



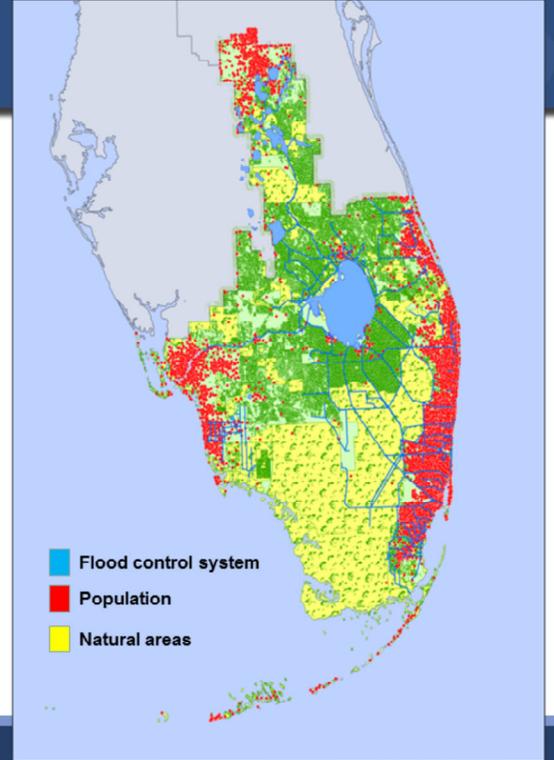
SFWMD and Restoring Florida Bay

Drew Bartlett
Executive Director
South Florida Water Management District

South Florida Water Management District



- ~2,100 miles of canals and 2,200 miles of levees/berms
- More than 650 water control structures and 77 pump stations
- About 3,500 hydrological monitoring stations, including 200 rain gauges and 26 weather stations
- More than 8.7 million residents



sfwmd.gov

- Here you can see a little bit about the area and the population served by the South Florida Water Management District.
- Our area of responsibility stretches all the way from Orlando down here to the Keys.
- That area includes more than 2,100 miles of canals and 2,800 miles of levees and berms as well as hundreds of water control that protect communities from flooding while helping to protect the environment. **(Blue)**
- We serve more than 8.7 million residents and that number is growing every day. **(Red)**
- There are also millions of acres of natural and protected lands that we help manage or protect **(Yellow)**

Mission of SFWMD

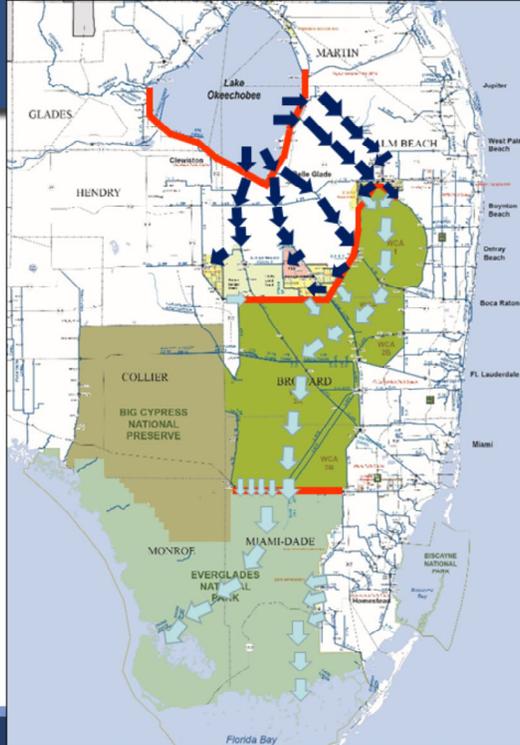


OUR MISSION:

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.gov

- Our mission statement, which our Governing Board approved earlier this year, our core missions include protecting both our communities from harm by flooding and protecting our ecosystems and water resources from harm.
- Our work increasing the flow of water south to Everglades National Park and Florida involve fulfilling both of these core missions, getting more water where it is needed to safeguard and restore those ecosystems and keeping the water in the park and away from communities surrounding the park to protect them from flooding.



How water moves south through Everglades National Park to Florida Bay

1. Lake Okeechobee:

- SFWMD can move water from Lake Okeechobee South through four water control structures (**CLICK**) named C-10A, S-352, S-351 and S-354 structures.

