

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

NEWS RELEASE

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Ingenuity Increases Flood Control for Golden Gate Estates SFWMD improvements boost efficiency of weir until it's replaced



(Click on the picture for a larger version.)

Naples, FL — Recognizing an opportunity to improve flood protection for residents in Golden Gate Estates, a team from the South Florida Water Management District (SFWMD) recently completed the retrofit of an aging weir in the Big Cypress Basin until a new structure is constructed.

Population growth during the 45 years since the Miller #3 weir was built began to appreciably impact its ability to provide flood control to the surrounding area. Routine inspection of the system by field crews followed by a hydraulic evaluation by engineers showed the weir was no longer efficient in moving water along the Miller Canal during heavy rainfall. As a result, water backed up into local, neighboring canals. The team's solution to prevent this backup was to cut large notches in the structure to boost water flow.

"Creative solutions such as this weir upgrade help to enhance our ongoing maintenance work and ensure that the flood control system is operating at its best," said Dan DeLisi, an SFWMD Governing Board member and Chairman of the Big Cypress Basin Board. "This upgrade and a replacement structure in the future will enhance flood control for nearby residents today and for many years to come."

Big Cypress Basin field station staff completed the interim modification of the structure just before the rainy season began, and with June's heavy rainfall, the modified weir delivered on expectations. Its new capability increases flows during peak storm events by 200 cubic-feet-per second, or 89,000 gallons-a-minute. The modified structure is also equipped with two 7x3-foot steel gates to conserve water during the dry season. A new weir is scheduled to be constructed in 2014.

To further enhance flood control in the area, the Big Cypress Basin Board will be considering a suite of upgrades and structure retrofits as part of the basin's Capital Improvement Plan. This includes replacement of the 28th Avenue crossing over the Miller Canal, which will help convey water more efficiently south of the upgraded Miller #3 weir.

Maintenance: Keeping the Flow Going

To sustain the flood control system's capability for handling storms and wet season rainfall, the Big Cypress Basin has a robust program of structural maintenance and upgrades. Accomplished primarily during the dry season, these activities are critical to ensuring that the network of 162 miles of primary canals, 46 water control structures and four pumps operate at optimal capacity.

During the past five years, the Basin has invested approximately \$35 million in essential maintenance work in Collier County, including:



- Retrofitting weirs with modern water control facilities
- Replacing culverts to enhance flood conveyance
- Dredging canals and stabilizing banks
- Upgrading the real-time data collection network
- Controlling aquatic vegetation to keep canals clear

Each year as the summer rainy season and hurricane season approaches, many canals and lakes from Orlando to the Florida Keys reach the lowest level in their seasonally varying operations. During that timeframe, District crews also inspect many of the approximately 1,300 water control structures and 64 pump stations across its 16 counties, including Collier County.

Know the Flow

Flood control in South Florida is a shared responsibility between the District, county and city governments, local drainage districts and residents. Residents can do their part by:

• Knowing whether they live next to a primary canal maintained by the District or a secondary canal maintained by a municipality or drainage district.

- Making sure trees or other vegetation do not encroach on canal maintenance right-of-way.
- Reporting the location and condition of any clogged or damaged facilities to the proper authority.
- Keeping ditches, swales, drainage grates and retention lakes clear of debris, trash and other discarded material.

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About the South Florida Water Management District

The South Florida Water Management District is a regional, governmental agency that oversees the water resources in the southern half of the state – 16 counties from Orlando to the Keys. It is the oldest and largest of the state's five water management districts. The agency mission is to manage and protect water resources of the region by balancing and improving water quality, flood control, natural systems and water supply. A key initiative is cleanup and restoration of the Everglades.