

Florida Department of Environmental Protection



St. Lucie River and Estuary Basin Management Action Plan (BMAP) 2014 Progress Report

August 13, 2014





Presentation Overview

- Overview of annual report.
- Second-phase planning update.
 - Future project planning.
 - Managed Aquatic Plant Systems (MAPS).
 - WaSh Model.
 - Phase II timeline.



Annual Report Overview



Annual Report Overview

- First annual progress on the BMAP activities.
- Information was provided by stakeholders on activities from June 11, 2013 (BMAP adoption) through June 30, 2014.
- The report includes:
 - Accomplishments.
 - Upcoming year activities.



BMAP Background

- The Department adopted Total Maximum Daily Load (TMDL) in March 2009.
 - Total phosphorus (TP).
 - Total nitrogen (TN).
 - Biochemical Oxygen Demand (BOD).
- BMAP focused on achieving TP and TN reductions over a 15-year period.
- Detailed allocations were made to the responsible stakeholders to achieve 30% of reductions over five-year period.
- BMAP adopted by Department Secretary in June 2013.



Completed Projects during Reporting Period

- **Fort Pierce**
 - Fertilizer ordinance.
- **City of Stuart**
 - Amerigo Avenue Drainage Improvements.
- **Florida Department of Transportation (FDOT) District 4/Martin County**
 - Indian Street Bridge.
- **Martin County**
 - Rio Water Quality Retrofit.
- **Town of Sewall's Point**
 - Pedway/Greenway.
 - High Point Exfiltration Project.
 - Indialucie Project.



Agriculture Accomplishments

- 170 Notices of Intent in BMAP area (131,594.6 acres).
- Plan to enroll remaining 39,252.2 acres by June 2018 (90% goal).
- Florida Department of Agriculture and Consumer Services (FDACS) responsible for enrolling landowners in best management practice (BMP) programs in:
 - Hobe St. Lucie Conservancy District.
 - North St. Lucie River Water Control District (WCD).
 - Pal Mar WCD.
 - Troup-Indiantown WCD.



Fort Pierce Accomplishments

- Completed fertilizer ordinance in June 2014.
- Began construction of Indian Hills Recreation Area Stormwater Improvements Project.



Indian Hills Recreation Area Stormwater Improvements - First Floating Island Installed - 06/26/14



Port St. Lucie Accomplishments

- **Septic tanks**

- Phased out 265 during the reporting period.
- Previously phased out ~5,600 (34,206.5 pounds/year TN).

- **Fertilizer ordinance**

- Passed a revised ordinance.
- Created educational video and webpage:
<http://www.cityofpsl.com/public-works/fertilizer.html>.



Port St. Lucie Accomplishments, continued

- **Baffle boxes**
 - Began installation of five in May 2014.
- **St. Lucie West Services District**
 - Improve wetland detention pond to increase retention time.
 - Construction kickoff expected in November 2014.



City of Stuart Accomplishments

- Removed septic tanks since 2000 (1,340.7 pounds/year TN).
- Completed Amerigo Avenue Drainage Improvements in 2014.
- Began Phase I of Heart of Haney Creek wetland restoration project.
- Provided information to quantify reductions from existing baffle boxes and continuous deflective separation (CDS) units.
- Identified areas within closed basins, which have no discharge.

Heart of Haney - 11/13/2013 "After"



Heart of Haney - 10/14/2013 "Before"





Martin County Accomplishments

- **Septic Tanks**
 - Phased out 1,084 since 2000 (15,369.2 pounds/year TN).
- **Old Palm City Beemats**
 - Pilot effort installed at Old Palm City Stormwater Treatment Area (STA).
 - County will gather information on this BMP.
- **Rio Water Quality Retrofit**
 - Completed during reporting period.
 - Provides one inch of water quality treatment over ~45-acre treatment basin.



St. Lucie County Accomplishments

- Initiated construction of White City-Citrus Seagar Stormwater Improvement Project.
 - 4.01-acre detention lake.
 - Mechanisms to pump water through polyacrylamide “floc logs.”
 - Completion expected in December 2015.





Town of Sewall's Point Accomplishments

- **Pedway/Greenway**
 - Completed during reporting period.
 - Pervious paver/exfiltration project.
- **High Point Exfiltration**
 - Eliminated uncontrolled discharge outfall into Indian River Lagoon (IRL)/St. Lucie Estuary.
- **Indialucie Project**
 - Added treatment to system that overflows long shallow weir directly into IRL.



