

Florida Fish and Wildlife Conservation Commission Meeting

Moving Water to Florida Bay



July 11, 2017

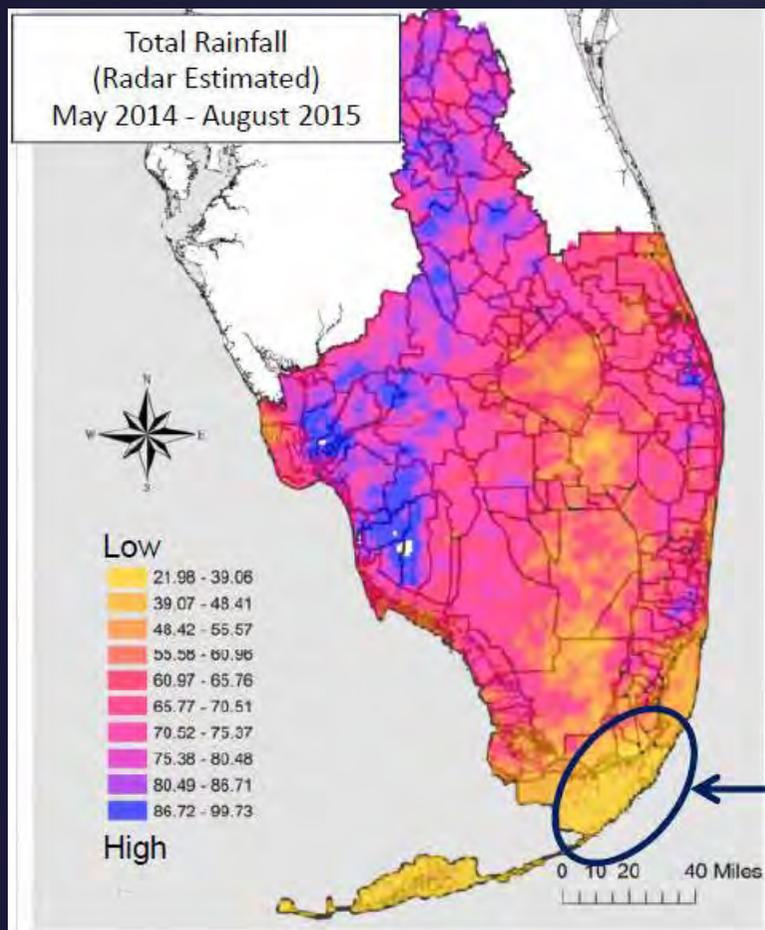
Ernie Marks

Everglades Policy and Coordination



L-31 W Canal looking west

Localized Drought May 2014 - August 2015



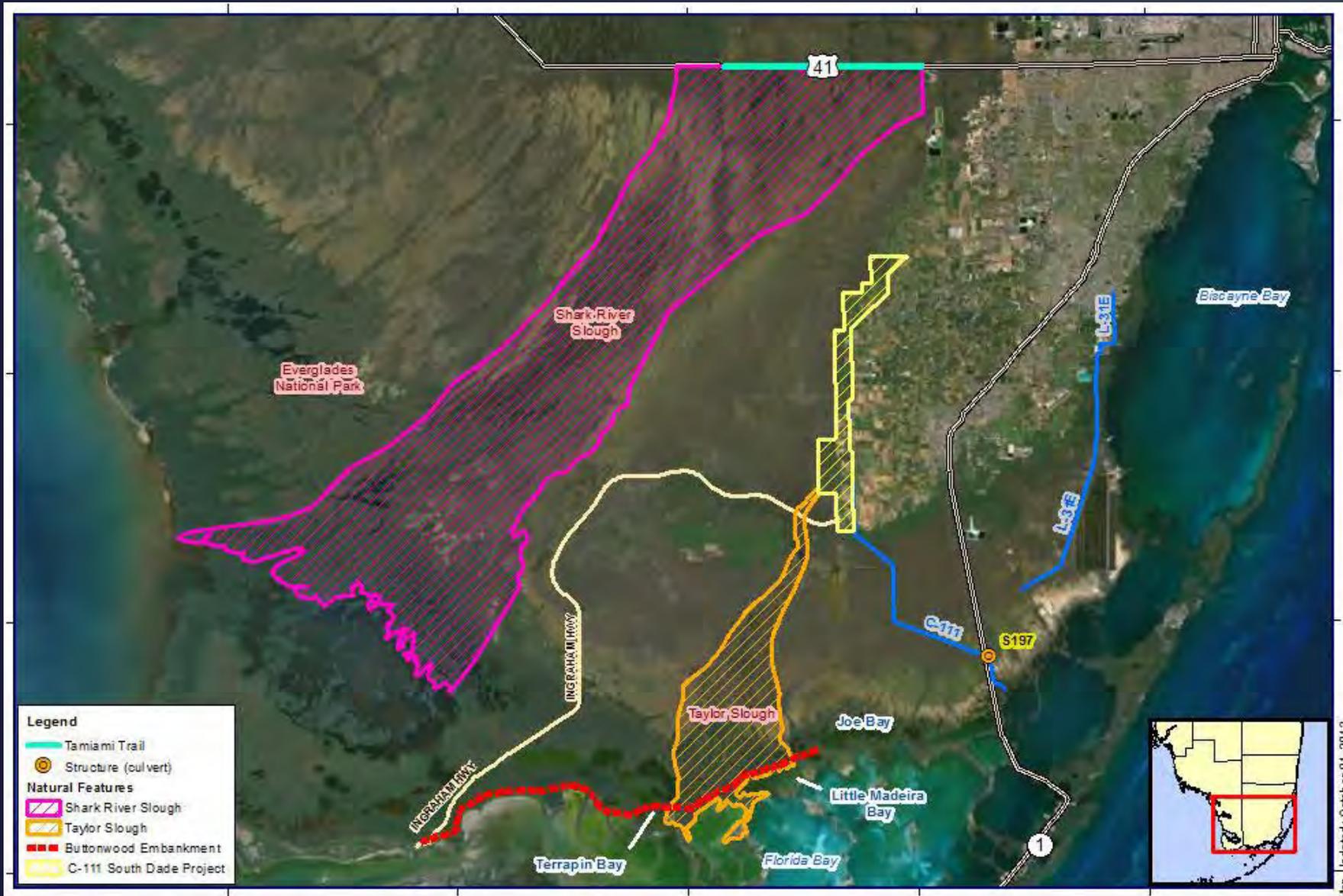
- Florida Bay depends on freshwater inputs
 - 45% comes directly from rainfall
 - 55% from run-off
 - Dry conditions District-wide
 - Very dry over Everglades National Park
 - Taylor Slough and Florida Bay 25 to 35 inches of rain
 - About half of the average annual rainfall
- 25-35 inches compared to 50-60 inches (wet year)

