2014 PROGRESS REPORT

For the Lake Jesup
Basin Management Action Plan

prepared by the
Division of Environmental Assessment and Restoration
Water Quality Restoration Program
Florida Department of Environmental Protection
Tallahassee, Florida 32399

in cooperation with the
Lake Jesup Basin Working Group

August 2014

ACKNOWLEDGEMENTS

This 2014 Lake Jesup BMAP Progress Report 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 in cooperation with the Lake Jesup stakeholders.

Orlando-Orange County Expressway Authority

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LIST OF ACRONYMS AND ABBREVIATIONS

BMAP	Basin Management Action Plan
BMP	Best Management Practice
BOD	Biological Oxygen Demand
CDS	Continuous Deflective Separation (Unit)
Department	Florida Department of Environmental Protection
FDACS	Florida Department of Agriculture and Consumer Services
FDOT	Florida Department of Transportation
FWC	Florida Fish and Wildlife Conservation Commission
FYN	Florida Yards and Neighborhood (Program)
HSPF	Hydrologic Simulation Program – FORTRAN (model)
I/I	Inflow and Infiltration
lbs/yr	Pounds per Year
mg/L	Milligrams per Liter
MS4	Municipal Separate Storm Sewer System
O&M	Operations and Maintenance
OOCEA	Orlando Orange County Expressway Authority
PSA	Public Service Announcement
RSF	Regional Stormwater Facility
SJRWMD	St. Johns River Water Management District
STORET	STOrage and RETrieval (Database)
TKN	Total Kjeldahl Nitrogen
TMDL	Total Maximum Daily Load
TN	Total Nitrogen
TP	Total Phosphorus
TSI	Trophic State Index
UF–IFAS	University of Florida–Institute of Food and Agricultural Sciences
WASP	Water Quality Analysis Simulation Program
WBID	Waterbody identification

SUMMARY

TOTAL MAXIMUM DAILY LOADS

Lake Jesup is one of the largest lakes in Central Florida and is part of the St. Johns River system. Lake Jesup has a surface area of about 10,660 acres and drains a watershed of about 86,382 acres, including a large portion of Seminole County, a small portion of Orange County, the entire City of Winter Springs, and portions of the following municipalities: Altamonte Springs, Casselberry, Eatonville, Lake Mary, Longwood, Maitland, Orlando, Oviedo, Sanford, and Winter Park. The Florida Department of Environmental Protection identified Lake Jesup to be impaired for nutrients, and, in 2006, adopted total maximum daily loads (TMDLs) for total phosphorus (TP) and total nitrogen (TN) for the lake. The TMDLs required a 34% reduction in TP to achieve the target concentration of 0.096 milligrams per liter (mg/L) and a 50% reduction in TN to achieve the target concentration of 1.27 mg/L.

The Lake Jesup Basin Management Action Plan (BMAP) was adopted in May 2010 to implement the TP TMDL. The focus on the TP loads was driven by the significant role of nitrogen fixation in Lake Jesup and several unknowns regarding internal nutrient cycling in the lake, including mineralization and resuspension from the sediments to the water column, mass deposition from the water column to the sediments, and diffusion. However, the stakeholders have been conducting studies to evaluate the unknowns and plan to include TN load reductions in the second iteration of the BMAP. The BMAP allocated the required surface runoff and septic tank reductions to the responsible entities. To allow time for additional monitoring and research studies to address the unknowns identified, the required reductions were split into three, five-year time periods. The adopted BMAP addresses the first one-third of the required reductions.

This 2014 Progress Report is the fourth annual progress report for the Lake Jesup BMAP, and it describes the accomplishments and issues identified during the reporting period from June 1, 2013 through May 31, 2014.

ACCOMPLISHMENTS

The fourth year of BMAP implementation has been successful. The total estimated project reductions during the reporting period were 337.2 pounds per year (lbs/yr) of TP. The total BMAP project reductions, including those shown as completed in the BMAP and the projects completed during the first four years of implementation are 12,987.1 lbs/yr of TP, which are greater than the required reduction in

the first BMAP iteration of 6,249.5 lbs/yr of TP. The total reductions, including those from completed projects to date and the load within noncontributing areas to the lake, are 14,022.1 lbs/yr of TP, which is a 71.5% reduction from the starting load. The goal of the first BMAP iteration was a 33% reduction in TP.

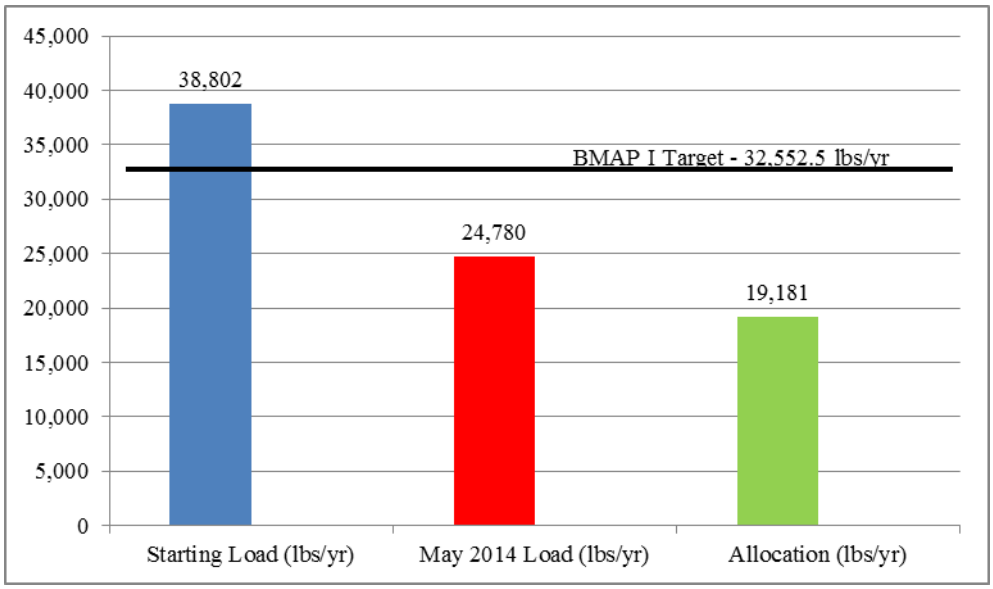

FIGURE ES-1: PROGRESS TOWARDS THE LAKE JESUP TP TMDL THROUGH MAY 31, 2014

During the reporting period (June 1, 2013 through May 31, 2014), the City of Winter Park completed two projects, an exfiltration trench project and a baffle box project, with reductions of 9.7 lbs/yr of TP and 6.6 lbs/yr of TP, respectively. The City of Oviedo adopted a pet waste ordinance for a reduction of 5.8 lbs/yr of TP, and completed a stormwater treatment project for a reduction of 1.9 lbs/yr. Orange County installed 40 curb inlet baskets in the Lake Burkett sub-basin resulting in a reduction of 11.5 lbs/yr of TP. Seminole County completed a wet detention pond project for a reduction of 156.8 lbs/yr of TP. The Florida Department of Agriculture and Consumer Services (FDACS), through field staff and contracted staff with the East Central Florida Resource Conservation and Development Council, has been working on enrolling growers in the container nursery, citrus, and cow/calf best management practice (BMP) programs. Most of the efforts so far have concentrated on the container nurseries and cow/calf operations.

Several of the research studies to gather additional data for the next iteration of the TMDL and BMAP have been completed or are ongoing. In addition, the responsible stakeholders implemented the BMAP monitoring plan to gather water quality data for Lake Jesup and its tributaries.

ACTIVITIES FOR THE UPCOMING YEAR

The five-year BMAP assessment report will encompass the period of June 1, 2014 through May 31, 2015. Seminole County will complete two wet detention ponds, one of which will achieve a reduction of 229 lbs/yr of TP and other which has an estimated reduction range between 82 lbs/yr and 238 lbs/yr of TP. The City of Maitland will complete a baffle box project for a reduction of 7.7 lbs/yr of TP, and an infiltration trench project for a reduction of 0.9 lbs/yr. The City of Casselberry will complete two shoreline vegetation projects for a reduction of 1.1 lbs/yr, and an alum treatment project for a reduction of 510.4 lbs/yr. The City of Orlando will complete a stormwater retrofit and alum treatment project for a reduction of 3.8 lbs/yr. Orange County will complete installation of the second phase of curb inlet baskets in the Lake Martha and Burkett drainage basin for an estimated reduction of 12.7 lbs/yr of TP. The Florida Department of Transportation (FDOT), City of Winter Park, and Seminole County will each begin construction on projects. FDACS will continue to sign up growers for BMPs under the container nursery, citrus, and cow/calf manuals, and FDACS will also explore opportunities for more one-on-one work and/or workshops with growers in the basin to ensure the proper implementation of BMPs. In addition, BMAP monitoring will continue.

In addition, the St. Johns River Water Management District (SJRWMD) engineering staff are developing both a watershed loading model, Hydrologic Simulation Program – FORTRAN (HSPF), and an in-lake water quality model, Water Quality Analysis Simulation Program (WASP) for the Lake Jesup Basin. Results from this modeling will facilitate the recalculation of the TMDLs for TP and TN, as needed.

Section 1: INTRODUCTION

1.1 PURPOSE OF THE REPORT

This is the fourth annual progress report for the Lake Jesup Basin Management Action Plan (BMAP). **Section 2** describes the accomplishments and the progress toward meeting the total maximum daily load (TMDL) during the period from June 1, 2013 through May 31, 2014. A summary of efforts scheduled for the upcoming year (June 1, 2014 through May 31, 2015) is included in **Section 3**.

1.2 TMDLS FOR THE LAKE JESUP BASIN

Lake Jesup is one of the largest lakes in Central Florida and is part of the St. Johns River system. Lake Jesup has a surface area of about 10,660 acres (16.7 square miles) and drains a watershed of about 87,322 acres (136.4 square miles), including a large portion of Seminole County, a small portion of Orange County, the entire City of Winter Springs, and portions of the following municipalities: Altamonte Springs, Casselberry, Eatonville, Lake Mary, Longwood, Maitland, Orlando, Oviedo, Sanford, and Winter Park. At high stage levels, Lake Jesup has surface area up to 16,000 acres. Lake Jesup includes waterbody identification numbers (WBIDs) 2981 and 2981A. The subbasins and local governments located in the Lake Jesup Basin are shown in **Figure 1**.

The TMDLs for the Lake Jesup Basin were adopted by the Florida Department of Environmental Protection in April 2006 for total phosphorus (TP) and total nitrogen (TN). The focus of the BMAP is to achieve reductions in external TP loads to the lake. The focus on external TP loads was driven by the significant role of nitrogen fixation in Lake Jesup and several unknowns regarding internal nutrient cycling in the lake. The stakeholders have been conducting studies to evaluate TN loading and in-lake processes and plan to include TN load reductions in the second iteration of the BMAP.

Table 1 lists the TMDLs and pollutant load allocations adopted by rule for the Lake Jesup Basin**.**

TABLE 1: TMDLS IN THE LAKE JESUP BASIN

WBID(S)	TMDL (POUNDS PER YEAR [LBS/YR])	TARGET CONCENTRATION (MILLIGRAMS PER LITER [MG/L])	WASTELOAD ALLOCATION STORMWATER	LOAD ALLOCATION (NONPOINT)
2981 (Including 2981A)	41,888 TP	0.096	34%	34%
2981 (Including 2981A)	545,203 TN	1.27	50%	50%

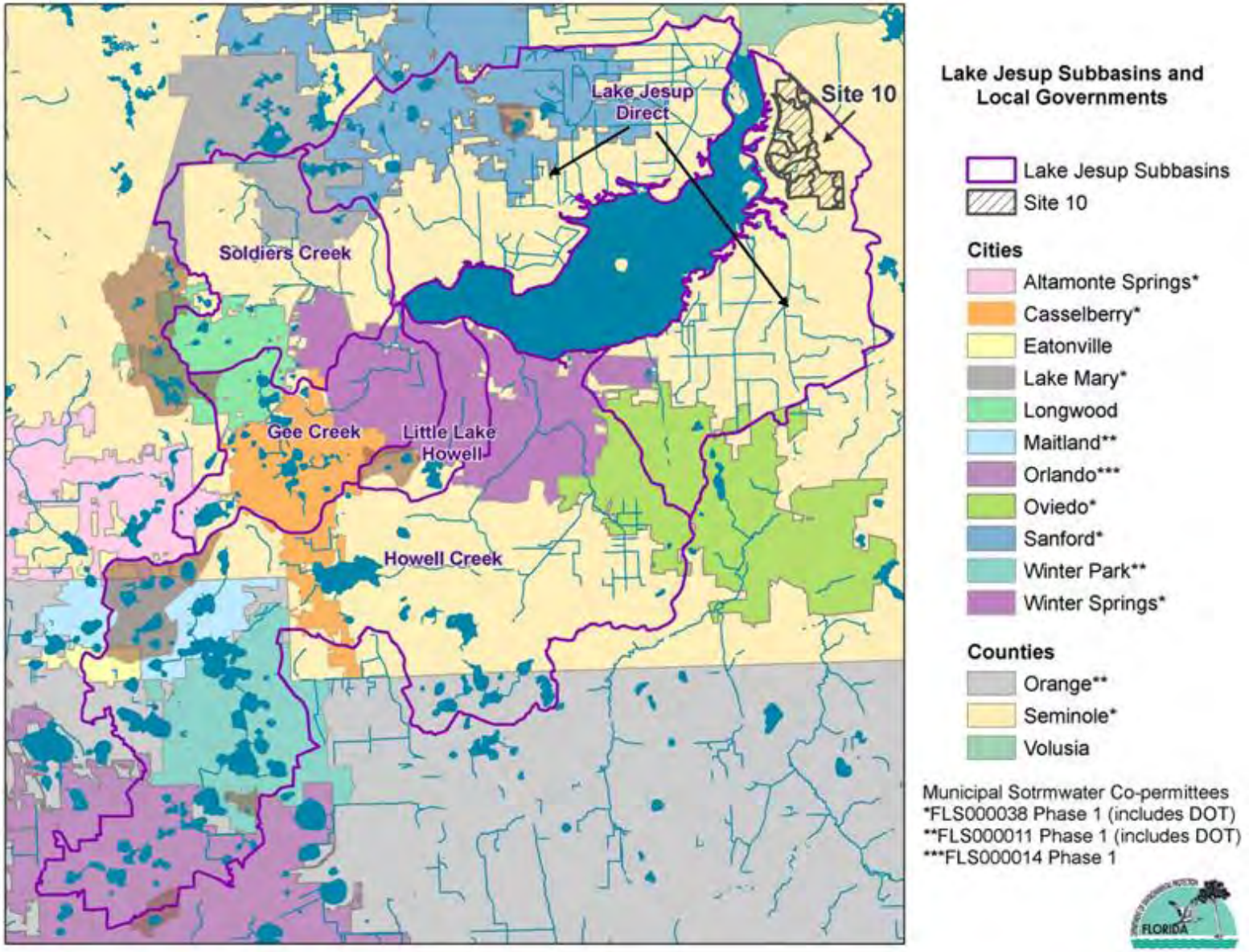

FIGURE 1: LAKE JESUP AND LOCAL GOVERNMENT JURISDICTIONS IN THE BASIN

1.3 RESPONSIBLE PARTIES AND KEY STAKEHOLDERS

The Lake Jesup BMAP identified municipal separate storm sewer systems (MS4s), septic tanks, and agricultural sources of TN and TP in the basin. Those entities that are responsible for achieving the load reductions are:

- *Agriculture*
- *City of Altamonte Springs*
- *City of Casselberry*
- *City of Lake Mary*
- *City of Longwood*
- *City of Maitland*
- *City of Orlando*
- *City of Oviedo*
- *City of Sanford*
- *City of Winter Park*
- *City of Winter Springs*
- *Florida Department of Transportation (FDOT) District 5*
- *Orange County*
- *Orlando Orange County Expressway Authority (OOCEA)*
- *Seminole County*
- *Town of Eatonville*
- *Turnpike Authority*

In addition to the these entities, the Florida Department of Agriculture and Consumer Services (FDACS), the Department, and St. Johns River Water Management District (SJRWMD) are essential to the implementation of the BMAP activities.

1.4 BMAP ALLOCATIONS

Stakeholders in the Lake Jesup Basin agreed that a fair approach for allocations would be to determine the relative contribution of each entity to the surface runoff and septic tank (if applicable) loadings and use this relative contribution to apportion the required reductions. This percentage was separately calculated for each entity for the surface runoff load and septic tank load. To allow time for additional monitoring and research studies (see **Section 2.4**) to address the unknowns identified in the BMAP, the required reductions were split into three, five-year time periods. The adopted BMAP addresses the first one-third of the required reductions over the period from BMAP adoption (May 2010) through May 31, 2015, as shown in **Table 2**.

