DRAFT

Wekiva River, Rock Springs Run, and Little Wekiva Canal Basin Management Action Plan

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

with participation from the
Wekiva River, Rock Springs Run, and Little Wekiva Canal Basin Stakeholders

April 2025

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Acknowledgements

This *2025 Wekiva River, Rock Springs Run, and Little Wekiva Canal 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 Wekiva River, Rock Springs Run, and Little Wekiva Canal stakeholders.

Florida Department of Environmental Protection
Alexis A. Lambert, Secretary

Table ES-1. Wekiva River, Rock Springs Run, and Little Wekiva Canal stakeholders

Type of Entity	Name
Responsible Entities	Agriculture City of Altamonte Springs City of Apopka City of Eustis City of Maitland City of Mount Dora City of Ocoee City of Orlando Lake County Orange County Seminole County
Responsible Agencies	County Health Departments Florida Department of Environmental Protection (DEP) Florida Department of Agriculture and Consumer Services (FDACS) Florida Department of Transportation (FDOT) – District 5 St. Johns River Water Management District (SJRWMD) Sunshine Water Services Turnpike Enterprise
Other Interested Stakeholders	Environmental Interests Florida Fish and Wildlife Conservation Commission Florida Native Plant Society Florida Onsite Wastewater Association (FOWA) Friends of Wekiva River Private Wastewater Treatment Facilities Residents/Homeowners Save the Manatee Club Septic System Contractors Wekiva River Aquatic Preserve

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

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AAM	Arithmetic Mean
ACE	Agricultural Cooperative Regional Elements
ALG	Agricultural Land Geodatabase
ARTF	Wekiva River, Rock Springs Run, and Little Wekiva Canal Task Force
AWT	Advanced Waste Treatment
BEBR	Bureau of Economic and Business Research
BMAP	Basin Management Action Plan
BMP	Best Management Practice
BOD	Biochemical Oxygen Demand
CAFO	Concentrated Animal Feeding Operation
CASTNET	Clean Air Status and Trends Network
CDM	Camp, Dresser, and McKee
Chl-a	Chlorophyll-a
CMAQ	Community Multiscale Air Quality
CWA	Clean Water Act
DEP	Florida Department of Environmental Protection
DMR	Discharge Monthly Report
DO	Dissolved Oxygen
EMC	Event Mean Concentration
EPA	Environmental Protection Agency
F.A.C.	Florida Administrative Code
FFS	Florida Forest Service
FIB	Fecal Indicator Bacteria
FLWMI	Florida Water Management Inventory
FNAI	Florida Natural Areas Inventory
F.S.	Florida Statutes
FDACS	Florida Department of Agriculture and Consumer Services
FDOH	Florida Department of Health
FDOT	Florida Department of Transportation
FLWMI	Florida Water Management Inventory
FNAI	Florida Natural Areas Inventory
FOWA	Florida Onsite Wastewater Association
FSAID	Florida Statewide Agricultural Irrigation Demand (geodatabase)
FWRA	Florida Watershed Restoration Act
GIS	Geographic Information System
H1	Hierarchy 1
HTAT	Hillsborough Tributary Assessment Team
L.O.F.	Laws of Florida
LA	Load Allocation
lbs/day	Pounds Per Day
lbs/yr	Pounds Per Year
LTAAM	Long-Term Average of Annual Means
mgd	Million Gallons Per Day

mg/L	Milligrams Per Liter
MS4	Municipal Separate Storm Sewer System
N/A	Not Applicable
NADP	National Atmospheric Deposition Program
NHD	National Hydrography Database
NMP	Nutrient Management Plan
NNC	Numeric Nutrient Criteria
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NTN	National Trends Network
OAWP	Office of Agricultural Water Policy (FDACS)
OSTDS	Onsite Sewage Treatment and Disposal System
POR	Period of Record
RAP	Reasonable Assurance Plan
ROC	Runoff Coefficient
SCI	Stream Condition Index
SSO	Sanitary Sewer Overflow
STAR	Statewide Annual Report
SWFWMD	Southwest Florida Water Management District
SWMM	Storm Water Management Model
SWMP	Stormwater Management Program
TAT	Tributaries Assessment Team
TBD	To Be Determined
TBEP	Tampa Bay Estuary Program
TDEP	Total Atmospheric Deposition Model
TMDL	Total Maximum Daily Load
TN	Total Nitrogen
TP	Total Phosphorus
UF–IFAS	University of Florida-Institute of Food and Agricultural Sciences
WBID	Waterbody Identification (number)
WIN	Florida Watershed Information Network Database
WLA	Wasteload Allocation
WMD	Water Management District
WMM	Watershed Management Model
WQPP	Water Quality Protection Plan
WWTF	Wastewater Treatment Facility

Executive Summary

Background

The Wekiva River originates in Wekiwa Springs State Park at the confluence of Wekiva Springs Run and Rock Springs Run. The river meanders for about 14 miles through Lake, Seminole, and Orange counties before entering the St. Johns River just downstream of Lake Monroe. Along the way, it receives discharges from major tributaries, including the Little Wekiva River and Blackwater Creek. The Little Wekiva Canal has an outfall to the Little Wekiva River approximately 14 miles upstream of the confluence with the Wekiva River. The area is shown in the map below (**Figure ES-1**).

The Wekiva River, Rock Springs Run, and the Little Wekiva Canal are designated by the state as Class III waters, meaning they must be suitable for recreation and must support the propagation and maintenance of a healthy, well-balanced population of fish and wildlife. Both the Wekiva River and Rock Springs Run, and the associated headsprings, are significant recreational resources for activities such as swimming, snorkeling, tubing, canoeing, boating, and fishing. The Wekiva River system (including the main stem of the Wekiva River and Rock Springs Run) is designated by the state as an Outstanding Florida Water (OFW), the Wekiva River and portions of its tributaries are designated as a state aquatic preserve worthy of special protection because of their natural attributes, and the river is also designated by the federal government as a wild and scenic river.

The dissolution of underlying limestone has shaped the basin's land forms and topography, and closed depressions and water-filled sinks drain much of the area. Lakes in the area are formed in solution depressions (sinkholes), and surface runoff flows to the nearest depression. Spring discharges from multiple vents provide most of the water to the Wekiva River, Rock Springs Run, the Little Wekiva River (north of State Road 434), and Blackwater Creek; however, local stormwater runoff is also a significant source of flow. There are no known springs discharging to the Little Wekiva Canal, and its flow comes from local runoff and shallow ground water inflows. The source of the water discharged by springs in the basin is the upper Floridan aquifer system, which is also the main source of water for potable supply in the area.

This BMAP targets restoration of the following segments with adopted total maximum daily loads (TMDLs)(**Table ES-2**). The Wekiva River and Rock Springs Run were verified as impaired in 2007 because of elevated total phosphorus (TP) and nitrate-nitrogen, based on evidence of an imbalance in aquatic flora. The Little Wekiva Canal was verified as impaired for dissolved oxygen (DO) and nutrients based on elevated levels of chlorophyll-*a* and was subsequently verified as impaired for DO attributable to elevated total nitrogen (TN) and biochemical oxygen demand (BOD). Although the Little Wekiva River and Blackwater Creek watersheds are not verified as impaired and do not have TMDLs, their contributing areas are included in the BMAP as contributing areas to the Wekiva River (main stem), nutrient reductions made in those watersheds will also benefit the Wekiva River (main stem). The list below shows the TMDL waterbody identification (WBID) numbers in the Wekiva River, Rock Springs Run, and Little Wekiva Canal Basin and names of the waterbodies:

Table ES-2. Wekiva River TMDLs

lbs/yr = Pounds per year; mg/L = Milligrams per liter.

WBID Number and Waterbody	Parameter	TMDL (lbs/yr)	Target Concentration (mg/L)	NPDES Stormwater Wasteload Allocation (% reduction)	TN/TP Load Allocation (% reduction)
2929A Blackwater Creek	Nitrate	N/A	0.286	52%	52% / 36%
2956 Wekiva River (upstream)	Nitrate	2,805	0.286	68%	68% /6 1%
2956A Wekiva River (downstream)	Nitrate	N/A	0.286	47%	47% / 57%
2956C Wekiwa Spring	Nitrate	N/A	0.286	79%	79% / 64%
Rock Spring	Nitrate	N/A	0.286	81%	81% / 23%
2967 Rock Springs Run	Nitrate	N/A	0.286	63%	63% / 58%
2987 Little Wekiva River	Nitrate	N/A	0.286	59%	59% / 78%
3004 Little Wekiva Canal	TN	N/A	N/A	45.2%	45.2% / N/A

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.

Section 403.067, Florida Statutes (F.S.), establishes an adaptive management process for BMAPs that continues until the TMDLs are achieved and maintained. This 2025 Wekiva River, Rock Springs Run, and Little Wekiva Canal BMAP incorporates new legislative requirements that are now in effect in the BMAP. This document is to be used as a supplement to the original 2015 BMAP. The phased BMAP approach allows for incrementally reducing 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.

This iteration of the Wekiva River, Rock Springs Run, and Little Wekiva Canal surface water BMAP will be implemented in addition to the Wekiwa Spring and Rock Springs BMAP. The groundwater contributing area for the Wekiwa Spring and Rock Springs BMAP does not fully encompass the surface water contributing area for Wekiva River, Rock Springs Run, and Little Wekiva Canal. The BMAP for surface water will remain in place for those areas that are not included in the Wekiwa Spring and Rock Springs contributing area and for any direct discharge activities into the surface waters. In cases where the requirements from two concurrent BMAPs may conflict, the Wekiwa Spring and Rock Springs BMAP will supersede the Wekiva River BMAP.

Required Reductions and Options to Achieve Reductions

The 2015 BMAP includes the methodology for estimating the baseline loads based on nonpoint source runoff and the estimated loads from spring discharges. The allocation approach from the 2015 BMAP remains in effect. Currently, 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 HSPF, Environmental Fluid Dynamics Code (EFDC), and Water Quality Analysis Simulation Program (WASP).

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 Wekiva River BMAP. After model completion, DEP will reevaluate and, if necessary, adopt another iteration of the Wekiva River 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. 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. Responsible entities and agencies should expect periodic adjustments to their reduction assignments during the BMAP process.

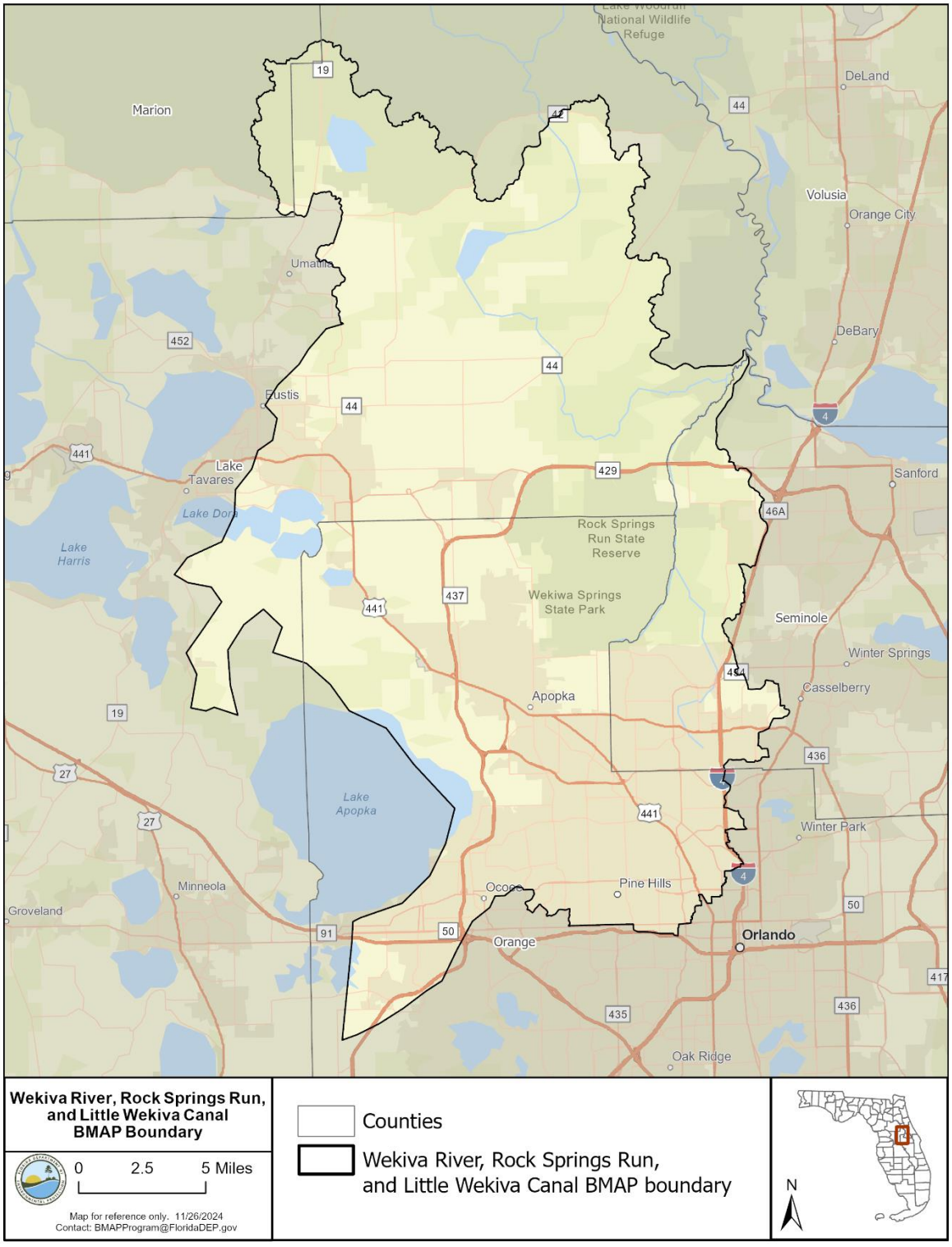

Figure ES-1. Wekiva River, Rock Springs Run, and Little Wekiva Canal BMAP area

Based on section 403.67 F.S., DEP is required to fairly and equitably allocate pollutant loads. DEP is currently working on an update to the St. Johns River Model to provide updated estimates on the load and wasteload nutrient sources to the Wekiva River, Rock Springs Run, and Little Wekiva Canal. Pending this new information, responsible entities are required to implement nutrient reduction projects, when identified, or identify and plan projects to reduce nutrient loads.

The new legislative requirements will address future growth of onsite sewage treatment and disposal systems (OSTDS) on parcels of one acre or less. Implementation of these OSTDS restrictions along with additional wastewater treatment requirements function as milestones to further protect and restore the waters of the Wekiva River, Rock Springs Run, and Little Wekiva Canal. If future evaluations determine these protections are not enough, the BMAP may expand the future growth protections, for example, by including OSTDS enhancement on larger parcels or may require remediation of existing conventional septic systems.

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

The Wekiva River originates in Wekiwa Springs State Park at the confluence of Wekiva Springs Run and Rock Springs Run. The river meanders for about 14 miles through Lake, Seminole, and Orange counties before entering the St. Johns River just downstream of Lake Monroe. Along the way, it receives discharges from major tributaries, including the Little Wekiva River and Blackwater Creek. The Little Wekiva Canal has an outfall to the Little Wekiva River approximately 14 miles upstream of the confluence with the Wekiva River. The area is shown in the map below (**Figure 1**). The Wekiva River, Rock Springs Run, and the Little Wekiva Canal BMAP was adopted in August 2015 to address the adopted TMDLs in the basin.

The Wekiva River, Rock Springs Run, and the Little Wekiva Canal are designated by the state as Class III waters, meaning they must be suitable for recreation and must support the propagation and maintenance of a healthy, well-balanced population of fish and wildlife. Both the Wekiva River and Rock Springs Run, and the associated headsprings, are significant recreational resources for activities such as swimming, snorkeling, tubing, canoeing, boating, and fishing. The Wekiva River system (including the main stem of the Wekiva River and Rock Springs Run) is designated by the state as an Outstanding Florida Water (OFW), the Wekiva River and portions of its tributaries are designated as a state aquatic preserve worthy of special protection because of their natural attributes, and the river is also designated by the federal government as a wild and scenic river.

The dissolution of underlying limestone has shaped the basin's land forms and topography, and closed depressions and water-filled sinks drain much of the area. Lakes in the area are formed in solution depressions (sinkholes), and surface runoff flows to the nearest depression. Spring discharges from multiple vents provide most of the water to the Wekiva River, Rock Springs Run, the Little Wekiva River (north of State Road 434), and Blackwater Creek; however, local stormwater runoff is also a significant source of flow. There are no known springs discharging to the Little Wekiva Canal, and its flow comes from local runoff and shallow ground water inflows. The source of the water discharged by springs in the basin is the upper Floridan aquifer system, which is also the main source of water for potable supply in the area.

This 2025 Wekiva River, Rock Springs Run, and Little Wekiva Canal BMAP incorporates new legislative requirements that are now in effect. This document is to be used as a supplement to the original 2015 BMAP. In 2028, DEP anticipates the completion of a model revision to the Wekiva River 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 Wekiva River BMAP. After model completion, DEP will reevaluate and, if necessary, adopt another iteration of the Wekiva River BMAP which may include updated pollutant loading information and 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 as needed to protect the Wekiva River, Rock

Springs Run, and Little Wekiva Canal. 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.

