



Florida Department of Environmental Protection

Water Quality Restoration Program

Lake Okeechobee Basin Management Action Plan (BMAP) Annual Meeting

May 2, 2017

Sara Davis

Sara.C.Davis@dep.state.fl.us





Agenda

- Florida Department of Environmental Protection (DEP) Overview of the Lake Okeechobee BMAP 2016 Annual Progress Report.
- South Florida Water Management District (SFWMD) Updates.
- Florida Department of Agriculture and Consumer Services (FDACS) Updates.
- Watershed Assessment Model (WAM) Update and Alternative Scenario Simulation Presentation.
- DEP Division of Watershed Restoration Assistance (DWRA) Overview.
- Questions, Comments, and Discussion.



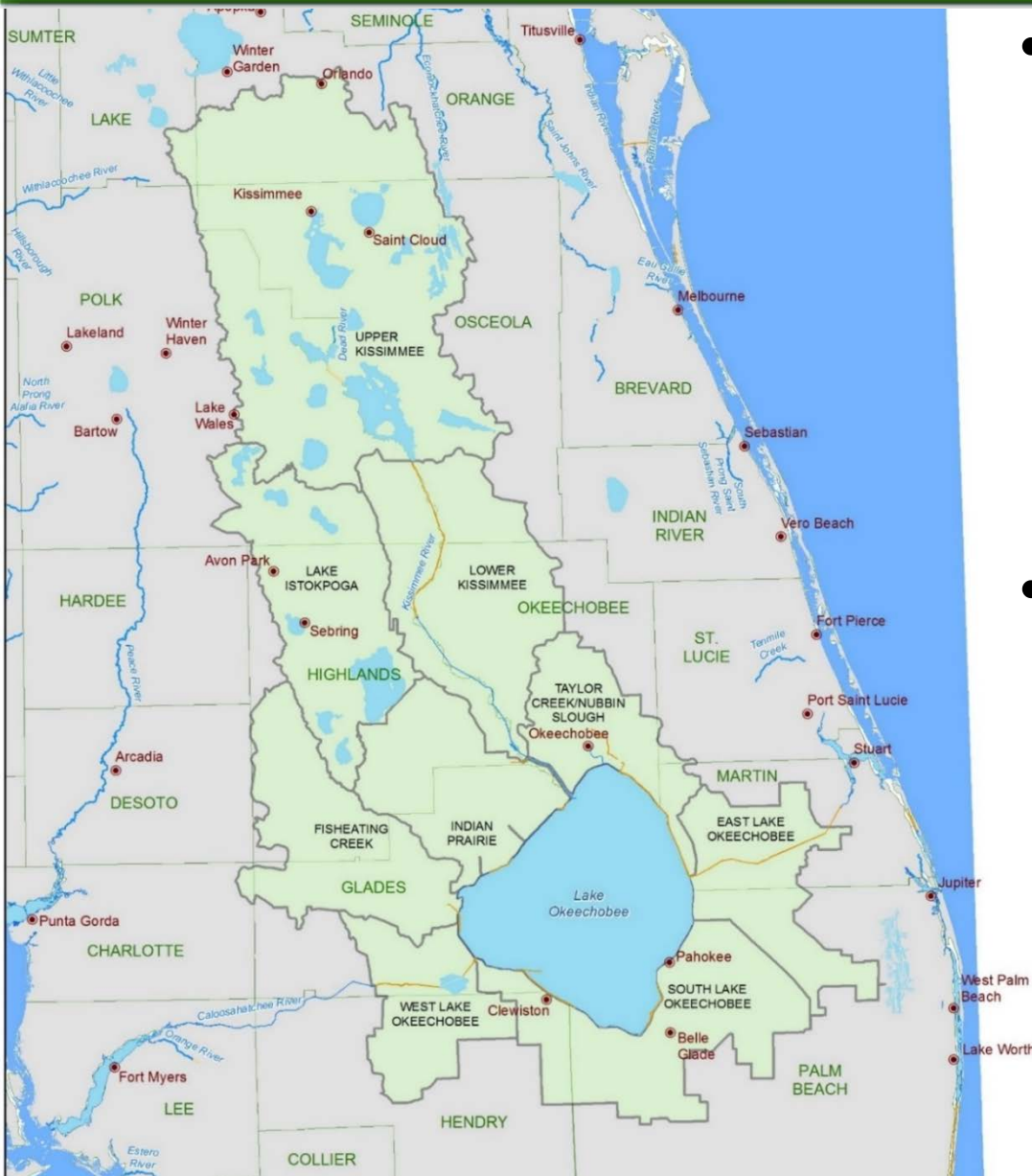
Florida Department of Environmental Protection

