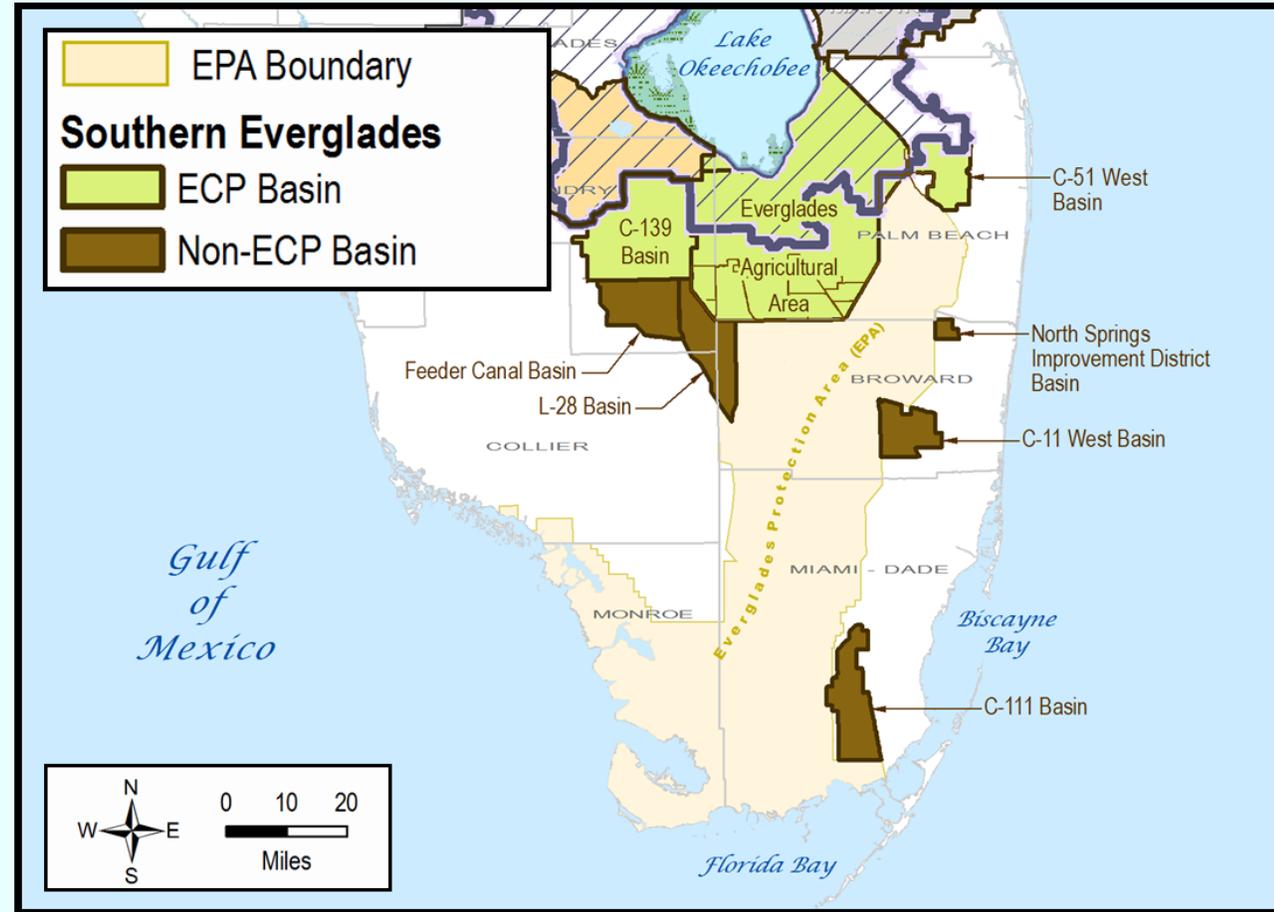


SFWMD Southern Everglades Nutrient Source Control Program Update

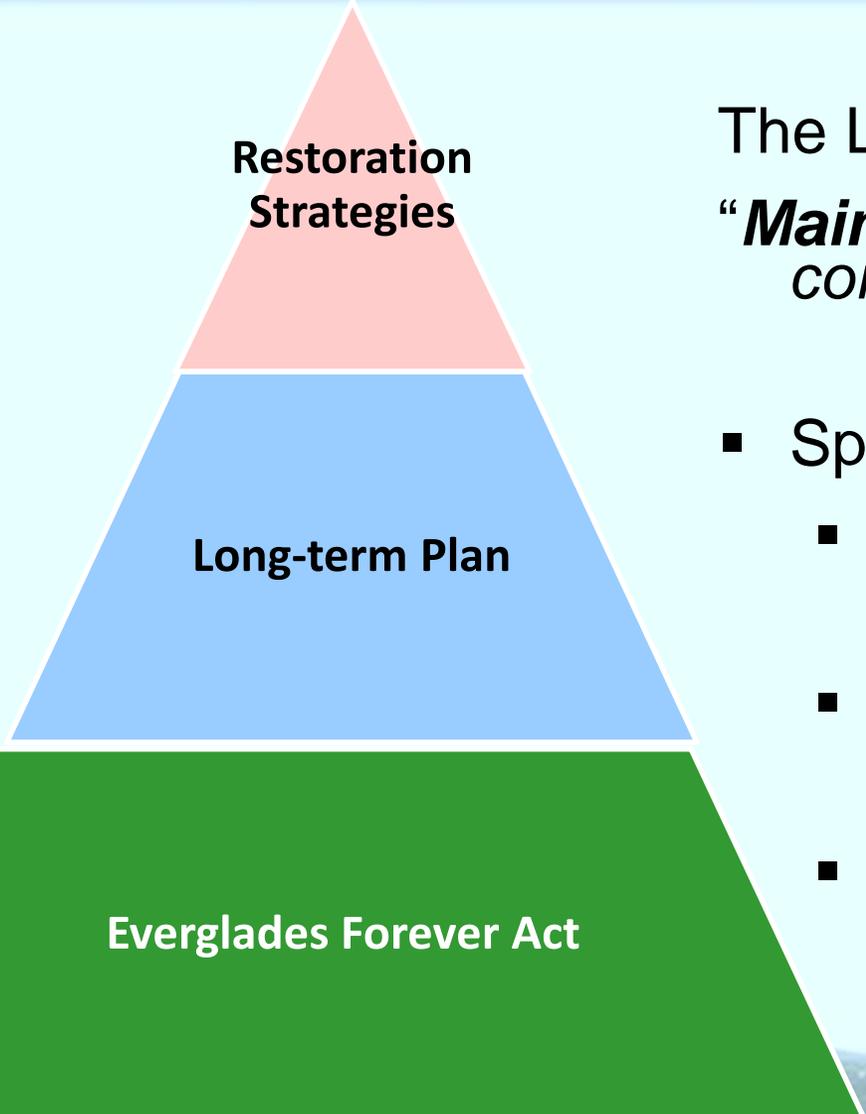
Carmela Bedregal, PE
Section Leader
Everglades Policy & Coordination Division

16th Annual Public Meeting on the Long-Term Plan
for Achieving Water Quality Goals for Everglades
Protection Area Tributary Basins
February 25, 2019

