Upper Wakulla River and Wakulla Spring Basin Management Action Plan

September 23, 2024 at 10:00 AM EDT

In-person

DEP Carr Building, Conference Room 170
3800 Commonwealth Blvd.
Tallahassee, FL 32399

Agenda

- Upper Wakulla River and Wakulla Spring (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: Sam Hankinson at (850) 245-8086 Samuel.Hankinson@FloridaDEP.gov.

WAKULLA SPRING AND UPPER WAKULLA RIVER BASIN MANAGEMENT ACTION PLAN (BMAP)

Sam Hankinson, P.G. II
Division of Environmental Assessment and Restoration
Water Quality Restoration Program
Florida Department of Environmental Protection

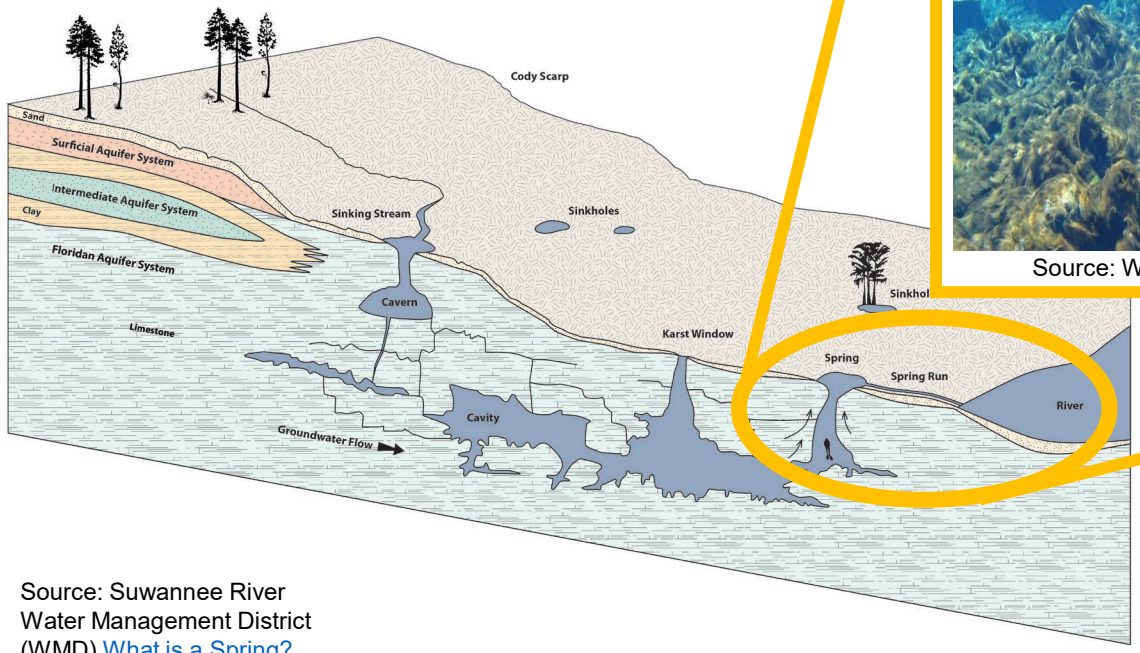
DEP Carr Building | Sept. 23, 2024

Source: SFWMD

AGENDA

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

BACKGROUND
SPRINGS RESTORATION

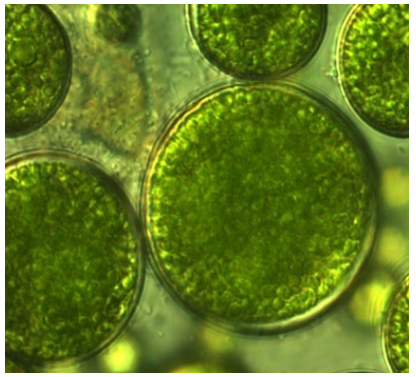


Source: Suwannee River Water Management District (WMD) What is a Spring?

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 target for restoration.**

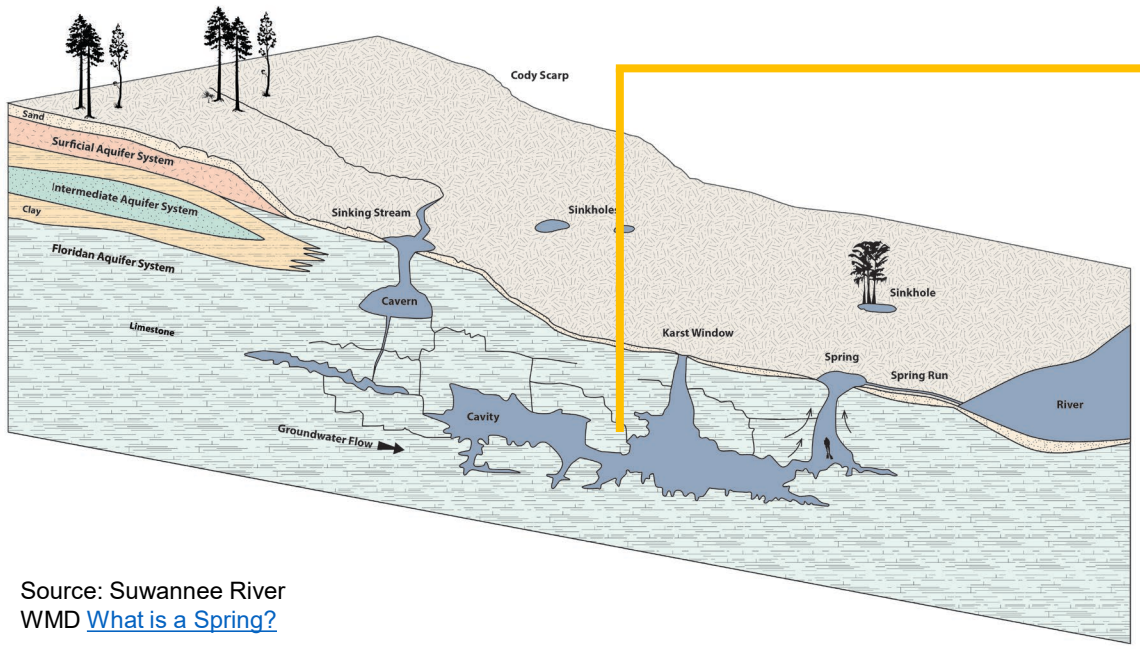
Source: Florida Geological Survey - Rainbow Spring #4

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?]