Overview of the Lake Okeechobee BMAP 2016 Annual Progress Report





Lake Okeechobee BMAP



- Total maximum daily load (TMDL) for total phosphorus (TP) adopted in 2001.
 - 105 MT/yr allocated to entire watershed.
- Lake Okeechobee BMAP adopted in 2014.
 - Watershed divided into nine sub-watersheds.
 - BMAP focuses on activities in six northern sub-watersheds.



2016 Lake Okeechobee Report

- Second annual progress report compiled.
- Reporting period: January 1, 2016 – December 31, 2016.
- Report sections:
 - Activities during the reporting period.
 - Water quality monitoring.
 - Other efforts.
 - Compliance.





2016 Completed Efforts

Lead Entity	Project Number	Project Name	Total Nitrogen (TN) Reduction (kg/yr)	TP Reduction (kg/yr)
Okeechobee County	OK-02	Oak Park	14	2
Okeechobee County	OK-07	Lock 7 Bypass Culvert System	TBD	TBD
Orange County	OC-28	Lake Down Alum Treatment Facility	555	21
SFWMD	SFWMD-06	Phase I Rolling Meadows	TBD	65
Spring Lake Improvement District (SLID)	SLID-01	SLID Phases 1-3	88	70
TBD = To be determined			Total:	
			657	158



2016 Completed Efforts (cont.)

Okeechobee County: Completed Two Projects



OK-2: Oak Park Project



OK-7: Lock 7 Bypass
Culvert System Project



2016 Completed Efforts (cont.)

Orange County: Completed OC-28 and OC-38



OC-28: Lake Down Alum Treatment Facility Project



2016 Completed Efforts (cont.)

SFWMD: Completed SFWMD-06 Phase I Rolling Meadows





2016 Completed Efforts (cont.)

- Spring Lake Improvement District:
Completed SLID-1.
- Treats 3,016 acres.
- Reduction of 69.83 kg/yr TP.

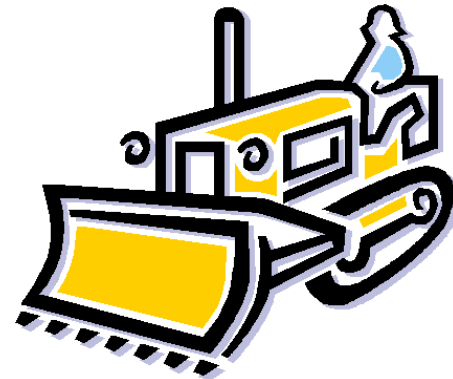




Coordinating Agencies

Projects Under Development

- Istokpoga Marsh Watershed Improvement District - Phase II.
- Lakeside Ranch Stormwater Treatment Area (STA) - Phase II.
- Brighton Valley - Lykes.
- Latt Maxcy Dispersed Water Management (DWM).
- Rolling Meadows Wetland Restoration - Phase II.
- Inactive Dairies - Lagoon Remediation.
- PL-566 Funded/Fisheating Creek Structure.
- State Road (S.R.) 710 Regional Project.
- Legislative Cost-Share Appropriation Program.





