

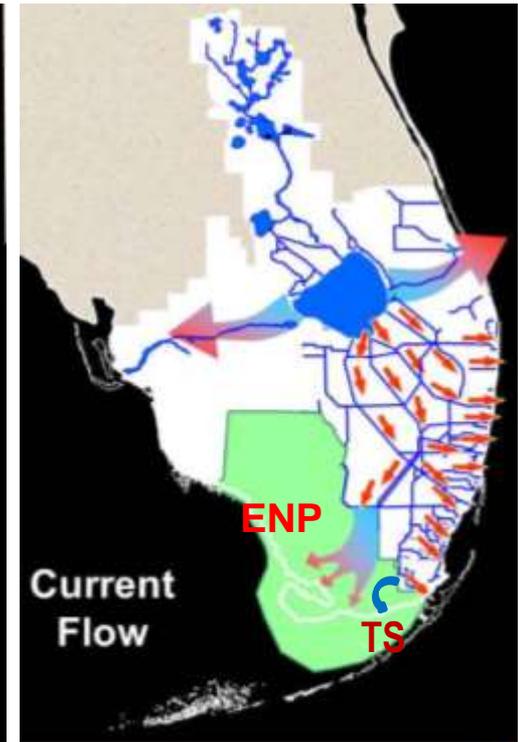
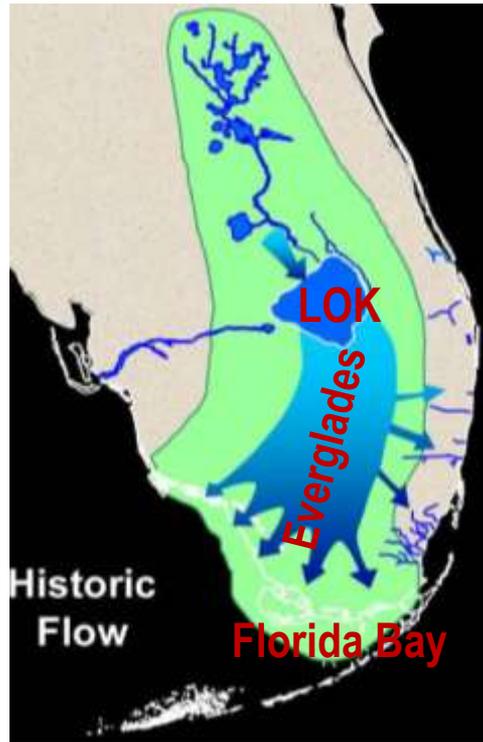
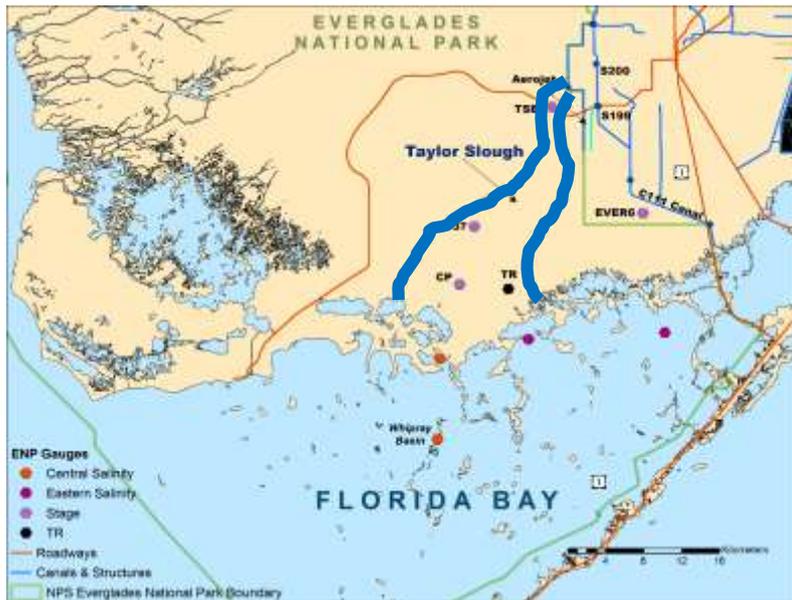
Evaluation of Options for Sending More Water to Florida Bay Via Taylor Slough Using Regional Simulation Model for the Everglades and Lower East Coast

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Greater Everglades Ecosystem Restoration
April 18-20, 2017



