



**FEBRUARY 2020**

The G-3273 Constraint Relaxation and S-356 Pump Station Field Test was developed to improve hydrologic conditions for Northeast Shark River Slough (NESRS) in Everglades National Park, while maintaining the multiple congressionally authorized purposes of the Central and Southern Florida (C&SF) project. The C&SF project purposes include providing flood control; water supply for municipal, industrial and agricultural purposes; prevention of saltwater intrusion; water supply for Everglades National Park; and preservation of fish and wildlife.

The field test is a deviation from the 2012 water control plan. Since the implementation of Increment 1 in October 2015, the field test has provided incremental benefits to NESRS. In addition to modeling, the data collected during the incremental field tests was used to develop a draft comprehensive integrated water control plan for the operation of water management infrastructure associated with the Modified Water Deliveries to Everglades National Park (Mod Waters) and C-111 South Dade projects, while balancing the ecological restoration objectives for these projects.

### **BACKGROUND**

Restoring historic water flows and ecological viability to Everglades National Park is a complex endeavor that requires many projects to work in concert.

The Mod Waters and C-111 South Dade projects provide critical infrastructure that will enable larger quantities of water to flow into the park. Construction for both these projects has been completed.

Currently, operational constraints exist to mitigate for potential flooding risks to adjacent residential, commercial and agricultural lands, and impacts to endangered species. The relaxation of the G-3273 constraint and use of S-356, along with acquisition of real estate interests south of the Tamiami Trail, has allowed additional operational flexibility within the existing infrastructure.

Between 1985 and October 2015 (start of Increment 1), the G-3273 constraint served as a trigger to cease S-333 discharges from flowing south into NESRS when water levels reach 6.8 feet at G-3273 in eastern Everglades National Park. This constraint was used as a protective measure for residential areas to the east, particularly the 8.5 Square Mile Area.

Since the majority of features for the Mod Waters and C-111 South Dade projects have been built, relaxation of the G-3273 constraint and increased water deliveries to NESRS are taking place under the incremental field tests until Increment 3, the Combined Operational Plan, is implemented.

### **FIELD TEST PURPOSE**

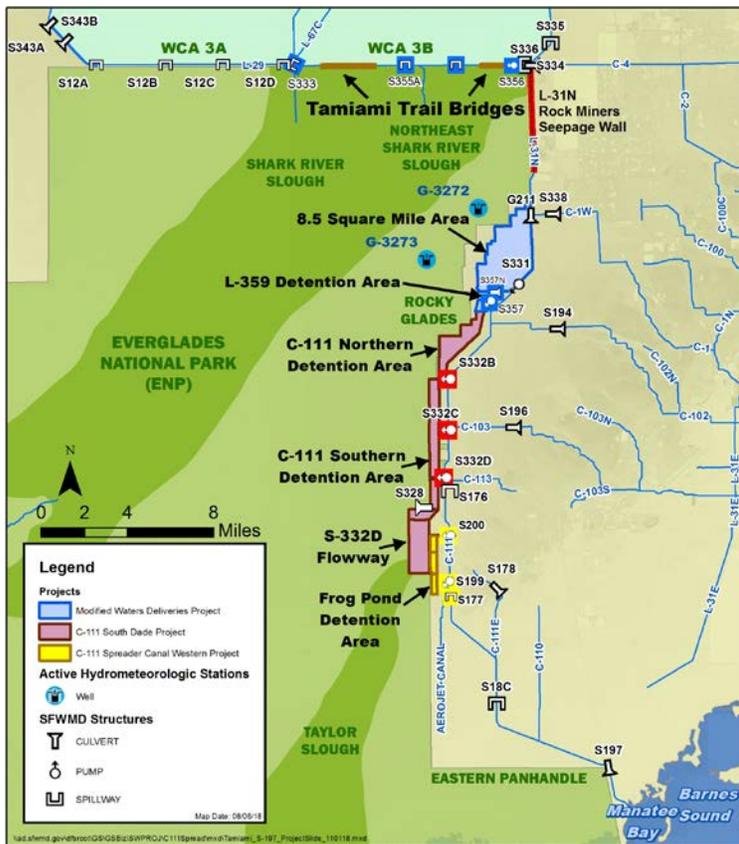
An integrated water control plan is needed to operate infrastructure connected to both the Mod Waters and C-111 South Dade projects.

