2009 PROGRESS REPORT

For the Lower St. Johns River Main Stem Basin Management Action Plan

Developed by the
Lower St. Johns River TMDL Executive Committee

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

APRICOT	A Prototype Realistic Innovative Community of Today
ATAC	Allocation Technical Advisory Committee
AWT	Advanced Wastewater Treatment
BMAP	Basin Management Action Plan
BMP	Best Management Practice
CBIR	Community Issue Budget Request
CCUA	Clay County Utility Authority
CDBG	Community Development Block Grant
DO	Dissolved Oxygen
FDACS	Florida Department of Agriculture and Consumer Services
FDEP	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
FIT	Florida Institute of Technology
FYN	Florida Yards and Neighborhood (Program)
GPM	Gallons Per Minute
HDPE	High Density Polyethelyne
LID	Low Impact Design
LSJR	Lower St. Johns River
MLE	Modified Ludzack-Ettinger
MS4	Municipal Separate Storm Sewer System
NAS	Naval Air Station
NS	Naval Station
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
O&M	Operation and Maintenance
PLRG	Pollutant Load Reduction Goals
PVC	Polyvinyl Chloride
RO	Reverse Osmosis
RST	Regional Stormwater Treatment
SCR	Selective Catalytic Reduction
SJRWMD	St. Johns River Water Management District
STORET	STOrage and RETrieval (Database)
TCAA	Tri-County Agricultural Area
TMDL	Total Maximum Daily Load
TN	Total Nitrogen
TP	Total Phosphorus
UF–IFAS	University of Florida–Institute of Food and Agricultural Sciences
USACE	U.S. Army Corps of Engineers
USDA	U. S. Department of Agriculture
USGS	U.S. Geological Survey
VAC	Vegetable and Agronomic Crops
WAV	Watershed Action Volunteers
WBID	Waterbody identification
WSEA	Water and Sewer Expansion Authority
WTP	Water Treatment Plant
WWTF	Wastewater Treatment Facility

EXECUTIVE SUMMARY

TOTAL MAXIMUM DAILY LOADS

The Total Maximum Daily Loads (TMDLs) for the main stem of the Lower St. Johns River (LSJR) Basin were adopted by the Florida Department of Environmental Protection (FDEP) in June 2008. The TMDLs include total phosphorus (TP) and total nitrogen (TN) in the freshwater reach to achieve reductions in the chlorophyll-a levels in this portion of the river. In addition, a TN TMDL was also established in the marine reach to meet dissolved oxygen (DO) levels that would be protective of aquatic life uses.

The LSJR Main Stem Basin Management Action Plan (BMAP) to implement these TMDLs was adopted in October 2008. This 2009 Progress Report is the first annual progress report for the LSJR Main Stem BMAP, and it describes the major accomplishments and issues identified during the first year of BMAP implementation (October 2008 through October 31, 2009).

MAJOR ACCOMPLISHMENTS

The first year of BMAP implementation has had many successes. Three wastewater treatment facility (WWTF) projects in the freshwater section were completed with a total reduction of 3,451 kg/yr of TP and 26,045 kg/yr of TN. No WWTF projects were completed in the marine section this past year. During this time, FDEP issued the five aggregate permits that were needed to implement the pre-BMAP trades. In addition, the majority of the individual facility permits were also issued.

Over the last year, three municipal separate storm sewer system (MS4) projects were completed in the freshwater section for a total reduction of 189.6 kg/yr of TP and 111.5 kg/yr of TN. The reductions in TP that were accomplished this year in combination with the completed projects in the BMAP have achieved the TP reductions required for the MS4s in the freshwater section. An additional ten MS4 projects were completed in the marine section for a reduction of 3,685 kg/yr of TN. In the freshwater section, six non-MS4 projects were completed this year, yielding 769.2 kg/yr of TP and 1,763 kg/yr of TN reductions. There were also three non-MS4 projects completed in the marine section for 993 kg/yr of TN reduction.

The Florida Department of Agriculture and Consumer Services (FDACS) has continued to sign up growers under the vegetable and agronomic crop best management practices (BMP) manual. The sod and cow/calf manuals were adopted this year, and FDACS held workshops to inform producers about the manuals and to begin the enrollment process. To date, no producers have opted to monitor water quality instead of implementing BMPs. In addition, the St. Johns River Water Management District (SJRWMD) is currently assessing the most cost effective means of meeting the remainder of the agricultural allocation through improved BMPs, land buffers, and regional treatment.

BMAP monitoring plan efforts have started in the freshwater section, marine section, and tributaries. The river transect sampling in the freshwater section occurred on schedule in April through October. The two new continuous DO stations were added in the marine section. The entities have started the ambient water quality sampling in the tributaries, and the Clay County Utility Authority (CCUA) has started their high-flow sampling. FDEP and SJRWMD also prepared a detailed monitoring plan to support the BMAP, which describes the processes for collecting and submitting data.

MAJOR ISSUES

The major issue in BMAP implementation this past year is funding. With the economic downturn and decrease in development, the funding necessary to implement the BMAP projects was difficult to obtain. The utilities had fewer new connections to their systems, and the local governments had less local revenue. In addition, federal and state funding that had been available in the past to help with the projects also decreased significantly. While funding has been an issue, this limitation has not caused delays in implementation of BMAP projects this first year.

ACTIVITIES FOR THE UPCOMING YEAR

The second annual BMAP progress report will encompass the period of November 1, 2009 through December 31, 2010. During this time, two WWTF projects should be completed and one will start in the freshwater section. In the marine section of the Lower Basin, an additional four WWTF projects should be completed and three will have plans and specifications completed. The City of Jacksonville will continue to phase-out septic tanks and design stormwater projects to meet their MS4 allocation. Both Putnam and St. Johns counties will begin the operation and maintenance of the two existing regional stormwater treatment (RST) facilities and two additional non-MS4 projects should be completed. In the upcoming year, FDACS will continue to enroll producers in the vegetable, sod, and cow/calf operations BMP programs. In addition, all components of the monitoring plan should be in place.

SECTION 1: INTRODUCTION

1.1 PURPOSE OF THE REPORT

This is the first annual progress report for the LSJR Main Stem BMAP. **Section 2** and **Section 3** describe the accomplishments and issues, respectively, during the first year of BMAP implementation. The information presented includes updates from the time of BMAP adoption (October 2008) through October 31, 2009. In addition a summary of efforts for the upcoming year (November 1, 2009 through December 31, 2010) is included in **Section 4**.

1.2 TOTAL MAXIMUM DAILY LOAD FOR THE LOWER ST. JOHNS RIVER BASIN

The area addressed by the Lower St. Johns River (LSJR) Basin Management Action Plan (BMAP) is that portion of the St. Johns River that flows between the mouth of the Ocklawaha River, its largest tributary, and the Atlantic Ocean, encompassing a 2,750-square-mile drainage area (see **Figure 1**). Within this reach, the St. Johns River is 101 miles long and has a water surface area of approximately 115 square miles. Major centers of population within the LSJR include Palatka, a city of 10,700 at the southern entrance to the basin; Green Cove Springs, a city of 4,700 at the midpoint; and the Orange Park, Middleburg, and Jacksonville metropolitan area, with a population of over one million, in the northern portion of the basin. For assessment purposes, the Florida Department of Environmental Protection (FDEP) has divided the LSJR Basin into water assessment polygons with a unique waterbody identification (WBID) number for each watershed or stream reach. The main stem of the LSJR is divided into fifteen WBID segments (see **Figure 1**). The LSJR is also divided into two reaches based on salinity: the marine reach and the freshwater reach (**Figure 2**).

The Total Maximum Daily Loads (TMDLs) for the main stem of the LSJR Basin were adopted by FDEP in June 2008. The TMDLs include total phosphorus (TP) and total nitrogen (TN) in the freshwater reach to achieve reductions in the chlorophyll-a levels in this portion of the river. In addition, a TN TMDL was also established in the marine reach to meet dissolved oxygen (DO) levels that would be protective of aquatic life uses. **Table 1** lists the TMDLs and pollutant load allocations adopted by rule for the LSJR**.**

TABLE 1: TMDLS IN THE LOWER ST. JOHNS RIVER BASIN

This is a six-column table. Column 1 lists the WBID number(s), Column 2 lists the TMDL, Column 3 lists the TMDL baseline load, Column 4 lists the wasteload allocation, Column 5 lists the nonpoint load allocation, and Column 6 lists the overall needed reduction. Columns 2 through 6 are in kilograms per year.

- = Empty cell/no data

* Includes a percent reduction from National Pollutant Discharge Elimination System (NPDES) stormwater sources.

WBID(S)	TMDL (kg/yr)	TMDL BASELINE LOAD (kg/yr)	WASTELOAD ALLOCATION* (kg/yr)	LOAD ALLOCATION (NONPOINT) (kg/yr)	OVERALL NEEDED REDUCTION (kg/yr)
Freshwater	-	-	-	-	-
2213I to 2213N	500,325 TP	599,610	46,357 TP	453,968 TP	99,285
2213I to 2213N	8,571,563 TN	10,115,552	236,695 TN	8,334,868 TN	1,543,989
Marine	-	-	-	-	-
2213A to 2213H	1,376,855 TN	2,453,258	1,027,590 TN	349,265	1,076,403

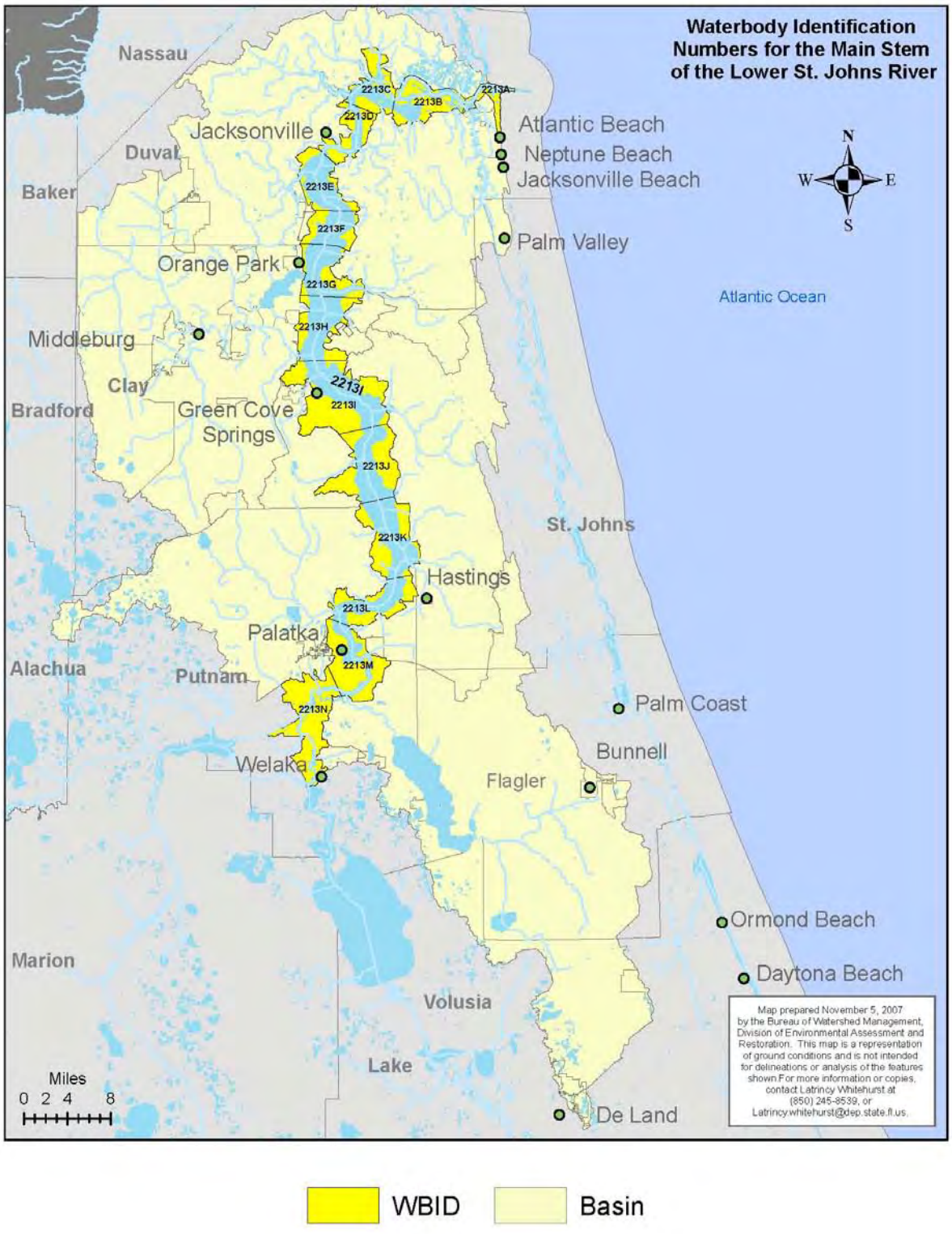

FIGURE 1: LOCATION OF THE LOWER ST. JOHNS RIVER BASIN

FIGURE 2: MARINE AND FRESHWATER REACHES IN THE LOWER ST. JOHNS RIVER BASIN

1.3 Responsible Parties and Key Stakeholders

The LSJR BMAP identified wastewater treatment facilities (WWTFs), municipal separate storm sewer systems (MS4s), urban areas outside of MS4s (non-MS4 areas), and agricultural sources of TN and TP in the basin. Those entities that are responsible for achieving the load reductions are shown in **Table 2** and **Table 3** for the freshwater reach and marine reach, respectively. In addition to the these entities, the Florida Department of Agriculture and Consumer Services (FDACS), FDEP, and St. Johns River Water Management District (SJRWMD) are key to the implementation of the BMAP activities.

Table 2: Responsible BMAP Entities in the Freshwater Reach

This is a one-column table that lists responsible BMAP entities in the freshwater reach, grouped by category (WWTFs, MS4s, non-MS4 stormwater, and nonpoint sources).

Responsible BMAP Entities
WWTFs
City of Green Cove Springs
City of Palatka
Georgia-Pacific
Seminole Electric
MS4s
Clay County
Green Cove Springs
Non-MS4 Stormwater
City of Palatka
Clay County
Putnam County
St. Johns County
Town of Hastings
Town of Welaka
Nonpoint Sources
Agriculture

TABLE 3: RESPONSIBLE BMAP ENTITIES IN THE MARINE REACH

This is a one-column table that lists responsible BMAP entities in the marine reach, grouped by category (WWTFs, MS4s, non-MS4 stormwater, and nonpoint sources).

RESPONSIBLE BMAP ENTITIES
WWTFs
Anheuser Busch
City of Atlantic Beach
City of Jacksonville Beach
City of Neptune Beach
Clay County Utility Authority (CCUA)
JEA
Naval Air Station (NAS) – Jacksonville
Naval Station (NS) - Mayport
Smurfit-Stone Container
Town of Orange Park
MS4s
City of Atlantic Beach
City of Jacksonville/Florida Department of Transportation (FDOT)
City of Jacksonville Beach
City of Neptune Beach
Clay County
NAS – Jacksonville
NS – Mayport
St. Johns County
Town of Orange Park
Non-MS4 Stormwater
Camp Blanding
Clay County
St. Johns County
Nonpoint Sources
Agriculture

1.4 BMAP ALLOCATIONS

The required reductions in the BMAP were developed through an extensive allocation process that built off of the three-step process recommended in the Allocation Technical Advisory Committee (ATAC) Report to the Governor and Legislature (February 2001). "Step 1" and "Step 2" reductions were only applied to nonpoint sources (urban and agriculture) to provide treatment approximately equivalent to the treatment required for domestic and industrial WWTFs. The Step 2 reductions were based on the reduction from nonpoint sources expected from implementation of their respective best management practices (BMPs). Since Step 2 reductions did not result in meeting the assimilative capacity of the river, additional "Step 3" reductions were necessary, which required the same overall percentage reduction from both point and nonpoint sources. The starting point loads and BMAP allocations for each entity in the marine and freshwater reaches of the river are shown in **Table 4** through **Table 6**.

TABLE 4: TN STARTING POINT LOADS AND BMAP ALLOCATIONS IN THE FRESHWATER REACH

This is a three-column table. Column 1 lists the sources in the freshwater reach (grouped by category), Column 2 lists the starting point load (in kilograms per year), and Column 3 lists the allocation (in kilograms per year).

- = Empty cell/no data

SOURCE	STARTING POINT LOAD (KG/YR)	ALLOCATION (KG/YR)
WWTFs and Aggregated Loads	-	-
Georgia-Pacific	258,155	165,909
Green Cove Springs WWTFs	14,600	9,052
Palatka WWTF	60,889	40,795
Seminole Electric	21,045	14,732
Future APRICOT/RO Dischargers	9,961	9,961
MS4s	-	-
Clay County	2,770	1,976
Green Cove Springs	6,961	4,967
Non-MS4 Stormwater	-	-
Alachua County Non-MS4	636	0.0
Clay County Non-MS4	5,579	4,401
Flagler County Non-MS4	7	7
Hastings	624	448
Palatka	9,683	6,908
Pomona Park	108	108
Putnam County	43,616	33,976
St. Johns County Non-MS4	27,277	25,340
Welaka	1,175	838
Nonpoint Sources	-	-
Agriculture	310,700	194,336
Other Sources	-	-
Upstream Anthropogenic Load	4,148,223	2,693,852
Atmospheric Deposition	105,688	105,688
Natural Background	5,087,856	5,087,856
Total	-	-
Total – Freshwater TN Loads	10,115,552	8,401,150

TABLE 5: TP STARTING POINT LOADS AND BMAP ALLOCATIONS IN THE FRESHWATER REACH

This is a three-column table. Column 1 lists the sources in the freshwater reach (grouped by category), Column 2 lists the starting point load (in kilograms per year), and Column 3 lists the allocation (in kilograms per year).

- = Empty cell/no data

SOURCE	STARTING POINT LOAD (KG/YR)	ALLOCATION (KG/YR)
WWTFs	-	-
Georgia-Pacific	63,875	33,182
Green Cove Springs WWTFs	3,865	2,397
Palatka WWTF	9,955	6,670
Future APRICOT/RO Dischargers	3,320	3,320
MS4s	-	-
Clay County	404.6	212.6
Green Cove Springs	1,095.7	575.9
Non-MS4 Stormwater	-	-
Alachua County Non-MS4	83.8	83.8
Clay County Non-MS4	767.3	499.4
Flagler County Non-MS4	0.9	0.9
Hastings	92.9	49.3
Palatka	1,507.8	792.5
Pomona Park	15.8	15.8
Putnam County	5,990.4	3,964.9
St. Johns County Non-MS4	3,727.4	3,296.6
Welaka	172.0	90.4
Nonpoint Sources	-	-
Agriculture	83,455	70,974
Other Sources	-	-
Upstream Anthropogenic Load	137,157	76,502
Atmospheric Deposition	1,356	1,356
Natural Background	282,768	282,768
Total	-	-
Total – Freshwater TP Loads	599,610	486,751

TABLE 6: TN STARTING POINT LOADS AND BMAP ALLOCATIONS IN THE MARINE REACH

This is a three-column table. Column 1 lists the sources in the marine reach (grouped by category), Column 2 lists the starting point load (in kilograms per year), and Column 3 lists the allocation (in kilograms per year).

- = Empty cell/no data

SOURCE	STARTING POINT LOAD (KG/YR)	ALLOCATION (KG/YR)
WWTFs and Aggregated Loads	-	-
Anheuser Busch – Main Street	24,399	12,418
Atlantic Beach Aggregate	49,275	21,863
CCUA – Fleming Island	61,569	84,058
Jacksonville Beach WWTF	40,150	23,878
JEA Aggregate	1,396,622	654,672
Neptune Beach WWTF	11,448	7,014
Orange Park WWTF	24,886	9,999
Smurfit-Stone Container	145,989	74,305
U.S. Navy WWTF Aggregate	27,225	16,118
Future APRICOT/Reverse Osmosis (RO) Dischargers	4,979	4,979
MS4s	-	-
Atlantic Beach	2,474	976
Clay County Marine MS4	25,249	10,556
Jacksonville/FDOT	243,438	96,016
Jacksonville Beach	4,974	1,941
Neptune Beach	1,484	585
Orange Park	3,451	1,289
St. Johns County	3,057	746
U.S. Navy MS4s	7,530	2,798
Non-MS4 Stormwater	-	-
Camp Blanding – State of Florida	2,870	1,220
Clay County Marine Non-MS4	12,051	4,898
St. Johns County Marine Non-MS4	9,846	4,865
Nonpoint Sources	-	-
Agriculture	12,800	4,170
Other Sources	-	-
Atmospheric Deposition - Marine	95,028	95,028
Natural Background	242,300	242,300
Total	-	-
Total – Marine TN Loads	2,453,094	1,376,692

SECTION 2: MAJOR ACCOMPLISHMENTS

2.1 SUMMARY OF EFFORTS

The first year of BMAP implementation has had many successes. Three WWTF projects in the freshwater section were completed with a total reduction of 3,451 kg/yr of TP and 26,045 kg/yr of TN. While no WWTF projects were completed in the marine section this past year, FDEP issued the five aggregate permits that were needed to implement the pre-BMAP trades. In addition, the majority of the individual facility permits were also issued. Over the last year, three MS4 projects were completed in the freshwater section for a total reduction of 189.6 kg/yr of TP and 111.5 kg/yr of TN. The reductions in TP that were accomplished this year in combination with the completed projects in the BMAP have achieved the TP reductions required for the MS4s in the freshwater section. An additional ten MS4 projects were completed in the marine section for a reduction of 3,685 kg/yr of TN. In the freshwater section, six non-MS4 projects were completed this year, yielding 769.2 kg/yr of TP and 1,763 kg/yr of TN reductions. There were also three non-MS4 projects completed in the marine section for 993 kg/yr of TN reduction.

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BMAP monitoring plan efforts have started in the freshwater section, marine section, and tributaries. The river transect sampling in the freshwater section occurred on schedule in April through October. The two new continuous DO stations were added in the marine section. The entities have started the ambient water quality sampling in the tributaries, and CCUA has started their high-flow sampling. FDEP and SJRWMD also prepared a detailed monitoring plan to support the BMAP that describes the processes for collecting and submitting data.

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 SOURCE TYPE

2.2.1 WASTEWATER TREATMENT FACILITIES

2.2.1.1 Freshwater Section

City of Green Cove Springs

The City of Green Cove Springs has been sending reuse water to the Magnolia Point Golf Course since May 2004. Green Cove Springs is currently seeking ways to increase the amount of reuse water that is sent to the golf course from the Harbor Road WWTF to meet the load reductions for project GCS-1. In addition, the City has tasked Mittauer and Associates, Inc. with the design of the South WWTF Modified Ludzack-Ettinger (MLE) process conversion project (project GCS-2). Plans for this project are currently at 50% completion.

City of Palatka

During the past year, the City of Palatka has installed a new 1,400 gallons per minute (GPM) reclaimed water pumping station with wet well at the reclaimed water holding pond located at the Palatka Golf Course (see **Figure 3**). Additionally, more than 19,300 linear feet of polyvinyl chloride (PVC) reuse transmission/distribution mains were added to multiple sites throughout the city. The total area where reclaimed water has been provided is approximately 202 acres. Selected reclaimed water irrigation sites include local ball fields, cemeteries, middle school and high school athletic fields, and the St. Johns River Community College. These new reuse mains meet the reductions for projects PAL-2 and PAL-3. In addition, secondary filters were added at the City's water treatment plant (WTP). These filters allowed the City to recycle the backwash water generated from the primary filters, which significantly reduced the waste stream sent to the WWTF (project PAL-4). When the City put these projects out to bid, they received very low project prices that allowed them to extend the project up to the original budget.

FIGURE 3: CITY OF PALATKA WET WELL PIPE CONNECTION TO RECLAIMED WATER HOLDING POND

Seminole Electric

Seminole Electric has installed the Selective Catalytic Reduction (SCR) controls on Units 1 and 2 (project SE-1) at the Seminole Generating Station (see **Figure 4**). These devices significantly lower nitrogen oxide emissions and reduce the amount of TN that is deposited in the St. Johns River and surrounding watershed. Both SCR units were installed and operating before the anticipated dates in the BMAP, but engineering and environmental testing has only been completed on one unit to date.

FIGURE 4: INSTALLATION OF SCR BOX

WWTF Progress Towards the Freshwater TMDLs

Figure 5 and **Figure 6** show the progress made towards meeting the WWTF portion of the freshwater TP and TN TMDLs. The first bar in the figures shows the starting load for the freshwater WWTFs as calculated in the BMAP. The second bar shows the estimated 2009 load based on all completed freshwater WWTF projects (both those in the BMAP and those listed above). The third bar indicates the total allocation allowed for the WWTFs in the freshwater section of the river.