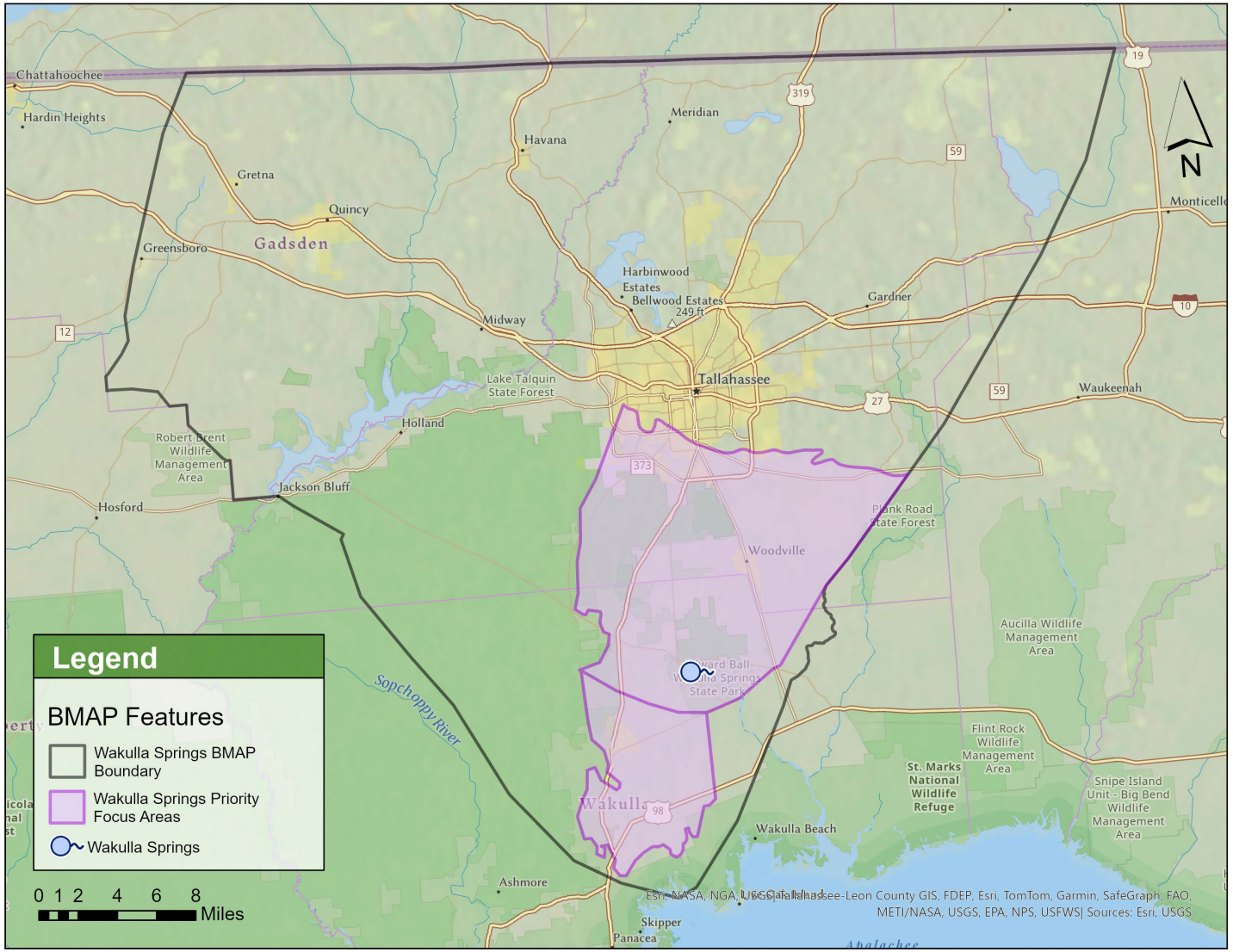
Complex groundwater dynamics lead to variable travel times to the spring vent.

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

BMAP BACKGROUND



- Approximately 848,445 acres (1,325 square miles) in Leon, Gadsden, Jefferson and Wakulla counties.
- Two Priority Focus Areas (PFAs).

Waterbody	Waterbody Identification (WBID)	Parameter	TMDL (mg/L)
Upper Wakulla River	1006	Nitrate, monthly average	0.35

mg/L: milligrams per liter.

STAKEHOLDERS

Responsible Stakeholders:

- Agricultural Producers.
- Leon County.
- Wakulla County.
- Gadsden County.
- Jefferson County.
- City of Tallahassee.
- City of Gretna.
- City of Midway.
- City of Quincy.
- Town of Havana.
- Town of Greensboro.
- Private Golf Courses.
- Private Wastewater Treatment Facilities.

Responsible Agencies:

- Florida Department of Environmental Protection (DEP), including Wakulla Springs State Park.
- Florida Department of Agriculture and Consumer Services (DACS).
- Florida Department of Health.
- Florida Department of Transportation - District 3.
- Northwest Florida Water Management District.
- Federal Correctional Institution-Tallahassee.
- Florida Agricultural and Mechanical University.
- Florida State University.
- Tallahassee State College.
- Talquin Electric Cooperative.
- Leon County Health Department.
- Wakulla County Health Department.

