



Lake Okeechobee Basin Management Action Plan BMAP Public Meeting

January 2020



Agenda

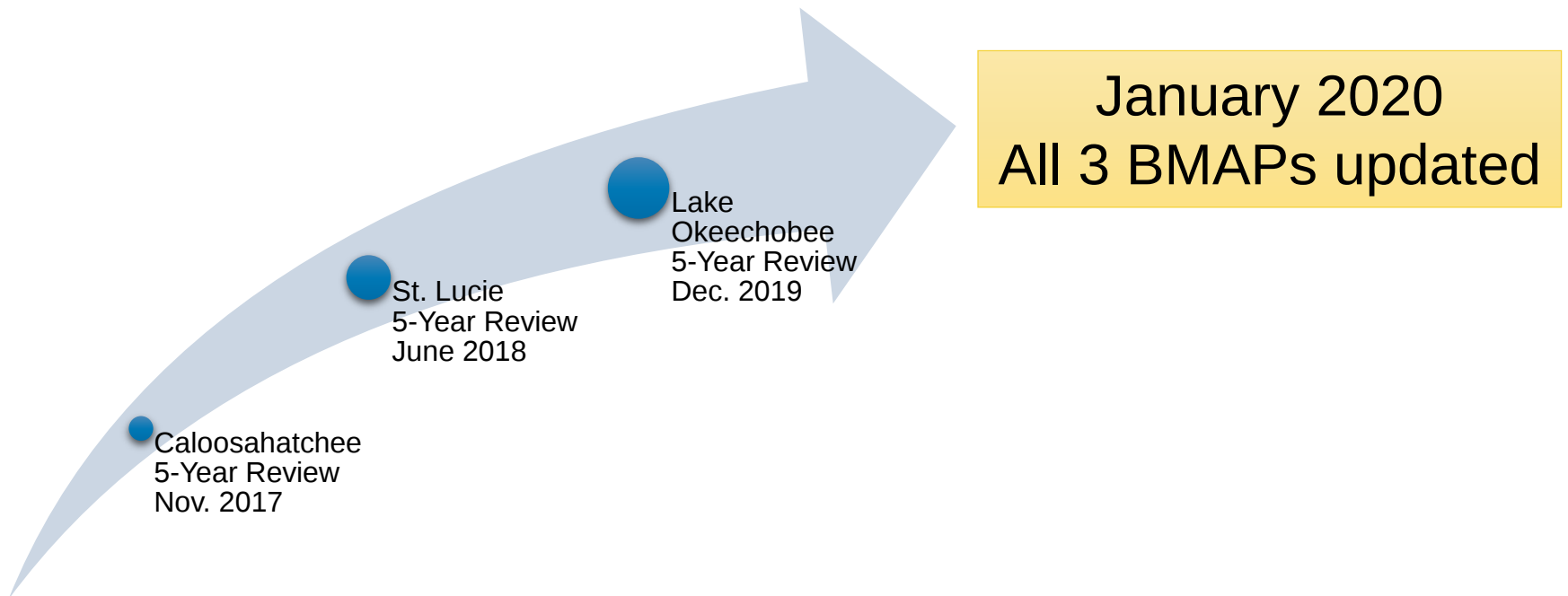
- Background
- Overview of the BMAP Update
- Next Steps



Executive Order 19-12

BMAP Directives

- Update restoration plans impacting South Florida communities within the year, including:





BMAP Update Process

- Public meetings in 2019:
 - March 27, July 30, December 19
- Draft report posted December 2019
 - Public comment period Dec. 16, 2019 – Jan. 10, 2020
- Comments reviewed and draft edited
- Updated draft report posted January 22, 2020
 - Adjusted several tables to clarify information
 - Incorporated clarification in source requirements sections*
 - Corrected project table details

* denotes changes that were not included in the Jan. 22 version



Background (Chapter 1)

