DRAFT

Lower St. Johns River Basin Management Action Plan

Division of Environmental Assessment and Restoration
Water Quality Restoration Program
Florida Department of Environmental Protection

with participation from the
Lower St. Johns River Basin Stakeholders

March 2025

2600 Blair Stone Road
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Acknowledgements

This *2025 Lower St. Johns River Main Stem Basin Management Action Plan (BMAP)* was prepared as part of a statewide watershed management approach to restore and protect Florida's water quality. It was prepared by the Florida Department of Environmental Protection (DEP) in coordination with the Lower St. Johns River Main Stem stakeholders.

Florida Department of Environmental Protection
Alexis A. Lambert, Secretary

Table ES-1. Lower St. Johns River Main Stem stakeholders

Type of Organization/Entity	Name
Responsible Entities	Agriculture Alachua County American Water Military Services Anheuser Busch Baker County Bradford County Camp Blanding City of Atlantic Beach City of Bunnell City of Crescent City City of Daytona Beach City of Deland City of Green Cove Springs City of Jacksonville/Duval County City of Jacksonville Beach City of Keystone Heights City of Neptune Beach City of Palatka City of Palm Coast City of Pomona Park Clay County Clay County Utility Authority (CCUA) Flagler County Georgia-Pacific JEA Seminole Electric Cooperative Town of Penney Farms Town of Pomona Park Putnam County St. Johns County Town of Orange Park Town of Pierson Town of Welaka Turnpike Enterprise U.S. Navy Volusia County WestRock

Type of Organization/Entity	Name
Responsible Agencies	County Health Departments Florida Department of Agriculture and Consumer Services (FDACS) DEP Florida Department of Health (FDOH) Florida Department of Transportation (FDOT), District 2 Florida Turnpike Enterprise St. Johns River Water Management District (SJRWMD)
Other Interested Stakeholders	Residents/Homeowners Florida Audubon Jacksonville University Northeast Florida Regional Planning Council Florida Farm Bureau Florida Onsite Wastewater Association Septic System Contractors St. Johns Riverkeeper University of North Florida

See **Appendix A** for links to resources referenced in this document. For additional information, contact:

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List of Acronyms and Abbreviations

ACE	Agricultural Cooperative Regional Elements
ALG	Agricultural Land Geodatabase
APRICOT	A Prototype Realistic Innovative Community of Today
AWT	Advanced Waste Treatment
BEBR	Bureau of Economic and Business Research
BMAP	Basin Management Action Plan
BMP	Best Management Practice
CAFO	Confined Animal Feeding Operation
CASTNET	Clean Air Status and Trends Network
CCUA	Clay County Utility Authority
CMAQ	Community Multiscale Air Quality
COJ	City of Jacksonville
CR	County Road
CWA	Clean Water Act
DEP	Florida Department of Environmental Protection
DMR	Discharge Monthly Report
DO	Dissolved Oxygen
EFDC	Environmental Fluid Dynamics Code (model)
EMC	Event Mean Concentration
EPA	Environmental Protection Agency
ERP	Environmental Resource Permit
ESA	Environmental Science Associates
F.A.C.	Florida Administrative Code
FDACS	Florida Department of Agriculture and Consumer Services
FDOH	Florida Department of Health
FDOT	Florida Department of Transportation
FFS	Florida Forest Service
FLWMI	Florida Water Management Inventory
FNAI	Florida Natural Areas Inventory
F.S.	Florida Statutes
FSA	Florida Stormwater Association
FSAID	Florida Statewide Agricultural Irrigation Demand (geodatabase)
FWRA	Florida Watershed Restoration Act
GIS	Geographic Information System
HSPF	Hydrological Simulation Program–FORTRAN (model)
kg/yr	Kilograms per year
L.O.F.	Laws of Florida
LA	Load Allocations
lbs/yr	Pounds Per Year
LID	Low Impact Development
mgd	Million Gallons Per Day

mg/L	Milligrams Per Liter
MOU	Memorandum of Understanding
MS4	Municipal Separate Storm Sewer System
N	Nitrogen
N/A	Not Applicable
N.S.	Naval Station
NADP	National Atmospheric Deposition Program
NARF	Nutrient Application Record Form
NAS	Naval Air Station
NELAC	National Laboratory Environmental Accreditation Conference
NELAP	National Environmental Laboratory Accreditation Program
NHD	National Hydrography Database
NOI	Notice of Intent
NMP	Nitrogen Management Plan
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NS	Naval Station
NTN	National Trends Network
O&M	Operations and Maintenance
OAWP	Office of Agricultural Water Policy (FDACS)
OSTDS	Onsite Sewage Treatment and Disposal System
P	Phosphorus
PLSM	Pollutant Load Screening Model
PSA	Public Service Announcement
RAP	Reasonable Assurance Plan
RIB	Rapid Infiltration Basin
RO	Reverse Osmosis
ROC	Runoff Coefficient
RSF	Regional Stormwater Facility
RST	Regional Stormwater Treatment
SJRWMD	St. Johns River Water Management District
SR	State Road
STAR	Statewide Annual Report
SWMP	Stormwater Management Program
TBD	To Be Determined
TDEP	Total Deposition (Model)
TMDL	Total Maximum Daily Load
TN	Total Nitrogen
TP	Total Phosphorus
TSI	Trophic State Index
UF–IFAS	University of Florida-Institute of Food and Agricultural Sciences
VAC	Vegetable Agronomic Crop
WASP	Water Quality Analysis Simulation Program (model)

WBID	Waterbody Identification (number)
WLA	Wasteload Allocation
WMD	Water Management District
WWTF	Wastewater Treatment Facility
µg/L	Micrograms per Liter

Executive Summary

Background

The physical area addressed by the Lower St. Johns River 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 ES-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 Lower St. Johns include Palatka, Green Cove Springs, Orange Park, and Jacksonville metropolitan area in the northern portion of the basin (Floyd *et al.,* 1997).

The St. Johns River was verified as impaired by nutrients based on elevated chlorophyll-a and trophic state index (TSI) levels in the freshwater and marine portions of the river, and was included on the verified list of impaired waters for the Lower St. Johns River Basin that was adopted by Secretarial Order on September 4, 2003. The subsequent total maximum daily loads (TMDLs) establish the allowable loadings of TN and TP to the marine and freshwater portions of the LSJR that would restore the river so that it meets its applicable water quality criteria for nutrients.

This 2025 Lower St. Johns River Main Stem BMAP provides updates to legislative requirements that are in effect for the BMAP area. This document is to be used as a supplement to the 2008 BMAP.

In 2028, DEP anticipates the completion of a model revision to the Lower St. Johns River Main Stem Basin as part of a larger effort to model the entire St. Johns River Basin. This work will provide the necessary technical support for potential updates to allocations to meet the TMDLs and achieve the requirements of the BMAPs, including the Lower St. Johns River Main Stem BMAP. After model completion, DEP will reevaluate and, if necessary, adopt another iteration of the Lower St. Johns River Main Stem BMAP which may include updated pollutant loading information and potential updates to required reductions for the responsible stakeholders. The BMAP provides phased implementation under subparagraph 403.067(7)(a)1., Florida Statutes (F.S.), and this adaptive management process will continue until the TMDLs are met. The phased BMAP approach allows for incrementally reducing nutrient loadings through the implementation of projects, while simultaneously monitoring and conducting studies to better understand water quality dynamics (sources and response variables) in each impaired waterbody.

Currently, most surface waters in Florida, including Lower St. Johns River Main Stem, are categorized as Class III waters, meaning they must be suitable for recreation and support fish consumption and the propagation and maintenance of a healthy, well-balanced population of fish and wildlife. A BMAP is a framework for water quality restoration that contains a comprehensive set of solutions to achieve the pollutant reductions established by a TMDL. Examples include permit limits on regulated facilities, urban and agricultural best management

practices (BMPs), wastewater and stormwater infrastructure, regional projects and conservation programs designed to achieve pollutant reductions established by a TMDL. A BMAP is developed with local stakeholders and relies on local input and commitment for successful implementation. BMAPs are adopted by Secretarial Order and are legally enforceable. BMAPs use an adaptive management approach that allows for incremental load reductions through the implementation of projects and management strategies, while simultaneously monitoring and conducting studies to better understand the water quality and hydrologic dynamics. Progress is tracked by assessing project implementation and water quality analyses.

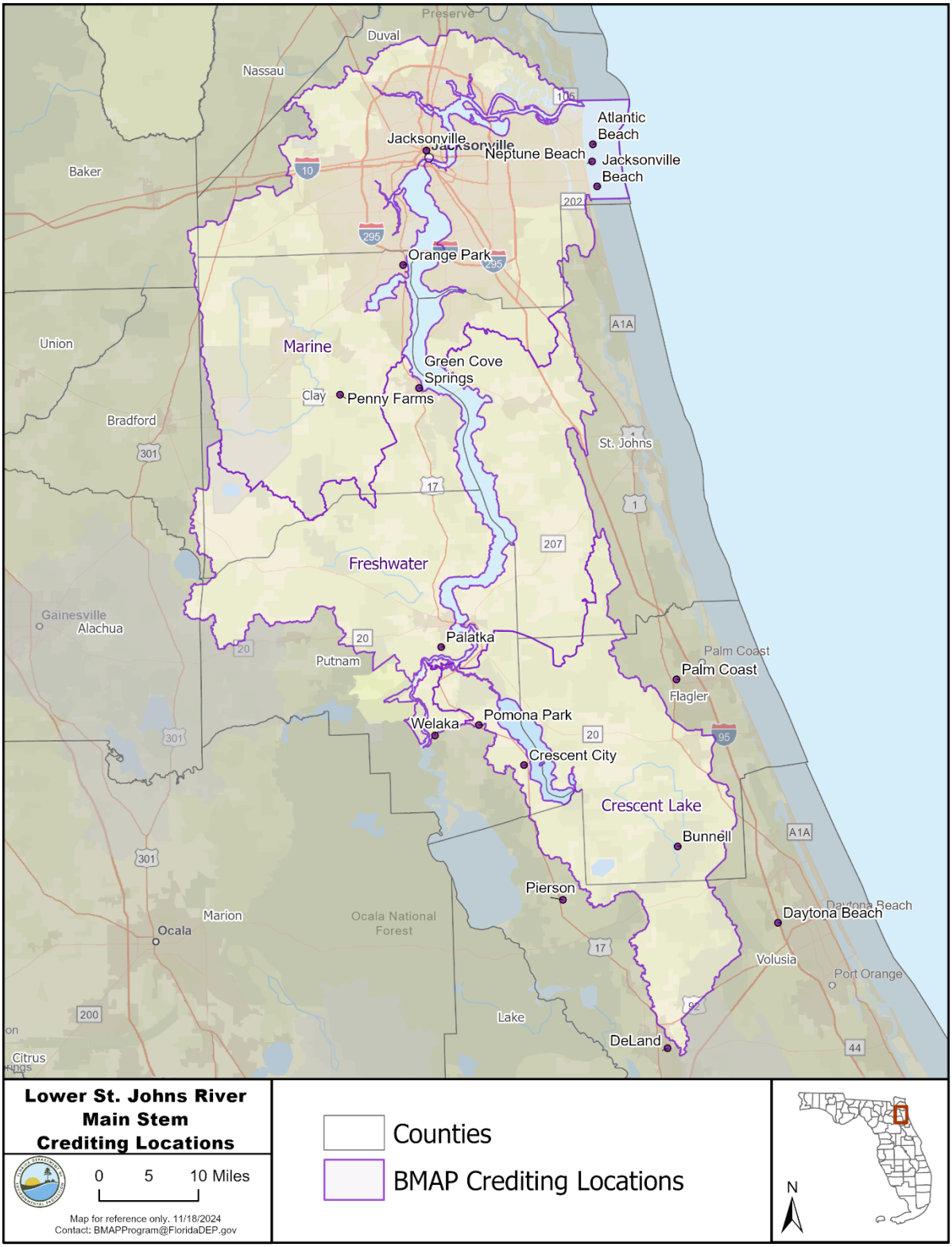

Figure ES-1. Lower St. Johns River Main Stem and local government jurisdictions in the basin

The Florida Watershed Restoration Act (FWRA), section 403.067, F.S., establishes an adaptive management process for BMAPs that continues until the TMDLs are achieved and maintained. This approach allows for incrementally reducing nutrient loads through the implementation of projects and programs, while simultaneously monitoring and conducting studies to better understand water quality dynamics (sources and response variables) in each impaired waterbody. The Lower St. Johns River Main Stem BMAP was first adopted in 2008.

Required Reductions and Options to Achieve Reductions

An interconnected suite of basin wide hydrologic, hydrodynamic, and water quality models were assembled to develop the TMDL. The suite of models includes the following: a) a hydrologic model that calculates seasonal runoff and nutrient loads for each sub-basin within the LSJR basin; b) a hydrodynamic model of the river that simulates the mixing and transport of nutrients in the river; and c) a water quality model that simulates the transformation of nutrients and processes affecting eutrophication in the river.

The hydrologic watershed model used to estimate nonpoint source loads was the Pollution Load Screening Model (PLSM) (Adamus and Bergman, 1995; Hendrickson and Konwinski, 1998). The river hydrodynamics and salinity of the LSJR were simulated with the Environmental Fluid Dynamics Code (EFDC) model (Hamrick, 1992; Sucsy and Morris, 2002). EFDC solves finite differenced forms of the hydrostatic Navier-Stokes equations, together with a continuity equation, and transport equations for salinity, temperature, turbulent kinetic energy, and turbulent macro-scale. Both Tillman et al. (2004) and Sucsy and Hendrickson (2004) document the modifications to CE-QUAL-ICM that were made for this application of the model.

This 2025 BMAP update will not update the modeling information presented in the 2008 Lower St. Johns River BMAP. The existing load estimates and allocations of load reductions to the responsible stakeholders will remain in effect. A multi-year effort is underway to model the entire St. Johns River Basin and provide updates to the existing watershed, hydrodynamic and water quality models, including those that have been developed by SJRWMD. The modeling framework will be comprised of different mechanistic models including Hydrologic Simulation Program FORTRAN (HSPF), EFDC and Water Quality Analysis Simulation Program (WASP) models.

DEP anticipates that this effort will be completed in 2028. This work will provide the necessary technical support for potential updates to allocations to meet the TMDLs and achieve the requirements of the BMAPs, including the Lower St. Johns River Main Stem BMAP. After model completion, DEP will reevaluate and, if necessary, adopt another iteration of the Lower St. Johns River Main Stem BMAP which may include updated pollutant loading information and potential updates to required reductions for the responsible stakeholders.

Section 1. Context, Purpose, and Scope of the Plan

The physical area addressed by the Lower St. Johns River 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 Lower St. Johns include Palatka, Green Cove Springs, Orange Park, and Jacksonville metropolitan area in the northern portion of the basin (Floyd *et al.,* 1997). The area also includes U.S. and National Guard military installations. The Lower St. Johns River is a sixth-order, darkwater river estuary, and, along its length, it exhibits characteristics associated with riverine, lake, and estuarine aquatic environments (Phlips *et al.,* June 2000). Additional information about the river's hydrology and geology are available in the Basin Status Report for the LSJR Basin (DEP, 2002).

For assessment purposes, the Department has divided the Lower St. Johns River 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 2)**. The Lower St. Johns River is also divided into two reaches based on salinity: the marine reach and the freshwater reach (**Figure 3**). The Lower St. Johns River Main Stem BMAP addresses nutrient TMDLs. The BMAP addresses sources of nutrients that discharge both directly and indirectly (stormwater discharges) into the main stem of the Lower St. Johns River.

Point sources such as domestic wastewater plants that discharge to tributaries above the head of tide were not separated as individual loads to the main stem. Those point sources are considered as part of the total load of the tributaries that enter the main stem. Loads associated with land uses that drain to the tributaries and then to the main stem are addressed in this BMAP as well as permitted stormwater operations and nonpoint sources that drain directly to the main stem. Specific load reduction requirements have been assigned to municipalities with urban lands. The responsibilities for load reductions from urban areas were assigned to the county where the urban area was located or to the associated city or town with an incorporated area. FDOT is responsible for loads from state roads and highways and from the stormwater treatment areas they manage.

Agriculture and silviculture operations were assigned load reduction responsibilities as a general land use category, with the FDACS as the lead entity for reporting reductions. Florida law requires these operations to implement BMPs or monitor runoff water quality to ensure that water quality standards are met.

The 2008 BMAP considered loads from the Ocklawaha River, Crescent Lake, and Lake George and their related watersheds as "upstream sources." Upstream sources were assigned responsibility for load reductions but those reductions were not assigned to individual entities. It is envisioned that specific allocations to the Crescent Lake area, which was included in the BMAP boundary, will be assigned in a future BMAP update.

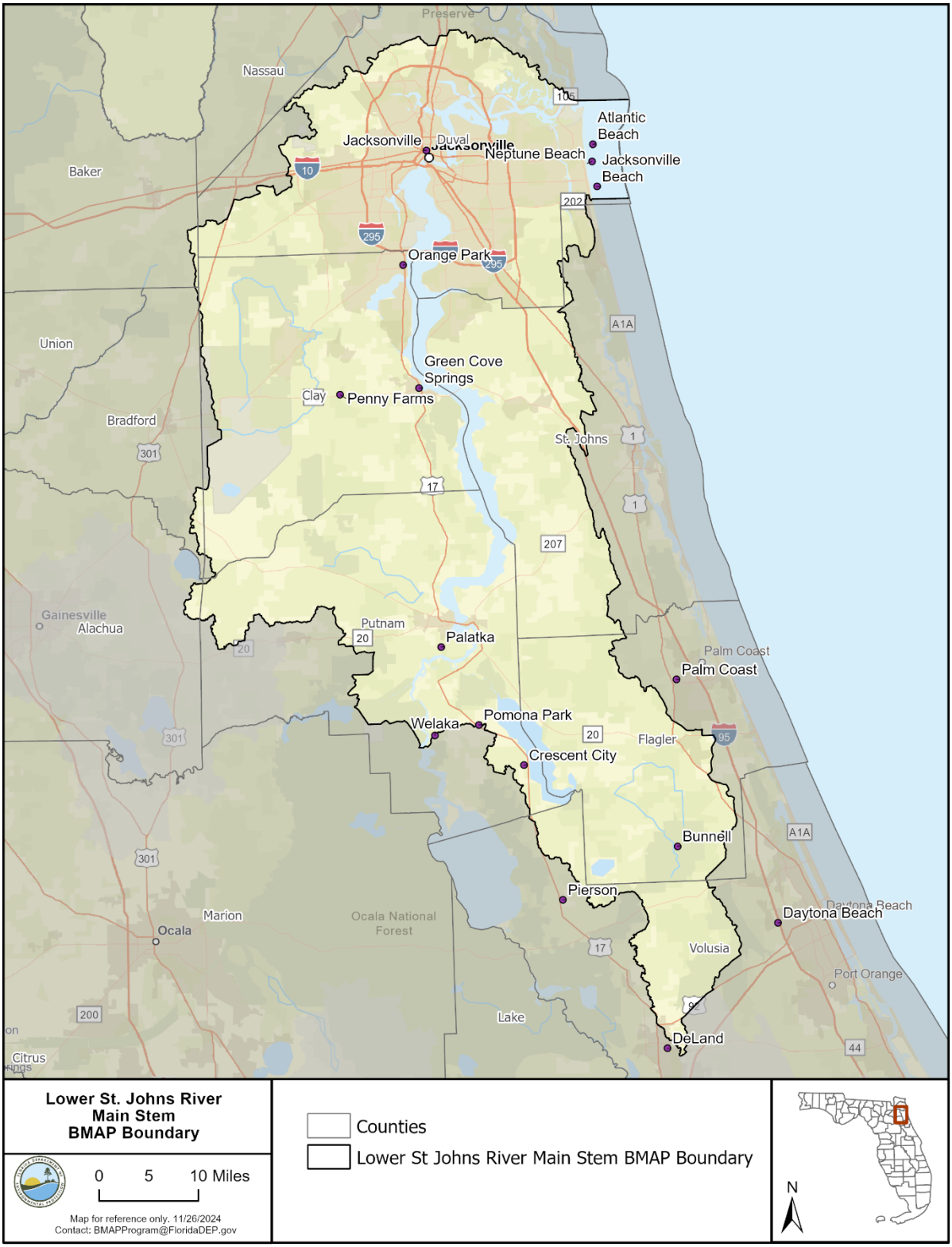

Figure 1. Lower St. Johns River Main Stem and local governments in the basin

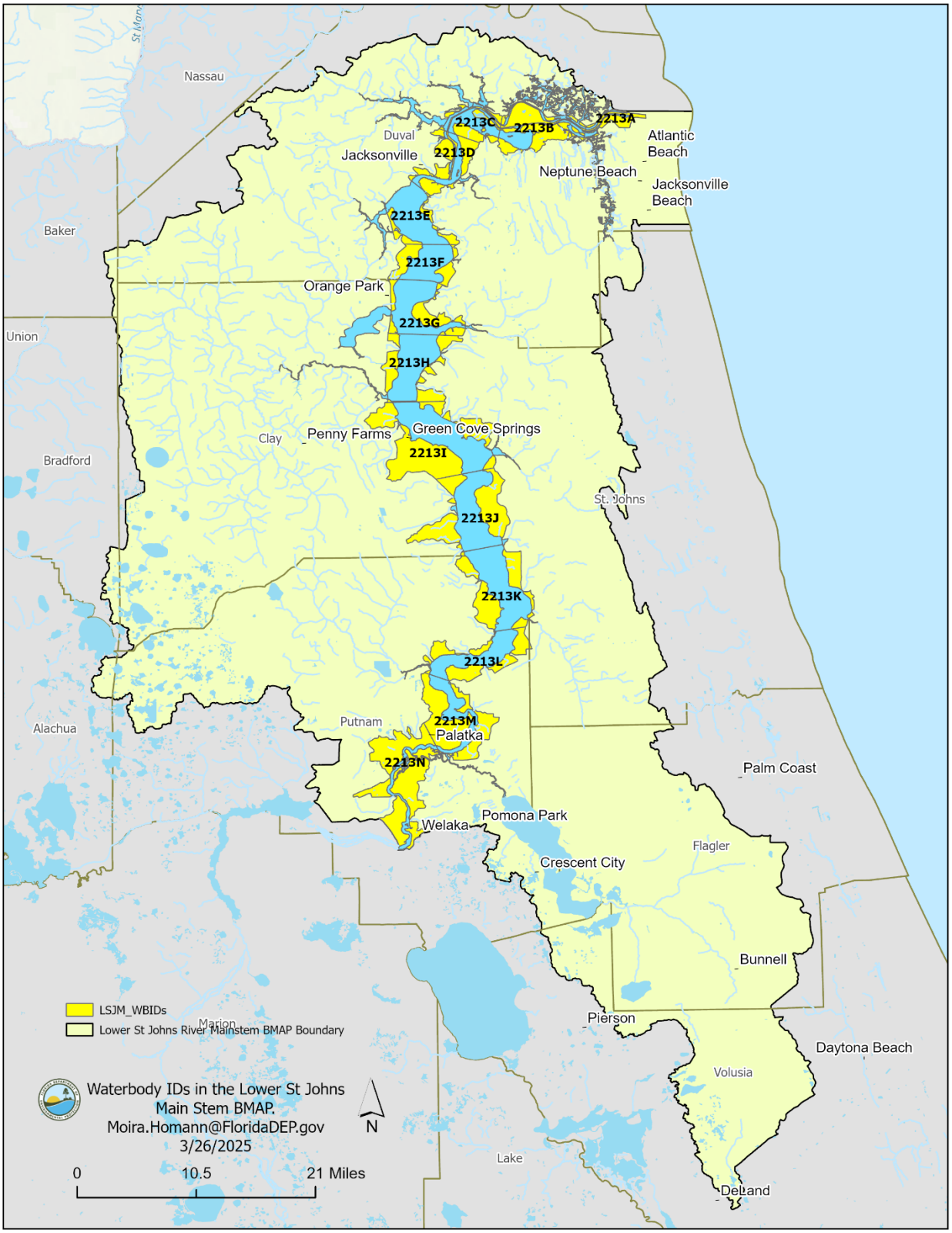

Figure 2. Main Stem WBID locations in the Lower St. Johns River BMAP

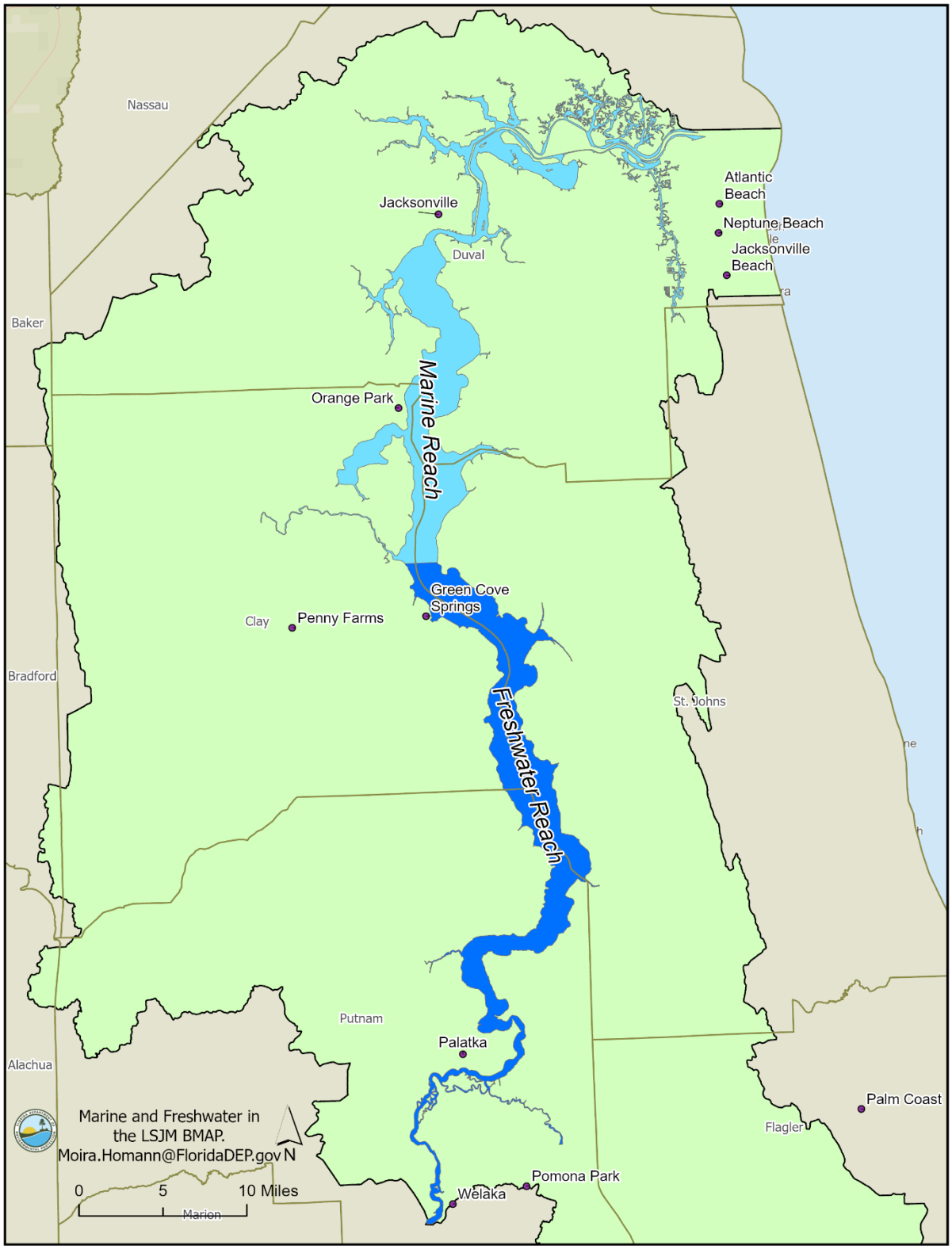

Figure 3. Marine and freshwater reaches in the Lower St. Johns River

This 2025 Lower St. Johns River Main Stem BMAP incorporates new legislative requirements that are now in effect. This document is to be used as a supplement to the 2008 BMAP. In 2028, DEP anticipates the completion of a model revision to the Lower St. Johns River Main Stem Basin because of a larger effort to model the entire St. Johns River Basin. This work will provide the necessary technical support for potential updates to allocations to meet the TMDLs and achieve the requirements of the BMAPs, including the Lower St. Johns River Main Stem BMAP. After model completion, DEP will reevaluate and, if necessary, adopt another iteration of the Lower St. Johns River Main Stem BMAP which may include updated pollutant loading information and potential updates to required reductions for the responsible stakeholders. The BMAP provides for phased implementation under subparagraph 403.067(7)(a)1., F.S., and this adaptive management process will continue until the TMDLs are achieved and maintained. The phased BMAP approach allows for incrementally reducing nutrient loadings through the implementation of projects, while simultaneously monitoring and conducting studies to better understand water quality dynamics (sources and response variables) in each impaired waterbody.

1.1 Water Quality Standards and TMDLs

Florida's water quality standards are designed to ensure that surface waters fully support their designated uses, such as drinking water, aquatic life, recreation, and agriculture. Currently, most surface waters in Florida, including Lower St. Johns River Main Stem, are categorized as Class III waters, meaning they must be suitable for recreation and support fish consumption and the propagation and maintenance of a healthy, well-balanced population of fish and wildlife. **Table 1** lists all designated use classifications for Florida's surface waters.

Table 1. Designated use attainment categories for Florida surface waters

[1] Class I, I-Treated, and II waters additionally include all Class III uses.

Classification	Description
Class I[1]	Potable water supplies
Class I-Treated[1]	Treated potable water supplies
Class II[1]	Shellfish propagation or harvesting
Class III	**Fish consumption; recreation, propagation and maintenance of a healthy, well-balanced population of fish and wildlife**
Class III-Limited	Fish consumption, recreation or limited recreation, and/or propagation and maintenance of a limited population of fish and wildlife
Class IV	Agricultural water supplies
Class V	Navigation, utility, and industrial use (*no current Class V designations*)

Section 303(d) of the federal Clean Water Act (CWA) requires that every two years each state must identify its "impaired" waters, including estuaries, lakes, rivers, and streams that do not meet their designated uses. DEP is responsible for assessing Florida's waters for inclusion on the Verified List of Impaired Waters (when a causative pollutant for the impairment has been identified) and Study List (when a causative pollutant for the impairment has not been identified, and additional study is needed). These lists are then provided to the U.S. Environmental Protection Agency (EPA) as a biennial update to the state "303(d) list." In 2004, DEP identified

Lower St. Johns River Main Stem as impaired for total phosphorus, total nitrogen, and un-ionized ammonia.

1.2 Lower St. Johns River Main Stem TMDLs

The St. Johns River was verified as impaired by nutrients based on elevated chlorophyll-a and TSI levels in the freshwater and marine portions of the river, and was included on the verified list of impaired waters for the Lower St. Johns River Basin that was adopted by Secretarial Order on September 4, 2003. The TMDLs establish the allowable loadings of total nitrogen (TN) and total phosphorus (TP) to the marine and freshwater portions of the LSJR that would restore the river so that it meets its applicable water quality criteria for nutrients.

A nutrient TMDL for the LSJR was originally adopted by the State of Florida on December 3, 2003 (Rule 62-304.415, Florida Administrative Code [F.A.C.]) and formally submitted to the U.S. EPA - Region 4 on March 15, 2004. While the TMDL was initially approved by U.S. EPA on April 27, 2004, U.S. EPA was challenged on the basis that the Class III marine daily average dissolved oxygen (DO) criterion would not be met at all times under the TMDL. U. S. EPA then rescinded its April 27, 2004, approval, and subsequently established a nutrient TMDL for the Lower St. Johns River that would meet the DO criteria on January 23, 2006.

At the time U.S. EPA disapproved the State's TMDL, U.S. EPA recognized that a) the TMDL for the marine portion of the river was based on meeting DO levels that were protective of aquatic life use support as an indirect way to evaluate the State's narrative nutrient criterion (shall not cause an imbalance in flora or fauna); b) the appropriate DO levels were based on a U.S. EPA methodology for development of DO criteria; and c) the State intended to develop a site-specific alternative criterion (SSAC) based on the EPA methodology.

The DEP application of the U.S.EPA methodology to develop a DO SSAC for the marine portion of the river between Julington Creek and the mouth of the river was adopted by the State and approved by U. S. EPA.

After the SSAC was approved by U. S. EPA, DEP worked with SJRWMD to remodel the river to determine the allowable nutrient load that would maintain dissolved oxygen levels above the levels established in the SSAC, and a revised TMDL was developed based on the results of that re-assessment. On September 30, 2007, U. S. EPA proposed a new TMDL based on the SSAC for DO in the marine portion of the Lower St. Johns River. After public review and comment, this TMDL was finalized by EPA on January 17, 2008. DEP then adopted the revised TMDL on June 3, 2008.

1.1.1.1 Freshwater Section TMDLs and General Allocations

As adopted by the U.S. EPA in January 2008 and by DEP in June 2008, the TMDL for the freshwater segment of the Lower St. Johns River, from Buffalo Bluff to Black Creek, is 500,325 kilograms per year (kg/yr) for TP and 8,571,563 kg/yr for TN.

The Freshwater TMDL was allocated by rule as follows:

- The wasteload allocation (WLA) for point sources discharging wastewater to the freshwater portion of the river is 46,357 kilograms/year (kg/yr) of TP and 236,695 kg/yr of TN. WLAs include loads allocated to municipal separate storm sewer systems (MS4s), which are National Pollutant Discharge Elimination System (NPDES) permits.
- The load allocation (LA) for nonpoint sources is 453,968 kg/yr of TP and 8,334,868 kg/yr of TN.

1.1.1.2 Marine Section TMDL and General Allocations

As adopted by the U.S. EPA in January 2008 and by DEP in June 2008, the TMDL for the marine segment of the Lower St. Johns River, from Black Creek to the mouth, is 1,376,855 kg/yr for TN. The WLA for point sources discharging wastewater or stormwater to the estuarine portion of the river is 1,027,590 kg/yr of TN. The LA for nonpoint sources is 349,265 kg/yr of TN.

Table 2 lists the TMDLs and pollutant load allocations adopted by rule for the LSJR**.**

Table 2. TMDLs for Lower St. Johns River Main Stem

WBID Number	Parameter	TMDL (kg/yr)	NPDES Stormwater Wasteload Allocation (kg/yr)	NPDES Stormwater Load Allocation (kg/yr)	Overall Needed Reduction (kg/yr)
2213I to 2213N (Freshwater Section)	TP	500,325	46,357	453,968	99,285
2213I to 2213N (Freshwater Section)	TN	8,571,563	236,695	8,334,868	1,543,989
2213A to 2213H (Marine Section)	TN	1,376,855	1,027,590	349,265	1,076,403

1.1.1.3 Crescent Lake TMDL and General Allocations

In 2017, DEP adopted new TMDLs for Crescent Lake that include WLAs and LAs. While these TMDLs were adopted after the 2008 Lower St. Johns River Main Stem BMAP, the Crescent Lake watershed was included in the Lower St. Johns River Main Stem BMAP boundary. When the St. Johns River modeling effort which is currently underway is completed (see **Section 2**), DEP expects to adopt more specific nutrient allocations in the Crescent Lake Basin to benefit the Lower St. Johns River waters downstream as well as to implement the Crescent Lake TMDLs. In the meantime, the applicable Florida rules and statutory protections for BMAP areas apply to the Crescent Lake Basin.

Table 3. TMDLs for Crescent Lake

*151 lbs TP per day.
**2,672 lbs TN per day.
lbs/yr = Pounds per year.

WBID Number	Parameter	TMDL (lbs/yr)	WLA-NPDES Wastewater (lbs/yr)	WLA-NPDES MS4 Stormwater (lbs/yr) (%)	Load Allocation (non-point) (%)	Margin of Safety
2606B	TP	57,959*	701	58	58	Implicit
2606B	TN	1,018,666**	12,702	34	34	Implicit

1.3 Lower St. Johns River Main Stem BMAP

A BMAP is a framework for water quality restoration that contains a comprehensive set of solutions to achieve the pollutant reductions established by a TMDL. Examples include permit limits on regulated facilities, urban and agricultural BMPs, wastewater and stormwater infrastructure, regional projects and conservation programs designed to achieve pollutant reductions established by a TMDL. A BMAP is developed with local stakeholders and relies on local input and commitment for successful implementation. BMAPs are adopted by Secretarial Order and are legally enforceable. BMAPs use an adaptive management approach that allows for incremental load reductions through the implementation of projects and management strategies, while simultaneously monitoring and conducting studies to better understand the water quality and hydrologic dynamics. Progress is tracked by assessing project implementation and evaluating water quality analyses.

