

# WEST-CENTRAL FLORIDA WATER RESTORATION ACTION PLAN REPORT TO THE LEGISLATURE

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

## West-Central FLORIDA Water Restoration Action Plan

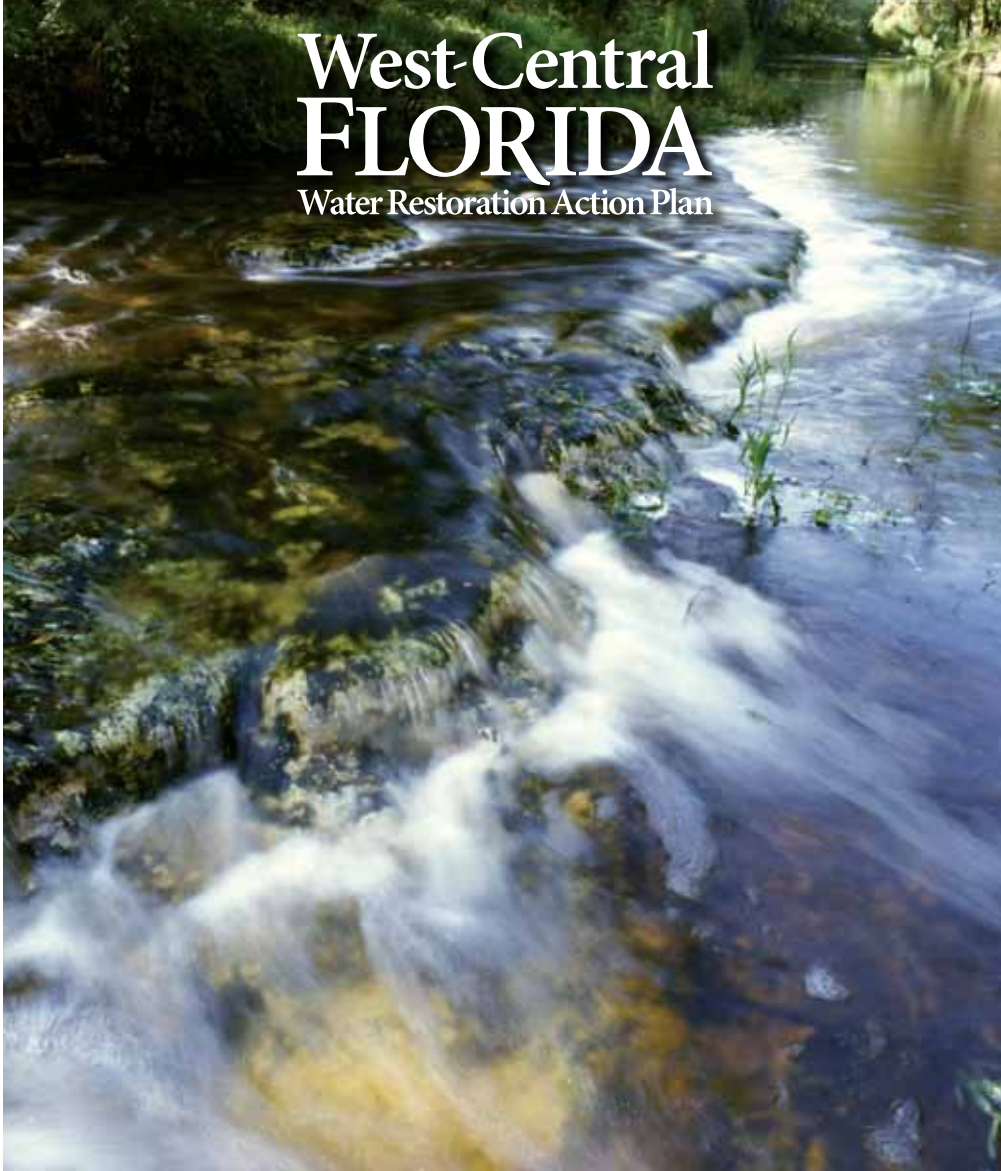


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*Water Management District*

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# West-Central FLORIDA

Water Restoration Action Plan

March 2010

## Report to the Legislature

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## Introduction

The Southern Water Use Caution Area (SWUCA) encompasses approximately 5,100 square miles in all or parts of eight counties in the west-central portion of the Southwest Florida Water Management District (District). It includes all of Manatee, Sarasota, Hardee and DeSoto counties and portions of Hillsborough, Charlotte, Polk and Highlands counties. For decades this area has experienced environmental impacts caused by an overreliance on groundwater that has depleted aquifer levels. Although groundwater withdrawals have since stabilized as a result of the District's management efforts, depressed aquifer levels continue to result in saltwater intrusion in the coastal communities, reduced flows in the upper Peace River and lowered lake levels in the Lake Wales Ridge areas of Polk and Highlands counties.

In order to address the concerns of this area, the District developed the SWUCA Recovery Strategy. The SWUCA Recovery Strategy outlines the District's efforts to ensure that adequate water supplies are available to meet growing demands while at the same time protecting and restoring the water and related natural resources of the region. The West-Central Florida Water Restoration Action Plan (WRAP) is an implementation plan for components of the SWUCA Recovery Strategy adopted by the District.