2. Canals:

- After water is moved south out of Lake Okeechobee through the water control structures it flows south through a series of canals which were built as part of the original flood control system including the West Palm Beach Canal (**CLICK**), the Hillsboro Canal (**CLICK**), the North New River Canal (**CLICK**) and the Miami Canal (**CLICK**).
- We can also sometimes use the L-8 Canal (**CLICK**)

3. Treatment Areas:

- Water sent south to the Everglades must meet the state's stringent water quality standards and have ultralow levels of nutrients such as phosphorus to avoid damaging the rare ecosystem that is America's Everglades.
- Water sent south is treated in several manmade wetlands called Stormwater Treatment Areas (**CLICK**) where plants naturally absorb much of the nutrients before it is moved south.
- SFWMD has built 57,000 acres of effective treatment areas
- We also currently utilize shallow storage in two Flow Equalization Basins (**CLICK**) to store water and control how fast it flows to the Stormwater Treatment Areas to maximize their ability to remove nutrients.

- Another “FEB” will be built by 2023 to optimize the performance of STA 5/6

4. **Water Conservation Areas:**

- After treatment, water is sent south through 1,350 square miles of Everglades in three Water Conservation Areas (**CLICK**)
- These conservation areas serve multiple purposes including ensuring flood protection, water supply for the region and providing habitat to native wildlife and plants. They also provide recreational opportunities and are of deep cultural value to the Seminole Tribe of Florida and the Miccosukee Tribe of Indians of Florida.

5. **Everglades National Park (Northeast Shark River Slough):**

- What is good for Everglades National Park is good for Florida Bay and that is why we work to increase flows to the park and the bay.
- When you hear people talking about sending the water south, this is exactly what they mean.
- Once water has been treated and sent south, it can reach the Northeast Shark River Slough area of Everglades National Park through several different outlets controlled by SFWMD and the U.S. Army Corps of Engineers.
- We can send water into the park through the S-333 water control structure. (**CLICK**) Our ability to move water south is constrained by the capacity of this structure but we are working to increase that capacity to move more water south into the park, which I’ll talk more about in a second.
- The Army Corps can send water into the park through four S-12 structures (**CLICK**)
- SFWMD is currently exploring a study to determine if moving more water into Shark River Slough could increase hydrologic pressure underground in the water table and cause more groundwater to reach Florida Bay.

6. **Sending Additional Water South to Florida Bay**

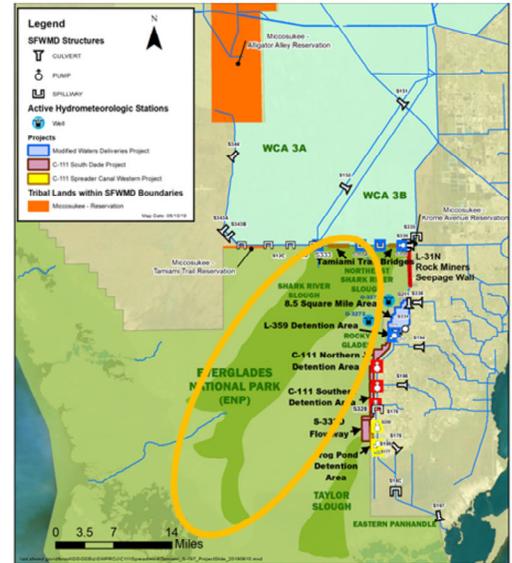
- SFWMD sends water to Florida Bay utilizing structures that were built and modified on the eastern border of Everglades National Park (**CLICK**) I’ll talk a little more shortly about the actions we took to increase the flow of water through these structures into the park.
- This water flows south through Taylor Slough to reach Florida Bay (**CLICK**)

Efforts Underway to Get More Water Into Everglades National Park

- Old Tamiami Trail Removal
- Tamiami Trail Next Steps
Bridges
- S-333N



Above: Old Tamiami Trail
Below: 2.6 Mile Tamiami Trail Bridge completed 2019



- Florida Bay depends on plenty of clean, freshwater to support its ecosystem. SFWMD is working hard to accelerate projects that do this under the direction and with the strong support of Gov. Ron DeSantis.
- SFWMD is currently designing a project that will remove approximately 6 miles of Old Tamiami Trail in Miami-Dade County by September 2021 and coordinating with Florida Power and Light to relocate power lines allowing for the road to be removed.
- A 2.6 mile bridge raising a section of the existing Tamiami Trail roadway was recently completed and a 1-mile bridge was previously completed, allowing water to flow underneath those bridges south from Water Conservation Area 3A into Everglades National Park. The state and federal governments have also fully funded the construction of a 6.5-mile bridge raising another section of the roadway. That will be completed by 2022.
- As I mentioned before, SFWMD last year started building a second S-333 water control structure called S-333N right next to the existing S-333. When it is completed next summer, it will **nearly double** the amount of water the District can move through that area south into Everglades National Park.

