



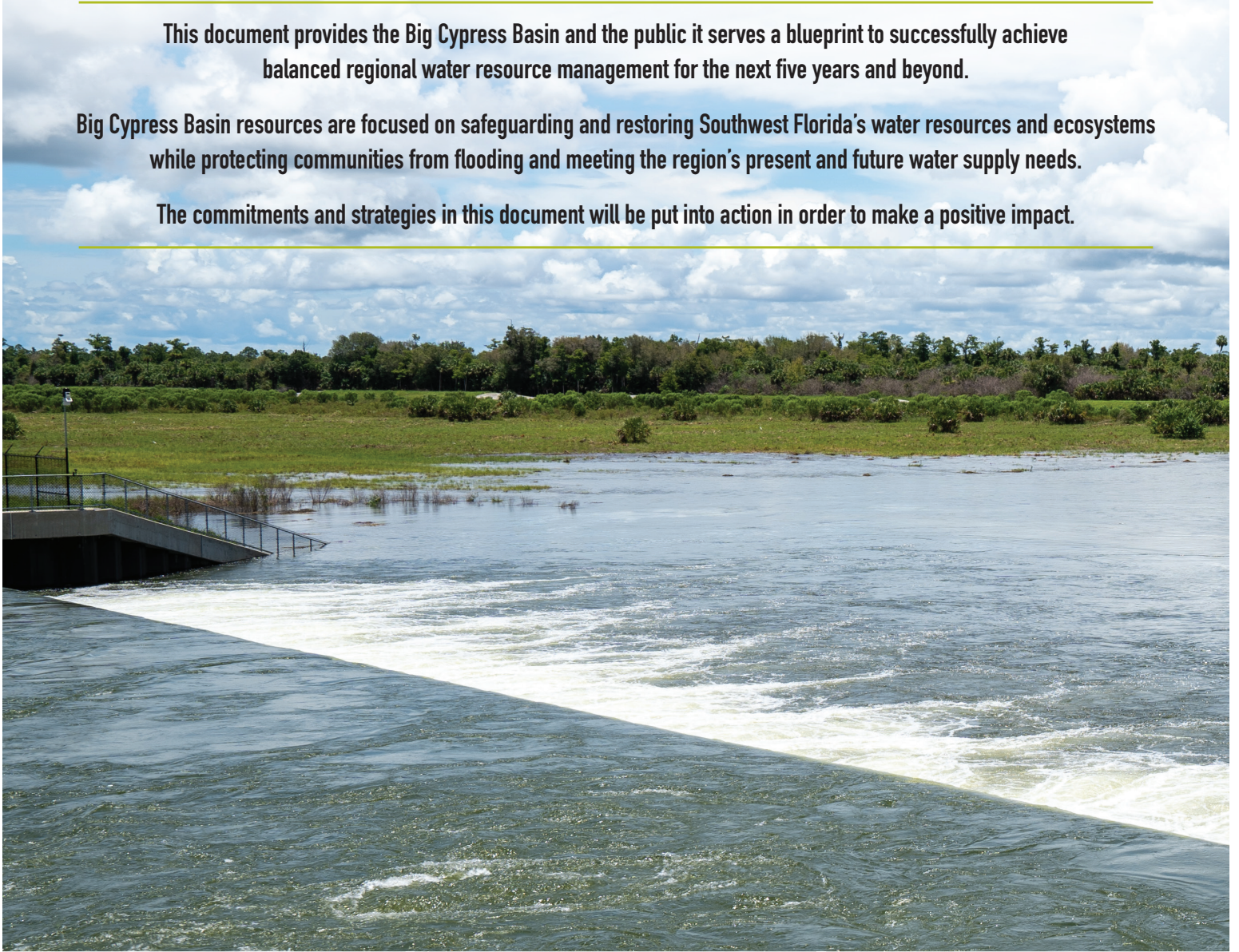
Big Cypress Basin 2023–2028 Strategic Plan

**RESTORATION OF WATER RESOURCES AND ECOSYSTEMS • WATER SUPPLY
FLOOD PROTECTION • PUBLIC ENGAGEMENT AND ADMINISTRATION**

This document provides the Big Cypress Basin and the public it serves a blueprint to successfully achieve balanced regional water resource management for the next five years and beyond.

Big Cypress Basin resources are focused on safeguarding and restoring Southwest Florida's water resources and ecosystems while protecting communities from flooding and meeting the region's present and future water supply needs.

The commitments and strategies in this document will be put into action in order to make a positive impact.



BIG CYPRESS BASIN OVERVIEW

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 over nine million, this region covers 17,930 square miles (31 percent of the entire state) and includes vast areas of urban development, agricultural lands and conservation areas. Operating for over 70 years, the SFWMD is the oldest and largest of the state's five water management districts.

State legislation divides the SFWMD 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 SFWMD boundaries.

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

The BCB was established in 1976 and was 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 BCB. This agreement is renewed approximately every 10 years, and today the County and BCB work cooperatively to provide flood control for the residents and visitors of Collier County.