Florida Bay Concerns



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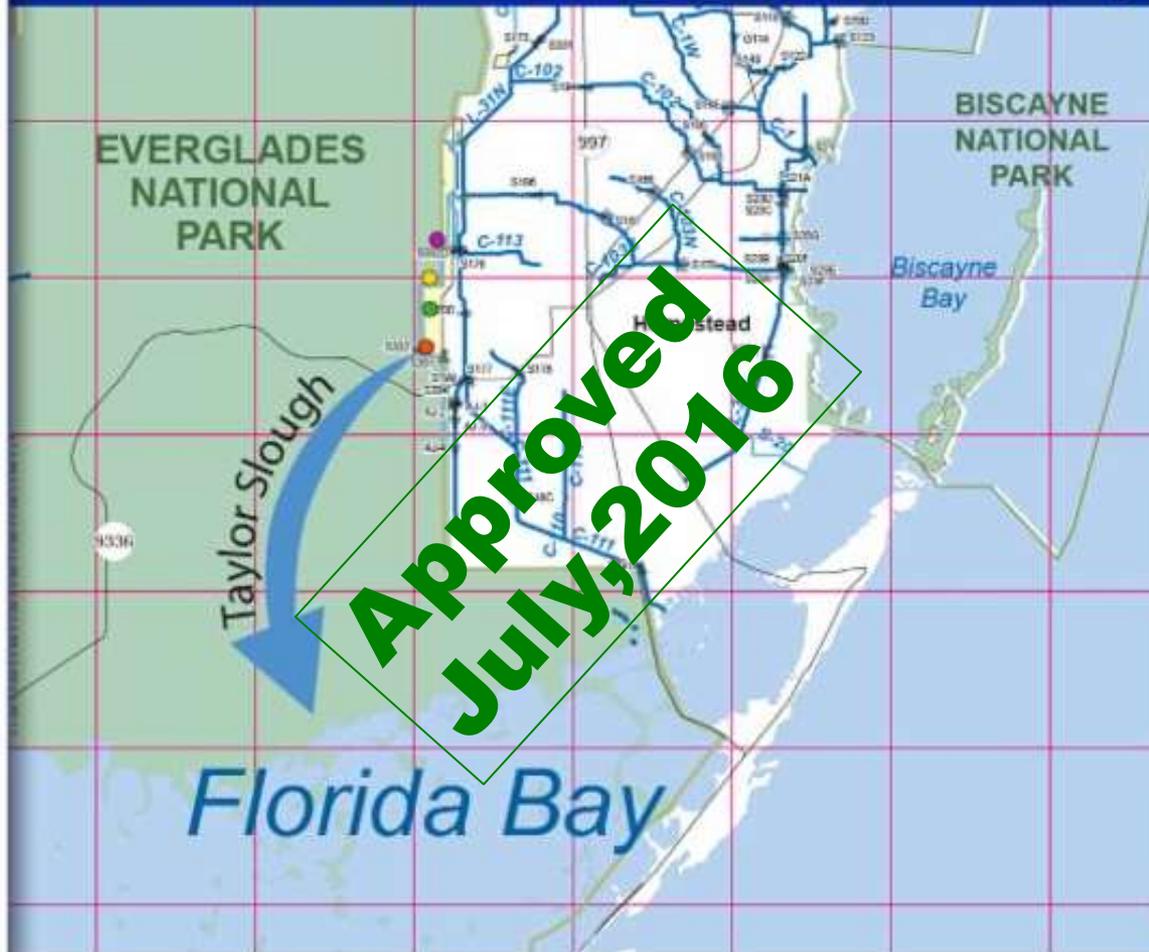
Plan to Help Florida Bay

The Florida Bay Plan:

- Degrading a weir and adding plugs along the L-31 West Canal to allow more water to flow into Taylor Slough, and keeping more water in Everglades National Park.
- Sending additional water through the S-328 water control structure in the L-31 West Canal reaching Taylor Slough.
- Connecting the Frog Pond detention system to the L-31 West Canal sending more water towards Taylor Slough.
- Rebuilding a L-31 West Levee and Weir to keep more water in Everglades National Park.

These actions will be the first steps to help save the bay.