Basins Tributary to the Everglades Protection Area



Long Term Plan Project Objectives



Restoration
Strategies

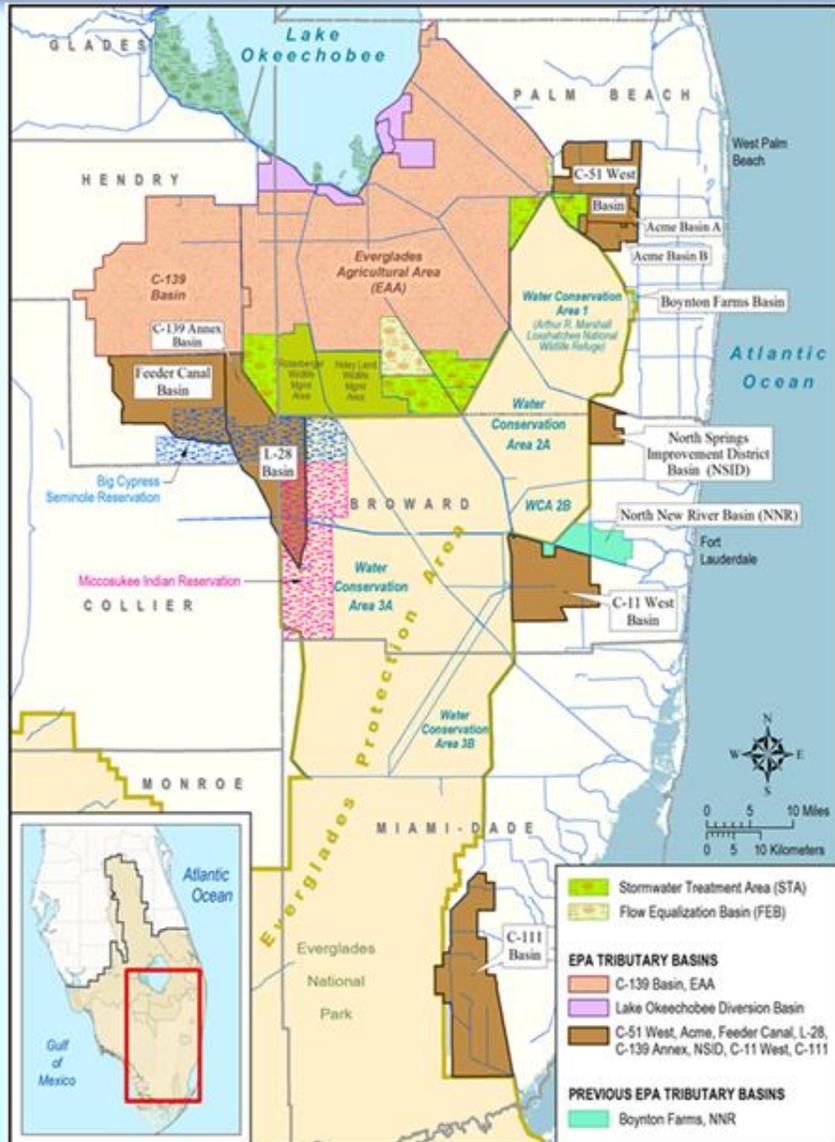
Long-term Plan

Everglades Forever Act

The Long-Term Plan recommends activities designed to:
“***Maintain and improve** upon the contribution of source controls to overall water quality improvement goals.*”

- Specifically:
 - **Identify** discharges that are candidates for implementation of **cost effective** source controls
 - Characterize management practices on lands or processes tributary to those discharges
 - Implement these source controls **in concert with** landowners or municipalities

Contents



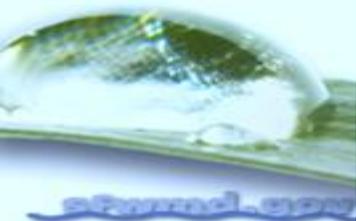
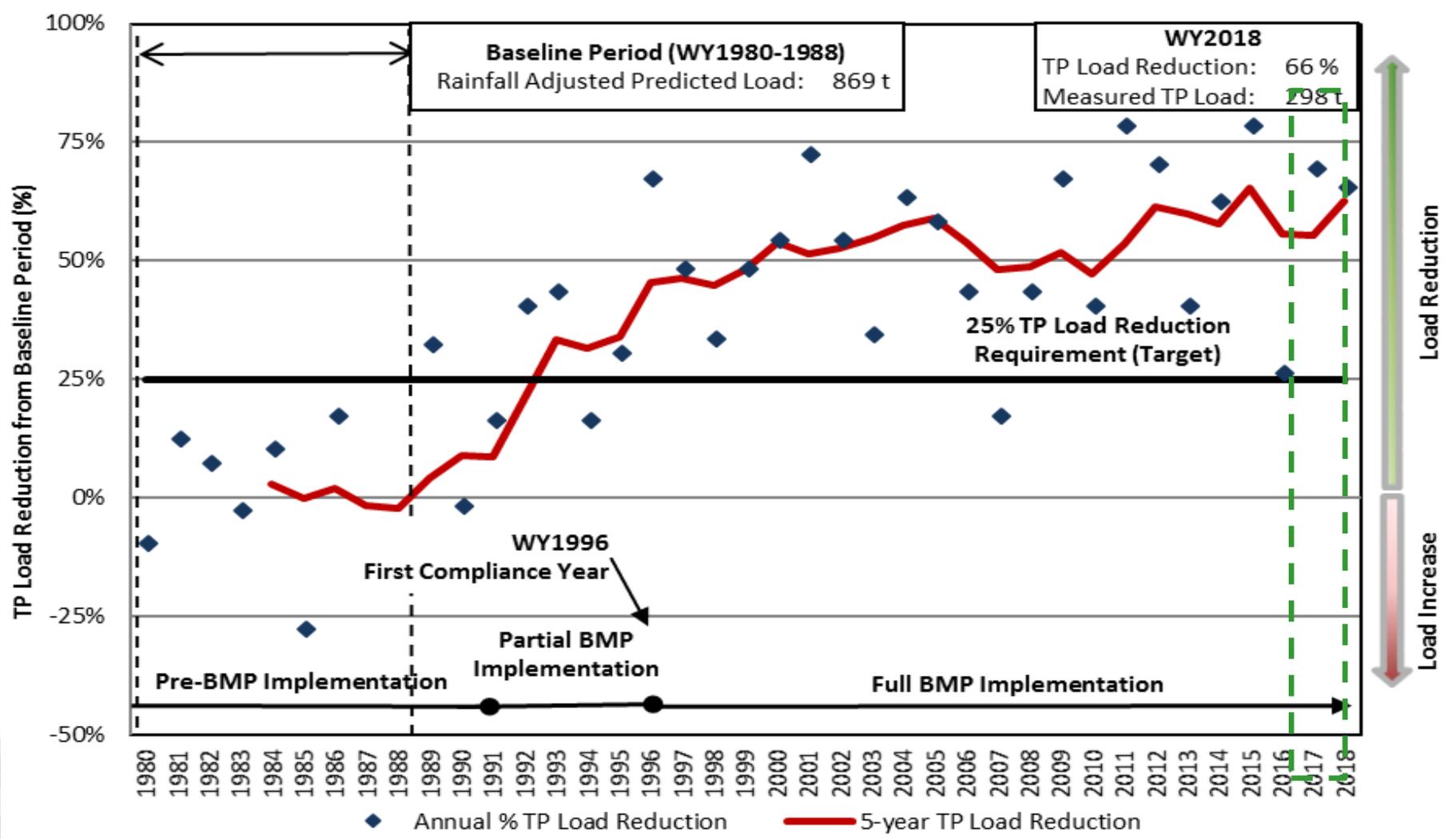
- **EAA and C-139 Basins**
 - Regulatory activities
 - Research and demonstration projects
 - Sub-regional source control projects
- **Other Tributary Basins**
 - Regulatory and cooperative activities
 - Project integration

WY2018 Phosphorus Data by Basin

Basin	Receiving Body	WY2018 TP Load (metric tons)	WY2018 TP FWMC (µg/L)
Everglades Agricultural Area (EAA)	STAs and Lake Okeechobee	298	182
C-139	STA 5/6 and EAA	90	221
Lake Okeechobee Diversion Basins	EAA and Lake Okeechobee	32	281
Feeder Canal	Water Conservation Area (WCA) 3A	23	123
L-28	WCA-3A	18	69
C-51 West and ACME	STA-1E and C-51 East Basin	15	217
C-11 West	WCA-3A	8	30
C-111	Everglades National Park	5	9
North Springs Improvement District (NSID)	WCA-2A	1	71
North New River (NNR)	Coastal Broward County	0	-
Boynton Farms	Lake Worth Drainage District	0	-