Lake Okeechobee TMDL

Lake Okeechobee BMAP

Pollutant Sources

Assumptions and Considerations



Background Information

1.1.1. Lake Okeechobee TMDL

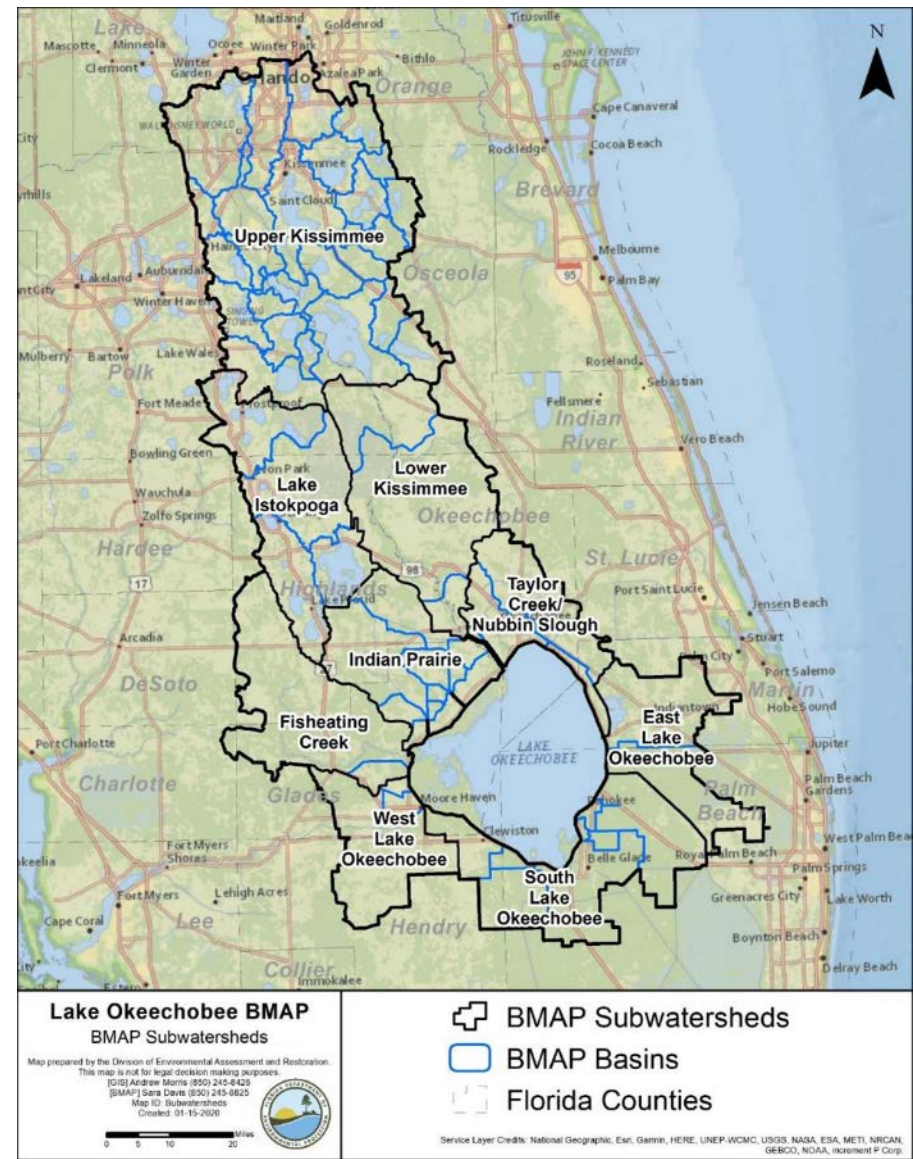
- Total maximum daily load (TMDL) for total phosphorus (TP) adopted in 2001
- TMDL is a TP load of 140 metric tons per year (mt/yr):
 - 35 mt/yr fall directly on the lake through atmospheric deposition
 - Remaining 105 mt/yr allocated to the entire Lake Okeechobee Watershed (LOW)
- TMDL attainment calculated using a 5-year rolling average of the monthly loads calculated from measured flow and concentration values



Background Information

1.2. Lake Okeechobee BMAP

- BMAP adopted in December 2014
- Focus was on project implementation in the six subwatersheds north of Lake Okeechobee
- Edits:
 - Reorganized some text
 - Added new figure with basins included



01/24/2020



Background Information

- 1.2.1. Pollutant Sources
 - 1.2.1.1. Agriculture
 - Adjusted language and added some clarification
 - Acknowledged overlap between BMAPs
 - 1.2.1.2. MS4
 - Clarified timing of requirements
- 1.2.3. Considerations
 - Clarified land use data source
 - Added new consideration



5-Year Review (Chapter 2)

2.1. Progress to Date

2.2. BMAP Modeling

2.3. LOW Construction Project

2.4. Water Quality Analysis

2.5. 5-Year Review Conclusions



5-Year Review

2.1. Progress to Date

- 215 projects completed from January 1, 2009 to June 30, 2019
 - Estimated benefits from WAM LET 95.54 mt/yr
- Finished some project calculations and updated **Table 12**
- Added more details on number of projects and reductions to date