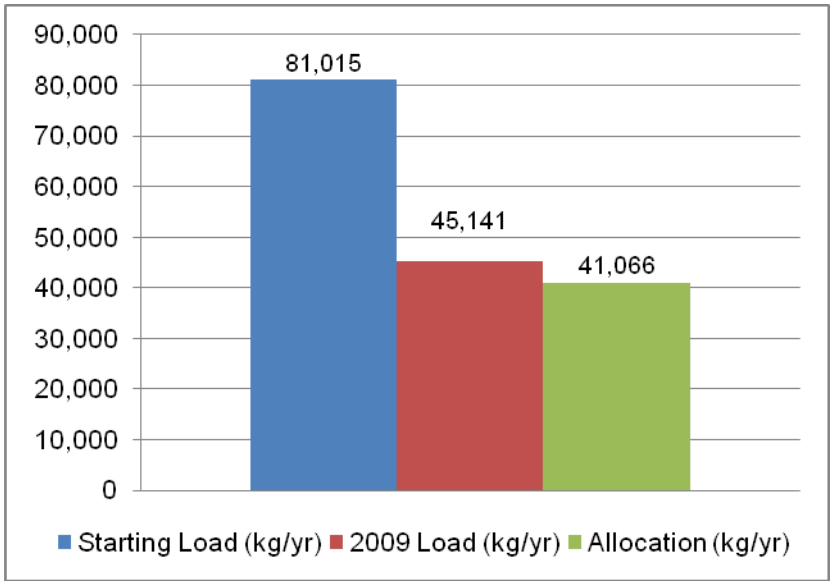


FIGURE 5: WWTF PROGRESS TOWARDS THE TP FRESHWATER TMDL

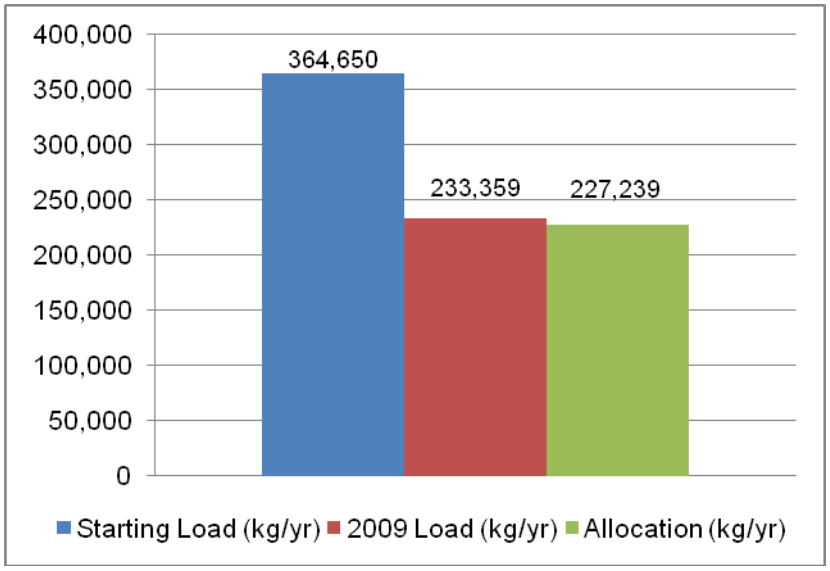


FIGURE 6: WWTF PROGRESS TOWARDS THE TN FRESHWATER TMDL

2.2.1.2 Marine Section

City of Atlantic Beach

The City of Atlantic Beach has completed the preliminary design for improvements to the Main WWTF for reuse and nutrient removal (projects AB-2 and AB-3). The City's engineering study concluded that the most cost effective way to meet the TMDL is to upgrade the City's WWTF #1 (Main) to a 4-Stage Bardenpho plant to meet advanced wastewater treatment (AWT) nitrogen standards, pump the flow from WWTF #2 (Buccaneer) to WWTF #1, and properly abandon WWTF #2. Final design for this work is underway.

City of Jacksonville Beach

The City of Jacksonville Beach issued a Notice to Proceed to WPC Industrial Contractors, LLC for the WWTF upgrade to AWT for nitrogen removal (project JB-1) on April 6, 2009 (see **Figure 7**). This project is more than two years ahead of the BMAP schedule, which has a construction start date of July 1, 2011. This project is approximately 15% complete.

FIGURE 7: CITY OF JACKSONVILLE BEACH INSTALLATION OF NEW 24" EFFLUENT DISCHARGE PIPING FROM THE NEW CHLORINE CONTACT TANKS TO THE EXISTING EFFLUENT PUMP STATION

City of Neptune Beach

The WWTF design improvements (project NB-1) to comply with the City of Neptune Beach's BMAP requirements are 30% complete. The City intends to complete design for nutrient removal improvements by April 20, 2010, which is four months ahead of the BMAP schedule. The City also intends to complete the construction for nutrient removal improvements by May 30, 2011, which is nine months ahead of the BMAP schedule. The TMDL discharge level targeted by the City of Neptune Beach is 7,915 lbs/yr of TN (3,598 kg/yr), which is less than the 16,108 lbs/yr of TN (7,322 kg/yr) required by the BMAP and NPDES permit for the WWTF.

Clay County Utility Authority

CCUA entered into an interlocal agreement with Clay County allowing the transfer of water quality credits to the County. The two parties recognize this will save Clay County millions of dollars in costly surface water management improvement projects, which would have been needed to meet their nutrient reduction requirements. Cost estimates of $25 to $40 million were projected for the County to achieve compliance through these types of projects; whereas CCUA calculated that WWTF improvements costs were much lower to generate the credits. CCUA identified a value for these credits of $186.25 per pound of TN removed. Therefore, the 20,095 kg/yr (44,301 lbs/yr) of TN water quality credits traded had a value of $8,251,143.

CCUA traded these at no cost to Clay County on the underlying assumptions that: (1) the Clay County rate payers who funded the original WWTF improvements are also Clay County citizens and should, therefore, not be asked to pay again through higher property taxes; and (2) it is imperative for CCUA and its partner Clay County to allow new growth in the county, which would only occur if the County was able to fund projects to serve new development and not be straddled with a large deficit to achieve TMDL compliance. However, as part of the interlocal agreement, CCUA insisted that Clay County adopt low impact design (LID) standards for all new development to ensure the nutrient loading from new development would be minimized. The

County is currently developing these LID standards and is awaiting promulgation of the new FDEP stormwater rule before implementing them.

In addition, CCUA entered into an interlocal agreement with the Town of Orange Park on January 13, 2009. This agreement allows CCUA to accept all of the treated effluent from the Town of Orange Park's WWTF at CCUA's Miller Street WWTF. CCUA will then provide high level disinfection and use this effluent in its reclaimed water distribution system. In so doing, the Town of Orange Park will be able to reduce its surface water discharge and use these reductions towards compliance with their MS4 requirement. Because of the proximity of the reclaimed water transmission facilities to the Town, the Town will also have the opportunity to utilize this reclaimed water for future projects within their jurisdiction. One project is already planned for the Gano Avenue Athletic Complex and will be implemented upon completion of the Miller Street WWTF reuse upgrades project (see **Figure 8**).

FIGURE 8: CCUA HERITAGE HILLS (LIFT STATION 30) UPGRADE

Note: Project will remove approximately 1.5 million gallons per day of effluent from the Miller Street WWTF and transfer to Spencer's WWTF to be used as reclaimed water.

JEA

JEA began a voluntary nitrogen reduction initiative in 2000, with the goal of reducing the nitrogen discharged from its WWTFs to the St. Johns River by 50%. This initiative has reduced the discharge of nitrogen from 1,400 tons per year in 2000 to 843 tons per year in 2009. Several of the BMAP projects are achieving higher reductions than originally estimated as shown in **Table 7**. To achieve JEA's BMAP reductions, a number of improvement projects are currently in the design and construction phase. When these projects are completed by 2013,

JEA estimates they will more than meet their allocation of 720 tons of nitrogen per year as shown below in **Figure 9**.

TABLE 7: UPDATED REDUCTIONS FROM JEA PROJECTS

This is a four-column table. Column 1 lists the project number, Column 2 lists the project description, Column 3 lists the BMAP TN reduction (in kilograms per year), and Column 4 lists the updated reduction (in kilograms per year).

- = Empty cell/no data

PROJECT NUMBER	PROJECT DESCRIPTION	BMAP TN REDUCTION (KG/YR)	UPDATED REDUCTION (KG/YR)
JEA-1	Julington Creek WWTF Complete Process Improvements	4,546	5,909
JEA-2	Arlington East WWTF Complete Process Improvements	15,272	92,727
JEA-4	Southwest WWTF Complete Process Improvements	39,091	45,909
JEA-5	Buckman WWTF Complete Process Improvements	39,091	50,455
JEA-6	Monterey WWTF Complete Process Improvements	26,364	35,455
JEA-7	Mandarin WWTF Complete Process Improvements	8,181	12,726
-	**Total**	**132,545**	**243,181**

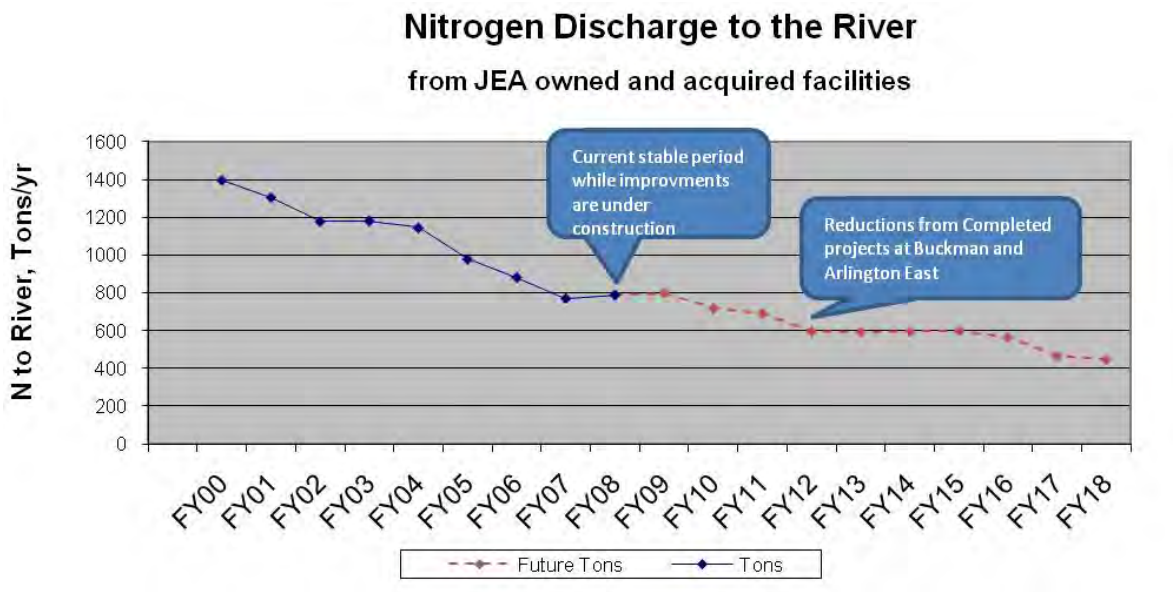


FIGURE 9: DISCHARGE OF NITROGEN FROM JEA FACILITIES

JEA's BMAP projects fall into three categories: (1) upgrading the regional treatment plants to advanced nutrient removal; (2) phasing out older technology treatment plants; and (3) increasing reclaimed water use. Improvement projects have already been completed at two regional treatment facilities, Mandarin and Southwest (projects JEA-7 and JEA-4). In the last 12 months, JEA has moved from design to construction on a $26 million improvement project (project JEA-13) at a third regional treatment facility, Arlington East (see **Figure 10**). The Arlington East improvements are scheduled to be completed by January 2011, and will result in

a reduction of over 50 tons per year of nitrogen. Design is currently underway for an upgrade project for a fourth regional treatment facility, Buckman, which when completed in 2013 will result in a reduction of almost 100 tons per year (project JEA-16).

FIGURE 10: JEA ARLINGTON EAST WWTF CONSTRUCTION PROJECT

JEA has already phased out two older technology plants. Design is complete and construction is ongoing for the phase-out of a third plant, Beacon Hills, which should be completed by the end of 2010 (project JEA-10). In addition, during the last year, JEA has installed approximately 18 miles of reuse lines. Included in this construction was a critical segment interconnecting the Arlington East and Mandarin reclaimed water grids. This interconnection allows these two facilities to satisfy the growing reuse needs of developments in southern Duval and northern St. Johns counties, such as Nocatee.

Additionally, JEA initiated a pilot study to test the application of a glycerin (a byproduct of biodiesel production) as a supplemental carbon source at the Buckman WWTF. With approval from FDEP, a total of 500 gallons of byproduct was applied from August 3, 2009 through August 9, 2009, at a rate of 70 gallons/day. The addition of the byproduct resulted in an average drop of 0.833 mg/l TN. There were no adverse effects upon treatment for carbonaceous biological oxygen demand and total suspended solids. JEA is currently further evaluating this material. In addition to aiding in nutrient removal, use of this product increases the viability of biodiesel production by beneficially using a byproduct that otherwise would have to be disposed.

Town of Orange Park

The Town of Orange Park received a new WWTF permit from FDEP this past year, which requires that the Phase 1 improvements to the WWTF (project OP-1) be completed by January 31, 2010 (see **Figure 11**). As part of the Phase 1 improvements, on January 2009, the Town Council considered and approved an interlocal agreement with CCUA, which provided the legal framework to discharge treated, filtered effluent from the Ash Street WWTF into the CCUA reclaimed water system at the Miller Street WWTF. This agreement specified the effluent quality conditions necessary to discharge treated effluent to CCUA and provided that: (1) CCUA would pay no charges to the Town for water used in the reclaimed water system; (2) a

methodology for calculating the reclaimed water transmission capacity allocated for Town effluent; and (3) grants of easement to CCUA to construct the reclaimed water transmission line westward through Town rights-of-way.

FIGURE 11: VIEW LOOKING EAST AT THE TOWN OF ORANGE PARK'S PROJECT AREA FROM DIGESTER #2

U.S Navy

The U.S. Navy's NAS-Jacksonville WWTF reuse system expansion (project USN-2) has been designed (100%), and the FDEP permit application has been submitted. NAS-Jacksonville is currently waiting on the construction permit from FDEP. The Navy is pursuing funding for this project through an Energy Conservation Program, and it appears that funding may become available in fall 2010. In addition, NS-Mayport has initiated a study of their WWTF to obtain the most cost effective solution to meeting the TN TMDL. The contract for the study was recently awarded and should be complete by early spring 2010.

WWTF Progress Towards the Marine Section TMDL

Figure 12 shows the progress made towards meeting the WWTF portion of the marine TN TMDL. The first bar in the figure shows the starting load for the marine WWTFs as calculated in the BMAP. The second bar shows the estimated 2009 load based on all completed marine WWTF projects (both those in the BMAP and those listed above). The third bar indicates the total allocation allowed for the WWTFs in the marine section of the river.

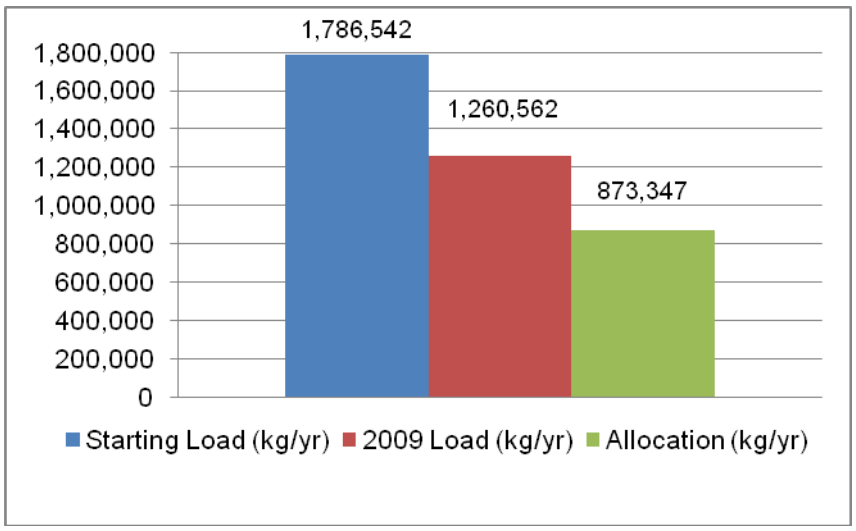


FIGURE 12: WWTF PROGRESS TOWARDS THE TN MARINE TMDL

2.2.1.3 **Project Implementation Status**

The section above described all the efforts in the past year related to project implementation including design and construction. These are important milestones that lead to project completion and actual load reductions. The WWTF projects that were completed during the last year and their associated load reductions are shown below in **Table 8** and **Table 9** for the freshwater section of the river. No WWTF projects were completed this past year in the marine section, although several are underway (see **Section 2.2.1.2**).

TABLE 8: WWTF PROJECTS COMPLETED IN THE FRESHWATER SECTION FOR TP (OCTOBER 2008 – OCTOBER 2009)

This is a four-column table. Column 1 lists the entity, Column 2 lists the project number, Column 3 lists a description, and Column 4 lists the TP project reduction (in kilograms per year).

- = Empty cell/no data

ENTITY	PROJECT NUMBER	DESCRIPTION	TP PROJECT REDUCTION (KG/YR)
City of Palatka	PAL-2	Reuse to ball fields	691
City of Palatka	PAL-3	Reuse to cemeteries	1,205
City of Palatka	PAL-4	Reuse at WTP	1,555
-	-	**Total**	**3,451**

TABLE 9: WWTF PROJECTS COMPLETED IN THE FRESHWATER SECTION FOR TN (OCTOBER 2008 – OCTOBER 2009)

This is a four-column table. Column 1 lists the entity, Column 2 lists the project number, Column 3 lists a description, and Column 4 lists the TN project reduction (in kilograms per year).

- = Empty cell/no data

ENTITY	PROJECT NUMBER	DESCRIPTION	TN PROJECT REDUCTION (KG/YR)
City of Palatka	PAL-2	Reuse to ball fields	5,227
City of Palatka	PAL-3	Reuse to cemeteries	9,091
City of Palatka	PAL-4	Reuse at WTP	11,727
-	-	**Total**	**26,045**

2.2.1.4 Water Quality Credit Trading Status

CCUA entered into a pre-BMAP trade agreement with Clay County on February 12, 2008 to transfer up to 21,845 kg/yr of TN to the County to meet their marine TN reduction requirements. Because of some final revisions to the BMAP allocation, the County only required 19,686 kg/yr of TN allocation for the marine section at the time of the transfer on March 6, 2008. A letter of agreement was prepared and signed by both CCUA and Clay County. After this letter of agreement was delivered to FDEP, the County reduction requirement was further reduced by FDEP to 16,841 kg/yr, resulting in an excess TN allocation transferred to the County from CCUA in the amount of 2,845 kg/yr. The County and CCUA agreed that the County could retain the excess allocation to meet the County's freshwater TN reduction requirements. On August 25, 2009, CCUA and Clay County amended the interlocal agreement to allow the transfer of an additional 409 kg/yr of TN to the County to meet their freshwater TN reduction requirement and to provide a temporary loan of TP water quality credits in the amount of 1,476 kg/yr. The loan of TP credit was made after CCUA had applied for and received a permit revision to its Fleming Island WWTF to reduce its TP loading limit by this same amount. A copy of the letter agreement between CCUA and Clay County was provided to FDEP on September 23, 2009 regarding the amended interlocal agreement.

The Town of Hastings and St. Johns County entered into an interlocal agreement for the trade of 198.2 kg/yr of TP. The Hastings WWTF has been upgraded with chemical feed facilities, which will generate the necessary credits. The trade to St. Johns County will begin on December 31, 2010.

JEA has held preliminary discussions about trading with prospective partners, specifically City of Jacksonville and FDOT. No formal request for credits from either of these entities has been obtained as of October 31, 2009.

2.2.2 MS4s

2.2.2.1 Freshwater

Clay County

In the past year, Clay County officials worked closely with CCUA to amend the existing interlocal agreement to transfer additional water quality credits from CCUA to the County. CCUA's Fleming Island WWTF permit was modified to reflect the TP reduction that was needed to trade with the County (project CC-3). The interlocal agreement was finalized in September 2009, fulfilling Clay County's BMAP requirements for both TN and TP reductions in the

freshwater portion of the LSJR Basin. Clay County has continued its education program (project CC-1) to bring information to residents on water conservation and improving the health of the St. Johns River through television broadcasts, participation in the Florida Yards and Neighborhood (FYN) Program, and SJRWMD Watershed Action Volunteers (WAV).

City of Green Cove Springs

The Vystar Credit Union project (GCS-6) in Green Cove Springs was completed in August 2008. This is the last project needed by Green Cove Springs to meet their MS4 allocation.

MS4 Progress Towards Meeting the Freshwater TMDLs

Figure 13 and **Figure 14** show the progress made towards meeting the MS4 portion of the freshwater TP and TN TMDLs. The first bar in the figures shows the starting load for the freshwater MS4s from the BMAP. The second bar shows the estimated 2009 load based on all completed freshwater MS4 projects (both those in the BMAP and those listed above). The third bar indicates the total allocation allowed for the MS4s in the freshwater section of the river. As shown in **Figure 13**, the MS4s in the freshwater section have met the TP reductions required under the BMAP.

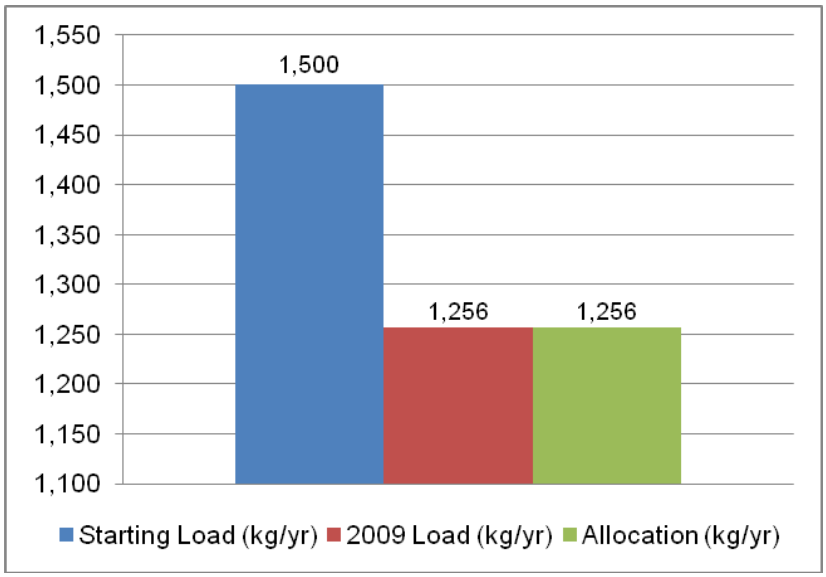


FIGURE 13: MS4 PROGRESS TOWARDS THE TP FRESHWATER TMDL

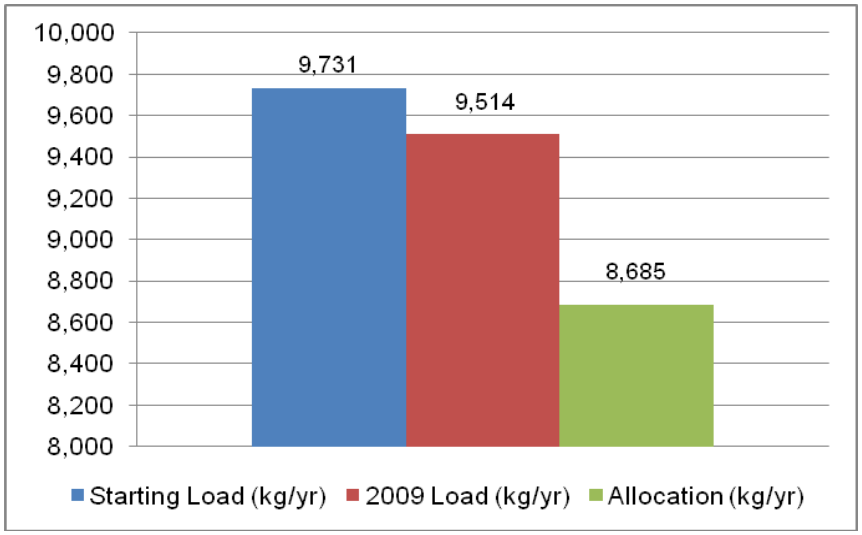


FIGURE 14: MS4 PROGRESS TOWARDS THE TN FRESHWATER TMDL

2.2.2.2 **Marine**

City of Atlantic Beach

The City of Atlantic Beach completed the Hopkins Creek Stormwater Treatment System project (project AB-5) on October 31, 2008 (see **Figure 15**), which completes the City's projects to meet the MS4 allocation. In addition, the City has continued the activities required by the MS4 permit including WAV education efforts, street sweeping, stormwater system inspection, and monitoring.

FIGURE 15: ATLANTIC BEACH RIBBON CUTTING FOR HOPKINS CREEK REGIONAL RETENTION POND

City of Jacksonville

The City of Jacksonville in cooperation with the Water and Sewer Expansion Authority (WSEA) has completed the Lake Forest Phase III Septic Tank Phase-Out Project. Approximately 840 properties previously identified with potential failing septic tanks were provided connection to central sewer facilities. The City also broke ground on the Lincoln Villas Phase I Septic Tank Phase-Out Project during this time period. Approximately 90 septic tanks will be provided connection to central sewer facilities. Of these approximately 930 septic tank connections, 151 occur within a 300 meter buffer of streams and are eligible for BMAP credit. Based on the methodology submitted with the City's BMAP projects prior to BMAP adoption, completion of these two projects would represent a reduction of 1,000 kg/yr of TN (towards the total reductions for project COJ-52). As agreed to in pre-BMAP discussions, FDEP is conducting a study to quantify nutrient contributions from failing septic tanks to area waterways (see **Section 2.3.2.1**). Results of the study will be used to quantify the final water quality credits applicable to the City's septic tank phase-out projects.

The City of Jacksonville has also been working on stormwater treatment projects. The Sandalwood Canal Project (COJ-25) construction was completed this past year (see **Figure 16**). The project consisted of canal widening and conveyance improvements as well as retrofit of 3,100 acres for water quality treatment. The Upper Deer Creek Expansion Project (COJ-22) was bid during this time period, and construction is scheduled to begin prior to the end of 2009. The project expands the existing pond to provide retrofit water quality treatment for 536 acres. The City began design on four stormwater treatment projects anticipated to provide retrofit water quality treatment. The projects, BMP type, as well as the associated BMAP project title are listed in **Table 10**.

FIGURE 16: CITY OF JACKSONVILLE SANDALWOOD CANAL UNDER CONSTRUCTION (PHOTO AT LEFT) AND COMPLETED (PHOTO AT RIGHT)

TABLE 10: CITY OF JACKSONVILLE STORMWATER TREATMENT PROJECTS ISSUED FOR DESIGN IN 2008-2009

This is a four-column table. Column 1 lists the COJ project title, Column 2 lists the BMAP project title, Column 3 lists the project number, and Column 4 lists the BMP type.

