

# **B) WATER QUALITY & AFTER-ACTION REPORT**

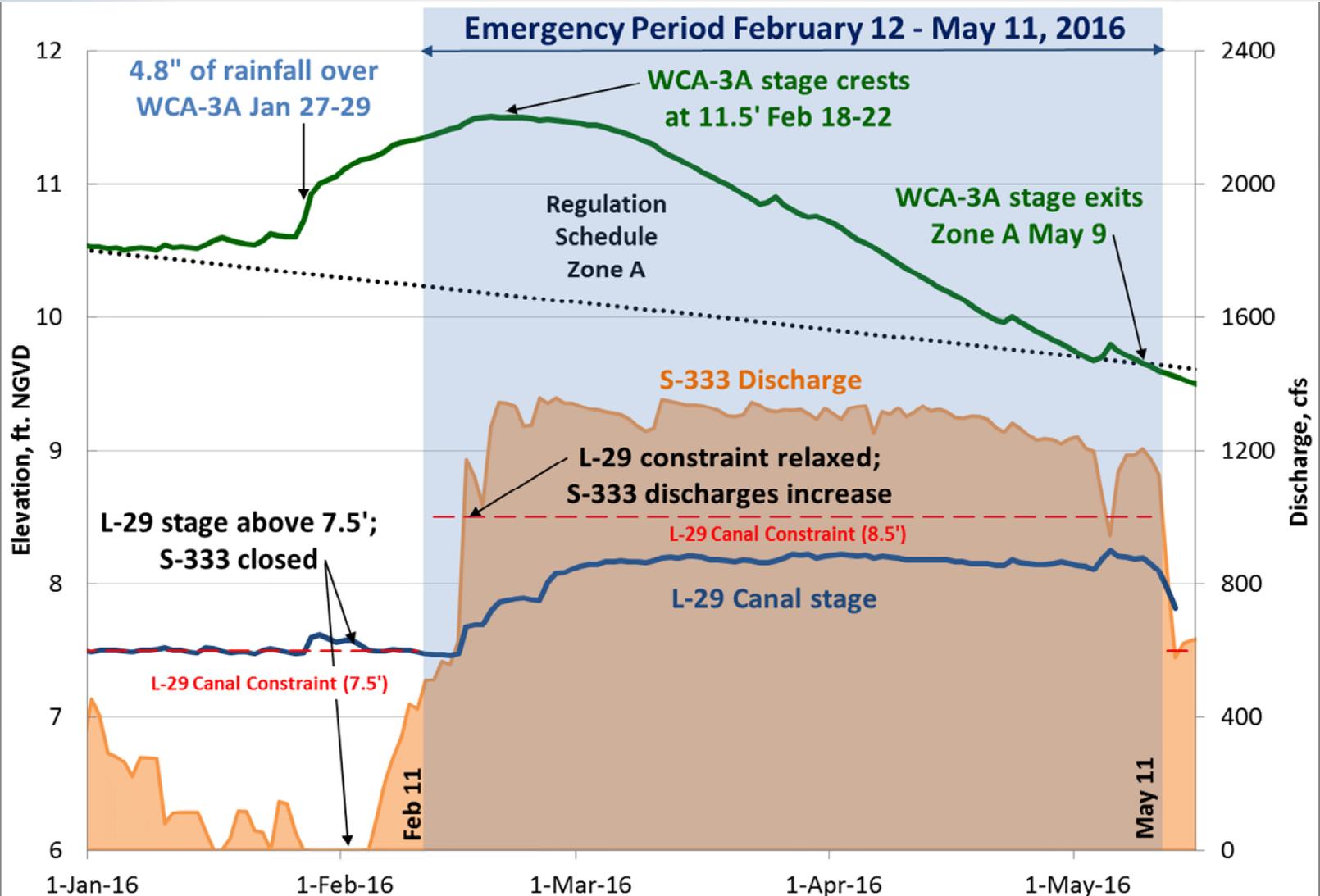
**Stuart Van Horn, Water Quality Bureau Chief**

