

FINAL

2015 ANNUAL PROGRESS REPORT

**for the Alafia River
Basin Management Action Plan**

prepared by the
Division of Environmental Assessment and Restoration
Watershed Restoration Program
Florida Department of Environmental Protection

with participation from the
Alafia River Stakeholders

July 2015

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Tallahassee, FL 32399-2400**



ACKNOWLEDGMENTS

This *2015 Progress Report for the Alafia River Basin Management Action Plan* was prepared as part of a statewide watershed management approach to restore and protect Florida's water quality. It was prepared by the Florida Department of Environmental Protection with information from the Alafia River stakeholders. Additional input was received from members of the Tampa Bay Estuary Program and Tampa Bay Nutrient Management Consortium, who are not specifically mentioned below.

ALAFIA RIVER BASIN PARTICIPANTS

- Environmental Protection Commission of Hillsborough County
- Hillsborough County Public Works
- Tampa Bay Water
- CSX
- Florida Department of Agriculture and Consumer Services
- TECO Energy
- City of Lakeland
- Plant City
- Polk County
- Southwest Florida Water Management District
- The Mosaic Company
- Kinder Morgan
- Tampa Bay Estuary Program
- Florida Department of Transportation
- CF Industries
- Florida Department of Health in Hillsborough County
- Hillsborough County Health Department
- Tampa Bay Regional Planning Council
- Coronet Industries
- Sierra Club

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LIST OF ACRONYMS AND ABBREVIATIONS

BMAP	Basin Management Action Plan
BMP	Best Management Practice
DEP	Florida Department of Environmental Protection
DO	Dissolved Oxygen
EPCHC	Environmental Protection Commission of Hillsborough County
FDACS	Florida Department of Agriculture and Consumer Services
FDOH	Florida Department of Health
FDOT	Florida Department of Transportation
FWC	Florida Fish and Wildlife Conservation Commission
kg/yr	Kilograms Per Year
LA	Load Allocation
lbs/day	Pounds Per Day
lbs/yr	Pounds Per Year
mg/L	Milligrams Per Liter
NMC	(Tampa Bay) Nitrogen Management Consortium
NPDES	National Pollutant Discharge Elimination System
SCR	Selective Catalytic Reduction
SWFWMD	Southwest Florida Water Management District
TBEP	Tampa Bay Estuary Program
TBRPC	Tampa Bay Regional Planning Council
TMDL	Total Maximum Daily Load
TN	Total Nitrogen
TP	Total Phosphorus
WBID	Waterbody Identification
WLA	Wasteload Allocation

SUMMARY

The Alafia River Basin Management Action Plan (BMAP) was developed in collaboration with areawide stakeholders with the assistance of the Tampa Bay Estuary Program (TBEP) and the Tampa Bay Nitrogen Management Consortium (NMC). The TBEP has been successful in coordinating a plan to reduce nutrient inputs to Tampa Bay by working with NMC members to assess the actual loads generated, implement actions to reduce nitrogen loadings, and then monitor improvements in seagrass coverage throughout the bay. Through the implementation of projects, activities, and additional source assessment, stakeholders expect the following outcomes:

- Continued improvements in water quality trends in the Alafia River.
- Decreased loading of the target pollutant, total nitrogen (TN).
- Identification of potential sources of fecal coliform impairments.
- Increased coordination between state BMAP efforts and TBEP and NMC members in problem solving for surface water quality restoration.
- Determination of effective projects through the stakeholder decision-making and priority-setting processes.

TOTAL MAXIMUM DAILY LOADS (TMDLS)

The Florida Department of Environmental Protection (DEP) adopted fecal, nutrient, and dissolved oxygen (DO) TMDLs (**Table 1**), for the Alafia River Basin in 2005 for Thirtymile Creek (waterbody identification [WBID] number 1639) and in 2009 for the remainder of the WBIDs in the basin. The Alafia River BMAP for was adopted in April 2014 to implement these TMDLs.

This 2015 Progress Report is the first annual assessment report for the Alafia River BMAP; it describes the major accomplishments and issues identified during the reporting period from April 1, 2014, to March 30, 2015.

MAJOR ACCOMPLISHMENTS

The first year of BMAP implementation has been successful. The BMAP includes 78 projects; 61 of the projects have been completed and 17 are ongoing.

WATER QUALITY TRENDS

DEP has collected water quality samples in the Alafia River since the 1950s. To enhance the understanding of basin loads, track project implementation, and identify long-term water quality trends, water quality data were collected for DO, DO percent saturation, TN, and total phosphorus (TP). The Southwest Florida Water Management District (SWFWMD) monitors the health of Tampa Bay and is a major source of current water quality information about the basin. The information gathered will measure progress toward achieving the TN and TP TMDLs and provide a foundation for continued improvement in cost-effective project implementation.

SECTION I: INTRODUCTION

1.1 PURPOSE OF THE REPORT

The Alafia River Basin Management Action Plan (BMAP) was developed in collaboration with areawide stakeholders with the assistance of the Tampa Bay Estuary Program (TBEP) and the Tampa Bay Nitrogen Management Consortium (NMC). The TBEP has been successful in coordinating a plan to reduce nutrient inputs to Tampa Bay by working with NMC members to assess the actual loads generated, implement actions to reduce nitrogen loadings, and then monitor improvements in seagrass coverage throughout the bay. The BMAP incorporates those efforts.

This is the first annual Progress Report for the Alafia River BMAP. **Section 2** and **Section 3** describe the results of the water quality monitoring for trends that occurred during the period from April 1, 2014, to March 30, 2015, in the Alafia River Basin. **Section 4** describes the projects and activities that occurred during the reporting period.

1.2 TOTAL MAXIMUM DAILY LOADS (TMDLS) FOR THE ALAFIA RIVER BASIN

The Alafia River BMAP addresses the total nitrogen (TN), total phosphorus (TP), and fecal coliform TMDLs for the following segments with waterbody identification (WBID) numbers: WBID 1621G, WBID 1578B, WBID 1592C, WBID 1552, WBID 1639, and WBID 1583. **Table 1** lists the TMDLs and pollutant load allocations (LAs) adopted by rule for the watershed.

