Wekiva River, and Wekiwa Spring and Rock Springs Basin Management Action Plans

September 24, 2024 at 2:00 PM EDT

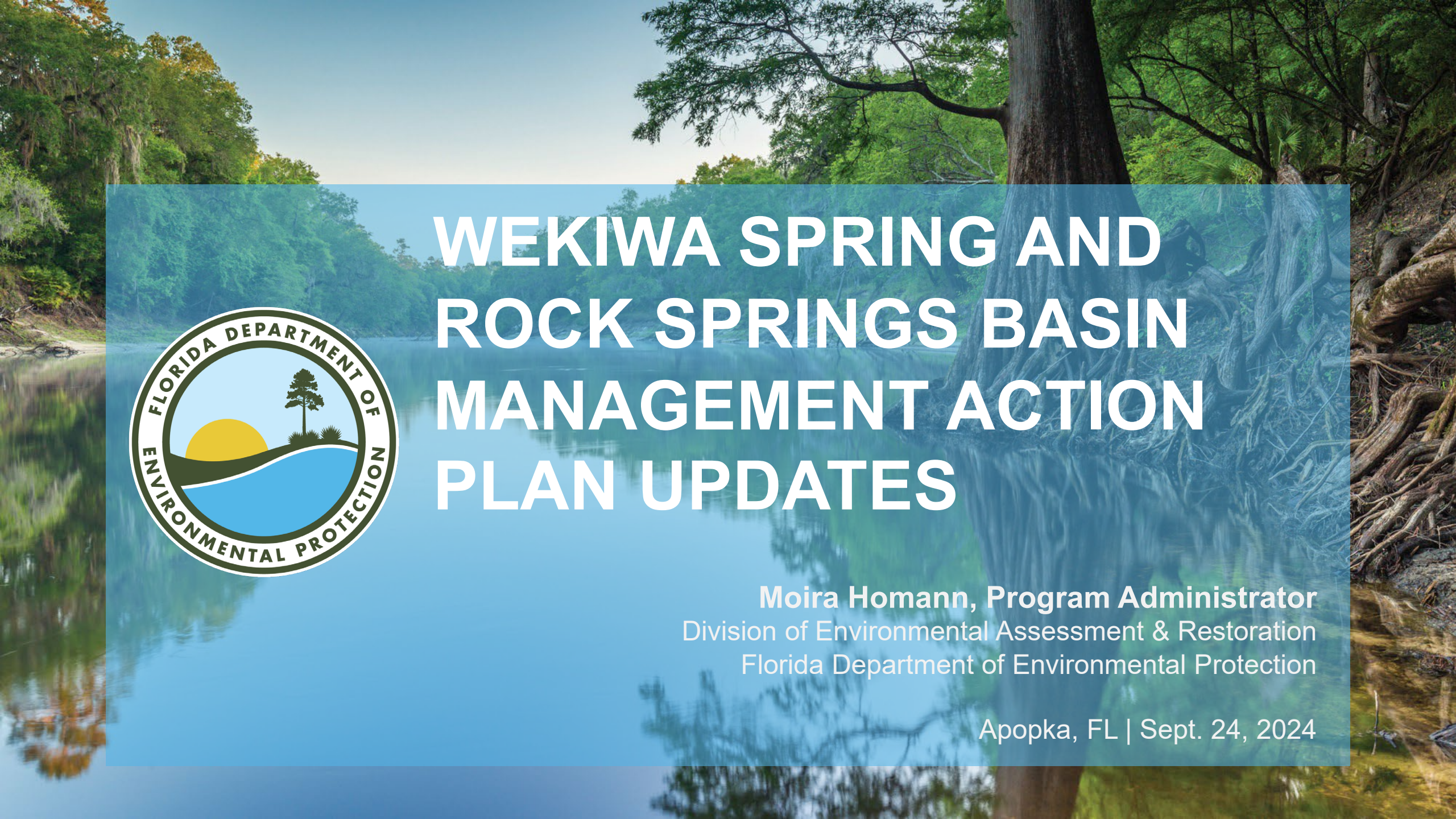
In-person

University of Florida Institute of Food and Agricultural Sciences
Mid-Florida Research and Education Center, Building B
2725 S. Binion Road
Apopka, FL 32703

Agenda

- Wekiva River, and Wekiwa Spring and Rock Springs Basin Management Action Plans (BMAP) Overview.
- Analysis results summary.
- Basin required reductions.
- Entity required reductions.
- Poster Session.

Please note the FTP site for documents pertaining to the various BMAPs:
publicfiles.dep.state.fl.us - /DEAR/BMAP/
For more information, contact: Lauren Campbell at (850) 245-8083 Lauren.Campbell@FloridaDEP.gov.



WEKIWA SPRING AND ROCK SPRINGS BASIN MANAGEMENT ACTION PLAN UPDATES

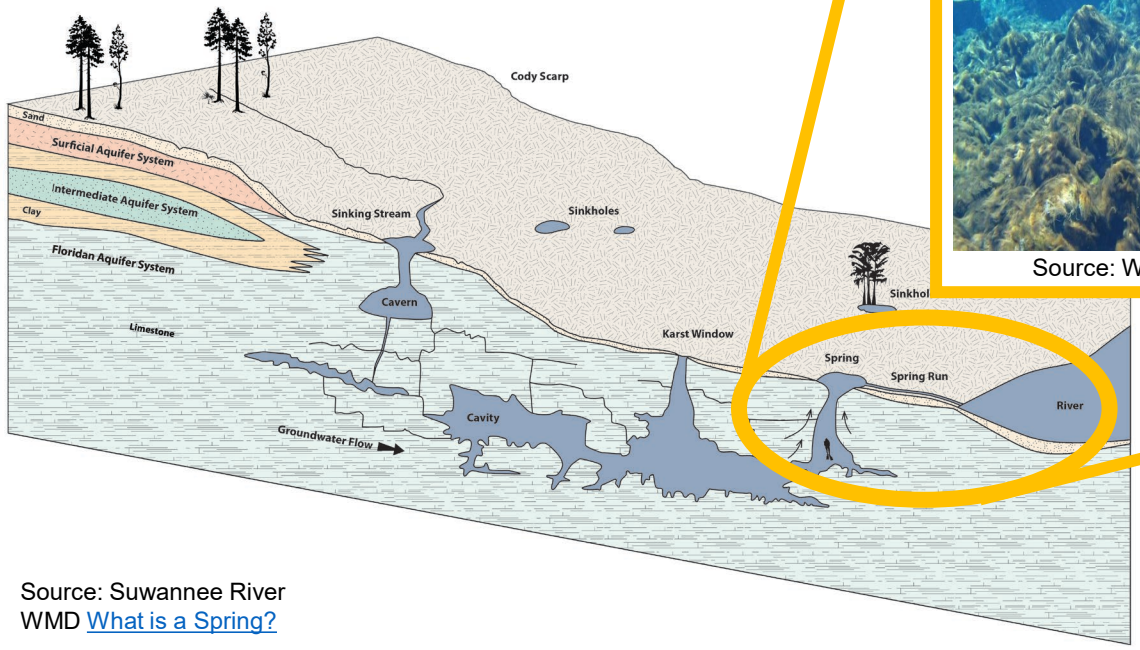
Moira Homann, Program Administrator
Division of Environmental Assessment & Restoration
Florida Department of Environmental Protection

Apopka, FL | Sept. 24, 2024

AGENDA

- Background.
- Analysis results summary.
- Basin required reductions.
- Entity required reductions.
- Poster session.

BACKGROUND
SPRINGS RESTORATION

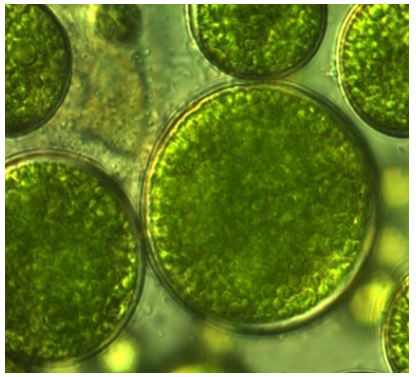


Source: Suwannee River WMD [What is a Spring?]

Impairment: Not meeting water quality standards.

Source: Weeki Wachee TMDL

Algae growth can be caused by **excess nutrients.**



Source: Shutterstock

Total maximum daily load (TMDL): The maximum amount of a pollutant that a waterbody can receive and still maintain its designated uses. This represents the restoration target.

