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Florida Department of Environmental Protection

Northern Everglades and Estuaries Basin Management Action Plans

September 6, 2018

Drew Bartlett, Deputy Secretary
Office of Ecosystem Restoration





Evolution of the Northern Everglades and Estuaries Protection Program (NEEPP)

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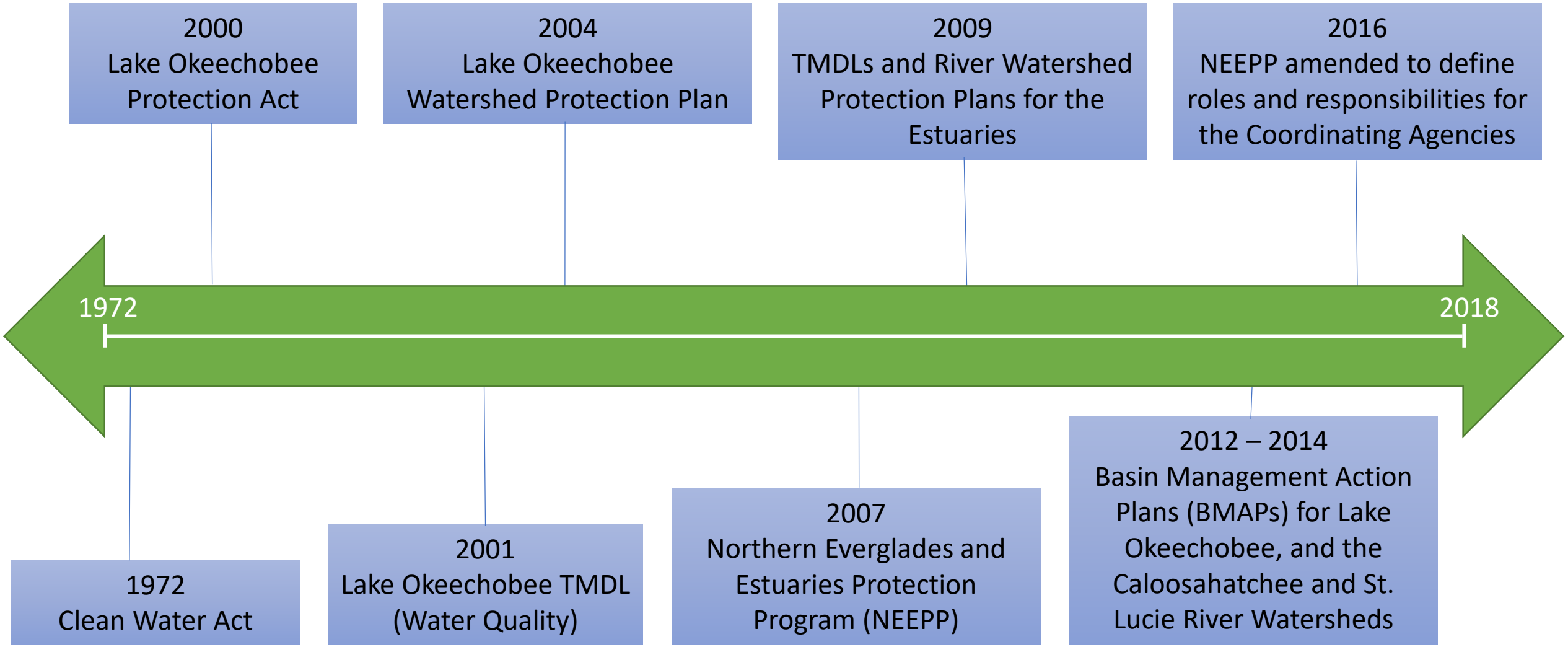

Kissimmee-Okeechobee-Everglades Ecosystem

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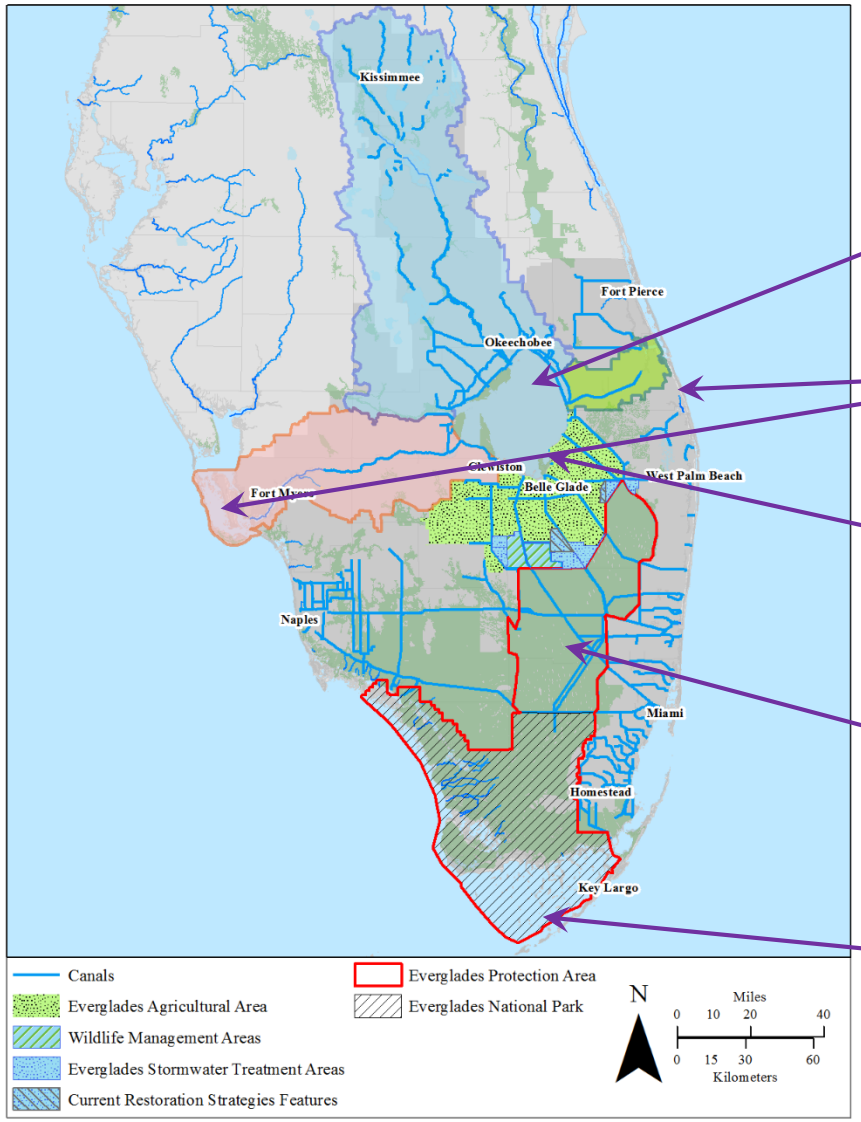