COJ PROJECT TITLE	BMAP PROJECT TITLE	PROJECT NUMBER	BMP TYPE
McCoy Creek Pond C	LSJR Upstream of Trout	COJ-42	Wet Detention
McCoy Creek Burke Lime Pit	LSJR Upstream of Trout	COJ-42	Wet Detention
Miruelo Circle Drainage Improvements	LSJR Upstream of Trout	COJ-42	Vegetated Swales
Paul Avenue Outfall	LSJR Upstream of Trout	COJ-42	Wet Detention
Smith-Broward Pond	LSJR Upstream of Trout	COJ-42	Wet Detention
Country Creek Drainage Improvements	Trout River	COJ-48	Wet Detention

The City of Jacksonville's Master Stormwater Management Plan is being updated, and alternatives development has been completed for five sub-basins. All projects will be prioritized on a watershed and county-wide basis to determine the most cost effective projects with relation to flood control and water quality treatment. Additionally, the City has successfully completed its second year of billing and collection for the Jacksonville Stormwater Utility. The utility represents a significant step forward in the City's ability to plan and implement stormwater treatment projects. The advantages of dedicated funding on a regular and predictable timetable greatly increase the success of stormwater project implementation and ultimately the ability to retrofit those areas that currently receive no water quality treatment. A portion of the utility's funds will be dedicated to septic tank phase out in those high priority areas classified by local ordinance.

The City of Jacksonville continues to implement non-structural activities to reduce nutrient loading to the river in compliance with the BMAP. These activities include street sweeping, drainage maintenance, local ordinances, and extensive education and outreach efforts. In addition, the City is participating with the Florida Stormwater Association and FDEP on a study to determine actual removal rates of nutrients and other pollutants through implementation of storm water BMPs.

The City enacted a fertilizer ordinance in July 2008 (Ordinance 2008-28-E) to address residential and commercial fertilization practices and the associated impacts to surface waters. The fertilizer ordinance requires homeowners, commercial fertilizer applicators, and fertilizer bulk storage facility operators to abide by specific BMPs and associated reporting requirements. For instance, commercial fertilizer applicators and fertilizer bulk storage facility operators are required to obtain training in the fertilizer application and handling BMPs. Ordinance 2008-30-E was also enacted at the same time to adopt the SJRWMD Landscape Irrigation Schedule rule which addresses excessive irrigation and the associated nutrient laden runoff associated with lawn fertilizer. In order to accomplish the intended goals and objectives of the ordinances, the City is on an educational campaign to inform the residents and commercial applicators about the value of the natural water resources, how to effectively apply fertilizer on home lawns and around commercial properties, and the particulars of the irrigation schedule and associated application rates.

The major thrust of this outreach effort is public and business involvement and participation. The goal is to engage the general public and the businesses in water pollution prevention and conservation techniques. The Duval County Agriculture Extension Service), SJRWMD WAV program, JEA, and other organizations have partnered with the City to educate the public in

these areas. Irrigation and fertilizer educational outreach is ongoing at town-meetings, Citizen Planning and Advisory Committee Meetings, other governmental bodies (Planning and Zoning Board, Duval County Soil and Water Conservation District, St. Johns River Commission), homeowner association meetings, businesses, civic organizations, professional groups (such as the Florida Pest Management Association), and civic events (such River Clean-up Day Awards, Earth-Day, Water Day at the Museum of Science and History). To date, over 40,000 irrigation and fertilizer brochures have been printed and over 31,000 have been distributed at 69 events. In addition more than 100,000 of JEA's customers have received information in their utility bills.

The City is also partnering with the local retailers in regards to the importance of proper irrigation and fertilizer use. Stores are being asked to carry out the "message" to their customers. One of the larger retailers, The Home Depot Inc., is now displaying irrigation and fertilizer posters that emphasize irrigation and fertilizer BMPs. The Wal-Mart Stores have just completed the design of similar irrigation and fertilizer posters for their stores

In addition to the above educational efforts, compliance and enforcement activities are being implemented. More than 50 City inspectors have been properly trained in irrigation and fertilizer violation enforcement. They are able to recognize and investigate irrigation and fertilizer violations, and to write Notices to Correct and tickets for violations. In 2008, 64 irrigation violation complaints were investigated and four violations were observed. In 2009, 509 irrigation violation complaints were investigated and 37 violations were observed. So far no repeat violations have been observed but additional enforcement training and more rigorous enforcement efforts are planned for 2010.

Florida Department of Transportation

FDOT submitted a plan for the balance of their BMAP reductions to meet the requirements of project COJ-120. FDOT and FDEP are coordinating further details of their plan to achieve reductions through a combination of changes in fertilizer application practices, addition of floating mats to several existing wet ponds, and overdesigning future stormwater projects to treat larger areas than required by permit.

City of Jacksonville Beach

In the City of Jacksonville Beach, the FDOT Beach Boulevard Widening Project Pond 2 (project JB-2) is anticipated to be completed ahead of schedule. The project is currently under construction and is scheduled to be completed next year (2010).

Clay County

The interlocal agreement between Clay County and CCUA was finalized in September 2009, fulfilling Clay County's BMAP requirements for TN in the marine section of the river. Clay County has also continued its education program to bring information to residents on water conservation and improving the health of the St. Johns River through television broadcasts, participation in the FYN Program, and WAV.

St. Johns County

The St. Johns County stormwater education program (project SJC-11) has been very successful this past year. The County made presentations to 364 student groups with over 4,200 student interactions (see **Figure 17**). There have also been presentations to 41 adult groups with 828 adult interactions. Over 10,000 written materials, such as brochures, educational pieces, and waterwise books, have been distributed this year. The Erosion and Sedimentation Control Inspector Training Course certified its 75 attendees. In addition, several storm drain marking

events placed 488 storm drain markers throughout St. Johns County. For the Deep Creek Regional Stormwater Treatment (RST) operation and maintenance (O&M), an agreement has been developed and the County is working through the details with SJRWMD (project SJC-6). Additionally, the interlocal agreement with the Town of Hastings to purchase TP credits was executed on September 2, 2009, and will go into effect December 31, 2010 (project SJC-7).

FIGURE 17: ST. JOHNS COUNTY ENVIROSCAPE DISPLAY AT WAV NIGHT AT LOCAL SCHOOL

MS4 Progress Towards Meeting the Marine TMDLs

Figure 18 shows the progress made towards meeting the MS4 portion of the marine TN TMDL. The first bar in the figure shows the starting load for the marine MS4s from the BMAP. The second bar shows the estimated 2009 load based on all completed marine MS4 projects (both those in the BMAP and those listed above). The third bar indicates the total allocation allowed for the MS4s in the marine section of the river.

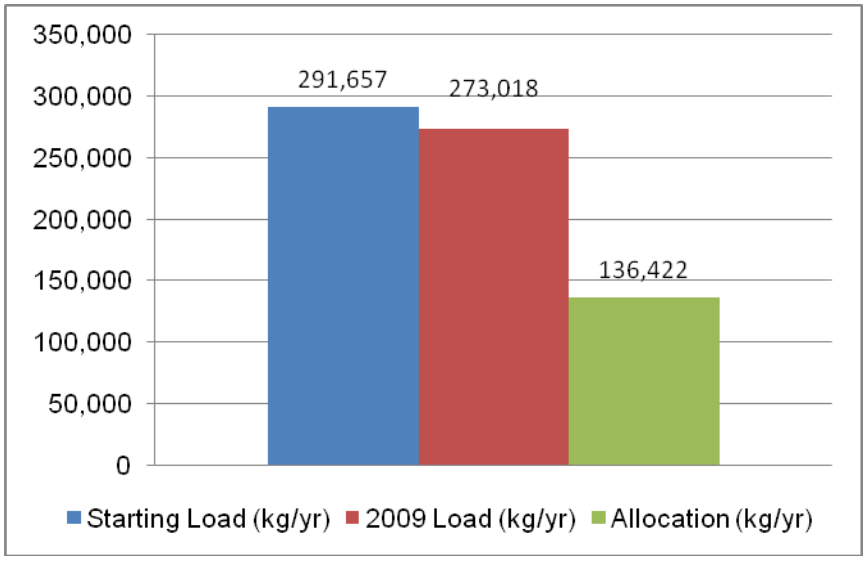


FIGURE 18: MS4 PROGRESS TOWARDS THE TN MARINE TMDL

2.2.2.3 **Project Implementation Status**

The section above described all of the activities that were underway during the past year, which includes efforts that are not yet complete or are continuous, such as public education. The MS4 projects that were completed during the last year and their associated load reductions are shown below in **Table 11** and **Table 12** for the freshwater section of the river and **Table 13** for the marine section.

TABLE 11: MS4 PROJECTS COMPLETED IN THE FRESHWATER SECTION FOR TP (OCTOBER 2008 – OCTOBER 2009)

This is a four-column table. Column 1 lists the entity, Column 2 lists the project number, Column 3 lists the description, and Column 4 lists the TP project reduction (in kilograms per year).

- = Empty cell/no data

ENTITY	PROJECT NUMBER	DESCRIPTION	TP PROJECT REDUCTION (KG/YR)
Clay County	CC-1	Education Program	16.2
Clay County	CC-3	Trade with CCUA	173.4
-	-	**Total**	**189.6**

TABLE 12: MS4 PROJECTS COMPLETED IN THE FRESHWATER SECTION FOR TN (OCTOBER 2008 – OCTOBER 2009)

This is a four-column table. Column 1 lists the entity, Column 2 lists the project number, Column 3 lists the description, and Column 4 lists the TN project reduction (in kilograms per year).

- = Empty cell/no data

ENTITY	PROJECT NUMBER	DESCRIPTION	TN PROJECT REDUCTION (KG/YR)
City of Green Cove Springs	GCS-6	Vystar Credit Union	0.5
Clay County	CC-1	Education Program	111.0
-	-	**Total**	**111.5**

TABLE 13: MS4 PROJECTS COMPLETED IN THE MARINE SECTION (OCTOBER 2008 – OCTOBER 2009)

This is a four-column table. Column 1 lists the entity, Column 2 lists the project number, Column 3 lists the description, and Column 4 lists the project reduction (in kilograms per year).

- = Empty cell/no data

ENTITY	PROJECT NUMBER	DESCRIPTION	PROJECT REDUCTION (KG/YR)
City of Atlantic Beach	AB-5	Hopkins Creek Stormwater Treatment System	12
City of Jacksonville	COJ-25	Sandalwood Canal	880
City of Jacksonville	COJ-52	Septic Tank Phase-Out Projects (151 tanks)	1,000
City of Jacksonville	COJ-70	FDOT New JTB/9A Interchange	442
City of Jacksonville	COJ-97	FDOT Branan Field Chafee roadway project (103rd to I-10)	55
City of Jacksonville	COJ-102	FDOT Heckscher Drive / 9a Interchange-1 DRS	89
City of Jacksonville	COJ-103	FDOT Heckscher Drive / 9a Interchange-2 WDS	25
Clay County	CC-12	Education Program	1,010
St. Johns County	SJC-10	Implementation street sweeping	19
St. Johns County	SJC-11	Stormwater Education	153
-	-	**Total**	**3,685**

2.2.3 URBAN STORMWATER

2.2.3.1 **Freshwater**

Clay County

The interlocal agreement between Clay County and CCUA was finalized in September 2009, fulfilling Clay County's BMAP requirements for both TN and TP reductions in the freshwater section (project CC-6). Clay County has continued its education program to bring information to residents on water conservation and improving the health of the St. Johns River through television broadcasts, participation in the FYN Program, and WAV (project CC-4).

Town of Hastings

The Town of Hastings completed the installation of the alum feed system at the Town's WWTF for phosphorus removal (HAS-1). The Town also completed negotiations with St. Johns County for a water quality credit trade of phosphorus credits.

Putnam County

In Putnam County, as part of the new East Putnam County Regional WWTF, septic tank removal projects along U.S. 17 have been under construction. This project consists of 50 commercial septic tanks and 58 residential homes along the river. Once the new WWTF is completed, these homes and businesses will be connected to the WWTF, which consists of rapid infiltration basins as a means of effluent disposal. Credit for the septic tank phase-outs were calculated based on recommended TN and TP concentrations from FDEP. These credits are provisional and could be revised based on the results of the septic tank study (see **Section 2.3.2.1**). The septic tank project will replace project PUT-3 (Trade with Port Buena Vista WWTF) in the BMAP. The new project will result in greater load reductions in a shorter period of time than the previous project, which also allows for a reduction in the County's Algal Initiative

commitment (project PUT-6). In addition, the County has begun to negotiate the agreement for the Edgefield/Dog Branch RST with SJRWMD for O&M (project PUT-4). A draft agreement has been prepared.

St. Johns County

St. Johns County has secured funding for acquisition of 160 acres for an RST facility that will serve as a component of the Algal Initiative (projects SJC-17 and SJC-26). A preliminary engineering report is underway to optimize a treatment train for the agricultural canals that flow through this site. An additional study is also underway to explore the feasibility of another RST site in the freshwater section of the LSJR.

Town of Welaka

The Town of Welaka replaced their Algal Initiative commitment (project WEL-1) with a septic tank phase-out project. The credits from this project are provisional and could be revised based on the results of the septic tank study (see **Section 2.3.2.1**). Through this project, 136 homes within 300 meters of surface waters were connected to sewer. This project achieves greater reductions than what was required in the BMAP and is already completed, which allowed for reductions to occur earlier than the October 31, 2017 deadline for Algal Initiative projects.

Non-MS4 Progress Towards Meeting the Freshwater TMDLs

Figure 19 and **Figure 20** show the progress made towards meeting the non-MS4 portion of the freshwater TP and TN TMDLs. The first bar in the figures shows the starting load for the freshwater non-MS4s from the BMAP. The second bar shows the estimated 2009 load based on all completed freshwater non-MS4 projects (both those in the BMAP and those listed above). The third bar indicates the total allocation allowed for the non-MS4s in the freshwater section of the river.

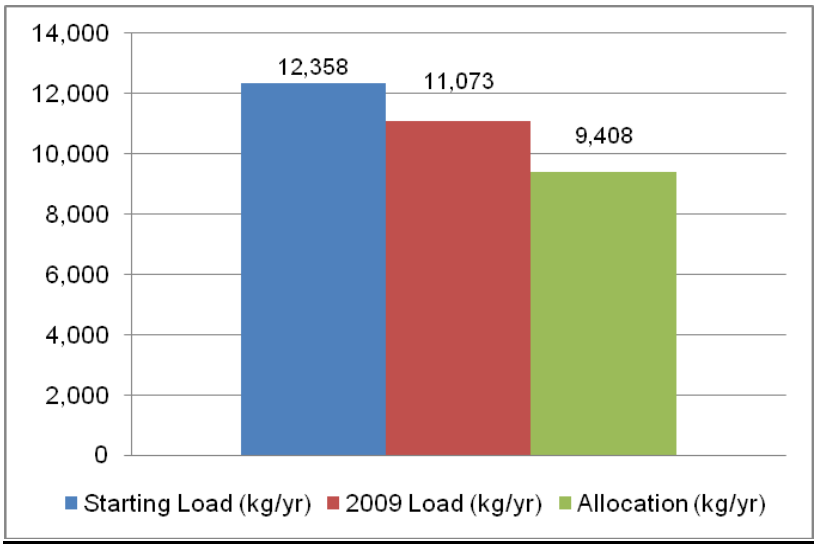


FIGURE 19: NON-MS4 PROGRESS TOWARDS THE TP FRESHWATER TMDL

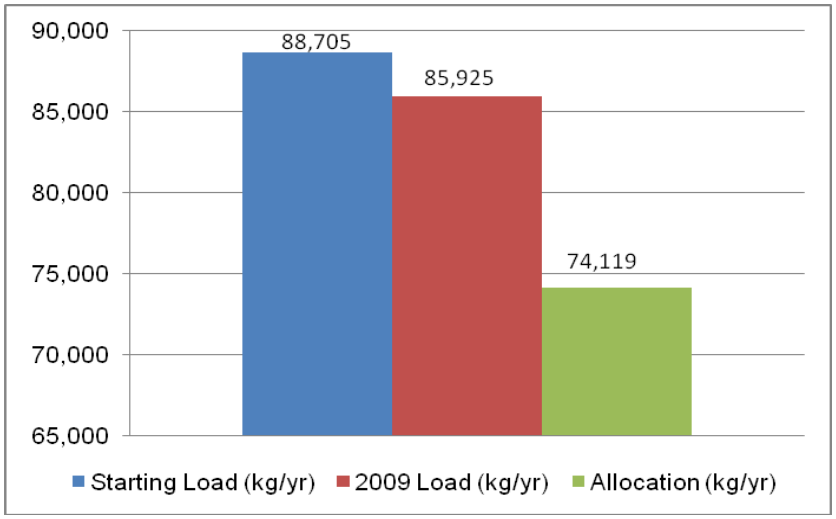


FIGURE 20: NON-MS 4 PROGRESS TOWARDS THE TN FRESHWATER TMDL

2.2.3.2 **Marine**

Camp Blanding

Over the last year, Camp Blanding has maintained or repaired over 200 miles of swales within the Cantonment Area (see **Figure 21**). Maintenance/repair of the swales includes mowing, debris removal, tree and shrub removal, re-grading as resources provide, and stabilization when needed. An estimated 30% of the total man hours and related funding required for grounds maintenance within the Camp Blanding Cantonment Area were dedicated solely to maintenance or repairs of the swale systems. A related effort that helped to locate swales in need repair involved a rewrite of the Washrack Engineering Report performed by AEROSTAR Engineering in 2003. In addition, 13 washrack sites were investigated in 2009. These sites were located within different unit compounds on post and included washracks that will be closed due to inactivity. Camp Blanding also ensured that there are no uncontrolled releases of water into adjacent swale systems because of damaged oil/water separators. No damaged sites were located and this effort allowed for a closer inspection of the sites by Environmental Staff at Camp Blanding.

During July 2008, the Camp Blanding WWTF washrack facilities were repaired as the adjacent triangular retention basin was excavated and stabilized using stone to include the addition of new culvert piping that would decrease the potential for erosion. The area that was repaired is 1,000 square feet in size. These modifications were deemed necessary after a routine inspection by Camp Blanding Environmental Staff. The repairs have not only reduced erosion but have also made it easier to keep the area clear of vegetation and allow for the proper reduction of nitrates.

FIGURE 21: CAMP BLANDING CAMPGROUND SWALE FROM AVENUE A TO KINGSLEY LAKE

Clay County

The interlocal agreement between Clay County and CCUA was finalized in September 2009, fulfilling Clay County's BMAP requirements for TN reductions in the marine section. Clay County has continued its education program to bring information to residents on water conservation and improving the health of the St. Johns River through television broadcasts, participation in the FYN Program, and WAV (project CC-17).

St. Johns County

St. Johns County secured funding for acquisition of 160 acres for a RST facility that will serve as a component of the Algal Initiative (project SJC-26). A preliminary engineering report is underway to optimize a treatment train for the agricultural canals that flow through this site.

Non-MS4 Progress Towards Meeting the Marine TMDL

Figure 22 shows the progress made towards meeting the non-MS4 portion of the marine TN TMDL. The first bar in the figure shows the starting load for the marine non-MS4s from the BMAP. The second bar shows the estimated 2009 load based on all completed marine non-MS4 projects (both those in the BMAP and those listed above). The third bar indicates the total allocation allowed for the non-MS4s in the marine section of the river.

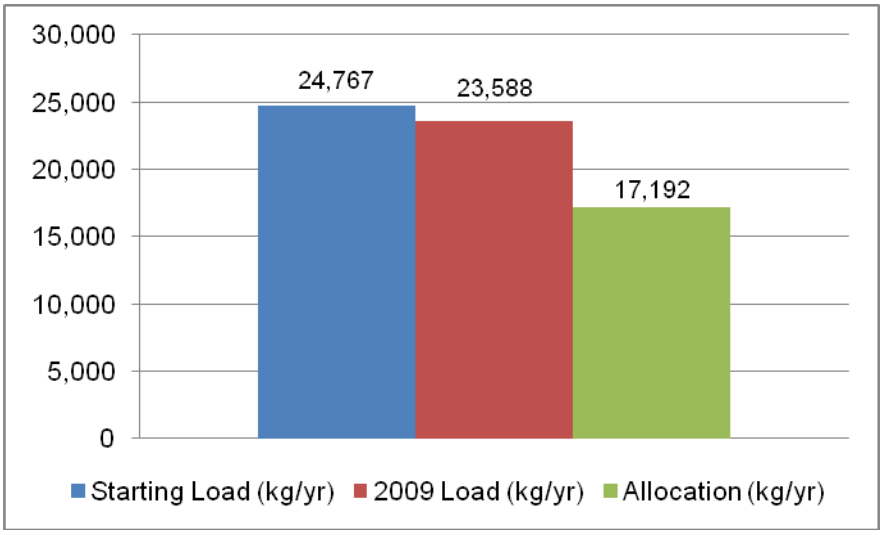


FIGURE 22: NON-MS4 PROGRESS TOWARDS THE TN MARINE TMDL

2.2.3.3 Project Implementation Status

The non-MS4 projects that were completed during the last year and their associated load reductions are shown below in **Table 14** and
Table 15 for the freshwater section of the river and **Table 16** for the marine section.

TABLE 14: NON-MS4 PROJECTS COMPLETED IN THE FRESHWATER SECTION FOR TP (OCTOBER 2008 – OCTOBER 2009)

This is a four-column table. Column 1 lists the entity, Column 2 lists the project number, Column 3 lists the description, and Column 4 lists the TP project reduction (in kilograms per year).

- = Empty cell/no data

ENTITY	PROJECT NUMBER	DESCRIPTION	TP PROJECT REDUCTION (KG/YR)
Clay County	CC-4	Education Program	30.7
Clay County	CC-6	Trade with CCUA	147.7
St. Johns County	SJC-2	Implementation street sweeping	2.3
St. Johns County	SJC-3	Stormwater Education	186.4
Town of Hastings	HAS-1	WWTP Chemical Feed Systems	249.1
Town of Welaka	WEL-1	Septic Tank Phase-Out	153.0
-	-	**Total**	**769.2**

TABLE 15: NON-MS4 PROJECTS COMPLETED IN THE FRESHWATER SECTION FOR TN (OCTOBER 2008 – OCTOBER 2009)

This is a four-column table. Column 1 lists the entity, Column 2 lists the project number, Column 4 lists the description, and Column 4 lists the TN project reduction (in kilograms per year).

- = Empty cell/no data

ENTITY	PROJECT NUMBER	DESCRIPTION	TN PROJECT REDUCTION (KG/YR)
St. Johns County	SJC-2	Implementation street sweeping	19
St. Johns County	SJC-3	Stormwater Education	1,078
Hastings	HAS-1	WWTP Chemical Feed Systems	176
Town of Welaka	WEL-1	Septic Tank Phase-Out	490
-	-	**Total**	**1,763**

TABLE 16: NON-MS4 PROJECTS COMPLETED IN THE MARINE SECTION (OCTOBER 2008 – OCTOBER 2009)

This is a four-column table. Column 1 lists the entity, Column 2 lists the project number, Column 4 lists the description, and Column 4 lists the TN project reduction (in kilograms per year).

- = Empty cell/no data

ENTITY	PROJECT NUMBER	DESCRIPTION	PROJECT REDUCTION (KG/YR)
Clay County	CC-17	Education Program	482
St. Johns County	SJC-20	Implementation street sweeping	19
St. Johns County	SJC-21	Stormwater Education	492
-	-	**Total**	**993**

2.2.4 AGRICULTURE

2.2.4.1 **BMP Implementation Status**

FDACS through field staff and contracted staff with the University of Florida Institute of Food and Agricultural Sciences (UF-IFAS) has been working on enrolling growers in the vegetable and sod BMP programs. Most of the efforts so far have concentrated on the row crops. Several workshops were held with growers on the vegetable and agronomic crop manual.

There was a roll-out meeting in December 2008 for the sod manual that was attended by producers throughout the area. Staff have begun workshops in the LSJR Basin to introduce the cow/calf manual and begin enrollment of ranchers, and are starting to meet with nursery owners. Significant amounts of acreage in sod and pastures will be enrolled during the next BMAP reporting year. As other manuals are adopted, FDACS will begin the process with the appropriate commodity groups. The acres of each agricultural commodity currently enrolled in a BMP program are listed in **Table 17**.

TABLE 17: ACRES OF EACH COMMODITY ENROLLED IN A BMP PROGRAM

This is a four-column table. Column 1 lists the FDACS BMP program, Column 2 lists the acres as of February 2008, Column 3 lists the acres as of October 2009, and Column 4 lists the percent of commodity acreage.

Note: The acres in this table include Clay, Duval, Flagler, Putnam, and St. Johns Counties. Some of the area in these counties is outside of the LSJR Basin.
[1] Enrollment in these programs has been discontinued. Acres enrolled under the TCAA BMP will be re-enrolled under the Vegetable and Agronomic Crops (VAC) manual. A modified leatherleaf fern BMP will be incorporated in revisions to the VAC manual.
[2] Based on SJRWMD 2004 Agricultural Land Use Acres in the LSJR pertinent to each commodity with an adopted BMP manual. These acreages may include non-production areas of farm operations. In addition, the land use categories do not fall neatly under FDACS manuals.
[3] See discussion below. These acres may include all or part of the acres enrolled under the TCAA Interim BMP Program.
[4] This number is the percent of commodity acreage for both container nurseries and leatherleaf ferns combined.

- = Empty cell/no data
N/A = Not available

FDACS BMP PROGRAM	ACRES AS OF FEBRUARY 2008	ACRES AS OF OCTOBER 2009	PERCENT OF COMMODITY ACREAGE[2]
Citrus	54	98	26%
TCAA Interim BMP Program (Crops) [1]	4,694	4,694	15%
Vegetable and Agronomic Crops	0	600	9%
Container Nurseries	20	20	5%[4]
Leatherleaf Ferns[1]	78	78	5%[4]
Sod (adopted 2009)	N/A	805	17%
Cow/Calf (adopted 2009)	N/A	0	0%
Enrollment Total	**4,846**	**6,295**	**14%**
BMPs Otherwise Implemented (TCAA)[3]	N/A	**12,000**	**27%**
BMP Implementation Total	**-**	**18,295**	**41%**

The Tri-County Agricultural Area (TCAA) is included in the LSJR BMAP for nutrients. Vegetable growers are under a statutory mandate to either sign up for the FDACS BMP program or monitor the quantity and quality of the water leaving their farms. To date, no producers have opted to monitor water quality. Although there has been some resistance to submitting Notices of Intent (NOIs) to implement the FDACS BMPs by potato farmers in the TCAA, most are implementing the BMPs to a significant degree, as discussed below.

