



WEEKI WACHEE BASIN MANAGEMENT ACTION PLAN (BMAP)

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

Brooksville, FL | Nov. 7, 2024



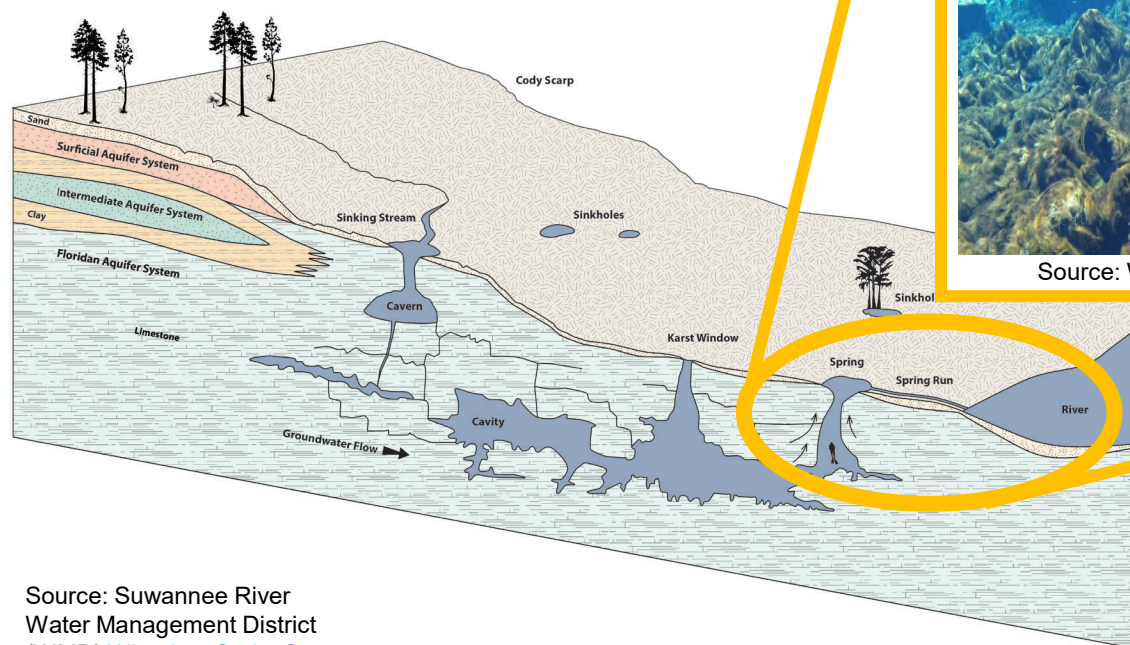
AGENDA

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





BACKGROUND SPRINGS RESTORATION



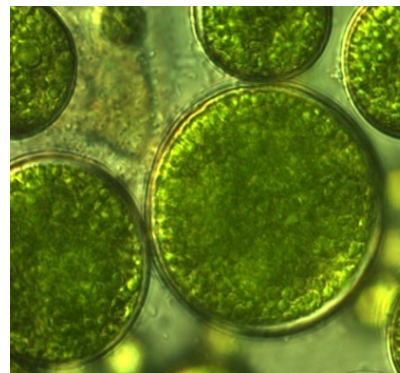
Source: Suwannee River
Water Management District
(WMD) [What is a Spring?](#)