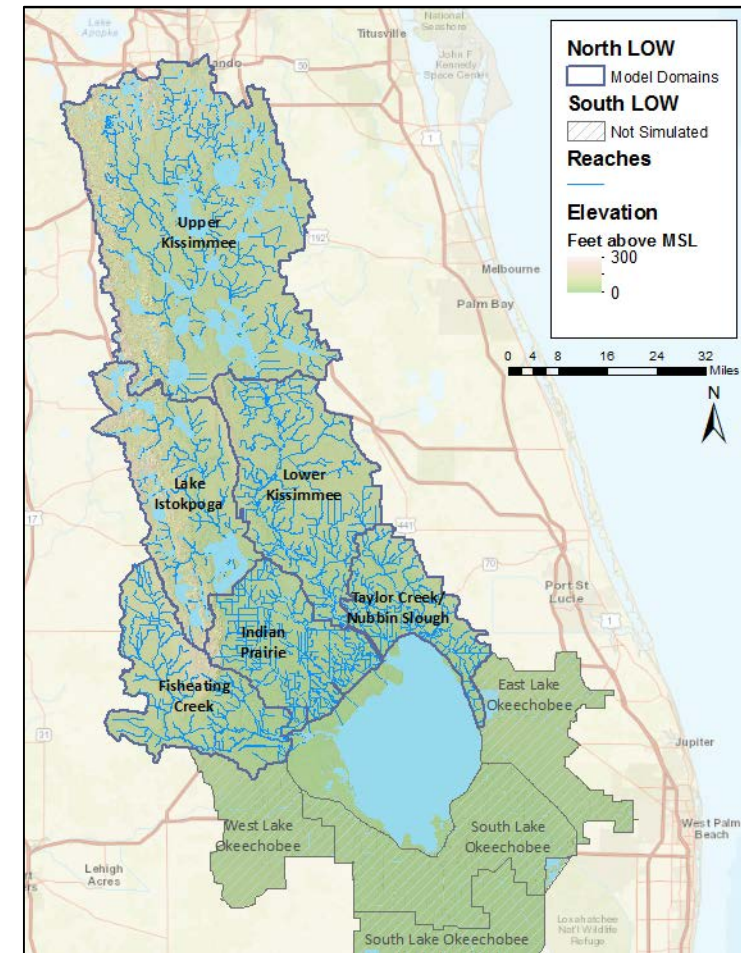
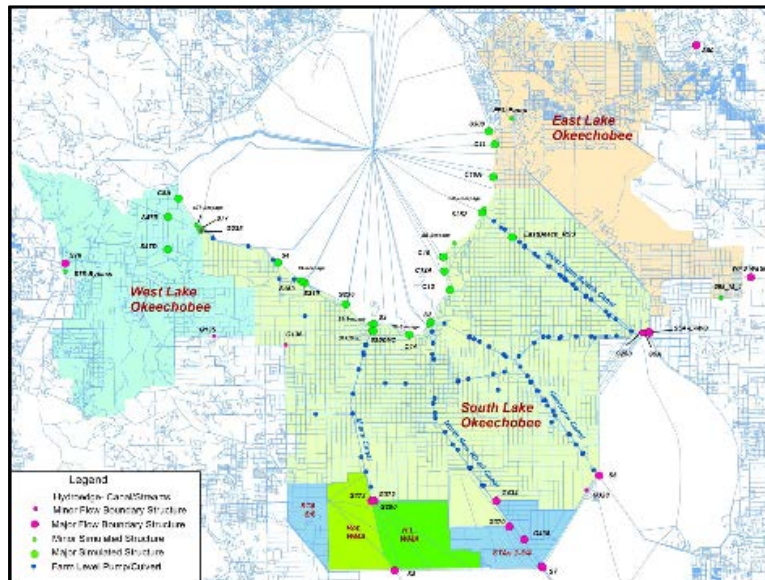
Subwatershed	TP Reduction to Date (lbs/yr)	TP Reduction to Date (mt/yr)
Fisheating Creek	31,652	14.36
Indian Prairie	45,077	20.45
Lake Istokpoga	5,595	2.54
Lower Kissimmee	12,245	5.55
Taylor Creek/Nubbin Slough	51,437	23.33
Upper Kissimmee	36,234	16.44
East Lake Okeechobee	8,911	4.04
South Lake Okeechobee	18,309	8.30
West Lake Okeechobee	1,176	0.53
Total	210,636	95.54
Total Required Reductions	1,086,879	493.00
Total Reductions Achieved (%)	19.4 %	19.4 %



5-Year Review

2.2. BMAP Modeling

- Clarified information about land use input
- Included dates of calibration and verification period