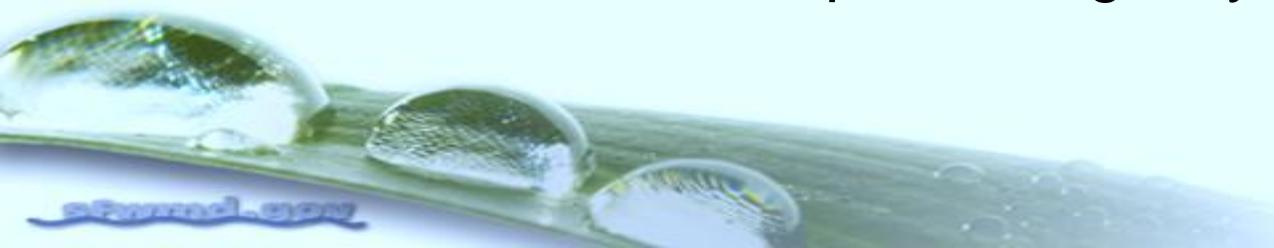
EAA Basin-Level Compliance

25% Reduction in TP Load

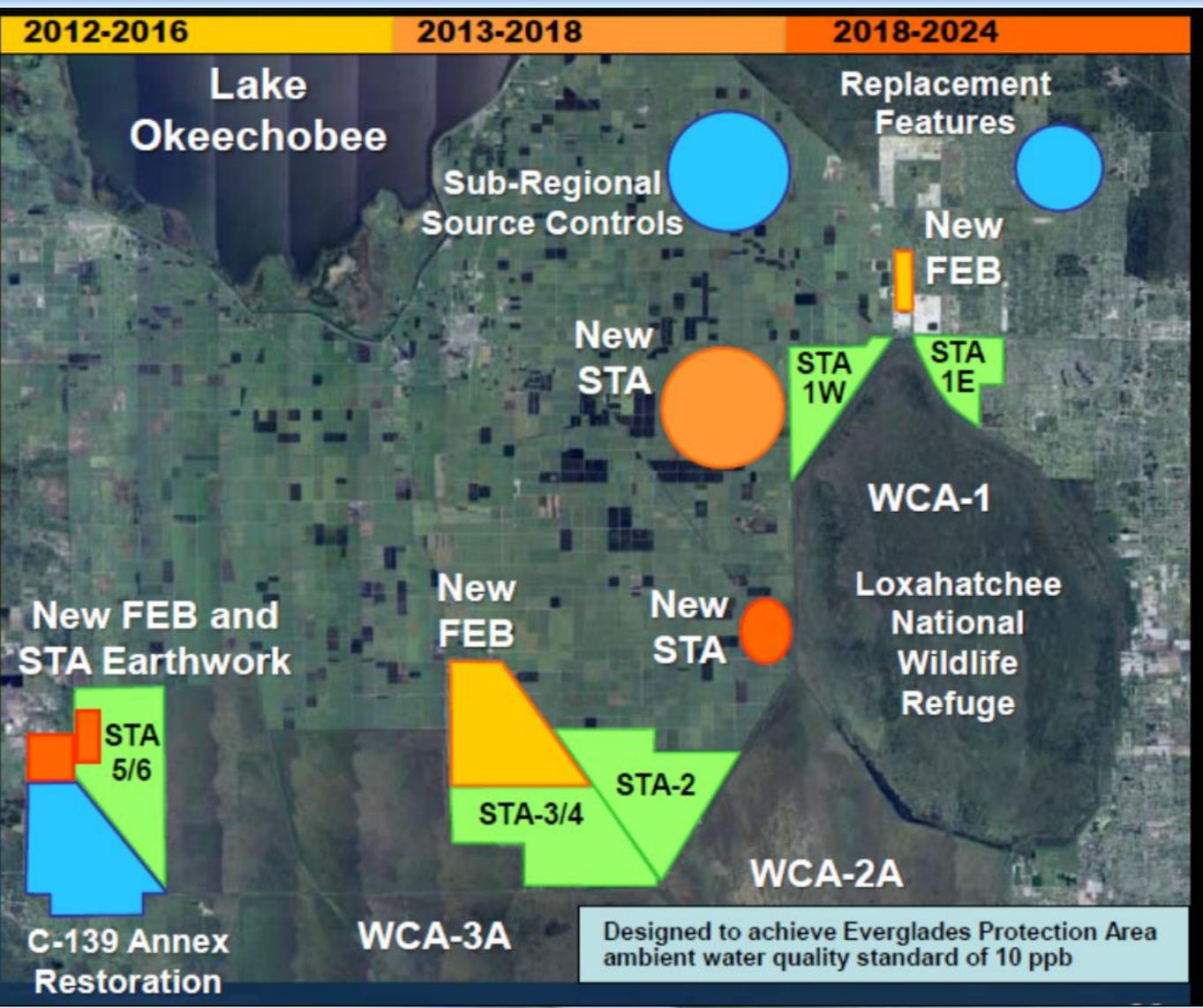


EAAEPD BMP Master Research Permit

- BMP research is mandated by the Everglades Forever Act (EFA) and Chapter 40E-63, Florida Administrative Code (FAC)
- The approved Scope of Work includes:
 - Research on the impact of alternate management practices for the control of floating aquatic vegetation (FAV) in EAA farm canals
 - Develop improved techniques for FAV management and
 - BMP education and extension services
- February 15, 2019 Final Research Report submitted
- Proposed Scope of Work including future BMP field testing is due
- Public workshop. Final agency action within 60 days of workshop

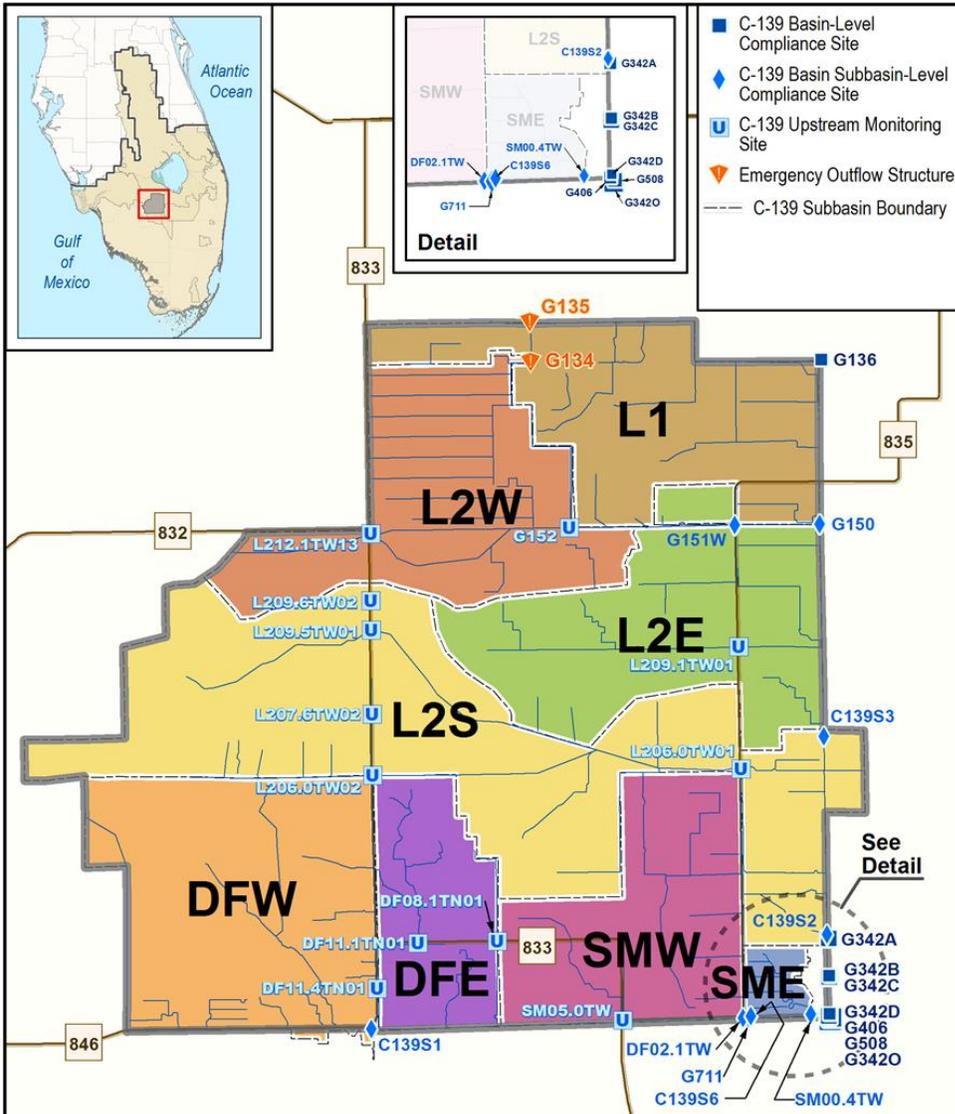


Sub-regional Source Control Projects



- Projects to provide a safety factor for meeting water quality based limits downstream of STA1E and STA1W (Eastern Flow path, EAA S5A Basin)
- Sub-regional projects are downstream of areas where BMPs are implemented
- Discussion of project ideas is ongoing

