which are SWIM priority water bodies. Hydrologic changes to the lakes and the high degree of urbanization have increased nutrient loading to the lakes and degraded water quality. More than 40 BMPs, including the addition of rain gardens, improved swales, small isolated wetlands and other passive treatment methods within the downtown area of the City of Winter Haven and the outlying neighborhoods, have been installed. Ongoing projects with the City and Polk County include the design and construction of low impact design (LID) percolation and infiltration BMPs and the South Lake Conine Watershed Restoration Project.

***Objective: Identify priority Ridge Lakes in need of further evaluation and data collection***

The District initiated a project to prepare and update the implementation plan for the Ridge Lakes Restoration Initiative in FY2017. The primary objective of this project is to create a planning document to identify additional projects in the Ridge Lakes watershed for water quality improvements and restoration of natural systems. The project will be completed FY2019 and the results will be provided to surrounding stakeholders. Once complete, the District will investigate implementing projects while providing the conceptual plans to stakeholders that will allow them to implement projects to improve their respective waterbodies.

## Southern Region Priorities and Objectives

### **Priority: Implement Southern Water Use Caution Area Recovery Strategy**

***Objective: Achieve a net reduction of up to 50 million gallons daily of groundwater use in SWUCA by 2025 with 40 mgd of offsets achieved through agricultural reductions via the Facilitating Agricultural Resource Management Systems Program***

See the Tampa Bay Regional Priorities and Objectives for a discussion on this objective.

***Objective: 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***

Although the SWUCA saltwater intrusion minimum aquifer level is not being met, the 2017 MFL status assessment indicated that MFLs for 5 of 7 freshwater river segments, 1 of 1 spring group, 4 of 4 estuaries and 13 of 32 lakes within the SWUCA are currently met. That assessment also documented improved status of MFLs established for 1 lake in the SWUCA.

In addition, see Tampa Bay Regional Priorities and Objectives for information relating to this objective.

***Objective: Ensure a sustainable water supply***

The District utilizes per capita water use to help ensure a sustainable water supply in the future and to measure progress in measuring conservation. Specifically, the goal is to achieve and maintain 150 gallons per capita per day compliance with all public supply utilities and to reduce the 2011 Southern Region average compliance per capita by five percent by 2020. The region has only one utility above 150 gpcd, and the regional average compliance per capita has declined by eight percent to 80 gpcd.

Reuse has also had an important role in helping with reductions in the per capita. As of 2017 (latest data), this region has achieved 59 percent utilization and 78 percent resource benefit, exceeding the interim 2020 goals of 55 percent utilization/resource benefit. As of 2017, the region has a beneficial reuse flow of 42.0 mgd, while the objectives are 39 mgd by 2020 and 65 mgd by 2040. The regional water supply planning process updates these targets as needed.

The District continues to explore aquifer storage and recharge options and partnership opportunities in the SWUCA. Both surface water and reclaimed water sources exist in sufficient quantity for recharge and ASR to provide recovery benefit. Preliminary stakeholder feedback on this issue indicates that utilities will be looking for ways to provide a benefit to their customers. The District continues to fund an aquifer recharge feasibility and pilot- testing project in Hillsborough County. This project would use excess reclaimed water to recharge the MIA of the SWUCA. Potential benefits include providing a saltwater intrusion barrier.

The District is working to develop AWS in the SWUCA. Alternative supply is an important tool in meeting recovery goals, specifically to offset projected increases in public supply groundwater demand. The SWUCA recovery strategy identified more than 50 mgd of potential AWS projects.

A major District project aimed at recovering the SWIMAL is the Flatford Swamp Project in eastern Manatee County. Hydrologic alterations and excess water have resulted in tree mortality within the swamp. The District continues to explore a project that would recharge the Floridan aquifer with the

excess water within the swamp. This option would benefit both the recovery of the SWIMAL and the hydroperiod of the swamp. The District has contracted with a driller and consultant to construct a test well and evaluate the injection of surface water into the Floridan aquifer in 2018-2021. To date the test well drilling has been initiated, and construction of diversion infrastructure is anticipated in FY2020.