The WRAP prescribes the measures to implement the recovery strategy and quantifies the funds needed, enabling the District to budget its funds for WRAP projects, ensure match from project partners and seek funding for the initiative from state and federal sources. The WRAP program works with local and regional partners on a variety of initiatives to introduce agricultural best management practices and stormwater treatment, restore surface water storage and flows, and maximize the beneficial use of alternative supplies to further reduce groundwater withdrawals.

## Background

In response to growing demands from public supply, agriculture, mining, power generation and recreational uses, groundwater withdrawals in the SWUCA steadily increased for nearly a century before peaking in the mid-1970s. These withdrawals resulted in declines in aquifer levels throughout the groundwater basin, which in some areas exceeded 50 feet. Although groundwater withdrawals have since stabilized as a result of management efforts, depressed aquifer levels continue to cause saltwater intrusion and contribute to reduced flows in the upper Peace River and lowered lake levels of some of the more “leaky” lakes in the upland areas of Polk and Highlands counties.

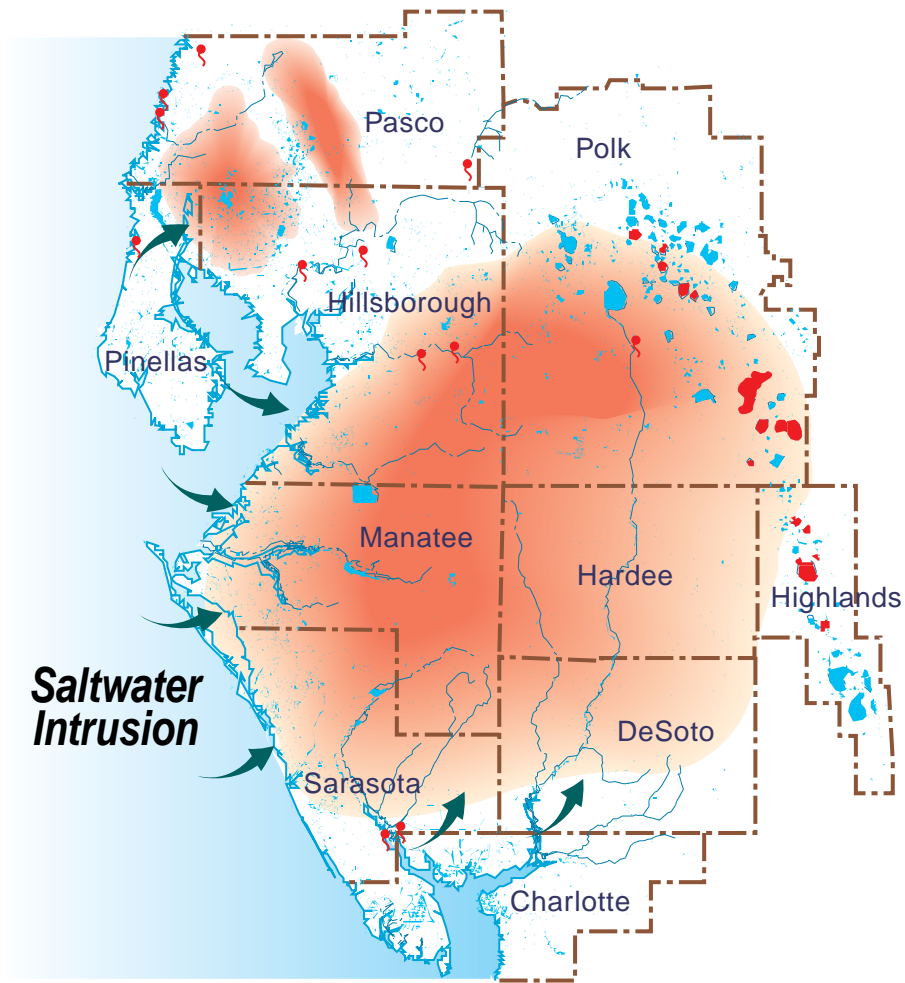
The SWUCA Recovery Strategy is designed to restore minimum flows to the upper Peace River and minimum levels to lakes in Highlands and Polk counties. It will also slow the inland movement of saltwater intrusion such that withdrawal infrastructure will be at minimal risk of water quality deterioration over the next century. This slowing will also make the ultimate stopping of saltwater intrusion more manageable because advances in energy sources and membrane technology should enhance the economic and environmental feasibility of desalting seawater. This could provide the necessary quantities of fresh water to create a saltwater barrier or some other appropriate solution to this long-term resource issue. Consistent with statutory direction, the SWUCA Recovery Strategy also ensures that there is ample water supply for all existing and projected reasonable-beneficial uses in this eight-county area.