Table 1: Alafia River Basin TMDLs

WBID	WATERBODY NAME	TMDL COMPONENTS
1621G	Alafia River above Hillsborough Bay (Tidal Segment)	TN concentration (target=1.65 milligrams per liter [mg/L]) <ul style="list-style-type: none"> • Wasteload Allocation (WLA) (National Pollutant Discharge Elimination System [NPDES] stormwater) = 54% reduction • WLA (NPDES wastewater) = 14.3 pounds per day (lbs/day) <ul style="list-style-type: none"> • LA = 54% reduction
1578B	Turkey Creek	Fecal coliform concentration (percent reduction) <ul style="list-style-type: none"> • WLA (NPDES stormwater) = 64% reduction • WLA (NPDES wastewater) = must meet permit limits <ul style="list-style-type: none"> • LA = 64% reduction
1592C	Mustang Ranch Creek	TN concentration (percent reduction) <ul style="list-style-type: none"> • WLA (NPDES stormwater) = 50% reduction <ul style="list-style-type: none"> • LA = 50% reduction TP concentration (percent reduction) <ul style="list-style-type: none"> • WLA (NPDES stormwater) = 45% reduction <ul style="list-style-type: none"> • LA = 45% reduction

WBID	WATERBODY NAME	TMDL COMPONENTS
1592C	Mustang Ranch Creek	Fecal coliform concentration (percent reduction) <ul style="list-style-type: none"> WLA (NPDES stormwater) = 88% reduction LA = 88% reduction
1552	English Creek	Fecal coliform concentration (percent reduction) <ul style="list-style-type: none"> WLA (NPDES stormwater) = 40% reduction LA = 40% reduction
1639	Thirtymile Creek	TN concentration (target = 3.0 mg/L) <ul style="list-style-type: none"> WLA = 3.0 mg TN/L (monthly average) LA = 1.6 mg TN/L (annual average)
1583	Poley Creek	Fecal coliform concentration (percent reduction) <ul style="list-style-type: none"> WLA (NPDES stormwater) = 67% reduction LA = 67% reduction

1.3 AREA COVERED BY BMAP

Figure 1 shows the WBIDs addressed in the Alafia River Basin BMAP.

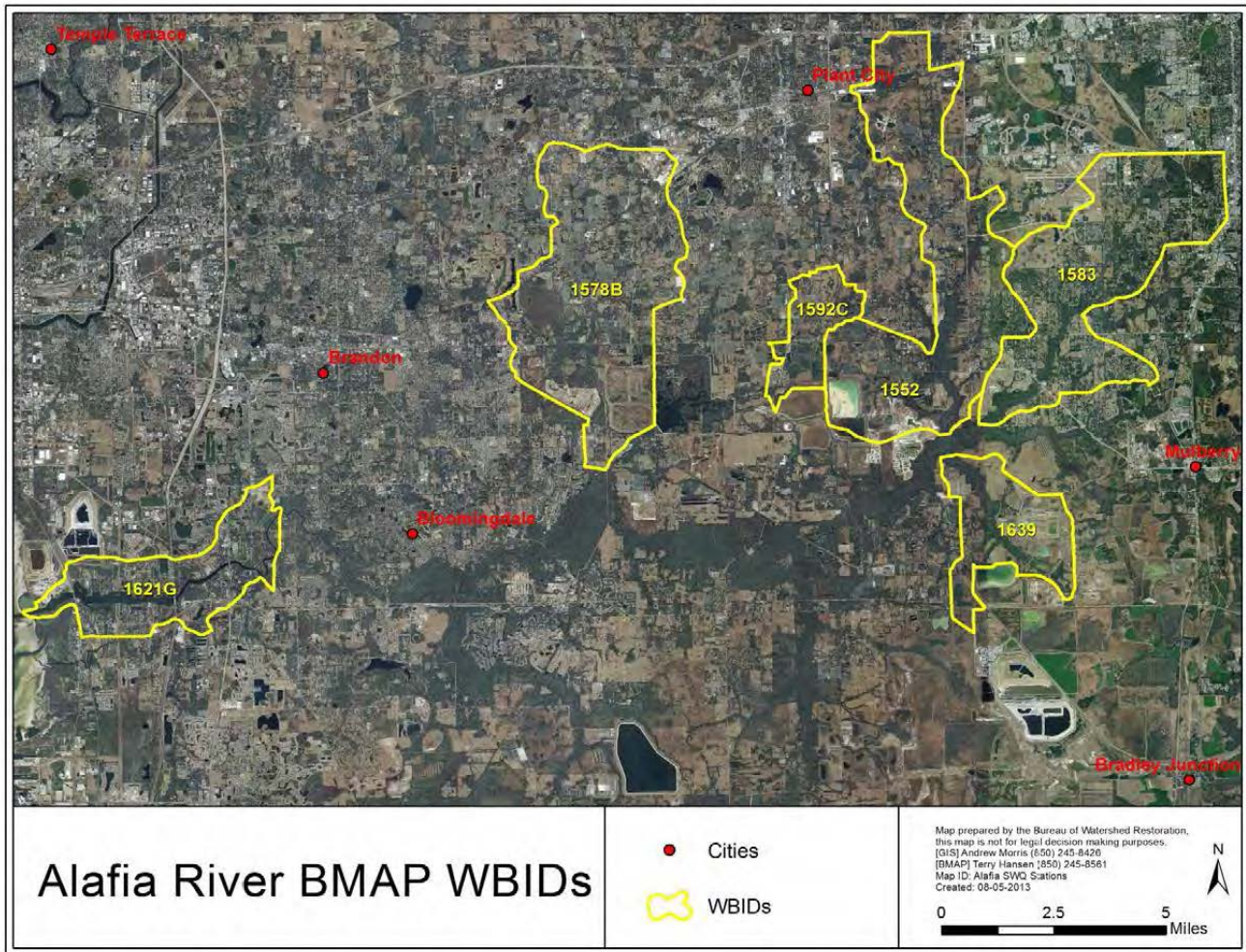


Figure 1: Alafia River Basin and WBIDs addressed in the BMAP

SECTION II: WATER QUALITY MEASUREMENTS

2.1 WATER QUALITY MONITORING

DEP has collected water quality samples in the Alafia River since the 1950s. To enhance the understanding of basin loads, track project implementation, and identify long-term water quality trends, water quality data were collected for dissolved oxygen (DO), DO percent saturation, TN, and TP. The Southwest Florida Water Management District (SWFWMD) monitors the health of Tampa Bay and is a major source of current water quality information about the basin. The information gathered will measure progress toward achieving the TN and TP TMDLs and provide a foundation for continued improvement in cost-effective project implementation.