BILLS AND LEGISLATION
SUMMARY

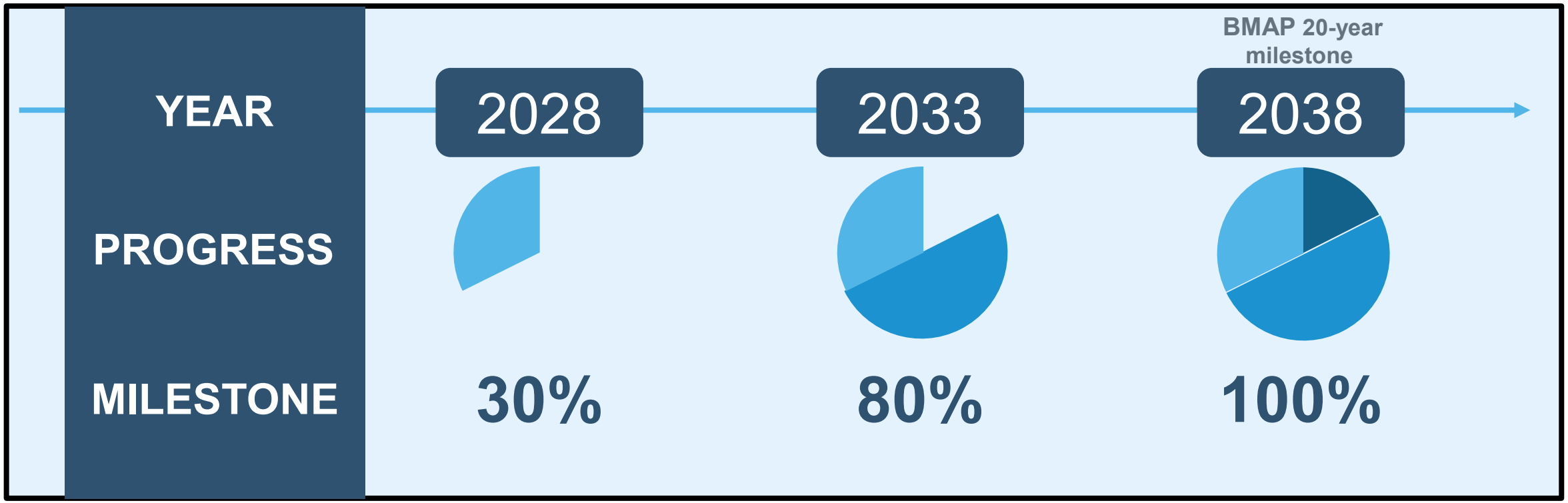
- Florida Watershed Restoration Act (section 403.067, Florida Statutes (F.S.)).
- Florida Springs and Aquifer Protection Act (Part VIII of Chapter 373, F.S.)
- 2020 Senate Bill (SB) 712 - Clean Waterways Act.
- 2023 House Bill (HB) 1379.
- 2024 HB 1557.

Summary of latest updates:

- Prohibition on new conventional onsite sewage treatment and disposal system (OSTDS) where sewer is available on lots one acre or less.
- Wastewater treatment plans and OSTDS remediation plans.
- List of projects to meet five-year milestones.
- Agricultural Cooperative Regional Elements.
- For spring BMAPs, prohibitions expanded from PFA to the entire BMAP.
- Advanced waste treatment (AWT) required for more types of effluent, including 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.

BMAP UPDATES
DRAFT LOADING SUMMARY

	Nitrogen Loads (lbs-N/yr)	Source
Total Load at Spring Vents (August 2023)	627,101	Upper 95% confidence interval - nitrate data and flow data from years 2013 to 2022 (0.41 mg/L and 784.42 cfs)
TMDL Load	539,806	TMDL target is 0.35 mg/L and using the same flow data from years 2013 to 2022 (784.42 cfs)
Percent Required Reduction	14%	
Total NSILT Load (October 2023)	945,688	2023 NSILT
Required Reduction	131,643	Proportional decrease in NSILT load

cfs: Cubic feet per second.

REDUCTIONS

DRAFT SPRINGSHED REDUCTIONS

Nitrogen Source	Allocations by Source (lb-N/yr)	Reduction Determination	Percent of Total Reduction
Atmospheric Deposition	32,296	Spring Vent Percentage	24.11%
Septic Systems	57,522	Spring Vent Percentage on All Lots	42.94%
Wastewater Treatment Facilities	4,862	BMAP Effluent Requirements (All)	3.63%
Farm Fertilizer (BMP)	20,536	15% reduction	15.33%
Livestock Waste (BMP)	2,872	10% reduction	2.14%
Urban Turfgrass Fertilization	12,285	Spring Vent Percentage	9.17%
Sports Turf - Golf Courses	3,272	Spring Vent Percentage	2.44%
Sports Turf - Other	316	Spring Vent Percentage	0.24%
Total	133,963		100.00%

- The spring vent percentage of 14% was used to determine the required reduction for most categories.
- For wastewater treatment facilities (WWTFs), estimated reduction was determined based on the BMAP effluent standards.
- For agricultural sources, an estimated reduction of 15% will be achieved when all crop producers are enrolled in the DACS Best Management Practice (BMP) program and implement BMPs, and a reduction of 10% will be achieved when all livestock producers enroll in the DACS BMP program and implement BMPs.

REDUCTIONS

DRAFT ENTITY REQUIRED REDUCTIONS

All local municipalities will be allocated reductions based on the loading estimated to occur under their jurisdiction from central wastewater systems, septic systems and urban fertilizers.