TABLE 2: TP WASTELOAD ALLOCATIONS FOR 2010-2015

ALLOCATION ENTITY	2010-2015 TOTAL REQUIRED REDUCTION (LBS/YR)
Agriculture	254.7
City of Altamonte Springs	19.0
City of Casselberry	342.7
City of Lake Mary	264.3
City of Longwood	205.3
City of Maitland	124.8
City of Orlando	326.3
City of Oviedo	258.7
City of Sanford	602.2
City of Winter Park	370.5
City of Winter Springs	513.0
FDOT District 5	132.3
OOCEA	5.2
Orange County	569.0
Seminole County	2,137.0
Town of Eatonville	23.4
Turnpike Authority	101.1
Total	**6,249.5**

Section 2: ACCOMPLISHMENTS

2.1 SUMMARY OF EFFORTS

The fourth year of BMAP implementation has been successful. During the reporting period, the City of Winter Park completed two projects, an exfiltration trench project and a baffle box project, with reductions of 9.7 lbs/yr of TP and 6.6 lbs/yr of TP, respectively. The City of Oviedo adopted a pet waste ordinance for a reduction of 5.8 lbs/yr of TP, and completed a stormwater treatment project for a reduction of 1.9 lbs/yr. Orange County installed 40 curb inlet baskets in the Lake Burkett sub-basin resulting in a reduction of 11.5 lbs/yr of TP. Seminole County completed a wet detention pond project for a reduction of 156.8 lbs/yr of TP. The Florida Department of Agriculture and Consumer Services (FDACS), through field staff and contracted staff with the East Central Florida Resource Conservation and Development Council, has been working on enrolling growers in the container nursery, citrus, and cow/calf best management practice (BMP) programs. Most of the efforts so far have concentrated on the container nurseries and cow/calf operations.

Several research studies to gather additional data for the next iteration of the TMDL and BMAP have been completed or are ongoing. In addition, the responsible stakeholders implemented the BMAP monitoring plan to gather water quality data for Lake Jesup and its tributaries.

Additional details about the accomplishments over the past year are described in **Section 2.2** through **Section 2.4**. The individual project tables are included in **Appendix A**, and photographs of project implementation efforts are included in **Section 2.2**.

2.2 ACCOMPLISHMENTS BY ENTITY

2.2.1 CITY OF ALTAMONTE SPRINGS

The City of Altamonte Springs continues to fund and participate in the Florida Yards and Neighborhoods (FYN) program through Seminole County and University of Florida–Institute of Food and Agricultural Sciences (UF-IFAS) Extension office (Project A-3). In addition, the city's street sweeping program continues to operate year-round and citywide (Project A-2).

2.2.2 CITY OF CASSELBERRY

As reported previously, a series of whole lake alum treatments were proposed for two lakes to cost effectively bind phosphorus in the sediments, reducing loads and water quality impacts through internal

nutrient recycling and groundwater seepage. In 2013, this project was expanded to include a total of four lakes (Middle, North, and South Lake Triplet, and Queen's Mirror Lake) (Project C-21). The city also completed a total of eight whole lake alum treatments over the past year and has two more planned in the coming year. These projects are anticipated to bind a total of over 5,100 pounds of phosphorus over a ten year period, and it is hoped that significant water quality improvements in these lakes, as well as positive downstream effects, will be evidenced by the city's long-term monitoring data. At a total cost of about $282/lbs of TP removed, this project is more cost effective than most conventional stormwater treatment projects. Altogether 14 treatments have been completed so far, with two more planned for completion in fall 2014 to conclude the project. The total cost of the project is anticipated to be approximately $297,016 and is fully funded.

The city concluded field work on the effectiveness evaluation of multiple baffle boxes, inlet filter baskets, and a continuous deflective separation (CDS) unit (see **Figure 2**). A draft report was completed in early 2014 and is anticipated to be finalized by fall 2014. Design differences between the various baffle boxes studied in the project amplify the importance of the study (e.g., some feature media filters, while others feature additives to prevent anoxic conditions). It is hoped the results of this study will provide information statewide in helping agencies choose the most cost effective forms of pollutant reduction for particular applications. This study will also help guide the city in modifying its future proposed projects for the BMAP, as necessary, to improve their cost effectiveness. Based on the draft report (subject to change), TP removal by the various baffle boxes ranged from 10% to 57%, with a removal cost estimate ranging from $4.48/lb of TP to $24,658/lb of TP. Those baffle boxes with media filtration and special additives to prevent anoxic conditions performed best. It should be noted that these numbers are preliminary and subject to change pending the final report for the study.

a. Captured vegetation on the screen

b. Water pumped from sump area

c. Solids removed using vactor truck

d. Screen following cleaning

Note: Photographs taken from the draft project report prepared by Environmental Research & Design, Inc.

FIGURE 2: CITY OF CASSELBERRY CLEANOUT SEQUENCE FOR THE LAKE HODGE BAFFLE BOX

Substantial progress was made on the North and Middle Lake Triplet Shoreline Revegetation (Projects C-7 and C-22), resulting in enhanced shorelines for both lakes that now provide improved erosion protection, improved vegetative buffer, and improved native habitat. The city completed a design and began installation of this revegetation project using in-house resources. The project consists of removal of invasive vegetation, installation of a shallow bioretention area (North Lake Triplet only, **Figure 3**), and restoration with native shoreline and emergent plants. Final plantings, a volunteer planting event, and installation of an educational sign are planned for completion by September 2014.

FIGURE 3: CITY OF CASSELBERRY BIOSWALE/BIORETENTION AREA (FOREGROUND) FOR NORTH LAKE TRIPLET (BACKGROUND) SHORELINE REVEGETATION PROJECT

The City of Casselberry continued its public education programs related to water quality (Project C-28). The city continues to partner in the FYN program and continues to grow its conservation/environmental branding program called "Green Up Casselberry." In April, the city once again hosted an Earth Day event called Earth Fest at Lake Concord Park (**Figure 4**). The event included several educational workshops, which covered Florida-friendly landscaping, shoreline plants, rain gardens, rain barrels, and more. The event highlighted Lake Concord Park's permanent stormwater educational features.

FIGURE 4: CITY OF CASSELBERRY EARTHFEST IN APRIL 2014

2.2.3 CITY OF LAKE MARY

The City of Lake Mary continued its street sweeping, education and outreach efforts, and catch basin clean out over the last year (Projects LM-3, LM-4, and LM-5).

2.2.4 CITY OF LONGWOOD

The City of Longwood continued its BMP clean out (Project L-3), street sweeping (Project L-4), and education and outreach efforts (Project L-5) during the reporting year.

2.2.5 CITY OF MAITLAND

The City of Maitland found that street sweeping (see **Figure 5**) and education continue to be very successful components in the city's nutrient reduction goals. Street sweeping continued once every two weeks throughout the reporting period (Project M-16). Educational events included but are not limited to cooperative public service announcements (PSAs) with Seminole County, stormwater education talks to classes at Maitland Middle School, presentations to lakefront property owners regarding stewardship, educational booths and community events, and bi-monthly newsletter with tips and regulations regarding stormwater BMPs.

FIGURE 5: CITY OF MAITLAND STREET SWEEPER

2.2.6 CITY OF ORLANDO

The City of Orlando continues to maintain all of its stormwater retrofit BMPs with clean out performed on the inlet baskets. The city is continually implementing ways to increase maintenance frequency. The City of Orlando has developed a complete inventory of all structures and pipes within the Howell Branch basin.

2.2.7 CITY OF OVIEDO

The City of Oviedo adopted a Pet Waste Ordinance (Ordinance #1583), to enable enforcement and strengthen education delivered to pet owners regarding harmful nutrients entering the city's storm systems and non-source point pollutant reduction (project OV-6). The city conducted revisions to the Land Development Code - Environmental Preservation Chapter to include inlet marking by developers and installation of pet waste stations. As part of the Water Quality Report regarding the fecal coliform impairment in the Little Econlockhatchee, the city conducted a Geographic Information Systems septic tank assessment inventory. This information will be included in the revised land development code, which will prohibit septic tanks along the Econlockhatchee Corridor. In addition, the Aulin Avenue Stormwater/Roadway Improvement Project is substantially complete (Projects OV-9 and OV-10). Final completion and project closeout documents are currently being coordinated by the city's public works operations manager. The improvements have addressed flooding and pavement deterioration on Aulin Avenue South and its contributing streets.

2.2.8 CITY OF SANFORD

The City of Sanford continued with the street sweeping program, which includes sweeping 37.7 miles of roadways weekly in the Lake Jesup Basin (Project S-1). The city has also continued to participate in the FYN program, which provides ongoing public education that takes place in the city (Project S-2).

2.2.9 CITY OF WINTER PARK

The City of Winter Park continued its street sweeping twice a month, education and outreach efforts, and implementation of the stormwater and lake management program (Projects WP-34 and WP-35). The city completed the Canton Avenue retrofit project (**Figure 6**), in which a baffle box was installed to improve conditions by removing larger organic debris (primarily oak leaves) and sediment (project WP-41). The Park North exfiltration treatment project (project WP-40) was also completed during the reporting period (see **Figure 7**).

FIGURE 6: CITY OF WINTER PARK CANTON BAFFLE BOX

FIGURE 7: CITY OF WINTER PARK NORTH EXFILTRATION TREATMENT PROJECT

In addition, the city has several projects underway including a study and design project for the Howell Branch retention pond; alum station rehabilitation projects, which will involve upgrading the electronics in all four of the active stations and switching to more modern pumps in two of them; and several other retrofit projects. Results for these projects will be reported on the next cycle.

2.2.10 CITY OF WINTER SPRINGS

The City of Winter Springs continued its education and outreach activities and quarterly street sweeping of roads within the city. During the reporting period, the city improved the performance of its street sweeping operation (Project WS-7). In addition, the Solary Canal Regional Stormwater Treatment Facility (Project WS-1) has been complete for about two years, and has performed successfully with minimal maintenance required (see **Figure 8**).

FIGURE 8: CITY OF WINTER SPRINGS SOLARY CANAL REGIONAL STORMWATER TREATMENT FACILITY

2.2.11 FDOT DISTRICT 5

FDOT District 5 has continued its public education efforts (Project FDOT-6). In addition, the Soldiers Creek Alum Treatment Facility (project FDOT-2) was approved by the Seminole County Board of County Commissioners on June 11, 2013. The facility was permitted by SJRWMD. The design for FDOT's US 17/92 road widening project was completed and the Environmental Resource Permit applications were submitted (Project FDOT-3). Construction for both projects is anticipated to begin in spring 2015. FDOT recently revised the requirements for new street sweeping contracts in Seminole County. The new contracts, which begin in July 2014, will provide specific sweeping frequencies and estimates of material collected. FDOT's reporting of nutrient removal credits from street sweeping activities will likely resume in 2014 and 2015 (Project FDOT-5).

2.2.12 ORANGE COUNTY

Orange County continued its street sweeping and educational outreach efforts (Projects OC-4 and OC-5). The pressure transducer installed at Lake Burkett continues to transmit data real-time to the Water Atlas (www.orange.wateratlas.org). Debris and sediment continues to be removed from stormwater using curb inlet baskets which were installed around Lake Sue (Project OC-3) and Lake Killarney (Project OC-10). In addition, during the reporting period, Orange County installed 40 curb inlet baskets (Project OC-8) in the Lake Burkett sub-basin (see **Figure 9**), and removed debris and sediment in this sub-basin.

FIGURE 9: ORANGE COUNTY CLEAN INLET BASKET INSIDE CURB INLET (LEFT) AND INLET BASKET FULL OF DEBRIS READY FOR PROCESSING (RIGHT)

2.2.13 SEMINOLE COUNTY

Seminole County continued to conduct the ongoing educational efforts, PSAs, and ambient monitoring cooperatively funded by Seminole County and other local governments (Project SC-10). The county continued to conduct lake restoration events using volunteers (**Figure 10**), as well as AquaScaping Classes through the FYN program. The county continued biological and vegetative monitoring, mapping and restoration both in-lake and in-basin; as well as conducting research studies, such as the Crow Creek Nutrient Study and Red Bug Regional Stormwater Facility (RSF) vegetative efficiency study. The in-lake submerged aquatic vegetation plantings of Suwannee narrow leaf biotype eelgrass in two, one-acre plots continue to show success. The exclusion area protecting the one-acre plots were breached, which allowed predation of the plants (**Figure 11**). An additional revegetation event was conducted during the past year, which included repair of the exclusion area and replanting of the plots. Work continues on the construction and efficiency monitoring at the Cassel Creek RSF (Project SC-1), and the project design, construction, and monitoring the Black Hammock Creek reclamation and floodplain treatment system (Project SC-17).

FIGURE 10: SEMINOLE COUNTY LAKE RESTORATION EVENT WITH VOLUNTEERS

FIGURE 11: SEMINOLE COUNTY REPAIR OF THE SUBMERGED AQUATIC VEGETATION EXCLUSION AREA

2.2.14 TOWN OF EATONVILLE

The Town of Eatonville continued with its street sweeping of all town roads and its public education and outreach activities (Projects E-1 and E-4).

2.2.15 TURNPIKE AUTHORITY

The Turnpike Authority continued its monthly street sweeping in the basin (Project T-2). In addition, the Turnpike continued its education and outreach efforts of presentations and an illicit discharge program (Project T-3).

2.2.16 AGRICULTURE

FDACS, through field staff and contracted staff with the East Central Florida Resource Conservation and Development Council, has been working on enrolling growers in the container nursery, citrus, and cow/calf BMP programs. Most of the efforts so far have concentrated on the container nurseries and cow/calf operations.

The land use table in the BMAP shows significant acreage in the nurseries and vineyards category that still needs to be enrolled. As discussed in the agriculture section of the BMAP, most of the remainder of this acreage is an in-ground palm nursery in the Black Hammock area. This operation will be contacted in the near future as the existing nursery manual was just revised in June 2014 and now includes in-ground operations. A large citrus operation in the same area will be enrolled under the new statewide citrus manual. As reported last year, the table also shows just over 200 acres of row/field crops, but field verification of the basin shows only one small row crop operation, which was enrolled prior to BMAP adoption. The majority of the remaining acres designated as row/field crops are now a sod farm, which was enrolled in the sod BMP program in 2009. Current enrollment figures are contained in **Table 3** and depicted in **Figure 12**.

The basin also has several small equine operations that may or may not be eligible to enroll in the equine manual, depending on whether they are commercial agriculture or residential/hobby operations. With limited staff, FDACS' equine BMP enrollments have been focused on heavily commercial equine regions in the state, and no assessments have yet taken place in the Lake Jesup Basin.

TABLE 3: AGRICULTURAL ACRES ENROLLED IN FDACS BMPS IN THE LAKE JESUP BMAP AREA

*Note: 2,197.6 of the cow/calf acres were categorized as wetlands in the 2004 SJRWMD land use coverage.