South Dade Study: Two Goals

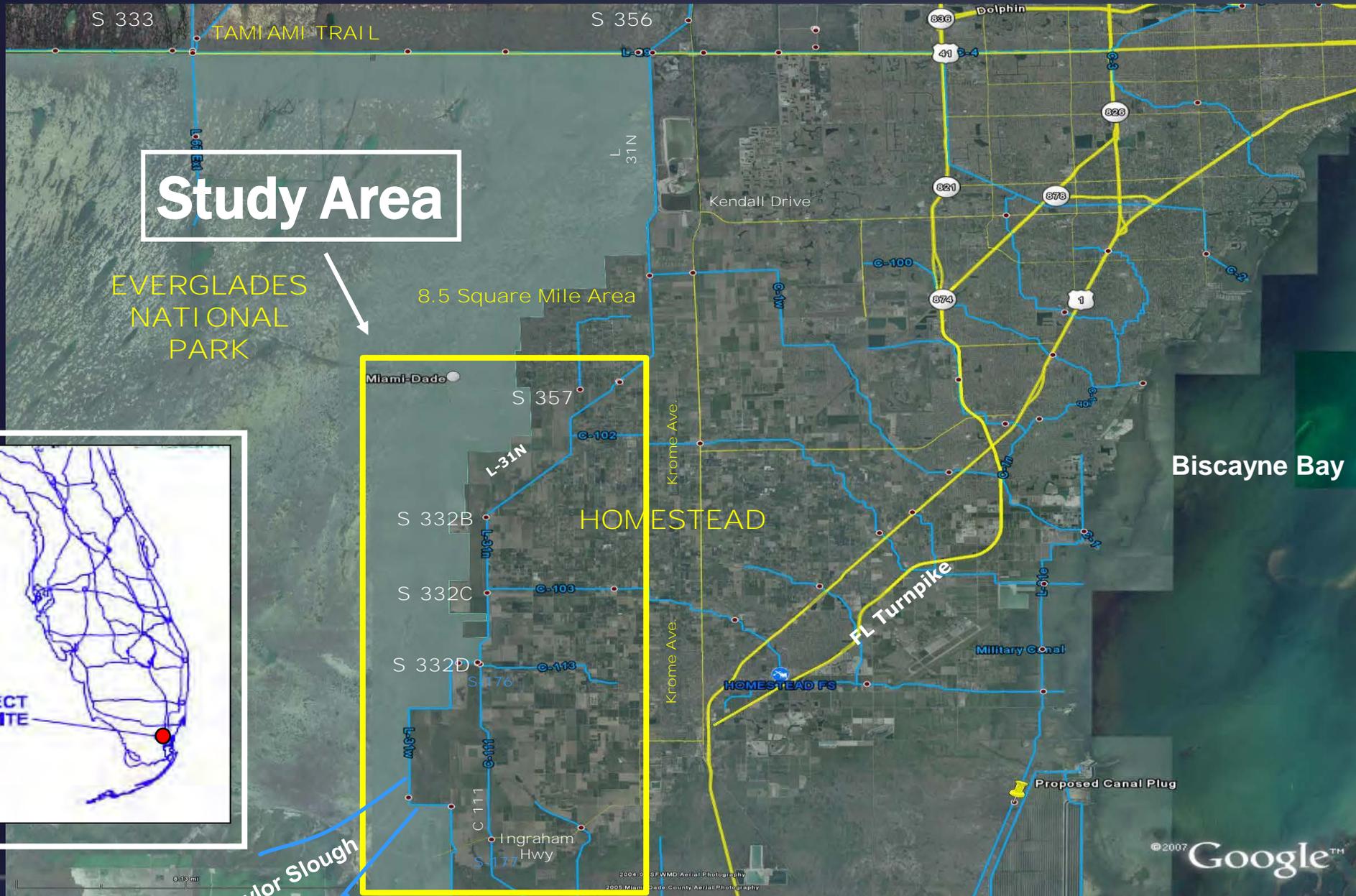
- Identify options to reduce flood risks in urban and agricultural areas
- Provide much-needed water to natural areas