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.**

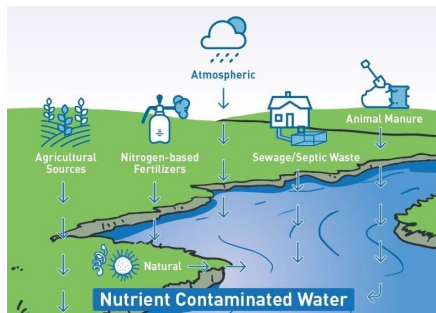


Source: Florida Geological Survey
- Rainbow Spring #4



BACKGROUND SPRINGS RESTORATION

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



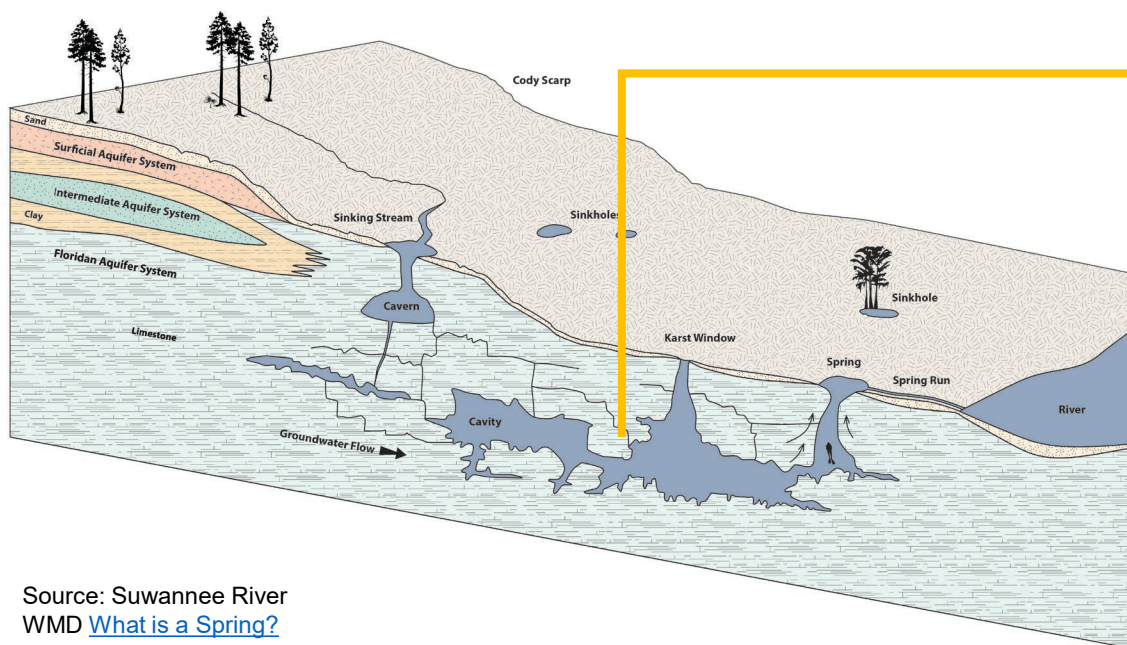
Source: Beta Analytics

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

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

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.