Region	Strategy
Lake Okeechobee	BMAP/NEEPP/CERP
St. Lucie/ Caloosahatchee Estuaries	BMAP/NEEPP/CERP
Everglades Agricultural Area	Restoration Strategies/ CERP (SB10)
Everglades Protection Area	Restoration Strategies/ CERP
Florida Bay	Reasonable Assurance Plan

Water Quality Assessment and Implementation Framework

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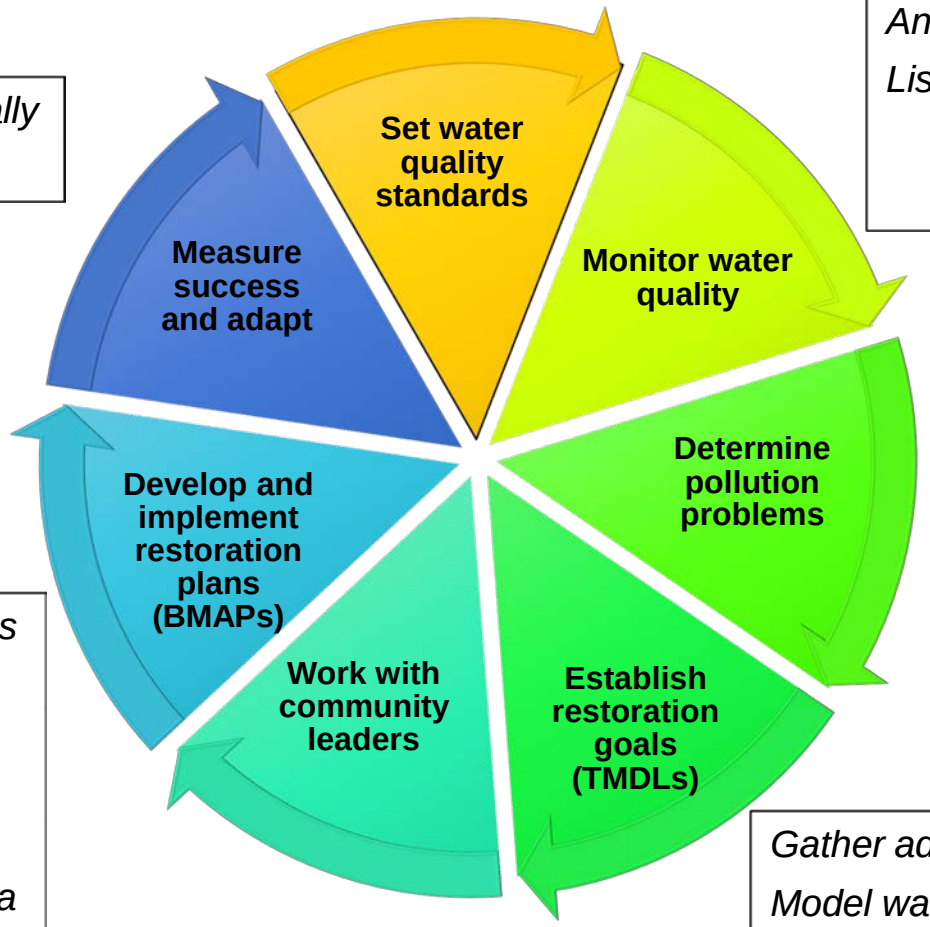

Collect data
Analyze and verify
List "impaired" waters

REPEAT

Excessive nutrients
Bacteria
Mercury

Gather additional data
Model water quality
Adopt pollutant reduction targets

Allocate responsibilities
Identify projects
- *Infrastructure*
- *BMPs*

Establish schedules
Identify success criteria

Monitor and report progress annually
Adapt and change

Basin Management Action Plans (BMAPs)

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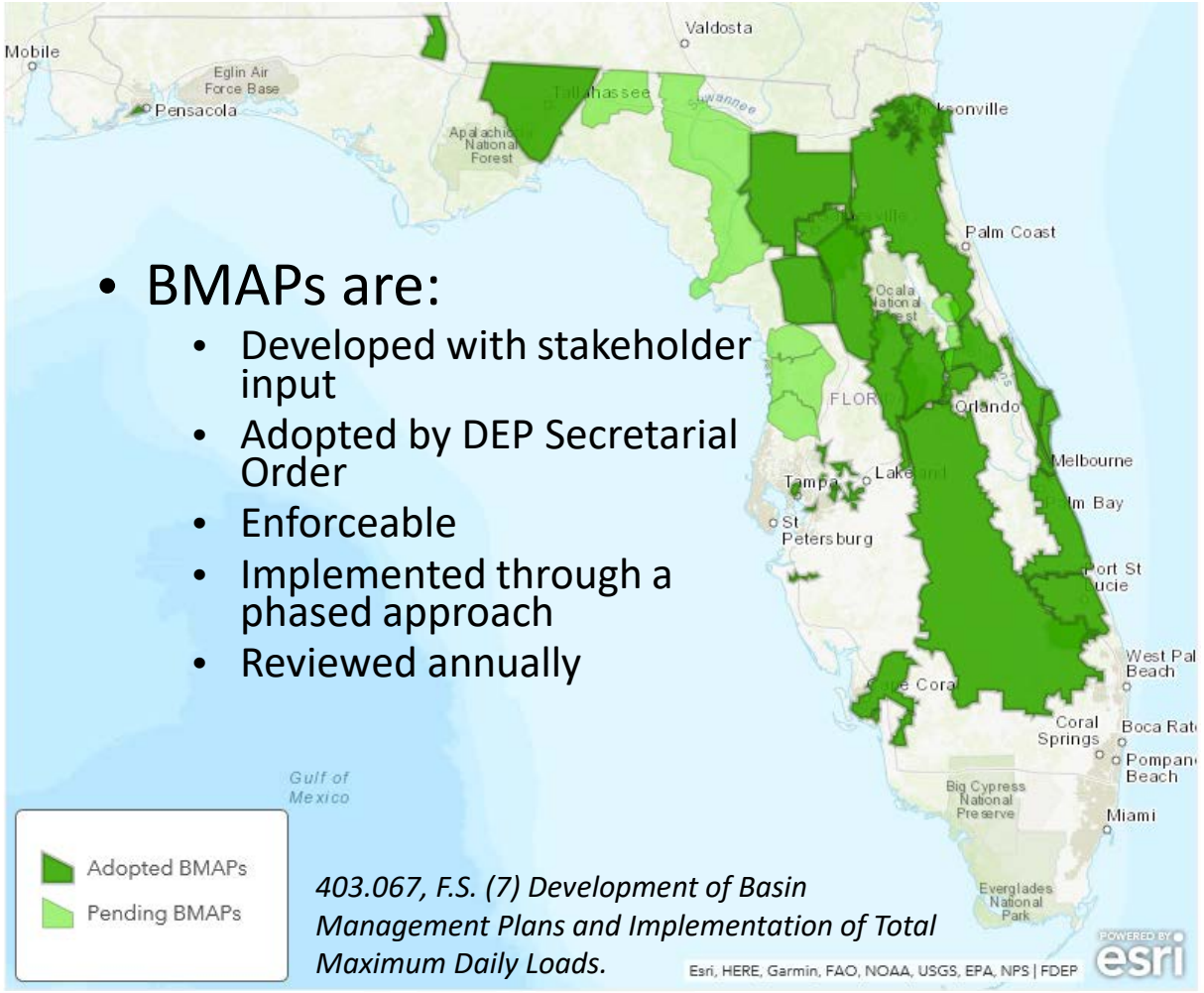
- One of DEP's methods for restoring water quality in an impaired water body