SECTION III: WATER QUALITY TRENDS

2.2 WATER QUALITY MONITORING OBJECTIVES

Focused objectives are critical for a monitoring strategy to provide the information needed to evaluate implementation success. The primary and secondary objectives of the monitoring strategy for the tributaries, described below, will be used to evaluate the success of the BMAP, help interpret the data collected, and provide information for potential future refinements of the BMAP.

2.2.1 PRIMARY OBJECTIVE

On a baywide basis, Tampa Bay currently appears to be on track in terms of meeting its TN, chlorophyll *a*, water clarity, and seagrass restoration goals (TBEP 2006; Yates *et al.* 2011; Sherwood 2014). As a result, future watershed management actions will presumably focus on the TBEP's "hold-the-line" strategy, seeking to compensate for ongoing population growth and prevent TN loads from increasing as the human population of the watershed continues to expand. If those management efforts are successful, in future years TN concentrations in the Alafia River tidal reach are likely to be comparable to those observed today.

Year-to-year algae abundance (measured as chlorophyll *a* concentrations) and visible light penetration through the water column (Secchi depth) have been identified as critical water quality indicators in Tampa Bay. Based on water quality data from 2014, the TBEP has determined that for the third year in a row, all bay segments received a "Green" management status, indicating that projects would continue as planned. This is the first time since monitoring began that all four bay segments met targets for three straight years, indicating that water quality is improving. Additionally, seagrass gains have been documented in all bay segments. Additional information regarding the [TBEP's Nitrogen Management Strategy](#) is available online.

2.2.2 SECONDARY OBJECTIVE

Additional water quality sampling stations are monitored throughout the Alafia River Basin. **Table 2**, **Table 3**, and **Table 4**, as well as **Figure 2**, **Figure 3**, and **Figure 4**, reflect the annual geometric means for the sampling stations located in WBIDs 1621G, 1578B, 1592C, 1552, 1583, and 1639 for DO, DO percent saturation, TN, and TP. Water quality data were compiled beginning in July 2008, when the TMDL was adopted, through January 2014.

DO concentrations between July 2008 and January 2014 indicate an increasing trend. DO saturation in these WBIDs indicates a decreasing trend during the same period, as do TN and TP.

Physical factors that determine circulation, flushing, and reaeration rates could be playing critical roles in DO and nutrient concentrations. Those factors, their interactions with each other and with ambient nutrient levels, and the effects of the interactions on ambient DO levels need further examination. The information could be used to develop a strategy for achieving compliance with existing DO criteria or developing site-specific alternative criteria that are consistent with the waterbody's physical characteristics.

Table 2: Geometric mean of DO and DO saturation, July 2008–January 2014

Year	DO (mg/L)	DO Saturation (%)
2008	4.06	57.01%
2009	3.78	57.56%
2010	4.72	59.34%
2011	4.03	61.92%
2012	4.62	59.26%
2013	4.36	55.14%
2014	6.84	40.45%

Table 3: Geometric mean of TN, July 2008–January 2014

Year	TN (mg/L)
2008	1.20
2009	1.37
2010	1.41
2011	1.17
2012	1.38
2013	1.18
2014	1.15

Table 4: Geometric mean of TP, July 2008–January 2014

Year	TP (mg/L)
2008	1.20
2009	1.37
2010	1.41
2011	1.17
2012	1.38
2013	1.18
2014	1.15