S-332D Pump Station looking east



Map updated - October 01, 2013



Study Area

EVERGLADES NATIONAL PARK

8.5 Square Mile Area

Biscayne Bay

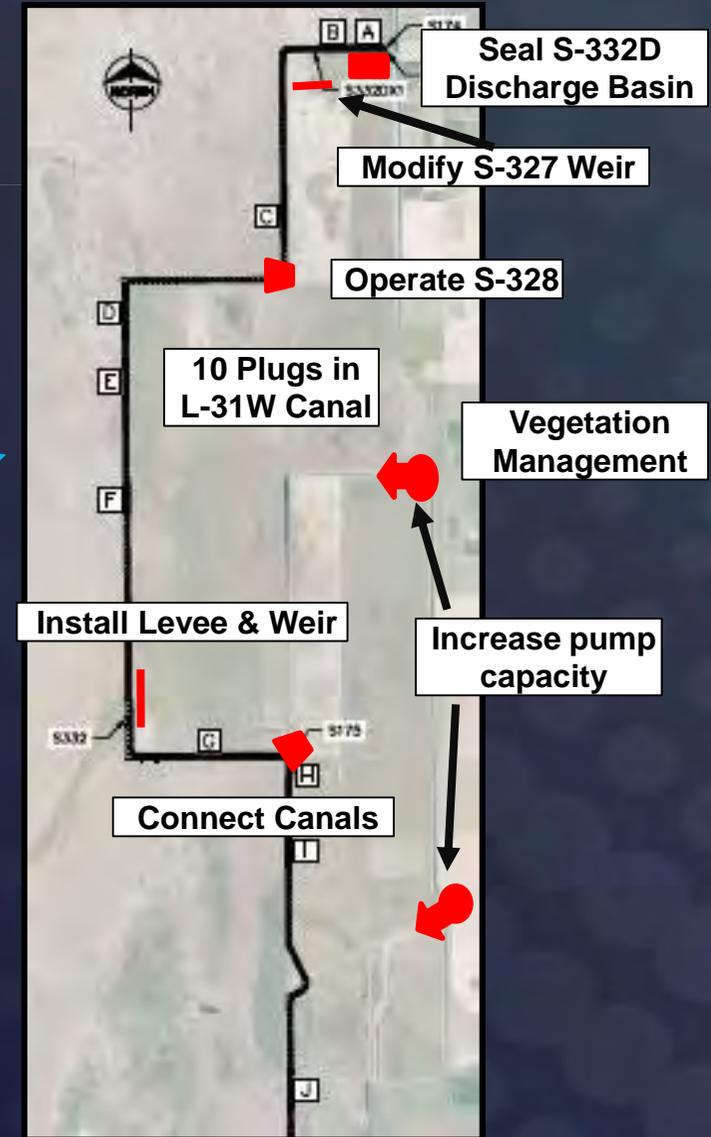
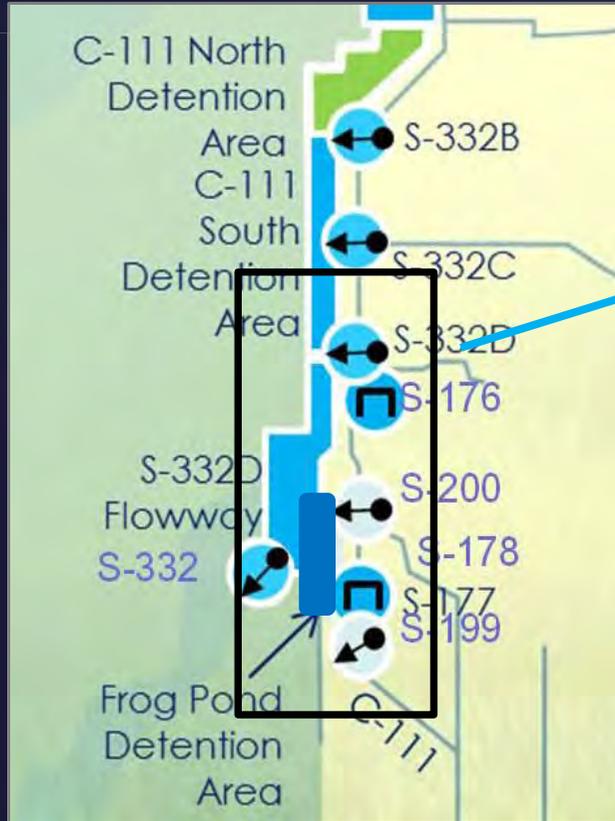
HOMESTEAD