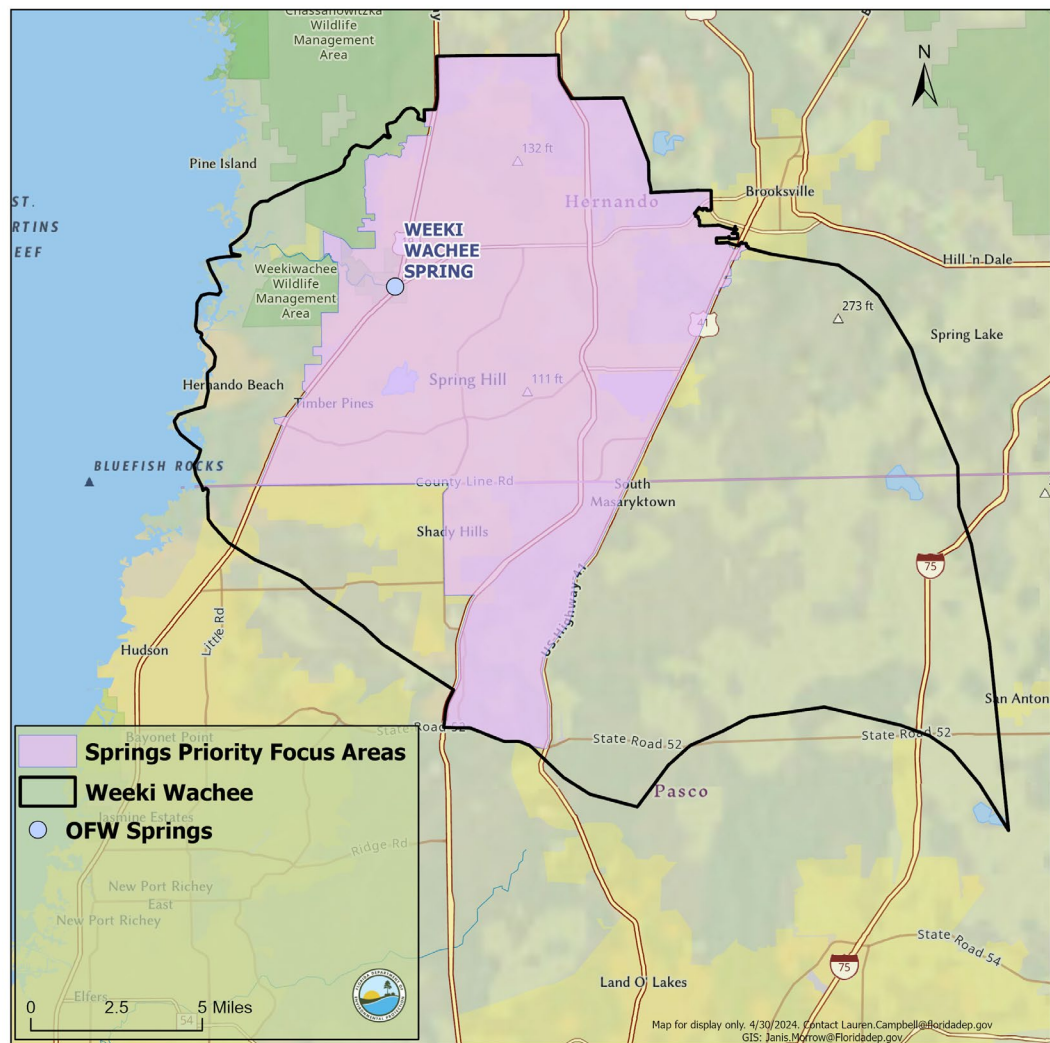
Source: Suwannee River
WMD [What is a Spring?](#)



Source: Florida Geological Survey
- Rainbow Spring #4



BMAP BACKGROUND



Type of Entity	Name
Responsible Stakeholders	City of Brooksville
	Hernando County
Responsible Agencies	Pasco County
	Agricultural producers
Responsible Agencies	Golf courses
	Florida Department of Agriculture and Consumer Services
Responsible Agencies	Florida Department of Environmental Protection
	Florida Department of Health
Responsible Agencies	Southwest Florida Water Management District

Waterbody or Spring Name	Waterbody Identification (WBID) Number	Parameter	TMDL (mg/L)
Weeki Wachee Spring	1382B	Nitrate, annual average	0.28
Weeki Wachee River	1382F	Nitrate, annual average	0.20
Magnolia-Aripeka Springs Group	1391B	Nitrate, annual average	0.23
Wilderness-Mud-Salt Springs Group	1382G	Nitrate, annual average	0.23
Jenkins Creek Spring	1389	Nitrate, annual average	0.23



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.