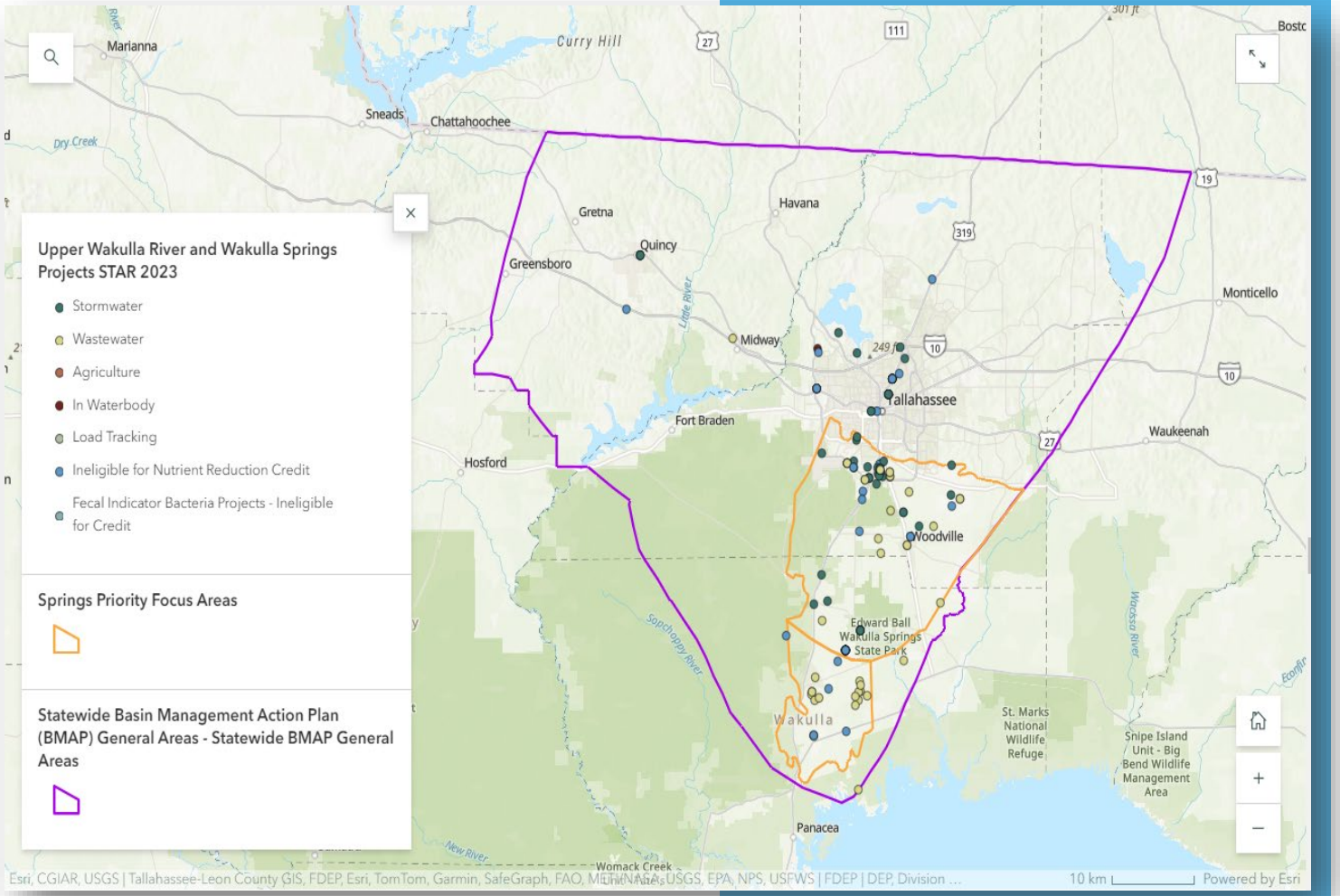
Entity	2028 Milestone Required Reductions lbs-N/yr (30%)	2033 Milestone Required Reductions lbs-N/yr (80%)	2038 Milestone Required Reductions lbs-N/yr (100%)
Gadsden County	690	1,841	2,301
Town of Greensboro	17	46	57
City of Gretna	21	55	68
Town of Havana	36	96	120
City of Midway	158	422	527
City of Quincy	96	257	321
Jefferson County	52	139	174
Leon County	11,795	31,453	39,317
City of Tallahassee	1,983	5,287	6,609
Wakulla County	6,272	16,726	20,907
Talquin Electric Cooperative Multiple WWTFs*	1,112	2,965	3,706
Private WWTFs*	303	809	1,011
Private Golf Courses*	942	2,512	3,140
Agriculture	7,022	18,727	23,408

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

PROJECTS

HB 1379 (2023), requires responsible entities to report on projects that demonstrate how they intend to meet their five-year milestones.

- Entities are required to plan and report projects to the state through the Statewide Annual Report (STAR). All projects needed to fulfill milestones should be added, 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.



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.

June - Dec. 2024

Technical analyses and BMAP document drafting.

Dec. 2024

Final draft BMAP documents and public meetings.

July 1, 2025

Statutory deadline for updated nutrient BMAPs.

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

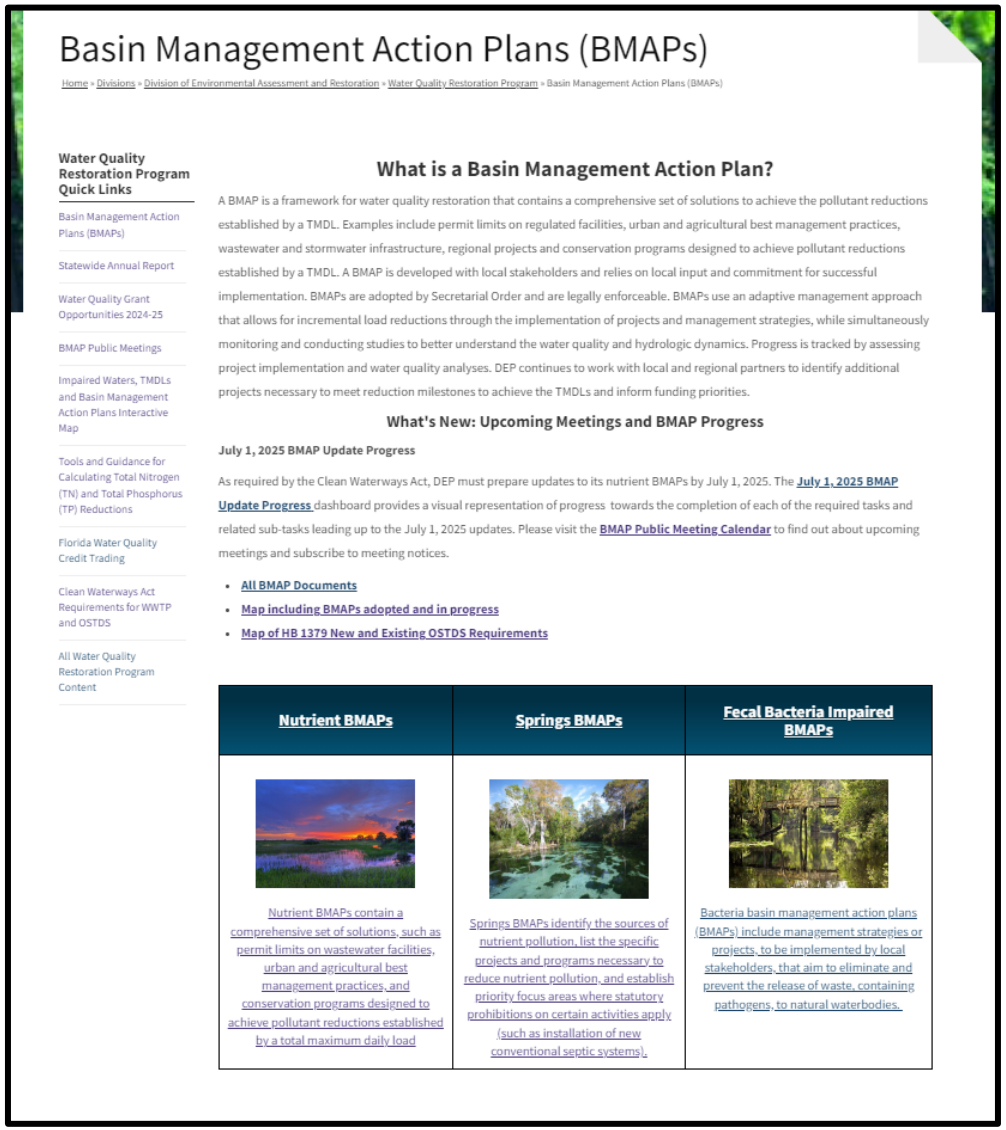
5 Homosassa and Chassahowitzka Springs...

