

2012 PROGRESS REPORT

For the Lake Jesup Basin Management Action Plan

*Developed by the
Lake Jesup Basin Working Group*

*In cooperation with the
Florida Department of Environmental Protection
Division of Environmental Assessment and Restoration
Bureau of Watershed Restoration
Tallahassee, Florida 32399*

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LIST OF ACRONYMS

BMAP	Basin Management Action Plan
BMP	Best Management Practice
CDS	Continuous Deflective Separation (Unit)
FDACS	Florida Department of Agriculture and Consumer Services
FDEP	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
FWC	Florida Fish and Wildlife Conservation Commission
FYN	Florida Yards and Neighborhood (Program)
GIS	Geographic Information Systems
LVI	Lake Vegetation Index
MS4	Municipal Separate Storm Sewer System
OOCEA	Orlando Orange County Expressway Authority
PSA	Public Service Announcement
RSF	Regional Stormwater Facility
SAV	Submerged Aquatic Vegetation
SJRWMD	St. Johns River Water Management District
STORET	STOrage and RETrieval (Database)
TMDL	Total Maximum Daily Load
TN	Total Nitrogen
TP	Total Phosphorus
TSI	Trophic State Index
WBID	Waterbody identification

EXECUTIVE 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 (16.7 square miles) and drains a watershed of about 86,382 acres (135 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. The Florida Department of Environmental Protection (FDEP) 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 Lake Jesup Basin Management Action Plan (BMAP) was adopted in May 2010 to implement the TP TMDL. This 2012 Progress Report is the second annual progress report for the Lake Jesup BMAP, and it describes the major accomplishments and issues identified during the reporting period from June 1, 2011 through May 31, 2012.

MAJOR ACCOMPLISHMENTS

The second year of BMAP implementation has been very successful. The City of Casselberry completed five baffle box projects that resulted in 8.6 lbs/yr of TP reductions. The City of Maitland also completed a baffle box project with 9.9 lbs/yr of TP reductions. The City of Orlando completed a wet detention pond expansion project and a baffle box project that resulted in 0.9 lbs/yr of TP reductions. The City of Winter Park completed an alum system retrofit and two baffle box projects with a total reduction of 237.1 lbs/yr of TP. The City of Oviedo, City of Winter Springs, and Seminole County, in conjunction with SJRWMD, completed the Solary Canal Stormwater Treatment Area with a reduction of 690 lbs/yr of TP. In addition, 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. This BMP implementation is expected to reduce loads from agricultural operations. 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. SJRWMD has also completed a few of the feasibility studies for the regional projects in the basin. In addition, the responsible stakeholders implemented the BMAP monitoring plan to gather water quality data for Lake Jesup and its tributaries.

MAJOR ISSUES

Several entities have encountered delays with their project implementation. However, these delays are not causing an issue with BMAP compliance because the delayed projects are either additional reductions not required in this five-year iteration or the projects will be completed within the five-year period as allowed. The stakeholders also noted that obtaining funding to implement the projects and research studies has been an issue. Data were not collected from a few of the BMAP monitoring stations due to low flow conditions from lack of rainfall. The locations of these stations may need to be modified in the future if low flow continues to be an issue.

ACTIVITIES FOR THE UPCOMING YEAR

The third annual BMAP progress report will encompass the period of June 1, 2012 through May 31, 2013. During this time, the City of Longwood will complete two of its stormwater master

plan projects with a reduction of 2.1 lbs/yr of TP. The City of Maitland will complete one baffle box project for a reduction of 1.1 lbs/yr of TP. The City of Orlando will complete one exfiltration project for a reduction of 1.3 lbs/yr of TP. The City of Orlando, City of Oviedo, and Seminole County will each begin construction on a project. FDACS will continue to sign up growers for BMPs under the citrus and cow/calf manuals. In addition, the BMAP monitoring will continue.

SECTION 1: INTRODUCTION

1.1 PURPOSE OF THE REPORT

This is the second annual progress report for the Lake Jesup Basin Management Action Plan (BMAP). **Section 2** and **Section 3** describe the accomplishments and issues, respectively, during the period from June 1, 2011 through May 31, 2012. A summary of efforts scheduled for the upcoming year (June 1, 2012 through May 31, 2013) is included in **Section 4**.

1.2 TOTAL MAXIMUM DAILY LOADS 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 total maximum daily loads (TMDLs) for the Lake Jesup Basin were adopted by the Florida Department of Environmental Protection (FDEP) 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.

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 (LBS/YR)	TARGET CONCENTRATION (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%

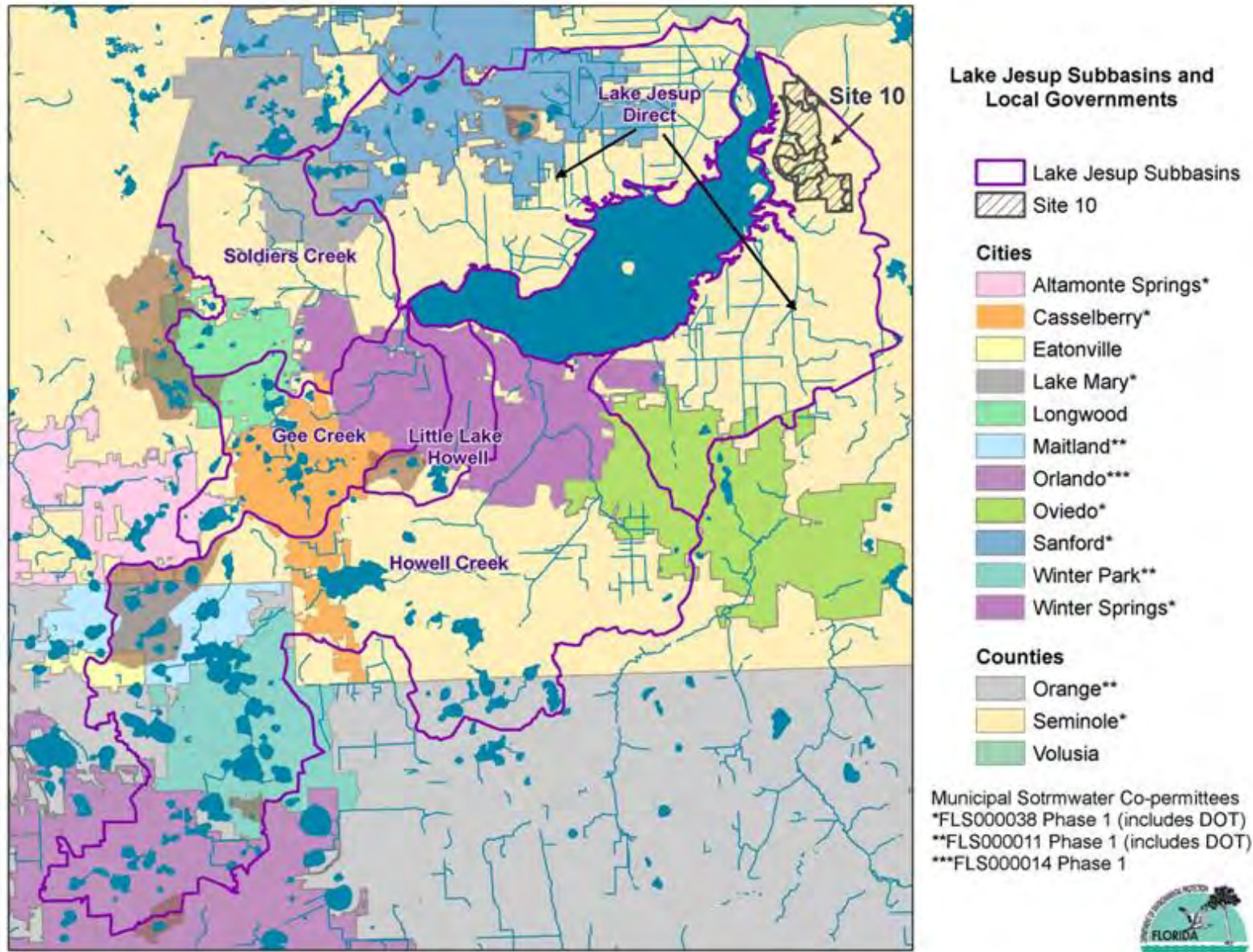


FIGURE 1: LAKE JESUP AND LOCAL GOVERNMENT JURISDICTIONS IN THE BASIN

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 these entities, the Florida Department of Agriculture and Consumer Services (FDACS), FDEP, 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 December 31, 2014, as shown in **Table 2**.

TABLE 2: TP WASTELOAD ALLOCATIONS FOR 2010-2014

ALLOCATION ENTITY	2010-2014 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: MAJOR ACCOMPLISHMENTS

2.1 SUMMARY OF EFFORTS

The second year of BMAP implementation has been very successful. The City of Casselberry completed five baffle box projects that resulted in 8.6 lbs/yr of TP reductions. The City of Maitland also completed a baffle box project with 9.9 lbs/yr of TP reductions. The City of Orlando completed a wet detention pond expansion project and a baffle box project that resulted in 0.9 lbs/yr of TP reductions. The City of Winter Park completed an alum system retrofit and two baffle box projects with a total reduction of 237.1 lbs/yr of TP. The City of Oviedo, City of Winter Springs, and Seminole County, in conjunction with SJRWMD, completed the Solary Canal Stormwater Treatment Area with a reduction of 690 lbs/yr of TP. In addition, 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. This BMP implementation is expected to reduce loads from agricultural operations. 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. SJRWMD has also completed a few of the feasibility studies for the regional projects in the basin. 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** and **Appendix C**.

2.2 ACCOMPLISHMENTS BY ENTITY

2.2.1 CITY OF ALTAMONTE SPRINGS

The City of Altamonte Springs has continued the biweekly street sweeping in the basin and its participation in the Florida Yards and Neighborhoods (FYN) program. The city also completed a project on Lake Maltbie, which involved tussock removal, shoreline re-vegetation, and introduction of triploid grass carp to control hydrilla. The city used this project to educate the public on the benefits of planting native vegetation along the shoreline and reducing the reliance on herbicide to control hydrilla. Aerial images of the lake from 2009 and 2012 are included in **Figure 2** and **Figure 3** below, which show the improvements made as part of this project.



FIGURE 2: CITY OF ALTAMONTE SPRINGS AERIAL IMAGE OF LAKE MALTBIIE FROM THE SEMINOLE COUNTY PROPERTY APPRAISER'S WEBSITE, 2009

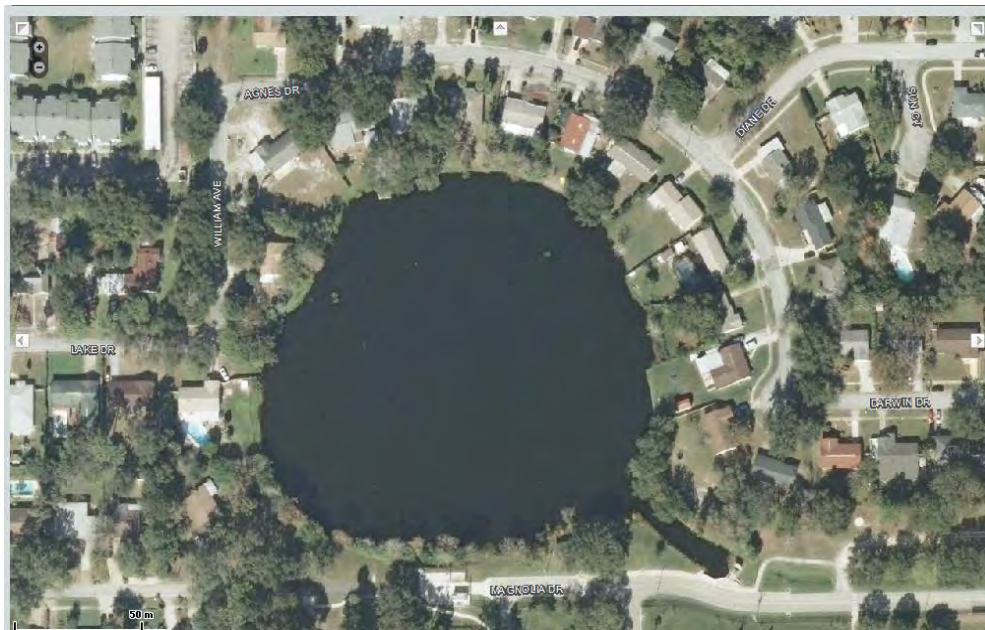


FIGURE 3: CITY OF ALTAMONTE SPRINGS AERIAL IMAGE OF LAKE MALTBIIE FROM THE SEMINOLE COUNTY PROPERTY APPRAISER'S WEBSITE, 2012

2.2.2 CITY OF CASSELBERRY

The City of Casselberry achieved significant progress in its baffle box projects this past year, installing a total of five baffle boxes in the Howell Creek and Gee Creek subbasins (see **Figure 4**), within the Lake Jesup Basin (projects C-10, C-11, C-12, C-15, and C-19). Installed in older subdivisions that lacked any significant stormwater treatment prior to discharge, these retrofits feature litter screens, sediment chambers, and downstream media filters, which should help further reduce pollutant loads to receiving waters.