Data were collected from 22 on-farm assessments conducted in the TCAA on vegetable farms by IFAS BMP Implementation staff, funded through federal (FDEP), state (FDACS), and water management district programs. These preliminary assessments indicate that the targeted operations (representing about 12,000 acres) are conducting an average of 94% of the applicable BMPs in the 2005 *Water Quality/Quantity Best Management Practices for Florida Vegetable and Agronomic Crops*. On average, there are 27 (out of 49) BMPs applicable to these operations, with a range of 21 - 35.

BMPs that generally are not applicable to the crops, geography, and/or production systems in the TCAA fall largely in the following categories:

- Wetlands protection
- Filter strips

- Contour farming
- Fertigation
- Plasticulture
- Grassed waterways
- Riparian buffers
- Erosion control
- Farm ponds and springs

Plasticulture may be more of a factor in coming years, as producers try growing different crops. For most growers in the region, the following BMPs make up the majority of the applicable BMPs not being implemented, as indicated during the assessment process; however, not every BMP is applicable to every grower:

- Soil moisture measurement
- Observation wells
- Sap testing – by the time sap testing can show deficiency, it is usually too late to put out fertilizer because the row is closed up.
- Sediment sumps – possibly not effective for sandy soils; the growers generally use water control structures with riser boards.
- Tissue testing

FDACS staff and contractors will work with growers to evaluate whether these BMPs are truly applicable to their operations and, if so, how best to implement them.

2.2.4.2 Regional Stormwater Treatment Facilities

In sub-basins where a large percentage of the land is in agricultural use, regional treatment will be needed to meet pollutant load reduction goals (PLRGs) and TMDLs. Several RST projects were included in the LSJR BMAP: four in the freshwater portion of the river and four in the marine section. Two projects have been completed within the TCAA, in the freshwater section of the river (refer to **Section 2.3.2.2**). SJRWMD is currently assessing the most cost effective means of meeting the agricultural allocation beyond constructing RSTs alone, such as source control through improved BMPs or the creation of buffers through acquisition. However, it is likely that some of these listed RSTs may still be needed.

2.3 Improving Scientific Understanding

2.3.1 Water Quality Monitoring

2.3.1.1 Freshwater Section for the Chlorophyll-a Target

The monitoring plan includes two components to determine progress towards the chlorophyll-a target in the freshwater section: (1) routine ambient sampling; and (2) supplemental river transects. SJRWMD is conducting the ambient sampling in the freshwater section and this monitoring occurs on a biweekly basis at nine sites. SJRWMD has conducted this sampling on schedule over the last year and the effort is ongoing. The ambient water quality data are uploaded to STORET on a regular basis.

The river transects sampling occurs biweekly from April through October in the two worst case freshwater WBIDs (2213K and 2213L). The purpose of this sampling is to augment the ambient sampling during the high chlorophyll period of the year to better estimate the mean chlorophyll-a

concentration. As noted in the BMAP, 29 samples are needed in each WBID (58 samples total per monitoring event) to estimate mean concentrations with acceptable confidence. This sampling includes both standard parameters and *in vivo* fluorescence. The river transect sampling was funded by Georgia-Pacific and Seminole Electric. The samples were collected and analyzed by FDEP. The river transects sampling occurred on schedule from April 2009 through October 2009. The river transects data for the standard parameters are uploaded to STORET. The fluorescence data are maintained by FDEP.

2.3.1.2 Marine Section for the Dissolved Oxygen Target

Compliance with the DO target in the marine section of the river will be determined through data from three continuous DO stations, in which samples are collected every 15 minutes. The U.S. Geological Survey (USGS) station at Dames Point is an existing station and the DO sampling occurred throughout the last year. The data from this station are maintained by USGS and can be accessed through their website. There are also two new BMAP stations at Fulton Point and Clapboard Creek. FDEP obtained the equipment for these stations and set them up in August 2009. JEA is responsible for the operation and maintenance of these stations. Data have been collected from the Fulton Point station through October 2009. However, the Clapboard Creek station was damaged (see **Section 3.3**), and data are only available through early October 2009. FDEP is maintaining the DO data from the two new stations.

2.3.1.3 Nonpoint Source Monitoring and Monitoring of Tributary Inputs

The tributaries monitoring includes both ambient and high-flow event sampling. This information will be used to determine the loads entering the main stem of the river from its tributaries and to estimate the reductions associated with the implementation of stormwater projects.

For the ambient monitoring, SJRWMD samples a total of 21 stations. Four stations are sampled biweekly, 12 stations are sampled monthly, and the remaining five stations are sampled bimonthly. This sampling has occurred on schedule over the last year. In addition, JEA is responsible for sampling five stations on a bimonthly basis. JEA began their sampling in July 2009 and have, therefore, collected samples in July and September. All of the ambient monitoring data are uploaded to STORET on a regular basis.

The high-flow event sampling is conducted by CCUA, SJRWMD, and JEA. CCUA hired a contractor to collect the samples at their five stations. This work started in May 2009, and samples were collected in May through September. The results of this sampling are included in **Appendix B**. SJRWMD is responsible for collecting high-flow event samples at one station in Rice Creek and the City of Jacksonville is responsible for sampling at seven stations. However, neither entity has initiated their high-flow sampling. The storm event data are maintained by FDEP.

2.3.2 Special Projects

2.3.2.1 Septic Tank Study

FDEP is conducting a study, in conjunction with the Florida Institute of Technology (FIT), to assess nutrient and bacteria loadings and associated surface and ground water quality impacts from septic tanks. During the week of July 20, 2009, FDEP and FIT performed the initial setup on 12 residential septic sites that were located on nutrient and/or DO impaired waterbodies. Nine of the sites have active, in-place septic systems and three have abandoned-in-place systems. The sites are shown in **Figure 23**. The initial field work involved installation and survey of piezometers for ground water flow gradient assessment; collection of soil samples for

grain size, permeability, and percent organic matter; collection of shallow ground water samples from points down gradient from the septic tank drainfields; and collection of surface water samples from adjacent waterbodies. The water samples are being analyzed at the FDEP laboratory for nitrogen, phosphorus, chloride, and boron, and by FIT for triclosan and caffeine (two indicators for human wastewater). FIT will return to these sites in December 2009 and two other occasions in 2010 to conduct detailed sampling and measurement of ground water flow and seepage.

The information from this study will refine the BMAP estimates for TN and TP loading from septic tanks to the adjacent waterbodies and the distance that pollutants can travel from the septic tank drainfield to a waterbody. BMAP credit that was assigned for septic tank phase-outs will be refined once the study has been completed.

2.3.2.2 **Algal Initiative**

SJRWMD has completed two RSTs, Deep Creek West (Yarborough) and Edgefield, in the TCAA. The Deep Creek RST was estimated to 687 kg/yr of TN reduction and 562 kg/yr of TP reduction. The Edgefield RST was estimated to achieve 1,815 kg/yr of TN reduction and 822 kg/yr of TP reduction. SJRWMD has been monitoring the effectiveness of these RSTs and while the initial data for the Edgefield RST are encouraging and suggest that the facility is effectively reducing pollutants, the Deep Creek West RST data suggest that the facility may not be meeting the estimated TN and TP reductions goals. As more data become available, they will be evaluated to reassess the management and performance of these two RSTs.

SJRWMD is also looking at the feasibility of an additional RST, Deep Creek Southwest Masters. This RST will help to treat runoff from a largely agricultural area and is one of several large-scale RST facilities that will aid in the implementation of the LSJR Basin Regional Stormwater Treatment plan for the TCAA. This project will reduce nitrogen, phosphorus, turbidity, and sediment loading from the surrounding agricultural area. Approximately $4-$11 million will be needed to complete this project, depending on the type of facility. SJRWMD and St. Johns County are negotiating the possible sale of this property from SJRWMD to the County.

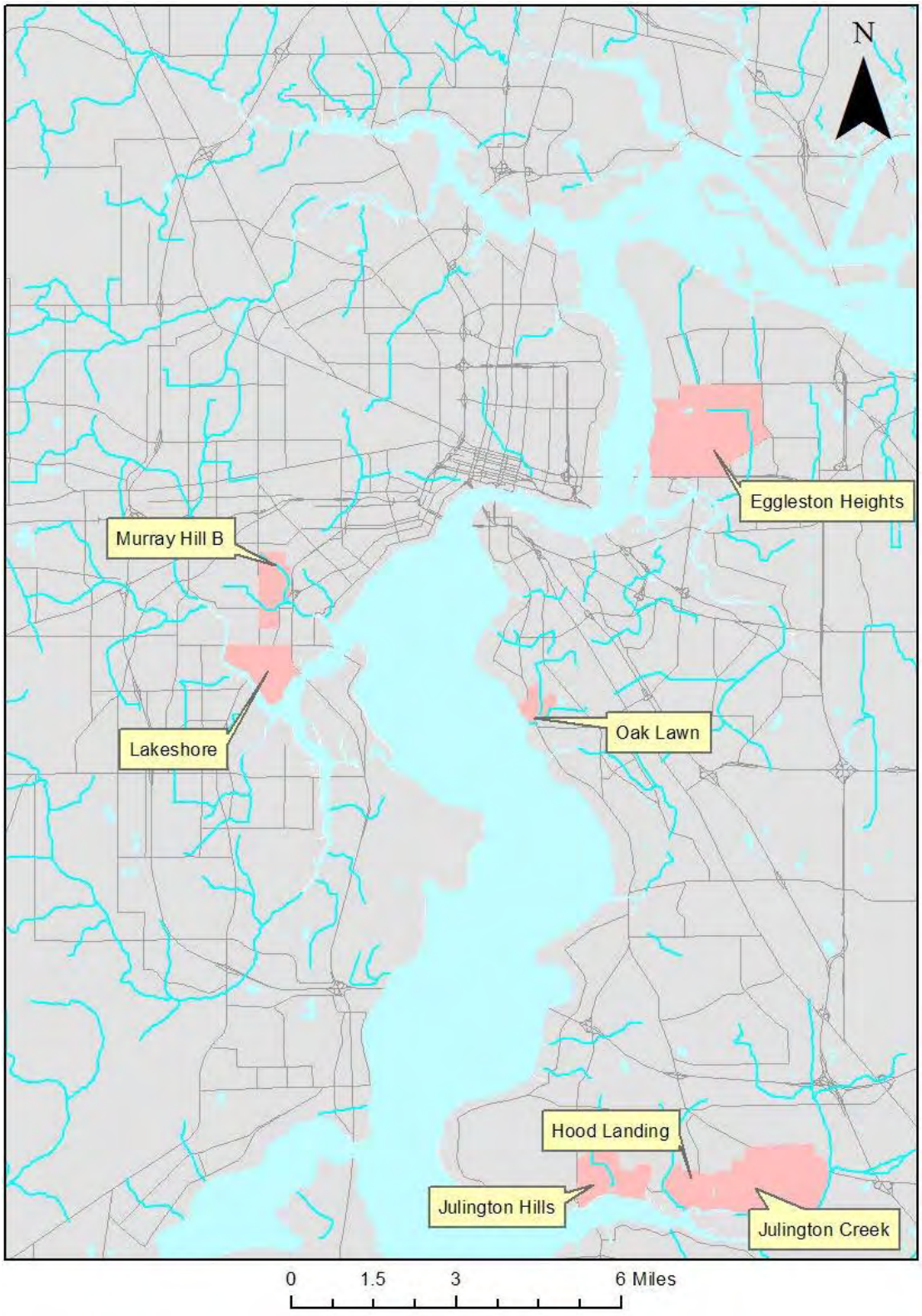


FIGURE 23: SEPTIC TANK STUDY SITES

2.3.3 TMDL Model Revisions

Several model modifications were identified in the BMAP so that the model could be run again in the next iteration with greater accuracy. One desired improvement to the TMDL model was to extend the ocean boundary to simulate the river plume as it moves out to the ocean and returns with the incoming tide. In 2009, the model boundary was extended on the ocean so the ocean grid now extends about 40 miles out. This distance was determined based on tests of how far large plumes extend out into the ocean so that the model can capture the fraction of the plume that comes back into the river. The plumes tend to travel north and south parallel to the coast. The United States Army Corps of Engineers (USACE) has provided assistance to SJRWMD in improving the ocean boundary in the model.

Another recommended modification to the model was to extend the boundaries into Lake George and Crescent Lake. The model previously ended at Buffalo Bluff and the additional area will provide information on how upstream nutrients loads affect the LSJR Basin. These improvements were completed in 2009 by SJRWMD. In addition, the salt marsh areas in the model have been altered to capture flows going in and out more accurately. Improving the marshes could help model DO consumption when water is in these areas. These marsh areas include Pablo Creek to the south of the Intracoastal Waterway, Sisters Creek, and Clapboard Creek.

In the upcoming year, modifications will be made to the river channel profile in the model. USACE recently completed the bathymetry for the channel, and they will provide the data to SJRWMD for use in updating the model.

2.4 Funding

The City of Atlantic Beach has a draft agreement with SJRWMD that is currently pending. If approved by both parties, there will be a grant for $1 million towards the Main WWTF upgrades and $1 million toward a reclaimed water system.

The City of Green Cove Springs in the process of applying for a $700,000 Community Development Block Grant (CDBG) to fund a portion of the $1,800,000 WWTF MLE conversion project. The City has also issued a Community Issue Budget Request (CBIR) to help fund this project.

The City of Jacksonville has received a $1 million grant for the Paul Avenue outfall land acquisition.

For the City of Jacksonville Beach's WWTF project, the City received $7,000,000 in state legislative grant funds and $4,000,000 in SJRWMD reuse grant funds.

The City of Neptune Beach will receive $700,000 (or up to 50% of construction costs) from SJRWMD for the WWTF upgrade project.

The City of Palatka has acquired funding from FDEP and SJRWMD for portions of the BMAP projects.

CCUA entered into a 50% cost share grant agreement with SJRWMD on August 22, 2007, for the Miller Street WWTF reuse upgrades project. To date, CCUA has received $6,951,034 in grant funding.

Table 18 shows JEA's total expenditures qualifying for reimbursement in Fiscal Year 2009 (October 2008 – September 2009) as part of existing agreements with FDEP and SJRWMD. Although the qualifying JEA expenditures took place in Fiscal Year 2009, some funds may not be received until after that period.

TABLE 18: JEA PROJECT FUNDING AND EXPENDITURES (OCTOBER 2008 – SEPTEMBER 2009)
This is a five-column table. Column 1 lists the granting agency, Column 2 lists the agreement number, Column 3 lists the project, Column 4 lists the FY09 total expenditures, and Column 5 lists the state's portion.

- = Empty cell/no data

GRANTING AGENCY	AGREEMENT NUMBER	PROJECT	FY09 TOTAL EXPENDITURES	STATE'S PORTION
FDEP	LP6738	SJRPP Reclaimed Water Project	$19,946.53	$9,973.27
FDEP	LP6832	Reclaimed Water – Transmission Line Extension on Kernan	$699,876.93	$349,938.47
SJRWMD	SK928AA	Assorted Reclaimed Water Projects	$166,113.22	$83,056.61
SJRWMD	SK928AA	Arlington East WRF - BNR	$5,118,054.38	$2,559,027.19
-	-	**TOTAL**	**$6,003,991.06**	**$3,001,995.54**

Putnam County received legislative appropriation funding for the East Putnam County Regional WWTF, which will allow for septic tank removal along U.S. 17 and removal of the Hiawatha Condos WWTF.

St. Johns County received $2 million for acquisition of the Masters Tract, an RST component of the Algal Initiative. In addition, the County obtained $1.1 million for countywide TMDL stormwater quality drainage improvements.

At the end of Phase 1 of the WWTF upgrades, the Town of Orange Park will have expended $8,042,428.55 for plant improvements. This includes $151,672 that was expended on the new plant operations building, which was constructed prior to October 2007. This total does not include engineering costs. Of that amount, $1,000,000 was provided to the Town in the form of a grant from FDEP. The Town is currently working with SJRWMD on a $625,000 grant to complete the Phase 1 improvements.

SJRWMD has approved a 50% cost share for the construction of the NAS-Jacksonville reuse expansion project. The Navy has explored various sources of funding and is currently pursuing funding through an Energy Conservation program, and money may be available in fall 2010.

An estimated 30% of total grounds maintenance funding within the Camp Blanding Cantonment Area was utilized for the maintenance/repair of over two hundred acres of swales.

Funding for agricultural BMP implementation in the LSJR Basin includes staff salary and contract expenditures. The estimated total for these costs is $30,000.

SECTION 3: MAJOR ISSUES

3.1 SUMMARY OF ISSUES

The major issue in BMAP implementation this past year has been funding. With the economic downturn and decrease in development, the funding necessary to implement the BMAP projects was difficult to obtain. The utilities had less new connections to their systems, and the local governments had less local revenue. In addition, federal and state funding that had been available in the past to help with the projects was also impacted. While funding has been an issue, this limitation has not caused delays in implementation of BMAP projects this first year. Additional details about how funding affected the stakeholders and other issues encountered this past year are described in **Section 3.2**. The issues associated with starting the BMAP monitoring plan are described in **Section 3.3**.

3.2 ISSUES BY SOURCE TYPE

3.2.1 WASTEWATER TREATMENT FACILITIES

3.2.1.1 Freshwater

City of Green Cove Springs

The largest issue for the City of Green Cove Springs is funding. The City is facing a potential $1,800,000 loan for the WWTF upgrade if no grant funding comes through. This could result in a 30-40% rate increase for the City's customers.

City of Palatka

The City of Palatka completed the reuse project at the WTP. However, the project was completed 9.5 months behind the BMAP schedule. The project was scheduled for December 31, 2008, and was actually completed on September 15, 2009. FDEP was not aware of this delay until the completion date was provided in the annual reporting process.

Seminole Electric

Seminole Electric has had problems with unit outages delaying testing of the SCRs. However, the project will be completed on time, in compliance with the BMAP schedule.

3.2.1.2 Marine

City of Atlantic Beach

The BMAP included a reclaimed water project to meet the City of Atlantic Beach's allocation. The preliminary design results showed that the most cost effective means of meeting the allocation was through WWTF upgrades only. However, the City is still willing to construct a reclaimed water system pending an agreement with the Selva Marina Country Club. The agreement has been on hold due to economic factors at the country club. If an agreement cannot be reached, the City will be requesting a modification to the project list, and will meet the BMAP allocation with only WWTF upgrades.

City of Neptune Beach

The City of Neptune Beach has scheduled construction of the WWTF upgrades during the dry season (November through May) to minimize the impact of peak flow events at the facility during construction.

Clay County Utility Authority
The major issue for CCUA was primarily in negotiating the terms and conditions of the interlocal agreements with Clay County and the Town of Orange Park. The agreement to transfer water quality credits to Clay County was particularly challenging as there were very few examples in the country as to how this agreement should be structured. In addition, it was challenging to manage the Miller Street WWTF reuse upgrades project.

JEA
The current economic recession has impacted JEA along with the rest of the utility community. New growth (and connections) has greatly dropped off and the ability for JEA to obtain funding through bonds has also been significantly impacted. As a result, JEA has been obligated to substantially reduce their capital budget. JEA estimates it will still meet or exceed its BMAP reduction requirements, but several BMAP projects, primarily the package plant phase-outs, have been delayed. The BMAP and JEA's aggregate permit Administrative Order allows JEA to substitute other projects of equal reductions. Through incremental improvements at the regional treatment facilities, JEA accomplished the nutrient reductions associated with the phase-outs and District II WWTF improvements, as required by the BMAP. Although JEA fully intends to complete the phase-outs and possibly the District II WWTF improvements, they will not be completed in accordance with the BMAP compliance schedule deadlines. Therefore, the reductions associated with these projects (projects JEA-10, JEA-11, JEA-12, JEA-14, and JEA-15) have been set to zero in the updated project table (see **Appendix A**). As these projects are implemented in future years, JEA will provide updates on the status and associated reductions. JEA will still meet the required BMAP reductions and schedule with the remainder of their projects.

U.S. Navy
The U.S. Navy encountered issues in obtaining federal funding for the construction of the reuse system at NAS-Jacksonville. The design of this project was completed a year behind schedule; however, the project will still be completed on time, in compliance with the BMAP schedule.

3.2.2 MS4s

3.2.2.1 **Marine**

Florida Department of Transportation
The FDOT project Beach Boulevard Improvements from West of FCCJ to East of San Pablo (COJ-94) was scheduled to be completed on April 30, 2008. However, this project has been delayed and is currently under construction. The project will be completed by December 31, 2010.

St. Johns County
The major issue for St. Johns County is that these tight fiscal times will make it difficult to secure the full funding needed to implement projects to meet the BMAP allocation. However, the County has met is BMAP requirements for the first year.

Town of Orange Park
The greatest challenge for the Town of Orange Park in meeting the BMAP allocation has been the construction of a new process system on the existing footprint of an active WWTF operation. Town staff and contractors have taken great care to ensure that the quality of wastewater effluent was not compromised during the construction process. To enhance effluent quality

during the construction process, the Town entered into a contractual agreement with In-Pipe Technology Company, LLC to provide facultative bacterial dosing of the wastewater collection system in twenty-three locations. Introduction of facultative bacteria has reduced the influent carbonaceous biological oxygen demand, the influent nitrogen, and has helped reduce hydrogen sulfide and fats, oils, and greases in the system prior to reaching the Ash Street WWTF. As a result, effluent quality has steadily improved even as biological processes in the plant were disrupted during construction.

3.2.3 URBAN STORMWATER

3.2.3.1 **Freshwater**

Town of Hastings

The Town of Hastings has installed but has not yet begun utilizing the chemical feed facilities at the WWTF. However, the Town is meeting their BMAP allocation, and the chemical feed facilities will be utilized once the trade agreement with St. Johns County begins (December 31, 2010)

Putnam County

Due to the economic times and land development declines in Putnam County, the Port Buena Vista WWTF is no longer being considered by developers for plant relocation and upgrades. The County removed this project (PUT-3) from the BMAP project list and replaced it with the septic tank phase-out project. The septic tank project will be completed earlier than the previous project and will result in greater nutrient reductions, based on the provisional credits. The reductions for the new septic tank phase-out project are subject to revision when the septic tank study is complete and the load reduction estimates are refined, as described in the BMAP.

3.2.3.2 **Marine**

Camp Blanding

Camp Blanding needs to expand its current budget for BMAP implementation, which already requires the usage of 30% of the grounds maintenance budget within the Cantonment Area. Projects such as the Washrack Engineering Report required a minimum of $9,000 and the repairs to the WWTF retention area cost $8,000. An increase in federal and state funding requirements relies upon a further understanding of the entire regulatory process and programming projects through both the Florida Army National Guard and National Guard Bureau.

3.2.4 AGRICULTURE

The latest estimates show that the spring storms in the TCAA resulted in a 35-38% loss of acreage to potato crops, with a total economic loss of $65.8 million (see **Figure 24**). This is based on lost production costs and revenue. The area (Clay, Duval, Flagler, Lake, Nassau, Orange, Putnam, Seminole, St. Johns, and Volusia Counties) was also declared a disaster area by FDACS Commissioner Charles Bronson, Governor Charlie Crist and U. S. Department of Agriculture (USDA) Secretary Tom Vilsack. Based on these estimates, it is uncertain whether some growers will be able to secure financing to continue business this coming growing season.

Agriculture overall continues to be lost to development pressures, although that has slowed somewhat due to the current economy. Other issues facing producers in the area are efforts to regulate or restrict use of agrichemicals, mainly fumigants, which are vital to the production of crops grown in the TCAA. Just as agriculture is addressing potential impacts, local governments and municipalities are struggling to address their obligations. One of the local

government approaches is to create stormwater utilities and assess fees to cover costs. Some local governments are considering assessing agricultural lands that are being addressed through FDACS BMPs.

FIGURE 24: 2009 SPRING FLOOD IMPACTS IN THE TCAA TO POTATO FIELDS

One area of confusion for vegetable growers is that they perceive use of the IFAS-recommended rate to be a strict requirement if they enroll in FDACS BMPs. Because of concerns (primarily on the part of chip potato growers) that the recommended rate is insufficient to sustain economic yields, growers have been reluctant to sign and submit an NOI. However, the vegetable and agronomic crop BMP manual gives some flexibility in implementing fertilization management/application, and specifically provides the following option: *"Use IFAS published fertilizer application recommendations as a general starting point, and if these rates are exceeded, growers are expected to employ additional nutrient and irrigation BMPs to negate possible environmental impacts."*

In order to provide guidance to growers on which BMPs they should implement in this case, representatives of FDACS, SJRWMD, and IFAS Extension developed a "mitigating BMP table," which was adopted as part of the BMAP. Because of the short timeframe for developing the table and the fact that growers were not included in the process, the following qualifying note was placed in the BMAP:

> *This table provides guidance for growers in the LSJR Basin to implement fertilization BMPs contained in the 2005 FDACS Water Quality/Quantity Best Management Practices for Florida Vegetable and Agronomic Crops (VAC) manual, for mitigating impacts when exceeding IFAS-recommended fertilizer application rates. The table will be ground-tested and is subject to modification based on practical and technical considerations. Revisions to the 2005 VAC manual, which will contain similar guidance, will take precedence over this table once the revisions are adopted by rule.*

Currently, representatives of FDACS, SJRWMD, and IFAS are working with growers in the TCAA to modify the table to be more relevant to the particular circumstances in that region. Growers have been cooperative and constructive in these discussions, and have indicated a willingness to formally enroll in the FDACS BMP program. They support new research to verify an adequate nitrogen recommendation for the region and the potato varieties that are grown.

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

Since setting up the new monitoring stations and implementing a new sampling regime required some start up time, a full year of all BMAP sampling did not occur. The new continuous DO stations were set up in August 2009. In early October 2009, JEA noticed that the Clapboard Creek station had been damaged. Upon further investigations by JEA and FDEP it appears that a boat hit the station and detached the DO sonde. FDEP is attempting to find the equipment to set the station up again but new equipment may need to be purchased for this site. The loss of this sonde will limit the amount of DO data that were collected during this reporting period.

