

BIG CYPRESS BASIN Strategic Plan 2013 – 2018

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 mission functions 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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The South Florida Water Management District is a regional governmental agency that oversees the water resources in the southern half of the state. Covering almost 18,000 square miles, the region encompasses all or part of 16 counties. Headquartered in West Palm Beach, it 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 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 Big Cypress Basin-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.

Established in 1977, the Big Cypress Basin was initially charged with providing for the broad objectives of conservation, preservation and enhancement of water resources. Between 1979 and 1993, agreements with

Collier County transferred operation and maintenance of the primary network of county-built water control facilities to the basin.

Today, the Big Cypress Basin is responsible for operating and maintaining 162 miles of canals and 46 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 water storage and 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. Environmental, water use and right-of-way permitting support and water resource education / community outreach programs are other key basin activities.

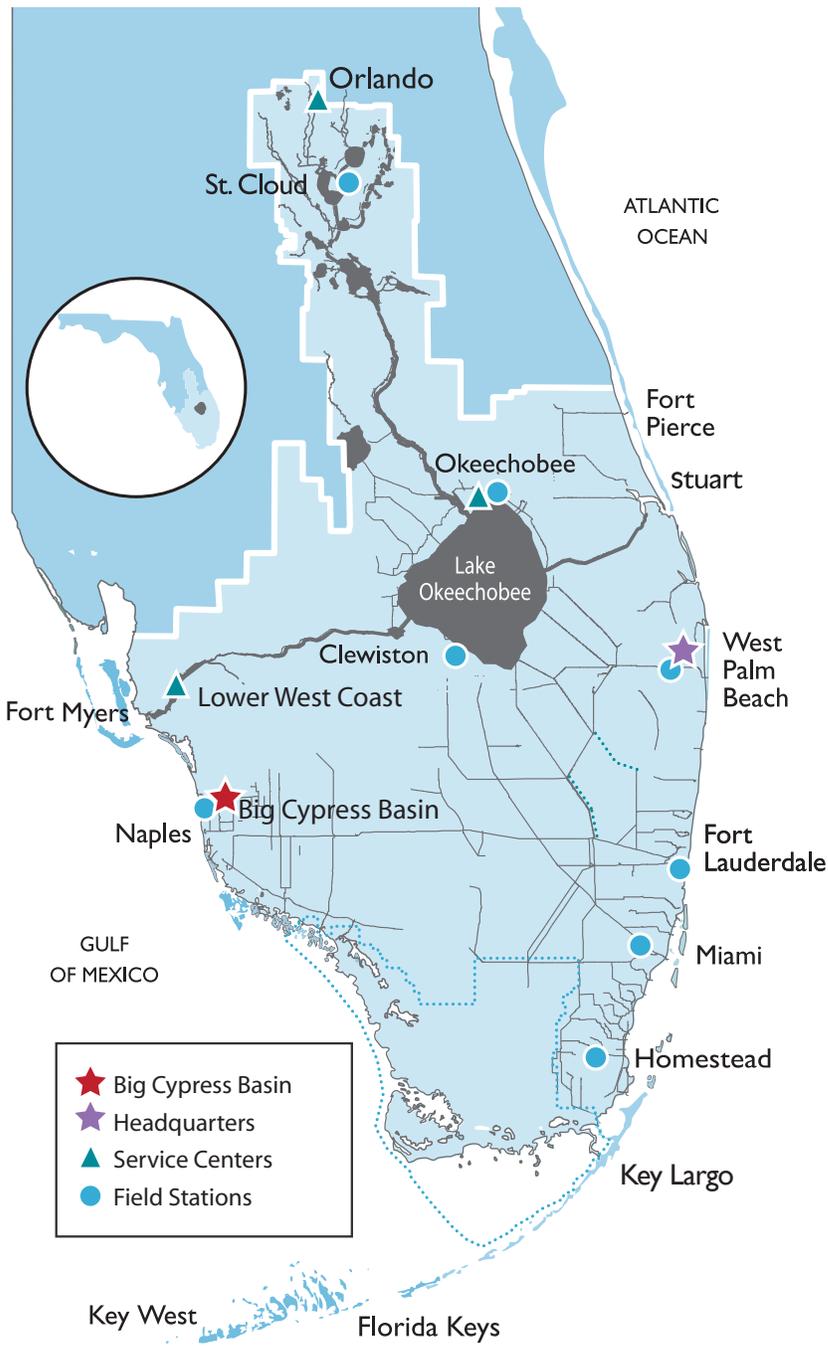
Meetings of the Big Cypress Basin Board are typically held every other month. All meetings are open to the public and provide a discussion forum for matters relating to the region's issues. Basin administration is managed through the South Florida Water Management District Big Cypress Basin Service Center in Naples. Operations and maintenance activities – including future responsibility for new pump stations being constructed as 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 water quality, flood control, natural systems and water supply