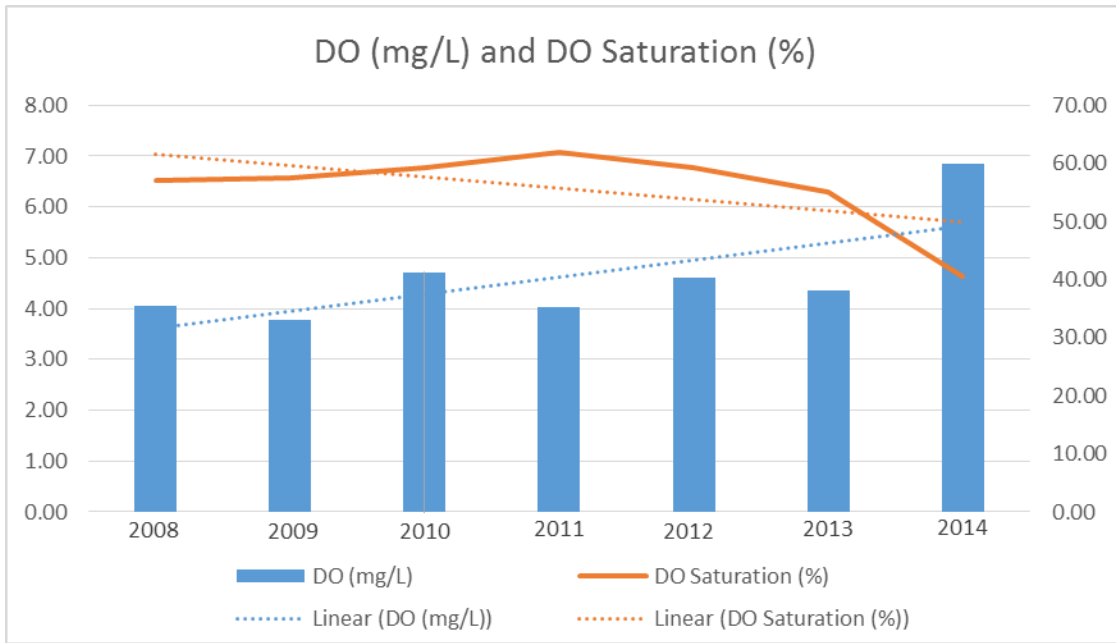


Figure 2: Geometric mean of DO and DO saturation, July 2008–January 2014

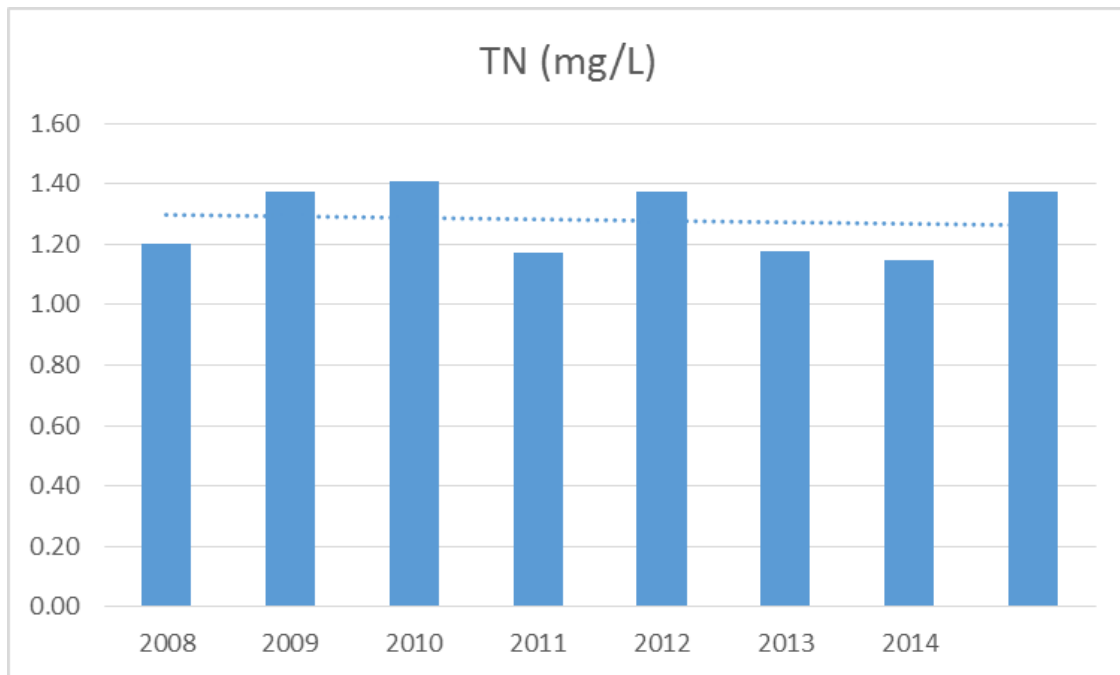


Figure 3: Geometric mean of TN, July 2008–January 2014

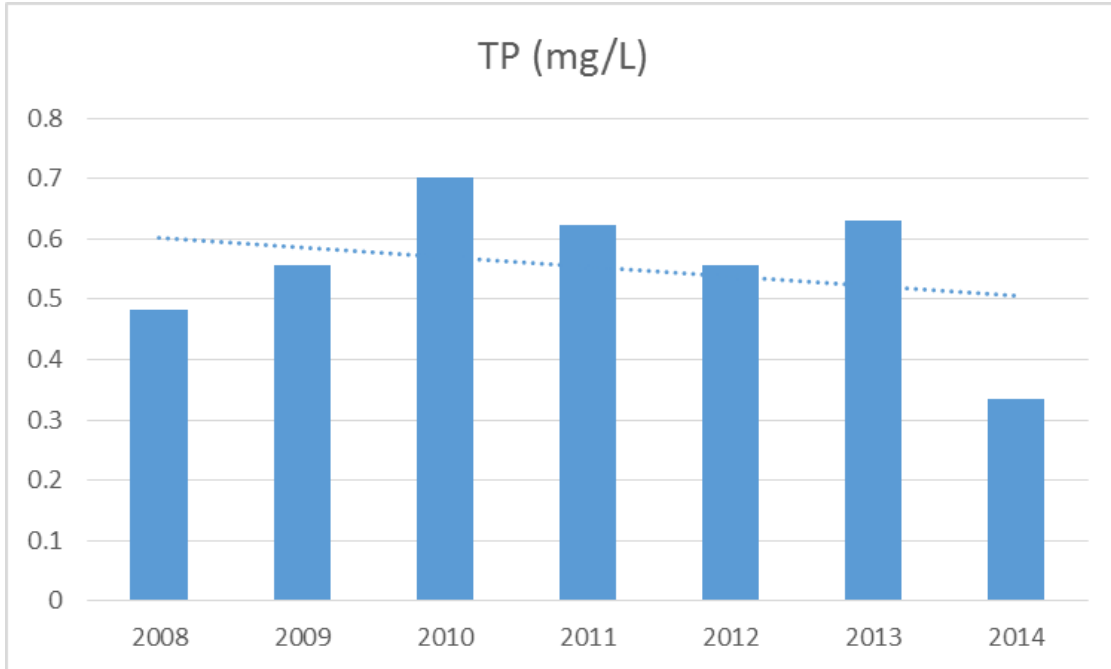


Figure 4: Geometric mean of TP, July 2008–January 2014

2.3 FECAL COLIFORM TRENDS

A Walk the Waterbody report was completed for Poley Creek during the reporting period. The report summarizes the results of field reconnaissance activities conducted to gain a better understanding of the observed high concentrations of fecal coliform bacteria in the watersheds. The exercise allows stakeholders to identify uncertainties and future options for more effective adaptive management.

The Poley Creek watershed is located in west-central Polk County. The Walk the Waterbody exercise was conducted on September 19 and 26, 2012. The lead entity for the exercise was the Polk County Parks and Natural Resources Division; other participants included the Polk County Utilities Division, City of Lakeland Lakes and Stormwater Division, Florida Department of Health (FDOH), DEP, Florida Fish and Wildlife Conservation Commission (FWC), Polk County Farm Bureau, Agricultural Extension Service, Polk County Cattlemen's Association, and others.

Potential sources or other issues identified while in the field were reported to the proper jurisdiction and cataloged while in the field. A record was kept of major findings, including observations about the waterbody, potential sources, followed-up items and the responsible entity, and any areas that should be added to the monitoring plan or that required additional investigation. Upon the completion of the

identified follow-up activities, the presence of fecal coliform bacteria from anthropogenic activities in the watershed should decrease.

SECTION IV: PROJECT DESCRIPTIONS

Sections 4.8 through 4.8 describe the accomplishments in the Alafia River Basin over the past year, and Appendix A contains the individual project tables.

3.1 CF INDUSTRIES, INC.

CF Industries, Inc. has met the BMAP commitments as required.