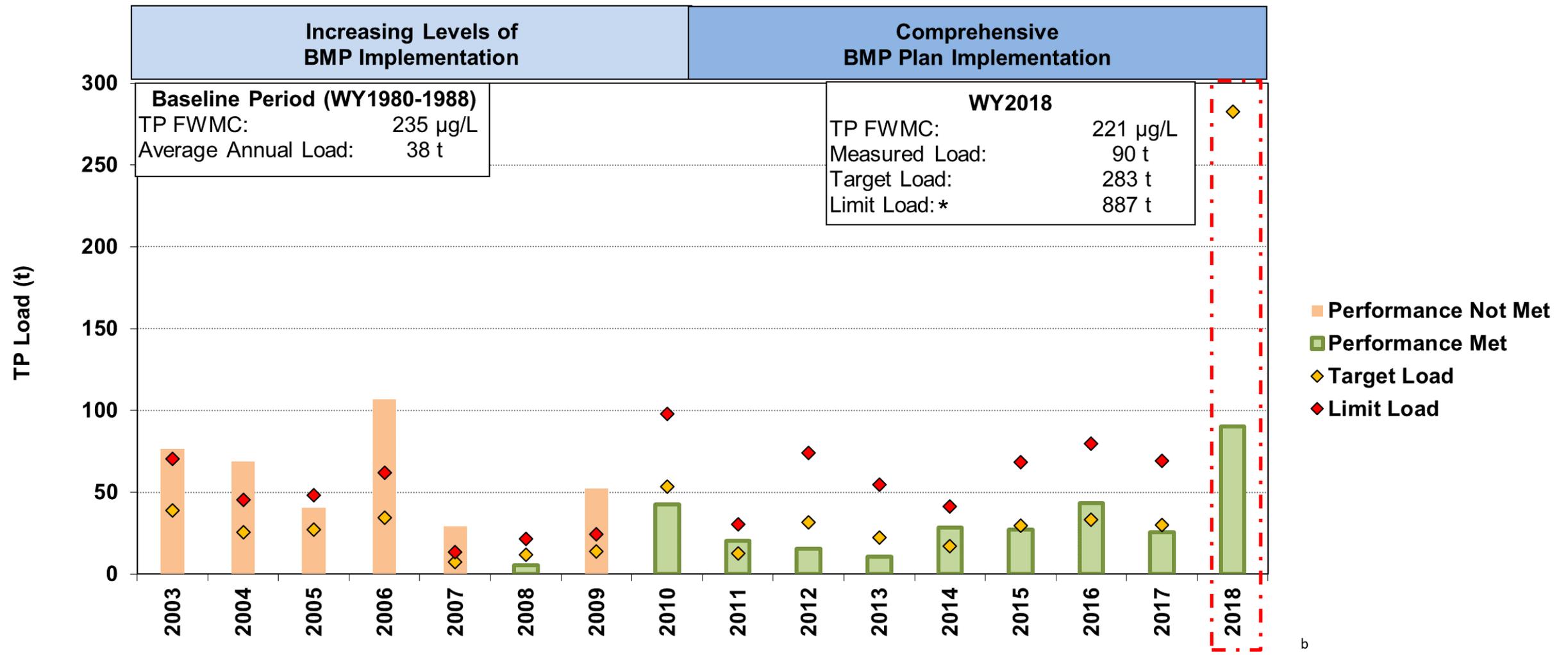
C-139 Basin Source Controls



- Permit-level compliance
- Basin-Level water quality compliance
- Upstream monitoring
 - Eight sub-basins automatic sampler and flow stations
 - Synoptic monitoring

C-139 Basin-Level Compliance

Do not exceed historic levels



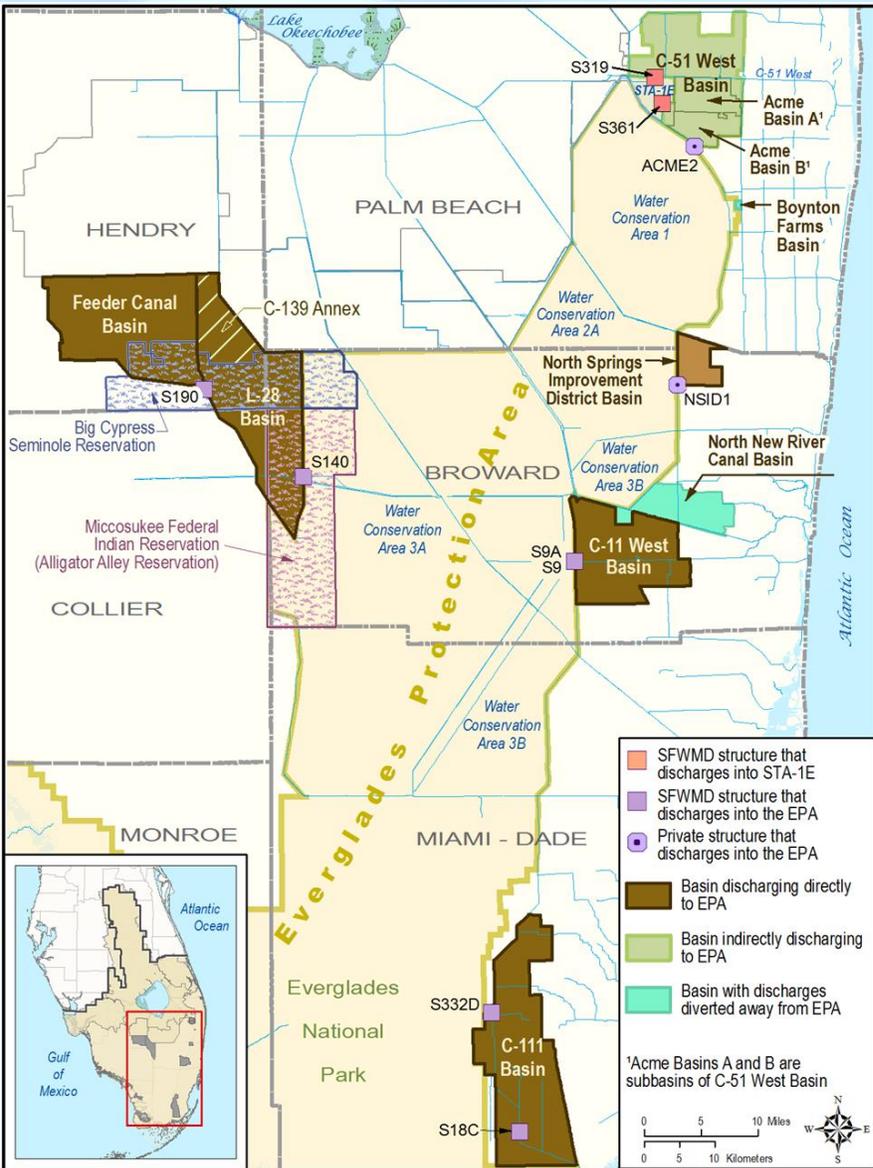
Baseline Period (WY1980-1988)
 TP FWMC: 235 µg/L
 Average Annual Load: 38 t

WY2018
 TP FWMC: 221 µg/L
 Measured Load: 90 t
 Target Load: 283 t
 Limit Load: *