- BMAPs are:
  - Developed with stakeholder input
  - Adopted by DEP Secretarial Order
  - Enforceable
  - Implemented through a phased approach
  - Reviewed annually

403.067, F.S. (7) Development of Basin Management Plans and Implementation of Total Maximum Daily Loads.

Tracking BMAP Progress

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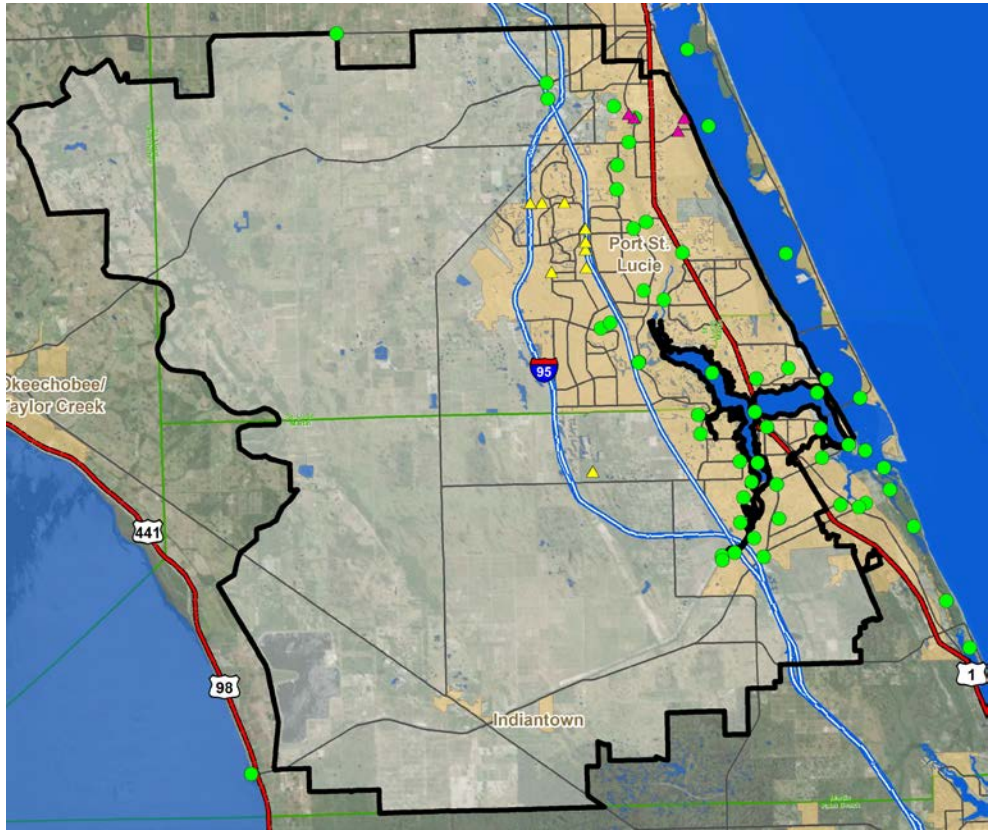
- BMAP Monitoring Plans
  - Provide the information needed to evaluate implementation success.
  - Identify parameters, frequency, and network of stations.



- Adaptive management
  - Mechanism for making adjustments in the BMAP when circumstances change or feedback indicates the need for a more effective strategy.

Coordinating Agencies Roles

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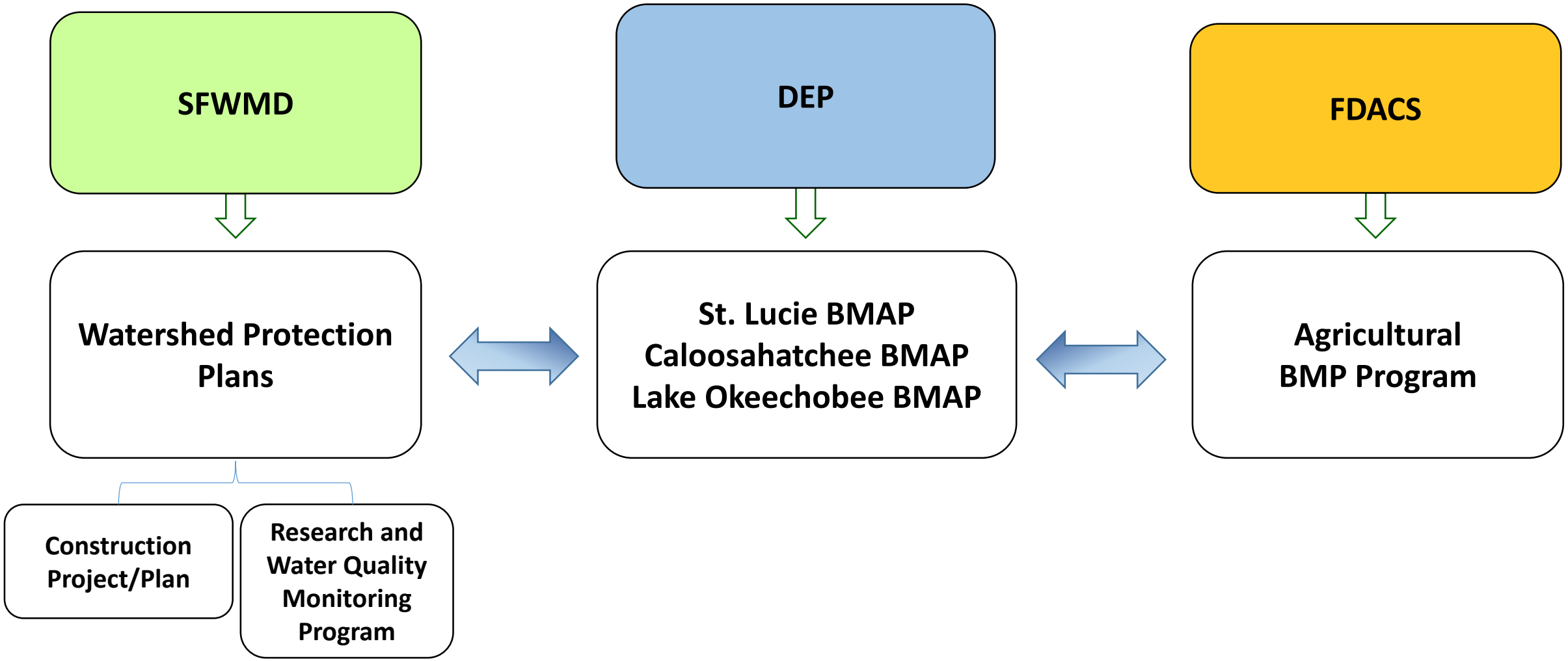

