Santa Fe River Basin Management Action Plan (BMAP)
Update Meeting

Via Webinar
Webinar Registration Link:
https://register.gotowebinar.com/register/2633110891434594903
April 10, 2025
2:00 PM EDT

Agenda

- Santa Fe River BMAP Background.
- Overview of Draft Santa Fe River BMAP.
- Next Steps.
- Questions/Comments.

Please note the site for documents pertaining to the Santa Fe River BMAP: BMAP Public Meetings | Florida Department of Environmental Protection
For more information on the Santa Fe River Basin BMAP, contact: Moira Homann, 850-245-8460.
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SANTA FE BASIN MANAGEMENT ACTION PLAN DOCUMENT UPDATE

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Division of Environmental Assessment and Restoration
Florida Department of Environmental Protection

GoTo Webinar | Apr. 10, 2025

WEBINAR TIPS

Audience Participation

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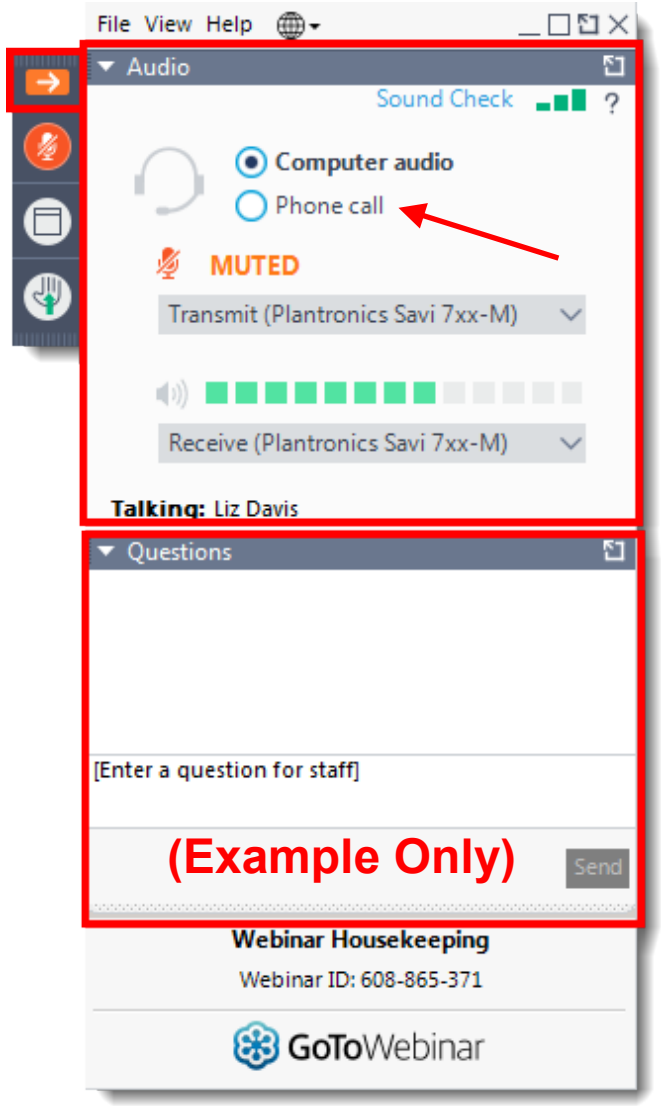
Attendee audio will automatically be muted.

Submit questions and comments via the **Questions** panel.

If viewing this webinar as a group, please provide a list of attendees via the **Questions** panel.

Note: Today's presentation is being recorded and will be provided on the website after the webinar.



AGENDA

- Basin management action plan (BMAP) background.
- Review of previous meetings.
- Document update walk-through.
- Next steps.

KEY BMAP COMPONENTS

- Total maximum daily loads (TMDLs) being addressed.
- Area addressed by the restoration plan.
- Identify sources.
- Phased implementation approach.
- Milestones.
- Projects and management strategies.
- Future growth impacts.