The FWRA, section 403.067, F.S., establishes an adaptive management process for BMAPs that continues until TMDLs are achieved and maintained. This approach allows for incrementally reducing nutrient loads through the implementation of projects and programs, while simultaneously monitoring and conducting studies to better understand water quality dynamics (sources and response variables) in each impaired waterbody. The Lower St. Johns River Main Stem BMAP was first adopted in 2008 with a maximum of a 15-year schedule to implement the nutrient reductions.

1.4 Stakeholder Involvement

Local stakeholders are a significant part of the Lower St. Johns River BMAP process.

In the context of the BMAP, there are different organizations named in the plan.

- Responsible entities are those organizations who are assigned load reductions and must comply with the BMAP provisions; these organizations are sometimes referred to as “Lead Entities.”
- Responsible agencies may be accountable for reducing loads from their own activities or have an important public sector role in BMAP implementation such as regulatory oversight, monitoring, research, or other related duties.

- Interested stakeholders are those organizations that have engaged with BMAP development and implementation with the intention to influence the implementation process and outcomes.
- Stakeholders is a more general term often used in the BMAP context to include all three of the previously mentioned organizations—responsible entities, responsible agencies, and interested stakeholders.

The BMAP process engages responsible entities, responsible agencies, and interested stakeholders and promotes coordination and collaboration to address the pollutant load reductions necessary to achieve the TMDL.

DEP held a series of individual meetings with responsible stakeholders to review their BMAP progress and ensure they are aware of the legislative changes that apply to the BMAP. A public meeting was held on April 3, 2025, to present and receive public comments on the draft 2025 BMAP update. The purpose of this meeting was to solicit comments from all interested parties, disseminate information, and allow for public discussion. Prior to adoption, all public meetings are formally noticed in the Florida Administrative Register, and at least one meeting is noticed in local newspapers.

Section 2. Modeling

2.1 2008 BMAP

An interconnected suite of basin wide hydrologic, hydrodynamic, and water quality models were assembled to develop the TMDL. The suite of models includes the following: a) a hydrologic model that calculates seasonal runoff and nutrient loads for each sub-basin within the LSJR basin; b) a hydrodynamic model of the river that simulates the mixing and transport of nutrients in the river; and c) a water quality model that simulates the transformation of nutrients and processes affecting eutrophication in the river.

The hydrologic watershed model used to estimate nonpoint source loads was the Pollution Load Screening Model (PLSM) (Adamus and Bergman, 1995; Hendrickson and Konwinski, 1998). The river hydrodynamics and salinity of the LSJR were simulated with the EFDC model (Hamrick, 1992; Sucsy and Morris, 2002). EFDC solves finite differenced forms of the hydrostatic Navier-Stokes equations, together with a continuity equation, and transport equations for salinity, temperature, turbulent kinetic energy, and turbulent macro-scale. Both Tillman et al. (2004) and Sucsy and Hendrickson (2004) document the modifications to CE-QUAL-ICM that were made for this application of the model.

Table 4 summarizes the annual loading to Lower St. Johns River Main Stem from the watershed and from point sources below head of tide in the tributaries. Point sources above the head of tide were included in the watershed loads. **Figure 4, Figure 5,** and **Figure 6** show the loads by source in the freshwater (for TN and TP) and marine sections (for TN), respectively.

As previously mentioned, this 2025 BMAP update will not include updated modeling information. Loading estimates and allocations of load reductions to the responsible stakeholders presented in the 2008 Lower St. Johns River Main Stem BMAP will remain in effect.

Table 4. Loading to Lower St. Johns River Main Stem by source

Source	Freshwater TN (kg/yr)	Freshwater TP (kg/yr)	Marine TN (kg/yr)
Wastewater Treatment Facilities (WWTFs) and Aggregated Loads	364,650	81,015	1,801,346
MS4s	9,731	1,500	291,657
Non-MS4	88,705	12,358	24,767
Nonpoint Sources	310,700	83,455	12,800
Total	**773,786**	**178,329**	**2,130,570**

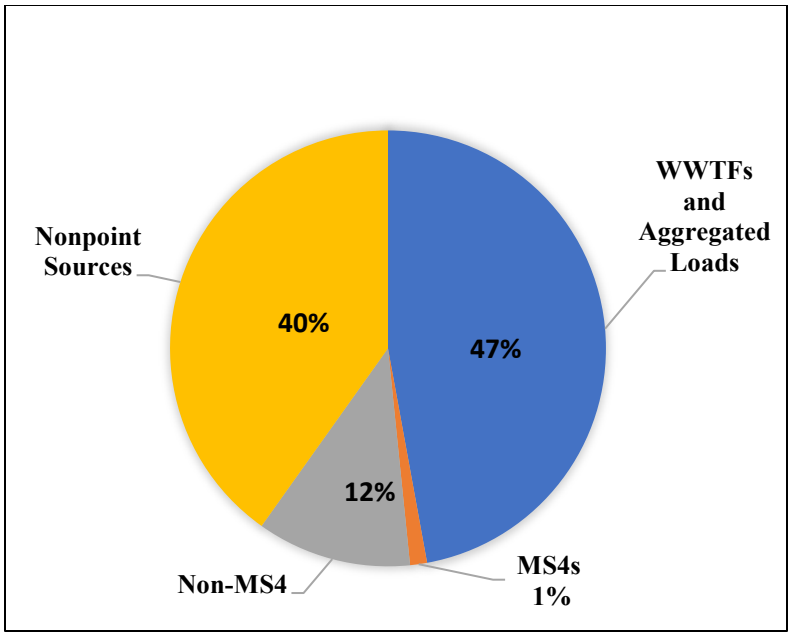

Figure 4. Freshwater TN loading by source

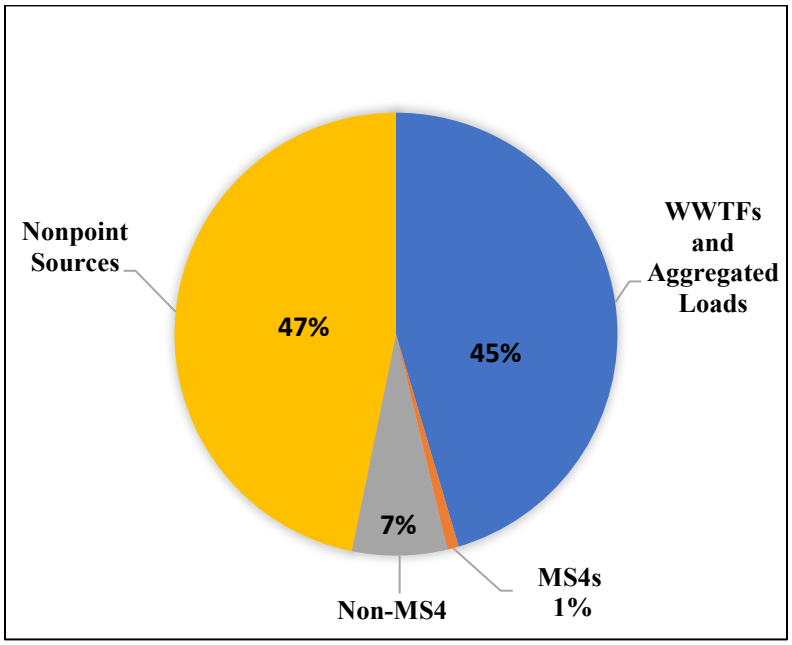

Figure 5. Freshwater TP loading by source

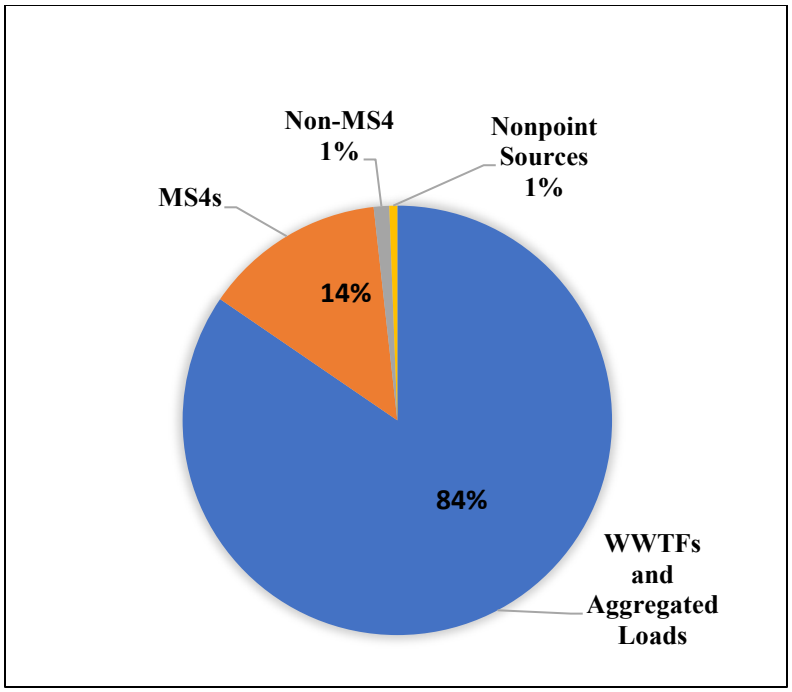

Figure 6. Marine TN loading by source

2.2 St. Johns River Basin Model Update

At the time of the 2025 Lower St. Johns River Main Stem BMAP update, a multi-year effort is underway to model the entire St. Johns River Basin. DEP and SJRWMD have contracted with Environmental Science Associates (ESA), GHD, and Wildwood Consulting to provide a more comprehensive estimation of pollutant loading to the entire basin and provide updates to the existing watershed, hydrodynamic and water quality models, including those that have been developed by SJRWMD.

The modeling framework will be comprised of different mechanistic models including HSPF, EFDC, and WASP. Public meetings will be held to share progress and update information with interested stakeholders.

DEP anticipates that this effort will be completed in 2028. After the St. Johns River Basin model is complete, DEP will reevaluate and, if necessary, adopt another iteration of the Lower St. Johns River Main Stem BMAP, most likely before 2030. DEP providing revised starting loads and allocations is an expected part of the iterative BMAP process where loading estimates are reassessed as land uses and other loading sources change over time as well as the response of chlorophyll-a and DO conditions to improved loading rates are assessed. Responsible entities and agencies should expect periodic adjustments to their reduction assignments during the BMAP process. The next BMAP iteration may include updated required reductions, timelines, and 5-year milestones.

Section 3. Calculating and Allocating Load Reductions

As noted in **Section 1.2**, the Lower St. Johns River Main Stem TMDLs are adopted in rule as a load, with an allowable freshwater section TN load of 515,090 kg/yr and TP allowable load of 126,125 kg/yr as well as a marine section TN allowable load of 1,050,131 kg/yr when the upstream and natural background loads are removed. The purpose of the allowable loadings is to achieve healthy concentrations of chlorophyll-a in the freshwater section and healthy DO conditions in the marine section.

This section describes the process used to calculate the load reductions needed to achieve the TMDL loads and to allocate the load reduction requirements to the responsible stakeholders, as outlined in the 2008 BMAP.

3.1 Calculating Load Reductions

For a detailed description of how the pollutant sources and detailed allocations were calculated, see **Chapter 3** of the *Lower St. Johns River Main Stem BMAP* (DEP, 2008). The BMAP will continue to be re-evaluated and adaptively managed to achieve the goal of restoring the lake to meet its designated uses.

Table 5. Required reductions by source

Source	Freshwater TN Existing Load (kg/yr)	Freshwater TN Allowable Load (kg/yr)	Freshwater TP Existing Load (kg/yr)	Freshwater TP Allowable Load (kg/yr)	Marine TN Existing Load (kg/yr)	Marine TN Allowable Load (kg/yr)
WWTFs and Aggregated Loads	364,650	237,200	81,015	44,386	1,801,346	892,347
MS4s	9,731	8,685	1,500	1,256	291,657	136,422
Non-MS4	88,705	74,870	12,358	9,509	24,767	17,192
Nonpoint Sources	310,700	194,336	83,455	70,974	12,800	4,170
Total	**773,786**	**515,090**	**178,329**	**126,125**	**2,130,570**	**1,050,131**

3.2 Allocations

The TN and TP loads contributed by different sources were estimated. The initial point source loads were the 1997 to 1998 loads provided by each entity. For point sources, the starting point loads included the initial loads and incorporated growth estimates for the subsequent five years. The growth included allocations for facilities under construction at the time that were designed to need periodic APRICOT (also called “wet weather”)(A Prototype Realistic Innovative Community of Today) discharges or needed allocations for reverse osmosis (RO) processing. In areas where growth was not projected to occur, the starting point load is equal to the initial load.

For MS4s and nonpoint sources, the starting point load is based on loading estimates associated with projected 2008 land uses. The starting point load was used to determine the reductions required by each discharger to meet the TMDL. **Table 6** and **Table 7** summarize the resulting loading assigned to each entity in the freshwater section and marine section, respectively.

Table 6. Starting TN and TP loads in the freshwater section by entity

Source Type/Entity	Freshwater TN Load (kg/yr)	Freshwater TP Load (kg/yr)
WWTFs and Aggregated Loads		
Georgia-Pacific	258,155	63,875
Green Cove Springs WWTFs	14,600	3,865
Palatka WWTF	60,889	9,955
Seminole Electric	21,045	0
Future APRICOT/RO Dischargers	9,961	3,320
MS4s		
Clay County	2,770	405
Green Cove Springs	6,961	1,096
Non-MS4		
Alachua County Non-MS4	636	84
Clay County Non-MS4	5,579	767
Flagler County Non-MS4	7	1
St. Johns County (formerly Hastings)	624	93
Palatka	9,683	1,508
Pomona Park	108	16
Putnam County	43,616	5,990
St. Johns County Non-MS4	27,277	3,727
Welaka	1,175	172
Nonpoint Sources		
Agriculture	310,700	83,455
SJRWMD Projects	0	0
Total	**773,786**	**178,329**

Table 7. Starting TN Loads in the marine section by entity

Source Type/Entity	Marine TN Load (kg/yr)
WWTFs and Aggregated Loads	
Anheuser Busch	24,399
Atlantic Beach	49,275
CCUA Aggregate	61,569
Jacksonville Beach	40,150
JEA Aggregate	1,396,622
Neptune Beach	11,448
Orange Park	24,886
WestRock (formerly Smurfit-Stone Container)	145,989
U.S. Navy-Naval Air Station (NAS) Jax WWTF	42,029

Source Type/Entity	Marine TN Load (kg/yr)
American Water (previously Naval Station [NS] Mayport) WWTF	7,686
Future APRIOT/RO Discharges	4,979
MS4s	
Atlantic Beach	2,474
Clay County	25,249
COJ/FDOT	243,438
Jacksonville Beach	4,974
Neptune Beach	1,484
Orange Park	3,451
St. Johns County	3,057
U.S. Navy	7,530
Non-MS4	
Camp Blanding	2,870
Clay County	12,051
St. Johns County	9,846
Nonpoint Sources	
Agriculture	310,700
Total	**2,130,570**

The allowable loading to meet the TMDLs was part of the TMDL calculations (**Table 8**). While reductions to attain the TMDLs may come from any source, the focus is on reductions from anthropogenic sources. Therefore, the loads associated with the natural lands were subtracted from the allowable watershed loads to determine the allowable loads for anthropogenic (urban and agricultural) lands.

Table 8. Allowable watershed loads

Parameter	Watershed Starting Load (kg/yr)	% Reduction	Allowable Watershed Load (kg/yr)
Freshwater			
TN	773,786	33.4	515,090
TP	178,329	29.3	126,125
Marine			
TN	2,130,570	50.7	1,050,131

Required reductions were assigned to the responsible entities. The urban stormwater loads were assigned to the responsible entities based on geographic information system (GIS) land use/land cover data for the different government jurisdictions in the basin. The GIS coverage that was created from this information showed 37 areas, which were recombined into 21 jurisdictional

areas with reduction allocations that were designated as NDPES Phase I MS4, NPDES Phase II MS4, or non-NPDES stormwater.

Allocated loads were set at future (through 2008) urban nonpoint source loads that were projected using a regression model that estimated future growth based on the four most recent land cover data sets (from 1989 through 2004). Stormwater loads were calculated for two categories of urban development: 1) areas without stormwater treatment, presumed to be all urban development that occurred prior to the enactment of Chapter 40C-4, Florida Administrative Code (F.A.C.)(Management and Storage of Surface Waters), and later, the general Environmental Resource Permit (F.A.C. 40C-42); and 2) areas with stormwater BMPs, presumed to be new development (development that has occurred since 1984).

Additional details on the process to determine urban stormwater loads can be found in the SJRWMD document *Determination of Nitrogen and Phosphorus Nonpoint Source Loads for Urban Stormwater Jurisdictions of the Lower St. Johns River Basin* (Hendrickson and Hart, 2007). For more information about how reductions were assigned to point sources and loads from MS4 permitted areas, please see **Section 3.2** in the *2008 Lower St. Johns River Main Stem BMAP*.

Table 9 and **Table 10** list the total required reductions to meet the TMDL target loads for the freshwater section and for the marine section.

Table 9. Freshwater required reductions by entity

Entity	TN Starting Load (kg/yr)	TN Required Reduction (kg/yr)	TP Starting Load (kg/yr)	TP Required Reduction (kg/yr)
Alachua County	TBD	TBD	TBD	TBD
Bradford County	TBD	TBD	TBD	TBD
City of Green Cove Springs WWTF	14,600	6,848	3,865	1,936
City of Green Cove Springs MS4	6,961	695	1,096	52
City of Palatka Non-MS4	9,683	825	1,508	0
City of Palatka WWTF	60,889	22,044	9,955	4,000
Clay County MS4	2,770	352	405	192
Clay County Non-MS4	5,579	920	767	268
FDACS	310,700	116,364	83,455	12,481
Georgia-Pacific	258,155	92,246	63,875	30,693
Putnam County Non-MS4	43,616	9,640	5,990	2,026
Seminole Electric	21,045	6,313	N/A	N/A
St. Johns County Non-MS4	27,277	1,937	3,727	431
St. Johns County (formerly Hastings)	624	176	93	44
Town of Welaka Non-MS4	1,175	337	172	82
SJRWMD	N/A	N/A	N/A	N/A

Entity	TN Starting Load (kg/yr)	TN Required Reduction (kg/yr)	TP Starting Load (kg/yr)	TP Required Reduction (kg/yr)
Total	**748,474**	**258,697**	**174,908**	**52,205**

Table 10. Marine required reductions by entity

Entity	TN Starting Load (kg/yr)	TN Required Reduction (kg/yr)
American Water Military Services	7,696	9,000
City of Atlantic Beach MS4	2,474	823
City of Atlantic Beach WWTF	49,275	28,087
Anheuser Busch	24,399	11,980
Camp Blanding Non-MS4	2,870	1,650
CCUA Aggregate	61,569	2,394
City of Jacksonville Beach MS4	4,974	170
City of Jacksonville Beach WWTF	40,150	19,135
City of Neptune Beach MS4	1,484	47
City of Neptune Beach WWTF	11,448	5,286
Clay County MS4	25,249	4,061
Clay County Non-MS4	12,051	944
COJ/ FDOT MS4	243,438	147,422
FDACS	12,800	7,845
JEA Aggregate	1,396,622	741,950
WestRock (formerly Smurfit-Stone Container)	145,989	71,684
St. Johns County MS4	3,057	2,311
St. Johns County Non-MS4	9,846	4,981
Town of Orange Park MS4	3,451	103
Town of Orange Park WWTF	24,886	16,946
U.S. Navy Aggregate	42,029	29,649
U.S. Navy MS4	7,530	298
Total	**2,106,247**	**1,082,389**

As previously mentioned, as the Crescent Lake Basin was excluded from the modeled area and considered an upstream load in the PLSM, no entity allocations were assigned in the 2008 BMAP. However, as the basin was included in the BMAP boundary, the Crescent Lake Basin is part of the BMAP area and the statutory requirements that apply to BMAPs must be implemented in this watershed. DEP plans to describe detailed allocations and milestones in the subsequent BMAP update, based on the St. Johns River modeling effort underway. Nutrient

reductions in the Crescent Lake Basin will benefit the freshwater section of the Lower St. Johns River and the marine section downstream. Additionally, future allocations will support the implementation of the 2017 Crescent Lake nutrient TMDLs (DEP, 2017). In the meantime, there are currently no required reductions assigned to lead entities in the Crescent Lake area, beyond those assigned in the 2017 Crescent Lake TMDLs and the statutory protections provided to BMAP areas.

Table 11. Crescent Lake Basin required reductions

Entity	TN Required Reduction (kg/yr)	TP Required Reduction (kg/yr)
Agriculture	TBD	TBD
City of Bunnell	TBD	TBD
City of Crescent City	TBD	TBD
City of Daytona Beach	TBD	TBD
City of DeLand	TBD	TBD
City of Palm Coast	TBD	TBD
Flagler County	TBD	TBD
Town of Pierson	TBD	TBD
Town of Pomona Park	TBD	TBD
Volusia County	TBD	TBD

3.2.1 5-Year Milestones

Section 403.067, F.S., requires that BMAPs include 5-year milestones for the implementation of TMDLs. Any responsible entity within the BMAP that has an assigned pollutant load reduction requirement must identify projects or strategies to meet their upcoming 5-year milestone, even if the identified project or strategy will not be completed by the milestone. Each project must include a planning-level cost estimate and an estimated date of completion that is included in the BMAP and updated in the statewide annual reporting process.

The 2008 BMAP assigned all the watershed loads to specific entities. Those entities are either meeting 100% of their assigned reductions or have a compliance plan to meet their shortfalls. **Table 12, Table 13,** and **Table 14** summarize the current reductions made towards the 2027 milestone for TN and TP by entity. When the models for the Lower St. Johns River are updated, the need for new milestones will be evaluated.

If any entity needs further action to meet its allocations, those responsible entities must submit a sufficient list of additional projects and management strategies to DEP no later than January 14, 2026, to be compliant with the upcoming BMAP milestone or be subject to further department enforcement.

If any lead entity's management strategies list falls short of meeting their next 5-year milestone reductions, additional projects and management strategies are required. To remain in compliance with the BMAP until January 14, 2026, responsible entities with project deficits must catalog their efforts to identify management strategies to meet their milestone reduction requirements. These planning efforts are ineligible for BMAP credit themselves but are necessary to demonstrate that additional eligible management actions will be forthcoming and BMAP compliance will be achieved. Examples of project identification efforts are included in **Appendix C**.

After the St. Johns River Basin model is complete, DEP will reevaluate and, if necessary, adopt another iteration of the Lower St. Johns River Main Stem BMAP, most likely before 2030. The next iteration may include updated required reductions, timelines, and 5-year milestones.

3.2.2 Project Progress

Table 12, Table 13, and **Table 14** summarizes the total required reductions and the estimated reductions achieved for completed and ongoing projects for each entity. **Appendix B** includes the project details. As part of the annual reporting process, stakeholders will be required to provide a detailed and quantified description of their ordinance enforcement and environmental education activities to receive credits for these activities. Based on progress towards meeting the TMDL and water quality monitoring results, reductions from ordinances and education efforts may be reevaluated in future BMAP updates, particularly with respect to enforcement of ordinances.

DEP continues to work with the appropriate agencies and other stakeholders to identify and prioritize needed projects and management strategies required to meet the reduction milestones.

Table 12. Freshwater TN and TP load reductions

Entity	TN Required Reduction (kg/yr)	TN Completed and Ongoing Project Reductions Achieved (kg/yr)	% of TN Reductions Achieved	TP Required Reduction (kg/yr)	TP Completed and Ongoing Project Reductions Achieved (kg/yr)	% of TP Reductions Achieved
Alachua County	TBD	TBD	TBD	TBD	TBD	TBD
Bradford County	TBD	TBD	TBD	TBD	TBD	TBD
City of Green Cove Springs	6,848	9,641	141	1,936	2,486	128
City of Green Cove Springs MS4	695	695	100	52	52	100
City of Palatka Non-MS4	825	984	119	0	73	100
City of Palatka WWTF	22,044	60,889	276	4,000	9,955	249
Clay County MS4	352	784	223	192	1,349	702
Clay County Non-MS4	920	976	106	268	275	103
FDACS	116,364	162,917	140	12,481	26,913	216
Georgia-Pacific	41,930	92,246	220	30,693	30,693	100
Putnam County Non-MS4	9,640	11,120	115	2,026	2,789	138
Seminole Electric	6,313	6,314	100	N/A	N/A	N/A
St. Johns County Non-MS4	1,937	2,037	105	431	488	113
St. Johns County (formerly Town of Hastings) Non-MS4	176	302	172	44	286	657
Town of Welaka Non-MS4	337	510	151	82	153	188
SJRWMD	N/A	N/A	N/A	N/A	658	100
Totals	**208,381**	**349,415**		**52,204**	**76,170**	

Table 13. Marine TN and TP load reductions

Entity	TN Required Reduction (kg/yr)	TN Completed and Ongoing Project Reductions Achieved (kg/yr)	% of TN Reductions Achieved
American Water Services	9,000	5,753	64
Anheuser Busch	11,980	11,981	100
Baker County	TBD	TBD	TBD
Bradford County	TBD	TBD	TBD
Camp Blanding Non-MS4	1,650	1,651	100
City of Atlantic Beach MS4	823	823	100
City of Atlantic Beach WWTF	28,087	34,179	122
CCUA Aggregate	(2,394)	46,092	1,925
City of Jacksonville Beach MS4	170	170	100
City of Jacksonville Beach WWTF	19,135	21,582	113
City of Neptune Beach MS4	47	289	615
City of Neptune Beach WWTF	5,286	7,322	139
Clay County MS4	4,061	4,380	108
Clay County Non-MS4	944	1,065	113
COJ/ FDOT MS4	147,422	148,572	101
FDACS	7,845	9,033	115
JEA Aggregate	741,950	783,050	106
WestRock (formerly Smurfit-Stone Container)	71,684	73,206	102
St. Johns County MS4	2,311	2,311	100
St. Johns County Non-MS4	4,981	5,623	113
Town of Orange Park MS4	103	103	100
Town of Orange Park WWTF	16,946	22,895	135
Town of Penney Farms	TBD	TBD	TBD
U.S. Navy Aggregate	17,706	13,273	143
U.S. Navy MS4	298	298	100
Totals	**1,092,979**	**1,193,652**	**109**

Table 14. Crescent Lake Basin required reductions

Entity	TN Required Reduction (kg/yr)	TP Required Reduction (kg/yr)
Agriculture	TBD	TBD
City of Bunnell	TBD	TBD
City of Crescent City	TBD	TBD
City of Daytona Beach	TBD	TBD
City of DeLand	TBD	TBD
City of Palm Coast	TBD	TBD
Flagler County	TBD	TBD
Town of Pierson	TBD	TBD
Town of Pomona Park	TBD	TBD
Volusia County	TBD	TBD

Section 4. Management Actions

Management actions refer to the suite of structural and nonstructural activities that the Lower St. Johns River Main Stem BMAP entities will be conducting to achieve their required TP and TN reductions. The projects submitted by the entities to achieve at least their required upcoming 5-year milestone reductions are summarized in the tables in **Appendix B**. These projects were submitted to provide reasonable assurance to DEP that each entity has a plan on how it will meet its allocations. However, this list of projects is meant to be flexible and allow for changes over time, provided that the required reduction is still met within the specified timeframe. New projects that meet the required nutrient reductions may be substituted for those identified in **Appendix B** during the statewide annual report process.

4.1 Wastewater

Recent legislative updates have expanded the requirements for addressing onsite sewage treatment and disposal systems (OSTDS or septic systems) and WWTF sources within BMAPs.

4.1.1 OSTDS

Beginning July 1, 2023, section 403.067, F.S., prohibits any new OSTDS serving a lot of one acre or less where central sewer is available. Within all BMAP areas, if central sewer is unavailable, then the owner must install a DEP-approved enhanced nutrient-reducing OSTDS that achieves 65% nitrogen reduction, or other wastewater system that achieves 65% reduction.

4.1.1.1 BMAP OSTDS Remediation Plan

This BMAP contains a remediation plan for OSTDS consisting of management actions, including those described in **Appendix B** and updated annually through the statewide reporting process that reduce loads from existing OSTDS through either sewer connection, adding enhancement nitrogen treatment to OSTDS, or installing another type of wastewater system on the property, as applicable.

Subparagraph 403.067(7)(a)9., F.S., also requires local governments within a BMAP to develop an OSTDS remediation plan that is adopted as part of the BMAP no later than July 1, 2025, if DEP identifies OSTDS as contributors of at least 20% of point source or nonpoint source nutrient pollution or if DEP determines remediation is necessary to achieve the TMDL. When applicable, the OSTDS remediation plans must be developed by each local government in cooperation with DEP, water management districts (WMDs), and public and private domestic wastewater facilities. Each OSTDS remediation plan for this BMAP must contain the information outlined in DEP Final Order 23-0120. Based on data from the Florida Water Management Inventory (FLWMI) database, there are 95,979 known and likely septic systems located throughout the Lower St. Johns River Main Stem BMAP area. Stakeholders submit projects describing how septic system loads are addressed as part of BMAP reporting and estimate the load reductions associated with each project. The estimated reductions to the basin

from addressing these septic systems will be based on several factors, including location, how they are addressed, and the amount of attenuation that occurs.

4.1.1.2 Local Government Ordinances

Local governments may have existing ordinances or could adopt new ordinances that add additional requirements for enhancement of OSTDS. To expedite remediation of wastewater sources and to facilitate achievement of assigned milestones in this BMAP, DEP encourages local governments to adopt such ordinances.

4.1.2 Wastewater Treatment

4.1.2.1 Facility Improvements and Effluent Limits

A list of WWTFs that are located within or discharge to the BMAP area are listed below in **Table 15**. WWTFs located in the Lower St. Johns River Main Stem BMAP are shown in **Figure 7**. The U.S. EPA authorizes DEP to issue permits for discharges to surface waters under the NPDES Program.

Permits for discharges to groundwater are issued by DEP based on Florida law and rules. Wastewater discharge permits establish specific limitations and requirements based on the location and type of facility or activity releasing industrial or domestic wastewater from a point source. In areas with an adopted, nutrient-related BMAP prior to July 1, 2023, section 403.086, F.S., requires any facility discharging to a waterbody to upgrade to advanced waste treatment (AWT) by January 1, 2033. Further, waterbodies determined not to be attaining nutrient or nutrient-related standards after July 1, 2023, or subject to a BMAP or reasonable assurance plan (RAP) after July 1, 2023, have 10 years to provide AWT after such determination or adoption.

Table 15. Facilities with domestic wastewater disposal sites within the Lower St. Johns River Main Stem BMAP boundary

* This is a preliminary list of facilities. Additional facilities may also dispose of effluent in the BMAP area and identified at a later date.

Facility Name	Facility Identification Number
Applegate Estates WWTF	FLA011159
BAE Systems Jacksonville Ship Repair WWTF	FLAB07509
Bartram Oaks WWTF	FLA011767
Bass Capital Mobile Home Park WWTF	FLA011709
Bayou Club WWTF	FLA011717
Blacks Ford WRF	FL0174441
Briarwood Apartments WWTF	FLA011381
Buckman RMF	FL0026000
Cherry Blossom RV Resort WWTF	FLA011741
City of Atlantic Beach WWTF	FL0038776
City of Bunnell WWTF	FL0020907
City of Crescent City WWTF	FL0021610
City of Green Cove Springs - South WWTF	FL0030210

Facility Name	Facility Identification Number
City of Neptune Beach WWTF	FL0020427
City of Palatka WWTF	FL0040061
Clay County Utility Authority Combined WWTF	FL0629006
Clay County Utility Authority Miller St. WWTP	FL0025151
Clay Hill Elementary School WWTF	FLA011350
Defense Fuel Supply Point Jacksonville	FL0000922
Diamond D Ranch	FLA620475
District 2 Water Reclamation	FL0026450
East Putnam County Regional WWTF	FLA667757
Economy Inn Motel WWTF	FLA011713
Fang - Camp Blanding WWTF	FL0022853
Fernwood WWTF	FLA011229
Fleming Island Regional WWTF	FL0043834
Florida Visitors Center WWTF	FLA011754
Green Cove Springs Combined WWTF	FL0635618
Green Cove Springs Harbor Road WWTF	FL0020915
GreenEdge Central Florida BMF	FLA925071
Ideal Mobile Home Park WWTF	FL0023426
Jacksonville Beach WWTP	FL0020231
JEA Arlington East Wastewater Treatment Plant	FL0026441
JEA Watershed	FL0620564
Julington Creek WRF	FL0043591
Keystone Heights High School WWTF	FLA011363
Keystone Heights WWTF	FLA362743
Keystone Village Apartments WWTF	FLA011338
Keystone Village Square Shopping Center WWTF	FLA011379
Mandarin Water Reclamation Facility	FL0023493
Marsh Landing WWTF	FL0044253
Marywood Retreat Center WWTF	FLA011777
McRae Elementary School WWTF	FLA011361
Meadowlea Estates WWTF	FLA011208
Melrose Community School WWTF	FLA011697
Mid - Clay Regional WWTF	FLA011377
Monterey WRF	FL0023604
NAS Jacksonville WWTF	FL0000957
Normandy Ryze LLC WWTF	FL0115231
Normandy Village WWTF	FLA011517
Northwest Wastewater Treatment Plant	FL0670651
Orangewood Mobile Home Park	FLA011217
Palm Port WWTF	FLA011742
Park Of The Palms WWTF	FLA011383
Peter's Creek WWTF (fka Green Cove West)	FLA327841
Players Club WRF	FL0044245
Q I Roberts Middle School WWTF	FLA184829

Facility Name	Facility Identification Number
Ridaught Landing WWTF	FL0039721
River Villas WWTF	FLA011731
San Mateo Estates (Jan's Modular Estates) WWTF	FLA011714
Sandhill Forest Two WWTF	FLA011739
Silver Lake Oaks Mobile Home Park WWTF	FLA011715
Southwest Water Reclamation	FL0026468
Southwood Elementary WWTF	FLA395692
Spencer Maxville Ranch	FLA686361
Spencer WWTF	FL0173371
SR-16 WWTF	FL0043109
Study Estates WWTF	FL0043419
Town of Hastings (St. Johns County) WWTF	FL0042315
Town of Orange Park WWTF	FL0023922
Volusia County/New Hope WWTF-20	FLA178918
Wilkinson Elementary School WWTF	FLA011355
Wilkinson Junior High School WWTF	FLA011353

The nitrogen and phosphorus effluent limits in units of milligrams per lister (mg/L) set forth in **Table 16** and **Table 17** will be applied as an annual average, taken at end of pipe before any land disposal (or other authorized compliance point), to all new and existing WWTFs with a DEP-permitted discharge or disposal area within this BMAP. Some effluent limits are based on average flows, in units of million gallons per day (mgd).

