



BIG CYPRESS BASIN

Strategic Plan

2018 – 2023

This document provides the South Florida Water Management District Big Cypress Basin and the public it serves with the blueprint for successfully meeting the water resource management regional priorities for the next five years and beyond. With fiscal resources focused on the agency's core missions of flood control, water supply, water quality and natural systems, these commitments and strategies will be put into action to help make a difference in South Florida's future.



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MESSAGE from the EXECUTIVE DIRECTOR

Ernie Marks

Guided by the strategic direction of our Big Cypress Basin Board, the South Florida Water Management District manages our water resources in the best interest of over 400,000 residents in the Big Cypress Basin. Without question, balancing the agency's multiple missions of delivering dependable flood control, managing regional water supplies and improving natural systems can be challenging. Fortunately, these responsibilities also provide us with countless opportunities to make a lasting difference in the daily lives of the citizens of South Florida and its visitors.

The next five years promise to be exciting ones in the Big Cypress Basin. We continue the ongoing work of operating and maintaining the water management infrastructure within Collier County. Key multi-year capital improvement projects include regional storage and canal conveyance improvements in the I-75, C-1 Connector, Curry, Cypress, Miller and Green canals. Investment in our flood control system insures that we can continue to efficiently and effectively move water each day, especially during South Florida's unpredictable weather extremes.

As we make progress each year on our long-term restoration initiatives, we are also realizing near-term strategies, such as our innovative dispersed water management program. We remain committed to sound science — the foundation of all successful restoration. With focused research and targeted monitoring, we can ensure that science consistently informs our decision making and supports our priority projects.

Lastly, the District will continue to diversify the Big Cypress Basin's water supply portfolio and, at the same time, work to protect existing supplies through conservation. Public-private partnerships, along with enhanced coordination between city and county water management agencies and for the Florida Department of Environmental Protection, are already strengthening our efforts to meet the water needs of the environment as well as the state's economy.

As we look to the years ahead, I am fully confident that the South Florida Water Management District and the Big Cypress Basin have the resources and capabilities to successfully carry out our Governing Board's strategic direction and to fulfill our mission responsibilities to the citizens we serve.



The South Florida Water Management District (SFWMD) is a regional governmental agency that oversees the water resources in 16 counties – from Orlando to the Florida Keys. With a population of 8.1 million, this region covers 17,930 square miles (31 percent of the entire state) and includes vast areas of agricultural lands, water conservation areas and urban development. Headquartered in West Palm Beach, SFWMD is the oldest and largest of the state's five water management districts.

State legislation divides the South Florida Water Management District into two taxing basins based on hydrologic characteristics unique to each basin. The Big Cypress Basin (BCB) includes all of Collier County and a portion of mainland Monroe County. The Okeechobee Basin comprises the remaining area within South Florida Water Management District boundaries.

A nine-member Governing Board, appointed by the Governor, provides oversight and sets policy for both the Okeechobee Basin and the entire South Florida Water Management District. The Governor also appoints five Collier County residents to oversee the Big Cypress Basin's specific planning, budgeting and operations. The South Florida Water Management District Governing Board member representing South Florida's lower west coast area serves as chairman of the Big Cypress Basin Board.

The Big Cypress Basin was established in 1977 and initially charged with providing the broad objectives of conservation, preservation and enhancement of water resources. In 1979, an agreement with Collier County transferred the primary flood control system operation and maintenance responsibilities to the Basin. This agreement has been renewed every 10 years, and today the County and BCB work cooperatively to provide flood control for the residents and visitors of Collier County.

The Big Cypress Basin is responsible for operating and maintaining 143 miles of canals and 36 water control structures. Capital improvements to the water management infrastructure, designed to enhance water supply, environmental and flood control capabilities, are also provided by the Big Cypress Basin. In addition to drainage responsibilities, the Big Cypress Basin assists local governments and water utilities in developing alternative water supplies and implementing stormwater management programs to improve water quality.

Basin administration is managed through the Big Cypress Basin Service Center in Naples. Operations and maintenance activities, including responsibility for the new pump stations that are part of the Picayune Strand Restoration Project, are carried out by staff at the South Florida Water Management District Big Cypress Basin Field Station, also in Naples.

OUR MISSION

To manage and protect water resources of the region by balancing and improving flood control, water supply and natural systems/water quality.