LAND USE DESCRIPTION	LAND USE ACRES (2004 SJRWMD)	BMP PROGRAM	ACRES ENROLLED AS OF JULY 2009	ACRES ENROLLED AS OF MARCH 2014
Citrus	1,340.8	Citrus	100.0	376.0
Unimproved, improved, and woodland pasture	2,425.3	Cow/Calf	Not applicable	2,558.0*
Row crops, field crops, and mixed crops	212.1	Vegetable and Agronomic Crops	15.0	7.5
Nurseries and vineyards, ornamentals	475.0	Container Nurseries; Specialty Fruit and Nut	93.5	75.1
Floriculture	2.3	Not applicable – Comprehensive nursery manual under development	Not applicable	Not applicable
Sod farm	278.0	Sod	0.0	609.0
Horse farm	88.2	Equine	Not applicable	0.0
Poultry feeding	2.5	Conservation Plan Rule	Not applicable	0.0

Land Use Description	Land Use Acres (2004 SJRWMD)	BMP Program	Acres Enrolled as of July 2009	Acres Enrolled as of March 2014
Total Acres	**4,824.2**	**BMP Implementation Total**	**208.5**	**3,625.6**

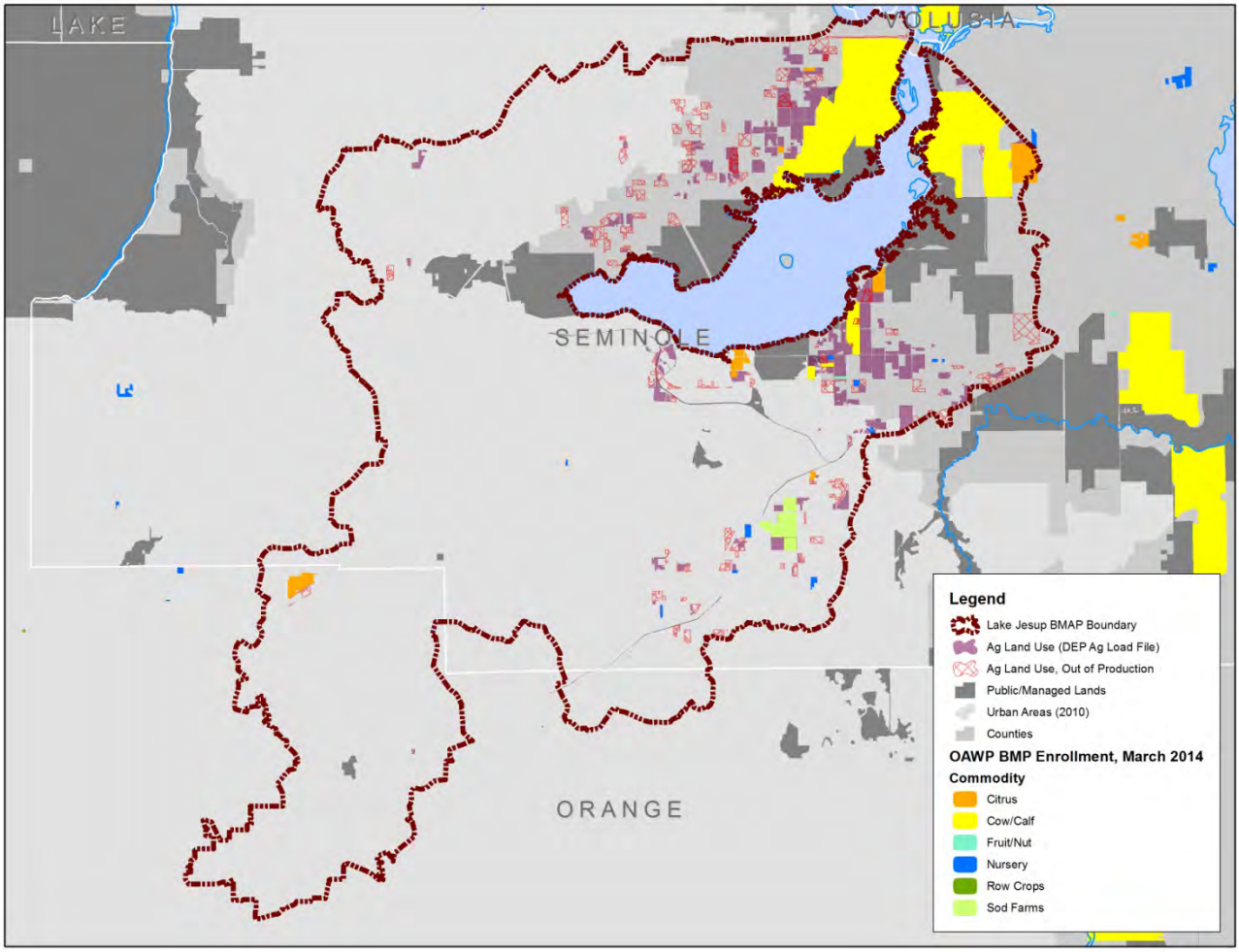

Figure 12: Agricultural Operations Enrolled in FDACS BMP Programs in the Lake Jesup BMAP Area as of March 31, 2014

For the BMAP, FDACS and the Department used a spreadsheet model tool to estimate the total potential load reduction from BMP implementation to be 277.9 lbs/yr of TP, based on agricultural land use acreage. Estimated load reductions to date, based on FDACS enrollment of about 3,626 acres within the BMAP basin (excluding silviculture and aquaculture) comes to 72.5 lbs/yr of TP. This estimate does not include the majority of the acres enrolled in cow/calf BMPs, as those acres were not initially included in the 2004 SJRWMD agricultural acres used to calculate the starting loads and associated load reduction

estimates. Those acres were identified as wetlands. The more recent land use/land cover identifies most of the acreage as unimproved pasture, but no loadings have been assigned to that acreage.

FDACS worked with the Department to calculate an estimated load reduction credit based on loss of agricultural production acreage. During the development of this BMAP, FDACS identified approximately 2,650 acres classified as agricultural land in the 2004 land use/land cover that appeared to be no longer in production. However, no agricultural credit was calculated due to the limitations listed in the BMAP document, including the absence of commodity-specific load estimates. During the 2013-2014 reporting year, FDACS compared the 2004 land use with the most recent land use available in the basin, and worked with the Department to refine the agricultural loading information in order to calculate an estimated load reduction associated with the loss of production acreage. The total reductions from changes in agricultural land uses was 144.9 lbs/yr of TP (see **Table 4**).

TABLE 4: AGRICULTURAL TP LOAD REDUCTION ALLOCATION AND ESTIMATED REDUCTIONS IN TP LOADS

ESTIMATED LOADS	TP (LBS/YR)
Agricultural Load Reduction Allocation	764.0
Agricultural Reduction Needed per BMAP Allocation Scenario, 2010-2015	254.7
Estimated Load Reductions via BMPs, 100% Target Enrollment, 2010-2015	235.9
Reductions from Land Use Changes	144.9
Total Estimated Load Reductions	380.8
Estimated Load Reductions Needed for BMAP, 2010-2015	(credit) -126.1

2.3 SUMMARY OF ACCOMPLISHMENTS

The projects completed during the fourth annual BMAP reporting period are summarized in **Table 5**. These projects resulted in an estimated 337.2 lbs/yr of TP reductions. These reductions are in addition to those projects given credit before BMAP adoption and the projects that were completed during the first, second, and third annual progress report periods. Therefore, the total project reductions to date are 12,987.1 lbs/yr of TP, which is greater than the required reduction in the first BMAP iteration of 6,249.5 lbs/yr of TP. The total reductions, including those from completed projects to date and the load within noncontributing areas to the lake, are 14,022.1 lbs/yr of TP, which is a 71.5% reduction from the starting load. The goal of the first BMAP iteration was a 33% reduction in TP.

The progress towards the total TMDL load reductions are shown in **Figure 13**. The first bar in this figure shows the starting load for stormwater runoff and septic tanks from the TMDL. The second bar shows the current estimated loading with the implementation of projects and the removal of non-

contributing areas. The third bar shows the total allocation for stormwater runoff and septic tanks to meet the TMDL. The line shows the target for the first BMAP, which is a reduction of 6,249.5 lbs/yr of TP.

TABLE 5: SUMMARY OF PROJECTS COMPLETED IN THE REPORTING PERIOD (JUNE 1, 2013 THROUGH MAY 31, 2014)

ENTITY	PROJECT NUMBER	PROJECT NAME	TP REDUCTION (LBS/YR)
Agriculture	N/A	Agricultural Land Use Changes	144.9
City of Oviedo	OV-6	Additional Education – Pet Waste Ordinance	5.8
City of Oviedo	OV-10	Aulin Avenue South	1.9
City of Winter Park	WP-40	Park North Exfiltration	9.7
City of Winter Park	WP-41	Canton Avenue Outfall Retrofit	6.6
Orange County	OC-8	Lake Burkett Curb Inlet Baskets	11.5
Seminole County	SC-1	Cassel Creek RSF	156.8
Total	**Not applicable**	**Total Reductions in Reporting Period**	**337.2**

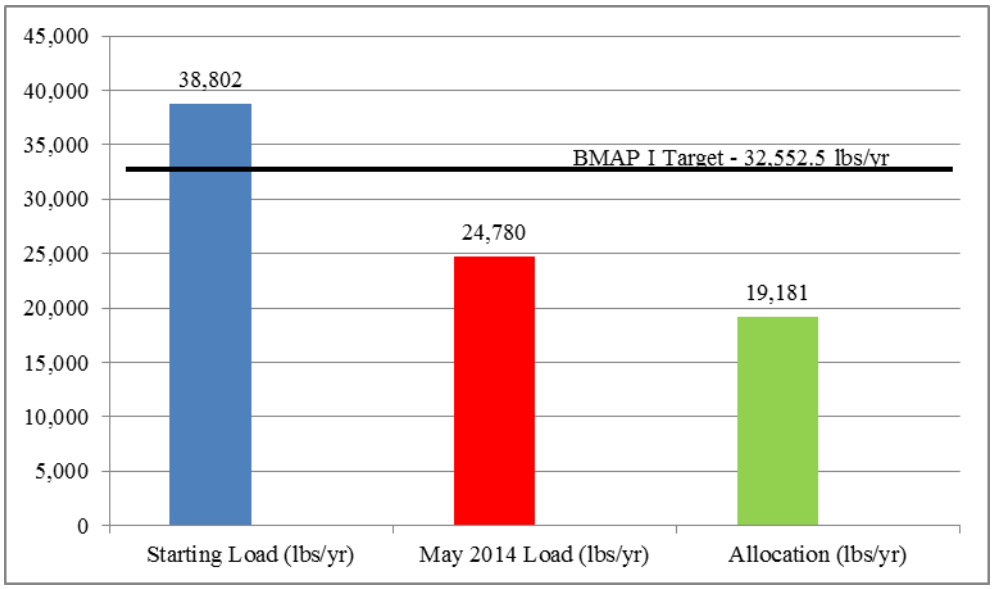

FIGURE 13: PROGRESS TOWARDS THE LAKE JESUP TP TMDL THROUGH MAY 31, 2014

2.4 IMPROVING SCIENTIFIC UNDERSTANDING

2.4.1 WATER QUALITY MONITORING

The Lake Jesup BMAP monitoring plan was designed to enhance the understanding of basin loads, track project implementation, and identify long-term water quality trends. The information gathered through the monitoring plan will measure progress toward achieving the TP TMDL and provide a foundation for continued improvement in cost-effective project implementation. The BMAP monitoring plan consists of ambient water quality sampling, storm event sampling, and biological monitoring. All responsible

stakeholders participated in the monitoring plan in the fourth year of BMAP implementation. A few highlights of the monitoring efforts are described below.

The Department's Central District office has been sampling at Cameron Avenue and Kentucky Street, near the Sanford wastewater treatment facility, as part of the BMAP monitoring plan. However, although staff has tried to collect monthly samples, this site rarely has flows so very few water quality samples have been collected since BMAP adoption. Therefore, this station has been removed from the BMAP monitoring plan. In addition, the Central District office collects samples at Sweetwater Creek at Howard Avenue and Kansas Street in conjunction with Seminole County. During the reporting period, Sweetwater Creek in this area was choked with vegetation and had minimal flows. Therefore, samples are now collected slightly south of the original location at the corner of Florida Avenue and Kansas Street.

The City of Altamonte Springs continued to fulfill its commitment to perform surface water sampling in Prairie Lake. Although the city has contracted with the University of South Florida to upload the sampling data to STORET, there may be a lag in the reported results between sampling and upload; therefore, the sampling results for the reporting period are included in **Appendix B**.

The City of Casselberry continued to conduct quarterly ambient water quality sampling of 12 of its lakes. In addition, the city continued to partner with Seminole County by funding monthly sampling at the Gee Creek weir and partially funding ambient sampling for Lake Howell. The city uploads its quarterly ambient water quality data twice annually to the Seminole County Watershed Atlas, which is then uploaded to STORET.

The City of Longwood and Seminole County signed a Letter of Understanding for Lake Jesup BMAP sampling at the Fairy Lake outfall. Samples have been collected monthly at this site.

The City of Lake Mary has a contract with Seminole County for ambient environmental monitoring, and data upload to STORET.

The City of Maitland has collected monthly water quality data at the Lake Waumpi site. The city has not yet uploaded the data into STORET but the data are included in **Appendix B**.

The City of Orlando collected monthly water quality data at the Lake Rowena Canal site. The city is in the process of uploading their data into STORET, and the data are included in **Appendix B**. During this reporting period, the parameter biological oxygen demand (BOD) was omitted for a portion of the sampling year, but will be added again during next year's monitoring efforts.

The City of Sanford has continued with the Letter of Understanding with Seminole County for ambient environmental monitoring, which allows the Seminole County Watershed Management Division to pull samples for the Chub Creek and Navy Creek sites. The county uploads the data to STORET.

The City of Winter Park was able to collect monthly water quality samples from its station at the Howell Branch weir. The data have not yet been uploaded to STORET but are included in **Appendix B**.

Orange County collected water quality and flow data from the Burkett Canal site. The data will be added to STORET in the next upload (summer 2014).

Seminole County continued its ambient monitoring, which is cooperatively funded by several other local governments. The county has two sites that will be removed from the BMAP monitoring plan because of low or no flow conditions. The first station, CHUBB, is located on Chub Creek at East Lake Mary Boulevard, where the creek flows from the Sanford airport property to Lake Jesup. The airport constructed additional stormwater ponds on their property, which affected the amount of flow that the creek is receiving. The county visited the site monthly since June 22, 2010, and has only been able to collect samples on nine separate occasions. No samples have been collected since June 25, 2012 due to low water levels, which are less than inches. Seminole County sampled this location for the City of Sanford. The second site, BLMOUT-LM, is located at the Big Lake Mary Outfall. The county has visited this site monthly since June 30, 2010, and has never been able to collect a sample due to either no water present or very low water level with no flow conditions. Seminole County sampled this location for the City of Lake Mary. The county also continued the biological and vegetative monitoring, mapping, and restoration both in-lake and in-basin. Monitoring data is uploaded twice a year via the Seminole Watershed Atlas.

2.4.1.1 Site 10 Monitoring

As part of the City of Sanford's Domestic Wastewater Facility Permit Number FL002014, the city was required to identify an additional sampling point for storm event sampling that could be alternated with

the initial sampling location (Pond B-2). The city conducted a site visit in late 2012 with the Department and SJRWMD staff to identify potential locations to re-locate the auto-sampler from its current location at Pond B-2. Pond C-2B, which is located in the southern portion of the site, was selected based on accessibility and observed flow conditions. During the site visit, it was also observed that the pond inflow structures would require rehabilitation prior to the re-location of the auto-sampler. Based on the field inspection, city staff and the regulatory agencies agreed to re-locate the auto-sampler to the new location at Pond C-2B pending the completion of the pond rehabilitation activities. Plans for the Pond C-2B were subsequently prepared and the rehabilitation was completed in December 2013 (**Figure 14**). City staff initiated the re-location of the auto-sampler from Pond B-2 to Pond C-2B earlier this year but have been working on resolving some equipment issues until sample collection can be initiated at the new location.

FIGURE 14: CITY OF SANFORD SITE 10 IMPROVEMENTS

Sampling in 2013 continued at Pond B-2 while the rehabilitation of Pond C-2B was underway. Updated results for storm event sampling for TN and TP are shown in **Figure 15** and **Figure 16**. Storm events that met thresholds resulted in sample collection during the second, third, and fourth quarters of 2013. However, it should be noted for the October 7, 2013 sample date, the city observed the concentrations were elevated compared to previous collected samples. Inspection of the area after the sampling event indicated that cattle broke through the fence and disturbed the ditch reinforcements on the upstream side resulting in sediment buildup in the pipe. There was also observed cattle waste which most likely

contributed to high organic concentrations. The auto-sampler was in the process of being re-located during the first quarter of 2014, and city staff has recently been working on resolving equipment issues so samples have not been collected during the first quarter.