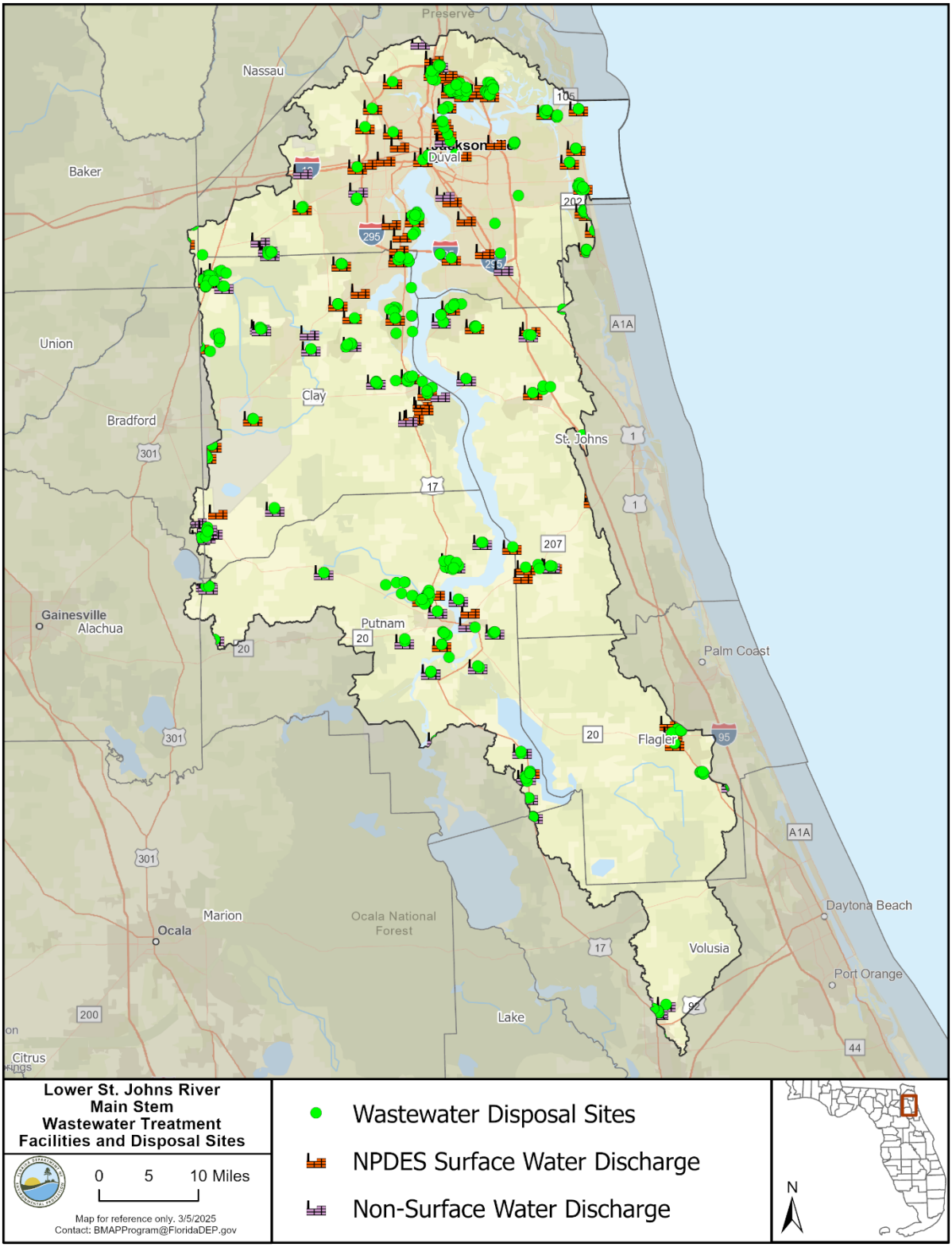

Figure 7. Wastewater treatment facilities in the Lower St. Johns River Main Stem BMAP

Table 16. Nitrogen effluent limits for wastewater facilities

Facility Capacity (mgd)	Surface Water Discharges (mg/L)	WWTFs Listed in Appendix D (mg/L)	WWTFs Not Listed in Appendix D – Rapid Rate Land Application Effluent Disposal System (mg/L)	WWTFs Not Listed in Appendix D – All Other Disposal Methods, Including Reuse (mg/L)
≥ 0.5	3	3	3	10
< 0.5, ≥ 0.1	3	3	6	10
< 0.1	3	N/A	10	10

Table 17. Phosphorus effluent limits wastewater facilities

Facility Capacity (mgd)	Surface Water Discharges (mg/L)	WWTFs Listed in Appendix D (mg/L)	WWTFs Not Listed in Appendix D – Rapid Rate Land Application Effluent Disposal System (mg/L)	WWTFs Not Listed in Appendix D – All Other Disposal Methods, Including Reuse (mg/L)
≥ 0.5	1	1	1	6
< 0.5, ≥ 0.1	1	1	3	6
< 0.1	1	NA	6	6

Where the law does not provide a compliance timeframe, new effluent standards will take effect at the time of permit renewal or no later than five years after BMAP adoption, whichever is sooner.

Additionally, new and existing wastewater permits in the BMAP area must require at least quarterly sampling of the effluent discharge for TN and TP concentrations and report these sampling results in the discharge monitoring reports (DMRs) submitted to DEP.

In 2021, subsection 403.064(16), F.S., was amended where domestic wastewater utilities that dispose of effluent, reclaimed water, or reuse water by surface water discharge were required to submit for DEP review and approval, a plan for eliminating non-beneficial surface water discharge by January 1, 2032. A utility must fully implement the approved plan by January 1, 2032. If a plan was not timely submitted or approved by DEP, the utility's domestic WWTFs may not dispose of effluent, reclaimed water, or reuse water by surface water discharge after January 1, 2028. Violations are subject to administrative and civil penalties pursuant to sections 403.121, 403.131, and 403.141, F.S.

4.1.2.2 Reclaimed Water Effluent Limits

In accordance with section 403.086. F.S., by July 1, 2034, any WWTF providing reclaimed water that will be used for commercial or residential irrigation or be otherwise land applied within a nutrient BMAP or RAP area is required to meet AWT standards for TN and TP, such that the reclaimed water product contains not more, on a permitted annual average basis, of 3 mg/L of TN and 1 mg/L of TP if the department has determined in an applicable basin management action plan or reasonable assurance plan that the use of reclaimed water as

described in this subparagraph is causing or contributing to the nutrient impairment being addressed in such plan.. These requirements do not apply to reclaimed water that is land applied as part of a water quality restoration project or water resource development project approved by DEP to meet a TMDL or minimum flow or level and where the TN and TP will be at or below AWT standards prior to entering groundwater or surface water.

DEP has determined that certain WWTFs providing reclaimed water for the purpose of commercial or residential irrigation or that is otherwise being land applied within this BMAP area are causing or contributing to the nutrient impairments being addressed in this BMAP. Based on DEP's determination, these facilities are identified in **Appendix D** and are subject to the nitrogen and phosphorus limits set forth in section 403.086, F.S. The facilities listed in **Appendix D** have 10 years from BMAP adoption to meet the applicable AWT standards. This requirement does not prevent the department from requiring an alternative treatment standard, if the department determines the alternative standard is necessary to achieve the TMDL(s) or applicable water quality criteria. For facilities that did not have adequate information to complete an evaluation or where a change occurs to the facility's application of reclaimed water after the initial evaluation (e.g., an increase in facility capacity or change in location of reclaimed water application), the department will evaluate the land application of reclaimed water as more information becomes available pursuant to section 403.086, F.S.

All new permitted facilities providing reclaimed water that will be used for commercial or residential irrigation or be otherwise land applied within the BMAP area are required to meet AWT standards for TN and TP in accordance with section 403.086, F.S.

4.1.2.3 Wastewater Treatment Facility Plans

Subparagraph 403.067(7)(a)9., F.S., requires local governments within a BMAP to develop WWTF plans to be adopted as part of nutrient BMAPs no later than July 1, 2025, if DEP identifies domestic wastewater as contributors of at least 20% of point source or nonpoint source nutrient pollution or if DEP determines remediation is necessary to achieve the TMDL. The WWTF plans must be developed by each local government in cooperation with DEP, WMDs, and public and private domestic wastewater facilities within the jurisdiction of the local government. Each local government's wastewater treatment plan for this BMAP must contain the information outlined in Final Order 23-0118 for each existing or proposed domestic wastewater facility in the local government's jurisdiction.

Subparagraph 403.067(7)(a)9., F.S., was amended in 2024 to clarify that private domestic wastewater facilities must provide this information to local governments effective July 1, 2024. Information related to private facilities will need to be included in future local government WWTF plans if not captured in the initial plans.

4.1.2.3 Connection to Sewer

The installation of new OSTDS within a BMAP area is prohibited where connection to sewer lines is available. For existing OSTDS, the owner must connect to sewer within 365 days of

written notification by the utility that connection to its sewer line is available. A utility is statutorily required (section 381.00655, F.S.) to provide written notice to existing OSTDS owners regarding the availability of sewer lines for connection. Additionally, existing OSTDS needing repair or modification must connect to available sewer lines within 90 days of notification by DEP.

To facilitate an inventory of noncompliant properties, by February 2, 2026, and every two years thereafter, each utility with sewer lines in the BMAP shall provide DEP a list of properties with existing OSTDS where sewer is available but has not connected. For each identified property, include the date(s) which the utility provided written notice to the owners of the availability of sewer.

4.1.2.4 Biosolids and Septage Application Practices

To provide assurance that nitrogen and phosphorus losses to surface water and groundwater are minimized from the permitted application of biosolids and septage in the BMAP area, the requirements in Chapter 62-640 F.A.C. apply to newly permitted application sites and existing application sites upon permit renewal. Where biosolids materials mixed with yard waste or other organic materials are distributed as compost or soil amendments, DEP recommends the recipients of these materials be notified of their increased nutrient content, so that any fertilization practices on the site can be adjusted accordingly. FDACS and University of Florida Institute of Food and Agricultural Sciences (UF-IFAS) are coordinating efforts to ensure that the distribution process for these kinds of materials includes notification of the nutrient content to the site manager.

4.2 Stormwater

Urban stormwater is a considerable source of nutrient loading to Lower St. Johns River Main Stem and many urban areas are already regulated under the MS4 NPDES Stormwater Program. An MS4 is a conveyance or system of conveyances, such as roads with stormwater systems, municipal streets, catch basins, curbs, gutters, ditches, constructed channels, or storm drains. If an MS4 permittee is identified as a contributor in the BMAP, the permitted MS4 must undertake projects specified in the BMAP. Refer to **Appendix A** for a link to a list of MS4 permittees.

Regulated MS4s are required to implement stormwater management programs (SWMP) to reduce pollutants to the maximum extent practicable and address applicable TMDL allocations. Both Phase I and Phase II MS4 permits include provisions for the modification of SWMP activities. Phase I medium and large MS4s are regulated under an individual permit, with multiple permittees having coverage under the same permit as “co-permittees.” Phase II small MS4s are regulated under a generic permit. Under the “NPDES Two-Step Generic Permit for Discharge of Stormwater from Phase II MS4s” (paragraph 62-621.300(7)(a), F.A.C.), regulated Phase II MS4s must develop a SWMP that includes BMPs with measurable goals and a schedule for implementation to meet six minimum control measures.

DEP can designate an entity as a regulated MS4 if its discharges meet the requirements of the rule and are determined to be a significant contributor of pollutants to surface waters of the state in accordance with Rule 62-624.800, F.A.C. A Phase II MS4 can be designated for regulation when a TMDL has been adopted for a waterbody or segment into which the MS4 discharges the pollutant(s) of concern. Because urban areas located in the BMAP that are not currently covered by an MS4 permit also significantly contribute to nutrient loading, individually or in aggregate, the NPDES Stormwater Program will, within five years of BMAP adoption, evaluate any entity located in the BMAP area that serves a minimum resident population of at least 1,000 individuals that is not currently covered by an MS4 permit and designate eligible entities as regulated MS4s, in accordance with Chapter 62-624, F.A.C.

On June 28, 2024, Governor Ron DeSantis signed Senate Bill 7040 into law, which updates Florida's stormwater rules and design criteria, including Chapter 62-330 F.A.C., to protect the state's waterways. The new regulations aim to manage runoff from developments, ensuring that future stormwater systems are better maintained. Operation and maintenance entities will be required to have estimates for the expected routine maintenance costs and to certify that they have the financial capability to maintain the stormwater system over time. The rule will also provide for more consistent oversight through a required periodic inspection routine and reporting on the inspection results to the permitting agency.

Additionally, under Chapter 62-330 F.A.C., applicants must demonstrate, through calculations or modeling, that future stormwater management systems meet the greater of the following nutrient load reduction criteria: either the Environmental Resource Permit (ERP) stormwater performance standards of an 80% reduction for TP and 55% reduction for TN, or that post-development nutrient loading does not exceed pre-development levels. Additional requirements apply for projects discharging to Outstanding Florida Waters or impaired waters. Permitting requirements for groundwater protection are outlined in the Stormwater Applicant Handbook, Volume I, Section 8.5.2.

4.2.1 Urban BMPs and Eligibility

Management actions must reduce TN and/or TP loads and meet certain criteria to be considered eligible for credit in the BMAP. The Lower St. Johns River Main Stem PLSM used 1995 land use coverage and an estimate of lands developed with stormwater treatment requirements versus those that were developed prior to state requirements. Therefore, urban structural projects completed since January 1, 1995, and planned in the future were eligible for BMAP credit. Urban structural projects only received credit for the portion of the load reduction that was over and above any permit requirements. This criterion was needed because permit conditions are established to prevent impacts from the new development and do not contribute to water quality improvement.

Public education and outreach efforts and nonstructural projects were eligible for BMAP credit regardless of when they were implemented because these efforts were excluded in the Lower St. Johns River Main Stem loading estimates. Estimates of TN and TP reductions from street

sweeping and BMP clean out were made using a tool developed by the Florida Stormwater Association (FSA) in 2012, based on data collected by Sansalone *et al.* (2011) that uses the volume or weight of material removed to estimate the pounds of TN and TP removed.

4.2.2 Sports Turfgrass and Golf Courses

Sports turfgrass sources include golf courses and other sporting facilities. Sporting facilities are required to follow the 2025 Sports Turf BMP Manual to protect water resources.

Superintendents of all publicly owned golf courses within the BMAP must obtain a certification for golf course BMPs under section 403.9339 F.S. and all golf courses must implement the BMPs described in the DEP golf course BMP manual, *Best Management Practices for the Enhancement of Environmental Quality on Florida Golf Courses* (DEP, 2021). All golf courses located within a BMAP are required to submit an NMP to DEP that is designed to sustain even plant growth while minimizing excessive growth and nutrient losses. Required information for the NMP is available in **Appendix E**. A draft NMP must be submitted to DEP within one year of BMAP adoption and a final document is due two years after adoption. All soil, water and tissue sampling must include appropriate nitrogen and phosphorous analyses.

If a facility (either golf course or other sporting facility) uses fertilizer rates greater than those in the BMP manuals, the facility is required to conduct water quality monitoring prescribed by DEP or a WMD that demonstrates compliance with water quality standards.

4.2.3 Agriculture

4.2.3.1 Agricultural BMPs

To address nutrient loading from agricultural operations effectively, a balanced approach is necessary - one that supports agricultural productivity while safeguarding water resources. This entails promoting farming practices that optimize nutrient and water use efficiency, minimize runoff, and enhance soil health. Section 403.067, F.S., requires agricultural producers in adopted BMAPs to either enroll and properly implement the applicable FDACS BMPs for their operation or to conduct water quality monitoring activities as required by Chapter 62-307, F.A.C. Agricultural BMPs include practices such as nutrient management, irrigation management and water resource protection, and can mitigate nutrient loading while promoting environmental stewardship among Florida's agricultural producers. In many BMAPs, however, the implementation of BMPs alone will not be sufficient to meet water quality restoration goals. BMP manuals adopted by FDACS are available at https://www.fdacs.gov/Agriculture-Industry/Water/Agricultural-Best-Management-Practices. Agricultural landowners that do not enroll in BMPs are referred to DEP for water quality monitoring or enforcement under sections 403.121, 403.141, and 403.161, F.S.

Every two years, FDACS is required to perform onsite inspections of each agricultural producer that enrolls in BMPs to ensure that the practices are being properly implemented. The verification includes: review and collection of nutrient application records that producers must maintain to demonstrate compliance with the BMP Program; verification that all other applicable

BMPs are being properly implemented; verification that any cost shared practices are being properly implemented; and identification of potential cost share practices, projects or other applicable BMPs not identified during enrollment. . Rule 5M-1.008, F.A.C., outlines the procedures used to verify the implementation of agricultural BMPs. Producers not implementing BMPs according to the process outlined in Chapter 5M-1, F.A.C., are referred to DEP for enforcement action after attempts at remedial action by FDACS are exhausted. Failure to implement BMPs or conduct water quality monitoring that demonstrates compliance with pollutant reductions may result in enforcement action by DEP (paragraph 403.067(7)(b), F.S.).

Pursuant to paragraph 403.067(7)(c), F.S., where water quality problems are demonstrated despite the appropriate implementation, operation and maintenance of adopted BMPs, DEP, a WMD, or FDACS, in consultation with DEP, must conduct a reevaluation of the BMPs. If a reevaluation of the BMPs is needed, FDACS will also include DEP, the appropriate WMD, and other partners in the reevaluation and BMP update processes. A reevaluation will occur after FDACS has completed its enrollment efforts in the area of concern.

For this 2025 BMAP update, FDACS used the parcel-level polygon Agricultural Land Geodatabase (ALG) data that is part of the Florida Statewide Agricultural Irrigation Demand (FSAID) Geodatabase to estimate agricultural acreages statewide. The percentage of agricultural land use within the Lower St. Johns River Main Stem BMAP was then determined by comparing the FSAID 11 ALG and total acreage of the BMAP boundary. Based on FSAID 11, the total agricultural land in the BMAP is 7,764 acres. To estimate the agricultural acres enrolled in the BMP program, FDACS Office of Agricultural Water Policy (OAWP) overlayed the FSAID ALG and BMP enrollment data within a GIS to calculate the acres of agricultural land in an enrolled parcel. **Table 18** summarizes agricultural lands within the Lower St. Johns River Main Stem BMAP based on the FSAID 11 and the results of the FDACS unenrolled agricultural lands characterization.

Table 18. Agricultural lands in the Lower St. Johns River Main Stem Basin

* Enrollment information current as of June 30, 2024.

Crediting Location	Agricultural Acres	Unenrolled - Unlikely Enrollable Acres	Agricultural Acres - Adjusted	Agricultural Acres Enrolled*
Freshwater	60,196	16,255	43,940	34,119
Marine	22,029	9,719	12,310	2,935

FDACS will seek further enrollment of producers in the BMAP area. As of June 30, 2024, in the Lower St. Johns River Main Stem Basin there are 2,067 agricultural acres enrolled in the BMP program. **Table 19** and **Figure 8** summarize the acres enrolled in the BMP Program by commodity. Currently, no producers are conducting water quality monitoring in lieu of implementing BMPs.

Table 19. Agricultural lands enrolled in the Lower St. Johns River Main Stem BMAP by BMP program commodity and location

BMP Program Commodity	Freshwater Section – Agricultural Acres Enrolled	Marine Section – Agricultural Acres Enrolled
Citrus	14	0
Cow/Calf	6,865	1,341
Equine	12	6
Fruit/Nut	182	6
Multiple Commodities	3,812	770
Nursery	35	75
Row/Field Crop	21,616	737
Sod	1,584	0
Total	**34,119**	**2,935**
Percent of Agricultural Lands Enrolled in BMPs	**78%**	**24%**

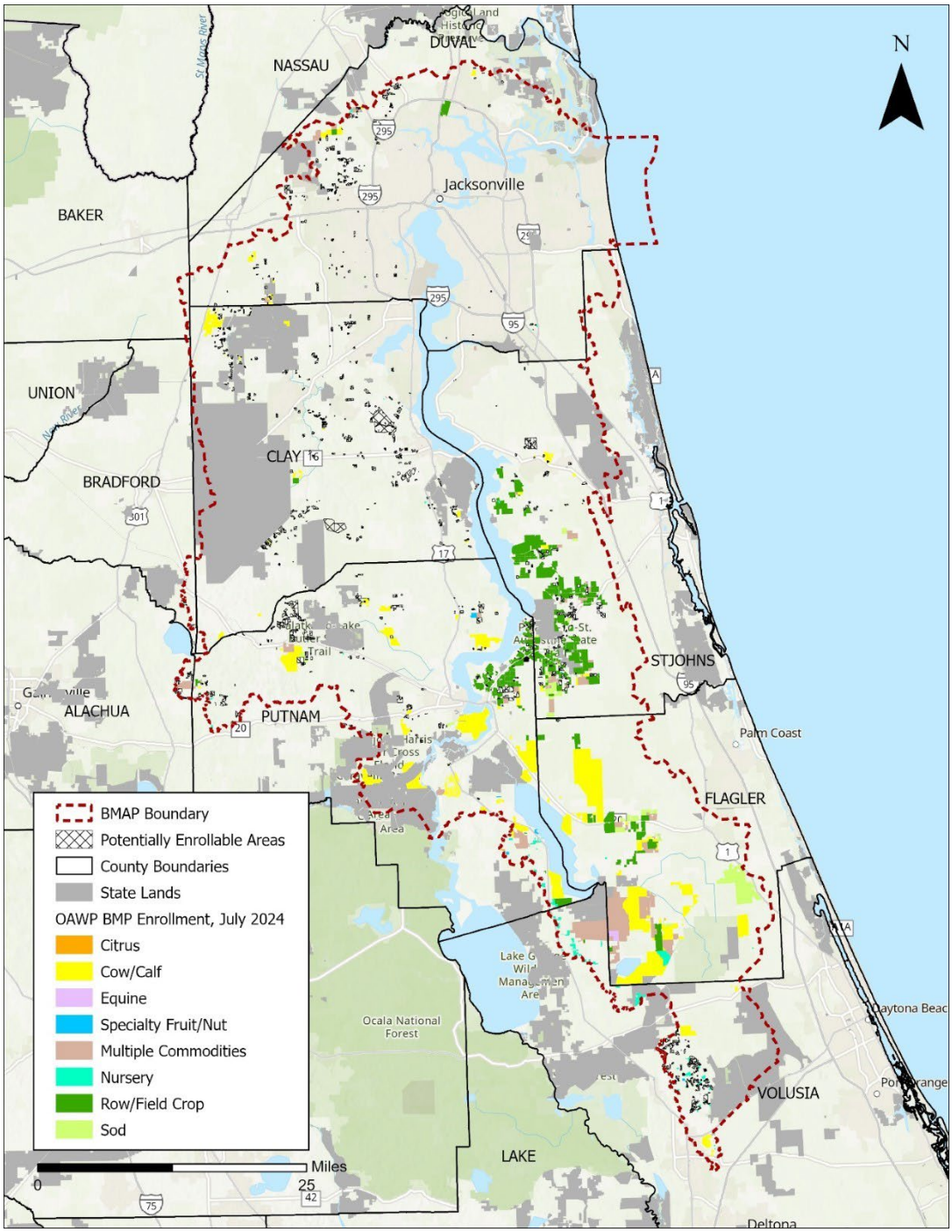

Figure 8. Agricultural BMP enrollment in the Lower St. Johns River Main Stem Basin

4.2.3.2 Dairies and Other Confined Animal Feeding Operations (CAFOs)

CAFO dairies permitted under Chapter 62-670, F.A.C., located within a BMAP, may not cause or contribute to a violation of water quality standards and must implement nutrient management practices identified in the permits. To minimize infiltration of liquid manure, waste storage ponds must be lined using a concrete or geosynthetic liner. If a clay liner exists, then the operation will need to upgrade to a concrete or geosynthetic liner when funding is available, or it must demonstrate that the liner does not allow leaching that results in water quality exceedances.

Additionally, sampling for TN and TP of land applied effluent/wastewater must be included in the DEP-approved nutrient monitoring plan established in the permit and implemented in accordance with the monitoring plan.

4.2.3.3 Livestock Operations Without CAFO Permits

Livestock operations may not cause or contribute to a violation of water quality standards. Not all livestock operations are large enough to require an NPDES CAFO permit under Chapter 62-670, F.A.C. For these operations, section 403.067, F.S., requires the operation to enroll in the FDACS BMP Program and implement applicable BMPs or to conduct a monitoring program according to Chapter 62-307, F.A.C., that is approved by DEP or the applicable WMD.

4.2.3.4 Aquaculture

Under the federal Clean Water Act, aquaculture activities are defined as a point source. In 1999, the Florida Legislature amended Chapter 597, F.S., Florida Aquaculture Policy Act, to create a program within FDACS that requires those who sell aquatic species to annually acquire an Aquaculture Certificate of Registration and implement Chapter 5L-3, F.A.C., Aquaculture BMPs. Permit holders must be certified every year.

4.2.3.5 Silviculture

The Florida Forest Service (FFS) within FDACS is the lead entity responsible for assisting landowners, loggers, and forestry professionals with silviculture BMP implementation as well as for conducting statewide silviculture BMP training and compliance monitoring. The FFS implements Chapter 5I-6, F.A.C., and requires both private and public forest landowners across the state to comply with BMPs and the rule. Compliance with the rule involves submitting a Notice of Intent to Implement BMPs (NOI) to the FFS and thereby committing to follow BMPs during all current and future forestry operations.

4.2.3.6 Agricultural Cooperative Regional Elements (ACE)

Section 403.067, F.S., requires FDACS, DEP, and agricultural producers to work together to establish ACEs in BMAPs where agricultural nonpoint sources contribute at least 20% of nonpoint source nutrient discharges to impaired waterbodies, or where DEP determines this element is necessary to achieve the TMDLs. FDACS is responsible for providing DEP a list of projects which, in combination with BMPs, state-sponsored regional projects and other management strategies, will achieve the needed pollutant load reductions established for

agricultural nonpoint sources. The list of projects included in the ACE must include a planning-level cost estimate of each project along with the estimated amount of nutrient reduction that such project will achieve. Partner agencies and key stakeholders referred to in this process include FDACS, DEP and agricultural producers.

Addressing nutrient loading from agricultural sources in Florida's waterways requires collective action and partnership among the key stakeholders, and in consultation with the WMDs. By fostering cooperation and engagement, the ACE framework facilitates the exchange of knowledge, resources, and expertise, leading to innovative solutions and effective strategies for tackling water quality challenges. Engaging producers in the decision-making process ensures that projects are practical, feasible, and tailored to the needs and realities of agricultural operations. Partner agencies provide technical support, regulatory guidance, and funding opportunities that will enhance the implementation and success of regional water quality improvement initiatives. This cooperative effort is essential for implementing targeted actions that balance the economic and social benefits of agriculture with the obligation to address agricultural nonpoint source loading beyond BMP implementation and cost share.

The ACE framework leverages resources and technical expertise to efficiently identify regional projects and other strategies tailored to the diverse agriculture production methods, landscapes, and watersheds that will need to be implemented to achieve the TMDLs. Regional project types will vary among the different BMAPs, and can include, but are not limited to, a combination of traditional projects that focus on water treatment, land acquisition in fee or conservation easements on the lands of willing sellers, site-specific water quality improvement projects, dispersed water management projects, innovative technologies, and regional projects funded through existing or enhanced cost share programs administered by FDACS or the WMDs.

While FDACS is assigned the lead role on project solicitation, development, selection, and implementation, they will work closely with all the key stakeholders, including DEP as a partner agency, to define and identify regional projects that will be included in the BMAP and to leverage existing programs and resources. FDACS will lead engagement with producers and industry groups through workshops to identify potential regional projects. Identified projects will be implemented through various mechanisms, such as existing agency cost share or grant programs or through a legislative budget request and eventual appropriation. Upon identification of a project, FDACS will update DEP on project development and implementation, including the funding strategy.

DACS and DEP will work together to track progress on agricultural water quality projects under the ACE framework through the development of performance metrics and evaluation of water quality monitoring data in the basin or, if necessary, at the project level. The default performance measures will be the expected range of pollutant removal efficiencies associated with a project or strategy. Tools may be needed to determine the effectiveness of projects, such as modeling and where feasible onsite water quality monitoring.

FDACS will report on projects annually through DEP's Statewide Annual Report (STAR) process and during BMAP update and/or development. Projects and other management strategies implemented through the ACE will be evaluated cooperatively by partner agencies using the predetermined performance metrics. The ACE process provides for adaptive management, allowing flexibility to adapt and improve based on regional project or management strategy results.

Based on the existing model, agricultural nonpoint sources contribute 7% of the TN and 61% TP nutrient sources in the freshwater section and 1% of the TN loads of the marine section of the Lower St. Johns River Main Stem BMAP. However, DEP, in collaboration with the SJRWMD, is updating the hydrodynamic, water quality, and watershed models for the St. Johns River basin, which includes the area in the Lower St. Johns River Main Stem BMAP. This effort is expected to take at least two years to complete, at which point more current land use and pollutant load information will be available for a Lower St. Johns River Main Stem BMAP update. DEP will then re-evaluate the need for ACE projects.

Most agricultural lands are engaged in row crop production. **Table 20** shows the dominant crop types within the Lower St. Johns River Main Stem BMAP.

Table 20. Dominant crop types in the Lower St. Johns River Main Stem BMAP

Crop Type	Acres
Row Crops	40,269
Grazing Land	20,120
Vegetables	6,326

FDACS will continue to work with key stakeholders in the Lower St. Johns River Main Stem BMAP to identify additional options for addressing agricultural nonpoint source nutrient loading. For more information on the FDACS Regional Projects Program, see the links in **Appendix F**.

4.2.3.7 Description of BMPs Adopted by Rule

Appendix F provides detailed information on BMPs and agricultural practices in the BMAP area. **Table 21** identifies the adopted BMPs and BMP manuals relevant to this BMAP.

Table 21. BMPs and BMP manuals adopted by rule as of July 2025

Agency	F.A.C. Chapter	Chapter Title
FDACS OAWP	5M-1	Office of Agricultural Water Policy
FDACS OAWP	5M-06	Florida Nursery Operations, 2024 Edition: Water Quality and Water Quantity Best Management Practices
FDACS OAWP	5M-08	Florida Vegetable and Agronomic Crop (VAC) Operations, 2024 Edition: Water Quality and Water Quantity Best Management Practices
FDACS OAWP	5M-09	Florida Sod Operations, 2024 Edition: Water Quality and Water Quantity Best Management Practices

Agency	F.A.C. Chapter	Chapter Title
FDACS OAWP	5M-11	Florida Cattle Operations, 2024 Edition: Water Quality and Water Quantity Best Management Practices
FDACS OAWP	5M-12	Conservation Plans for Specified Agricultural Operations
FDACS OAWP	5M-13	Florida Specialty Fruit and Nut Crop Operations, 2024 Edition: Water Quality and Water Quantity Best Management Practices
FDACS OAWP	5M-14	Florida Equine Operations, 2024 Edition: Water Quality and Water Quantity Best Management Practices
FDACS OAWP	5M-16	Florida Citrus Operations, 2024 Edition: Water Quality and Water Quantity Best Management Practices
FDACS OAWP	5M-17	Florida Dairy Operations, 2024 Edition: Water Quality and Water Quantity Best Management Practices
FDACS OAWP	5M-18	Florida Agriculture Wildlife Best Management Practices
FDACS OAWP	5M-19	Florida Poultry Operations, 2024 Edition: Water Quality and Water Quantity Best Management Practices
FDACS OAWP	5M-21	Florida Small Farms and Specialty Livestock Operations, 2024 Edition: Water Quality and Water Quantity Best Management Practices
FDACS Division of Agriculture Environmental Services	5E-1	Fertilizer
FDACS Division of Aquaculture	5L-3	Aquaculture Best Management Practices
FFS	5I-6	Best Management Practices for Silviculture
DEP	62-330	Environmental Resource Permitting

4.3 Atmospheric Deposition

4.3.1 Summary of Atmospheric Loading

Atmospheric deposition is largely a diffuse, albeit continual, source of nitrogen. Currently, nitrogen species and other chemical constituents are measured in wet and dry deposition at discrete locations around the U.S. In 2014, Schwede and Lear developed a hybrid model for estimating the total atmospheric deposition of nitrogen and sulfur for the entire U.S., referred to as the total atmospheric deposition model (TDEP). Deposition data from several monitoring networks-- including the Clean Air Status and Trends Network (CASTNET); the National Atmospheric Deposition Program (NADP) Ammonia Monitoring Network; the Southeastern Aerosol Research and Characterization Network; and modeled data from the Community Multiscale Air Quality (CMAQ) Modeling System—are combined in a multistep process with National Trends Network (NTN) wet deposition values to model total deposition.

Atmospheric deposition of phosphorus can also be a source to lakes via wet deposition through rainfall and dry deposition via gaseous and particulate wind-transported particles (Anderson & Downing, 2006; Zhai et al., 2009). The movement of phosphorus between land and water sources has been greatly accelerated by anthropogenic activities, particularly related to use of fertilizers that include phosphorus (Cordell et al., 2009; Boehme et al., No Date). However, the NADP National Analytical laboratory does not include phosphorus measurements as a primary objective; orthophosphate is measured, but only for quality assurance as an indicator of sample

pollution (University of Wisconsin, 2024). Therefore, fewer data are available on the trends of atmospheric deposition of phosphorus in the basin.

4.3.2 Description of Approach

A 2003 assessment of atmospheric deposition load to the Lower St. Johns River (Pollman and Roy, 2003) determined that approximately 2 percent of the total nitrogen load, and 10 percent of the inorganic nitrogen load, is supplied through direct atmospheric deposition. The objective of this assessment was to increase the precision of the atmospheric load estimate and to determine if spatially and temporally varying input is needed to adequately describe nutrient enrichment. The assessment also included a greater number of nutrient forms, dry and wet deposition, an increased number of stations, and an examination of existing data. Atmospheric deposition of phosphorus was not included in the modeling and TMDL assessment because it is expected to be a very minor source of phosphorus to the basin.

Atmospheric sources of nutrients are local, national, and international. Nitrogen atmospheric sources are generally of low concentration compared with other sources and are further diminished through additional biological and chemical processes before they reach groundwater. Recent data (Himes and Dawson, 2017) indicate that the deposition of nitrogen has been generally decreasing in Florida with an up to 55% decrease in atmospheric deposition by 2028, possibly related to power plant fuel source changes and air treatment upgrades as well as the increased use of electric vehicles, decreasing mobile sources (Himes and Dawson, 2017). This gradual decrease in atmospheric deposition of nitrogen will assist with creating the necessary reductions. Atmospheric deposition sources and trends will be re-evaluated periodically.

4.4 Future Growth

Nutrient impacts from new development are addressed through a variety of mechanisms outlined in this BMAP, as well as provisions of Florida law. While most of the restoration projects and management strategies listed in this BMAP address current nutrient loading, there is a need to plan and implement sound management strategies to address loading associated with population growth. DEP has included in this BMAP specific elements to address current and future WWTF effluent, OSTDS, and stormwater sources. Broader requirements—such as local land development regulations, comprehensive plans, ordinances, incentives, environmental resource permit requirements and consumptive use permit requirements—all provide additional mechanisms and avenues to protect water resources and reduce the impact of new development and other land use changes as they occur.

Further strengthening of comprehensive plans is required under section 163.3177, F.S., which requires local governments to amend their comprehensive plans with the following considerations:

- Identify and prioritize projects to meet the TMDLs.

- Update the wastewater section to include plans for treatment updates, not just capacity, and AWT must be prioritized.

- In developments with more than 50 lots with more than one OSTDS per acre, the plan must consider the feasibility of providing sanitary sewer within a 10-year planning horizon and identify the facility that could receive the flows. The plan must review the capacity of the facility and any associated transmission facilities; projected wastewater flow at that facility for the next 20 years, including expected future new construction and connections of OSTDS to sanitary sewer; and timeline for the construction of the sanitary sewer system. The plan was initially required to be updated by July 1, 2024.

- Comprehensive plans must contain capital improvements element to consider the need for and the location of public facilities:
    - Construction, extension, or increase in capacity of public facilities as well as principals for correcting existing public facility deficiencies. Components must cover at least a 5-year period.
    - Costs, timeline, general location, and projected revenue sources to fund the facilities.
    - Standards to meet an acceptable level of service.
    - Schedule of capital improvements, which may include privately funded projects.
    - A list of projects necessary to achieve the pollutant load reductions attributable to the local government, as established in a BMAP.
    - The element must address coordinating the extension of, increase in the capacity of, or upgrade in treatment of facilities to meet future needs; prioritizing AWT while maximizing the use of existing facilities and discouraging urban sprawl; conserving potable water resources; and protecting the functions of natural groundwater recharge areas and natural drainage features.

Through this array of laws and the requirements in this BMAP, new development must undertake certain nutrient-reduction measures before the development is complete. DEP recommends that local governments revise their planning and land use ordinance(s) to adequately address future growth and the associated environmental impact. Maintaining land at lower intensity uses through land purchases or easements for conservation and recreational use is one strategy that can help reduce water quality impacts in the basin. Any additional nutrient loading from land use intensification will be evaluated during future BMAP update efforts. If an increase in loading occurs, a responsible entity may receive additional reduction allocations that will require additional management actions by the responsible entity to mitigate those water quality impacts.

4.4.1 Future Growth Analysis

An analysis was done to consider the impacts of future population growth and urban development on loading in the basin. Wastewater sources were evaluated using per-person estimations calculated for portions of the population estimated to be served by OSTDS and those

connected to central sewer. Stormwater sources were evaluated using per-acre estimations calculated for portions of a jurisdictional area that may be developed.

First, population growth for each county was taken from the Bureau of Economic and Business Research (BEBR) 2040 Medium Growth Projections. Then, a spatial analysis was performed to determine the proportion of developable land area attributed to each entity within each county. Areas where there are permanent waterbodies, or which have been set aside for conservation are unlikely to see future development or increased population so the National Hydrography Database (NHD) for lake and ponds and the Florida Natural Areas Inventory (FNAI) conservation lands were used to remove lands from the analysis. The percentage of remaining land attributed to each entity was applied to the county projected population growth to determine the number of additional people anticipated to contribute to loading by 2040.

The next step was to distinguish the future population expected to be served by sewer versus those with OSTDS based on the most recent FLWMI for each BMAP county. For this, FLWMI parcels within each entity's jurisdiction were counted and categorized based on the Wastewater Type field. The number of points in "Known Sewer," "Likely Sewer," and "Somewhat Likely Sewer" divided by the total number of points estimated a portion of the population that are served by central wastewater collection system. The remainder are assumed to have an OSTDS.

Per person loading calculations were used to estimate future loads from WWTFs and OSTDS under different planning scenarios, as described below. DEP's Domestic Wastewater Program estimates each person in Florida generates 100 gallons of wastewater per day. For OSTDS, the FDOH estimates each person in Florida generates 10 lbs TN/yr. US-IFAS estimates each person in Florida generates 10 grams TP/day. Phosphorus loading rates from OSTDS are not affected by new technologies or BMAP management strategies. An attenuation rate of 50% for wastewater effluent disposal was applied to loading calculations to derive the estimated future load to the basin.