Projects to meet the TMDL:

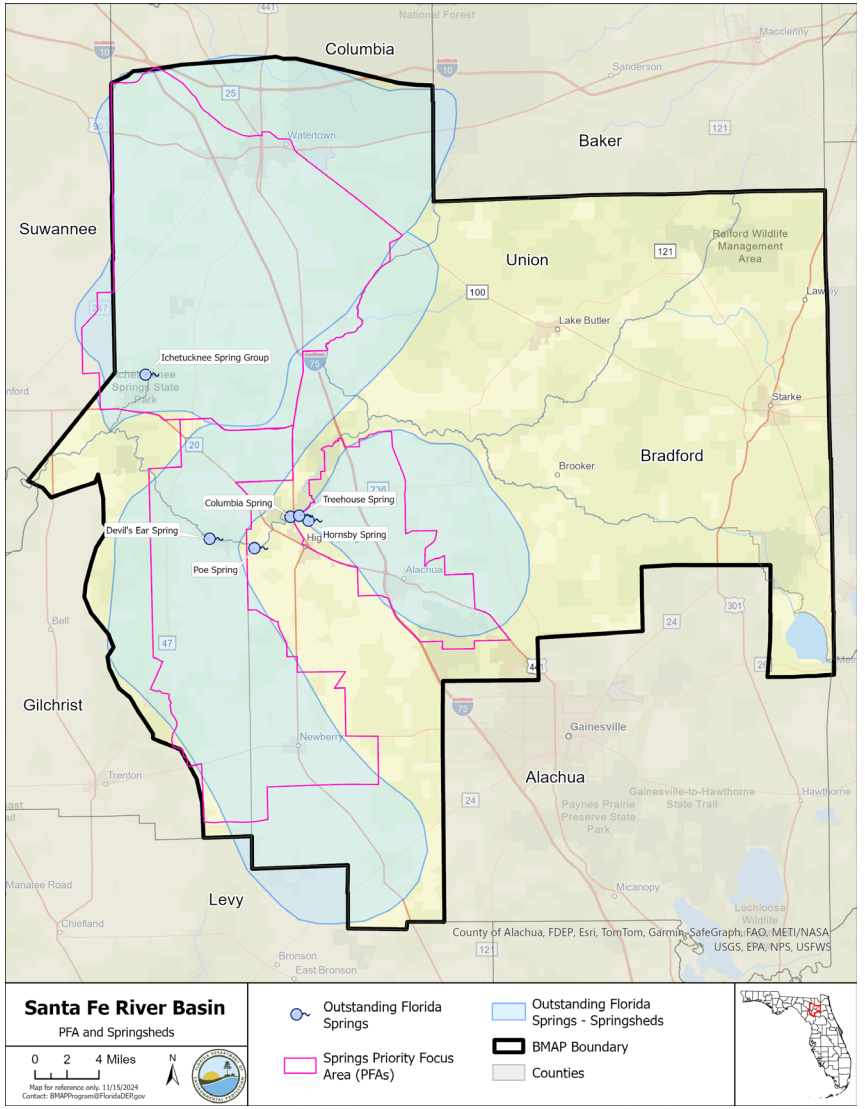
- Implementation timeline.
- Commitment to projects.
- Expected water quality improvement from projects and management strategies.

Process to assess progress toward achieving the TMDL:

- Monitoring plan.
- Project reporting.
- Periodic follow-up meetings.
- Water quality analyses.

BACKGROUND

- BMAP area encompasses over one million acres.
- 5 of 6 Outstanding Florida Springs impaired for the nitrate form of nitrogen.
- TMDL is a monthly average target of 0.35 mg/L of nitrate.



BACKGROUND
BMAP STAKEHOLDERS

Type of Organization/Entity	Name
Responsible Entities	Agricultural Producers Alachua County Bradford County Columbia County Gilchrist County Union County City of Alachua City of Archer City of Gainesville City of Hampton City of High Springs City of Lake Butler City of Lake City City of Lawtey City of Newberry City of Starke City of Waldo Town of Brooker Town of Fort White Town of La Crosse Town Raiford Town Worthington Springs Private Wastewater Treatment Facilities Private Golf Courses
Responsible Agencies	Florida Department of Agriculture and Consumer Services (DACS) Florida Department of Environmental Protection (DEP) Florida Department of Health Florida Department of Transportation (DOT) District 2 Suwannee River Water Management District (SRWMD)
Other Interested Stakeholders	Residents/Homeowners Florida Farm Bureau Florida Onsite Wastewater Association Septic Contractors

BMAP UPDATE COMPONENTS

ADOPT BY JULY 1, 2025

- Nitrogen Source Inventory Loading Tool (NSILT) updates.
- Spring vent load analyses updates.
- Entity allocation development.
- Establish five-year milestones for project implementation.
- Incorporate the 2020 Clean Waterways Act, 2023 House Bill (HB) 1379 and 2024 HB 1557 requirements.
- Incorporate regional projects.
- Future growth.
- Water quality data evaluation:
  - Evaluation of the monitoring network (spring vent and groundwater).
  - Water quality trend analyses.
- Evaluate further onsite sewage treatment and disposal systems (OSTDS) provisions.
- Evaluate the need for advanced wastewater treatment (AWT) or other more stringent effluent limits for domestic wastewater treatment facilities (WWTF).