BIG CYPRESS BASIN OVERVIEW



SFWMD Locations

SFWMD Headquarters

West Palm Beach
(561) 686-8800 or (800) 432-2045

Big Cypress Basin

Big Cypress Basin Service Center
Naples: (239) 263-7615

Big Cypress Basin Field Station
(239) 348-7530

Service Center Service Centers

Fort Myers
(239) 338-2929 or (800) 248-1201

Okeechobee
(863) 462-5260 or (800) 250-4200

Orlando
(407) 858-6100 or (800) 250-4250

Field Stations

Clewiston
(863) 983-1431

Fort Lauderdale
(954) 452-4814

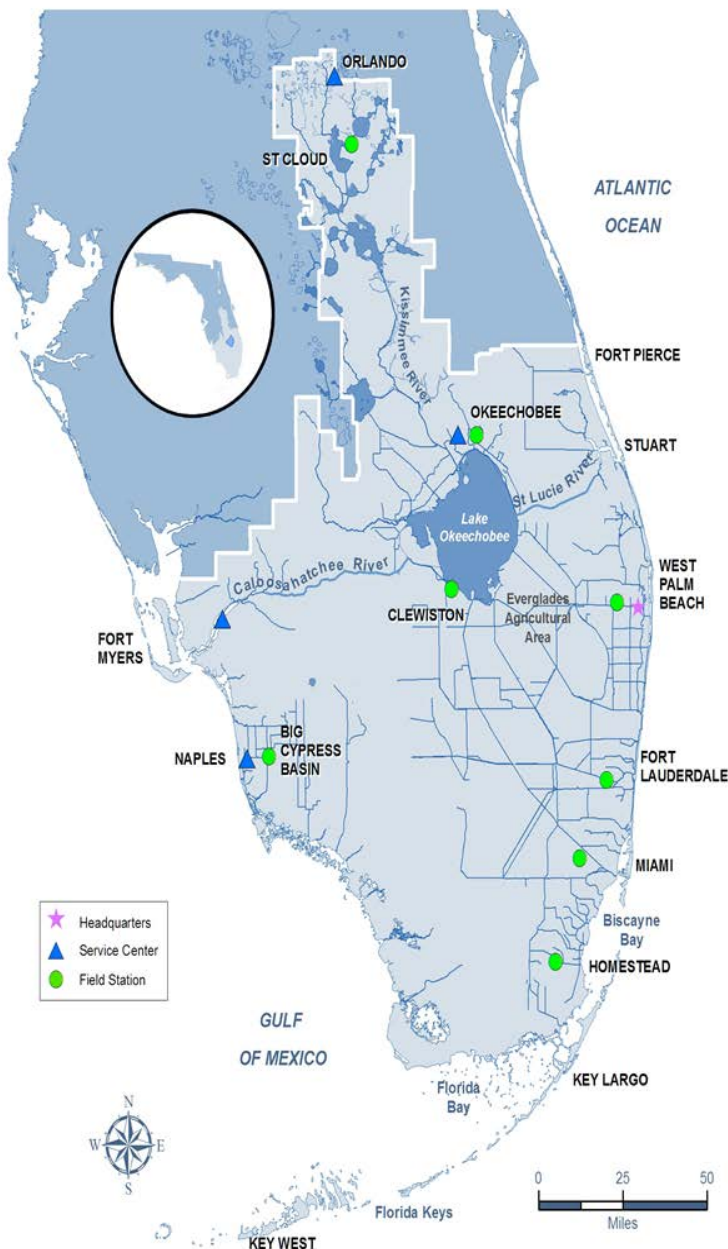
Homestead
(305) 242-5933

Miami
(305) 513-3420

Okeechobee
(863) 462-5280 or (800) 250-4200

St. Cloud
(407) 891-3550

West Palm Beach
(561) 791-4100





FLOOD CONTROL

Managing the Water for Flood Protection

The subtropical climate of South Florida with high rainfall and the region's geographical vulnerability to tropical weather, make flood control an ongoing and mission-critical responsibility of the Big Cypress Basin (BCB). Almost three quarters of the region's 55 inches of annual rainfall typically falls in the six-month period from May through October, when intense storms are common. In addition to seasonal variation, rainfall fluctuates significantly from year to year, and South Florida can move quickly from flooding to drought, or vice versa. These weather extremes add to the challenges associated with managing water resources.