Caloosahatchee Estuary Basin

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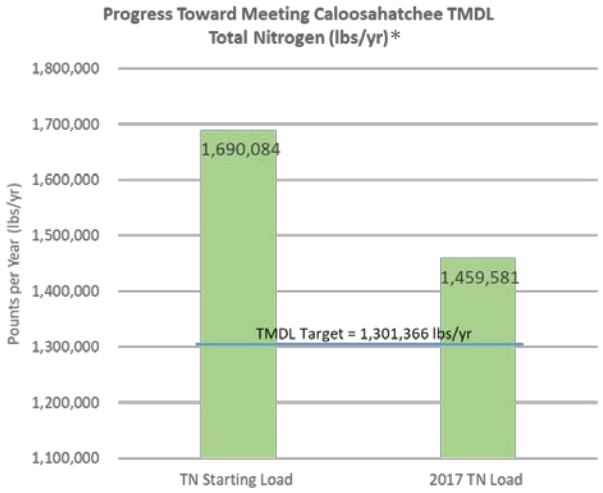
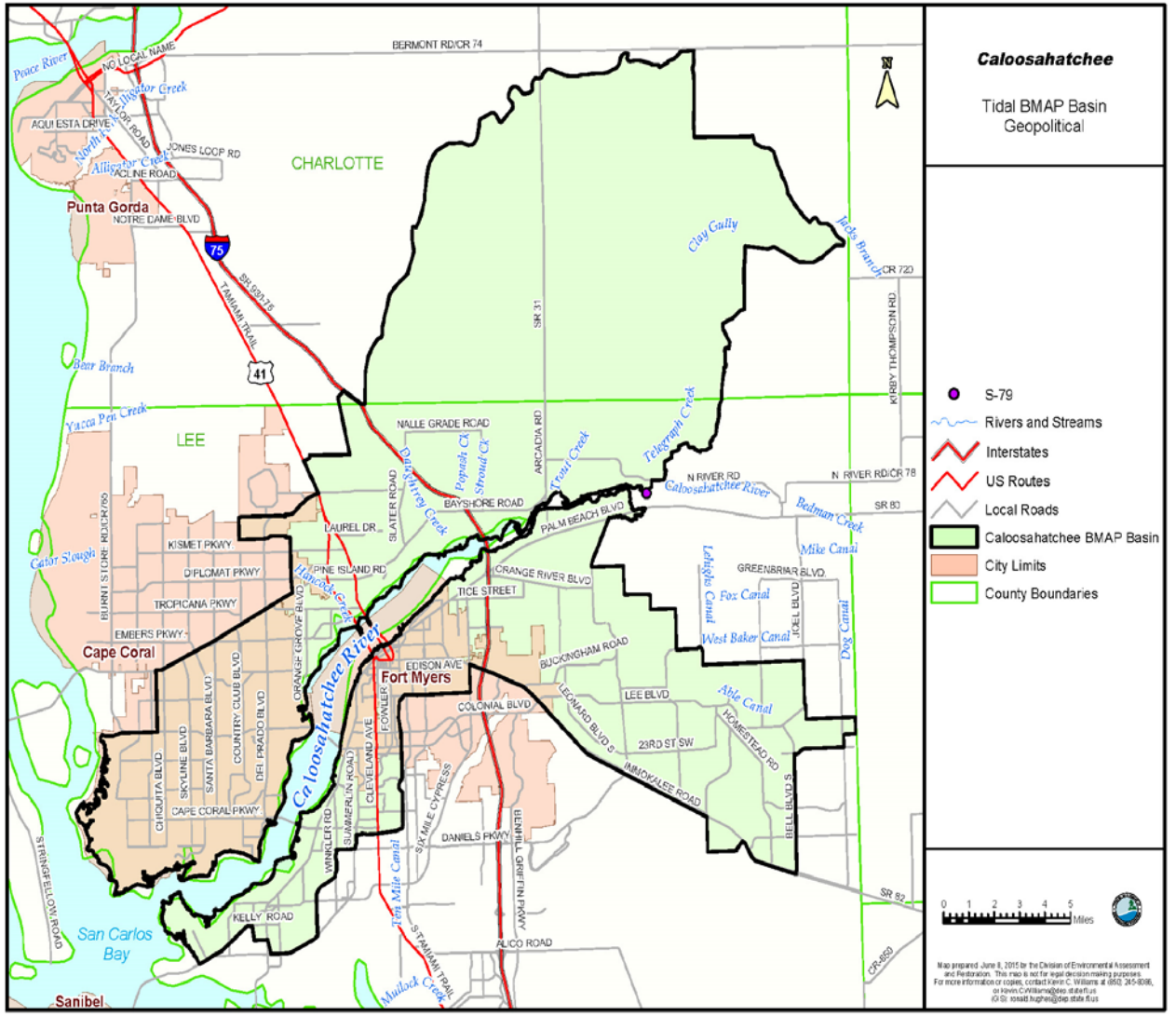
- Impaired for DO and nutrients
  - Freshwater input from S-79, tributaries and canal systems
- TMDL adopted in 2009
  - Requires 23% reduction in TN
- BMAP adopted in 2012
  - Total required reductions: 388,718 lbs/yr