BIG CYPRESS BASIN OVERVIEW



SFWMD Locations

Big Cypress Basin

Naples: (239) 263-7615

Headquarters

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

Regulatory Service Centers

Lower West Coast
(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

Big Cypress Basin
(239) 597-2236

Clewiston
(863) 983-1431

Fort Lauderdale
(954) 452-4814

Homestead
(305) 242-5933

Miami
(305) 513-3420

Okeechobee
(863) 462-5328

St. Cloud
(407) 891-3550

West Palm Beach
(561) 791-4100



FLOOD CONTROL

Ensuring and Managing Water Flow

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 57 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.

The BCB operates and maintains a network of 162 miles of primary canals, 46 water control structures and 3 dry season recharge pumps. An additional three large pump stations will be operational as a part of the Picayune Strand Restoration Project during this strategic plan cycle. These facilities provide flood control during the wet season and protect water supplies and environmental resources from over-drainage during the dry season. BCB facilities are operated in coordination with local governments.

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 rights 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.

BCB'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:

- Maintaining preparedness for emergency storm operations
- 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
- 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 control 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 primary function. 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
- Complete operational testing 100 percent of new projects on schedule
- Operate 100 percent of the Works of the Basin in accordance with established operating criteria
- Complete at least 80 percent of maintenance activities on schedule
- Treat approximately 1,600 acres of aquatic, terrestrial and exotic vegetation annually to maintain conveyance capacity of the canals
- Visually inspect all structures monthly and all canal reaches every quarter.
- Perform at least 80 percent of all work activities as planned work
- Pass U.S. Army Corps of Engineers annual inspection on 90 percent of canals/levees
- Update and maintain real time modeling projects concurrent with the commissioning of capital improvement projects

FLOOD CONTROL Key Projects





NATURAL SYSTEMS/ WATER QUALITY

Protecting and Restoring Ecosystems

Over several decades, development and increased urbanization significantly changed the size, hydrology, water quality and ecology of the Big Cypress Basin watershed. Today, a wide variety of restoration and water quality improvement projects are under way to improve the quality, quantity, timing and distribution of water deliveries within the Basin. A key focus in the Big Cypress Basin is to reconnect historic flow-ways and reestablish ecosystems while enhancing the flow conveyance capabilities of the water management infrastructure.

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. Key elements of the plan include Northern Golden Gate Estates Flowway, North Belle Meade Rehydration, and Henderson Creek Diversion projects, which will help to improve the quantity, quality, timing and distribution of water, delivered to Naples Bay and Rookery Bay. Protection of Naples Bay has been a collective priority element of all regional stakeholders. Two key projects under this initiative are underway – collection of additional salinity and water level data in partnership with the United States Geological Survey, and development of a salinity hydrodynamic model for Naples Bay and Rookery Bay.

In partnership with the U.S. Army Corps of Engineers, BCB supports implementation of the Picayune Strand Restoration Project, a component of the Comprehensive Everglades Restoration Plan. The recently completed restoration of Lake Trafford was authorized as a Critical Restoration Project under the Water Resources Development Act of 1996. The Basin funded the project as the local sponsor with support from the State of Florida and Collier County. The Basin also partners with local governments to implement community stormwater projects that enhance water quality and habitat restoration. In addition, the BCB also assists with SFWMD land management activities associated with the Corkscrew Regional Ecosystem Watershed(CREW) lands located in Collier and Lee counties.