b

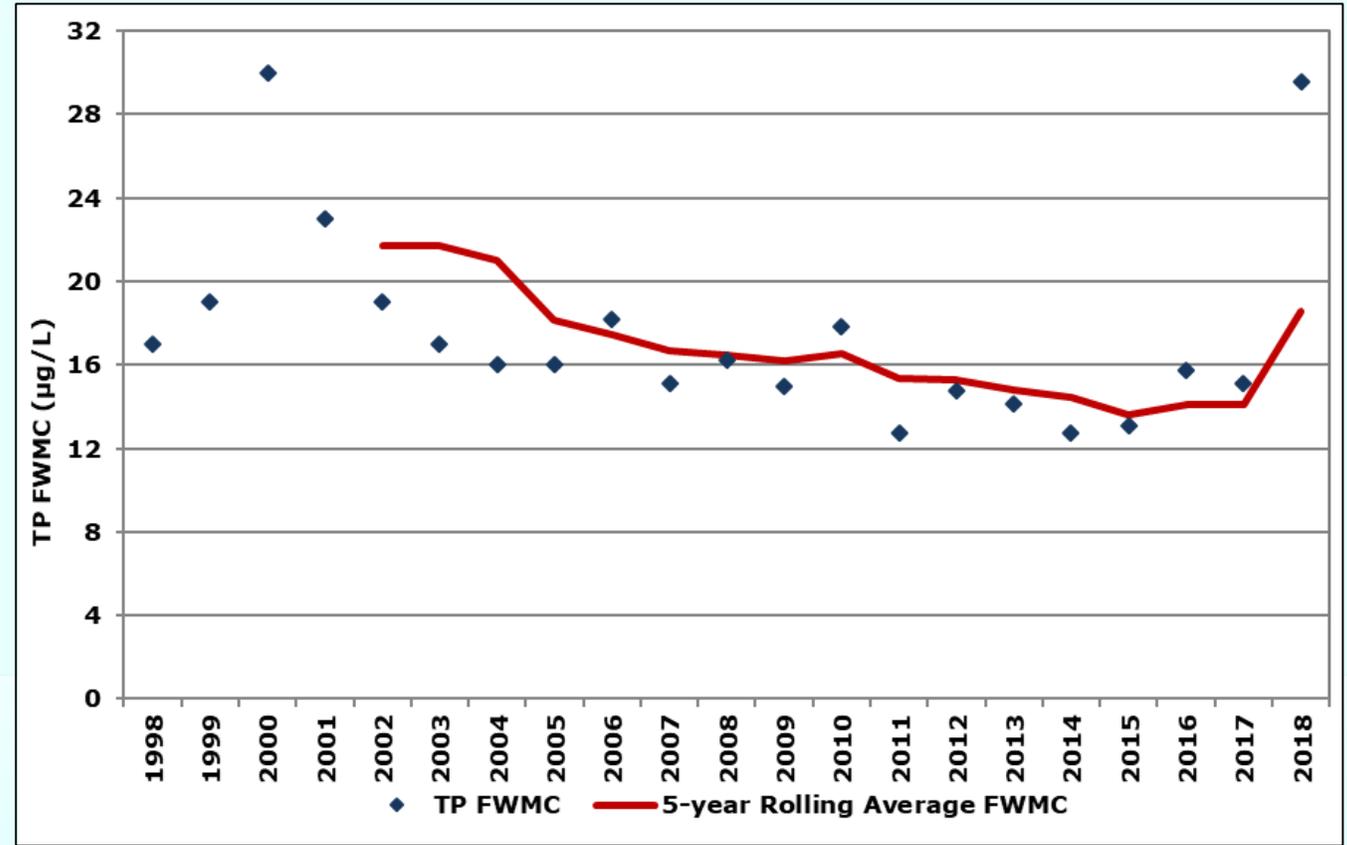
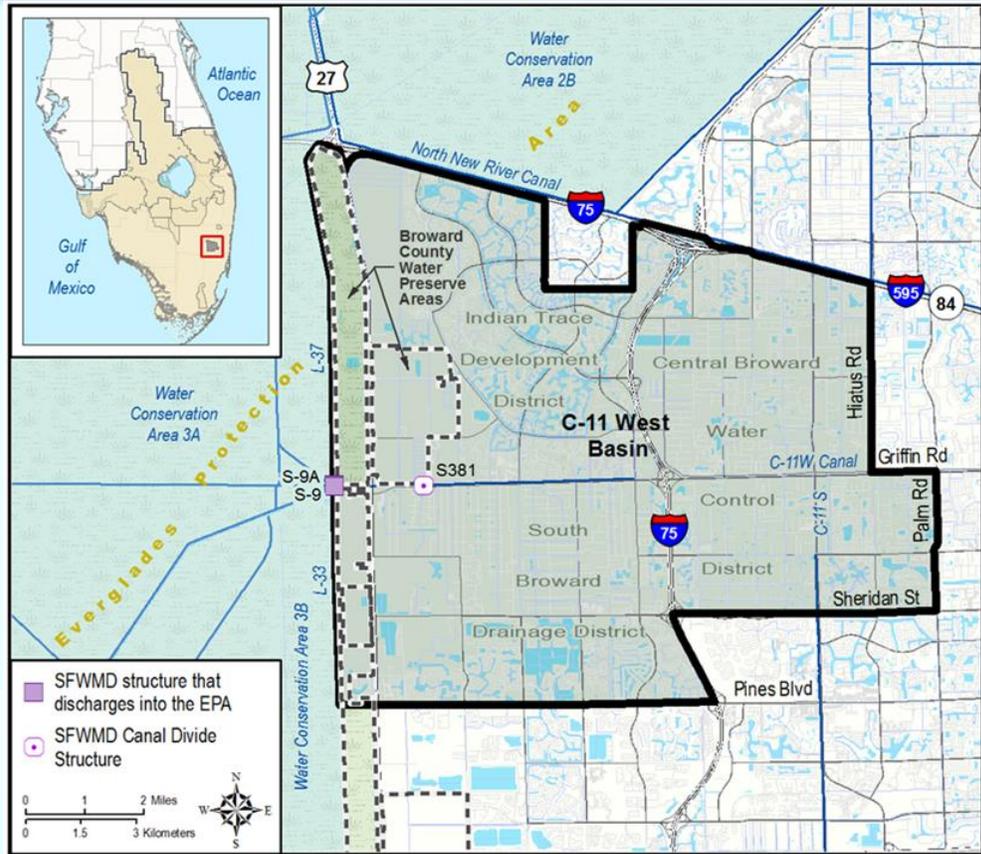
*Limit load not depicted