3.2 CITY OF CLEARWATER

Clearwater has met the BMAP commitments as required.

3.3 CITY OF LAKELAND

Lakeland has met the BMAP commitments as required.

3.4 CITY OF PLANT CITY

Plant City continues to conduct ongoing activities related to stormwater management including the following: street sweeping, curb inlet marking, grease management, spill prevention and response, and sewer line maintenance, in addition to lift station telemetry, security, auxiliary power, and maintenance.

3.5 CITY OF TAMPA

Tampa has met the BMAP commitments as required.

3.6 FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES (FDACS)

Figure 5 shows agricultural land use in the Alafia River BMAP area. Table 5 summarizes the land use data, the number of acres enrolled in BMP programs, and the goal for enrolling additional acres in the basin. The acreage used to calculate the starting point agricultural nutrient load is based on 2008 land use information from the SWFWMD.

It is important to understand that, even if all targeted agricultural operations are enrolled, not all of the acreage listed as agriculture in Table 5 will be included in enrollment figures. The NOIs will document the estimated total number of acres on which applicable BMPs are implemented, not the entire parcel acreage. This is because land use data can contain nonproduction acres (such as buildings, parking lots, and fallow acres) that will not be counted on the NOIs submitted to FDACS.

There also may be significant amounts of acreage that do not need to be enrolled, such as lands that are not actively involved in commercial agriculture (operations conducted as a business). These areas are

often low-density residential uses on large parcels of grassed land, or land that was but is no longer in commercial agricultural production. This information is impossible to discern in the photo interpretation process used to generate land use data. Local governmental, SWFWMD, or DEP BMPs may address these noncommercial sources.

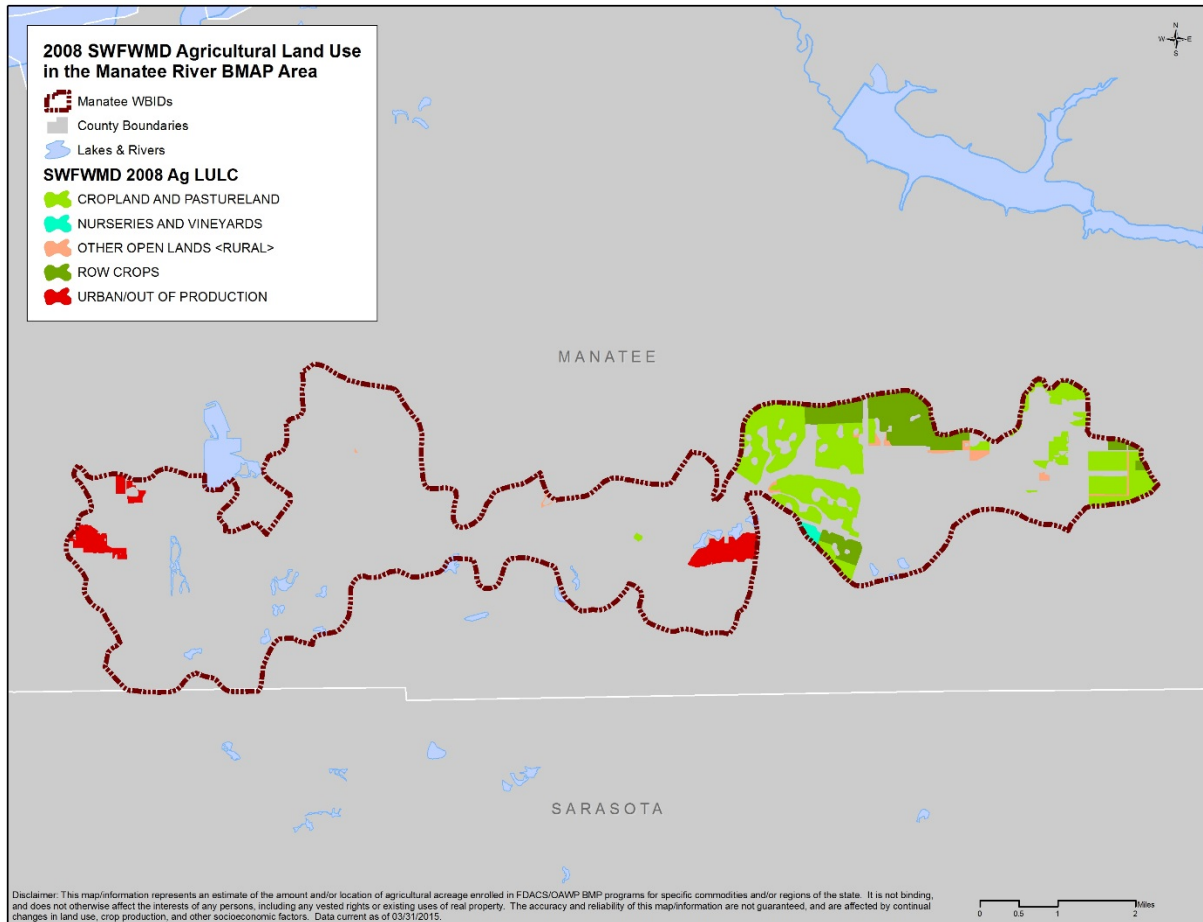


Figure 5. Agricultural land use based on 2008 SWFWMD data in the Alafia River Basin

Based on aerial imagery and field staff observation, FDACS adjusted these figures to reflect the current agricultural land use acreage more accurately. The FDACS-adjusted acreage shows approximately 8.8% less total acreage than indicated in the 2008 figures, due to nonproduction land that would not need to be enrolled but is included in agricultural land use and classified as "other open lands – rural." In addition, some acreage may have ceased production since 2008 and also would not need to be enrolled in BMPs.

All agricultural nonpoint sources in the BMAP area are statutorily required either to implement FDACS-adopted BMPs or to conduct water quality monitoring that demonstrates compliance with state water quality standards. **Figure 6** shows the acres enrolled in BMPs as of March 31, 2015.