PROJECT SITE

Taylor Slough

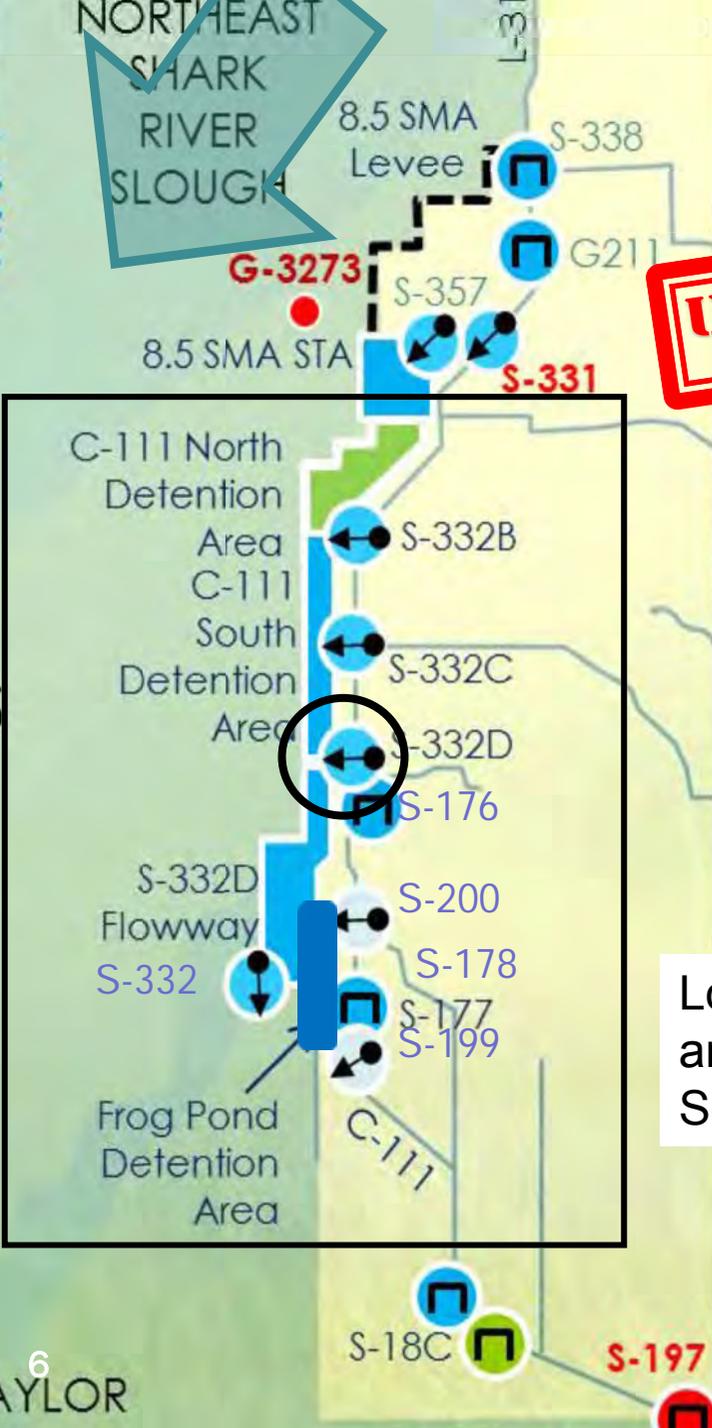
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Project Features to Move Water South to Florida Bay September 2016



Discharge Basin Sealing

UNDER CONSTRUCTION



S-332D

Location of Sheet Pile and Tremie Concrete to Seal Discharge Basin



S-332D Pump Station

Modify S-332D High Head Cell Weir

Degrade
XXXX



Structure	Crest Elevation	Height above Grade
S-327 (High Head Cell Weir)	82.33	3.0 ft
S-328 (Cell 2 Weir)	81.50	1.5 ft
S-329 (Cell 1 Weir)	81.00	1.0 ft
S-330 (Levee Gate)	80.00	0.0 ft