FIGURE 4: CITY OF CASSELBERRY INSTALLATION OF A BAFFLE BOX WITH MEDIA FILTRATION TO PROTECT GEE CREEK

The city has commenced work on effectiveness evaluation of multiple baffle boxes, inlet filter baskets, and a continuous deflective separation (CDS) unit. The city is in the process of having the Quality Assurance Project Plan approved by FDEP and plans to install equipment and begin monitoring in mid-summer 2012. It is hoped the results of this study, expected to be completed mid-2013, will provide valuable 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.

The city has continued to enhance its public education programs related to water quality. The city continues to partner in the FYN program and to grow its conservation/environmental branding program called “Green Up Casselberry.” In March 2012, the city held its first volunteer lakefront restoration event at Lake Hodge Park, providing both an educational opportunity and an enhanced vegetated shoreline that will help filter pollutants before they reach the lake (see **Figure 5**). In April 2012, the city hosted an Earth Day event called “Earth Fest” at Lake Concord Park. Overall, the event was more successful than that held in 2011, especially in terms of attendance for educational sessions, which covered Florida-friendly landscaping, shoreline plants, rain barrels, and more. The event also resulted in high public exposure to Lake Concord Park’s permanent stormwater educational features.

While not an explicit BMAP component, the Lake Hodge Shoreline Restoration Project provided an educational opportunity with a real environmental benefit. The re-vegetation phase, which included volunteers planting over 700 plants, has been completed and resulted in approximately 300 linear feet of natively re-vegetated shoreline, providing a protective buffer between the lake and runoff pollutants. The educational sign for the project is anticipated to be installed later in 2012 and, similarly to that used in Lake Concord Park, will provide heightened public awareness of the benefit of well vegetated shorelines in helping protect our water resources.



FIGURE 5: CITY OF CASSELBERRY VOLUNTEERS AT THE LAKE HODGE SHORELINE RESTORATION PROJECT

2.2.3 CITY OF LAKE MARY

The City of Lake Mary has continued their annual street sweeping in the basin. In addition, the city held a FYN seminar that was focused on the designing of a Florida friendly landscape using the “9 Principles.” The group that participated in the seminar was actively engaged and left with an overall better understanding of how to design a landscape suited for Florida.

2.2.4 CITY OF LONGWOOD

The first three phases of the City of Longwood's stormwater master plan have been completed with final deliverables provided in September 2011. The first phase of the master plan was aerial mapping, the second phase was a drainage structure inventory, and the third phase was an existing conditions analysis and stormwater modeling. The stormwater master plan inventory has already assisted the city in developing a comprehensive maintenance program that includes critical facilities. The final phase of the stormwater master plan will commence in the near future and includes the following task assignments:

- Develop and evaluate structural and non-structural solutions that will address deficiencies associated with flood protection and water quality.
- Develop a prioritized listing of stormwater capital improvement projects, including engineering/construction cost estimates that may be used by the city to develop a multi-year capital improvement program. The prioritized listing of stormwater capital improvement projects will be based on the system requirements identified in the stormwater master plan and available funding.

In addition, the City of Longwood took over the Aquatic Maintenance Program. The city is taking a more aggressive approach to removing invasive plant species and improving the overall quality of the waterbodies. The city has conducted several community meetings to educate the residents on what a healthy lake is and becoming more actively involved. This effort has resulted in volunteers joining the Florida Lake Watch Program.

In the 2011/12 budget, the city has made progress on approximately \$750,000 in new stormwater projects and approximately \$1,000,000 in roadway projects that will have a positive impact on surface waters by removing unpaved roadways and increasing retention opportunities.

2.2.5 CITY OF MAITLAND

The City of Maitland is still in the planning and design stages for the Dommerich Drive Baffle Box (project M-12). Negotiations regarding modification of the existing drainage easements have been ongoing for more than half a year, and the city's attorney is attempting to broker an agreement. Construction plans are currently under review and should be complete this summer. Design of the Lake Gem/Park Lake COOP (projects M-2 through M-6) has been completed; however, the source of funding for the project is still undetermined. A Section 319 grant application was submitted to FDEP for this current grant cycle. Without a 60% grant cost share, this project will be put on hold due to lack of funds. An uncommitted stormwater treatment project was completed in the basin. Savings from the Lake Nina Wetland Restoration were used to install a Suntree nutrient separating baffle box on Packwood Avenue (new project M-19), which treats stormwater flow into the wetland (see **Figure 6**). In the spring of this year, the city's Stormwater and Lakes Management Division purchased its first vacuum truck to replace the use of hired contractors. This will enable to the Division to clean existing BMPs more frequently and provide additional pollutant removal to treated areas.



FIGURE 6: CITY OF MAITLAND PACKWOOD AVENUE BAFFLE BOX INSTALLATION

The city has continued the street sweeping once every two weeks throughout the reporting period and has continued to be successful. Educational events have 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 (see **Figure 7**), and bi-monthly newsletter with tips and regulations regarding stormwater best management practices.

Due to funding, the Horatio Avenue Infiltration Trench (project M-14) has now been delayed until fiscal years 2015-2016. However, two smaller scale projects within the basin have been planned for fiscal years 2013 and 2014. A 2nd generation baffle box on Lake Minnehaha (project M-19) will be completed in fiscal year 2013, with an estimated reduction of 7.7 lbs/yr of TP. Another project is currently undergoing a feasibility study and will be located on Park Lake.



FIGURE 7: CITY OF MAITLAND EARTH DAY EDUCATIONAL BOOTH

2.2.6 CITY OF ORLANDO

The City of Orlando completed two of the four capital improvement water quality improvement projects within the last year: Guernsey Park - Expansion of Wet Detention Pond (project ORL-7) and Lake Concord 2nd Generation Baffle Boxes (project ORL-9). At the time of this document, the city has started a third project, Ivanhoe Plaza Park Exfiltration (project ORL-8), and are in the process of obtaining permits with SJRWMD for the fourth project, Lake Concord Alum Injection Retrofit (project ORL-26). The city has continued to perform nutrient monitoring at the Lake Rowena Canal location on a monthly basis. In addition, the city has continued to maintain all of the inlet baskets, baffle boxes, and other stormwater retrofit structures on a routine basis or more frequently under varied conditions.

2.2.7 CITY OF OVIEDO

The City of Oviedo is a partner in the Solary Canal Stormwater Treatment Area (OV-4), which was completed in December 2011. This is a cooperative project that was completed in

conjunction with the City of Winter Springs, Seminole County, and SJRWMD. The city has also continued their monthly street sweeping and education and outreach efforts during the reporting period.

2.2.8 CITY OF SANFORD

The City of Sanford continued their weekly street sweeping. However, the city is now sweeping 37.7 miles, not 25.3 miles, each week. This additional sweeping resulted in an additional 1.7 lbs/yr of TP removal. The city also participated in the FYN program during the reporting year.

2.2.8.1 Site 10

The City of Sanford has been collecting quarterly storm event samples within the Site 10 area since the first quarter of 2010. The sampler is located at the upstream inflow to Pond B-2 as shown on **Figure 8**. The city conducted a field visit in May 2011 with staff from FDEP and SJRWMD at Site 10 to inspect the storm event sampler and overall conditions of the site. Based on this meeting and ambiguous language in the city's wastewater permit, it was agreed to refine the permit conditions describing future storm event sampling. A permit revision was issued in July 2011, which clarifies the number of storms to be sampled during the dry and wet seasons, rainfall thresholds for sampling, and sampling with regards to the timing of reclaimed water applications.

Based on review of the quality of the samples collected thus far, it is the city's position that additional samples are needed at the current sampling location (Pond B-2) to more accurately define the characteristics of the runoff coming from the upstream tributary area. Therefore, the city has requested FDEP's permission to continue storm event sampling at the current location (Pond B-2) through the end of 2012. At that time, the city will evaluate the re-location of the sampler.

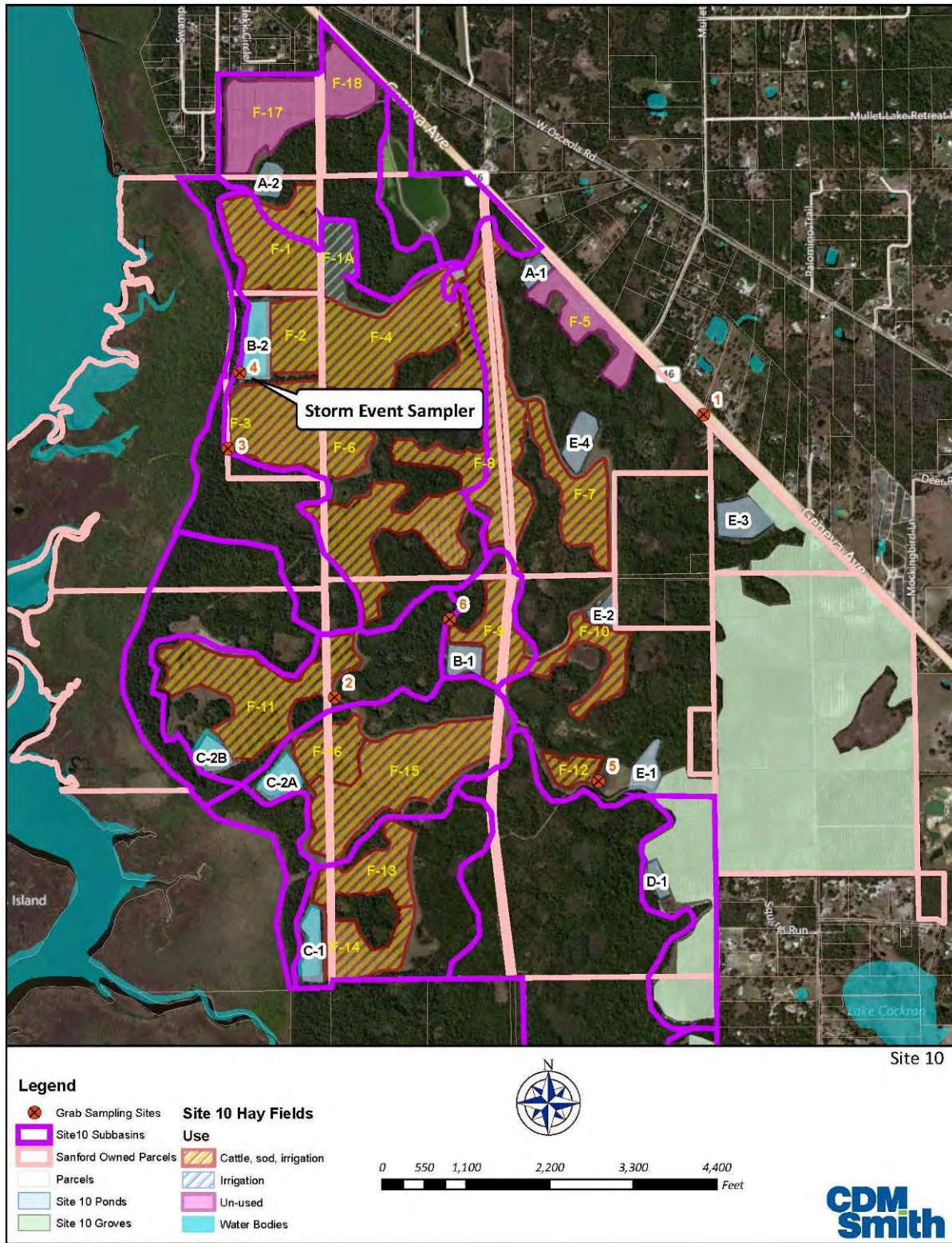


FIGURE 8: LOCATION OF THE SITE 10 STORM EVENT SAMPLER

2.2.9 CITY OF WINTER PARK

The construction of several new retrofits and the continuation of ongoing street sweeping and public education programs were the primary BMAP related activities in the City of Winter Park. The Courtland Avenue Alum System Retrofit (project WP-37), Alabama Drive Improvements (project WP-38), and Morse Boulevard Outfalls Retrofit (project WP-39) (refer to **Figure 9**) were completed in the reporting period.



