



South Florida Water Management District (SFWMD) Update

Everglades Policy and Coordination Division

Chapter 2016-1 Northern Everglades and Estuaries Protection Program

- Coordinating Agencies: FDEP, FDACS, SFWMD
 - FDEP – lead on water quality protection measures through BMAPs
 - FDACS – lead on agricultural interim measures, BMPs, and other measures
 - SFWMD – lead on hydrologic improvements pursuant to the Lake Okeechobee Watershed Protection Plans
- In March 2017, Coordinating Agencies executed an Interagency Agreement for the lake BMAP
 - Clarifies agencies' roles and responsibilities
 - Covers specific information on Watershed Research and Water Quality Monitoring and BMPs
 - Outlines mandated reporting requirements of BMAP



SFWMD Project Highlights

Coordinating Agency Initiatives

CERP Lake Okeechobee Watershed (LOW) Project

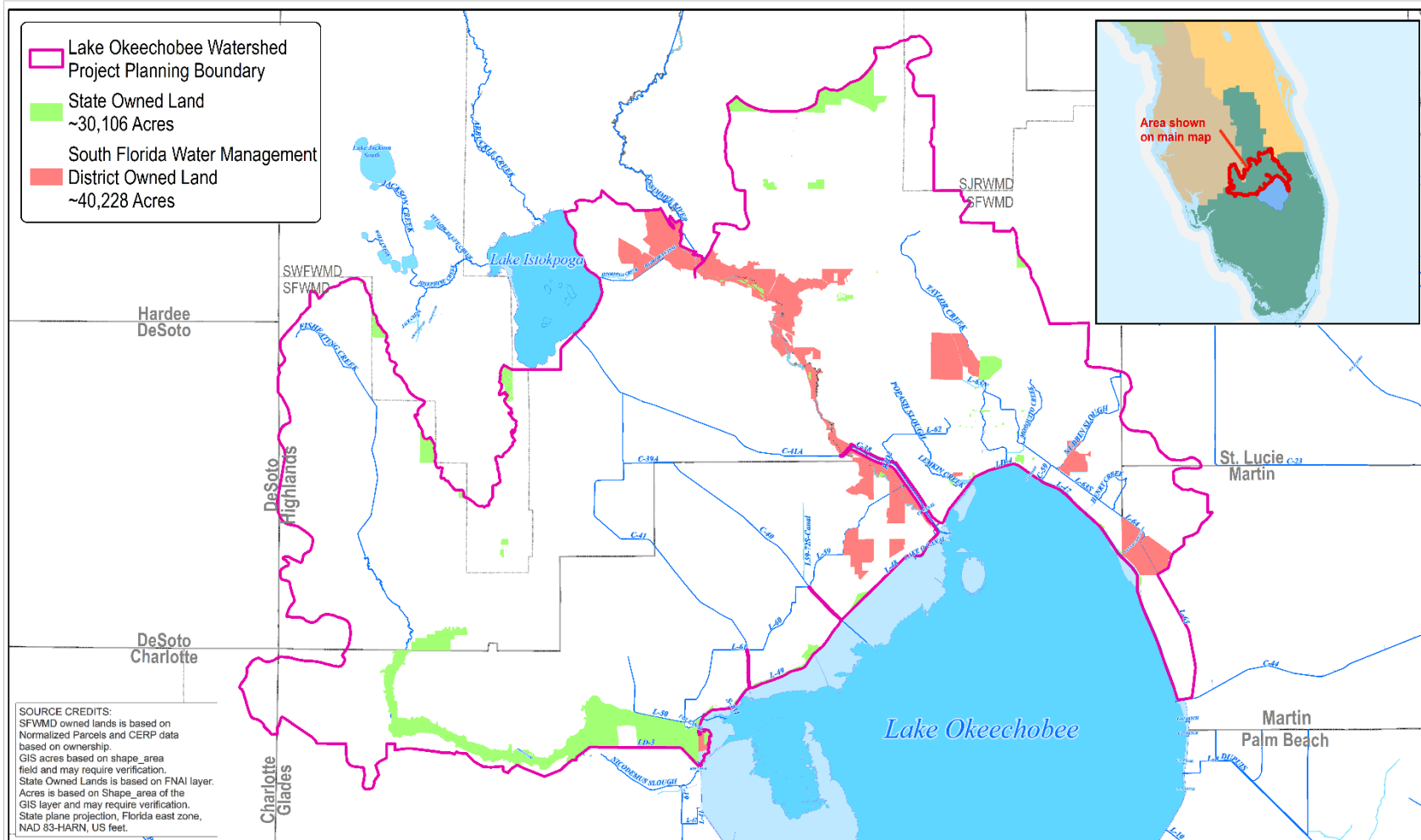
- LOW Project Implementation Report identified project as one of next CERP studies to be conducted (USACE Integrated Delivery Schedule)
- Purpose
 - Increase water storage capacity in the watershed, resulting in improved Lake Okeechobee water levels
 - Improve quantity and timing of discharges to Caloosahatchee and St. Lucie estuaries which adversely affect salinity and estuarine biota
 - Restore/create habitat to increase spatial extent/functionality of wetlands
 - Improve existing and future water supply
- Study Area ~ 950,000 acres; historically dominated by wetlands; current use includes agriculture, natural open land/water, and urban/infrastructure