The SWUCA Recovery Strategy furthers the progressive water resource management that has evolved in this area over the last few decades. Financial incentives are provided to encourage conservation and development of alternative supplies so that the adverse effects of competition for water from the Floridan aquifer will be minimized. The SWUCA Recovery Strategy is also designed to take advantage of long-term land and water use planning to maximize the beneficial use of alternative supplies and further reduce groundwater withdrawals. The goals of the SWUCA Recovery Strategy are to accomplish the following in an economically, environmentally and technologically feasible manner:

- (1) Restore minimum levels to priority lakes in the Ridge area by 2025.
- (2) Restore minimum flows to the upper Peace River by 2025.
- (3) Reduce the rate of saltwater intrusion in coastal Hillsborough, Manatee and Sarasota counties by achieving the proposed minimum aquifer level for saltwater intrusion by 2025. Once achieved, future efforts should seek further reductions in the rate of saltwater intrusion and the ultimate stabilization of the saltwater-freshwater interface.
- (4) Ensure there are sufficient water supplies for all existing and projected reasonable-beneficial uses.

# West-Central FLORIDA

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*Conceptual Map Showing Areas of Regional Resource Concerns*



*The Peace and Myakka rivers spill into Charlotte Harbor.*

## **West-Central Florida Water Restoration Action Plan**

To meet the SWUCA Recovery Strategy goals, more than \$80 million has been invested by the District and its project partners, including the state and federal government. However, the cost of the projects included in the WRAP is approximately \$1.8 billion. Of these costs, it is anticipated that one-third will need to be derived from state or federal sources over the 17-year course of this plan. The following is a brief summary of each component of the WRAP and their corresponding projects.

### ***Central Florida Water Resource Development Project***

Characterized by their landlocked nature, central Florida communities have limited options in the development of alternative water supplies. A long-term plan for the identification and development of alternative water supply opportunities for Polk County offers a comprehensive approach. This area encompasses 2,000 square miles. Within Polk County are the headwaters for six major river systems, 550 lakes and a limited supply of groundwater.

The Central Florida Water Resource Development Project aids in the development of viable water supplies for Polk County. This is an integral component in the development of alternative water supplies for the region. Projects will be developed from water resources that include conservation, reclaimed water, surface water, other alternative sources and groundwater.

### **Regional Reclaimed Water Partnership Initiative**

This alternative water supply project is proposed to maximize the beneficial use of reclaimed water flows that are not currently being beneficially used by the City of Lakeland and potentially other utilities, such as Polk County, Plant City, Mulberry and Hillsborough County. The project is best described as being composed of two elements.

The first element is a traditional reclaimed water supply project consisting of transmission pipelines and storage to provide reclaimed water to industrial users from one or more domestic wastewater treatment facilities.



Recharge is being explored as part of the second element, which is more innovative in concept and seeks to create opportunities for additional potable groundwater withdrawals in the SWUCA through direct or indirect recharge of reclaimed water into the Upper Floridan aquifer in southern Hillsborough County and/or western Polk County. Funding was approved by the Governing Board to be used for the initiation of a feasibility study to be conducted by a specialized consultant to investigate treatment needs, costs and water resource benefits achieved through direct or indirect recharge of reclaimed water into the Upper Floridan aquifer.

Utilization of reclaimed water will eliminate surface water discharges, ultimately resulting in a reduction of nitrogen loading to Tampa Bay. The potential project benefit of recharge to the Upper Floridan aquifer of the SWUCA was studied. The findings indicated that it is possible to develop direct and indirect aquifer recharge projects to improve Upper Floridan aquifer water levels and provide opportunities for additional groundwater withdrawals in the area.

### **Northeast Regional Utilities Service Area Holly Hills Reclaimed Water Storage and Pumping and Lower Floridan Aquifer Well**

This regional FY2010 project consists of the construction of a 2-million-gallon reclaimed water storage tank and high service pumping facility, the design and construction of a 2,200-foot Lower Floridan aquifer (LFA) well, and a related aquifer performance test (APT) in the Holly Hills area of Polk County (three miles north of I-4 on US 27).

The tank and pump station will be constructed first in order to temporarily store groundwater related to the LFA and APT portions of the project. After the completion of the APT, the tank and pump station will be permanently converted to reclaimed water operation to serve reclaimed water customers in the Northeast Regional Utility Service Area (NERUSA).

The storage and pumping portions of this project will expand reclaimed water storage capacity in NERUSA to 15 million gallons total to meet future public access reuse needs. The LFA well and APT portions of the project will help determine the amount of water supply that can be developed from the LFA for public supply as outlined in the Polk County Water Supply Plan. The project is regional in nature because it will enable the District to develop a regional hydrogeologic understanding of the LFA with potential for long-term changes in water quality.

### **Polk County Northwest Regional Utilities Service Area Reclaimed Water Storage and Pumping Station**

This project consists of the design, permitting and construction of an 80-million-gallon, lined storage reservoir and associated pumping and piping systems for storage and disposal of approximately 1.5 million gallons per day (mgd) located within the Northwest Regional Utilities Service Area (NWRUSA). The project was anticipated to provide reclaimed water storage for two new planned developments, Neat and Sweet and Fox Branch Ranch. The Fox Branch Ranch subdivision will no longer be constructed. As a result, the county is still negotiating with property owners to secure a site for the reservoir. The project will be undertaken in three phases, the first of which includes design and permitting services. The second phase includes the land acquisition and right-of-way easements from the plant site to the property. The third phase will consist of the construction of the reservoir.

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*Peace River Manasota Regional Water Supply Authority reservoir and treatment facility*

The project will increase the public access reuse storage capacity of the Northwest Regional Wastewater Treatment Facility by 1.5 mgd and will enable the county to maximize reclaimed water use in the NWRRUSA.