*Loads are modeled long-term loads



St. Lucie River & Estuary Basin

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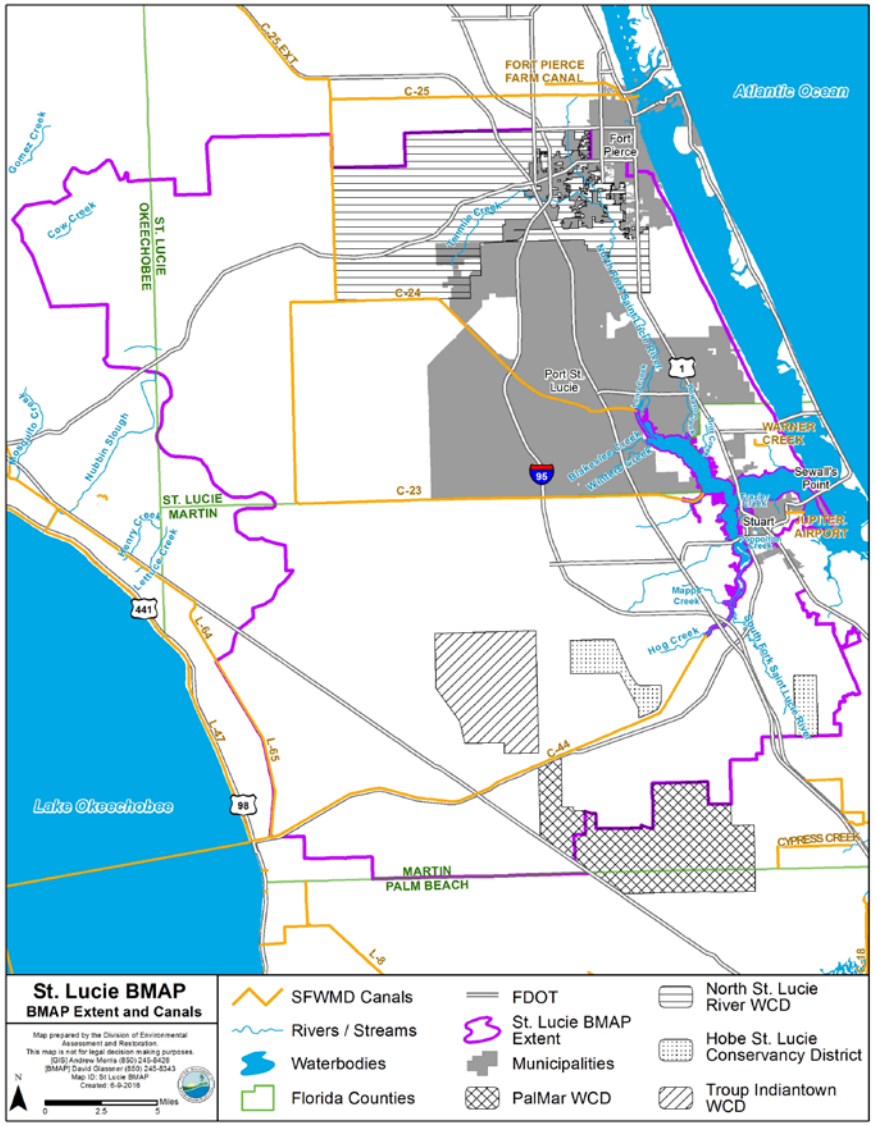
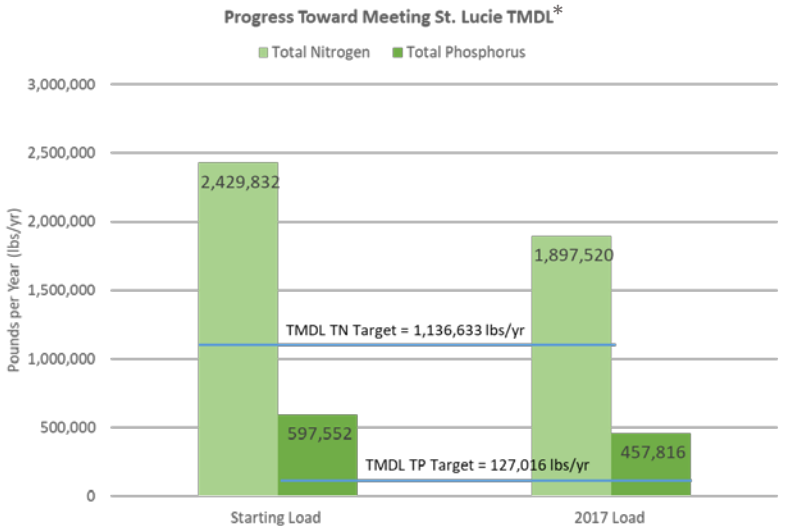


- Impaired for DO and nutrients
- TMDL adopted in 2009
  - TP, TN, BOD
  - Designates SE03 as compliance point for target concentrations
- BMAP adopted in June 2013
  - Focused on achieving TP and TN reductions



*Loads are modeled long-term loads

Lake Okeechobee TMDL

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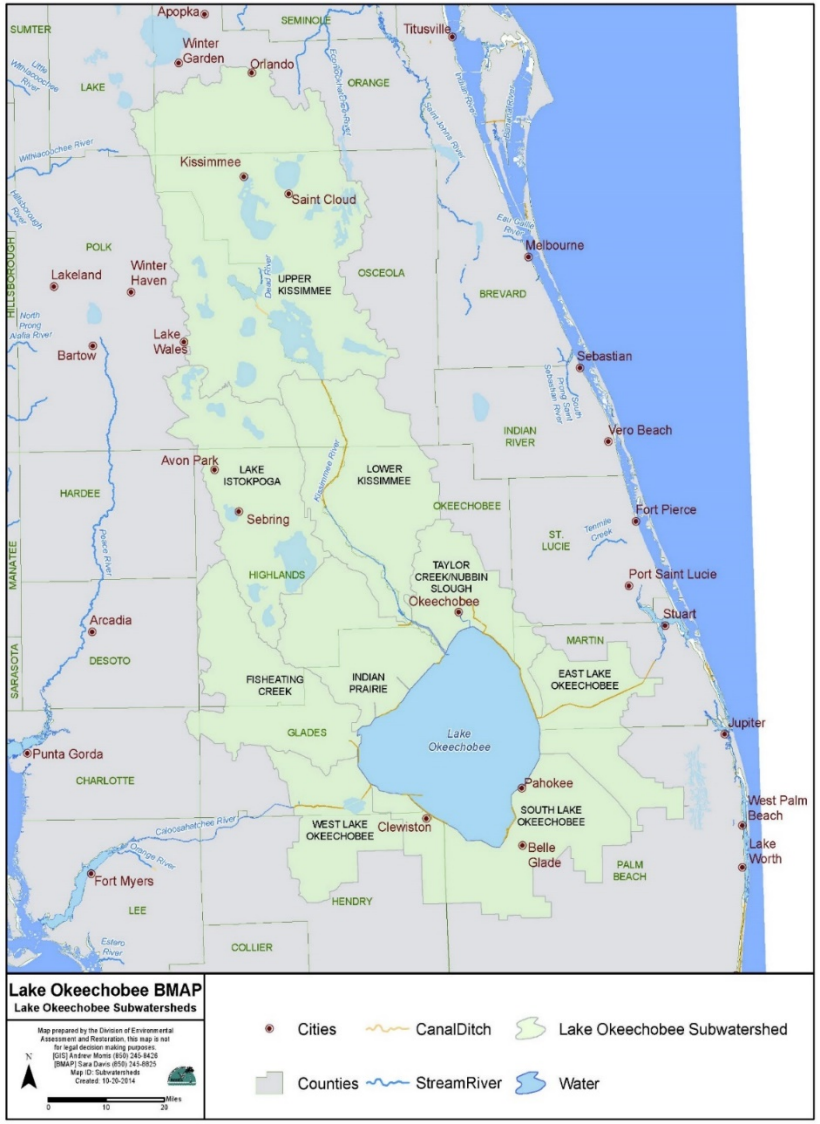
- TMDL for TP adopted in 2001
- TMDL is a total annual TP load of 140 metric tons per year (mt/yr):
  - 35 mt/yr fall directly on the lake through atmospheric deposition
  - Remaining 105 mt/yr allocated to the entire Lake Okeechobee Watershed (LOW)
- TMDL attainment calculated using a 5-year rolling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