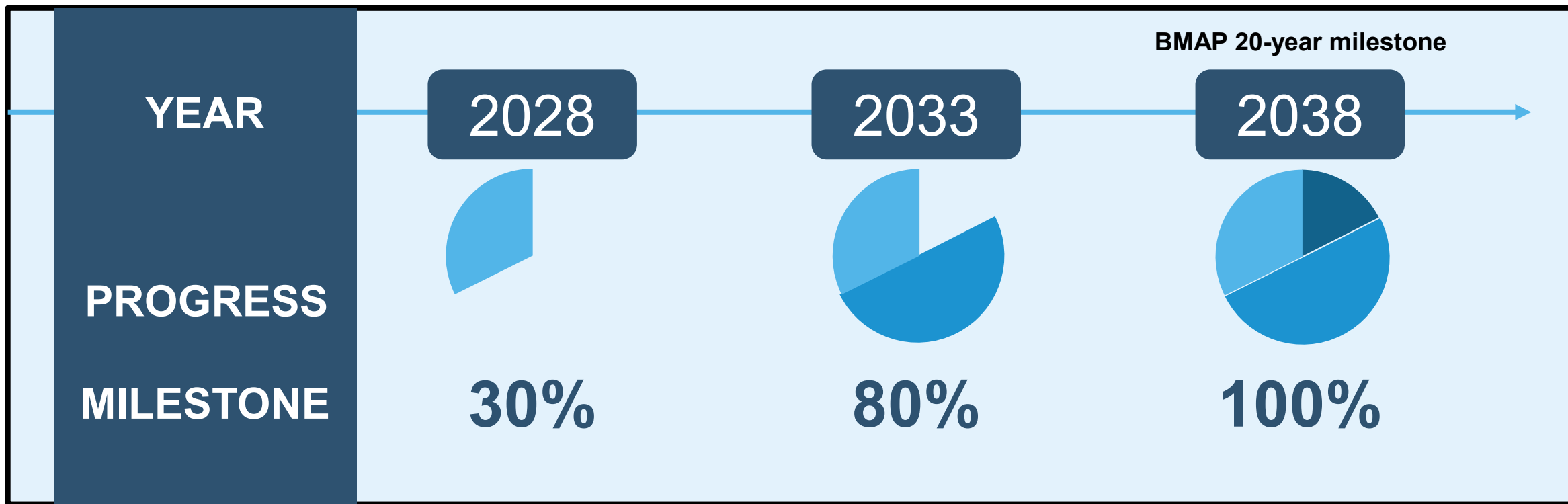
Summary of latest updates:

- No new conventional onsite sewage treatment and disposal systems (OSTDS) on lots one acre or less.
- Wastewater treatment plans and OSTDS remediation plans from local governments.
- List of identified project to meet 5-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 BACKGROUND

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.



BASIN ANALYSES

DRAFT LOADING SUMMARY

	Nitrogen Loads (lbs-TN/yr)	Source
Total Load at Spring Vents (October 2023)	308,909	Upper 95% confidence interval - nitrate data from 2012 - 2022 (0.91 mg/L) and flow data from 2012-2021 (173.04 cfs).
TMDL Load	95,265	TMDL target is 0.28 mg/L and using the same flow data from 2012-2021.
Percent Required Reductions	69%	
Total NSILT Load (October 2023)	1,356,282	2023 NSILT.
Required Reductions	938,016	Proportional decrease in NSILT load.

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



REDUCTIONS

DRAFT SPRINGSHED REDUCTIONS

Nitrogen Source	Allocations by Source (lb-N/yr)	Percent of Total Reduction
Atmospheric Deposition*	64,367	6.86%
Onsite Sewage Treatment and Disposal System	443,758	47.31%
Wastewater Treatment Facility	25,093	2.68%
Farm Fertilizer (BMP Enrollment)	20,973	2.24%
Livestock Waste-NonCAFO (BMP Enrollment)	13,917	1.48%
Ag-Cooperative Regional Elements (CRE)	166,971	17.80%
Urban Turfgrass Fertilizer	166,027	17.70%
Sports Turf-Golf	28,207	3.01%
Sports Turf-Other	719	0.08%
Regional Projects*	7,983	0.85%
Total	938,016	100.00%

- The spring vent percentage was used to determine the required reduction for most categories.
- For wastewater treatment facilities, reduction was determined based on the BMAP effluent standards.
- For agricultural sources, an estimated reduction of 15% will be achieved when crop producers are enrolled 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 will be addressed through a combination of regional projects, ACE, innovative technologies and cost-share projects.