Lake Okeechobee

CERP LOW Project (cont.)

District and State-Owned Lands in Planning Boundary



Lake Okeechobee Watershed (LOW) Project Area



BASE CREDITS:
State plane projection, Florida east zone, NAD 83-HARN, US feet

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A number line diagram illustrating the conversion of 10 miles to kilometers. The top scale is labeled "Miles" and has markings at 5, 0, 5, and 10. The bottom scale is labeled "Kilometers" and has markings at 5, 0, 5, and 10. The 10-mile mark on the top scale corresponds to the 16-kilometer mark on the bottom scale.

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Map Date: MARCH 2017



CERP LOW Project (cont.)

- USACE's SMART Planning Feasibility Process is under way
 - USACE and SFWMD on planning efforts began in June 2016
 - Initial planning effort includes identifying the initial array of alternatives, which are being developed into overall scope of the plan
- Project Components under Consideration
 - Above Ground Storage
 - Aquifer Storage and Recovery (ASR)
 - Wetland and Floodplain Restoration
 - Deep Well Injection
- Planning process will take three years to complete (by 2019)

SFWMD Project Highlights

SFWMD Activities

Northern Everglades Stormwater Treatment Areas (STAs)



BASE CREDITS:
State plane projection, Florida east zone, NAD 83-HARN, US feet

South Florida Water Management District
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Lake Okeechobee STAs