**Water Resources Division**

# Water Conservation Areas High Water Emergency After-Action Report

- Required by FDEP Emergency Order
- SFWMD to submit by July 11, 2016
- Content to include:
  - Hydrologic summary prior to Emergency Operations
  - Details of Emergency Operation activities
    - Deployment of temporary pumps
    - Construction of temporary features
    - Mitigation for higher downstream water levels
  - Response to Emergency Operations
    - Hydrology (flows, water levels; comparison with previous years)
    - Water quality (total phosphorus concentrations and loads; comparison with previous years)
  - C-111 Seepage Monitoring
  - Caloosahatchee, St. Lucie and Florida Bay flows and salinities

# Water Conservation Area 3A Water Level and S-333 Discharge: Jan. 1 – May 31, 2016



# WCA-3A/3B Discharge Destinations

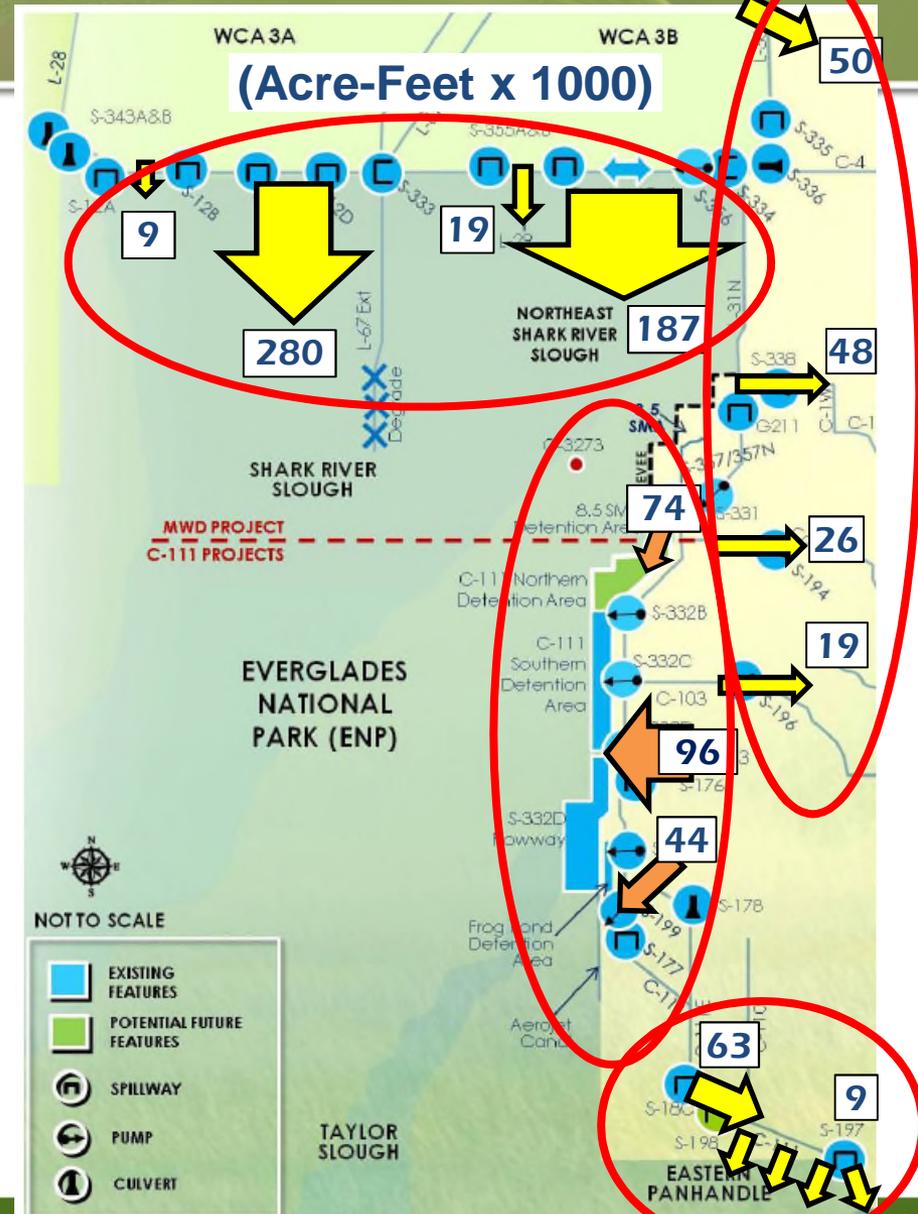
Feb. 12 – May 11, 2016

Preliminary flow estimates to:

- East Coast Basins: 143,000 Acre-feet
- Everglades National Park:
  - Shark River Slough: 495,000 Acre-feet
  - Detention Areas (Hydraulic Ridge / Seepage for Taylor Slough)\*: 214,000 Acre-feet
  - S-18C (toward Eastern Panhandle and Barnes Sound): 63,000 Acre-feet
- Barnes Sound (S-197): 9,000 Acre-feet

*Includes provisional flow data*

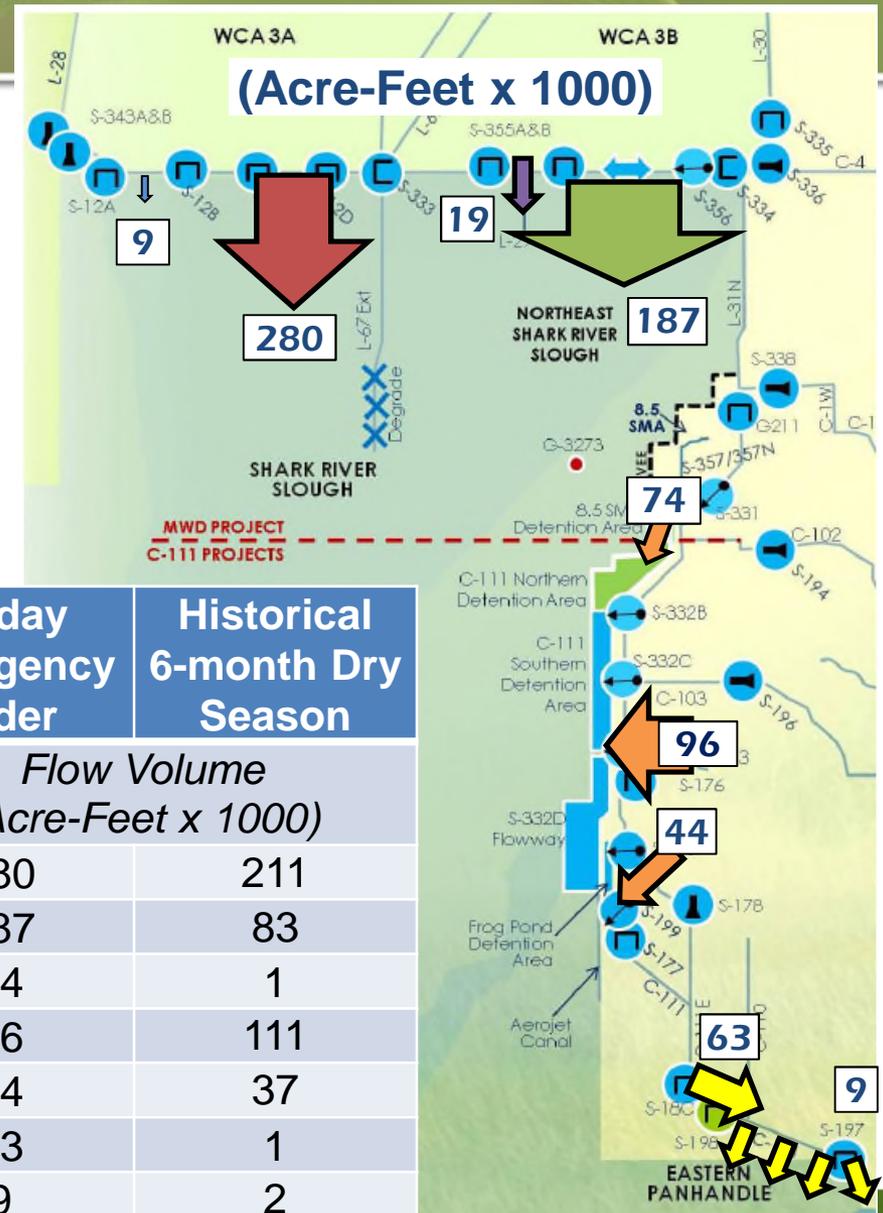
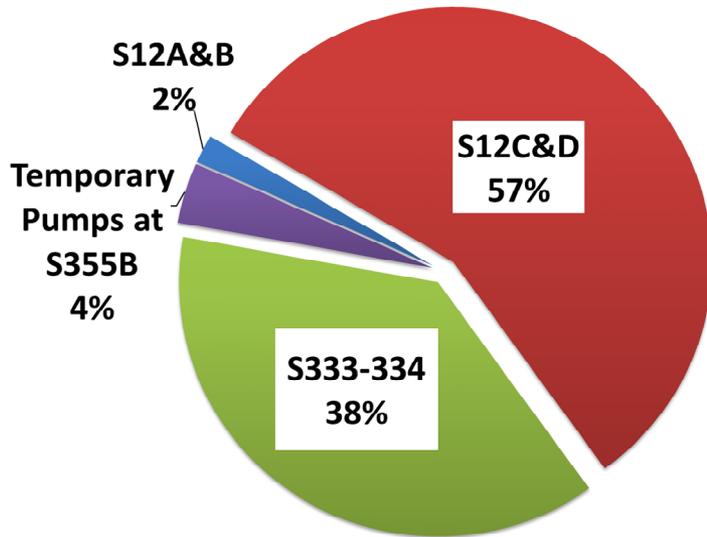
*\*Volumes include seepage return pumping*