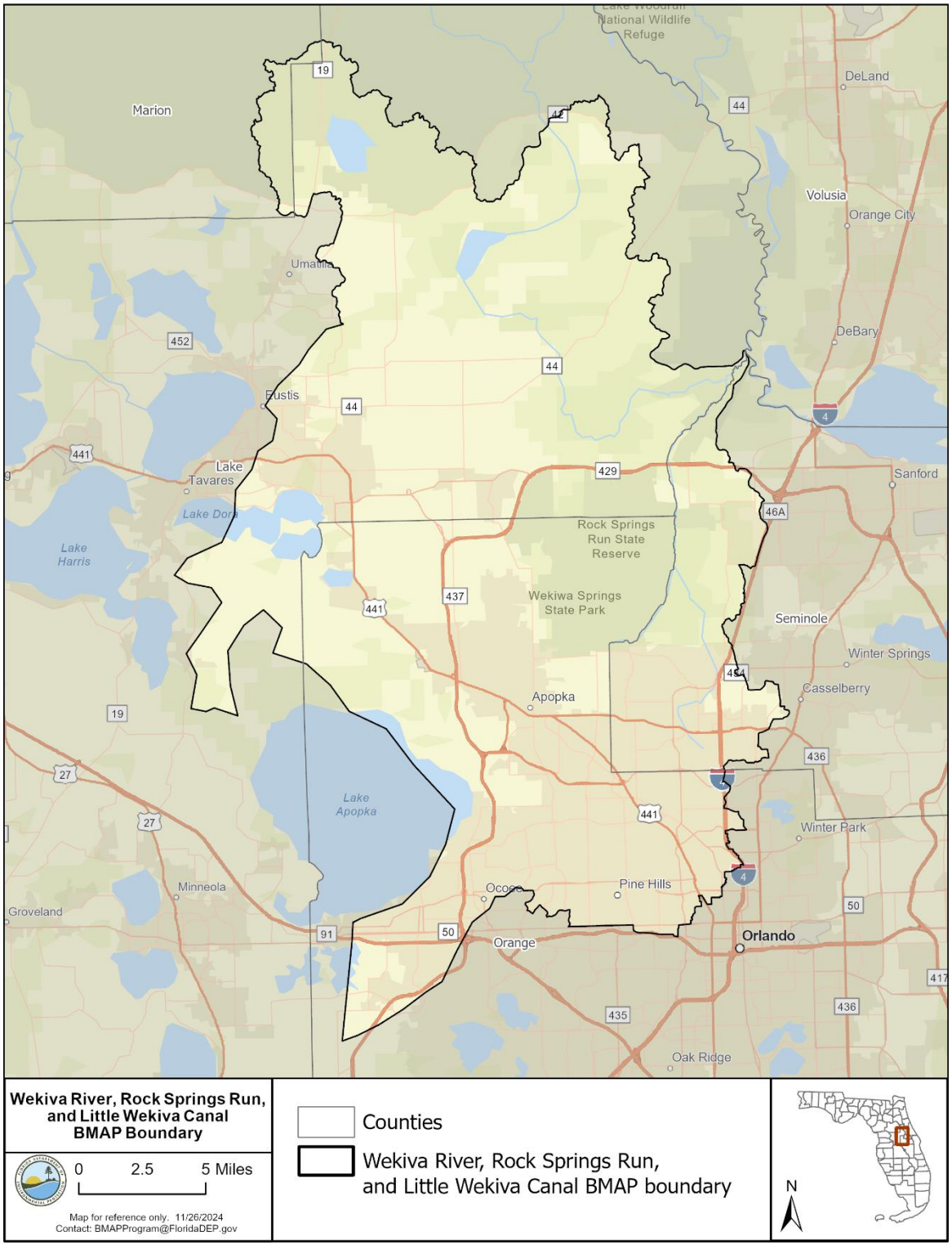

Figure 1. Wekiva River, Rock Springs Run, and Little Wekiva Canal BMAP area

1.1 Water Quality Standards and Total Maximum Daily Loads (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 Wekiva River, Rock Springs Run, and Little Wekiva Canal and its tributaries, 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."

1.2 Wekiva River, Rock Springs Run, and Little Wekiva Canal Basin TMDLs

A TMDL is the maximum amount of a specific pollutant that a waterbody can assimilate while maintaining its designated uses. The wasteload allocations (WLA) have two parts—a WLA for stormwater sources with National Pollutant Discharge Elimination System (NPDES) permits called municipal separate storm sewer system (MS4) permits as well as a WLA for wastewater sources. Additionally, the TMDLs include load allocations (LAs) for stormwater sources outside of the designated MS4 areas. The following TMDLs in **Table 2** are listed in the original 2015 BMAP.

Table 2. Wekiva River, Rock Springs Run, and Little Wekiva Canal TMDLs

lbs/yr = Pounds per year; mg/L = Milligrams per liter.
N/A = Not applicable.
* = Required reduction as calculated in Gao 2008.
Source: Bailey 2008, Table 6.1 and Gao 2008, Table 6.1.

WBID Number and Waterbody Name	Parameters	Target Concentration (mg/L)	Nitrate NPDES Wasteload Allocation (lbs/month)	TP NPDES Wasteload Allocation (lbs/month)	NPDES Stormwater Wasteload Allocation (% reduction)	Load Allocation (% reduction)
2929A Blackwater Creek*	Nitrate / TP	0.286 / 0.065	N/A	N/A	52% / 36%	52% / 36%
2956 Wekiva River (Upstream)	Nitrate / TP	0.286 / 0.065	2,805	40	68% / 61%	68% /6 1%
2956A Wekiva River (Downstream)	Nitrate / TP	0.286 / 0.065	N/A	191	47% / 57%	47% / 57%
2956C Wekiwa Spring	Nitrate / TP	0.286 / 0.065	N/A	N/A	79% / 64%	79% / 64%
Rock Spring	Nitrate / TP	0.286 / 0.065	N/A	N/A	81% / 23%	81% / 23%
2967 Rock Springs Run	Nitrate / TP	0.286 / 0.065	N/A	N/A	63% / 58%	63% / 58%
2987 Little Wekiva River*	Nitrate / TP	0.286 / 0.065	N/A	N/A	59% / 78%	59% / 78%
3004 Little Wekiva Canal	TN / TP	N/A	N/A	N/A	45.2% / N/A	45.2% / N/A

This BMAP provides for phased implementation under subparagraph 403.067(7)(a)1., F.S. As part of the continual adaptive management process.

1.3 Wekiva River, Rock Springs Run, and Little Wekiva Canal 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.

This iteration of the Wekiva River, Rock Springs Run, and Little Wekiva Canal BMAP will be implemented in addition to the Wekiwa Spring and Rock Springs BMAP. The groundwater contributing area for the Wekiwa Spring and Rock Springs BMAP does not fully encompass the surface water contributing area for Wekiva River, Rock Springs Run, and Little Wekiva Canal.

This BMAP to address surface water impairments will remain in place for those areas that are excluded from the Wekiwa Spring and Rock Springs contributing area and for any direct discharge activities into the surface waters. In cases where the requirements from two concurrent BMAPs may conflict, the Wekiwa Spring and Rock Springs BMAP will supersede the Wekiva River BMAP.

1.4 Stakeholder Involvement

Stakeholder involvement is critical to develop, gain support for, and secure commitments in a BMAP. 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 TMDLs. DEP invited stakeholders to participate in the BMAP development process and encouraged public participation and consensus to the greatest practicable extent. **Table ES-1** identifies the stakeholders who participated in the development of this BMAP.

Local stakeholders are a significant part of the process to update the Wekiva River, Rock Springs Run, and Little Wekiva Canal BMAP. 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 17, 2025, to present and receive public comments on the 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.

1.5 Considerations

The full implementation of this BMAP will be a long-term, adaptively managed process. More current information to characterize loading sources is vital to allocate specific reduction responsibilities in this basin. For example, updated information on agricultural land uses and the commodities being produced; updated land uses for urban and commercial types, given population growth in the area since the prior assessment; loadings from the springs that directly feed the Wekiva River, and the OSTDS loads are all important.

While some of the BMAP projects have been completed, more effort is needed to identify, plan, design, fund, and construct projects to reduce nutrient inputs. Regular follow-up and continued coordination and communication by the stakeholders will be essential to ensure the implementation of management strategies and assessment of incremental effects.

Section 2. Modeling and Nutrient Sources

2015 BMAP

The Wekiva River, Rock Springs Run, and Little Wekiva Canal BMAP was prepared in coordination with the Wekiva Parkway and Protection Act (WPPA) (Chapter 369, Part III, F.S.). The adopted TMDLs for the Wekiva River, Rock Springs Run, and the Little Wekiva Canal provided the allocations referenced in this BMAP. For nonpoint sources, these allocations were collectively applied throughout the entire Wekiva BMAP planning area.

2.1.1 Estimated Baseline Loads Based on Nonpoint Source Runoff

Estimates of nutrient loading via stormwater runoff were provided in the TMDL reports (Gao 2008; Bailey 2008). In the Wekiva River and Rock Springs Run nutrient TMDLs, stormwater runoff loadings were calculated using the Camp Dresser McKee (CDM) Watershed Management Model (WMM) (CDM 2005), the entire watershed areas for the waterbodies of interest, and the 2000 SJRWMD land use coverage. In the Little Wekiva Canal TMDL, land use categories and the corresponding event mean concentrations (EMCs) were calculated, and the Storm Water Management Model (SWMM), Version 5.0, was used to simulate the Little Wekiva Canal's water quantity and quality and to predict loads of TN and biochemical oxygen demand (BOD) (Bailey 2008).

To provide a more accurate estimate of nonpoint source discharges from runoff, the runoff-contributing areas were recalculated to exclude subbasin-scale high-recharge areas in which most or all of the water would infiltrate to ground water and not run off. The recalculation was also based on the most recent SJRWMD land use coverage, which was for 2009, rather than the 2000 land use used for the Wekiva River and Rock Springs Run TMDL report. *The runoff-based values in the Wekiva BMAP are to be used for planning purposes and to assist stakeholders.*

The BMAP planning area includes six subbasins contributing to the flow and nutrient loads of the Wekiva River. These subbasins represent the entire watershed of the major surface water features of the Wekiva River and its major tributaries (i.e., Blackwater Creek, Rock Springs Run, Little Wekiva River, and Little Wekiva Canal). Four of the six subbasins include WBIDs that are impaired and thus have TMDL requirements specified in the Wekiva River, Rock Springs Run, and Little Wekiva Canal TMDLs. All the subbasins include the contributing areas to the specific WBIDs identified in the TMDL documents.

The areal extent of the upstream and downstream Wekiva River subbasins aligns with WBIDs 2956 and 2956A, respectively. The Rock Springs Run subbasin includes the contributing runoff from WBID 2967 and its remaining watershed. The Little Wekiva Canal subbasin includes WBID 3004 and portions of WBID 3002 for purposes of the BMAP estimates. The Blackwater Creek and Little Wekiva River subbasins, which are tributary to the Wekiva River, are not impaired and therefore do not include a designated subbasin; however, surface water from these subbasins contributes to the impaired status of the downstream segment of the Wekiva River. For more details on the analysis, see **Section 3.1** in the *2015 Wekiva River, Rock Springs Run, and Little Wekiva Canal BMAP*.

Table 3 illustrates how the nutrient loads associated with runoff were calculated for the Wekiva BMAP. The subbasin-level calculation of runoff loading excluded portions of the subbasins that are high-recharge areas to the Floridan aquifer (12 to more than 20 inches per year, based on the SJRWMD 2005 recharge map) that would not contribute to runoff. Pollutant loading from these high-recharge areas (consisting of approximately 30% of the combined subbasin area) would be accounted for as part of the load from spring discharge. For more information about the subbasin areas that were considered as surface runoff loading, please see the *2015 Wekiva River, Rock Springs Run, and Little Wekiva Canal BMAP*.

Table 3 lists the calculated baseline loads from anthropogenic as well as natural sources of runoff-derived loads in the Little Wekiva Canal, Little Wekiva River, Rock Springs Run, Blackwater Creek, and upstream and downstream segments of the Wekiva River. The nitrate and TP loads from these subbasins listed in **Table 3** are lower than the baseline loads provided in the TMDL documents because the loadings in the table are based on loads generated from areas where runoff would most likely occur, not the entire subbasins. These loading estimates did not take into consideration attenuation during pollutant transport across the basin.

Table 3. Estimated nutrient baseline loads in the Wekiva BMAP planning area

Wekiva BMAP Planning Area Subbasins	Acres in Subbasin Contributing Runoff	Nitrate Baseline Load (lbs/yr)	TP Baseline Load (lbs.yr)	Typical Land Use
Blackwater Creek	96,582	108,108	55,190	Agriculture/golf courses had the highest nutrient loads.
Wekiva River (Upstream)	10,415	15,397	8,114	Wetlands had the highest nutrient loads; medium-density residential had the highest loads from anthropogenic sources.
Wekiva River (Downstream)	17,035	25,165	13,385	Low and medium-density residential had the highest loads from anthropogenic sources; wetland loads were significant.
Rock Springs Run	21,617	28,462	14,959	Wetlands had the highest nutrient loads; medium-density residential and agriculture/golf course had the highest loads from anthropogenic sources.
Little Wekiva River	14,914	45,318	24,692	Commercial and medium-density residential had the highest nutrient loads.
Little Wekiva Canal	23,093	68,793	37,747	Medium-density residential and commercial had the highest nutrient loads.
Totals	**183,656**	**291,243**	**154,087**	**N/A**

2.1.2 Estimated Loads From Spring Discharges

Nonpoint source loading to ground water is the pathway responsible for the nitrate and TP loading discharging from the spring vents. Nutrient loading associated with land use contributes the nutrient load in ground water and subsequently to the springs.

As previously noted, there are about 30 named springs in the Wekiva River and Rock Springs Run drainage basin. **Table 4** lists the named springs, their discharges, and nutrient concentrations. The TMDL report provided the magnitude, discharge rate, and nitrate and TP concentrations, loadings, and percent loading from these springs (*Tables 4.11* and *4.12* in Gao 2008). The top five springs (by discharge flow) are highlighted. The total nitrate and TP loadings from all 30 springs are 511,433 and 78,952 lbs/yr, respectively (**Table 5**). Total nitrate loading from the springs is greater than the loading estimated from surface runoff (383,959 lbs/yr per *Table 4.13* in Gao 2008). The TP loading from the springs is significant compared with the TP loading from surface water (208,819 lbs/yr per *Table 4.13* in Gao 2008). The springs are very significant sources of nutrients to the Wekiva River system.

Table 4. Median nutrient concentrations and discharge in springs

N/A = Not available.

Source: SJRWMD. Top five springs by loading are listed in boldface type.

Subbasin	Spring Name	Discharge (cfs)	NO3 + NO2 (mg/L)	TP (mg/L)
Blackwater Creek	Blackwater Spring	1.4	N/A	N/A
Blackwater Creek	Blue Algae Boil	0.14	0.03	0.05
Blackwater Creek	Blueberry Spring	0.07	0.03	N/A
Blackwater Creek	Boulder Spring	0.23	0.08	0.18
Blackwater Creek	Camp La-No-Che Spring	0.7	N/A	0.06
Blackwater Creek	Cedar Spring	0.03	0.03	0.05
Blackwater Creek	Droty Spring	0.65	0.03	0.08
Blackwater Creek	Green Algae Boil	0.14	N/A	0.06
Blackwater Creek	Markee Spring	0.24	0.02	0.06
Blackwater Creek	Messant Spring	14.7	0.51	0.04
Blackwater Creek	Mocassin Spring	0.29	0.01	N/A
Blackwater Creek	Palm Spring	0.68	0.01	0.02
Blackwater Creek	**Seminole Spring**	**35.2**	**1.33**	**0.08**
Blackwater Creek	Sharks Tooth Spring	0.18	0.15	0.06
Blackwater Creek	Snail Springs	0.26	0.02	N/A
Blackwater Creek	Trickle Spring	N/A	N/A	N/A
Little Wekiva River	Ginger Ale Springs	0.11	N/A	0.04
Little Wekiva River	Palm Spring	6.61	0.68	0.12
Little Wekiva River	Pegasus Spring	2.8	0.54	0.22
Little Wekiva River	**Sanlando Spring**	**19.65**	**0.62**	**0.18**
Little Wekiva River	**Starbuck Springs**	**13.78**	**0.41**	**0.15**
Rock Springs Run	**Rock Spring**	**57.58**	**1.41**	**0.08**
Rock Springs Run	Sulphur Spring	0.74	N/A	0.03
Rock Springs Run	Tram Springs	N/A	N/A	N/A
Wekiva River	Barrel Spring	0.25	0.05	N/A
Wekiva River	Island Spring	8.29	0.24	0.11
Wekiva River	Miami Springs	5.13	0.16	0.11
Wekiva River	Nova Spring	8.52	0.12	0.1
Wekiva River	**Wekiwa Spring**	**66.68**	**1.21**	**0.14**
Wekiva River	Witherington Spring	4.7	0.38	N/A

2.1.3 Combined Loading Estimates

Many studies have used a variety of methodologies to estimate the baseline load of nutrients to the Wekiva River system, including the Wekiva Basin nutrient TMDLs (Gao 2008; Bailey 2008), MACTEC (2010), and others. All efforts have tried to characterize the loadings and sources with an end goal of controlling the sources and reducing the loads of nutrients to the system. The baseline nutrient loads presented here were calculated to provide some scale to the load reduction efforts by the responsible entities. **Table 5** summarizes the baseline loadings from runoff and spring discharge in the planning area.