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April 2017



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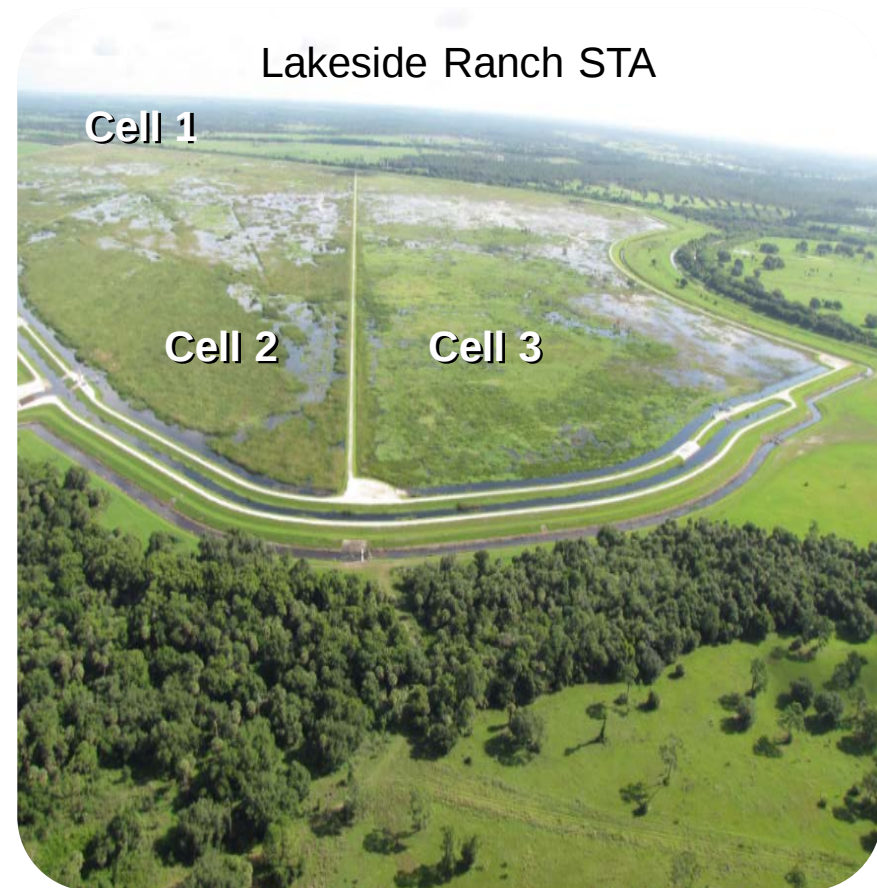
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Lakeside Ranch STA – Phase I

- Purpose: Total phosphorus (TP) removal from S-191 Basin
- Phase I – Northern STA & Inflow Pump Station
 - Operations began in 2012
 - 910-acre effective treatment area
- Designed TP load reduction of 9 MT/yr, with 43% efficiency
- 2016 Status
 - During BMAP reporting period (Jan–Dec. 2016), STA removed 10.2 MT of TP (50% of the total load received); BMAP target is 13.8 MT/yr