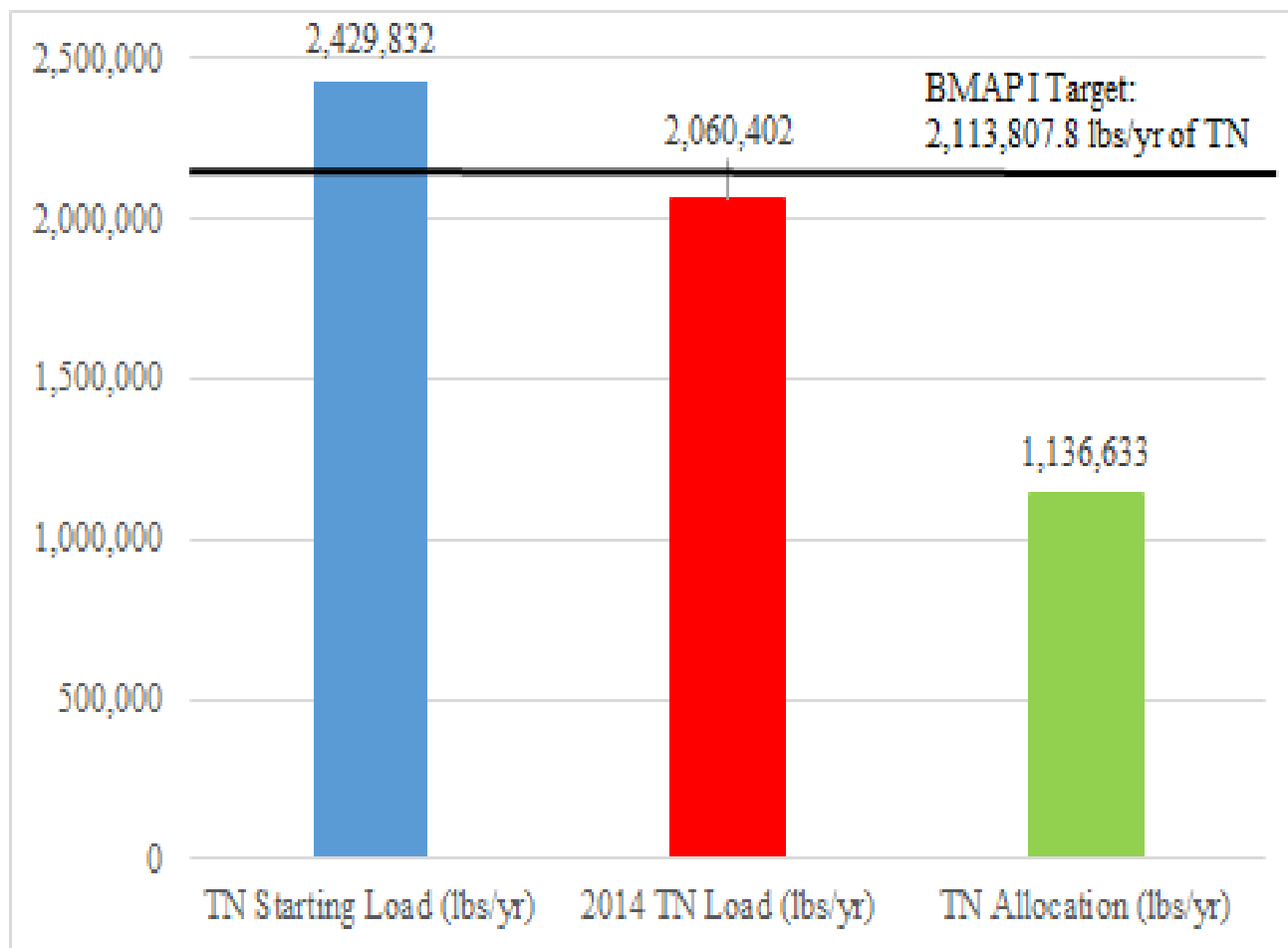


Summary of Accomplishments

- Projects completed during first reporting period:
 - 52,152 pounds/year TN.
 - 280 pounds/year TP.
 - These reductions are in addition to projects given credit before BMAP adoption.
- Total reductions to date:
 - 369,430 pounds/year TN.
 - 105,710 pounds/year TP.