In order to develop this integrated water control plan, known as the Combined Operational Plan, additional information is needed on how newly operational project infrastructure integrates with the current water management system, and how to maximize ecological restoration objectives.

Information collected through the incremental field tests will continue to be used to evaluate the effects of incremental increases in flows to Northeast Shark River Slough in Everglades National Park. This information includes:

- Ecological responses due to increased inflows and changes in distribution of water entering Everglades National Park.
- Potential effects on water quality entering Everglades National Park.
- Potential effects on changing water levels in Water Conservation Areas (WCA) 3A and 3B.
- Potential effects on levels of service for water supply and flood protection in Miami-Dade County.
- Potential effects on flood mitigation performance for the 8.5 Square Mile Area Flood Mitigation Project, a component of the Mod Waters project.
- Potential effects on water management operations.
- Potential effects on cultural resources for future increments.

# MODIFIED WATER DELIVERIES TO ENP | G-3273 & S-356 Pump Station Field Test



## FIELD TEST STRUCTURES

The following structures and operational constraints are incorporated into the test:

- The S-333 spillway, which releases water from WCA-3A to the L-29 Canal.
- The L-29 Canal that runs parallel to the Tamiami Trail, adjacent to Everglades National Park.
- The S-356 Pump Station located alongside the L-29 Canal.
- The G-3273 gage in eastern Everglades National Park.
- The components of the Mod Waters project, which includes the Tamiami Trail Modifications and 8.5 Square Mile Area Flood Mitigation projects.
- The components of the C-111 South Dade project, which includes the Northern and Southern Detention Areas.
- S-197 will be operated as needed to mitigate potential risks to flood protection for areas in south Miami Dade County. S-197 operations will be reassessed once the C-111 South Dade Northern Detention Area is constructed and operable.
- Supplemental flows to Taylor Slough may be supplied to S-332D, when levels in WCA-3A are above 8 feet in May, and above 8.5 feet in all other months..

## FIELD TEST APPROACH

The field test has been conducted in increments. During Increments 1 -2, data was collected and analyzed; natural, agricultural and urban system responses to project operations have been assessed; and ecological monitoring has been maintained.

### INCREMENT 1

Initiated in October 2015, operations produced a small but important increase in the net flow of water into Northeast Shark River Slough. Increment 1 involved:

- Maintaining the maximum operating limit for the L-29 Canal water level at 7.5 feet.
- Relaxing the maximum stage constraint (currently 6.8 ft) at the downstream G-3273 gage in Everglades National Park.
- Operating the S-356 pump station for control of seepage into the L-31N Canal.

### INCREMENT 1 PLUS (1.1/1.2)

Implemented in March 2017, operations increased net flows to NESRS and:

- Incorporated lessons learned from the State-requested temporary emergency deviation.
- Incorporated mandated terms and conditions issued in July 2016 as part of the Everglades Restoration Transition Plan's Biological Opinion.
- Maintained flood mitigation within the 8.5 Square Mile Area and pre-existing flood protection along the L-31N and C-111 canals while the Corps completed construction of the Mod Waters and C-111 South Dade projects.
- Provided perational flexibility to operate the L-29 Canal to a maximum of 7.8 feet, subject to downstream constraints. *[Dependent on obtaining flowage easements and construction completion of the C-111 South Dade project western levees (L-357W and L-315).]*

### INCREMENT 2

Implemented in March 2018, Increment 2 involves:

- Incorporating the information obtained from the previous increments.
- Raising the maximum operating limit of the L-29 Canal, up to a maximum of 8.5 feet.

### INCREMENT 3

The COP will serve as the water management plan for the southern portion of the Everglades ecosystem and includes:

- Water Conservations Areas 3A and 3B.
- Everglades National Park.
- South Dade Conveyance System, which includes the constructed features of the Mod Waters and C-111 South Dade projects.

COP will be implemented in August 2020.

## FOR MORE INFORMATION



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