As part of the primary flood control system for Collier County, the Basin operates and maintains a network of 115 miles of canals and 30 water control structures. These facilities provide flood control during the wet season and protect water supplies and environmental resources from over-drainage during the dry season. The Basin's facilities are operated in coordination with local governments. Additionally, the Basin's field staff are responsible for operating and maintaining 3 additional pump stations, 10 miles of levees and 28 miles of canals and 6 water control structures for the Picayune Strand Restoration Project in progress, which are part of the Comprehensive Everglades Restoration Plan (CERP).

Canals are maintained to maximize conveyance capacity, including shoal and debris removal, as well as aquatic and terrestrial vegetation control. Right-of-Way Permits are issued to protect the South Florida Water Management District's (SFWMD) ability to effectively and safely use the canal right of ways. Additional benefits incorporated into the operation of the flood control system include prevention of saltwater intrusion, recharging public water supply well fields and protecting regional ecosystems.

The Big Cypress Basin's hydrologic monitoring network continuously collects data on rainfall, evaporation, surface and ground water levels, streamflow, water control structure operations and other meteorological parameters. Real time data, delivered via a telemetry system, improves the response capability to localized or regional water resource conditions and allows the public to view water control structure operations and water conditions on the web. Monitoring data is used for the operation and maintenance of existing facilities, as well as the design on new works of the Basin.

Strategic Priority

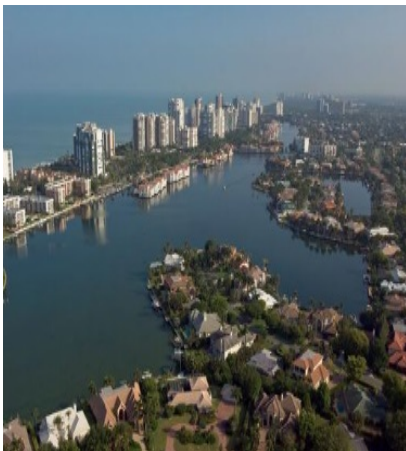
Maximize flood protection by:

- Efficiently operating and maintaining the Basin's primary canal and water control structure network
- Improving canal conveyance capacities while emphasizing water resource protection and beneficial alternative uses
- Maintaining preparedness for emergency storm operations
- Protecting existing canal right of way from encroachments and unauthorized uses
- Retrofitting old inefficient water control structures; building new structures to meet current or future design conditions
- Inventorying, prioritizing and retrofitting coastal and other water controls structures, while considering the potential effects of sea level rise
- Cooperating with local governments to improve and maintain secondary and tertiary stormwater management systems