Per acre loading calculations were used to estimate future loads from increased urban runoff as a result of development under different planning scenarios, described below. First, a number of developed acres were derived by applying percentages to the developable land areas from the initial GIS analysis for each entity. Then, the loadings were based on DEP's statewide event mean concentrations (EMCs) and runoff coefficients (ROCs) for low density residential, with a generalized rainfall for Central Florida from the Harper 2007 Stormwater Evaluation. Finally, a generalized attenuation rate of 70% for urban runoff was applied to loading calculations to derive the estimated future load to the basin.

Scenario 1 represents a future planning scenario with the highest levels of treatment feasible. It assumes all local governments within the BMAP have a minimum of 90% of their population served by centralized sewer, and all domestic wastewater will be treated to AWT standards (3 mg/L TN or less and 1mg/L TP or less) by 2040 based on current Florida law and BMAP management strategies. This scenario also assumes that all future OSTDS will be enhanced nutrient-reducing systems or other wastewater systems with a nitrogen treatment efficiency of at

least 65%. For urban development, this scenario represents a conservative growth future where 2% of developable land is converted to low density residential.

Scenario 2 utilizes the current rates of sewer availability based on the FLWMI parcels to estimate the population served by central wastewater collection system. This future planning scenario assumes that all domestic wastewater will be treated to AWT standards (3 mg/L TN or less and 1mg/L TP or less) by 2040 based on current Florida law and BMAP management strategies. This scenario also assumes that all future OSTDS will be enhanced nutrient-reducing systems or other wastewater systems with a nitrogen treatment efficiency of at least 65%. For urban development, this scenario represents a moderate growth future where 10% of developable land is converted to low density residential.

Scenario 3 represents a future planning scenario with the lowest levels of treatment feasible. It utilizes the current rates of sewer availability based on the FLWMI parcels to estimate the population served by central wastewater collection system and assumes that all domestic wastewater will be treated to 6 mg/L TN and 3 mg/L TP by 2040. This scenario also assumes that all future OSTDS will be conventional systems. For urban development, this scenario represents an extreme growth future where 17% of developable land is converted to low density residential.

Future development will likely also result in an increase in loading from turfgrass. This change is difficult to model because much of it depends on the type and location of development, enforcement of local ordinances, future home values, and future social attitudes towards turfgrass lawns. There are also complex dynamics associated with new urban development in which loading from human activities is compounded by potential removal or conversion of forest lands or green spaces, which had previously provided natural remediation of atmospheric and soil nitrogen.

Based on the methodology above, using nitrogen loads as an example, **Table 22** shows the estimated future loads from wastewater and urban stormwater sources that may be assigned to local governments if growth continues as projected under the three planning scenarios. DEP encourages local governments to consider these additional nutrient loads when authorizing new development or changes in land uses, and when developing local plans for wastewater infrastructure expansion and maintenance, to ensure that the TMDL target is achieved and maintained.

Table 22. Estimated nitrogen load from future growth in the BMAP area

Entity	2040 Additional Population	2040 Additional TN Loading (kg/yr) Scenario 1	2040 Additional TN Loading (kg/yr) Scenario 2	2040 Additional TN Loading (kg/yr) Scenario 3
Alachua County	300	546	1,557	2,849
Baker County	44	280	819	1,435
Bradford County	35	266	1,229	2,124
Clay County	43,556	67,838	144,570	268,050
Green Cove Springs	1,150	1,532	3,016	5,476
Keystone Heights	117	183	538	1,019
Orange Park	632	856	1,672	3,038
Penney Farms	175	273	515	945
Duval County	91	125	201	385
Atlantic Beach	652	797	1,141	2,153
Jacksonville	154,950	211,787	339,866	649,021
Jacksonville Beach	1,584	2,165	4,288	8,263
Neptune Beach	559	765	1,158	2,205
Flagler County	18,569	27,881	61,154	114,877
Bunnell	13,109	18,492	32,482	59,719
Palm Coast	1,691	2,151	3,955	7,233
Putnam County	1,774	15,707	72,636	124,996
Crescent City	11	92	413	705
Palatka	45	395	1,757	3,005
Pomona Park	11	100	469	808
Welaka	4	33	145	248
St. Johns County	64,300	91,377	159,148	300,315
Hastings	571	812	2,365	4,571
Volusia County	9,984	14,852	41,190	78,592
Daytona Beach	4	15	20	38
DeLand	654	973	2,375	4,501
Pierson	53	79	243	467
Totals	**314,626**	**460,371**	**878,922**	**1,647,038**

Scenario 1 resulted in an additional basin load of 460,371 lbs/yr TN. Scenario 3 resulted in an additional basin load of 1,647,038 lbs/yr TN.

While it is unlikely that additional nutrient loading from future populations can be entirely avoided, the results of this analysis provide local governments information on how they can mitigate future nitrogen loading by pursuing planning scenarios which prioritize the expansion of centralized sewer services that meet or exceed AWT standards for wastewater effluent. Entities

with minor or no changes in 2040 loading under Scenarios 1 and 2 already have a high rate of sewering in their jurisdiction.

This broad analysis is not being used to determine allocated reductions for responsible entities because it does not capture all local considerations and complexities of mixed land use, or current allocation approaches for wastewater. In addition, changes in nutrient loading from future population and development are difficult to model because much of it is dependent on the type and location of development, enforcement of local ordinances, future home values, and future social attitudes towards lawn maintenance and waste management. There are also complex dynamics associated with new urban development in which loading from human activities is compounded by potential removal or conversion of forest lands or green spaces, which had previously provided natural remediation of atmospheric and soil nutrients, as well as other ecosystem benefits. However, the results show trends in how loading in the basin might change in the coming decades without comprehensive local and regional planning.

Other mechanisms discussed in this section are available to local governments to further mitigate future nutrient loading from existing and future developed land. For example, strengthening and enforcing fertilizer ordinances, working with homeowners' associations or neighborhood groups to reduce fertilizer use on community landscaping, or incentivizing Florida Friendly development practices could reduce the overall impact of additional nutrient loading associated with urban fertilizer. Additionally, wastewater can be treated to higher standards than those built into this analysis through upgrades to WWTFs and use of enhanced nutrient-reducing OSTDS certified with higher nitrogen treatment efficiencies or other wastewater treatment systems with higher treatment levels. Local governments can use this information to incorporate water quality considerations when developing and implementing local ordinances, comprehensive plans, stormwater planning, and enhanced OSTDS incentive programs in areas of urban expansion.

4.4.2 Funding Opportunities

Chapter 2023-169, Laws of Florida (L.O.F.), expanded grant opportunities for local governments and eligible entities working to address TMDLs or impaired waters. Through the DEP Water Quality Improvement Grant program, eligible entities can apply for grant funding for wastewater, stormwater, and regional agricultural projects. Projects are prioritized that have the maximum nutrient load per project, demonstrate project readiness, are cost-effective, have cost-share by the applicant (except for *Rural Areas of Opportunity*), have previous state commitment, and are in areas where reductions are most needed. Multiple competitive funding resources are available under the Protecting Florida Together website.

Financial and technical assistance through FDACS and the SJRWMD are available to agricultural producers within the Lower St. Johns River Main Stem BMAP. FDACS and conservation district technicians provide outreach and education on BMP implementation for enrolled agricultural operations, as well as work with interested producers to provide cost share funding for projects to improve on-farm nutrient and irrigation efficiencies that work in tandem with the applicable practices from the producer’s BMP checklist. The SJRWMD cost share

program also provides outreach and funding for projects that provide nutrient and irrigation management benefits. FDACS and the SJRWMD work closely to ensure their cost share programs complement each other to meet the needs of the producers while considering the specific characteristics of the region.

4.5 Water Quality Credit Trading

This BMAP area has a water quality credit trading program to enable entities to trade reductions with other entities under certain conditions and through the permitting process. See **Section 5.4** in the *2008 Lower St. Johns River Main Stem BMAP* for further details and 62-306, F.A.C.

Section 5. Monitoring Strategy

5.1 Monitoring Objectives

The Lower St. Johns River Main Stem BMAP monitoring plan is described in detail in the 2008 BMAP and will remain the same for this 2025 BMAP update. A map of the current monitoring network is shown in **Figure 9**. The objectives of the monitoring strategy are the following:

- To assess the condition of the LSJR based on dissolved oxygen for the river's marine reach and chlorophyll-a for the freshwater reach;
- To determine the compliance of domestic and industrial point sources with nitrogen and phosphorus load limits allocated in this BMAP and to track implementation of projects listed in this BMAP for urban nonpoint sources;
- To establish a continuing monitoring program for major tributaries to the LSJR that provides data for performing future water quality model simulations and assessments of nonpoint source loads; and
- To identify who will be tasked with the analysis, interpretation, and dissemination of monitoring information

The monitoring for the freshwater section of the river is based on chlorophyll-a with a target of "not to exceed 40 micrograms per liter (µg/L), as a WBID-wide average, for more than 40 consecutive days." The monitoring in the freshwater section will focus on the two "worst case" WBIDs: 2213L and 2213K, which are located on the reach of the river between Palatka and Tocoi.

The marine reach of the LSJR exhibits chronic low dissolved oxygen concentrations. This condition is the most pronounced in the narrow, deep section of the river's marine reach, from the Main Street Bridge in downtown Jacksonville to the Intracoastal Waterway. The greatest frequency of low concentrations is observed between river miles 5 to 11, corresponding to WBID 2213B. The continuous monitoring station locations have been selected to characterize the zones that tend to exhibit different oxygen patterns within the WBID: 1) the waters of the main channel and 2) the out-welling water of the Timucuan tide marsh north of Heckscher Drive.

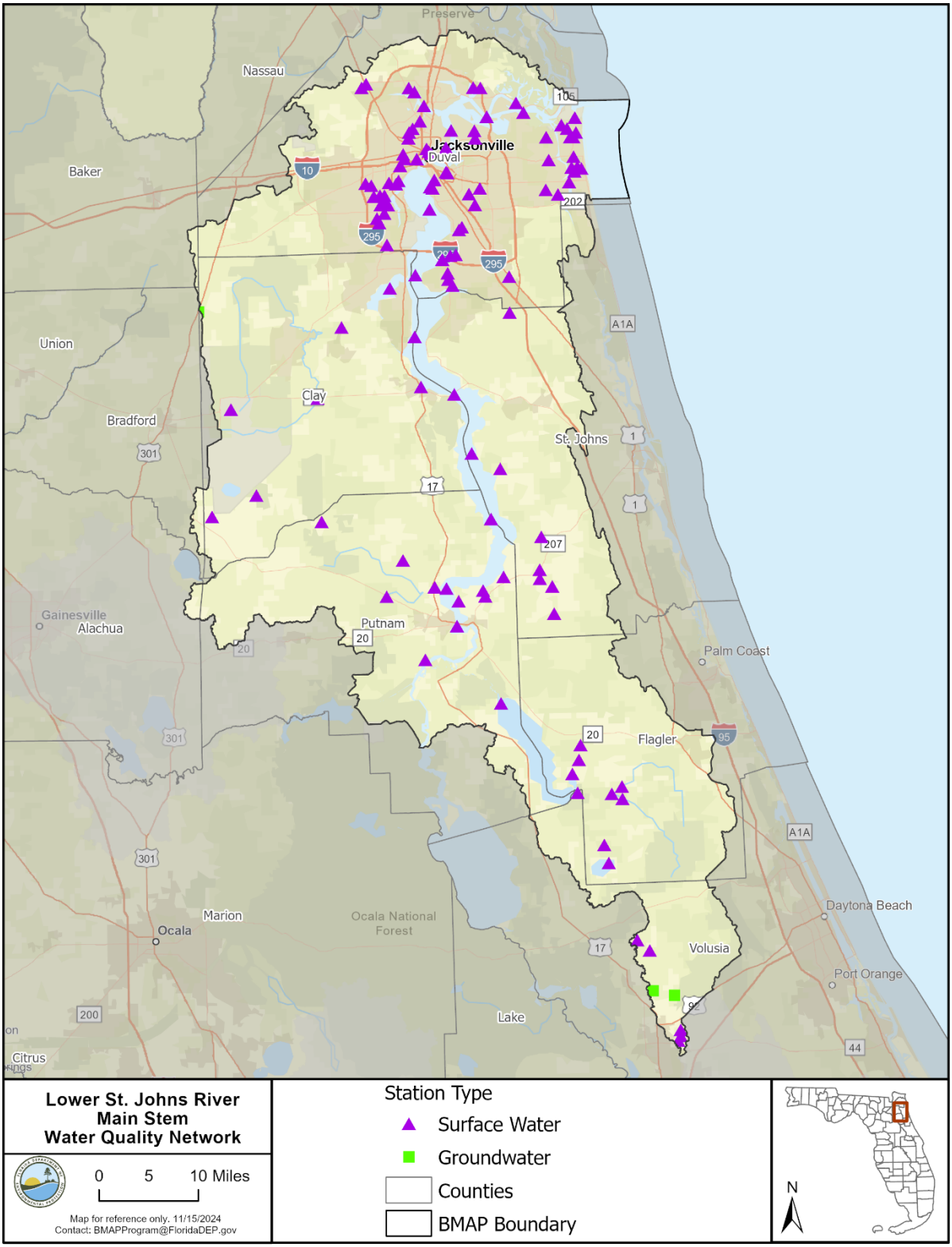

Figure 9. Lower St. Johns River Main Stem water quality monitoring network

5.2 Hotspot Analysis

To better prioritize and focus resources to achieve restoration most efficiently in the Lower St. Johns River Main Stem BMAP, DEP developed the hotspot analysis approach. This approach uses measured data collected throughout the watershed to evaluate TN and TP concentrations. This process is not intended to be a management strategy under section 403.067, F.S. The benchmarks are not intended to measure progress towards restoration or compliance; they are only be used to assist with allocating and prioritizing resources.

The measured nutrient concentrations were compared with selected benchmarks to identify areas that should be the highest priority for restoration. Four statistics (**Figure 10**) are calculated for the whole BMAP and are used to compare against each station average: TN or TP concentration average; TN or TP 90th percentile; TN or TP standard deviation; and TN or TP percent frequency of samples over the BMAP threshold. Stations are assigned a rank of 0, 1, or 2 for each category, as shown in **Figure 10**.

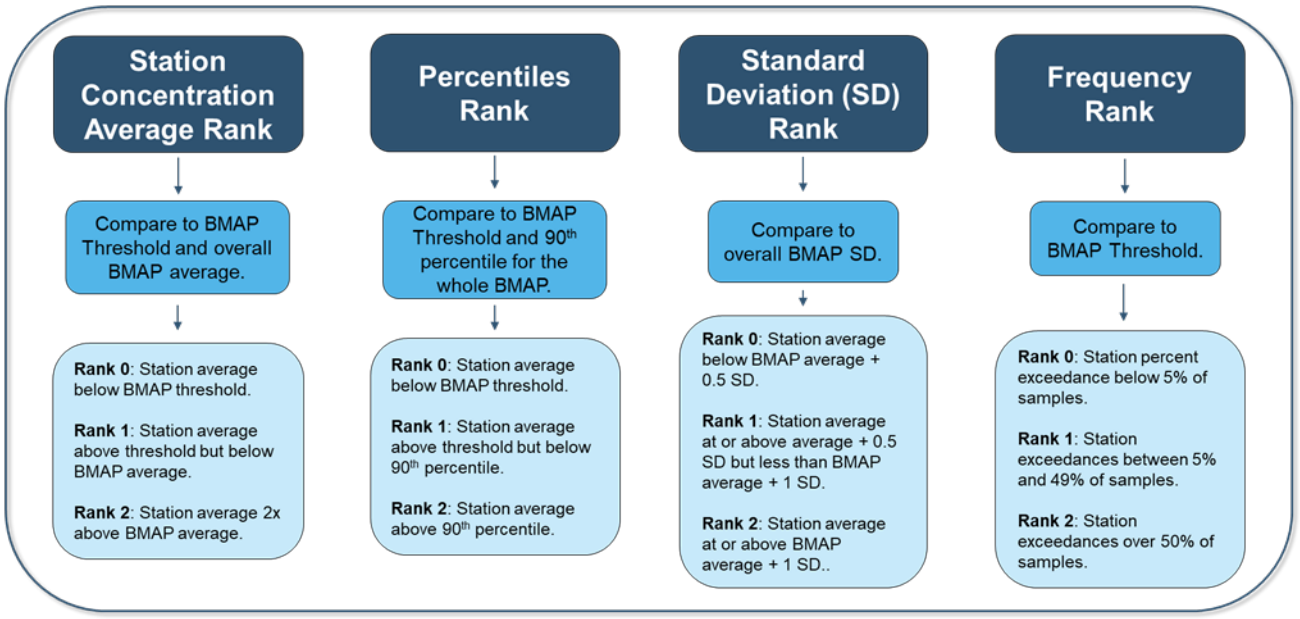

Figure 10. Summary of the hot spot analysis approach

The scores for the four categories are added for a total index rank. The total index rank ranges between 0 and 8, with high rank values (8, 7, and 6) being stations of high concern and low ranks (0, 1, and 2) of least concern. This analysis will be run as needed to identify areas of concern within the BMAP boundary.

Figure 11 and **Figure 12** summarize the most recent TN and TP hot spot analysis results. The period of record used was 2019 to 2023, using ambient monitoring sites with at least three samples per year and at least three years of data; extreme outliers were removed.

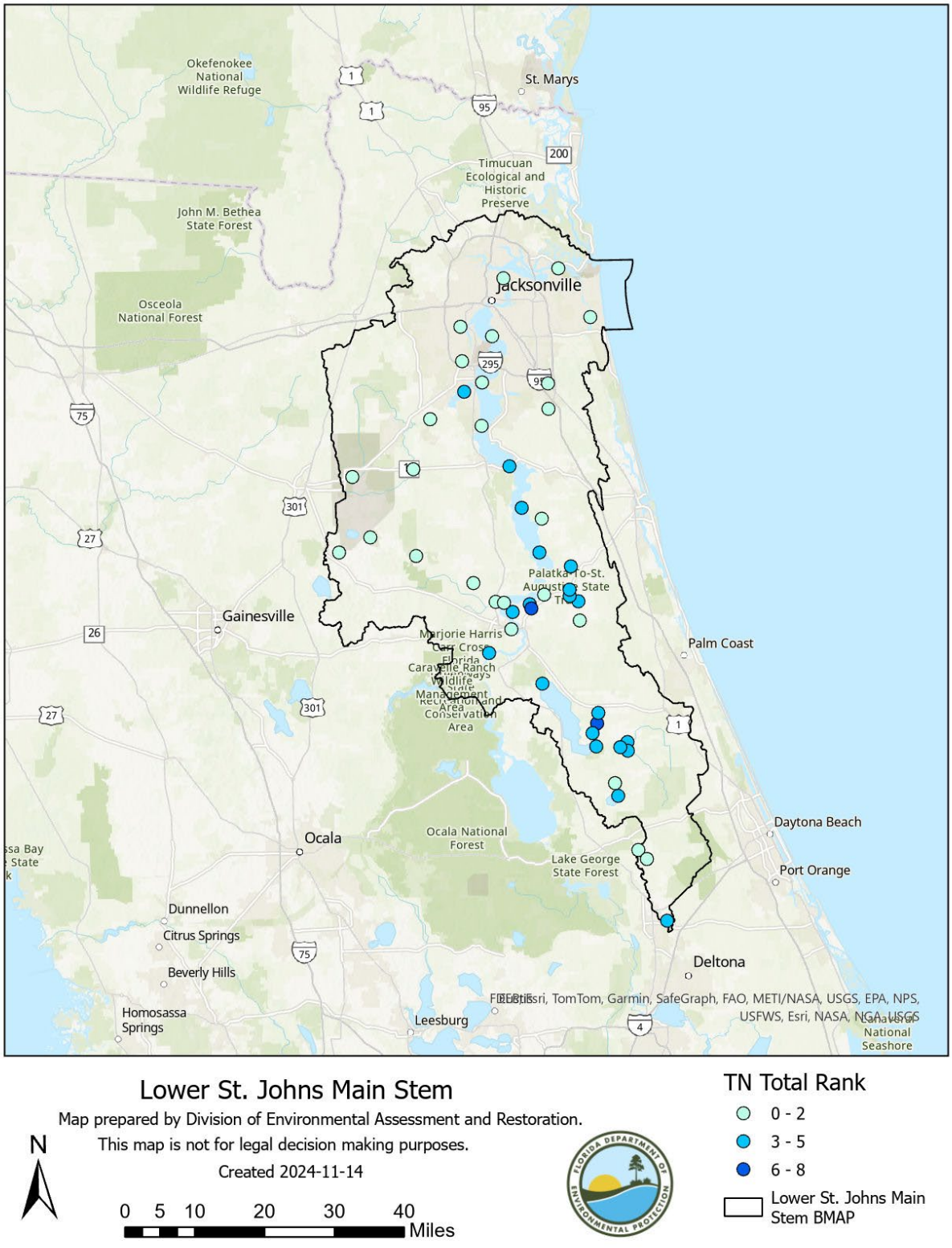

Figure 11. TN hot spot results

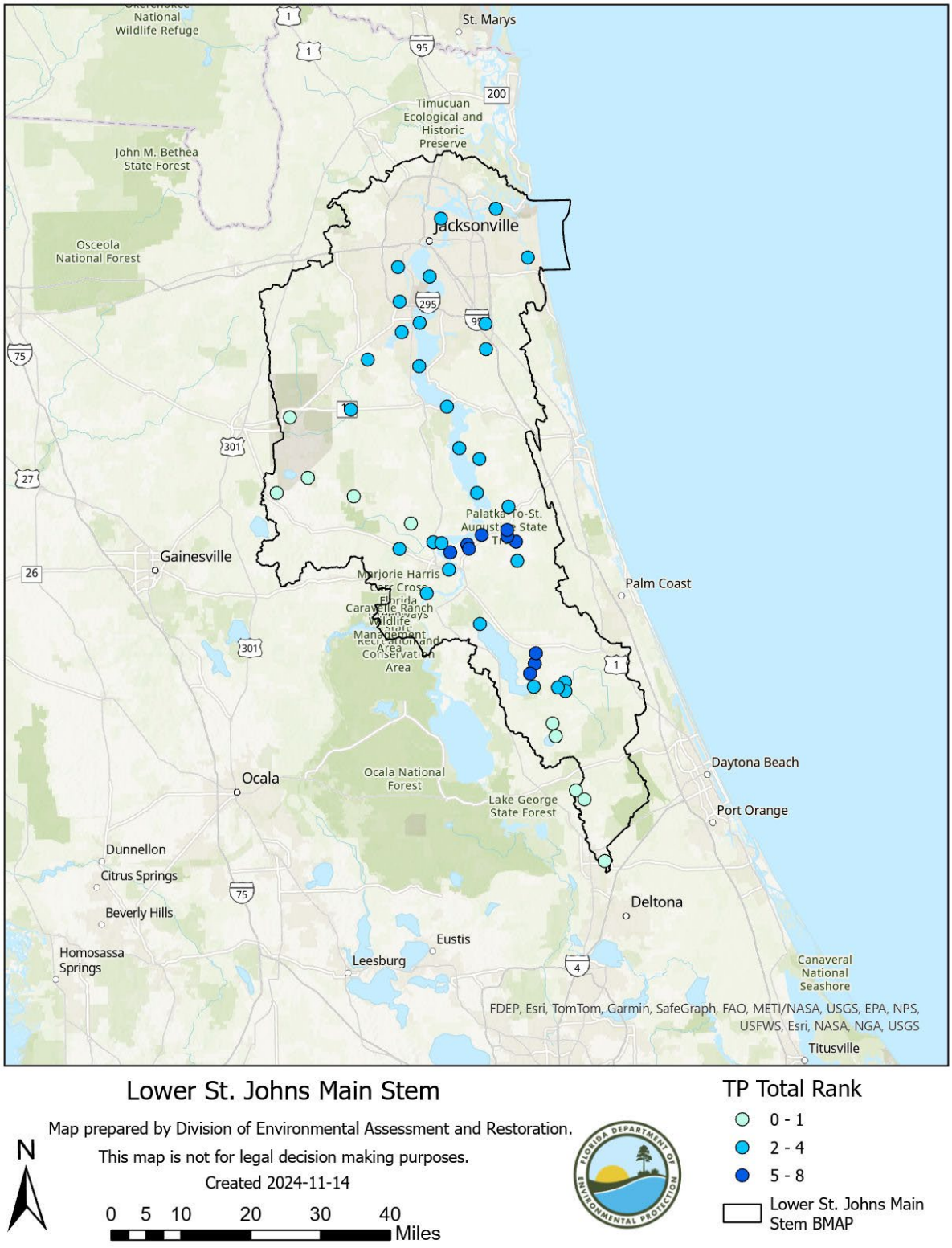

Figure 12. TP hot spot results

Section 6. Commitment to Plan Implementation

6.1 Adoption Process

The 2025 BMAP update is adopted by Secretarial Order and assigns TP and TN load reductions to the responsible stakeholders in the Lower St. Johns River Main Stem Basin.

6.2 Tracking Reductions

The required loading reductions were expected to be met by 2023. The additional statutory requirements must be met as described by the L.O.F. Each entity responsible for implementing management actions as part of the BMAP will provide DEP, via the statewide annual report process, with an annual update of progress made in implementing load reductions. The update will track the implementation status of the management actions listed in the BMAP and document additional projects undertaken to further water quality improvements in the basin. FDACS will continue to report acreage enrolled in NOIs at least annually to DEP.

6.3 Revisions to the BMAP

Adaptive management involves setting up a mechanism for making course corrections in the BMAP when circumstances change, or feedback mechanisms indicate that a more effective strategy is needed. Section 403.067, F.S., requires that the plan be revised, as appropriate, in collaboration with basin stakeholders. All or part of a revised BMAP must be adopted by Secretarial Order. Adaptive management measures include the following:

- Need to update based on new information, including model updates.
- New law requirements.
- Procedures to determine whether additional cooperative actions are needed.
- Criteria/process for determining whether and when plan components need to be revised because of changes in costs, environmental impacts, social effects, watershed conditions, or other factors.
- Descriptions of the stakeholders' role after BMAP completion.

DEP anticipates that the St. Johns River Basin model will be completed in 2028. After the St. Johns River Basin model is complete, DEP will reevaluate and, if necessary, adopt another iteration of the Lower St. Johns River Main Stem BMAP, most likely before 2030. The next iteration may include updated required reductions, timelines and 5-year milestones. DEP providing revised starting loads and allocations is an expected part of the iterative BMAP process where loading estimates are reassessed as land uses and other loading sources change over time as well as the response of chlorophyll-a and DO conditions to improved loading rates

are assessed. Responsible entities and agencies should expect periodic adjustments to their reduction assignments during the BMAP process. Tracking implementation, monitoring water quality and pollutant loads, and holding periodic meetings to share information and expertise are key components of adaptive management.

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Appendices

Appendix A. Important Links

The links below were correct at the time of document preparation. Over time, the locations may change and the links may no longer be accurate. None of these linked materials are adopted into this BMAP.

- DEP Website: http://www.floridadep.gov
- DEP Map Direct Webpage: https://ca.dep.state.fl.us/mapdirect/
- Florida Statutes: http://www.leg.state.fl.us/statutes:
    a. Florida Watershed Restoration Act (Section 403.067, F.S.)
- DEP Model Ordinances: http://fyn.ifas.ufl.edu/fert_ordinances.html
- DEP Standard Operating Procedures for Water Quality Samples: https://floridadep.gov/dear/quality-assurance/content/dep-sops
- FDACS BMPs: Best Management Practices (BMPs) / Agriculture Industry / Home - Florida Department of Agriculture & Consumer Services
- FDACS BMP and Field Staff Contacts: Agricultural Water Policy / Divisions & Offices / Home - Florida Department of Agriculture & Consumer Services
- FDACS Regional Projects Program: https://www.fdacs.gov/Divisions-offices/Agricultural-Water-Policy.
- Florida Administrative Code (Florida Rules): https://www.flrules.org/
- Florida Stormwater Rule: https://floridadep.gov/water/engineering-hydrology-geology/content/erp-stormwater-resource-center
- National Laboratory Environmental Accreditation Conference (NELAC) National Environmental Laboratory Accreditation Program (NELAP): https://floridadep.gov/dear/florida-dep-laboratory/content/nelap-certified-laboratory-search
- SJRWMD 2008 Lower St. Johns River Basin Surface Water Improvement and Management (SWIM) Plan: https://www.sjrwmd.com/static/plans/2008_LSJRB_SWIM_Plan_Update.pdf
- UF–IFAS Research: http://research.ifas.ufl.edu/
- MS4 Permittee List: https://floridadep.gov/water/stormwater/content/stormwater-facilities-lists

Appendix B. Projects to Reduce Nutrient Sources

Table B- 1. Projects to reduce nutrients

TBD = To be determined; N/A = Not applicable; O&M = Operations and maintenance.

ProjID	Lead Entity	Partners	Project Number	Project Name	Project Description	Project Type	Project Status	Estimated Completion Date	TN Reduction (lbs/yr)	Cost Estimate	Funding Source	Funding Amount
7225	American Water Military Services	US Navy	AWMS-01	Deep Injection Well	Construct and test Class 5 deep injection well for future plant discharge.	Wastewater - Injection Well	Underway	2027	NA	$27,000,000	Private	Private - $27,000,000.00
729	American Water Military Services	Not provided	USN-04	NS Mayport WWTF FL0000922	Inflow/ infiltration repair projects.	WWTF Upgrade	Completed	2008	12,657	$2,500,000	Not provided	Not provided - $0.00
728	American Water Military Services	Not provided	USN-05	NS Mayport WWTF FL0000922	Modifications to Mayport WWTF; New system owner, American Water (AW) is now the permittee of FL0000922 as of 01 March 2023. As of 13 October 2023, AW has received a modified permit that incorporates trading credits, pending upgrades.	WWTF Upgrade	Underway	2025	24,901	$0	Not provided	Not provided - $0.00
827	Anheuser Busch	Not provided	ANB-01	Anheuser Busch - Main Street	Complete process improvements.	WWTF Upgrade	Completed	2006	26,358	$0	Not provided	Not provided - $0.00
835	Camp Blanding Non-MS4	NA	CB-01	Camp Blanding	Regrade existing swale system (completed through 2013).	Grass swales without swale blocks or raised culverts	Completed	2013	1,552	$0	Not provided	Not provided - $0.00
825	Camp Blanding Non-MS4	NA	CB-02	Camp Blanding	Atmospheric deposition load reduction - Seminole Electric SCR upgrade.	Industrial Facility Upgrades	Completed	2010	216	$176,000,000	Not provided	Not provided - $0.00
824	Camp Blanding Non-MS4	NA	CB-03	Camp Blanding	Completed stormwater projects.	On-line Retention BMPs	Completed	2014	105	$0	Not provided	Not provided - $0.00
823	Camp Blanding Non-MS4	NA	CB-04	Camp Blanding	Regrade existing swale system (80 miles).	Grass swales without swale blocks or raised culverts	Completed	2017	1,760	$0	Not provided	Not provided - $0.00

ProjID	Lead Entity	Partners	Project Number	Project Name	Project Description	Project Type	Project Status	Estimated Completion Date	TN Reduction (lbs/yr)	Cost Estimate	Funding Source	Funding Amount
924	CCUA Aggregate	NA	CCUA-01	Fleming Island WWTF FL0043834	Upgrade to A Prototype Realistic Innovative Community of Today (APRICOT) and Reuse.	WWTF Upgrade	Completed	Prior to 2008	40,029	$4,143,944	NA	NA - $0.00
923	CCUA Aggregate	NA	CCUA-02	Miller St. WWTF FL0025151	Reuse water upgrades including Spencer WWTP.	WWTF Upgrade	Completed	2011	35,670	$16,255,437	NA	NA - $0.00
914	CCUA Aggregate	NA	CCUA-03	Miller St. WWTF FL0025151	WWTF improvements to meet APRICOT standards.	WWTF Nutrient Reduction	Completed	Prior to 2008	22,737	$5,889,193	NA	NA - $0.00
921	CCUA Aggregate	DEP; SJRWMD	CCUA-04	Mid-Clay Reclaimed Land Application and Recovery System	This project increases the capacity of the RIBs at CCUA Mid-Clay WWTF, allowing CCUA to land apply an additional 1.235 MGD of treated effluent which would otherwise be discharged into the St. Johns River.	WWTF Disposal Site	Completed	2015	6,704	$2,836,095	DEP SRF; SJRWMD	DEP SRF - $1,735,142.00; SJRWMD - $1,030,853.00
929	CCUA Aggregate	Clay County	CCUA-05	Trade	Trade with CC-03 and CC-06. Sold TN 2,850 kg/yr and TP 7,973 kg/yr.	Credit Trade	Completed	2009	(6,270)	$0	NA	NA - $0.00
4408	CCUA Aggregate	SJRWMD	CCUA-06	Doctor's Lake Phosphorus Removal - Fleming Island WWTF (FL0043834) Pilot Project	SJRWMD-funded and operated pilot project to investigate TP removal from a WRF discharge. The project is removing TP from the Fleming Island low-TP reuse system. System may be used to explore TP removal in other projects throughout the state.	WWTF Nutrient Reduction	Completed	2020	-	$5,075,000	SWIG; SJRWMD	SWIG - $3,575,000.00; SJRWMD - $1,500,000.00
5326	CCUA Aggregate	SJRWMD	CCUA-07	Doctor's Lake Septic to Sewer Project	SJRWMD cost-shared project to phase single family residences in the Doctor's Lake watershed from septic systems to CCUA's sewer system (0-79 houses). Reductions to be determined.	OSTDS Phase Out	Completed	2023	TBD	$1,900,000	SJRWMD; CCUA	SJRWMD - $1,500,000.00; CCUA - $0.00
5327	CCUA Aggregate	SJRWMD	CCUA-08	Tynes Reclaimed Water Pumping Facility	SJRWMD-cost shared project to construct a reclaimed water storage and pumping facility to expand CCUA's reclaimed water service capacity and reduce nutrient discharge to the St. Johns River.	WWTF Diversion to Reuse	Completed	2020	2,532	$4,084,599	SJRWMD; CCUA	SJRWMD - $1,433,000; CCUA - $2,651,599

ProjID	Lead Entity	Partners	Project Number	Project Name	Project Description	Project Type	Project Status	Estimated Completion Date	TN Reduction (lbs/yr)	Cost Estimate	Funding Source	Funding Amount
5328	CCUA Aggregate	SJRWMD	CCUA-09	Saratoga Spring Reclaimed Water Pumping Facility	Project to construct a reclaimed water storage and pumping facility to expand CCUA's reclaimed water service area and reduce nutrient discharge to the St. Johns River.	WWTF Diversion to Reuse	Completed	2023	TBD	$3,000,000	SJRWMD; CCUA	SJRWMD - $900,570.00; CCUA - $2,099,430.00
5776	CCUA Aggregate	DEP	CCUA-10	Fleming Island WWTF (FL0043834) BTU Upgrade	Project to construct a third biological treatment unit at the Fleming Island WWTF to provide additional capacity for increased nutrient treatment.	WWTF Upgrade	Completed	2022	NA	$7,282,239	DEP; CCUA	DEP - $1,500,000.00; CCUA - $5,782,239.00
5777	CCUA Aggregate	DEP	CCUA-11	Mid-Clay WWTF (FLA011377) Upgrades	Project to construct a second biological treatment unit at the Mid-Clay WWTF to provide additional capacity for increased nutrient treatment.	WWTF Upgrade	Completed	2023	220	$7,596,456	CCUA; DEP	DEP - $1,500,000.00; CCUA - $6,096,456.00
5778	CCUA Aggregate	SJRWMD	CCUA-12	Wastewater Treatability Study Project and Potable Reuse Pilot Project	Project to investigate the feasibility of treating WWTF effluent to potable water standards and to investigate use of full-scale potable reuse at CCUA.	Study	Underway	2024	NA	$5,255,500	SJRWMD; CCUA; DEP	SJRWMD - $58,784.00; CCUA - $4,806,716.00; DEP - $390,000.00
815	City of Atlantic Beach MS4	Not provided	AB-04	Atlantic Bch MS4 FLS000012	Core City Capital Improvement Project: Stormwater, sanitary sewer, and water systems upgrades.	Baffle Boxes-Second Generation with Media	Completed	2004	1,450	$0	Not provided	Not provided - $0.00
816	City of Atlantic Beach MS4	Not provided	AB-05	Atlantic Bch MS4 FLS000012	Hopkins Creek stormwater treatment system.	Wet Detention Pond	Completed	2008	26	$0	Not provided	Not provided - $0.00
817	City of Atlantic Beach MS4	FDOT	AB-06	Atlantic Bch MS4 FLS000012	FDOT Widening of SR 10 (Atlantic Blvd) roadway and bridge upgrade.	Wet Detention Pond	Completed	Prior to 2008	110	$0	FDOT	FDOT - $0.00