For the high-flow event sampling, SJRWMD did not sample their one site and the City of Jacksonville did not begin the sampling at their seven sites. The sampling by SJRWMD will need to start as soon as possible in the upcoming year. The City of Jacksonville will be prepared and equipped to implement high event sampling by January 25, 2010. By this date City staff will have reconnoitered the sites, researched optimal weather sites for rain projections, obtained necessary equipment and supplies, and consulted with appropriate laboratories. They City's goal is to collect the required two high-flow events during the current cool season, which extends from November 2009 to mid-March 2010, and then to continue sampling for two years as detailed in the BMAP.

SECTION 4: UPCOMING YEAR ACTIVITIES

4.1 SUMMARY OF EFFORTS FOR THE UPCOMING YEAR

The second annual BMAP progress report will encompass the period of November 1, 2009 through December 31, 2010. During this time, two WWTF projects should be completed and one will start in the freshwater section. An additional four WWTF projects should be completed and three will have plans and specifications completed in the marine section. The City of Jacksonville will continue to phase-out septic tanks and design stormwater projects to meet their MS4 allocation. Both Putnam and St. Johns counties will begin the O&M of the two existing RSTs, and two additional non-MS4 projects should be completed. In the upcoming year, FDACS will continue to enroll producers in the vegetable, sod, and cow/calf BMP programs. In addition, all components of the monitoring plan should be in place. Additional details are included in **Section 4.2** and **Section 4.3**.

4.2 UPCOMING EFFORTS BY SOURCE TYPE

4.2.1 WASTEWATER TREATMENT FACILITIES

4.2.1.1 Freshwater

City of Green Cove Springs

The preliminary plans for the City of Green Cove Springs WWTF upgrades are scheduled to be completed by September 30, 2010.

City of Palatka

The City of Palatka will complete the upgrades at the WWTF for zero discharge by December 31, 2010. This project will result in a reduction of 4,774 kg/yr of TP and 21,844 kg/yr of TN.

Seminole Electric

Seminole Electric will complete their SCR upgrade by December 31, 2009, which will result in a reduction of 6,314 kg/yr of TN plus the additional TN reductions assigned to the MS4s and non-MS4s (see project tables in **Appendix A**).

4.2.1.2 Marine

City of Atlantic Beach

The final plans and specifications for the City of Atlantic Beach Main WWTF upgrade to AWT will be completed by October 1, 2010. In addition, the plans and specifications will be completed and construction will start on the reuse water to Selva Marina Golf Course project, pending an agreement with the golf course.

City of Neptune Beach

The City of Neptune Beach intends to complete the plans and specifications for the WWTF upgrade by April 30, 2010.

Clay County Utility Authority

CCUA will complete the reuse water upgrades by December 1, 2010 for a reduction of 16,209 kg/yr of TN.

JEA

JEA will complete the phase-out of Beacon Hills WWTF by December 31, 2010, which will result in a reduction of 16,364 kg/yr of TN. In addition, construction will be completed on Arlington East WWTF by December 31, 2010 (operational effectiveness will not be achieved until September 2011, at which time the full reductions will be realized).

Town of Orange Park

The Town of Orange Park plans to complete the Phase I improvements at Ash Street WWTF by January 31, 2010, and the facility will reach its operational level by April 15, 2010 for a reduction of 4,273 kg/yr of TN.

4.2.2 MS4s

4.2.2.1 **Marine**

City of Jacksonville

The City of Jacksonville anticipates that the Lincoln Villas Phase II Septic Tank Project will be completed within the next year (subject to third party funding). In addition, the City will begin design on the stormwater treatment projects listed in **Table 19**. Of these projects, the Lasalle Pump Station is anticipated to have the most water quality treatment. This project will involve installation of a pump station and baffle boxes similar to the Landon and Children's Way pump stations currently installed in the San Marco area. Additional stormwater treatment projects will likely be issued for design based on the results of the Master Stormwater Management Plan. Completion of the master list of stormwater projects is anticipated spring 2010.

TABLE 19: CITY OF JACKSONVILLE STORMWATER TREATMENT PROJECTS ISSUED FOR DESIGN IN 2009-2010

This is a two-column table. Column 1 lists the COJ project title, and Column 2 lists the BMP type.

COJ PROJECT TITLE	BMP TYPE
Lasalle Pump Station	Baffle Box
Messer Ave Drainage Improvements	To be determined
Ave B Outfall Improvements	To be determined
Lower East Side Drainage Improvements Phase III	To be determined
Old Plank Road Outfall Improvements	To be determined
Noroad-Lambing Outfall Improvements	To be determined

4.2.3 URBAN STORMWATER

4.2.3.1 **Freshwater**

Putnam County

Putnam County will complete the trade with Hiawatha WWTF by May 31, 2010, which will result in a reduction of 49.8 kg/yr of TP and 150 kg/yr of TN. The County will also take over O&M of the Edgefield RST by October 1, 2010 for a credit of 269.1 kg/yr of TP and 594 kg/yr of TN.

St. Johns County

St. Johns County will take over O&M for the Deep Creek RST by October 1, 2010 for a credit of 255.9 kg/yr of TP and 313 kg/yr of TN. In addition, the trade agreement with the Town of Hastings will go into effect on December 31, 2010 for a credit of 198.2 kg/yr of TP.

4.2.3.2 **Marine**

Camp Blanding

Camp Blanding will complete the maintenance/repair of the next set of swales (approximately one-fifth of the total swales) by December 31, 2010.

4.2.4 AGRICULTURE

The target date for enrolling all vegetable and container nursery operations is July 2011. The target date for enrolling all sod and cow/calf operations is October 2011. FDACS will work on enrolling producers under these BMP manuals in the upcoming year, and anticipates that 40,000 additional acres of vegetable, sod, and cow/calf operations will formally participate in FDACS BMP programs. This figure may include the 12,000 acres of vegetable farms that have received an assessment but did not submit an NOI. In addition, FDACS will explore opportunities for more one-on-one work with growers in the basin to ensure the proper implementation of BMPs. During 2010, FDACS BMAP manuals addressing equine operations, in-ground nurseries, and specialty fruit and nut crops are scheduled to be adopted.

In October 2009, SJRWMD contacted FDACS to help develop language to be included in consumptive use permits relative to growers' responsibility to implement BMPs or conduct water quality monitoring in the LSJR Basin. SJRWMD plans to use the following provision:

> *By July 1, 2011, the permittee must submit to FDACS, with a copy submitted to the District, a Notice of Intent (NOI) to implement the applicable FDACS-adopted Best Management Practices (BMPs) for each existing FDACS manual relevant to the operation. If FDACS adopts a new BMP manual relevant to the operation, the permittee must submit an NOI to implement the applicable BMPs within three years of manual adoption. Alternatively, the permittee may commence water quality monitoring by July 1, 2011, according to a District- or FDEP-approved monitoring plan, to demonstrate compliance with the pollutant reductions identified in the applicable Basin Management Action Plan(s). If the permittee chooses to conduct water quality monitoring, the permittee must submit an FDEP-approved monitoring plan or a draft monitoring plan for District approval by February 1, 2011.*

State funding for agricultural BMPs is lacking in the LSJR Basin and statewide. SJRWMD has been able to maintain a reduced level of cost-share funding. FDACS will work with SJRWMD to encourage greater participation in cost-share and help determine where the monies can be most effectively spent.

4.3 WATER QUALITY MONITORING

For the freshwater sampling, SJRWMD will continue to monitor at their ambient stations and FDEP will collect the river transect samples from April 2010 through October 2010. JEA will continue to operate and maintain the DO station at Fulton Point for the marine section monitoring. FDEP will replace the sondes at the Clapboard Creek site and then JEA will continue the operation and maintenance. SJRWMD and JEA will continue the ambient water quality sampling in the tributaries, and CCUA will continue their high-flow event sampling. SJRWMD will start the high-flow event sampling at their station as soon as feasible in the upcoming year. The City of Jacksonville will commence the high-flow event sampling at their seven stations by the first qualifying rain event after January 25, 2010.

APPENDIX A: BMAP PROJECTS

The BMAP project tables below show the status of the projects as of October 31, 2009. These tables provide information on the nutrient reduction attributed to each individual project and the remaining nutrient load after each project is implemented, shown in both kilograms per year (kg/yr) and pounds per year (lbs/yr). The expected load reductions are subtracted from the entity's starting point load. The remaining nutrient balance once all projects have been implemented by an entity should be equal to or exceed the allocation for that entity's facility or facilities. The schedule to implement each of the projects is also included in the tables.

The following notes apply to all the tables in this appendix:
- = Empty cell/no data
N/A = Not available

FRESHWATER PHOSPHORUS ALLOCATION

Name of Facility — ***Wasteload Allocation (kg/yr)***

Clay County MS4 FLR04E045 ..... 212.6

This is an eight-column table. Column 1 lists the facility name, Column 2 lists the project number, Column 3 lists the description, Column 4 lists the type(s) of BMP(s) implemented, Column 5 lists the acres treated, Column 6 lists the deadline, Column 7 lists the project TP reduction (in kilograms per year), and Column 8 lists the project TP reduction (in pounds per year).

FACILITY NAME	PROJECT NUMBER	DESCRIPTION	TYPE(S) OF BMP(S) IMPLEMENTED	ACRES TREATED	DEADLINE	PROJECT TP REDUCTION (KG/YR)	PROJECT TP REDUCTION (LBS/YR)
CC MS4 FLR04E045	-	Total Reduction Required	-	-	-	191.9	442.2
CC MS4 FLR04E045	CC-1	Education Program	N/A	N/A	Ongoing	16.2	35.6
CC MS4 FLR04E045	CC-2	FDOT SR 21 Widening from SR 215 to CR 220	Dry retention (1")	12	Completed	2.3	5.1
CC MS4 FLR04E045	CC-3	Trade with CCUA	-	-	Completed – 09/2009	173.4	381.5
CC MS4 FLR04E045	-	Total Project Reductions	-	-	-	191.9	442.2
CC MS4 FLR04E045	-	Credit/(Deficit)	-	-	-	0	0

City of Green Cove Springs Aggregate.....1,929.2
FL0635618

This is a six-column table. Column 1 lists the facility name, Column 2 lists the project number, Column 3 lists the description, Column 4 lists the deadline, Column 5 lists the project TP reduction (in kilograms per year), and Column 6 lists the project TP reduction (in pounds per year).

Facility Name	Project Number	Description	Deadline	Project TP Reduction (kg/yr)	Project TP Reduction (lbs/yr)
Green Cove Total (Aggregate)	-	Total Reduction Required	-	1,935.8	4,258.8
GCS – Harbor Road FL0020915	GGS-1	Reuse to golf course	05/01/2011	2,743	6,034.6
GCS – South FL0030210	GCS-2	Convert to MLE and alum feed	10/01/2012	466	1,025.2
Green Cove Total (Aggregate)	-	Total Project Reductions	-	3,209	7,059.8
Green Cove Total (Aggregate)	-	Credit/(Deficit)	-	1,273.2	2,801.0

This is a two-column table. Column 1 lists the Green Cove (aggregate) projects, and Column 2 lists the implementation schedule.

Green Cove Springs (Aggregate) Projects	Implementation Schedule
Phase One – Initial Nutrient Removal Phase a. Preliminary Plans Complete	09/30/2010
b. Final Plans and Specifications Complete	01/30/2011
c. Begin Construction	04/01/2011
d. End Construction	04/01/2012
e. Begin Operation	05/01/2012
f. Operational Level Attained	10/01/2012

City of Green Cove Springs MS4 FLR04E103 ***.....1,043.7***

This is an eight-column table. Column 1 lists the facility name, Column 2 lists the project number, Column 3 lists the description, Column 4 lists the type(s) of BMP(s) implemented, Column 5 lists the acres treated, Column 6 lists the deadline, Column 7 lists the project TP reduction (in kilograms per year), and Column 8 lists the project TP reduction (in pounds per year).

Facility Name	Project Number	Description	Type(s) of BMP(s) Implemented	Acres Treated	Deadline	Project TP Reduction (kg/yr)	Project TP Reduction (lbs/yr)
Green Cove MS4	-	Total Reduction Required	-	-	-	52	114
GCS MS4 FLR04E103	GCS-3	SW Drainage System Improvements	Wet Detention (1", 21 day)	54.6	Completed	15	33
GCS MS4 FLR04E103	GCS-4	Cypress Baffle Box	Baffle Box	125	Completed	6	13
GCS MS4 FLR04E103	GCS-5	Green Cove Springs Industrial Park	Wet Detention (2.5", 21 day)	91.6	Completed	31	68
GCS MS4 FLR04E103	GCS-6	Vystar Credit Union	Dry Detention	1.8	Completed - 08/12/2008	0	0
Green Cove MS4	-	Total Project Reductions	-	-	-	52	114
Green Cove MS4	-	Credit/(Deficit)	-	-	-	0	0

City of Palatka WWTF.....5,954.7
FL0040061

This is a six-column table. Column 1 lists the facility name, Column 2 lists the project number, Column 3 lists the description, Column 4 lists the deadline, Column 5 lists the project TP reduction (in kilograms per year), and Column 6 lists the project TP reduction (in pounds per year).

Facility Name	Project Number	Description	Deadline	Project TP Reduction (kg/yr)	Project TP Reduction (lbs/yr)
Palatka WWTF	-	Total Reduction Required	-	4,000.3	8,800.7
Palatka WWTF FL0040061	PAL-1	Reuse to golf course	Completed	1,730	3,806
Palatka WWTF FL0040061	PAL-2	Reuse to ball fields	Completed - 10/31/2008	691	1,520
Palatka WWTF FL0040061	PAL-3	Reuse to cemeteries	Completed - 10/31/2008	1,205	2,651
Palatka WWTF FL0040061	PAL-4	Reuse at WTP	Completed - 09/15/2009	1,555	3,421
Palatka WWTF FL0040061	PAL-5	Zero discharge	12/31/2010	4,774	10,503
Palatka WWTF	-	Total Project Reductions	-	9,955	21,901
Palatka WWTF	-	Credit/(Deficit)	-	5,954.7	13,100.3

This is a two-column table. Column 1 lists the Palatka WWTF projects, and Column 2 lists the implementation schedule.

Palatka WWTF Projects	Implementation Schedule
Zero Discharge a. Preliminary Plans Complete	01/31/2008
b. Final Plans and Specifications Complete	10/31/2008
c. Begin Construction	11/01/2008
d. End Construction	05/30/2010
e. Begin Operation	05/30/2010
f. Operational Level Attained	12/31/2010

Georgia-Pacific ***.....33,182***
FL0002763

This is a six-column table. Column 1 lists the facility name, Column 2 lists the project number, Column 3 lists the description, Column 4 lists the deadline, Column 5 lists the project TP reduction (in kilograms per year), and Column 6 lists the project TP reduction (in pounds per year).

Facility Name	Project Number	Description	Deadline	Project TP Reduction (kg/yr)	Project TP Reduction (lbs/yr)
Georgia-Pacific	-	Total Reduction Required	-	30,693	67,525
Georgia-Pacific	GP-1	Complete Process Improvements	Completed	30,693	67,525
Georgia-Pacific	-	Total Project Reductions	-	30,693	67,525
Georgia-Pacific	-	Credit/(Deficit)	-	0	0

Name of Facility ***.....Load Allocation (kg/yr)***

City of Palatka Non-MS4 ***.....1,507.8***

This is an eight-column table. Column 1 lists the facility name, Column 2 lists the project number, Column 3 lists the description, Column 4 lists the type(s) of BMP(s) implemented, Column 5 lists the acres treated, Column 6 lists the deadline, Column 7 lists the project TP reduction (in kilograms per year), and Column 8 lists the project TP reduction (in pounds per year).

Facility Name	Project Number	Description	Type(s) of BMP(s) Implemented	Acres Treated	Deadline	Project TP Reduction (kg/yr)	Project TP Reduction (lbs/yr)
Palatka Non-MS4	-	Total Reduction Required	N/A	N/A	N/A	0	0
Palatka Non-MS4	-	Total Project Reductions	N/A	N/A	N/A	0	0
Palatka Non-MS4	-	Credit/(Deficit)	N/A	N/A	N/A	0	0

Clay County Non-MS4 ..... 499.4

This is an eight-column table. Column 1 lists the facility name, Column 2 lists the project number, Column 3 lists the description, Column 4 lists the type(s) of BMP(s) implemented, Column 5 lists the acres treated, Column 6 lists the deadline, Column 7 lists the project TP reduction (in kilograms per year), and Column 8 lists the project TP reduction in (in pounds per year).

Facility Name	Project Number	Description	Type(s) of BMP(s) Implemented	Acres Treated	Deadline	Project TP Reduction (kg/yr)	Project TP Reduction (lbs/yr)
CC Non-MS4	-	Total Reduction Required	-	-	-	267.9	589.4
CC Non-MS4	CC-4	Education Program	N/A	N/A	Ongoing	30.7	67.5
CC Non-MS4	CC-5	FDOT construction of 7 new wet ponds on SR15 from Putnam County line to SR16	Wet pond (1", 14 days)	281	Completed	89.5	196.9
CC Non-MS4	CC-6	Trade with CCUA	-	-	Completed – 09/2009	147.7	324.9
CC Non-MS4	-	Total Project Reductions	-	-	-	267.9	589.4
CC Non-MS4	-	Credit/(Deficit)	-	-	-	0	0

Hastings Non-MS4 .....49.3

This is an eight-column table. Column 1 lists the facility name, Column 2 lists the project number, Column 3 lists the description, Column 4 lists the type(s) of BMP(s) implemented, Column 5 lists the acres treated, Column 6 lists the deadline, Column 7 lists the project TP reduction (in kilograms per year), and Column 8 lists the project TP reduction (in pounds per year).

Facility Name	Project Number	Description	Type(s) of BMP(s) Implemented	Acres Treated	Deadline	Project TP Reduction (kg/yr)	Project TP Reduction (lbs/yr)
Hastings Non-MS4	-	Total Reduction Required	-	-	-	43.6	95.9
Hastings Non-MS4	HAS-1	WWTP Chemical Feed Systems	N/A	N/A	Completed - 06/30/2008	249.1	548.0
Hastings Non-MS4	HAS-2	FDOT 4 laning of SR 207	Wet Pond (1", 14 days)	12	Completed	3.6	7.9
Hastings Non-MS4	HAS-3	FDOT 4 laning of SR207 from CR305 to Cypress Link Blvd	Wet Pond (1", 14 days)	106	Completed	33.6	73.9
Hastings Non-MS4	-	Total Project Reductions	-	-	-	286.3	629.9
Hastings Non-MS4	-	Credit/(Deficit)	-	-	-	242.7	533.9

Putnam County Non-MS4.....3,964.9

This is an eight-column table. Column 1 lists the facility name, Column 2 lists the project number, Column 3 lists the description, Column 4 lists the type(s) of BMP(s) implemented, Column 5 lists the acres treated, Column 6 lists the deadline, Column 7 lists the project TP reduction (in kilograms per year), and Column 8 lists the project TP reduction (in pounds per year).

Facility Name	Project Number	Description	Type(s) of BMP(s) Implemented	Acres Treated	Deadline	Project TP Reduction (kg/yr)	Project TP Reduction (lbs/yr)
Putnam Non-MS4	-	Total Reduction Required	-	-	-	2,025.5	4,456.1
Putnam Non-MS4	PUT-1	Trade with Putnam Lanes WWTF	N/A	N/A	Completed	12.5	27.5
Putnam Non-MS4	PUT-2	Trade with Hiawatha WWTF	N/A	N/A	05/31/2010	49.8	109.6
Putnam Non-MS4	PUT-3	Septic Tank Phase-Out	N/A	N/A	12/30/2011	298.0	656.0
Putnam Non-MS4	PUT-4	Edgefield RST O&M Value	N/A	N/A	10/01/2010	269.1	592.0
Putnam Non-MS4	PUT-5	FDOT construction of 7 new wet ponds on SR15 from Clay County line to south of Gordon Wilkins Rd	Wet pond (1", 14 days)	1,181	Completed	376.8	829.0
Putnam non-MS4	PUT-6	Algal Initiative	N/A	N/A	10/31/2017	1,019.3	2,242.5
Putnam Non-MS4	-	Total Project Reductions	-	-	-	2025.5	4,456.1
Putnam Non-MS4	-	Credit/(Deficit)	-	-	-	0	0

This is a two-column table. Column 1 lists the Putnam County non-MS4 projects, and Column 2 lists the implementation schedule.

PUTNAM COUNTY NON-MS4–PROJECTS	IMPLEMENTATION SCHEDULE
Trade with Hiawatha WWTF a. Start Date of Project	04/01/2008
b. Completion Date - Design	Completed - 02/01/2009
c. Completion Date - Construction	08/15/2010 – The line is constructed but need the East Putnam County Regional (EPCR) WWTF to be completed for regional tie in. Estimated completion is 12/30/2010.
d. Completion Date – Completion of Project	08/31/2010
Septic Tank Phase-Out US 17 – tie into EPCR WWTF a. Start Date of Project	01/01/2009
b. Completion Date - Design	Completed - 02/02/2009
c. Completion Date - Construction	12/30/2011
d. Completion Date – Completion of Project	12/30/2011
Algal Initiative a. Start Date of Project	10/01/2008
b. Completion Date – Project Assessment	10/31/2010
c. Completion Date – Project Fundraising	10/31/2012
d. Completion Date – Construction	10/31/2017

St. Johns County Non-MS4.....3,296.6

This is an eight-column table. Column 1 lists the facility name, Column 2 lists the project number, Column 3 lists the description, Column 4 lists the type(s) of BMP(s) implemented, Column 5 lists the acres treated, Column 6 lists the deadline, Column 7 lists the project TP reduction (in kilograms per year), and Column 8 lists the project TP reduction (in pounds per year).

Facility Name	Project Number	Description	Type(s) of BMP(s) Implemented	Acres Treated	Deadline	Project TP Reduction (kg/yr)	Project TP Reduction (lbs/yr)
SJC Non-MS4	-	Total Reduction Required	-	-	-	430.8	947.8
SJC Non-MS4	SJC-1	Implementation of Stormwater Management Program - purchase a street sweeper	Street sweeping	-	01/01/2012	16.8	37
SJC Non-MS4	SJC-2	Implementation street sweeping	Street sweeping	-	Ongoing	2.3	5.1
SJC Non-MS4	SJC-3	Stormwater Education	Education	-	Ongoing	186.4	410.1
SJC Non-MS4	SJC-4	Low-impact development	-	-	Ongoing	Not quantified	0
SJC Non-MS4	SJC-5	Slow release fertilizer ordinance	-	-	01/01/2011	Not quantified	0
SJC Non-MS4	SJC-6	Deep Creek RST O&M value	-	-	10/01/2010	255.9	563
SJC Non-MS4	SJC-7	Purchase Hastings WWTP reduction credits	-	-	12/31/2010	198.2	436
SJC Non-MS4	-	Total Project Reductions	-	-	-	659.6	1,451.1
SJC Non-MS4	-	Credit/(Deficit)	-	-	-	228.8	503.4

This is a two-column table. Column 1 lists the St. Johns County non-MS4 projects, and Column 2 lists the implementation schedule.

St. Johns County Non-MS4 Projects	Implementation Schedule
Purchase a Street Sweeper a. Start Date of Project	01/01/2012
b. Completion Date – Completion of Project	01/01/2012
Slow Release Fertilizer Ordinance a. Start Date of Project	01/01/2010
b. Completion Date – Completion of Project	01/01/2011

Welaka Non-MS4 .....90.4

This is a six-column table. Column 1 lists the facility name, Column 2 lists the project number, Column 3 lists the description, Column 4 lists the deadline, Column 5 lists the project TP reduction (in kilograms per year), and Column 6 lists the project TP reduction (in pounds per year).

Facility Name	Project Number	Description	Deadline	Project TP Reduction (kg/yr)	Project TP Reduction (lbs/yr)
Welaka Non-MS4	-	Total Reduction Required	-	81.6	179.5
Welaka Non-MS4	WEL-1	Septic Tank Phase-Out	Completed	153.0	336.6
Welaka Non-MS4	-	Total Project Reductions	-	153.0	336.6
Welaka Non-MS4	-	Credit/(Deficit)	-	71.4	157.1

POINT SOURCE – FRESHWATER NITROGEN ALLOCATION

Name of Facility — ***Wasteload Allocation (kg/yr)***

Clay County MS4 FLR04E045 2,418

This is an eight-column table. Column 1 lists the facility name, Column 2 lists the project number, Column 3 lists the description, Column 4 lists the type(s) of BMP(s) implemented, Column 5 lists the acres treated, Column 6 lists the deadline, Column 7 lists the project TN reduction (in kilograms per year), and Column 8 lists the project TN reduction (in pounds per year).

FACILITY NAME	PROJECT NUMBER	DESCRIPTION	TYPE(S) OF BMP(S) IMPLEMENTED	ACRES TREATED	DEADLINE	PROJECT TN REDUCTION (KG/YR)	PROJECT TN REDUCTION (LBS/YR)
CC MS4 FLR04E045	-	Total Reduction Required	-	-	-	352	774
CC MS4 FLR04E045	CC-1	Education Program	N/A	N/A	Ongoing	111	244
CC MS4 FLR04E045	CC-2	FDOT SR 21 Widening from SR 215 to CR 220	Dry retention (1")	12	Completed	5	11
CC MS4 FLR04E045	CC-7	Atmospheric deposition load reduction – Seminole Electric SCR upgrade	N/A	N/A	01/01/2010	236	519
CC MS4 FLR04E045	-	Total Project Reductions	-	-	-	352	774
CC MS4 FLR04E045	-	Credit/(Deficit)	-	-	-	0	0

City of Green Cove Springs Aggregate.....7,752.5
FL0635618

This is an eight-column table. Column 1 lists the facility name, Column 2 lists the project number, Column 3 lists the description, Column 4 lists the type(s) of BMP(s) implemented, Column 5 lists the acres treated, Column 6 lists the deadline, Column 7 lists the project TN reduction (in kilograms per year), and Column 8 lists the project TN reduction (in pounds per year).