Table 5. Summary of estimated nitrate and TP loads from runoff and spring discharge in the Wekiva BMAP planning area

[1] Calculated based on Gao (2008) using the WMM and updated by R. Hicks in 2013 using SJRWMD 2009 land uses and excluding high-recharge areas.
[2] Calculated in Gao (2008) using spring discharge and concentration.

Source Category	Subbasin	Nitrate Load (lbs/yr)	TP Load (lbs/yr)
Baseline Runoff[1]	Blackwater Creek	108,108	55,190
Baseline Runoff[1]	Little Wekiva Canal	68,793	37,747
Baseline Runoff	Little Wekiva River	45,318	24,692
Baseline Runoff[1]	Rock Springs Run	28,462	14,959
Baseline Runoff[1]	(Upstream) Wekiva River	15,397	8,114
Baseline Runoff[1]	(Downstream) Wekiva River	25,165	13,385
Total Baseline Runoff	**N/A**	**291,243**	**154,087**
Total Spring Discharge[2]	**N/A**	**511,433**	**78,952**
Total Combined Baseline Runoff and Spring Discharge Load	**N/A**	**802,676**	**233,039**

Section 3. Tracking Implementation

3.1 Allocations and 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 allocation approach from the 2015 BMAP remains in effect, pending updated loading and jurisdictional information through the St. Johns River Model update, which is underway. In the interim, responsible entities are expected to submit their nutrient reduction projects annually during the statewide annual reporting (STAR) process. Additionally, entities are expected to show efforts to identify, plan, and fund additional projects and report these efforts in the STAR, with the expectation that they will be assigned more specific allocations based on the updated model.

All responsible entities must report to DEP on how they are planning and implementing the new statutory requirements related to nutrient loads in the BMAP area. If any lead entity is unable to submit a sufficient list of eligible management strategies to demonstrate they are implementing the statutory requirements, additional project identification efforts are required to be submitted by January 14, 2026, to remain in compliance with the BMAP. The project description and estimated completion date for any such project identification effort must be provided and reflect the urgency of defining, funding, and implementing projects to meet the upcoming and future BMAP milestones. 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**. Responsible entities must submit a sufficient list of projects and management strategies to DEP no later than January 14, 2026, to be compliant with the upcoming BMAP milestone, which is 2030, or be subject to further department enforcement. DEP will notify entities by March 31, 2026, if their list is deemed inadequate.

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

Section 4. Management Actions

Management actions refer to the suite of structural and nonstructural activities that the Wekiva River, Rock Springs Run, and Little Wekiva Canal BMAP entities will be conducting to achieve their required TP and TN reductions. The projects submitted by the entities to achieve the TMDLs and planning efforts to identify additional projects 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 current and future allocations. However, this list of projects is meant to be flexible and allow for changes over time, provided that the required reductions are 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 OSTDS also known as septic systems) and wastewater treatment facility (WWTF) sources within BMAPs.

4.1.1 OSTDS

Beginning July 1, 2023, section 403.067, F.S., prohibits new conventional 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 23-0126. Based on data from the Florida Water Management Inventory (FLWMI) database, there are approximately 21,043 known and likely septic systems located throughout the 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 6**. The WWTFs located in the Wekiva River, Rock Springs Run, and Little Wekiva Canal BMAP are shown in **Figure** 2**.**

Table 6. Facilities with domestic wastewater disposal sites within the Wekiva River BMAP boundary

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

Facility Name	Facility ID
Astatula Elementary	FLA179698
Baywood WWTF	FLA010525
Boggy Creek Gang Camp	FLA016155
Camp La No Che WWTF	FLA010638
Central Florida Bible Camp WWTF	FLA010566
Chloe WWTF	FLA010594
City of Mt Dora James Snell - WWTF #2	FLA268542
City of Wildwood WWTF	FLA013497
Don Monn Ranch	FLA697737
Easter Seals Camp Challenge	FLA010577
Eustis Bates Avenue WWTF	FLA010507
Eustis-Eastern WWTF	FLA295965
Fairways At Mt Plymouth	FLA186481
Lakeview Terrace Retirement Services	FLA010597
Meadows of Astatula WWTF	FLA010527
Oak Springs WWTF	FLA010629
Round Lake Elementary School WWTF	FLA185868
Seminole County - Yankee Lake WWTF	FLA042625
Seminole Springs Elementary School WWTF	FLA010498
Venetian Village WWTF	FLA010567
Wekiva Falls WWTF	FLA010541

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.

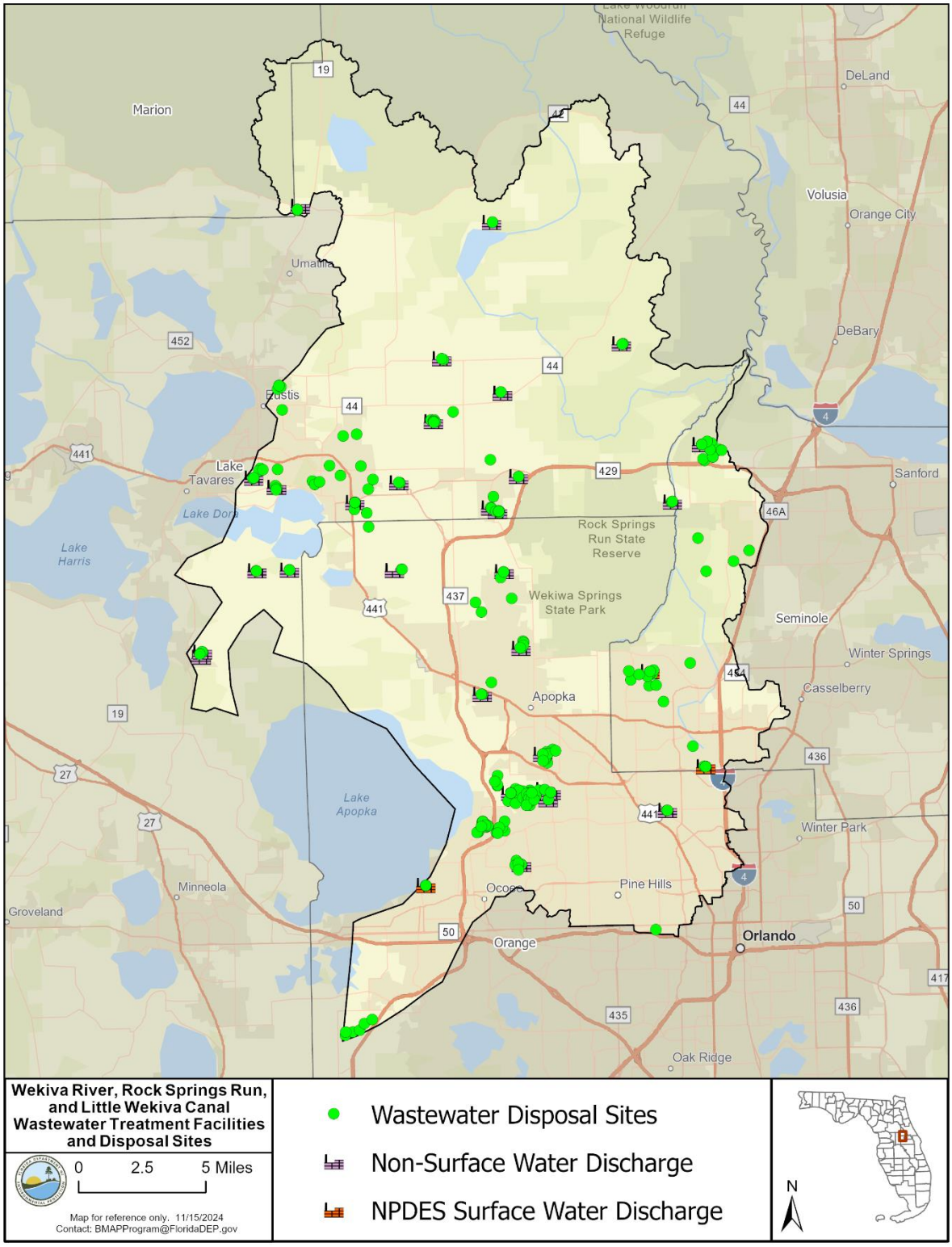

Figure 2. Wastewater disposal sites in the BMAP area

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 RAP after July 1, 2023, have 10 years to provide AWT after such determination or adoption.

The nitrogen and phosphorus effluent limits set forth in **Table 7** and **Table 8** 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. If a facility has effluent disposal located in an area where the boundaries of a surface water and an OFS BMAP overlap, the more stringent nitrogen effluent limits apply. DEP will evaluate the need for more stringent nutrient effluent limits as appropriate.

Table 7. Nitrogen effluent limits for wastewater facilities

mgd = Million gallons per day. mg/L = Milligrams per liter.

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 8. Phosphorus effluent limits for wastewater facilities

mgd = Million gallons per day. mg/L = Milligrams per liter.

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	N/A	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. 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 advanced wastewater treatment (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., required 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 23-0126 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.

4.1.2.4 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.

4.1.2.5 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 source of nutrient loading to Wekiva River, Rock Springs Run, and Little Wekiva Canal 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.

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. Permit conditions are established to prevent impacts from the new development and do not contribute to water quality improvement.

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 (UF-IFAS Florida Golf Course Best Management Practices Program)

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 the reevaluation determines that the best management practice or other measure requires modification, DEP, a water management district, or FDACS, as appropriate, shall revise the rule to require implementation of the modified practice within a reasonable time period.

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 Wekiva River Basin 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 6,734 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 geographic information system (GIS) to calculate the acres of agricultural land in an enrolled parcel. **Table 9** summarizes agricultural lands within the Wekiva River, Rock Springs Run, and Little Wekiva Canal BMAP based on the FSAID 11 and the results of the FDACS unenrolled agricultural lands characterization.

Table 9. Agricultural lands in the Wekiva River, Rock Springs Run, and Little Wekiva Canal BMAP

* Enrollment information current as of June 30, 2024.

Crediting Location	Agricultural Acres	Unenrolled - Unlikely Enrollable Acres	Agricultural Acres - Adjusted	Agricultural Acres Enrolled*
BMAP Wide	32,224	14,628	17,595	5,292

FDACS will seek further enrollment of producers in the BMAP area. As of June 30, 2024, in the Wekiva River, Rock Springs Run, and Little Wekiva Canal BMAP there are 26,099 agricultural acres enrolled in the BMP program. **Table 10** and **Figure** 3 summarize the acres enrolled in the BMP Program by commodity. Currently, no producers are conducting water quality monitoring in lieu of implementing BMPs.

Table 10. Agricultural lands enrolled in the Wekiva River, Rock Springs Run, and Little Wekiva Canal BMAP by BMP Program commodity

Commodity	Agricultural Acres Enrolled
Citrus	454
Cow/Calf	20,633
Dairy	225
Equine	3,759
Nursery	1,028
Total	**26,099 (30%)**

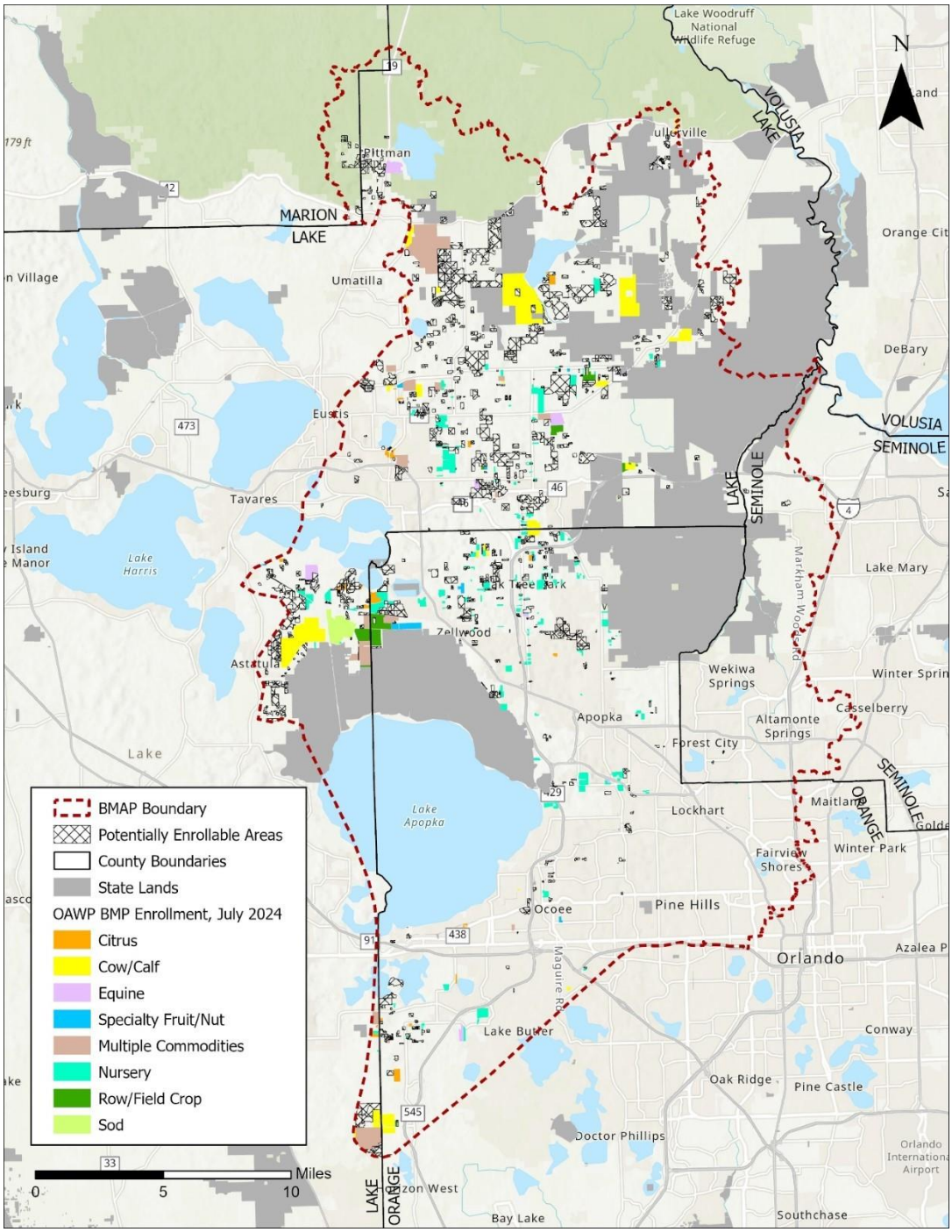

Figure 3. Agricultural BMP enrollment in the Wekiva River, Rock Springs Run, and Little Wekiva Canal BMAP

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 are contributors to the Wekiva River, Rock Springs Run, and Little Wekiva Canal 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 this 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 Wekiva River, Rock Springs Run, and Little Wekiva Canal BMAP update. DEP will then re-evaluate the need for ACE projects.

Most agricultural lands are engaged in row crop production. **Table 11** shows the three dominant crop types within the Wekiva River, Rock Springs Run, and Little Wekiva Canal BMAP.

Table 11. Dominant crop types in the Wekiva River, Rock Springs Run, and Little Wekiva Canal BMAP

Crop Type	Acres
Row Crops	14,420
Grazing Land	9,157
Vegetables	2,134

Targeting future funding toward precision agriculture, manure management, innovative technologies or soil health practices, including combining practices where applicable, to address nutrient impacts from row crop production on a regional scale could provide additional reductions.

FDACS will continue to work with key stakeholders in the BMAP area 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 12** identifies the adopted BMPs and BMP manuals relevant to this BMAP.

Table 12. 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
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

Agency	F.A.C. Chapter	Chapter Title
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

4.3Atmospheric 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 waterbodies 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

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. Currently, since the scale of the national and international programs to address air deposition loads are difficult to integrate into the much smaller scale of this water quality plan, there are no specific nitrogen or phosphorus reductions assigned to this source category. 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 considerations listed below. This 2025 BMAP includes a boundary expansion that extends the comprehensive plan requirements to additional local governments. Responsible entities who are newly subject to section 163.3177, F.S. have one year from BMAP adoption to submit their comprehensive plan amendments to address these 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 Florida Water Management Inventory (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 EMCs and runoff coefficients (ROCs) for low density residential, with a generalized rainfall for Central Florida from the *Evaluation of Current Stormwater Design within the State of Florida* report (Harper, 2007). 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 13** 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 13. 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
City of Altamonte Springs	1,961	1,092	1,681	3,141
City of Apopka	15,397	9,140	11,406	21,962
City of Eustis	1,003	642	1,168	2,217
City of Maitland	782	468	584	1,126
City of Mount Dora	1,820	1,165	2,051	3,886
City of Ocoee	7,473	4,469	7,003	13,594
City of Orlando	3,818	2,101	2,663	5,115
Lake County	26,872	17,203	38,730	74,277
Orange County	46,522	27,820	43,072	83,578
Seminole County	7,331	4,665	7,606	14,387
Total	**112,979**	**68,765**	**115,964**	**223,283**

Scenario 1 resulted in an additional basin load of 68,765 lbs/yr TN. Scenario 3 resulted in an additional basin load of 223,283 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 SWFWMD Pare available to agricultural producers within the Wekiva River, Rock Springs Run, and Little Wekiva Canal BMAP. FDACS provides 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 SWFWMD cost share program also provides outreach and funding for projects that provide nutrient and irrigation management benefits. FDACS and the SWFWMD 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.