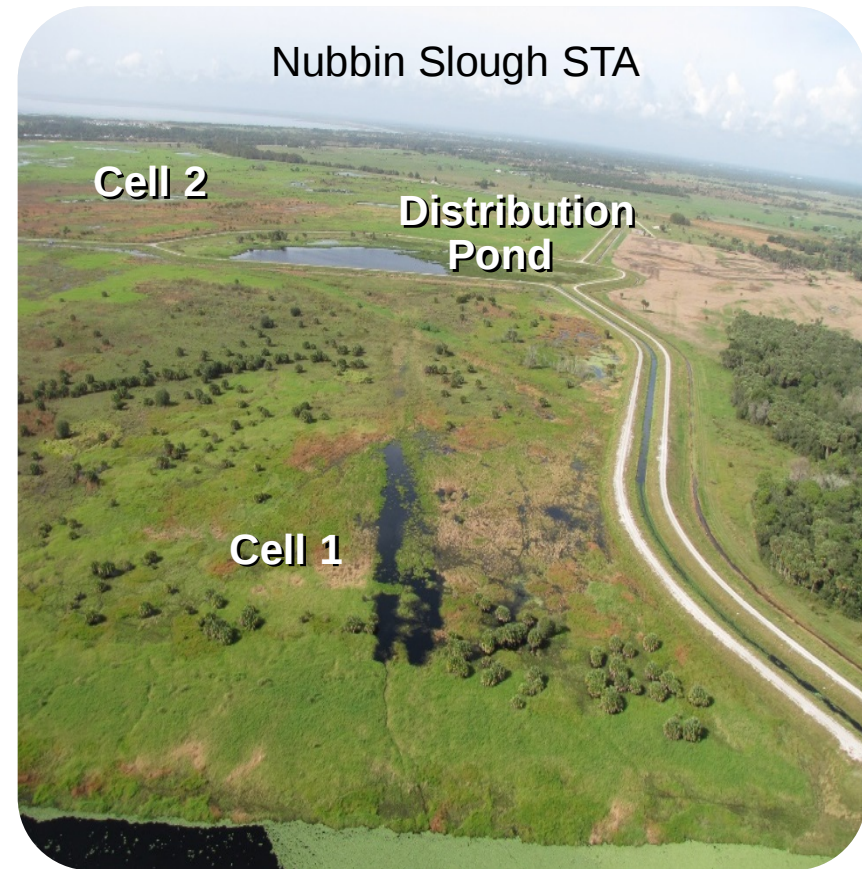
Taylor Creek STA

- Purpose: TP removal from Taylor Creek watershed
 - Operations began in 2008
 - 118-acre effective treatment area
- Designed TP load reduction of 2.1 MT/yr, with 38% efficiency
- 2016 Status
 - During BMAP reporting period (Jan–Dec. 2016), STA removed 1.8 MT of TP (51% of the total load received); this is the same as BMAP target (1.8 MT/yr)



Nubbin Slough STA

- Purpose: TP removal from Nubbin Slough drainage basin
 - 773-acre treatment area
- USACE transferred STA to SFWMD (Mar. 2015) and repairs/modifications were completed
- 2016 Status
 - After ~9 months of consistent sampling, start-up monitoring requirement for TP reduction was achieved in Jun. 2016
 - Flow-through activities commenced in Sep. 2016
 - Optimization is ongoing



Kissimmee River Restoration Project (KRRP)

■ Purpose

- Restore ecological integrity to ~1/3 of river and its floodplain that existed before river channelized (pre-1960s)

■ 50/50 Cost-Share

- USACE: Engineering & Construction
- SFWMD/State: Land Acquisition (>102,000 acres) & Restoration Evaluation

■ Key Components

- Backfill 22 miles of C-38 canal
- Reconnect remnant section of original river channel (45 miles)
- Remove 2 water control structures
- Implement Headwaters Regulation Schedule to meet KRRP goals



Kissimmee River Restoration Project (cont.)

- 2016 Status
 - Construction: Last major portions of construction planned for completion in 2020
 - Headwaters planned for implementation after construction is completed (2020)
- Post-construction Activities
 - Mimic historical flows – 2020
 - Restoration Evaluation Program through 2025
 - Evaluate restoration success



Rolling Meadows Wetland Restoration – Phase I

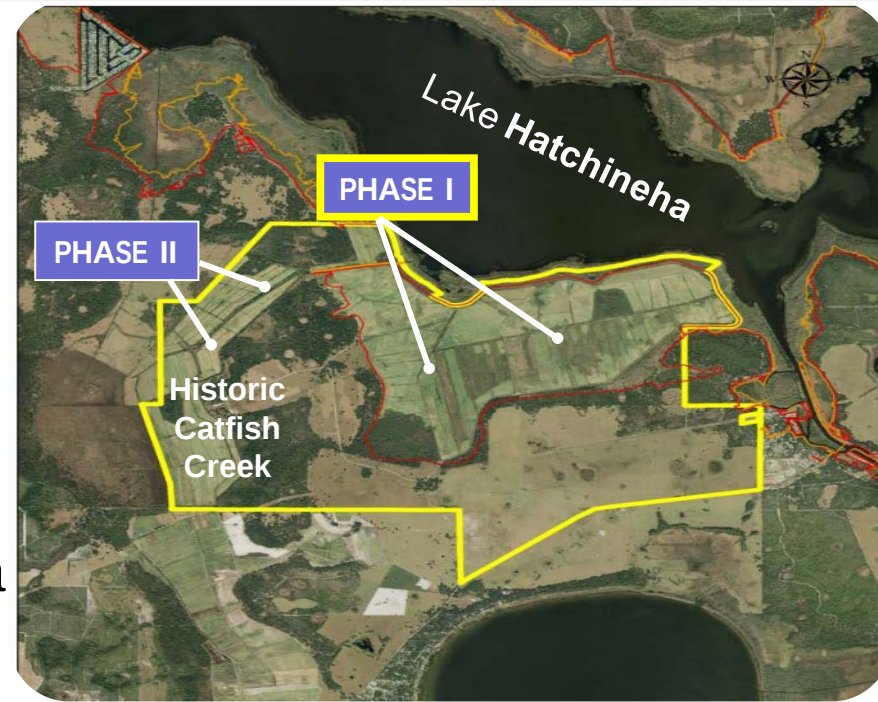
■ Purpose

- Restore historical Lake Hatchineha floodplain wetlands on Rolling Meadows property
 - Storage & Water Quality benefits