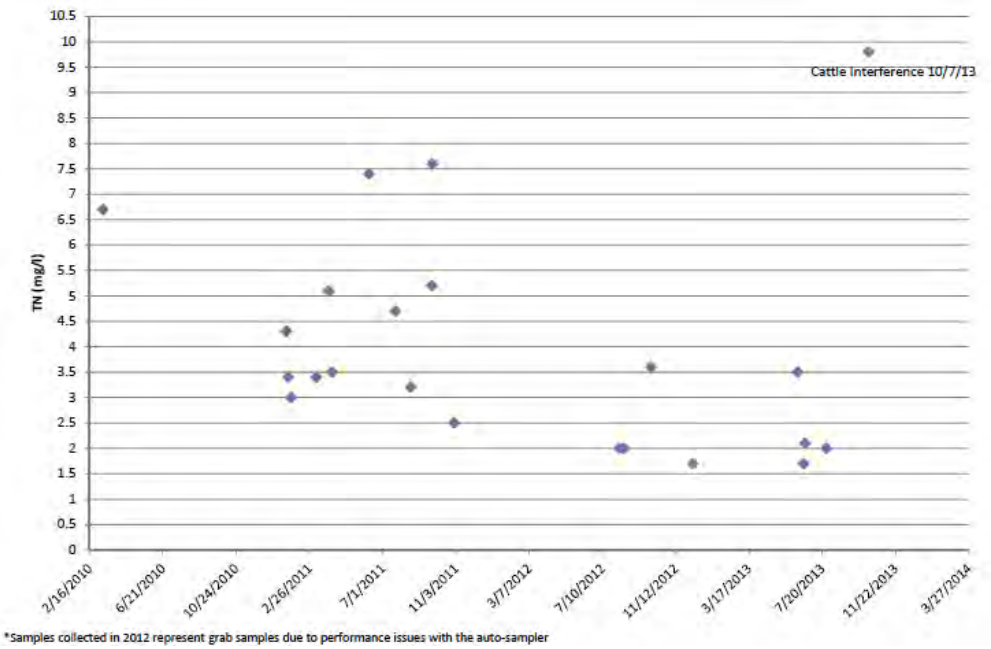

FIGURE 15: SITE 10 STORM EVENT SAMPLES FOR TN

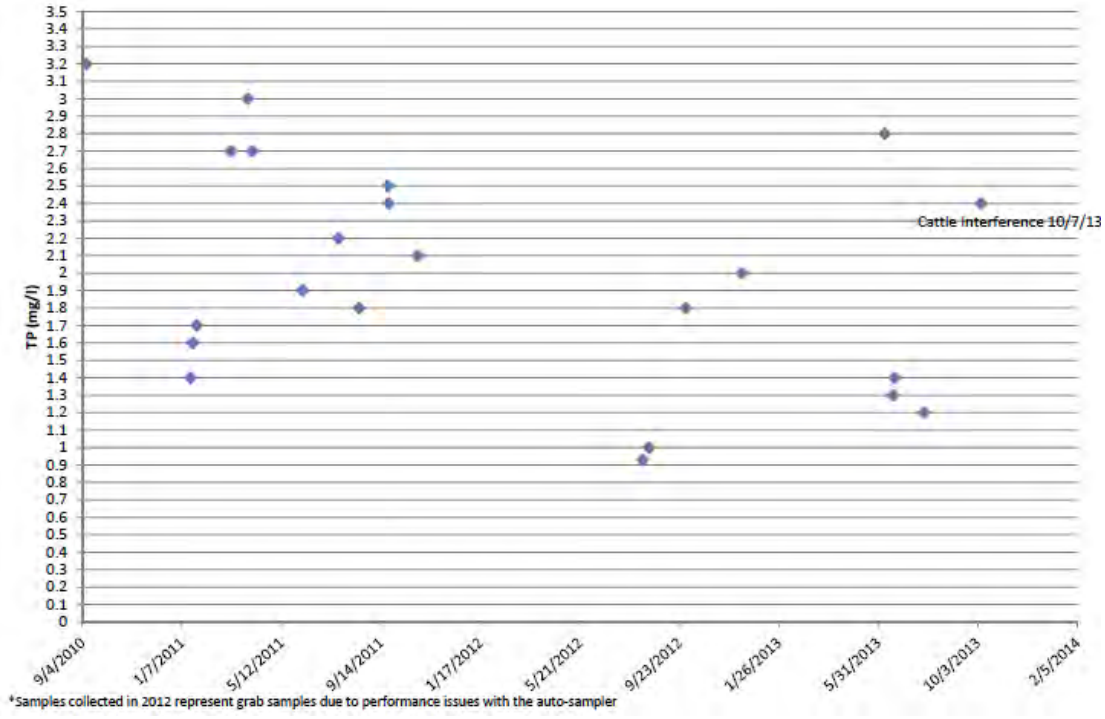

FIGURE 16: SITE 10 STORM EVENT SAMPLES FOR TP

The city also continued to collect quarterly surface water grab samples for Site 10. The grab sample data that were collected since 2010 and through the reporting period are shown graphically in **Figure 17** and **Figure 18**. **Figure 19** shows the locations where the grab samples are collected.

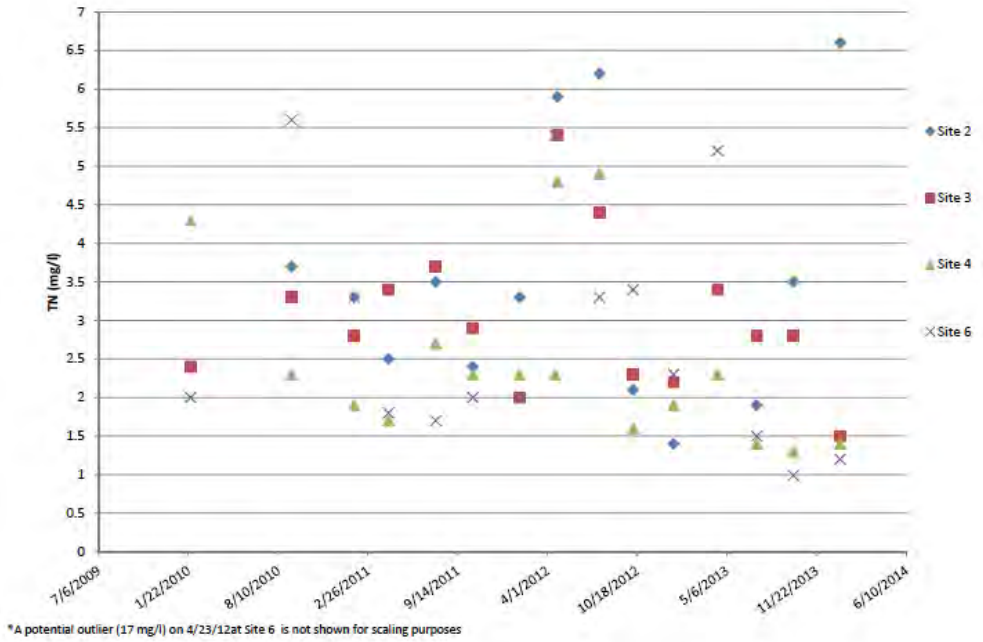

FIGURE 17: SITE 10 GRAB SAMPLES FOR TN

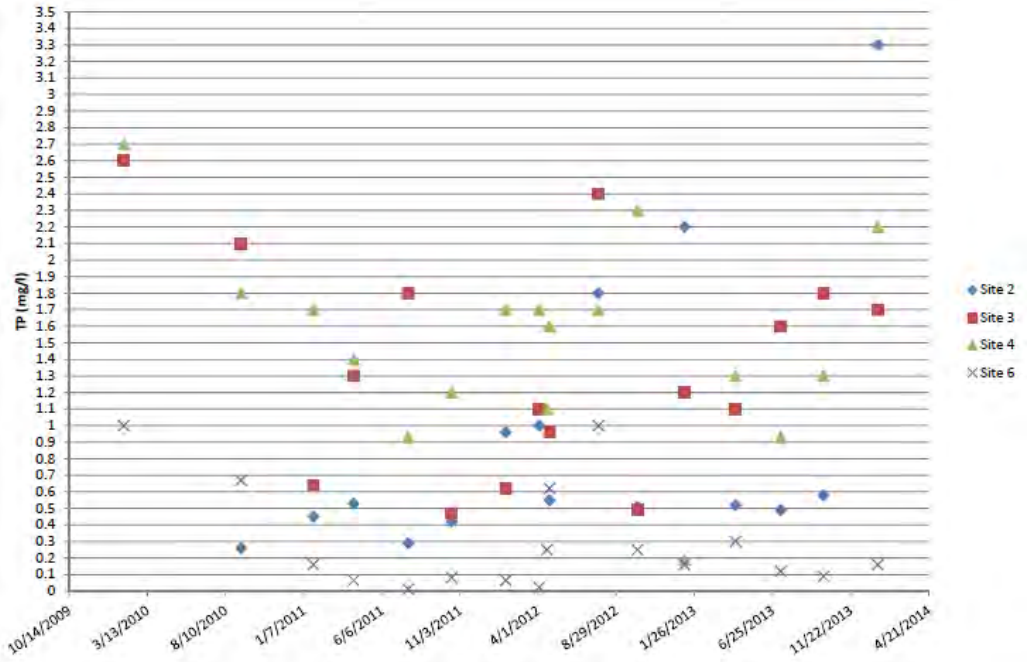

FIGURE 18: SITE 10 GRAB SAMPLES FOR TP

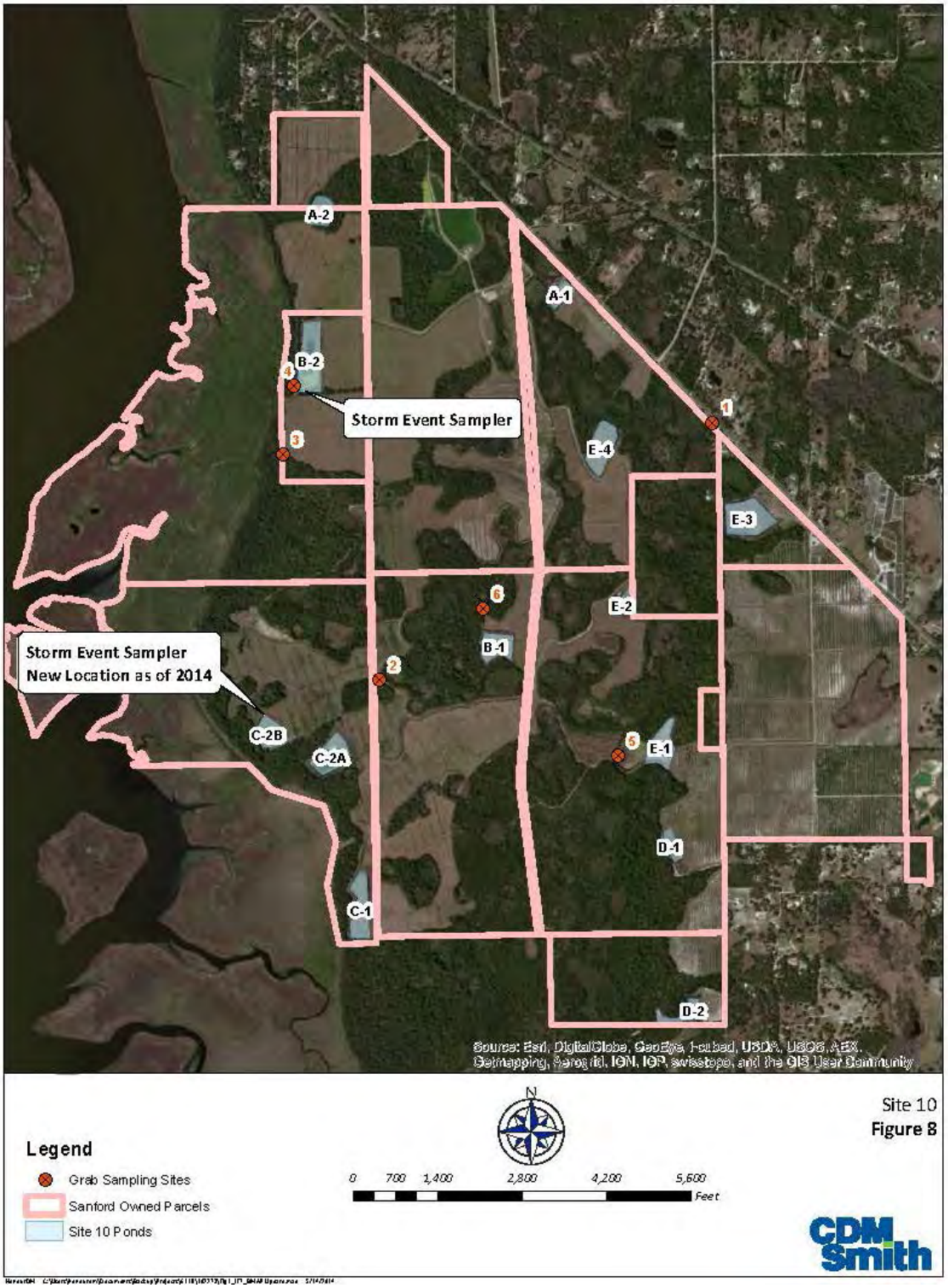

FIGURE 19: SITE 10 GRAB SAMPLE COLLECTION LOCATIONS

2.4.2 RESEARCH PRIORITIES

Several entities in the basin have completed research projects or are currently implementing studies that will provide information to address the unknowns in the basin that were identified in the BMAP. The applicable data from these studies will be used by the Department in future re-evaluation of the TMDLs (see **Section 2.5**).

2.4.2.1 Orange County

Orange County continued with its efforts to determine the pollutant loads being discharged through Lake Burkett. Sampling is ongoing and data are submitted to the Department and SJRWMD.

2.4.2.2 Seminole County

Seminole County will update the QUAL2K model to reflect the additional research and ongoing monitoring results. The Red Bug RSF vegetative efficiency study will be extended for an additional year, as it was determined that one of the outfall structures was not functioning properly, which caused the conditions (water elevation) within the pond to be irregular. The county initiated efficiency monitoring on the Cassel Creek RSF. In addition, the county began several monitoring projects for in-lake vegetation and biological bioassessments.

2.4.2.3 SJRWMD

The pilot project treating lake water on the southern shore of Jesup ended in April 2014. AquaFiber Technologies completed this project having successfully met all project objectives.

No new studies on Lake Jesup nutrient dynamics were completed this past year by SJRWMD. One study is beginning in July that will measure changes in the unconsolidated sediment layer since the first SJRWMD study evaluated cores in 1996 (Cable et al 1997). Results quantifying overall changes in volume and exploring potential shifts in deposition should be available by September 2014.

Preliminary assessments of developing a marsh to treat lake water on the northwest shore of Lake Jesup began in March 2014, and a potential conceptual design will be presented to the SJRWMD Governing Board in early fall 2014 for discussion.

2.5 TMDL MODEL UPDATE

The Lake Jesup BMAP identified "technical uncertainties," and stakeholders committed to address these uncertainties within the first BMAP iteration to allow for possible recalculation of the TMDLs and

requisite adjustments to the allocations required by the BMAP. With the completion of the fourth year of BMAP implementation, the Department in collaboration with stakeholders, including SJRWMD, Seminole County, Orange County, and others, is coordinating new modeling efforts to better quantify many of the uncertainties originally expressed in the BMAP.

SJRWMD engineering staff are developing both a watershed loading model, Hydrologic Simulation Program – FORTRAN (HSPF), and an in-lake water quality model, Water Quality Analysis Simulation Program 7 (WASP7) for the Lake Jesup Basin. The HSPF model will include data collected by the stakeholders from the research studies and BMAP monitoring to revise the estimates of loading to the lake. In-lake modeling will include new ground water information, sediment dynamics, and updated watershed loads from the HSPF model. This collaborative process allows the agencies, local municipalities, and counties to achieve the most efficient and effective use of their resources necessary for data collection, data analysis, and modeling activities and to answer many of the questions related to baseline TP and TN loadings. The watershed loading model will be complete by end of July 2014, and the in-lake model is scheduled for completion in September 2014. Recommendations for target TP concentrations and pollutant load reduction goals will be completed sometime between July and September by SJRWMD environmental science staff. SJRWMD is working with the Department to share results and information, as available. Results from this modeling will facilitate the recalculation of the TMDLs for TP and TN, as needed.

Section 3: UPCOMING YEAR ACTIVITIES

3.1 SUMMARY OF EFFORTS FOR THE UPCOMING YEAR

The five-year BMAP assessment report will encompass the period of June 1, 2014 through May 31, 2015. In addition the projects detailed in **Section 3.2** and **Section 3.3**., BMAP monitoring will continue.

3.2 UPCOMING EFFORTS BY ENTITY

3.2.1 CITY OF CASSELBERRY

The City of Casselberry will complete two shoreline vegetation projects for a reduction of 1.1 lbs/yr, and an alum treatment project for a reduction of 510.4 lbs/yr.

3.2.2 CITY OF LONGWOOD

The City of Longwood will complete the Raven Avenue stormwater pipe replacement (Project L-2) for an estimated reduction of 1.4 lbs/yr of TP.

3.2.3 CITY OF MAITLAND

The City of Maitland will complete a baffle box project for a reduction of 7.7 lbs/yr of TP, and an infiltration trench project for a reduction of 0.9 lbs/yr.

3.2.4 CITY OF ORLANDO

The City of Orlando will complete a stormwater retrofit and alum treatment project for a reduction of 3.8 lbs/yr.

3.2.5 CITY OF OVIEDO

The City of Oviedo will begin work on the Aulin Avenue North stormwater retrofit and water quality treatment project.

3.2.6 CITY OF WINTER PARK

The City of Winter Park will continue with the Howell Branch Retention Pond upgrades study and design. In addition, the city has the alum station rehabilitation projects underway, and will report on this project on the next progress report.

3.2.7 FDOT DISTRICT 5

The Soldiers Creek Alum Treatment project with Seminole County continues to move forward. In addition, FDOT recently revised the requirements for new street sweeping contracts in Seminole County. The new contracts, which will begin in July 2014, will provide specific sweeping frequencies and estimates of material collected. FDOT's reporting of nutrient removal credits from street sweeping activities will likely resume in 2014 and 2015.

3.2.8 ORANGE COUNTY

Orange County intends to install an additional 44 curb inlet baskets in the Lake Burkett Sub-basin, which has an estimated TP reduction of 12.7 lbs/yr. The installation of these baskets will bring the total number of baskets in this sub-basin to 84, which have a total estimated TP load reduction of 24 lbs/yr.