Source: DEP


Source: DEP


Source: DEP

PREVIOUS MEETINGS

Summary of BMAP update meetings (held in 2024):

- **January Public Meeting**
  - Virtual.
  - Overview of NSILT methodology updates (all springs basins).
- **May Public Meeting**
  - Virtual.
  - Legislative requirements and basin specific analyses.
- **October/November Public Meeting**
  - In person.
  - Basin and entity allocated reductions, poster session.
- **Entity Specific Meetings**
  - Throughout summer and fall.
  - Eleven meetings with responsive stakeholders to discuss reduction allocations and project lists.

Source: Crystal River and Kings Bay | WaterMatters.org

DRAFT DOCUMENT

Section 1: Background

Section 2: Implementation

Section 3: Monitoring and Reporting

Section 4: Commitment to Plan Implementation

Section 5: References

Appendices

Legislation

TMDLs

BMAP Requirements

BMAP Areas

Priority Focus Area (PFA)

Other Scientific and Historical Information

Stakeholder Involvement

Best Management Practices (BMPs) Adopted by Rule

DRAFT DOCUMENT

Section 1: Background

Section 2: Implementation

Section 3: Monitoring and Reporting

Section 4: Commitment to Plan Implementation

Section 5: References

Appendices

Pollutant Loads

Load Reduction Strategy

Allocated Reductions

Management Strategies

OSTDS

WWTF

Urban Turfgrass Fertilizer (UTF)

Sports Turfgrass Fertilizer (STF)