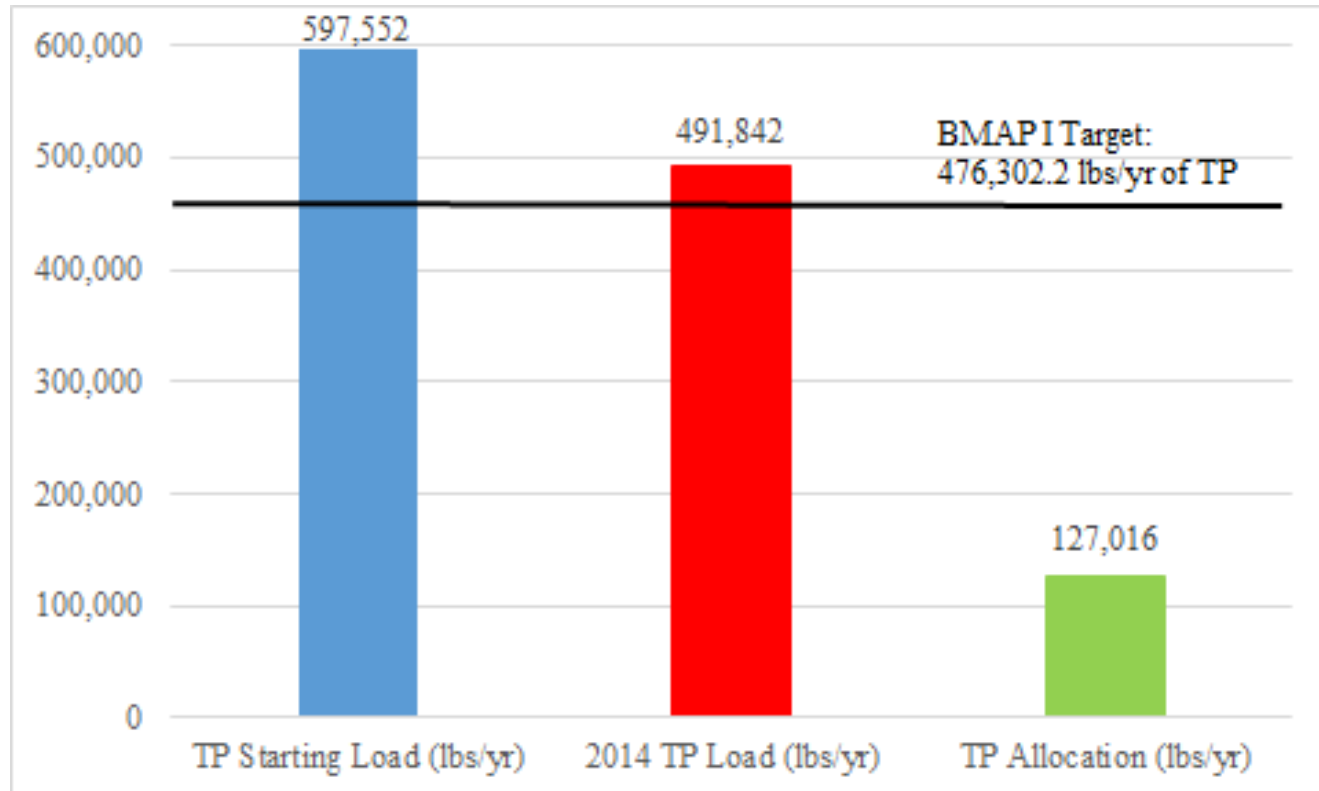


Summary of Accomplishments, continued



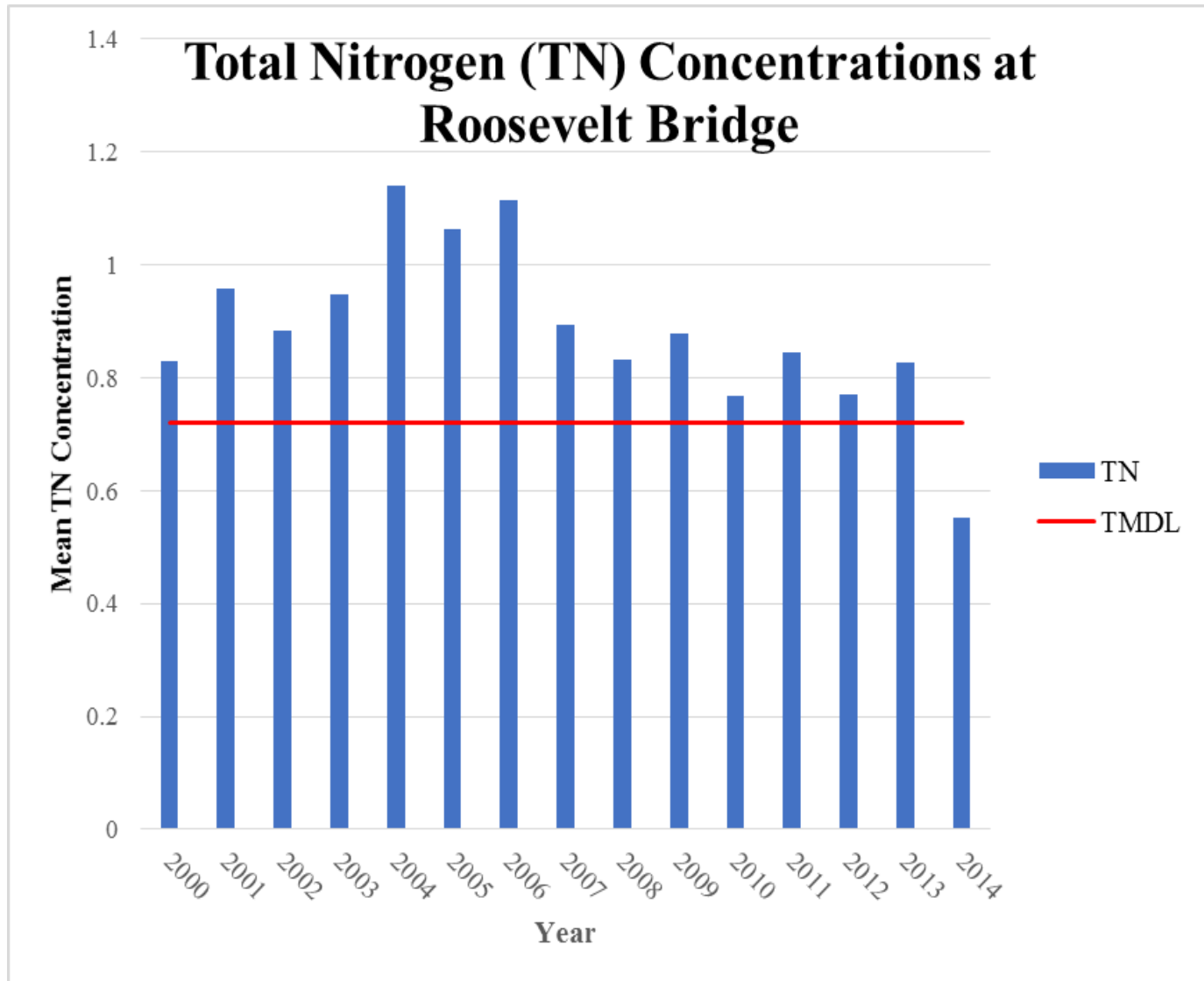


Summary of Accomplishments, continued





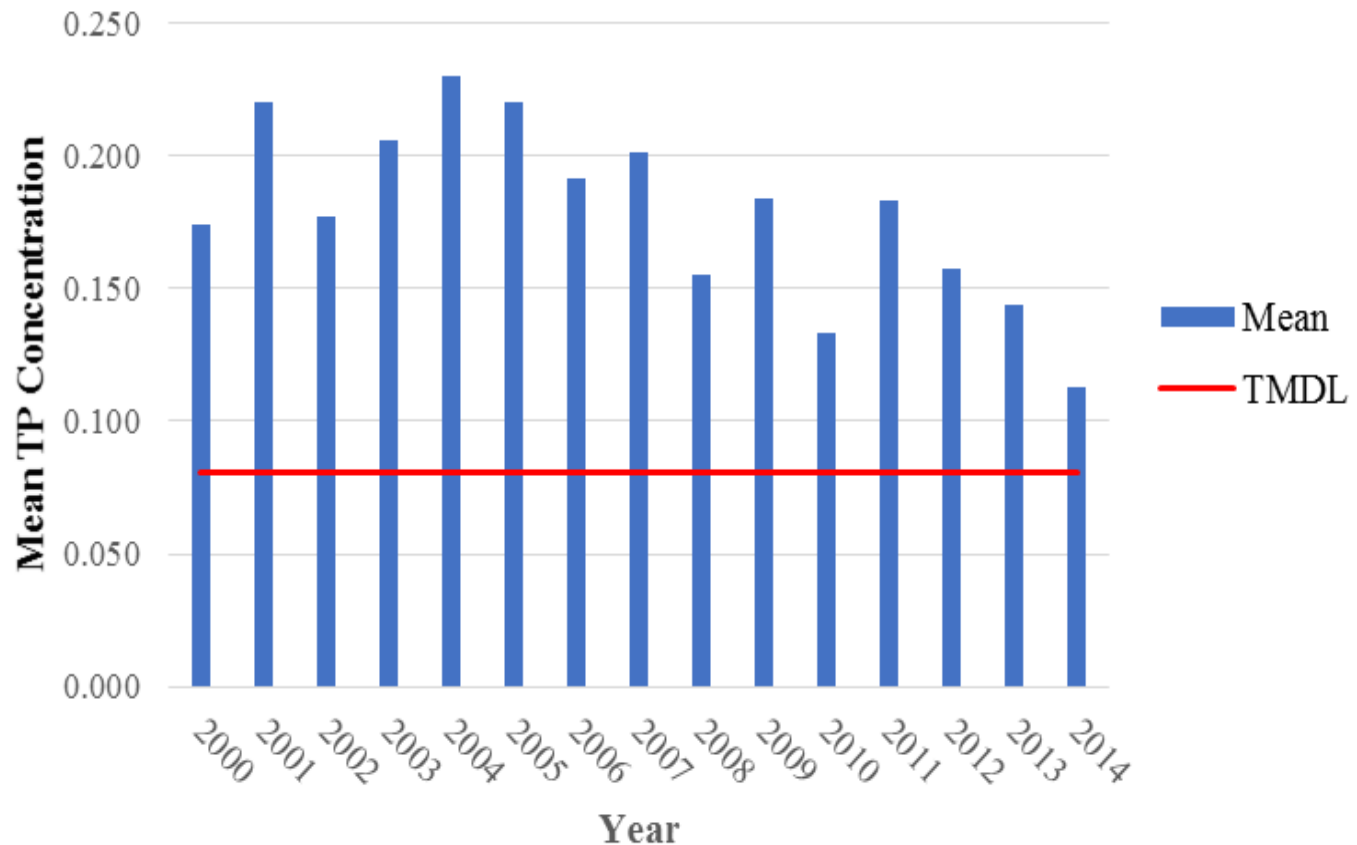
Water Quality Evaluation





Water Quality Evaluation, continued

Total Phosphorus (TP) Concentrations at Roosevelt Bridge





Second-Phase Planning Update



Future Project Planning

- **Step 1:** Identify additional projects to meet remaining 40% second phase reductions (**2013 - January 2017**).
- **Step 2:** Work with other stakeholders to develop collaborative projects (**2014-2016**).
- **Step 3:** Brief management on these projects (**by end of 2016**).
- **Step 4:** Work with the Department as needed, e.g., discuss funding eligibility (**2013-2018**).