FIGURE 9: CITY OF WINTER PARK INSTALLATION OF TWO 2ND GENERATION BAFFLE BOXES AT MORSE BOULEVARD

The Winter Park City Commission shifted surplus and capital stormwater utility funds to operations and maintenance to allow for two new maintenance positions so that adequate retrofit maintenance frequency can be maintained. The Morse Boulevard and Alabama Drive projects were constructed in house, which saved a significant amount in construction costs. All large lakes (35 acres and up) within the city continue to show positive trends toward improving water quality.

2.2.10 CITY OF WINTER SPRINGS

The City of Winter Springs continued its education efforts and quarterly street sweeping in the basin. In addition, the Solary Canal Stormwater Treatment Area (project WS-1) was completed in December 2011 (see **Figure 10**). This is a cooperative project that was completed in conjunction with the City of Oviedo, Seminole County, and SJRWMD.



FIGURE 10: AERIAL IMAGE OF THE SOLARY CANAL STORMWATER TREATMENT AREA

2.2.11 FDOT DISTRICT 5

FDOT has continued its monthly street sweeping and public education efforts in the basin during the reporting year.

2.2.12 ORANGE COUNTY

Orange County continued its education efforts during the report year. In addition, the county swept a total of 971.93 curb miles in the basin during the year.

2.2.13 SEMINOLE COUNTY

Seminole County completed the Solary Canal Stormwater Treatment Area (project SC-7) in May 2012. This is a cooperative project that was completed in conjunction with the City of Oviedo, City of Winter Springs, and SJRWMD. The county also received construction bids for the Cassel Creek Regional Stormwater Facility (RSF) (project SC-1) in May, and construction is scheduled to start in September 2012. The county is also working on a partnership with FDOT for the construction of the Soldiers Creek at County Road 427 RSF (project SC-12). At full capacity, the facility will use an alum injection system to remove up to 2,131 lbs/yr of TP from the Soldiers Creek Basin, which flows into the western portion of Lake Jesup. Under the agreement with FDOT, Seminole County will design, construct, and operate the RSF. Seminole County and FDOT will use the TP removal credits toward their share of the Lake Jesup Basin improvements. Additional partnerships could be developed to contribute towards future operating costs, for additional TP credits in the Lake Jesup Basin.

Seminole County has continued its education and outreach efforts during the reporting period (project SC-10). The county FYN coordinator continues to implement the FYN Program in Seminole County and its seven cities. A few of the tasks that the FYN coordinator conducts include at least two annual FYN landscape training sessions for continuing education credits, FYN New Resident Landscaping Workshops within the targeted watersheds, presentations at homeowner association meetings within the TMDL targeted watershed, yard audits (applying

the nine principals of FYN to lakeside living) with lakefront homeowners on TMDL waterbodies, and at least two annual FYN aquascaping classes within the watershed. Seminole County also continued to distribute pamphlets and conduct watershed presentations through the in-house Seminole Education, Restoration & Volunteer Program. The county has also continued its Illicit Discharge Program, which includes facility inspections, countywide field staff training, anonymous web reporting through the Water Atlas, and facility inspections and coordination with the County's Environmental Compliance Assistance and Pollution Prevention Program. A new and improved "Citizens Guide to Lake Management" video has been completed and is available for viewing from the county website, Watershed Atlas website, and the new Facebook page (mms://streaming.seminolecountyfl.gov/media/media/guide/Citizens%20Guide_Web.wmv or www.facebook.com/SERVProgram). PSAs are running from January 2012 – September 2012. The weekly rotation varies from week to week, but the county primarily receives three prime spots during the week (noon and evening news), a few early morning spots, weekly Saturday and Sunday morning news, and free spots during midnight and 4:00 am seven days a week. The link to the PSAs is: http://www.seminolecountyfl.gov/extensionservices/adults/fynclasses_psa.aspx.

The county has also completed several restoration projects. The Jesup Shoreline Restoration Project is a shoreline re-vegetation project, which was completed in conjunction with the Aquatic Habitat Restoration Enhancement funding program provided by the Florida Fish and Wildlife Conservation Commission (FWC). Re-vegetation occurred on approximately 14,000 linear feet of shoreline with beneficial native plant material such as bulrush, pickerelweed, thalia, bidens, and mixed tree canopy was accomplished (see **Figure 11**). The plants are well established and expanding.



FIGURE 11: SEMINOLE COUNTY LAKE JESUP SHORELINE RESTORATION PROJECT

The first Lake Jesup Restoration Event held on Saturday, April 14, 2012, was a huge success in which more than 110 volunteers braved a cool and windy day on Lake Jesup to help plant approximately 30,000 eelgrass plants in a one-acre plot, along with building two, one-acre cages. The county gives special thanks to the Black Hammock Adventures because without their dedication, support, and transportation of the volunteers by airboat to the planting location, the county could not have accomplished this huge planting event. **Figure 12** shows planted material expanding with daughter plants present.



FIGURE 12: EXPANDING EELGRASS PLANTS AFTER THE SEMINOLE COUNTY LAKE JESUP RESTORATION EVENT

The county also completed the Overlook Park Restoration, which is a shoreline re-vegetation project in conjunction with the Aquatic Habitat Restoration Enhancement funding program provided by FWC. The Spartina and cypress trees are performing well, but there has been a loss of other herbaceous aquatic plants, such as duck potato and pickerelweed, due to shifting water elevations. Seminole County conducted successful volunteer restoration events on several lakes in which shorelines were replanted with beneficial native aquatic plants. These lakes within the Lake Jesup Basin include Prairie Lake, Lake Howell, Lake Tuskawilla (Little Lake Howell), and Bear Gully. These lakes (with the exception of Prairie Lake) are scheduled for additional restoration events in the 2012 calendar year. In 2010, the county mapped the submerged aquatic vegetation (SAV) presence in Lake Howell and less than one acre of beneficial SAV was present in the lake. The lake was re-surveyed in 2012, in which a significant increase of SAV (eelgrass) was noted and mapped.

2.2.14 TOWN OF EATONVILLE

The Town of Eatonville has continued to sweep its roadways on a monthly basis. The town has also been in contact with Orange County to discuss options for a cooperative project to address the portion of the town's drainage that goes to the Lake Jesup Basin.

2.2.15 TURNPIKE AUTHORITY

The Turnpike Authority has continued its monthly street sweeping in the basin. In addition, it has continued its education and outreach efforts of presentations and an illicit discharge program.

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 best management practice (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 once the existing nursery manual is revised to include in-ground operations, which is expected to be completed in 2013. A large citrus operation in the same area was not within one of the areas originally covered by the FDACS citrus BMP programs. However, the statewide citrus manual rule was recently adopted, and the producer will be contacted in the near future. 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 in BMPs prior to BMAP adoption. The remaining acres designated as row/field crops seem to be either no longer in agriculture or misidentified citrus.

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. The equine manual was very recently adopted, and no assessments have taken place in the Lake Jesup Basin yet. **Table 3** summarizes the agricultural acres enrolled in BMPs and **Figure 13** shows the location of the enrolled acres.

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

BMP PROGRAM	ACRES ENROLLED AS OF JULY 2009	ACRES ENROLLED AS OF MARCH 2012
Citrus	100.0	100.0
Cow/Calf	N/A	*2,158.0
Vegetable and Agronomic Crops	15.0	15.0
Container Nurseries	93.5	130.0
Sod	N/A	209.0
BMP Implementation Total	208.5	2,612.0

*Note: 2,000 of the cow/calf acres were categorized as wetlands because they are on SJRWMD lands.

In the BMAP, FDACS and FDEP used a spreadsheet model to estimate the total possible load reductions via BMPs to be 277.9 lbs/yr of TP. Using the same spreadsheet model, FDACS estimates that the load reduction achieved via BMPs to date is approximately 37.1 lbs/yr of TP. This estimation does not include the 2,158-acre cow/calf operation, as those acres were not initially included in the agricultural acres used to calculate the starting loads and associated load reduction estimates.

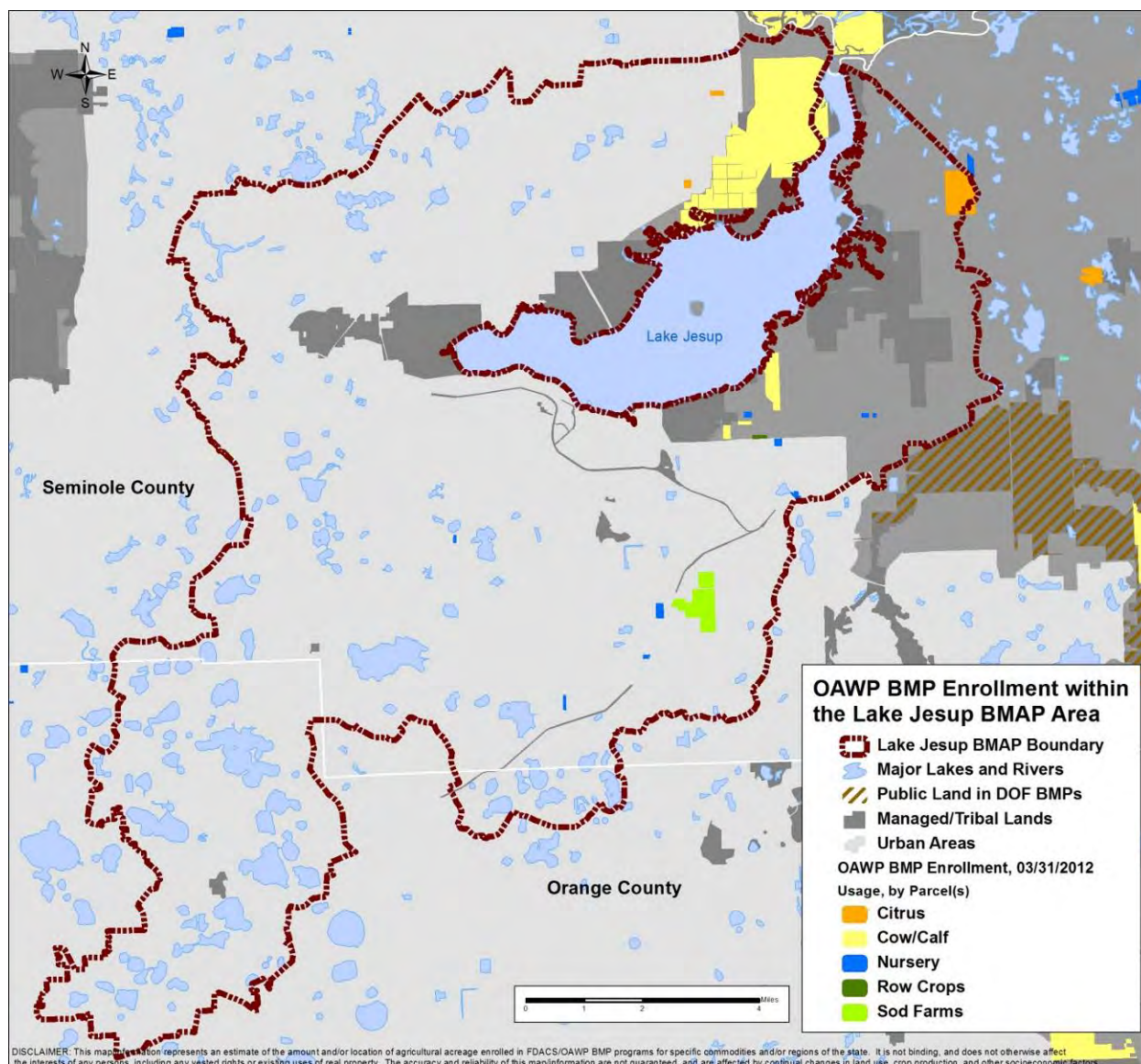


FIGURE 13: AGRICULTURAL OPERATIONS ENROLLED IN FDACS BMP PROGRAMS IN THE LAKE JESUP BMAP AREA

2.3 SUMMARY OF ACCOMPLISHMENTS

The projects completed during the second annual BMAP reporting period are summarized in **Table 1**. These projects resulted in an estimated 821.4 lbs/yr of TP reductions, with an additional 37.1 lbs/yr of TP reductions from agricultural BMPs. These reductions are in addition to those projects given credit before BMAP adoption and the projects that were completed during the first annual progress report period. Therefore, the total project reductions to date are 9,082.5 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 progress towards the total TMDL load reductions are shown in **Figure 14**. 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.