■ 2016 Status

Phase I: ~1,900-acre impacted area

- Construction began in late 2015 and was completed in Dec. 2016
- Water control structures installed to facilitate hydration and restore wetland
- BMAP target is 0.07 MT/yr



Dispersed Water Management (DWM) Program

■ Purpose

- Shallow water storage, retention and detention to enhance lake/estuary health
 - Minimize runoff/discharge
 - Reduce nutrient loads
 - Expand groundwater recharge opportunities

■ DWM Project Types in BMAP

- Florida Ranchlands Environmental Services Projects (FRESP)
- Northern Everglades Payment for Environmental Services (NE-PES)
- Retention on Public Lands
- Public-Private Partnerships (NE-PPP)



Operational DWM Projects in BMAP

- **NE-PES-1 Projects** (estimated TP reduction & storage)

- XL Ranch; 4.17 MT/yr; 887 ac-ft
- Dixie West: 0.23 MT/yr; 315 ac-ft
- Dixie Ranch: 0.21 MT/yr; 856 ac-ft
- Buck Island Ranch: 1.09 MT/yr; 1,573 ac-ft
- Lost Oak Ranch: 0.03 MT/yr; 374 ac-ft
- Willaway Cattle & Sod: 0.11 MT/yr; 229 ac-ft
- Triple A. Ranch: 0.08 MT/yr; 397 ac-ft

**Total
TP Reduction:**
~10 MT/yr

Est. Storage:
44,000 ac-ft

- **NE-PES-2 Projects** (est. TP reduction/storage)

- Buck Island Ranch: 0.71 MT/yr; 620 ac-ft of water
- Rafter T. Ranch: 0.09 MT/yr; 1,298 ac-ft of water

- **Other Projects** (est. TP reduction & storage)

- Nicodemus Slough; 3.25 MT/yr; 33,860 ac-ft
- West Waterhole Marsh (FRESP); 4.17 MT/yr; 4,848 ac-ft

SFWMD Project Highlights

Projects Under Development by Coordinating Agencies

Lakeside Ranch STA – Phase II

- Phase II – Southern STA & Pump Station (S-191A)
- STA under construction
 - Construction began in Jan. 2016
 - Completion planned by early 2018
 - 788-acre effective treatment area
 - Planned design TP load reduction of 10 MT/yr, with 43% efficiency; BMAP target is 7.6 MT/yr
- Pump Station is designed
 - Pending future legislative funding