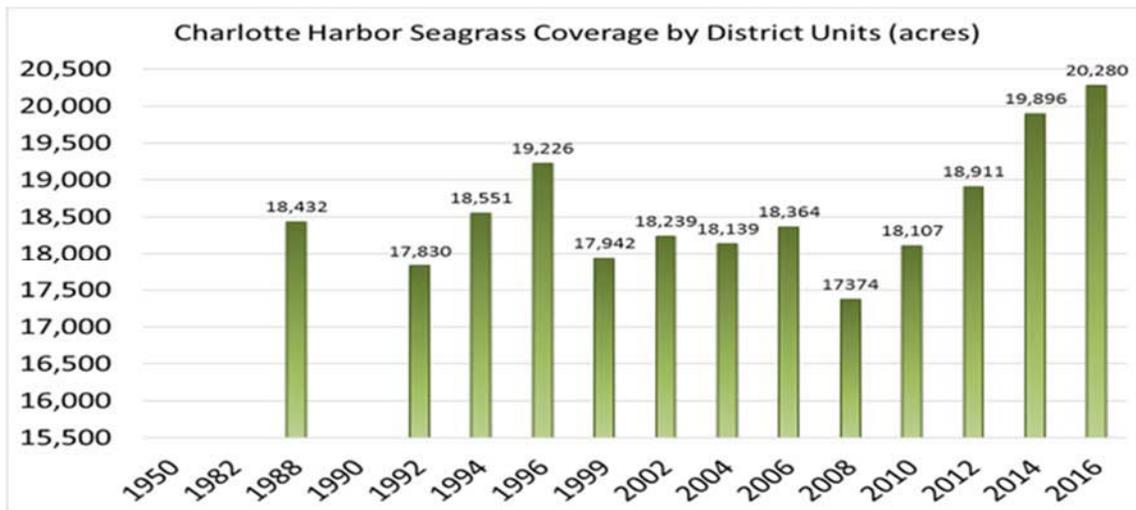
Additionally, the PRMRWSA has two ongoing and three completed phases of the Regional Integrated Loop System Project. These projects are part of a series of transmission pipelines developed to transfer and deliver water from existing and future alternative supplies to demand centers. This will provide the PRMRWSA's customers in four counties with maximum flexibility to address changing needs and emerging circumstances. Two additional phases, cooperatively funded with the District, are in final design, and will improve flow capacity and reliability to the City of Punta Gorda, DeSoto County and northern Sarasota County. Future phases are planned for the next 20 years. District funding has helped with three completed phases of the regional loop system.

## Priority: Improve Charlotte Harbor, Sarasota Bay, Shell/Prairie/Joshua Creeks

**Objective: Implement plans and projects for water chemistry, wetlands, critical shoreline and/or submerged habitats in each priority water body**

The District continues to work with local governments on projects to assess the conditions of these water bodies and to identify and implement projects to improve water quality and habitat.

**Charlotte Harbor:** Charlotte Harbor is generally characterized as having good water quality. The graph below shows the acreage of seagrass over time. Increases in several bay segments have occurred between the 2014 and 2016 mapping efforts.

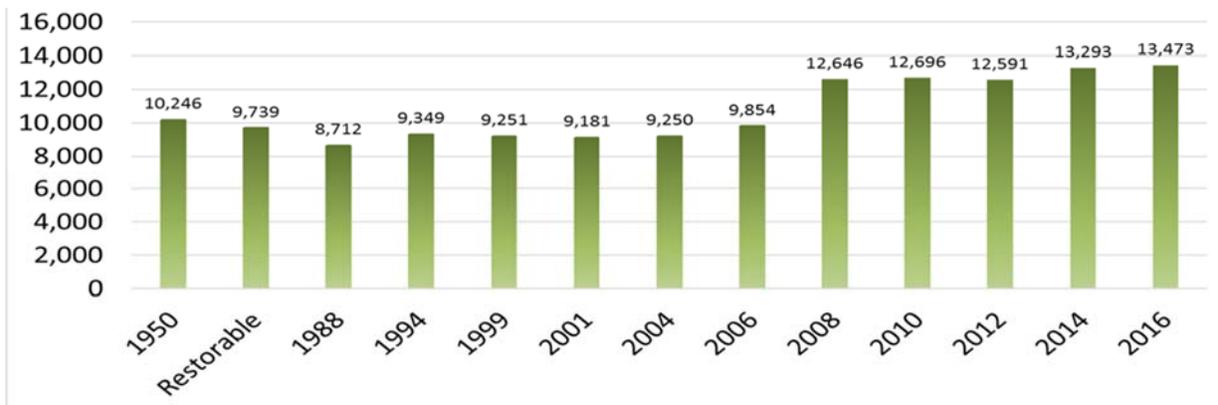


Source: District SWIM staff, 2018

- Charlotte Harbor seagrass increased by 2% from 2014 to 2016
- Many gains occurred in the Myakka River, Peace River and Cape Haze bay segments
- Lemon Bay seagrass decreased by 2% from 2014 to 2016