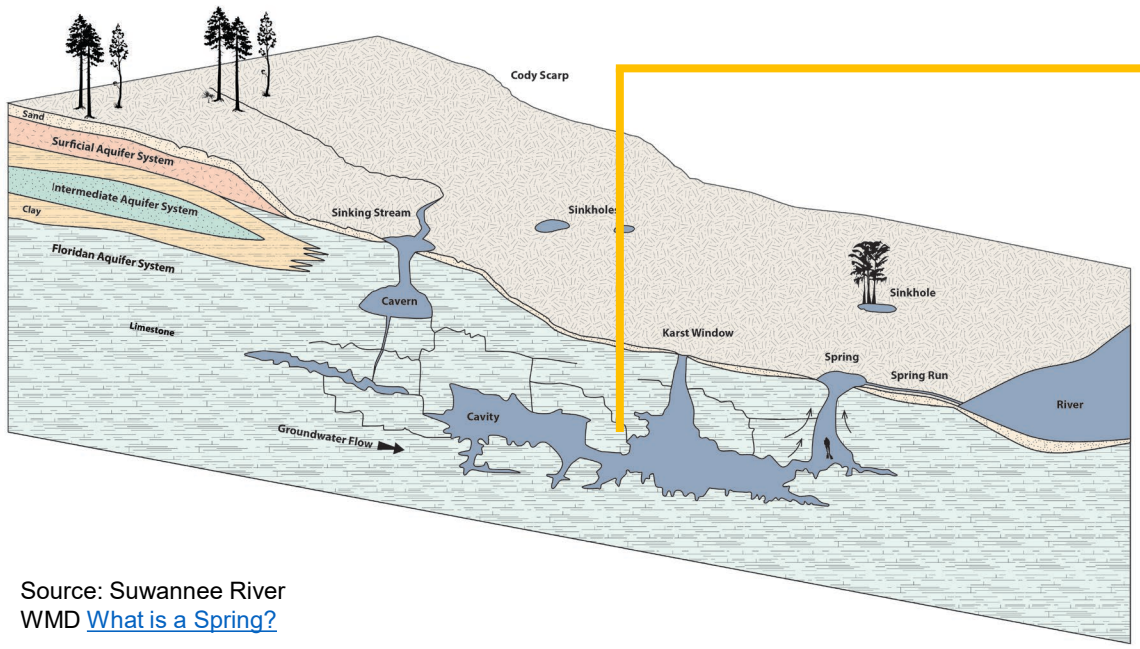
Source: Florida Geological Survey - Rainbow Spring #4

BACKGROUND
SPRINGS RESTORATION

Excess nutrients come from **sources on the landscape.**

Source: Beta Analytics

BMAP Projects: Efforts that result in the reduction or prevention of nutrients to the waterbodies addressed by the BMAP.



Source: Suwannee River WMD [What is a Spring?]

BMAP: Basin Management Action Plan

Complex groundwater dynamics lead to variable travel times to the spring vent.

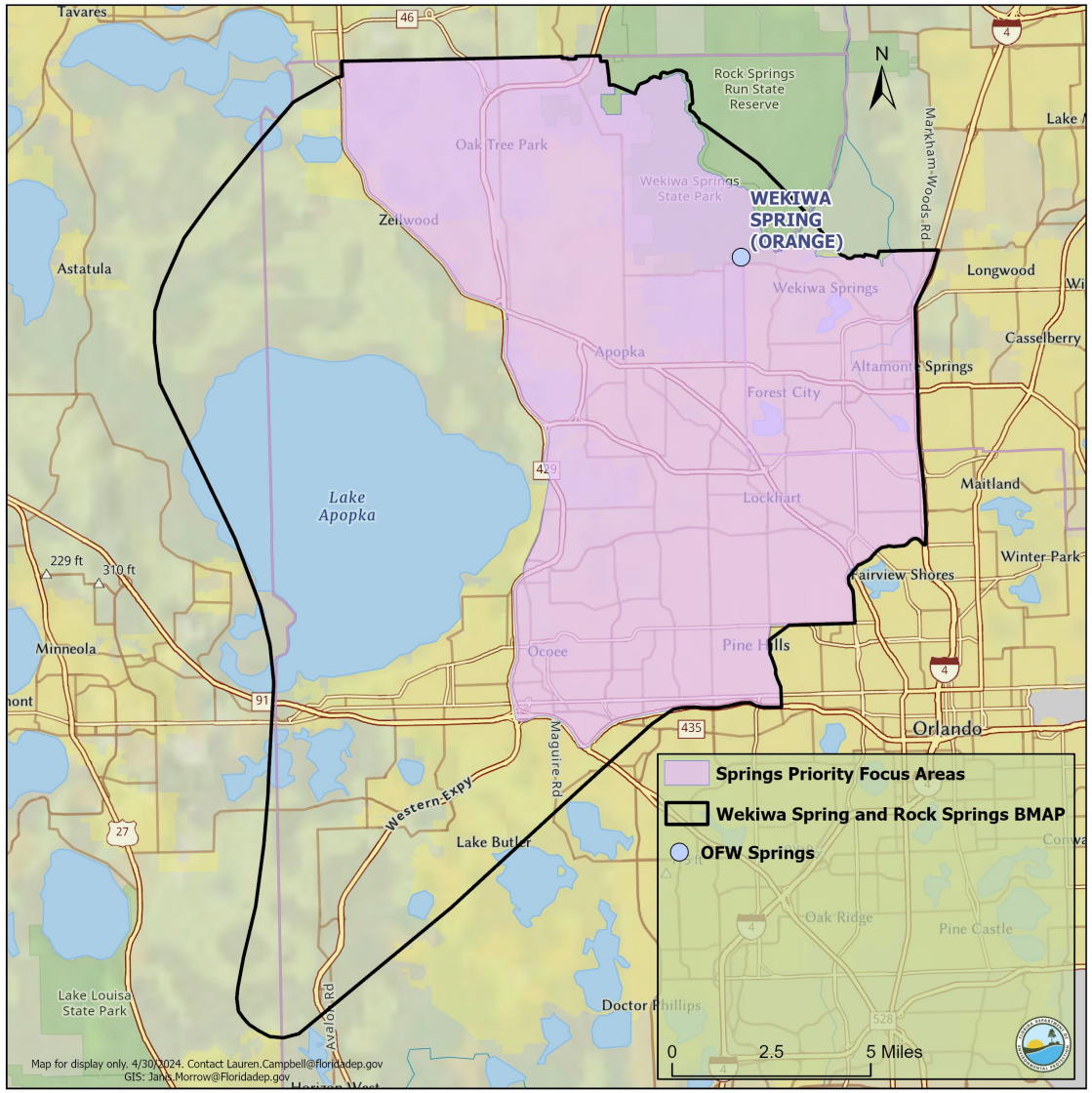
Water quality monitoring is performed through a network of surface water, spring vent and groundwater stations to assess waterbodies and measure progress towards restoration goals.

BMAP: An adaptive framework for water quality restoration that contains a comprehensive set of solutions developed to achieve the pollutant reductions established by TMDL.

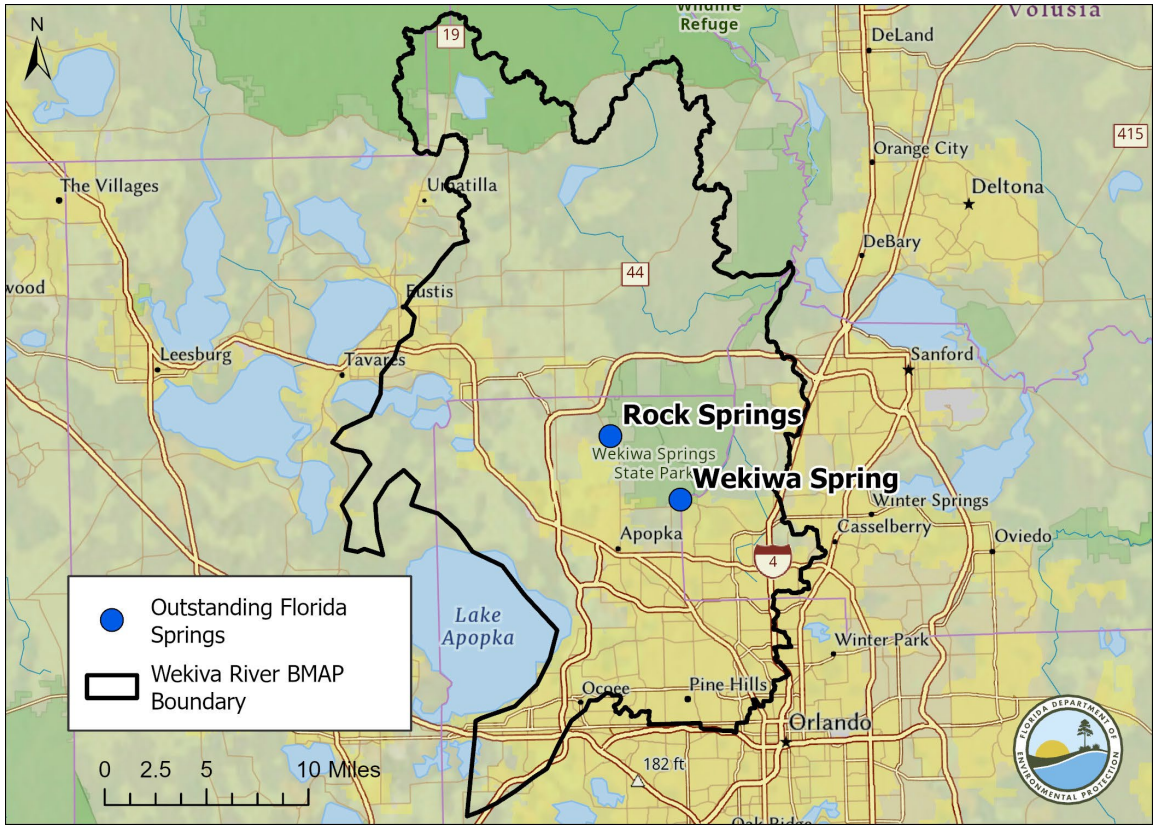
Source: Florida Geological Survey - Rainbow Spring #4

WEKIWA SPRING AND ROCK SPRINGS BMAP

- BMAP area is approximately 183,165 acres or 286 square miles in Orange, Lake and Seminole counties.
- Wekiwa Spring forms the headwater of the Wekiva River, a tributary to the St. Johns River. Rock Springs discharges into Rock Springs Run, which then joins the Wekiva River.
- TMDLs - monthly average nitrate target of 0.286 milligrams per liter (mg/L) of nitrate and 0.065 mg/L of total phosphorus (TP).