► Strategic Priority

Enhance and protect Big Cypress Basin ecosystems by:

- Completing construction of existing key restoration projects
- Restoring historic flowways to enhance wetland functions while minimizing impact to property owners
- Supporting land acquisition for environmental restoration
- Improving surface water storage capacity and promoting aquifer recharge
- Improving the timing, quantity, quality and distribution of freshwater to coastal estuaries
- 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 stormwater improvement projects
- Operating water control structures with advanced water release technologies to meet water quality standards of receiving waters





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 on line and begin operating and delivering their 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.

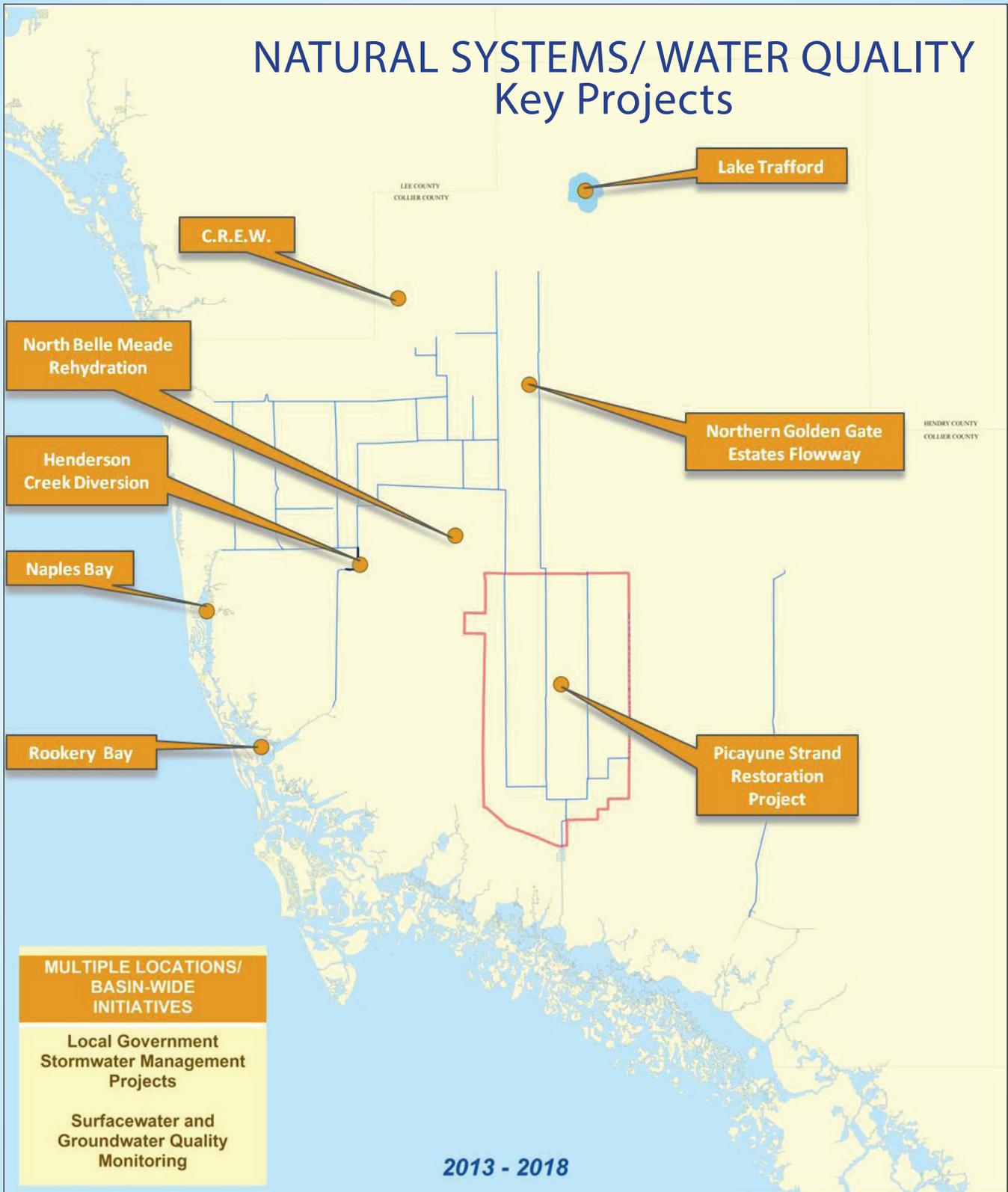


► Natural Systems/Water Quality – Success Indicators

- Complete projects on time and on budget
- Complete 100% of new Works of the Basin on schedule
- Hold exotic plant control costs to no more than \$50 per acre treated
- Complete Lake Management Plan for Lake Trafford
- Implement Henderson Creek Diversion Project within five years