TABLE 4: SUMMARY OF PROJECTS COMPLETED IN THE REPORTING PERIOD (JUNE 1, 2011 THROUGH MAY 31, 2012)

ENTITY	PROJECT NUMBER	PROJECT NAME	TP REDUCTION (LBS/YR)
City of Casselberry	C-10	672 & 676 San Pablo Avenue 2 nd generation Baffle Boxes	1.3
City of Casselberry	C-11	Madrid Drive at Desoto Drive 2 nd generation Baffle Box	0.4
City of Casselberry	C-12	Sonora Drive at Desoto Drive 2 nd generation Baffle box	2.4
City of Casselberry	C-15	Lake Hodge Park 2 nd generation Baffle Box	3.3
City of Casselberry	C-19	Replace existing storm manholes with baffle boxes for removal of pollutants	1.2
City of Maitland	M-19	Packwood Avenue Baffle Box	9.9
City of Orlando	ORL-7	Guernsey Park – Expansion of Wet Detention Pond	0.1
City of Orlando	ORL-9	Lake Concord 2 nd Generation Baffle Boxes	0.8
City of Oviedo	OV-4	Solary Canal Stormwater Treatment Area	188.3
City of Winter Park	WP-37	Courland Avenue Alum System Retrofit	40.7
City of Winter Park	WP-38	Alabama Drive Improvements	1.7
City of Winter Park	WP-39	Morse Boulevard Outfalls Retrofit	194.7
City of Winter Springs	WS-1	Solary Canal Stormwater Treatment Area	188.3
Seminole County	SC-7	Solary Canal Stormwater Treatment Area	188.3
Total	N/A	Total Reductions in Reporting Period	821.4

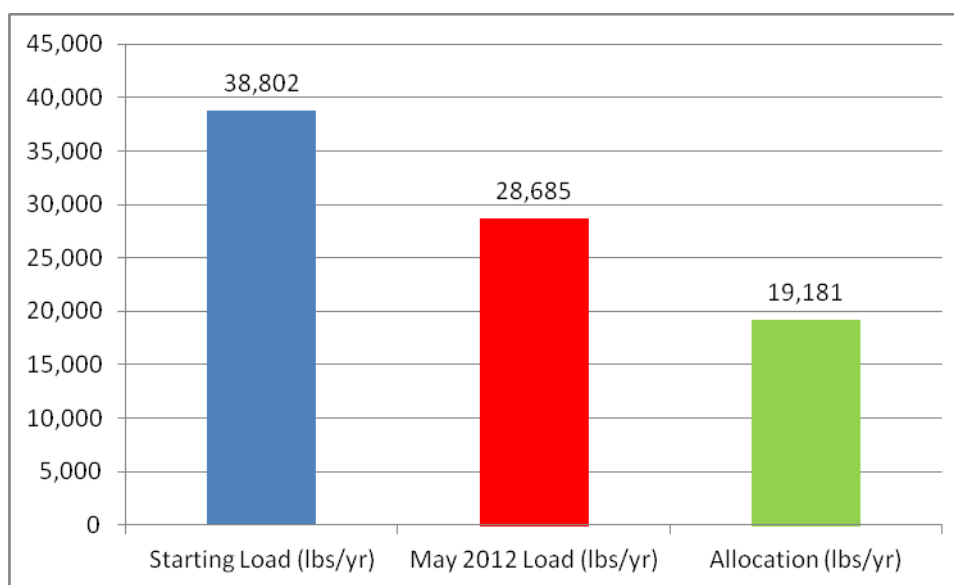


FIGURE 14: PROGRESS TOWARDS THE LAKE JESUP TP TMDL THROUGH MAY 31, 2012

2.4 IMPROVING SCIENTIFIC UNDERSTANDING

2.4.1 WATER QUALITY MONITORING

All responsible stakeholders participated in the monitoring plan in the second year of BMAP implementation. Any issues associated with the monitoring plan are discussed in **Section 3.3**. A few highlights of the monitoring efforts are described below.

The City of Altamonte Springs has collected data from its monitoring station in the basin, and is working with the University of South Florida to upload the data into STORET. The data are included in **Appendix B**.

The City of Casselberry continued to conduct quarterly ambient water quality sampling of twelve 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 into STORET. The city's latest submittal to the Watershed Atlas was in June 2012.

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, water levels permitting, since October 2011.

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 has 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**.

The City of Sanford has a Letter of Understanding with Seminole County for ambient environmental monitoring. This allows the Seminole County Water Quality Division to pull samples from 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. However, flows have been very low for most of the past 12 months, and while data have been collected at the Howell Branch Road monthly, there has been no flow from the system since December 2011. The data collected have not been uploaded to STORET but are included in **Appendix B**.

Orange County has been collecting water quality and flow data from the Burkett Canal site. However, there has been little to no flow at this location since December 2011, which has limited the amount of water quality data collected during the reporting period. The data have not yet been uploaded to STORET but are included in **Appendix B**.

On a quarterly basis, the Seminole County Lake Management Program assesses the vegetation status of Lake Jesup and then distributes a narrative report. Additionally, with the Seminole County Water Quality Program, FDEP, and FWC, the lake vegetation index (LVI) was conducted. The LVI was created by FDEP as a rapid screening tool (bioassessment) for ecological condition, and it determines how closely a lake's flora (aquatic plants) resembles that of an undisturbed lake. The LVI is conducted annually in Lake, and historical LVI scores range from 38 to 47 with the most current score (May 2012) being 47. These scores are all within the healthy category.

Seminole County collected storm event samples at five sites in the basin. However, due to budget constraints, the county will no longer conduct the storm event monitoring after this calendar year. Instead, the county will increase the frequency of the grab samples to monthly at all five sites. The county's consultant will be providing a final, long-term report, which will provide a detailed analysis of the more than 10 years of storm event data that have been collected, and a summary of this report will be provided in the next BMAP annual progress report.

2.4.1.1 Site 10 Monitoring

The City of Sanford's consultant, CDM Smith, reviewed the Site 10 sampling data reported in the city's quarterly reports submitted to FDEP since January 2010. These reports summarize data for both stormwater grab sampling and storm event sampling. CDM Smith graphed the data and ran a limited statistical analysis to determine if any trends have been established in terms of nutrient concentrations on the site. Storm event sampling data were graphed separately from grab samples. Storm event data are shown in **Figure 15** and **Figure 16** for TN and TP, respectively. No discernible trends were detected in the storm event sampling based on the statistical analysis; however, measured concentrations all currently are greater than the established ambient Lake Jesup TMDL targets for both TN and TP.

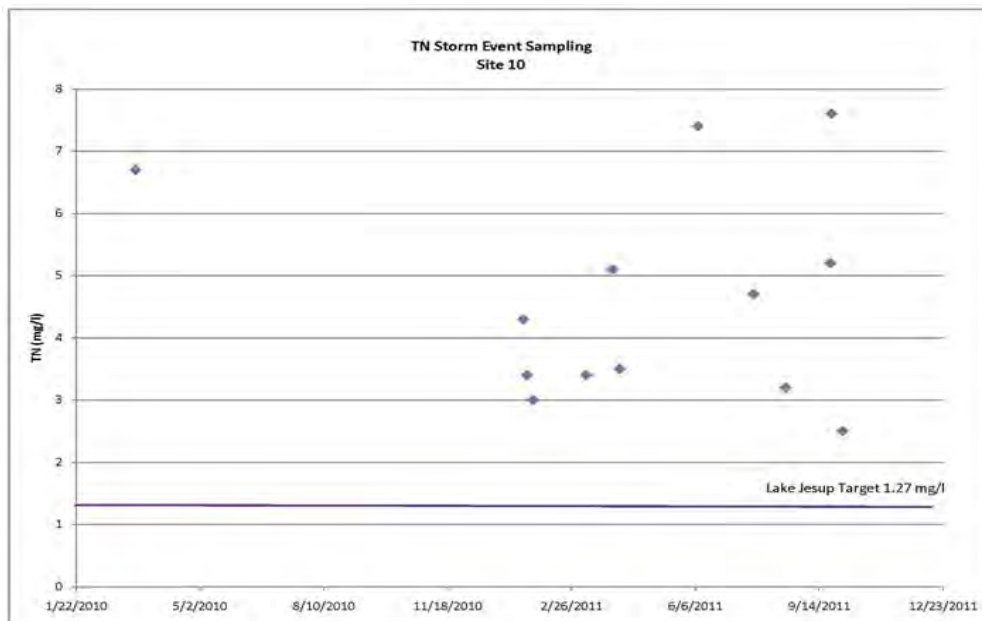


FIGURE 15: SITE 10 TN STORM EVENT SAMPLING RESULTS (2010-2011)

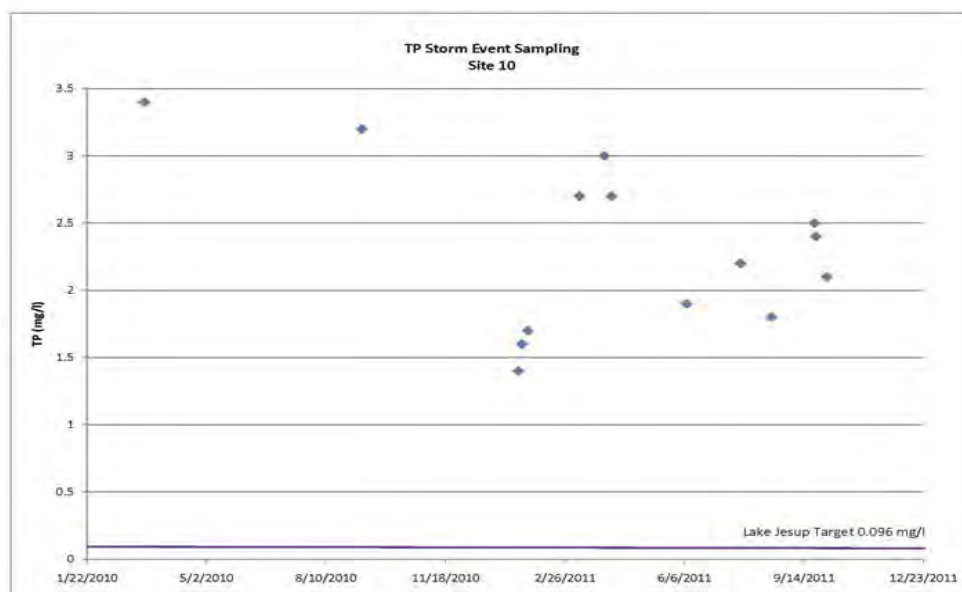


FIGURE 16: SITE 10 TP STORM EVENT SAMPLING RESULTS (2010-2011)

Grab samples measurements for TN and TP for those sites within the Lake Jesup watershed are shown on **Figure 17** and **Figure 18** for TN and TP, respectively. A limited statistical analysis was also performed for the grab samples. The only station showing any significant trend was Site 4, in which measured TP concentrations were shown to decrease with time at the statistically significant 0.05 level (i.e., $\alpha = 0.05$ error rate or 0.95 confidence rate). Measured concentrations at the grab sample sites all currently are greater than the established ambient Lake Jesup TMDL targets for both TN and TP.