Lake Okeechobee BMAP

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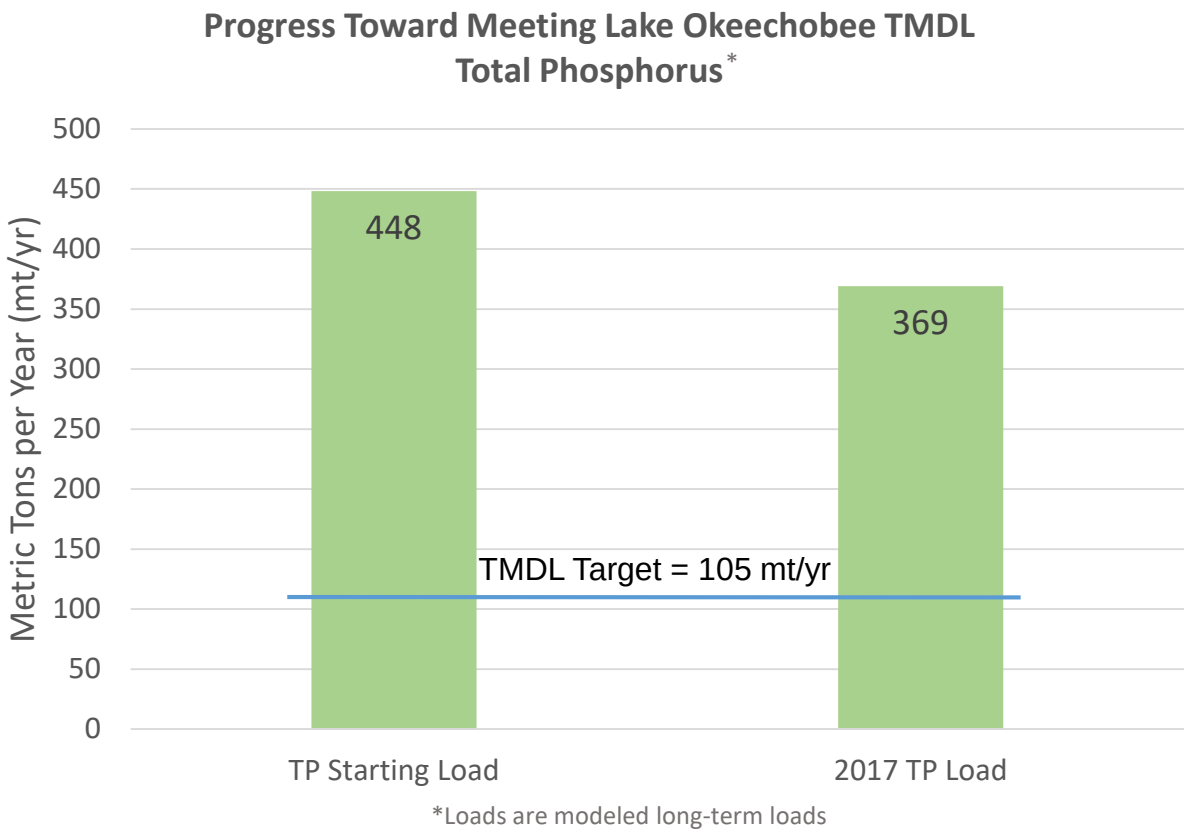

- BMAP adopted in December 2014
- Focus is on project implementation in the six sub-watersheds north of Lake Okeechobee
- Project reductions spread over a ten-year time frame:
  - Allows Coordinating Agencies to include long-term projects and develop additional projects to meet the TMDL
- 166 projects completed through December 2017
  - Additional 54 projects underway or planned

Key Lake Okeechobee Initiatives

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- Agricultural Cost Share Program
  - $70 Million across watersheds executed incrementally and annually
- Dispersed Water Management
  - Greater than 20 contracts executed and funded annually
  - Larger scale projects like Brighton Valley and Latt Maxcy/El Maximo
- Stormwater Treatment Areas/Flow Equalization Basins
  - Lakeside Ranch Phase II (Construction)
  - Istapoga Marsh (Design & Construction)
  - West Waterhole Marsh (Completed)
- Dairy Projects
  - Inactive Dairies – Lagoon Remediation (Completed)
  - Legislative Cost-Share Appropriation Program – projects submitted annually (~$4 million, 8 approved projects)
- Rolling Meadows Phase II Wetland Restoration (Awaiting funding)
- Kissimmee River Restoration (Construction)
- Lake Okeechobee Watershed CERP Project