ProjID	Lead Entity	Partners	Project Number	Project Name	Project Description	Project Type	Project Status	Estimated Completion Date	TN Reduction (lbs/yr)	Cost Estimate	Funding Source	Funding Amount
818	City of Atlantic Beach MS4	FDOT	AB-07	Atlantic Bch MS4 FLS000012	FDOT Atlantic Blvd and Mayport Rd. interchange.	Wet Detention Pond	Completed	Prior to 2008	40	$0	FDOT	FDOT - $0.00
826	City of Atlantic Beach MS4	FDOT	AB-08	Atlantic Bch MS4 FLS000012	FDOT Wonderwood Connector Segment 1 - Girvin to Sandcastle.	Wet Detention Pond	Completed	2005	13	$0	FDOT	FDOT - $0.00
828	City of Atlantic Beach MS4	Seminole Electric	AB-09	Atlantic Bch MS4 FLS000012	Atmospheric deposition load reduction - Seminole Electric SCR Upgrade.	Industrial Facility Upgrades	Completed	2010	172	$176,000,000	Not provided	Not provided - $0.00
805	City of Atlantic Beach MS4	NA	AB-10	Atlantic Bch MS4 FLS000012	Stormwater Master Plan: Identifies improvements for future capital projects.	Study	Completed	2018	NA	$190,000	City of Atlantic Beach	City of Atlantic Beach - $190,000.00
833	City of Atlantic Beach MS4	SJRWMD	AB-11	Atlantic Bch MS4 FLS000012	Phasing out existing septic tanks.	OSTDS Phase Out	Planned	2026	TBD	$850,000	City of Atlantic Beach	City of Atlantic Beach - $850,000.00
5775	City of Atlantic Beach MS4	NA	AB-12	Begonia Street Gravity Sewer Extension (Septic to Sewer)	Installed 550 LF of 8" PVC SDR-26 gravity sewer pipe, two 4' diameter manholes, and 10 6" PVC laterals.	OSTDS Phase Out	Completed	2020	TBD	$115,500	Atlantic Beach	Atlantic Beach - $115,500.00
812	City of Atlantic Beach WWTF	Not provided	AB-01	Buccaneer WWTP FL0023248	Complete upgrade to sequencing batch reactor.	WWTF Upgrade	Completed	1998	21,967	$374,131	Not provided	Not provided - $0.00
813	City of Atlantic Beach WWTF	Not provided	AB-02	Main WWTP FL0038776	Upgrade to biological nutrient removal and flow transfer from Buccaneer WWTF.	WWTF Upgrade	Completed	2013	48,661	$9,000,000	DEP SRF; SJRWMD	DEP SRF - $8,000,000.00; SJRWMD - $1,000,000.00
814	City of Atlantic Beach WWTF	SJRWMD	AB-03	Main WWTP FL0038776	Atlantic Beach Country Club reclaimed facilities.	WWTF Diversion to Reuse	Completed	2015	4,566	$1,410,528	SJRWMD	SJRWMD - $442,000.00

ProjID	Lead Entity	Partners	Project Number	Project Name	Project Description	Project Type	Project Status	Estimated Completion Date	TN Reduction (lbs/yr)	Cost Estimate	Funding Source	Funding Amount
7039	City of Crescent City	DEP; SJRWMD	CRES-01	WWTF Improvements & Septic Tank Phase Out	Rehabilitate the WWTF's Sequencing Batch Reactor (SBR) facility that has many outdated and aged components to ensure continued Advanced Wastewater Treatment (AWT) performance. The project also extends central sewer to remove remaining ˜40 OSTDS.	OSTDS Phase Out	Planned	2027	658	$9,647,500	DEP Water Quality Improvement Grants Program	DEP Water Quality Improvement Grants Program - $9,647,500.00
619	City of Green Cove Springs	Not provided	GCS-01	GCS - Harbor Rd. FL0020915, South FL0030210	Reuse to golf course.	Stormwater Reuse	Canceled	2011	NA	$0	Not provided	Not provided - $0.00
618	City of Green Cove Springs	Not provided	GCS-02	GCS - Harbor Rd. FL0020915, South FL0030210	Convert to Modified Ludzack Ettinger (MLE) and alum feed.	WWTF Upgrade	Canceled	2011	NA	$0	Not provided	Not provided - $0.00
774	City of Green Cove Springs	Not provided	GCS-08	GCS - Harbor Rd. FL0020915, South FL0030210	Operational changes.	WWTF Nutrient Reduction	Completed	2011	21,210	$0	Not provided	Not provided - $0.00
7122	City of Green Cove Springs	DEP SRF; SJRWMD	GCS-08	Harbor Road WRF Expansion, Ph. 2	Replace existing Harbor Road WWTF with 1.25 MGD Advanced Wastewater Treatment Water Reclamation Facility, reducing nutrient load to St. Johns River and also providing additional reclaimed water for landscape irrigation.	WWTF Upgrade	Underway	2024	10,650	$19,686,500	SJRWMD Cost-Share Grant; DEP SRF	SJRWMD Cost-Share Grant - $1,500,000.00; DEP SRF - $18,186,500.00
7141	City of Green Cove Springs	City of Green Cove Springs; DEP; SJRWMD	GCS-09	South WWTF Decommissioning & PS No. 2 Force Main Ext.	Decommissioning of Green Cove Springs' South WWTF and extend a 16" force main from Pump Station No. 2 to the Harbor Road AWT WWTF.	Decommission/ Abandonment	Planned	2026	1,303	$8,208,250	SJRWMD; DEP	SJRWMD - $0.00; DEP - $0.00

ProjID	Lead Entity	Partners	Project Number	Project Name	Project Description	Project Type	Project Status	Estimated Completion Date	TN Reduction (lbs/yr)	Cost Estimate	Funding Source	Funding Amount
7144	City of Green Cove Springs	DEP SRF	GCS-10	Magnolia Point Reclaimed Water System (Design Phase)	Improving water infrastructure by prioritizing reclaimed water over potable use in Magnolia Point. The project includes extending distribution systems and upgrading the Reynolds Water Treatment Plant to meet regulatory standards.	WWTF Diversion to Reuse	Planned	2025	TBD	$2,171,400	DEP SRF	DEP SRF - $2,171,400.00
722	City of Green Cove Springs MS4	Not provided	GCS-03	GCS MS4 FLR04E103	SW drainage system improvements.	Wet Detention Pond	Completed	Prior to 2008	62	$0	Not provided	Not provided - $0.00
591	City of Green Cove Springs MS4	Not provided	GCS-04	GCS MS4 FLR04E103	Cypress baffle box.	Baffle Boxes- First Generation	Completed	Prior to 2008	33	$0	Not provided	Not provided - $0.00
671	City of Green Cove Springs MS4	Not provided	GCS-05	GCS MS4 FLR04E103	Green Cove Springs Industrial Park.	Wet Detention Pond	Completed	Prior to 2008	128	$0	Not provided	Not provided - $0.00
776	City of Green Cove Springs MS4	Not provided	GCS-06	GCS MS4 FLR04E103	Vystar Credit Union.	Dry Detention Pond	Completed	Prior to 2008	1	$0	Not provided	Not provided - $0.00
775	City of Green Cove Springs MS4	Seminole Electric	GCS-07	GCS MS4 FLR04E103	Atmospheric deposition load reduction - Seminole Electric SCR upgrade.	Industrial Facility Upgrades	Completed	2010	1,305	$176,000,000	Not provided	Not provided - $0.00
766	City of Jacksonville Beach MS4	FDOT	JB-02	Jax Bch MS4 FLS000013	FDOT Beach Blvd. widening (Pond 2).	Dry Detention Pond	Completed	2010	31	$0	Not provided	Not provided - $0.00
751	City of Jacksonville Beach MS4	Seminole Electric	JB-03	Jax Bch MS4 FLS000013	Atmospheric deposition load reduction - Seminole Electric SCR upgrade.	Industrial Facility Upgrades	Completed	2010	343	$176,000,000	Not provided	Not provided - $0.00

ProjID	Lead Entity	Partners	Project Number	Project Name	Project Description	Project Type	Project Status	Estimated Completion Date	TN Reduction (lbs/yr)	Cost Estimate	Funding Source	Funding Amount
767	City of Jacksonville Beach WWTF	City of Jacksonville Beach; CRA; SJRWMD	JB-01	Jax Bch WWTF FL0020231	Upgrade WWTF to advanced wastewater treatment for TN removal.	WWTF Nutrient Reduction	Completed	2012	47,421	$22,100,000	SJRWMD; CRA; Water-Sewer Bonds; TBD	SJRWMD - $11,000,000; CRA - $5,600,000; Water-Sewer Bonds - $600,000; TBD - $4,900,000
4417	City of Jacksonville Beach WWTF	SJRWMD	JB-04	Hopson Road Sewer Main Extension Project	Expanded sanitary sewer system and abandoned 6 residential septic tanks along the intracoastal waterway.	Wastewater Service Area Expansion	Completed	2018	TBD	$192,000	COJB; SJRWMD	COJB - $129,000.00; SJRWMD - $63,000.00
4418	City of Jacksonville Beach WWTF	NA	JB-05	Sewer Main Lining	CIPP lining of aging gravity sewer main over several years. Costs are per year costs.	Wastewater Service Area Expansion	Underway	TBD	TBD	$100,000	COJB	COJB - $100,000.00
5329	City of Jacksonville Beach WWTF	NA	JB-06	Penman Road Sewer Main Extension Project	Expand sanitary sewer system and abandon 5 residential septic tanks along Penman Road.	OSTDS Phase Out	Completed	2022	59	$240,000	COJB; SJRWMD Cost-Share Grant	COJB - $195,000.00; SJRWMD Cost-Share Grant - $45,000.00
800	City of Neptune Beach MS4	Seminole Electric	NB-02	Neptune Beach MS4	Atmospheric deposition load reduction - Seminole Electric SCR upgrade.	Industrial Facility Upgrades	Completed	2010	103	$176,000,000	Not provided	Not provided - $0.00
799	City of Neptune Beach MS4	Not provided	NB-03	Neptune Beach MS4	Public Education: web site, yearly newsletter, FOG program, inspection program, pet waste ordinance, fertilizer ordinance, irrigation ordinance.	Education Efforts	Ongoing	NA	73	$0	Not provided	Not provided - $0.00
798	City of Neptune Beach MS4	Not provided	NB-04	Neptune Beach MS4	Annual street sweeping program of streets with curb and gutter (June 1, 2015 to May 31, 2016).	Street Sweeping	Ongoing	NA	460	$0	Not provided	Not provided - $0.00

ProjID	Lead Entity	Partners	Project Number	Project Name	Project Description	Project Type	Project Status	Estimated Completion Date	TN Reduction (lbs/yr)	Cost Estimate	Funding Source	Funding Amount
801	City of Neptune Beach WWTF	SJRWMD	NB-01	Neptune Beach WWTF FL0020427	Complete process improvements.	WWTF Nutrient Reduction	Completed	2011	16,108	$0	SJRWMD	SJRWMD - $700,000.00
797	City of Neptune Beach WWTF	NA	NB-05	Neptune Beach WWTF FL0020427	WWTP package plant modification.	WWTF Nutrient Reduction	Completed	2017	NA	$0	Not provided	Not provided - $0.00
792	City of Palatka Non-MS4	Seminole Electric	PAL-06	Palatka Non-MS4	Atmospheric deposition load reduction - Seminole Electric SCR upgrade.	Industrial Facility Upgrades	Completed	2010	1,815	$176,000,000	Not provided	Not provided - $0.00
691	City of Palatka Non-MS4	Not provided	PAL-07	Palatka Non-MS4	Downtown watershed first-flush treatment.	Stormwater Treatment Areas (STAs)	Completed	2015	4	$0	Null	Null - $160,000.00
692	City of Palatka Non-MS4	SJRWMD; Better Place	PAL-08	Palatka Non-MS4	Booker Park Regional Pond.	Wet Detention Pond	Completed	2018	76	$779,000	SJRWMD; Better Place Funding	SJRWMD - $440,000.00; Better Place Funding - $0.00
693	City of Palatka Non-MS4	SJRWMD; Community Redevelopment Funding	PAL-09	Palatka Non-MS4	South Historic District Pretreatment.	Exfiltration Trench	Completed	2018	18	$694,000	SJRWMD; TIF	SJRWMD - $500,000.00; TIF - $0.00
5330	City of Palatka Non-MS4	SJRWMD; Community Redevelopment Funding	PAL-11	Palatka Non-MS4	South historic district pretreatment phase II.	Exfiltration Trench	Completed	2020	TBD	$1,758,527	SJRWMD; Better Place Funding	SJRWMD - $1,500,000.00; Better Place Funding - $0.00
5331	City of Palatka Non-MS4	USDA CF; City Funded	PAL-12	Palatka Non-MS4	Purchase of street sweeper.	Street Sweeping	Completed	2018	252	$211,391	Better Place Funding; Utility Funds; USDA	Better Place Funding - $0; Utility Funds - $0; USDA - $100,000

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5781	City of Palatka Non-MS4	FDOT; SJRWMD	PAL-15	Palatka Non-MS4	St. Johns Avenue/Transportation Hub Pervious Pavement.	Pervious Pavement Systems	Underway	2024	TBD	$2,302,816	FDOT; Better Place Funding; SJRWMD; TIF	FDOT - $0.00; Better Place Funding - $0.00; SJRWMD - $0.00; TIF - $2,302,816.00
686	City of Palatka WWTF	Not provided	PAL-01	Palatka WWTF FL0040061	Reuse to golf course.	Stormwater Reuse	Completed	Prior to 2008	28,600	$2,500,000	Not provided	Not provided - $0.00
687	City of Palatka WWTF	Not provided	PAL-02	Palatka WWTF FL0040061	Reuse to ballfields.	Stormwater Reuse	Completed	2008	11,499	$650,000	Not provided	Not provided - $0.00
688	City of Palatka WWTF	Not provided	PAL-03	Palatka WWTF FL0040061	Reuse to cemeteries.	Stormwater Reuse	Completed	2009	20,000	$1,250,000	Not provided	Not provided - $0.00
866	City of Palatka WWTF	SJRWMD; City Funded	PAL-04	Palatka WWTF FL0040061	Reuse at WTP.	Stormwater Reuse	Completed	2009	25,799	$787,000	SJRWMD; City	SJRWMD - $0.00; City - $0.00
689	City of Palatka WWTF	Not provided	PAL-05	Palatka WWTF FL0040061	Zero discharge.	WWTF Diversion to Reuse	Completed	2014	48,057	$8,500,000	DEP; SJRWMD	DEP - $0.00; SJRWMD - $0.00
694	City of Palatka WWTF	Tater Farms	PAL-10	Palatka WWTF FL0040061	Reuse to 200+ acres of agriculture (0.5 mgd estimated use).	WWTF Diversion to Reuse	Completed	2020	TBD	$1,200,000	SJRWMD; Utility Funds	SJRWMD - $1,109,220.00; Utility Funds - $0.00
5779	City of Palatka WWTF	FDOT Appropriation Grant Funded	PAL-13	Palatka WWTF FL0040061	Conversion of Anaerobic to Aerobic Digesters and replacement of primary belt press.	WWTF Diversion to Reuse	Underway	2024	TBD	$3,500,000	DEP; Utility Funds	DEP - $0.00; Utility Funds - $3,500,000.00
5780	City of Palatka WWTF	DEO	PAL-14	Palatka WWTF FL0040061	Sanitary Sewer Inspections and Resiliency Master Plan.	Sanitary Sewer Inspections	Planned	2024	NA	$385,000	DEO	DEO - $385,000.00

ProjID	Lead Entity	Partners	Project Number	Project Name	Project Description	Project Type	Project Status	Estimated Completion Date	TN Reduction (lbs/yr)	Cost Estimate	Funding Source	Funding Amount
822	Clay County MS4	Not provided	CC-01	CC MS4 FLR04E045	Education program including: Florida Yards & Neighborhoods, fertilizer ordinance, pet waste ordinance, PSAs, Websites, Illicit Discharge and Prohibition Ordinance and Policies, and Public Information. 5% of starting load freshwater MS4 allocation.	Education Efforts	Ongoing	NA	305	$0	Not provided	Not provided - $0.00
821	Clay County MS4	FDOT	CC-02	CC MS4 FLR04E045	FDOT SR 21 widening from SR 215 to CR 220.	Dry Detention Pond	Completed	2007	11	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
881	Clay County MS4	CCUA	CC-03	CC MS4 FLR04E045	TN trade credited to Clay County MS4. TP trade with CCUA-05 with trading factors applied to total CCUA trade of 2,850 kg/yr TN and 7,973 kg/yr TP. CC-03 credited 1,328 kg/yr TP and CC-06 credited 148 kg/yr TP.	Credit Trade	Completed	2009	900	$0	NA	NA - $0.00
910	Clay County MS4	Seminole Electric	CC-07	CC MS4 FLR04E045	Atmospheric deposition load reduction - Seminole Electric SCR upgrade.	Industrial Facility Upgrades	Completed	2010	519	$176,000,000	Not provided	Not provided - $0.00
908	Clay County MS4	Clay County	CC-09	CC MS4 FLR04E045	Wells Rd. improvements.	Wet Detention Pond	Completed	2007	20	$0	Not provided	Not provided - $0.00
907	Clay County MS4	Clay County	CC-10	CC MS4 FLR04E045	CR 224 Phase I.	Wet Detention Pond	Completed	2008	84	$0	Not provided	Not provided - $0.00
898	Clay County MS4	Clay County	CC-11	CC MS4 FLR04E045	CR 224 Phase II.	Wet Detention Pond	Completed	2007	150	$0	Not provided	Not provided - $0.00
905	Clay County MS4	Clay County	CC-12	CC MS4 FLR04E045	Education program including: Florida Yards & Neighborhoods, fertilizer ordinance, pet waste ordinance, PSAs, Websites, Illicit Discharge and Prohibition Ordinance and Policies, and Public	Education Efforts	Ongoing	NA	2,777	$10,000	Ad Valorem	Ad Valorem - $10,000.00

ProjID	Lead Entity	Partners	Project Number	Project Name	Project Description	Project Type	Project Status	Estimated Completion Date	TN Reduction (lbs/yr)	Cost Estimate	Funding Source	Funding Amount
					Information. 5% of starting load marine MS4 allocation.							
913	Clay County MS4	FDOT	CC-13	CC MS4 FLR04E045	FDOT construction of stormwater management systems for Clay County recreational trail on SR 15.	Wet Detention Pond	Completed	2007	198	$0	State Legislature; FDOT	State Legislature - $0.00; FDOT - $0.00
903	Clay County MS4	FDOT	CC-14	CC MS4 FLR04E045	FDOT SR 15 widening at Fleming Island.	Wet Detention Pond	Completed	2007	2,939	$0	State Legislature; FDOT	State Legislature - $0.00; FDOT - $0.00
902	Clay County MS4	FDOT	CC-15	CC MS4 FLR04E045	FDOT SR 15 widening at Fleming Island from Village Square Park Rd. to south of Margarets Walk Rd.	Wet Detention Pond	Completed	2007	1,461	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
901	Clay County MS4	Seminole Electric	CC-16	CC MS4 FLR04E045	Atmospheric deposition load reduction - Seminole Electric SCR upgrade.	Industrial Facility Upgrades	Completed	2010	1,861	$176,000,000	Not provided	Not provided - $0.00
906	Clay County MS4	Clay County	CC-20	CC MS4 FLR04E045	CR 729 widening from CR 218 to Black Creek Bridge.	Wet Detention Pond	Completed	2014	99	$0	Not provided	Not provided - $0.00
928	Clay County MS4	Clay County	CC-21	CC MS4 FLR04E045	Old Jennings Rd widening from Blanding Blvd to Branan Field Rd.	Wet Detention Pond	Completed	2012	37	$0	Not provided	Not provided - $0.00
927	Clay County MS4	Clay County	CC-22	CC MS4 FLR04E045	College Drive Ponds A and B.	Wet Detention Pond	Completed	2014	TBD	$0	Not provided	Not provided - $0.00
926	Clay County MS4	Clay County	CC-23	CC MS4 FLR04E045	Education program. Project was canceled in 2018. Reductions and information are included in CC-01.	Education Efforts	Canceled	2018	NA	$0	NA	NA - $0.00

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925	Clay County MS4	Clay County; FDOT	CC-24	CC MS4 FLR04E045	CR 220 widening stormwater retention.	Control Structure	Planned	2024	TBD	$13,000,000	State; Federal; Local	State - $13,000,000.00; Federal - $0.00; Local - $0.00
5332	Clay County MS4	Clay County	CC-25	CC MS4 FLR04E046	Enlarging College Drive master stormwater pond to increase stormwater attenuation and increase treatment volume.	Wet Detention Pond	Planned	2024	NA	$0	State; Local	State - $0.00; Local - $0.00
6570	Clay County MS4	Clay County BCC	CC-26	Stormwater Modeling and Vulnerability Assessment	Identification and prioritization of problem areas and the development of effective alternatives needed to handle water quality/quantity problems as well as stormwater system capacity issues.	Study	Underway	2024	NA	$1,677,961	American Rescue Plan Act of 2021	American Rescue Plan Act of 2021 - $1,677,960.61
915	Clay County Non-MS4	Not provided	CC-04	CC Non-MS4	Education program including: Florida Yards & Neighborhoods, fertilizer ordinance, pet waste ordinance, PSAs, Websites, Illicit Discharge and Prohibition Ordinance and Policies. 5% of starting load freshwater non-MS4 allocation.	Education Efforts	Ongoing	NA	614	$0	Not provided	Not provided - $0.00
865	Clay County Non-MS4	FDOT	CC-05	CC Non-MS4	FDOT construction of seven wet ponds on SR 15 from Putnam County line to SR 16.	Wet Detention Pond	Completed	2007	378	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
911	Clay County Non-MS4	CCUA	CC-06	CC Non-MS4	Trade with CCUA-05 with trading factors applied to total CCUA trade of 2,850 kg/yr TN and 7,973 kg/yr TP. CC-03 credited 1,328 kg/yr TP and CC-06 credited 148 kg/yr TP.	Credit Trade	Completed	2009	NA	$0	NA	NA - $0.00

ProjID	Lead Entity	Partners	Project Number	Project Name	Project Description	Project Type	Project Status	Estimated Completion Date	TN Reduction (lbs/yr)	Cost Estimate	Funding Source	Funding Amount
909	Clay County Non-MS4	Seminole Electric	CC-08	CC Non-MS4	Atmospheric deposition load reduction - Seminole Electric SCR upgrade.	Industrial Facility Upgrades	Completed	2010	1,155	$176,000,000	Not provided	Not provided - $0.00
900	Clay County Non-MS4	Clay County	CC-17	CC Non-MS4	Education program including: Florida Yards & Neighborhoods, fertilizer ordinance, pet waste ordinance, PSAs, Websites, Illicit Discharge and Prohibition Ordinance and Policies. 5% of starting load marine non-MS4 allocation.	Education Efforts	Completed	2007	1,326	$0	Not provided	Not provided - $0.00
920	Clay County Non-MS4	FDOT	CC-18	CC Non-MS4	FDOT SR 23 improvements from Kindlewood Rd to Duval County line - five systems.	Wet Detention Pond	Completed	2007	152	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
904	Clay County Non-MS4	Seminole Electric	CC-19	CC Non-MS4	Atmospheric deposition load reduction - Seminole Electric SCR upgrade.	Industrial Facility Upgrades	Completed	2010	865	$176,000,000	Not provided	Not provided - $0.00
919	COJ/ FDOT MS4	Not provided	COJ-001	COJ MS4 FLS000012	Big Fishweir Creek-Murray Hill Phase I - Drainage improvements.	Baffle Boxes-Second Generation	Completed	Prior to 2008	176	$0	Not provided	Not provided - $0.00
918	COJ/ FDOT MS4	Not provided	COJ-002	COJ MS4 FLS000012	Sixmile Creek-West 1st Street/ Melson Avenue - Drainage improvements.	Wet Detention Pond	Completed	Prior to 2008	1,034	$0	Not provided	Not provided - $0.00
917	COJ/ FDOT MS4	Not provided	COJ-003	COJ MS4 FLS000012	McCoys Creek Ponds A and B.	Wet Detention Pond	Completed	Prior to 2008	1,650	$0	Not provided	Not provided - $0.00
916	COJ/ FDOT MS4	Not provided	COJ-004	COJ MS4 FLS000012	McCoys Creek Pond F.	Wet Detention Pond	Completed	Prior to 2008	22	$0	Not provided	Not provided - $0.00
896	COJ/ FDOT MS4	Not provided	COJ-005	COJ MS4 FLS000012	Riverside Ave. - Baffle boxes.	Baffle Boxes-Second Generation	Completed	Prior to 2008	88	$0	Not provided	Not provided - $0.00
922	COJ/ FDOT MS4	Not provided	COJ-006	COJ MS4 FLS000012	St. Augustine Rd. (Emerson to US 1) - Regional pond facilities.	Wet Detention Pond	Completed	Prior to 2008	440	$0	Not provided	Not provided - $0.00
899	COJ/ FDOT MS4	Not provided	COJ-007	COJ MS4 FLS000012	Powers Ave./ Old Kings Rd. - Regional pond facilities.	Wet Detention Pond	Completed	Prior to 2008	1,364	$0	Not provided	Not provided - $0.00
868	COJ/ FDOT MS4	Not provided	COJ-008	COJ MS4 FLS000012	Fouraker Rd. - from Old Middleburg Rd. to Normandy	Wet Detention Pond	Completed	Prior to 2008	88	$0	Not provided	Not provided - $0.00

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					Blvd. Regional pond facilities.							
869	COJ/ FDOT MS4	Not provided	COJ-009	COJ MS4 FLS000012	Greenland Rd. from St. Augustine Rd. to Coastal Lane - Detention pond facilities.	Wet Detention Pond	Completed	Prior to 2008	66	$0	Not provided	Not provided - $0.00
870	COJ/ FDOT MS4	Not provided	COJ-010	COJ MS4 FLS000012	Barnes Rd. from University Blvd. to Parental Home Rd. - Detention pond facilities.	Wet Detention Pond	Completed	Prior to 2008	44	$0	Not provided	Not provided - $0.00
871	COJ/ FDOT MS4	Not provided	COJ-011	COJ MS4 FLS000012	Emerson St. from Emerson St. Expwy to Spring Glenn Rd. - Detention pond facility.	Wet Detention Pond	Completed	Prior to 2008	44	$0	Not provided	Not provided - $0.00
872	COJ/ FDOT MS4	Not provided	COJ-012	COJ MS4 FLS000012	Bowden Rd. from US 1 to Salisbury Rd. - Detention pond facilities.	Wet Detention Pond	Completed	Prior to 2008	286	$0	Not provided	Not provided - $0.00
873	COJ/ FDOT MS4	Not provided	COJ-013	COJ MS4 FLS000012	Parental Home Rd. Phase I (Bowden Rd. from Salisbury Rd. to Dean Rd.) - Detention pond facility.	Wet Detention Pond	Completed	Prior to 2008	44	$0	Not provided	Not provided - $0.00
874	COJ/ FDOT MS4	Not provided	COJ-014	COJ MS4 FLS000012	Parental Home Rd. Phase II (Beach Blvd. to Ibach Rd.) - Detention pond facility.	Wet Detention Pond	Completed	Prior to 2008	22	$0	Not provided	Not provided - $0.00
875	COJ/ FDOT MS4	Not provided	COJ-015	COJ MS4 FLS000012	Lorretto Rd. from S.R. 13 to Old St. Augustine Rd. - Detention pond facilities.	Wet Detention Pond	Completed	Prior to 2008	110	$0	Not provided	Not provided - $0.00
876	COJ/ FDOT MS4	Not provided	COJ-016	COJ MS4 FLS000012	Belford Rd. - Pottsburg Creek to Touchton Rd. - Detention pond facilities.	Wet Detention Pond	Completed	Prior to 2008	22	$0	Not provided	Not provided - $0.00
877	COJ/ FDOT MS4	Not provided	COJ-017	COJ MS4 FLS000012	Royal Terrace Phases A+B+C+D+E+1+2+3+4 - Master pond facility.	Wet Detention Pond	Completed	Prior to 2008	902	$0	Not provided	Not provided - $0.00
878	COJ/ FDOT MS4	Not provided	COJ-018	COJ MS4 FLS000012	University Pointe regional pond facility.	Wet Detention Pond	Completed	Prior to 2008	330	$0	Not provided	Not provided - $0.00
879	COJ/ FDOT MS4	Not provided	COJ-019	COJ MS4 FLS000012	Cleveland Rd. Phase I-B wet detention pond.	Wet Detention Pond	Completed	Prior to 2008	330	$0	Not provided	Not provided - $0.00
880	COJ/ FDOT MS4	Not provided	COJ-020	COJ MS4 FLS000012	Hogan Creek.	Wet Detention Pond	Completed	Prior to 2008	110	$0	Not provided	Not provided - $0.00
888	COJ/ FDOT MS4	Not provided	COJ-021	COJ MS4 FLS000012	McCoy Creek Pond D.	Wet Detention Pond	Completed	Prior to 2008	66	$0	Not provided	Not provided - $0.00

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890	COJ/ FDOT MS4	Not provided	COJ-022	COJ MS4 FLS000012	Upper Deer Creek - RSF.	Wet Detention Pond	Completed	Prior to 2008	1,848	$0	Not provided	Not provided - $0.00
867	COJ/ FDOT MS4	Not provided	COJ-023	COJ MS4 FLS000012	Hugh Edwards Canal.	Wet Detention Pond	Completed	Prior to 2008	1,672	$0	Not provided	Not provided - $0.00
895	COJ/ FDOT MS4	Not provided	COJ-024	COJ MS4 FLS000012	Cedar River outfall improvements.	Wet Detention Pond	Completed	Prior to 2008	1,166	$0	Not provided	Not provided - $0.00
894	COJ/ FDOT MS4	Not provided	COJ-025	COJ MS4 FLS000012	Sandalwood Canal.	Wet Detention Pond	Completed	2008	1,936	$0	Not provided	Not provided - $0.00
893	COJ/ FDOT MS4	Not provided	COJ-026	COJ MS4 FLS000012	Moncrief Creek.	Wet Detention Pond	Completed	Prior to 2008	1,430	$0	Not provided	Not provided - $0.00
892	COJ/ FDOT MS4	Not provided	COJ-027	COJ MS4 FLS000012	Lincoln Villas East Side - Regional pond facility.	Wet Detention Pond	Completed	Prior to 2008	220	$0	Not provided	Not provided - $0.00
891	COJ/ FDOT MS4	Not provided	COJ-028	COJ MS4 FLS000012	Old Middleburg Rd. from Wilson Blvd. to 103rd St. - Regional pond facilities.	Wet Detention Pond	Completed	Prior to 2008	462	$0	Not provided	Not provided - $0.00
882	COJ/ FDOT MS4	Not provided	COJ-029	COJ MS4 FLS000012	Lakeshore Woodcrest drainage improvements.	Wet Detention Pond	Completed	Prior to 2008	968	$0	Not provided	Not provided - $0.00
889	COJ/ FDOT MS4	Not provided	COJ-030	COJ MS4 FLS000012	Townsend Rd. drainage improvements.	Wet Detention Pond	Completed	Prior to 2008	132	$0	Not provided	Not provided - $0.00
897	COJ/ FDOT MS4	Not provided	COJ-031	COJ MS4 FLS000012	Lenox Ave. (Highway to McDuff).	Wet Detention Pond	Completed	Prior to 2008	396	$0	Not provided	Not provided - $0.00
887	COJ/ FDOT MS4	Not provided	COJ-032	COJ MS4 FLS000012	Wesconnett Blvd. (Blanding to Blanding).	Wet Detention Pond	Completed	Prior to 2008	88	$0	Not provided	Not provided - $0.00
886	COJ/ FDOT MS4	Not provided	COJ-033	COJ MS4 FLS000012	Durkeeville West.	Wet Detention Pond	Completed	Prior to 2008	352	$0	Not provided	Not provided - $0.00
885	COJ/ FDOT MS4	Not provided	COJ-034	COJ MS4 FLS000012	Huffman Blvd.	Wet Detention Pond	Completed	Prior to 2008	44	$0	Not provided	Not provided - $0.00
884	COJ/ FDOT MS4	Not provided	COJ-035	COJ MS4 FLS000012	Spring Park Rd. (Emerson to University).	Wet Detention Pond	Completed	Prior to 2008	110	$0	Not provided	Not provided - $0.00
883	COJ/ FDOT MS4	Not provided	COJ-036	COJ MS4 FLS000012	Barnes Rd. (Kennerly to University).	Wet Detention Pond	Completed	Prior to 2008	1,584	$0	Not provided	Not provided - $0.00

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690	COJ/ FDOT MS4	Not provided	COJ-037	COJ MS4 FLS000012	Pritchard Rd. (Jones to I-295).	Wet Detention Pond	Completed	Prior to 2008	-	$0	Not provided	Not provided - $0.00
811	COJ/ FDOT MS4	Not provided	COJ-038	COJ MS4 FLS000012	Lenox (Lane to Normandy).	Wet Detention Pond	Completed	Prior to 2008	66	$0	Not provided	Not provided - $0.00
810	COJ/ FDOT MS4	Not provided	COJ-039	COJ MS4 FLS000012	Cahoon Rd., Phase I.	Wet Detention Pond	Completed	Prior to 2008	44	$0	Not provided	Not provided - $0.00
809	COJ/ FDOT MS4	Not provided	COJ-040	COJ MS4 FLS000012	Pulaski Rd. (Eastport Dr. to New Berlin Rd.).	Wet Detention Pond	Completed	Prior to 2008	44	$0	Not provided	Not provided - $0.00
808	COJ/ FDOT MS4	Not provided	COJ-041	COJ MS4 FLS000012	Lamoya roadway project.	Wet Detention Pond	Completed	Prior to 2008	-	$0	Not provided	Not provided - $0.00
807	COJ/ FDOT MS4	Not provided	COJ-042	COJ MS4 FLS000012	LSJR upstream of Trout River. In STAR 2024, this placeholder project was canceled as it was replaced by our 2023 WQCT.	Stormwater System Upgrade	Canceled	NA	NA	$0	NA	NA - $0.00
850	COJ/ FDOT MS4	Not provided	COJ-042a	COJ MS4 FLS000012	McCoy Creek Pond C (LSJR upstream of Trout River) - compensatory treatment #40-031-18070-4 #40-031-115242-1.	Wet Detention Pond	Completed	2014	385	$0	Not provided	Not provided - $0.00
819	COJ/ FDOT MS4	Not provided	COJ-042b	COJ MS4 FLS000012	McCoy Creek Burke Lime Pit (LSJR upstream of Trout River).	Wet Detention Pond	Canceled	NA	NA	$0	Not provided	Not provided - $0.00
933	COJ/ FDOT MS4	Not provided	COJ-042c	COJ MS4 FLS000012	Miruelo Circle drainage improvements (LSJR upstream of Trout River) - Changed from Bioswale to Erosion Control Only in 2011 #400-031-89582-2.	Stormwater System Upgrade	Completed	2014	NA	$0	Not provided	Not provided - $0.00
934	COJ/ FDOT MS4	Not provided	COJ-042d	COJ MS4 FLS000012	Paul Avenue outfall (LSJR upstream of Trout River).	Wet Detention Pond	Completed	2013	35	$0	Null	Null - $1,000,000.00
935	COJ/ FDOT MS4	Not provided	COJ-042e	COJ MS4 FLS000012	Smith-Broward Pond (LSJR upstream of Trout River) #40-031-114255-1.	Wet Detention Pond	Completed	2010	55	$0	Not provided	Not provided - $0.00
942	COJ/ FDOT MS4	Not provided	COJ-042f	COJ MS4 FLS000012	Pine Forest/ Larsen Acres (LSJR upstream of Trout River) #4-031-105859-1.	Wet Detention Pond	Completed	2012	14	$0	Not provided	Not provided - $0.00