Section 5. Monitoring Strategy

5.1 Monitoring Objectives

The Wekiva River, Rock Springs Run, and Little Wekiva Canal BMAP monitoring plan is described in the 2015 BMAP. The primary and secondary objectives of the monitoring strategy will remain the same for this 2025 BMAP. A map of the water quality monitoring network is shown in **Figure** 7**.**

An annual review of the DEP study list will be supplemental to the existing monitoring plan to allow for more comprehensive assessments of the nutrient related TMDL waters in the Wekiva River, Rock Springs Run, and Little Wekiva Canal BMAP.

Additional long-term monitoring stations will be identified to represent areas of the BMAP that are not represented in the current BMAP monitoring network.

5.2 Hotspot Analysis

To better prioritize and focus resources to achieve restoration most efficiently in the Wekiva river, Rock Springs Run, and Little Wekiva Canal 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** 4) 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** 4.

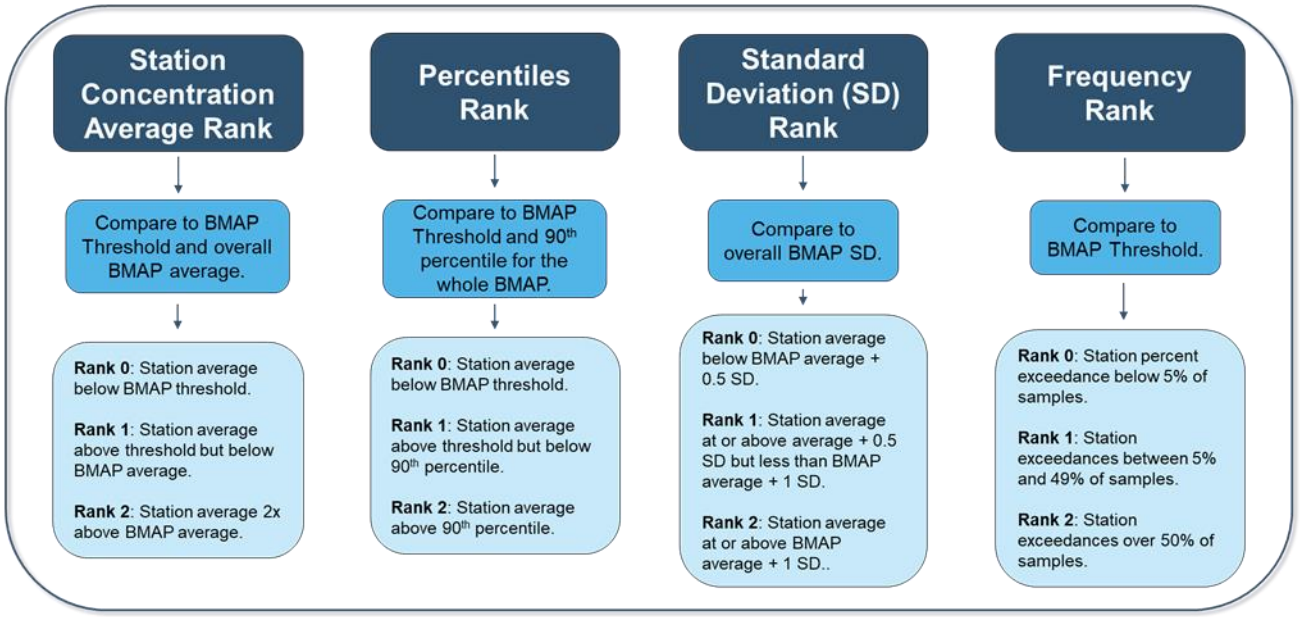

Figure 4. Summary of the hot spot analysis approach

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 5 and **Figure** 6 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 four samples per year and at least two years of data.

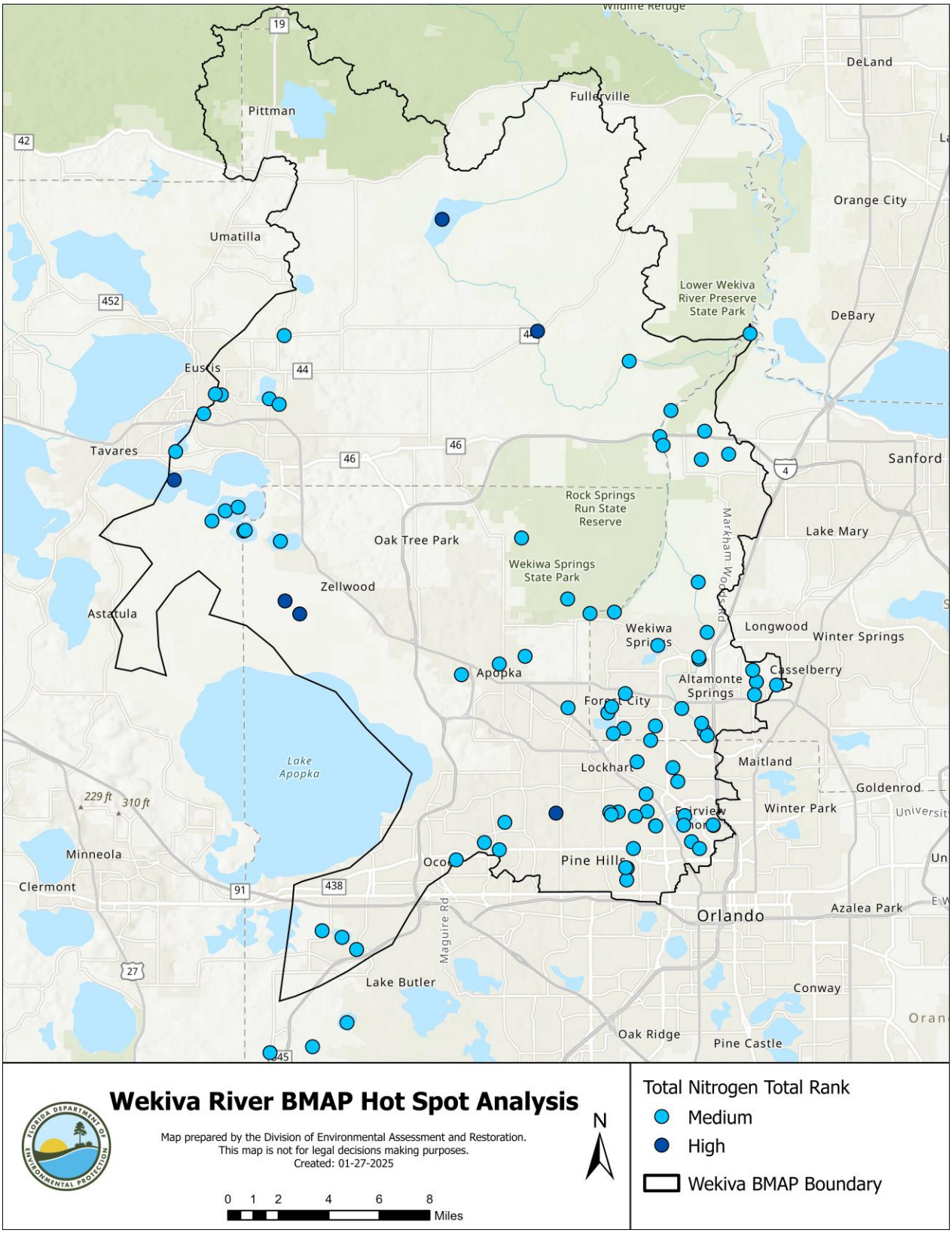

Figure 5. TN hot spot results

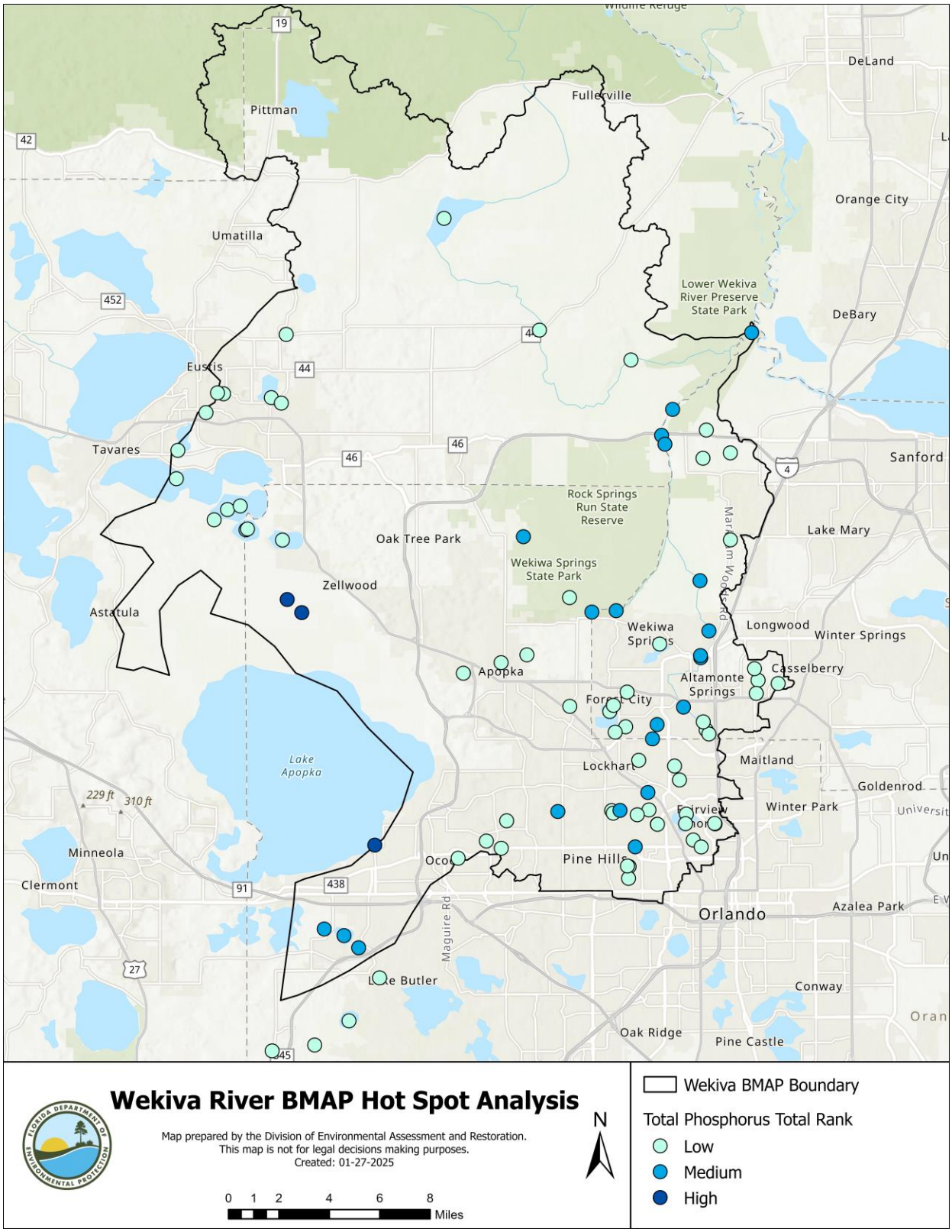

Figure 6. TP hot spot results

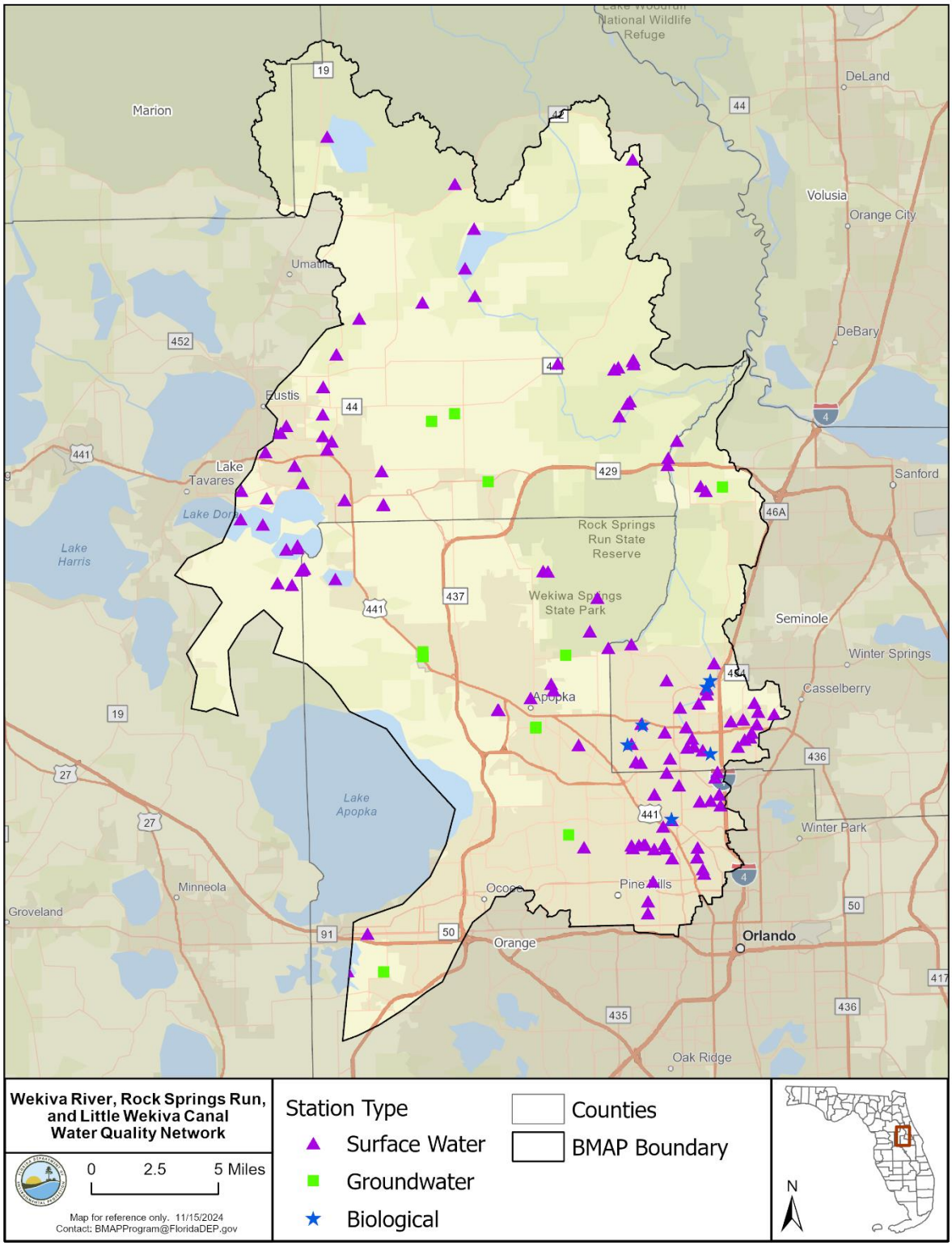

Figure 7. Wekiva River, Rock Springs Run, and Little Wekiva Canal BMAP water quality monitoring network

Section 6. Commitment to Plan Implementation

6.1 Adoption Process

The 2025 BMAP update is adopted by Secretarial Order and designates responsible entities.