Collier County is one of the fastest growing counties in the State of Florida but also has approximately 70 percent of its land in local state or federal ownership for preservation efforts. The BCB is responsible for operating and maintaining 134.1 miles of canals and 34 water control structures. As more people are moving to this area and as more lands are developed, it puts more pressure on providing flood control. Capital improvements to the water management infrastructure, designed to enhance water supply, environmental and flood control capabilities are provided by the BCB. In addition to drainage responsibilities, the BCB works to protect water supply and also works with regional partners to improve water quality.

The BCB administration is managed through the BCB 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 BCB Field Station, also in Naples.



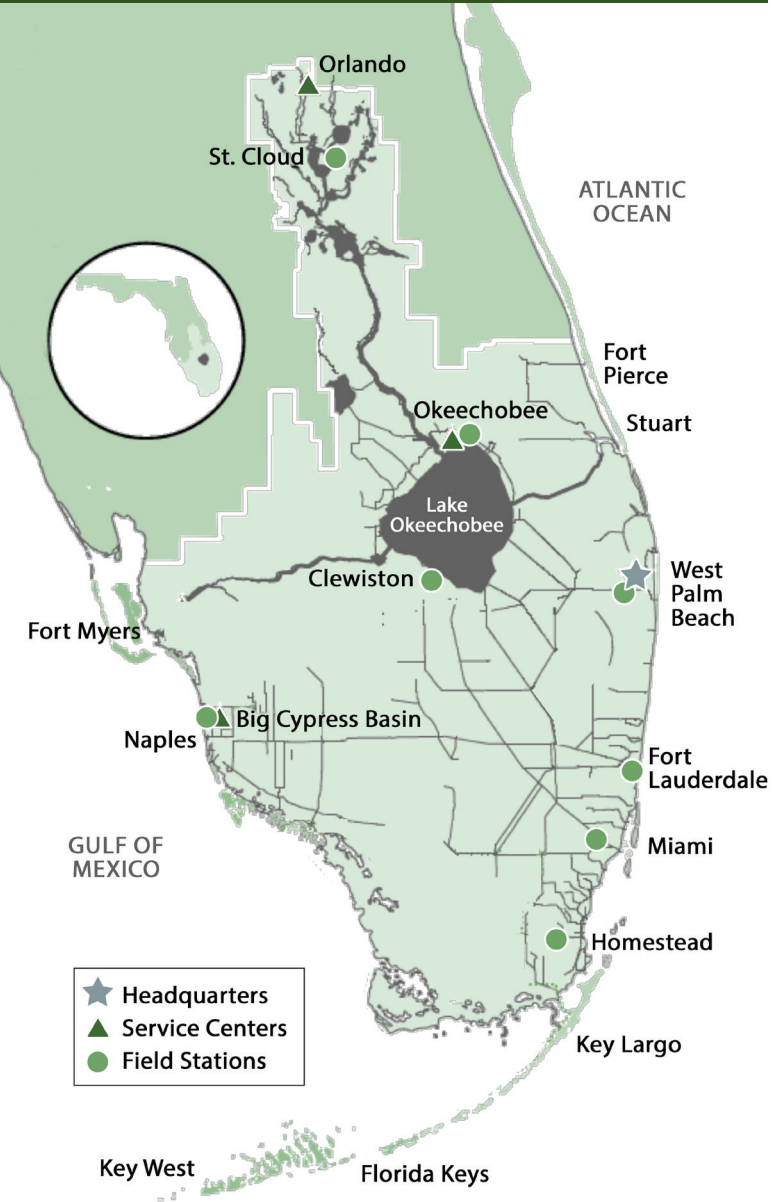
OUR MISSION

To SAFEGUARD and RESTORE South Florida's water resources and ecosystems, PROTECT our communities from flooding, and MEET the region's water needs while CONNECTING with the public and stakeholders.

SFWMD LOCATIONS



Mary Ellen Hawkins Building.



HEADQUARTERS

- ▶ 3301 Gun Club Road
West Palm Beach, FL 33406

SERVICE CENTERS

- ▶ **Naples (BCB)**
2660 N. Horseshoe Dr., Ste. 101A
- ▶ **Fort Myers**
2301 McGregor Blvd.
- ▶ **Okeechobee**
316 Northwest 5th St.
- ▶ **Orlando**
1707 Orlando Central Pky., #200

FIELD STATIONS

- ▶ **Naples (BCB)**
3875 City Gate Blvd. N.
- ▶ **Clewiston**
2425 Hookers Point Rd.
- ▶ **Fort Lauderdale**
2535 Davie Rd.
- ▶ **Homestead**
2195 NE 8th S.
- ▶ **Miami**
9001 NW 58th St.
- ▶ **Okeechobee**
1000 NE 40th Ave.
- ▶ **St. Cloud**
3800 Old Canoe Creek Rd.
- ▶ **West Palm Beach**
801 Sansburys Way

CORE MISSION

RESTORATION OF WATER RESOURCES AND ECOSYSTEMS AND WATER SUPPLY



Newly Restored Area of Audubon's Corkscrew Swamp Sanctuary.