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)

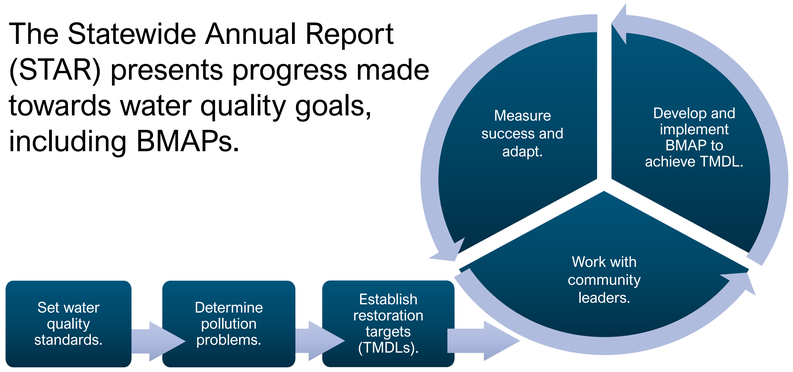
Outstanding Florida Springs Public Meetings, Fall 2024

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.



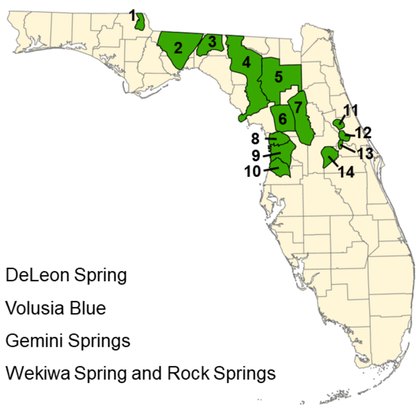
Outstanding Florida Springs BMAPs

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.

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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

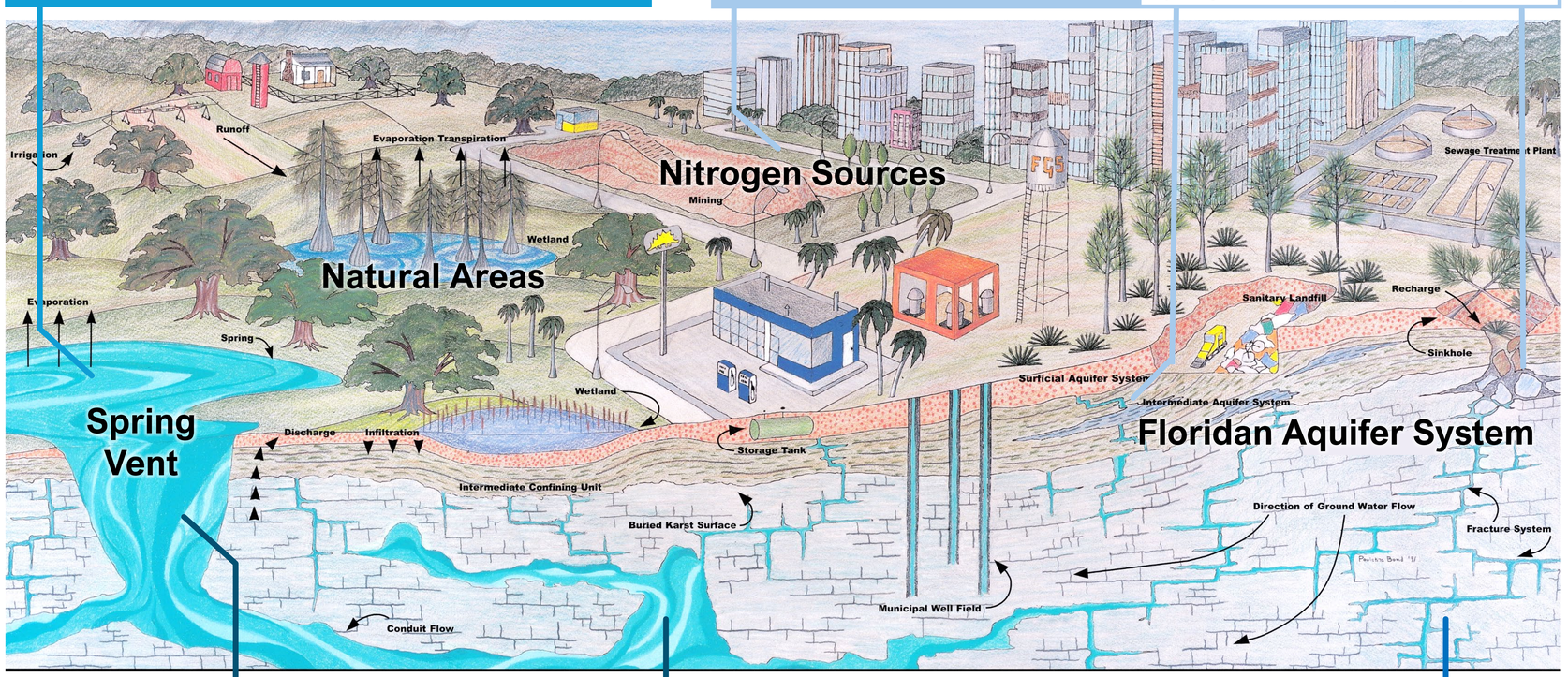
OFS includes all historic first magnitude springs and their associated spring runs as determined by DEP, using the most recent Florida Geological Survey springs bulletin (66), as well as the following additional springs and their associated spring runs: DeLeon Springs, Peacock Springs, Poe Springs, Rock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