WEKIVA RIVER BMAP



- BMAP area is approximately 328,612 acres or 513 square miles in Orange, Lake and Seminole counties.
- TMDL - monthly average nitrate target of 0.286 milligrams per liter (mg/L) and 0.065 mg/L of total phosphorus (TP).
- This surface water BMAP will be included in the St. Johns River Basin Model update.

STAKEHOLDERS
WEKIWA AND ROCK SPRINGS AND WEKIVA RIVER

Responsible stakeholders:

- City of Altamonte Springs.
- City of Apopka.
- City of Eustis.
- City of Maitland.
- City of Mount Dora.
- City of Ocoee.
- City of Orlando.
- City of Tavares.
- City of Winter Garden.
- Lake County.
- Orange County and Orange County Utilities.
- Sunshine Water Services.
- Seminole County.
- Town of Astatula.
- Town of Eatonville.
- Town of Oakland.
- Town of Windermere.
- Turnpike Enterprises.

Responsible agencies:

- Florida Department of Agriculture and Consumer Services (DACS).
- Florida Department of Environmental Protection (DEP).
- Florida Department of Health.
- Florida Department of Transportation.
- Florida Department of Health in Lake County.
- Florida Department of Health in Orange County.
- Florida Department of Health in Seminole County.
- St. Johns River Water Management District.

Other interested stakeholders:

- Environmental Interests.
- Florida Fish and Wildlife Conservation Commission.
- Friends of Wekiva River.
- Wekiva River Aquatic Preserve.
- Wekiwa Springs State Park.

BILLS AND LEGISLATION
SUMMARY

- Florida Watershed Protection Act, section 403.067, Florida Statutes (F.S.).
- Florida Springs and Aquifer Protection Act, Part VIII of Chapter 373, F.S.

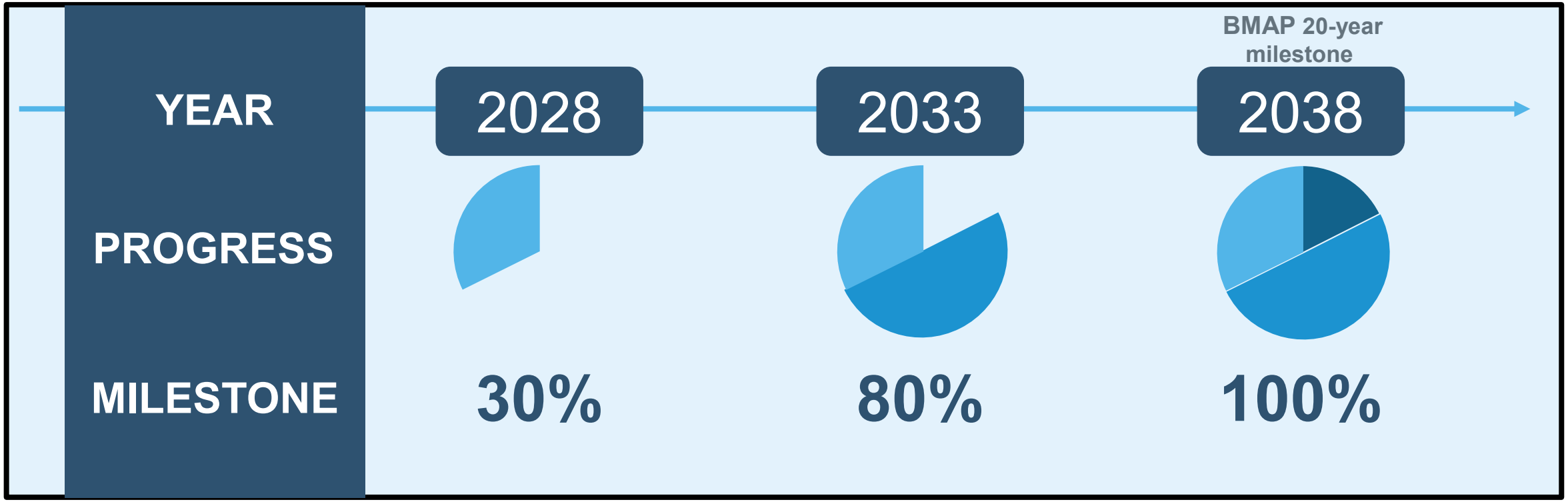
- 2020 Senate Bill (SB) 712, Clean Waterways Act.
- 2023 House Bill (HB) 1379.
- 2024 HB 1557.

Summary of latest updates:

- Wastewater facility plans and onsite sewage treatment and disposal system (OSTDS) remediation plans from local governments.
- List of identified project to meet five-year milestones.
- Agricultural Cooperative Regional Elements (ACE).
- For the spring BMAPs, prohibitions expanded from priority focus area (PFA) to the entire BMAP.
- Advanced waste treatment (AWT) required for more types of effluent, including certain reclaimed water.

BMAP MILESTONES

FIVE-, 10-, AND 15-YEAR MILESTONES/REDUCTION SCHEDULE



Assessment of progress toward these milestones must be conducted every five years and revisions to the plan must be made as appropriate. BMAPs use an adaptive management approach that allows for incremental load reductions through the implementation of projects and management strategies; however, the restoration target – the TMDL – remains the same.

WEKIWA AND ROCK SPRINGS BMAP UPDATES

DRAFT LOADING SUMMARY

Wekiwa Rock Springs- Total Reduction Needed to Meet the TMDL		
	Nitrogen Loads (lbs-N/yr)	**Information**
Total Load at Spring Vents (October 2023)	286,567	Upper 95% confidence interval – nitrate and flow data 2012-2022
TMDL Load	67,705	TMDL target is 0.286 mg/L and using the same flow data and proportions
Percent Required Reductions	76%	Based on Spring Vent Load and TMDL Load
Total NSILT Load (October 2023)	1,213,232	2023 NSILT
Required Reductions	926,589	Based on NSILT Load and Percent Reduction at Spring Vent

cfs: Cubic feet per second
mg/L: milligram per liter

REDUCTIONS

DRAFT SPRINGSHED REDUCTIONS

Nitrogen Source	Allocations by Source (lbs-N/yr)	Percent of Total Reduction
Atmospheric Deposition (AD)	42,032	4.54%
Onsite Sewage Treatment and Disposal System (OSTDS)	479,681	51.77%
Wastewater Treatment Facility (WWTF)	68,792	7.42%
Farm Fertilizer (BMP Enrollment)	7,236	0.78%
Livestock Waste-NonCAFO (BMP Enrollment)	948	0.10%
Other Agriculture	35,896	3.87%
Urban Turf Fertilizer (UTF)	227,154	24.52%
Sports Turf Fertilizer (STF) -Golf	20,031	2.16%
Sports Turf Fertilizer (STF) -Other	5,201	0.56%
Regional Projects	39,618	4.28%
Total	**926,589**	**100.00%**

- The spring vent percentage of 76% was used to determine the required reduction for most categories of sources.
- For wastewater treatment facilities, reductions were determined based on the BMAP effluent standards or recent legislative changes.
- For agricultural sources, an estimated reduction of 15% will be achieved when crop producers enroll in the DACS Best Management Practice (BMP) program and implement BMPs, and a reduction of 10% is estimated when all livestock producers enroll in the DACS BMP program and implement BMPs. The remaining allocated reduction to agricultural sources will be addressed through a combination of regional projects, ACE, innovative technologies and cost-share projects.