# WCA-3A/3B Discharge South Comparisons

Feb. 12 – May 11, 2016

## Flows to Shark River Slough

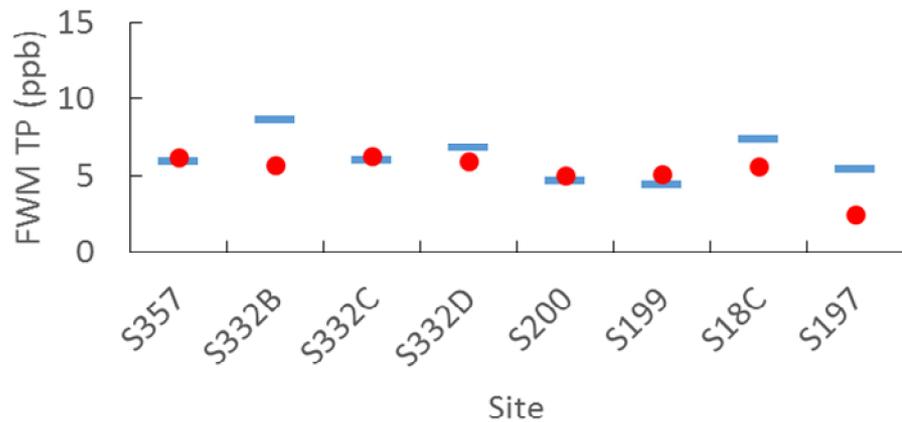


	90-day Emergency Order	Historical 6-month Dry Season
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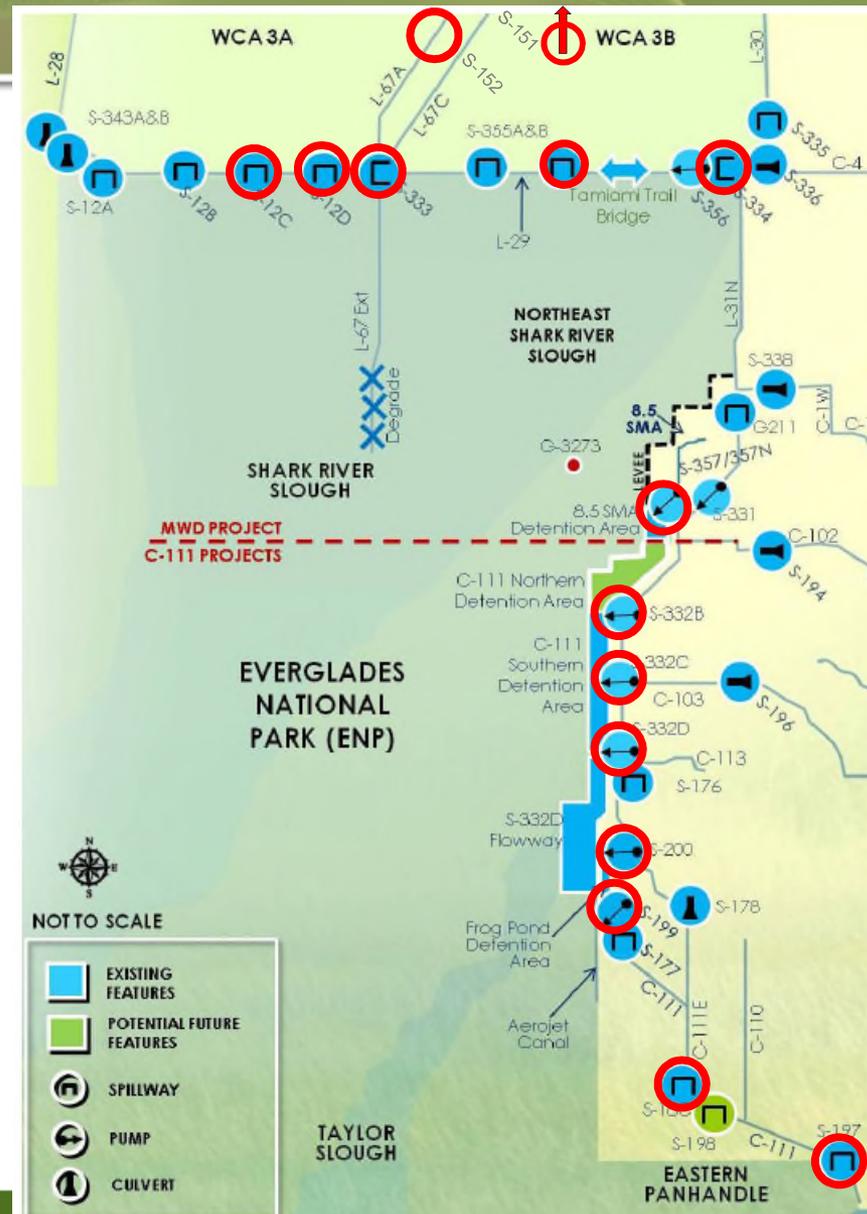
Structure	Flow Volume (Acre-Feet x 1000)	
	90-day Emergency Order	Historical 6-month Dry Season
S12C+S12D	280	211
S333-S334	187	83
S357	74	1
S332B, C, D	96	111
S199+S200	44	37
S18C	63	1
S197	9	2

