



St. Lucie River and Estuary Basin Management Action Plan Annual Meeting

**Division of Environmental Assessment & Restoration
December 12, 2018**



Agenda

- Overview of BMAP
- Statewide Annual Report
- St. Lucie River and Estuary Story Map
- Stakeholder Presentations
- Upcoming BMAP Updates and Revisions
- Next Steps



BMAP Overview

TMDL

BMAP Background



TMDL

Total Maximum Daily Load

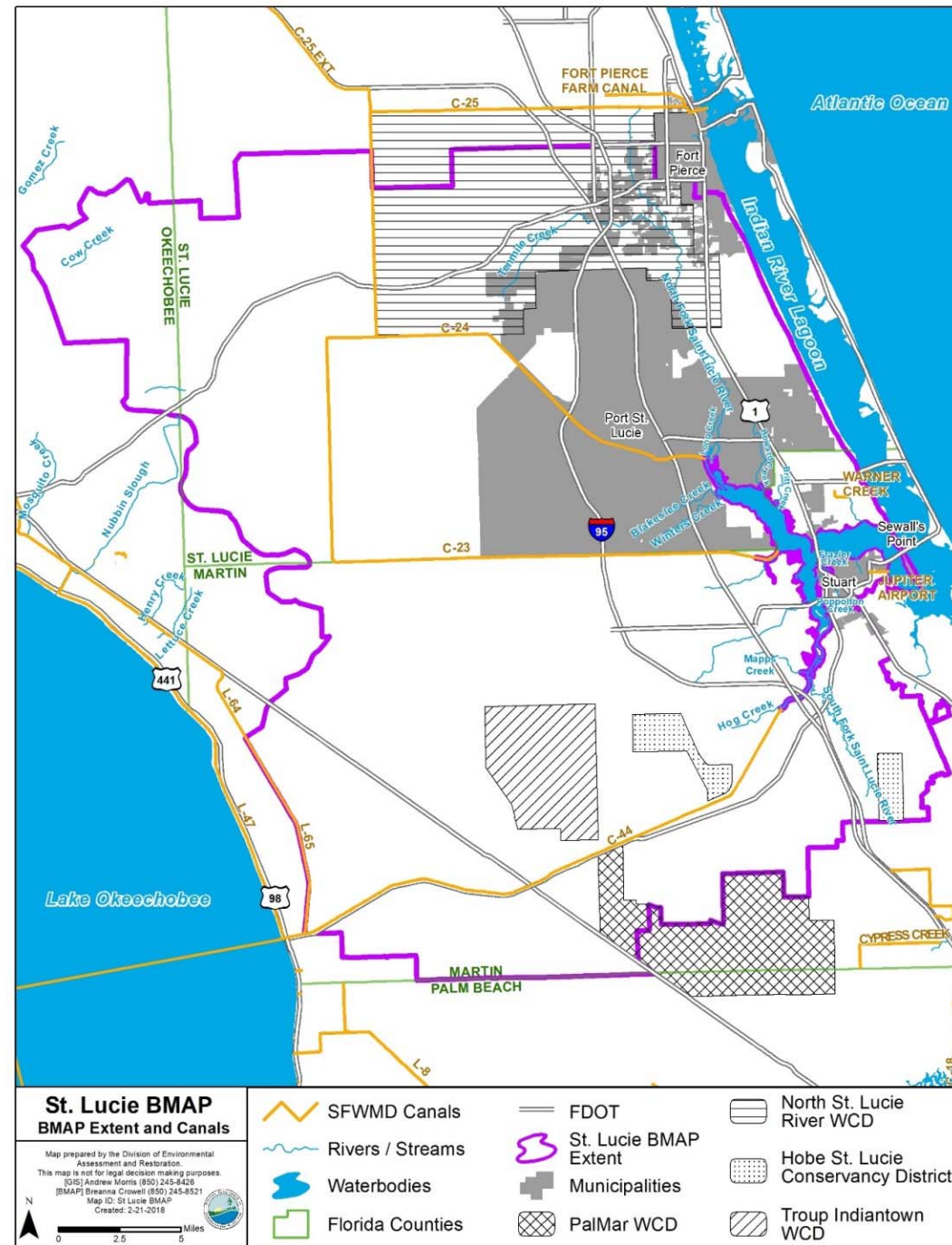
- TMDLs adopted in 2009
- The target concentrations were used to calculate TMDL loads at points upstream
- Total nitrogen (TN) and total phosphorus (TP) concentrations are monitored at Roosevelt Bridge, the compliance point for the TMDLs
- Sampled monthly by South Florida Water Management District (SFWMD)