6.2 Tracking Reductions of Nutrients

For BMAP compliance, responsible entities are expected to continue implementing and reporting on efforts.. Each entity responsible for implementing management actions to meet their upcoming 5-year milestone 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 Wekiva River 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. 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:
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
NELAC NELAP: https://floridadep.gov/dear/florida-dep-laboratory/content/nelap-certified-laboratory-search
SJRWMD 2002 Middle St. Johns River Basin Surface Water Improvement and Management (SWIM) Plan: https://www.sjrwmd.com/static/plans/2002_MSJRB_SWIM_Plan.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. Stakeholder projects

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	Cost Estimate	Funding Source	Funding Amount
4117	City of Altamonte Springs	NA	AS-06	Cracker Barrel Development	Redevelop commercial site and expand existing exfiltration system, raising level of treatment to current city standards.	Exfiltration Trench	Completed	2002	$0	NA	NA - $0.00
4118	City of Altamonte Springs	NA	AS-07	Fairfield Marriot Suites Development	Construct 92-room Fairfield Suites Hotel to replace commercial development constructed prior to stormwater development rules, raising level of water quality treatment on-site to meet city standards.	Off-line Retention BMPs	Completed	2000	$0	NA	NA - $0.00
4119	City of Altamonte Springs	NA	AS-08	Florida Hospital Development	Proposed development is for construction of 6,000± square-foot worship center, associated paved parking, and upgrades to existing stormwater management system to replace existing parking lot.	Stormwater System Upgrade	Completed	2005	$0	NA	NA - $0.00
4129	City of Altamonte Springs	NA	AS-10	Maitland Ave. Walgreens Development	Redevelop 1.46-acre commercial site and expand existing exfiltration system, raising level of treatment to current city standards.	Exfiltration Trench	Completed	2002	$0	NA	NA - $0.00
4121	City of Altamonte Springs	NA	AS-11	Panera Bread (State Road 434) Development	Demolish and remove existing impervious area for construction of new 4,479-square-foot restaurant; replace existing commercial building and residential areas; raise level of treatment to meet city standards.	Stormwater System Upgrade	Completed	2007	$0	NA	NA - $0.00
4114	City of Altamonte Springs	NA	AS-12	River Run South Pond 23 Improvement Project	Enlarge existing retention pond.	On-line Retention BMPs	Completed	2004	$100,000	City of Altamonte Springs	City of Altamonte Springs - $100,000.00
4123	City of Altamonte Springs	NA	AS-15a	Street Sweeping	Street sweeping occurs daily; total miles swept = 5,000 miles per year - Split between springshed and surface.	Street Sweeping	Ongoing	NA	$480,000	City of Altamonte Springs	City of Altamonte Springs - $480,000.00
4124	City of Altamonte Springs	NA	AS-18	Wekiva GeoPark Restoration Project	Conservation project - Restore 20 acres of wetlands in Wekiva Basin GeoPark; includes removal of logging roads.	Wetland Restoration	Completed	2000	$387,500	City of Altamonte Springs	City of Altamonte Springs - $387,500.00
4125	City of Altamonte Springs	NA	AS-19	Adventist Health System Headquarters Development	Remove five septic systems within 200 meters of receiving waterbody by connecting them to city sanitary system.	OSTDS Phase Out	Completed	2011	$0	NA	NA - $0.00

ProjID	Lead Entity	Partners	Project Number	Project Name	Project Description	Project Type	Project Status	Estimated Completion Date	Cost Estimate	Funding Source	Funding Amount
4126	City of Altamonte Springs	NA	AS-20	Spring St., Central St., Marker St., and Campello St. Septic System Removal	Remove seven septic systems within 200 meters of receiving waterbody by connecting them to city sanitary system.	OSTDS Phase Out	Completed	2011	$0	NA	NA - $0.00
4127	City of Altamonte Springs	NA	AS-21	640 Jasmine Ave. Septic System Removal	Remove one septic system within 200 meters of receiving waterbody by connecting it to city sanitary system.	OSTDS Phase Out	Completed	2011	$0	NA	NA - $0.00
4099	City of Altamonte Springs	NA	AS-22	Storage and Retrieval of Reclaimed Water in Cranes Roost	DEP permitted storage and retrieval of reclaimed water in Cranes Roost in 2002.	Stormwater Reuse	Completed	2002	$152,284	NA	NA - $0.00
4603	City of Altamonte Springs	Altamonte Springs; FDOT; SJRWMD; DEP; Apopka	AS-23	Altamonte Springs-FDOT Integrated Reuse and Stormwater Treatment (A-FIRST)	Collection, treatment, and reuse of stormwater from Cranes Roost Basin (including I4 widening) and eliminating two direct wastewater discharge points to Little Wekiva River.	Stormwater Reuse	Completed	2016	$12,500,000	DEP; FDOT; SJRWMD; City of Altamonte Springs	DEP - $1,500,000; FDOT - $4,500,000; SJRWMD - $3,500,000; City of Altamonte Springs - $3,000,000
4122	City of Altamonte Springs	NA	AS-24	Central Parkway Force Main Replacement from Lift Station (LS) 54 to Montgomery Rd.	Replace 1,230 linear feet of failing 8-inch force main.	WWTF Upgrade	Completed	2007	$245,133	City of Altamonte Springs	City of Altamonte Springs - $245,133.00
7581	City of Altamonte Springs	City of Altamonte Springs	AS-35a	Altamonte Springs Advanced Wastewater Treatment	Advanced wastewater treatment.	WWTF Nutrient Reduction	Underway	2033	$0	City of Altamonte Springs	City of Altamonte Springs - $0.00
7577	City of Altamonte Springs	Private Developer	AS-36a	Hampton Inn	The owner proposes to construct a new 78,151 sf six story hotel with amenities. This will include the demolition of three existing buildings and rerouting of existing utilities. A new stormwater treatment system will be constructed as part of the project.	Exfiltration Trench	Completed	2017	$0	Private Developer	Private Developer - $0.00
7570	City of Altamonte Springs	NA	AS-37a	McDonald's Rebuild	Demolish existing restaurant and rebuild with new infrastructure.	Exfiltration Trench	Completed	2012	$0	Private Developer	Private Developer - $0.00

ProjID	Lead Entity	Partners	Project Number	Project Name	Project Description	Project Type	Project Status	Estimated Completion Date	Cost Estimate	Funding Source	Funding Amount
7580	City of Altamonte Springs	City of Altamonte Springs	AS-38a	Westmonte Recreation Facility	Redevelopment to include two pre-treatment ponds and three on-line exfiltration trenches.	BMP Treatment Train	Completed	2020	$0	TBD	TBD - $0.00
7568	City of Altamonte Springs	Private Developer	AS-39a	City Furniture (CITF) Altamonte Springs	Proposed furniture store and office complex with accompanying exfiltration system and stormwater management system.	Exfiltration Trench	Completed	2022	$0	Private Developer	Private Developer - $0.00
7569	City of Altamonte Springs	Private Development	AS-40	Wendy's - Altamonte Spring	Redevelopment with stormwater treatment by exfiltration trench for Wendy's - Altamonte Springs, a 1.08 - acre project to be constructed as per plans received by the District on December 10, 2013.	Exfiltration Trench	Completed	2013	$0	Private Developer	Private Developer - $0.00
4116	City of Apopka	Sanlando Utilities	A-10	Sunshine Water Services Inc. Reuse to City	COA receives reclaimed water from Sunshine Water Services Inc (formally Sanlando), to reduce discharged into Little Wekiva, approximately 1 MGD; this will also reduce ground water withdrawal from City.	WWTF Diversion to Reuse	Completed	2013	$3,800,000	Sanlando Utilities	Sanlando Utilities - $3,800,000.00
4120	City of Eustis	Not provided	E-01	Cardinal Pond	Retention for area along Bates Ave. between Glover and Wall Sts.	On-line Retention BMPs	Completed	2015	$300,000	Not provided	Not provided - $0.00
4112	City of Eustis	Not provided	E-02	Downtown Master Stormwater Project	Wet detention for downtown area; 32.4-acre drainage basin; project will provide pollutant reduction of 64.5% TN and 40% TP; small eastern portion of new lines falls within springshed.	Wet Detention Pond	Completed	2015	$4,000,000	Not provided	Not provided - $0.00
4111	City of Eustis	SJRWMD	E-03	Eastern WWTP Expansion	The Eastern WWTP is currently being upgraded to 1.3 MGD in order to the serve new developments around the area.	WWTF Upgrade	Completed	2018	$7,500,000	City of Eustis; SJRWMD	City of Eustis - $0.00; SJRWMD - $2,475,000.00
4110	City of Eustis	Not provided	E-04	Stormwater Design Rules	Eustis code sec. 115-5. Eustis stormwater rules for new development are more stringent than state or SJRWMD rules.	Regulations, Ordinances, and Guidelines	Ongoing	NA	$0	NA	NA - $0.00
6364	City of Eustis	SJRWMD	E-05	Sprayfield Pump Station Rehab	Upgraded the existing Eastern spray field transfer pump station and electrical system. Included removal and replacement of 2 slice gates, discharge piping, electrical control panel improvements, new SCADA capabilities, and additional lighting.	Sanitary Sewer and Wastewater Treatment Facility (WWTF) Maintenance	Completed	2022	$532,848	City of Eustis	City of Eustis - $0.00
6365	City of Eustis	SJRWMD	E-06	Eastern WWTF Pond Liner Improvements	Replacement of Eastern WWTP reclaimed pond liners. Improvements included demolition of existing pond liner system, re-grading of pond	Sanitary Sewer and Wastewater Treatment Facility	Completed	2022	$1,510,690	City of Eustis	City of Eustis - $0.00

ProjID	Lead Entity	Partners	Project Number	Project Name	Project Description	Project Type	Project Status	Estimated Completion Date	Cost Estimate	Funding Source	Funding Amount
					surface, installation of new pond liner with vents and influent piping reconfiguration.	(WWTF) Maintenance					
7479	City of Eustis	NA	E-07	Eastern Area Force Main Extension	Construction of 1,000 feet of 10 inch force main and cover the cost difference of upsizing the force main to the Cardinal Ln (White Rose) Development Project. Approximately 2,400 feet of force main to be upsized.	Wastewater Service Area Expansion	Planned	TBD	$400,000	City of Eustis	City of Eustis - $400,000.00
4132	City of Maitland	NA	M-01	Street Sweeping	Streets are swept twice a month; roadway length swept = 23.86 miles per 2 weeks; total miles swept = 572.64 miles per year.	Street Sweeping	Ongoing	NA	$0	City of Maitland	City of Maitland - $0.00
4133	City of Mount Dora	Not provided	MD-01	5th and McDonald Parking Lot	Install three 36-inch diameter exfiltration pipes under new parking lot.	Exfiltration Trench	Completed	Prior to 2015	$0	Not provided	Not provided - $0.00
4134	City of Mount Dora	Not provided	MD-02	Highway 441 and Highway 46 StormTech Installation	Install StormTech system - 100 LF inline arrangement with "isolator rows" at each end for maintenance.	Exfiltration Trench	Completed	Prior to 2015	$0	Not provided	Not provided - $0.00
4135	City of Mount Dora	Not provided	MD-03	St. Johns St. StormTech Installation	Install StormTech system - 250 LF rows with "isolator row" for maintenance; regraded and paved road to improve drainage.	Exfiltration Trench	Completed	Prior to 2015	$18,000	Not provided	Not provided - $0.00
4145	City of Mount Dora	Not provided	MD-04	5th Ave. and Rossiter NSBB Installation	Install Suntree NSBB at 5th Ave. and Rossiter discharge into Lake Franklin, which is isolated spring-fed lake.	Baffle Boxes-Second Generation	Completed	Prior to 2015	$0	Not provided	Not provided - $0.00
4137	City of Mount Dora	Not provided	MD-05	1552 Hilltop Dr. Pipe Relining	Reline existing corrugated metal pipe (CMP) with high-density polyethylene (HDPE) to eliminate sinkhole formation and erosion into Lake Nettie.	Shoreline Stabilization	Completed	Prior to 2015	$13,000	Not provided	Not provided - $0.00
4130	City of Mount Dora	Not provided	MD-06	5th Ave. and McDonald St. Retention Pond Restoration	Remove accumulated sediment and debris from retention pond; install new inlet pipe to prevent erosion; replace erosion protection around inlet pipes.	BMP Cleanout	Completed	Prior to 2015	$3,000	Not provided	Not provided - $0.00
4139	City of Mount Dora	Not provided	MD-07	Donnelly St. and Lincoln Ave. Pipe Repair	Headwall broke away from pipe; water undermining Donnelly St.; installed drop structure and extend pipeline 140 linear feet.	Stormwater System Rehabilitation	Completed	Prior to 2015	$35,000	Not provided	Not provided - $0.00
4140	City of Mount Dora	Not provided	MD-08	Pine and Jackson Pipe Repair	Replace crushed section of 36x54 CMP to allow proper drainage of northeast area of city.	Stormwater System Rehabilitation	Completed	Prior to 2015	$3,000	Not provided	Not provided - $0.00
4141	City of Mount Dora	Not provided	MD-09	Street Sweeping	Streets are swept 15 times per year; length of streets swept = 69 miles; total miles swept = 1,035 miles per year.	Street Sweeping	Ongoing	NA	$0	Not provided	Not provided - $0.00

ProjID	Lead Entity	Partners	Project Number	Project Name	Project Description	Project Type	Project Status	Estimated Completion Date	Cost Estimate	Funding Source	Funding Amount
4142	City of Mount Dora	Not provided	MD-10	Lake John Rehabilitation	Lake John is part of greater Lake Gertrude Basin project; wetland was excavated to remove excess sediment and exotic vegetation; stepwise drainage reestablished between 3 ponds, and new vegetation planted.	Wetland Restoration	Completed	Prior to 2015	$1,200,000	Not provided	Not provided - $0.00
4143	City of Mount Dora	Not provided	MD-11	Community Development Block Grant	Extend 8-inch sewer main and install four laterals to connect four duplexes to city sewer on 11th Ave.; abandon existing septic systems.	Wastewater Service Area Expansion	Completed	Prior to 2015	$63,000	Not provided	Not provided - $0.00
4144	City of Mount Dora	Not provided	MD-12	Lift Station #10 Piping Replacement (Pine Ave.)	Replace 602 feet of 8-inch pipe and two manholes.	Sanitary Sewer and Wastewater Treatment Facility (WWTF) Maintenance	Completed	Prior to 2015	$0	Not provided	Not provided - $0.00
4147	City of Mount Dora	Not provided	MD-13	Pipe Lining 2007, 2008, 2009, and 2010	Pipe lining from 2007 through 2010.	Sanitary Sewer and Wastewater Treatment Facility (WWTF) Maintenance	Completed	Prior to 2015	$705,907	Not provided	Not provided - $0.00
4069	City of Mount Dora	Not provided	MD-14	Lift Stations #1, 2, 3, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 20, 22, 25, 27, 28, 30, 31, & 34 Piping	Cleaning and inspections of pipe.	Sanitary Sewer Inspections	Completed	Prior to 2015	$21,000	Not provided	Not provided - $0.00
4065	City of Mount Dora	LCWA; DEP	MD-15	7th Avenue Stormwater	Install concrete storm pipe as follows: 753 feet of 36", 466 feet of 30", 1,431 feet of 24", 425 feet of 18" and a stormwater treatment System.	Stormwater Treatment Areas (STAs)	Completed	2015	$1,500,000	DEP; LCWA; City of Mount Dora	DEP - $0; LCWA - $0; City of Mount Dora - $1,470,651
7601	City of Ocoee	WSP	O-68	Starke Lake / Lake Prima Vista EutroSORB*G Treatment	As part of the Starke Lake and Lake Prima Vista Nutrient Reduction Program under the 4e DEP Nutrient Reduction Program, the City plans to perform EutroSORB* G application to reduce the release of phosphorus from sediments.	In Waterbody - Alum Injection System	Planned	2025	$1,000,000	City of Ocoee	City of Ocoee - $317,963.52
4058	City of Orlando	NA	ORL-01a	Compliance Inspections of Private Stormwater Systems	Inspect annually all 233 commercial, single, and multifamily stormwater systems in basin for functionality and adherence to design standards with maximum pollutant removal efficiency.	Stormwater System Rehabilitation	Completed	2023	$0	City of Orlando	City of Orlando - $0.00
4057	City of Orlando	NA	ORL-02a	Stormwater System Inspections	Conduct proactive inspections and perform routine maintenance on 13 ponds and 31 ditches in basin to ensure systems are being maintained	Stormwater System Rehabilitation	Ongoing	NA	$0	City of Orlando	City of Orlando - $0.00

ProjID	Lead Entity	Partners	Project Number	Project Name	Project Description	Project Type	Project Status	Estimated Completion Date	Cost Estimate	Funding Source	Funding Amount
					at optimal pollutant removal efficiency (and flood prevention).						
4056	City of Orlando	Not provided	ORL-03a	Two Inlet Baskets Around Lake Daniel	Install (2006) 2 inlet baskets in Lake Daniel Basin. 173 cubic feet per year of material collected.	Catch Basin Inserts/Inlet Filter Cleanout	Ongoing	NA	$1,500	City of Orlando	City of Orlando - $0.00
4055	City of Orlando	Not provided	ORL-05	Three Baffle Boxes on Ardsley	Capture gross pollutants and reduce levels of nitrogen entering basin by removing leaves and clippings before they enter Lake Silver. 270 cubic feet per year of material collected.	Catch Basin Inserts/Inlet Filter Cleanout	Ongoing	NA	$7,800	City of Orlando	City of Orlando - $0.00
4054	City of Orlando	NA	ORL-06	Four Inlet Baskets Around Lake Sarah	Install (2006) three inlet baskets in Lake Sarah Basin. 302 cubic feet per year of material collected.	Catch Basin Inserts/Inlet Filter Cleanout	Ongoing	NA	$2,250	City of Orlando	City of Orlando - $0.00
4053	City of Orlando	NA	ORL-07	Four Inlet Baskets Around Lake Silver	Install (2004) four inlet baskets in Lake Silver Basin. 325 cubic feet per year of material collected.	Catch Basin Inserts/Inlet Filter Cleanout	Ongoing	NA	$3,000	City of Orlando	City of Orlando - $0.00
4048	City of Orlando	NA	ORL-08	Lake Silver Treatment Structure (Westmoreland Dr. CDS Unit)	Install CDS unit to capture gross pollutants before they enter Lake Silver. 162 cubic feet per year of material collected.	Hydrodynamic Separators	Completed	2000	$565,702	City of Orlando	City of Orlando - $0.00
4038	City of Orlando	DEP; Diocese of Orlando; FDOT; SJRWMD	ORL-09	Little Lake Fairview Restoration and Dubsdread Golf Course Renovation Project	Expand five wet detention ponds and create 10 additional wet detention ponds within golf course; system discharges to adjacent wetland; restores hydroperiod of wetland; raise drain well elevation for more treatment.	BMP Treatment Train	Completed	2008	$9,000,000	City of Orlando	City of Orlando - $0.00
4039	City of Orlando	NA	ORL-10	Palomar Exfiltration	Install 20-foot pipe to capture debris in separate chamber before stormwater percolates into ground.	Exfiltration Trench	Completed	2006	$30,000	City of Orlando	City of Orlando - $0.00
4040	City of Orlando	NA	ORL-11	Sandbar Removal on Lake Sarah	Remove 300 cubic yards of sediment from Lake Sarah.	Muck Removal/Restoration Dredging	Completed	2006	$20,000	City of Orlando	City of Orlando - $0.00
4042	City of Orlando	NA	ORL-12a	Street Sweeping	Streets are swept every two weeks; 102,813 cubic feet per year of material collected. 2.36% of the total credits are applied to groundwater and 97.3% is applied to surface to reflect the percentage of the city within each.	Street Sweeping	Ongoing	NA	$0	City of Orlando	City of Orlando - $0.00
4043	City of Orlando	Not provided	ORL-13	Little Wekiva River - Preliminary Engineering	Nutrient reduction projects in Little Wekiva River watershed, using suggested drainage improvements from CDM report.	Study	Completed	2008	$49,900	City of Orlando	City of Orlando - $0.00