# Total Phosphorus Concentration Comparison

## February – May Periods

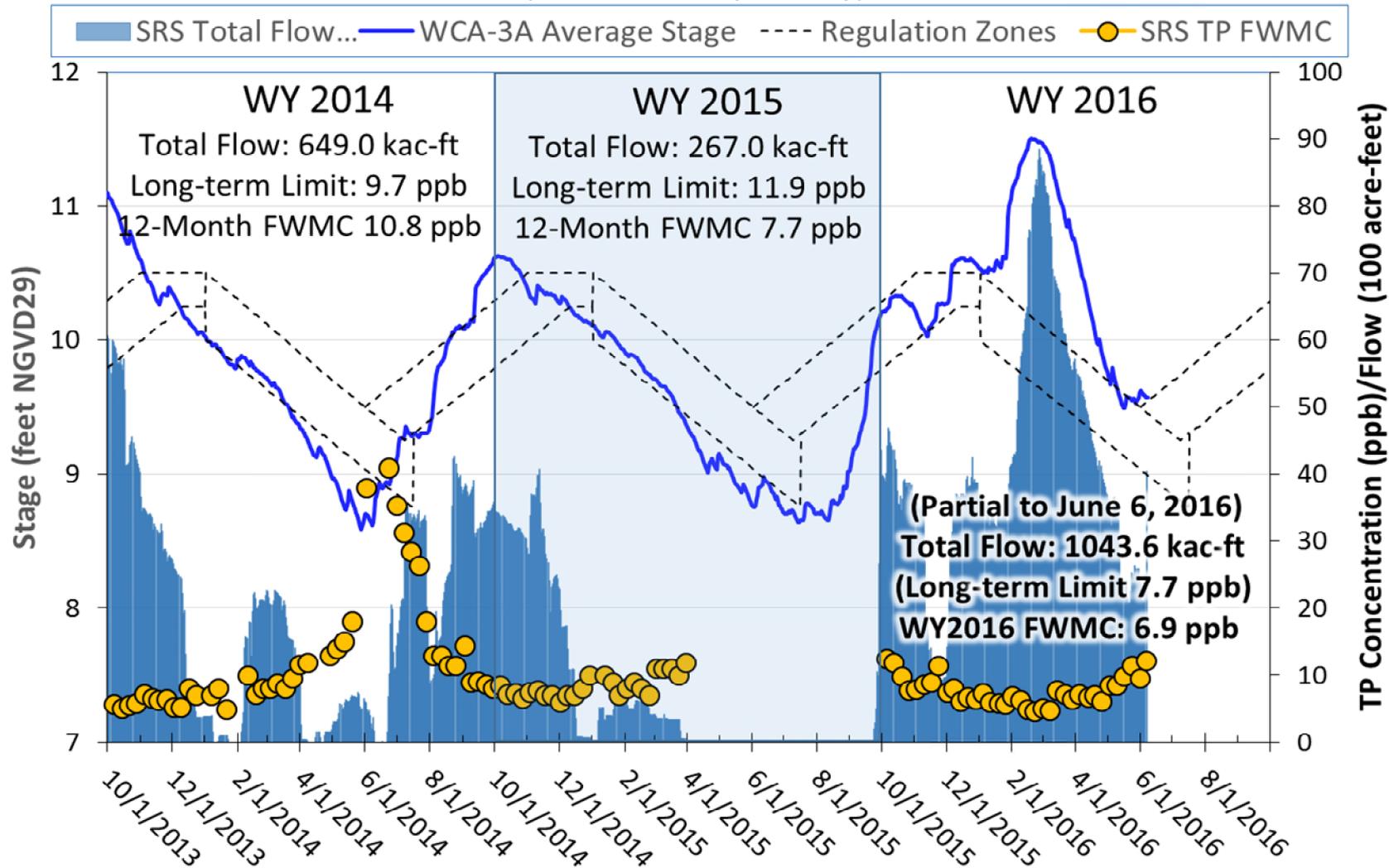


\*S152 TP is Geometric Mean (no flow data)