REDUCTIONS

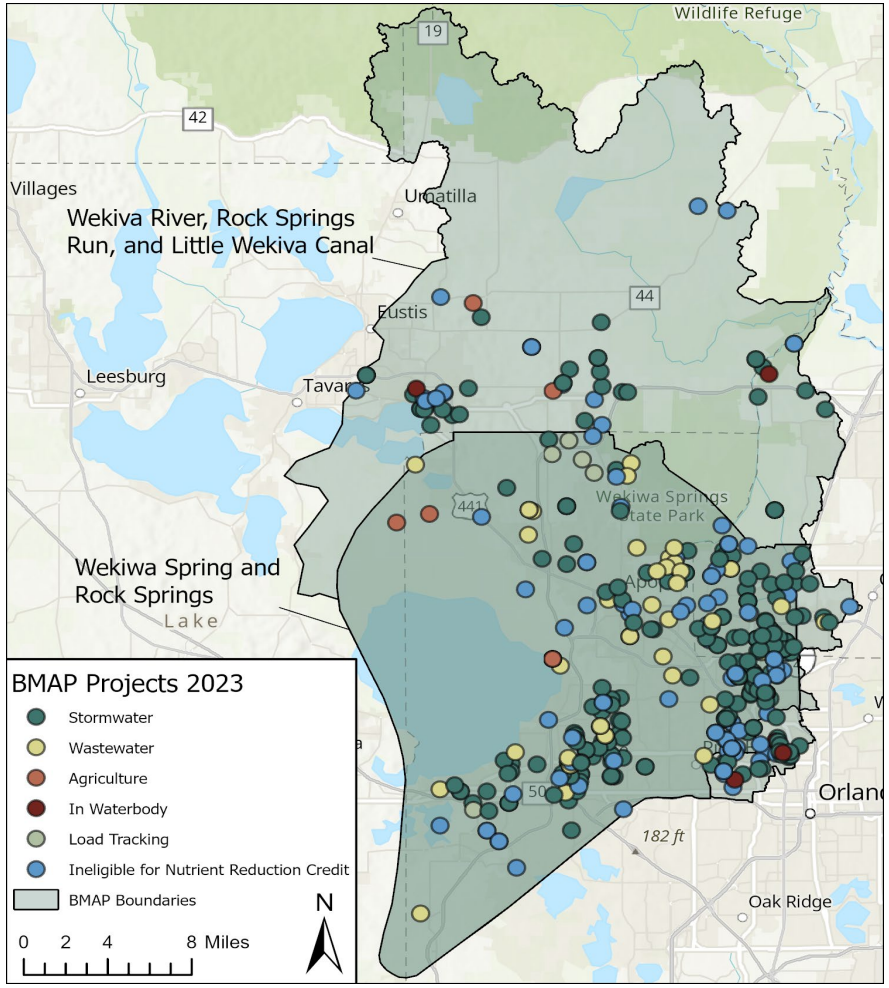
DRAFT ENTITY REQUIRED REDUCTIONS

- All local municipalities will be allocated reduction targets based on the estimated loading within their jurisdiction from wastewater, OSTDS and urban fertilizers.
- Agriculture will be allocated based on reduction targets.
- Private wastewater treatment facilities will be required to meet BMAP wastewater standards or advanced waste treatment standards as determined by DEP and implemented through permits.
- New management strategies will provide assurance golf courses are using fertilizers appropriately.

*Reductions for these entities will be tracked through permits and compliance actions.

Entity	Milestone 2028 Assigned Reductions lbs-N/yr (30%)	Milestone 2033 Assigned Reductions lbs-N/yr (+50%=80%)	Milestone 2038 Assigned Reductions lbs-N/yr (+20%=100%)
City of Altamonte Springs	4,641	12,376	15,470
City of Apopka	16,842	44,913	56,141
City of Maitland	669	1,783	2,229
City of Montverde	1	3	4
City of Ocoee	22,240	59,308	74,135
City of Orlando	1,737	4,632	5,790
City of Winter Garden	4,412	11,766	14,708
Lake County	671	1,789	2,236
Orange County	155,672	415,126	518,907
Seminole County	21,998	58,662	73,327
Town of Eatonville	254	678	848
Town of Oakland	2,447	6,526	8,158
Town of Windermere	1,091	2,909	3,636
Mt. Dora WWTF	7	17	22
Private WWTF*	1,565	4,175	5,218
Private Golf Courses*	6,009	16,025	20,031
Agriculture (BMPs)	2,455	6,547	8,184
Ag-Cooperative Regional Elements and Cost Share	10,769	28,717	35,896
Regional Projects	11,885	31,695	39,618

PROJECTS



HB 1379 requires responsible entities to report on projects that meet the required five-year milestones.

- It is critical to the BMAP program that entities plan for and report projects and project updates to the state through the Statewide Annual Report (STAR) process.
- All projects needed to fulfill milestones should be included in the STAR report, even if a funding source has not been identified.
- Reporting projects in the STAR allows the state to evaluate funding needs and prioritize projects to promote maximum environmental benefit and to meet milestones.
- Entity allocations and milestones will be added to the **Wekiva River BMAP** in another BMAP update after completion of the St. Johns River model. Interim management strategies will be included in this BMAP update.

UPCOMING SCHEDULE

May-Aug. 2024

Individual meetings on allocations and milestones with BMAP stakeholders.

Aug.1, 2024

Final wastewater and OSTDS plans due from stakeholders.

Aug. - Nov. 2024

BMAP Portal opened early for project collection. Public meetings on allocations.

Technical analyses, project identification and BMAP document drafting.

June - Dec. 2024

Final draft BMAP documents and public meetings.

Dec. 2024

Statutory deadline to update nutrient BMAPs.

July 1, 2025

RESOURCES

BMAP WEBSITE AND STORY MAPS

Florida Springs Basin Management Action Plans (BMAPs)

Welcome to the Florida Springs Basin Management Action Plan (BMAP) StoryMap

The springs BMAPs are developed with specific provisions for the protection and restoration of the state's Outstanding Florida Springs. This story map focuses on the springs-related BMAPs; for more details about other BMAPs or more information about the BMAP program in general, visit https://floridadep.gov/bmaps.

* The story map will display differently depending on the screen size and resolution being used. Story map best viewed in Chrome or Firefox.

Overview

The Florida Springs and Aquifer Protection Act (Part VIII of Chapter 373, F.S.) provides for the protection and restoration of the state"s Outstanding Florida Springs (OFS), which comprise 24 first magnitude springs, 6 additional named springs, and their associated spring runs. The act provides specific requirements for OFS BMAPs beyond those

1 Legislative Requirements

2 Crystal River - Kings Bay BMAP StoryMap

3 DeLeon Spring Story Map

4 Gemini Springs Story Map

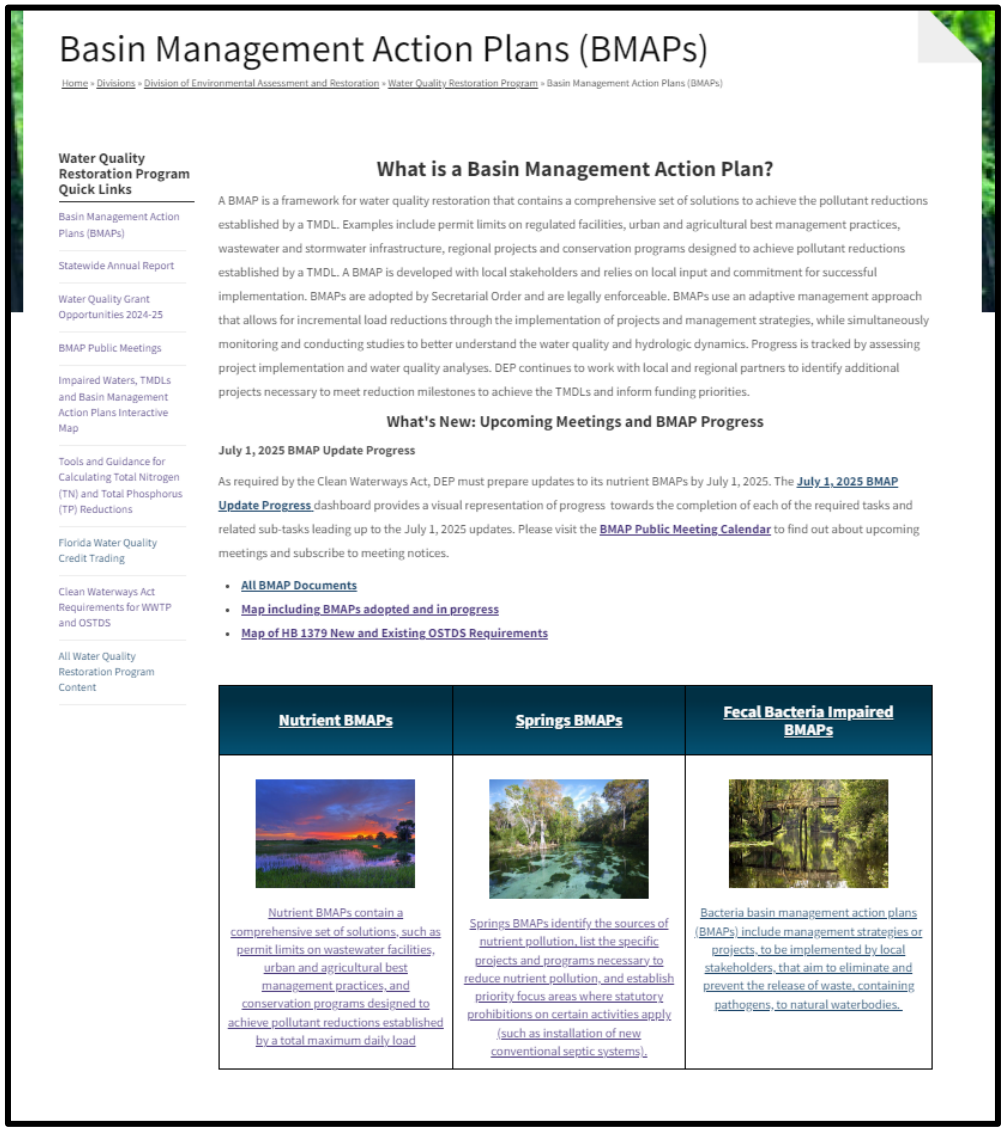
5 Homosassa and Chassahowitzka Springs...