St. Lucie Estuary	
Parameter	Annual TMDL Target (Concentration in mg/L)
TN	0.720
TP	0.081



BMAP

- Adopted in June 2013
- Completed 5-Year Review in June 2018 with recommended changes to the BMAP



12/12/2018



Statewide Annual Report

STAR Background

STAR 2018 Progress

STAR 2019 Timeline



STAR Background

- Requirement under Section 403.0675 Florida Statutes (F.S.) to provide an annual update to the Governor and Legislature
- Summarizes accomplishments in the BMAPs statewide
- Reports on restoration projects and management strategies
- All BMAP reporting periods align with calendar year
- Submitted to the Governor and the Legislature by July 1 of each year
- Annual meetings → opportunity to highlight stakeholder activities



STAR 2018

**First STAR submitted to the
Governor and the Legislature
June 29, 2018**

<https://floridadep.gov/STAR>

*Florida Statewide Annual Report on
Total Maximum Daily Loads, Basin
Management Action Plans, Minimum
Flows or Minimum Water Levels, and
Recovery or Prevention Strategies*

Florida Department of Environmental Protection

Division of Environmental Assessment and Restoration
and
Office of Water Policy

June 2018

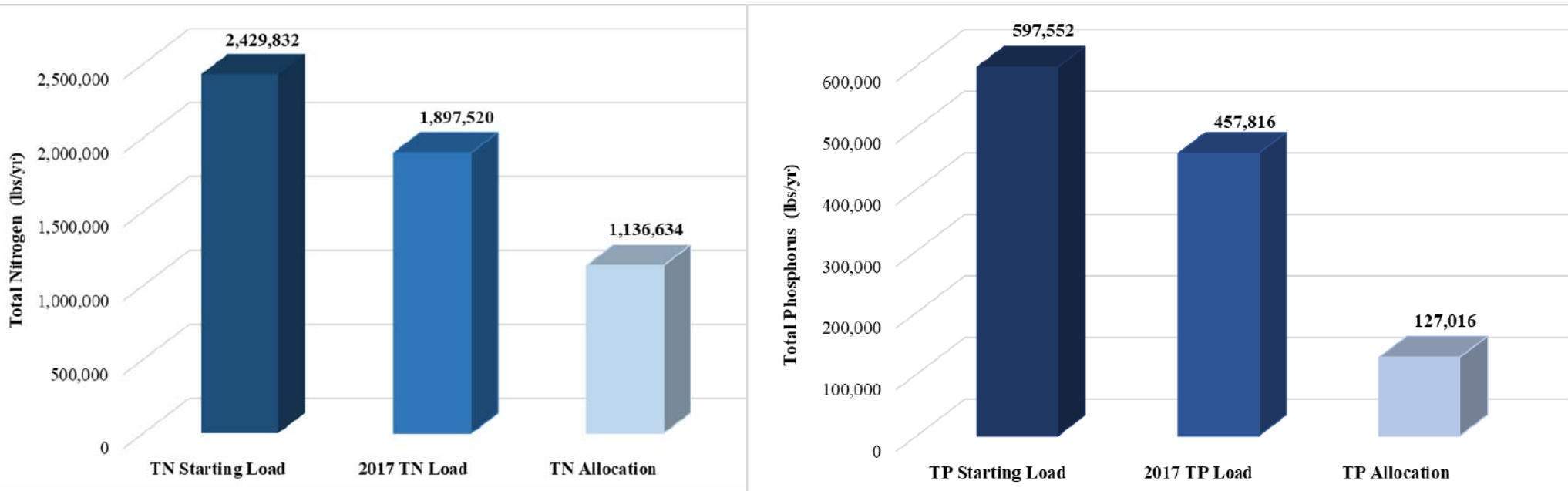
2600 Blair Stone Road
Tallahassee, Florida 32399
www.floridadep.gov





TMDL Progress

Through December 31, 2017



- 221 projects were completed; additional 26 underway or planned
- Estimated reductions of 532,312 lbs/yr of TN and 139,736 lbs/yr of TP
- 51 % of TN and 35% of TP reductions needed to meet the TMDL