REDUCTIONS

DRAFT ENTITY REQUIRED REDUCTIONS

Entity	2028 Milestone (30%)	2033 Milestone (80%)	2038 Milestone (100%)
Hernando County	155,894	415,718	519,648
City of Brooksville	960	2,559	3,199
Pasco County	33,361	88,962	111,202
Agriculture	60,558	161,489	201,861
Private Wastewater Facilities*	466	1,238	1,549
Private Golf Courses*	8,460	22,565	28,207

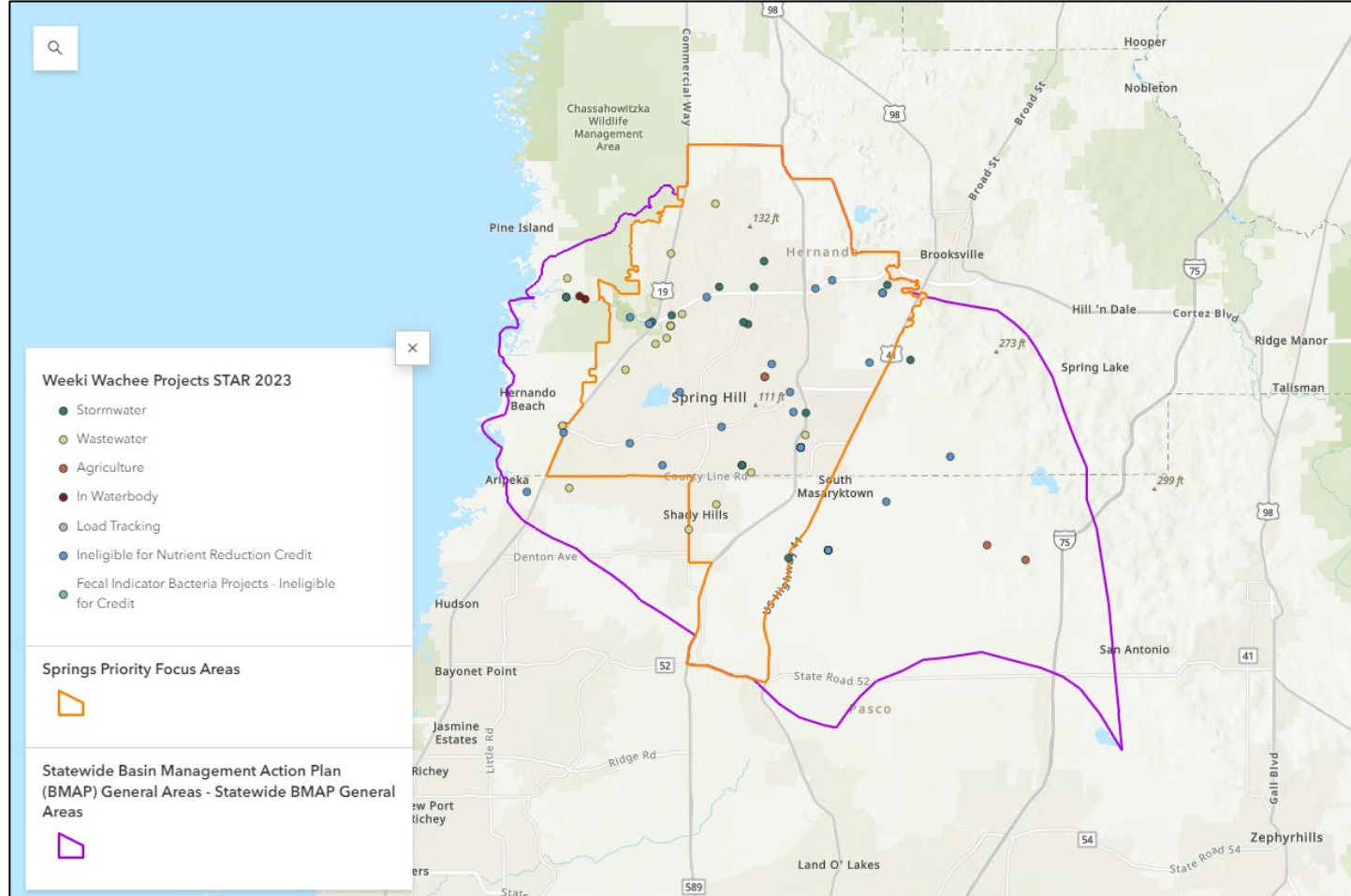
*Reductions for these entities will largely be tracked through permits and compliance actions.