6 Jackson Blue and Merritts Mill Pond BMAP Story Map

7 Rainbow Springs Group and Rainbow Springs Group Run...

8 Santa Fe River BMAP Story Map

9 Silver Springs and Upper Silver River BMAP Story Map



SUBSCRIBER PAGE

HOW TO CONTACT US

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THANK YOU

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FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION

OVERVIEW - BASIN MANAGEMENT ACTION PLANS (BMAPS)

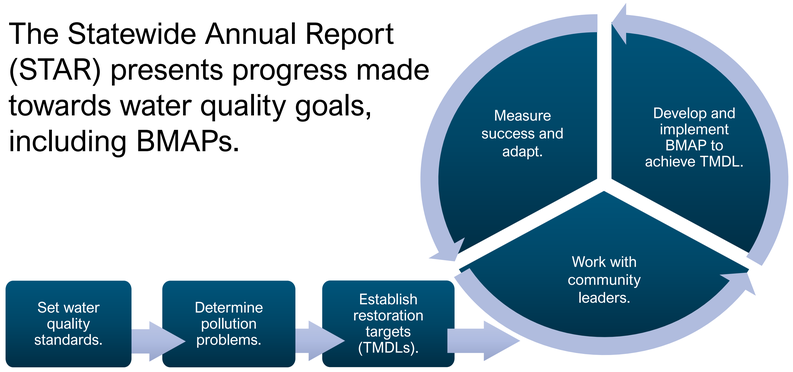
Outstanding Florida Springs Public Meetings, Fall 2024

Water Quality Framework

The Florida Department of Environmental Protection (DEP) monitors and assesses Florida's surface water and groundwater quality, including Outstanding Florida Springs.

DEP and partner agencies maintain and expand monitoring networks to provide water quality data for decision making.

The Statewide Annual Report (STAR) presents progress made towards water quality goals, including BMAPs.



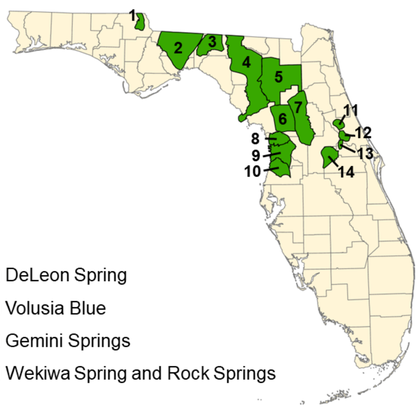
Outstanding Florida Springs BMAPs

A BMAP provides a water quality restoration framework to implement total maximum daily loads (TMDLs).

There are currently 13 BMAPs targeting the restoration of 24 Outstanding Florida Springs.

Springs BMAPs

1. Jackson Blue
2. Wakulla Spring
3. Wacissa
4. Suwannee
5. Santa Fe
6. Rainbow Springs
7. Silver Springs
8. Kings Bay-Crystal River
9. Chassahowitzka-Homosassa
10. Weeki Wachee
11. DeLeon Spring
12. Volusia Blue
13. Gemini Springs
14. Wekiwa Spring and Rock Springs



BMAP Legislation

Authority and responsibility for BMAPs is outlined in the following Florida Statutes (F.S.):

Florida Watershed Restoration Act (section 403.067, F.S) - Outlines the process for identifying impaired waters and the strategies to restore them, including cooperative plans, known as BMAPs.

Florida Springs and Aquifer Protection Act (sections 373.801 - .813, F.S.) -Provides for the protection and restoration of the state's Outstanding Florida Springs, which is comprised of 24 first-magnitude springs, six additional named springs and their associated spring runs.

Recent amendments to the above laws include:
2020 - Promotes resilient wastewater infrastructure and utilities; requires local governments to develop wastewater treatment facility (WWTF) plans and onsite sewage treatment and disposal system (OSTDS) remediation plans.

2023 - Requires a list of identified projects to achieve the five-year milestones in BMAPs and agricultural cooperative regional water quality improvement elements; adds requirements for local comprehensive planning; requires more stringent domestic wastewater treatment standards; expands eligibility for grant opportunities; and expands prohibitions in springs BMAP areas.

2024 - Requires advanced treatment of reclaimed water within BMAPs and requires private domestic wastewater facilities to coordinate with local governments in the development of wastewater treatment plans.

BMAP Components and Updates

Key Elements of BMAPs:
- The TMDL(s) that define the restoration targets.
- Physical description of the waterbody and contributing area.
- Description of the monitoring network and water quality.
- Identification of the pertinent pollution sources.
- Identification of responsible stakeholders.
- List of projects and strategies to reduce nutrient loading.

USFWS_CCBY2.0

Recent Updates:
- 2023 Nitrogen Source Inventory Loading Tool (NSILT).
- Spring Vent Analyses.
- Evaluation and expansion of the monitoring network.
- Local OSTDS and wastewater remediation plans.
- Determination of entity allocations and milestones.
- Evaluation of milestone progress with stakeholders.

New Additions to the Springs BMAPs:
- More detailed groundwater analyses.
- Updated spring vent water quality analyses.
- Incorporation of law requirements adopted 2020-24.
- Entity allocations.

BMAP Timeline

2018
Outstanding Florida Springs BMAPs adopted.

2020
Clean Waterways Act signed into Florida law.

2023
NSILT and spring vent analyses are updated with methodology revisions.

2025
Statutory deadline for updated nutrient BMAPs.

2028
Next BMAP milestone for entity reductions.

2018 | 2019 | 2020 | 2021 | 2022 | 2023 | **2024** | 2025 | 2026 | 2027 | 2028

January 2024
Public meeting about updated NSILT methodology.

May 2024
BMAP updates public meetings. Responsible entity meetings.

August 2024
Final OSTDS Remediation Plans and WWTF Plans due.

October 2024
Public meetings about allocated reductions and milestone progress.

December 2024
Final Draft BMAP documents and public meetings.

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FLORIDA SPRINGS – AN OVERVIEW

Outstanding Florida Springs Public Meetings, Fall 2024

Springshed Diagram

The diagram below represents an overview of the complex processes that impact water flow through a spring system. It also shows how human behaviors on the landscape affect nitrogen pollution in the groundwater. Eventually, groundwater flows back to the surface through the Outstanding Florida Springs (OFS). Pollutants from the surface can travel long distances, negatively impacting water quality and the biology of springs and rivers. The variable distances and underground conditions means it can take time to observe water quality improvements at the spring vent from restoration projects being implemented on the land surface across the springshed.

OFS

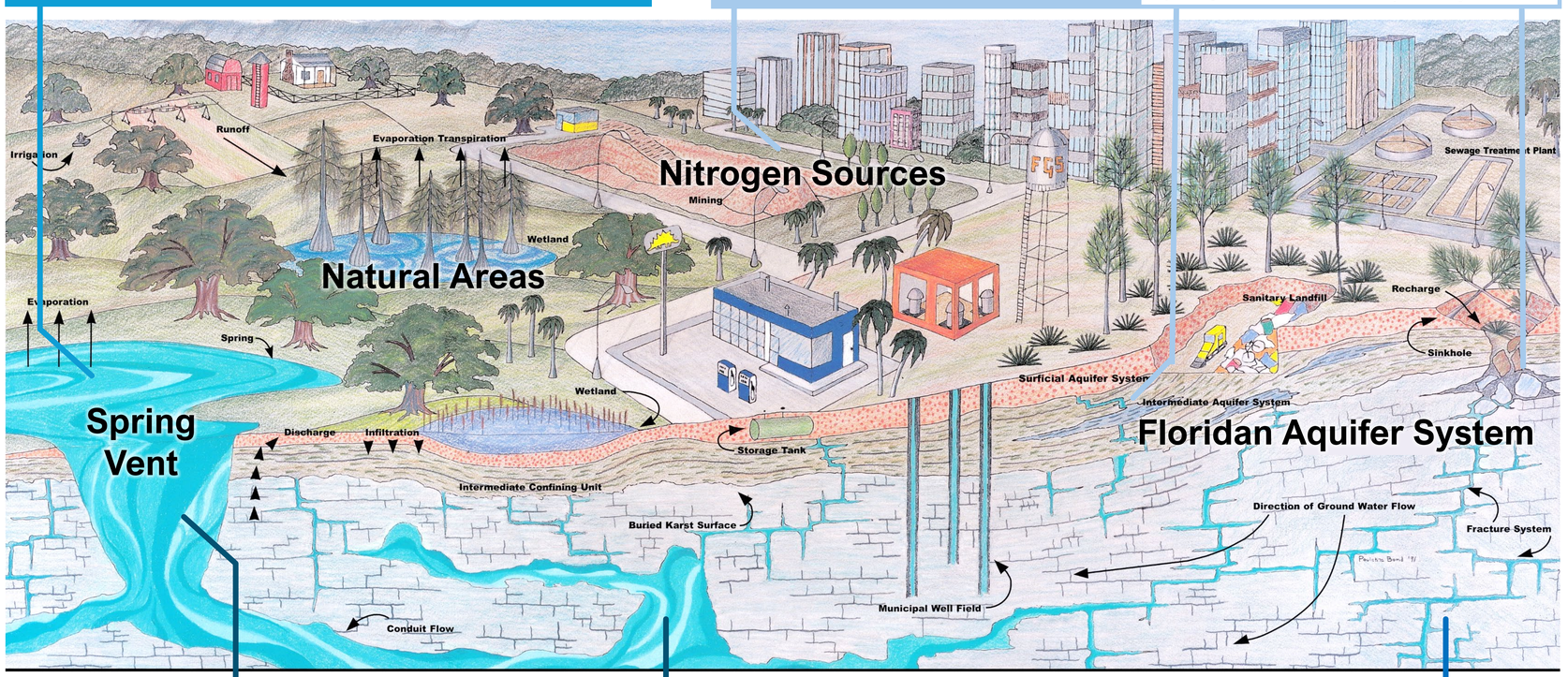
OFS includes all historic first magnitude springs and their associated spring runs as determined by DEP, using the most recent Florida Geological Survey springs bulletin (66), as well as the following additional springs and their associated spring runs: DeLeon Springs, Peacock Springs, Poe Springs, Rock Springs, Wekiwa Springs and Gemini Springs.