STAR 2019 Timeline

November
2018

**Request for
review
project updates
through Dec.
31, 2018**

January
15, 2019

**Deadline for
project
information to
be submitted
to DEP**

February
through
June 2019

**Draft Report
compiled**

July 1,
2019

**Report
submitted to
Governor and
Legislature and
web posted**



St. Lucie Story Map

Now Available Online

St. Lucie Basin Management Action Plan



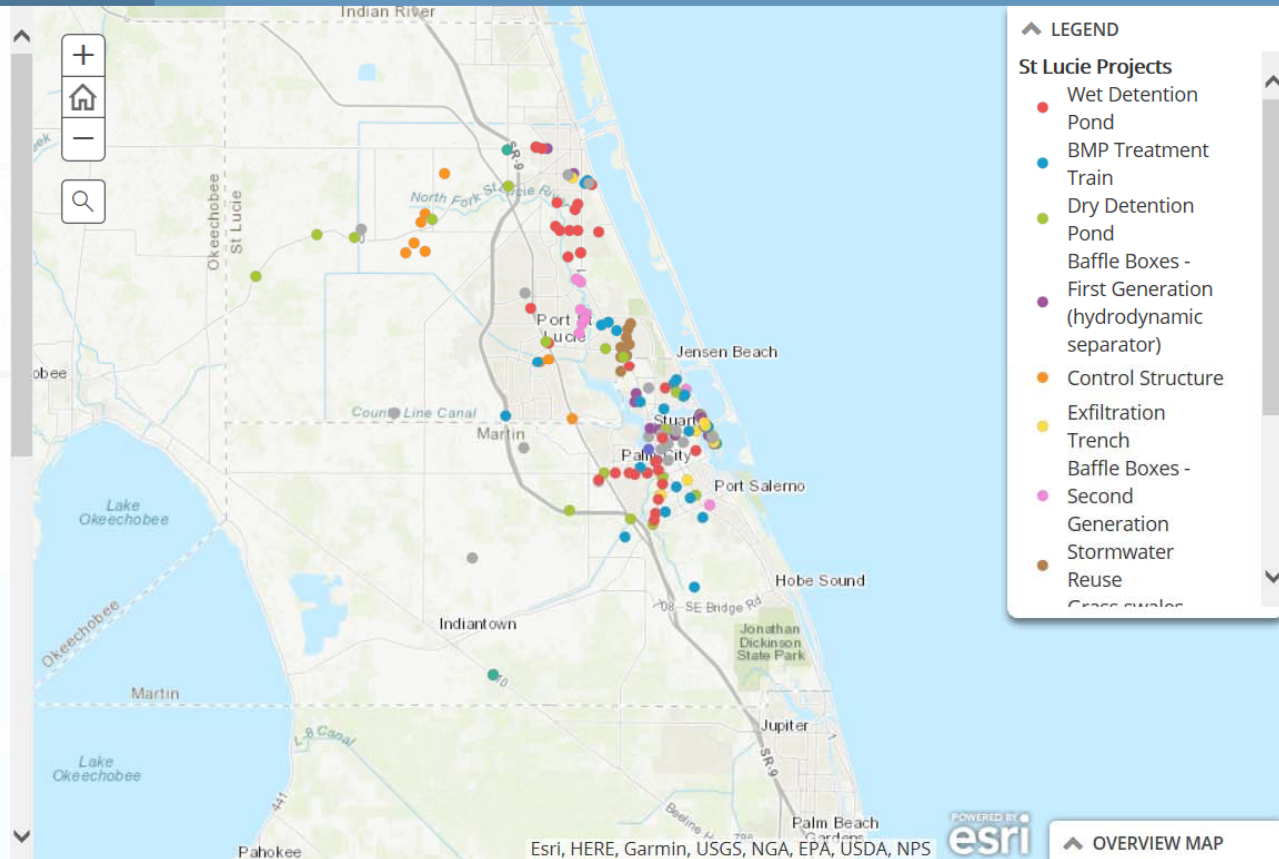
Introduction Overview Location **Projects** Progress Contacts & More Information

ACTIONS TO ACHIEVE NUTRIENT LOAD REDUCTIONS

The St. Lucie River and Estuary BMAP is designed to be implemented in a 5-year, phased approach to allow for adaptive management. The phased BMAP approach allows for the implementation of projects designed to achieve incremental reductions, while simultaneously monitoring and conducting studies to better understand the water quality dynamics (sources and response variables) in the watershed. The first 5-Year Review, completed in June 2018, provided updates on the status of implementation and recommendations for future phases of the BMAP. The BMAP requires stakeholders to implement projects to achieve reductions as soon as practicable. However, the full implementation of the BMAP will be a long-term process. While some of the projects and activities contained in the BMAP were recently completed or are currently ongoing, several projects require more time to design, secure funding, and construct.