Source: 2012 Draft C-111SD EDR



COMPLETED



S-327 High Head Weir, looking west towards ENP, after partial removal

Operate S-328 to Deliver Water to Taylor Slough

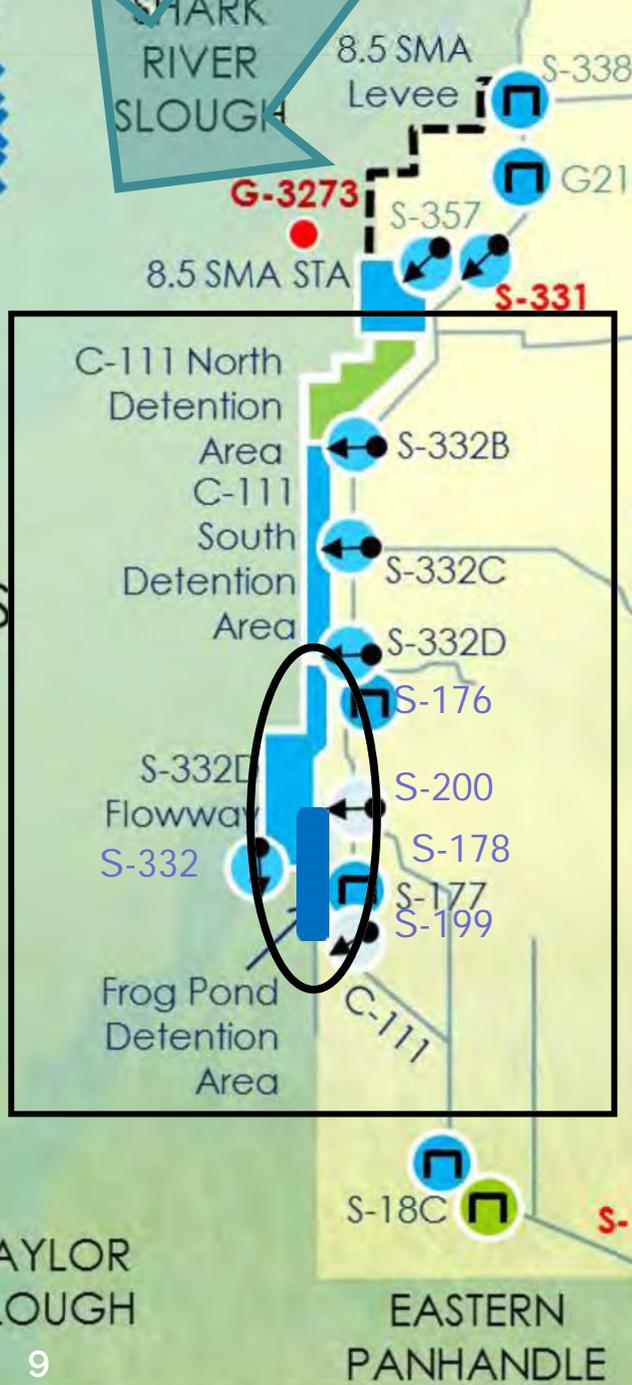


Looking east - S-332D Flowway



Looking west from L-31W Canal towards ENP

Plugs in L-31W Canal



Plug G

COMPLETED



Plug G

L-31W Canal Plugs



Plug F Looking South
100% Complete



Plug G Looking West (submerged)



Plug H Looking West



Plug J Looking North
100% Complete



Plug A Looking Northwest
30% Complete

Vegetation Management

- ✓ Remove vegetation along C-111 Canal south of S-18C
- ✓ Remove or cut roads within Aerojet facility
- ✓ Mechanical clearing of vegetation in S-200 and S-199 header channels
- ✓ Mechanical clearing of vegetation in S-357 Flowway
- ✓ Controlled Burn at Frog Pond Detention Area