ProjID	Lead Entity	Partners	Project Number	Project Name	Project Description	Project Type	Project Status	Estimated Completion Date	Cost Estimate	Funding Source	Funding Amount
				Evaluation Lake Lawne, Center of Commerce, and Lake Orlando Sites							
4044	City of Orlando	Not provided	ORL-14	Arthur Ave. Sewer Line	Install approximately 1,200 feet of gravity lines in area with septic tanks to reduce nutrient seepage into ground water table.	Wastewater Service Area Expansion	Completed	Prior to 2015	$53,977	City of Orlando	City of Orlando - $0.00
4052	City of Orlando	NA	ORL-16	Lynx Facility	Install sanitary sewer in area with septic tanks to reduce nutrient seepage into ground water table.	Wastewater Service Area Expansion	Completed	2007	$0	City of Orlando	City of Orlando - $0.00
4046	City of Orlando	NA	ORL-17	Rio Grande Sanitary Sewer	Install gravity lines in area with septic tanks to reduce nutrient seepage into ground water table.	Wastewater Service Area Expansion	Completed	2000	$1,622,124	City of Orlando	City of Orlando - $0.00
4047	City of Orlando	Not provided	ORL-18	West Lake Fairview Sanitary Sewer	Install sanitary sewer in area with septic tanks to reduce nutrient seepage into ground water table.	Wastewater Service Area Expansion	Canceled	NA	$0	City of Orlando	City of Orlando - $0.00
4045	City of Orlando	NA	ORL-19	Lift Station #37 Improvements	Lift station components replaced, including wet well with greater capacity. Standby generator installed. Gravity pipes in vicinity replaced.	Sanitary Sewer and Wastewater Treatment Facility (WWTF) Maintenance	Completed	2009	$1,400,000	City of Orlando	City of Orlando - $0.00
4050	City of Orlando	Not provided	ORL-22	West Lake Silver Phase I and II	Line sewers to prevent untreated sewage from escaping through cracks and joints; project will reduce nutrient seepage into ground water table.	Sanitary Sewer and Wastewater Treatment Facility (WWTF) Maintenance	Completed	Prior to 2015	$0	City of Orlando	City of Orlando - $0.00
4051	City of Orlando	Not provided	ORL-23	Mercy Dr. Sewer Rehab	Install lift station in new commercial area.	Sanitary Sewer and Wastewater Treatment Facility (WWTF) Maintenance	Completed	2002	$878,400	City of Orlando	City of Orlando - $0.00
4041	City of Orlando	Not provided	ORL-24	Regent Ave. Force Main 2613	Replace force main on Mercy Dr. from south of Princeton to LS #45; connect or replace new sanitary pipe to existing pipes.	Sanitary Sewer and Wastewater Treatment Facility (WWTF) Maintenance	Completed	2010	$2,000,000	City of Orlando	City of Orlando - $0.00
4063	City of Orlando	NA	ORL-25	Sanitary System Inspections	Conduct proactive inspections and perform routine maintenance on lift stations and sanitary lines.	Sanitary Sewer and Wastewater Treatment Facility	Ongoing	NA	$0	City of Orlando	City of Orlando - $0.00

ProjID	Lead Entity	Partners	Project Number	Project Name	Project Description	Project Type	Project Status	Estimated Completion Date	Cost Estimate	Funding Source	Funding Amount
						(WWTF) Maintenance					
4097	City of Orlando	NA	ORL-26	Lift Station #45 Improvements	Replace lift station.	Sanitary Sewer and Wastewater Treatment Facility (WWTF) Maintenance	Completed	2022	$6,000,000	City of Orlando	City of Orlando - $6,000,000.00
4084	City of Orlando	NA	ORL-27	Mercy Drive Sewer Cleaning	Maintenance of sanitary line will prevent sanitary overflows from occurring in the basin which negatively impact the water quality in the lake.	Sanitary Sewer and Wastewater Treatment Facility (WWTF) Maintenance	Completed	2018	$300,000	City of Orlando	City of Orlando - $300,000.00
4085	City of Orlando	NA	ORL-29	LS8, 30, 47, and 77 Replacements	Lift Station Replacement (only LS #47 in Wekiva basin).	Sanitary Sewer and Wastewater Treatment Facility (WWTF) Maintenance	Completed	2018	$1,500,000	City of Orlando	City of Orlando - $1,500,000.00
4086	City of Orlando	Orange County Public Schools	ORL-31	Lake Silver Shores	Partner with Edgewater High School (EHS) to design and create joint wet pond on EHS property.	Baffle Boxes-Second Generation with Media	Planned	2030	$800,000	City of Orlando	City of Orlando - $800,000.00
4087	City of Orlando	NA	ORL-32	Ardsley Baffle Box Retrofits	Second Generation baffle boxes.	Baffle Boxes-Second Generation	Completed	2018	$450,000	City of Orlando	City of Orlando - $450,000.00
5534	City of Orlando	NA	ORL-33	BMP Cleanout	3,974 cubic feet of debris removed from storm lines and BMP structures.	BMP Cleanout	Ongoing	NA	$0	City of Orlando	City of Orlando - $0.00
4770	City of Orlando	Dr. Phillips Inc.	ORL-35	Packing District Park	Construction of two dry retention ponds and one wet detention pond in new city park.	BMP Treatment Train	Completed	2022	$0	Dr Phillips Inc; City of Orlando	Dr Phillips Inc - $0.00; City of Orlando - $0.00
4771	City of Orlando	NA	ORL-36	Fairview Shores - North Service Area	Install 2 Stormceptors™ to capture gross pollutants before they reach Lake Fairview.	Hydrodynamic Separators	Completed	2008	$4,522,401	City of Orlando	City of Orlando - $0.00
6304	City of Orlando	TBD	ORL-38	Lake Lawne Alum Station	Installation of alum treatment facility along canal. Volume of alum to be injected still being determined; consultant performing field study to obtain typical flow measurements & current nutrient concentrations of waterbody. Station at 60% design phase.	In Waterbody - Alum Injection System	Planned	2027	$2,502,410	DEP SWAG; City of Orlando Stormwater Utility Fee	DEP SWAG - $1,501,446.00; City of Orlando Stormwater

ProjID	Lead Entity	Partners	Project Number	Project Name	Project Description	Project Type	Project Status	Estimated Completion Date	Cost Estimate	Funding Source	Funding Amount
											Utility Fee - $1,000,964.00
6307	City of Orlando	NA	ORL-39	Lake Silver - Floating Aquatic Vegetation Removal Project	Mechanical removal of aquatic vegetation (hydrilla, dislodged eel grass floating on surface, filamentous algae (Lygnbya).	Aquatic Vegetation Harvesting	Completed	2021	$10,000	City of Orlando Stormwater Utility Fee	City of Orlando Stormwater Utility Fee - $10,000.00
7417	City of Orlando	NA	ORL-41	Water Reclamation Lift Station Emergency Generators	Install emergency generators in 3 lift stations throughout City to prevent sanitary overflows during power outages, including tropical systems; all located within Wekiva Basin.	Sanitary Sewer and Wastewater Treatment Facility (WWTF) Maintenance	Completed	2024	$0	City of Orlando Water Reclamation	City of Orlando Water Reclamation - $0.00
6369	FDACS	Agricultural Producers	FDACS-04	BMP Implementation and Verification	Enrollment and verification of BMPs by agricultural producers. Acres treated and reductions estimated using FDACS June 2024 Enrollment and surface water model developed by DEP.	Agricultural BMPs	Ongoing	NA	$0	FDACS	FDACS - $0.00
4109	FDOT District 5	NA	FDOT-01	FM: 238406 (1 treatment project)	State Road 44: Swales and ditch blocks providing treatment for runoff generated from existing and proposed pavement.	Grass swales without swale blocks or raised culverts	Completed	2002	$0	Florida Legislature	Florida Legislature - $0.00
4108	FDOT District 5	NA	FDOT-03	FM: 239496-2 (Pond 100)	State Road 423: Add lanes from Shader Rd. to State Road 424 (Edgewater Dr.). Wet Detention Pond 100 and Pond 200 providing treatment for John Young Parkway.	Wet Detention Pond	Completed	2016	$0	Florida Legislature	Florida Legislature - $0.00
4107	FDOT District 5	NA	FDOT-03b	FM: 239496-2 (Pond 200)	State Road 423: Add lanes from Shader Rd. to State Road 424 (Edgewater Dr.). Wet Detention Pond Pond 200 providing treatment for John Young Parkway.	Wet Detention Pond	Completed	2016	$0	Florida Legislature	Florida Legislature - $0.00
4106	FDOT District 5	NA	FDOT-04	FM: 240231-2 (Dry Detention Pond 1N-1)	Add lanes to State Road 434: from State Road 414, Lotus Landing Blvd., then to State Road 436: Dry Detention Pond 1N-1, 1N-2 2N, P, Wet Detention WTC Ponds 1 and 2; Exfiltration System 4N-1 and 5N providing treatment for existing and proposed pavement.	Dry Detention Pond	Completed	2013	$0	Florida Legislature	Florida Legislature - $0.00
4105	FDOT District 5	NA	FDOT-04b	FM: 240231-2 (Dry Detention Pond 1N-2)	Add lanes to State Road 434: from State Road 414, Lotus Landing Blvd., then to State Road 436: Dry Detention Pond 1N-1, 1N-2 2N, P, Wet Detention WTC Ponds 1 and 2; Exfiltration System 4N-1 and 5N providing treatment for existing and proposed pavement.	Dry Detention Pond	Completed	2013	$0	Florida Legislature	Florida Legislature - $0.00

ProjID	Lead Entity	Partners	Project Number	Project Name	Project Description	Project Type	Project Status	Estimated Completion Date	Cost Estimate	Funding Source	Funding Amount
4104	FDOT District 5	NA	FDOT-04c	FM: 240231-2 (Exfiltration System 4N-1)	Add lanes to State Road 434: from State Road 414, Lotus Landing Blvd., then to State Road 436: Dry Detention Pond 1N-1, 1N-2 2N, P, Wet Detention WTC Ponds 1 and 2; Exfiltration System 4N-1 and 5N providing treatment for existing and proposed pavement.	Exfiltration Trench	Completed	2013	$0	Florida Legislature	Florida Legislature - $0.00
4103	FDOT District 5	NA	FDOT-04d	FM: 240231-2 (Exfiltration System 5N)	Add lanes to State Road 434: from State Road 414, Lotus Landing Blvd., then to State Road 436: Dry Detention Pond 1N-1, 1N-2 2N, P, Wet Detention WTC Ponds 1 and 2; Exfiltration System 4N-1 and 5N providing treatment for existing and proposed pavement.	Exfiltration Trench	Completed	2013	$0	Florida Legislature	Florida Legislature - $0.00
4102	FDOT District 5	NA	FDOT-05	FM: 238314-1 (Dry Retention Pond 2)	State Road 500: Dry Retention Ponds 2, 4, 6; Wet Detention Ponds 3E, 5 A/B; Ponds 3B, 3C, 3D; French drain providing treatment for runoff generated from existing and proposed pavement.	On-line Retention BMPs	Completed	2008	$0	Florida Legislature	Florida Legislature - $0.00
4101	FDOT District 5	NA	FDOT-05b	FM: 238314-1 (Wet Detention Pond 3E)	State Road 500: Dry Retention Ponds 2, 4, 6; Wet Detention Ponds 3E, 5 A/B; Ponds 3B, 3C, 3D; French drain providing treatment for runoff generated from existing and proposed pavement.	Wet Detention Pond	Completed	2008	$0	Florida Legislature	Florida Legislature - $0.00
4100	FDOT District 5	NA	FDOT-05c	FM: 238314-1 (Dry Retention Pond 4)	State Road 500: Dry Retention Ponds 2, 4, 6; Wet Detention Ponds 3E, 5 A/B; Ponds 3B, 3C, 3D; French drain providing treatment for runoff generated from existing and proposed pavement.	On-line Retention BMPs	Completed	2008	$0	Florida Legislature	Florida Legislature - $0.00
4131	FDOT District 5	NA	FDOT-05d	FM: 238314-1 (Wet Detention Pond 5a/5b)	State Road 500: Dry Retention Ponds 2, 4, 6; Wet Detention Ponds 3E, 5 A/B; Ponds 3B, 3C, 3D; French drain providing treatment for runoff generated from existing and proposed pavement.	Wet Detention Pond	Completed	2008	$0	Florida Legislature	Florida Legislature - $0.00
4154	FDOT District 5	NA	FDOT-05e	FM: 238314-1 (Dry Retention Pond 6)	State Road 500: Dry Retention Ponds 2, 4, 6; Wet Detention Ponds 3E, 5 A/B; Ponds 3B, 3C, 3D; French drain providing treatment for runoff generated from existing and proposed pavement.	On-line Retention BMPs	Completed	2008	$0	Florida Legislature	Florida Legislature - $0.00
4128	FDOT District 5	NA	FDOT-05f	FM: 238314-1 (Frenth Drain System)	State Road 500: Dry Retention Ponds 2, 4, 6; Wet Detention Ponds 3E, 5 A/B; Ponds 3B, 3C, 3D; French drain providing treatment for runoff generated from existing and proposed pavement.	Exfiltration Trench	Completed	2008	$0	Florida Legislature	Florida Legislature - $0.00
4148	FDOT District 5	NA	FDOT-06	FM: 239535-2	State Road 50: Add lanes from east ramps of Turnpike to Avalon Rd.; Wet Detention Ponds A and B providing treatment for runoff from existing and proposed pavement.	Wet Detention Pond	Completed	2016	$0	Florida Legislature	Florida Legislature - $0.00

ProjID	Lead Entity	Partners	Project Number	Project Name	Project Description	Project Type	Project Status	Estimated Completion Date	Cost Estimate	Funding Source	Funding Amount
4149	FDOT District 5	NA	FDOT-06b	FM: 239535-2	State Road 50: Add lanes from east ramps of Turnpike to Avalon Rd.; Wet Detention Ponds A and B providing treatment for runoff from existing and proposed pavement.	Wet Detention Pond	Completed	2016	$0	Florida Legislature	Florida Legislature - $0.00
4150	FDOT District 5	NA	FDOT-08	Street Sweeping	Street sweeping contract.	Street Sweeping	Ongoing	NA	$0	Florida Legislature	Florida Legislature - $0.00
4151	FDOT District 5	NA	FDOT-09	Fertilizer Cessation	Reduction of bulk fertilizer use on state roadways in basin.	Fertilizer Cessation	Completed	2005	$0	Florida Legislature	Florida Legislature - $0.00
4604	FDOT District 5	NA	FDOT-12	FM: 238275-2/238275-3	SR 46/US 441 from W. of US 441 to E. of Pond Rd. - Wekiva Parkway 3B / SR 46 from E. of Pond Rd. to E. of Round Lake Rd. (Wekiva Parkway Section 3A).	On-line Retention BMPs	Completed	2020	$0	Florida Legislature	Florida Legislature - $0.00
4605	FDOT District 5	NA	FDOT-13	FM: 238275-7	W. of Old McDonald Rd. to E. of Wekiva River Rd. - New Road Construction (Wekiva Parkway Section 6).	On-line Retention BMPs	Completed	2022	$0	Florida Legislature	Florida Legislature - $0.00
4606	FDOT District 5	NA	FDOT-14	FM: 238275-8-52-01	CR 46A Realignment from SR 46 to N. of Arundel Way - New Road Construction (Wekiva Parkway Section 5).	On-line Retention BMPs	Completed	2020	$0	Florida Legislature	Florida Legislature - $0.00
4607	FDOT District 5	NA	FDOT-16	FM: 240200-2	SR 429/46 (Wekiva Parkway) from E. of Wekiva River Rd. to Orange Blvd. (Wekiva Parkway Section 7A).	On-line Retention BMPs	Completed	2023	$0	Florida Legislature	Florida Legislature - $0.00
4608	FDOT District 5	NA	FDOT-17	FM: 240200-4-52-01	SR 429/46 (Wekiva Parkway) from Orange Boulevard to East of Rinehart Road (Wekiva Parkway Section 8).	Wet Detention Pond	Underway	2024	$0	Florida Legislature	Florida Legislature - $0.00
5818	FDOT District 5	NA	FDOT-18	FM: 238275-2-52-01	Pond WB1-1	Wet Detention Pond	Completed	2020	$0	Florida Legislature	Florida Legislature - $0.00
5819	FDOT District 5	NA	FDOT-19	FM: 238275-8-52-01	Pond 5-1B-1 and 5-1B-2	On-line Retention BMPs	Completed	2020	$0	Florida Legislature	Florida Legislature - $0.00
5820	FDOT District 5	NA	FDOT-20	FM: 238275-8-52-01	Pond 5-2B	Wet Detention Pond	Completed	2020	$0	Florida Legislature	Florida Legislature - $0.00
5821	FDOT District 5	NA	FDOT-21	FM: 238275-8-52-01	Pond 5-3A	On-line Retention BMPs	Completed	2020	$0	Florida Legislature	Florida Legislature - $0.00