It is anticipated that reclaimed water will be pumped into the storage reservoir during wet-season storm events and later pumped, filtered and treated to be used for irrigation on residential lawns, commercial

landscapes and recreational grounds. The NWRRUSA has approximately 29 subdivisions with an estimated 1,655 homes that can be delivered reclaimed water. Of the 1,655 residential customers, 800 are currently receiving reclaimed water. This project will assist the county in providing reclaimed water to the existing 855 potential residential customers, as well as future potential customers. Once completed, the project will enhance the county's ability to further offset potable quality water by increasing flows of reclaimed water for irrigation to existing and future industrial/commercial, residential and recreation/aesthetic customers.

### ***Central West Coast Surface Water Enhancement Initiative***

To ensure reliable supplies of high-quality water in a way that both protects and preserves the environment, these projects are a comprehensive approach to maximize the use of surface water for public supply which, in turn, will limit development pressure on groundwater in the SWUCA. Projects within this initiative offer the opportunity for up to 14 billion gallons of water storage capacity and 55 mgd of finished water supply. There is a focus on connectivity that is essential for managing water supplies on a regional scale, protecting the environment and making supplies more reliable during times of drought and hurricane.

The projects that are under way and/or are under continued evaluation concentrate on surface water; however, they also take advantage of use and rotation of groundwater supplies where appropriate, which will ensure improved system reliability. Dona Bay/Cow Pen Slough offers the opportunity to reduce excess freshwater flows through storage for drinking water use. Shell Creek watershed offers upstream storage during high flows and a redirection of water that has been diverted back to its natural and historical flow pattern. Upper Myakka/Flatford Swamp will utilize the excess water in the ecosystem through harvest and storage to restore normal hydroperiods and supplement potable water supply.

Projects within the Myakka River Watershed Initiative will restore natural hydroperiods to the area through utilization of excess water for natural systems restoration and/or water supply, as well as opportunities for flood protection and water quality improvement.



*Peace River Facility*

### **Peace River Manasota Regional Water Supply Authority Phase 1A**

The Regional Integrated Loop System project is a series of transmission pipelines that will be developed to regionally transfer and deliver water from existing and future alternative supplies to demand centers within the Peace River Manasota Regional Water Supply Authority's (Authority) four county region: Charlotte, DeSoto, Manatee and Sarasota counties.

This project will interconnect the water supply systems of

the Authority, Charlotte County and the City of Punta Gorda so that the additional water from the recently expanded facility on Shell Creek can be shared regionally. Construction consists of approximately 12 miles of a 24-inch diameter line interconnecting the Shell Creek facility to the Peace River facility and includes a subaqueous crossing of the lower Peace River. The project will have a minimum design capacity of 6 mgd.

Development of this project will integrate regional resources; maximize surface water for public supply; provide rotational capacity and the ability to rest sources; provide for reserve capacity for emergency transfers; provide alternatives to the development of groundwater in the SWUCA; and better match supply, demand and financial investment on a regional basis. The use of alternative sources with the maximization of surface water for public supply is consistent with the District's Regional Water Supply Plan.

### **Peace River Manasota Regional Water Supply Authority Phase 2 Interconnect**

The Phase 2 Interconnect project is a component of the Regional Integrated Loop System that will provide needed regional transmission capacity between the Authority's Peace River facility and the City of North Port. The initial segment under development will extend approximately 5.5 miles from the facility to Serris Boulevard, where it will interconnect with the City of North Port's transmission/distribution system, allowing the City of North Port to receive additional water from the Authority's Peace River expansion project. Additional Phase 2 segments will include a critical segment for the extension of regional transmission capacity to the City of North Port's Myakkahatchee Creek Water Treatment Facility and the Englewood Water District treatment facilities and establish a rotational link with the Carlton Water Treatment Facility.

Development of this project will integrate regional resources; maximize surface water for public supply; provide rotational capacity and the ability to rest sources; provide for reserve capacity for emergency transfers; provide alternatives to the development of groundwater in the SWUCA; and better match supply,

demand and financial investment on a regional basis. The use of alternative sources with the maximization of surface water for public supply is consistent with the District's Regional Water Supply Plan.

### **Peace River Manasota Regional Water Supply Authority Phase 3A Interconnect**

This project extends the Authority's existing regional transmission line that currently terminates at Sarasota County's Carlton Water Treatment Facility. Phase 3A provides an additional water delivery point to Sarasota County and creates a potential intertie to the City of Venice. The project includes 8.4 miles of 48-inch diameter pipeline with a design capacity of 37 mgd and includes a subaqueous crossing of the Myakka River. Once all phases have been completed, the interconnect will extend from the Carlton facility to water supply systems in Manatee County. The future expansion of Phase 3B northward will join long-term components of Phase 4 in Manatee County and will connect to the surface water treatment facility on Lake Manatee and a water treatment plant on University Parkway.

Development of this project will further integrate regional resources; maximize surface water for public supply; provide rotational capacity and the ability to rest sources; provide for reserve capacity for emergency transfers; provide alternatives to the development of groundwater in the SWUCA; and better match supply, demand and financial investment on a regional basis. The use of alternative sources with the maximization of surface water for public supply is consistent with the District's Regional Water Supply Plan.