Lake Okeechobee Loads

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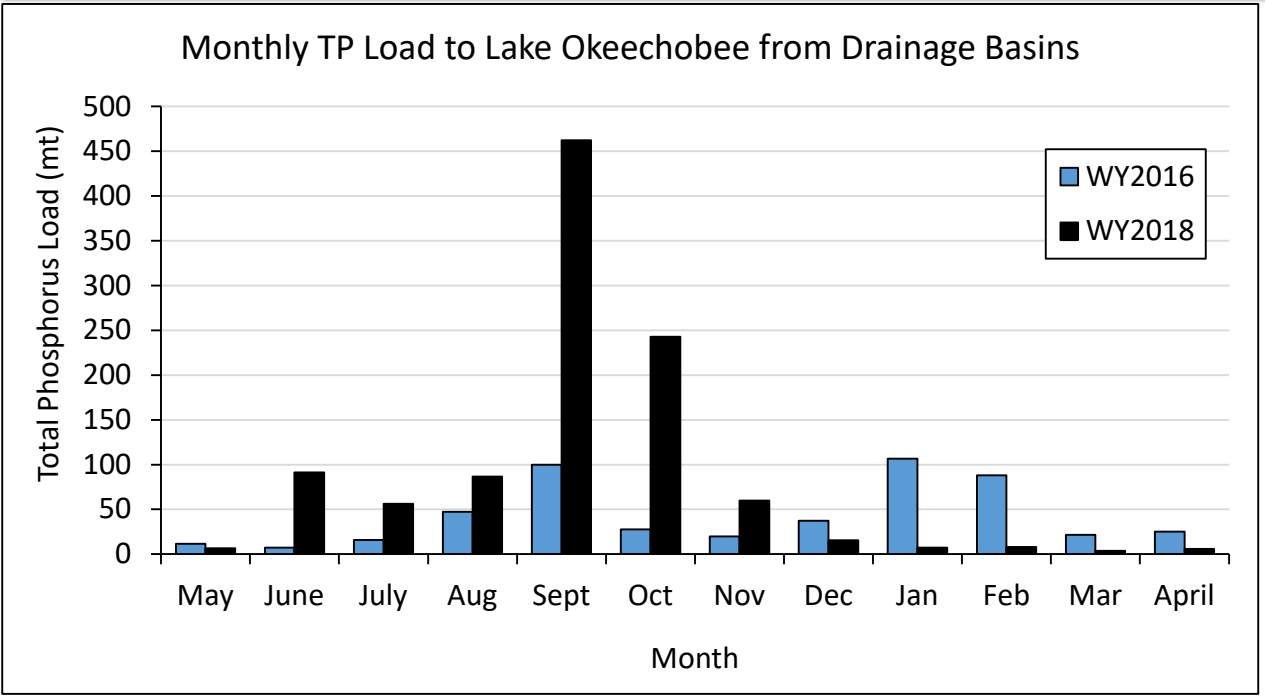
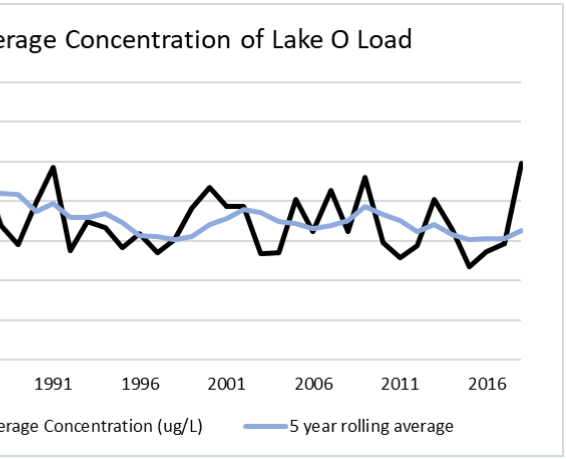
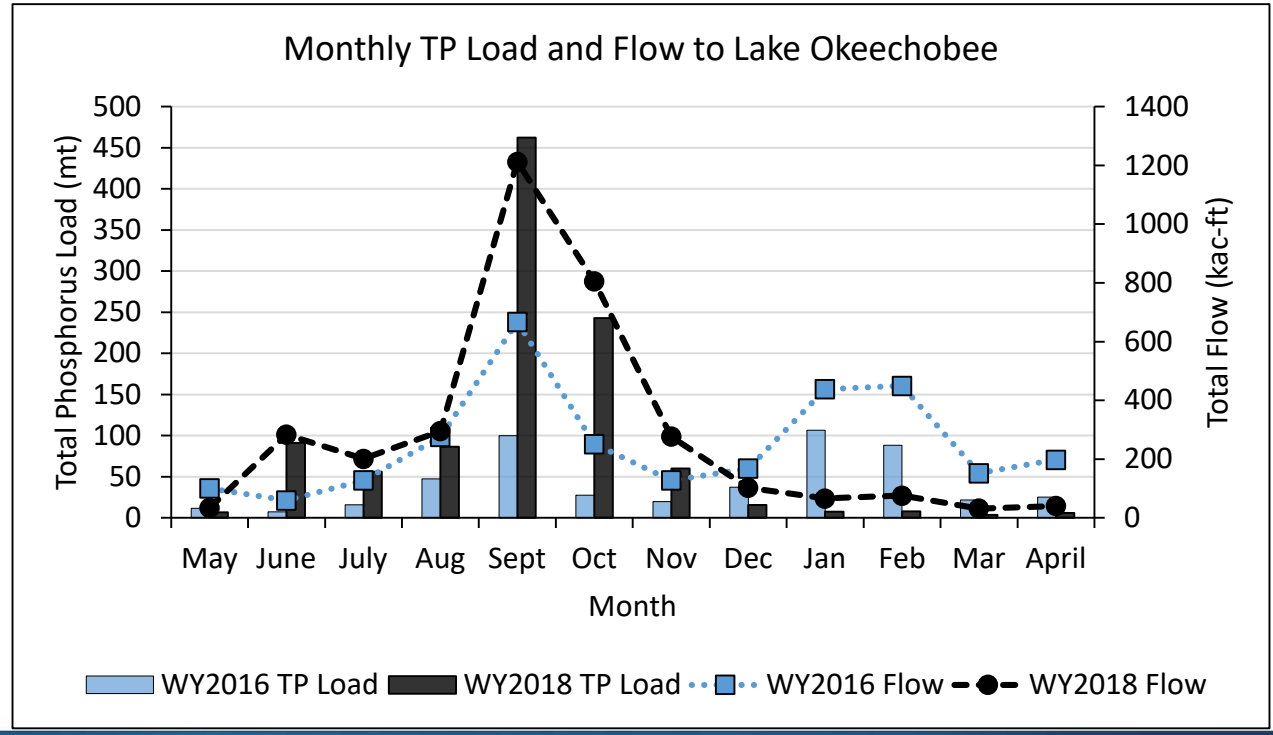


	TP Load to Lake (mt)	Total Flow to Lake (ac-ft)
WY2016	508	3,012,129
WY2018	1046	3,423,597