Vegetation clearing south of S-18C



Mechanical clearing of S-200 Channel



Mechanical clearing of S-357 Flowway

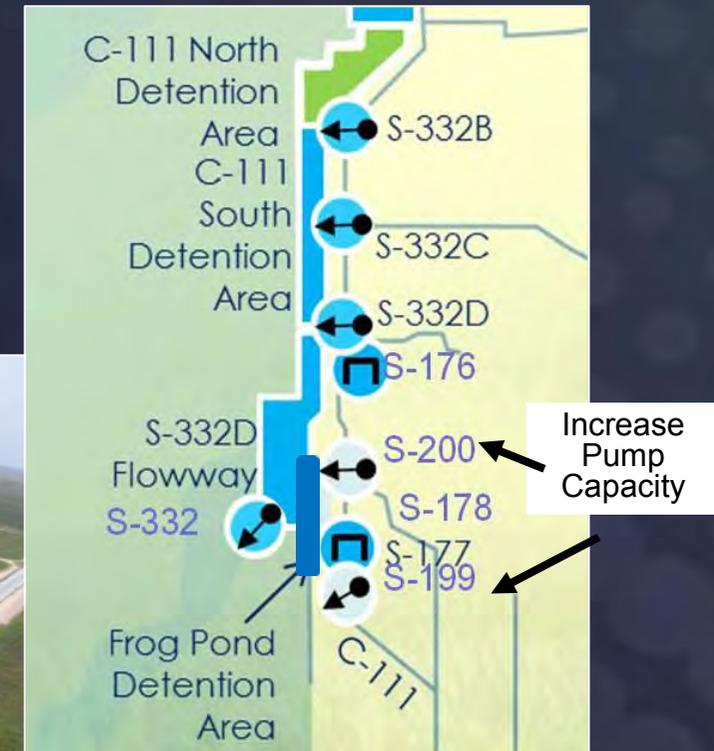
L-31W Canal Levee and Weir

UNDER CONSTRUCTION

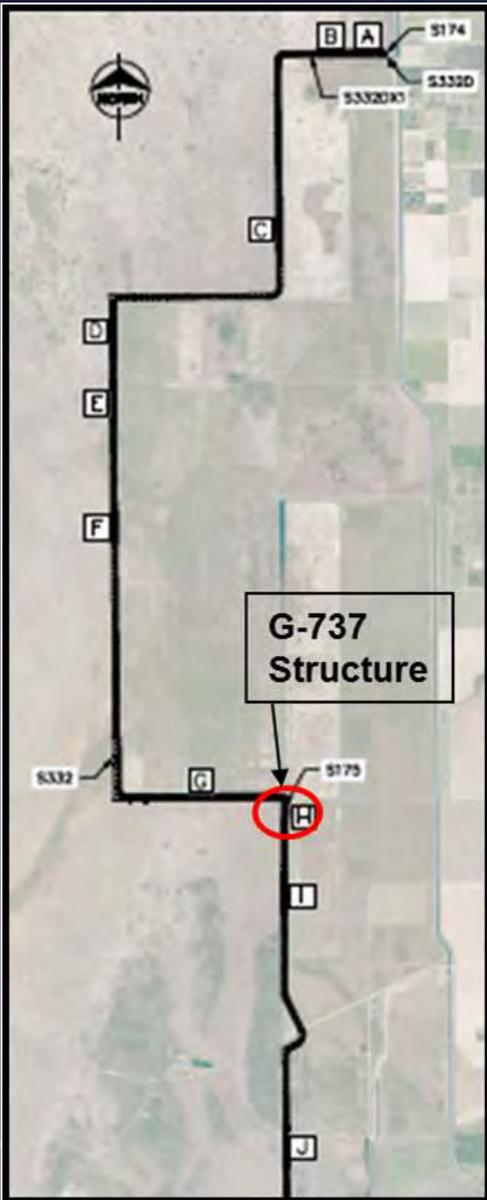


Modify C-111 Spreader Canal Project

- Two pump stations: S-199 and S-200
- Pull water from C-111 Canal
- ✓ Modified operations in March 2016 as recommended by South Dade Study
 - Lower ranges, seasonal variation
- ✓ Completed design to increase pump capacity