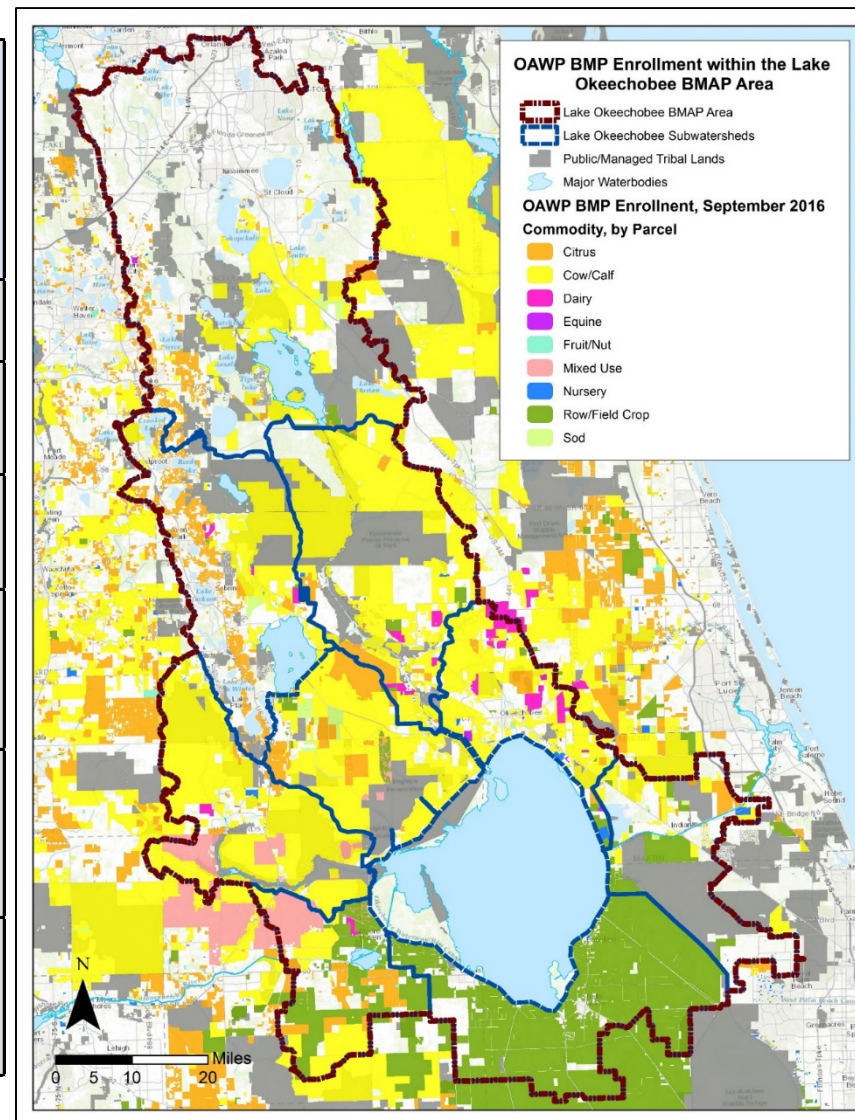
Coordinating Agencies Initiatives

- Comprehensive Everglades Restoration Plan (CERP) Planning.
- Owner-implemented best management practice (BMP) verification.
- Cost-share BMP effectiveness verification.
- Watershed Assessment Model (WAM) revisions.
- Water quality monitoring.
- Alternative BMP nutrient reduction projects.
- In-lake strategies: muck scraping and tilling.



Agricultural Lands Enrollment

	Fisheating Creek	Indian Prairie	Lake Istokpoga	Lower Kissimmee	Taylor Creek Nubbin Slough	Upper Kissimmee	Total
LET Agricultural Acres	174,561	218,216	130,523	216,284	140,921	275,034	1,155,539
LET Agricultural Acres within Enrolled Acres	145,940	166,194	92,077	159,084	113,446	124,240	800,981
LET Remaining Agricultural Acres to Enroll	28,621	52,022	38,446	57,200	27,475	150,794	354,558
Total Acreage Enrolled (as of December 31, 2008)	37,918	8,604	73,501	155,862	51,903	22,037	349,825
Acreage Enrolled January 1, 2009–September 30, 2016	270,823	198,667	133,207	193,338	107,084	176,503	1,079,622
Total Acreage Enrolled (as of September 30, 2016)	308,741	207,271	206,708	349,200	158,987	198,540	1,429,447





Florida Department of Environmental Protection

Monitoring Program Update





Monitoring

Water quality monitoring is being conducted by:

City of Orlando

City of Kissimmee

Orange County

Osceola County

SFWMD

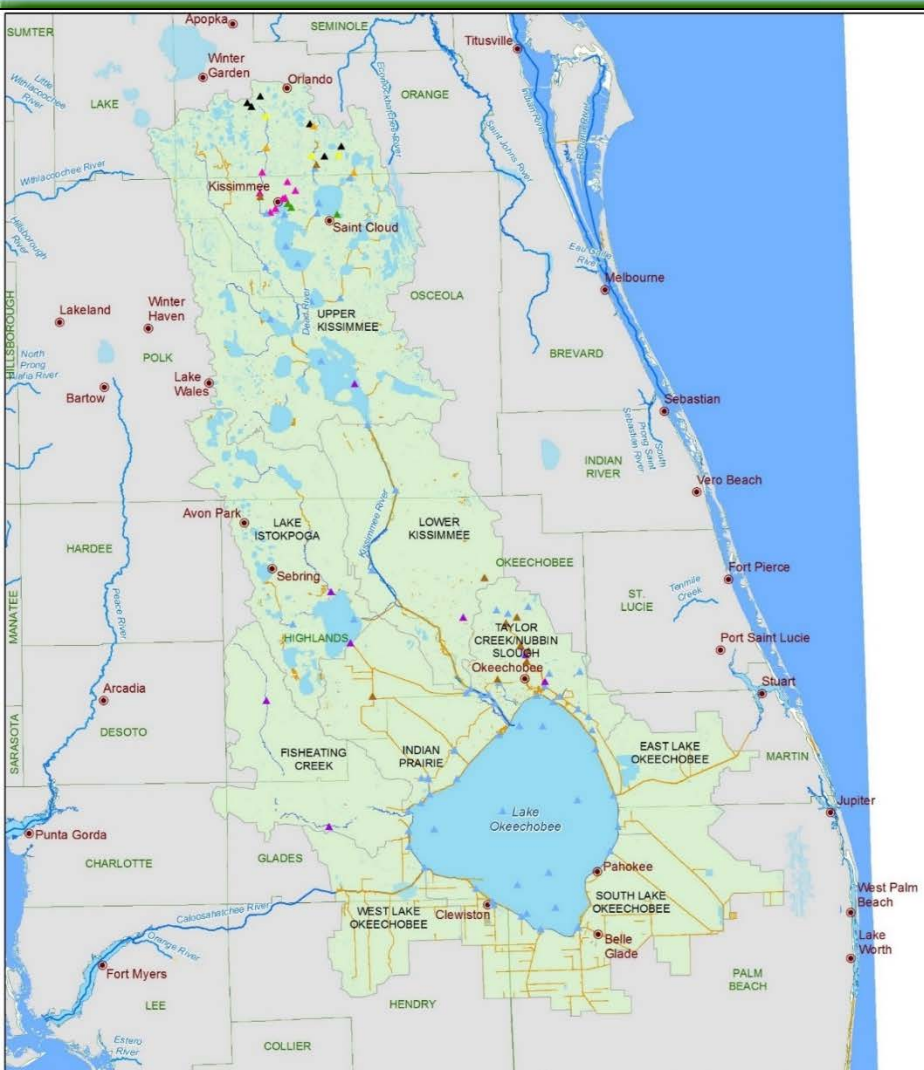


Photo: Water quality monitoring by SFWMD staff in the restored area of the Kissimmee River, Station PC62 (photo by the SFWMD, February 2016).



Monitoring (cont.)

- Monitoring network information in Section 3 and Appendix D.
- Efforts under way to improve the monitoring plan.
- Some STORET data uploads still needed.



Lake Okeechobee BMAP
Water Quality Monitoring Network

Map prepared by the Division of Environmental Assessment and Restoration. This map is not for legal decision making purposes.
(2013) Andrew Morris (850) 245-8425
(BMAP) Sara Davis (850) 245-8425
Map ID: Monitoring Stations
Created: 7-20-2016

Monitoring Entities

● Cities	— Canal/Ditch	▲ SFWMD	▲ City of Orlando
■ Counties	— Stream/River	▲ Osceola County	▲ City of Kissimmee
■ Lake/Pond		▲ SFWMD/USGS	▲ Orange County
■ Lake Okeechobee Subwatersheds		▲ USGS	▲ Orlando/Orange County

Watershed Information Network (WIN) replaces STORET in 2017. By 2018, all data submitted to WIN.