3.2.9 SEMINOLE COUNTY

Seminole County will complete two wet detention ponds, one with an estimated reduction of 229 lbs/yr of TP and the other with an estimated reduction range between 82 lbs/yr and 238 lbs/yr of TP. In addition, the county is in the process of adopting a fertilizer ordinance and potentially adopting a shoreline protection ordinance by the end 2014.

3.2.10 AGRICULTURE

FDACS will continue to sign up growers for BMPs under the citrus and cow/calf manuals. FDACS will also explore opportunities for more one-on-one work and/or workshops with growers in the basin to ensure the proper implementation of BMPs.

As per the BMAP, the target date for enrolling all operations for which an adopted manual exists is June 2015. The target date for enrolling all other commodities is within five years of manual adoption. During the coming year, FDACS will work to enroll the remaining citrus and cow/calf acreage. In addition, FDACS will explore opportunities for more one-on-one work and/or workshops with growers in the basin to ensure the proper implementation of BMPs.

3.3 WATER QUALITY MONITORING

All responsible stakeholders in the BMAP monitoring plan will continue to sample their stations at the frequency noted in the BMAP. The stakeholders will continue to upload their data to STORET on a

regular basis. Any stakeholder that is not currently loading their data into STORET will work with the Department to set up the capability to do so.

APPENDIX A: BMAP PROJECTS

The BMAP project tables below show the status of the projects as of May 31, 2014. The tables provide information on the nutrient reduction attributed to each individual project, shown in lbs/yr. These projects were submitted to provide reasonable assurance to the Department that each entity has a plan on how they will meet their allocation; however, this list of projects is meant to be flexible enough to allow for changes that may occur over time, provided that the reduction is still met within the specified timeframe.

TABLE A-1: CITY OF ALTAMONTE SPRINGS PROJECTS

N/A = Not applicable

ENTITY	PROJECT NUMBER	PROJECT NAME	PROJECT DETAIL	TP REDUCTION (LBS/YR)	STATUS
Altamonte Springs	A-1	Existing BMPs	BMPs in place at the time of the TMDL	35.0	Completed
Altamonte Springs	A-2	Street Sweeping	Street sweeping of 4.4 miles, two times per month	220.0	Ongoing
Altamonte Springs	A-3	Education Efforts	FYN, irrigation ordinance, PSAs, pamphlets, presentations, website, illicit discharge program	4.6	Ongoing
Altamonte Springs	**N/A**	**N/A**	**Total Projects Reduction**	**259.6**	**N/A**
Altamonte Springs	**N/A**	**N/A**	**Total Required Reduction 2010-2015**	**19.0**	**N/A**
Altamonte Springs	**N/A**	**N/A**	**Credit for Future BMAPs**	**240.6**	**N/A**

TABLE A-2: CITY OF CASSELBERRY PROJECTS

N/A = Not applicable

ENTITY	PROJECT NUMBER	PROJECT NAME	PROJECT DETAIL	START DATE	END DATE	TP REDUCTION (LBS/YR)	PROJECT COST	TREATMENT ACRES	PROJECT TYPE	STATUS
Casselberry	C-1	Lake Concord Stormwater Park/Anniversary Park - Plumosa Baffle Box	Redevelopment and retrofit of city-owned property into an educational stormwater park; 2nd generation baffle box	10/2007	09/2009	0.5	$43,250	8.5	Stormwater retrofit	Completed
Casselberry	C-2	Lake Concord Stormwater Park/Anniversary Park - Exfiltration Trench	Redevelopment and retrofit of city-owned property into an educational stormwater park; an exfiltration trench	10/2007	09/2009	0.4	$143,200	1.7	Exfiltration	Completed
Casselberry	C-3	Lake Concord Stormwater Park/Anniversary Park - Dry Detention	Redevelopment and retrofit of city-owned property into an educational stormwater park; dry detention	10/2007	09/2009	0.0	$75,000	1.0	Dry detention pond	Completed
Casselberry	C-4	Lake Concord Stormwater Park/Anniversary Park - Swale, Wetland Revegetation, & Boardwalk	Redevelopment and retrofit of city-owned property into an educational stormwater park; swale, lakeshore revegetation, educational boardwalk	10/2007	09/2009	0.1	$742,000	1.7	Swales	Completed
Casselberry	C-5	Lake Concord Stormwater Park/Anniversary Park	Redevelopment and retrofit of city-owned property into an educational stormwater park; baffle box, pervious pavement, bioretention/ parking lot	10/2007	09/2009	0.1	$226,500	1.2	Stormwater retrofit	Completed
Casselberry	C-6	Anchor Road Reconstruction	Reconstruction of Anchor Road with drainage improvements including upgraded detention/retention ponds	10/2007	10/2009	2.9	$2,000,000	60.7	Wet detention pond	Completed
Casselberry	C-7	North Lake Triplet Shoreline Revegetation	Remove existing nuisance vegetation from the north and west shores of North Lake Triplet and replace with beneficial species; install reverse berm and swale	12/2007	09/2014	0.8	$80,000	16.2	Swales	Substantially complete; shallow bioretention installed; anticipated to come in well under budget

Entity	Project Number	Project Name	Project Detail	Start Date	End Date	TP Reduction (lbs/yr)	Project Cost	Treatment Acres	Project Type	Status
Casselberry	C-8	Secret Lake Shoreline Revegetation	Remove existing nuisance vegetation from the east and southwest shores of Secret Lake and replace with beneficial species; install 2 reverse berms and swales	01/2008	05/2008	0.2	N/A	3.7	Swales	Completed
Casselberry	C-9	Fountain/Aeration and Revegetation for Grassy Lake	Installation of aeration for high BOD loading to this waterbody; includes shoreline revegetation for aesthetics and nutrient removal with swale construction as practicable	03/2009	07/2009	0.0	$150,000	1.7	Aeration system	Completed
Casselberry	C-10	672 & 676 San Pablo Avenue 2nd generation Baffle Boxes	Replace existing storm manholes with two inlet filters and one 2nd generation baffle box for removal of pollutants	03/2009	01/2012	1.3	$300,000	28.0	Stormwater retrofit	Completed
Casselberry	C-11	Madrid Drive at Desoto Drive 2nd Generation Baffle Box	Replace existing storm manholes with 2nd generation baffle boxes for removal of pollutants	03/2009	01/2012	0.4	$150,000	5.0	Stormwater retrofit	Completed
Casselberry	C-12	Sonora Drive at Desoto Drive 2nd Generation Baffle box	Replace existing storm manholes with 2nd generation baffle boxes for removal of pollutants	03/2009	01/2012	2.4	$170,000	42.7	Stormwater retrofit	Completed
Casselberry	C-13	Live Oaks Center 2nd Generation Baffle Box	Replace existing storm manholes with baffle boxes for removal of pollutant	Unknown	Unknown	1.9	$100,000	11.6	Stormwater retrofit	Deferred
Casselberry	C-15	Lake Hodge Park 2nd Generation Baffle Box	Replace existing storm manholes with baffle boxes for removal of pollutants	03/2011	04/2012	3.3	$170,000	53.2	Stormwater retrofit	Completed
Casselberry	C-16	161 South Lake Triplet Drive 2nd Generation Baffle Box	Replace existing storm manholes with baffle boxes for removal of pollutants	Unknown	Unknown	5.5	$170,000	89.9	Stormwater retrofit	Planned & Funded, Delayed

Entity	Project Number	Project Name	Project Detail	Start Date	End Date	TP Reduction (lbs/yr)	Project Cost	Treatment Acres	Project Type	Status
Casselberry	C-17	530 South Lake Triplet Drive 2nd Generation Baffle Box	Replace existing storm manholes with baffle boxes for removal of pollutants; it is anticipated this project will be cancelled with bioswales and other drainage improvements instead (anticipated construction in fall 2014)	Unknown	Unknown	1.3	$140,000	20.7	Stormwater retrofit	Planned & Funded, Delayed
Casselberry	C-19	808 Osceola Trail 2nd Generation Baffle Box	Replace existing storm manholes with baffle boxes for removal of pollutants	Unknown	2012	1.2	$140,000	25.2	Stormwater retrofit	Completed
Casselberry	C-20	Park Drive Drainage/Wetland Improvements	Construction of stormwater retention area on Lots 10A & 11 on north side of Park Drive	10/2013	Unknown	4.2	$36,000	46.4	Wet retention pond	Planned & Funded, Delayed. Feasibility study planned to commence June 2014.
Casselberry	C-21	Whole Lake Alum Treatment	Modified project: Execution of whole lake alum treatments to directly treat Queens Mirror Lake and the Triplet Lake chain to address loads due to groundwater seepage and internal recycling	09/2012	09/2014	510.4 (equivalent per year for 10 years)	$297,016	101.9 (lake acreage only)	Alum treatment	Underway, approximately 88% completed
Casselberry	C-22	Middle Lake Triplet Shoreline Revegetation	Remove existing nuisance vegetation from the north shore of Middle Lake Triplet and replace with beneficial species	12/2013	09/2014	0.3	$33,000	3.4	Swales	In Progress
Casselberry	C-23	Secret Way at Canal 2nd generation Baffle Box	Replace existing storm manholes with baffle boxes for removal of pollutants	Unknown	Unknown	0.7	$170,000	16.4	Stormwater retrofit	Planned & Funded, Delayed
Casselberry	C-24	51 North Lake Triplet Drive 2nd Generation Baffle Box	Replace existing storm manholes with baffle boxes for removal of pollutants	Unknown	Unknown	1.2	$140,000	27.4	Stormwater retrofit	Planned & Funded, Delayed

Entity	Project Number	Project Name	Project Detail	Start Date	End Date	TP Reduction (lbs/yr)	Project Cost	Treatment Acres	Project Type	Status
Casselberry	C-25	South Lake Triplet Swales	Installation of water quality swales along northwestern shore of South Lake Triplet to provide golf course runoff treatment	Unknown	Unknown	1.0	$80,000	6.3	Swales	Planned & Funded, Delayed
Casselberry	C-26	South Lake Triplet 2nd Generation Baffle Box	Replace existing storm manholes with baffle boxes for removal of pollutants (sediment and detritus) (4.l)	Unknown	Unknown	0.8	$140,000	18.3	Stormwater retrofit (baffle box)	Envisioned but Not Funded, Delayed
Casselberry	C-27	Street Sweeping	Monthly street sweeping of 72.5 miles, 29,876 cubic feet of material collected annually	N/A	N/A	916.0	N/A	N/A	Street sweeping	Ongoing
Casselberry	C-28	Education Efforts	FYN, landscape and irrigation ordinances, PSAs, pamphlets/presentations, website, illicit discharge program	N/A	N/A	85.6	N/A	N/A	Education	Ongoing
Casselberry	C-29	Existing BMPs	BMPs that were in place at the time of the TMDL	N/A	N/A	319.9	N/A	N/A	N/A	Completed
Casselberry	C-30	Structures Cleaning	729 cubic feet of solids collected from catch basins, baffle boxes, and other structures per year	N/A	N/A	26.0	N/A	N/A	Clean out	Ongoing
Casselberry	**N/A**	**N/A**	**Total Projects Reduction**	**N/A**	**N/A**	**1,888.4**	**N/A**	**N/A**	**N/A**	**N/A**
Casselberry	**N/A**	**N/A**	**Total Required Reduction 2010-2015**	**N/A**	**N/A**	**342.7**	**N/A**	**N/A**	**N/A**	**N/A**
Casselberry	**N/A**	**N/A**	**Credit for Future BMAPs**	**N/A**	**N/A**	**1,545.7**	**N/A**	**N/A**	**N/A**	**N/A**

TABLE A-3: CITY OF LAKE MARY PROJECTS

N/A = Not applicable
O&M = Operations and maintenance

ENTITY	PROJECT NUMBER	PROJECT NAME	PROJECT DETAIL	START DATE	END DATE	TP REDUCTION (LBS/YR)	PROJECT COST	ANNUAL O&M COST	FOOTPRINT (ACRES)	PROJECT TYPE	STATUS
Lake Mary	LM-1	Lake Mary Woods	Eliminate 18 septic tanks 75 feet from surface water, some of them were failing	5/2005	4/2006	44.5	$3,700,000	$2,056	6,260	Extend sewer line	Completed
Lake Mary	LM-2	Street Sweeping	Annual street sweeping of 31.5 miles	N/A	N/A	17.0	N/A	N/A	N/A	Street sweeping	Ongoing
Lake Mary	LM-3	Education Efforts	FYN, ordinances, PSAs, pamphlets, presentations, website, illicit discharge program	N/A	N/A	67.6	N/A	N/A	N/A	Education	Ongoing
Lake Mary	LM-4	Existing BMPs	BMPs that were in place at the time of the TMDL	N/A	N/A	264.3	N/A	N/A	N/A	N/A	Completed
Lake Mary	LM-5	Catch Basin Clean Out	Removal of 1,620 cubic feet of material per year	N/A	N/A	57.0	N/A	N/A	N/A	Clean out	Ongoing
Lake Mary	**N/A**	**N/A**	**Total Projects Reduction**	**N/A**	**N/A**	**450.4**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Lake Mary	**N/A**	**N/A**	**Total Required Reduction 2010-2015**	**N/A**	**N/A**	**264.3**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Lake Mary	**N/A**	**N/A**	**Credit for Future BMAPs**	**N/A**	**N/A**	**186.1**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**

TABLE A-4: CITY OF LONGWOOD PROJECTS

N/A = Not applicable

ENTITY	PROJECT NUMBER	PROJECT NAME	PROJECT DETAIL	START DATE	END DATE	TP REDUCTION (LBS/YR)	PROJECT COST	PROJECT TYPE	STATUS
Longwood	L-1	Stormwater Master Plan Project	Fairy Lake outfall	2011	2013	0.7	$300,000	Stormwater retrofit	Completed
Longwood	L-2	Stormwater Master Plan Project	Raven Avenue replacement of stormwater pipe	2014	2015	1.4	$300,000	Stormwater retrofit	Planned
Longwood	L-3	BMP Clean Out	Clean out of BMPs, 176 cubic feet of material per year	N/A	Ongoing	5.0	N/A	BMP clean out	Ongoing
Longwood	L-4	Street Sweeping	Quarterly street sweeping of 11.1 miles	N/A	N/A	4.0	N/A	Street sweeping	Ongoing
Longwood	L-5	Education Efforts	FYN, pamphlets, presentations, website, illicit discharge program	N/A	N/A	44.9	N/A	Education	Ongoing
Longwood	L-6	Existing BMPs	BMPs that were in place at the time of the TMDL	N/A	N/A	58.9	N/A	N/A	Completed
Longwood	L-7	Regional Project	Participate in a regional project	2009	2014	90.4	N/A	N/A	Planned
Longwood	**N/A**	**N/A**	**Total Projects Reduction**	**N/A**	**N/A**	**205.3**	**N/A**	**N/A**	**N/A**
Longwood	**N/A**	**N/A**	**Total Required Reduction 2010-2015**	**N/A**	**N/A**	**205.3**	**N/A**	**N/A**	**N/A**
Longwood	**N/A**	**N/A**	**Credit for Future BMAPs**	**N/A**	**N/A**	**0.0**	**N/A**	**N/A**	**N/A**

TABLE A-5: CITY OF MAITLAND PROJECTS

N/A = Not applicable
O&M = Operations and maintenance

ENTITY	PROJECT NUMBER	PROJECT NAME	PROJECT DETAIL	START DATE	END DATE	TP REDUCTION (LBS/YR)	PROJECT COST	ANNUAL O&M COST	TREATMENT ACRES	PROJECT TYPE	STATUS
Maitland	M-1	Sybelia Parkway Regional Pond	Construct wet pond	2005	2007	33.7	$4,400,000	$3,000	125.2	Wet detention pond	Completed
Maitland	M-2	Lake Gem/Park Lake COOP BMP	Construct second generation baffle box	2010	Unknown	0.3	$30,000	$3,000	3.4	Stormwater retrofit	Delayed indefinitely
Maitland	M-3	Lake Gem/Park Lake COOP BMP	Construct second generation baffle box	2010	Unknown	3.1	$30,000	$3,000	20.0	Stormwater retrofit	Delayed indefinitely
Maitland	M-4	Lake Gem/Park Lake COOP BMP	Construct second generation baffle box	2010	Unknown	0.2	$60,000	$6,000	3.1	Stormwater retrofit	Delayed indefinitely
Maitland	M-5	Lake Gem/Park Lake COOP BMP	Construct second generation baffle box	2010	Unknown	18.9	$60,000	$6,000	178.9	Stormwater retrofit	Delayed indefinitely
Maitland	M-6	Lake Gem/Park Lake COOP BMP	Construct second generation baffle box	2010	Unknown	9.1	$60,000	$6,000	58.1	Stormwater retrofit	Delayed indefinitely
Maitland	M-7	Lake Maitland Basin - Ridgewood Area Quality Neighborhood Program City Street Improvement Plan	Construct infiltration trenches	2009	2010	0.5	$60,000	$2,500	3.9	Infiltration trench	Completed
Maitland	M-8	Lake Maitland Basin - Ridgewood Area Quality Neighborhood Program City Street Improvement Plan	Construct infiltration trenches	2009	2010	1.7	$170,000	$8,500	15.0	Infiltration trench	Completed
Maitland	M-9	Lake Maitland Basin - Ridgewood Area Quality Neighborhood Program City Street Improvement Plan	Construct infiltration trenches	2009	2010	0.6	$100,000	$5,000	9.2	Infiltration trench	Completed
Maitland	M-10	North Lake Maitland Leaf Trap Project	Install curb inlet leaf trap	2009	2010	0.1	$3,000	$6,000	16.8	Inlet	Completed
Maitland	M-11	Lake Maitland Basin - Ridgewood Area Quality Neighborhood Program City Street Improvement Plan	Construct infiltration trenches	2009	2010	0.9	$100,000	$8,500	14.8	Infiltration trench	Completed
Maitland	M-12	Dommerich Lot Baffle Box	Construct second generation baffle box	2010	2014	1.1	$60,000	$5,000	24.7	Stormwater retrofit	Planned and Funded
Maitland	M-13	Chipewa Trail Baffle Box	Construct second generation baffle box	2007	2007	1.1	$60,000	$5,000	25.3	Stormwater retrofit	Completed
Maitland	M-14	Horatio Avenue Infiltration Trench	Construct infiltration trenches	2014	2015	0.9	$150,000	$5,000	5.0	Infiltration trench	Planned and Funded