Protecting and Restoring

Over several decades, development and increased urbanization has significantly changed the size, hydrology, water quality and ecology of the BCB watershed. Today, improvement projects are underway to improve the quality, quantity, timing and distribution of water deliveries within the BCB. Over the past two decades, the BCB has partnered with local governments and agencies to assist with regional water projects ranging from enhanced flood control, water quality, ecosystem restoration and alternative water supply.

The BCB also assists with SFWMD land management activities associated with the Corkscrew Regional Ecosystem Watershed (CREW) for lands located in Collier County.

The SFWMD and the BCB are making efforts to increase resilience in the face of warmer temperatures, sea level rise and other climate change impacts, by increasing the ability to better manage extreme wet and drought events for the benefit of communities and the environment.

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 BCB is committed to identifying and implementing innovative, cost-effective and sustainable solutions to meet the region's water quality and ecosystem restoration challenges.

Planning, Regulation and Conservation

Effective planning and permitting, along with source diversification and water conservation, are key to ensuring that communities are less susceptible to water supply challenges. 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.

The BCB's primary water supply challenges include saline water intrusion, unpredictable weather extremes and a growing demand coupled with competing uses.

Part of the SFWMD's and the BCB's strategy to address the impacts of climate change and sea level rise includes analyzing potential impacts that affect water supply sources and the natural system, including enhancing groundwater models to predict potential movement of the saltwater interface. Initiated in 2009, the SFWMD monitors and documents the location and movement of the saltwater interface and identifies areas where inland movement of the saltwater interface puts wellfields and other critical resources at risk.

Additionally, sea level rise and climate change adaptations are being considered in the development of water supply plans. This allows the SFWMD, local governments, utilities and other water users to plan and proactively implement prevention or adaptation strategies, such as the use of coastal canals and storage alternatives to maintain groundwater levels to slow saltwater intrusion.

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. Water reuse is the use of highly-treated domestic wastewater (reclaimed water) for beneficial purposes. Reuse reduces the reliance on groundwater, surface water and potable water.



Otter at Bird Rookery Swamp.

CORE MISSION

RESTORATION OF WATER RESOURCES AND ECOSYSTEMS AND WATER SUPPLY

Safeguarding and Expanding Water Resources

Increasing population and urban 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 southwest Florida's future demands, a diverse water supply portfolio is needed to maximize traditional sources while at the same time tapping into and continuing to develop alternative water sources, while not causing harm to the water resources and related natural systems.

Strategies include:

- ◆ Sound planning
- ◆ Demand reduction through water conservation
- ◆ Development of alternative water sources
- ◆ Aquifer storage and recovery
- ◆ Use of reclaimed water and desalination of brackish and saline water
- ◆ Habitat restoration

Water supply plans are updated in collaboration with stakeholders every five years pursuant to Chapter 373, Florida Statutes.

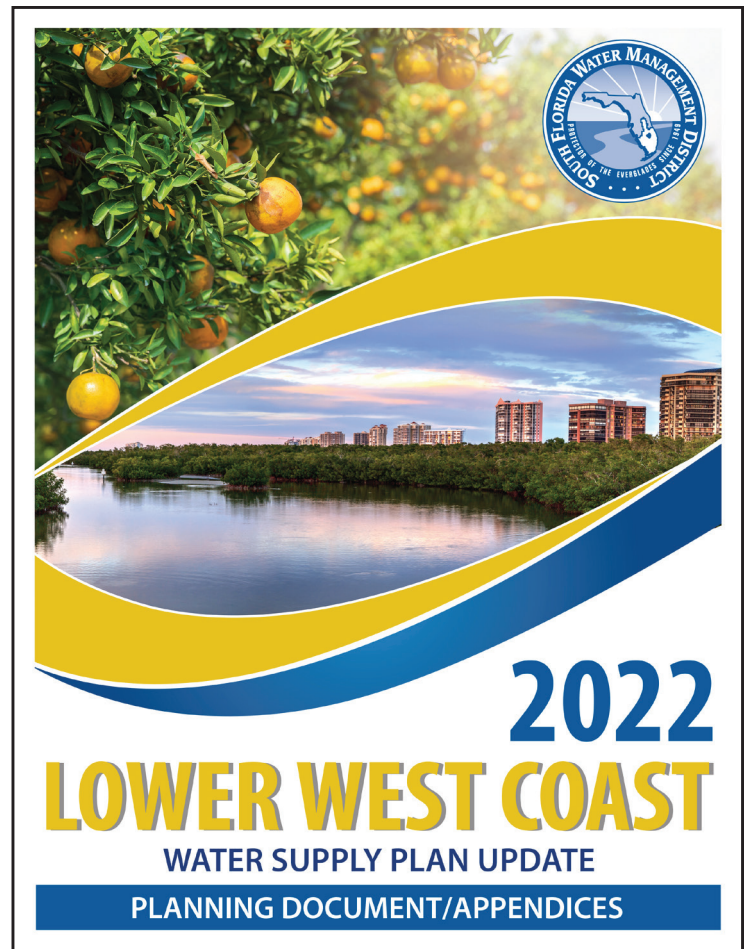
Based on a 20-year outlook, these plans include:

- ◆ Water demand estimates and projections
- ◆ An evaluation of existing regional water resources
- ◆ Identification of water supply-related issues and options
- ◆ Funding strategies
- ◆ Recommendations for meeting projected demands while sustaining water resources and related natural systems

Alternative water supplies, regional solutions and water conservation are encouraged through regulatory, voluntary and financial incentives.