### **Myakka River Restoration Initiative — Flatford Swamp Hydrologic Restoration/Implementation**

This is a comprehensive project illustrating the effects of land-use conversions and alterations and evaluation of best management practices for restoration. The objective of this initiative is to restore water quality, natural system and floodplain impacts in the watershed in ways that can also provide a benefit to water supplies in the SWUCA. Hydrologic alterations and excess runoff have adversely impacted Flatford Swamp in the upper Myakka watershed. The Flatford alternative will be a multipronged approach: encouraging the development of Facilitating Agricultural Resource Management Systems Program projects within the watershed, targeted sediment removal from waterways and the construction of infrastructure to remove excess flows from Flatford Swamp and some portions of the surrounding area to improve the natural systems. The initiative continues to explore beneficial uses for the excess water, such as injection into the aquifer to help mitigate the most impacted area in the SWUCA, mitigation for stressed water bodies not meeting their minimum flows and levels, and as a groundwater offset for industrial/mining use.

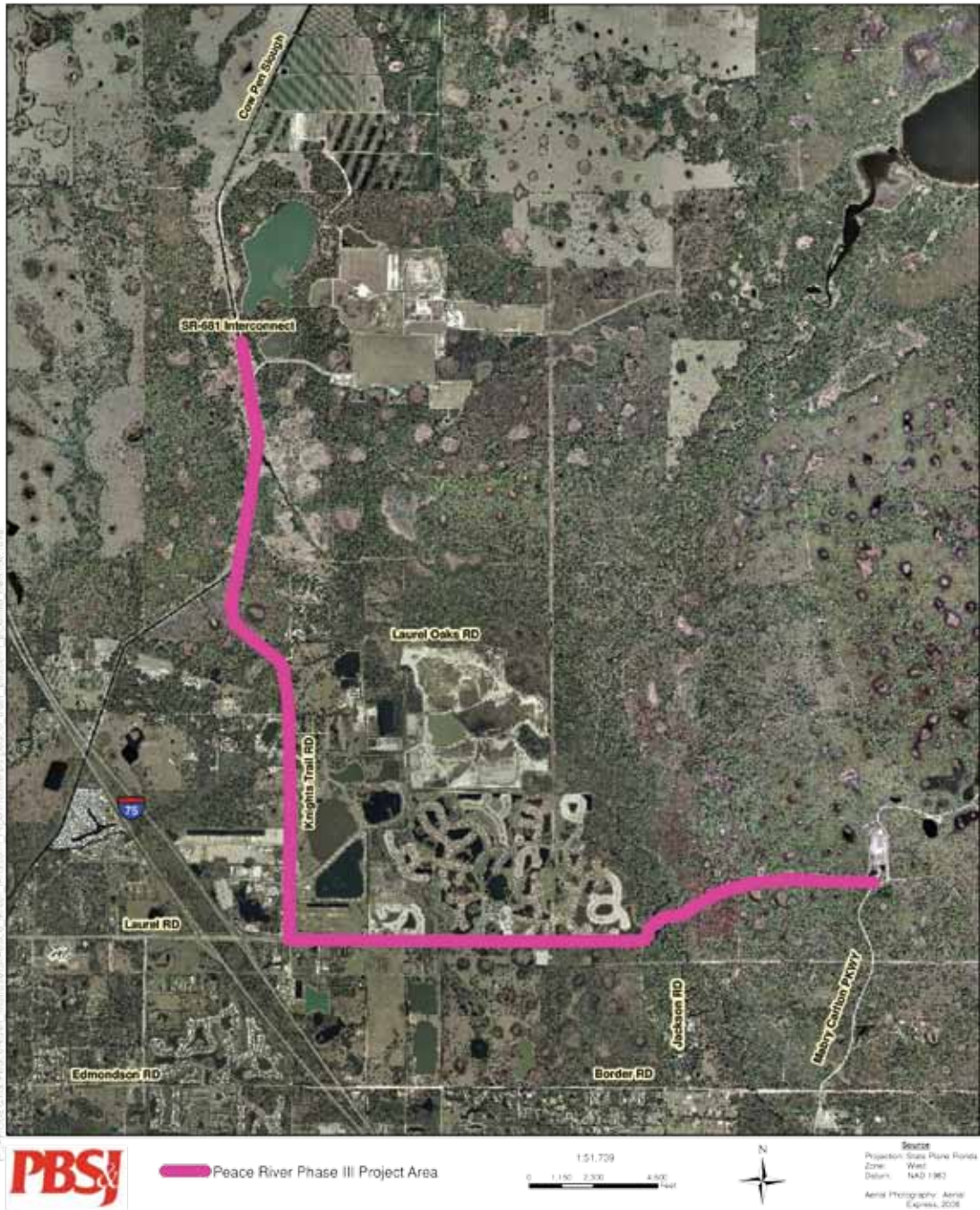
### **Regional Resource Development Phase 1**

The Regional Resource Development program will, in several phases, develop up to 35 mgd in average daily capacity of alternative/conjunctive drinking water supplies based on results of the Peace River Manasota Regional Water Supply Authority's Source Water Feasibility Study. The new capacity is needed to meet regional reliability targets and growing regional needs. The new supplies are proposed for development at Shell/Prairie Creek, Dona Bay/Cow Pen Slough, Upper Myakka/Flatford and the RV Griffin Reserve.