Connect Canals: G-737 Structure



COMPLETED



Scraping to Cap Rock and Excavating Sump Area



G-737 Intake



Culverts from C-200 to L-31W Canal/
L-31W Canal Plug G

Monitoring Efforts

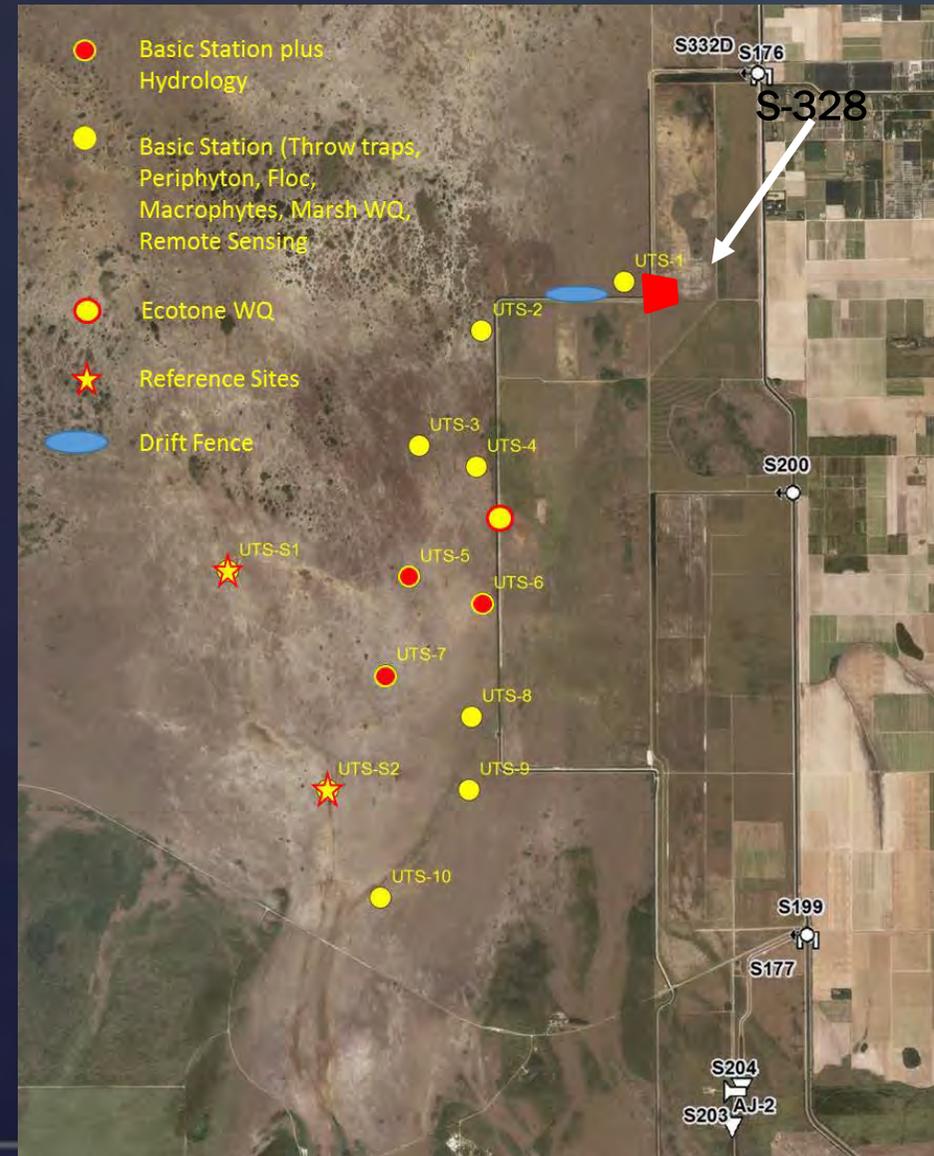
Interagency Adaptive Management Plan - assess hydrologic benefits and document environmental changes.

At S-328 & G-737

- Stage, Flow, Water Quality

In Taylor Slough

- Macrophytes, Floc, Epiphytic periphyton, marsh water quality, periphyton biomass, oxygen, stage and flow direction, fish and invertebrates throw traps and drift fences, soil and vegetation mapping



South Dade Study/Florida Bay Improvements Project Schedule

Project Features	Permit and Approvals	Construction Substantial Completion/Operation
Refine Operations of Structures & Pumps	✓ March 2016 & 2017	✓ March 2016 & 2017
Modify S-332D High Head Weir (S-327)	✓ June 2016	✓ July 2016
Operate S-328 structure	✓ March 2017	July 2017
Connect canals C-200 to L-31W (G-737)	✓ January 2017	✓ April 2017
Rebuild L-31W levee and weir	✓ December 2016	September 2017
Plugs in L-31W Canal at F, G, H, I, J	✓ December 2016	✓ June 2017
Plugs in L-31W Canal at D & E	✓ December 2016	July 2017
Plugs in L-31W Canal at A, B, C	✓ December 2016	September 2017
Seal S-332D discharge basin	✓ December 2016	September 2017
Increase S-200 and S-199 pump capacity	✓ December 2016	February 2018
Vegetation Management	N/A	Ongoing