- **Step 5:** Brief councils and/or commissions (**by end of 2018**).
- **Step 6:** Adopt the new list of projects for the second phase BMAP (**June 2018**).



MAPS

- Included in Final St. Lucie River and Estuary BMAP as a provisional stormwater BMP (20%).
- New data indicate efficiency is highly variable.
- At this time, Department is no longer giving credit for new MAPS unless project-specific monitoring shows a reduction of TN/TP from inflow to outflow.



WaSh Model

- Department and South Florida Water Management District (SFWMD) working together to finalize agreement.
- August 2015→ kickoff for model planning.



Phase II Timeline

- **August 2014**-Annual report meeting.
- **Fall 2014**-Stakeholder meeting (if needed).
- **Spring 2015**-Stakeholder meeting (if needed).
- **August 2015**-Annual report meeting/model discussion.
- **Fall 2015**-Stakeholder meeting (if needed).
- **Spring 2016**-Stakeholder meeting (if needed).
- **August 2016**-Annual report meeting.
- **Fall 2016**-Stakeholder meeting (if needed)/Finish modeling.



Phase II Timeline, continued

- **Spring 2017**-Stakeholder meeting.*
- **August 2017**-Annual report meeting/water quality assessment.
- **Fall 2017**-Stakeholder meeting/kickoff five-year update planning.
- **Spring 2018**-Stakeholder meeting/five-year update planning.
- **August 2018**-Five-year update meeting.



Action Items

- Provide comments on annual report to Katie (Katie.Hallas@dep.state.fl.us) by **Friday, August 22nd**.
- Continue to identify projects for potential BMAP credits.

Questions