The Regional Resource Development program will focus on four objectives: (1) maximize surface water for public supply which, in turn, limits development pressure on groundwater in the SWUCA, (2) provide rotational and reserve capacity, enabling improved resource management opportunities such as source resting, (3) participate in conjunctive projects that improve resource conditions while yielding economical water supply, and (4) optimize the regional financial investment in water supply and transmission capacity.



Peace River Manasota Regional Water Supply Authority  
Regional Interconnect Phase 3A Pipeline





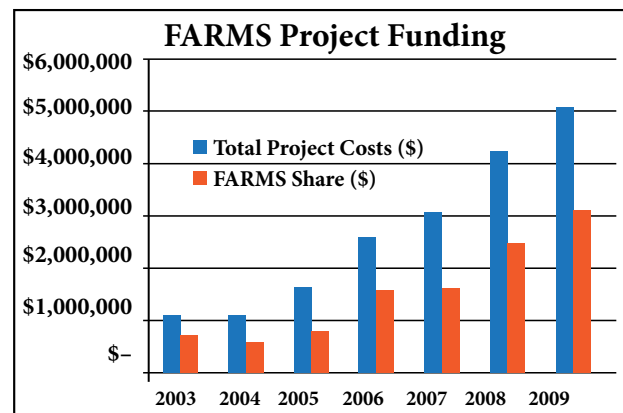
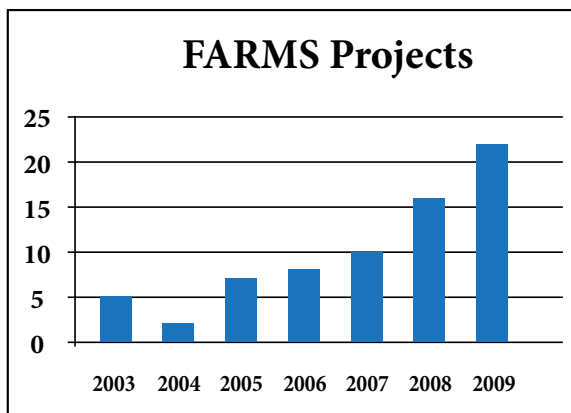
*Aerial of the 15-acre tailwater recovery reservoir and pump station in the foreground of FARMS project H516 Hancock Grove, DeSoto Co. The reservoir provides offset of groundwater on approximately 700 acres of the entire 1,400 acre citrus grove.*

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

FARMS is a public/private partnership program developed by the District and Florida Department of Agriculture and Consumer Services. It is an agricultural best management practice (BMP) cost-share reimbursement program that involves both water quantity and water quality aspects. The FARMS Program is designed to serve as an incentive to the agricultural community to install and maintain irrigation BMPs that will promote surface water and groundwater resource sustainability.

The program is critical to the SWUCA Recovery Strategy and is intended to offset 40 mgd of groundwater within the SWUCA by 2025. The FARMS Program assists in the implementation of the District's Regional Water Supply Plan, SWUCA Recovery Strategy and Shell Creek and Prairie Creek Watersheds Management Plan.

FARMS Program partners include the Department of Agriculture and Consumer Services, Natural Resources Conservation Service, Institute of Food and Agricultural Sciences and Southwest Florida Resource Conservation & Development Council. FARMS projects represent a variety of agricultural industry commodities including tomato, citrus, dairy, row crops, blueberry, nursery, strawberry, sod and flower bulbs. Since its inception, 86 FARMS projects have been Board-approved, with a projected groundwater offset of 13.77 mgd. Currently there are 48 projects operational with actual offsets of 6.2 mgd for period of record and 7.1 mgd for the past 12 months.







*A Ridge Lake shoreline*

### ***Ridge Lakes Restoration Initiative***

Approximately 130 lakes lie along the Lake Wales Ridge, which extends roughly 90 miles along the center of the state in Polk and Highlands counties. These lakes are threatened by declining lake levels along with declining water quality from stormwater and agricultural runoff, wastewater effluent, residential and fertilizer applications, groundwater pollution, shoreline habitat degradation and hydrologic alterations. The Ridge Lakes Restoration Initiative project objectives are protecting and enhancing water quality through stormwater treatment as well as enhancing and restoring natural systems and achieving A further flood protection.

### **Lake Gwyn Restoration**

This is a cooperative project with Polk County to restore Lake Gwyn, a 120-acre depressional wetland located within the watershed that drains directly to Peace Creek. The restoration project included a feasibility study for the placement of a control structure at the outfall of the lake in order to restore floodplain storage and wetland functions, while also improving flood conveyance within the Wahneta Canal drainage area. Restoring the natural storage and wetlands through the use of a control structure will also provide additional storage that can be released when needed to the upper Peace River.

The project will reestablish the historic surface water levels to provide additional storage volume to attenuate flooding of the Peace Creek Canal and assist in maintaining the minimum flows in the upper Peace River. The additional open water will provide aquatic habitat and improved fishery. The county received an environmental resource permit on November 13, 2009. Polk County has submitted for total maximum daily load (TMDL) grant funds to apply to construction costs.