Other Tributary Basins



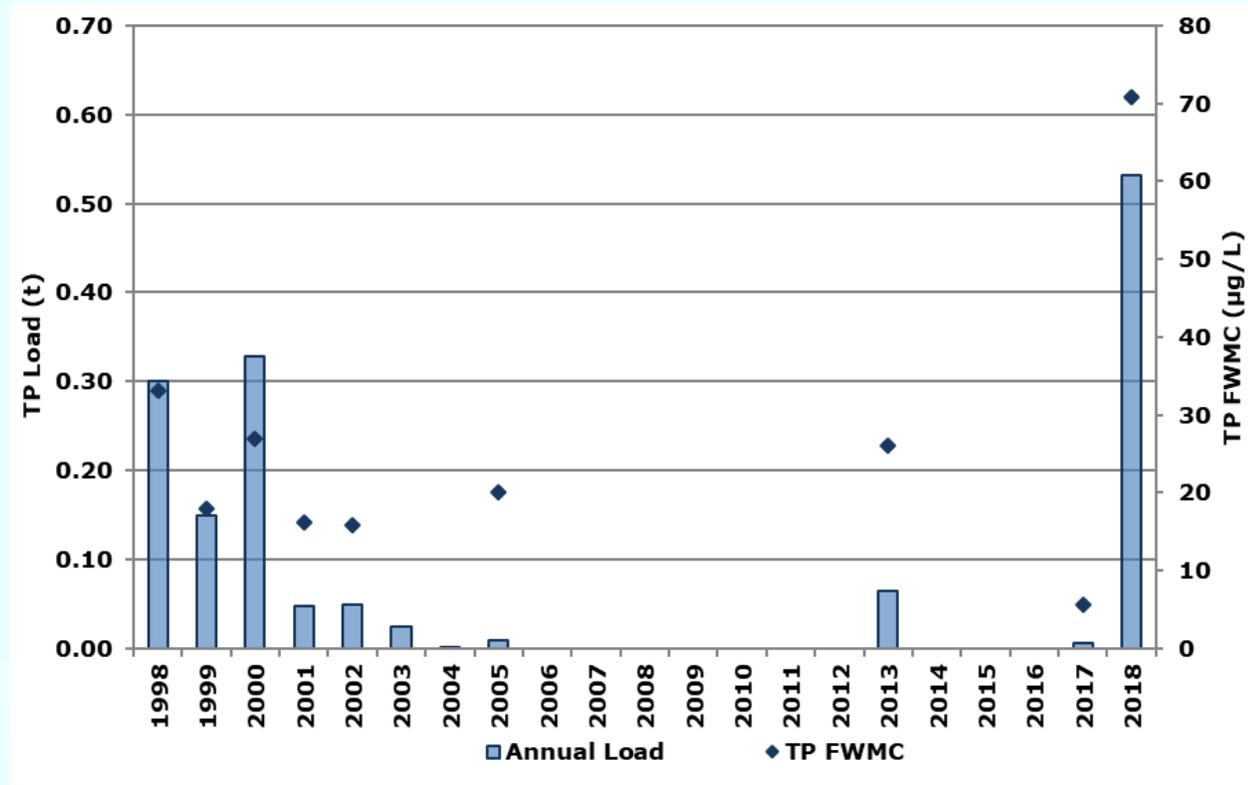
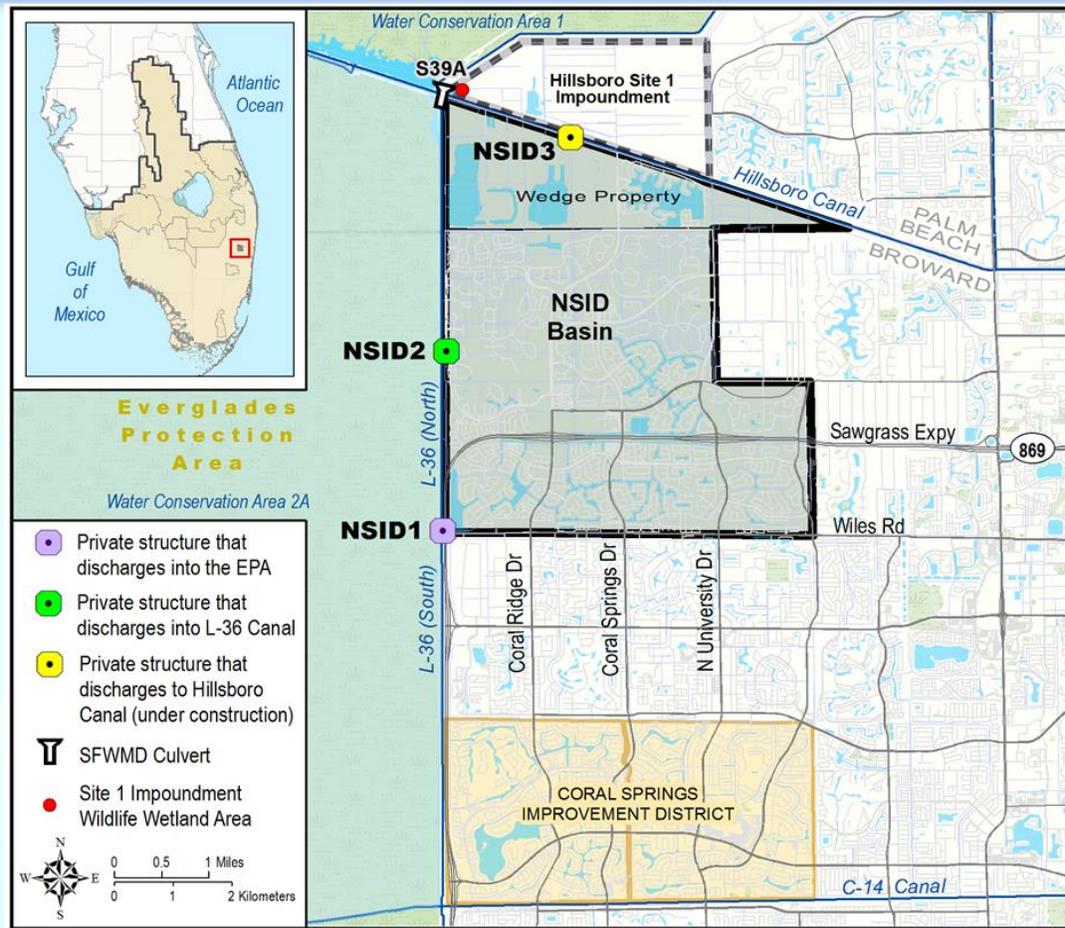
To Everglades National Park and Water Conservation Areas (WCAs) via SFWMD structures:	
C-111	S-18C + S-332D
C-11W	S-9 + S-9A
L-28 Canal	S-140
Feeder Canal	S-190
To WCA via private structures:	
North Springs Improvement District	NSID1
To STAs or WCA via SFWMD structures:	
C-51 West and ACME	S-319 + S-361 (Acme2)
Not discharging:	
North New River Canal	
Boynton Farms	

C-11W Basin



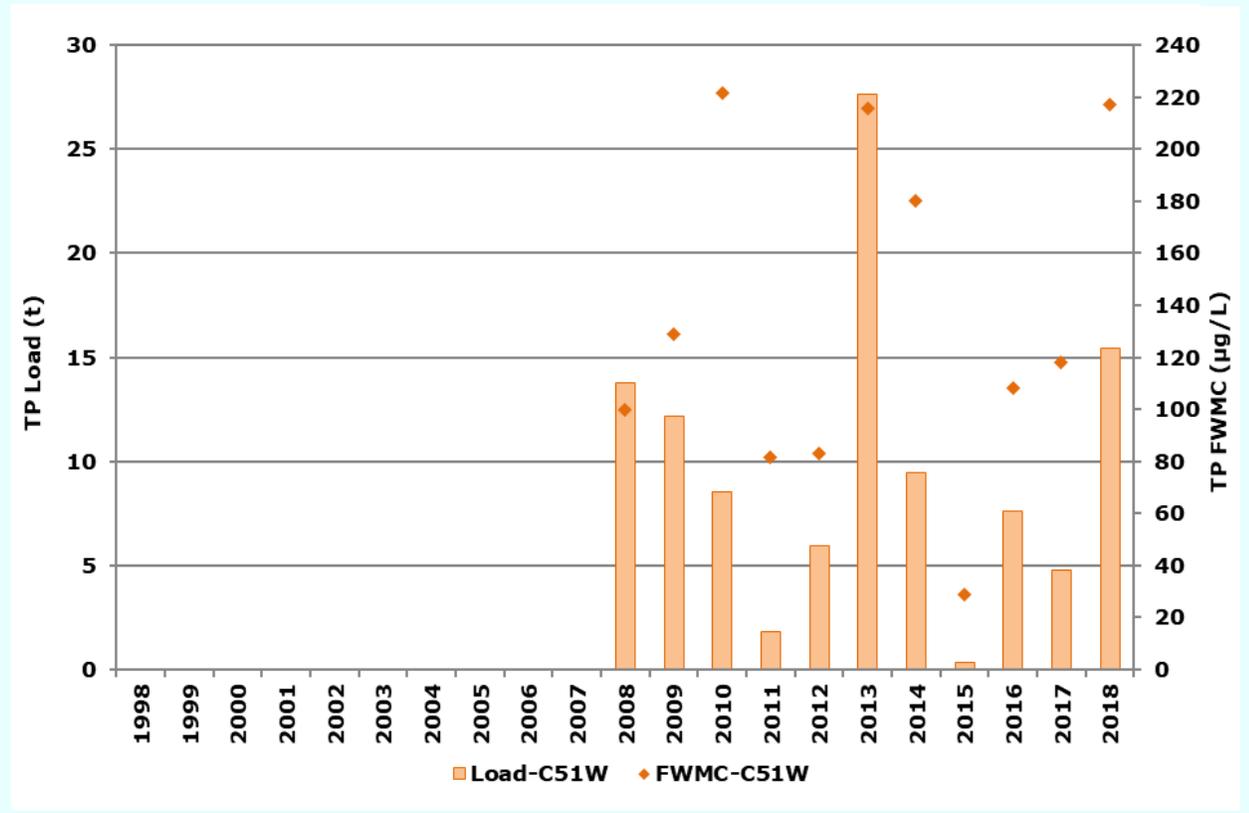
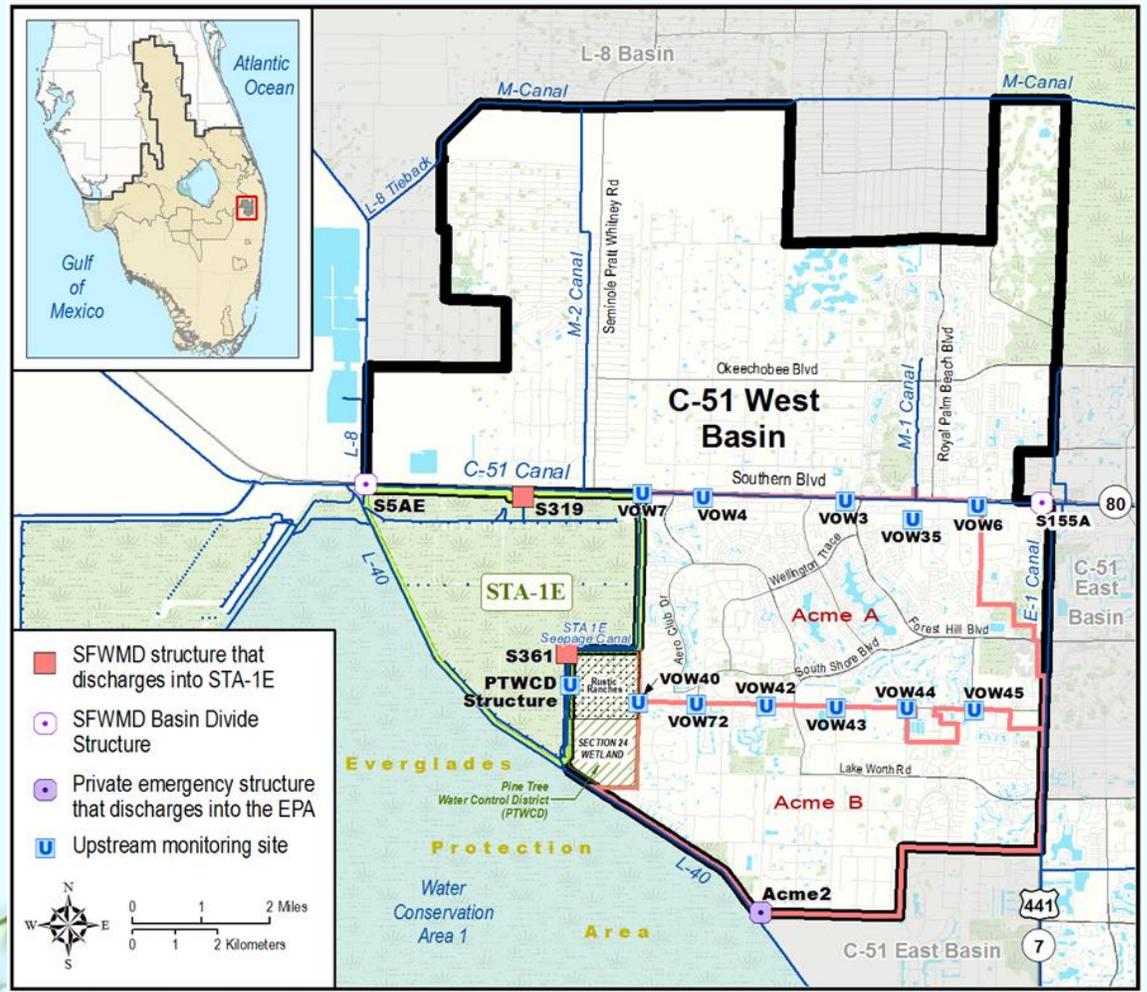
- Environmental Resource Permits to WCDs including optimized detention and water quality reporting
- Ongoing CERP Project: Broward Co Preserve Area