Regional System Expansion and Enhancements

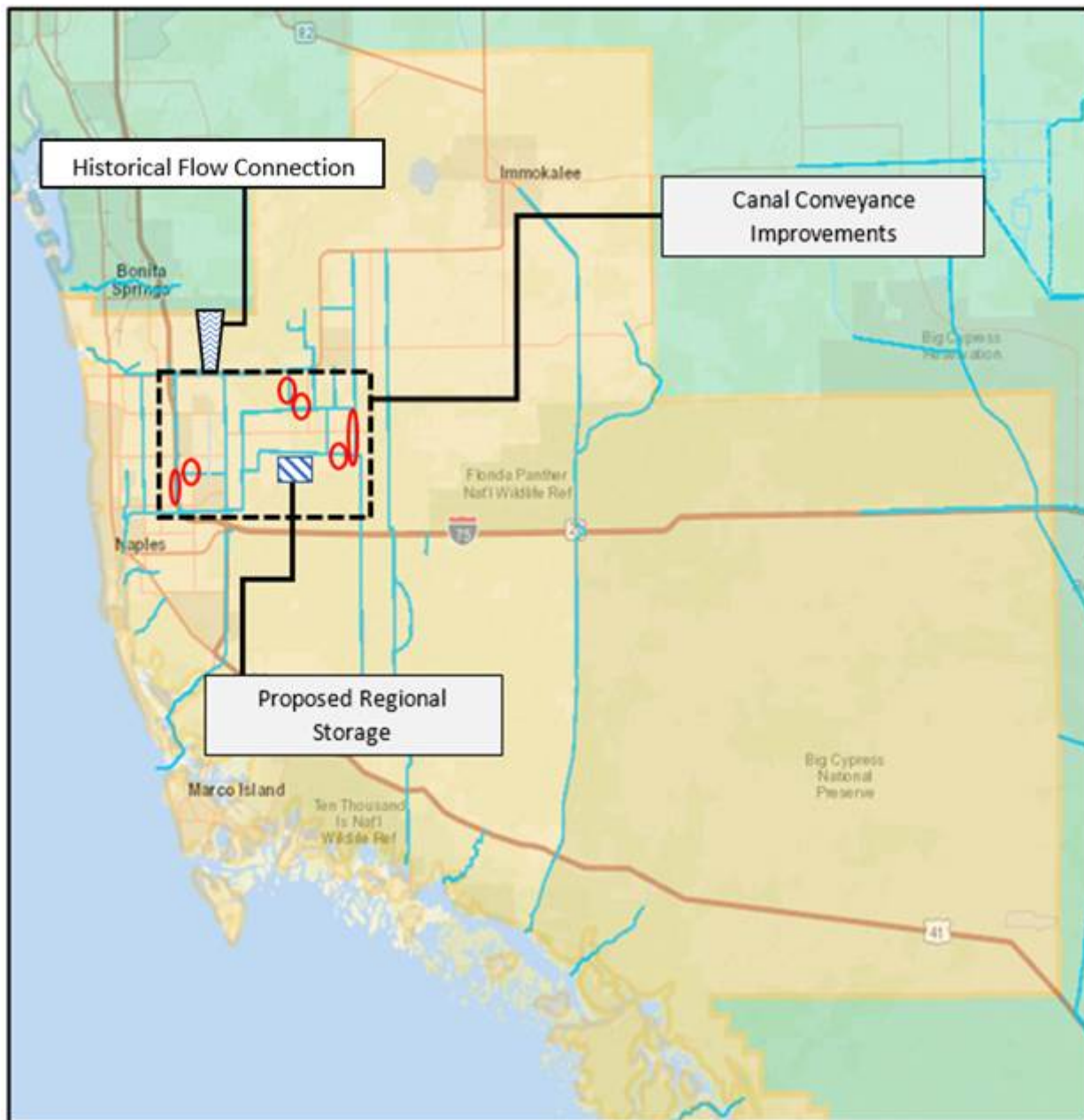
Moving water is central to the Basin's mission of flood control. Unlike the canals and waterways of the Central and Southern Florida Project, most of the BCB canals were inherited from land developers. The levels of service for flood control provided by these canals are limited. The Basin commits specific funds each year to implement long-range plans for repairing, refurbishing and upgrading the canals and water control structures to meet the levels of service of a rapidly urbanizing community (including enhancements as needed to meet the regulatory standards for dam safety). In addition, construction of new facilities requires an increase in operations and maintenance responsibilities, not only for managing new Basin-built facilities but also for restoration projects being constructed by the federal government that will ultimately be turned over to the Basin.





Flood Control – Success Indicators

- Complete projects on time and on budget
- Commission 100 percent of new works on schedule, prior to project closeout
- Complete at least 80 percent of maintenance activities on schedule
- Perform at least 80 percent of all work activities as planned work
- Treat necessary acreage of aquatic, terrestrial and exotic vegetation annually to maintain conveyance capacity of the canals
- Visually inspect all structures monthly and all canal reaches quarterly
- Implement the Flood Protection Level of Service Project recommendation as part of the Capital Improvement Project
- Return historic flows from the Corkscrew watershed as practicable to the Cocohatchee system

FLOOD CONTROL - KEY PROJECTS



 Planned conveyance improvement locations

 Planned regional storage location

 Project Limits



Strategic Priority

Ensure sustainable water supplies that protect natural systems and meet all reasonable-beneficial uses by:

- Diversifying water supply options and encouraging development of alternative water supply projects
- Supporting development and implantation of regional water supply plans in coordination with local governments and the public
- Updating regional models and analysis to assist in determining water sustainability in the Basin
- Incorporating sea level rise and salt water intrusion vulnerability analysis to the regional water supply plans

WATER SUPPLY

Safeguarding and Expanding Water Resources

Land use changes, a growing population and agricultural development have resulted in higher demands for water supply in the region. Planning for a growing population must be balanced with ensuring that water is also available for natural systems. To meet Florida's future demands, a diverse water supply portfolio is needed to maximize traditional sources while at the same time tapping into alternative sources. Strategies include sound planning; demand reduction through water conservation; development of alternative water sources such as surface waters, reuse and desalinization; and habitat restoration, which will result in more water overall for environmental, urban and agricultural users.