### **Highlands Water Management Plan**

This is a multiyear-funded cooperative project with Highlands County to perform topographic information, watershed evaluation and watershed management plan elements of the District's Watershed Management Program (WMP) for the Lake Placid watershed. The watershed covers an area of approximately 20 square miles and is located in Highlands County. Issues in the watershed include rapid growth, natural systems preservation, flood protection and water quality. The Watershed Management Plan element includes: development of watershed parameters for a specific use, GIS processing, computer modeling, floodplain and water quality analysis, surface water resource assessment, establishment of level of service, and BMP alternative analysis.

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 information developed provides the science

for the District's Resource Management and Environmental Resource Permitting. It assists local governments with their land management responsibilities by establishing a level of service and developing BMPs to address level of service deficiencies; providing a geodatabase and projected results from watershed model simulations for floodplain management; and providing water quality management through the TMDL process for their National Pollution Discharge Elimination System permit requirements.

### **Ridge Lakes Stormwater Improvement**

This multiyear project will design, permit and construct stormwater treatment systems for 10 lakes located within the Lake Wales Ridge in Polk and Highlands counties. The first two projects were completed in 2009. The first stormwater retrofit project on Lake Menzie, in the Town of Dundee, was completed in July 2009. This project was designed to treat runoff from the commercial area of Dundee and SR 17, thereby enhancing the water quality of Lake Menzie. A second project on Lake Eva in Haines City was completed in August 2009. Designed to treat runoff from a 180-acre urban basin, this project will improve the water quality of Lake Eva by significantly reducing pollutant loading to the lake. A third stormwater retrofit project for Lake Clay in the Town of Lake Placid is currently in the design and permitting stages and is scheduled for construction in the fall of 2010. Utilizing parallel infiltration systems, the Lake Clay project will treat runoff from the Towers Plaza and Plaza Avenue area. The completed project will provide water quality enhancement of Lake Clay. The next projects will design and construct stormwater treatment projects on Lake Isis, Lake Tulane and Lake Wales.

These projects will protect and enhance the water quality of 10 lakes located within the Lake Wales Ridge chain of lakes by providing stormwater treatment in areas where direct stormwater discharges have caused water quality impacts.

### ***Upper Peace River Restoration Initiative***

The objectives of this initiative include restoration of surface water storage and flows, aquifer recharge and improvement to water quality and ecosystems that have been lost, degraded or significantly altered in the Peace River watershed, all of which contribute essential freshwater flows to the Peace River and Charlotte Harbor. This initiative provides a critical link to a major greenway that extends from Florida's lower west coast up through the Peace River watershed and Green Swamp and further north to the Ocala National Forest. Projects under this initiative will include the identification of alternative water supply opportunities for Polk County along with significant restoration efforts for Lake Hancock and the upper Peace River.

### **Lake Hancock Outfall Treatment System**

The goal of the Lake Hancock Outfall Treatment Project is to improve water quality discharging from Lake Hancock through Saddle Creek to the Peace River. Historical data has shown that the Saddle Creek drainage basin, one of nine subbasins in the Peace River watershed, contributes approximately 6 percent of the total flow of the Peace River, yet it contributes approximately 13 percent of the watershed's total annual nitrogen load. 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.

The Peace River ecosystem routinely suffers from algal 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





*Lake Hancock, looking south down Saddle Creek.*

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. It is anticipated that the proposed impending assessment based on criteria by the U.S. Environmental Protection Agency will confirm the basins are impaired, requiring that TMDLs be established. Furthermore, nitrogen

loads have been predicted to increase significantly over the next 20 years as a result of growth.

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. The District has acquired the 3,500-acre, planned Old Florida Plantation development property. Portions of this tract of land are planned to be utilized for the outfall treatment project. The project involves five tasks: (1) research, monitoring and data acquisition, (2) feasibility study, (3) design and permitting, (4) construction, and (5) system start-up and operation.

The project addresses water quality and natural systems District objectives. The project will address water quality impairments in the upper Peace River as part of the Basin Management Action Plan (BMAP) that will be developed in accordance with the TMDL program. Water quality improvements in the upper Peace River will improve natural systems along the river. The creation of a 1,000-acre functional marsh system will provide habitat where historic mining has altered the landscape.

### **Lake Hancock Lake Level Modification**

The Lake Hancock Lake Level Modification Project is part of the proposed strategy for achieving minimum flows and levels recovery for the upper Peace River established by the District. The goal of the Lake Hancock Lake Level Modification Project is to store water by raising the control elevation of the existing outflow structure on Lake Hancock and to slowly release the water during the dry season to help meet the minimum flow requirements in the upper Peace River between Bartow and Zolfo Springs. Historically, Lake Hancock fluctuated more than a foot higher than it has during the past several decades. The project proposes to increase the normal operating level from 98.7 feet to 100.0 feet National Geodetic Vertical Datum (NGVD) by modifying the P-11 outfall structure. This proposed project will further the District's efforts to restore minimum flows in the upper Peace River, which is a major component of the District's SWUCA Recovery Strategy.