Facility Name	Project Number	Description	Deadline	Project TN Reduction (kg/yr)	Project TN Reduction (lbs/yr)
Green Cove Total (Aggregate)	-	Total Reduction Required	-	6,847.5	15,064.5
GCS – Harbor Road FL0020915	GCS-1	Reuse to golf course	05/01/2011	8,647	19,023
GCS – South FL0030210	GCS-2	Convert to MLE and alum feed	10/01/2012	1,003	2,207
Green Cove Total (Aggregate)	-	Total Project Reductions	-	9,650	21,230
Green Cove Total (Aggregate)	-	Credit/(Deficit)	-	2,802.5	6,165.5

This is a two-column table. Column 1 lists the Green Cove (aggregate) projects, and Column 2 lists the implementation schedule.

Green Cove (Aggregate) Projects	Implementation Schedule
Nutrient Removal Phase a. Preliminary Plans Complete	09/30/2010
b. Final Plans and Specifications Complete	01/30/2011
c. Begin Construction	04/01/2011
d. End Construction	04/01/2012
e. Begin Operation	05/01/2012
f. Operational Level Attained	10/01/2012

City of Green Cove Springs MS4 FLR04E103 ..... 6,266.5

This is an eight-column table. Column 1 lists the facility name, Column 2 lists the project number, Column 3 lists the description, Column 4 lists the type(s) of BMP(s) implemented, Column 5 lists the acres treated, Column 6 lists the deadline, Column 7 lists the project TN reduction (in kilograms per year), and Column 8 lists the project TN reduction (in pounds per year).

Facility Name	Project Number	Description	Type(s) of BMP(s) Implemented	Acres Treated	Deadline	Project TN Reduction (kg/yr)	Project TN Reduction (lbs/yr)
Green Cove MS4	-	Total Reduction Required	-	-	-	694.5	1,528
GCS MS4 FLR04E103	GCS-3	SW Drainage System Improvements	Wet Detention (1", 21 day)	54.6	Completed	28	62
GCS MS4 FLR04E103	GCS-4	Cypress Baffle Box	Baffle Box	125	Completed	15	33
GCS MS4 FLR04E103	GCS-5	Green Cove Springs Industrial Park	Wet Detention (2.5", 21 day)	91.6	Completed	58	128
GCS MS4 FLR04E103	GCS-6	Vystar Credit Union	Dry Detention	1.8	Completed - 08/12/2008	0.5	1
GCS MS4 FLR04E103	GCS-7	Atmospheric deposition load reduction – Seminole Electric SCR upgrade	N/A	N/A	01/01/2010	593	1,305
Green Cove MS4	-	Total Project Reductions	-	-	-	694.5	1,528
Green Cove MS4	-	Credit/(Deficit)	-	-	-	0	0

City of Palatka WWTF.....38,845
FL0040061

This is a six-column table. Column 1 lists the facility name, Column 2 lists the project number, Column 3 lists the description, Column 4 lists the deadline, Column 5 lists the project TN reduction (in kilograms per year), and Column 6 lists the project TN reduction (in pounds per year).

Facility Name	Project Number	Description	Deadline	Project TN Reduction (kg/yr)	Project TN Reduction (lbs/yr)
Palatka WWTF	-	Total Reduction Required	-	22,044	48,497
Palatka WWTF FL0040061	PAL-1	Reuse to golf course	Completed	13,000	28,600
Palatka WWTF FL0040061	PAL-2	Reuse to ball fields	Completed - 10/31/2008	5,227	11,499
Palatka WWTF FL0040061	PAL-3	Reuse to cemeteries	Completed - 10/31/2008	9,091	20,000
Palatka WWTF FL0040061	PAL-4	Reuse at WTP	Completed – 09/15/2009	11,727	25,799
Palatka WWTF FL0040061	PAL-5	Zero discharge	12/31/2010	21,844	48,057
Palatka WWTF	-	Total Project Reductions	-	60,889	133,956
Palatka WWTF	-	Credit/(Deficit)	-	38,845	85,459

This is a two-column table. Column 1 lists the Palatka WWTF projects, and Column 2 lists the implementation schedule.

Palatka WWTF Projects	Implementation Schedule
Zero Discharge a. Preliminary Plans Complete	Completed - 01/31/2008
b. Final Plans and Specifications Complete	Completed - 10/31/2008
c. Begin Construction	Completed - 11/01/2008
d. End Construction	05/30/2010
e. Begin Operation	05/30/2010
f. Operational Level Attained	12/31/2010

Georgia-Pacific WWTF 165,909
FL0002763

This is a six-column table. Column 1 lists the facility name, Column 2 lists the project number, Column 3 lists the description, Column 4 lists the deadline, Column 5 lists the project TN reduction (in kilograms per year), and Column 6 lists the project TN reduction (in pounds per year).

Facility Name	Project Number	Description	Deadline	Project TN Reduction (kg/yr)	Project TN Reduction (lbs/yr)
Georgia-Pacific	-	Total Reduction Required	-	92,246	202,941
Georgia-Pacific	GP-1	Complete Process Improvements	Completed	92,246	202,941
Georgia-Pacific	-	Total Project Reductions	-	92,246	202,941
Georgia-Pacific	-	Credit/(Deficit)	-	0	0

Seminole Electric.....14,732
FL0036498

This is a six-column table. Column 1 lists the facility name, Column 2 lists the project number, Column 3 lists the description, Column 4 lists the deadline, Column 5 lists the project TN reduction (in kilograms per year), and Column 6 lists the project TN reduction (in pounds per year).

Facility Name	Project Number	Description	Deadline	Project TN Reduction (kg/yr)	Project TN Reduction (lbs/yr)
Seminole Electric Total	-	Total Reduction Required	-	6,314	13,891
Seminole Electric FL0036498	SE-1	SCR Upgrade	12/31/2009	6,314	13,891
Seminole Electric Total	-	Total Project Reductions	-	6,314	13,891
Seminole Electric Total	-	Credit/(Deficit)	-	0	0

This is a two-column table. Column 1 lists the Seminole Electric projects, and Column 2 lists the implementation schedule.

Seminole Electric Projects	Implementation Schedule
a. Completion Date – SCR for Unit 1	12/31/2009
b. Completion Date – SCR for Unit 2	10/30/2009 - Completed
c. Units Fully Operational	12/31/2009

City of Palatka Non-MS4 8,858

This is an eight-column table. Column 1 lists the facility name, Column 2 lists the project number, Column 3 lists the description, Column 4 lists the type(s) of BMP(s) implemented, Column 5 lists the acres treated, Column 6 lists the deadline, Column 7 lists the project TN reduction (in kilograms per year), and Column 8 lists the project TN reduction (in pounds per year).

Facility Name	Project Number	Description	Type(s) of BMP(s) Implemented	Acres Treated	Deadline	Project TN Reduction (kg/yr)	Project TN Reduction (lbs/yr)
Palatka Non-MS4	-	Total Reduction Required	-	-	-	825	1,815
Palatka Non-MS4	PAL-6	Atmospheric deposition load reduction – Seminole Electric SCR upgrade	N/A	N/A	01/01/2010	825	1,815
Palatka Non-MS4	-	Total Project Reductions	-	-	-	825	1,815
Palatka Non-MS4	-	Credit/(Deficit)	-	-	-	0	0

Clay County Non-MS4 4,659

This is an eight-column table. Column 1 lists the facility name, Column 2 lists the project number, Column 3 lists the description, Column 4 lists the type(s) of BMP(s) implemented, Column 5 lists the acres treated, Column 6 lists the deadline, Column 7 lists the project TN reduction (in kilograms per year), and Column 8 lists the project TN reduction (in pounds per year).

Facility Name	Project Number	Description	Type(s) of BMP(s) Implemented	Acres Treated	Deadline	Project TN Reduction (kg/yr)	Project TN Reduction (lbs/yr)
CC Non-MS4	-	Total Reduction Required	-	-	-	920	2,024
CC Non-MS4	CC-3	Education Program	N/A	N/A	Ongoing	223	491
CC Non-MS4	CC-4	FDOT Construction of 7 new Wet Ponds on SR 15 from Putnam County Line to SR 16	Wet pond (1", 14 days)	281	Completed	172	378
CC Non-MS4	CC-8	Atmospheric deposition load reduction – Seminole Electric SCR upgrade	N/A	N/A	01/01/2010	525	1,155
CC Non-MS4	-	Total Project Reductions	-	-	-	920	2,024
CC Non-MS4	-	Credit/(Deficit)	-	-	-	0	0

Hastings Non-MS4**.....448**

This is an eight-column table. Column 1 lists the facility name, Column 2 lists the project number, Column 3 lists the description, Column 4 lists the type(s) of BMP(s) implemented, Column 5 lists the acres treated, Column 6 lists the deadline, Column 7 lists the project TN reduction (in kilograms per year), and Column 8 lists the project TN reduction (in pounds per year).

Facility Name	Project Number	Description	Type(s) of BMP(s) Implemented	Acres Treated	Deadline	Project TN Reduction (kg/yr)	Project TN Reduction (lbs/yr)
Hastings Non-MS4	-	Total Reduction Required	-	-	-	177	389
Hastings Non-MS4	HAS-1	WWTP Chemical Feed Systems	N/A	N/A	Completed - 06/30/2008	176	388
Hastings Non-MS4	HAS-2	FDOT 4 laning of SR 207	Wet Pond (1", 14 days)	12	Completed	7	15
Hastings Non-MS4	HAS-3	FDOT 4 laning of SR207 from CR305 to Cypress Link Blvd	Wet Pond (1", 14 days)	106	Completed	65	143
Hastings Non-MS4	HAS-4	Atmospheric deposition load reduction – Seminole Electric SCR upgrade	N/A	N/A	01/01/2010	54	119
Hastings Non-MS4	-	Total Project Reductions	-	-	-	302	664
Hastings Non-MS4	-	Credit/(Deficit)	-	-	-	125	275

Putnam County Non-MS4.....33,976

This is an eight-column table. Column 1 lists the facility name, Column 2 lists the project number, Column 3 lists the description, Column 4 lists the type(s) of BMP(s) implemented, Column 5 lists the acres treated, Column 6 lists the deadline, Column 7 lists the project TN reduction (in kilograms per year), and Column 8 lists the project TN reduction (in pounds per year).

Facility Name	Project Number	Description	Type(s) of BMP(s) Implemented	Acres Treated	Deadline	Project TN Reduction (kg/yr)	Project TN Reduction (lbs/yr)
Putnam Non-MS4	-	Total Reduction Required	-	-	-	9,639	21,206
Putnam Non-MS4	PUT-1	Trade with Putnam Lanes WWTF	N/A	N/A	Completed	50	110
Putnam Non-MS4	PUT-2	Trade with Hiawatha WWTF	N/A	N/A	05/31/2010	150	330
Putnam Non-MS4	PUT-3	Septic Tank Phase-Out	N/A	N/A	12/30/2011	1,097	2,414
Putnam Non-MS4	PUT-4	Edgefield RST O&M Value	N/A	N/A	10/01/2010	594	1,307
Putnam Non-MS4	PUT-5	FDOT construction of 7 new wet ponds on SR15 from Clay County line to south of Gordon Wilkins Rd	Wet pond (1", 14 days)	1,181	Completed	723	1,591
Putnam Non-MS4	PUT-6	Algal Initiative	N/A	N/A	10/31/2017	2,969	6,532
Putnam Non-MS4	PUT-7	Atmospheric deposition load reduction – Seminole Electric SCR upgrade	N/A	N/A	01/01/2010	4,056	8,923
Putnam Non-MS4	-	Total Project Reductions	-	-	-	9,639	21,206
Putnam Non-MS4	-	Credit/(Deficit)	-	-	-	0	0

This is a two-column table. Column 1 lists the Putnam County non-MS4 projects, and Column 2 lists the implementation schedule.

PUTNAM COUNTY NON-MS4 PROJECTS	IMPLEMENTATION SCHEDULE
Trade with Hiawatha WWTF a. Start Date of Project	04/01/2008
b. Completion Date - Design	02/01/2009 – Completed
c. Completion Date - Construction	08/15/2010 – The line is constructed but need the East Putnam County Regional (EPCR) WWTF to be completed for regional tie in. Estimated completion is 12/30/2010.
d. Completion Date – Completion of Project	08/31/2010
Septic Tank Phase-Out US 17 – tie into EPCR WWTF a. Start Date of Project	01/01/2009
b. Completion Date - Design	Completed - 02/02/2009
c. Completion Date - Construction	12/30/2011
d. Completion Date – Completion of Project	12/30/2011
Algal Initiative a. Start Date of Project	10/01/2008
b. Completion Date – Project Assessment	10/31/2010
c. Completion Date – Project Fundraising	10/31/2012
d. Completion Date – Construction	10/31/2017

St. Johns County Non-MS4.....25,340

This is an eight-column table. Column 1 lists the facility name, Column 2 lists the project number, Column 3 lists the description, Column 4 lists the type(s) of BMP(s) implemented, Column 5 lists the acres treated, Column 6 lists the deadline, Column 7 lists the project TN reduction (in kilograms per year), and Column 8 lists the project TN reduction (in pounds per year).

Facility Name	Project Number	Description	Type(s) of BMP(s) Implemented	Acres Treated	Deadline	Project TN Reduction (kg/yr)	Project TN Reduction (lbs/yr)
SJC Non-MS4	-	Total Required Reduction	-	-	-	1,937	4,070
SJC Non-MS4	SJC-1	Implementation of Stormwater Management Program - purchase a street sweeper	Street sweeping		01/01/2012	129	283
SJC Non-MS4	SJC-2	Implementation street sweeping	Street sweeping		Ongoing	19	41
SJC Non-MS4	SJC-3	Stormwater Education	Education		Ongoing	1,078	2,372
SJC Non-MS4	SJC-4	Low-impact development	-	-	Ongoing	Not quantified	Not quantified
SJC Non-MS4	SJC-5	Slow release fertilizer ordinance	-	-	01/01/2011	Not quantified	Not quantified
SJC Non-MS4	SJC-6	Deep Creek RST O&M value	-	-	10/01/2010	313	689
SJC Non-MS4	SJC-8	Atmospheric deposition load reduction – Seminole Electric SCR upgrade	N/A	N/A	01/01/2010	1,937	4,261
SJC Non-MS4	-	Total Project Reductions	-	-	-	3,476	7,647
SJC Non-MS4	-	Credit/(Deficit)	-	-	-	1,539	3,386

This is a two-column table. Column 1 lists the St. Johns County non-MS4 projects, and Column 2 lists the implementation schedule.

St. Johns County Non-MS4 Projects	Implementation Schedule
Purchase a Street Sweeper a. Start Date of Project	01/01/2012
b. Completion Date – Completion of Project	01/01/2012
Slow Release Fertilizer Ordinance a. Start Date of Project	01/01/2010
b. Completion Date – Completion of Project	01/01/2011

Welaka Non-MS4 838

This is a six-column table. Column 1 lists the facility name, Column 2 lists the project number, Column 3 lists the description, Column 4 lists the deadline, Column 5 lists the project TN reduction (in kilograms per year), and Column 6 lists the project TN reduction (in pounds per year).

Facility Name	Project Number	Description	Deadline	Project TN Reduction (kg/yr)	Project TN Reduction (lbs/yr)
Welaka Non-MS4	-	Total Reduction Required	-	337.0	741.4
Welaka Non-MS4	WEL-1	Septic Tank Phase-Out	Completed	490.0	1,078.0
Welaka Non-MS4	WEL-2	Atmospheric deposition load reduction – Seminole Electric SCR upgrade	01/01/2010	100.0	220.0
Welaka Non-MS4	-	Total Project Reductions	-	590.0	1,298.0
Welaka Non-MS4	-	Credit/(Deficit)	-	253.0	556.6

POINT SOURCE – MARINE NITROGEN ALLOCATION

Name of Facility | ***Wasteload Allocation (kg/yr)***

Anheuser Busch – Main Street ***12,418***
FL0041530

This is a six-column table. Column 1 lists the facility name, Column 2 lists the project number, Column 3 lists the description, Column 4 lists the deadline, Column 5 lists the project TN reduction (in kilograms per year), and Column 6 lists the project TN reduction (in pounds per year).

FACILITY NAME	PROJECT NUMBER	DESCRIPTION	DEADLINE	PROJECT TN REDUCTION (KG/YR)	PROJECT TN REDUCTION (LBS/YR)
Anheuser Busch – Main Street	-	Total Reduction Required	-	11,981	26,358
Anheuser Busch – Main Street	ANB-1	Complete Process Improvements	Completed	11,981	26,358
Anheuser Busch – Main Street	-	Total Project Reductions	-	11,981	26,358
Anheuser Busch – Main Street	-	Credit/(Deficit)	-	0	0

City of Atlantic Beach Aggregate 21,188
FL0626881

This is a six-column table. Column 1 lists the facility name, Column 2 lists the project number, Column 3 lists the description, Column 4 lists the deadline, Column 5 lists the project TN reduction (in kilograms per year), and Column 6 lists the project TN reduction (in pounds per year).

Facility Name	Project Number	Description	Deadline	Project TN Reduction (kg/yr)	Project TN Reduction (lbs/yr)
Atlantic Bch Total (Aggregate)	-	Total Reduction Required	-	28,087	61,791
Buccaneer WWTP FL0023248	AB-1	Complete Upgrade to SBR	Completed	9,985	21,967
Main WWTP FL0038776	AB-2	Reuse water to Selva Marina Golf Course	08/01/2011	1,242	2,732
Main WWTP FL0038776	AB-3	Upgrade to AWT	10/01/2013	20,877	45,929
Atlantic Bch Total (Aggregate)	-	Total Project Reductions	-	32,104	70,629
Atlantic Bch Total (Aggregate)	-	Credit/(Deficit)	-	4,017	8,837

This is a two-column table. Column 1 lists the Atlantic Beach (aggregate) projects, and Column 2 lists the implementation schedule.

Atlantic Beach (Aggregate) Projects	Implementation Schedule
Phase One – Main WWTF Reuse Project Phase a. Preliminary Plans Complete	Completed - 03/30/2009
b. Final Plans and Specifications Complete	01/31/2010 - on hold pending agreement with Selva Marina Country Club
c. Begin Construction	04/01/2010
d. End Construction	11/30/2010
e. Begin Operation	12/15/2010
f. Operational Level Attained	08/01/2011
Phase Two – Main WWTF Nutrient Removal Phase a. Preliminary Plans Complete	Completed - 03/30/2009
b. Final Plans and Specifications Complete	10/01/2010 – design underway
c. Begin Construction	04/30/2011
d. End Construction	12/31/2012
e. Begin Operation	03/31/2013
f. Operational Level Attained	10/01/2013

City of Atlantic Beach MS4 1,651
FLS000012

This is an eight-column table. Column 1 lists the facility name, Column 2 lists the project number, Column 3 lists the description, Column 4 lists the type(s) of BMP(s) implemented, Column 5 lists the acres treated, Column 6 lists the deadline, Column 7 lists the project TN reduction (in kilograms per year), and Column 8 lists the project TN reduction (in pounds per year).

Facility Name	Project Number	Description	Type(s) of BMP(s) Implemented	Acres Treated	Deadline	Project TN Reduction (kg/yr)	Project TN Reduction (lbs/yr)
Atlantic Bch MS4	-	Total Reduction Required	-	-	-	823	1,811
Atlantic Bch MS4 FLS000012	AB-4	Core City Capital Improvement Project: stormwater, sanitary sewer and water systems upgrades	Second Generation Baffle Box	180	Completed	659	1,450
Atlantic Bch MS4 FLS000012	AB-5	Hopkins Creek Stormwater Treatment System	Wet Detention	53	Completed - 12/31/2008	12	26
Atlantic Bch MS4 FLS000012	AB-6	FDOT Widening of SR 10 (Atlantic Blvd) roadway & bridge upgrade	Wet Pond (1", 14 days)	152	Completed	50	110
Atlantic Bch MS4 FLS000012	AB-7	FDOT Atlantic Blvd and Mayport Rd Interchange	Wet Pond (1", 14 days)	50	Completed	18	40
Atlantic Bch MS4 FLS000012	AB-8	FDOT Wonderwood Connector Segment 1 – Girvin to Sandcastle	Wet Pond (1", 14 days)	70	Completed	6	13
Atlantic Bch MS4 FLS000012	AB-9	Atmospheric deposition load reduction – Seminole Electric SCR upgrade	N/A	N/A	01/01/2010	78	172
Atlantic Bch MS4	-	Total Project Reductions	-	-	-	823	1,811
Atlantic Bch MS4	-	Credit/(Deficit)	-	-	-	0	0

City of Jacksonville/Florida Department of Transportation MS4 ..... 96,016 FLS000012

This is an eight-column table. Column 1 lists the facility name, Column 2 lists the project number, Column 3 lists the description, Column 4 lists the type(s) of BMP(s) implemented, Column 5 lists the acres treated, Column 6 lists the deadline, Column 7 lists the project TN reduction (in kilograms per year), and Column 8 lists the project TN reduction (in pounds per year).

[1] The estimated reductions are based on the treatment expected for wet detention ponds. The City has committed to provide a detailed implementation plan and schedule for the stormwater projects by 2010 as part of the Master Stormwater Management Plan update. In addition, the City has committed to accomplish, at a minimum, a 50 percent implementation of the future stormwater projects by the mid-point of the 15-year timeline shown.

[2] Significant reduction in nitrogen loading from septic tank phase-out projects are included. The City commits to re-evaluating the load reductions associated with septic tank phase-out based on the study results. In the event that the expected reductions, which must be agreed to by the Department, are less than projected in the City's current submittal, the City commits to either submitting plans for an alternative project(s), potentially including additional septic tank phase-outs, or a contract to purchase the amount of credits needed within six months of completion of the study or by June 30, 2011, whichever is earlier. If additional projects are required, they must be completed by the due date for the septic tank phase-out project, which is December 31, 2023.

[3] The schedule broadly outlines the project milestones for septic tank phase outs. While the general schedule depicts implementation over a 15-year time frame, the City will continuously implement projects throughout the implementation period. At a minimum, the City will accomplish a 50 percent implementation of the septic tank phase out projects by the mid-point of the 15-year implementation timeline shown. This schedule will be replaced with project specific dates and milestones following completion of the septic tank study or the June 30, 2011 target, whichever is earlier.

[4] At this time, FDOT has not been able to develop sufficient projects to meet the reductions required under the TMDL. In order to move forward with adoption of the BMAP at this time, FDOT has committed to evaluating additional projects and/or a water quality credit trade to meet the balance of their allocation, and will either submit plans for an additional project(s) or a plan to purchase the amount of credits needed by June 30, 2009. The plans must describe the specific activities, whether additional projects, credit purchase, or a combination thereof, that FDOT will implement to meet its wasteload allocation under the TMDL by December 31, 2014.