5-Year Review

Table 14. Coordinating Agencies Initiatives

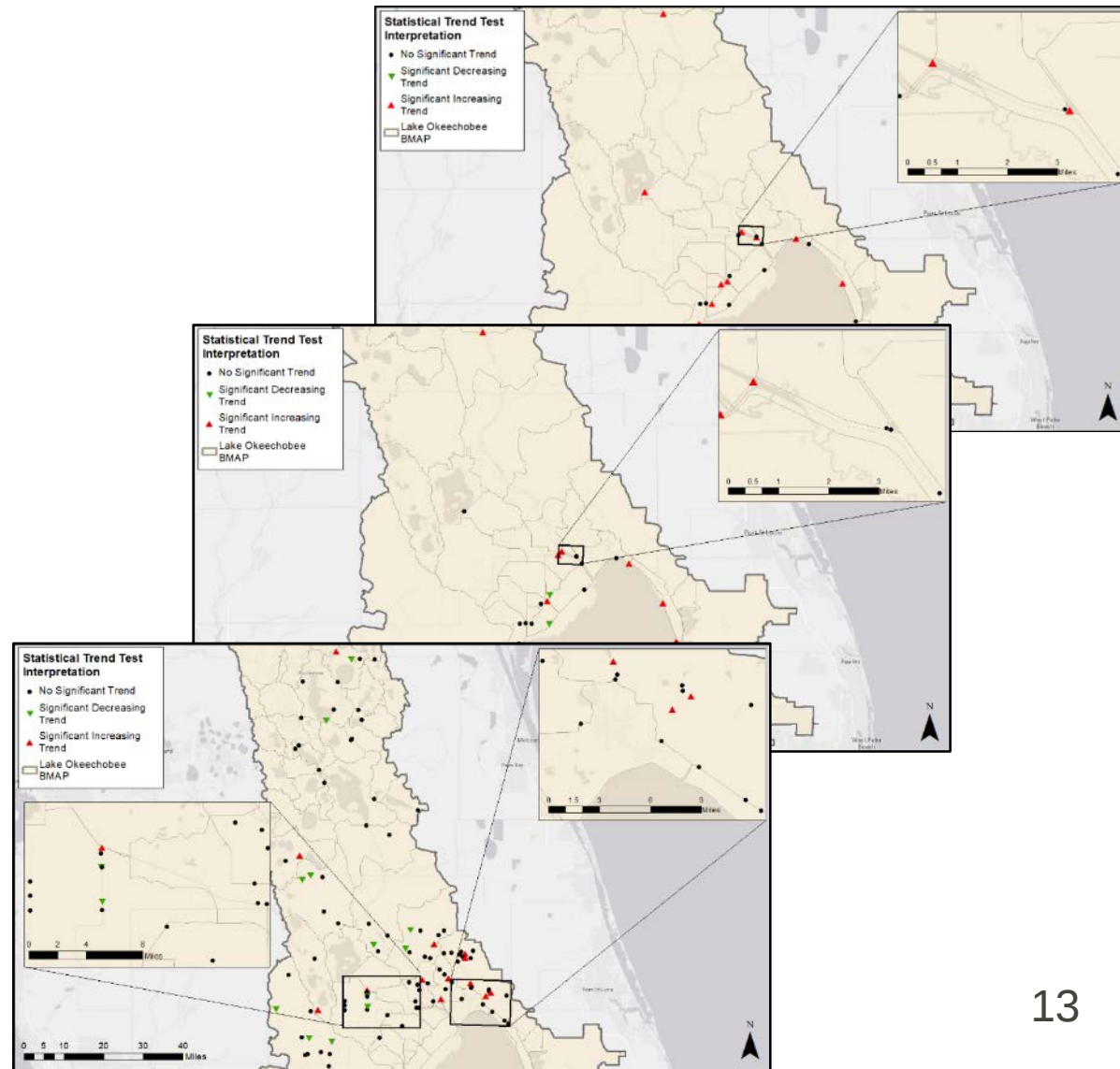
Initiative	Update
Lake Okeechobee Watershed Restoration Project (LOWRP)	SFWMD reinitiated formulation of storage components of LOWRP, with U.S. Army Corps of Engineers (USACE) as federal partner.
Implemented BMP Verification	FDACS and DEP are developing plan for BMP verification.
Cost-Share BMP Effectiveness Review	FDACS and DEP developed approach to evaluate effectiveness of various types of cost-share projects.
Chapter 40E-61, F.A.C.	SFWMD has initiated rulemaking to revise Chapter 40E-61, F.A.C., to ensure objectives are consistent with Sections 373.4595 and 403.067, F.S.
Water Quality Monitoring	As DEP develops monitoring plan for BMAP, consideration is being given to areas with on-the-ground projects/ BMPs to evaluate water quality improvements.
In-Lake Strategies: Muck Scraping and Tilling	Initiative during low lake levels in Lake Okeechobee



5-Year Review

2.4. Water Quality Analysis

- Tier 1 Stations - Analyzed trends in loads and flow weighed means (FWMs)
- Tier 2 Stations - Analyzed trends in TP concentrations
- Clarified types of samples collected at stations in each tier
- Added subwatersheds to **Tables 15, 16, 17**