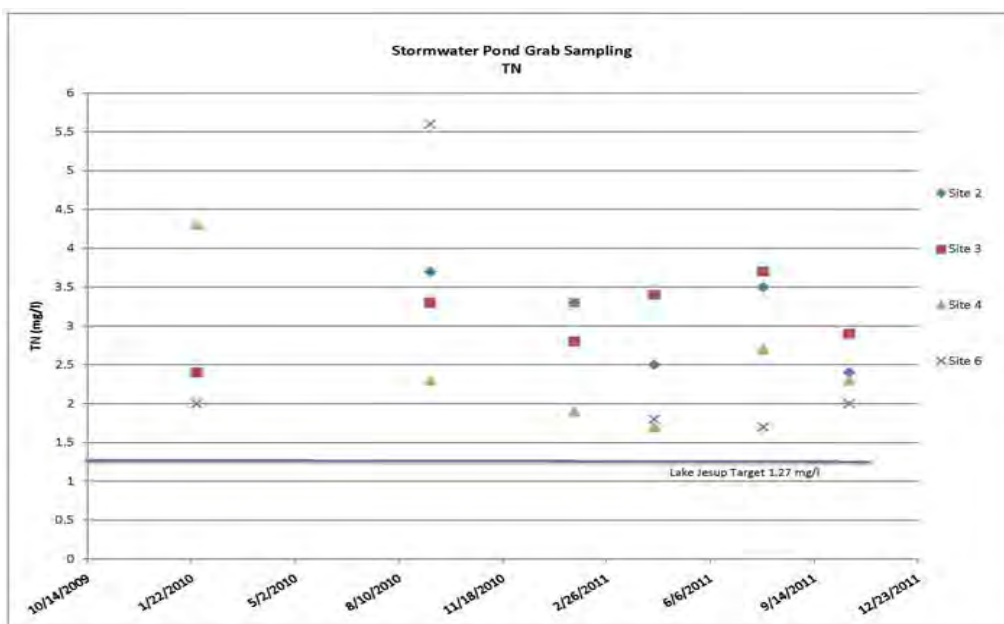


FIGURE 17: SITE 10 TN STORMWATER POND GRAB SAMPLING (2010-2011)

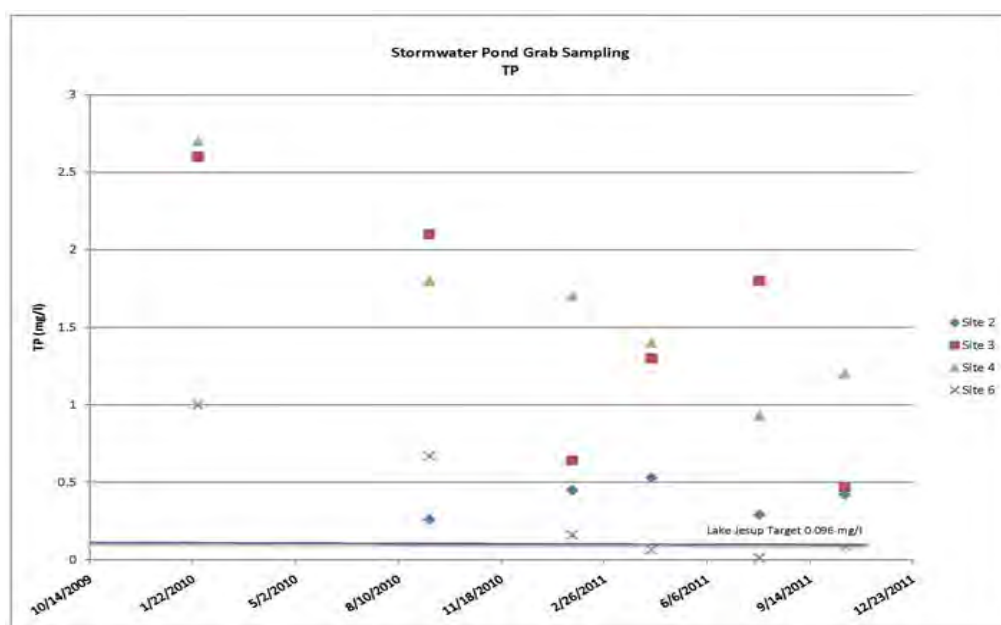


FIGURE 18: SITE 10 TP STORMWATER POND GRAB SAMPLING (2010-2011)

At this point, it is inconclusive as to the exact source of nutrients in the surface water on the site. There are a number of sources on site that could all be affecting nutrient levels including legacy loads from the sediments from past biosolids application, reclaimed water, and cattle. There are sod farming operations on the site, but these operations are prohibited by the city from using fertilizer. For comparison purposes, CDM Smith graphed the ambient water quality data for TP for Lake Jesup near Site 10 (station OW-2 monitored by the SJRWMD). As shown in **Figure 19**, the ambient concentrations are mostly below 0.3 mg/L. Comparatively speaking, most TP values measured through storm event and grab samples collected on the site often exceed 1.0 mg/L, which is indicative of anthropogenic influences.

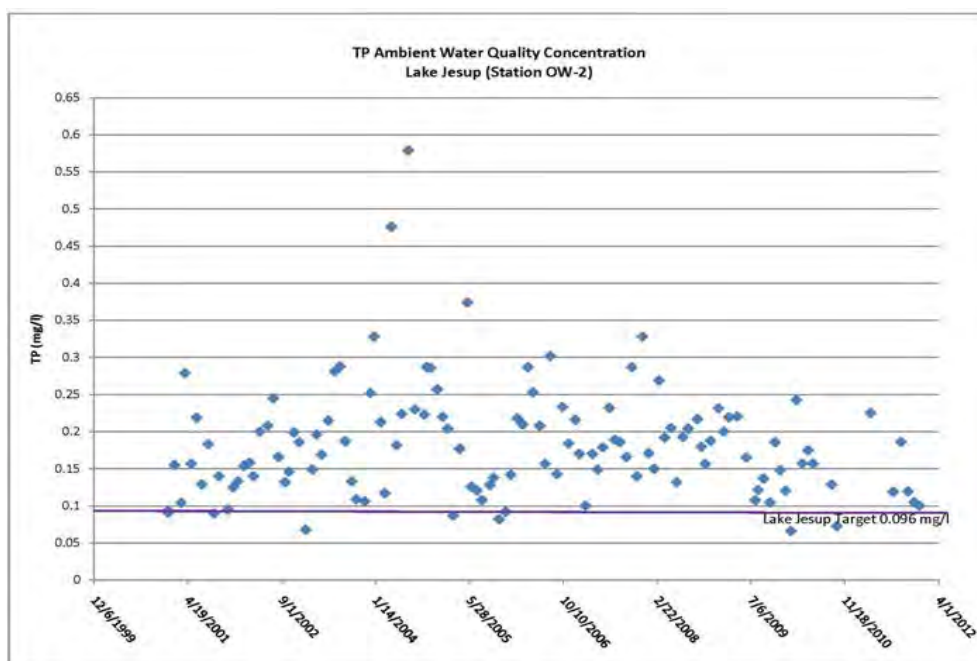


FIGURE 19: TP AMBIENT WATER QUALITY CONDITIONS IN LAKE JESUP AT STATION OW-2

2.4.2 RESEARCH PRIORITIES

2.4.2.1 City of Casselberry

Queen's Mirror and South Lake Triplet are two of the City of Casselberry's highest Trophic State Index (TSI) lakes, typically falling into the eutrophic range. In an effort to better understand loading sources for the lake system, the city began a study in summer 2010 that included installation of seepage meters, sediment collection, and inflow monitoring. The final report was completed in February 2012, and is available online at www.casselberry.org/lakes. The study revealed that internal recycling contributes 21%-32% of the phosphorus loading to each of these lakes, with an additional 1%-8% of the phosphorus loading due to groundwater seepage. The study recommended whole lake alum treatment as a cost effective option for Queen's Mirror and South Lake Triplet. This treatment was estimated to cost \$172-\$203 per kg of TP removed. In comparison, an online alum treatment system, which would be a highly effective means of treating stormwater inputs, was estimated to cost \$970 per kg of TP removed. As a result, the city has further modified project C-21.

2.4.2.2 City of Oviedo

The City of Oviedo completed a research study to determine the loading from the North Corporate Oviedo drainage area to the Lake Jesup Basin. The study was completed in April

2012, and the goal was to better understand the stormwater conveyance systems, associated loadings, and priority improvements within the city.

2.4.2.3 Seminole County

The efficiency monitoring at Seminole County's Red Bug Lake RSF is scheduled to start in 2012 with two years (total) of monitoring planned. Year one monitoring will be with no aquatic plants in the stormwater ponds (shoreline or submersed), and year two monitoring will be with plants installed along the pond's shoreline. Invasive plants have been removed from the system and the auto samplers are in the process of being mobilized. The county also began the second phase of the Lake Jesup Seepage Study in early 2012. The purpose of this study is to differentiate and quantify the nutrient loading from the sediments and the groundwater in Lake Jesup. This project should be completed by early 2013, and the results will be utilized in the TMDL re-evaluation.

2.4.2.4 SJRWMD

SJRWMD's sediment nutrient flux research study found high rates of sediment resuspension and deposition in Lake Jesup. The exchange of solids between the bottom and water column were positively correlated with wind speed and negatively correlated with lake stage. There is a negative correlation between water column total suspended solids (sediment and phytoplankton) and the bulk density of the sediment flocculent layer. This suggests there is a significant mass of organic matter fluctuating between suspension in the water column and deposition in the surficial flocculent layer. The yearly flux of TP back and forth between the sediments and water column was estimated at 23 metric tons per year. There was net sediment deposition within the lake.

SJRWMD has also estimated reuse nutrient contributions for the Lake Jesup watershed and the entire Middle St. Johns River Basin using a Geographic Information Systems (GIS) model. The model estimates the TP load to the Lake Jesup watershed to be 5 metric tons per year. The SJRWMD and FDEP are working with the University of Florida - Institute of Food and Agricultural Sciences on the development of fertilizer BMPs for reuse irrigation.

2.4.3 LAKE JESUP INTERAGENCY RESTORATION STRATEGY

The *Lake Jesup Interagency Restoration Strategy* was jointly developed by FDEP, SJRWMD, and FWC. The strategy lays out a plan for the restoration of Lake Jesup that will be implemented in two phases. The first phase includes developing the BMAP, reducing external loads to the lake, and reducing nutrients in the lake water column. The second phase of the strategy will be implemented as necessary after the first phase is complete. The strategy was endorsed by the agencies in January 2008. Since that time, several changes have occurred related to the restoration of Lake Jesup. An addendum to the strategy was finalized in January 2011 by the agencies to address the following items:

- The Lake Jesup BMAP spreads the reduction of external phosphorus loads over 15 years rather than the five years as initially proposed in the strategy.
- Improved management of reuse water and elimination of sludge disposal to reduce phosphorus export from Site 10 was incorporated into a new FDEP permit.
- United States Army Corps of Engineers 1135 project determination and alternative process recommendation.
- Construction of the new State Road 46 high-span bridge.
- The feasibility phase of cost-effective regional TP projects is almost complete and regional project lists updated.

- Address incorporation of any new Pollutant Load Reduction Goals and TMDLs scheduled for completion by 2014.
- Provide a new timeline with parallel efforts identified as replacement for previously sequential activities.