- All local municipalities are allocated reduction targets based on the loading estimated to occur under their jurisdiction from wastewater, septic systems and urban fertilizers.
- Private wastewater treatment facilities will be required to meet effluent standards through permits.
- New management strategies will provide assurance golf courses are using fertilizers appropriately.

Reductions in this table reflect overall allocated reductions in Weeki Wachee. Some entities will have responsibilities in multiple springsheds and BMAPs.



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) process. All projects needed to fulfill milestones should be added, even if a funding source has not been identified.
- Reporting projects in the STAR process 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.

Technical
analyses,
project
identification
and BMAP
document
drafting.

June -
Dec. 2024

Final draft BMAP
document and
public meetings.

Dec. 2024
- Jan. 2025

Statutory deadline to update
nutrient BMAPs.

July 1,
2025



RESOURCES

BMAP WEBSITE AND STORY MAPS

Florida Springs Basin Management Action Plans (BMAPs)

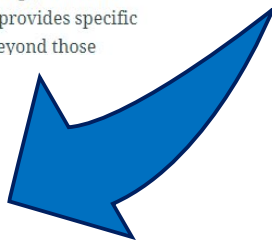
Welcome to the Florida Springs Basin Management Action Plan (BMAP) StoryMap

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



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[Water Quality Grant Opportunities 2024-25](#)

[BMAP Public Meetings](#)

[Impaired Waters, TMDLs and Basin Management Action Plans Interactive Map](#)

[Tools and Guidance for Calculating Total Nitrogen \(TN\) and Total Phosphorus \(TP\) Reductions](#)

[Florida Water Quality Credit Trading](#)

[Clean Waterways Act Requirements for WWTP and OSTDS](#)

[All Water Quality Restoration Program Content](#)

What is a Basin Management Action Plan?

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, 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. DEP continues to work with local and regional partners to identify additional projects necessary to meet reduction milestones to achieve the TMDLs and inform funding priorities.

What's New: Upcoming Meetings and BMAP Progress

July 1, 2025 BMAP Update Progress

As required by the Clean Waterways Act, DEP must prepare updates to its nutrient BMAPs by July 1, 2025. The [July 1, 2025 BMAP Update Progress](#) dashboard provides a visual representation of progress towards the completion of each of the required tasks and related sub-tasks leading up to the July 1, 2025 updates. Please visit the [BMAP Public Meeting Calendar](#) to find out about upcoming meetings and subscribe to meeting notices.

- [All BMAP Documents](#)
- [Map including BMAPs adopted and in progress](#)
- [Map of HB 1379 New and Existing OSTDS Requirements](#)

Nutrient BMAPs	Springs BMAPs	Fecal Bacteria Impaired BMAPs
 Nutrient BMAPs contain a comprehensive set of solutions, such as permit limits on wastewater facilities, urban and agricultural best management practices, and conservation programs designed to achieve pollutant reductions established by a total maximum daily load	 Springs BMAPs identify the sources of nutrient pollution, list the specific projects and programs necessary to reduce nutrient pollution, and establish priority focus areas where statutory prohibitions on certain activities apply (such as installation of new conventional septic systems).	 Bacteria basin management action plans (BMAPs) include management strategies or projects, to be implemented by local stakeholders, that aim to eliminate and prevent the release of waste, containing pathogens, to natural waterbodies.



SUBSCRIBER PAGE

HOW TO CONTACT US



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THANK YOU

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