5-Year Review

2.5.1. Milestones

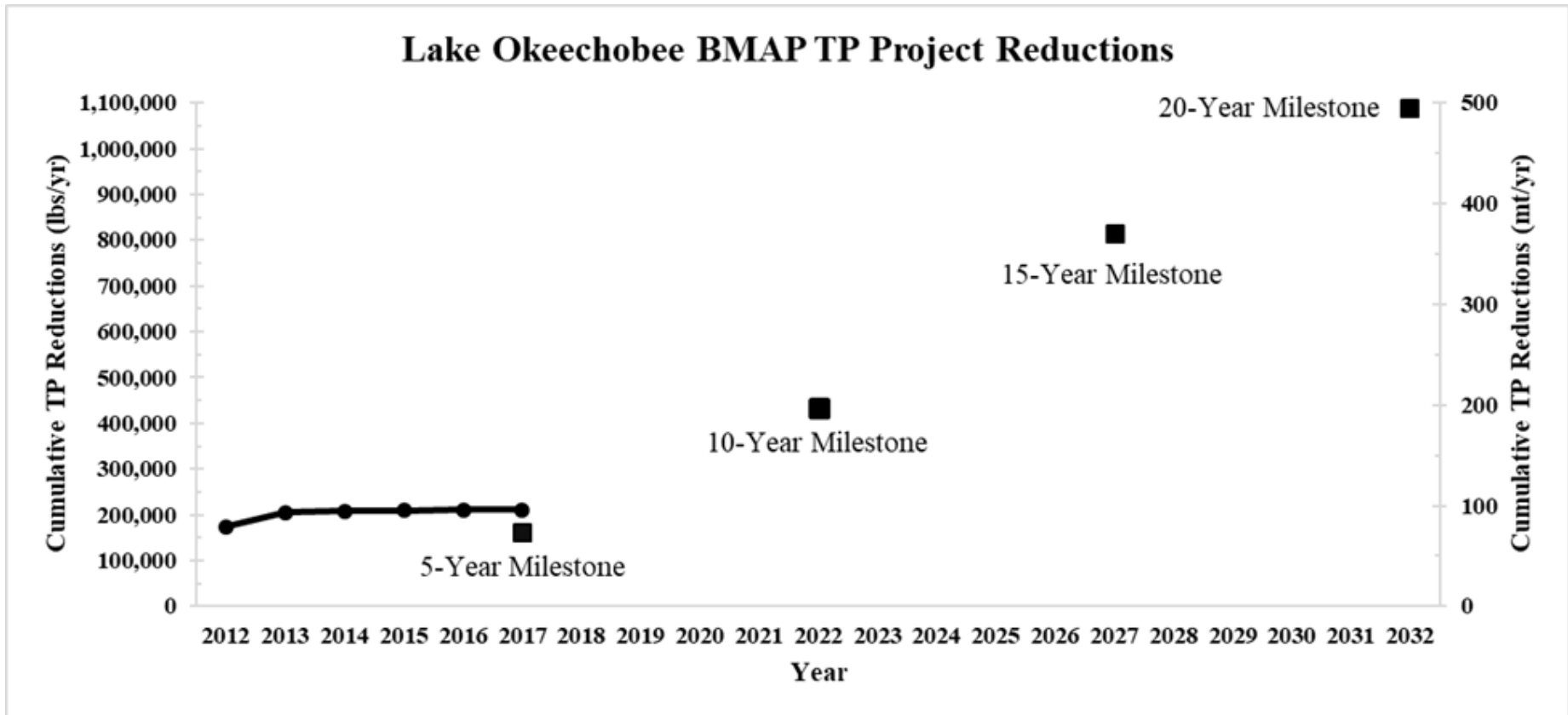


Figure 7. Estimated progress towards the Lake Okeechobee BMAP TP milestones with projects completed through June 30, 2019



Questions





BMAP Update

Chapter 3 – Restoration Approach

Chapter 4 – Subwatersheds

Chapter 5 – Summary

Appendices A through E



Restoration Approach

3.1. Basinwide Sources Approach

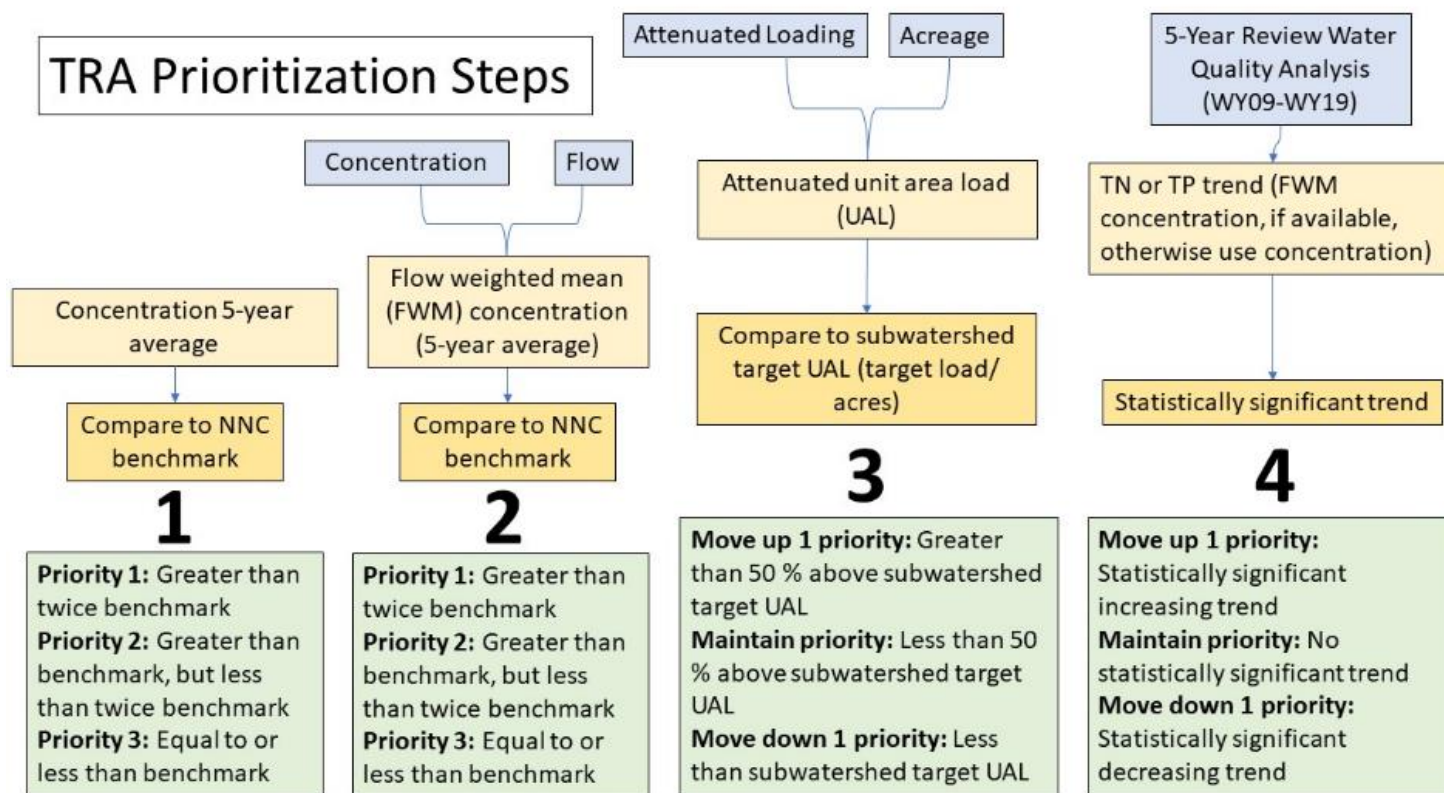
- Incorporated clarification language in source requirements sections:
 - 3.1.1. Agriculture
 - Adjusted cost-share language, clarified fertilizer use summary language
 - 3.1.2. Septic Systems
 - Clarified language on stakeholder requirements and estimated effluent loads
 - 3.1.3. Stormwater
 - Better aligned language with MS4 rules
 - 3.1.4. Wastewater Treatment
 - Clarification text added