Florida Bay Restoration Initiative



- Created by SFWMD to help balance salinity levels
- Components to move more freshwater to Florida Bay through Taylor Slough operating
 - Culverts, weirs, plugs, increased pump capacity, operational adjustments
- Increased flow of 78,000 acre-feet per year

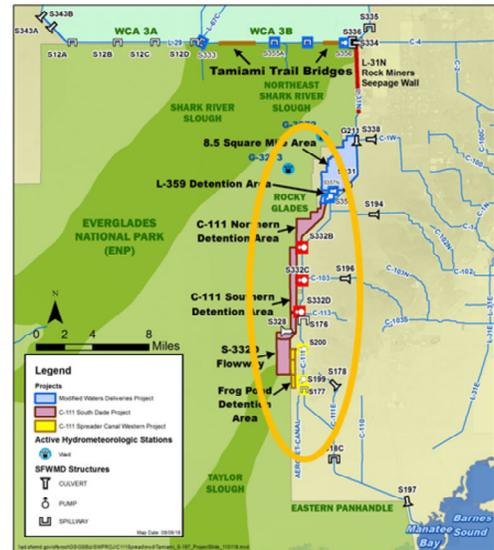


- We also have a plan to help with the issue of elevated salinity in Florida Bay, which is a largely rainfall driven system prone to elevated salinity after localized droughts
- Elevated salinity levels from past droughts have contributed to large seagrass dieoffs in Florida like one that occurred in 2015 that are harmful to the ecosystem.
- The plan accelerated projects in south Miami-Dade and installed some other features to dramatically increase the flow of clean freshwater to Taylor Slough, which reaches the eastern part of Florida Bay.
- These components includes plugging some canals, degrading some weirs, increasing the capacity at pump stations and other changes that are increasing the flow of clean freshwater to Taylor Slough.
- All of these components are completed and are sending more freshwater to Florida Bay as we speak and as you heard fishing conditions in the bay have never been better. The average increase in flow is expected to be about 78,000 more acre-feet of water per year.

Keeping Water in Everglades National Park



- C-111 South Dade Project
- C-111 Spreader Canal Western Project
- Protects property owners east of park from flooding while benefitting ecology by keeping water in park



- What is good for Everglades National Park is good for Florida Bay. What is good for flood protection in South Miami-Dade County is also good for Everglades National Park and Florida Bay. The park wants water and the communities east of the park do not want that water on their land.
- One of the District's primary missions is flood protection. As we have worked to get more into Everglades National Park, we have also worked with the U.S. Army Corps of Engineers to keep that water in the park and protect residents east of the park from flooding caused by water seeping out of the park.
- The C-111 South Dade Project, which was completed last year, creates a 25-mile long hydraulic barrier along the eastern edge of the park along the C-111 Canal that prevents freshwater from seeping out of the park onto private land.
- The C-111 Spreader Canal, which was completed in 2012, creates another nine-mile hydraulic barrier that keeps water in Everglades National Park using culverts and plugs.
- Keeping this water in the park also preserves ecosystem and allows more water to reach Florida Bay.

Comprehensive Everglades Restoration is Working



- Record wading bird nesting season in 2018
- Improving ecological measures



Figure 1. Locations of wading bird colonies with 50 or more nests in South Florida, 2018.

While many of these projects are underway there is promising scientific evidence showing that our Everglades restoration efforts are working and that when we get the water right, mother nature responds favorably. The same appears to be holding true in Florida Bay as we are all working to increase the flow of water to the bay.

The South Florida Wading Bird Report, which detailed the nesting activity of wading birds throughout South Florida including the Everglades in 2018, saw a record season with nearly 140,000 nests found. That was the largest nesting season in the last 80 years by far.

This can be attributed in part to favorable weather conditions but also to ongoing restoration work and operational changes that show that when the system is restored and favorable weather conditions are present, nature will rebound

Since the C-111 Spreader Canal project was finished, ecological measures such as the number of freshwater fish, have improved.

The same can be said of ecological measures such as bird and fish counts in areas of the Kissimmee River where the Kissimmee River Restoration project, decades in the making, is nearing completion north of Lake Okeechobee.

Comprehensive Everglades Restoration is working and helping Florida Bay tremendously.

Achieving More for Florida's Environment Now



- Gov. Ron DeSantis issued the [Achieving More Now for Florida's Environment Executive Order](#) in January 2019 less than 48 hours after taking office
- Identifies dozens of priority restoration projects to be expedited
- Multiple projects increase ability to move more water south to Everglades National Park and Florida Bay
- SFWMD and USACE working to expedite projects
- Learn more at sfwmd.gov/AchieveMoreNow





Questions

sfwmd.gov

Thank you for your time today
I'd be happy to answer any of your questions