Water supply plans are updated in collaboration with stakeholders every five years. Based on a 20-year outlook, these plans include water demand estimates and projections; an evaluation of existing regional water resources; identification of water supply-related issues and options; funding strategies, and recommendations for meeting projected demands. Alternative water supplies, regional solutions and water conservation are encouraged through regulatory, voluntary and financial incentives.

The Big Cypress Basin participates in the development and implementation of the SFWMD Lower West Coast Water Supply Plan. Technical and financial assistance is provided to local governments for projects enhancing alternative water supply and water conservation.

The agency regulates and manages the consumptive use of water through Water Use Permits. These permits ensure that proposed uses are reasonable, beneficial, will not interfere with any current existing legal users and are consistent with the public interest.



Planning, Regulation and Conservation

Effective planning and permitting, along with diversification and conservation, are key to ensuring that communities are less susceptible to water supply challenges. The Big Cypress Basin's primary water supply challenges include saline water intrusion, unpredictable weather extremes and a growing demand coupled with competing uses.

Finding and implementing cost-effective solutions to environmental, water resource protection and water supply availability issues requires a collaborative approach. Water supply development projects that support the reuse of treated wastewater are included in regional water supply plans, and its beneficial use is encouraged.



Water Supply - Success Indicators

- Percentage of the 2015-2040 increase in public supply demand met by planning basin annually
- Alternative water supply capacity and reclaimed water use increase consistent with the adopted Lower West Coast Water Supply Plan
- Provide funding to local governments to assist in meeting their water supply demand through the development of alternative water supplies
- Complete construction of Curry Canal Structure to increase ground water recharge in the upper watershed during dry season
- Optimize canal operational criteria to enhance the ground water recharge in the up-stream Corkscrew watershed





NATURAL SYSTEMS/ WATER QUALITY

Protecting and Restoring

Strategic Priority

Enhance and protect Big Cypress Basin ecosystems by:

- Completing construction of existing key restoration projects
- Restoring historical flowways to enhance wetland function while minimizing impact to property owners
- Improving surface water storage capacity and promoting aquifer recharge
- Implementing restoration projects and protection plans for coastal water bodies
- Monitoring the trends of surface and groundwater quality in inland and receiving waters
- Supporting local governments to implement storm water improvement projects
- Operating water control structures with advanced water release technologies to meet water quality standards of receiving waters

Over several decades, development and increased urbanization significantly changed the size, hydrology, water quality and ecology of the Big Cypress Basin watershed. Today, improvement projects are underway to improve the quality, quantity, timing and distribution of water deliveries within the Basin.

Paramount to protection and restoration efforts is the implementation of the Collier County Watershed Management Plan completed in 2011. Developed in cooperation with local municipalities and the Big Cypress Basin, the plan sets forth the framework for freshwater and coastal systems enhancement through the implementation of stormwater, flood control and habitat restoration projects.

The Basin also partners with local governments to implement community stormwater projects that enhance water quality and habitat restoration. The BCB also assists with SFWMD land management activities associated with the Corkscrew Regional Ecosystem Watershed(CREW) lands located in Collier and Lee counties



Increased Storage, Improved Habitats and Cleaner Water

Improved water storage, habitat restoration and water quality treatment are key elements for a healthy environment and strong economy. The natural environment will experience significant benefits as restoration projects come online and begin operating and delivering desired results. The Basin is committed to identifying and implementing innovative, cost-effective and sustainable solutions to meet the region's water quality and ecosystem restoration challenges.