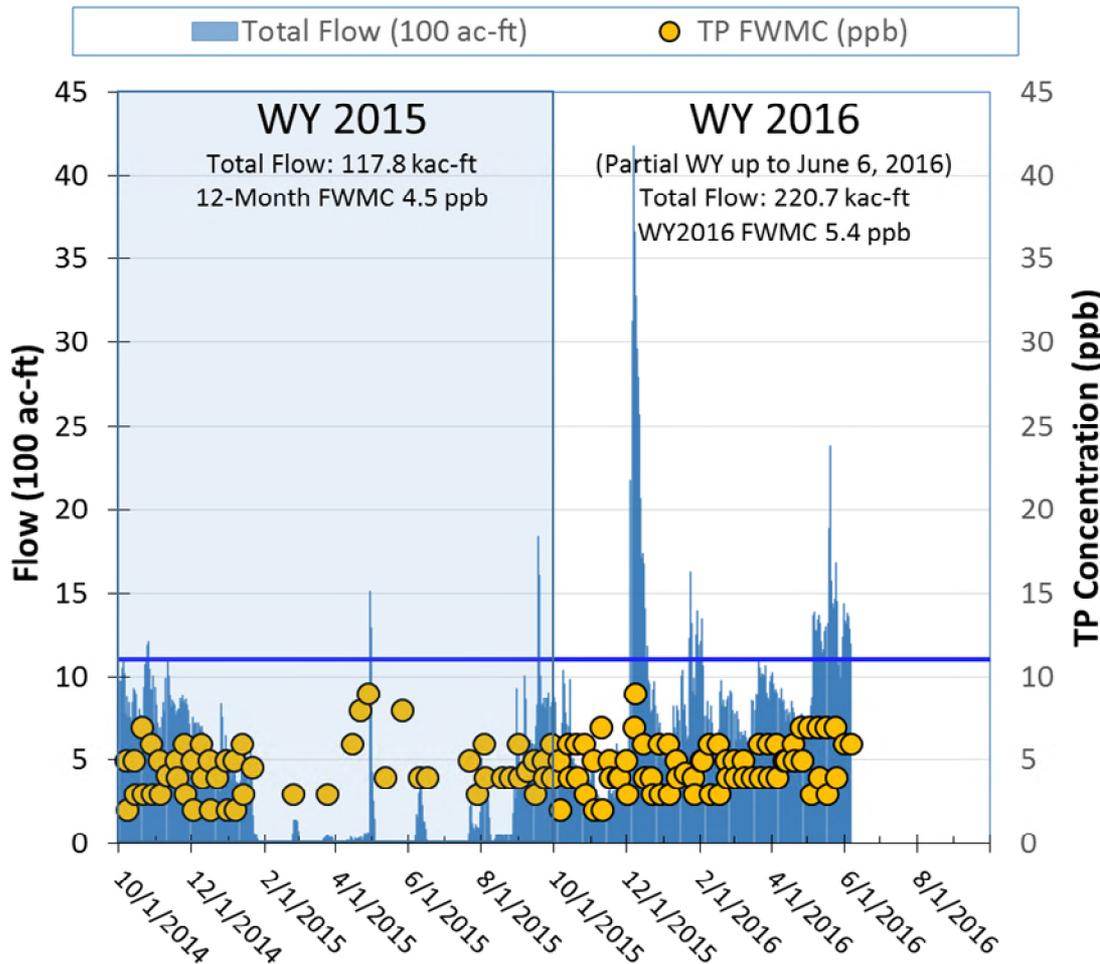
# Water Level, Flow & Total Phosphorus Trends Shark River Slough Water Years 2014 – 2016

(WY2016 values are preliminary.)



# Taylor Slough/Coastal Basins Flow and TP Trends WY2015 – WY2016

Flow and TP Flow-weighted Mean Concentration to Taylor Slough and Coastal Basins



- Consent Decree compliance for Taylor Slough and Coastal Basins based on annual flow-weighted mean TP concentration
- The TP limit fixed at 11 ppb
- TP concentrations appear to be on trajectory for 5 - 6 ppb
- Federal WY2016 ends September 30, 2016 (four months remain in compliance period)

WY2016 Provisional data included – Subject to change  
 1 ppb = 1 µg/L = 0.001 mg/L  
 ac-ft = acre-feet, 1 kac-ft = 1,000 ac-ft

# High Water Emergency After-Action Report Summary

- Agency coordination throughout High Water Emergency Order period
- All Water Conservation Area stages significantly lowered
- Increased fresh water to Everglades National Park and Florida Bay
- Temporary and longer-term actions taken to mitigate for high water levels downstream
- SFWMD to submit After-Action Report to Florida Department of Environmental Protection by July 11, 2016



# Questions?