Lakeside Ranch,
South STA Construction



Rolling Meadows Wetland Restoration – Phase II

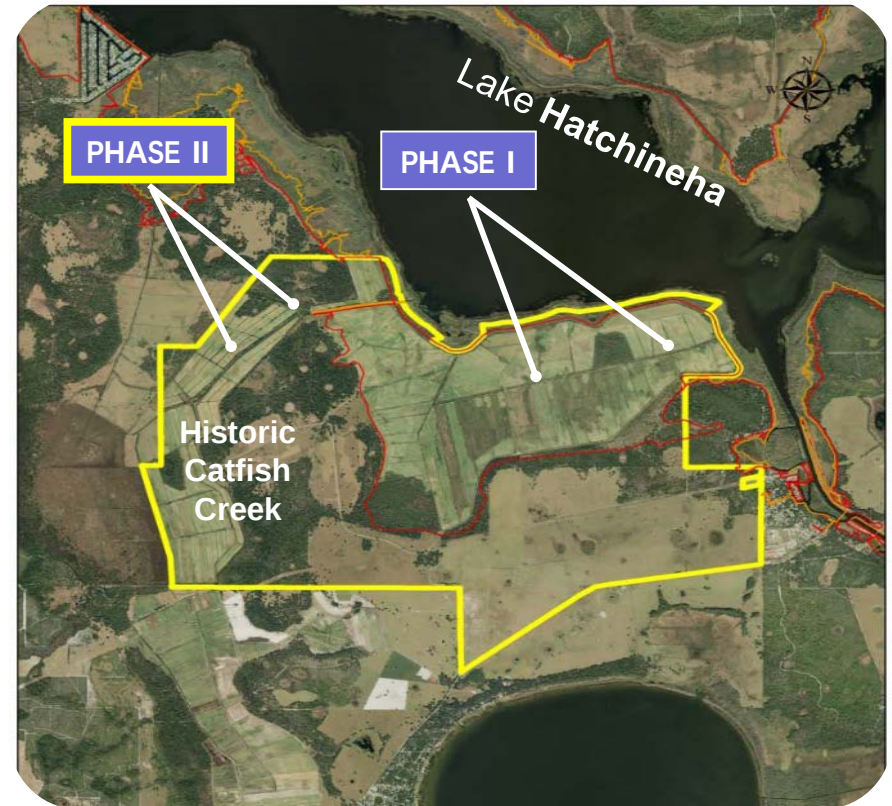
■ Purpose

- Restore historical Lake Hatchineha floodplain wetlands on Rolling Meadows property
 - Storage & Water Quality benefits