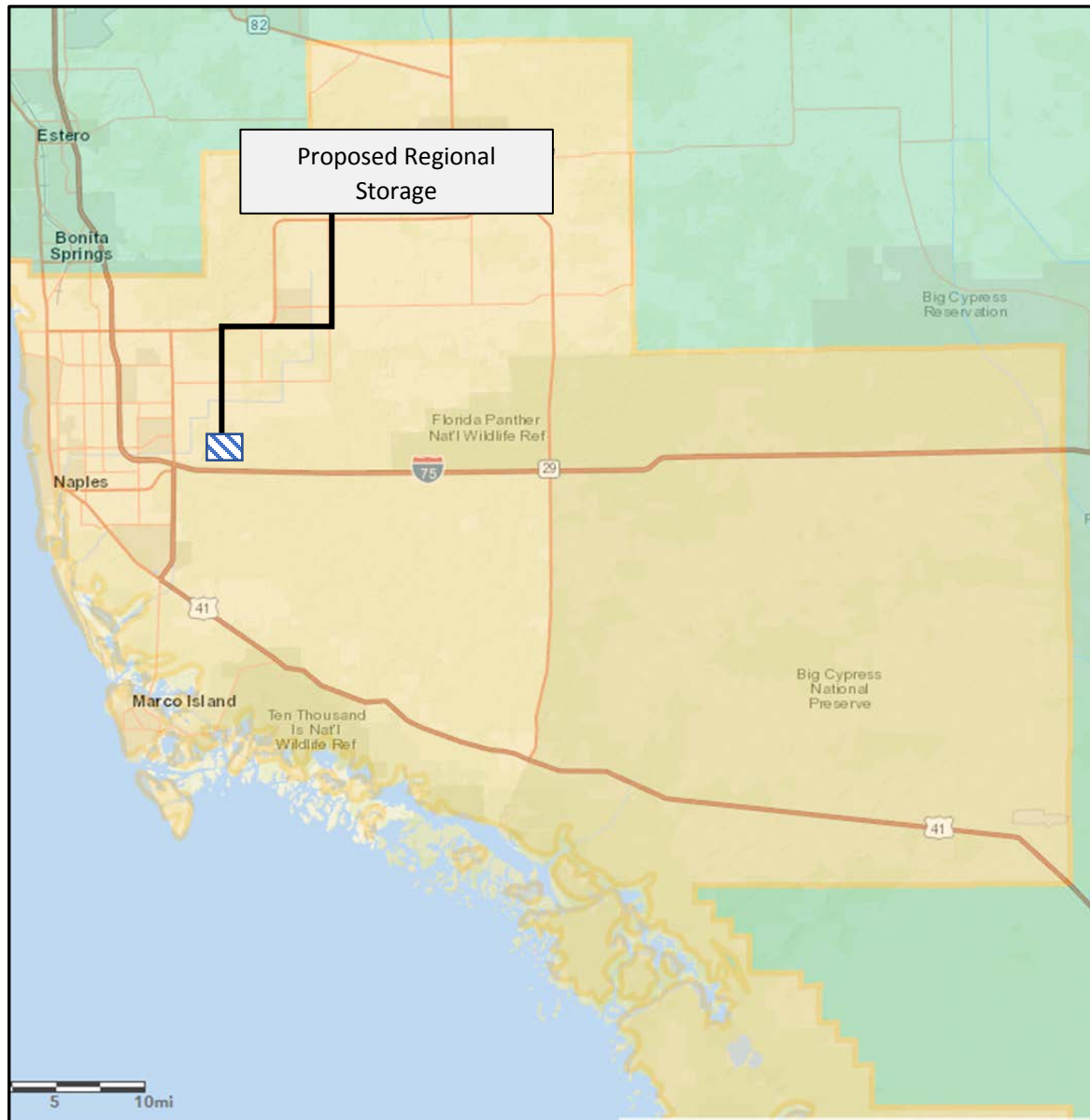
To keep pace with the challenges of increased development will require enhancements to the capabilities of the current system. The proposed Golden Gate Regional Storage Project will increase the capacity of the system by providing a controlled connection into large lakes located adjacent to the canal. In addition to increased storage, the inclusion of these lakes will help attenuate peak flood stages during major storm events, and provide larger residence times which will result in improved water quality and groundwater recharge.



Natural Systems/Water Quality Success Indicators

- Complete projects on time and on budget
- Complete 100% of new Works of the Basin on schedule
- Hold exotic plant costs to no more than \$70 per acre treated
- Support Ground Water and Surface Water Quality monitoring efforts





Proposed storage location



MISSION SUPPORT



MISSION SUPPORT

Delivering Efficient and Cost-Effective Services

The Mission Support element provides optimum business support and logistical functions in carrying out the missions of the Basin. Administrative actions are based on sound management of financial resources to meet the Basin Board's legislative charge and policy guidance. This includes preparation of an annual operating budget for adoption by the Basin Board and inclusion in the SFWMD Budget, and other related administrative functions. Financial statements are presented at Basin Board meetings and posted online to clearly demonstrate how the Basin utilizes taxpayer dollars.