- Support Collier County in initiation of the Northern Golden Gate Estates Flowway and North Belle Meade restoration projects



NATURAL SYSTEMS/ WATER QUALITY Key Projects





WATER SUPPLY

Safeguarding Water Resources

Over time, 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 desalination; and habitat restoration, which will result in more water overall for environmental, urban and agricultural users.

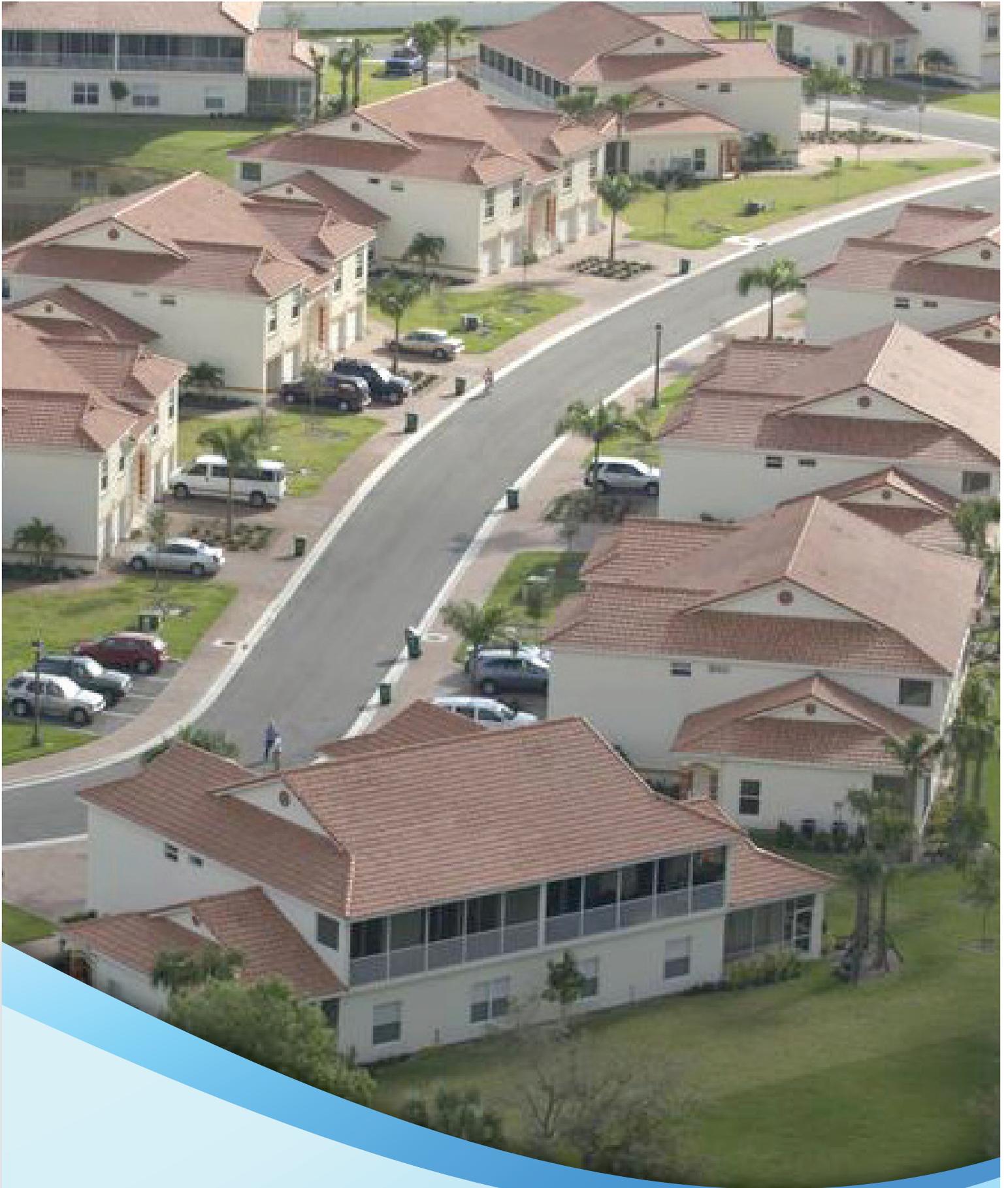
Water supply plans are updated in collaboration with stakeholders every five years. Based on a 20-year outlook, these plans include water demand estimates and projections; an evaluation of existing regional water resources; identification of water supply-related issues and options; funding strategies, 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 District's Lower West Coast Water Supply Plan. Technical and financial assistance is provided to local governments for projects enhancing alternative water supply and water conservation. In addition, the Basin actively participates in community outreach events and water resource educational programs to share information about water resource management and protection.