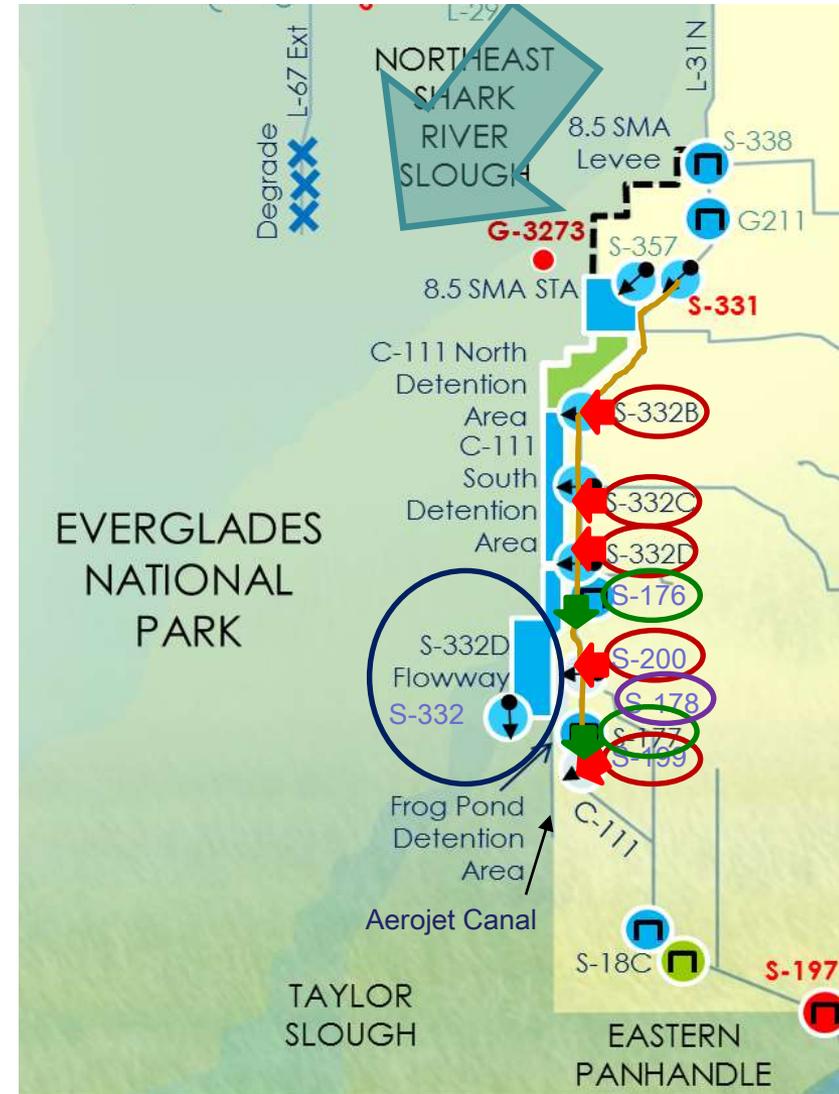
New Connections for Additional Water Flow to Florida Bay



The South Florida Water Management District's expedited plan to restore Florida Bay will send billions more gallons of freshwater per year into Taylor Slough.

South Dade Study Features

1. Seasonal (Aug-Dec) lowered operations for the S-332B, S-332C and S-332D and S-199s and S-200s pump stations.
2. lower capacity, more frequent opening of S-176 and S-177 spillways
3. Add a 200 cfs pump downstream of S-178
4. Constructing maximum 15 miles long seepage barrier
5. Infrastructure improvement to promote flows toward Taylor Slough: Moving forward with Florida Bay Plan



Model Details

Modeling Tool: RSM

(Regional Simulation Model)

- ❑ Developed by SFWMD with South Florida's unique hydrology in mind

Model: RSMGL

(Regional Simulation Model for Everglades & Lower East Coast)

Model Domain:

Domain size: 5,825 sq. miles

Mesh Information:

Finite element mesh

Number of cells: 5,794

Average size: ~ 1 sq. mile

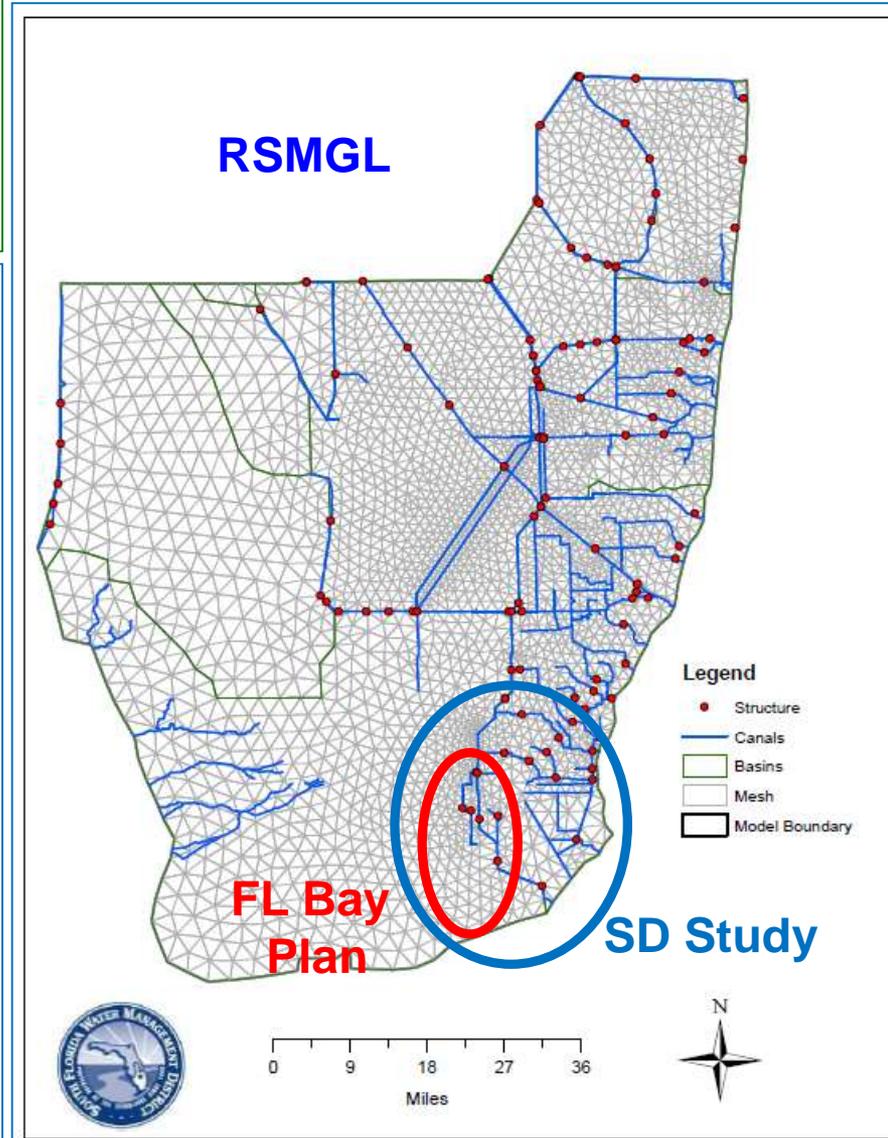
Canal Information:

Total length: ~ 1,000 miles

Number of segments: ~ 1,000

Average length: ~ 1 mile

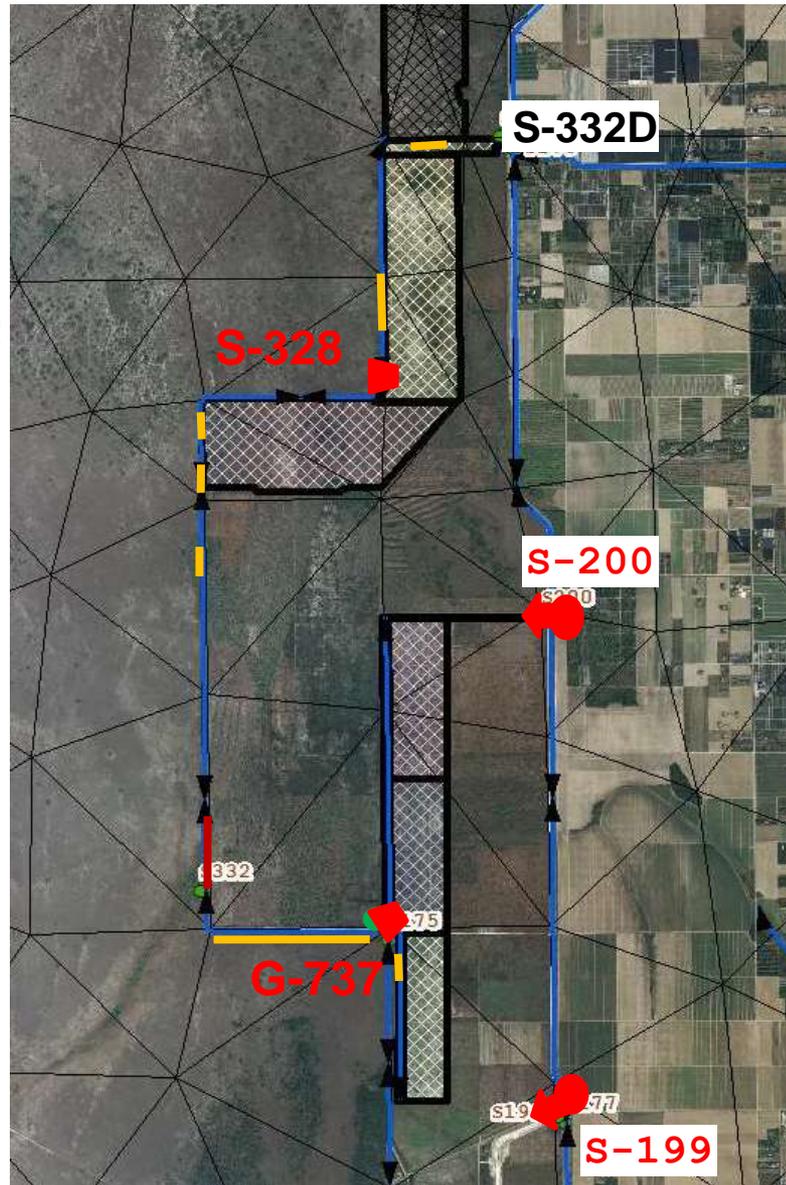
Run Time: ~ 1 day



Florida Bay Options

Scenario Step1A4 (without plug)