Table 5. Agricultural acreage, BMP enrollment, and future enrollment goals in the Alafia River Basin

¹ FDACS-adjusted acreage for purposes of enrollment is based on a review of more recent aerial imagery in the basin and local staff observations.
NA = Not applicable

2008 SWFWMD Land Use	2008 Acres	FDACS-Adjusted Acres for Enrollment ¹	Related FDACS' BMP Programs	Acreage Enrolled ¹	Related NOIs/ Certification
Pastureland and Rangeland	4,396.3	4,396.3	Cow/Calf Future (hay)	760.8	3
Row/Field/Mixed Crops	3,033.3	3,033.3	Vegetable/ Agronomic Crops	3,769.5	55
Tree Crops	1,452.2	142.2	Specialty Fruit and Nut	102.1	9
Nurseries and Vineyards	343.2	343.2	Container Nursery	313.3	10
Specialty Farms	40.0	40	Equine	0	0
Feeding Operations	42.9	42.9	Conservation Plan Rule	0	0
Other Open Land – Rural	1,183.7	0	No Enrollment Needed	NA	NA
Aquaculture	12.9	12.9	FDACS Aquaculture		
TOTAL	10,554.4	9,370.7	-	4,945.8	77

ENROLLED ACREAGE (MARCH 31, 2015) = 4,945.8

Due to the inaccuracies in land use information and changes in land use since 2008, agricultural loadings may be less than indicated in the TMDL. The region is expected to continue the shift from agricultural to residential/urban land uses, further reducing agricultural loadings. More precise information will be incorporated into the next iteration of the BMAP, and the estimated agricultural load will be adjusted to reflect the updated acreage figure. The potential refinement of a basin- and commodity-specific agricultural loading/reduction model should be considered during the first BMAP cycle. FDACS will work with DEP to identify appropriate nutrient reductions associated with agricultural BMPs.

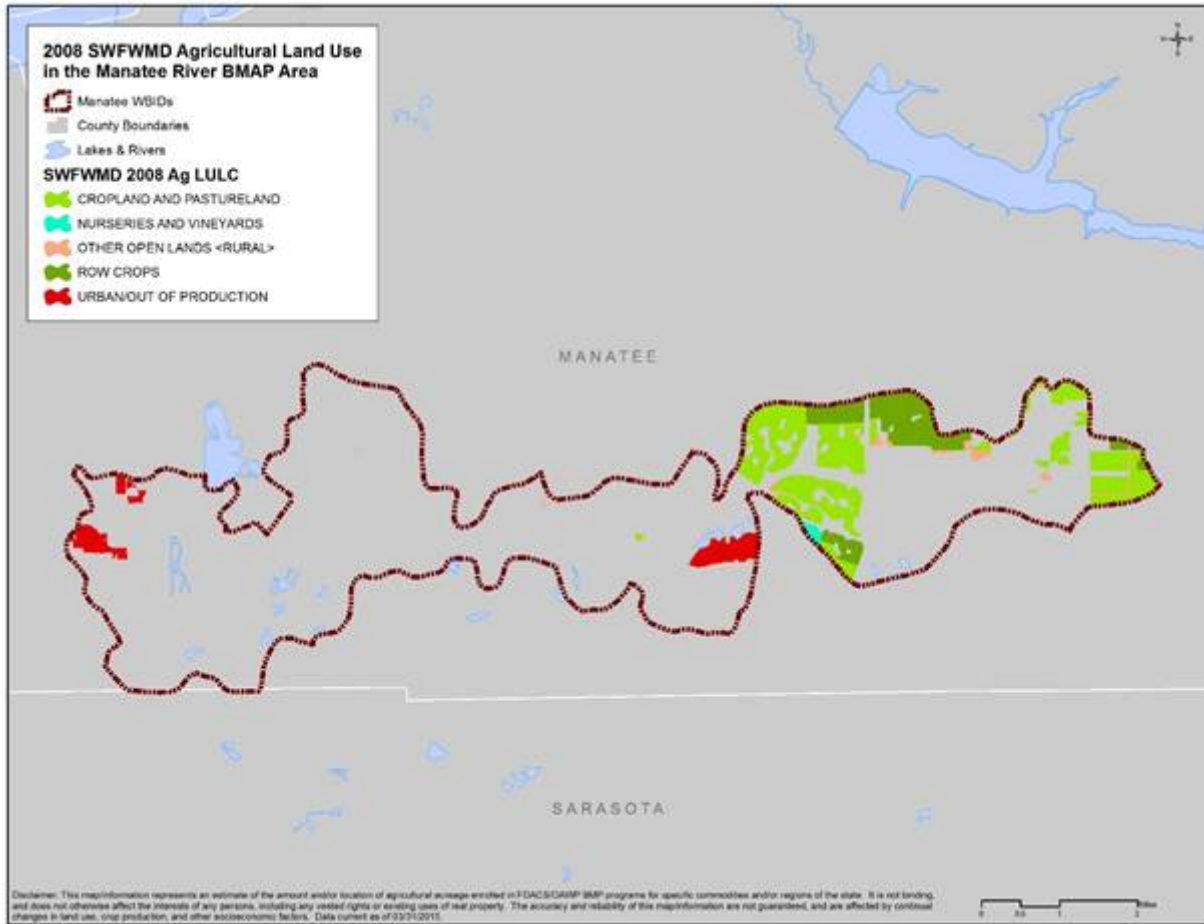


Figure 6. BMP enrollment as of March 31, 2015, in the Alafia River Basin

3.7 DEP

DEP has met the BMAP commitments as required.

3.8 FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) DISTRICT 7

FDOT District 7 continues sweeping state roads in the county.

3.9 HILLSBOROUGH COUNTY

Hillsborough County has met the BMAP commitments as required.

3.10 IMC – PHOSPHATE

IMC – Phosphate has met the BMAP commitments as required.

3.11 MOSAIC

Mosaic completed the Bartow Operations phosphogypsum stack system closure in 2014.

3.12 POLK COUNTY

Polk County continues to investigate illicit discharge complaints.

3.13 SWFWMD

The SWFWMD has met the BMAP commitments as required.

3.14 TAMPA BAY REGIONAL PLANNING COUNCIL (TBRPC)

The TBRPC has met the BMAP commitments as required.

3.15 TAMPA BAY WATER

Tampa Bay Water has met the BMAP commitments as required.

3.16 TECO

TECO has met the BMAP commitments as required.