► Strategic Priority

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

- Supporting development and implementation of the regional water supply plan in coordination with local governments to meet the current and future demands of water users and the environment
- Creating financial and other incentives for regional solutions, developing alternative water supplies and water conservation
- 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 models.



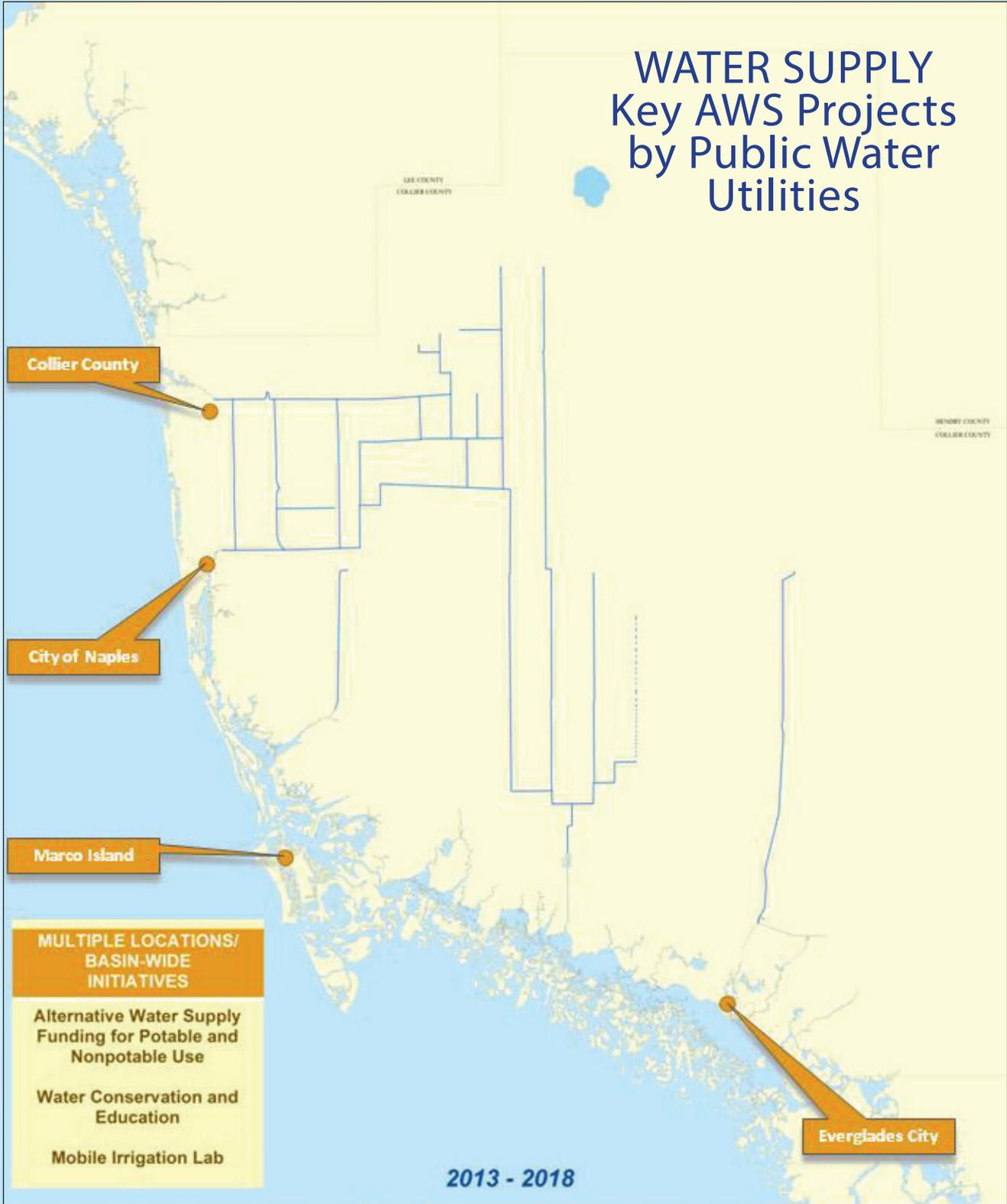


Planning and Conservation

Effective planning and permitting, along with diversification of other sources and conservation, are key to ensuring that communities are less susceptible to the effects of drought. South Florida's primary water supply challenges are three-fold: the need for storage, sustainability of the resources to meet unpredictable weather extremes and a growing demand coupled with competing uses. Finding and implementing workable, cost-effective solutions to environmental, water resource protection and water supply availability issues requires a concerted and collaborative approach, often achieved through creative solutions. Water supply development projects that support the reuse of treated wastewater and its beneficial use is encouraged in consumptive use permits.