NSID Basin



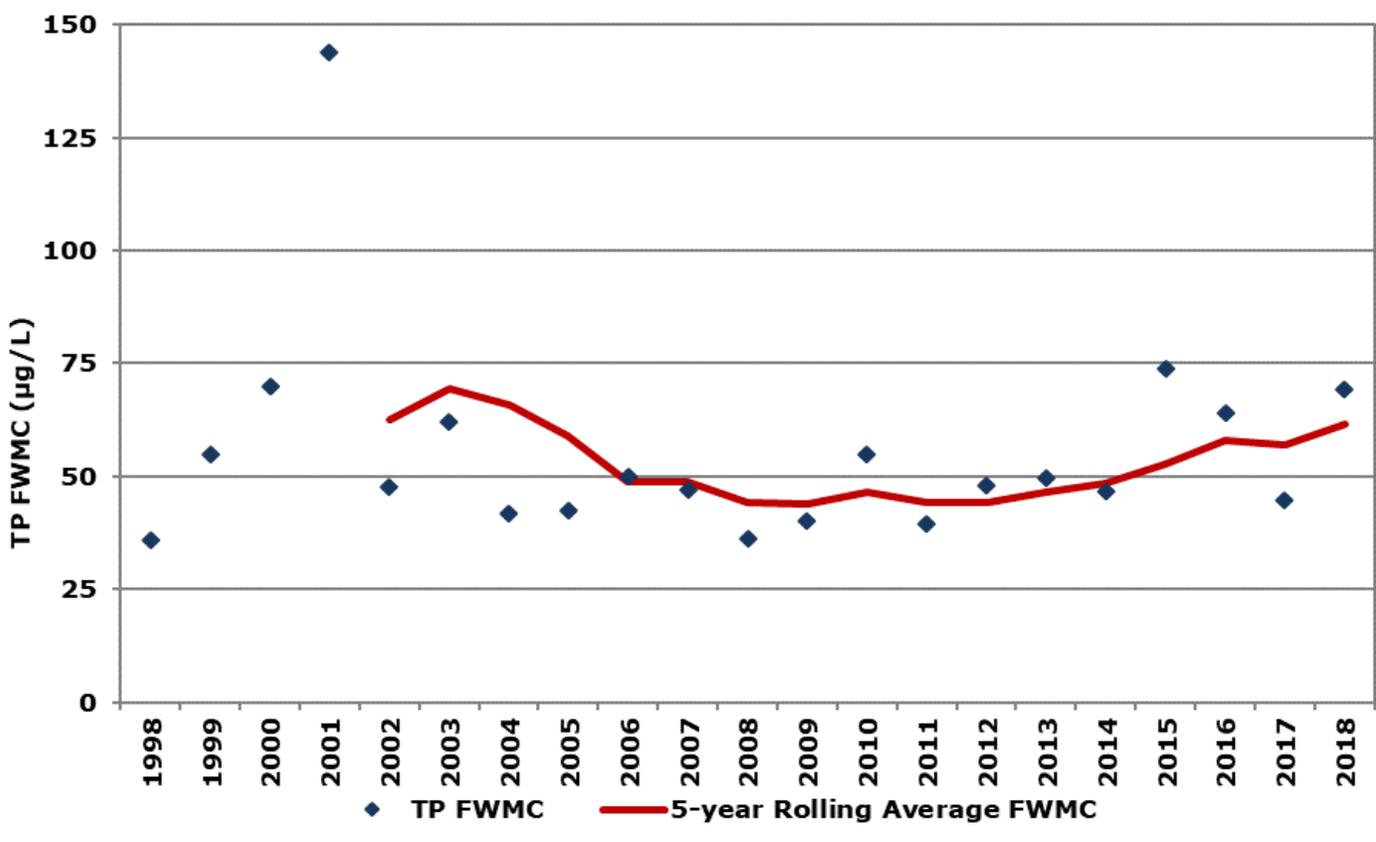
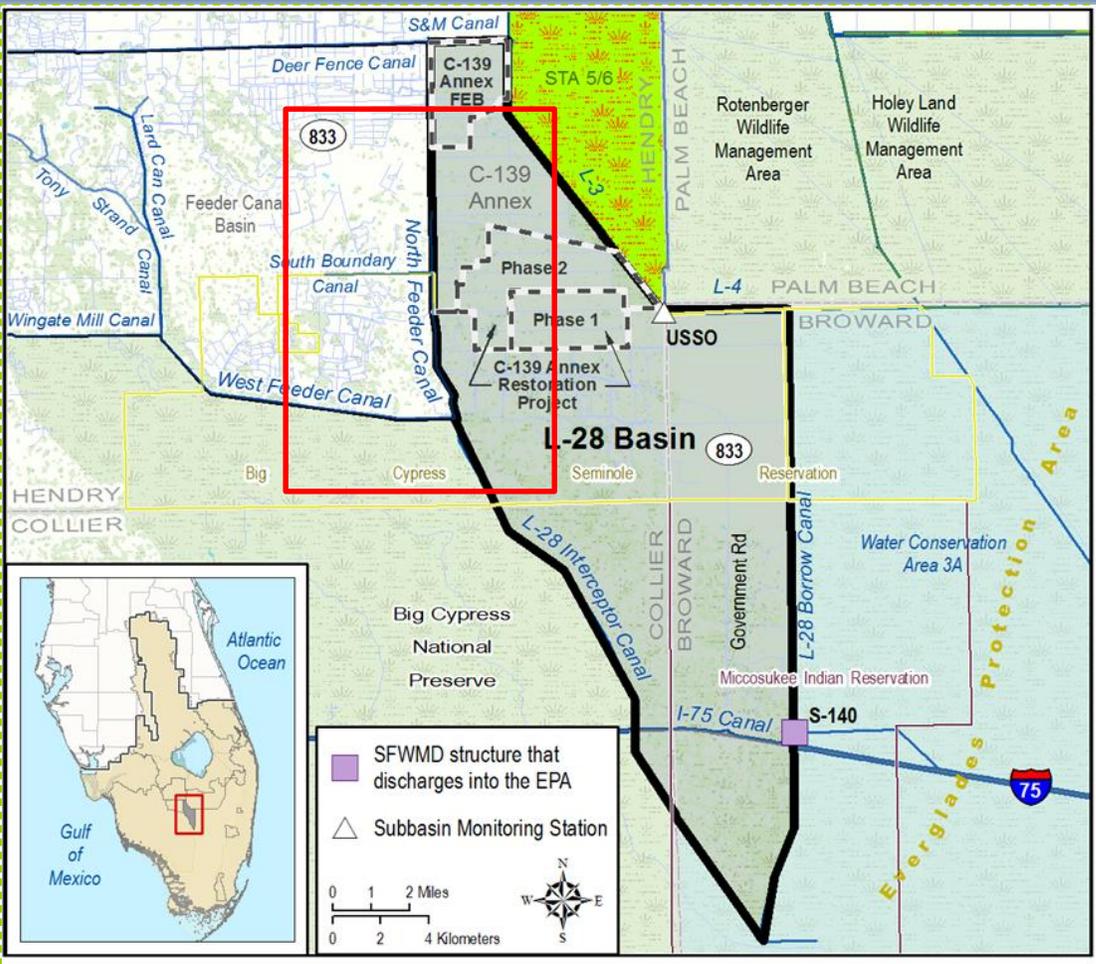
- Environmental Resource Permits to NSID including limited discharge and water quality reporting
- CERP Project: Hillsboro 1 Impoundment (on-hold)