3.17 SUMMARY OF ACCOMPLISHMENTS

The Alafia River BMAP was developed in collaboration with areawide stakeholders with the assistance of the TBEP and the Tampa Bay NMC. The TBEP has been successful in coordinating a plan to reduce nutrient inputs to Tampa Bay by working with NMC members to assess the actual loads generated, implement actions to reduce nitrogen loadings, and then monitor improvements in seagrass coverage throughout the bay. The projects included in the TBEP Reasonable Assurance Plan are included in the BMAP, in addition to other projects. Due to the completed and ongoing efforts of these stakeholders, Tampa Bay appears to be improving; this will subsequently improve water quality in the Alafia River Basin tributaries.

APPENDIX A: BMAP PROJECTS

The BMAP project tables below show the status of the projects as of March 30, 2015. These tables provide information on the types of projects completed or under way by stakeholders and the project number associated with the Tampa Bay Estuary Reasonable Assurance Plan. The schedule to implement each of the projects is included in each table. Project numbers have been assigned to each project, to aid in project tracking over time. Most of the project numbers are based on the Tampa Bay project database. Where there were projects in the BMAP that were not included in the Tampa Bay database, numbers that reflect the responsible entity names have been assigned.

Table A-1: CF Industries, Inc.

Lead Entity	Project Number	Project Name	Project Type	Project Status	Project Completion Year
CF Industries, Inc.	848	Bartow Phosphate Complex, Enhanced Process Water Evaporation, Nutrient Load Prevention Project 2001	Restoration, land acquisition, and water quality improvement	Completed	2006
CF Industries, Inc.	849	Bartow Phosphate Complex, Enhanced Process Water Evaporation, Nutrient Load Prevention Project	Restoration, land acquisition, and water quality improvement	Completed	
CF Industries, Inc.	854	Bartow Phosphate Complex Phosphogypsum Stack Closure	Restoration, land acquisition, and water quality improvement	Completed	
CF Industries, Inc.	997	Bartow Phosphate Complex, Enhanced Process Water Evaporation, Nutrient Load Prevention Project - 2005	Restoration, land acquisition, and water quality improvement	Completed	2005
CF Industries, Inc.	1003	Bartow Phosphate Complex, Enhanced Process Water Evaporation, Nutrient Load Prevention Project	Restoration, land acquisition, and water quality improvement	Completed	2006

Table A-2: City of Clearwater

Lead Entity	Project Number	Project Name	Project Type	Project Status	Project Completion Year
City of Clearwater	1023	Bayview Park	Restoration, land acquisition, and water quality improvement	Completed	

Table A-3: City of Lakeland

- = Empty cell/no data

Lead Entity	Project Number	Project Name	Project Type	Project Status	Project Completion Year
City of Lakeland	1057	Lakeland Methane to Energy Project - Phase II	Other	Completed	
City of Lakeland	1058	Lakeland Selective Catalytic Reduction (SCR) Project	Other	Completed	
City of Lakeland	1059	Lakeland Hi-efficiency Burners	Other	Completed	
City of Lakeland	1060	Lakeland Water to TECO	Wastewater infrastructure	Completed	
City of Lakeland	1061	Lakeland Methane to Energy Project - Phase I	Other	Completed	
City of Lakeland	1082	Septic Tank Abandonment or Connection to Sanitary Sewer	Wastewater infrastructure	Completed	

Table A-4: City of Plant City

N/A = Not applicable

Lead Entity	Project Number	Project Name	Project Type	Project Status	Project Completion Year
City of Plant City	1164	Dog Waste Signs	Stormwater management	Ongoing	N/A
City of Plant City	1314	Plant City Street Sweeping Program	Stormwater management	Ongoing	N/A
City of Plant City	1275	Plant City Environmental Education Program	Public education and outreach	Completed	
City of Plant City	N/A	Plant City Lift Station Telemetry Program	Wastewater infrastructure	Ongoing	N/A
City of Plant City	1284	Plant City Stormwater Inlet Marking Program	Wastewater infrastructure	Ongoing	N/A
City of Plant City	1285	Plant City Lift Station Auxiliary Power Program	Wastewater infrastructure	Ongoing	N/A
City of Plant City	1286	Plant City Lift Station Maintenance Program	Wastewater infrastructure	Ongoing	N/A
City of Plant City	1287	Plant City Lift Station Security Program	Wastewater infrastructure	Ongoing	N/A
City of Plant City	1288	Plant City Grease Management Program	Wastewater infrastructure	Ongoing	N/A
City of Plant City	1289	Plant City Inflow and Infiltration Program	Wastewater infrastructure	Ongoing	N/A

Lead Entity	Project Number	Project Name	Project Type	Project Status	Project Completion Year
City of Plant City	1291	Plant City Spill Prevention and Response Program	Wastewater infrastructure	Ongoing	N/A
City of Plant City	1292	Plant City Sewer Line Maintenance Program	Wastewater infrastructure	Ongoing	N/A

Table A-5: City of Tampa

Lead Entity	Project Number	Project Name	Project Type	Project Status	Project Completion Year
City of Tampa	14	Palma Ceia Area Stormwater Pond	Stormwater management	Completed	

Table A-6: DEP

Lead Entity	Project Number	Project Name	Project Type	Project Status	Project Completion Year
DEP	411	Alafia River Task Force	Restoration, land acquisition, and water quality improvement	Completed	

Table A-7: FDACS/DEP

N/A = Not applicable

Lead Entity	Project Number	Project Name	Project Type	Project Status	Project Completion Year
FDACS/DEP	1182	BMP Enrollment	Agricultural BMPs	Ongoing	N/A
FDACS/DEP	1184	BMP Enrollment	Agricultural BMPs	Ongoing	N/A
FDACS/DEP	1187	BMP Enrollment	Agricultural BMPs	Ongoing	N/A
FDACS/DEP	1189	BMP Enrollment	Agricultural BMPs	Ongoing	N/A
FDACS/DEP	1190	BMP Enrollment	Agricultural BMPs	Ongoing	N/A

Table A-8: Environmental Protection Commission of Hillsborough County (EPCHC)/FDOT

N/A = Not applicable

Lead Entity	Project Number	Project Name	Project Type	Project Status	Project Completion Year
EPCHC/FDOT	To be added	Monitoring for Pollutant Loading Estimate Project	Special studies, planning, monitoring, and assessment	Ongoing	N/A