Restoration Approach

3.2. TRA Approach

- 3.2.1. Overview
- 3.2.2. Evaluation
 - Clarification of several steps



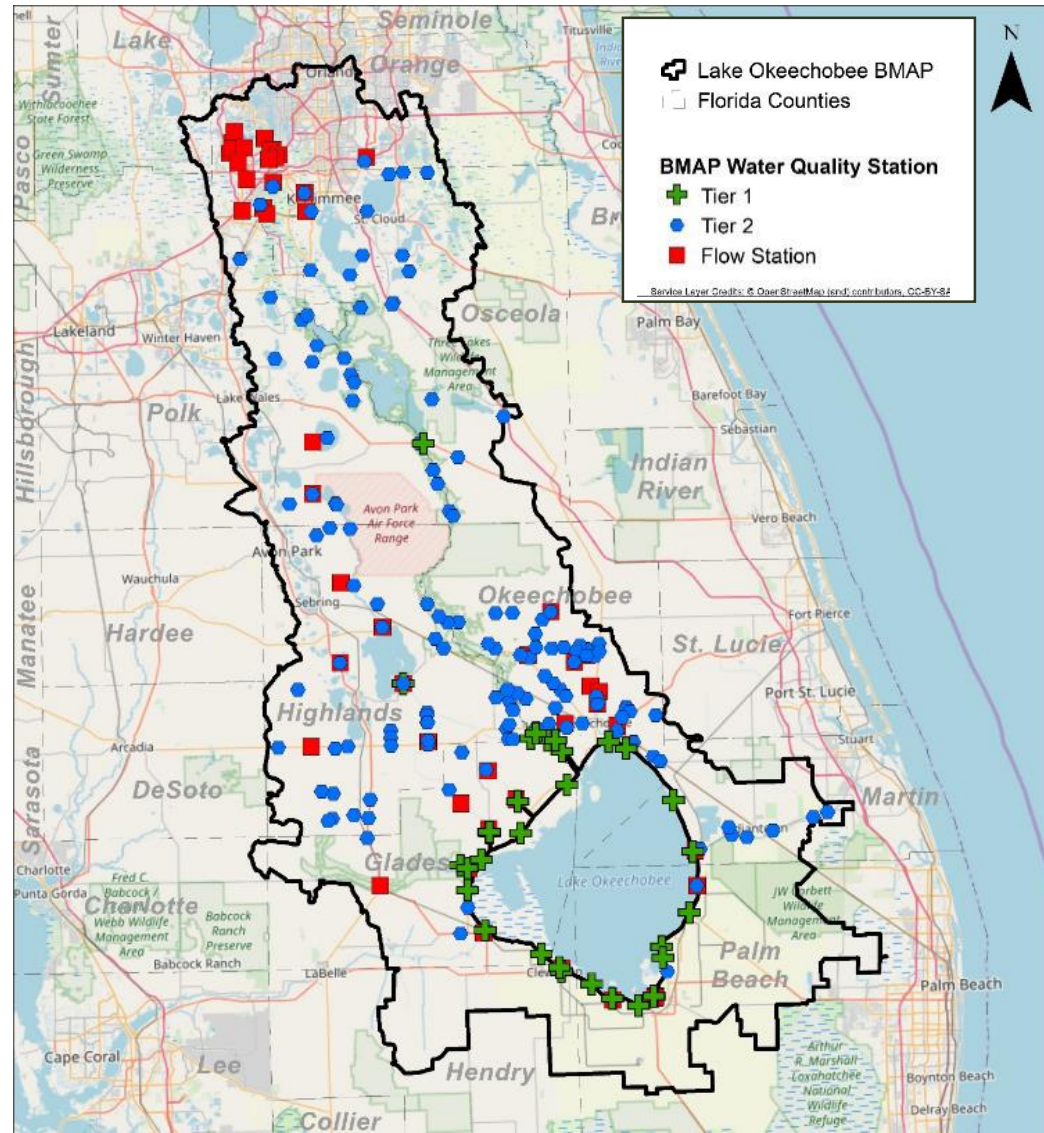


Restoration Approach

3.3 Water Quality Monitoring Plan

- 3.3.1. Objectives and Parameters
 - Matched parameter names with Watershed Information Network (WIN), where appropriate
- 3.3.2. Monitoring Network
 - Updated station tables and figures*
- 3.3.3. Data Management and QA/QC
 - Included information about flow data