Water Quality Analyses

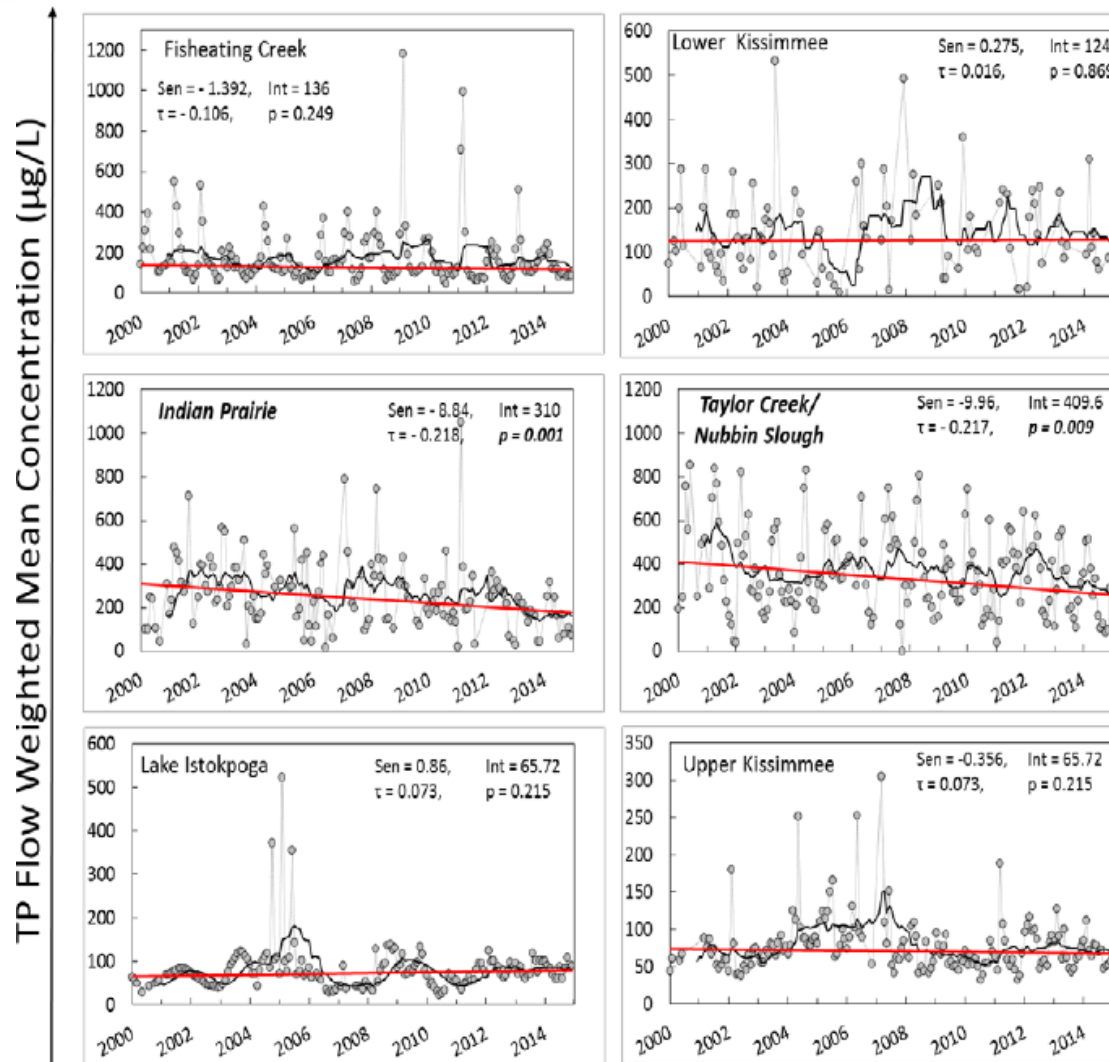


Figure 8B-12. Monthly TP FWM concentrations from WY2001 to WY2015. Gray dots represent monthly values, black line presents 12-month moving average, and red line represents Seasonal Kendall Tau trend line. Bolded and italicized subwatershed labels indicate statistically significant changes (p -value < 0.05).

- The 2017 SFER – Volume I, Chapter 8B, includes various water quality analyses in the Lake Okeechobee Watershed (LOW).
- Additional analyses being developed for BMAP.



Florida Department of Environmental Protection

Future Projects and Requirements





New Requirements

- Revisions to Section 373.4595, Florida Statutes (F.S.) during 2016 legislative session.
- New requirements for Northern Everglades watersheds.
 - Lake Okeechobee.
 - Caloosahatchee.
 - St. Lucie.
- Enhanced integration of water management district protection plans and BMAPs.
- Additional reporting
 - 5-year BMAP progress reports.
 - Annual Northern Everglades Coordinating Agencies Report.