Purple Identifies Pumps and Pipes Carrying Reclaimed Water for Reuse.



Hydrological Monitoring Station.

Restoration of Water Resource and Ecosystems Strategic Priorities and Success Indicators

PRIORITY – Maximizing use of available water storage features.

Success Indicators:

- ◆ Identify storage needs to meet flood control, water supply, and environmental goals.

PRIORITY – Managing invasive and nuisance species.

Success Indicators:

- ◆ Continue an aggressive, integrated plant management program to eliminate and control infestations of invasive and nuisance plant species to a level where they do not threaten the integrity of the natural communities.
- ◆ Develop and implement annual Exotic Strategy Plan to treat nuisance plants in Corkscrew Regional Ecosystem Watershed (CREW).
- ◆ Continue to implement early detection rapid response treatments of invasive plant species as needed.
- ◆ Continue to work with the Florida Fish and Wildlife Conservation Commission (FWC) to secure funding opportunities for invasive plant treatments in the CREW Management Area.



Staff from the BCB Field Station Removing Vegetation in the Golden Gate Canal.



Prescribed Burn at Corkscrew Regional Ecosystem Watershed (CREW).

Water Supply Strategic Priorities and Success Indicator

PRIORITY – Developing and implementing regional water supply plans in coordination with local governments, utilities, stakeholders and the public.

Success Indicators:

- ◆ Approve five-year water supply plan updates on schedule.
- ◆ Identify sufficient water supply sources and future projects within the SFWMD's water supply plans to meet existing and future reasonable-beneficial uses during 1-in-10 year drought conditions through 2045 while sustaining water resources and natural systems.
- ◆ Continue to support the agency's strategic priority to encourage pre-application meetings to ensure complete application submittals incorporating full implementation of statutorily mandated consumptive use conditions of issuance.

PRIORITY – Implementing solutions to improve water quality treatment, reduce nutrient load.

Success Indicators:

- ◆ Continue to work with both Public-Public and Public-Private partnerships between state and local agencies, and cost share funding programs to most efficiently leverage funding to support the Picayune watershed.

PRIORITY – Increasing water depth and hydroperiod to save additional freshwater in critical Bird Rookery and Corkscrew Swamp ecosystems.

Success Indicators:

- ◆ Begin comprehensive study to replace and improve the Corkscrew Canal Headwater Water Control Structures by utilizing the new BCB regional model tool.
- ◆ Commence feasibility study to increase the hydroperiod for Bird Rookery and Corkscrew Swamp Sanctuary wetland areas.
- ◆ Enhance groundwater recharge in the upstream Corkscrew Swamp Sanctuary watershed.

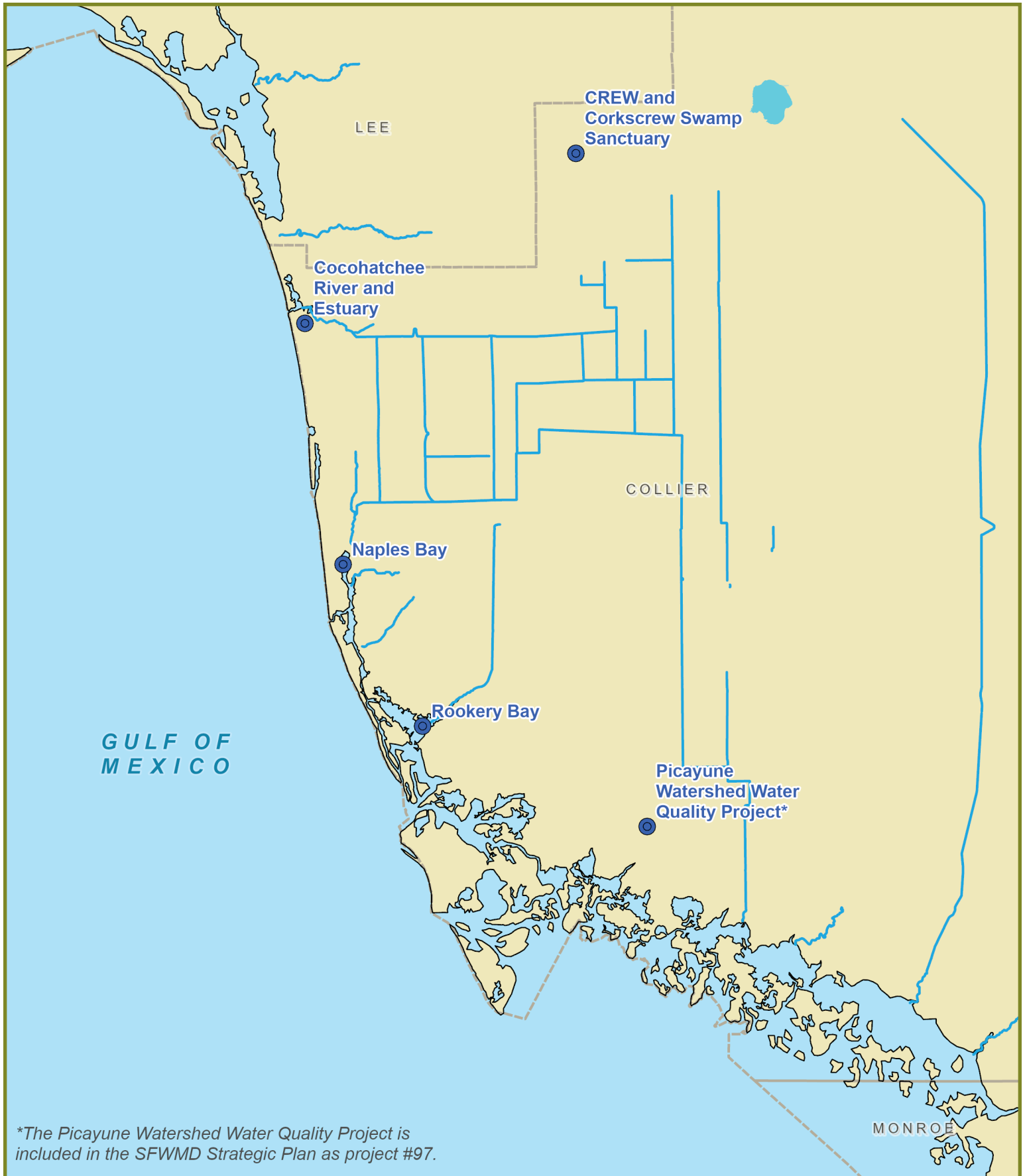
PRIORITY – Enhancing groundwater recharge and reduce freshwater discharges during the wet season in the Henderson Creek watershed as conditions allow.