Facility Name	Project Number	Description	Type(s) of BMP(s) Implemented	Acres Treated	Deadline	Project TN Reduction (kg/yr)	Project TN Reduction (lbs/yr)
COJ MS4 FLS000012	-	Total Reduction Required	-	-	-	147,422	324,328
COJ MS4 FLS000012	COJ-1	Big Fishweir Creek-Murray Hill Phase I-Drainage improvements	Second generation baffle box	219	Completed	80	176
COJ MS4 FLS000012	COJ-2	Sixmile Creek-West 1st Street/Melson Avenue-Drainage improvements	Wet detention	254	Completed	470	1,034
COJ MS4 FLS000012	COJ-3	McCoys Creek Pond A & B	Wet detention	680	Completed	750	1,650
COJ MS4 FLS000012	COJ-4	McCoys Creek Pond F	Wet detention	11	Completed	10	22

Facility Name	Project Number	Description	Type(s) of BMP(s) Implemented	Acres Treated	Deadline	Project TN Reduction (kg/yr)	Project TN Reduction (lbs/yr)
COJ MS4 FLS000012	COJ-5	Riverside Ave-baffle boxes	Second generation baffle box	70	Completed	40	88
COJ MS4 FLS000012	COJ-6	St Augustine Rd (Emerson to US 1)-Regional pond facilities	Wet detention	167	Completed	200	440
COJ MS4 FLS000012	COJ-7	Powers Avenue/Old Kings Rd-Regional pond facilities	Wet detention	520	Completed	620	1,364
COJ MS4 FLS000012	COJ-8	Fouraker Rd- from Old Middleburg Rd. to Normandy Blvd. regional pond facilities	Wet detention	32	Completed	40	88
COJ MS4 FLS000012	COJ-9	Greenland Road-from St. Augustine Rd to Coastal Lane- detention pond facilities	Wet detention	33	Completed	30	66
COJ MS4 FLS000012	COJ-10	Barnes Rd-from University Blvd. to Parental Home Rd.- detention pond facilities	Wet detention	97	Completed	20	44
COJ MS4 FLS000012	COJ-11	Emerson St.-from Emerson St. Expwy. to Spring Glenn Rd - detention pond facility	Wet detention	17	Completed	20	44
COJ MS4 FLS000012	COJ-12	Bowden Rd-from U.S.# 1 to Salisbury Rd. - detention pond facilities	Wet detention	98	Completed	130	286
COJ MS4 FLS000012	COJ-13	Parental Home Rd Phase I (Bowden Rd from Salisbury Rd to Dean Rd) - detention pond facility	Wet detention	28	Completed	20	44
COJ MS4 FLS000012	COJ-14	Parental Home Rd Phase II (Beach Blvd to Ibach Rd) detention pond facility	Wet detention	82	Completed	10	22
COJ MS4 FLS000012	COJ-15	Lorretto Rd from S.R. 13 to Old St. Augustine Road - detention pond facilities	Wet detention	55	Completed	50	110
COJ MS4 FLS000012	COJ-16	Belford Rd-Pottsburg Ck. to Touchton Rd. detention pond facilities	Wet detention	20	Completed	10	22
COJ MS4 FLS000012	COJ-17	Royal Terrace phases A+B+C+D+E+1+2+3+4 - master pond facility	Wet detention	332	Completed	410	902
COJ MS4 FLS000012	COJ-18	University Pointe regional pond facility	Wet detention	102	Completed	150	330
COJ MS4 FLS000012	COJ-19	Cleveland Road-Phase I-B wet detention pond	Wet detention	269	Completed	150	330
COJ MS4 FLS000012	COJ-20	Hogan Creek	Wet detention	48	Completed	50	110
COJ MS4 FLS000012	COJ-21	McCoy Creek Pond D	Wet detention	27	Completed	30	66
COJ MS4 FLS000012	COJ-22	Upper Deer Creek Regional Stormwater Facility	Wet detention	537	Completed	840	1,848
COJ MS4 FLS000012	COJ-23	Hugh Edwards Canal	Wet detention	329	Completed	760	1,672

Facility Name	Project Number	Description	Type(s) of BMP(s) Implemented	Acres Treated	Deadline	Project TN Reduction (kg/yr)	Project TN Reduction (lbs/yr)
COJ MS4 FLS000012	COJ-24	Cedar River Outfall Improvements	Wet detention	1,452	Completed	530	1,166
COJ MS4 FLS000012	COJ-25	Sandalwood Canal	Wet detention	3,118	Completed - 12/31/2008	880	1,936
COJ MS4 FLS000012	COJ-26	Moncrief Creek	Wet detention	619	Completed	650	1,430
COJ MS4 FLS000012	COJ-27	Lincoln Villas-East Side-regional pond facility	Wet detention	185	Completed	100	220
COJ MS4 FLS000012	COJ-28	Old Middleburg Rd from Wilson Blvd to 103rd St-regional pond facilities	Wet detention	192	Completed	210	462
COJ MS4 FLS000012	COJ-29	Lakeshore Woodcrest Drainage Improvement	Wet detention	296	Completed	440	968
COJ MS4 FLS000012	COJ-30	Townsend Rd drainage improvements	Wet detention	151	Completed	60	132
COJ MS4 FLS000012	COJ-31	Lenox Ave (Highway to McDuff)	Wet detention	108	Completed	180	396
COJ MS4 FLS000012	COJ-32	Wesconnett Blvd (Blanding to Blanding)	Wet detention	396	Completed	40	88
COJ MS4 FLS000012	COJ-33	Durkeeville West	Wet detention	106	Completed	160	352
COJ MS4 FLS000012	COJ-34	Huffman Boulevard	Wet detention	16	Completed	20	44
COJ MS4 FLS000012	COJ-35	Spring Park Rd/Emerson to University	Wet detention	36	Completed	50	110
COJ MS4 FLS000012	COJ-36	Barnes Rd/Kennerly to University	Wet detention	418	Completed	720	1,584
COJ MS4 FLS000012	COJ-37	Pritchard Rd (Jones to I-295)	Wet detention	116	Completed	0	0
COJ MS4 FLS000012	COJ-38	Lenox, Lane to Normandy	Wet detention	47	Completed	30	66
COJ MS4 FLS000012	COJ-39	Cahoon Rd, Phase I	Wet detention	23	Completed	20	44
COJ MS4 FLS000012	COJ-40	Pulaski Road (Eastport Dr to New Berlin Rd)	Wet detention	19	Completed	20	44
COJ MS4 FLS000012	COJ-41	Lamoya Roadway Project	Wet detention	17	Completed	0	0
COJ MS4 FLS000012	COJ-42	LSJR upstream of Trout River	Wet detention[1]	3,141	12/31/2023	2,500	5,500
COJ MS4 FLS000012	COJ-43	Ortega River	Wet detention[1]	7,169	12/31/2023	4,600	10,120

Facility Name	Project Number	Description	Type(s) of BMP(s) Implemented	Acres Treated	Deadline	Project TN Reduction (kg/yr)	Project TN Reduction (lbs/yr)
COJ MS4 FLS000012	COJ-44	Arlington River	Wet detention[1]	3,352	12/31/2023	2,500	5,500
COJ MS4 FLS000012	COJ-45	LSJR Downstream of Trout River	Wet detention[1]	514	12/31/2023	200	440
COJ MS4 FLS000012	COJ-46	Intracoastal Waterway	Wet detention[1]	7,646	12/31/2023	4,600	10,120
COJ MS4 FLS000012	COJ-47	Julington Creek	Wet detention[1]	4,404	12/31/2023	2,600	5,720
COJ MS4 FLS000012	COJ-48	Trout River	Wet detention[1]	5,329	12/31/2023	2,100	4,620
COJ MS4 FLS000012	COJ-49	Broward River	Wet detention[1]	837	12/31/2023	700	1,540
COJ MS4 FLS000012	COJ-50	Dunn Creek	Wet detention[1]	1,300	12/31/2023	600	1,320
COJ MS4 FLS000012	COJ-51	Public Education Activities	N/A	N/A	Ongoing	9,859	21,690
COJ MS4 FLS000012	COJ-52	Septic Tank Phase-Out Projects[2]	N/A	N/A	12/31/2023[3]	103,619	227,962
COJ MS4 FLS000012	COJ-53	Atmospheric deposition load reduction – Seminole Electric SCR upgrade	N/A	N/A	01/01/2010	6,926	15,237
COJ MS4 FLS000012	-	City of Jacksonville Projects Subtotal	-	-	-	149,804	329,569
COJ MS4 FLS000012	COJ-54	FDOT Urban Office Reconstruction	Dry retention w/ underdrain	7	Completed	9	20
COJ MS4 FLS000012	COJ-55	FDOT Fort George Inlet Bridge	Wet pond (1", 14 days)	18	Completed	6	13
COJ MS4 FLS000012	COJ-56	FDOT Widening of Riverside Area	Wet pond (1", 14 days)	14	Completed	5	11
COJ MS4 FLS000012	COJ-57	FDOT Widening of Merrill Road between Wompi Drive and Milcoe road	Wet pond (1", 14 days)	58	Completed	21	46
COJ MS4 FLS000012	COJ-58	FDOT Widening of Merrill Road between 9A and Wompi Drive	Wet pond (1", 14 days)	69	Completed	25	55
COJ MS4 FLS000012	COJ-59	FDOT Widening of SR 13 to six lane divided highway	Wet pond (1", 14 days)	174	Completed	63	139
COJ MS4 FLS000012	COJ-60	FDOT Bch Blvd Widening from ICWW to E. of Penman	Wet pond (1", 14 days)	25	Completed	9	20
COJ MS4 FLS000012	COJ-61	FDOT I-295 and SR 21 (Blanding) interchange upgrade	Wet pond (1", 14 days)	42	Completed	15	33
COJ MS4 FLS000012	COJ-62	FDOT I-295 and SR 17 (Blanding) interchange expansion	Wet pond (1", 14 days)	96	Completed	35	77

Facility Name	Project Number	Description	Type(s) of BMP(s) Implemented	Acres Treated	Deadline	Project TN Reduction (kg/yr)	Project TN Reduction (lbs/yr)
COJ MS4 FLS000012	COJ-63	FDOT JTB/Belfort Road Interchange	Wet pond (1", 14 days)	155	Completed	56	123
COJ MS4 FLS000012	COJ-64	FDOT Pine Avenue Sidewalk	Dry retention (1")	7	Completed	9	20
COJ MS4 FLS000012	COJ-65	FDOT 9A from Baymeadows Road to I-95	Wet pond (1", 14 days)	550	Completed	200	440
COJ MS4 FLS000012	COJ-66	FDOT Widening of I-95 from St. Johns County line to 9A/I-295	Wet pond (1", 14 days)	175	Completed	64	141
COJ MS4 FLS000012	COJ-67	FDOT Widening of I-95 from I-295 to south of JTB	Wet pond (1", 14 days)	441	Completed	160	352
COJ MS4 FLS000012	COJ-68	FDOT Widening of SR 10 (Atlantic Blvd from St. Johns Bluff to San Pablo)	Wet pond (1", 14 days)	1096	Completed	397	873
COJ MS4 FLS000012	COJ-69	FDOT Widening of Southside Blvd	Dry retention	146	Completed	53	117
COJ MS4 FLS000012	COJ-70	FDOT New JTB/9A Interchange	Detention/retention (1")	339	Completed - 08/30/2009	442	972
COJ MS4 FLS000012	COJ-71	FDOT Southside (SR 115) frontage road	Wet pond (1", 14 days)	8	Completed	3	7
COJ MS4 FLS000012	COJ-72	FDOT I-95 Improvement - from I-295 to Nassau County Line South Project	Wet pond (1", 14 days)	291	Completed	105	231
COJ MS4 FLS000012	COJ-73	FDOT I-95 Improvement - S. of Clarke rd to I-295	Wet pond (1", 14 days)	94	Completed	34	75
COJ MS4 FLS000012	COJ-74	FDOT 9A Improvement - South Project	Wet pond (1", 14 days)	176	Completed	64	141
COJ MS4 FLS000012	COJ-75	FDOT 9A from South of Atlantic to Beach Blvd	Wet pond (1", 14 days)	124	Completed	45	99
COJ MS4 FLS000012	COJ-76	FDOT I-295/I-95/9A Interchange	Wet pond (1", 14 days)	580	Completed	200	440
COJ MS4 FLS000012	COJ-77	FDOT Branan Field Chafee roadway project	Wet pond (1", 14 days)	187	Completed	115	253
COJ MS4 FLS000012	COJ-78	FDOT Wonderwood Connector Segment 1 project Girvin to Sandcastle	Wet pond (1", 14 days)	70	Completed	19	42
COJ MS4 FLS000012	COJ-79	FDOT JIA South Access Connector project	Dry detention	63	Completed	82	180
COJ MS4 FLS000012	COJ-80	FDOT I-95 Widening from Lem Turner to I-295 project	Wet pond (1", 14 days)	117	Completed	42	92
COJ MS4 FLS000012	COJ-81	FDOT 4 laning of SR 13	Wet pond (1", 14 days)	105	Completed	38	84
COJ MS4 FLS000012	COJ-82	FDOT SR21 Widening from S. of Cedar River to E. of Cassat	Wet pond (1", 14 days)	19	Completed	7	15

Facility Name	Project Number	Description	Type(s) of BMP(s) Implemented	Acres Treated	Deadline	Project TN Reduction (kg/yr)	Project TN Reduction (lbs/yr)
COJ MS4 FLS000012	COJ-83	FDOT Arlington Expressway Project	Unknown	27	Completed	10	22
COJ MS4 FLS000012	COJ-84	FDOT Merrill Rd Southside Blvd Interchange Project	Wet pond (1", 14 days)	15	Completed	5	11
COJ MS4 FLS000012	COJ-85	FDOT Baymeadows Project from East of US 1 to SR 13	Wet pond (1", 14 days)	35	Completed	9	20
COJ MS4 FLS000012	COJ-86	FDOT SR 115/8th St Project	Wet pond (1", 14 days)	31	Completed	11	24
COJ MS4 FLS000012	COJ-87	FDOT SR 115/8th St Project	Wet pond (1", 14 days)	4	Completed	1	2
COJ MS4 FLS000012	COJ-88	FDOT JTB from I-95 to Gate Parkway Project	Wet pond (1", 14 days)	58	Completed	21	46
COJ MS4 FLS000012	COJ-89	FDOT I-295 from West of Duval to Biscayne Blvd	Wet pond (1", 14 days)	20	Completed	7	15
COJ MS4 FLS000012	COJ-90	FDOT Beaver Street (US 90) Project from Stockton to Tyler	Wet pond (1", 14 days)	7	Completed	3	7
COJ MS4 FLS000012	COJ-91	FDOT 9A from Baymeadows to JTB Project	Wet pond (1", 14 days)	195	Completed	71	156
COJ MS4 FLS000012	COJ-92	FDOT JTB/A1A Interchange Project	Wet pond (1", 14 days)	20	Completed	3	7
COJ MS4 FLS000012	COJ-93	FDOT Southside Blvd/I-95 Connector	Dry retention (1")	76	Completed	99	218
COJ MS4 FLS000012	COJ-94	FDOT Beach Blvd improvement from west of FCCJ to East of San Pablo	Wet pond (1", 14 days)	165	12/31/2010	60	132
COJ MS4 FLS000012	COJ-95	FDOT Widening of SR 13	Unknown	227	Completed	82	180
COJ MS4 FLS000012	COJ-96	FDOT Branan Field Chafee roadway project (Argyle Foprest to 103rd)	Wet pond (1", 14 days)	112	Completed	40	88
COJ MS4 FLS000012	COJ-97	FDOT Branan Field Chafee roadway project (103rd to I-10)	Wet pond (1", 14 days)	150	Completed - 8/31/2009	55	121
COJ MS4 FLS000012	COJ-98	FDOT Southside (SR115) & Bch Blvd (SR202) interchange & rd widening	Wet pond (1", 14 days)	33	Completed	12	26
COJ MS4 FLS000012	COJ-99	FDOT Wonderwood Connector Segment 2	Wet pond (1", 14 days)	58	Completed	21	46
COJ MS4 FLS000012	COJ-100	FDOT JTB/Kernan project	Wet pond (1", 14 days)	65	Completed	24	53
COJ MS4 FLS000012	COJ-101	FDOT I-95 from JTB to Emerson	Dry retention (1")	105	Completed	137	301
COJ MS4 FLS000012	COJ-102	FDOT Heckscher Drive / 9a Interchange-1 DRS	Dry Retention (1")	103	Completed - 12/31/2009	89	196

Facility Name	Project Number	Description	Type(s) of BMP(s) Implemented	Acres Treated	Deadline	Project TN Reduction (kg/yr)	Project TN Reduction (lbs/yr)
COJ MS4 FLS000012	COJ-103	FDOT Heckscher Drive / 9a Interchange-2 WDS	Wet pond (1", 14 days)	68	Completed - 12/31/2009	25	55
COJ MS4 FLS000012	COJ-104	FDOT Wonderwood Segment 3 Project	Wet pond (1", 14 days)	69	Completed	25	55
COJ MS4 FLS000012	COJ-105	FDOT Collins Rd Collector Distributor	Wet pond (1", 14 days)	142	Completed	51	112
COJ MS4 FLS000012	COJ-106	FDOT JTB / I-95 Ramp project (40-031-18233-6)	Wet pond (1", 14 days)	54	Completed	20	44
COJ MS4 FLS000012	COJ-107	FDOT SR 5 US 1 Project (209516-3-52-01)	Wet pond (1", 14 days)	27	Completed	10	22
COJ MS4 FLS000012	COJ-108	FDOT 4 laning of SR 207	Wet Pond (1", 14 days)	12	Completed	7	15
COJ MS4 FLS000012	COJ-109	FDOT 4 laning of SR207 from CR305 to Cypress Link Blvd	Wet Pond (1", 14 days)	106	Completed	65	143
COJ MS4 FLS000012	COJ-110	FDOT 4 laning of SR207 from SR15 (US 17) to CR207	Wet Pond (1", 14 days)	538	Completed	330	726
COJ MS4 FLS000012	COJ-111	FDOT Six laning of I-95 from Flagler County Line to SR 16	Wet pond (1", 14 days)	800	Completed	255	561
COJ MS4 FLS000012	COJ-112	FDOT I-95 Rest Area Reconstruction	Wet pond (1", 14 days)	52	Completed	17	37
COJ MS4 FLS000012	COJ-113	FDOT Six laning of I-95 from World Golf Village to Duval County line	Wet pond (1", 14 days)	537	Completed	237	521
COJ MS4 FLS000012	COJ-114	FDOT Widening of SR 16	Swale treatment system	68	Completed	22	48
COJ MS4 FLS000012	COJ-115	FDOT SR 207 from I-95 to SR 312	Wet pond (1", 14 days)	102	Completed	33	73
COJ MS4 FLS000012	COJ-116	FDOT SR 207 from SR 312 to US 1	Wet pond (1", 14 days)	536	Completed	171	376
COJ MS4 FLS000012	COJ-117	FDOT Stormwater Education Efforts in St. Johns County	N/A	N/A	Ongoing	286	629
COJ MS4 FLS000012	COJ-118	FDOT Education Efforts in City of Jacksonville	N/A	N/A	Ongoing	974	2,143
COJ MS4 FLS000012	COJ-119	Atmospheric deposition load reduction – Seminole Electric SCR upgrade	N/A	N/A	01/01/2010	769	1,692
COJ MS4 FLS000012	COJ-120	FDOT Future Projects and/or Trade[4]	-	-	12/31/2014	8,362	18,396
COJ MS4 FLS000012	-	FDOT Projects Subtotal	-	-	-	14,742	32,432
COJ MS4 FLS000012	-	Total Project Reductions	-	-	-	164,546	362,001

Facility Name	Project Number	Description	Type(s) of BMP(s) Implemented	Acres Treated	Deadline	Project TN Reduction (kg/yr)	Project TN Reduction (lbs/yr)
COJ MS4 FLS000012		Credit/(Deficit)	-	-	-	17,124	37,673

This is a two-column table. Column 1 lists the City of Jacksonville MS4 projects, and Column 2 lists the implementation schedule.

City of Jacksonville MS4 Projects	Implementation Schedule
Future COJ Stormwater Projects a. Start Date of Project	01/01/2009
b. Completion Date – Attain 50% of required reduction	07/31/2015
c. Completion Date – Completion of Project	12/31/2023
Septic Tank Phase-Out Projects a. Start Date of Project	10/31/2008
b. Completion Date - Phase-out 50% of Septic Tanks	07/31/2015
c. Completion Date – Completion of Project	12/31/2023
FDOT Future Projects and/or Trade a. Submittal Date – Project List and/or Plan for Trade	06/30/2009
b. Completion Date – Future Project(s) and/or Trade	12/31/2014

City of Jacksonville Beach WWTF 21,015
FL002031

This is a six-column table. Column 1 lists the facility name, Column 2 lists the project number, Column 3 lists the description, Column 4 lists the deadline, Column 5 lists the project TN reduction (in kilograms per year), and Column 6 lists the project TN reduction (in pounds per year).

Facility Name	Project Number	Description	Deadline	Project TN Reduction (kg/yr)	Project TN Reduction (lbs/yr)
Jax Bch WWTF	-	Total Reduction Required	-	19,135	41,246
Jax Bch WWTF FL0020231	JB-1	Upgrade WWTF to AWT for N removal	12/31/2013	21,555	47,421
Jax Bch WWTF	-	Total Project Reductions	-	21,555	47,421
Jax Bch WWTF	-	Credit/(Deficit)	-	2,420	5,324

This is a two-column table. Column 1 lists the Atlantic Beach (aggregate) projects, and Column 2 lists the implementation schedule.

Jacksonville Beach WWTF Projects	Implementation Schedule
Phase One – Initial Nutrient Removal Phase a. Preliminary Plans Complete	Completed – 01/01/2008
b. Final Plans and Specifications Complete	Completed – 2009
c. Begin Construction	Completed – 04/06/2009
d. End Construction	07/01/2013
e. Begin Operation	08/01/2013
f. Operational Level Attained	12/31/2013

City of Jacksonville Beach MS4 4,804
FLS000013

This is an eight-column table. Column 1 lists the facility name, Column 2 lists the project number, Column 3 lists the description, Column 4 lists the type(s) of BMP(s) implemented, Column 5 lists the acres treated, Column 6 lists the deadline, Column 7 lists the project TN reduction (in kilograms per year), and Column 8 lists the project TN reduction (in pounds per year).

Facility Name	Project Number	Description	Type(s) of BMP(s) Implemented	Acres Treated	Deadline	Project TN Reduction (kg/yr)	Project TN Reduction (lbs/yr)
Jax Bch MS4	-	Total Reduction Required	-	-	-	170	374
Jax Bch MS4 FLS000013	JB-2	FDOT Beach Blvd widening (Pond 2)	-	38.87	12/31/2010	14	31
Jax Bch MS4 FLS000013	JB-3	Atmospheric deposition load reduction – Seminole Electric SCR upgrade	N/A	N/A	01/01/2010	156	343
Jax Bch MS4	-	Total Project Reductions	-	-	-	170	374
Jax Bch MS4	-	Credit/(Deficit)	-	-	-	0	0

This is a two-column table. Column 1 lists the Jacksonville Beach MS4 projects, and Column 2 lists the implementation schedule.

Jacksonville Beach MS4 Projects	Implementation Schedule
FDOT Beach Boulevard Widening Project (Pond 2) a. Start Date of Project	Completed - 06/01/2006
b. Completion Date - Design	Completed - 06/30/2006
c. Completion Date - Construction	12/31/2010
d. Completion Date – Completion of Project	12/31/2010

City of Neptune Beach WWTF 6,162
FL0020427

This is a six-column table. Column 1 lists the facility name, Column 2 lists the project number, Column 3 lists the description, Column 4 lists the deadline, Column 5 lists the project TN reduction (in kilograms per year), and Column 6 lists the project TN reduction (in pounds per year).

Facility Name	Project Number	Description	Deadline	Project TN Reduction (kg/yr)	Project TN Reduction (lbs/yr)
Neptune Beach WWTF FL0020427	-	Total Reduction Required	-	5,286	11,629
Neptune Beach WWTF FL0020427	NB-1	Complete Process Improvements	10/01/2012	7,322	16,108
Neptune Beach WWTF FL0020427	-	Total Project Reductions	-	7,322	16,108
Neptune Beach WWTF FL0020427	-	Credit/(Deficit)	-	2,036	4,479

This is a two-column table. Column 1 lists the Neptune Beach WWTF projects, and Column 2 lists the implementation schedule.

Neptune Beach WWTF Projects	Implementation Schedule
Phase One – Initial Nutrient Removal Phase a. Preliminary Plans Complete	01/01/2009
b. Final Plans and Specifications Complete	09/01/2010 – projected to be 04/30/2010
c. Begin Construction	03/01/2011
d. End Construction	03/01/2012 – projected to be 05/30/2011
e. Begin Operation	04/01/2012 – projected to be 06/30/2011
f. Operational Level Attained	10/01/2012 – projected to be 12/30/2011

City of Neptune Beach MS4 1,437
FLS000012

This is a six-column table. Column 1 lists the facility name, Column 2 lists the project number, Column 3 lists the description, Column 4 lists the deadline, Column 5 lists the project TN reduction (in kilograms per year), and Column 6 lists the project TN reduction (in pounds per year).

Facility Name	Project Number	Description	Deadline	Project TN Reduction (kg/yr)	Project TN Reduction (lbs/yr)
Neptune Beach MS4	-	Total Reduction Required	-	47	103
Neptune Beach MS4	NB-2	Atmospheric deposition load reduction – Seminole Electric SCR upgrade	01/01/2010	47	103
Neptune MS4	-	Total Project Reductions	-	47	103
Neptune MS4	-	Credit/(Deficit)	-	0	0

Clay County MS4 21,188
FLR04E045

This is an eight-column table. Column 1 lists the facility name, Column 2 lists the project number, Column 3 lists the description, Column 4 lists the type(s) of BMP(s) implemented, Column 5 lists the acres treated, Column 6 lists the deadline, Column 7 lists the project TN reduction (in kilograms per year), and Column 8 lists the project TN reduction (in pounds per year).

Facility Name	Project Number	Description	Type(s) of BMP(s) Implemented	Acres Treated	Deadline	Project TN Reduction (kg/yr)	Project TN Reduction (lbs/yr)
CC MS4 FLR04E045	-	Total Reduction Required	-	-	-	4,061	8,934
CC MS4 FLR04E045	CC-9	Wells Road Improvements	Wet Detention Pond	120	Completed	9	20
CC MS4 FLR04E045	CC-10	County Road 224 Phase I	Wet Detention Pond	70	Completed	38	84
CC MS4 FLR04E045	CC-11	County Road 224 Phase II	Wet Detention Pond	140	Completed	68	150
CC MS4 FLR04E045	CC-12	Education Program	N/A	N/A	Ongoing	1,010	2,222
CC MS4 FLR04E045	CC-13	FDOT Construction of Stormwater Management Systems for Clay County Recreational Trail on SR15	Retention/ Detention (1")	69	Completed	90	198
CC MS4 FLR04E045	CC-14	FDOT SR 15 Widening @ Fleming Island	Retention/ Detention (1")	606	Completed	1,336	2,939
CC MS4 FLR04E045	CC-15	FDOT SR 15 Widening @ Fleming Island from Village Sq Park Rd to South of Margarets Walk Rd	Retention/ Detention (1")	301	Completed	664	1,461
CC MS4 FLR04E045	CC-16	Atmospheric deposition load reduction – Seminole Electric SCR upgrade	N/A	N/A	01/01/2010	846	1,861
CC MS4 FLR04E045	-	Total Project Reductions	-	-	-	4,061	8,934
CC MS4 FLR04E045	-	Credit/(Deficit)	-	-	-	0	0

Clay County Utility Authority Aggregate.....63,963
FL0629006

This is a six-column table. Column 1 lists the facility name, Column 2 lists the project number, Column 3 lists the description, Column 4 lists the deadline, Column 5 lists the project TN reduction (in kilograms per year), and Column 6 lists the project TN reduction (in pounds per year).

Facility Name	Project Number	Description	Deadline	Project TN Reduction (kg/yr)	Project TN Reduction (lbs/yr)
CCUA Total Facilities	-	Total Reduction Required	-	-2,394	-5,267
Fleming Island WWTF FL0043834	CCUA-1	Upgrade to APRICOT and Reuse	Completed	18,195	40,029
Miller Street WWTF FL0025151	CCUA-2	Reuse Water upgrades including Spencer WWTP	12/01/2010	16,209	35,670
Miller Street WWTF FL0025151	CCUA-3	WWTF Improvements to meet APRICOT standards	Completed	10,335	22,737
CCUA Total Facilities	-	Total Project Reductions	-	44,739	98,426
CCUA Total Facilities	-	Credit/(Deficit)	-	47,133	103,693

This is a two-column table. Column 1 lists the CCUA WWTF projects, and Column 2 lists the implementation schedule.

CCUA WWTF Projects	Implementation Schedule
Miller Street WWTF Reuse Upgrades a. Start Date of Project	08/01/2006
b. Completion Date – Design	Completed - 04/01/2009
c. Completion Date – Construction	10/01/2010 – approximately 55% complete
d. Completion Date – Project	12/01/2010

JEA Aggregate.....654,672
FL0620564

This is a six-column table. Column 1 lists the facility name, Column 2 lists the project number, Column 3 lists the description, Column 4 lists the deadline, Column 5 lists the project TN reduction (in kilograms per year), and Column 6 lists the project TN reduction (in pounds per year).