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936	COJ/ FDOT MS4	Not provided	COJ-042g	COJ MS4 FLS000012	Upper Deer Creek Phase 3 (LSJR upstream of Trout River); Wet detention pond with MAPS #40-031-17913-5.	Wet Detention Pond	Completed	2011	211	$0	Not provided	Not provided - $0.00
930	COJ/ FDOT MS4	Not provided	COJ-042h	COJ MS4 FLS000012	Newtown Drainage main trunk line improvement (Myrtle & Beaver) (LSJR upstream of Trout River) - Changed from wet detention to flood control only.	Stormwater System Upgrade	Underway	TBD	NA	$0	Not provided	Not provided - $0.00
937	COJ/ FDOT MS4	Not provided	COJ-042i	COJ MS4 FLS000012	Air Liquide Pond Retrofit (LSJR upstream of Trout River) Compensatory Treatment #40-031-125423-1.	Wet Detention Pond	Completed	2016	37	$2,617,459	COJ	COJ - $2,896,013.00
851	COJ/ FDOT MS4	Not provided	COJ-042j	COJ MS4 FLS000012	Durkeeville West Pond Expansion (LSJR upstream Trout River).	Wet Detention Pond	Canceled	NA	NA	$0	Not provided	Not provided - $0.00
617	COJ/ FDOT MS4	Not provided	COJ-042k	COJ MS4 FLS000012	Lower Eastside Phase III Drainage Improvements (LSJR upstream Trout River).	Wet Detention Pond	Completed	2020	TBD	$4,782,100	COJ	COJ - $6,382,000.00
668	COJ/ FDOT MS4	NAS Jax	COJ-042l	COJ MS4 FLS000012	NAS Jax Reuse Partnering Project (LSJR upstream Trout River).	Stormwater Reuse	Completed	2013	TBD	$0	Not provided	Not provided - $0.00
667	COJ/ FDOT MS4	Not provided	COJ-042m	COJ MS4 FLS000012	Kennedy Center LID Project (LSJR upstream Trout River).	Stormwater Reuse	Completed	2013	TBD	$0	COJ	COJ - $49,925.00
666	COJ/ FDOT MS4	Not provided	COJ-042n	COJ MS4 FLS000012	Melba/Green Street (LSJR upstream Trout River) #40-031-115242-1.	Wet Detention Pond	Completed	2011	490	$0	COJ	COJ - $2,053,834.00
665	COJ/ FDOT MS4	Not provided	COJ-042o	COJ MS4 FLS000012	Hamilton Jersey drainage improvements (LSJR upstream Trout River) installed two 2nd generation baffle boxes and drainage collection with raised inlets and perforated pipe.	Baffle Boxes-Second Generation	Completed	2015	85	$0	COJ	COJ - $2,617,460.00
664	COJ/ FDOT MS4	Not provided	COJ-043	COJ MS4 FLS000012	Ortega River. In STAR 2024, this placeholder project was canceled as it was replaced by our 2023 WQCT.	Stormwater System Upgrade	Canceled	NA	NA	$0	Not provided	Not provided - $0.00
663	COJ/ FDOT MS4	Not provided	COJ-043a	COJ MS4 FLS000012	Hugh Edwards Road Drainage (Ortega River Basin) - Changed from Wet Detention 2010 to Erosion	Stormwater System Upgrade	Canceled	2011	NA	$0	Not provided	Not provided - $0.00

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					Control Only 2011 #40-031-96682-2.							
662	COJ/ FDOT MS4	Not provided	COJ-043b	COJ MS4 FLS000012	Venetia Terrace Drainage (Ortega River Basin) - Changed from Wet Detention to Flood Control Only #40-031-112908-1.	Stormwater System Upgrade	Canceled	2011	NA	$0	Not provided	Not provided - $0.00
661	COJ/ FDOT MS4	Not provided	COJ-043c	COJ MS4 FLS000012	Pinedale Area (Ortega River Basin).	Wet Detention Pond	Canceled	NA	NA	$0	Not provided	Not provided - $0.00
660	COJ/ FDOT MS4	Not provided	COJ-043d	COJ MS4 FLS000012	Country Creek area drainage Improvements (Ortega River Basin).	Stormwater System Upgrade	Completed	2015	-	$0	COJ	COJ - $872,773.00
659	COJ/ FDOT MS4	SJRWMD	COJ-043e	COJ MS4 FLS000012	Crystal Springs area drainage (Ortega River).	Wet Detention Pond	Completed	2017	188	$3,859,944	STAG; SJRWMD; DEP	STAG - $944,300.00; SJRWMD - $986,040.00; DEP - $0.00
658	COJ/ FDOT MS4	SJRWMD	COJ-043f	COJ MS4 FLS000012	Noroad/Lambing drainage (Ortega).	Wet Detention Pond	Completed	2017	36	$1,122,660	SJRWMD; DEP	SJRWMD - $374,220.00; DEP - $0.00
643	COJ/ FDOT MS4	SJRWMD; Not provided	COJ-043g	COJ MS4 FLS000012	Old Plank Road outfall. Former pasture area converted to a wetland system.	Constructed Wetland Treatment	Completed	2020	26	$2,275,498	SJRWMD; COJ	SJRWMD - $4,953,248.00; COJ - $0.00
656	COJ/ FDOT MS4	Not provided	COJ-044	COJ MS4 FLS000012	Arlington River. In STAR 2024, this placeholder project was canceled as it was replaced by our 2023 WQCT.	Stormwater System Upgrade	Canceled	NA	NA	$0	NA	NA - $0.00
669	COJ/ FDOT MS4	Not provided	COJ-044a	COJ MS4 FLS000012	Woodland Acres/Oakwood Villa Area Drainage Phase I (Arlington River).	Wet Detention Pond	Completed	2010	18	$0	COJ	COJ - $0.00
654	COJ/ FDOT MS4	Not provided	COJ-044b	COJ MS4 FLS000012	Valens Drive LID project (Arlington River).	Wet Detention Pond	Completed	2017	36	$0	COJ	COJ - $1,109,821.00
653	COJ/ FDOT MS4	Not provided	COJ-044c	COJ MS4 FLS000012	Wurn Park LID project.	LID- Other	Completed	2005	TBD	$0	COJ	COJ - $0.00

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652	COJ/ FDOT MS4	Not provided	COJ-045	COJ MS4 FLS000012	LSJR downstream of Trout River. In STAR 2024, this placeholder project was canceled as it was replaced by our 2023 WQCT.	Stormwater System Upgrade	Canceled	NA	NA	$0	NA	NA - $0.00
651	COJ/ FDOT MS4	Not provided	COJ-046	COJ MS4 FLS000012	Intracoastal Waterway. In STAR 2024, this placeholder project was canceled as it was replaced by our 2023 WQCT.	Stormwater System Upgrade	Canceled	NA	NA	$0	NA	NA - $0.00
650	COJ/ FDOT MS4	Not provided	COJ-047	COJ MS4 FLS000012	Julington Creek. In STAR 2024, this placeholder project was canceled as it was replaced by our 2023 WQCT.	Stormwater System Upgrade	Canceled	NA	NA	$0	NA	NA - $0.00
649	COJ/ FDOT MS4	Not provided	COJ-048	COJ MS4 FLS000012	Trout River. In STAR 2024, this placeholder project was canceled as it was replaced by our 2023 WQCT.	Stormwater System Upgrade	Canceled	NA	NA	$0	NA	NA - $0.00
648	COJ/ FDOT MS4	Not provided	COJ-048a	COJ MS4 FLS000012	Messer Area drainage (Trout River).	Wet Detention Pond	Canceled	NA	NA	$0	Not provided	Not provided - $0.00
938	COJ/ FDOT MS4	Not provided	COJ-048b	COJ MS4 FLS000012	Bunche Drive Pond (Trout River).	Wet Detention Pond	Completed	2011	140	$0	COJ	COJ - $936,602.00
939	COJ/ FDOT MS4	Not provided	COJ-048c	COJ MS4 FLS000012	Riverview Drainage Improvements Phase I (Trout River) #40-031-97111-1.	Wet Detention Pond	Completed	2013	103	$0	Not provided	Not provided - $0.00
940	COJ/ FDOT MS4	Not provided	COJ-048d	COJ MS4 FLS000012	Leonid Road (Lower Trout River).	Wet Detention Pond	Completed	2016	42	$80,000	COJ	COJ - $80,000.00
943	COJ/ FDOT MS4	Not provided	COJ-049	COJ MS4 FLS000012	Broward River. In STAR 2024, this placeholder project was canceled as it was replaced by our 2023 WQCT.	Stormwater System Upgrade	Canceled	NA	NA	$0	NA	NA - $0.00
951	COJ/ FDOT MS4	Not provided	COJ-050	COJ MS4 FLS000012	Dunn Creek. In STAR 2024, this placeholder project was canceled as it was replaced by our 2023 WQCT.	Stormwater System Upgrade	Canceled	NA	NA	$0	NA	NA - $0.00
950	COJ/ FDOT MS4	Not provided	COJ-051	COJ MS4 FLS000012	Public education activities.	Education Efforts	Ongoing	NA	28,921	$0	Not provided	Not provided - $0.00
949	COJ/ FDOT MS4	Not provided	COJ-052	COJ MS4 FLS000012	Septic tank phase-out projects.	OSTDS Phase Out	Canceled	2023	NA	$0	Not provided	Not provided - $0.00

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941	COJ/ FDOT MS4	Not provided	COJ-052a	COJ MS4 FLS000012	Oakwood Villas.	OSTDS Phase Out	Completed	2012	2,739	$0	Not provided	Not provided - $0.00
952	COJ/ FDOT MS4	Not provided	COJ-052b	COJ MS4 FLS000012	Lake Forest.	OSTDS Phase Out	Completed	2012	1,667	$0	Not provided	Not provided - $0.00
946	COJ/ FDOT MS4	Not provided	COJ-052c	COJ MS4 FLS000012	Scott Mill.	OSTDS Phase Out	Completed	2012	2,565	$0	Not provided	Not provided - $0.00
945	COJ/ FDOT MS4	Not provided	COJ-052d	COJ MS4 FLS000012	Murray Hill B.	OSTDS Phase Out	Completed	2012	10,781	$0	Not provided	Not provided - $0.00
947	COJ/ FDOT MS4	Not provided	COJ-052e	COJ MS4 FLS000012	Pernecia.	OSTDS Phase Out	Completed	2012	2,779	$0	Not provided	Not provided - $0.00
944	COJ/ FDOT MS4	Not provided	COJ-052f	COJ MS4 FLS000012	Glynlea.	OSTDS Phase Out	Completed	2012	2,853	$0	Not provided	Not provided - $0.00
948	COJ/ FDOT MS4	Seminole Electric	COJ-053	COJ MS4 FLS000012	Atmospheric deposition load reduction -Seminole Electric SCR upgrade.	Industrial Facility Upgrades	Completed	2010	15,237	$176,000,000	Not provided	Not provided - $0.00
932	COJ/ FDOT MS4	Not provided	COJ-054	COJ MS4 FLS000012	FDOT urban office reconstruction.	Dry Detention Pond	Completed	Prior to 2008	20	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
806	COJ/ FDOT MS4	Not provided	COJ-055	COJ MS4 FLS000012	FDOT Fort George Inlet Bridge.	Wet Detention Pond	Completed	Prior to 2008	13	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
837	COJ/ FDOT MS4	Not provided	COJ-056	COJ MS4 FLS000012	FDOT widening of Riverside Area.	Wet Detention Pond	Completed	Prior to 2008	11	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
838	COJ/ FDOT MS4	Not provided	COJ-057	COJ MS4 FLS000012	FDOT widening of Merrill Rd. between Wompi Dr. and Milcoe Rd.	Wet Detention Pond	Completed	Prior to 2008	46	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00

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839	COJ/ FDOT MS4	Not provided	COJ-058	COJ MS4 FLS000012	FDOT widening of Merrill Rd. between 9A and Wompi Dr.	Wet Detention Pond	Completed	Prior to 2008	55	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
840	COJ/ FDOT MS4	Not provided	COJ-059	COJ MS4 FLS000012	FDOT widening of SR 13 to 6 Lane Divided Highway.	Wet Detention Pond	Completed	Prior to 2008	139	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
841	COJ/ FDOT MS4	Not provided	COJ-060	COJ MS4 FLS000012	FDOT Beach Blvd. widening from Intracoastal Waterway to east of Penman.	Wet Detention Pond	Completed	Prior to 2008	20	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
842	COJ/ FDOT MS4	Not provided	COJ-061	COJ MS4 FLS000012	FDOT I-295 and SR 21 (Blanding) interchange upgrade.	Wet Detention Pond	Completed	Prior to 2008	33	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
843	COJ/ FDOT MS4	Not provided	COJ-062	COJ MS4 FLS000012	FDOT I-295 and SR 17 interchange expansion.	Wet Detention Pond	Completed	Prior to 2008	77	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
844	COJ/ FDOT MS4	Not provided	COJ-063	COJ MS4 FLS000012	FDOT J. Turner Butler Blvd. (JTB)/Belfort Rd. interchange.	Wet Detention Pond	Completed	Prior to 2008	123	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
845	COJ/ FDOT MS4	Not provided	COJ-064	COJ MS4 FLS000012	FDOT Pine Avenue sidewalk.	Dry Detention Pond	Completed	Prior to 2008	20	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00

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846	COJ/ FDOT MS4	Not provided	COJ-065	COJ MS4 FLS000012	FDOT 9A from Baymeadows Rd. to I-95.	Wet Detention Pond	Completed	Prior to 2008	440	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
847	COJ/ FDOT MS4	Not provided	COJ-066	COJ MS4 FLS000012	FDOT widening of I-95 from St. Johns County line to 9A/I-295.	Wet Detention Pond	Completed	Prior to 2008	141	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
848	COJ/ FDOT MS4	Not provided	COJ-067	COJ MS4 FLS000012	FDOT widening of I-95 from I-295 to south of JTB.	Wet Detention Pond	Completed	Prior to 2008	352	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
849	COJ/ FDOT MS4	Not provided	COJ-068	COJ MS4 FLS000012	FDOT widening of SR 10 (Atlantic Blvd. from St. Johns Bluff to San Pablo).	Wet Detention Pond	Completed	Prior to 2008	873	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
857	COJ/ FDOT MS4	Not provided	COJ-069	COJ MS4 FLS000012	FDOT widening of Southside Blvd.	Dry Detention Pond	Completed	Prior to 2008	117	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
859	COJ/ FDOT MS4	Not provided	COJ-070	COJ MS4 FLS000012	FDOT new JTB/9A interchange.	Dry Detention Pond	Completed	Prior to 2008	972	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
836	COJ/ FDOT MS4	Not provided	COJ-071	COJ MS4 FLS000012	FDOT Southside (SR 115) Frontage Rd.	Wet Detention Pond	Completed	Prior to 2008	7	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00

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864	COJ/ FDOT MS4	Not provided	COJ-072	COJ MS4 FLS000012	FDOT I-95 from I-295 to Nassau County line south project.	Wet Detention Pond	Completed	Prior to 2008	231	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
863	COJ/ FDOT MS4	Not provided	COJ-073	COJ MS4 FLS000012	FDOT I-95 south of Clarke Rd. to I-295.	Wet Detention Pond	Completed	Prior to 2008	75	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
862	COJ/ FDOT MS4	Not provided	COJ-074	COJ MS4 FLS000012	FDOT 9A south project.	Wet Detention Pond	Completed	Prior to 2008	141	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
861	COJ/ FDOT MS4	Not provided	COJ-075	COJ MS4 FLS000012	FDOT 9A from south of Atlantic to Beach Blvd.	Wet Detention Pond	Completed	Prior to 2008	99	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
860	COJ/ FDOT MS4	Not provided	COJ-076	COJ MS4 FLS000012	FDOT I-295/I-95/9A interchange.	Wet Detention Pond	Completed	Prior to 2008	440	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
912	COJ/ FDOT MS4	Not provided	COJ-077	COJ MS4 FLS000012	FDOT Branan Field Chafee roadway project.	Wet Detention Pond	Completed	Prior to 2008	253	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
858	COJ/ FDOT MS4	Not provided	COJ-078	COJ MS4 FLS000012	FDOT Wonderwood Connector Segment 1 from Girvin to Sandcastle.	Wet Detention Pond	Completed	Prior to 2008	42	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00

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931	COJ/ FDOT MS4	Not provided	COJ-079	COJ MS4 FLS000012	FDOT JIA south access connector project.	Dry Detention Pond	Completed	Prior to 2008	180	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
856	COJ/ FDOT MS4	Not provided	COJ-080	COJ MS4 FLS000012	FDOT I-95 widening from Lem Turner to I-295 .	Wet Detention Pond	Completed	Prior to 2008	92	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
855	COJ/ FDOT MS4	Not provided	COJ-081	COJ MS4 FLS000012	FDOT 4 Laning of SR 13.	Wet Detention Pond	Completed	Prior to 2008	84	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
854	COJ/ FDOT MS4	Not provided	COJ-082	COJ MS4 FLS000012	FDOT SR 21 widening from south of Cedar River to east of Cassat.	Wet Detention Pond	Completed	Prior to 2008	15	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
853	COJ/ FDOT MS4	Not provided	COJ-083	COJ MS4 FLS000012	FDOT Arlington Expressway project.	Wet Detention Pond	Completed	Prior to 2008	22	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
852	COJ/ FDOT MS4	Not provided	COJ-084	COJ MS4 FLS000012	FDOT Merrill Rd/Southside Blvd. interchange project.	Wet Detention Pond	Completed	Prior to 2008	11	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
834	COJ/ FDOT MS4	Not provided	COJ-085	COJ MS4 FLS000012	FDOT Baymeadows from east of US 1 to SR 13.	Wet Detention Pond	Completed	Prior to 2008	20	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00

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670	COJ/ FDOT MS4	Not provided	COJ-086	COJ MS4 FLS000012	FDOT SR 115/ 8th St. project.	Wet Detention Pond	Completed	Prior to 2008	24	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
683	COJ/ FDOT MS4	Not provided	COJ-087	COJ MS4 FLS000012	FDOT SR 115/ 8th St project.	Wet Detention Pond	Completed	Prior to 2008	2	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
696	COJ/ FDOT MS4	Not provided	COJ-088	COJ MS4 FLS000012	FDOT JTB from I-95 to Gate Parkway.	Wet Detention Pond	Completed	Prior to 2008	46	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
681	COJ/ FDOT MS4	Not provided	COJ-089	COJ MS4 FLS000012	FDOT I-295 from west of Duval to Biscayne Blvd.	Wet Detention Pond	Completed	Prior to 2008	15	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
680	COJ/ FDOT MS4	Not provided	COJ-090	COJ MS4 FLS000012	FDOT Beaver Street (US 90) from Stockton to Tyler.	Wet Detention Pond	Completed	Prior to 2008	7	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
679	COJ/ FDOT MS4	Not provided	COJ-091	COJ MS4 FLS000012	FDOT 9A from Baymeadows to JTB.	Wet Detention Pond	Completed	Prior to 2008	156	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
678	COJ/ FDOT MS4	Not provided	COJ-092	COJ MS4 FLS000012	FDOT JTB/ A1A interchange.	Wet Detention Pond	Completed	Prior to 2008	7	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00

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677	COJ/ FDOT MS4	Not provided	COJ-093	COJ MS4 FLS000012	FDOT Southside Blvd/ I-95 connector.	Dry Detention Pond	Completed	Prior to 2008	218	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
676	COJ/ FDOT MS4	Not provided	COJ-094	COJ MS4 FLS000012	FDOT Beach Blvd. from west of Florida Community College at Jacksonville (FCCJ) to east of San Pablo.	Wet Detention Pond	Completed	2008	132	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
675	COJ/ FDOT MS4	Not provided	COJ-095	COJ MS4 FLS000012	FDOT widening of SR 13.	Dry Detention Pond	Completed	Prior to 2008	180	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
674	COJ/ FDOT MS4	Not provided	COJ-096	COJ MS4 FLS000012	FDOT Branan Field Chafee roadway project (Argyle Forest to 103rd).	Wet Detention Pond	Completed	Prior to 2008	88	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
673	COJ/ FDOT MS4	Not provided	COJ-097	COJ MS4 FLS000012	FDOT Branan Field Chafee roadway project (103rd to I-10).	Wet Detention Pond	Completed	Prior to 2008	121	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
672	COJ/ FDOT MS4	Not provided	COJ-098	COJ MS4 FLS000012	FDOT Southside (SR 115) and Beach Blvd (SR 202) interchange and road widening.	Wet Detention Pond	Completed	Prior to 2008	26	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
630	COJ/ FDOT MS4	Not provided	COJ-099	COJ MS4 FLS000012	FDOT Wonderwood Connector Segment 2.	Wet Detention Pond	Completed	Prior to 2008	46	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00

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684	COJ/ FDOT MS4	Not provided	COJ-100	COJ MS4 FLS000012	FDOT JTB/ Kernan project.	Wet Detention Pond	Completed	Prior to 2008	53	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
644	COJ/ FDOT MS4	Not provided	COJ-101	COJ MS4 FLS000012	FDOT I-95 from JTB to Emerson.	Dry Detention Pond	Completed	Prior to 2008	301	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
614	COJ/ FDOT MS4	Not provided	COJ-102	COJ MS4 FLS000012	FDOT Heckscher Dr/ 9A interchange-1dry retention system (DRS).	Dry Detention Pond	Completed	Prior to 2008	196	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
613	COJ/ FDOT MS4	Not provided	COJ-103	COJ MS4 FLS000012	FDOT Heckscher Dr/9A interchange-2 wet detention system (WDS).	Wet Detention Pond	Completed	Prior to 2008	55	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
612	COJ/ FDOT MS4	Not provided	COJ-104	COJ MS4 FLS000012	FDOT Wonderwood Segment 3.	Wet Detention Pond	Completed	Prior to 2008	55	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
611	COJ/ FDOT MS4	Not provided	COJ-105	COJ MS4 FLS000012	FDOT Collins Rd. collector distributor.	Wet Detention Pond	Completed	Prior to 2008	112	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
610	COJ/ FDOT MS4	Not provided	COJ-106	COJ MS4 FLS000012	FDOT JTB/ I-95 Ramp (40-031-18233-6).	Wet Detention Pond	Completed	Prior to 2008	44	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00

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609	COJ/ FDOT MS4	Not provided	COJ-107	COJ MS4 FLS000012	FDOT SR 5/ US 1 (209516-3-52-01).	Wet Detention Pond	Completed	Prior to 2008	22	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
608	COJ/ FDOT MS4	Not provided	COJ-108	COJ MS4 FLS000012	FDOT widening of SR 207.	Wet Detention Pond	Completed	Prior to 2008	15	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
607	COJ/ FDOT MS4	Not provided	COJ-109	COJ MS4 FLS000012	LOC septic tank phase out projects.	Wet Detention Pond	Completed	Prior to 2008	143	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
606	COJ/ FDOT MS4	Not provided	COJ-110	COJ MS4 FLS000012	FDOT widening of SR 207 from SR 15 (US 17) to CR 207.	Wet Detention Pond	Completed	Prior to 2008	726	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
605	COJ/ FDOT MS4	Not provided	COJ-111	COJ MS4 FLS000012	FDOT widening of I-95 from Flagler County line to SR 16.	Wet Detention Pond	Completed	Prior to 2008	561	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
604	COJ/ FDOT MS4	Not provided	COJ-112	COJ MS4 FLS000012	FDOT I-95 rest area reconstruction.	Wet Detention Pond	Completed	Prior to 2008	37	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
590	COJ/ FDOT MS4	Not provided	COJ-113	COJ MS4 FLS000012	FDOT widening of I-95 from World Golf Village to Duval County line.	Wet Detention Pond	Completed	Prior to 2008	521	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00

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602	COJ/ FDOT MS4	Not provided	COJ-114	COJ MS4 FLS000012	FDOT widening of SR 16.	Wet Detention Pond	Completed	Prior to 2008	48	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
615	COJ/ FDOT MS4	Not provided	COJ-115	COJ MS4 FLS000012	FDOT SR 207 from I-95 to SR 312.	Wet Detention Pond	Completed	Prior to 2008	73	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
600	COJ/ FDOT MS4	Not provided	COJ-116	COJ MS4 FLS000012	FDOT SR 207 from SR 312 to US 1.	Wet Detention Pond	Completed	Prior to 2008	376	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
599	COJ/ FDOT MS4	Not provided	COJ-117	COJ MS4 FLS000012	FDOT stormwater education efforts in St. Johns County.	Education Efforts	Ongoing	NA	629	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
598	COJ/ FDOT MS4	Not provided	COJ-118	COJ MS4 FLS000012	FDOT education efforts in COJ.	Education Efforts	Ongoing	NA	3,214	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
597	COJ/ FDOT MS4	Seminole Electric	COJ-119	COJ MS4 FLS000012	Atmospheric deposition load reduction - Seminole Electric SCR upgrade.	Industrial Facility Upgrades	Completed	2010	1,692	$176,000,000	Not provided	Not provided - $0.00
596	COJ/ FDOT MS4	Not provided	COJ-120	COJ MS4 FLS000012	FDOT future projects and/or trade (fertilizer cessation).	Fertilizer Cessation	Completed	2008	40,663	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
595	COJ/ FDOT MS4	Not provided	COJ-121	COJ MS4 FLS000012	Street sweeping.	Street Sweeping	Ongoing	NA	5,553	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00

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594	COJ/ FDOT MS4	Not provided	COJ-122	COJ MS4 FLS000012	Future projects and/or trades.	Stormwater System Upgrade	Planned	2023	181,331	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
593	COJ/ FDOT MS4	Not provided	COJ-122a	COJ MS4 FLS000012	EPB Rule 3 - Lift Station Maintenance and SSO Reduction (Submitted as COJ-55 and renumbered to first available).	WWTF Upgrade	Completed	2012	5,355	$0	Not provided	Not provided - $0.00
592	COJ/ FDOT MS4	FDOT	COJ-122b	COJ MS4 FLS000012	FDOT water quality credit agreement.	Credit Trade	Completed	2015	23,254	$0	NA	NA - $0.00
628	COJ/ FDOT MS4	JEA	COJ-122c	COJ MS4 FLS000012	JEA water quality credit agreement updated December 21, 2023. Agreement expires December 31, 2024.	Credit Trade	Completed	2015	164,663	$0	NA	NA - $0.00
601	COJ/ FDOT MS4	Not provided	COJ-123	COJ MS4 FLS000012	LOC septic tank phase out projects. A portion of this calculation is estimated and may change in the future.	OSTDS Phase Out	Completed	2017	3,652	$0	Not provided	Not provided - $0.00
603	COJ/ FDOT MS4	Not provided	COJ-124	COJ MS4 FLS000012	Better Jacksonville Plan septic tank phase out projects. Actual reductions calculated by neighborhood in COJ-052a through COJ-052f.	OSTDS Phase Out	Canceled	NA	6,459	$0	Not provided	Not provided - $0.00
641	COJ/ FDOT MS4	DEP	COJ-125	COJ MS4 FLS000012	Lasalle Pump Station.	Stormwater System Upgrade	Underway	2026	TBD	$40,000,000	COJ; DEP	COJ - $20,000,000.00; DEP - $20,000,000.00
640	COJ/ FDOT MS4	NA	COJ-126	COJ MS4 FLS000012	FDOT Overland Bridge replacement.	Wet Detention Pond	Completed	2018	92	$164,940,000	FDOT State Legislature	FDOT State Legislature - $0.00
639	COJ/ FDOT MS4	NA	COJ-127	COJ MS4 FLS000012	FDOT SR 23 First Coast Expressway (SR 21 to North of Argyle Forest Blvd. and North of Argyle to I-10).	Wet Detention Pond	Completed	2018	888	$85,300,000	FDOT State Legislature	FDOT State Legislature - $0.00

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638	COJ/ FDOT MS4	NA	COJ-128	COJ MS4 FLS000012	FDOT I-295 widening to Commonwealth.	Wet Detention Pond	Completed	2017	63	$0	FDOT State Legislature	FDOT State Legislature - $0.00
637	COJ/ FDOT MS4	NA	COJ-129	COJ MS4 FLS000012	FDOT I-95 and JTB Interchange.	Wet Detention Pond	Completed	2017	104	$66,990,000	FDOT State Legislature	FDOT State Legislature - $66,990,000.00
636	COJ/ FDOT MS4	NA	COJ-130	COJ MS4 FLS000012	FDOT I-295 managed lane.	Wet Detention Pond	Completed	2018	205	$89,780,000	FDOT State Legislature	FDOT State Legislature - $89,780,000.00
635	COJ/ FDOT MS4	NA	COJ-131	COJ MS4 FLS000012	FDOT SR 243 Mainline International Airport Blvd.	Wet Detention Pond	Completed	2017	57	$0	FDOT State Legislature	FDOT State Legislature - $0.00
634	COJ/ FDOT MS4	NA	COJ-132	COJ MS4 FLS000012	FDOT CR 210 & US 1 improvement.	Wet Detention Pond	Completed	2017	47	$0	FDOT State Legislature	FDOT State Legislature - $0.00
633	COJ/ FDOT MS4	NA	COJ-133	COJ MS4 FLS000012	FDOT 9A Express Lane.	Wet Detention Pond	Underway	2024	339	$141,720,000	FDOT State Legislature	FDOT State Legislature - $141,720,000.00
632	COJ/ FDOT MS4	NA	COJ-134	COJ MS4 FLS000012	FDOT North Interchange (I-295 & I-95).	Wet Detention Pond	Underway	2024	301	$178,420,000	FDOT State Legislature	FDOT State Legislature - $0.00
631	COJ/ FDOT MS4	NA	COJ-135	COJ MS4 FLS000012	FDOT I-295 and Wilson.	Wet Detention Pond	Completed	2017	37	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
616	COJ/ FDOT MS4	NA	COJ-136	COJ MS4 FLS000012	FDOT 9B & US 1 Interchange.	Wet Detention Pond	Completed	2017	363	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00

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629	COJ/ FDOT MS4	NA	COJ-137	COJ MS4 FLS000012	FDOT Marietta Interchange.	Wet Detention Pond	Completed	2017	51	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
642	COJ/ FDOT MS4	NA	COJ-138	COJ MS4 FLS000012	FDOT SR 243 add lanes reconstruction.	Wet Detention Pond	Underway	2024	47	$17,420,000	FDOT State Legislature	FDOT State Legislature - $17,420,000.00
627	COJ/ FDOT MS4	NA	COJ-139	COJ MS4 FLS000012	FDOT I-10 drainage improvement at Cassat.	Wet Detention Pond	Completed	2017	5	$6,260,000	FDOT State Legislature	FDOT State Legislature - $6,260,000.00
626	COJ/ FDOT MS4	NA	COJ-140	COJ MS4 FLS000012	FDOT I-10/US 301 Interchange.	Wet Detention Pond	Underway	2024	120	$66,830,000	FDOT State Legislature	FDOT State Legislature - $66,830,000.00
625	COJ/ FDOT MS4	NA	COJ-141	COJ MS4 FLS000012	FDOT Baldwin Bypass.	Wet Detention Pond	Canceled	NA	NA	$0	NA	NA - $0.00
624	COJ/ FDOT MS4	NA	COJ-142	COJ MS4 FLS000012	FDOT SR 9B.	Wet Detention Pond	Completed	2017	215	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
623	COJ/ FDOT MS4	NA	COJ-143	COJ MS4 FLS000012	FDOT SR 9B from CR 2209 to C/L at I-95.	Wet Detention Pond	Completed	2018	150	$78,980,000	FDOT State Legislature	FDOT State Legislature - $78,980,000.00
622	COJ/ FDOT MS4	NA	COJ-144	COJ MS4 FLS000012	FDOT SR 15 add Lanes San Mateo.	Wet Detention Pond	Completed	2017	115	$16,500,000	FDOT State Legislature	FDOT State Legislature - $16,500,000.00
621	COJ/ FDOT MS4	NA	COJ-145	COJ MS4 FLS000012	FDOT I-10 improvement at US 90 and SR 23.	Wet Detention Pond	Completed	2017	141	$46,680,000	FDOT State Legislature	FDOT State Legislature - $46,680,000.00

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620	COJ/ FDOT MS4	NA	COJ-146	COJ MS4 FLS000012	FDOT Prichard / I-295 improvement.	Wet Detention Pond	Completed	2017	54	$0	FDOT; State Legislature	FDOT - $0.00; State Legislature - $0.00
4409	COJ/ FDOT MS4	FDOT	COJ-147	COJ MS4 FLS000012	FDOT water quality credit agreement with COJ-122b.	Credit Trade	Completed	2015	(23,254)	$0	NA	NA - $0.00
4410	COJ/ FDOT MS4	JEA	COJ-148	COJ MS4 FLS000012	COJ Biltmore septic tank phase out project.	OSTDS Phase Out	Completed	2022	TBD	$16,000,000	COJ; JEA	COJ - $0.00; JEA - $0.00
4411	COJ/ FDOT MS4	JEA	COJ-149	COJ MS4 FLS000012	Beverly Hills West septic tank phase out project.	OSTDS Phase Out	Completed	2023	TBD	$18,000,000	COJ; JEA	COJ - $0.00; JEA - $0.00
4412	COJ/ FDOT MS4	JEA	COJ-150	COJ MS4 FLS000012	Beverly Hills East septic tank phase out project.	OSTDS Phase Out	Underway	2024	TBD	$11,000,000	COJ; JEA	COJ - $0.00; JEA - $0.00
4413	COJ/ FDOT MS4	JEA	COJ-151	COJ MS4 FLS000012	Christobel septic tank phase out project.	OSTDS Phase Out	Underway	TBD	TBD	$0	COJ; JEA	COJ - $0.00; JEA - $0.00
4414	COJ/ FDOT MS4	JEA	COJ-152	COJ MS4 FLS000012	COJ ongoing onsite septic systems connected to regional sewer by individual homeowners outside of city-planned projects (currently at 247).	OSTDS Phase Out	Underway	TBD	TBD	$0	Not provided	Not provided - $0.00
4415	COJ/ FDOT MS4	FDOT	COJ-153	COJ MS4 FLS000012	COJ Microbe Lift project.	Stormwater - Biological/ Bacteria Treatment	Completed	2021	NA	$0	Not provided	Not provided - $0.00
4416	COJ/ FDOT MS4	Groundworks Jacksonville; NFWF; SJRWMD	COJ-154	COJ MS4 FLS000012	COJ McCoys Creek Channel Improvements/Restoration.	Hydrologic Restoration	Underway	2024	NA	$23,515,254	SJRWMD; Groundworks Jacksonville; NFWF; COJ	SJRWMD - $1,358,916.00; Groundworks Jacksonville - $0.00; NFWF - $4,300,000.00; COJ - $17,856,338.00

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5333	COJ/ FDOT MS4	Not provided; USACOE	COJ-155	COJ MS4 FLS000012	Big Fishweir Creek - ecosystem restoration.	Exotic Vegetation Removal	Completed	2023	NA	$8,231,000	COJ; USACOE	COJ - $2,880,850.00; USACOE - $5,350,150.00
5334	COJ/ FDOT MS4	Not provided	COJ-156	COJ MS4 FLS000012	Burke Street Pond IRA & pond completion.	Wet Detention Pond	Completed	2017	37	$0	COJ	COJ - $8,365,731.00
5335	COJ/ FDOT MS4	Not provided	COJ-157	COJ MS4 FLS000012	University Point Pond.	Exotic Vegetation Removal	Canceled	NA	NA	$0	Not provided	Not provided - $0.00
7330	COJ/ FDOT MS4	JEA	COJ-158	COJ MS4 FLS000012	Riverview septic system phase out project.	OSTDS Phase Out	Planned	2032	TBD	$0	COJ; JEA	COJ - $0.00; JEA - $0.00
7395	COJ/ FDOT MS4	NA	COJ-159	COJ MS4 FLS000012	San Pablo Rd., from Atlantic Blvd. to Beach Blvd., widened from 2 lanes with no stormwater treatment to 3 lanes with treatment.	Stormwater System Upgrade	Underway	2025	TBD	$0	COJ	COJ - $0.00
7397	COJ/ FDOT MS4	NA	COJ-160	COJ MS4 FLS000012	Old Middleburg Road - Phase I stormwater upgrade.	Stormwater System Upgrade	Underway	2025	TBD	$0	COJ	COJ - $0.00
820	FDACS	Agricultural Producers	AG-01	BMP Implementation and Verification	Enrollment and verification of BMPs by agricultural producers. Acres treated based on FDACS June 2024 Enrollment and FSAID XI. Reductions based on FDACS December 2022 Enrollment and SJRWMD spreadsheet model which will be revised following the SJRWMD 2028 model update.	Agricultural BMPs	Ongoing	NA	220,915	$0	FDACS	FDACS - $0.00
832	FDACS	Agricultural Producers	AG-02	Agriculture	Formerly called "Deep Creek West (Yarborough) Regional Stormwater Treatment (RST)" in BMAP. Canceled in 2018; project now included in St. Johns County (SJC-29).	Regional Stormwater Treatment	Canceled	NA	NA	$0	NA	NA - $0.00
831	FDACS	Agricultural Producers	AG-03	Agriculture	Edgefield RST (also called Dog Branch RST), located in Putnam County. Canceled in 2018; project transferred to Putnam County (PUT-04).	Regional Stormwater Treatment	Canceled	NA	NA	$0	NA	NA - $0.00