- ◆ Commence the Hydrologic and Hydraulic assessment and begin design for replacement of HC1 coastal structure.
- ◆ Commence the Hydrologic and Hydraulic assessment, siting and begin design for a new water control structure HC1A between HC1 and HC2 to increase the hydroperiod to Henderson Creek watershed area.
- ◆ Increase headwater elevations throughout Henderson Creek when weather and hydrologic conditions allow.
- ◆ Enhance groundwater recharge in the upstream Corkscrew watershed.

CORE MISSION

RESTORATION OF WATER RESOURCES AND ECOSYSTEMS AND WATER SUPPLY

Big Cypress Basin Restoration and Water Supply Strategic Projects



*The Picayune Watershed Water Quality Project is included in the SFWMD Strategic Plan as project #97.

CORE MISSION

FLOOD CONTROL

Managing the Water for Flood Protection

The subtropical climate of Southwest Florida with high rainfall and the region's geographical vulnerability to tropical weather, make flood control an ongoing and mission-critical responsibility of the 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 Southwest 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 BCB operates and maintains a network of 134.1 miles of canals and 34 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. Additionally, the BCB's field staff are responsible for operating and maintaining three additional pump stations, 10 miles of levees and 35 miles of canals and six water control structures for the Picayune Strand Restoration Project, which is part of the Comprehensive Everglades Restoration Plan (CERP).

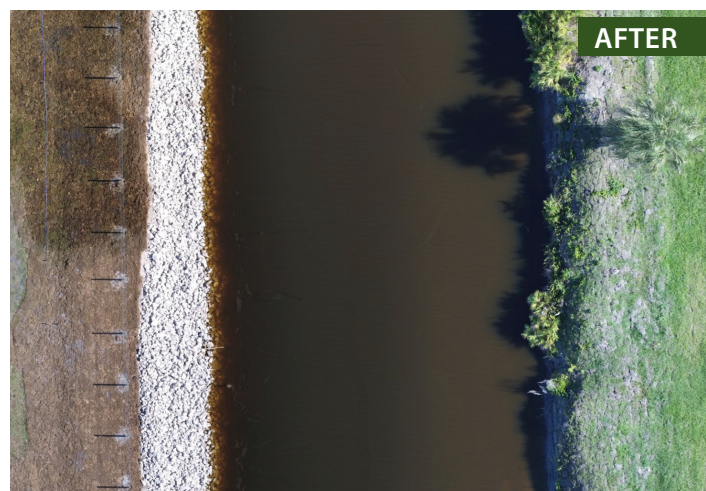
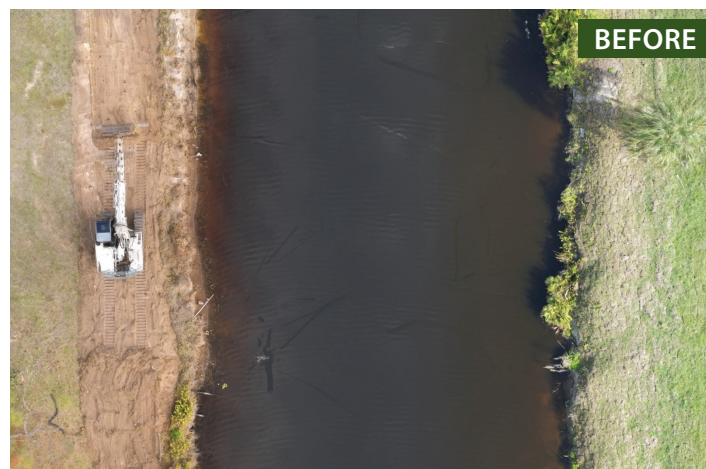
Canals are maintained to maximize conveyance capacity, including shoal and debris removal, as well as aquatic and terrestrial vegetation control. Right of Way Permits are issued to protect the BCB's ability to effectively and safely use the canal right of ways. Additional benefits incorporated into the operation of the flood control system include:

- ◆ Prevention of saltwater intrusion
- ◆ Recharging public water supply well fields
- ◆ Protecting regional ecosystems

The BCB's hydrologic monitoring network continuously collects data on rainfall, evaporation, surface and groundwater levels, streamflow, water control structure operations and other meteorological parameters. Real-time monitoring improves the responsiveness of the flood control system to maximize flood protection and protect ground water supplies. This monitoring information is on the SFWMD's website allowing transparency for flood control operations to the public.

Regional System Expansion and Enhancements

Moving water is central to the BCB'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 BCB commits specific funds each year to implement long-range plans for repairing, refurbishing and upgrading the canals and water control structures to meet the level of service of a rapidly urbanizing community.



Golden Gate #4 (GG4).

Faka Union Canal Bank Repair Before and After.

CORE MISSION

FLOOD CONTROL



Golden Gate #1 (GG1).

Building Resiliency: Sea Level Rise and Flood Resiliency Plan

With the goal to ensure the primary flood protection system continues to meet the region's needs into the future, the SFWMD and the BCB are assessing the risks to the flood protection system from development, the impacts of a changing climate, sea level rise, and storm surge. Central to risk assessment and adaptation planning efforts is the Flood Protection Level of Service Program (FPLOS). Under this program, the SFWMD and the BCB study the canals, structures, and pump stations it operates to ensure that they can provide the level of flood protection they were designed to under future conditions with consideration for sea level rise and other climate changing impacts.

Assumptions for sea level rise are based on available projections advanced by federal agencies, including the National Oceanic and Atmospheric Administration (NOAA) and the U.S. Army Corps of Engineers (USACE). Beyond sea level rise, SFWMD estimated future extreme rainfall conditions, in partnership with United States Geological Survey (USGS), and other future climate scenarios, based on the evaluation of existing climate model results in contrast to historic observation data.

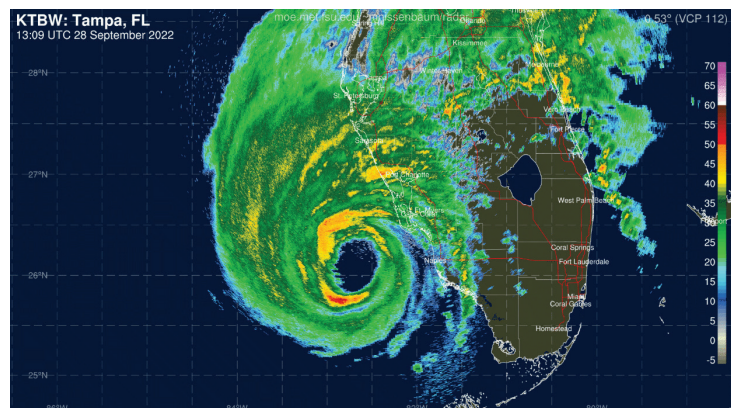


Hurricane Ian Storm Surge – City of Naples.

These observed datasets are being integrated into a set of water and climate resilience metrics to document and communicate trends and shifts in relevant water and climate data.

The FPLOS flood vulnerability assessments identify canals and/or structures that no longer provide adequate flood protection. In these cases, adaptation strategies are formulated, along with the identification of funding alternatives for implementation. These results support decision making on prioritizing investments to provide long-term resiliency and ensure flood protection needs are met.

The list of priority resiliency investments are integrated into the SFWMD Sea Level Rise and Flood Resiliency Plan. The goal of the plan is to reduce the risks of flooding, sea level rise, and other climate impacts on water resources and increasing community and ecosystem resiliency in South Florida. Implementation of the plan is done in collaboration with the federal agencies, such as Federal Emergency Management Agency (FEMA) and USACE, and the State of Florida. The plan implementation strategy ensures a resilient water management system, capable of coping with and adapting to acute and chronic stressors, and accounting for evolving conditions, now and in the future.



Hurricane Ian Radar.

Flood Control Protection Strategic Priorities and Success Indicators

PRIORITY – Assessing and operating the BCB water management system to meet flood protection and water supply needs into the future considering sea level rise and impacts of a changing climate.

Success Indicators:

- ◆ Maintain water levels within established target ranges to the extent that weather and climatological conditions allow.
- ◆ Complete the comprehensive BCB watershed model update on time and on budget.