As part of the strategy, SJRWMD has completed the feasibility studies for several regional projects. The in-lake TP reduction Pay-for-Performance project has completed its third year of the five-year project timeframe. This project effectively demonstrates TP removal from the water column near the project site on the south central Lake Jesup shore. Handling of the biomass is a challenge, but the contractor continues to meet requirements and also to seek solutions where necessary for this.

The first phase of the floating TP treatment feasibility study is complete. Initial results are promising with an estimated 40%-97% TP removal. SJRWMD has not had the funds to proceed with optimization of the structure, although staff will provide technical support and the proposed scope of work to any entity looking for a small, effective inexpensive treatment option.

Plans to pursue stream restoration and concomitant use of wetlands in the Black Hammock area for TP treatment have been delayed, although it is considered a priority for the Lake Jesup Basin should the funding and partnership opportunities arise.

SJRWMD also evaluated the feasibility of using alum to reduce TP concentrations in tributary inflows into Lake Jesup and to develop conceptual designs for systems capable of removing 4-6 metric tons of TP per year from Lake Jesup tributaries. The feasibility study was limited to Gee Creek, Soldiers Creek, and Howell Creek, and although additional work has not occurred at SJRWMD on these project prospects, they are still considered to be project choices that should be considered for implementation in the Lake Jesup Basin. The phosphorus removal costs for each of the sites are essentially equal for the three systems; therefore, the deciding factors on system construction would likely be land availability and proximity to Lake Jesup.

2.5 FUNDING

This past year the City of Casselberry received a Florida Lake Management Society "Love Your Lake" grant to assist in the restoration and education signage for Lake Hodge at Lake Hodge Park.

The City of Longwood continues to operate a stormwater utility with a monthly fee, which is the primary source of revenue for the BMAP projects. In addition, the city has achieved positive results utilizing the Seminole County One-Cent Sales Tax for roadway improvements that include paving unpaved roads and providing retention.

During the reporting year, the City of Winter Park was awarded a Section 319 grant for \$195,000 for the Lake Forrest Retention Pond project. Grant money awarded during the last reporting year that has not yet been spent includes \$150,000 for the North Park Subdivision Exfiltration project, \$144,000 for the Pansy Avenue Exfiltration project, and \$90,000 for the Canton Avenue Outfall Improvement (baffle box) project. These funds were all Section 319 grants and will likely be spent during the 2012-2013 reporting year. A portion (\$210,000) of the Courtland Avenue Retrofit project (project WP-37) was funded through a Section 319 grant from FDEP. That money was awarded during a previous reporting period (2009-2010), but was spent during the current reporting year (2011-2012).

Seminole County has been awarded a FDEP TMDL Water Quality Restoration Grant for \$808,846 towards the construction and post construction monitoring of the Cassel Creek RSF (project SC-1). Seminole County is working on a partnership with FDOT for the construction of the Soldiers Creek at County Road 427 RSF (project SC-12). The Joint Participation Agreement will go before the Seminole County Board of Commissioners June 26, 2012 for approval of the \$ 2,700,000 contract.

The Solary Canal Stormwater Treatment Area was funded by SJRWMD in the amount of \$1.7 million.

FDACS provides BMP implementation assistance through field staff and a contract with the East Central Florida Resource Conservation and Development Council. The contractors work primarily in Orange, Lake, Seminole, and Volusia counties, with a priority focus on BMAP areas within those counties. Lake Jesup basin costs include staff salary and contract expenditures. An estimated total figure for contractor cost alone is \$36,000.

SECTION 3: MAJOR ISSUES

3.1 SUMMARY OF ISSUES

Several entities have encountered delays with their project implementation. However, these delays are not causing an issue with BMAP compliance because the delayed projects are either additional reductions not required in this five-year iteration or the projects will be completed within the five-year period as allowed. The stakeholders also noted that obtaining funding to implement the projects and research studies has been an issue. Data were not collected from a few of the BMAP monitoring stations due to low flow conditions. The locations of these stations may need to be modified in the future if low flow continues to be an issue. Additional details on the issues encountered this past year are described in **Section 3.2**. The issues associated the BMAP monitoring plan are described in **Section 3.3**.

3.2 ISSUES BY ENTITY

3.2.1 CITY OF CASSELBERRY

The City of Casselberry's proposed Live Oaks Center baffle box (project C-13) has been deferred at least until Fiscal Year 2014. This proposed baffle box may not deliver a sufficient cost/benefit ratio to warrant its installation, as Grassy Lake typically has very good overall water quality. The city will be conducting effectiveness evaluation of various baffle boxes through 2013 and, in light of that study, will revisit the feasibility of this particular project at a later date.

In 2012, the city completed a nutrient and hydrologic budget study for the Triplet Chain of Lakes and Queens Mirror Lake. As a result of this study, the city is planning to conduct whole lake alum treatments (project C-21). The baffle boxes that are projects C-16 and C-17 have been indefinitely delayed pending the water quality results of the proposed alum treatments, as well as the results of the baffle box effectiveness evaluation that is currently underway.

Park Drive Drainage/Wetland Improvements (project C-20) has been delayed at least until Fiscal Year 2014. The budget originally proposed for this project and site/permitting constraints may be too restrictive to produce an effective project. The project (and its budget) will be re-evaluated and modified as needed.

In the 2011 BMAP update, an alternative flocculant system project was proposed (project C-21) and funded to treat flows directly entering Queen's Mirror Lake or within the lake system itself. Design of this system was delayed pending outcome of the nutrient study and this study has since revealed the likely most cost effective solution for reducing phosphorus and improving TSI in Queens Mirror and South Lake Triplet was to conduct whole lake alum treatments. Thus, the city has proposed, at least in the immediate future, to replace the proposed online treatment system instead with whole lake alum treatments conducted over the course of several months. It is anticipated this method will be a highly effective means of improving water quality within Queens Mirror and South Lake Triplet, two of the city's highest TSI lakes, while simultaneously reducing net pollutant loads to downstream Lake Jesup. It is hoped the benefits of this alternate project will be evident in the continued monitoring of the city's lakes and Gee Creek.

The City of Casselberry has already achieved their required reductions for this iteration of the BMAP; therefore, the project delays described above do not cause a BMAP compliance issue.

3.2.2 CITY OF LAKE MARY

The City of Lake Mary found that after 22 months of sampling (June 2010 – March 2012), the average TP loading measured is 34 lbs/yr. The TMDL model assumed that 1,229 lbs/yr of TP were being generated by Lake Mary. This shows that the model grossly overestimated the amount of TP loading from Lake Mary.

3.2.3 CITY OF LONGWOOD

The City of Longwood's stormwater master plan projects (projects L-1 and L-2) have been delayed until 2013. This timeline is still within the BMAP period; therefore, this delay is currently not a BMAP compliance issue.

In addition, while the City of Longwood had installed a substantial amount of sanitary sewers throughout the city, they continue to struggle with residential properties connecting to the system to reduce the impact of septic systems on the groundwater and surface waters.

3.2.4 CITY OF MAITLAND

Implementation of the Lake Park/Gem COOP (projects M-2 through M-6) has been incredibly difficult due to lack of funding and participation. Working with the developer, the City of Maitland was able to finalize construction plans for closure of an existing untreated open ditch and the installation of two nutrient separating baffle boxes. However, the basins' drainage contributors, Orange County, the City of Winter Park, and FDOT, have rejected Maitland's request for funding to construct the project. Project completion is now completely dependent upon the receipt of grant funding. The project should be completed in 2013, if funding is received, which is still within the BMAP period. Therefore, this delay is currently not a BMAP compliance issue.

The Dommerich Drive Baffle Box (project M-12) is in the planning and design stages and construction plans are currently under review and should be complete this summer. The date for completion of this project in the BMAP was 2011. However, the project will still be completed during the first BMAP iteration; therefore, this delay is currently not a BMAP compliance issue.

Due to funding, the Horatio Avenue Infiltration Trench (project M-14) has now been delayed until fiscal years 2015-2016. However, two smaller scale projects within the basin have been planned for fiscal years 2013 and 2014. A 2nd generation baffle box on Lake Minnehaha (project M-19) will be completed in fiscal year 2013, with an estimated reduction of 7.7 lbs/yr of TP. Another project is currently undergoing a feasibility study and will be located on Park Lake. These projects will achieve greater reductions than the Horatio Avenue Infiltration Trench project; therefore, the city is still in compliance with its BMAP reductions for this first five-year iteration.

3.2.5 CITY OF SANFORD – SITE 10

The City of Sanford continues to improve its operation of the storm event sampler. More recently, the city has had personnel changes and a new staff member is currently being trained on the operation of the sampler. The city's consultant, CDM Smith, is assisting the city with this transition. In addition to reclaimed water application on the site, it is also important to understand that the land is leased for cattle and sod farming purposes. The city has indicated that the sod farming lessee is prohibited from applying fertilizers. The hayfields with anthropogenic activities are shown in **Figure 8**. As shown in the figure, the majority of the fields are used for these purposes.

3.2.6 ORANGE COUNTY

Orange County is waiting for regional projects to buy into; therefore, the county is trying to determine the best course of action to reduce the remaining load. The county is performing a street sweeping efficiency analysis to determine if an increase in the basin will provide additional TP reduction credit.

3.2.7 SEMINOLE COUNTY

Seminole County's Cassel Creek RSF (project SC-1) was delayed one year, with a new completion date of July 2013. However, Seminole County has already achieved its required reductions for this iteration of the BMAP; therefore, this delay does not cause a BMAP compliance issue.

3.2.8 AGRICULTURE

State-level cost-share funding was not available for the BMAP reporting year, and fiscal projections indicate the same for the upcoming year. However, FDACS is exploring the possibility of providing additional staff time to work with farmers one-on-one to demonstrate and implement BMPs.

3.3 WATER QUALITY MONITORING ISSUES

Several of the monitoring stations have had little or no flow during the reporting period, which has limited the amount of water quality data collected. These sites include the City of Lake Mary station at the outlet of Big Lake Mary, the City of Winter Park station at the Howell Branch weir, and the Orange County station at Burkett Canal 2. The locations of these sites may need to be reconsidered if low/no flow conditions persist.

SECTION 4: UPCOMING YEAR ACTIVITIES

4.1 SUMMARY OF EFFORTS FOR THE UPCOMING YEAR

The third annual BMAP progress report will encompass the period of June 1, 2012 through May 31, 2013. During this time, the City of Longwood will complete two of its stormwater master plan projects with a reduction of 2.1 lbs/yr of TP. The City of Maitland will complete one baffle box project for a reduction of 1.1 lbs/yr of TP. The City of Orlando will complete one exfiltration project for a reduction of 1.3 lbs/yr of TP. The City of Orlando, City of Oviedo, and Seminole County will each begin construction on a project. FDACS will continue to sign up growers for BMPs under the citrus and cow/calf manuals. In addition, the BMAP monitoring will continue. Additional details are included in **Section 4.2** and **Section 4.3**.

4.2 UPCOMING EFFORTS BY ENTITY

4.2.1 CITY OF LONGWOOD

The City of Longwood's stormwater master plan projects, Fairy Lake Outfall (project L-1) and Raven Avenue Stormwater Pipe Replacement (project L-2), will be completed in 2013. These projects have an estimated reduction of 2.1 lbs/yr of TP.

4.2.2 CITY OF MAITLAND

The City of Maitland will complete the Dommerich Lot baffle box (project M-12) by the end of 2012. This will result in 1.1 lbs/yr of TP reduction.

4.2.3 CITY OF ORLANDO

The City of Orlando will complete the Ivanhoe Plaza Park Exfiltration (project ORL-8) in September 2012. This project will result in 1.3 lbs/yr of TP reduction. The Lake Concord Alum Injection retrofit project is scheduled to start in March 2013.

4.2.4 CITY OF OVIEDO

Construction on the City of Oviedo's Aulin Regional Stormwater Pond (project OV-1) is scheduled to begin in July 2012.