01/24/2020





Subwatersheds

Chapter 4

- **Section 4.1.** through **Section 4.10.**
- Land use summaries based on WAM
- Monitoring network stations
 - Added 45 stations to 8 subwatersheds*
 - Removed several inactive stations*
- Results of the TRA evaluation
 - Clarified that flow evaluation was done as part of LOWCP
 - Corrected flow results for some basins
- Project tables
 - Corrected project table details



Summary

Chapter 5

- 5.1. TRA Evaluation Results
 - Corrected flow results for some basins
- 5.2. Request for Information (RFI) Summary
 - Clarified potential future steps for RFI submittals
- 5.3. Future Growth
- 5.4. Compliance
 - Fixed typo in **Table 74**
 - Updated project reductions and percent achieved



Appendix B

Agricultural Enrollment and Reductions

- FDACS' Role in BMP Implementation and Followup
- Adopted BMAP Agricultural Land Use and Enrollment
 - Acknowledged overlap between BMAPs
- Unenrolled Agricultural Acreage
 - Additional figures included for each subwatershed

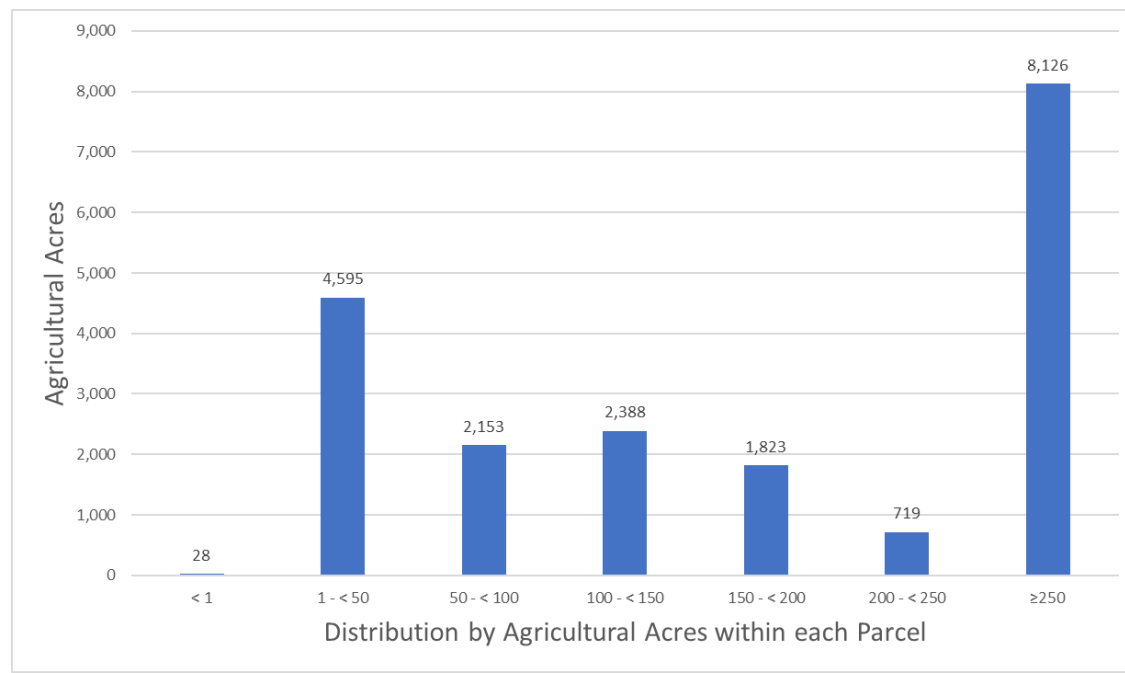


Figure B-24. Distribution by agricultural acres within each parcel, West Lake Okeechobee Subwatershed



Appendix B

(continued)