PRIORITY – Working with local, regional, state and federal partners to advance adaptation strategies and infrastructure investments laid out in the SFWMD Sea Level Rise and Flood Resiliency Plan.

- ◆ Enhance coastal structures, canals, and other critical flood protection infrastructure to address the effects of storm surge and rising sea levels.
- ◆ Implement the resiliency program's self-preservation operations and upgrades at the BCB's coastal structures.

PRIORITY – Implementing flood protection infrastructure refurbishment projects.

Success Indicators:

- ◆ Complete flood control strategic projects on time and on budget.

PRIORITY – Increasing communication, storm preparedness and operational response time.

Success Indicators:

- ◆ Complete communications resiliency projects on time and on budget.

PRIORITY – Protecting canal Right of Way (ROW) from encroachments and unauthorized users.

Success Indicators:

- ◆ Maintain improved canal ROW for maintenance access and implement prioritized tree removal projects as budget allows.
- ◆ Utilize Integrated Pest Management (IPM) or the use of mechanical and chemical controls to manage invasive species and to keep water moving throughout the BCB's flood control system.
- ◆ Maintain canal Floating Aquatic Vegetation (FAV) surface coverage to an acceptable level to provide adequate flood control.
- ◆ Maintain canal Submerged Aquatic Vegetation (SAV) water column coverage to an acceptable level to provide adequate flood control.
- ◆ Conduct visual inspection of all BCB canals on a regular basis so problems can be quickly addressed.

- ◆ Create quarterly canal condition reports to place emphasis on areas of concern.
- ◆ Re-establish canal cross-sections identified from canal improvements project.

PRIORITY – Coordinating with state and local partners to improve secondary and tertiary stormwater management systems.

Success Indicators:

- ◆ Assist with secondary system operations and watershed planning for Collier County.

PRIORITY – Exploring alternatives for different types of grasses/ground cover and landscape for canal banks that will reduce mowing and maintenance costs.

Success Indicators:

- ◆ Explore a plan to systematically replace traditional sod with low growing ground cover as appropriate.
- ◆ Explore alternatives to reduce maintenance costs and enhance the appearance of canal banks.