C-51 West and ACME Basin



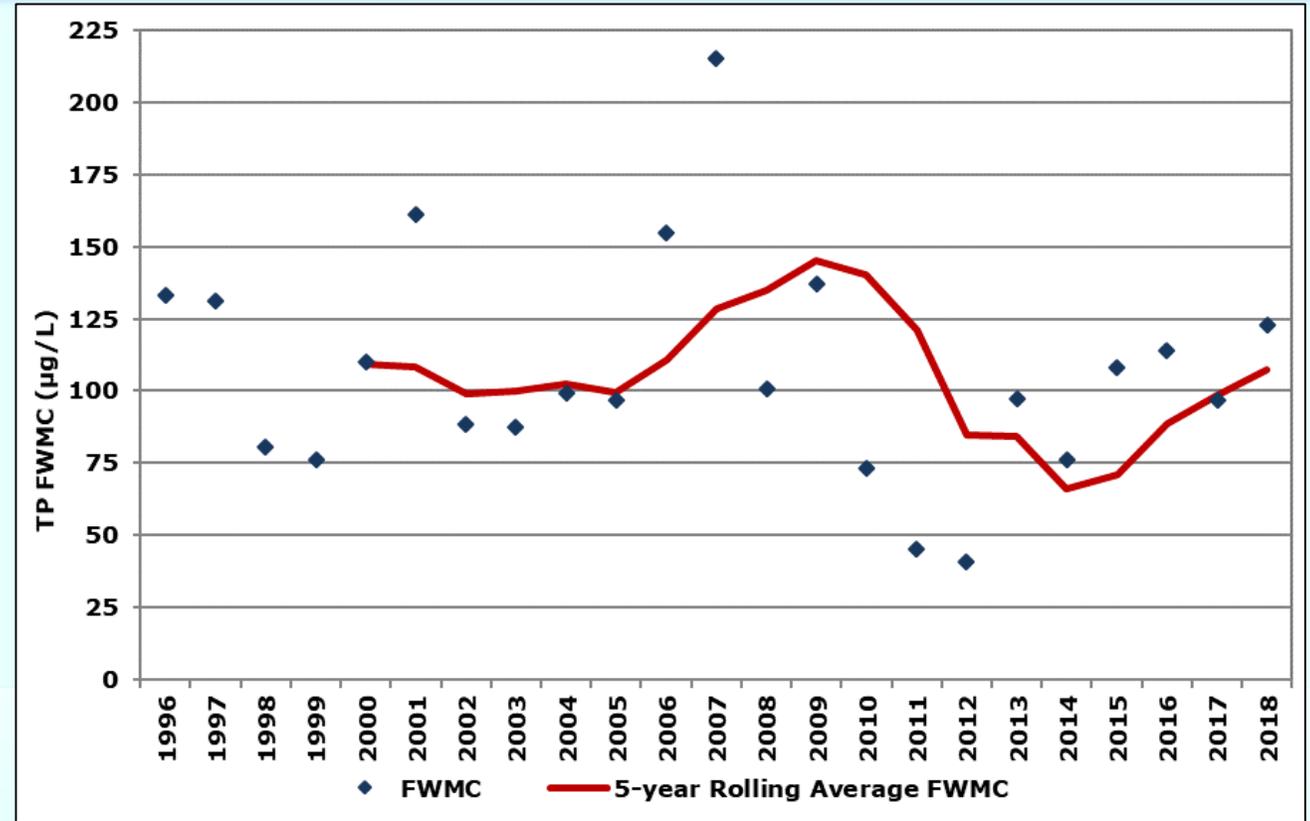
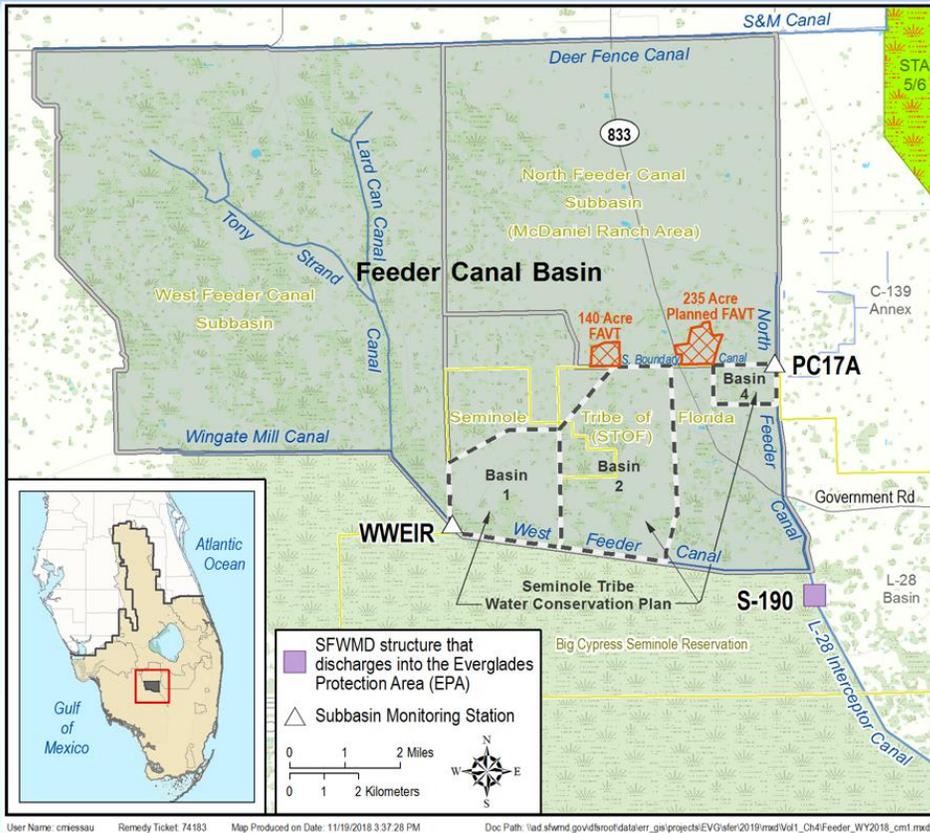
- Environmental Resource Permits to Village of Wellington and Pine Tree WCD (PTWCD) including BMPs and livestock waste storage and disposal ordinances, and water quality reporting

L-28 Basin



- Environmental Resource Permit to Southern Gardens Groves including Best Management Practices
- CERP Big Cypress/L-28 Interceptor Modification (WERP) – Planning

Feeder Canal Basin



- Environmental Resource Permits to North Feeder landowners including Best Management Practices, water quality monitoring and TP goals
- CERP Big Cypress/L-28 Interceptor Modification (WERP) – Planning
- FDACS Voluntary BMPs West Feeder Subbasin and FAV tilling projects

Summary

- Regulatory programs
- Cooperative agreements

- Verification of implementation
- Water quality monitoring to ensure effectiveness

- Program improvement

- BMP research and demonstration projects
- Data collection and supplemental evaluations

- Synergize benefits with regional and sub-regional projects

- Restoration Strategies source control projects
- CERP and others

Questions

cbedrega@sfwmd.gov
www.sfwmd.gov/sourcecontrols
www.sfwmd.gov/sfer