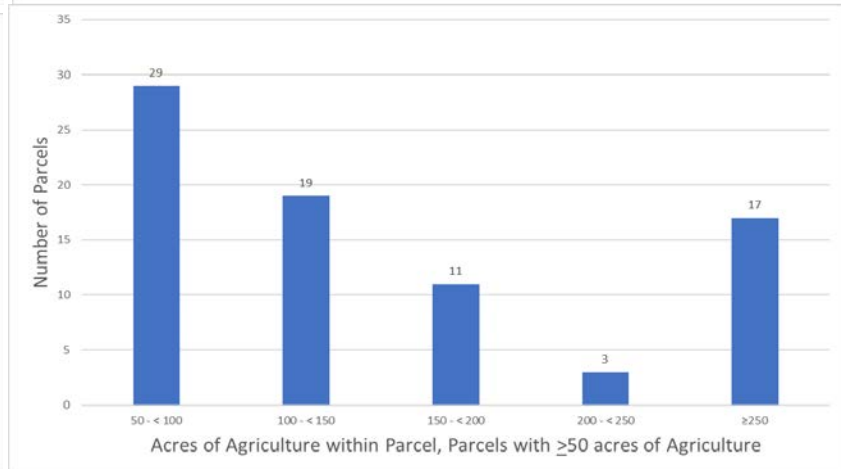
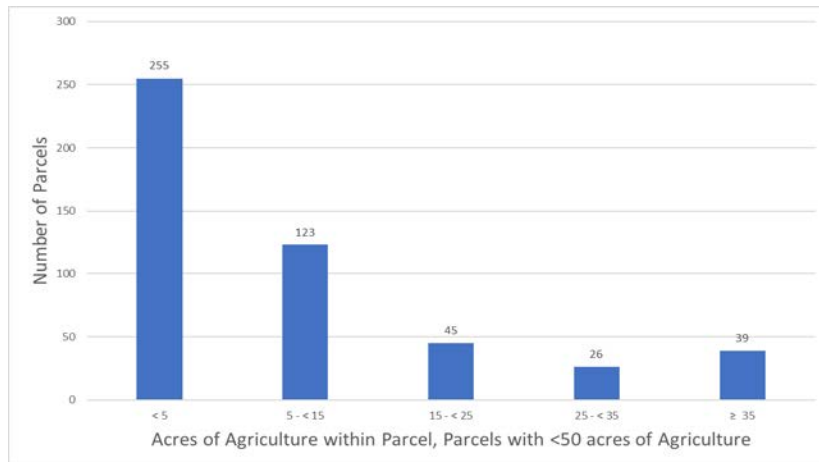
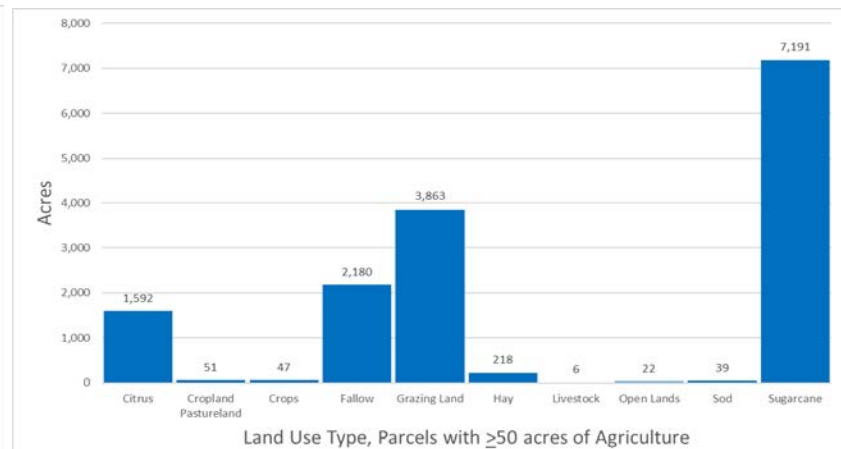
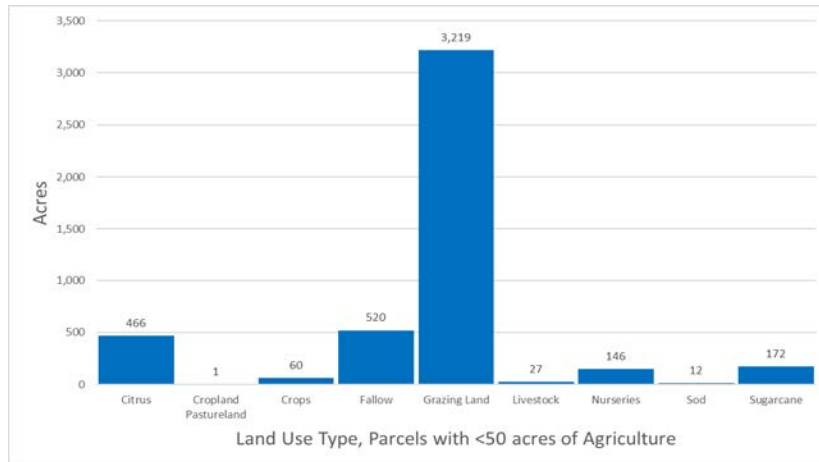


Figure B-25. Land use type and distribution of agricultural acreage, West Lake Okeechobee Subwatershed



Appendix E

RFI Responses

- Included date RFI was posted
- Clarified potential future steps for RFI submittals
- **Table E-1** summarizes the submittals

Table E-1. Summary of responses received for RFI 2020012

Location Information	Submitted by	Project Name	Project Type
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Questions





Next Steps

- Finalize edits presented
- Consider any public comments received during this meeting
- Brief DEP Secretary week of January 27, 2020
- Adoption through Secretarial Order
- 21-day notice period before BMAP is effective



Contact Information

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Comments