Impairment

Currently, 24 of the 30 OFS are impaired for the nitrate form of nitrogen. Anthropogenic sources of nitrogen such as human waste, livestock waste, farm fertilizer, urban fertilizer and other sources contribute to nitrate loading that results in an ecological imbalance.

Vulnerability evaluates how easily pollutants from the surface can impact groundwater quality.

Recharge occurs when rain or irrigation water infiltrates through the soil and enters an underlying aquifer system.



Monitoring

Spring vent monitoring is performed by DEP and partner agencies to measure progress towards meeting the total maximum daily loads (TMDLs).

Groundwater monitoring is performed by DEP and partner agencies to understand how nutrient loading and reduction activities impact water traveling to the spring vent.

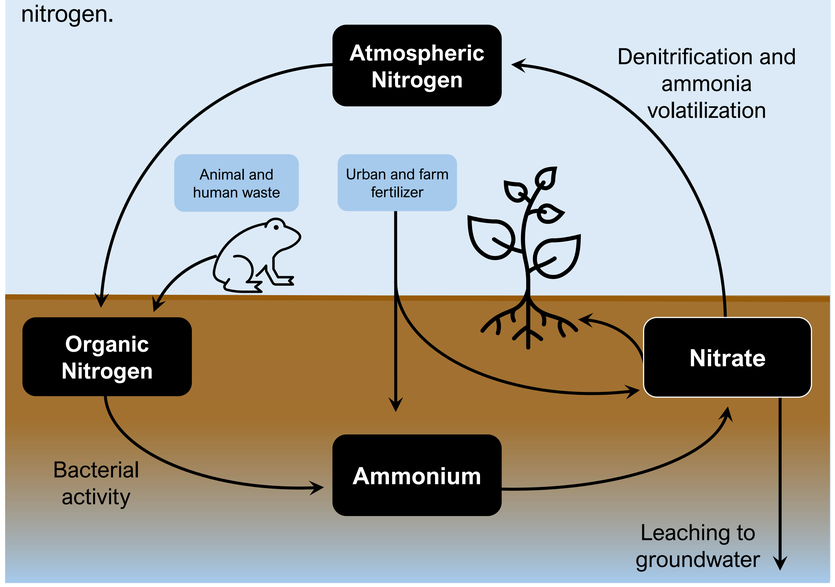
Karst Limestone

The Floridan aquifer is contained in limestone units that underly the state. Karst limestone results from the dissolution of calcium carbonate rock by acidic rainwater, creating voids and channels that result in sinkholes, conduits and springs. Water can travel rapidly from high recharge areas to spring vents through karst features.

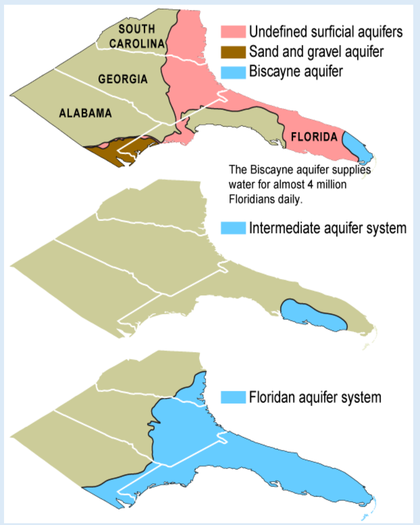
The Nitrogen Cycle

Nitrogen goes through biological, physical and chemical processes as it travels through the environment. This series of interactions is known as the nitrogen cycle.

Attenuation of nitrogen refers to the processes of immobilization, denitrification, volatilization and cation exchange that prevent leaching of nitrogen.



Florida's Aquifer Systems



The Floridan Aquifer underlies the entire state of Florida and is the source water for the state's springs.

In some areas of the state, a surficial aquifer system separates the Floridan Aquifer from the land surface.

In most OFS areas, the Floridan Aquifer is largely unconfined and vulnerable to leaching of nitrogen from the land surface.

[Springshed diagram: FGS PR5]

[Aquifer diagram: St. Johns River Water Management District (SRJWMD)]

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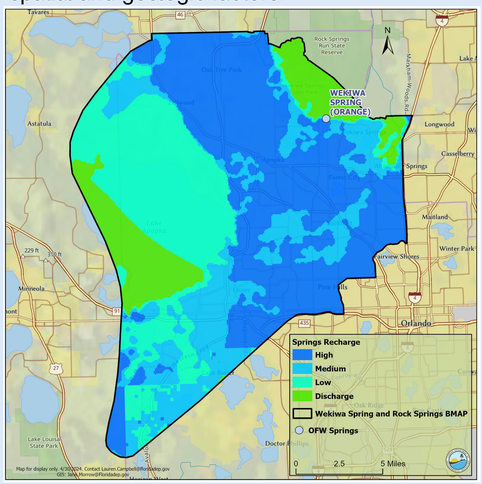
WEKIWA SPRING AND ROCK SPRINGS BASIN MANAGEMENT ACTION PLAN (BMAP) SUMMARY

Wekiwa BMAP

The first step to address nitrogen impairments in Wekiwa Spring and Rock Springs is to inventory the sources of the pollutant in the basin. This was completed through the **Nitrogen Source Inventory Loading Tool (NSILT).** The NSILT evaluated the loading in pounds of nitrogen per year (lb-N/yr) after attenuation from various sources and considered the recharge potential based on spatial and geologic factors.



This figure shows the generalized recharge zones in the basin.

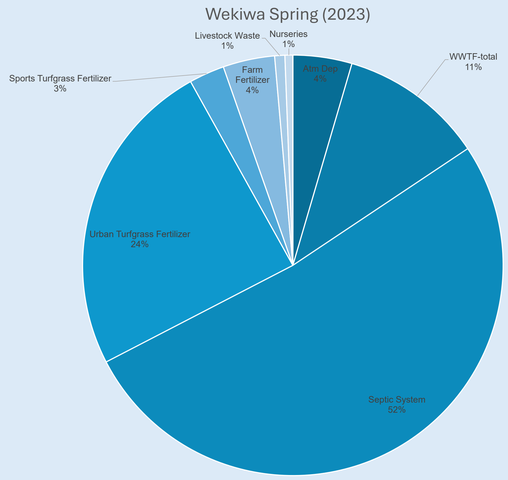
High recharge indicates areas where more water is expected to percolate into the Upper Floridan Aquifer and travel to the spring vent.

Discharge represents areas where water is expected to flow to a surface water body and, therefore, not impact groundwater (GW) quality.

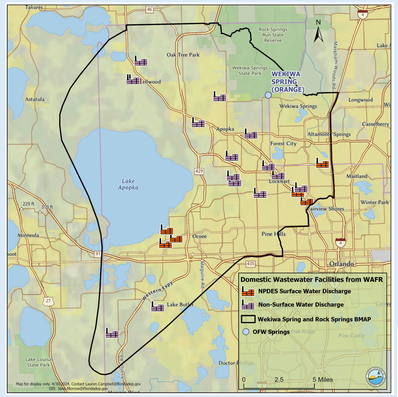
NSILT Summary

Wekiwa Spring and Rock Springs BMAP Area	
Nitrogen Source	**Annual Loading (lb-N/yr)**
Septic Systems	628,072
Urban Turf Fertilizer	297,425
Atmospheric Deposition	55,034
Farm Fertilizer	48,239
Nurseries	7,353
Sports Turf Fertilizer (STF)-Other	6,810
Sports Turf Fertilize-Golf	26,227
Livestock	9,477
Wastewater Treatment Facilities	134,595
Total	**1,213,232**

The pie chart below shows the comparative contribution of various nitrogen sources to the Wekiwa Spring and Rock Springs.