► Water Supply – Success Indicators

- Percentages of the 2010-2030 increase in public supply demand met 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
- Provide funding of water conservation programs to reduce per capita consumption





MISSION SUPPORT

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

Delivering Efficient and Cost-Effective Services

The Big Cypress Basin constantly looks for opportunities and 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

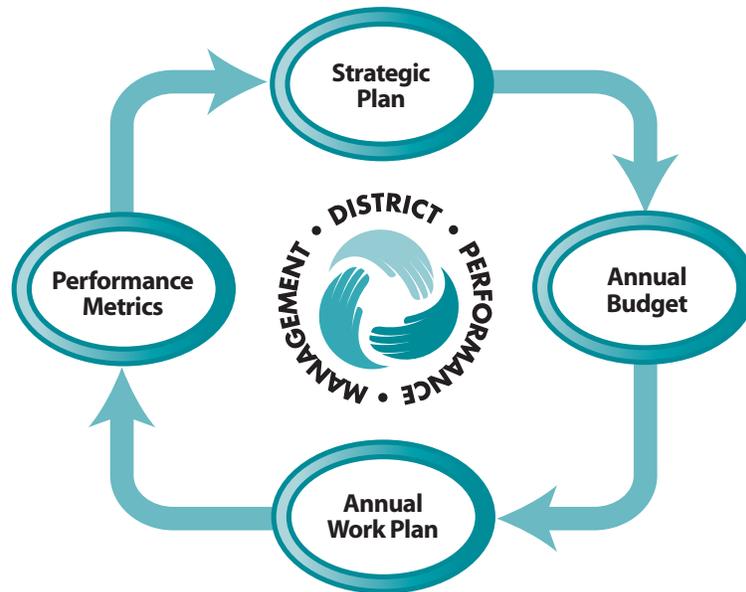
Ensure Big Cypress Basin's taxpayers receive efficient and effective customer service by:

- Focusing resources on core functions, minimizing administrative costs and measuring performance
- Providing assistance to local governments and partners on technical matters for improved water management
- Ensuring accountability, transparency and public involvement in Basin decisions
- Employing and developing a high quality, diverse and local 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



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