4.2.5 SEMINOLE COUNTY

Seminole County will begin construction of the Cassel Creek RSF in September 2012.

4.2.6 AGRICULTURE

Estimated load reductions from agricultural BMPs were based on implementation of BMPs by enrolled agricultural operations. Based on enrollment and assessment figures, BMPs are being implemented on about 2,612 acres (excluding silviculture and aquaculture). These figures are assumed to underestimate the actual acreage on which BMPs are being implemented. As acknowledged in the BMAP, "the estimated total load ... for agriculture is greater than the actual loading" due to inaccurate land use categorizations and to agricultural operations that had gone out of production. In early 2012, FDACS worked with FDEP to calculate load reduction "credits" in other basins. Now that the process is finalized, FDACS will work with FDEP to estimate the potential acreage credit in the Lake Jesup Basin for the next annual update.

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.

State funding for agricultural BMPs is sorely lacking statewide. FDACS will work with SJRWMD and FDEP to explore opportunities for providing cost share funding and to determine where the monies can be spent most effectively.

4.3 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 FDEP 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, 2012. The tables provide information on the nutrient reduction attributed to each individual project, shown in pounds per year (lbs/yr). These projects were submitted to provide reasonable assurance to FDEP 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.

CITY OF ALTAMONTE SPRINGS

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	0.5	Ongoing
Altamonte Springs	A-3	Education Efforts	FYN, PSAs, pamphlets, presentations, website, illicit discharge program	4.6	Ongoing
Altamonte Springs	N/A	N/A	Total Projects Reduction	40.1	N/A
Altamonte Springs	N/A	N/A	Total Required Reduction 2010-2014	19.0	N/A
Altamonte Springs	N/A	N/A	Credit for Future BMAPs	21.1	N/A

CITY OF CASSELBERRY

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; 2 nd 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	Planned & Funded

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	01/2015	12/2015	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
Casselberry	C-17	530 South Lake Triplet Drive 2nd generation Baffle Box	Replace existing storm manholes with baffle boxes for removal of pollutants	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

ENTITY	PROJECT NUMBER	PROJECT NAME	PROJECT DETAIL	START DATE	END DATE	TP REDUCTION (LBS/YR)	PROJECT COST	TREATMENT ACRES	PROJECT TYPE	STATUS
Casselberry	C-20	Park Drive Drainage/Wetland Improvements	Construction of stormwater retention area on Lots 10A & 11 on north side of Park Drive	03/2014	04/2015	4.2	\$36,000	46.4	Wet retention pond	Planned & Funded, Delayed
Casselberry	C-21	Whole Lake Alum Treatment	Construction of a whole lake alum treatment feed system to treat flows entering Queens Mirror Lake and the Triplet Lake chain	03/2013	04/2014	16.5	Unknown	Unknown	Alum Treatment	Envisioned but Not Funded
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; install reverse berm and swale	12/2013	06/2014	0.3	\$33,000	3.4	Swales	Planned & Funded
Casselberry	C-23	Secret Way at canal 2nd generation Baffle Box	Replace existing storm manholes with baffle boxes for removal of pollutants	03/2014	12/2014	0.7	\$170,000	16.4	Stormwater Retrofit	Planned & Funded
Casselberry	C-24	51 North Lake Triplet Drive 2nd generation Baffle Box	Replace existing storm manholes with baffle boxes for removal of pollutants	03/2014	12/2014	1.2	\$140,000	27.4	Stormwater Retrofit	Planned & Funded
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	03/2014	12/2014	1.0	\$80,000	6.3	Swales	Envisioned but Not Funded
Casselberry	C-26	South Lake Triplet 2nd generation Baffle Box	Replace existing storm manholes with Baffle Boxes for removal of pollutants (sediment and detritus) (4.1)	03/2014	12/2014	0.8	\$140,000	18.3	Stormwater Retrofit (baffle box)	Envisioned but Not Funded
Casselberry	C-27	Street Sweeping	Monthly street sweeping of 72.5 miles	N/A	N/A	5.3	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	N/A	N/A	Total Projects Reduction	N/A	N/A	457.8	N/A	N/A	N/A	N/A
Casselberry	N/A	N/A	Total Required Reduction 2010-2014	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	115.1	N/A	N/A	N/A	N/A

CITY OF LAKE MARY

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	1.1	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	N/A	N/A	Total Projects Reduction	N/A	N/A	377.5	N/A	N/A	N/A	N/A	N/A
Lake Mary	N/A	N/A	Total Required Reduction 2010-2014	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	113.2	N/A	N/A	N/A	N/A	N/A

CITY OF LONGWOOD

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	Permitted
Longwood	L-2	Stormwater Master Plan Project	Raven Avenue replacement of stormwater pipe	2011	2013	1.4	\$300,000	Stormwater Retrofit	Planned
Longwood	L-3	Sewering projects to remove septic tanks	Sewering projects to remove tanks within 75 ft of surface waters (remove 20 septic tanks)	2009	2013	50.0	N/A	Wastewater plant improvements	Planned & Funded
Longwood	L-4	Street Sweeping	Quarterly street sweeping of 11.1 miles	N/A	N/A	0.6	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	48.8	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 2010-2014	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

CITY OF MAITLAND

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	2013	0.3	\$30,000	\$3,000	3.4	Stormwater Retrofit	Planned and Funded
Maitland	M-3	Lake Gem/Park Lake COOP BMP	Construct second generation baffle box	2010	2013	3.1	\$30,000	\$3,000	20.0	Stormwater Retrofit	Planned and Funded
Maitland	M-4	Lake Gem/Park Lake COOP BMP	Construct second generation baffle box	2010	2013	0.2	\$60,000	\$6,000	3.1	Stormwater Retrofit	Planned and Funded
Maitland	M-5	Lake Gem/Park Lake COOP BMP	Construct second generation baffle box	2010	2013	18.9	\$60,000	\$6,000	178.9	Stormwater Retrofit	Planned and Funded
Maitland	M-6	Lake Gem/Park Lake COOP BMP	Construct second generation baffle box	2010	2013	9.1	\$60,000	\$6,000	58.1	Stormwater Retrofit	Planned and Funded
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

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-12	Dommerich Lot Baffle Box	Construct second generation baffle box	2010	2012	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	2012	2014	0.9	\$150,000	\$5,000	5.0	Infiltration trench	Envisioned, but Not Funded
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	7.4	N/A	\$100,000	2898	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	2013	7.7	N/A	N/A	23	Stormwater Retrofit	Planned and Funded
Maitland	N/A	N/A	Total Projects Reduction	N/A	N/A	140.0	N/A	N/A	N/A	N/A	N/A
Maitland	N/A	N/A	Total Required Reduction 2010-2014	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	15.2	N/A	N/A	N/A	N/A	N/A

CITY OF ORLANDO

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	09/2012	1.3	\$1,100,000	N/A	49	100% on-site retention	Started
Orlando	ORL-9	Lake Concord 2 nd 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

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-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
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	N/A	14.3	N/A	\$1,800,000	N/A	Street Sweeping	Completed
Orlando	ORL-20	Reading Dr (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

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-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
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	N/A	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	03/2013	N/A	3.8	\$500,00	N/A	90.8	Stormwater Retrofit and Alum	Planned & Funded
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	N/A	N/A	Total Projects Reduction	N/A	N/A	958.2	N/A	N/A	N/A	N/A	N/A
Orlando	N/A	N/A	Total Required Reduction 2010-2014	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	631.9	N/A	N/A	N/A	N/A	N/A

CITY OF OVIEDO

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	2014	13.5	N/A	N/A	Wet detention pond	Project has been bid, construction July 2012
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 160.8 miles	N/A	N/A	11.8	N/A	N/A	Street Sweeping	Ongoing
Oviedo	OV-6	Education Efforts	FYN, illicit discharge program	N/A	N/A	46.2	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	N/A	N/A	Total Projects Reduction	N/A	N/A	761.2	N/A	N/A	N/A	N/A
Oviedo	N/A	N/A	Total Required Reduction 2010-2014	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	502.5	N/A	N/A	N/A	N/A

CITY OF SANFORD

ENTITY	PROJECT NUMBER	PROJECT NAME	PROJECT DETAIL	TP REDUCTION (LBS/YR)	STATUS
Sanford	S-1	Street Sweeping	Weekly street sweeping of 37.7 miles	5.3	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	635.4	N/A
Sanford	N/A	N/A	Total Required Reduction 2010-2014	602.2	N/A
Sanford	N/A	N/A	Credit for Future BMAPs	33.2	N/A

CITY OF WINTER PARK

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 1 st 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 Mednsen, construct control structures for wet detention treatment	06/1905	03/1996	83.8	N/A	N/A	256.00	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
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
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	N/A	N/A	Total Projects Reduction	N/A	N/A	760.1	N/A	N/A	N/A	N/A	N/A
Winter Park	N/A	N/A	Total Required Reduction 2010-2014	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	389.6	N/A	N/A	N/A	N/A	N/A

CITY OF WINTER SPRINGS

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	\$3,000	Ongoing
Winter Springs	WS-7	Street Sweeping	Quarterly street sweeping; total swept in reporting year is 671 miles.	N/A	N/A	7.3	N/A	N/A	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	1,357.3	N/A	N/A	N/A
Winter Springs	N/A	N/A	Total Required Reduction 2010-2014	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	844.3	N/A	N/A	N/A

FLORIDA DEPARTMENT OF TRANSPORTATION

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	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	Pending	2014	80.0	N/A	Alum Treatment	Design
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	Pending	2014	3.7	47.97	Dry Retention	Design
FDOT	FDOT -4	FM: 240163-1 SR 46	SR 46 Bridge Replacement over Lake Jesup; drainage improvements and treatment of existing impervious	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	90.3	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	397.2	N/A	N/A	N/A
FDOT	N/A	N/A	Total Required Reduction 2010-2014	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	264.9	N/A	N/A	N/A

ORANGE COUNTY

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 Wauntta	OC CIP Lake Wauntta	2005	2009	3.5	Stormwater Retrofit	Completed
Orange County	OC-3	Lake Sue Inlet Baskets	Lake Sue inlet baskets	N/A	N/A	0.7	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	Education	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	182.5	Regional Project	Planned
Orange County	OC-8	Inlet Baskets	Inlet baskets on Lake Sue and Lake Killarney	2010	N/A	4.8	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 2010-2014	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

ORLANDO ORANGE COUNTY EXPRESSWAY AUTHORITY

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 2010-2014	5.2	N/A	N/A
OOCEA	N/A	N/A	Credit for Future BMAPs	7.6	N/A	N/A

SEMINOLE COUNTY

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	7/2013	156.8	\$1,700,000	10	830	Wet detention pond	Construction Bids Received
Seminole County	SC-2	Lake Ann Outfall	Baffle box and pipe replacement	4/2001	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	1/2010	7/2010	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	3/1/2005	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	4/17/2006	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	5/2007	11/1/2007	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	4/2010	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	4/2010	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	N/A	13.1	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	N/A	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 to treat water in the sub basin upstream	9/2013	1/2015	2,131	\$3,169,000	11	5,692	Alum Treatment System	Final Design
Seminole County	N/A	N/A	Total Projects Reduction	N/A	N/A	5,274.2	N/A	N/A	N/A	N/A	N/A
Seminole County	N/A	N/A	Total Required Reduction 2010-2014	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	3,137.2	N/A	N/A	N/A	N/A	N/A

TOWN OF EATONVILLE

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	13.5	Regional Project	Planned
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 2010-2014	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

TURNPIKE AUTHORITY

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 2010-2014	101.1	N/A
Turnpike Authority	N/A	N/A	Credit for Future BMAPs	163.4	N/A

APPENDIX B: WATER QUALITY DATA

The City of Altamonte Springs has collected data from its monitoring station in the Prairie Creek, 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-1: CITY OF ALTAMONTE SPRINGS SAMPLING RESULTS