Entity	Project Number	Project Name	Project Detail	Start Date	End Date	TP Reduction (lbs/yr)	Project Cost	Annual O&M Cost	Treatment Acres	Project Type	Status
Maitland	M-15	Minnehaha Park Stormwater Improvements Dry Stormwater Pond	Construct wet pond	2007	2008	1.3	$65,000	$2,000	9.9	Dry detention pond	Completed
Maitland	M-16	Street Sweeping	Street sweeping once every 2 weeks of 71 miles	2005	Ongoing	398.0	N/A	$100,000	2,898	Street sweeping	Ongoing
Maitland	M-17	Education Efforts	Landscaping ordinance, PSAs, presentations/ pamphlets, website, illicit discharge program	N/A	N/A	40.8	N/A	N/A	N/A	Education	Ongoing
Maitland	M-18	Existing BMPs	BMPs in place at the time of the TMDL	N/A	N/A	0.7	N/A	N/A	N/A	N/A	Completed
Maitland	M-19	Packwood Avenue Baffle Box	Construct second generation baffle box	N/A	2012	9.9	N/A	N/A	13	Stormwater retrofit	Completed
Maitland	M-19	Minnehaha Circle Baffle Box	Construction second generation baffle box	2012	2014	7.7	N/A	N/A	23	Stormwater retrofit	Under Design
Maitland	M-20	Park Lake Baffle Boxes	Construction second generation baffle boxes	2012	Unknown	23.2	N/A	N/A	58	Stormwater retrofit	Planned and Funded
Maitland	**N/A**	**N/A**	**Total Projects Reduction**	**N/A**	**N/A**	**553.8**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Maitland	**N/A**	**N/A**	**Total Required Reduction 2010-2015**	**N/A**	**N/A**	**124.8**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Maitland	**N/A**	**N/A**	**Credit for Future BMAPs**	**N/A**	**N/A**	**429.0**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**

TABLE A-6: CITY OF ORLANDO PROJECTS

N/A = Not applicable
O&M = Operations and maintenance

ENTITY	PROJECT NUMBER	PROJECT NAME	PROJECT DETAIL	START DATE	END DATE	TP REDUCTION (LBS/YR)	PROJECT COST	ANNUAL O&M COST	TREATMENT ACRES	PROJECT TYPE	STATUS
Orlando	ORL-1	Lake Dot Water Quality Restoration	Installation of Alum Treatment System, where aluminum sulfate (alum) is injected into stormline on a flow-proportioned basis	1988	07/1990	70.4	$569,207	N/A	276	Alum	Completed
Orlando	ORL-2	Hazel Street Outfall Improvements	Installation of CDS Unit at Lake Winyah from 96" pipe	07/2000	07/2003	8.3	$410,992	N/A	505	Stormwater retrofit	Completed
Orlando	ORL-3	Lake Rowena Screening Facility & Alum Stormwater Treatment	Installation of underground, flow-actuated rotating bar screen on 108" outfall pipe to capture debris with additional treatment via alum system	1994	1996	55.0	$596,512	N/A	470	Screening and alum	Completed
Orlando	ORL-4	Lake Highland CDS Unit	Installation of CDS Unit at Lake Highland	1998	1999	1.0	$60,000	N/A	45	Stormwater retrofit	Completed
Orlando	ORL-5	Mills Avenue Retrofit	Construction of Storm Flo Litter Collection Screen on Mills Ave., adjacent to Lake Rowena to treat runoff from 36" and 24" stormlines	01/2009	04/2009	8.4	$250,000	N/A	89	Stormwater retrofit	Completed
Orlando	ORL-6	Overbrook Stormwater Improvements	Construct 2nd generation baffle box upstream of Lake Adair; Implement pollution prevention methods, including gravel bottom and check dams to settle out pollutants	10/2007	07/2008	1.8	$400,000	N/A	236	Stormwater retrofit	Completed
Orlando	ORL-7	Guernsey Park - Expansion of Wet Detention Pond	Expansion of wet detention pond to treat 61% of sub-basin drainage	11/2011	03/2012	0.1	$425,000	N/A	80	Wet detention pond	Completed
Orlando	ORL-8	Ivanhoe Plaza Park Exfiltration	Installation of exfiltration galleries to treat 100% of sub-basin drainage	05/2012	12/2012	1.3	$1,100,000	N/A	49	100% on-site retention	Completed
Orlando	ORL-9	Lake Concord 2nd Generation Baffle Boxes	Construct two 2nd Generation Baffle Boxes upstream of Lake Concord and reroute flow to treat 30" and 24" outfalls from nearly 100% of two sub-basins	7/2011	09/2011	0.8	$250,000	N/A	66	Stormwater retrofit	Completed
Orlando	ORL-10	Winyah (Westchester Ave/Wilkinson St) 2nd Generation Baffle Box	Construct 2nd Generation Baffle Box upstream of Lake Winyah to treat 71% of sub-basin	9/2009	10/2009	1.6	$72,000	N/A	30	Stormwater retrofit	Completed

Entity	Project Number	Project Name	Project Detail	Start Date	End Date	TP Reduction (lbs/yr)	Project Cost	Annual O&M Cost	Treatment Acres	Project Type	Status
Orlando	ORL-11	Westmoreland 2nd Generation Baffle Box	Construct 2nd Generation Baffle Box upstream of Lake Adair	N/A	2006	0.1	$35,000	N/A	5.3	Stormwater retrofit	Completed
Orlando	ORL-12	Stormwater Filtration Systems / Inlet Baskets	Installation of 6 inlet baskets around perimeter of Lake Adair	N/A	2007	0.0	$5,400	N/A	25	Inlet basket	Completed
Orlando	ORL-13	Stormwater Filtration Systems / Inlet Baskets	Installation of 11 inlet baskets in Spring Lake basin	N/A	2007	0.0	$9,900	N/A	25	Inlet basket	Completed
Orlando	ORL-14	Stormwater Filtration Systems / Inlet Baskets	Installation of 13 inlet baskets in Lake Formosa basin	N/A	2007	0.1	$11,700	N/A	14	Inlet basket	Completed
Orlando	ORL-15	Stormwater Filtration Systems / Inlet Baskets	Installation of 29 inlet baskets in Lake Highland basin	N/A	2007	3.5	$26,100	N/A	223	Inlet basket	Completed
Orlando	ORL-16	Stormwater Filtration Systems / Inlet Baskets	Installation of 2 inlet baskets in Lake Rowena basin	N/A	2007	0.5	$1,800	N/A	39	Inlet basket	Completed
Orlando	ORL-17	Stormwater Filtration Systems / Inlet Baskets	Installation of 49 inlet baskets in Lake Ivanhoe basin	N/A	2008	0.6	$44,100	N/A	242	Inlet basket	Completed
Orlando	ORL-18	Stormwater Filtration Systems / Inlet Baskets	Installation of 4 inlet baskets in Lake Druid basin	N/A	2007	0.4	$1,800	N/A	39	Inlet basket	Completed
Orlando	ORL-19	Street Sweeping	2 times per week of 6.4 miles, weekly of 9.3 miles, and 2 times per month of 113 miles	N/A	Ongoing	428.0	N/A	$1,800,000	N/A	Street sweeping	Ongoing
Orlando	ORL-20	Reading Drive (24" line) - 2nd Generation Baffle Box at Lake Adair	Construct 2nd Generation Baffle Box upstream of Lake Adair to treat approximately 13% of subbasin	9/2009	10/2009	0.5	N/A	N/A	26	Stormwater retrofit	Completed
Orlando	ORL-21	Spring Lake -2nd Generation Baffle Box at Rio Grande	Construct 2nd Generation Baffle Box upstream of Spring Lake to treat 100% of subbasin	9/2009	10/2009	0.6	$128,000	N/A	39	Stormwater retrofit	Completed
Orlando	ORL-22	Spring Lake- 2nd Generation Baffle Box at Springdale Rd	Construct 2nd Generation Baffle Box upstream of Spring Lake to treat 100% of subbasin	N/A	N/A	0.1	N/A	N/A	21	Stormwater retrofit	Completed
Orlando	ORL-23	DOT Pond Maintenance, west of Spring Lake	Removal of muck/sediment and expansion of wet detention pond to treat 95% and 5% of two sub-basins, respectively.	2/2010	11/2010	6.1	N/A	N/A	141	Wet detention pond	Completed

Entity	Project Number	Project Name	Project Detail	Start Date	End Date	TP Reduction (lbs/yr)	Project Cost	Annual O&M Cost	Treatment Acres	Project Type	Status
Orlando	ORL-24	Weber Dr - 2nd Generation Baffle Box at Lake Druid	Construct 2nd Generation Baffle Box upstream of Lake Druid to treat approximately 7% of subbasin	N/A	2006	0.3	N/A	N/A	6	Stormwater retrofit	Completed
Orlando	ORL-25	Educational Component	FYN, ordinances (landscape, irrigation, pet waste), PSAs, pamphlets, presentations, website, illicit discharge program	N/A	Ongoing	94.2	N/A	N/A	N/A	Education	Ongoing
Orlando	ORL-26	Lake Concord Alum Injection Retrofit	Divert stormwater from Lake Concord basin to Lake Dot Alum Treatment before discharging into chain of lakes; installation of injection line in Lake Dot and new baffle box on Concord Ave	06/2013	N/A	3.8	$500,000	N/A	90.8	Stormwater retrofit and alum	In Progress
Orlando	ORL-27	Existing BMPs	BMPs that were in place at the time of the TMDL	N/A	N/A	684.4	N/A	N/A	N/A	N/A	Completed
Orlando	ORL-28	FDOT Pond Sandbar Removal from Spring Lake	Removal of sandbar from FDOT pond outfall that enters Spring Lake	11/2010	2/2011	N/A	N/A	N/A	N/A	Wet detention pond	Completed
Orlando	ORL-29	Catch Basin Clean Out	Clean out of catch basins, removal of 524 cubic feet of material per year	N/A	Ongoing	19.0	N/A	N/A	N/A	Catch basin clean out	Ongoing
Orlando	ORL-30	BMP Clean Out	Clean out of BMPs, removal of 133 cubic feet of material per year	N/A	Ongoing	4.0	N/A	N/A	N/A	BMP clean out	Ongoing
Orlando	**N/A**	**N/A**	**Total Projects Reduction**	**N/A**	**N/A**	**1,394.9**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Orlando	**N/A**	**N/A**	**Total Required Reduction 2010-2015**	**N/A**	**N/A**	**326.3**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Orlando	**N/A**	**N/A**	**Credit for Future BMAPs**	**N/A**	**N/A**	**1,068.6**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**

TABLE A-7: CITY OF OVIEDO PROJECTS

N/A = Not applicable

ENTITY	PROJECT NUMBER	PROJECT NAME	PROJECT DETAIL	START DATE	END DATE	TP REDUCTION (LBS/YR)	PROJECT COST	TREATMENT ACRES	PROJECT TYPE	STATUS
Oviedo	OV-1	Aulin Regional Stormwater Pond	Aulin Regional Stormwater Pond	2009	12/2012	13.5	N/A	N/A	Wet detention pond	Completed
Oviedo	OV-2	Lightwood Knox Canal Project	Lightwood Knox Canal Project	2009	2014	84.5	N/A	N/A	Dry detention pond, swales	Envisioned, but Not Funded
Oviedo	OV-3	Sweetwater Creek Project	Sweetwater Creek Project	2009	2014	30.4	N/A	N/A	Dry detention pond, wet detention pond	Envisioned, but Not Funded
Oviedo	OV-4	Solary Canal Stormwater Treatment Area	Regional Stormwater Treatment Facility consisting of an 8.0-acre wet pond and 4.8-acre wetland	4/2010	12/2011	188.3	$1,700,000	1,471	Wet detention pond, wetland treatment	Completed
Oviedo	OV-5	Street Sweeping	Monthly street sweeping of 315 lane miles	N/A	N/A	601.0	N/A	N/A	Street sweeping	Ongoing
Oviedo	OV-6	Education Efforts	FYN, pet waste ordinance, illicit discharge program, Adopt A Pond Program	N/A	N/A	52.0	N/A	N/A	Education	Ongoing
Oviedo	OV-7	Existing BMPs	BMPs that were in place at the time of the TMDL	N/A	N/A	386.5	N/A	N/A	N/A	Completed
Oviedo	OV-8	Jet-Vac Program	Routine cleaning of inlets and pipes	2011	N/A	220.0	N/A	N/A	Inlet and pipe cleaning	Ongoing
Oviedo	OV-9	Aulin Avenue North	Construction of stormwater conveyance system and treatment area	2014	2015	Not quantified	$50,000	Unknown	Stormwater Retrofitting and Water Quality Treatment	Under Design
Oviedo	OV-10	Aulin Avenue South	Improvement of stormwater treatment and road flooding	2008	2013	1.9	$899,860	Unknown	Installation of Storm Inlets and Stormwater Treatment Area	Completed
Oviedo	**N/A**	**N/A**	**Total Projects Reduction**	**N/A**	**N/A**	**1,576.1**	**N/A**	**N/A**	**N/A**	**N/A**
Oviedo	**N/A**	**N/A**	**Total Required Reduction 2010-2015**	**N/A**	**N/A**	**258.7**	**N/A**	**N/A**	**N/A**	**N/A**
Oviedo	**N/A**	**N/A**	**Credit for Future BMAPs**	**N/A**	**N/A**	**1,317.4**	**N/A**	**N/A**	**N/A**	**N/A**

TABLE A-8: CITY OF SANFORD PROJECTS

N/A = Not applicable

ENTITY	PROJECT NUMBER	PROJECT NAME	PROJECT DETAIL	TP REDUCTION (LBS/YR)	STATUS
Sanford	S-1	Street Sweeping	Weekly street sweeping of 37.7 miles	427.0	Ongoing
Sanford	S-2	Public Education	Public Education	108.9	Ongoing
Sanford	S-3	Existing BMPs	BMPs that were in place at the time of the TMDL	521.2	Completed
Sanford	**N/A**	**N/A**	**Total Projects Reduction**	**1,057.1**	**N/A**
Sanford	**N/A**	**N/A**	**Total Required Reduction 2010-2015**	**602.2**	**N/A**
Sanford	**N/A**	**N/A**	**Credit for Future BMAPs**	**454.9**	**N/A**