All New or Revised BMAPs

- Revisions to Section 403.067, F.S.
- Priority ranking of projects.
- Planning-level estimates:
 - Costs.
 - Completion dates.
 - Expected load reduction.
- Source and amount of financial assistance from:
 - DEP.
 - Water management districts.
 - Other entities.
- Annual Progress Report on all BMAPs, starting July 1, 2018

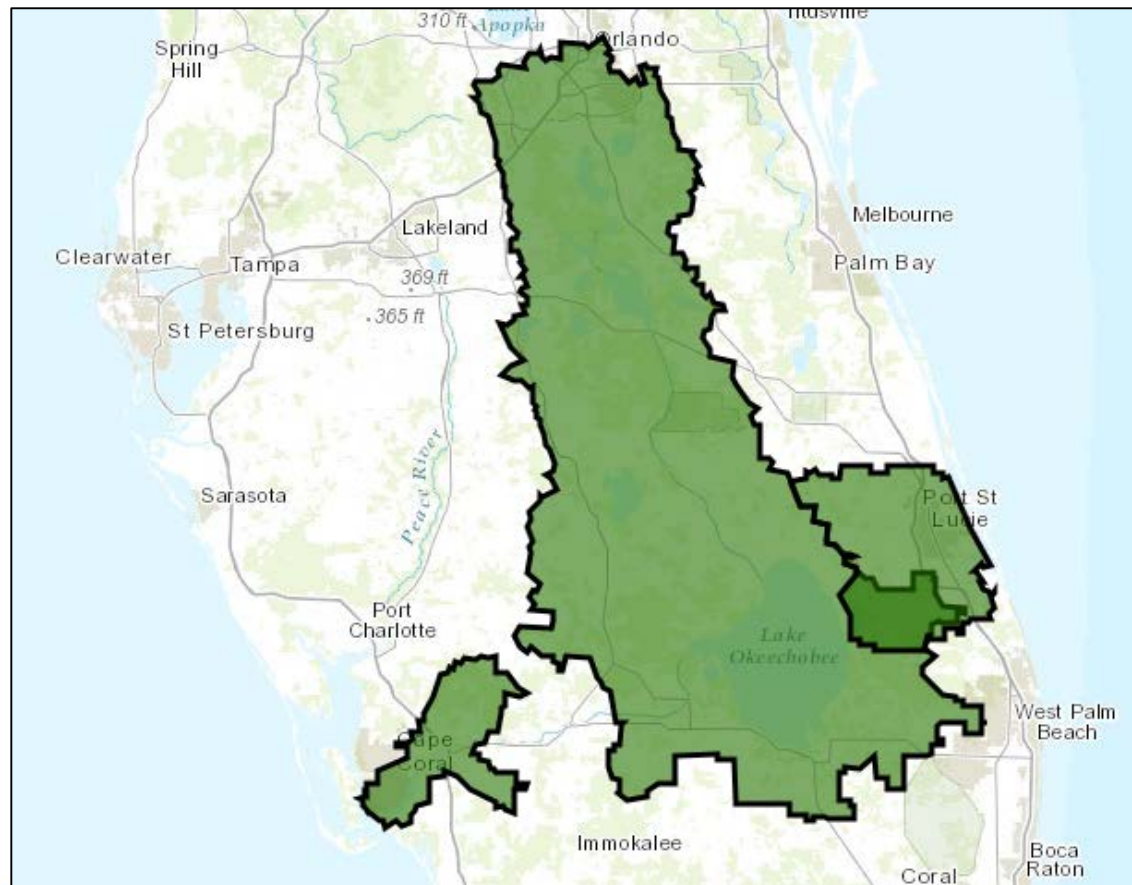




Northern Everglades BMAPs

New Elements for Northern Everglades and Estuaries Protection Program (NEEPP) BMAPs

- Projects to achieve the TMDL in 20 years.
- 5-year milestones to measure progress.
- 5-year Review.





Questions?





Florida Department of Environmental Protection

South Florida Water Management District (SFWMD) Updates





Florida Department of Environmental Protection

Florida Department of Agriculture and Consumer Services (FDACS) Updates





Florida Department of Environmental Protection

Watershed Assessment Model (WAM) Update and Alternative Scenario Simulation Presentation





Florida Department of Environmental Protection

DEP Division of Watershed Restoration Assistance (DWRA) Overview





Florida Department of Environmental Protection

Next Steps





Action Items

- Comments on the draft annual report due May 19, 2017.
- Florida STORET/WIN uploads.
- WAM scenarios.
- Continue development of water quality analyses.
- Continue project information collection.
- Next annual meeting spring/summer 2018.



Contact Information

For additional information please contact:

Sara Davis

850-245-8825

Sara.C.Davis@dep.state.fl.us