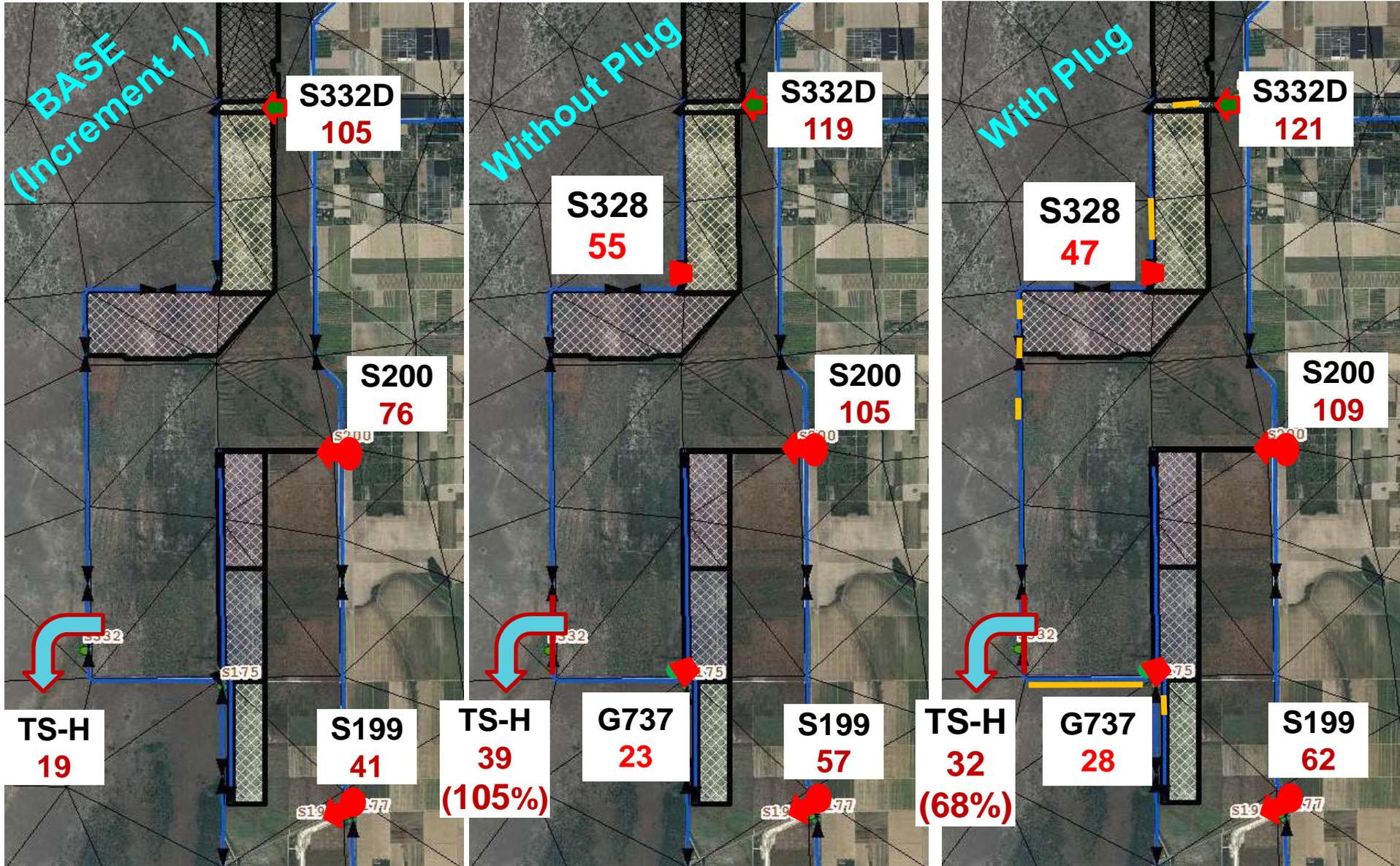
- South Dade Study features (except Seepage barrier)
- Infrastructure improvement
 - Use existing S-328 to connect to 332D reservoir to L-31W canal
 - Add G-737 to connect Frog Pond header canal to L-31W canal
 - Add a weir and levee at the L-31W gap
 - Add new pump units with 75 cfs each for S199 and S200
 - No plugs at L-31W - use canal as the fastest route



Scenario Step1A41C (with plug)