■ 2016 Status

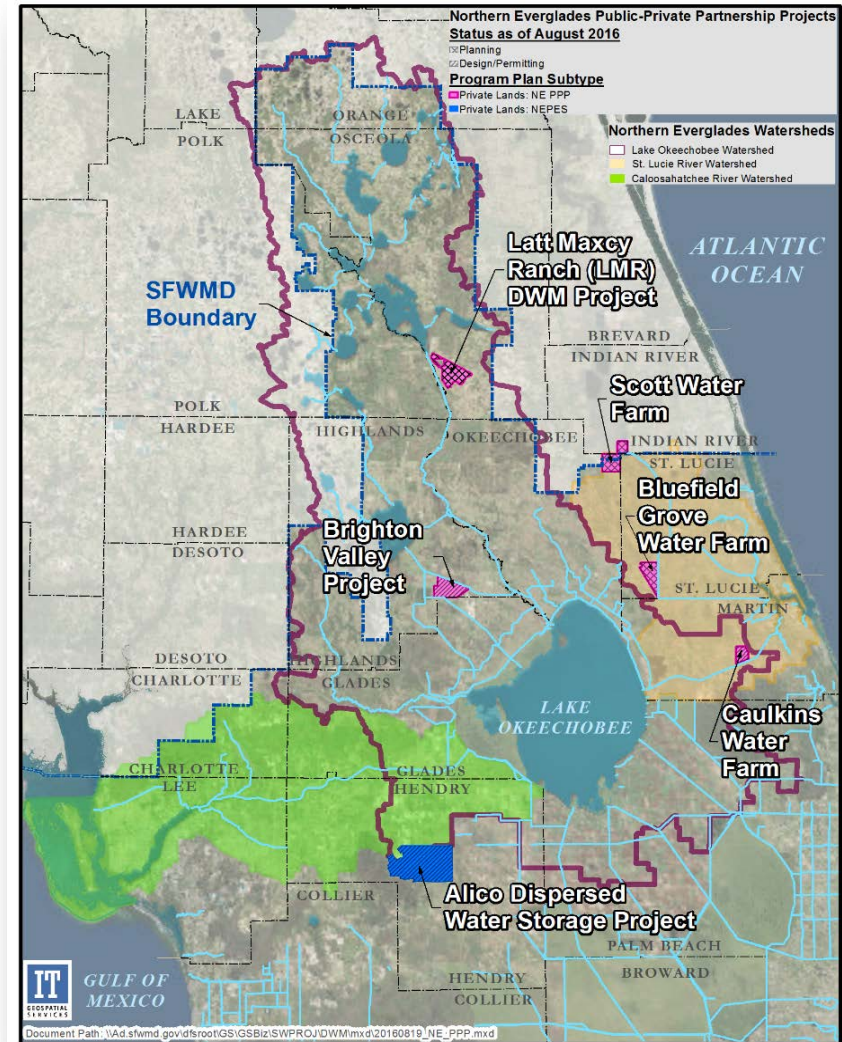
Phase II: ~580-acre wetland area

- Pending future legislative funding
- BMAP target is 0.01 MT/yr



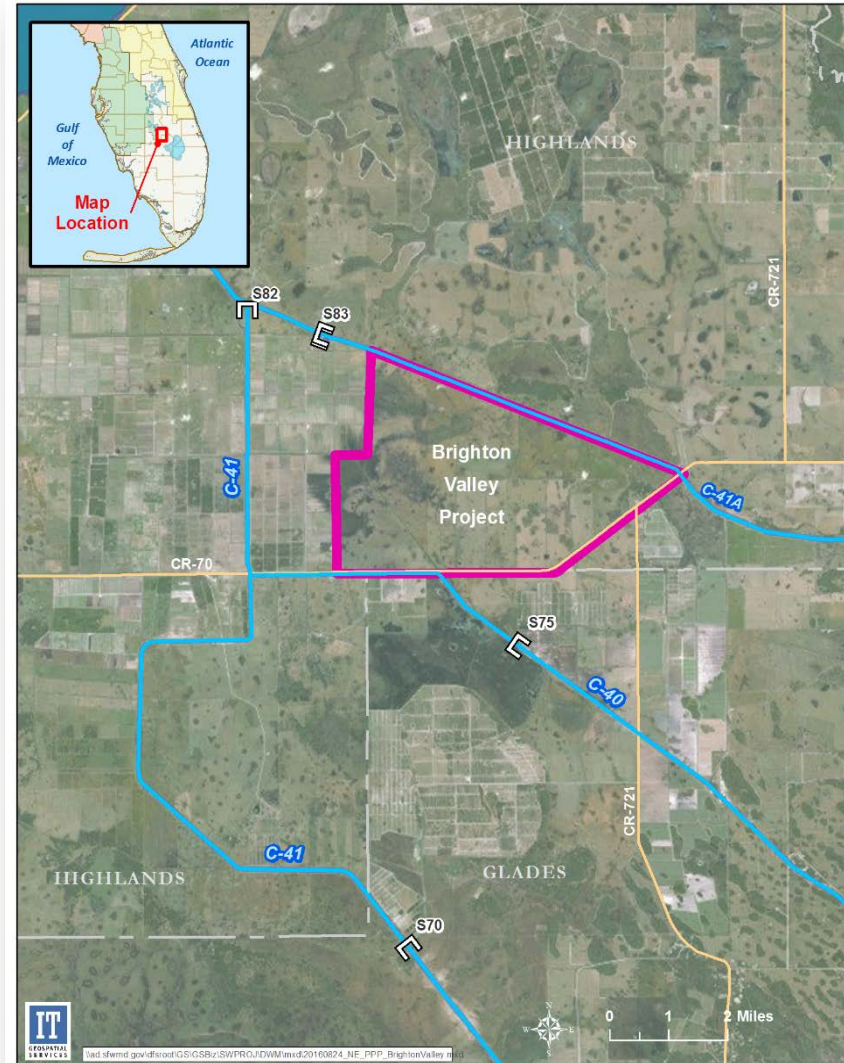
Northern Everglades Public-Private Partnerships (NE-PPP)

- In early 2016, FDEP issued survey for large, regional-scale BMAP projects; selected 6 projects from 16 submittals
- Mar. 2016: Legislature appropriated monies to fund construction of NE-PPP projects (Ch. 2016-66, Specific Appropriation 1590A)
- As part of Interagency Working Group, FDEP tasked SFWMD with developing and executing contracts for the projects
- Two of these projects are in the LOW:
 - Brighton Valley DWM
 - Latt Maxcy DWM