*Lake Hancock discharges into Saddle Creek.*

### **Lake Hancock Outfall Structure P-11 Modification**

This project is the replacement of the Lake Hancock P-11 Water Control Structure and is directly related to the Lake Hancock Lake Level Modification. Raising the normal operating water level of Lake Hancock to 100.0 feet NGVD will provide the storage to help meet the minimum flows and levels requirements of the upper Peace River. It was also determined that raising the operating level, along with other District projects, will help restore wetland function for several hundred acres of contiguous lands to Lake Hancock. The project will involve the actual replacement of the present control structure to achieve these goals.

## **Conclusion**

The projects encompassed in the WRAP address the goals of the SWUCA Recovery Strategy: restore minimum levels in the Lake Wales Ridge; restore minimum flows to the upper Peace River; reduce the rate of saltwater intrusion in coastal counties; and ensure there are sufficient water supplies for all existing and projected reasonable-beneficial uses.

In addition to the funding necessary for the implementation of the projects, during the 2009 Legislative Session, Senate Bill 2080 passed that codified WRAP into Florida Statute. Chapter 2009-243 will ensure the continued visibility of this program to the state. The WRAP is supported by the business community, environmental groups, agricultural associations, the Department of Environmental Protection, water management districts, local governments, and water utilities.

Water is critical to economic sustainability. The WRAP projects focus on natural systems restoration, further flood protection, aquifer recharge, improved water quality, conservation, and water use efficiency. WRAP is critical to ensuring the long-term viability of the regions' water supplies and the environmental health of the region. All funds appropriated to the District for WRAP are matched by the District and WRAP project partners. With a projected cost of more than \$1.8 billion over the course of the recovery, the District will continue to aggressively seek funding through direct appropriations at the state and federal level and through grant opportunities.



Southwest Florida Water Management District  
West-Central Florida Water Restoration Action Plan

	Project Name/Description	District Match	Local Match	State WRAP Funding	Federal Match	Total Project Cost
<b>Upper Peace River Restoration Initiative</b>						
H008	• Lake Hancock Lake Level Modification	\$4,500,000	\$0	\$250,000	\$0	\$14,628,000
H009	• Lake Hancock Outfall Structure P-11 Modification	\$2,500,000	\$0	\$2,500,000	\$0	\$5,000,000
H014	• Lake Hancock Outfall Treatment System	\$1,550,000	\$0	\$0	\$492,000	\$28,535,000
H024	• Upper Peace River Resource Development	\$750,000	\$0	\$0	\$0	\$3,150,000
H034	• Peace Creek Canal Watershed	\$1,305,000	\$0	\$0	\$0	\$7,700,000
<b>Central Florida Water Resource Development Project</b>						
N024	• Polk County NWRUSA Reclaimed Water Storage & Pumping Station	\$759,475	\$759,475	\$669,445	\$0	\$5,535,000
H090	• NERUSA Holly Hill Reclaimed Water Storage and Pumping and Lower Floridan Aquifer Well	\$605,000	\$1,010,974	\$1,010,973	\$0	\$3,033,000
H091	• Polk County SWRUSA Reclaimed Water Connection to TECO	\$553,024	\$1,158,023	\$833,332	\$0	\$2,500,000
H076	• Regional Reclaimed Water Partnership Initiative	\$19,178,416	\$18,628,416	\$2,500,000	\$0	\$65,686,800 (TECO Ph1 only)
TBD	• Indirect Aquifer Recharge in NERUSA	N/A		N/A		\$1,000,000
<b>Central West Coast Surface Water Enhancement Initiative</b>						
H069	• PRMRWSA Regional Loop System Phase 1A	\$7,007,500	\$7,007,500	\$5,000,000	\$0	\$19,015,000
H089	• Myakka River Restoration Initiative Flatford Swamp Hydrologic Restoration/Implementation	\$950,000	\$0	\$0	\$0	\$40,000,000

Southwest Florida Water Management District  
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	Project Name/Description	District Match	Local Match	State WRAP Funding	Federal Match	Total Project Cost
H052	• PRMRWSA Regional Loop System Phase 3A Interconnect	\$18,935,904	\$0	\$0	\$0	\$42,570,000
H051	• PRMRWSA Regional Loop System Phase 2 Interconnect	\$2,200,000	\$0	\$0	\$0	\$15,400,000
H079	• Regional Resource Development Phase 1	\$0	\$1,500,000	\$600,000	\$0	\$514,000,000
<b>Facilitating Agricultural Resource Management Systems Program</b>						<b>\$30 million</b>
H017	• Facilitating Agricultural Resource Management Systems Program	\$2,200,000	\$4,481,074	\$1,400,000	\$0	\$30,000,000
<b>Ridge Lakes Restoration Initiative</b>						<b>\$10 million</b>
B217	• Ridge Lake Stormwater Improvement (including Lake Isis)	\$202,500	\$0	\$42,500	\$0	\$608,000
L473	• Highlands Water Management Plan - Lake Placid	\$131,250	\$87,500	\$131,250	\$0	\$850,000
L918	• Lake Gwyn Restoration	\$62,500	\$375,000	\$62,500	\$0	\$750,000
	<b>Total</b>	<b>\$63,390,569</b>	<b>\$35,007,962</b>	<b>\$15,000,000</b>	<b>\$492,000</b>	





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