Table A-9: FDOT District 7

N/A = Not applicable

Lead Entity	Project Number	Project Name	Project Type	Project Status	Project Completion Year
FDOT	To be added	Road Best Management Practices (BMPs)	Stormwater management	Ongoing	N/A
FDOT	To be added	U.S. Hwy. 301 Underdrain Pond Reconstruction	Stormwater management	Completed	2013
FDOT	To be added	Road BMPs	Stormwater management	Ongoing	N/A

Table A-10: Hillsborough County

Lead Entity	Project Number	Project Name	Project Type	Project Status	Project Completion Year
Hillsborough County	8	Delaney Creek Wetland Restoration Project	Wetland restoration	Completed	1997
Hillsborough County	254	Bell Creek Preserve - Land Acquisition	Restoration, land acquisition, and water quality improvement	Completed	1997
Hillsborough County	256	Boy Scout - Land Acquisition	Restoration, land acquisition, and water quality improvement	Completed	1999
Hillsborough County	269	Rhodine Scrub Land Acquisition	Restoration, land acquisition, and water quality improvement	Completed	1997
Hillsborough County	273	Alafia River Corridor Land Acquisition	Restoration, land acquisition, and water quality improvement	Completed	1999
Hillsborough County	870	Hillsborough County Citrus	Agricultural BMPs	Completed	1995
Hillsborough County	871	Citrus Conversion to Micro-Irrigation	Agricultural BMPs	Completed	1995

Lead Entity	Project Number	Project Name	Project Type	Project Status	Project Completion Year
Hillsborough County	877	Field and Row Crop Conversion to Micro-Irrigation	Agricultural BMPs	Completed	1995
Hillsborough County	878	Field and Row Crop Conversion to Micro-Irrigation	Agricultural BMPs	Completed	2000
Hillsborough County	889	Strawberry Conversion to Micro-Irrigation	Agricultural BMPs	Completed	1995
Hillsborough County	1018	Hurley Tailwater Pond	Stormwater management	Completed	2006
Hillsborough County	1225	Alafia River Corridor - North Prong	Restoration, land acquisition, and water quality improvement	Completed	2006
Hillsborough County	To be added	Walk the Waterbody	Other	Completed	2012
Hillsborough County	To be added	Fertilizer Ordinance	Regulations, ordinances, and guidelines	Completed	2013

Table A-11: IMC Phosphate

Lead Entity	Project Number	Project Name	Project Type	Project Status	Project Completion Year
IMC - Phosphate	34	IMC - Agrico Company Termination of Ammonia in Float Plants - Alafia River	Restoration, land acquisition, and water quality improvement	Completed	1995

Table A-12: Mosaic

Lead Entity	Project Number	Project Name	Project Type	Project Status	Project Completion Year
Mosaic	843	Mosaic Riverview, Modifications to Outfall Automation and Monitoring	Restoration, land acquisition, and water quality improvement	Completed	
Mosaic	844	Mosaic Riverview, Enhanced Housekeeping and Street Sweeping	Restoration, land acquisition, and water quality improvement	Ongoing	2005
Mosaic	845	Mosaic Riverview, Improved Drainage in Phosphoric Acid Production Areas	restoration, land acquisition, and water quality improvement	Completed	
Mosaic	846	Mosaic Mulberry, Transfer of Mulberry Phosphates Process Water	Restoration, land acquisition, and water quality improvement	Completed	2005
Mosaic	847	Mosaic Mulberry, Transfer of Mulberry Phosphates Process Water	Restoration, land acquisition, and water quality improvement	Completed	2001
Mosaic	855	Mulberry Reverse Osmosis Process Water Treatment, Prevention Project	Restoration, land acquisition, and water quality improvement	Completed	
Mosaic	856	Mulberry/Bartow Regional Process Water Storage Pond and Reverse Osmosis Treatment	Restoration, land acquisition, and water quality improvement	Completed	
Mosaic	857	Mulberry, Closure of Mulberry Phosphogypsum Stack	Restoration, land acquisition, and water quality improvement	Completed	
Mosaic	1233	Green Bay Discharge Diversion to Progress	Other	Completed	

Table A-13: Polk County

N/A = Not applicable

Lead Entity	Project Number	Project Name	Project Type	Project Status	Project Completion Year
Polk County	1159	Illicit Discharge Complaint Investigation	Stormwater management	Ongoing	N/A
Polk County	1160	Creative Drive Outfall Project	Stormwater management	Completed	2006
Polk County	To be added	Walk the Waterbody	Other	Completed	2012
Polk County	To be added	Fertilizer Ordinance	Regulations, ordinances, and guidelines	Completed	2013

Table A-14: SWFWMD

Lead Entity	Project Number	Project Name	Project Type	Project Status	Project Completion Year
SWFWMD	27	Alafia River Corridor Land Acquisition	Restoration, land acquisition, and water quality improvement	Completed	1995
SWFWMD	805	Gibsonton on the Bay	Stormwater management	Completed	2003

Table A-15: TBRPC

Lead Entity	Project Number	Project Name	Project Type	Project Status	Project Completion Year
TBRPC	980	Marine Gang Educational Performance Troupe	Public education and outreach	Completed	2005

Table A-16: Tampa Bay Water

Lead Entity	Project Number	Project Name	Project Type	Project Status	Project Completion Year
Tampa Bay Water	1067	Tampa Bay Regional Surface Water Treatment Plant Expansion	Stormwater management	Completed	2010

Table A-17: TECO

Lead Entity	Project Number	Project Name	Project Type	Project Status	Project Completion Year
TECO	762	Repowering Gannon Power Plant - Bayside Facility	Restoration, land acquisition, and water quality improvement	Completed	2004
TECO	772	Big Bend Power Plant Improvements	Restoration, land acquisition, and water quality improvement	Completed	2005
TECO	782	Big Bend Power Plant Improvements	Restoration, land acquisition, and water quality improvement	Completed	2002
TECO	792	Hookers Point Facility - Shut Down	Restoration, land acquisition, and water quality improvement	Completed	2005

APPENDIX B: REFERENCES

Tampa Bay Estuary Program. 2006. *Charting the course: The comprehensive conservation and management plan for Tampa Bay*. St. Petersburg, FL.

Yates, K.K., H.S. Greening, and G. Morrison. 2011. *Integrating science and resource management in Tampa Bay, Florida*. U.S. Geological Survey Circular 1348. St. Petersburg, FL.

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