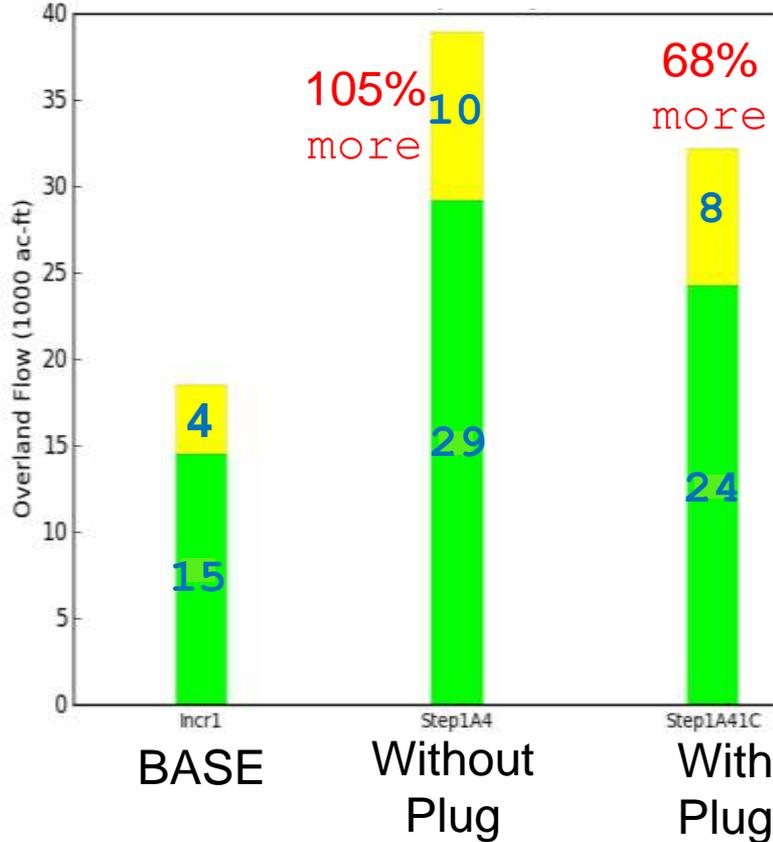
- Step1A4 +
- Plugs in L-31W Canal

Average Performance (Flows in K-AC-FT)

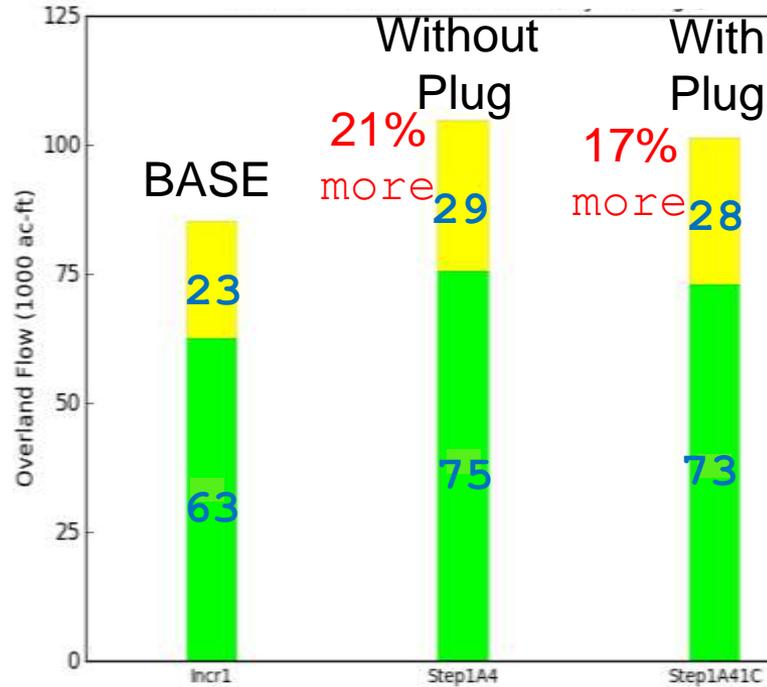


Flows at Taylor Slough

At Taylor Slough HW (TSH1)