Facility Name	Project Number	Description	Construction Complete	Achieve Operational Effectiveness	Project TN Reduction (kg/yr)	Project TN Reduction (lbs/yr)
JEA Total Facilities	-	Total Reduction Required	-	-	741,951	1,632,292
JEA Julington Creek FL0043591	JEA-1	Complete Process Improvements	Completed	N/A	5,909	13,000
JEA Arlington East FL0026441	JEA-2	Complete Process Improvements	Completed	N/A	92,727	204,000
JEA District II FL0026450	JEA-3	Complete Process Improvements	Completed	N/A	140,000	308,000
JEA Southwest FL0026468	JEA-4	Complete Process Improvements	Completed	N/A	45,909	101,000
JEA Buckman FL0026000	JEA-5	Complete Process Improvements	Completed	N/A	50,455	111,000
JEA Monterey FL00230604	JEA-6	Complete Process Improvements	Completed	N/A	35,455	78,001
JEA Mandarin FL0023493	JEA-7	Complete Process Improvements	Completed	N/A	12,726	27,997
JEA San Pablo FL0024767	JEA-8	Complete Phase Out	Completed	N/A	6,364	14,001
JEA Woodmere FL0026786	JEA-9	Complete Phase Out	Completed	N/A	10,000	22,000
JEA Beacon Hills FL0026778	JEA-10	Complete Phase Out	12/31/2010	12/31/2010	0	0
JEA Royal Lakes FL0026751	JEA-11	Complete Phase Out	06/30/2012	06/30/2012	0	0
JEA Jax Heights FL0023671	JEA-12	Complete Phase Out	08/14/2014	08/14/2014	0	0
JEA Arlington East FL0026441	JEA-13	Complete Process Improvements	12/31/2010	09/30/2011	118,172	259,978
JEA District II FL0026450	JEA-14	Complete Process Improvements	09/30/2012	09/30/2014	0	0
JEA San Jose FL0023663	JEA-15	Complete Phase Out	09/30/2013	09/30/2013	0	0
JEA Buckman FL0026000	JEA-16	Complete Process Improvements	03/30/2013	09/30/2013	191,183	420,603
JEA Facilities	JEA-17	Reuse expansion (approx 10 mgd) at Arlington East, Mandarin and District II	09/30/2012	09/30/2013	59,090	129,998
JEA Total Facilities	-	Total Project Reductions	-	-	767,990	1,689,578
JEA Total Facilities	-	Credit/(Deficit)	-	-	26,039	57,286

This is a two-column table. Column 1 lists the JEA WWTF projects, and Column 2 lists the implementation schedule.

JEA WWTF Projects	Implementation Schedule
Phased WWTF Nutrient Removal a. Preliminary Plans Complete	09/30/2008
b. Final Plans and Specifications Complete	01/30/2009
c. Begin Construction	06/30/2009
d. Interim Progress Report Due	12/01/2009
e. Interim Progress Report Due	06/30/2010
f. Interim Progress Report Due	12/01/2010
g. Interim Progress Report Due	06/30/2011
h. Interim Progress Report Due	12/01/2011
i. End Construction	09/30/2012
j. Begin Operations	10/01/2012
k. Interim Progress Report Due	03/31/2013
l. Operational Level Attained	09/30/2014

Smurfit-Stone Container ***.....74,305***
FL0000400

This is a six-column table. Column 1 lists the facility name, Column 2 lists the project number, Column 3 lists the description, Column 4 lists the deadline, Column 5 lists the project TN reduction (in kilograms per year), and Column 6 lists the project TN reduction (in pounds per year).

Facility Name	Project Number	Description	Deadline	Project TN Reduction (kg/yr)	Project TN Reduction (lbs/yr)
Smurfit-Stone	-	Total Reduction Required	-	71,684	157,705
Smurfit-Stone	SS-1	Complete Process Improvements	Completed	71,684	157,705
Smurfit-Stone	-	Total Project Reductions	-	71,684	157,705
Smurfit-Stone	-	Credit/(Deficit)	-	0	0

St. Johns County MS4.....746
FLR04E025

This is an eight-column table. Column 1 lists the facility name, Column 2 lists the project number, Column 3 lists the description, Column 4 lists the type(s) of BMP(s) implemented, Column 5 lists the acres treated, Column 6 lists the deadline, Column 7 lists the project TN reduction (in kilograms per year), and Column 8 lists the project TN reduction (in pounds per year).

Facility Name	Project Number	Description	Type(s) of BMP(s) Implemented	Acres Treated	Deadline	Project TN Reduction (kg/yr)	Project TN Reduction (lbs/yr)
SJC MS4 FLR04E025	-	Starting Load	-	-	-	2,311	5,084
SJC MS4 FLR04E025	SJC-9	Implementation of Stormwater Management Program - purchase a street sweeper	Street sweeping	1,500	01/01/2012	129	284
SJC MS4 FLR04E025	SJC-10	Implementation street sweeping	Street sweeping	-	Ongoing	19	42
SJC MS4 FLR04E025	SJC-11	Stormwater Education	Education	-	Ongoing	153	337
SJC MS4 FLR04E025	SJC-12	Low-impact development	-	-	Ongoing	Not quantified	Not quantified
SJC MS4 FLR04E025	SJC-13	Slow release fertilizer ordinance	-	-	01/01/2011	Not quantified	Not quantified
SJC MS4 FLR04E025	SJC-14	FDOT 4 laning of SR 312	Wet Pond (1", 14 days)	38	Completed	14	31
SJC MS4 FLR04E025	SJC-15	FDOT A1A Stormwater retrofit from Duval County line to Thousand Oaks lane	Dry detention	98	Completed	216	475
SJC MS4 FLR04E025	SJC-16	Atmospheric deposition load reduction – Seminole Electric SCR upgrade	N/A	N/A	01/01/2010	60	132
SJC MS4 FLR04E025	SJC-17	Algal Initiative	N/A	N/A	10/31/2017	1,720	3,784
SJC MS4 FLR04E025	-	Total Project Reductions	-	-	-	2,311	5,084
SJC MS4 FLR04E025	-	Credit/(Deficit)	-	-	-	0	0

This is a two-column table. Column 1 lists the St. Johns County MS4 projects, and Column 2 lists the implementation schedule.

ST. JOHNS COUNTY MS4 PROJECTS	IMPLEMENTATION SCHEDULE
Purchase a Street Sweeper a. Start Date of Project	01/01/2012
b. Completion Date – Completion of Project	01/01/2012
Slow Release Fertilizer Ordinance a. Start Date of Project	01/01/2010
b. Completion Date – Completion of Project	01/01/2011
Algal Initiative a. Start Date of Project	10/01/2008
b. Completion Date – Project Assessment	10/31/2010
c. Completion Date – Project Fundraising	10/31/2012
d. Completion Date – Construction	10/31/2017

Town of Orange Park WWTF**.....*****7,940***
FL0023922

This is a six-column table. Column 1 lists the facility name, Column 2 lists the project number, Column 3 lists the description, Column 4 lists the deadline, Column 5 lists the project TN reduction (in kilograms per year), and Column 6 lists the project TN reduction (in pounds per year).

- = Empty cell/no data

Facility Name	Project Number	Description	Deadline	Project TN Reduction (kg/yr)	Project TN Reduction (lbs/yr)
Orange Park WWTF	-	Total Reduction Required	-	16,946	37,281
Ash Street WWTF FL0023922	OP-1	Phase One Improvements	04/15/2010	4,273	9,401
Ash Street WWTF FL0023922	OP-2	Phase Two Improvements	11/01/2011	4,841	10,650
Ash Street WWTF FL0023922	OP-3	Phase Three Improvements – AWT/Reuse	11/01/2013	7,945	17,479
Orange Park WWTF	-	Total Project Reductions	-	17,059	37,530
Orange Park WWTF	-	Credit/(Deficit)	-	113	249

This is a two-column table. Column 1 lists the Orange Park WWTF projects, and Column 2 lists the implementation schedule.

ORANGE PARK WWTF PROJECTS	IMPLEMENTATION SCHEDULE
Phase One – Initial Nutrient Removal Phase a. Preliminary Plans Complete	04/01/2009
b. Final Plans and Specifications Complete	04/30/2009
c. Begin Construction	05/15/2009
d. End Construction	01/30/2010
e. Begin Operation	02/28/2010
f. Operational Level Attained	04/15/2010
Phase Two – Additional nutrient removal phase a. Preliminary Plans Complete	06/30/2009
b. Final Plans and Specifications Complete	11/01/2009
c. Begin Construction	02/30/2011
d. End Construction	08/30/2011
e. Begin Operation	09/30/2011
f. Operational Level Attained	11/15/2011
Phase Three – Final expansion and improvements a. Preliminary Plans Complete	11/01/2010
b. Final Plans and Specifications Complete	01/30/2011
c. Begin Construction	05/15/2012
d. End Construction	10/15/2012
e. Begin Operation	04/30/2013
f. Operational Level Attained	11/01/2013

Town of Orange Park MS4.....3,348
FLR04E075

This is a six-column table. Column 1 lists the facility name, Column 2 lists the project number, Column 3 lists the description, Column 4 lists the deadline, Column 5 lists the project TN reduction (in kilograms per year), and Column 6 lists the project TN reduction (in pounds per year).

Facility Name	Project Number	Description	Deadline	Project TN Reduction (kg/yr)	Project TN Reduction (lbs/yr)
Orange Park MS4	-	Total Reduction Required	-	103	227
Orange Park MS4	OP-4	Atmospheric deposition load reduction – Seminole Electric SCR upgrade	01/01/2010	103	227
Orange Park MS4	-	Total Project Reductions	-	103	227
Orange Park MS4	-	Credit/(Deficit)	-	0	0

U.S. Navy Aggregate 11,684
FL0639451

This is a six-column table. Column 1 lists the facility name, Column 2 lists the project number, Column 3 lists the description, Column 4 lists the deadline, Column 5 lists the project TN reduction (in kilograms per year), and Column 6 lists the project TN reduction (in pounds per year).

Facility Name	Project Number	Description	Deadline	Project TN Reduction (kg/yr)	Project TN Reduction (lbs/yr)
USN Total (Aggregate)	-	Total Reduction Required	-	15,541	34,190
NAS Jax WWTF FL0000957	USN-1	Reuse to Timuquana Country Club	Completed	7,693	16,925
NAS Jax WWTF FL0000957	USN-2	Expand Reuse System	10/01/2013	2,790	6,138
NAS Jax WWTF FL0000957	USN-3	Inflow/infiltration repair projects	Completed	2,790	6,138
NS Mayport WWTF FL0000922	USN-4	Inflow/infiltration repair projects	Completed	5,753	12,657
USN Total (Aggregate)	-	Total Project Reductions	-	19,026	41,857
USN Total (Aggregate)	-	Credit/(Deficit)	-	3,485	7,667

This is a two-column table. Column 1 lists the U.S. Navy (aggregate) projects, and Column 2 lists the implementation schedule.

U.S. Navy (Aggregate) Projects	Implementation Schedule
Expand Reuse System a. Start Date of Project	02/07/2008
b. Completion Date – Design	Completed - 09/30/2009
c. Completion Date - Construction	10/01/2013
d. Completion Date – Project	10/01/2013

US Navy MS4s 7,232
FLR04E091 and FLR04E056

This is an eight-column table. Column 1 lists the facility name, Column 2 lists the project number, Column 3 lists the description, Column 4 lists the type(s) of BMP(s) implemented, Column 5 lists the acres treated, Column 6 lists the deadline, Column 7 lists the project TN reduction (in kilograms per year), and Column 8 lists the project TN reduction (in pounds per year).

Facility Name	Project Number	Description	Type(s) of BMP(s) Implemented	Acres Treated	Deadline	Project TN Reduction (kg/yr)	Project TN Reduction (lbs/yr)
USN MS4s	-	Total Reduction Required	-	-	-	298	656
USN MS4	USN-6	Atmospheric deposition load reduction – Seminole Electric SCR upgrade	N/A	N/A	01/01/2010	298	656
USN MS4	-	Total Project Reductions	-	-	-	298	656
USN MS4	-	Credit/(Deficit)	-	-	-	0	0

Name of Facility ***Load Allocation (kg/yr)***

Camp Blanding Non-MS4.....1,220

This is an eight-column table. Column 1 lists the facility name, Column 2 lists the project number, Column 3 lists the description, Column 4 lists the type(s) of BMP(s) implemented, Column 5 lists the acres treated, Column 6 lists the deadline, Column 7 lists the project TN reduction (in kilograms per year), and Column 8 lists the project TN reduction (in pounds per year).

Facility Name	Project Number	Description	Type(s) of BMP(s) Implemented	Acres Treated	Deadline	Project TN Reduction (kg/yr)	Project TN Reduction (lbs/yr)
Camp Blanding	-	Total Reduction Required	-	-	-	1,650	3,630
Camp Blanding	CB-1	Re-grade existing swale system	Swales	2,220	12/31/2013	1,999	4,398
Camp Blanding	CB-2	Atmospheric deposition load reduction – Seminole Electric SCR upgrade	N/A	N/A	01/01/2010	98	216
Camp Blanding	-	Total Project Reductions	-	-	-	2,097	4,613
Camp Blanding	-	Credit/(Deficit)	-	-	-	447	983

This is a two-column table. Column 1 lists the Camp Blanding non-MS4 projects, and Column 2 lists the implementation schedule.

Camp Blanding Non-MS4 Projects	Implementation Schedule
Re-grade existing swale system a. Start Date of Project	Completed - 01/01/2009
b. Completion Date – Re-grade 1st set of swales	Completed - 12/31/2009
c. Completion Date – Re-grade 2nd set of swales	12/31/2010
d. Completion Date – Re-grade 3rd set of swales	12/31/2011
e. Completion Date – Re-grade 4th set of swales	12/31/2012
f. Completion Date – Re-grade 5th set of swales	12/31/2013
g. Completion Date – Completion of Project	12/31/2013

Clay County Non-MS4 11,107

This is an eight-column table. Column 1 lists the facility name, Column 2 lists the project number, Column 3 lists the description, Column 4 lists the type(s) of BMP(s) implemented, Column 5 lists the acres treated, Column 6 lists the deadline, Column 7 lists the project TN reduction (in kilograms per year), and Column 8 lists the project TN reduction (in pounds per year).

Facility Name	Project Number	Description	Type(s) of BMP(s) Implemented	Acres Treated	Deadline	Project TN Reduction (kg/yr)	Project TN Reduction (lbs/yr)
CC Non-MS4	-	Total Reduction Required	-	-	-	944	2,077
CC Non-MS4	CC-17	Education Program	N/A	N/A	Ongoing	482	1,060
CC Non-MS4	CC-18	FDOT SR 23 improvement from Kindlewood Rd to Duval County line - 5 systems	Wet pond (1", 14 days)	112	Completed	69	152
CC Non-MS4	CC-19	Atmospheric deposition load reduction – Seminole Electric SCR upgrade	N/A	N/A	01/01/2010	393	865
CC Non-MS4	-	Total Project Reductions	-	-	-	944	2,077
CC Non-MS4	-	Credit/(Deficit)	-	-	-	0	0

St. Johns County Non-MS4.....4,865

This is an eight-column table. Column 1 lists the facility name, Column 2 lists the project number, Column 3 lists the description, Column 4 lists the type(s) of BMP(s) implemented, Column 5 lists the acres treated, Column 6 lists the deadline, Column 7 lists the project TN reduction (in kilograms per year), and Column 8 lists the project TN reduction (in pounds per year).

Facility Name	Project Number	Description	Type(s) of BMP(s) Implemented	Acres Treated	Deadline	Project TN Reduction (kg/yr)	Project TN Reduction (lbs/yr)
SJC Non-MS4	-	Total Reduction Required	-	-	-	4,981	10,958
SJC Non-MS4	SJC-18	Greenbriar Road Paving/Improvements - 4 Stormwater Treatment Ponds	-	40	Completed	33	72
SJC Non-MS4	SJC-19	Implementation of Stormwater Management Program - purchase a street sweeper	Street sweeping	-	01/01/2012	129	284
SJC Non-MS4	SJC-20	Implementation street sweeping	Street sweeping	-	Ongoing	19	42
SJC Non-MS4	SJC-21	Stormwater Education	Education	-	Ongoing	492	1,082
SJC Non-MS4	SJC-22	Low-impact development	-	-	Ongoing	Not quantified	Not quantified
SJC Non-MS4	SJC-23	Slow release fertilizer ordinance	-	-	01/01/2011	Not quantified	Not quantified
SJC Non-MS4	SJC-24	FDOT SR 312 from US 1 to SR 3	-	38	Completed	84	185
SJC Non-MS4	SJC-25	Atmospheric deposition load reduction – Seminole Electric SCR upgrade	N/A	N/A	01/01/2010	390	858
SJC Non-MS4	SJC-26	Algal Initiative	N/A	N/A	10/31/2017	3,834	8,435
SJC Non-MS4	-	Total Project Reductions	-	-	-	4,981	10,958
SJC Non-MS4	-	Credit/(Deficit)	-	-	-	0	0

This is a two-column table. Column 1 lists the St. Johns County non-MS4 projects, and Column 2 lists the implementation schedule.

ST. JOHNS COUNTY NON-MS4 PROJECTS	IMPLEMENTATION SCHEDULE
Purchase a Street Sweeper a. Start Date of Project	01/01/2012
b. Completion Date – Completion of Project	01/01/2012
Slow Release Fertilizer Ordinance a. Start Date of Project	01/01/2010
b. Completion Date – Completion of Project	01/01/2011
Algal Initiative a. Start Date of Project	10/01/2008
b. Completion Date – Project Assessment	10/31/2010
c. Completion Date – Project Fundraising	10/31/2012
d. Completion Date – Construction	10/31/2017

APPENDIX B: WATER QUALITY DATA

The storm event samples collected by CCUA over the last year are summarized in **Table B-1**.

TABLE B-1: CCUA STORMFLOW SAMPLING RESULTS FOR 2009

This is a 10-column table. Column 1 lists the station, Column 2 lists the date, Column 3 lists DO concentrations (mg/L), Column 4 lists turbidity (NTU), Column 5 lists temperature (°C), Column 6 lists pH, Column 7 lists specific conductance (umho/cm), Column 8 lists Secchi depth (inches), Column 9 lists total stream depth (feet), and Column 10 lists nitrite + nitrate (mg/L).

Note: OTH – sample could not be taken within 3 hours after the cessation of rain of at least 0.50 inches.

STATION	DATE	DO (MG/L)	TURBIDITY (NTU)	TEMP (°C)	pH	SPECIFIC CONDUCTANCE (UMHO/CM)	SECCHI DEPTH (IN)	TOTAL STREAM DEPTH (FEET)	NITRITE + NITRATE (MG/L)
Peters Creek	May	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH
Governors Creek	May	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH
North Fork Black Creek	May	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH
South Fork Black Creek	May	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH
Little Black Creek	May	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH
Peters Creek	June	3.6	2.2	24.9	6.2	79	1.7	21.7	0.061
Governors Creek	June	4.90	3.3	24.1	6.8	211	2.1	4.20	0.203
North Fork Black Creek	June	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH
South Fork Black Creek	June	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH
Little Black Creek	June	2.70	14.7	25.3	6.5	120	2.4	19.2	0.061
Peters Creek	July	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH
Governors Creek	July	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH
North Fork Black Creek	July	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH
South Fork Black Creek	July	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH
Little Black Creek	July	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH
Peters Creek	August	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH
Governors Creek	August	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH
North Fork Black Creek	August	6.80	14.7	24.70	6.2	137	1.10	9.70	0.070
South Fork Black Creek	August	5.2	9.9	24.70	6.2	97	1.3	11.7	0.092
Little Black Creek	August	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH
Peters Creek	September	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH
Governors Creek	September	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH
North Fork Black Creek	September	5.20	1.6	27.80	6.3	140	1.20	7.50	0.031
South Fork Black Creek	September	4.8	2.7	27.50	6.0	85	1.10	14.1	0.032
Little Black Creek	September	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH

TABLE B-1: CCUA STORMFLOW SAMPLING RESULTS FOR 2009 (CONTINUED)

This is a 10-column table. Column 1 lists the station, Column 2 lists the date, Column 3 lists ammonia concentrations (mg/L), Column 4 lists TKN (mg/L), Column 5 lists orthophosphate (mg/L), Column 6 lists TP (mg/L), Column 7 lists color (pt-co), Column 8 lists sample depth (feet), Column 9 lists TOC (mg/L), and Column 10 lists BOD (mg/L).

Note: OTH – sample could not be taken within 3 hours after the cessation of rain of at least 0.50 inches.

STATION	DATE	AMMONIA (MG/L)	TKN (MG/L)	ORTHO-PHOSPHATE (MG/L)	TP (MG/L)	COLOR (PT-CO)	SAMPLE DEPTH (FT)	TOC (MG/L)	BOD (MG/L)
Peters Creek	May	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH
Governors Creek	May	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH
North Fork Black Creek	May	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH
South Fork Black Creek	May	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH
Little Black Creek	May	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH
Peters Creek	June	0.188	0.84	0.054	0.132	150	10.5	22.2	<2.0
Governors Creek	June	0.173	0.94	0.057	0.172	150	2.10	25.3	<2.0
North Fork Black Creek	June	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH
South Fork Black Creek	June	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH
Little Black Creek	June	0.175	0.73	0.019	0.089	100	10	19	<2.0
Peters Creek	July	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH
Governors Creek	July	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH
North Fork Black Creek	July	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH
South Fork Black Creek	July	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH
Little Black Creek	July	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH
Peters Creek	August	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH
Governors Creek	August	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH
North Fork Black Creek	August	0.222	0.75	<0.019	0.021	400	5.0	29	3.0
South Fork Black Creek	August	0.082	1.07	<0.019	0.008	400	6.0	31	3.5
Little Black Creek	August	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH
Peters Creek	September	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH
Governors Creek	September	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH
North Fork Black Creek	September	0.155	0.60	<0.019	0.071	300	3.5	20	<2.0
South Fork Black Creek	September	0.088	0.42	<0.019	0.191	250	7.00	18	<2.0
Little Black Creek	September	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH

APPENDIX C: ADDITIONAL PROJECT PICTURES

Agriculture

EXPOSED POTATOES FROM SPRING STORMS

BLOWN-OUT CULVERT FROM SPRING STORMS

Camp Blanding

SWALE SYSTEM FOR AVENUE A AND COOPER HALL PARKING

CAMPGROUND SWALE FROM AVENUE A, LEADING INTO KINGSLEY LAKE

AVENUE A SWALE FROM JACKSONVILLE STREET

AVENUE A SWALE FROM JACKSONVILLE STREET

J6 OFFICE SWALE REPAIR

RECREATION OFFICE PARKING LOT SWALE

RV PARK SURFACE AREA DRAINAGE LOCATED ON AVENUE A SWALE

SWALE LOCATED ALONG PARADE FIELD FROM DAYTONA BEACH STREET

City of Atlantic Beach

INFORMATIONAL SIGN FOR HOPKINS CREEK REGIONAL RETENTION POND

City of Jacksonville

CITY OF JACKSONVILLE REGIONAL STORMWATER FACILITY OUTFALL

WATER QUALITY SAMPLING AT UPPER DEER CREEK REGIONAL STORMWATER FACILITY

UPPER DEER CREEK REGIONAL STORMWATER FACILITY

SANDALWOOD CANAL BORROW PIT STORMWATER FACILITY

City of Jacksonville Beach

SANDBLASTING INSIDE THE SOUTH TANK BEING CONVERTED TO THE CHLORINE CONTACT TANK

NEW BAR SCREEN FOUNDATION SLAB AFTER CONCRETE POUR WAS COMPLETED

EXTRACTION OF TEMPORARY SHEET PILING FROM THE NEW BAR SCREEN STRUCTURE AREA

INSTALLATION OF 24" INFLUENT BY-PASS PIPING ON WEST SIDE OF CHLORINE CONTACT TANKS

SIGN FOR WWTF IMPROVEMENT PROJECT

PRE-CAST WET WELL INSTALLATION AT GOLF COURSE RECLAIMED WATER HOLDING POND

NEW PRE-CAST WET WELL INSTALLATION

INSTALLATION OF 16-INCH PVC RECLAIMED WATER MAIN

18-INCH HIGH DENSITY POLYETHYLENE (HDPE) DIRECTIONAL BORE UNDER STATE ROAD 19

NEW RECLAIMED WATER PUMPING STATION BUILDING FOUNDATION

NEW RECLAIMED WATER PACKAGE PUMP SKID INSTALLATION

VERTICAL TURBINE PUMPS INSTALLATION

NEW RECLAIMED WATER PUMPING STATION WITH BUILDING

Seminole Electric

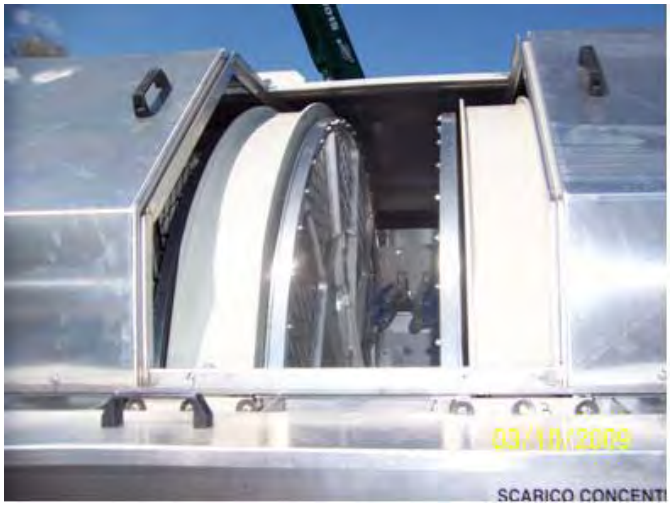
CONTINUOUS EMISSIONS MONITORING SYSTEM OUTPUT

SCR BOX 2

Town of Orange Park

VIEW LOOKING NORTH AT PROJECT AREA FROM DIGESTER #1

HOISTING MECHANICAL BARSCREEN CHANNEL INTO PLACE ATOP THE EXISTING SPLITTER BOX



STAINLESS STEEL FILTER DISKS

CHLORINE CONTACT CHAMBER CHANNEL WITH STAINLESS STEEL DIFFUSER BAFFLE AT INFLUENT

COARSE BUBBLE DIFFUSER ARRAY IN DIGESTER #2