All agricultural nonpoint sources in the BMAP area are statutorily required either to implement appropriate best management practices (BMPs) or to conduct water quality monitoring that demonstrates compliance with state water quality standards. The Florida Department of Agriculture and Consumer Services' (FDACS) Office of Agricultural Water Policy (OAWP) develops and adopts BMPs in coordination with DEP, UF-IFAS, and applicable producer groups. Producers that choose to implement BMPs must file a signed Notice of Intent (NOI) and BMP checklist with OAWP and implement the applicable BMPs.

Urban stormwater projects include best management practices (BMPs) such as stormwater ponds, baffle boxes that remove debris, swales, and street sweeping, as well as projects that reduce nutrient sources such as local ordinances (e.g., fertilizer and pet waste ordinances), public education, and Florida-friendly landscaping practices. These projects can occur at a variety of scales including county-wide, city-wide, and within the boundaries of special districts. Additionally, some areas may be covered by multiple programs or ordinances. Due to these varying scales, some projects may not be shown on this map.



12/12/2018



Stakeholder Presentations

Project Updates



Water Quality Analysis Review

Methodology for Evaluation

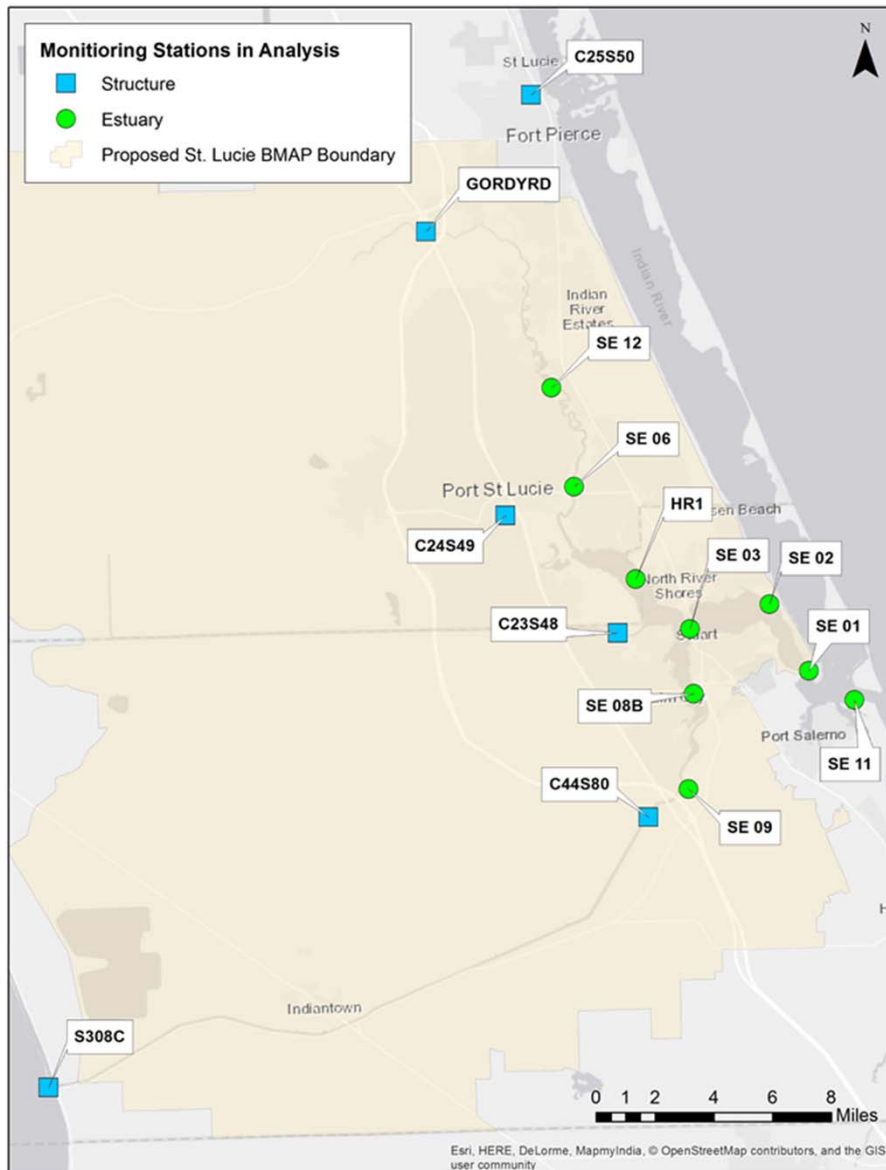
Water Quality Trends in Concentrations

Water Quality Trends in Loads



Water Quality Analysis

5-Year Review Refresher

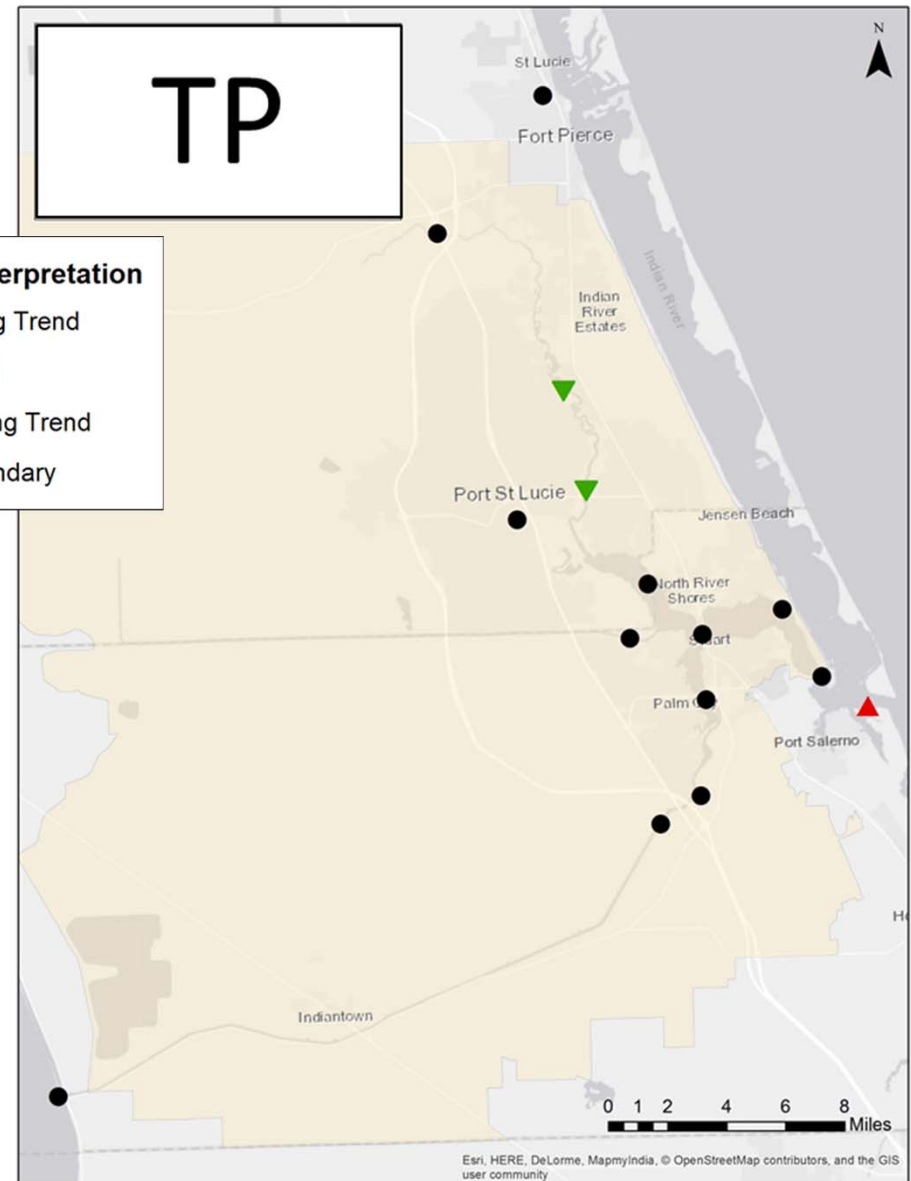
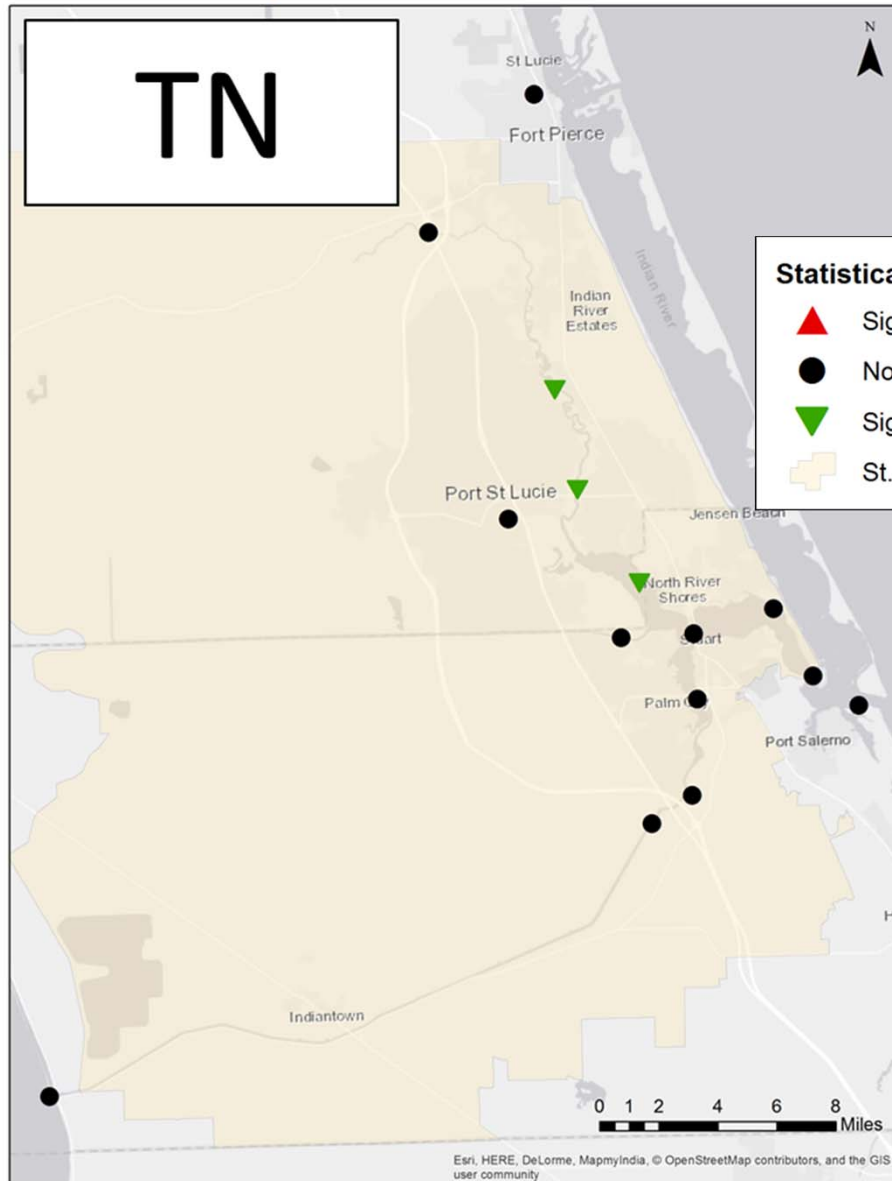


- Trend analyses were conducted on BMAP stations with the best data availability and sampling frequency
- Data analyzed at 6 structure stations and 9 estuary stations (15 stations total)
- Tested for trends in concentrations and loads (at structures)