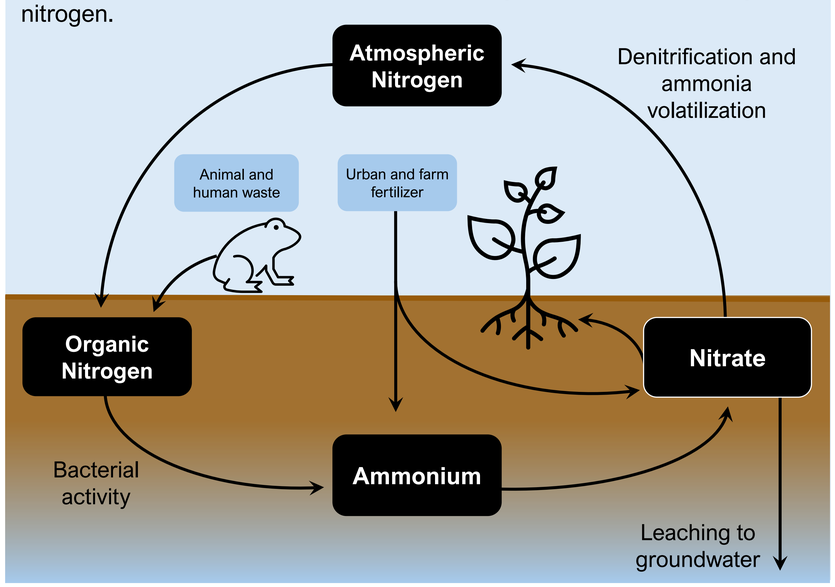
Karst Limestone

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.

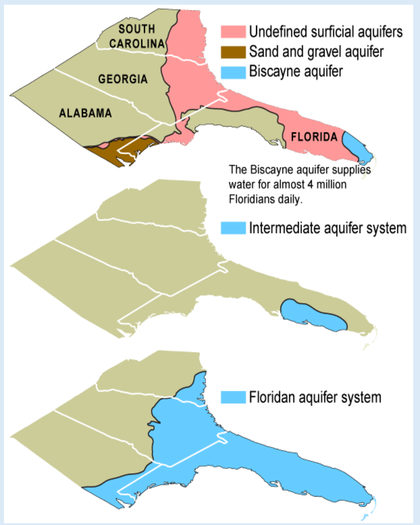
The Nitrogen Cycle

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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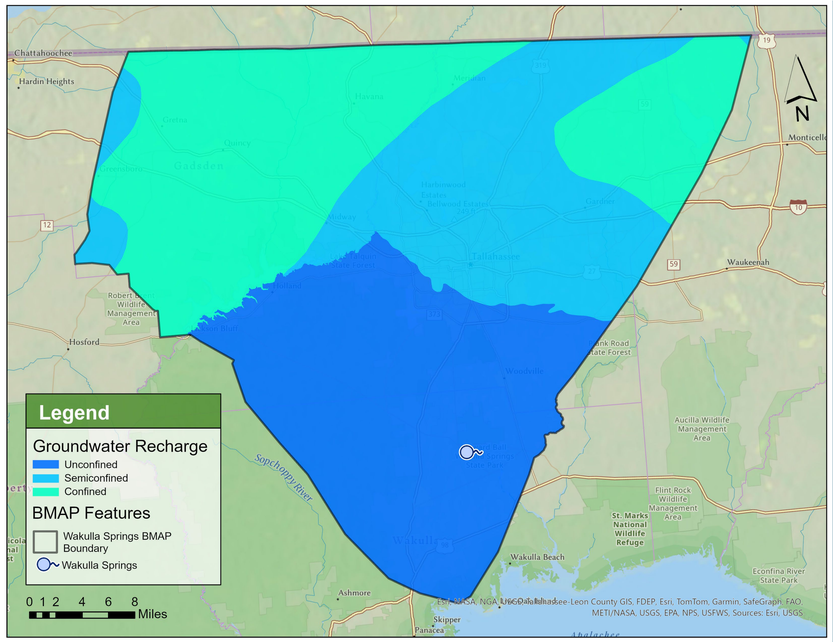
UPPER WAKULLA RIVER AND WAKULLA SPRING BASIN SUMMARY

Outstanding Florida Springs Public Meetings, Fall 2024

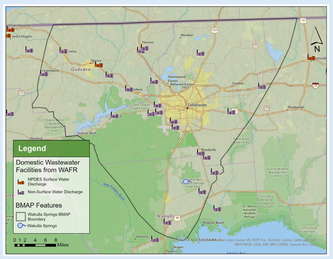
Wakulla Springs Basin Management Action Plan (BMAP)

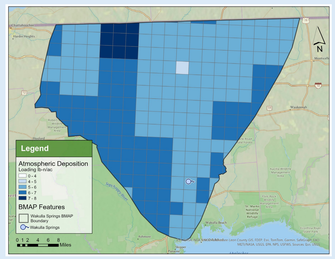


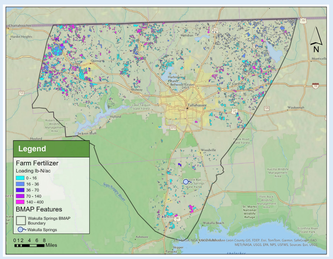
Nitrogen Source Loading

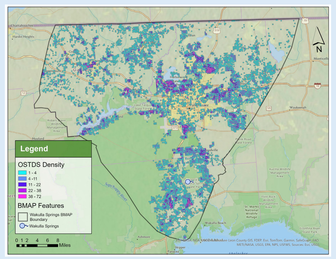
Nitrogen Loading: Nitrogen loading was estimated using the Nitrogen Source Inventory Loading Tool (NSILT). This is an evaluation tool that uses the best available data to estimate loading to the land surface from a variety of nitrogen sources. The calculations apply biochemical attenuation and hydrogeological attenuation factors to estimate the loading effects on groundwater quality. Sources reviewed include:

- Atmospheric Deposition.
- Wastewater Treatment Facilities.
- Onsite Sewage Treatment and Disposal Systems (OSTDS).
- Urban Turfgrass Fertilizer.
- Sports Turfgrass Fertilizer.
- Sports Turfgrass Fertilizer.
- Farm Fertilizer.
- Livestock Waste.
- Dairies (not in the Wakulla BMAP).
- Biosolids (not in the Wakulla BMAP).