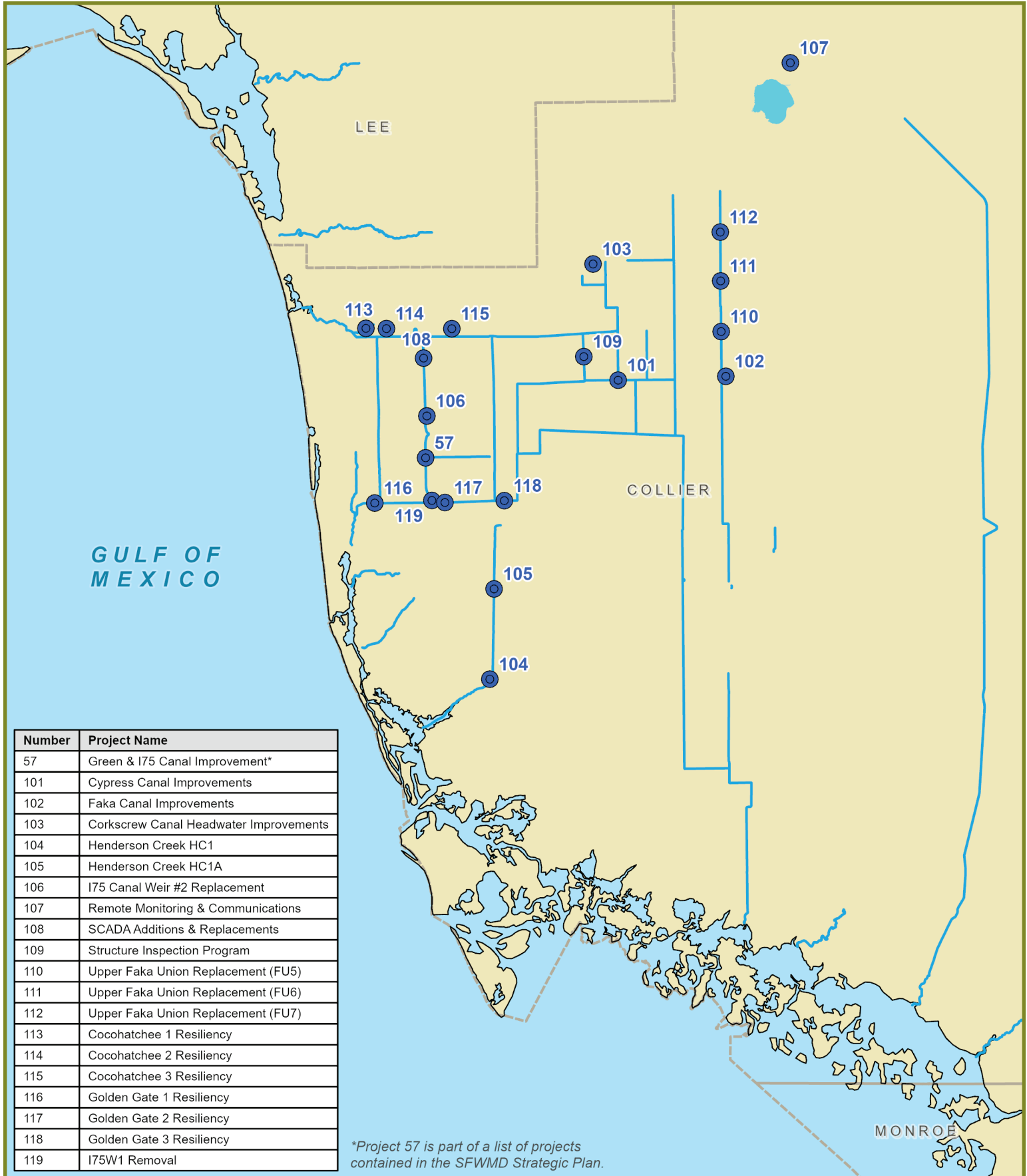


CORK2 Water Control Structure.

CORE MISSION

FLOOD CONTROL

Big Cypress Basin Flood Control Strategic Projects



CORE MISSION

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 BCB. Administrative actions are based on sound management of financial resources to meet the BCB's legislative charge and policy guidance. This includes preparation of an annual operating budget for adoption by the BCB Board and inclusion in the SFWMD Budget, and other related administrative functions. Financial statements are presented at BCB Board meetings and posted online to clearly demonstrate how the BCB utilizes taxpayer dollars.

The BCB 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 (DEP), local governments, community organizations and private business, the SFWMD and the BCB work to further leverage public dollars by identifying additional cost-saving strategies.



Canal Bank Study at Freedom Park with Naples Botanical Garden.



Construction of Golden Gate #4 (GG4).

Public Engagement And Administration Strategic Priorities and Success Indicators

PRIORITY – Focusing resources on core functions, minimizing administrative costs and measuring performance.

PRIORITY – Streamlining operations and achieving consistency across the BCB boundaries within SFWMD.

Success Indicators:

- ◆ Continue BCB regional watershed meetings.

PRIORITY – Ensuring accountability, transparency, and public involvement in agency decisions.

Success Indicators:

- ◆ Document, assign and respond to 90 percent of public records requests within 14 days.
- ◆ Explore opportunities to increase public engagement.

PRIORITY – Employing and developing a high-quality, diverse workforce.

Success Indicators:

- ◆ Maintain workforce turnover rate at less than thirty percent.
- ◆ Ensure more than 90 percent of new hires are retained after the six-month probation period.
- ◆ Complete classroom training events via e-learning, classroom instruction and/or virtual instruction that further develops employee and supervisor skills such as "Respect in the Workplace," "New Supervisor Training," and "Team Building."

AGENCY BUSINESS CYCLE

PUTTING THE PLAN INTO ACTION



BCB Field Station Staff Conducting Flood Control and Storm Preparation in Canals.



L-R: BCB Board Chair Charlette Roman, BCB Board Member Andrew D.W. Hill, BCB Board Vice Chair Dan Waters and BCB Administrator Lisa Koehler.

The Strategic Plan...

The Strategic Plan is a key component of the BCB business cycle. It establishes the overall policy direction and strategic priorities set by the BCB Board to carry out its core mission responsibilities.

Serving as the agency's blueprint for long-term planning and implementation, the Strategic Plan provides overarching guidance in the development of the annual budget and work plan and the success indicators used for measuring progress.

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

- ◆ Restoration of Southwest Florida's ecosystem, including improvements in the timing and quantity of water flows and restored habitats.
- ◆ Regional flood protection provided by a refurbished water management system.
- ◆ Improvement of water quality.
- ◆ Affordable and reliable water supplies.
- ◆ Public and private partnerships that help stretch limited resources.
- ◆ Efficient and effective customer service for Southwest Florida's taxpayers.
- ◆ Transparency to the public on the BCB's priorities.



BCB Field Station.



Baby Alligator, Corkscrew Swamp Sanctuary.



Barred Owl, Big Cypress Swamp.



The Ghost Orchid at Corkscrew Swamp Sanctuary is prized for its long, delicate and pure-white petals, and is considered one of the most rare plants in the region. It is an enduring symbol of South Florida's forests.

Ron DeSantis, Governor

**Big Cypress Basin
Governing Board**

Charlette Roman, Chair
Dan Waters, Vice Chair
Andrew D.W. Hill

Shawn Hamilton, Secretary,
Florida Department of
Environmental Protection

SFWMD Executive Management

Drew Bartlett, Executive Director
John Mitnik, Asst. Executive Director & Chief Engineer
Sean Cooley, Communication & Public Engagement Director
Jill Creech, Regulation Director
Maricruz Fincher, General Counsel
Lawrence Glenn, Water Resources Director
Candida Heater, Administrative Services Director
Lisa Koehler, Big Cypress Basin Administrator
Dr. Carolina Maran, District Resiliency Officer
Duane Piper, Chief Information Officer
Jennifer Reynolds, Ecosystem Restoration Director
Jennifer Smith, Chief of Staff
Rich Virgil, Field Operations Director

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