Water Quality Analysis

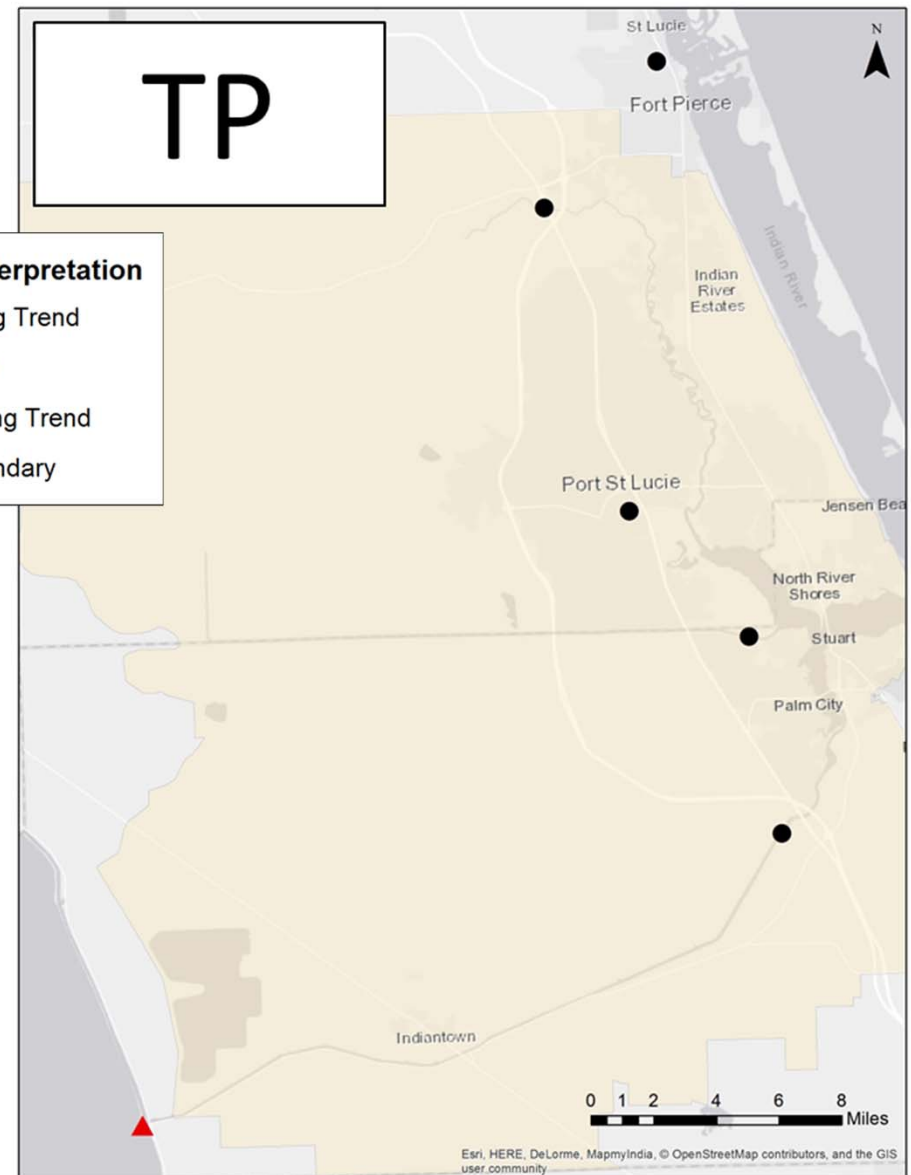
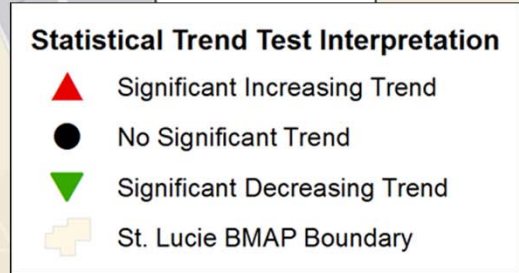
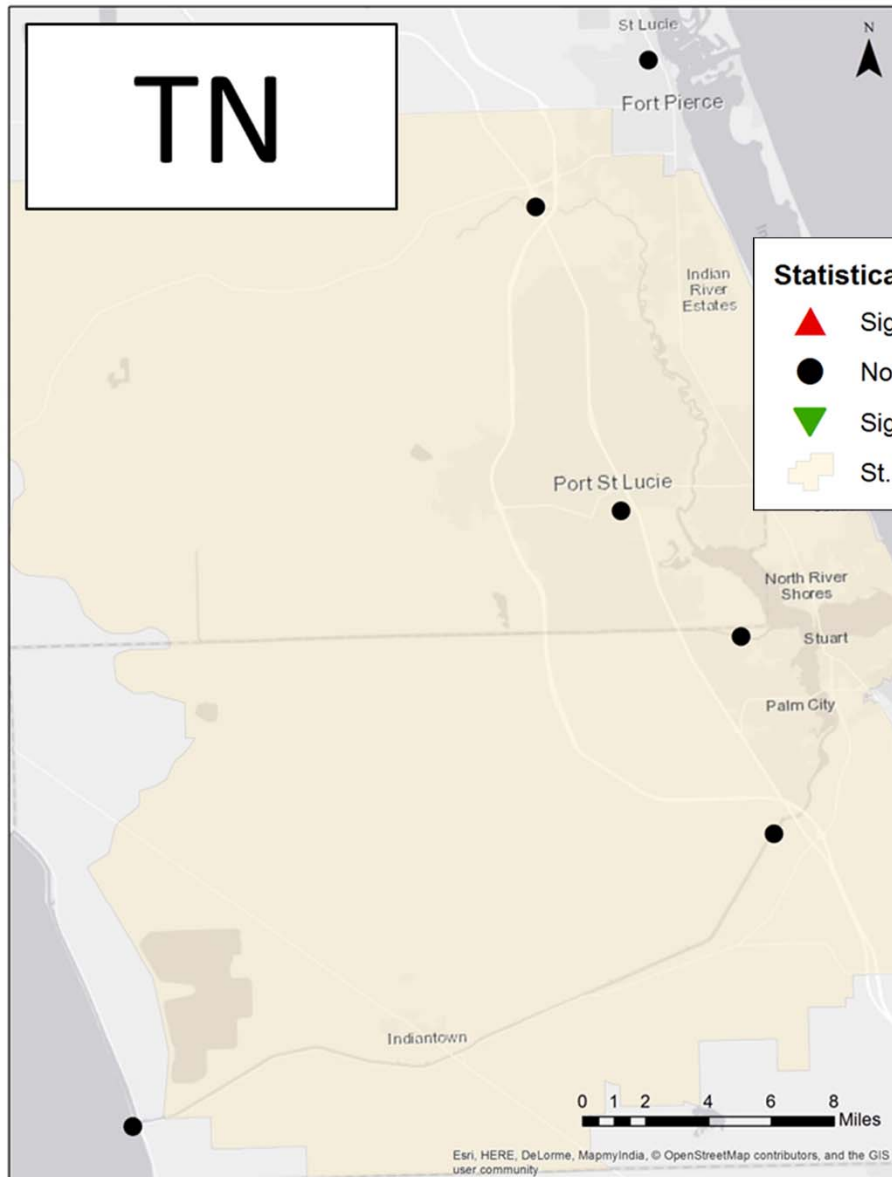
Trends in TN and TP Concentrations