ProjID	Lead Entity	Partners	Project Number	Project Name	Project Description	Project Type	Project Status	Estimated Completion Date	TN Reduction (lbs/yr)	Cost Estimate	Funding Source	Funding Amount
830	FDACS	Agricultural Producers	AG-04	Agriculture	New RST.	Regional Stormwater Treatment	Canceled	NA	NA	$0	NA	NA - $0.00
829	FDACS	Agricultural Producers	AG-05	Agriculture	New RST.	Regional Stormwater Treatment	Canceled	NA	NA	$0	NA	NA - $0.00
4406	FDACS	Agricultural Producers	AG-06	BMP Implementation and Verification	Enrollment and verification of BMPs by agricultural producers. Acres treated based on FDACS June 2024 Enrollment and FSAID XI. Reductions based on FDACS December 2022 Enrollment and SJRWMD spreadsheet model which will be revised following the SJRWMD 2028 model update.	Agricultural BMPs	Ongoing	NA	19,872	$0	FDACS	FDACS - $0.00
4407	FDACS	Agricultural Producers	AG-07	Agriculture	Cost Share BMPs in the freshwater section (Tri-County Agricultural Area Water Management Partnership) as of Dec 2022.	Agricultural BMPs	Ongoing	NA	123,456	$1,083,550	DEP; FDACS; Local Growers	DEP - $0.00; FDACS - $0.00; Local Growers - $0.00
5336	FDACS	SJRWMD	AG-08	Agriculture	Deep Creek HWTT is a combination of wetland and chemical treatment technologies designed mainly to remove phosphorus at the subbasin and parcel scales.	Hybrid wetland treatment technology (HWTT)	Completed	2016	14,702	$4,346,040	FDACS	FDACS - $0.00
773	Georgia-Pacific	NA	GP-01	Georgia-Pacific	Complete process improvements.	WWTF Nutrient Reduction	Completed	Prior to 2008	202,941	$0	Georgia-Pacific	Georgia-Pacific - $0.00
764	JEA Aggregate	JEA	JEA-01	JEA Julington Creek FL0043591	Complete process improvements.	WWTF Nutrient Reduction	Completed	2008	13,000	$5,000,000	JEA	JEA - $5,000,000.00
777	JEA Aggregate	JEA	JEA-02	JEA Arlington East FL0026441	Complete process improvements.	WWTF Nutrient Reduction	Completed	2008	204,000	$17,500,000	JEA	JEA - $17,500,000.00
762	JEA Aggregate	JEA	JEA-03	JEA District II FL0026450	Complete process improvements.	WWTF Nutrient Reduction	Completed	2008	308,000	$12,000,000	JEA	JEA - $12,000,000.00

ProjID	Lead Entity	Partners	Project Number	Project Name	Project Description	Project Type	Project Status	Estimated Completion Date	TN Reduction (lbs/yr)	Cost Estimate	Funding Source	Funding Amount
761	JEA Aggregate	JEA	JEA-04	JEA Southwest FL0026468	Complete process improvements.	WWTF Nutrient Reduction	Completed	2008	101,000	$16,000,000	JEA	JEA - $11,153,000.00
760	JEA Aggregate	JEA	JEA-05	JEA Buckman FL0026000	Complete process improvements.	WWTF Nutrient Reduction	Completed	2008	111,000	$18,000,000	JEA	JEA - $18,000,000.00
759	JEA Aggregate	JEA	JEA-06	JEA Monterey FL00230604	Complete process improvements.	WWTF Nutrient Reduction	Completed	2008	78,001	$500,000	JEA	JEA - $500,000.00
758	JEA Aggregate	JEA	JEA-07	JEA Mandarin FL0023493	Complete process improvements.	WWTF Nutrient Reduction	Completed	2007	27,997	$5,507,000	JEA	JEA - $5,507,000.00
757	JEA Aggregate	JEA	JEA-08	JEA San Pablo FL0024767	Complete phase out.	WWTF Nutrient Reduction	Completed	2007	14,001	$3,426,000	JEA	JEA - $3,426,000.00
756	JEA Aggregate	JEA	JEA-09	JEA Woodmere FL0026786	Complete phase out.	WWTF Nutrient Reduction	Completed	2007	22,000	$2,801,000	JEA	JEA - $2,801,000.00
755	JEA Aggregate	JEA	JEA-10	JEA Beacon Hills FL0026778	Complete phase out.	WWTF Nutrient Reduction	Completed	2011	12,540	$2,576,000	JEA	JEA - $2,576,000.00
754	JEA Aggregate	JEA	JEA-11	JEA Royal Lakes FL0026751	Complete phase out.	WWTF Nutrient Reduction	Completed	2014	-	$9,724,000	JEA	JEA - $9,724,000.00
753	JEA Aggregate	JEA	JEA-12	JEA Jax Heights FL0023671	Complete phase out.	WWTF Nutrient Reduction	Completed	2014	-	$615,000	JEA	JEA - $615,000.00
790	JEA Aggregate	JEA; SJRWMD	JEA-13	JEA Arlington East FL0026441	Complete process improvements.	WWTF Nutrient Reduction	Completed	2011	259,978	$24,351,000	JEA; SJRWMD	JEA - $0.00; SJRWMD - $3,500,000.00
763	JEA Aggregate	JEA	JEA-14	JEA District II FL0026450	Complete process improvements.	WWTF Nutrient Reduction	Completed	2013	87,340	$1,200,000	JEA	JEA - $1,200,000.00
765	JEA Aggregate	JEA	JEA-15	JEA San Jose FL0023663	Complete phase out.	WWTF Nutrient Reduction	Completed	2014	-	$4,787,000	JEA	JEA - $4,787,000.00
803	JEA Aggregate	JEA	JEA-16	JEA Buckman FL0026000	Complete process improvements.	WWTF Nutrient Reduction	Completed	2013	420,603	$12,202,000	JEA	JEA - $12,202,000.00

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802	JEA Aggregate	JEA; DEP; SJRWMD; EPA	JEA-17	JEA Facilities	Reuse expansion (approximately 10 mgd) at Arlington East, Mandarin, and District II.	WWTF Diversion to Reuse	Completed	2013	129,998	$100,000,000	DEP; SJRWMD; EPA; JEA	DEP - $1,004,000; SJRWMD - $5,446,000; EPA - $439,000; JEA - $93,111,000
4419	JEA Aggregate	FDOT MS4; COJ	JEA-18	Trade	Credit generated through treatment improvement and reuse. Trade with COJ-122c.	Credit Trade	Completed	2015	(66,748)	$0	NA	NA - $0.00
695	Putnam County Non-MS4	Not provided	PUT-01	Putnam Non-MS4	Phase Out Putnam Lanes WWTF.	Decommission/ Abandonment	Completed	2010	110	$350,000	Not provided	Not provided - $0.00
657	Putnam County Non-MS4	Not provided	PUT-02	Putnam Non-MS4	Phase Out Hiawatha WWTF.	Decommission/ Abandonment	Completed	2016	330	$1,800,000	Not provided	Not provided - $0.00
655	Putnam County Non-MS4	Not provided	PUT-03	Putnam Non-MS4	Septic tank phase out. East Putnam Regional Wastewater System.	OSTDS Phase Out	Completed	2015	2,413	$15,000,000	SRF; USDA Rural Development	SRF - $0.00; USDA Rural Development - $0.00
682	Putnam County Non-MS4	SJRWMD	PUT-04	Putnam Non-MS4	Edgefield RST. Former credit for just O&M updated to reflect transfer of ownership in 2018 to county. Additional credits of 3,931 kg/yr TN and 1,865 kg/yr TP transferred to this project in 2018.	Regional Stormwater Treatment	Completed	2018	9,955	$3,800,000	SJRWMD	SJRWMD - $0.00
645	Putnam County Non-MS4	FDOT	PUT-05	Putnam Non-MS4	FDOT construction of seven wet ponds on SR 15 from Clay County line to south of Gordon Wilkins Rd.	Wet Detention Pond	Completed	2008	1,591	$0	FDOT	FDOT - $0.00
646	Putnam County Non-MS4	Not provided	PUT-06	Putnam Non-MS4	Algal initiative. Canceled in 2020; replaced by other projects such as PUT-04.	Stormwater System Upgrade	Canceled	2017	NA	$0	Not provided	Not provided - $0.00

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647	Putnam County Non-MS4	Seminole Electric	PUT-07	Putnam Non-MS4	Atmospheric deposition load reduction - Seminole Electric SCR upgrade.	Industrial Facility Upgrades	Completed	2010	8,923	$176,000,000	Not provided	Not provided - $0.00
778	Putnam County Non-MS4	Not provided	PUT-08	Putnam Non-MS4	Education and outreach.	Education Efforts	Ongoing	NA	3,119	$0	Putnam County	Putnam County - $0.00
791	Putnam County Non-MS4	SJRWMD	PUT-09	Putnam Non-MS4	Phase 1 - Force main installation from Paradise Point to Yelvington Road Master Lift Station. Completed construction, stopped direct discharge, existing WWTF pumped out in 2019. Phase 2 - dismantle and collapse of pre-existing facility in January 2020.	Decommission/ Abandonment	Completed	2020	270	$2,500,000	Putnam County; SJRWMD	Putnam County - $500,000.00; SJRWMD - $2,000,000.00
5337	Putnam County Non-MS4	DEP	PUT-10	Putnam Non-MS4	Phase 1 - Design of force main installation from W. Louise Broer Road to Port Buena Vista. Design submitted to DEP. Phase 2 - Under construction.	Wastewater Service Area Expansion	Underway	2024	NA	$1,746,469	Putnam County; DEP	Putnam County - $349,294.00; DEP - $1,397,175.00
5338	Putnam County Non-MS4	SJRWMD	PUT-11	Putnam Non-MS4	Elsie Drive septic-to-sewer project in WBID 2213M. 14 Septic to Sewer connections completed. Provisional calculation method used.	OSTDS Phase Out	Completed	2020	165	$535,027	SJRWMD; Putnam County	SJRWMD - $462,300.00; Putnam County - $72,727.00
5339	Putnam County Non-MS4	SJRWMD	PUT-12	Putnam Non-MS4	Horse Landing Road septic-to-sewer project in WBID 2606A. 19 Septic to Sewer connections completed. Provisional calculation method used.	OSTDS Phase Out	Completed	2020	224	$784,273	Putnam County; SJRWMD	Putnam County - $127,272.00; SJRWMD - $657,000.00

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5782	Putnam County Non-MS4	SJRWMD	PUT-13	Putnam Non-MS4	Elsie Drive and Horse Landing Road Septic-to-Sewer project in WBID 2213M and 2606A. Reductions for 94 additional connections committed. Provisional SJRWMD calculation method used.	OSTDS Phase Out	Completed	2022	1,108	$1,279,375	Putnam County; SJRWMD	Putnam County - $0.00; SJRWMD - $1,279,375.00
804	Seminole Electric	NA	SE-01	Seminole Electric Total	Selective catalytic reduction (SCR) upgrade.	Industrial Facility Upgrades	Completed	2010	13,891	$176,000,000	Seminole Electric; SJRWMD	Seminole Electric - $0.00; SJRWMD - $0.00
6345	SJRWMD	SWIG LLC	SJRWMD-01	Doctos Lake Advanced Effluent Treatment	A full scale pay-for-performance (ongoing) project to remove TP from the Doctors Lake WWTP effluent. The goal of the project is to demonstrate that nutrient treatment technologies can cost-effectively remove TP from wastewater effluent water.	WWTF Nutrient Reduction	Ongoing	NA	NA	$5,075,000	SJRWMD; DEP	SJRWMD - $825,000.00; DEP - $4,250,000.00
6852	SJRWMD	CCUA; DEP; SWIG	SJRWMD-01	Doctors Lake Advanced Effluent Treatment	A full scale pay-for-performance (ongoing) project to remove TP from the Doctors Lake WWTP effluent. The goal of the project is to demonstrate that nutrient treatment technologies can cost-effectively remove TP from wastewater effluent water.	WWTF Nutrient Reduction	Underway	2026	NA	$0	SJRWMD; DEP	SJRWMD - $825,000.00; DEP - $4,250,000.00
6346	SJRWMD	Underhill Ferneries	SJRWMD-02	Underhill Ferneries - Precision Fertilizer	Purchase and implement precision fertilizer application equipment.	Agricultural BMPs	Completed	2022	945	$61,100	Underhill Ferneries; SJRWMD	Underhill Ferneries - $15,275.00; SJRWMD - $45,825.00

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700	Smurfit-Stone Container	NA	SS-01	Smurfit-Stone	Complete process improvements.	WWTF Nutrient Reduction	Completed	Prior to 2008	157,705	$0	NA	NA - $0.00
699	Smurfit-Stone Container	WestRock CP, LLC	SS-02	Smurfit-Stone	Routine WWTF maintenance.	Sanitary Sewer and Wastewater Treatment Facility (WWTF) Maintenance	Canceled	NA	NA	$0	NA	NA - $0.00
736	Smurfit-Stone Container	WestRock CP, LLC	SS-03	Smurfit-Stone	Routine WWTF maintenance.	Sanitary Sewer and Wastewater Treatment Facility (WWTF) Maintenance	Canceled	NA	NA	$0	NA	NA - $0.00
709	Smurfit-Stone Container	WestRock CP, LLC	SS-04	Smurfit-Stone	Routine WWTF maintenance.	Sanitary Sewer and Wastewater Treatment Facility (WWTF) Maintenance	Canceled	NA	NA	$0	NA	NA - $0.00
711	Smurfit-Stone Container	WestRock CP, LLC	SS-05	Smurfit-Stone	Routine WWTF maintenance.	Sanitary Sewer and Wastewater Treatment Facility (WWTF) Maintenance	Canceled	NA	NA	$0	NA	NA - $0.00
749	Smurfit-Stone Container	WestRock CP, LLC	SS-06	Smurfit-Stone	Routine WWTF maintenance.	Sanitary Sewer and Wastewater Treatment Facility (WWTF) Maintenance	Canceled	NA	NA	$0	NA	NA - $0.00

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748	Smurfit-Stone Container	WestRock CP, LLC	SS-07	Smurfit-Stone	Routine WWTF maintenance.	Sanitary Sewer and Wastewater Treatment Facility (WWTF) Maintenance	Canceled	NA	NA	$0	NA	NA - $0.00
747	Smurfit-Stone Container	WestRock CP, LLC	SS-08	Smurfit-Stone	Routine WWTF maintenance.	Sanitary Sewer and Wastewater Treatment Facility (WWTF) Maintenance	Canceled	NA	NA	$0	NA	NA - $0.00
746	Smurfit-Stone Container	WestRock CP, LLC	SS-09	Smurfit-Stone	Routine WWTF maintenance.	Sanitary Sewer and Wastewater Treatment Facility (WWTF) Maintenance	Canceled	NA	NA	$0	NA	NA - $0.00
745	Smurfit-Stone Container	WestRock CP, LLC	SS-10	Smurfit-Stone	Routine WWTF maintenance.	Sanitary Sewer and Wastewater Treatment Facility (WWTF) Maintenance	Canceled	NA	NA	$0	NA	NA - $0.00
744	Smurfit-Stone Container	WestRock CP, LLC	SS-11	Smurfit-Stone	Routine WWTF maintenance.	Sanitary Sewer and Wastewater Treatment Facility (WWTF) Maintenance	Canceled	NA	NA	$0	NA	NA - $0.00
743	Smurfit-Stone Container	WestRock CP, LLC	SS-12	Smurfit-Stone	Aeration pond dredging.	Sanitary Sewer and Wastewater Treatment Facility (WWTF) Maintenance	Ongoing	NA	NA	$0	NA	NA - $0.00

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742	Smurfit-Stone Container	WestRock CP, LLC	SS-13	Smurfit-Stone	Aeration pond dredging.	Sanitary Sewer and Wastewater Treatment Facility (WWTF) Maintenance	Canceled	NA	NA	$0	NA	NA - $0.00
741	Smurfit-Stone Container	WestRock CP, LLC	SS-14	Smurfit-Stone	Aeration pond dredging.	Sanitary Sewer and Wastewater Treatment Facility (WWTF) Maintenance	Canceled	NA	NA	$0	NA	NA - $0.00
740	Smurfit-Stone Container	WestRock CP, LLC	SS-15	Smurfit-Stone	Aeration pond dredging.	Sanitary Sewer and Wastewater Treatment Facility (WWTF) Maintenance	Canceled	NA	NA	$0	NA	NA - $0.00
739	Smurfit-Stone Container	WestRock CP, LLC	SS-16	Smurfit-Stone	Aeration pond dredging.	Sanitary Sewer and Wastewater Treatment Facility (WWTF) Maintenance	Canceled	NA	NA	$0	NA	NA - $0.00
724	Smurfit-Stone Container	WestRock CP, LLC	SS-17	Smurfit-Stone	Sludge drying bed clean out.	BMP Cleanout	Canceled	NA	NA	$0	NA	NA - $0.00
737	Smurfit-Stone Container	WestRock CP, LLC	SS-18	Smurfit-Stone	Sludge drying bed clean out.	BMP Cleanout	Canceled	NA	NA	$0	NA	NA - $0.00
750	Smurfit-Stone Container	WestRock CP, LLC	SS-19	Smurfit-Stone	Sludge drying bed clean out.	BMP Cleanout	Canceled	NA	NA	$0	NA	NA - $0.00
735	Smurfit-Stone Container	WestRock CP, LLC	SS-20	Smurfit-Stone	Sludge drying bed clean out.	BMP Cleanout	Canceled	NA	NA	$0	NA	NA - $0.00
734	Smurfit-Stone Container	WestRock CP, LLC	SS-21	Smurfit-Stone	Sludge drying bed clean out.	BMP Cleanout	Canceled	NA	NA	$0	NA	NA - $0.00

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733	Smurfit-Stone Container	WestRock CP, LLC	SS-22	Smurfit-Stone	Reroute sanitary wastes from on-site treatment to JEA.	OSTDS Phase Out	Completed	2018	3,349	$546,547	WestRock CP, LLC	WestRock CP, LLC - $546,547.00
4421	Smurfit-Stone Container	WestRock CP, LLC	SS-23	Smurfit-Stone	Aeration pond dredging.	Sanitary Sewer and Wastewater Treatment Facility (WWTF) Maintenance	Canceled	NA	NA	$0	NA	NA - $0.00
4422	Smurfit-Stone Container	WestRock CP, LLC	SS-24	Smurfit-Stone	Inlet aeration pond cleaning.	Sanitary Sewer and Wastewater Treatment Facility (WWTF) Maintenance	Canceled	NA	NA	$0	NA	NA - $0.00
4423	Smurfit-Stone Container	WestRock CP, LLC	SS-25	Smurfit-Stone	Inlet aeration pond cleaning.	Sanitary Sewer and Wastewater Treatment Facility (WWTF) Maintenance	Canceled	NA	NA	$0	NA	NA - $0.00
4424	Smurfit-Stone Container	WestRock CP, LLC	SS-26	Smurfit-Stone	Routine WWTF maintenance.	Sanitary Sewer and Wastewater Treatment Facility (WWTF) Maintenance	Ongoing	NA	NA	$243,327	WestRock CP, LLC	WestRock CP, LLC - $485,051.00
779	St. Johns County MS4	St. Johns County Public Works	SJC-11	SJC MS4 FLR04E025	Stormwater education.	Education Efforts	Ongoing	NA	337	$0	Not provided	Not provided - $0.00
738	St. Johns County MS4	St. Johns County Environmental Division	SJC-12	SJC MS4 FLR04E025	Proposed LID ordinance, originating from Environmental Division.	Regulations, Ordinances, and Guidelines	Planned	2027	TBD	$0	NA	NA - $0.00

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698	St. Johns County MS4	St. Johns County	SJC-13	SJC MS4 FLR04E025	Slow release fertilizer ordinance. Credits under SJC-11.	Regulations, Ordinances, and Guidelines	Completed	2010	NA	$0	NA	NA - $0.00
752	St. Johns County MS4	Not provided	SJC-14	SJC MS4 FLR04E025	FDOT widening of SR 312. Not in basin. Canceled in 2020.	Wet Detention Pond	Canceled	NA	NA	$0	NA	NA - $0.00
721	St. Johns County MS4	Not provided	SJC-15	SJC MS4 FLR04E025	FDOT A1A stormwater retrofit from Duval County line to Thousand Oaks Lane. Not in basin. Canceled in 2020.	Dry Detention Pond	Canceled	NA	NA	$0	NA	NA - $0.00
720	St. Johns County MS4	DEP	SJC-16	SJC MS4 FLR04E025	Atmospheric deposition load reduction - Seminole Electric SCR upgrade.	Industrial Facility Upgrades	Completed	2010	132	$176,000,000	NA	NA - $0.00
719	St. Johns County MS4	SJRWMD; DEP	SJC-17a	SJC MS4 FLR04E025	Algal initiative -Masters Tract RST facility. Total credit 7,230 lb/yr TN and 3,124 lb/yr TP. Credits divided among SJC-17a, SJC-17b, and HAS-06.	Regional Stormwater Treatment	Completed	2017	4,616	$796,007	DEP 319; SJRWMD; St. Johns County	DEP 319 - $796,007.00; SJRWMD - $0.00; St. Johns County - $1,917,006.00
789	St. Johns County Non-MS4	St. Johns County Public Works	SJC-01	SJC Non-MS4	Purchase of street sweeper.	Street Sweeping	Canceled	NA	NA	$0	Not provided	Not provided - $0.00
787	St. Johns County Non-MS4	St. Johns County Public Works	SJC-02	SJC Non-MS4	Street sweeping.	Street Sweeping	Ongoing	NA	219	$16,000	Road & Bridge; Transportation Trust Fund	Road & Bridge - $0.00; Transportation Trust Fund - $0.00
786	St. Johns County Non-MS4	St. Johns County; FDOT	SJC-03	SJC Non-MS4	Stormwater education.	Education Efforts	Ongoing	NA	2,372	$0	Not provided	Not provided - $0.00
785	St. Johns County Non-MS4	Not provided	SJC-04	SJC Non-MS4	Proposed LID ordinance, originating from Environmental Division.	Regulations, Ordinances, and Guidelines	Canceled	NA	NA	$0	NA	NA - $0.00

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784	St. Johns County Non-MS4	St. Johns County	SJC-05	SJC Non-MS4	Slow release fertilizer ordinance. Credits under SJC-03.	Regulations, Ordinances, and Guidelines	Completed	2010	NA	$0	NA	NA - $0.00
783	St. Johns County Non-MS4	SJRWMD	SJC-06	SJC Non-MS4	Deep Creek RST O&M value.	Regional Stormwater Treatment	Completed	2015	689	$0	Transportation Trust Fund	Transportation Trust Fund - $65,000
782	St. Johns County Non-MS4	Not provided	SJC-07	SJC Non-MS4	Purchase Hastings WWTF reduction credits (HAS-05). Canceled in 2018.	Credit Trade	Canceled	NA	NA	$0	NA	NA - $0.00
781	St. Johns County Non-MS4	DEP	SJC-08	SJC Non-MS4	Atmospheric deposition load reduction - Seminole Electric SCR upgrade.	Industrial Facility Upgrades	Completed	2010	4,261	$176,000,000	NA	NA - $0.00
780	St. Johns County Non-MS4	Not provided	SJC-09	SJC Non-MS4	Purchase of street sweeper.	Street Sweeping	Canceled	NA	NA	$0	NA	NA - $0.00
788	St. Johns County Non-MS4	St. Johns County Public Works	SJC-10	SJC Non-MS4	Street sweeping.	Street Sweeping	Ongoing	NA	144	$16,000	Transportation Trust Fund; Road & Bridge	Transportation Trust Fund - $0.00; Road & Bridge - $0.00
718	St. Johns County Non-MS4	SJRWMD	SJC-17b	SJC Non-MS4	Algal initiative -Masters Tract RST facility. Total credit 7,230 lb/yr TN and 3,124 lb/yr TP. Credits divided among SJC-17a, SJC-17b, and HAS-06.	Regional Stormwater Treatment	Completed	2017	2,226	$2,600,000	SJRWMD; St. Johns County	SJRWMD - $2,600,000.00; St. Johns County - $3,832,000
717	St. Johns County Non-MS4	St. Johns County	SJC-18	SJC Non-MS4	Greenbriar Rd. paving/ improvements.	Wet Detention Pond	Completed	1999	73	$500,000	Transportation Trust Fund	Transportation Trust Fund - $0.00
716	St. Johns County Non-MS4	St. Johns County Public Works	SJC-21	SJC Non-MS4	Stormwater education.	Education Efforts	Ongoing	NA	1,082	$0	Not provided	Not provided - $0.00

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715	St. Johns County Non-MS4	Not provided	SJC-22	SJC Non-MS4	Proposed LID ordinance, originating from Environmental Division.	Regulations, Ordinances, and Guidelines	Canceled	NA	NA	$0	NA	NA - $0.00
714	St. Johns County Non-MS4	St. Johns County	SJC-23	SJC Non-MS4	Slow release fertilizer ordinance. Credits under SJC-21.	Regulations, Ordinances, and Guidelines	Completed	2010	NA	$0	NA	NA - $0.00
713	St. Johns County Non-MS4	FDOT	SJC-24	SJC Non-MS4	FDOT SR 312 from US 1 to SR 3. Not in basin. Canceled in 2020.	Wet Detention Pond	Canceled	NA	NA	$0	FDOT	NA - $0.00
712	St. Johns County Non-MS4	DEP	SJC-25	SJC Non-MS4	Atmospheric deposition load reduction - Seminole Electric SCR upgrade.	Industrial Facility Upgrades	Completed	2010	858	$176,000,000	NA	NA - $0.00
697	St. Johns County Non-MS4	Not provided	SJC-26	SJC Non-MS4	Algal Initiative - Masters Tract RST facility* stormwater harvesting.	Stormwater Reuse	Canceled	NA	NA	$0	NA	NA - $0.00
710	St. Johns County Non-MS4	DEP	SJC-27a	SJC Non-MS4	Application of freshwater non-MS4 TN credits to marine non-MS4 section.	Credit Trade	Completed	2010	(3,060)	$0	NA	NA - $0.00
723	St. Johns County Non-MS4	DEP	SJC-27b	SJC Non-MS4	Application of freshwater non-MS4 TN credits.	Credit Trade	Completed	2010	3,060	$0	NA	NA - $0.00
708	St. Johns County Non-MS4	DEP	SJC-28	SJC Non-MS4	Bishop Estates baffles boxes.	Baffle Boxes-Second Generation	Completed	2013	262	$355,705	DEP 319	DEP 319 - $255,706.00
707	St. Johns County Non-MS4	SJRWMD; DEP	SJC-29	SJC Non-MS4	Deep Creek West RST improvements.**	Regional Stormwater Treatment	Completed	2015	4,515	$1,400,000	SJRWMD	SJRWMD - $500,000.00
706	St. Johns County Non-MS4	Not provided	SJC-30	SJC Non-MS4	Fruit Cove Secret Oaks Place baffle box. Canceled in 2017.	Baffle Boxes-Second Generation	Canceled	NA	NA	$0	NA	NA - $0.00

ProjID	Lead Entity	Partners	Project Number	Project Name	Project Description	Project Type	Project Status	Estimated Completion Date	TN Reduction (lbs/yr)	Cost Estimate	Funding Source	Funding Amount
705	St. Johns County Non-MS4	Not provided	SJC-31	SJC Non-MS4	Fruit Cove Lemonwood Rd. baffle box. Canceled in 2017.	Baffle Boxes-Second Generation	Canceled	NA	NA	$0	NA	NA - $0.00
704	St. Johns County Non-MS4	Not provided	SJC-32	SJC Non-MS4	Fruit Cove Degrove Rd. baffle box. Canceled in 2017.	Baffle Boxes-Second Generation	Canceled	NA	NA	$0	NA	NA - $0.00
703	St. Johns County Non-MS4	Not provided	SJC-33	SJC Non-MS4	CR 13 and Joe Ashton Rd. baffle box. Canceled in 2020.	Baffle Boxes-Second Generation	Canceled	NA	NA	$0	NA	NA - $0.00
702	St. Johns County Non-MS4	Not provided	SJC-34	SJC Non-MS4	Colee Cove Rd. baffle box. Canceled in 2017.	Baffle Boxes-Second Generation	Canceled	NA	NA	$0	NA	NA - $0.00
701	St. Johns County Non-MS4	St. Johns County	SJC-35	SJC Non-MS4	CR 13 Culvert Box #8.	Baffle Boxes-Second Generation	Completed	2014	150	$0	Transportation Trust Fund	Not provided - $0.00
772	Town of Hastings Non-MS4	Not provided	HAS-01	Hastings Non-MS4	WWTP chemical feed systems.	Sanitary Sewer - Alum Injection System	Canceled	NA	NA	$10,000	NA	NA - $0.00
771	Town of Hastings Non-MS4	FDOT	HAS-02	Hastings Non-MS4	FDOT widening of SR 207.	Wet Detention Pond	Completed	Prior to 2008	15	$0	State Legislature	State Legislature - $0.00
770	Town of Hastings Non-MS4	FDOT	HAS-03	Hastings Non-MS4	FDOT widening of SR 207 from CR 305 to Cypress Link Blvd.	Wet Detention Pond	Completed	Prior to 2008	143	$0	State Legislature	State Legislature - $0.00
769	Town of Hastings Non-MS4	Seminole Electric	HAS-04	Hastings Non-MS4	Atmospheric deposition load reduction - Seminole Electric SCR upgrade.	Industrial Facility Upgrades	Completed	2010	119	$176,000,000	NA	NA - $0.00
768	Town of Hastings Non-MS4	St. Johns County	HAS-05	Hastings Non-MS4	Credit traded to SJC-07 198 kg/yr of TP in freshwater section. Canceled in 2018.	Credit Trade	Canceled	NA	NA	$0	NA	NA - $0.00

ProjID	Lead Entity	Partners	Project Number	Project Name	Project Description	Project Type	Project Status	Estimated Completion Date	TN Reduction (lbs/yr)	Cost Estimate	Funding Source	Funding Amount
6158	Town of Hastings Non-MS4	SJRWMD; DEP	HAS-06	Hastings Non-MS4	Algal initiative -Masters Tract RST facility. Total credit 7,230 lb/yr TN and 3,124 lb/yr TP. Credits divided among SJC-17a, SJC-17b, and HAS-06.	Regional Stormwater Treatment	Completed	2017	388	$2,600,000	DEP 319; SJRWMD	DEP 319 - $0; SJRWMD - $2,600,000
6159	Town of Hastings Non-MS4	St. Johns County Utilities Dept.	HAS-07	Hastings Non-MS4	WWTP chemical feed systems.	WWTF Upgrade	Canceled	NA	NA	$0	CDBG	CDBG - $5,000,000.00
793	Town of Orange Park MS4	Seminole Electric	OP-04	Orange Park MS4	Atmospheric deposition load reduction - Seminole Electric SCR upgrade.	Industrial Facility Upgrades	Completed	2010	227	$176,000,000	NA	NA - $0.00
5340	Town of Orange Park MS4	Town of Orange Park WWTP	OP-06	Orange Park OSDTS Phase out	Connect 41 existing customers to Town of Orange Park WWTF at Ash Street. Abandon OSTDS. Provisional calculation method used.	OSTDS Phase Out	Underway	2025	446	$752,000	DEP; SJRWMD	DEP - $405,196.00; SJRWMD - $180,732.00
6249	Town of Orange Park MS4	Town of Orange Park	OP-07	Orange Park Street Sweeping	Weekly street sweeping.	Street Sweeping	Ongoing	NA	TBD	$0	TBD	TBD - $0.00
796	Town of Orange Park WWTF	Not provided	OP-01	Ash Street WWTF FL0023922	Phase 1 improvements.	WWTF Upgrade	Completed	2010	35,097	$8,042,428	DEP; SJRWMD	DEP - $924,164.00; SJRWMD - $627,286.00
795	Town of Orange Park WWTF	Not provided	OP-02	Ash Street WWTF FL0023922	Phase 2 improvements.	WWTF Upgrade	Completed	2011	15,272	$2,090,000	NA	NA - $0.00
794	Town of Orange Park WWTF	Not provided	OP-03	Ash Street WWTF FL0023922	Phase 3 improvements.	WWTF Upgrade	Canceled	2012	NA	$0	NA	NA - $0.00

ProjID	Lead Entity	Partners	Project Number	Project Name	Project Description	Project Type	Project Status	Estimated Completion Date	TN Reduction (lbs/yr)	Cost Estimate	Funding Source	Funding Amount
6248	Town of Orange Park WWTF	Clay County Utility Authority; DEP; SJRWMD; Town of Orange Park	OP-08	1.25 MG Reuse Ground Storage Tank and WRF Improvements, Ph. I	Construct a 1.25 MG reuse GST at the Orange Park WRF to enhance utilization of reuse while significantly reducing surface water discharge into the St. Johns River. The project includes WRF improvements to increase the transfer of treated effluent to CCUA.	WWTF Diversion to Reuse	Planned	2026	4,560	$4,947,000	DEP AWS	DEP AWS - $4,947,000.00
726	Town of Welaka Non-MS4	Not provided	WEL-01	Welaka Non-MS4	Septic tank phase out.	OSTDS Phase Out	Completed	2009	901	$0	Not provided	Not provided - $0.00
725	Town of Welaka Non-MS4	Seminole Electric	WEL-02	Welaka Non-MS4	Atmospheric deposition load reduction - Seminole Electric SCR upgrade.	Industrial Facility Upgrades	Completed	2010	220	$176,000,000	NA	NA - $0.00
7154	Town of Welaka Non-MS4	DEP; Town of Welaka	WEL-03	WWTF Expansion & Upgrades, Ph. I	This project will install a 0.250 MGD field-erected wastewater package plant to increase the WWTP capacity. The project will also include site planning and improvements that will allow for future expansion opportunity at the facility.	WWTF Upgrade	Underway	2026	TBD	$9,800,000	DEP	DEP - $9,800,000.00
7155	Town of Welaka Non-MS4	DEP; Town of Welaka	WEL-03	Sportsman's Harbor Vacuum Sewer System Improvements	The project aims to establish a more resilient vacuum sewer system capable of withstanding extreme conditions and providing consistent sewer service to Sportsman’s Harbor residents.	Sanitary Sewer and Wastewater Treatment Facility (WWTF) Maintenance	Planned	2028	NA	$4,996,000	DEP SRF	DEP SRF - $4,996,000.00
7019	Turnpike Enterprise	NA	TE-01	Street Sweeping First Coast Expressway MP 31 - 45.5	Street sweeping and litter control along SR 23 between MP 31 and 45.5, both northbound/southbound, including ramps.	Street Sweeping	Ongoing	NA	TBD	$0	NA	NA - $0.00
732	U.S. Navy Aggregate	Not provided	USN-01	NAS Jax WWTF FL0000957	Reuse to Timuquana Country Club.	Stormwater Reuse	Completed	2008	16,925	$500,000	Not provided	Not provided - $0.00

ProjID	Lead Entity	Partners	Project Number	Project Name	Project Description	Project Type	Project Status	Estimated Completion Date	TN Reduction (lbs/yr)	Cost Estimate	Funding Source	Funding Amount
731	U.S. Navy Aggregate	Not provided	USN-02	NAS Jax WWTF FL0000957	Expand reuse system.	Stormwater Reuse	Completed	2015	6,138	$3,000,000	Not provided	Not provided - $0.00
730	U.S. Navy Aggregate	Not provided	USN-03	NAS Jax WWTF FL0000957	Inflow/ infiltration repair projects.	WWTF Upgrade	Completed	2008	6,138	$2,100,000	Not provided	Not provided - $0.00
5341	U.S. Navy Aggregate	Not provided	USN-07	NAS Jax WWTF FL0000957	Modifications to NAS JAX WWTF to add BNR treatment.	WWTF Upgrade	Completed	2022	NA	$1,700,000	Not provided	Not provided - $0.00
727	U.S. Navy MS4	Seminole Electric	USN-06	USN MS4	Atmospheric deposition load reduction - Seminole Electric SCR upgrade.	Industrial Facility Upgrades	Completed	2010	656	$176,000,000	NA	NA - $0.00

Appendix C. Planning for Additional Management Strategies

Responsible entities must submit a sufficient list of additional projects and management strategies to DEP no later than January 14, 2026, to be compliant with the upcoming BMAP milestone or be subject to further department enforcement.

If any lead entity's management strategies list falls short of meeting their next 5-year milestone reductions, additional projects and management strategies are required. To remain in compliance with the BMAP until January 14, 2026, responsible entities with project deficits must catalog their efforts to identify management strategies to meet their milestone reduction requirements. These planning efforts are ineligible for BMAP credit themselves but are necessary to demonstrate that additional eligible management actions will be forthcoming and BMAP compliance will be achieved.