Lake Okeechobee Loads

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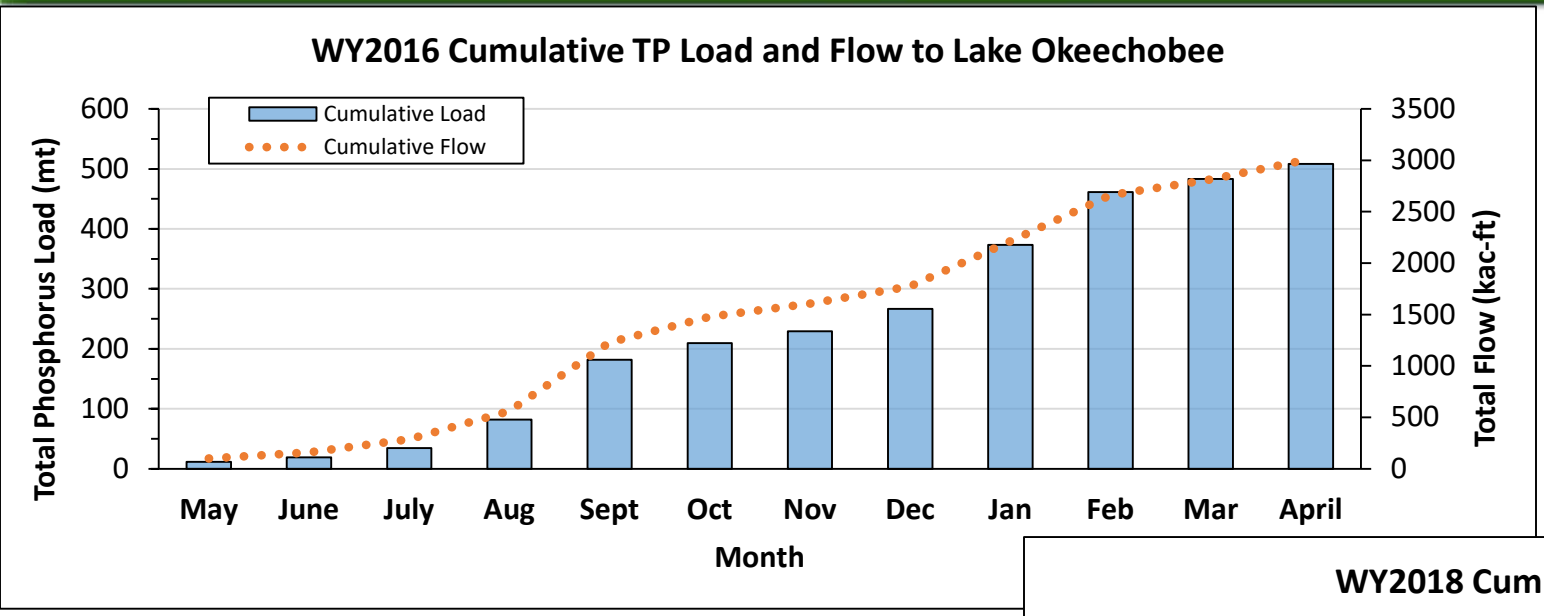

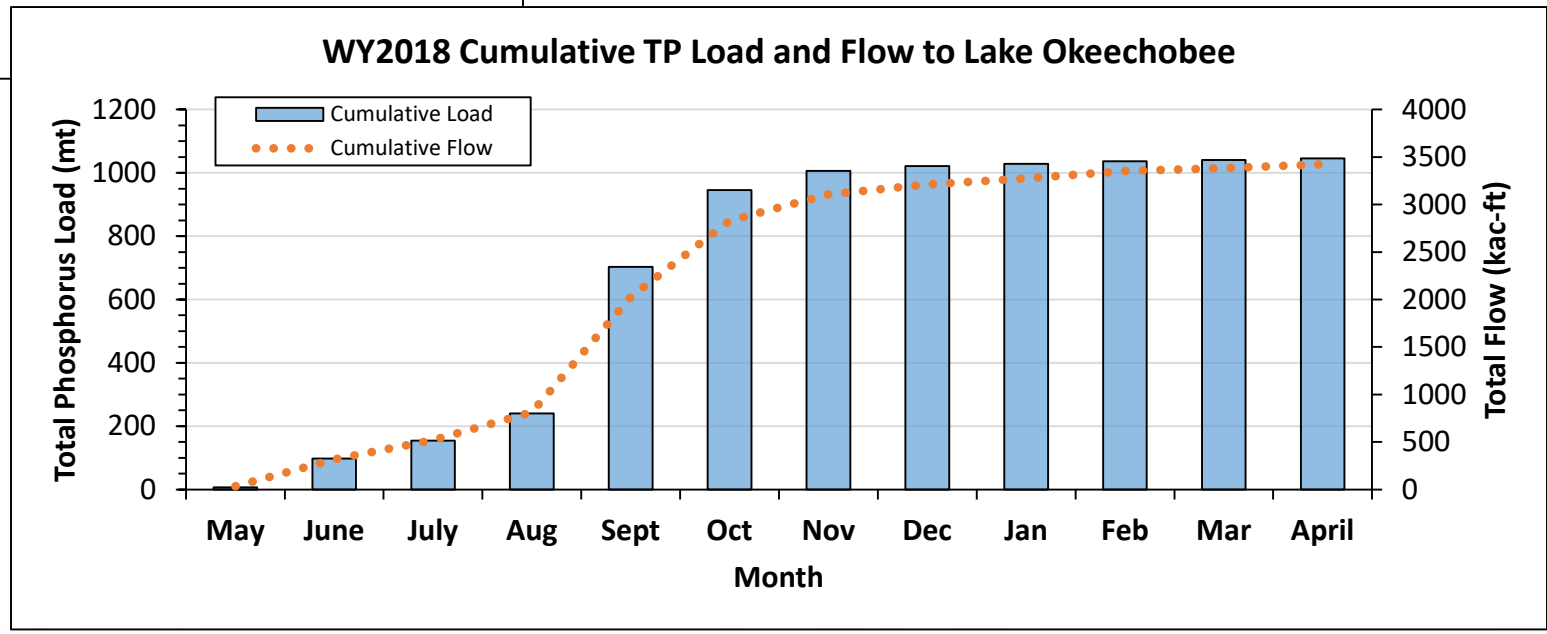

NEEPP 5-Year Reviews

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Chapter 373.4595, F.S.

- NEEPP BMAPs require a review to legislature and Governor, to include:
  - 5-year milestones towards meeting TMDLs 20 years after adoption
    - Assessment of progress towards meeting the milestones
  - Determination of whether TMDLs can be met in 20 years
    - If not, explanation of why
  - Identification of recommended revisions to the BMAP
    - modeling, allocations, monitoring network, etc.

BMAP	Adoption Date	5-Year Review Date
Caloosahatchee	November 2012	November 2017
St. Lucie	June 2013	June 2018
Lake Okeechobee	December 2014	December 2019

Contact

DRAFT

Drew Bartlett, Deputy Secretary

Office of Ecosystem Restoration

Drew.Bartlett@dep.state.fl.us, 850.245.2030