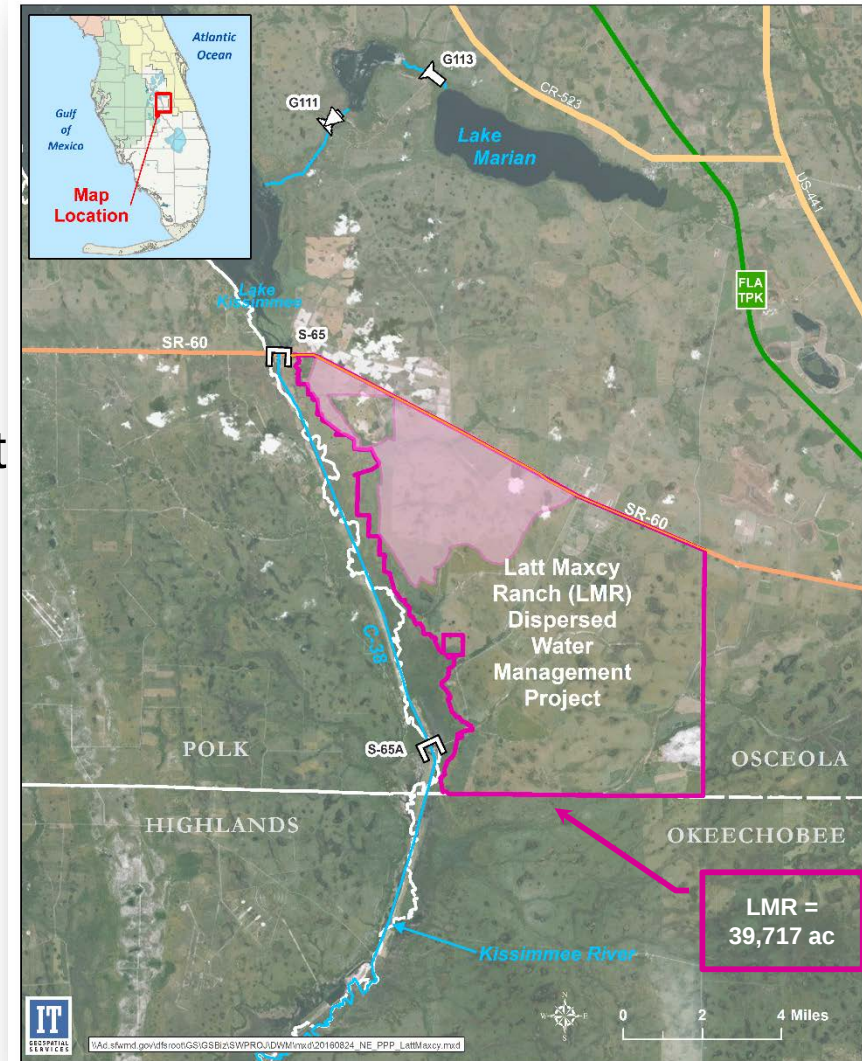
Brighton Valley DWM Project

- Service Provider: Lykes Bros, Inc.
- Lake Okeechobee Watershed, Indian Prairie Sub-Watershed (Highlands County)
- Project area: 8,200 acres
- Primary benefit: Water quality treatment through attenuation of regional runoff and onsite rainfall
- 2016 Status: Design/Permitting; cost-share provided by FDACS



Latt Maxcy DWM Project

- Service Provider: Latt Maxcy Ranch
- Lake Okeechobee Watershed, Lower Kissimmee Sub-Watershed (Osceola County)
- Project area: 9,175 acres
- Primary benefit: Water quality treatment through attenuation of regional runoff and onsite rainfall
- 2016 Status: Design/Permitting; cost-share provided by FDACS



Key Web Links

Lake Okeechobee at:

www.sfwmd.gov/Okeechobee

District Operations at:

www.sfwmd.gov/opsreports

2017 SFER at:

www.sfwmd.gov/SFER





Thank You



Taylor Creek STA,
Lake Okeechobee Watershed