Date	pH	DO (mg/L)	Temp (°C)	TSS (mg/L)	Ammonia (mg/L)	Nitrite (mg/L)	Nitrate (mg/L)	TKN (mg/L)	Ortho-P (mg/L)	TP (mg/L)	BOD (mg/L)	Chl-a (corrected) (mg/L)
06/14/2011	7.20	5.5	28.9	5.0	0.04	0.005	<0.004	0.10	<0.01	0.03	<2	1.03
07/06/2011	7.72	7.5	28.2	3.0	0.04	0.005	<0.003	<0.02	<0.01	0.03	<2	1.64
09/06/2011	7.57	ERR	27.7	4.0	<0.02	<0.004	<0.003	0.18	<0.01	0.07	<2	3.29
10/25/2011	7.72	7.5	28.2	3.0	<0.02	0.005	<0.003	0.07	<0.01	<0.01	<2	6.16
12/13/2011	7.50	8.8	20.3	2.0	0.05	<0.004	<0.003	1.33	<0.01	<0.01	<2	2.47
01/10/2012	8.00	7.4	18.5	3.1	0.15	<0.003	0.005	0.94	0.01	<0.02	<2	4.52
03/26/2012	7.64	8.1	20.3	4.0	<0.02	0.005	<0.004	1.63	<0.01	<0.02	<2	4.52
04/10/2012	7.08	6.98	24.5	1.0	<0.02	<0.003	<0.004	2.48	<0.01	0.04	<2	1.64
06/05/2012	7.87	6.3	27.6	3.0	<0.02	0.005	<0.004	0.74	<0.01	0.05	<2	1.64

The City of Maitland is currently working with FDEP 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-2: CITY OF MAITLAND SAMPLING RESULTS

Date	Ammonia	Chl a Corrected	Conductivity	DO	pH	Temp	Nitrate	Nitrite	Ortho-P	TKN	TP	TSS
06/2011	0.1040	3.63	209	4.14	7.01	28.2	0.05	0.05	0.1	0.852	0.0373	15.3
07/2011	0.0540	1.63	240	4.47	7.03	29.2	0.05	0.05	0.1	0.680	0.0211	1.00
08/2011	0.0100	8.01	209	3.27	6.70	30.4	0.05	0.05	0.1	0.595	0.0228	1.75
09/2011	0.0100	25.90	233	5.45	7.45	28.9	0.05	0.05	0.1	0.701	0.0359	2.25
10/2011	0.0183	3.20	202	2.60	6.28	25.3	0.05	0.05	0.1	0.657	0.0245	2.75
11/2011	0.0703	16.00	215	7.81	6.84	24.3	0.05	0.05	0.1	1.820	0.0365	3.63
12/2011	0.1300	3.56	236	8.38	6.79	19.4	0.05	0.05	0.1	1.200	0.0517	4.38
01/2012	0.0240	8.01	243	10.2	7.75	17.2	0.05	0.05	0.1	1.100	0.0478	4.13
02/2012	0.0717	12.30	234	8.59	8.21	14.8	0.05	0.05	0.1	1.120	0.0556	2.63
03/2012	0.0100	1.28	270	2.70	6.70	23.2	0.05	0.05	0.1	1.120	0.0977	1.00
04/2012	0.0247	1.71	183	4.72	7.84	24.7	0.05	0.05	0.1	1.210	0.0456	1.00
05/2012	0.0100	3.05	158	1.76	7.11	25.4	0.05	0.05	0.1	0.822	0.0512	1.63

The City of Winter Park is also working with FDEP to upload its data to STORET. The following table shows the results of the sampling at the Weir at Howell Branch Road site during the reporting period.

TABLE B-3: CITY OF WINTER PARK SAMPLING RESULTS

Date	Ammonium (mg/L)	Ammonia (mg/L)	TKN (mg/L)	NOx (mg/L)	Ortho-P (mg/L)	TP (mg/L)	Chl a (corrected) (mg/L)	BOD5 (mg/L)
5/24/2011	0.01	0.30	0.67	0.058	0.010	0.030	0.006	2.0
6/23/2011	0.08	0.09	0.68	0.025	0.005	0.027	0.027	2.0
7/28/2011	0.05	0.05	0.57	0.084	0.002	0.032	0.007	2.0
8/25/2011	0.04	0.04	0.50	0.140	0.002	0.027	0.007	2.3
9/21/2011	0.18	0.18	0.74	0.015	0.004	0.036	0.001	2.0
10/27/2011	0.01	0.01	0.60	0.015	0.004	0.031	0.011	2.0

Date	Ammonium (mg/L)	Ammonia (mg/L)	TKN (mg/L)	NOx (mg/L)	Ortho-P (mg/L)	TP (mg/L)	Chl a (corrected) (mg/L)	BOD5 (mg/L)
11/22/2011	0.04	0.04	0.58	0.140	0.002	0.030	0.007	2.0
12/22/2011	0.02	0.02	0.56	0.200	0.003	0.023	0.002	2.0
1/26/2012	0.03	0.03	0.67	0.180	0.004	0.026	0.006	2.6
2/23/2012	0.04	0.04	0.55	0.190	0.006	0.039	0.004	2.0
3/29/2012	0.02	0.02	0.88	0.180	0.002	0.027	0.004	2.0
4/26/2012	0.02	0.02	0.40	0.190	0.003	0.014	0.001	2.0

Orange County is in the process of uploading its data to STORET. The following table shows the results of the sampling at the Burkett Canal site during the reporting period.

TABLE B-4: ORANGE COUNTY SAMPLING RESULTS

Date	Flow (ft/s)	Chl a (corrected) (mg/L)	TP (mg/L)	Ortho-P (mg/L)	Ammonia (mg/L)	TN (mg/L)	Nitrate/ Nitrite (mg/L)	TKN (mg/L)	BOD5 (mg/L)	DO (mg/L)	TSS (mg/L)
6/29/2011	0.01	5.5	0.029	0.03	0.28	0.46	0.021	1.13	2.2	1.3	2
7/14/2011	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
7/28/2011	0.21	2.3	0.016	0.003	0.02	0.66	0.008	0.65	2.4	2.2	3
8/11/2011	0.16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
8/29/2011	0.12	1.9	0.011	0.003	0.03	0.55	0.018	0.54	1.5	3.3	1
9/28/2011	1.9	1.9	0.012	0.003	0.02	0.8	0.021	0.78	1.6	1.7	2
10/25/2011	0.31	1.9	0.018	0.003	0.02	0.61	0.01	0.6	1	5	1
11/29/2011	0.15	1.9	0.011	0.003	0.02	0.58	0.021	0.56	1.2	4.1	2
12/21/2011	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1/19/2012	0.016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1/30/2012	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2/14/2012	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2/28/2012	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3/15/2012	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3/28/2012	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4/11/2012	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4/23/2012	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
5/10/2012	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
5/30/2012	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Note: ND – No data because there was no flow.

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-5: 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)	TDS (mg/L)	Chl-a (mg/m ³)	Turbidity (NTU)
6/14/2011	2.6	51.2	7.49	5.38	27.70	0.030	0.002	1.04	0.05	0.01	<0.005	1.03	5.4	120	10.0	4.50
7/14/2011	3.4	48.6	8.40	7.70	30.50	0.026	0.003	0.92	<0.01	<0.01	<0.005	0.92	5.8	108	14.4	4.30
8/15/2011	4.0	50.9	7.78	6.82	29.90	0.024	0.003	1.04	0.02	<0.01	<0.005	1.04	5.8	110	12.8	3.4
9/16/2011	2.0	53.5	8.37	4.88	29.90	0.022	0.003	0.86	0.06	0.01	<0.005	0.85	4.2	120	6.59	-
10/17/2011	2.0	51.4	7.87	7.06	25.92	<0.005	0.006	0.49	<0.01	<0.01	<0.005	0.49	5.2	112	19.4	-
11/14/2011	1.8	51.2	8.03	9.25	21.97	0.025	0.002	0.98	0.03	0.01	<0.005	0.97	4.0	96	4.7	-
12/16/2011	1.4	55.0	8.17	6.62	20.19	0.017	0.003	0.60	0.17	<0.01	<0.005	0.60	3.4	158	6.15	-
01/18/2012	1.8	56.0	8.59	7.52	16.95	0.021	0.004	0.69	0.02	0.05	<0.005	0.64	2.8	126	0.99	-
02/15/2012	1.7	56.4	7.90	8.32	21.40	0.017	0.003	0.58	0.02	<0.01	<0.005	0.58	<2.0	70	1.76	0.95
03/14/2012	1.1	55.2	8.31	8.58	24.70	0.019	0.004	0.53	0.03	0.01	<0.005	0.54	<2.0	130	1.22	-
04/18/2012	1.2	55.4	6.71	4.65	24.20	0.030	0.004	0.99	0.05	0.03	<0.005	1.02	2.2	134	3.12	-
05/15/2012	3.6	56.5	7.11	5.32	26.20	0.037	0.003	1.37	0.11	0.023	0.007	1.40	5.8	136	46.3	-

APPENDIX C: ADDITIONAL PROJECT PICTURES

City of Altamonte Springs



PLANTINGS ALONG LAKE MALTBIIE



PLANTINGS ALONG LAKE MALTBIIE

City of Casselberry



LANDSCAPING EDUCATIONAL SESSION FEATURING TOM MACCUBBIN AT EART FEST IN CASSELBERRY ON APRIL 28, 2012

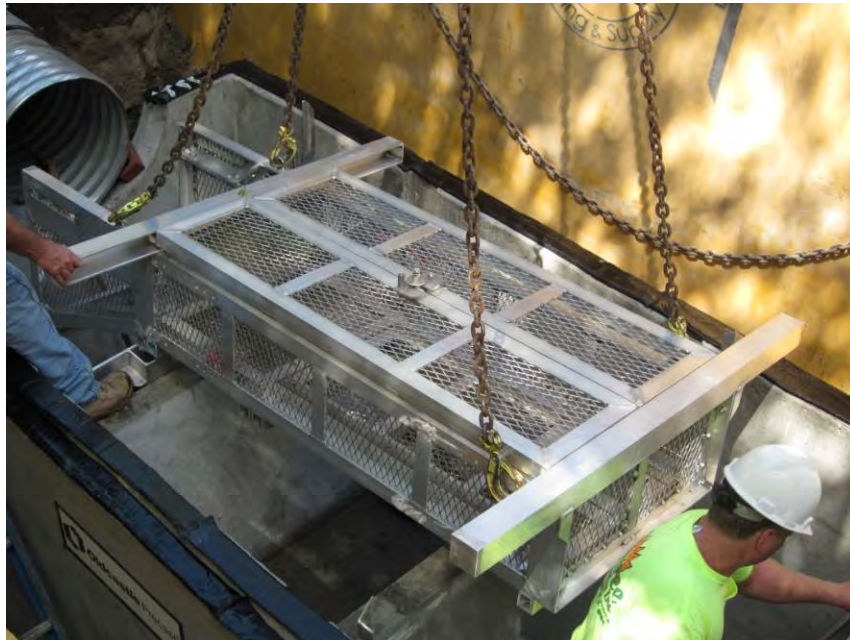


BALD CYPRESS TREE PLANTING IN HONOR OF "THE SENATOR" (BIG TREE) ON LAKE CONCORD AT EARTH FEST IN CASSELBERRY ON APRIL 28, 2012

CITY OF MAITLAND



INSTALLATION OF THE PACKWOOD AVENUE BAFFLE BOX



INSTALLATION OF THE PACKWOOD AVENUE BAFFLE BOX



EARTH DAY CO-OPERATIVE EDUCATIONAL BOOTH WITH THE CITY OF WINTER PARK



EARTH DAY CO-OPERATIVE EDUCATIONAL BOOTH WITH THE CITY OF WINTER PARK

City of Winter Park



INSTALLATION OF A BAFFLE BOX AT MORSE BOULEVARD



INSTALLATION OF A BAFFLE BOX AT MORSE BOULEVARD

SEMINOLE COUNTY



SEMINOLE COUNTY LAKE JESUP SHORELINE RESTORATION PROJECT



SEMINOLE COUNTY LAKE JESUP SHORELINE RESTORATION PROJECT