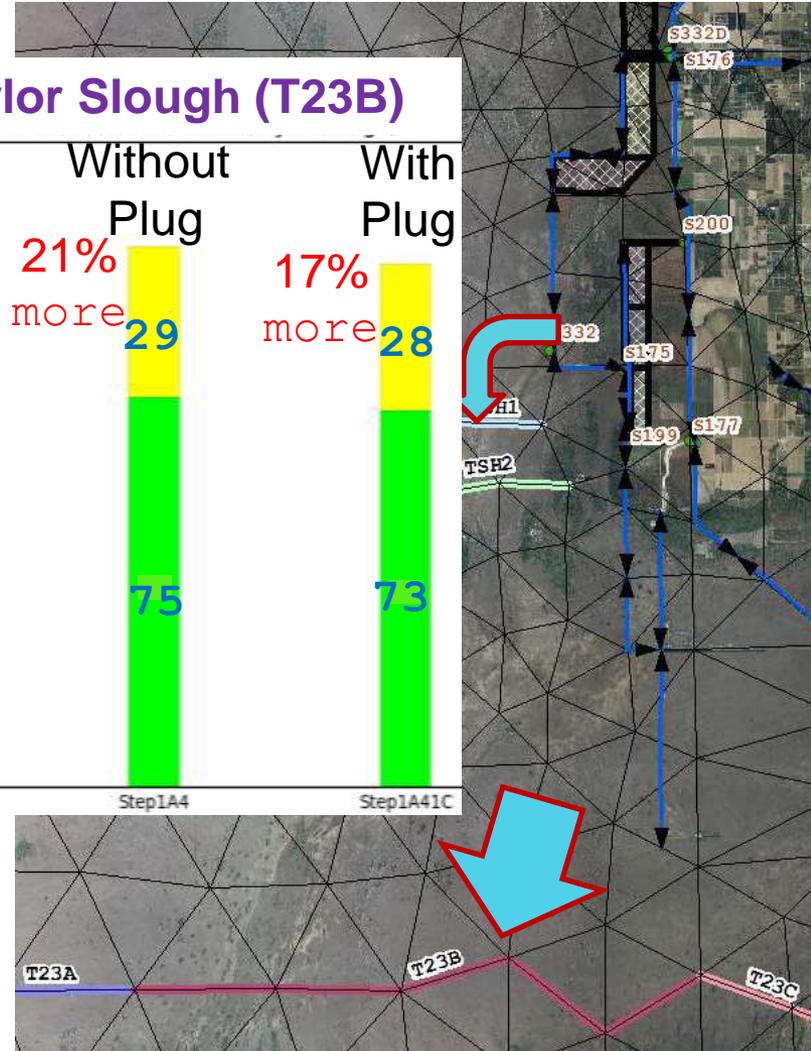


At Taylor Slough (T23B)



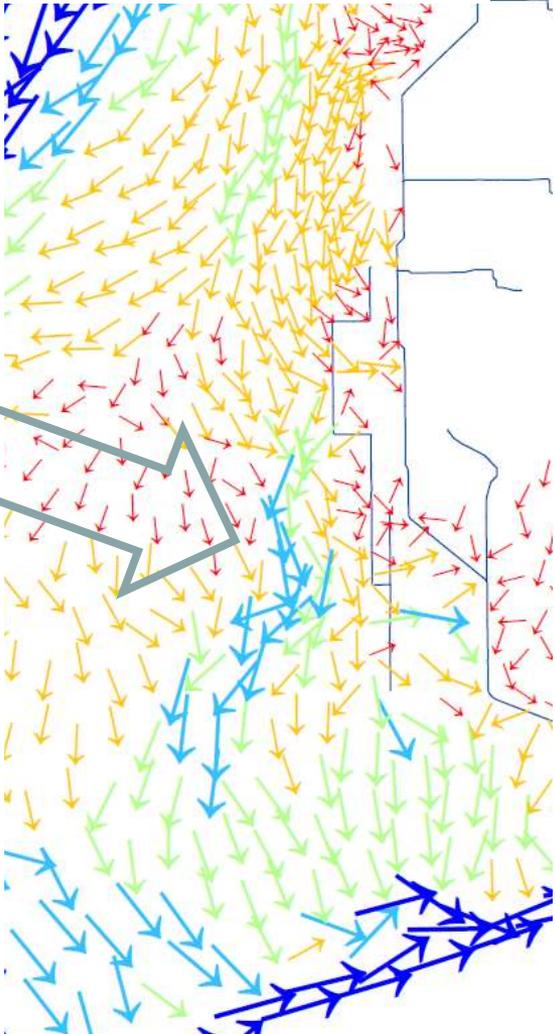
Wet Season (Jun-Oct) Dry Season (Nov-May)

Average Annual Overland Transect Flows (K-AC-FT)



Taylor Slough Flow Improvements

Base (Increment 1)