TABLE A-9: CITY OF WINTER PARK PROJECTS

N/A = Not applicable
O&M = Operations and maintenance

ENTITY	PROJECT NUMBER	PROJECT NAME	PROJECT DETAIL	START DATE	END DATE	TP REDUCTION (LBS/YR)	PROJECT COST	ANNUAL O&M COST	TREATMENT ACRES	PROJECT TYPE	STATUS
Winter Park	WP-1	Lake Island Interconnect	First Flush bypass to Wet Retention Ponds	06/2002	09/2003	4.7	$408,009	N/A	74.5	Wet detention pond	Completed
Winter Park	WP-2	Via Lugano Exfiltration	Off Line Exfiltration	10/1996	11/1997	1.3	$200,000	N/A	25.3	Dry detention pond	Completed
Winter Park	WP-3	N. Park Ave. Exfiltration	Off Line Exfiltration	06/2004	10/2004	6.6	$250,000	N/A	21.44	Dry detention pond	Completed
Winter Park	WP-4	Fairway 3 Exfiltration	Off Line Exfiltration	11/2006	10/2007	5.5	$1,000,000	N/A	57.39	Dry detention pond	Completed
Winter Park	WP-5	McKean Road CDS	CDS Unit on 24" outfall	05/2004	06/2005	0.0	N/A	N/A	5.58	Stormwater retrofit	Completed
Winter Park	WP-6	Pinetree Rd Outfall CDS	CDS unit on 42" outfall	05/2004	06/2005	0.6	N/A	N/A	64.78	Stormwater retrofit	Completed
Winter Park	WP-7	1190 Park Ave CDS	CDS unit on 30" outfall	08/1998	11/1999	0.2	N/A	N/A	22.82	Stormwater retrofit	Completed
Winter Park	WP-8	Moss/ Venetian Dry Capture 1st Generation Baffle Box	Baffle screen on 15" outfall	02/2000	03/2007	0.1	N/A	N/A	3.02	Stormwater retrofit	Completed
Winter Park	WP-9	Green Cove Road 2 CDS Units	2 CDS units on two 24" outfalls	05/2004	06/2006	0.1	N/A	N/A	11.35	Stormwater retrofit	Completed
Winter Park	WP-10	Courtland Alum Injection Treatment	Alum injection at Lake Mizell outfall	N/A	N/A	21.2	N/A	N/A	88.08	Alum	Completed
Winter Park	WP-11	Partnership/ Wet Detention/ Windsong	Developer's agreement to treat Palmer Ditch basin run off within site MSSW	N/A	N/A	5.8	N/A	N/A	84.55	Wet detention pond	Completed
Winter Park	WP-12	Lincoln Ave Alum Injection Treatment	Alum injection at Lake Osceola outfall	N/A	N/A	37.7	N/A	N/A	17.59	Alum	Completed
Winter Park	WP-13	Alexander Place Alum Injection Treatment with Baffle Box	Alum injection at Lake Osceola outfall	N/A	N/A	22.6	N/A	N/A	24.61	Alum	Completed
Winter Park	WP-14	Morse /Alum Injection Treatment	Alum injection at Lake Osceola outfall	N/A	N/A	6.9	N/A	N/A	57.13	Alum	Completed
Winter Park	WP-15	Trismen and Lakewood Drive Exfiltration	Off-Line Exfiltration	N/A	N/A	0.4	N/A	N/A	7.35	Dry detention pond	Completed
Winter Park	WP-16	Trismen CDS Unit	CDS Unit on 24" outfall	N/A	N/A	0.0	N/A	N/A	0.39	Stormwater retrofit (CDS)	Completed

Entity	Project Number	Project Name	Project Detail	Start Date	End Date	TP Reduction (lbs/yr)	Project Cost	Annual O&M Cost	Treatment Acres	Project Type	Status
Winter Park	WP-17	Trismen Dry 1st Generation Baffle Box	Baffle screen on 15" outfall	N/A	N/A	0.0	N/A	N/A	1.84	Stormwater retrofit	Completed
Winter Park	WP-18	Elizabeth CDS Treating Inlet at Bonita and Dale	CDS on 15" Pipe	05/2004	06/2006	0.0	N/A	N/A	2.35	Stormwater retrofit	Completed
Winter Park	WP-19	Lake Chelton Outfall Improvement	4 dry-capture baffle inlets and boxes	09/2003	01/2004	0.0	N/A	N/A	28.65	Stormwater retrofit	Completed
Winter Park	WP-20	Lakeview Road Bricking	CDS Installation on 24" outfall	03/2006	03/2006	0.1	N/A	N/A	9.53	Stormwater retrofit	Completed
Winter Park	WP-21	Mead Gardens Borrow Pit Pond Retrofit	Retrofit screening devices (two baffle boxes) to existing MSSW	05/2006	09/2006	15.4	N/A	$560,000	62.06	Stormwater retrofit	Completed
Winter Park	WP-22	Glencoe Road Bricking	Stormwater capture and screening system (baffle box)	03/2007	06/2007	0.1	N/A	N/A	3.39	Stormwater retrofit	Completed
Winter Park	WP-23	Laurel Road Dry Retention Pond	On-line dry retention pond	05/1999	03/2001	1.7	N/A	N/A	17.15	Dry detention pond	Completed
Winter Park	WP-24	Alum Injection Treatment/ Rollins	Alum injection at outfalls to Lake Virginia	01/1995	1996	26.8	N/A	N/A	72.99	Alum	Completed
Winter Park	WP-25	9th Grade Center Pond Wet Detention	Wet detention pond retrofit	Pre 1995	Pre 1995	7.6	N/A	N/A	110.8	Wet detention pond	Completed
Winter Park	WP-26	Lakeview Bricking	Stormwater capture and screening system (baffle box)	02/2005	11/2006	0.1	N/A	N/A	6.97	Stormwater retrofit	Completed
Winter Park	WP-27	Oxford Road Bricking	Stormwater capture and screening system (baffle box)	08/2006	11/2006	0.1	N/A	N/A	5.28	Stormwater retrofit	Completed
Winter Park	WP-28	Lake Island Park	Created treatment volume in Lake Mendsen, construct control structures for wet detention treatment	06/1905	03/1996	83.8	N/A	N/A	256.00	Wet detention pond	Completed
Winter Park	WP-29	950 Palmer Ave Retrofit	Stormwater capture and screening system (baffle box)	07/2007	07/2007	0.3	N/A	N/A	18.33	Stormwater retrofit	Completed
Winter Park	WP-30	Banchory Exfiltration	On-line retention 0.25 treatment volume	2008	2008	0.4	N/A	N/A	N/A	On-line retention	Completed
Winter Park	WP-31	Bryan CDS	CDS	2008	2008	0.2	N/A	N/A	N/A	Stormwater retrofit	Completed
Winter Park	WP-32	E. Lake Sue CDS	CDS	2008	2008	0.1	N/A	N/A	N/A	Stormwater retrofit	Completed

Entity	Project Number	Project Name	Project Detail	Start Date	End Date	TP Reduction (lbs/yr)	Project Cost	Annual O&M Cost	Treatment Acres	Project Type	Status
Winter Park	WP-33	Elizabeth Drive Baffle Box	Baffle box	N/A	N/A	1.1	N/A	N/A	N/A	Stormwater retrofit	Completed
Winter Park	WP-34	Street Sweeping	Street sweeping two times per month of 130 miles	N/A	Ongoing	13.6	N/A	N/A	N/A	Street sweeping	Ongoing
Winter Park	WP-35	Education Efforts	FYN, landscape and fertilizer ordinances, pamphlets, presentations, website, illicit discharge program	N/A	Ongoing	106.3	N/A	N/A	N/A	Education	Ongoing
Winter Park	WP-36	Existing BMPs	BMPs that were in place at the time of the TMDL	N/A	N/A	151.5	N/A	N/A	N/A	N/A	Completed
Winter Park	WP-37	Courtland Avenue Alum System Retrofit	2 Suntree baffle boxes (Osceola Ave and Mizell Ave outfalls)	06/2011	08/2011	40.7	$350,000	$4,000	88	Stormwater retrofit	Completed
Winter Park	WP-38	Alabama Drive Improvements	2 dry retention swales and 1 baffle box	08/2011	10/2011	1.7	$50,000	<$1,000	5	Stormwater retrofit	Completed
Winter Park	WP-39	Morse Boulevard Outfalls Retrofit	2- Suntree baffle boxes	04/2012	05/2012	194.7	$180,000	$2,500	30	Stormwater retrofit	Completed
Winter Park	WP-40	Park North Exfiltration	Exfiltration trench	02/2014	5/29/14	9.7	$703,000	$2,500	8.8	Retrofit	Completed
Winter Park	WP-41	Canton Avenue Outfall Retrofit	Suntree baffle box	05/2013	9/18/13	6.6	$129,000	$1,000	23	Retrofit	Completed
Winter Park	**N/A**	**N/A**	**Total Projects Reduction**	**N/A**	**N/A**	**776.3**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Winter Park	**N/A**	**N/A**	**Total Required Reduction 2010-2015**	**N/A**	**N/A**	**370.5**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Winter Park	**N/A**	**N/A**	**Credit for Future BMAPs**	**N/A**	**N/A**	**405.8**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**

TABLE A-10: CITY OF WINTER SPRINGS PROJECTS

N/A = Not applicable
O&M = Operations and maintenance

ENTITY	PROJECT NUMBER	PROJECT NAME	PROJECT DETAIL	START DATE	END DATE	TP REDUCTION (LBS/YR)	PROJECT COST	ANNUAL O&M COST	STATUS
Winter Springs	WS-1	Solary Canal Stormwater Treatment Area	Regional Stormwater Treatment Facility consisting of an 8.0-acre wet pond and 4.8-acre wetland	4/2010	12/2011	188.3	$1,700,000	N/A	Completed
Winter Springs	WS-2	Winding Hollow Wetland Treatment Area	Divert No Name Creek flow into wetland treatment system	2020	2020	210.1	$357,000	N/A	Envisioned but Not Funded
Winter Springs	WS-3	Winter Springs and Wedgewood Filtration Devices	Retrofit stormwater outfalls with flow-through filtration devices	2020	2020	24.7	$132,000	N/A	Envisioned but Not Funded
Winter Springs	WS-4	North Orlando Townsite Filtration Devices	Retrofit eastern and western outfalls with flow-through filtration devices	2020	2020	5.2	$80,000	N/A	Envisioned but Not Funded
Winter Springs	WS-5	Highlands Regional Pond Enhancements	Expansion of existing wet pond and redirection of untreated stormwater runoff to the pond	2020	2020	64.5	$1,385,000	N/A	Envisioned but Not Funded
Winter Springs	WS-6	Education Efforts - Update Local Codes and Ordinances (Fertilizer Rule, etc.), FYN	Continue FYN, PSAs, distribution of pamphlets, presentations to various groups, and inspection program on illicit discharges.	N/A	N/A	92.0	N/A	$4,000	Ongoing
Winter Springs	WS-7	Street Sweeping	Quarterly street sweeping; total swept in reporting year is 671 miles.	N/A	N/A	58.0	N/A	$23,381	Ongoing
Winter Springs	WS-8	Existing BMPs	BMPs that were in place at the time of the TMDL	N/A	N/A	765.2	N/A	N/A	Completed
Winter Springs	**N/A**	**N/A**	**Total Projects Reduction**	**N/A**	**N/A**	**1,408.0**	**N/A**	**N/A**	**N/A**
Winter Springs	**N/A**	**N/A**	**Total Required Reduction 2010-2015**	**N/A**	**N/A**	**513.0**	**N/A**	**N/A**	**N/A**
Winter Springs	**N/A**	**N/A**	**Credit for Future BMAPs**	**N/A**	**N/A**	**895.0**	**N/A**	**N/A**	**N/A**

TABLE A-11: FLORIDA DEPARTMENT OF TRANSPORTATION PROJECTS

N/A = Not applicable

* The street sweeping frequency and approach that was being implemented within the basin has changed. Credits for street sweeping for the reporting period cannot be calculated at this time.

ENTITY	PROJECT NUMBER	PROJECT NAME	PROJECT DESCRIPTION	START DATE	END DATE	TP REDUCTION (LBS/YR)	TREATMENT ACRES	PROJECT TYPE	STATUS
FDOT	FDOT -1	FM: 240167-1 SR434	Widen from 2 to 6 lanes from McCulloch Road to Mitchell Hammock; drainage improvements and treatment of existing impervious area	2002	2007	3.6	83.47	Wet detention	Completed
FDOT	FDOT -2	Soldiers Creek Alum Treatment Facility	Flow-through alum system along CR 427 in Seminole County to reduce nutrient loads within Soldiers Creek	2015	2016	80.0	N/A	Alum treatment	Designed and Permitted
FDOT	FDOT -3	FM: 240196-1 SR17-92 Basin C&D	Proposed widening of SR 15/600 (US 17/92) from Shepard Road to Lake Mary Blvd; drainage improvements and treatment of existing impervious area	2015	2016	3.7	47.97	Dry retention	Designed, Permits Pending
FDOT	FDOT -4	FM: 240163-1 SR 46	SR 46 Bridge Replacement over Lake Jesup; drainage improvements and treatment of existing impervious area	2008	2010	5.4	50.50	Wet detention	Completed
FDOT	FDOT -5	Street Sweeping	Monthly street sweeping of 1,232.6 miles	N/A	N/A	0.0*	N/A	Street sweeping	Ongoing
FDOT	FDOT -6	Education Efforts	Public Education efforts	N/A	N/A	6.5	N/A	Education	Ongoing
FDOT	FDOT -7	Existing BMPs	Varies	N/A	N/A	207.7	N/A	N/A	Completed
FDOT	**N/A**	**N/A**	**Total Projects Reduction**	**N/A**	**N/A**	**306.9**	**N/A**	**N/A**	**N/A**
FDOT	**N/A**	**N/A**	**Total Required Reduction 2010-2015**	**N/A**	**N/A**	**132.3**	**N/A**	**N/A**	**N/A**
FDOT	**N/A**	**N/A**	**Credit for Future BMAPs**	**N/A**	**N/A**	**174.6**	**N/A**	**N/A**	**N/A**

TABLE A-12: ORANGE COUNTY PROJECTS

N/A = Not applicable

ENTITY	PROJECT NUMBER	PROJECT NAME	PROJECT DETAIL	START DATE	END DATE	TP REDUCTION (LBS/YR)	PROJECT TYPE	STATUS
Orange County	OC-1	Hall Road Improvements	OC CIP Hall Road Improvements	2003	2009	0.1	Stormwater retrofit	Completed
Orange County	OC-2	OC CIP Lake Waunatta	OC CIP Lake Waunatta	2005	2009	3.5	Stormwater retrofit	Completed
Orange County	OC-3	Lake Sue Inlet Baskets	Lake Sue inlet baskets	2011	N/A	1.0	Curb inlet baskets	Completed
Orange County	OC-4	Street Sweeping	Street sweeping for a total of 971.93 curb miles per year	N/A	N/A	29.1	Street sweeping	Ongoing
Orange County	OC-5	Education Efforts	FYN, ordinances, PSAs, pamphlets, presentations, website, illicit discharge program	N/A	N/A	151	Educational outreach	Ongoing
Orange County	OC-6	Existing BMPs	BMPs that were in place at the time of the TMDL	N/A	N/A	197.3	N/A	Completed
Orange County	OC-7	Regional Project	Participate in a regional project	2009	2014	157.0	Regional project	Planned
Orange County	OC-8	Lake Burkett Inlet Baskets Phase I	Lake Burkett sub-basin	2013	N/A	11.5	Curb inlet baskets	Completed
Orange County	OC-9	Lake Burkett Inlet Baskets Phase II	Lake Burkett sub-basin	To be determined	N/A	12.7	Curb inlet baskets	Planned
Orange County	OC-10	Lake Killarney Inlet Baskets	Lake Killarney	2011	N/A	5.8	Curb inlet baskets	Ongoing
Orange County	**N/A**	**N/A**	**Total Projects Reduction**	**N/A**	**N/A**	**569.0**	**N/A**	**N/A**
Orange County	**N/A**	**N/A**	**Total Required Reduction 2010-2015**	**N/A**	**N/A**	**569.0**	**N/A**	**N/A**
Orange County	**N/A**	**N/A**	**Credit for Future BMAPs**	**N/A**	**N/A**	**0.0**	**N/A**	**N/A**

TABLE A-13: ORLANDO ORANGE COUNTY EXPRESSWAY AUTHORITY PROJECTS

N/A = Not applicable

ENTITY	PROJECT NUMBER	PROJECT NAME	PROJECT DETAIL	TP REDUCTION (LBS/YR)	PROJECT TYPE	STATUS
OOCEA	OOCEA-1	Existing BMPs	BMPs that were in place at the time of the TMDL	12.8	N/A	Completed
OOCEA	**N/A**	**N/A**	**Total Projects Reduction**	**12.8**	**N/A**	**N/A**
OOCEA	**N/A**	**N/A**	**Total Required Reduction 2010-2015**	**5.2**	**N/A**	**N/A**
OOCEA	**N/A**	**N/A**	**Credit for Future BMAPs**	**7.6**	**N/A**	**N/A**