**Sarasota Bay:** Sarasota Bay has shown improvements in water quality in recent years, as evidenced by growth in seagrass recovery, an indicator of overall bay health. Data for 2016 (latest available) is compared to the Sarasota Bay Estuary Program's seagrass goals by segments, which shows that the seagrass goals are being met.

## Sarasota Bay Seagrass Coverage



Source: District SWIM staff, 2018

**Shell/Prairie and Joshua Creeks:** The intent of the Shell, Prairie and Joshua Creeks Reasonable Assurance Plan (SPJCRAP), adopted on February 7, 2012, pursuant to a DEP Secretarial Order, was to improve water quality within these watersheds with explicit emphasis on total maximum daily load (TMDL) impaired sub-basins. Specifically, the goal was to consistently meet Class I surface-water quality criteria (F.A.C. 62-302.530) for chloride, specific conductance and total dissolved solids (TDS). The target date for achieving reductions in the identified water quality parameters was 2014.

In April 2016, the District, along with the Shell, Prairie and Joshua Creek Stakeholders Group (SPJCSG), submitted the final performance monitoring report required under the SPJCRAP to DEP. This report documented water quality improvements resulting from regulatory and resource management actions specified in the plan.

The Department of Environmental Protection delisted Prairie Creek as impaired for TDS and specific conductance based on the findings in the final monitoring report and a request by the District and the SPJCSG. The final monitoring report also suggested that surface waters within WBIDs 2040 and 2041 naturally exceed DEP Class I drinking water standards. Management actions will continue to be implemented in the Shell Creek watershed to address both water quality and quantity issues (Southern Water Use Caution Area Recovery Strategy, SWFWMD, 2015). DEP did not delist the two WBIDs in Shell Creek (2040 and 2041) as impaired, but the DEP has categorized them as a low priority for TMDL development, due in part to the continuing management actions that will be taken by the stakeholders.

In FY2018, the District continued water quality monitoring in the Shell Creek watershed to assist with identifying areas for implementation of management actions to address water quality and quantity issues.

***Objective: Develop and update plans and implement natural system projects that restore critical shoreline, coastal upland and intertidal habitats***

The District's SWIM program continues restoration activities for Charlotte Harbor and Sarasota Bay. In FY 2018, the District completed Alligator Creek Phase III, a 124-acre restoration project in Charlotte County. There are currently several ongoing cooperative funding projects in these watersheds as described below.

**Coral Creek Ecosystem Restoration:** This project helps to improve Charlotte Harbor's water quality. The District completed phase one of this project in FY2014. Phase two consists of hydrologic and habitat restoration of degraded and impacted wetlands on approximately 300 acres. This phase will include restoration and enhancement of historic and man-made creek channels, removal of invasive vegetation and construction of stormwater features to improve Charlotte Harbor's water quality. Construction began in the summer of 2017 and is expected to be completed by the end of 2018.

**Robinson Preserve Environmental Restoration:** The District is working with Manatee County and other stakeholders on this project. The goal is to restore 150 acres of coastal habitat within Sarasota Bay through non-native vegetation removal, creation of freshwater and intertidal wetlands and upland enhancement.

***Objective: Assist local governments with implementation of BMPs to achieve water quality standards***

The District uses its local government comprehensive plan amendment review program to communicate development strategies and practices for achieving greater water quality protection. This tool has assisted with the implementation of many District efforts. Examples of strategies communicated include the retention of native vegetation and preference for central sewer use when water bodies are at risk; incorporation of open spaces in floodprone areas; and use of clustering in more appropriate development areas. Most plan review feedback is provided for consideration and voluntary implementation. The District's review feedback also helps in satisfying provisions in Chapters 373 and 163, Florida Statutes, which require technical assistance for the development of comprehensive plan amendments.

In addition, the District uses its Cooperative Funding Initiative program to help fund BMP implementation. The funding of BMPs is used extensively for watershed management, SWIM and springs initiatives.