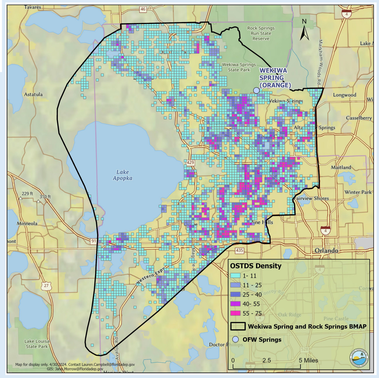


Urban Source Loading



Wastewater treatment facilities, including private facilities, contribute 11% of the total nitrogen load in the basin. The figure to the left shows the location of domestic wastewater facilities in the basin.

Onsite Sewage Treatment and Disposal Systems (OSTDS), also known as septic systems, contribute 52% of the nitrogen load in the BMAP. The figure to the right shows OSTDS density per 300-meter by 300-meter grid cell.

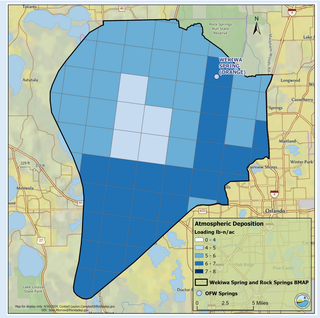


Urban turfgrass from single family residential and commercial sources, sports fields and golf contribute 27% of the total nitrogen load in the basin.

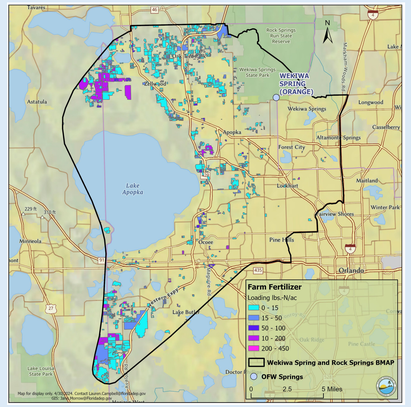
Atmospheric Deposition

Atmospheric deposition was estimated using data from the Total Deposition Science Committee (TDep) Model. TDep estimates annual deposition on 4-kilometer by 4-kilometer grid squares.

Atmospheric deposition accounts for 4% of total loading within the Wekiwa and Rock Springs BMAP area.



Agricultural Source Loading

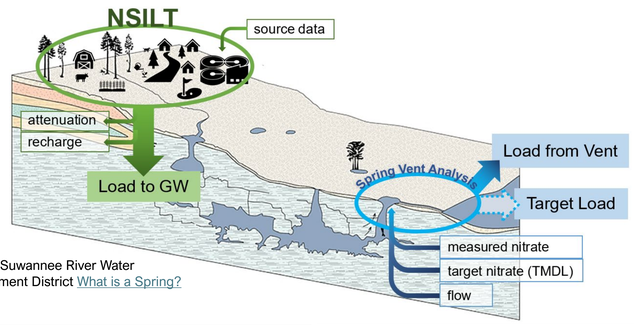


Agricultural sources include farm fertilizer and livestock waste. The Florida Department of Agriculture and Consumer Services (DACS) Florida Statewide Agriculture Irrigation Demand (FSAID) database were used to evaluate loading from farm fertilizer and nurseries. The FSAID and U.S. Department of Agriculture (USDA) Census of Agriculture data were used to estimate livestock loading.

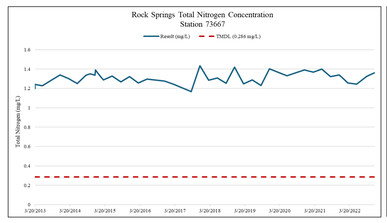
Spring Vent Analysis

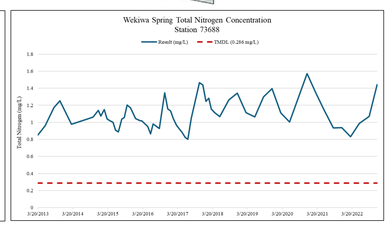
Spring flow and nitrate concentration data were evaluated to estimate the total load (lb-TN/yr) of nitrate flowing at the spring vent.

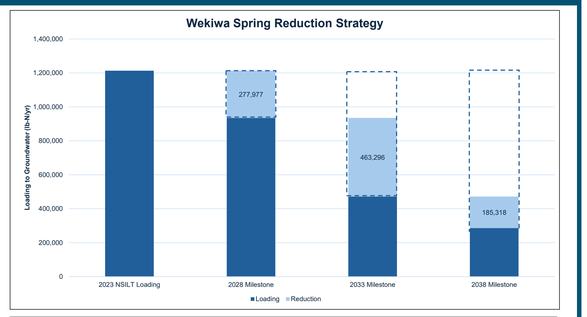
Approximately 76% more nitrate loading is discharged than the waterbodies can assimilate without impairment. This represents the reductions needed to achieve the total maximum daily loads (TMDLs). A proportional decrease in loading from nitrogen sources is needed to restore the waterbodies.



Source: Suwannee River Water Management District What is a Spring?







Wekiwa Rock Springs- Total Reduction Needed to Meet the TMDL		
	Nitrogen Loads (lbs-N/yr)	**Information**
Total Load at Spring Vents (October 2023)	286,567	Upper 95% confidence interval – nitrate and flow data 2012-2022
TMDL Load	67,705	TMDL target is 0.286 mg/L and using the same flow data and proportions
Percent Required Reductions	76%	Based on Spring Vent Load and TMDL Load
Total NSILT Load (October 2023)	1,213,232	2023 NSILT
Required Reductions	926,589	Based on NSILT Load and Percent Reduction at Spring Vent

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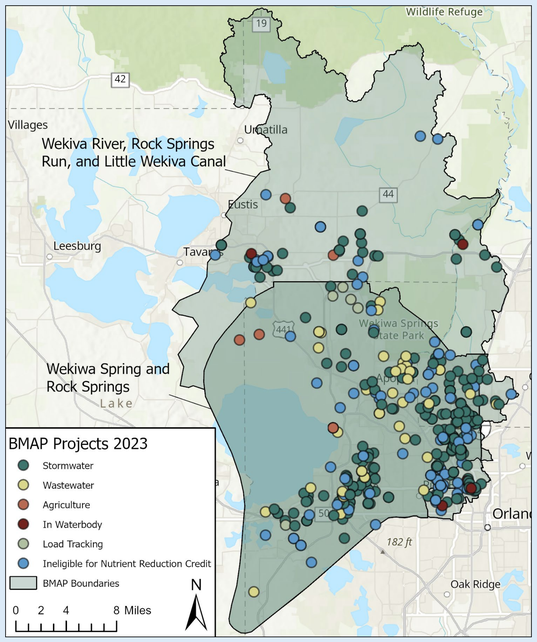
WEKIVA RIVER AND WEKIWA SPRING AND ROCK SPRINGS BASIN MANAGEMENT ACTION PLANS (BMAPS)

Allocated Reductions, Milestones and Progress

Project Map



BMAP Management Strategies

General Approach for Entity Allocations and Reductions
While the loading evaluation and entity allocations were determined by source, nutrient reduction credits can be earned through implementing projects addressing any source. Reduction milestones must be met to ensure sufficient progress towards meeting the total maximum daily load (TMDL) target.

Source-Specific Management Strategies:

- **Atmospheric Deposition:** Due to continuing air regulations, and fuel switching, emissions of atmospheric nitrogen have been trending downwards in Florida since at least 2005 (Himes & Dawson, 2017).
- **Onsite Sewage Treatment and Disposal Systems:** New installations or repair permits for conventional septic systems are not permitted on lots 1 acre or less.
- **Wastewater Treatment Facilities:** Surface water discharges must meet advanced waste treatment (AWT). Facilities with other disposal methods must meet AWT standards if the Florida Department of Environmental Protection (DEP) determines the treatment is needed.
- **Farm Fertilizer Best Management Practice (BMPs) Implementation:** An assumed decrease in nitrogen loading of 15% when a producer enrolls in the Florida Department of Agriculture and Consumer Services (DACS) BMP program and implements BMPs.
- **Livestock Waste BMP Implementation:** An assumed decrease in nitrogen loading of 10% when a livestock producer enrolls in the DACS BMP program and implements BMPs.
- **Other Agricultural Activities:** The remainder of agricultural reductions will be addressed through a combination of regional projects, agricultural cooperative elements, innovative technologies and cost-share projects.
- **Urban Turfgrass Fertilizer:** Ordinances, education, street sweeping and structural stormwater improvements to reduce impact from urban turfgrass fertilization.
- **Sports Turfgrass Fertilizer – Golf:** Operators will be required to develop a nutrient management plan to demonstrate fertilizers are being managed responsibly.
- **Sports Turfgrass Fertilizer – Other:** Owners/operators should follow the Sports Turfgrass BMP manual to ensure fertilizers are managed responsibly.