TABLE A-14: SEMINOLE COUNTY PROJECTS

N/A = Not applicable

ENTITY	PROJECT NUMBER	PROJECT NAME	PROJECT DETAIL	START DATE	END DATE	TP REDUCTION (LBS/YR)	PROJECT COST	FOOTPRINT (ACRES)	TREATMENT ACRES	PROJECT TYPE	STATUS
Seminole County	SC-1	Cassel Creek RSF	RSF to treat water in the sub basin upstream	09/2012	07/2013	156.8	$927,531	10	830	Wet detention pond	Completed
Seminole County	SC-2	Lake Ann Outfall	Baffle box and pipe replacement	04/2001	10/2001	10.8	$148,000	0.1	322	Stormwater Retrofit	Completed
Seminole County	SC-3	Red Bug Lake Road RSF	RSF to treat water in the sub basin upstream	01/2010	07/2010	93.0	$1,400,000	9	1050	Wet detention pond	Completed
Seminole County	SC-4	Navy Canal RSF	RSF to treat water in the sub basin upstream	03/01/2005	10/14/2006	285.0	$2,112,336	7	889	Wet detention pond	Completed
Seminole County	SC-5	Cameron Ditch RSF	RSF to treat water in the sub basin upstream	04/17/2006	10/14/2006	71.9	$3,735,374	32	376	Wet detention pond, Wetland treatment	Completed
Seminole County	SC-6	Lake Howell Road Pond Retrofit	Retrofit of an old FDOT pond now under county jurisdiction that drains Howell Branch Road	05/2007	11/01/2007	7.1	N/A	4.0	23	Wet detention pond	Completed
Seminole County	SC-7	Solary Canal Stormwater Treatment Area	RST facility consisting of an 8.0-acre wet pond and 4.8-acre wetland	04/2010	12/2011	188.3	$1,700,000	12.7	1471	Wet detention pond, Wetland treatment	Completed
Seminole County	SC-8	Anchor Road Reconstruction	Reconstruction of Anchor Road with drainage improvements including upgraded detention/retention ponds	11/2008	04/2010	5.1	$2,000,000	13	60.7	Wet detention pond	Completed
Seminole County	SC-9	Street Sweeping	Street sweeping monthly of 66.8 miles and quarterly of 160.2 miles	N/A	Ongoing	124.0	N/A	N/A	N/A	Street sweeping	Ongoing

Entity	Project Number	Project Name	Project Detail	Start Date	End Date	TP Reduction (lbs/yr)	Project Cost	Footprint (Acres)	Treatment Acres	Project Type	Status
Seminole County	SC-10	Education Efforts	FYN, ordinances, PSAs, pamphlets, presentations, website, illicit discharge program	N/A	Ongoing	558.3	N/A	N/A	N/A	Education	Ongoing
Seminole County	SC-11	Existing BMPs	BMPs that were in place at the time of the TMDL	N/A	N/A	1,753.8	N/A	N/A	N/A	N/A	Completed
Seminole County	SC-12	Soldiers Creek at County Road 427 RSF	RSF with alum to treat water in the sub basin upstream	04/2014	07/2015	2,137.0	$6,500,000	11	5,692	Alum treatment system	Final design
Seminole County	SC-13	Bear Gully RSF at Chapman Road	Preliminary design for RSF to treat water from Bear Gully Canal subbasin	02/2013	08/2014	82.0-238.0 (estimated)	$88,000	20	1,098	Wet detention pond	Preliminary design underway, in sampling phase
Seminole County	SC-14	Eagle Lake RSF at Six Mile Creek	Preliminary design for RSF to treat water from Six Mile Creek	08/2013	02/2015	229.0 (estimated)	$95,000	24	1,085	Wet detention pond	Preliminary design, in sampling phase, underway
Seminole County	SC-15	Lake Jesup In-Lake Restoration/Re-Vegetation	2,400 linear feet of shoreline planting at Jesup Park	10/2012	12/2012	Unknown	$25,000	2,400 linear feet	N/A	Shoreline planting	Completed
Seminole County	SC-16	Lake Jesup SAV Restoration	Planting two acres of eel grass near the Marlbed Flats	04/2012	03/2013	Unknown	$10,000	2	N/A	In-lake restoration, native SAV	Completed
Seminole County	SC-17	Black Hammock Creek Reclamation and Floodplain Treatment System	Preliminary and final design, construction, and monitoring to treat water from the Black Hammock area	04/2013	11/2016	In development	$2,000,000	160	5,619	Creek restoration/ reclamation	Preliminary design underway
Seminole County	SC-18	Lake Howell Restoration Events	In-lake re-vegetation of submersed and emergent plants by residents and volunteers, six events held to date	2011	Ongoing	Unknown	$10,000	N/A	N/A	In-lake restoration	Ongoing
Seminole County	SC-19	Lake Burkett/ Martha Restoration Events	In-lake re-vegetation of submersed and emergent plants by residents and volunteers; one event held to date	2013	Ongoing	Unknown	$1,000	N/A	N/A	In-lake restoration	Ongoing

Entity	Project Number	Project Name	Project Detail	Start Date	End Date	TP Reduction (lbs/yr)	Project Cost	Footprint (Acres)	Treatment Acres	Project Type	Status
Seminole County	SC-20	BMP Clean Out	Clean out of BMPs, 6,936 cubic feet of material per year	N/A	Ongoing	141.0	N/A	N/A	N/A	BMP clean out	Ongoing
Seminole County	SC-21	Bear Gully Lake Restoration Events	In-lake re-vegetation of submersed and emergent plants by residents and volunteers, two events held to date	2011	Ongoing	Unknown	$10,000	N/A	N/A	In-lake restoration	Ongoing
Seminole County	SC-22	Lake Jesup SAV Restoration	Planting of 2 acres of eel grass within containment, to reestablish SAV in the Lake. Completed by staff & volunteers. Three events have been completed to date	2011	Ongoing	Unknown	$5,000	N/A	N/A	In-lake Restoration	Ongoing
Seminole County	SC-23	Lake Jesup Shoreline Restoration at 2 County parks; Jesup and Overlook	In-lake re-vegetation of shoreline emergent plants by contractors that is monitored by County staff and maintained with herbicides for invasive plant management	2011	Ongoing	Unknown	$50,000	N/A	N/A	In-lake restoration	Ongoing- 2 County park lands completed to date
Seminole County	SC-24	Lake Jesup Shoreline Restoration	In-lake re-vegetation of shoreline emergent plants by contractors	2011	Ongoing	Unknown	$90,000	N/A	N/A	In-lake restoration	Ongoing- 17,000 linear feet of shoreline completed to date
Seminole County	**N/A**	**N/A**	**Total Projects Reduction**	**N/A**	**N/A**	**5,844.1**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Seminole County	**N/A**	**N/A**	**Total Required Reduction 2010-2015**	**N/A**	**N/A**	**2,137.0**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Seminole County	**N/A**	**N/A**	**Credit for Future BMAPs**	**N/A**	**N/A**	**3,707.1**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**

TABLE A-15: TOWN OF EATONVILLE PROJECTS

N/A = Not applicable

ENTITY	PROJECT NUMBER	PROJECT NAME	PROJECT DETAIL	START DATE	END DATE	TP REDUCTION (LBS/YR)	PROJECT TYPE	STATUS
Eatonville	E-1	Street Sweeping	Monthly street sweeping of 3.7 miles	N/A	N/A	0.3	Street sweeping	Ongoing
Eatonville	E-2	Existing BMPs	BMPs that were in place at the time of the TMDL	N/A	N/A	9.6	N/A	Completed
Eatonville	E-3	Regional Project	Participate in a regional project	2009	2014	11.6	Regional project	Planned
Eatonville	E-4	Public Education	Brochures, newsletters, public displays, workshops, illicit discharge program	N/A	Ongoing	1.9	Education	Ongoing
Eatonville	**N/A**	**N/A**	**Total Projects Reduction**	**N/A**	**N/A**	**23.4**	**N/A**	**N/A**
Eatonville	**N/A**	**N/A**	**Total Required Reduction 2010-2015**	**N/A**	**N/A**	**23.4**	**N/A**	**N/A**
Eatonville	**N/A**	**N/A**	**Credit for Future BMAPs**	**N/A**	**N/A**	**0.0**	**N/A**	**N/A**

TABLE A-16: TURNPIKE AUTHORITY PROJECTS

N/A = Not applicable

ENTITY	PROJECT NUMBER	PROJECT NAME	PROJECT DETAIL	TP REDUCTION (LBS/YR)	STATUS
Turnpike Authority	T-1	Existing BMPs	BMPs that were in place at the time of the TMDL	252.3	Completed
Turnpike Authority	T-2	Monthly street sweeping of 48 miles	Monthly street sweeping	3.2	Ongoing
Turnpike Authority	T-3	Education efforts	Presentations, illicit discharge program	9	Ongoing
Turnpike Authority	**N/A**	**N/A**	**Total Projects Reduction**	**264.5**	**N/A**
Turnpike Authority	**N/A**	**N/A**	**Total Required Reduction 2010-2015**	**101.1**	**N/A**
Turnpike Authority	**N/A**	**N/A**	**Credit for Future BMAPs**	**163.4**	**N/A**

APPENDIX B: WATER QUALITY DATA

The Lake Jesup BMAP monitoring plan was designed to enhance the understanding of basin loads, track project implementation, and identify long-term water quality trends. The information gathered through the monitoring plan will measure progress toward achieving the TP TMDL and provide a foundation for continued improvement in cost-effective project implementation. The following summarizes the data collected during the reporting period that have not been uploaded to STORET.

The City of Winter Park is in the process of uploading their data to STORET. The following table shows the results of their sampling at the outfall weir from Lake Maitland (at Howell Branch Road).

TABLE B-1: CITY OF WINTER PARK SAMPLING RESULTS

DATE	AMMONIA (MG/L)	NOX (MG/L)	TN (MG/L)	SRP (MG/L)	TP (MG/L)	CHLOROPHYLL-A (MG/M^3)	BOD5 (MG/L)
6/12/13	0.003	0.009	0.432	0.001	0.008	0.018	2.8
7/17/13	0.052	0.008	0.376	0.005	0.016	0.011	2.4
8/15/13	0.003	0.009	0.357	0.002	0.014	0.009	1.9
9/18/13	0.023	0.005	0.492	0.005	0.011	0.006	2.2
10/23/13	0.003	0.008	0.653	0.013	0.014	0.009	2.8
11/20/13	0.003	0.003	0.478	0.005	0.019	0.012	3.8
12/18/13	0.003	0.006	0.537	0.007	0.015	0.009	1.2
1/15/2014	0.043	0.007	0.503	0.010	0.022	0.008	1.8
2/12/2014	0.029	0.005	0.326	0.001	0.019	0.005	1.8
3/12/2014	0.021	0.007	0.328	0.001	0.013	0.003	2.4
4/15/2014	0.038	0.156	0.386	0.013	0.014	0.005	1.1
5/14/2014	0.008	0.079	0.444	0.001	0.013	0.005	1.7

The City of Altamonte Springs collected data from its monitoring station in Prairie Lake, and is working with the University of South Florida to upload the data into STORET. The following table shows the sampling results for the reporting period.

TABLE B-2: CITY OF ALTAMONTE SPRINGS SAMPLING RESULTS

DATE	SPECIFIC CONDUCTANCE (US/CM)	PH	DO (MG/L)	TEMP (°C)	TSS (MG/L)	ALKALINITY (MG/L)	CHLOROPHYLL-A (CORRECTED) (MG/L)	BOD (MG/L)	TP (MG/L)	ORTHO-P (MG/L)	AMMONIA (MG/L)	NITRITE (MG/L)	NITRATE (MG/L)	TKN (MG/L)	TN (MG/L)
Jun-13	204	8.31	8.21	26.6	124	48	2.57	2	0.02	0.01	0.03	0.003	0.004	0.32	0.32
Jul-13	182	8.09	6.02	27	94	46	1.37	2	0.04	0.01	0.02	0.003	0.005	0.18	0.18
Sep-13	112	6.84	7.02	26.3	92	48	2.05	2	0.05	0.05	0.02	0.003	0.014	0.12	0.12
Oct-13	203	7.61	5.95	24.7	88	46	2.05	2	0.07	0.01	0.02	0.003	0.012	0.36	0.36
Dec-13	213	8.96	6.87	21.6	130	48	1.37	2	0.05	0.02	0.02	0.006	0.004	0.24	0.24
Jan-14	197	10.7	10	10.6	96	50	3.42	2	0.03	0.02	0.02	0.003	0.013	0.23	0.23
Mar-14	185	9.77	8.47	188	124	50	2.74	2	0.02	0.01	0.02	0.008	0.004	0.24	0.24
Apr-14	190	8.29	7.57	21.6	122	48	2.05	2	0.05	0.01	0.02	0.003	0.004	0.46	0.46

The City of Maitland is currently working with the Department to upload its data to STORET. The following table shows the results of the sampling at the Lake Waumpi site during the reporting period.

TABLE B-3: CITY OF MAITLAND SAMPLING RESULTS

DATE	AMMONIA (MG/L)	CHLOROPHYLL-A (MG/L)	CONDUCTIVITY (US/CM)	DO (MG/L)	PH	TEMPERATURE (°C)	NITRATE (MG/L)	NITRITE (MG/L)	ORTHO-P (MG/L)	TKN (MG/L)	TP (MG/L)	TSS (MG/L)
June 2013	0.0100	3.46	214	5.13	8.29	30.4	0.0500	0.05	0.100	1.070	0.0376	2.50
July 2013	0.0100	25.70	200	4.39	7.56	28.9	0.0844	0.05	0.100	1.880	0.0247	1.63
August 2013	0.0100	7.69	196	3.44	7.49	29.5	0.0649	0.05	0.100	0.925	0.0243	2.25
September 2013	0.0100	14.20	193	4.56	7.29	30.1	0.0708	0.02	0.002	0.728	0.0336	3.13
October 2013	0.0207	39.90	190	4.25	7.20	27.1	0.0500	0.05	0.100	0.883	0.0328	5.00
November 2013	0.0100	1.00	241	4.10	6.72	22.2	0.5310	0.05	0.100	0.473	0.0178	1.00
December 2013	0.0100	1.15	211	4.20	7.08	17.9	0.3480	0.05	0.100	0.712	0.0369	1.00
January 2014	0.0100	4.12	224	4.67	7.06	17.8	0.2350	0.05	0.100	0.623	0.0677	1.00
February 2014	0.0229	1.69	225	5.93	7.32	18.9	0.2560	0.05	0.100	0.746	0.0387	2.00
March 2014	0.0100	4.45	202	5.19	7.13	18.3	0.0500	0.05	0.100	0.721	0.0393	1.25
April 2014	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
May 2014	0.0100	1.69	261	4.67	7.18	25.2	0.0500	0.05	0.100	0.587	0.0211	1.50
June 2014	0.0100	1.53	188	4.05	7.59	28.7	0.0500	0.05	0.100	0.870	0.0371	2.50

The City of Orlando is in the process of uploading their data to STORET. The following table shows the results of their sampling at the Lake Rowena Canal site during the reporting period.

TABLE B-4: CITY OF ORLANDO SAMPLING RESULTS

DATE	BOD (MG/L)	ALKALINITY (MG/L)	pH	DO (MG/L)	TEMP (°C)	TP (MG/L)	ORTHO-PHOSPHATE (MG/L)	TN (MG/L)	AMMONIA (MG/L)	NO3 (MG/L)	NO2 (MG/L)	TKN (MG/L)	TSS (MG/L)	CHLOROPHYLL-A (MG/M^3)
6/27/2012	3	49.2	7.33	7.21	27.2	0.033	0.002	1.12	<0.01	0.02	<0.005	1.1	5.8	18
7/19/2012	3.8	45.2	7.58	7.28	29.9	0.032	0.002	0.91	0.02	<0.01	<0.005	0.91	7	20.9
8/16/2012	3	46.8	8.21	8.08	31.75	0.022	<0.002	0.82	<0.01	<0.01	<0.005	0.82	5.4	8.94
9/12/2012	2.5	50.1	6.77	-	28.4	0.022	<0.002	0.79	0.01	<0.01	<0.005	0.79	5	13.1
10/16/2012	2.6	48.9	7.1	-	26.9	0.027	<0.002	0.77	0.02	<0.01	<0.005	0.77	6.8	9.77
11/15/2012	2.8	52.5	6.73	7.91	21	0.032	0.003	0.86	<0.01	<0.01	<0.005	0.86	5.4	15.6
12/13/2012	2.5	54.7	6.59	7.39	21.3	0.027	<0.002	0.77	0.01	0.02	<0.005	0.75	4.6	15.8
1/16/2013	1.6	54.3	6.49	7.47	20.5	0.021	0.002	0.67	0.05	0.01	<0.005	0.66	4	8.52
2/13/2013	1.4	57.1	6.67	5.67	21.4	0.022	0.005	0.6	0.02	0.01	<0.005	0.59	2.8	1.09
3/13/2013	1.6	56.8	6.41	5.2	17.3	0.023	0.005	0.6	0.02	<0.01	<0.005	0.6	<2.0	<0.8
4/16/2013	1.7	50.8	6.8	6.54	24.9	0.023	0.003	0.43	0.02	<0.01	<0.005	0.43	2.4	4.09
5/16/2013	2.4	54.4	7.82	7.97	27.9	0.017	<0.002	0.64	<0.01	<0.01	<0.005	0.64	3.2	<0.8