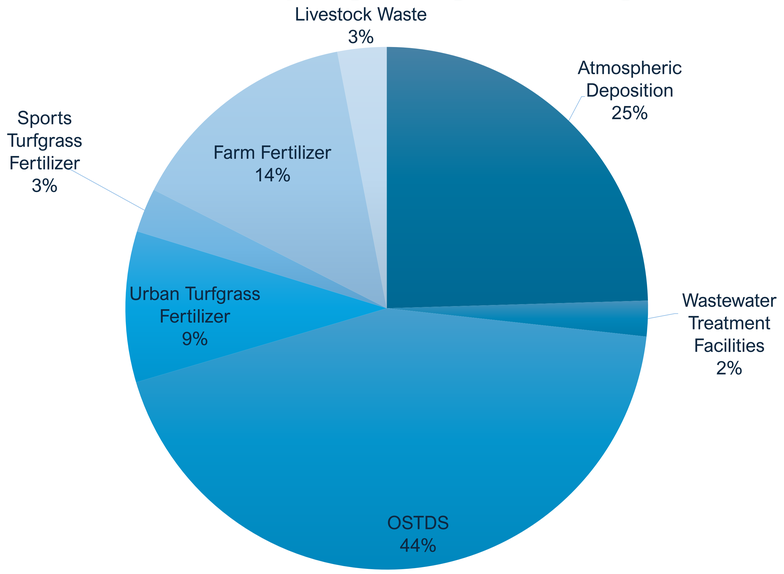








Wakulla Spring Nitrogen Loading



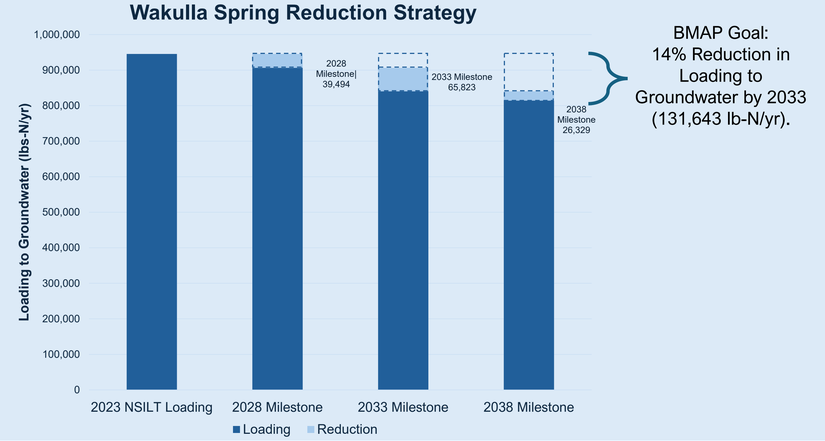
Nitrogen Source	Loading to Groundwater (lbs-N/yr)
Atmospheric Deposition	232,007
Wastewater Treatment Facilities	20,794
OSTDS	413,225
Urban Turfgrass Fertilizer	88,255
Sports Turfgrass Fertilizer	25,799
Farm Fertilizer	136,907
Livestock Waste	28,722
Total	945,708

Nitrogen Reduction Approach

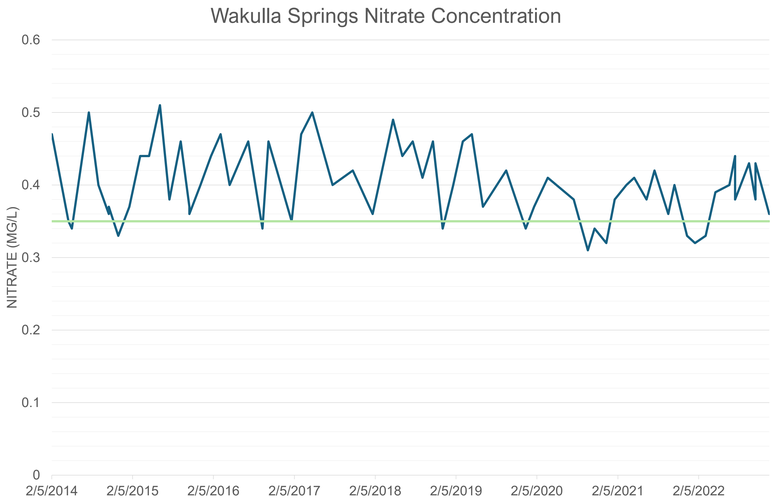
	Nitrogen Loads (lbs-N/yr)	Source
Total Load at Spring Vents (August 2023)	627,101	Upper 95% confidence interval - nitrate data and flow data from years 2013 to 2022 (0.41 mg/L and 784.42 cfs)
TMDL Load (August 2023)	539,806	TMDL target is 0.35 mg/L and using the same flow data from years 2013 to 2022 (784.42 cfs)
Percent Required Reduction	14%	
Total NSILT Load (October 2023)	945,688	2023 NSILT
New Required Reduction	131,643	Proportional decrease in NSILT load

lbs-N/yr: Pounds of nitrogen per year.
mg/L: Milligrams per liter.
cfs: Cubic feet per second.

Spring flows and nitrate concentration data were reviewed to evaluate the mass of nitrate discharging from the spring. It was determined that approximately 14% more mass of nitrate is discharged than the waterbody can assimilate without impairment. A proportional decrease in loading is needed to resolve this impairment.

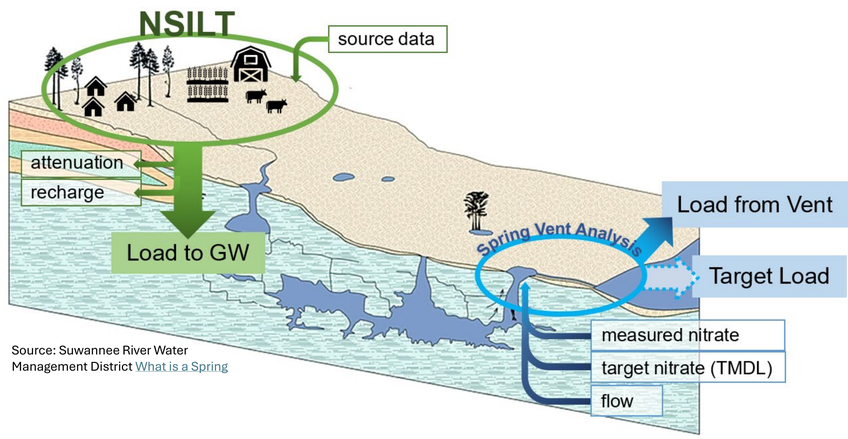


Spring Vent Analysis



Load from Vent – Target Load = Reduction Goal (at vent)

Percent Reduction at vent x **Load to Groundwater (GW)** = Required Reductions (from sources)



Source: Suwannee River Water Management District What is a Spring

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UPPER WAKULLA RIVER AND WAKULLA SPRING BMAP ALLOCATED REDUCTIONS, MILESTONES AND PROGRESS

Outstanding Florida Springs Public Meetings, Fall 2024

Nitrogen Sources

Nitrogen Source	Allocations by Source (lbs-N/yr)	% of Total Reduction
Atmospheric Deposition*	32,296	24.1%
Onsite Sewage Treatment and Disposal Systems	57,522	42.9%
Wastewater Treatment Facilities	4,862	3.6%
Farm Fertilizer (BMP Implementation)	20,536	15.3%
Livestock Waste (BMP Implementation)	2,872	2.1%
Urban Turfgrass Fertilizer	12,285	9.2%
Sports Turfgrass Fertilizer-Golf	3,272	2.4%
Sports Turfgrass Fertilizer-Other	316	0.2%
Total	133,963	100%

*Not allocated to entities.