Without Plug



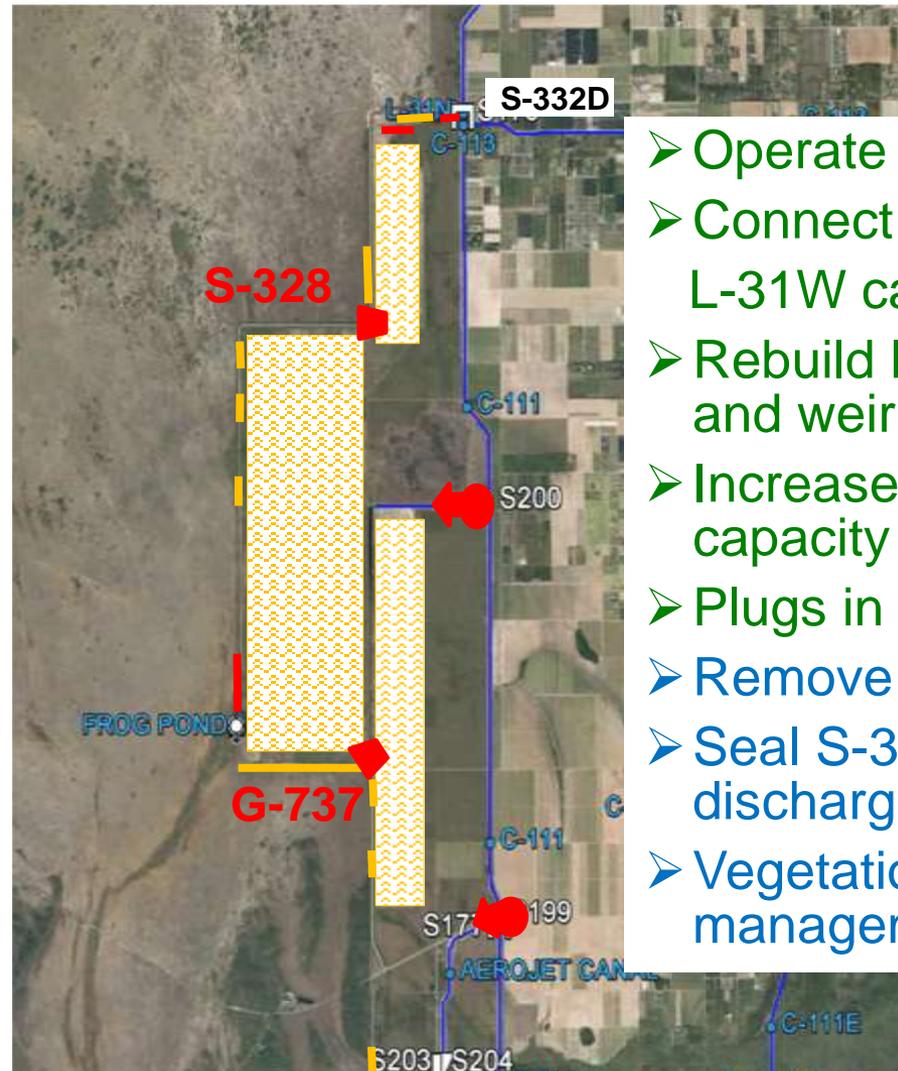
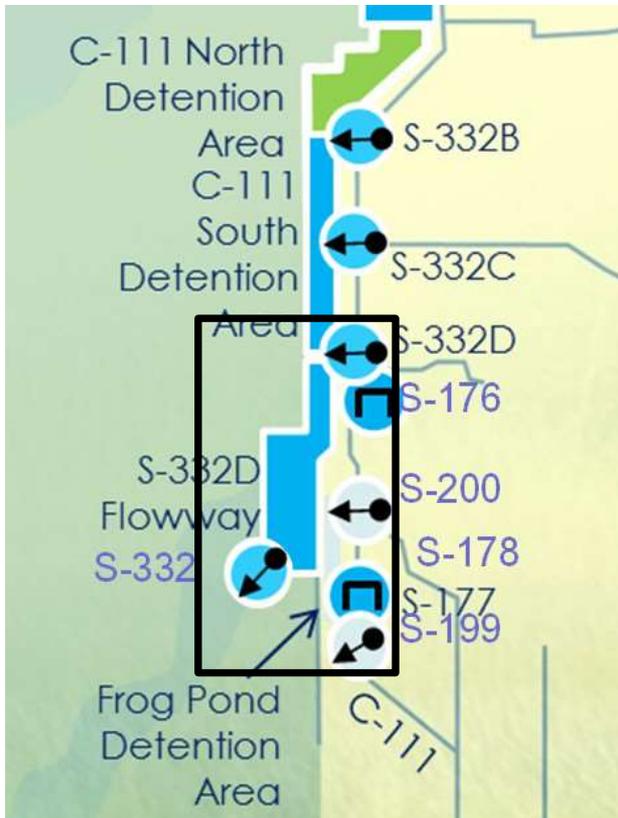
Shows
More Flow
Toward
Florida Bay

With Plug



Average Annual Overland Flow Vector Maps

Project Features of Florida Bay Plan



- Operate S-328
- Connect Frog Pond to L-31W canal (G-737)
- Rebuild L-31W levee and weir
- Increase pump capacity
- Plugs in L-31W Canal
- Remove S-327 weir
- Seal S-332D discharge basin
- Vegetation management

Florida Bay Plan : Schedule

Project Features	Construction Completion/Operation
Remove S-327 Weir	August 2016
Vegetation management (C-200 header canal)	February 2017
Operate S-328 structure	March 2017
Construct and operate G-737	April 2017
Rebuild L-31W levee and weir	September 2017
Plugs in L-31W at key locations	September 2017
Seal S-332D discharge basin	September 2017
Increase S-200 and S-199 pump capacity	February 2018

Remove S-327 weir



G-737 Construction Work



Vegetation management

Summary of the Florida Bay Plan

- **Florida Bay Plan promotes more water toward Taylor Slough and Florida Bay.**
- **SFWMD expedited implementation of the plan to help Florida Bay.**
- **The plan is compatible with other on-going planning efforts in the region and will enhance Taylor Slough performance moving forward.**

An aerial photograph of a coastal waterway, likely a bay or estuary, showing various shades of blue and green water, interspersed with small islands and peninsulas. The water appears shallow in some areas, revealing sandy or muddy bottoms. The sky is clear and light blue. The text "Thank you!" is centered in the middle of the image in a large, white, sans-serif font.

Thank you!