Water Quality Analysis

Trends in TN and TP Loads





Upcoming BMAP Update

Proposed Update Timeline

Allocations

Next Steps



BMAP Update

Coming in 2019!

- Will be based on recommendations made in the St. Lucie 5-Year Review
 - Milestones set for project estimates
 - Updated allocations based on enhanced WaSh model
 - Revised BMAP boundary reflecting improved knowledge of hydrology in the basin
 - Tiered monitoring network to be used in future analyses



Allocations

Proposed Methodology

- Use model loading output to generate starting loads
- Starting load multiplied by percent reduction will determine the required reduction in each sub-basin
 - One reduction for TN and one reduction for TP will be provided for each entity
- Project estimates will also be updated using new model



Allocations

Special Districts

- Change from previous allocation methodology:
 - Use canals and rights-of-way instead of entire district area since only have jurisdiction over the canals
- DEP talked to each district about the new approach and specific canal and right-of-way best management practices (BMPs) to follow
- Also simplifies reporting of agricultural BMP enrollment within the basin



Allocations

Current Status on Updates

- WaSh model is effectively estimating loading in the St. Lucie BMAP area
- Since April meeting:
 - Polygon output code updated for load attenuation
 - Modifications to GIS clipping based on feedback
- Next step: one-on-one stakeholder meetings about updated allocations numbers



Next Steps

- Submit project updates by January 15th
- One-on-one stakeholder conversations about draft updated allocations
- Draft BMAP report and meeting in Spring 2019



Contact Information

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Questions & Comments