ProjID	Lead Entity	Partners	Project Number	Project Name	Project Description	Project Type	Project Status	Estimated Completion Date	Cost Estimate	Funding Source	Funding Amount
5822	FDOT District 5	NA	FDOT-22	FM: 239496-3-52-01	Pond 2E-1 and 2E-2	Wet Detention Pond	Completed	2021	$0	Florida Legislature	Florida Legislature - $0.00
4161	Lake County	Not provided	LC-01	Northeast Lake County Scrub Preserve	60 acres of mature sand pine scrub community with wetlands in southeast; adjacent to Seminole State Forest; protection of land; no change in land use, thus no load reduction.	Land Acquisition	Completed	2008	$950,000	Not provided	Not provided - $0.00
4153	Lake County	Not provided	LC-02	Lake May Reserve	136 acres of remnant citrus, xeric oak hammock and 20-acre Lake May.	Land Acquisition	Completed	2008	$6,200,000	Not provided	Not provided - $0.00
4146	Lake County	Not provided	LC-03	Mt. Plymouth Lakes	Property consists of 184 acres of lake bottom and associated uplands in plat of Mt. Plymouth.	Land Acquisition	Completed	2007	$0	Not provided	Not provided - $0.00
4155	Lake County	Not provided	LC-04	Neighborhood Lakes	Part of multiagency acquisition (DEP, SJRWMD, OOCEA, and Lake and Orange Counties) totaling 1,584 acres; Lake County partnered with SJRWMD to purchase 210 acres.	Land Acquisition	Completed	2007	$5,000,000	Not provided	Not provided - $0.00
4156	Lake County	Not provided	LC-05	South Pine Lakes Reserve	Reserve consists of 2 adjoining properties totaling 128 acres, consisting of scrub, scrubby flatwoods, herbaceous marsh; bear habitat, possible sandhill crane nesting.	Land Acquisition	Completed	2008	$985,250	Not provided	Not provided - $0.00
4157	Lake County	Lake County Schools; Lake Sumter State College; Umatilla; Umatilla Chamber of Commerce	LC-06	North Lake County Community Environmental Stewardship Program	Project provides teacher workshops and outreach to K-12, exposure to various environmental careers to middle/high school students, increase number of volunteer water quality sample sites, and create community showcase site using native vegetation.	Enhanced Public Education	Completed	2020	$30,868	Not provided	Not provided - $0.00
4158	Lake County	Lake County Water Authority (LCWA)	LC-07	Wolfbranch Drainage Retrofit	Project includes removing concrete flumes in right-of-way and piping area to two new dry retention ponds; what cannot be treated in ponds will be captured in CDS unit within right of way, and compensating treatment for this area will be treated in Pond B.	Stormwater System Upgrade	Completed	2016	$1,530,000	Lake County; LCWA	Lake County - $1,300,000.00; LCWA - $200,000.00
4159	Lake County	Not provided	LC-08	Dirt Roadway Paving	Nutrient load reductions for 25 miles of road segments that were paved and improved with ditch blocks.	Grass swales with swale blocks or raised culverts	Completed	2011	$0	Not provided	Not provided - $0.00
4160	Lake County	Not provided	LC-09	Royal Trails Drainage and	Flood analysis, pollutant loading model, and conceptual project priorities are completed.	Study	Completed	2010	$394,101	Not provided	Not provided - $0.00

ProjID	Lead Entity	Partners	Project Number	Project Name	Project Description	Project Type	Project Status	Estimated Completion Date	Cost Estimate	Funding Source	Funding Amount
				Water Quality Improvements							
4138	Lake County	Lake County	LC-10	Firethorn Dirt Road Paving & Drainage	Paving of dirt road and construction of roadside swales for drainage & treatment.	Grass swales without swale blocks or raised culverts	Completed	2016	$238,000	Lake County	Lake County - $0.00
4136	Lake County	DEP	LC-11	Erosion Control Inspector Training	Lake County staff has become certified to instruct on the DEP Sedimentation and Erosion Control Inspector's certification program. County hosts annual class and exam free to local contractors and municipal employees.	Shoreline Stabilization	Completed	2022	$0	Lake County	Lake County - $0.00
4152	Lake County	NA	LC-12	Pipe and Catch Basin Cleaning	Removal of sediments and nutrients from roadside catch basins and stormwater pipes.	BMP Cleanout	Completed	2017	$6,500	Lake County	Lake County - $0.00
5536	Lake County	DEP	LC-14	Nutrient Pollution Awareness Campaign	Paid TV, Radio and Social Media advertising campaign to educate citizens on nutrient pollution and benefits of fertilizer ordinance.	Education Efforts	Completed	2020	$45,000	Lake County Stormwater MSTU; DEP	Lake County Stormwater MSTU - $45,000.00; DEP - $0.00
7402	Lake County	DEP	LC-15	Septic to Distributed Sewer (OnSyte) Conversion Phase 1 2024	Program to assist homeowners with conversion of OSTDS to OnSyte. - twenty units installed.	OSTDS Conversion to Distributed Wastewater System	Completed	2024	$40,000	Lake County; DEP Grant	Lake County - $1,000,000.00; DEP Grant - $1,000,000.00
4066	Orange County	Not provided	OC-17	Riverside Pond	Expand size of 0.8-acre existing treatment pond to 1.6 acres and add aeration to address DO impairment.	Stormwater System Upgrade	Completed	2013	$766,918	Not provided	Not provided - $0.00
4062	Orange County	Not provided	OC-18	Bay Lake Stormwater Improvement Project	Provide treatment for two drainage basins totaling 91.7 acres (Modular Wetlands with Bold and Gold™ media).	Constructed Wetland Treatment	Completed	2012	$260,000	Not provided	Not provided - $0.00
4061	Orange County	DEP; Florida Legislature; SJRWMD	OC-19	Lake Lawne Stormwater Irrigation Facility (SIF)	Online wet detention with irrigation system for reuse on adjacent sports fields.	Stormwater Reuse	Completed	2018	$1,925,347	OC BCC; SJRWMD; DEP; Legislative Appropriation	OC BCC - $0.00; SJRWMD - $671,633.00; DEP - $617,107.00; Legislative Appropriation - $250,000.00

ProjID	Lead Entity	Partners	Project Number	Project Name	Project Description	Project Type	Project Status	Estimated Completion Date	Cost Estimate	Funding Source	Funding Amount
4060	Orange County	Not provided	OC-20	Lake Weston Curb Inlet Baskets	Install (2016) 49 curb/grate inlet baskets on storm drains and apply storm drain markers.	Catch Basin Inserts/Inlet Filter Cleanout	Completed	2016	$160,000	Not provided	Not provided - $0.00
4049	Orange County	Not provided	OC-21	North Lake Lawne Stormwater Treatment Project (C-7)	Install 120 curb/grate inlet baskets on storm drains and apply storm drain markers.	Catch Basin Inserts/Inlet Filter Cleanout	Completed	2016	$196,899	Not provided	Not provided - $0.00
4059	Orange County	Not provided	OC-36a	Street Sweeping	Streets are swept every six weeks; 481,128 pounds of material removed per year.	Street Sweeping	Ongoing	NA	$0	Not provided	Not provided - $0.00
4067	Orange County	Not provided	OC-38	Lake Lawne Hydrologic and Nutrient Study	Study to evaluate hydrologic conditions and nutrient loadings to Lake Lawne.	Study	Completed	2015	$150,000	OC BCC	OC BCC - $150,000.00
6680	Orange County	NA	OC-59d	Lake Lawne SIF Performance Monitoring (Y5).	Performance monitoring of stormwater BMP. Credited in ProjID 4061.	Monitoring/Data Collection	Underway	2025	$50,286	OC BCC	OC BCC - $50,285.79
6991	Orange County	NA	OC-59e	Lake Lawne SIF Performance Monitoring (Y6)	TMDL load reduction tracking and credit reporting. Project credited in ProjID 4061.	Monitoring/Data Collection	Underway	2025	$69,838	OC BCC	OC BCC - $69,837.67
7645	Orange County	NA	OC-79a	Lake Weston 4e BMP #1 Mosher Dr. NSBB Construction	Construct a curb inlet NSBB with a BAM filter.	Baffle Boxes-Second Generation with Media	Planned	2026	$137,397	OC BCC	OC BCC - $137,396.82
7619	Orange County	NA	OC-81	Update Chapter 37 Wastewater Code	Increased sewer connection requirements in OC-PVAs and PFA: <2 ERU fronting gravity or force main, >2 ERU connect within 600 ft of main Enhanced Septic (65% N Reduction) in OC-PVAs lots one acre or less. Septic <150' from waterbody must be enhanced.	Regulations, Ordinances, and Guidelines	Underway	2025	$0	OC BCC	OC BCC - $0.00
7643	Orange County	NA	OC-82a	Lake Weston 4e Satel Canal In Stream Treatment Mini FS	Develop 3 in-stream treatment concepts to treat stagnant canal water before it reached Lake Weston.	Study	Planned	2025	$199,136	OC BCC	OC BCC - $199,136.09
7624	Orange County	NA	OC-84	OC-Facilities West District Septic to Sewer Feasibility	Septic to sewer feasibility is being evaluated at Tibet Butler, Willow Street, Apopka R&D, RD Keen, LEVO, West Beach, Rolling Hills, West Orange Highway, Trimble Park, Orlo Vista Park, Shadow Bay Park, Parks & Rec Warehouse, Frederick Douglas.	Study	Underway	2027	$820,000	OC BCC	OC BCC - $820,000.00
7627	Orange County	NA	OC-85a	Killarney Station Sewer Connection	Killarney Station sewer connection.	OSTDS Phase Out	Underway	2027	$930,000	OC BCC	OC BCC - $930,000.00

ProjID	Lead Entity	Partners	Project Number	Project Name	Project Description	Project Type	Project Status	Estimated Completion Date	Cost Estimate	Funding Source	Funding Amount
4088	Seminole County	NRCS	SC-06	Little Wekiva Grade Control Montgomery Rd. to State Road 434	Reduce sediment loads through bank stabilization and construction of two river grade control structures in Little Wekiva River; area served = >5,000 acres.	Shoreline Stabilization	Completed	2012	$850,000	NRCS	NRCS - $0.00
4098	Seminole County	NRCS	SC-07	Wekiva Park Drive Erosion Control Project	Reduce sediment loads through grade control structures; area served = 400 acres.	Shoreline Stabilization	Completed	2010	$350,000	NRCS	NRCS - $0.00
4090	Seminole County	NA	SC-08	Lake Mobile	Exotics removal/revegetation with native species. Accomplished using in-house staff, residents, and volunteers.	Exotic Vegetation Removal	Completed	2009	$25,000	NA	NA - $0.00
4083	Seminole County	NA	SC-09	LWR at Springs Landing Bridge	Exotics removal/revegetation with native species. Accomplished using in-house staff, residents, and volunteers.	Exotic Vegetation Removal	Completed	2010	$10,000	NA	NA - $0.00
4092	Seminole County	NA	SC-11	Spring Lake	Exotics removal/revegetation with native species. Accomplished using in-house staff, residents, and volunteers.	Exotic Vegetation Removal	Completed	2009	$75,000	NA	NA - $0.00
4093	Seminole County	NA	SC-12	Black Bear Wilderness Area	Previous land use = natural land; management focus = preservation, passive recreation; acreage = 1,650.	Land Acquisition	Completed	2002	$0	NA	NA - $0.00
4094	Seminole County	NA	SC-13	Yankee Lake Scrub Jay Preservation Area	Previous land use = natural land; management focus = preservation, passive recreation; acreage = 300.	Land Acquisition	Completed	2002	$0	NA	NA - $0.00
4113	Seminole County	NA	SC-17	Markham Woods Rd. Widening from State Road 434 to Springs Landing Blvd.	Provide water quality treatment for additional traffic lane through construction of new exfiltration trench; area served = 12.4 acres.	Exfiltration Trench	Completed	2003	$1,400,000	NA	NA - $0.00
4115	Seminole County	NA	SC-18	Markham Woods Rd. Widening from Lane Springs Landing Blvd. to EE Williamson Rd.	Provide water quality treatment to existing roadway through exfiltration trench; area served = 9.2 acres.	Exfiltration Trench	Completed	2006	$2,300,000	NA	NA - $0.00
4095	Seminole County	NA	SC-23	Palm Springs Rd. Paving and Drainage (Lakefront Lane Baffle Boxes)	Pave dirt road and install 2nd-generation baffle box to provide water quality treatment; area served = 0.4 acres.	Baffle Boxes-Second Generation	Completed	2003	$255,000	NA	NA - $0.00
4096	Seminole County	NA	SC-25a	Street Sweeping	Street sweeping within the Big Wekiva and Little Wekiva drainage basins.	Street Sweeping	Ongoing	NA	$0	NA	NA - $0.00

ProjID	Lead Entity	Partners	Project Number	Project Name	Project Description	Project Type	Project Status	Estimated Completion Date	Cost Estimate	Funding Source	Funding Amount
4068	Seminole County	NA	SC-27a	Spring Lake/Spring Lake Watershed Hydrology/Nutrient Budget and Water Quality Management Plan	Detailed nutrient and hydrologic study, quantifying all nutrient sources, including internal loading, ground water, surface water, precipitation, etc.; management plan includes potential structural/ nonstructural water quality improvements.	Study	Completed	2016	$0	NA	NA - $0.00
4091	Seminole County	NA	SC-29a	Seminole County Water Quality Master Plan	Countywide assessment of all water quality data, monitoring programs, regional ponds, CIP projects, etc., to improve effectiveness of existing programs and identify additional structural/nonstructural improvement projects.	Study	Planned	TBD	$0	NA	NA - $0.00
4089	Seminole County	NA	SC-30	Apple Valley LS	Completed Prior to 2015. Relocate and build brand new lift station.	Sanitary Sewer and Wastewater Treatment Facility (WWTF) Maintenance	Completed	2015	$351,975	NA	NA - $0.00
4081	Seminole County	NA	SC-32	Gravity Main Testing and Repairs	Completed Prior to 2015. Gravity main repairs including: lateral repairs, smoke testing and sealing laterals.	Sanitary Sewer and Wastewater Treatment Facility (WWTF) Maintenance	Completed	2015	$401,878	NA	NA - $0.00
4080	Seminole County	NA	SC-33a	Lift Station Rehab	Completed Prior to 2015. Seal wet well and rehabilitate lines (Wilson School LS, Breckenridge LS, Stockbridge LS, Lake Forest #5 LS, Buckingham LS, Retreat at Wekiva LS, Aster Farms LS, Bel-Aire #3 LS, Bel-Aire #1 LS, Heathrow Master LS).	Sanitary Sewer and Wastewater Treatment Facility (WWTF) Maintenance	Completed	2015	$324,353	NA	NA - $0.00
4082	Seminole County	TBD	SC-34	Douglas Ave Pond	Pond retrofit with soil amendment aimed at reducing nitrate loading to groundwater.	Stormwater System Upgrade	Planned	TBD	$200,000	TBD	TBD - $0.00
4079	Seminole County	NA	SC-36	Spring Lake Hills Outfall Weir Rehab	Construction retrofit project, replace existing failing weir.	Control Structure	Completed	2016	$4,500	NA	NA - $0.00
4064	Seminole County	Spring Lake MSBU	SC-38	Spring Lake Alum Treatment	In lake alum treatment.	In Waterbody - Alum Injection System	Completed	2020	$120,000	Spring Lake MSBU	Spring Lake MSBU - $90,000.00
4078	Seminole County	Spring Lake MSBU	SC-40	Spring Lake Shoreline Restoration	Planted native aquatic vegetation along individual homeowner shorelines.	Creating/ Enhancing Living Shoreline	Completed	2017	$0	NA	NA - $0.00
4077	Seminole County	Springwood MSBU	SC-41	Spring Wood Lake Shoreline Restoration	Planted native aquatic vegetation along individual homeowner shorelines.	Creating/ Enhancing Living Shoreline	Completed	2017	$0	NA	NA - $0.00

ProjID	Lead Entity	Partners	Project Number	Project Name	Project Description	Project Type	Project Status	Estimated Completion Date	Cost Estimate	Funding Source	Funding Amount
4076	Seminole County	Destiny Canal MSBU	SC-42	Lake Destiny Canal Shoreline Restoration	Planted native aquatic vegetation along individual homeowner shorelines.	Creating/ Enhancing Living Shoreline	Completed	2017	$0	NA	NA - $0.00
4803	Seminole County	TBD	SC-48	Nutrient Filter Pilot Project	Pilot project of an upflow nutrient removal media.	Study	Canceled	NA	$0	NA	NA - $0.00
4075	Seminole County	Wekiva Wild and Scenic River System Committee	SC-49	Wilson's Landing Stormwater Bioretention Area	Convey runoff into a bioretention area prior to discharge into Wekiva river.	Bioswales	Completed	2019	$35,000	Wekiva Wild and Scenic River System	Wekiva Wild and Scenic River System - $20,000.00
4074	Seminole County	NA	SC-51	AV Gravity Main Rehab	Seal and coating of 10 manholes; CIPP lining of 2,700 linear feet of 8-inch gravity main.	Sanitary Sewer and Wastewater Treatment Facility (WWTF) Maintenance	Completed	2017	$108,000	NA	NA - $0.00
5835	Seminole County	NA	SC-62	Wymore Road Drainage Improvements	Widen Wymore Road and add drainage improvements from Lake Destiny Road to Spring Valley Road.	Baffle Boxes-Second Generation	Completed	2023	$100,000	TBD	TBD - $0.00
5838	Seminole County	Rolling Hills MSBU	SC-65	Rolling Hills Pond Revegetation	Planted native aquatic vegetation along individual homeowner shorelines.	Creating/ Enhancing Living Shoreline	Completed	2021	$0	NA	NA - $0.00
6708	Seminole County	NRCS	SC-66	Little Wekiva River - The Springs	Stream bank stabilization along sections of the Little Wekiva River.	Shoreline Stabilization	Underway	2024	$370,240	Seminole County; NRCS	Seminole County - $40,000.00; NRCS - $120,000.00
6709	Seminole County	NRCS	SC-66a	Little Wekiva River - Horse Lovers Lane	Stream bank stabilization efforts along sections of the Little Wekiva River.	Shoreline Stabilization	Underway	2024	$257,283	NRCS; Seminole County	NRCS - $60,000.00; Seminole County - $20,000.00
6711	Seminole County	NRCS	SC-66b	Little Wekiva River - Mahogany Lane	Stream bank stabilization efforts along sections of the Little Wekiva River.	Shoreline Stabilization	Underway	2024	$4,771,560	NRCS; Seminole County	NRCS - $1,875,000.00; Seminole County - $625,000.00
7183	Seminole County	Oviedo; Longwood; Lake Mary; Casselberry; Altamonte	SC-69	Seminole County Fertilizer Ordinance - Commercial	Reduction of nitrogen and phosphorus sources education campaign focused on commercial retailers.	Enhanced Public Education	Completed	2023	$150,000	DEP	DEP - $90,000.00