Examples of project identification efforts include:

- Planning and identifying water quality projects and related costs and schedules in specific plans:
  - Feasibility studies (e.g., stormwater feasibility studies or wastewater feasibility studies).
  - Flood mitigation plans with nutrient management components.
  - Basinwide water quality management plans.
  - Nutrient management plans.
- Applying for external project funding.
- Developing interagency/interdepartmental agreements or MOUs for collaboration on nutrient reduction projects that cross jurisdictional or administrative boundaries.
- Updating future growth considerations in local comprehensive plans, land development reviews, and audits of relevant codes and ordinances
- Updating existing remediation plans.
- Monitoring water quality in support of project planning and implementation.
- Researching innovative technologies.

Appendix D: Wastewater Facilities

DEP has determined that certain WWTFs providing reclaimed water for the purpose of commercial or residential irrigation or that is otherwise being land applied within this BMAP area are causing or contributing to the nutrient impairments being addressed in this BMAP. Based on DEP's determination, the facilities listed below are subject to the nitrogen and phosphorus limits set forth in section 403.086, F.S.

These facilities have 10 years from BMAP adoption to meet the applicable AWT standards. This requirement does not prevent the department from requiring an alternative treatment standard, if the department determines the alternative standard is necessary to achieve the TMDL(s) or applicable water quality criteria.

For facilities that did not have adequate information to complete an evaluation or where a change occurs to the facility's application of reclaimed water after the initial evaluation (e.g., an increase in facility capacity or change in location of reclaimed water application), the department will evaluate the land application of reclaimed water as more information becomes available pursuant to section 403.086, F.S.

Table D-1. Wastewater facilities with reclaimed water that are causing or contributing to the nutrient impairments

Facility Name	Permit Number
FL0000957	NAS Jacksonville WWTF
FL0020231	Jacksonville Beach WWTP
FL0020427	City of Neptune Beach WWTF
FL0020915	Green Cove Springs Harbor Road WWTF
FL0023493	Mandarin Water Reclamation Facility
FL0023922	Town of Orange Park - WWTF
FL0025151	Clay County Utility Authority Miller St. WWTP
FL0026441	JEA Arlington East Wastewater Treatment Plant
FL0026450	District 2 Water Reclamation
FL0038776	City of Atlantic Beach - WWTF
FL0039721	Ridaught Landing WWTF
FL0040061	City of Palatka WWTF
FL0043109	SR-16 WWTF
FL0043591	Julington Creek WRF
FL0043834	Fleming Island Regional WWTF
FL0044245	Players Club WRF
FL0044253	Marsh Landing WWTF
FL0173371	Spencer WWTF
FL0174441	Blacks Ford WRF
FL0670651	Northwest Wastewater Treatment Plant
FLA011377	Mid - Clay Regional WWTF
FL0030210	City of Green Cove Spring - South WWTF

Appendix E: Golf Course NMPs

The fertilizers used to maintain golf courses can be significant sources of nutrients in certain (springsheds/watersheds) that are impaired for nitrogen and/or phosphorous. To achieve the TMDL target(s), all nutrient sources need to reduce their nutrient loading. Similar to other sources, golf courses are required to implement management strategies to mitigate their nutrient loading and be in compliance with the BMAP. Florida BMAPs are adopted by Secretarial Order and therefore legally enforceable by the DEP. Requirements for golf courses located in BMAPs are below.

1. Golf Course BMP Certification, Implementation, and Reporting.

a. In areas with an adopted BMAP, all golf courses must implement the BMPs described in DEP's golf course BMP manual, *Best Management Practices for the Enhancement of Environmental Quality on Florida Golf Courses* (DEP, 2021).

b. At minimum, the superintendent for each golf course must obtain and maintain certification through the UF/IFAS Florida Golf Courses Best Management Practices Program. It is highly recommended that course managers and landscape maintenance staff also participate in the certification program to ensure proper BMP implementation and understanding of nutrient-related water quality issues and the role of golf courses in water quality restoration and protection. By no later than January 14, 2026, the golf course superintendents must confirm to DEP whether they have completed the certification. Certification must be completed by December 31, 2026. This certification must be renewed every four years.

c. Beginning in 2026 a nutrient application record (fertilizer, reuse, etc.) must be submitted each year during the BMAP statewide annual reporting process.

d. Fertilizer rates should be no greater than the UF-IFAS recommendations to help prevent leaching. This includes nutrients from reuse or any other source applied. If a facility uses fertilizer rates greater than those in the BMP manual they are required to conduct water quality monitoring prescribed by DEP or WMD that demonstrates compliance with water quality standards (**Table E-1**).

e. Example golf course BMPs applicable to protecting water quality are listed below.

- Use slow release fertilizer to prevent volatilization.
- Use of Lined Media in Stormwater Features.
- Use of Denitrification Walls.
- Use of Rain Gardens.
- Use of Tree Boxes.
- Use of Bioswales.

Table E-1. Nutrient ranges for warm-season turfgrass species. For more information refer to the *Best Management Practices for the Enhancement of Environmental Quality on Florida Golf Courses* (DEP, 2021)

Nutrient	Bermudagrass (%)	St. Augustinegrass (%)	Seashore Paspalum (%)	Centipedegrass (%)	Zoysia (%)
N	1.95-4.63	1.53-2.41	2.80-3.50	1.5-2.9	2.04-2.36
P	0.15-0.43	0.30-0.55	0.30-60	0.18-0.26	0.19-0.22
K	0.43-1.28	1.1-2.25	2.00-4.00	1.12-2.50	1.05-1.27
Ca	0.15-0.63	0.24-0.54	0.25-1.50	0.50-1.15	0.44-0.56
Mg	0.04-0.10	0.20-0.46	0.25-0.60	0.12-0.21	0.13-0.15
S	0.07-0.02	0.15-0.48	0.20-0.60	0.20-0.38	0.32-0.37
Na	0.05-0.17	0.00-0.17	-	-	-

2. All golf courses located within a BMAP are required to submit a nutrient management plan (NMP) that is designed to, while maintaining even plant growth, prevent nutrient losses to the Floridan aquifer and surrounding surface waters. A draft NMP must be submitted to DEP within one year of BMAP adoption and a final document is due two years after adoption. The NMP must include the following:

a. ***A brief description of the goals of the nutrient management plan.***

(This should be a paragraph that describes the goals of your NMP. Talk about how you are managing for high quality turf and water quality. Remember your goal is to protect water quality while maintaining the golf course in premium condition.)

b. ***Identification of areas where nutrient applications will be made including greens, tees, fairways and roughs.***

(Discuss the areas of the course where you plan to use fertilizer, and why. Also discuss the areas that do not need or get any fertilizer applications.

Include a GIS shapefile identifying all of these areas.

Complete the table(s) detailing your nutrient application practices.)

Turf Details

Turf Type	Turf Species	Acreage
Tees		
Greens		

Fairways		
Roughs		
Total	-	

Fertilizer Application

Month	Turf Type	TN Application Rate (lbs/acre)	TP Application Rate (lbs/acre)	Number of Applications	Total TN Applied (lbs/acre)	Total TP Applied (lbs/acre)
January	Tees					
	Greens					
	Fairway					
	Roughs					
February	Tees					
	Greens					
	Fairway					
	Roughs					
March	Tees					
	Greens					
	Fairway					
	Roughs					
April	Tees					
	Greens					
	Fairway					
	Roughs					
May	Tees					
	Greens					
	Fairway					
	Roughs					
June	Tees					
	Greens					
	Fairway					
	Roughs					
July	Tees					
	Greens					
	Fairway					
	Roughs					
August	Tees					
	Greens					
	Fairway					

	Roughs					
September	Tees					
	Greens					
	Fairway					
	Roughs					
October	Tees					
	Greens					
	Fairway					
	Roughs					
November	Tees					
	Greens					
	Fairway					
	Roughs					
December	Tees					
	Greens					
	Fairway					
	Roughs					
Total						

Amount of Reuse/Effluent Applied*

Month	Quantity (Gallons)	Monthly Average TN (mg/L)	Monthly Average TP (mg/L)	Quantity of TN Applied (lbs)	Running Total of TN Applied per Acre (lbs/acre)	Quantity of TP Applied (lbs)	Running Total of TP Applied per Acre (lbs/acre)
January							
February							
March							
April							
May							
June							
July							
August							
Septenber							

October							
Novemeber							
December							
Total							

*If applicable.

Are any other sources of nutrients (i.e. manure, etc.) applied to the grounds? If so, please detail in a table similar to the reuse and fertilizer tables.

c. ***Soil sampling methods and results for each area receiving fertilizer applications. Areas receiving fertilizer applications shall be sampled once every three years. Soil samples shall be collected and analyzed according to UF-IFAS/DEP recommendations or standard industry practice. Soil samples shall be analyzed, at minimum, for:***

1. Nitrogen
2. Phosphorus

(Describe existing soil sampling here. Describe what your planned soil sampling schedule looks like. Have you been soil testing for years already? - say that. If you are just getting started with soil testing the course, you can discuss that. What parts of the course are priority?

If soil samples from areas of similar soil, fertilizer use and management are combined, then describe that process and justify why you feel they are similar enough to combine into a "representative" sample. That's fine, just describe why.

Keep all soil test results (or copies of them) in this file as part of your nutrient management plan. Please do not send them in to DEP individually. If you've been soil testing for years, remember to add copies of all those past results to your NMP file.)

d. ***Water quality sampling methods and results. Water quality sampling and analysis should be conducted in accordance with DEP's Standard Operating Procedures. Water quality samples shall be analyzed, at minimum, for:***

1. Nitrogen
2. Phosphorus.

(If applicable, describe existing water quality sampling here. Describe what your planned water quality sampling schedule looks like. Have you been sampling for years already? If you are just getting started with soil testing the course, you can discuss that. What parts of the course are priority?

Keep all water quality test results (or copies of them) in this file as part of your nutrient management plan. Please do not send them in to DEP individually. If you've been testing for years, remember to add copies of all those past results to your NMP file.)

e. ***Tissue sampling methods and results. Tissue samples shall be collected and analyzed according to UF-IFAS/DEP recommendations or standard industry practice.*** (Describe existing tissue sampling plan here. Keep all test results (or copies of them) in this file as part of your nutrient management plan. Please do not send them in to DEP individually. If you've been testing for years, remember to add copies of all those past results to your NMP file.)

f. ***Soil, tissue and water quality sample results shall be maintained for a minimum of 5 years. Please provide records.***

g. ***When developing new (or expanding) golf courses, pre and post monitoring should be implemented in accordance with UF-IFAS/DEP recommendations.***

Appendix F: Agricultural Enrollment and Reductions

FDACS provides the information for this appendix for each BMAP. The information in this appendix does not represent DEP's position.

Agricultural Landowner Requirements

Section 403.067, F.S., requires agricultural producers and landowners located within BMAP areas to either enroll in the FDACS Best Management Practices (BMP) Program and properly implement BMPs applicable to their property and operation or to conduct water quality monitoring activities as required by Rule Chapter 62-307, F.A.C. Producers or agricultural landowners who are enrolled in the FDACS BMP Program and are properly implementing the applicable BMPs identified on the BMP Checklist, or who are in compliance with the Equivalent Program requirements of Rule Chapter 5M-1, F.A.C., are entitled to a presumption of compliance with state water quality standards per subparagraph 403.067(7)(c)3., F.S.

FDACS OAWP BMP Program

BMPs Definition

For the purposes of the OAWP BMP Program, the term "best management practice" means a practice or combination of practices determined based on research, field-testing, and expert review, to be the most effective and practicable on-location means, including economic and technological considerations, for improving water quality in agricultural discharges. Section 403.067, F.S., requires that BMPs reflect a balance between water quality improvements and agricultural productivity. FDACS works closely with DEP, WMDs, industry experts, and academic institutions to understand the environmental and agronomic effects addressed by BMPs.

Section 403.067, F.S., authorizes and directs FDACS to develop and adopt by rule BMPs that will help Florida's agricultural industry achieve the pollution reductions allocated in BMAPs. To date, FDACS OAWP has adopted 11 commodity specific BMP manuals by rule, covering cattle, citrus, equine, dairy, nurseries, poultry, sod, small farms and specialty livestock, specialty fruit and nut, vegetable and agronomic crops, and wildlife operations. All OAWP BMP manuals are periodically revised, updated, and subsequently reviewed and preliminarily verified by DEP before re-adoption. BMPs serve as part of a multidisciplinary approach to water resource restoration and protection that includes public/private partnerships, landowner agreements and regional treatment technologies, which together form the comprehensive strategy needed to meet the goals established in BMAPs.

Enrolling in a FDACS BMP Program

To initially enroll in the FDACS BMP Program, agricultural landowners and producers must meet with a FDACS representative on site to determine the appropriate practices that are applicable to their operation(s) and to document the BMPs on the NOI and BMP Checklist.

FDACS representatives consider site-specific factors when determining the applicability of BMPs including commodity type, topography, geology, location of production, soil type, field size, and type and sensitivity of the ecological resources in the surrounding areas. Producers collaborate with the FDACS representative to complete an NOI to implement the BMPs and the BMP Checklist from the applicable BMP manual.

Once the NOI and BMP Checklist are completed, signed, and submitted to OAWP, the producer is formally enrolled in the BMP Program. Because many agricultural operations are diverse and are engaged in the production of multiple commodities, a landowner may sign multiple NOIs for a single parcel. Producers must properly implement all applicable BMPs as soon as practicable, but no later than 18 months after completion and execution of the NOI and associated BMP Checklist.

Enrollment Prioritization

To address the greatest resource concerns, OAWP utilizes a phased approach based on commodity type, irrigation, and agricultural acreages, while ensuring that all entities identified as agriculture will be notified. Enrollment efforts have previously focused on enrolling parcels that are most impactful to water quality including parcels containing many agricultural acres, irrigated acres, or more intense agricultural land uses.

Implementation Verification

Section 403.067, F.S., requires FDACS to conduct an Implementation Verification (IV) site visit at least every two years to ensure that agricultural landowners and producers are properly implementing the applicable BMPs identified in the BMP Checklist. An IV site visit includes: review and collection of nutrient application records that producers must maintain to demonstrate compliance with the BMP Program; verification that all other applicable BMPs are being properly implemented; verification that any cost shared practices are being properly implemented; and identification of potential cost share practices, projects or other applicable BMPs not identified during enrollment. During the IV site visit, FDACS representatives also identify opportunities for achieving greater nutrient, irrigation, or water resource management efficiencies, including opportunities for water conservation. Procedures used to verify the implementation of agricultural BMPs are outlined in Rule 5M-1.008, F.A.C.

Nutrient Application Records

Enrolled landowners and producers are required to keep records on the total pounds of nitrogen (N) and phosphorus (P) fertilizer from all sources that are applied to their operations to comply with BMP program requirements, including AA bio-solids. Nutrient records from Class A or B biosolids applied in accordance with Chapter 62-640, F.A.C. are collected through the DEP permitting process as described in 5M-1.008(5). FDACS will collect information pertaining to these records for a two-year period identified when an IV site visit is scheduled. OAWP adopted

a Nutrient Application Record Form (NARF) (FDACS-04005, rev. 06/24, incorporated in 5M-1.008(4), F.A.C.), to help simplify the record keeping requirement. The form is available under Program Resources at https://www.fdacs.gov/Agriculture-Industry/Water/Agricultural-Best-Management-Practices. As these records relate to processes or methods of production, costs of production, profits, other financial information, fertilizer application information collected during an IV site visit is considered confidential and may be exempt from public records under Chapters 812 and 815, F.S., and section 403.067, F.S. In accordance with subsection 403.067(7)(c)5., F.S., FDACS is required to provide DEP the nutrient application records.

Compliance Enforcement

If multiple efforts to contact agricultural landowners and producers within BMAPs about enrollment in the BMP Program are unsuccessful or if the landowner or producer chooses not to enroll in the BMP Program FDACS refers them to DEP for enforcement action per section 403.067(7)(b), F.S.

If a producer is enrolled in the FDACS BMP program and the producer chooses not to properly implement the applicable BMPs, FDACS representatives provide the landowner or producer with a list of corrective measures and the timeframes within which they must be implemented. If a landowner or producer does not cooperate with FDACS to identify or implement corrective or remedial measures, or refuses an IV site visit, FDACS refers them to DEP for enforcement action after attempts at corrective and remedial action are exhausted. Chapter 5M-1, F.A.C. outlines the process to ensure compliance with the BMP Program requirements.

Equivalent Programs

Enrollees operating under one of the Equivalent Programs listed in Rule 5M-1.001(7), F.A.C., are required to complete an NOI and meet the other requirements for Equivalent Programs specified in Rule Chapter 5M-1, F.A.C. Compliance with BMPs on the area(s) of the NOI property subject to the Equivalent Program instrument is demonstrated by fulfilling the requirements of Rule 5M-1.008(8), F.A.C. An enrollee under an Equivalent Program listed in Rule 5M-1.001(7)(a)-(b), F.A.C., that is not required to complete a BMP Checklist is not subject to IV site visits. For Enrollees under an Equivalent Program listed in Rule 5M-1.001(7)(a)-(b), F.A.C., implementation verification shall be undertaken by the agency that issued the permit pursuant to its statutory and/or rule authority.

Other FDACS BMP Programs

FDACS implements other regulatory programs that help minimize nonpoint source pollution from agricultural activities.

Aquaculture

The FDACS Division of Aquaculture develops and enforces regulations governing the commercial aquaculture industry in Florida. Chapter 597, F.S., Florida Aquaculture Policy Act, requires Floridians who engage in commercial aquaculture to annually acquire an Aquaculture Certificate of Registration and implement all applicable Aquaculture Best Management Practices listed in Rule Chapter 5L-3.004, F.A.C. Facilities with certain production and discharge rates also require an NPDES permit from DEP. The Aquaculture BMPs were last updated by rule in November 2023.

FDACS Division of Aquaculture conducts annual site visits at certified facilities to confirm compliance with BMPs. These include management practices in areas of construction, containment, shrimp culture, sturgeon culture, shellfish culture, live rock culture, aquatic plants, including fertilizer application, and health management. For more information about FDACS Division of Aquaculture and Aquaculture BMPs go to https://www.fdacs.gov/Divisions-Offices/Aquaculture.

Within the Lower St. Johns River Main Stem BMAP, there is one aquaculture facility under certification with the FDACS Division of Aquaculture as of November 2024. As with agricultural land use in Florida, aquaculture facilities are frequently in and out of production. The facilities being provided may no longer be in operation and/or there may be new companies in different parts of the basin by the next BMAP iteration.

Forestry

The FDACS FFS develops, implements (through education and training), and monitors Silviculture BMPs in Florida. Silviculture BMPs are applicable to *bona-fide* ongoing silviculture operations and are not intended for use during tree removal or land clearing operations that are associated with a land-use change to a non-forestry objective. The FFS Silviculture BMP Manual is adopted under Chapter 5I-6.002 F.A.C. and was last updated in 2008. FFS is currently in the process of updating the manual with guidance from the FDACS Silviculture BMP Technical Advisory Council. The current manual is composed of fourteen BMP categories covering many aspects of silviculture operations including timber harvesting, site preparation, forest roads, stream and wetland crossings, and forest fertilization. The primary objectives of Silviculture BMPs are to minimize the risks to Florida's water resources from silviculture-related sources of nonpoint source pollution and maintain overall ecosystem integrity. Section 403.067, F.S., provides silviculture practitioners implementing Silviculture BMPs a presumption of compliance with state water quality standards for the pollutants addressed by the BMPs.

The FFS Silviculture BMP implementation monitoring program was initiated in 1981 and follows the criteria which have been established for state forest agencies in the southeastern United States by the Southern Group of State Foresters. Monitoring surveys are conducted biennially on a random sample of recently conducted silviculture operations throughout Florida

with the goal of determining the level of implementation and compliance with Silviculture BMPs. For the period of record (1981 to 2023), Florida's statewide Silviculture BMP compliance rates range from 84% (1985) to 99.7% (2019) and have shown an overall average compliance rate above 98% since 2005. For more information about Silviculture BMPs and to download a copy of the latest FFS Silviculture BMP Implementation Survey Report go to https://www.fdacs.gov/bmps.

Agricultural Land Use

Agricultural Land Use in BMAPs

Land use data are helpful as a starting point for estimating agricultural acreage, determining agricultural nonpoint source loads, and developing strategies to reduce those loads in a BMAP area, but there are inherent limitations in the available data. Agriculture acreages fluctuate when volatile economic markets for certain agricultural commodities provide incentive for crops to change at a fast pace, properties are sold, leases are terminated, production areas decrease, or production ceases, among other reasons. Florida's recent population growth has also resulted in accelerated land use changes statewide, some of which include transitioning agricultural or fallow agricultural lands to developed land uses. The dynamic nature of Florida's agricultural industry creates challenges with comparing agricultural acres from year to year.

When developing a BMAP, agricultural nonpoint source loading is estimated using a broad methodology based on statewide land use data. Oftentimes, this results in properties being designated as agricultural nonpoint pollution sources and creates an obligation for these properties to enroll in the FDACS BMP Program when they may be better addressed under other programs more applicable to the practices occurring on those properties. Examples of these properties include: rural residential/homesteads, ranchettes, or single-family homes with accessory structures for livestock or groves that serve the needs of those living on the property. Continued identification of these properties as agricultural nonpoint sources limits the ability to reliably direct programmatic resources to meet water quality restoration goals.

FDACS uses the parcel-level polygon ALG data that is part of the FSAID Geodatabase to estimate agricultural acreages statewide. FSAID provides acreages and specific crop types of irrigated and non-irrigated agricultural lands statewide. FSAID is updated annually based on WMD land use data, county property appraiser data, OAWP BMP enrollment data, U.S. Department of Agriculture data for agriculture, such as the Cropland Data Layer and Census of Agriculture, FDACS Division of Plant Industry citrus data, as well as field verification performed by the U.S. Geological Survey, WMDs, and OAWP. As the FSAID is detailed and updated on an annual basis, it provides a reliable characterization of agricultural land uses that accounts for the fast-growing population and resultant land use changes taking place statewide. The FSAID also provides FDACS a clearer picture of agriculture's impact on the landscape and

consistent method to better track, direct, and assess BMP implementation, cost share projects, and regional projects.

Table F-1 shows a comparison of the agricultural acres within the BMAP boundary compared to the total acreage. **Figure F-1** shows the percentage of agricultural land use within the Lower St. Johns River Main Stem BMAP, determined by comparing the FSAID 11 ALG and total acreage of the BMAP boundary. Understanding what proportion of a BMAP is comprised of agriculture provides insight as to the potential contribution of agricultural nonpoint sources.

Table F-1. Agricultural versus non-agricultural acreages

Acreage Type	Acres
Non-agricultural acres	1,658,584
Agricultural acres	56,250

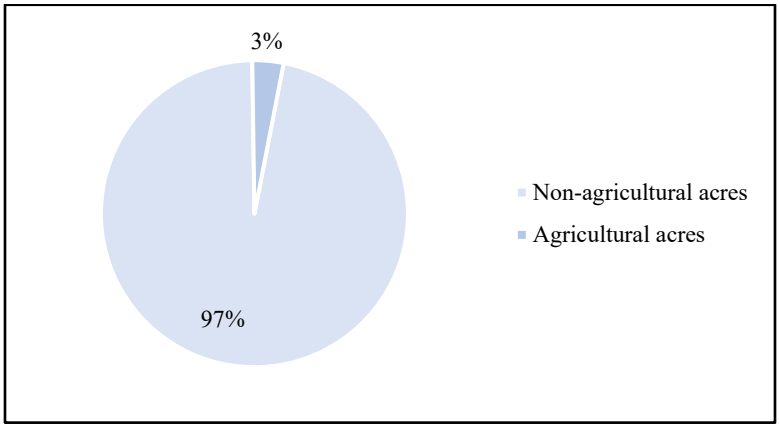

Figure F-1. Relative agricultural land uses in the Lower St. Johns River Main Stem BMAP

FDACS BMP Program Metrics

Enrollment Delineation and BMAP Metrics

BMP enrollments are delineated in GIS using county property appraiser parcels. In terms of NOIs, enrolled acreage fluctuates when parcels are sold, when leases end or change hands, or when production areas downsize or production ceases, among other reasons. Nonproduction areas such as forest, roads, urban structures, and water features are often included within the parcel boundaries. Conversely, agricultural lands in the FSAID ALG only include areas identified as agriculture. To estimate the agricultural acres enrolled in the BMP program, OAWP overlays the FSAID ALG and BMP enrollment data within GIS to calculate the acres of agricultural land in an enrolled parcel.

Summary Tables

Table F-2. Agricultural lands enrolled in the Lower St. Johns River Main Stem BMAP by BMP Program commodity

Commodity	Agricultural Acres Enrolled
Citrus	14
Cow/Calf	8,206
Equine	18
Fruit/Nut	188
Multiple Commodities	4,582
Nursery	110
Row/Field Crop	22,352
Sod	1,584
Total	**37,053 (66%)**

Table F-3. Agricultural acres enrolled by commodity and crediting location

BMP Program Commodity	Freshwater Section	Marine Section
Citrus	14	0
Cow/Calf	6,865	1,341
Equine	12	6
Fruit/Nut	182	6
Multiple Commodities	3,812	770
Nursery	35	75
Row/Field Crop	21,616	737
Sod	1,584	0
Total	**34,119**	**2,935**
Percent of Agricultural Lands Enrolled in BMPs	**78%**	**24%**

As of July 2024, 66% of the agricultural acres in the Lower St. Johns River Main Stem BMAP area are enrolled in FDACS BMP program. **Table F-2** shows the acreages enrolled in the BMP Program by commodity. **Figure F-2** shows a map of the enrolled acres in the basin. It is important to note that producers often undertake the production of multiple commodities on their operations, resulting in the requirement to implement the applicable BMPs from more than one BMP manual. When this occurs, the acres enrolled under more than one BMP manual are classified as "multiple commodity" and not included in the individual commodity totals to prevent duplication.

Enrollment Map

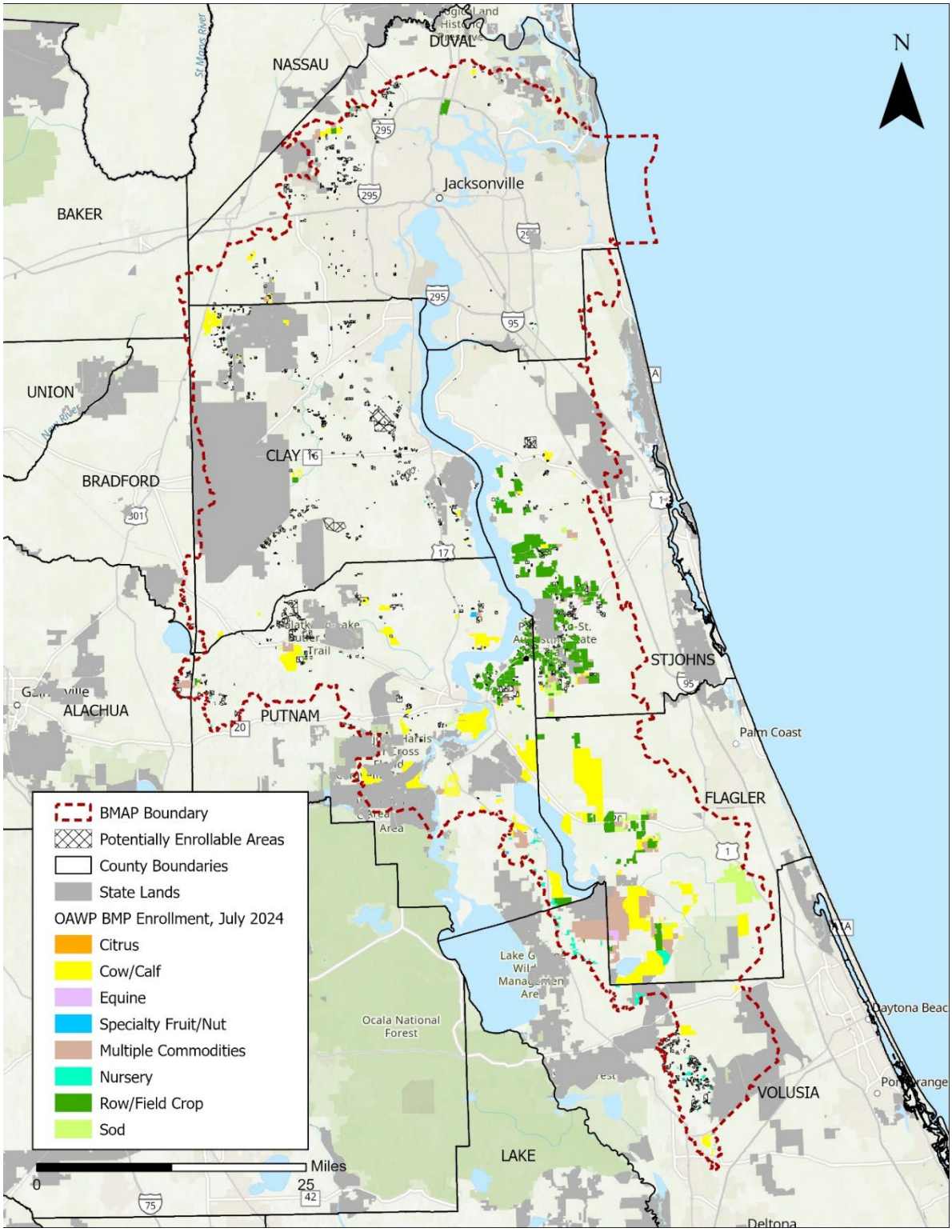

Figure F-2. Agricultural enrollment in the Lower St. Johns River Main Stem BMAP

Unenrolled Agricultural Lands

Oftentimes, there are lands initially identified as agriculture which, upon closer evaluation, raise questions as to whether there is agricultural activity and whether it is enrollable within the purview of OAWP. FDACS characterizes lands classified as agriculture in the FSAID ALG, but not currently enrolled in the FDACS BMP Program using property appraiser data such as parcel owner information, agricultural tax valuation for exemption purposes, other parcel land use details to determine whether the remaining lands are potentially enrollable. More information about the "Unenrolled agricultural lands" characterization analyses is available in FDACS ***Annual Status of Implementation of BMPs Report***.

The assessment of unenrolled agricultural lands at a more granular scale provides an indication of which areas are more likely (or unlikely) to have enrollable agricultural activities occurring on them. It also provides an estimate of the number of parcels and the associated agricultural acres deemed to be enrollable. The number of parcels is a useful proxy for the level of resource dedication needed to enroll the associated agricultural acres and where best to focus finite resources and staffing needs. It is often the case that much of the potentially enrollable acreage is encompassed within many smaller parcels which may require additional resources to enroll and require further evaluation, such as those that have agricultural activity intended solely for personal use ancillary to a residence, those that do not have an agricultural land use per the property appraiser, as well as parcels where there is no current activity to enroll.

Table F-4 shows the breakdown of agricultural lands within the Lower St. Johns River Main Stem BMAP based on the FSAID 11 and the results of the FDACS unenrolled agricultural lands characterization.

Table F-4. Agricultural lands in the Lower St. Johns River Main Stem BMAP

* Enrollment information current as of June 30, 2024.

Crediting Location	Agricultural Acres	Unenrolled - Unlikely Enrollable Acres	Agricultural Acres - Adjusted	Agricultural Acres Enrolled*
Freshwater	60,196	16,255	43,940	34,119
Marine	22,029	9,719	12,310	2,935

Potentially Enrollable Lands

There are 1,922 acres of potentially enrollable lands within the Lower St. Johns River Main Stem BMAP based on the assessment of unenrolled agricultural lands performed by FDACS. **Table F-5** shows the potentially enrollable acreages by crop type. **Figure F-3** shows the count of potentially enrollable parcels based on size classifications used by FDACS.

Table F-5. Potentially enrollable acres by crop type

Crop Type	Acres
Crops	1,881
Fallow	1,081
Fruit (Non-citrus)	1
Grazing Land	13,114
Hay	1,200
Livestock	1,334
Nursery	423
Open Lands	119
Sod	53
Total	**19,206**

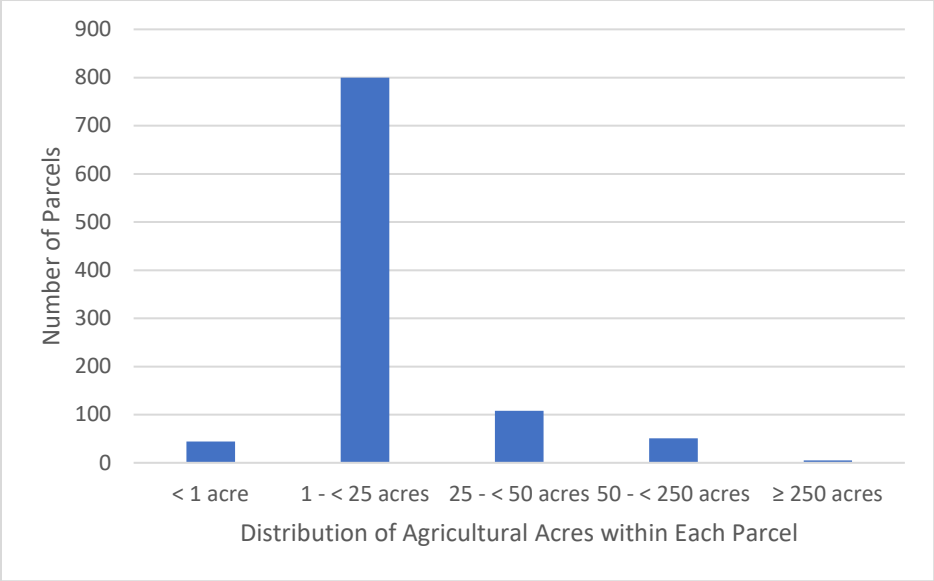

Figure F-3. Count of potentially enrollable parcels by size class

FDACS Cost Share

Enrollment in and proper implementation of BMPs makes a producer eligible for cost share for certain BMPs, other practices, and projects. The availability of cost share funds depends on annual appropriations by the Florida Legislature, and therefore, the amount available can vary each year. Cost share applications may be submitted once a producer has enrolled in the BMP Program and has been assigned an NOI number. Cost share practices are categorized as nutrient management, irrigation management, or water resource protection. BMPs, other practices, and projects eligible for cost share funding may include precision agriculture technologies, variable rate irrigation methods, water control structures, and tailwater recovery systems. OAWP seeks to leverage its cost share funding with other cost share programs offered by FDACS and other state

and federal agencies. The U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) offers funding through its Environmental Quality Incentives Program, and certain WMDs have agricultural cost share programs. Applicants are encouraged to use OAWP cost share in conjunction with other available conservation programs although funding cannot be duplicative.

Regional Projects

FDACS works cooperatively with stakeholders to reduce nutrient loading from agricultural lands in the Lower St. Johns Mainstem BMAP through the operation of a regional water treatment project. Regional projects may include hybrid wetland treatment technology (HWTT), floating aquatic vegetation treatment (FAVT), and dispersed water management (DWM) projects. **Table F-6** lists the project name, technology type, and reductions achieved by the regional projects within the Lower St. Johns Mainstem BMAP.

Table F-6. Average Reductions Achieved by Deep Creek HWTT

Project Name	Project Type	Crediting Location	Average TN reduction	Average TP reduction
Deep Creek HWTT	Hybrid Wetland Treatment Technology	Freshwater	14,702	5,056

Future Efforts

Outreach

To address resource concerns, FDACS continues enhancing coordination with producers, agencies, and stakeholders to increase enrollment in the BMP program. OAWP is sending correspondence to agricultural landowners within BMAPs that are not currently enrolled in the BMP program to increase enrollment rates and verify land uses where additional focus may be required to achieve resource protection. This effort is utilizing a phased approach and targeting priority land uses, and then evaluating the amount of agricultural acreage for the remaining unenrolled lands, while ensuring that all entities identified as agriculture will be notified. Additionally, OAWP continues to coordinate with industry groups and outreach partners to educate and inform agricultural producers about the BMP program.

Legacy Loads

Legacy loading can present an additional challenge to measuring progress in many areas of Florida with adopted BMAPs. Based on research, initial verification by DEP, and long-term trends in water quality in the BMAP area, it is expected that current efforts, such as BMP implementation, will continue to provide improvements in overall water quality despite the impacts from legacy loads.

While the implementation of BMPs will improve the water quality in the basin, it is not reasonable to assume that BMP implementation alone can overcome the issues of legacy loads,

conversion to more urban environments, and the effects of intense weather events. BMP implementation is one of several complex and integrated components in managing the water resources of a watershed.

Collaboration between DEP, FDACS, the water management districts, and other state agencies, as well as local governments, federal partners, and agricultural producers, is critical in identifying projects and programs, as well as locating funding opportunities to achieve allocations provided for under this BMAP. To improve water quality while retaining the benefits that agricultural production provides to local communities, wildlife enhancement, and the preservation of natural areas requires a commitment from all stakeholders to implementing protective measures in a way that maintains the viability of agricultural operations.