The Big Cypress Basin constantly implements strategies to improve operations, enhance fiscal efficiency, ensure public access and involvement, create more accountability and, most importantly, deliver the services and results that our local partners, citizens and businesses expect. Project and operational progress, along with overall organizational efficiency and effectiveness, are continuously measured and reported. By routinely collaborating with the Florida Department of Environmental Protection, local governments, community organizations and private business, the SFWMD and Basin work to further leverage public dollars by identifying additional cost-saving strategies.

Strategic Priority

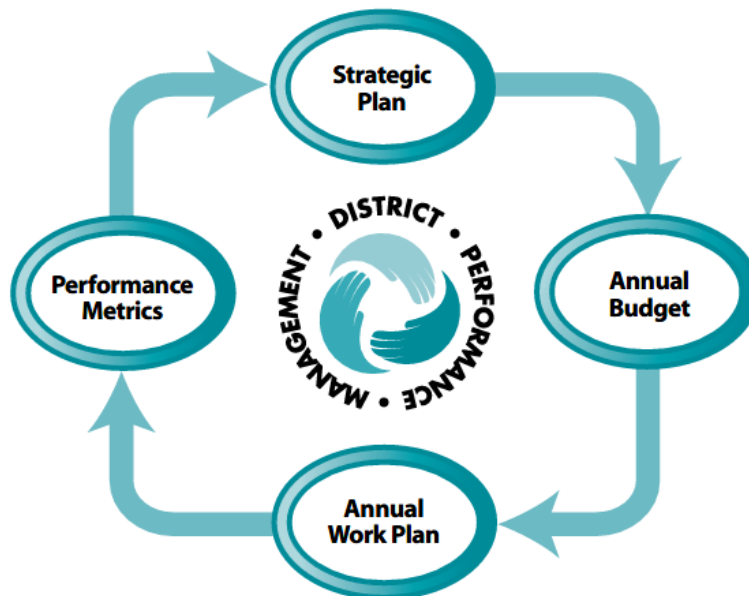
Ensure South Florida taxpayers receive efficient and effective customer service by:

- Focusing resources on core functions, minimizing administrative costs and measuring performance
- Streamlining operations and achieving consistency across water management district boundaries
- Ensuring accountability, transparency and public involvement in agency decisions
- Employing and developing a high-quality, diverse workforce

Mission Support – Success Indicators

- Hold mission support and outreach costs to less than 10 percent of adopted budget
- Complete at least 90 percent of local agreements within contracted timeframes
- Attain technical and financial efficiencies through collaboration with local governments to implement Basin supported water resource projects

PUTTING the PLAN into ACTION



The Strategic Plan...

is a key component of the Big Cypress Basin's business cycle. It establishes the overall policy direction and strategic priorities set by the Basin Board. Serving as the blueprint for the long-term planning and implementation, the Strategic Plan provides guidance in development of the annual budget and work plan, and it identifies the success indicators used for measuring progress.

Implementing the priorities identified in this Strategic Plan will result in:

- Improved flood protection by an enhanced water management system
- Improved local ecosystems, including improvements in the timing and quantity of water flows and restored habitats
- Improved stormwater storage capacity and increased aquifer recharge
- Improved water quality through improved timing and distribution of freshwater to coastal estuaries and supporting and implementing restoration projects
- Increased alternative water supply use and reduced demand on potable water supplies
- Public and private partnerships that help stretch limited resources
- Efficient and effective customer services for Big Cypress Basin taxpayers

When construction of the new Golden Gate #4 structure is complete, it will greatly enhance the Golden Gate Canal water management flexibility by changing the old fixed crest weir to a fully automated gated weir.



South Florida Water Management District – Big Cypress Basin

2600 Horseshoe Drive North, Naples, Florida 34104
239-263-7615 fax: 239-263-8166
www.sfwmd.gov/bcb

South Florida Water Management District

3301 Gun Club Road
West Palm Beach, Florida 33406
561-686-8800 800-432-2045
www.sfwmd.gov

Mailing Address:
P.O. Box 24680, West Palm Beach, FL 33416-4680