ProjID	Lead Entity	Partners	Project Number	Project Name	Project Description	Project Type	Project Status	Estimated Completion Date	Cost Estimate	Funding Source	Funding Amount
				Education Campaign							
6957	SJRWMD	Liner Source Inc.; SJRWMD	SJRWMD-02	Automated Liquid Fertilizer System - Liner Source Inc.	This project involves the installation of an automated liquid fertilizer system on approximately 4.5 acres of greenhouse edible crops.	Agricultural BMPs	Completed	2024	$257,375	Liner Source Inc.; SJRWMD Cost Share	SJRWMD Cost Share - $193,031.23; Liner Source Inc. - $64,343.74
7228	SJRWMD	SJRWMD; Tom West Blueberries	SJRWMD-05	Tom West Blueberries Precision Fertilizer Equipment	This project involves the purchase and implementation of precision fertilizer application equipment for 20 acres of blueberries.	Agricultural BMPs	Completed	2024	$48,520	Tom West Blueberries; SJRWMD Cost Share	Tom West Blueberries - $12,130.00; SJRWMD Cost Share - $36,390.00
7229	SJRWMD	Long and Scott Farms; SJRWMD	SJRWMD-06	Irrigation Conversion - Long and Scott Farms	This project involves performing an irrigation conversion from seepage to drip on approximately 90 acres of vegetables.	Agricultural BMPs	Underway	2025	$125,040	SJRWMD Cost Share; Long and Scott Farms	SJRWMD Cost Share - $93,780.00; Long and Scott Farms - $31,260.00
4073	Sunshine Water Services	Not provided	SUC-01	Sweetwater I&I Investigation & Collection System Repairs	Camera-inspect sanitary collection system in Sweetbrier subdivision and correct noted deficiencies.	Sanitary Sewer and Wastewater Treatment Facility (WWTF) Maintenance	Completed	Prior to 2015	$1,553,000	Sanlando Utilities	Sanlando Utilities - $0.00
4072	Turnpike Enterprise	NA	TP-03	Minneola Interchange	5 Dry Retention ponds and 3 treatment swales. Treated area outside BMAP boundary. Project canceled.	On-line Retention BMPs	Canceled	2017	$0	Turnpike Enterprise	Turnpike Enterprise - $0.00
4071	Turnpike Enterprise	NA	TP-04a	Education Efforts	No fertilizer on right-of-ways, educational signage, illicit discharge training.	Education Efforts	Ongoing	NA	$0	NA	NA - $0.00
4070	Turnpike Enterprise	NA	TP-05a	Street Sweeping	Street Sweeping MP (265-274) 600 LM per year.	Street Sweeping	Ongoing	NA	$0	NA	NA - $0.00

Appendix C. Planning for Additional Management Strategies

The allocation approach from the 2015 BMAP remains in effect, pending updated loading and jurisdictional information through the St. Johns River Model update, which is underway. In the interim, responsible entities are expected to submit their nutrient reduction projects annually during the statewide annual reporting (STAR) process. Additionally, entities are expected to show efforts to identify, plan, and fund additional projects and report these efforts in the STAR, with the expectation that they will be assigned more specific allocations based on the updated model.

All responsible entities must report to DEP on how they are planning and implementing the new statutory requirements related to nutrient loads in the BMAP area. If any lead entity is unable to submit a sufficient list of eligible management strategies to demonstrate they are implementing the statutory requirements, additional project identification efforts are required to be submitted by January 14, 2026, to remain in compliance with the BMAP. The project description and estimated completion date for any such project identification effort must be provided and reflect the urgency of defining, funding, and implementing projects to meet the upcoming and future BMAP milestones. 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**. Responsible entities must submit a sufficient list of projects and management strategies to DEP no later than January 14, 2026, to be compliant with the upcoming BMAP milestone, which is 2030, or be subject to further department enforcement. DEP will notify entities by March 31, 2026, if their list is deemed inadequate.

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 or creating new 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 in **Table D-1** 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 subject to the nitrogen and phosphorus limits set forth in section 403.086, F.S.

Permit Number	Facility Name
FLA042625	Seminole County - Yankee Lake WWTF
FL0036251	Wekiva Hunt Club WWTP
FL0033251	Altamonte Springs Regional WRF
FLA010818	Apopka WRF - Project Arrow
FLA010815	City of Ocoee,- WWTF
FLA010507	Eustis Bates Avenue WWTF
FLA268542	City of Mt Dora - James Snell - WWTF #2
FLAB07049	Hamlin WRF
FLA013497	City of Wildwood - WWTF
FLA010798	Northwest Reclamation Facility
FLA010814	Orlando/Conserv II WRF
FLA107972	OCUD/South WRF

Appendix E: Golf Course NMPs

The fertilizers used to maintain golf courses can be significant sources of nutrients in 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

Note: 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

Nutrient	Bermudagrass (%)	St. Augustinegrass (%)	Seashore Paspalum (%)	Centipedegrass (%)	Zoysia (%)
Potassium (K)	0.43 - 1.28	1.1 - 2.25	2.00 - 4.00	1.12 - 2.50	1.05 - 1.27
Calcium (Ca)	0.15 - 0.63	0.24 - 0.54	0.25 - 1.50	0.50 - 1.15	0.44 - 0.56
Magnesium (Mg)	0.04 - 0.10	0.20 - 0.46	0.25 - 0.60	0.12 - 0.21	0.13 - 0.15
Sulfur (S)	0.07 - 0.02	0.15 - 0.48	0.20 - 0.60	0.20 - 0.38	0.32 - 0.37
Sodium (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		
Totals		

Fertilizer Applications

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					
	Fairways					
	Roughs					
February	Tees					
	Greens					
	Fairways					
	Roughs					
March	Tees					
	Greens					
	Fairways					
	Roughs					
April	Tees					
	Greens					
	Fairways					
	Roughs					
May	Tees					
	Greens					
	Fairways					
	Roughs					
June	Tees					
	Greens					
	Fairways					
	Roughs					
July	Tees					
	Greens					
	Fairways					
	Roughs					
August	Tees					
	Greens					
	Fairways					
	Roughs					
September	Tees					
	Greens					
	Fairways					
	Roughs					

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)
October	Tees					
	Greens					
	Fairways					
	Roughs					
November	Tees					
	Greens					
	Fairways					
	Roughs					
December	Tees					
	Greens					
	Fairways					
	Roughs					
Totals						

Amount of Reuse/Reclaimed Water Applied

**Supply reuse/reclaimed water volumes applied, if applicable.*

Month	Reuse/Reclaimed Water 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							
September							
October							
November							
December							
Totals							

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? Please describe. 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.

Describe your 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 pos- 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 section 403.067(7)(c)3., F.S.

FDACS Office of Agricultural Water Policy (OAWP) BMP Program

Best Management Practices (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 the DEP, water management districts (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 an FDACS BMP Program

To initially enroll in the FDACS BMP Program, agricultural landowners and producers must meet with an FDACS representative on site to determine the appropriate practices that are applicable to their operation(s) and to document the BMPs on the Notice of Intent (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 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, Florida Statutes (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 Wekiva River, Rock Springs Run, and Little Wekiva Canal BMAP, there are 2 aquaculture facilities 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 Florida Forest Service (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 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 agricultural lands (ALG) data that is part of the Florida Statewide Agricultural Irrigation Demand (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 water management district 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, water management districts, 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 and **Figure F-1** shows the percentage of agricultural land use within the Wekiva River, Rock Springs Run, and Little Wekiva Canal 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	342,841

Agricultural acres	17,595

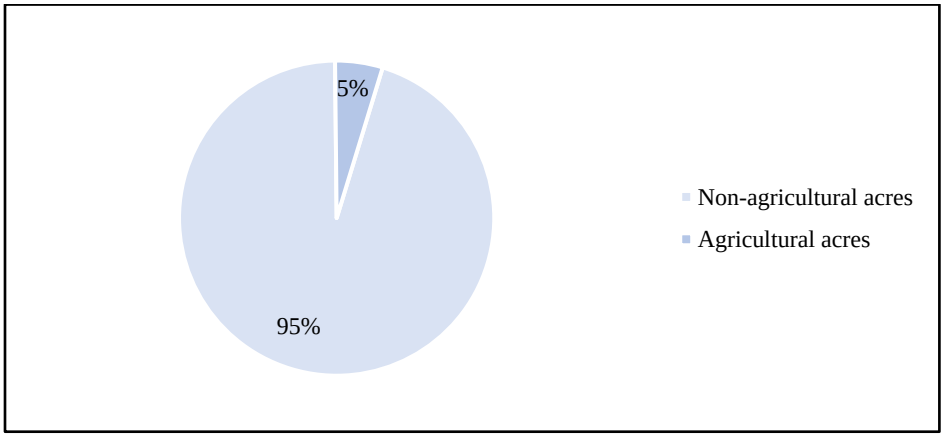

Figure F-1. Relative agricultural land uses in the Wekiva River, Rock Springs Run, and Little Wekiva Canal BMAP

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 Wekiva River, Rock Springs Run, and Little Wekiva Canal BMAP by BMP program commodity

Commodity	Agricultural Acres Enrolled
Citrus	454
Cow/Calf	20,633
Dairy	225
Equine	3,759
Nursery	1,028
Total	**26,099 (30%)**

As of July 2024, 60% of the agricultural acres in the Wekiva River, Rock Springs Run, and Little Wekiva Canal 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

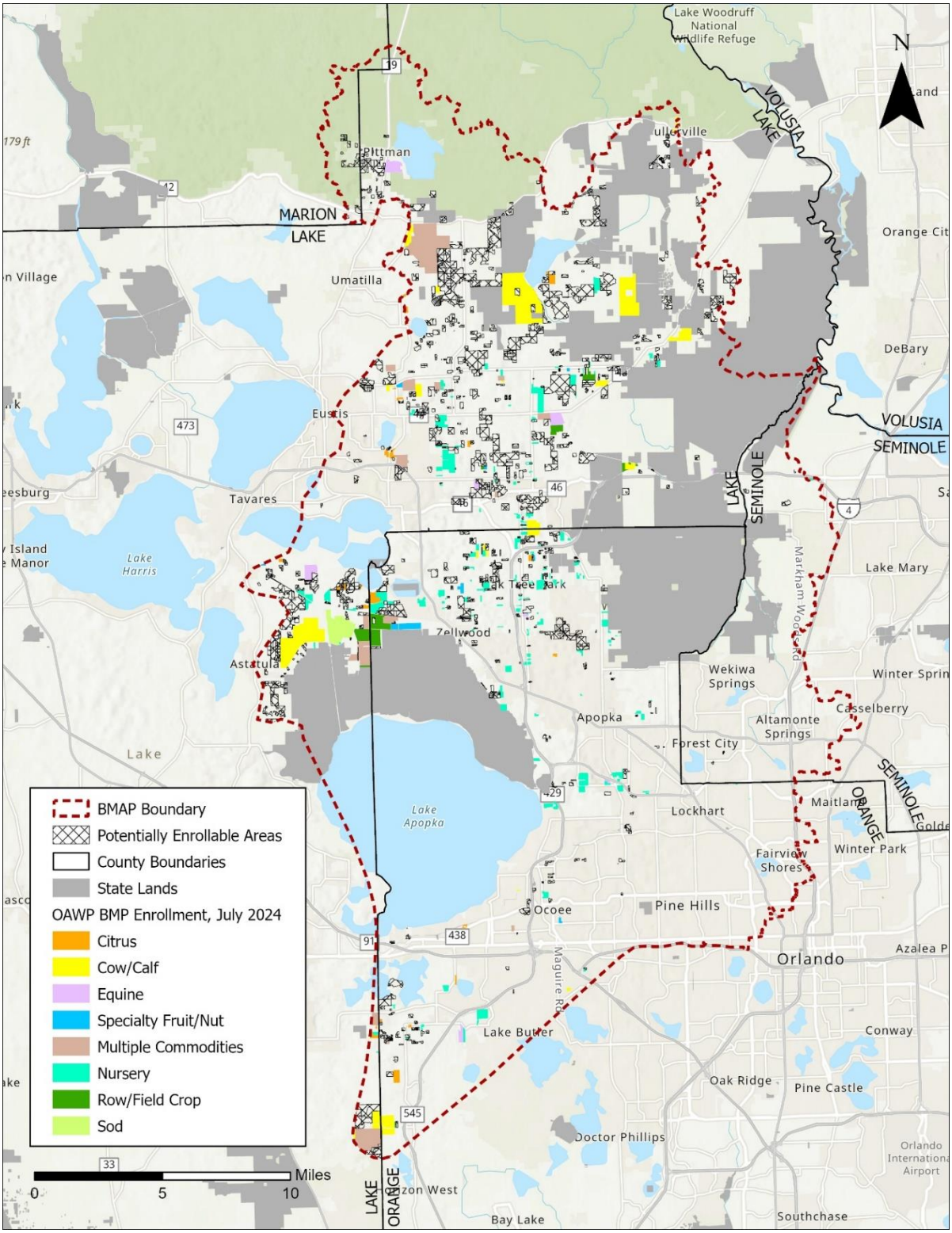

Figure F-2. Agricultural enrollment in the Wekiva River, Rock Springs Run, and Little Wekiva Canal BMAP

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-3 shows the breakdown of agricultural lands within the Wekiva River, Rock Springs Run, and Little Wekiva Canal BMAP based on the FSAID 11 and the results of the FDACS unenrolled agricultural lands characterization.

Table F-3. Agricultural lands in Wekiva River, Rock Springs Run, and Little Wekiva Canal BMAP

* Enrollment information current as of June 30, 2024.

Crediting Location	Agricultural Acres	Unenrolled - Unlikely Enrollable Acres	Agricultural Acres - Adjusted	Agricultural Acres Enrolled*
BMAP Wide	32,224	14,628	17,595	5,292

Potentially Enrollable Lands

There are 1,921 acres of potentially enrollable lands within the Wekiva River, Rock Springs Run, and Little Wekiva Canal BMAP based on the assessment of unenrolled agricultural lands performed by FDACS. **Table F-4** 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-4. Potentially enrollable acres by crop type

Crop Type	Acres
Citrus	238
Crops	46
Fallow	1,773

Crop Type	Acres
Grazing Land	9,256
Hay	78
Livestock	835
Nursery	303
Open Lands	53
Sod	356
Total	**12,938**

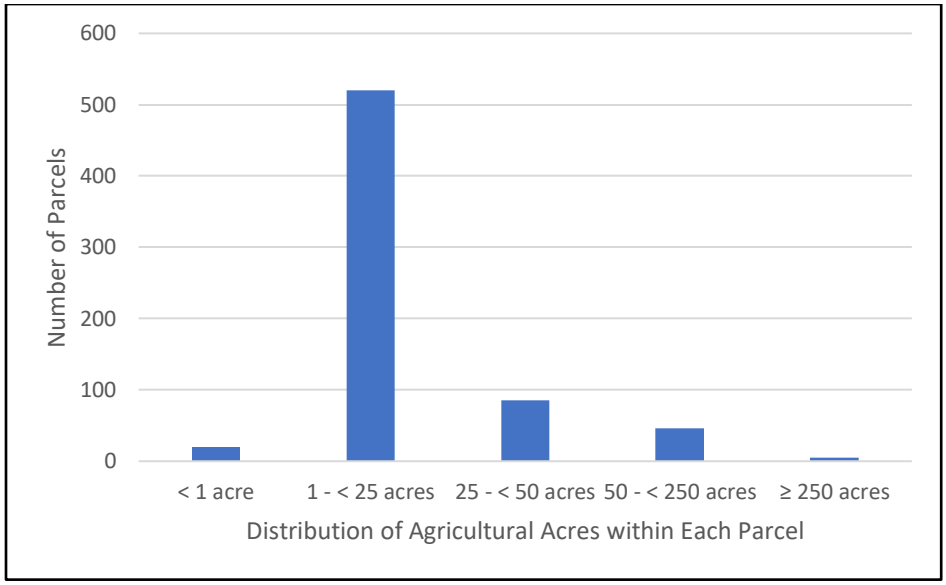

Figure F-3. Count of potentially enrollable parcels by size class

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 United States Department of Agriculture 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.

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.