Lbs-N/yr: Pounds of nitrogen per year.

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:

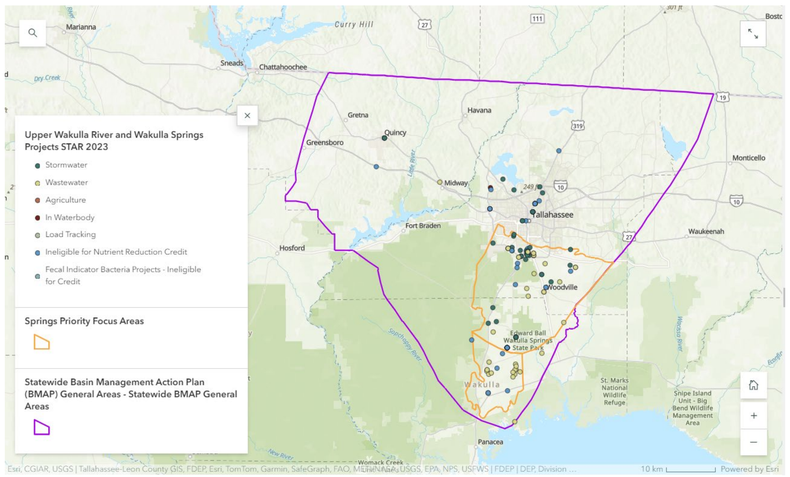
- **Atmospheric Deposition:** Due to continuing air regulations, and fuel switching, emissions of atmospheric nitrogen have been trending downwards in Florida since at least 2005.
- **Onsite Sewage Treatment and Disposal Systems:** New installations or repair permits for conventional septic systems are not permitted on lots 1 acre or less.
- **Wastewater Treatment Facilities:** Facilities must meet advanced waste treatment (AWT) standards if the Florida Department of Environmental Protection (DEP) determines the treatment is needed. Surface water discharges must meet AWT.
- **Farm Fertilizer Best Management Practice (BMPs) Implementation:** An assumed increase of nitrogen efficiency 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 increase of nitrogen efficiency of 10% when a livestock producer enrolls in the DACS BMP program and implements BMPs.
- **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 and may be required to monitor to demonstrate that fertilizers are being managed responsibly.
- **Sports Turfgrass Fertilizer – Other:** Owners/operators should follow the Sports Turfgrass BMP manual to ensure fertilizers are managed responsibly.

Projects

Project collection and reporting are crucial to the successful implementation and management of Basin Management Action Plans (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 that are needed to achieve reduction targets, along with an estimate of expected nutrient reduction benefits and financial costs.

It is important that all projects needed to achieve milestones are included in the STAR, even if a funding mechanism is not currently identified. This information provides the state information about the funding needed to achieve BMAP goals and assists with prioritizing projects.



Entity Required Reductions and Progress

Entity	2028 Milestone Required Reductions lbs-N/yr (30%)	2033 Milestone Required Reductions lbs-N/yr (80%)	2038 Milestone Required Reductions lbs-N/yr (100%)
Gadsden County	690	1,841	2,301
Town of Greensboro	17	46	57
City of Gretna	21	55	68
Town of Havana	36	96	120
City of Midway	158	422	527
City of Quincy	96	257	321
Jefferson County	52	139	174
Leon County	11,795	31,453	39,317
City of Tallahassee	1,983	5,287	6,609
Wakulla County	6,272	16,726	20,907
Talquin Electric Cooperative Multiple WWTFs	1,112	2,965	3,706
Private WWTFs*	303	809	1,011
Private Golf Courses*	942	2,512	3,140
Agriculture	7,022	18,727	23,408

Progress Achieved Towards the 2028 Milestone

*Estimates through December 2023.

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850-245-8086

Florida Department of Environmental Protection (DEP)
Wakulla Basin Management Action Plan (BMAP) Meeting Summary
September 23, 2024, 10:00 am – 11:39 am
DEP Carr Building, Conference Room 170
3800 Commonwealth Blvd.
Tallahassee, FL 32399

Attendees

Janelle Barriero, Florida Senate
Evelyn Becerra, DEP
Trevor Burch, Dewberry
Tiffany Busby, Wildwood Consulting
Lauren Campbell, DEP
Chris Denmark, DACS
Scott Barrett Dyer, DEP
Jessica Fetgatter, DEP
Tiare Fridrich, Save the Manatee Club
Roxanne Groover, FOWA
Sam Hankinson, DEP
Scott Hannahs, CURG
Chad Hanson, Citizen
Madeline Hart, DACS
Mark Heidecker, City of Tallahassee
Wyatt Hendrick, Friends of Lake Munson Inc.
Moira Homann, DEP
Cal Jameson, Wakulla Soil & Water Conservation District
Chandler Keenan, DEP
Mitzi Lucas, Florida Farm Bureau
Celeste Lyon, RES/FDOT
Sean McGlynn, McGlynn Labs
Nicolas Pisarello, Geosyntec
Raulie Raulerson, Florida Farm Bureau
Patrick Roark, FDOT
Donald Rogers, FDOT
Jerrick Saquibal, NWFWMD
Tiffany Simpson, DEP
Wayne Toothman, Leon County
Joel Trexler, FSU
Edgar Wade, Leon County
Richard Wieckowicz, Citizen

Presentation

Sam Hankinson gave a brief overview of the Wakulla BMAP, basin required reductions, entity required reductions and the upcoming BMAP schedule. He explained that the total maximum daily load (TMDL) is 0.35 milligrams per liter of nitrate. Based on recent water quality data, an additional 14% reduction is needed to meet the water quality target.

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 or questions were submitted at the meeting.