Wekiwa Springs Basin Reductions

Nitrogen Source	Allocations by Source (lbs-N/yr)	Percent of Total Reduction
Atmospheric Deposition (AD)*	42,032	4.54%
Onsite Sewage Treatment and Disposal System (OSTDS)	479,681	51.77%
Wastewater Treatment Facility (WWTF)	68,792	7.42%
Farm Fertilizer (BMP Enrollment)	7,236	0.78%
Livestock Waste-NonCAFO (BMP Enrollment)	948	0.10%
Other Agriculture	35,896	3.87%
Urban Turf Fertilizer (UTF)	227,154	24.52%
Sports Turf Fertilizer (STF) -Golf	20,031	2.16%
Sports Turf Fertilizer (STF) -Other	5,201	0.56%
Regional Projects*	39,618	4.28%
Total	**926,589**	**100.00%**

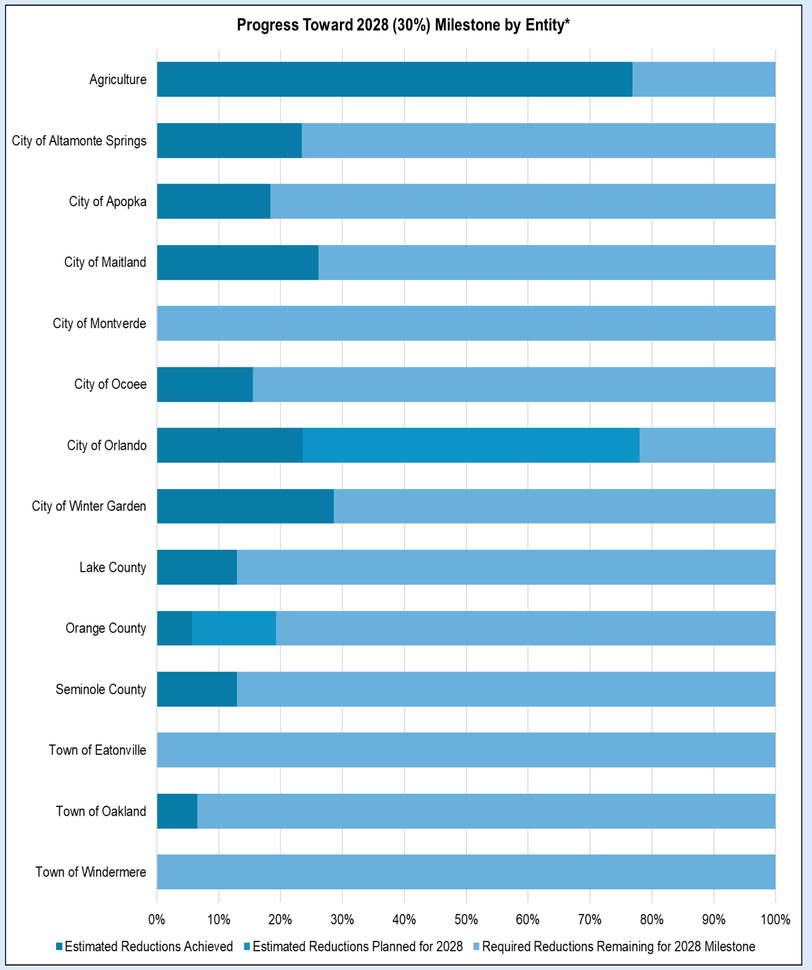
*Not allocated to entities.

Wekiwa Springs Entity Required Reductions

Entity	Milestone 2028 Required Reductions lbs-N/yr (30%)	Milestone 2033 Required Reductions lbs-N/yr (+50%=80%)	Milestone 2038 Required Reductions lbs-N/yr (+20%=100%)
City of Altamonte Springs	4,641	12,376	15,470
City of Apopka	16,842	44,913	56,141
City of Maitland	669	1,783	2,229
City of Montverde	1	3	4
City of Ocoee	22,240	59,308	74,135
City of Orlando	1,737	4,632	5,790
City of Winter Garden	4,412	11,766	14,708
Lake County	671	1,789	2,236
Orange County	155,672	415,126	518,907
Seminole County	21,998	58,662	73,327
Town of Eatonville	254	678	848
Town of Oakland	2,447	6,526	8,158
Town of Windermere	1,091	2,909	3,636
Mt. Dora WWTF	7	17	22
Private WWTF*	1,565	4,175	5,218
Private Golf Courses*	6,009	16,025	20,031
Agriculture (BMPs)	2,455	6,547	8,184
Ag-Cooperative Regional Elements and Cost Share	10,769	28,717	35,896
Regional Projects	11,885	31,695	39,618

*Reductions for these entities will be tracked through permits and compliance actions.

Wekiwa Springs Entity 2028 Milestone*



*Estimates through December 2023.

- Project collection and reporting are crucial to the successful implementation and management of BMAPs.
- Projects are reported to DEP annually through the Statewide Annual Report (STAR) process.
- Stakeholders are required to report projects that are being implemented or planned to achieve reduction targets, along with an estimate of expected nutrient loading benefits and financial costs.
- Reporting projects in the STAR allows the state to evaluate funding needs and to assist in prioritizing projects to promote maximum environmental benefit.

Lb-N/yr: Pounds of nitrogen per year.
CAFO: Confined animal feeding operation.

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Florida Department of Environmental Protection (DEP)
Wekiva River and Wekiwa & Rock Springs Basin Management Action Plan (BMAP)
Meeting Summary
September 24, 2024, 2:00 pm – 3:50 pm
University of Florida-Institute of Food and Agricultural Sciences, Mid-Florida Research Education Center, 2725 S. Binion Road, Apopka, FL 32703

Attendees

Lisa Bally, Geosyntec
Kyndall Bauer, Florida Farm Bureau
Sean Beaudet, Lake County
Cora Berchem, Save the Manatee
Jen Bolling, City of Ocoee
Julie Bortles, Orange County
Kellie Bracht, City of Altamonte Springs
Tiffany Busby, Wildwood Consulting
Lauren Campbell, DEP
Cathie Catasus, Lake County
Mike Cliburn, Friends of Wekiva
Jesse Conklin, City of Ocoee Utilities
Cliff Courtney, Friends of Wekiva
Cammie Dewey, SJRWMD
Lauren Dorval, DACS
Chloe Dougherty, Florida Springs Council
Yesenia Escribano, DACS
Danielle Fitzpatrick, SJRWMD
Tina Gordon, Wildwood Consulting
Roxanne Groover, FOWA
Raichel Gulde, RES
Sam Hankinson, DEP
Moira Homann, DEP
Lisa Kelley, Dewberry
Ashley Konon, Wekiva Wild and Scenic River
Emily Lawson, Orange County
Lynne Levy, Friends of Wekiva
Heather Lindell, Orange County
Lisa Lotti, City of Orlando
Tina McIntyre, UF/IFAS
Gabrielle Milch, St. Johns Riverkeeper
Troy Mitchell, Halff Associates
Joe Parish, Seminole County
Don Philpott, Wekiva Wilderness Trust
Nancy Prine, Friends of Wekiva
Rob Renk, Orange County
Michelle Shelton, Seminole County
Jodi Slater, SJRWMD
Rory Trumbore, Citizen
Tim Waln, SJRWMD
Marjorie Watson, City of Apopka
Mary Sue Weinaug, Wekiva Island
William Weinaug, Wekiva Island
Shannon Wetzel, Seminole County
Yilin Zhuang, UF/IFAS
Nick Zurasky, DACS

Presentation

Moira Homann gave a brief overview of the Wekiwa and Rock Springs and Wekiva River BMAP, basin required reduction, entity required reductions and the upcoming BMAP schedule. She explained that the total maximum daily loads (TMDLs) are 0.286 milligrams per liter of nitrate and 0.065 milligrams per liter of total phosphorus. Based on recent water quality data, an additional 76% reduction is needed to meet the springs water quality target.

Moira noted that there are some environmental groups specifically listed at the beginning of the BMAP document as interested stakeholders along with a general category of “Environmental

Interests." If there are groups that would like to have their organization listed in the 2025 BMAP update as interested stakeholders, please contact Moira or Lauren Campbell to be added.

Moira mentioned there have been staff changes at DEP for this BMAP, so please contact herself or Lauren Campbell if anyone has questions about the BMAP or about BMAP Portal entries.

Moira also encouraged entities with allocations to contact herself or Lauren if an extension is needed for anyone to complete their portal entries past the September 27, 2024, deadline due to Hurricane Helene.

Poster Session

Posters were presented, along with the opportunity for attendees to review BMAP information and ask questions of DEP staff.

Written Comments

No written comments were submitted at the meeting.

Action Items

Environmental Interests-- If there are groups that would like to have their organization listed in the 2025 BMAP update, please contact Moira Homann or Lauren Campbell to be added.

Lead Entities--Organizations with allocations should contact Moira Homann or Lauren Campbell if an extension is needed for anyone to complete their portal entries past the September 27, 2024, deadline.