Agriculture

Atmospheric Deposition

Future Growth

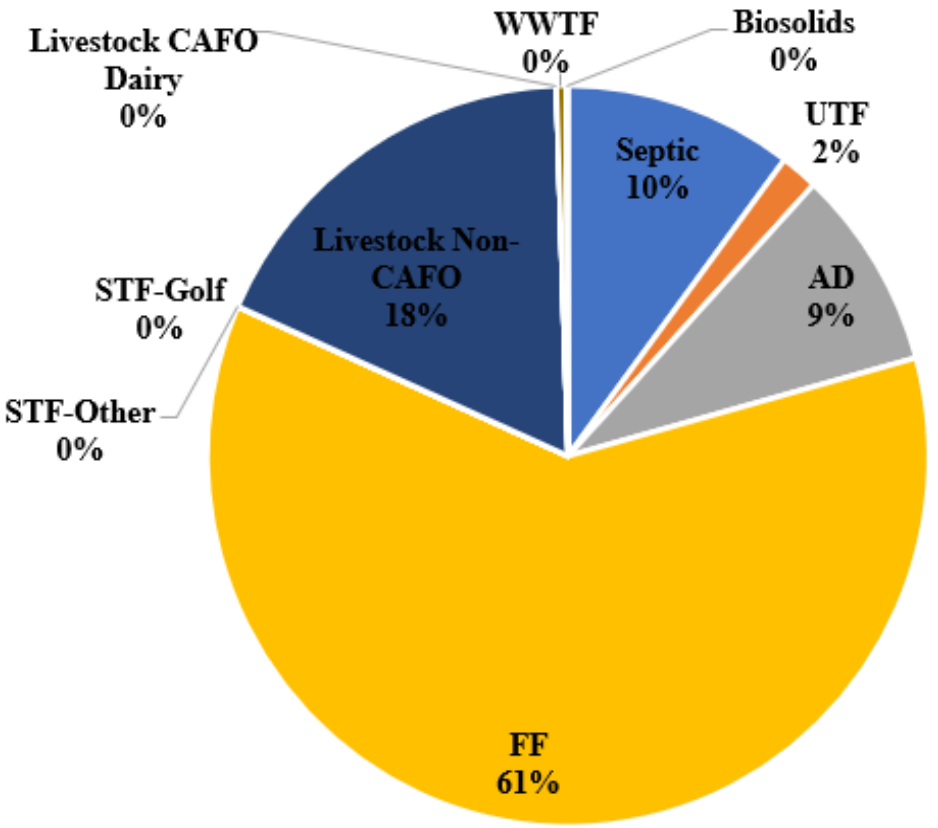
Funding Opportunities

POLLUTANT LOADS

SECTION 2: IMPLEMENTATION TO ACHIEVE TMDL

Loading to groundwater by source in the Devil's Ear Springshed area

Nitrogen Source	Total Nitrogen (TN) Load (lbs/yr)	% Contribution
OSTDS	96,194	10%
UTF	15,743	2%
Atmospheric Deposition (AD)	82,725	9%
Farm Fertilizer (FF)	571,544	61%
STF	156	<1%
Livestock Waste (LW) Non-CAFO Dairy and Poultry	167,804	18%
LW CAFO Dairy	0	0
Biosolids	855	<1%
WWTFs	3,994	<1%
Total	**939,017**	**100%**



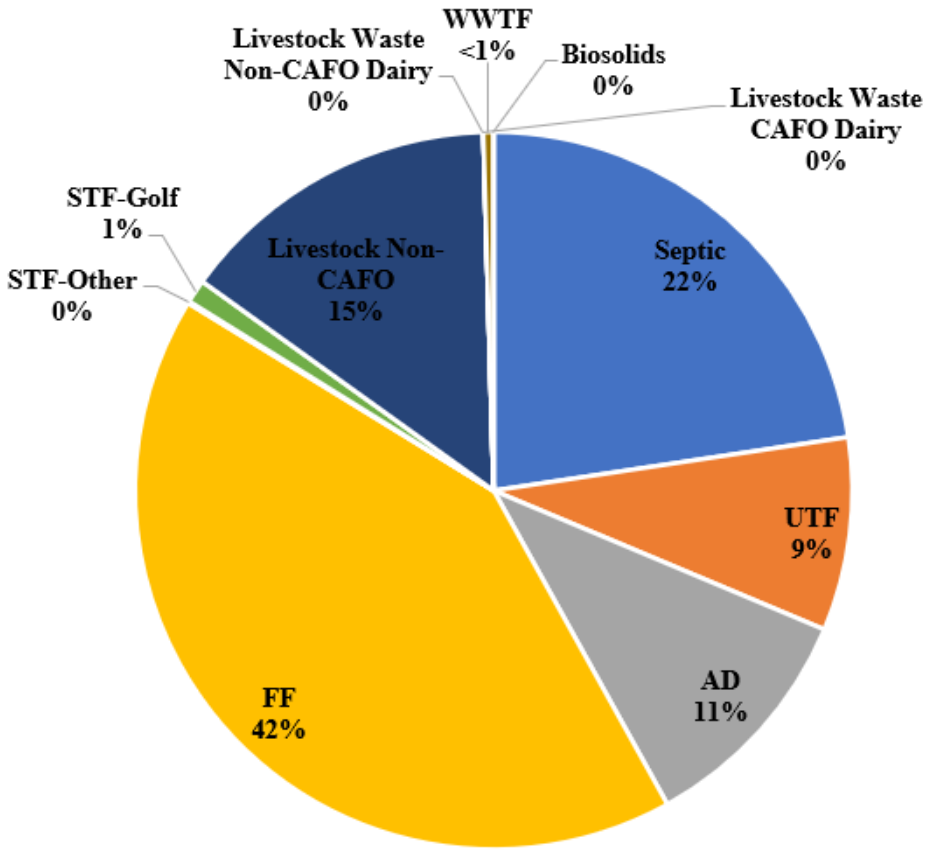
TN = Total Nitrogen
lbs/yr = pounds/year
CAFO = Confined Animal Feeding Operations

POLLUTANT LOADS

SECTION 2: IMPLEMENTATION TO ACHIEVE TMDL

Loading to groundwater by source in the Ichetucknee Springshed area

Nitrogen Source	TN Load to Groundwater (lbs/yr)	% Contribution
OSTDS	214,633	23%
UTF	82,723	9%
AD	100,805	11%
FF	396,844	42%
STF	10,864	1%
LW Non-CAFO Dairy and Poultry	138,864	15%
LW CAFO Dairy	0	0%
Biosolids	0	0%
WWTFs	4,388	<1%
Total	**949,121**	**100%**

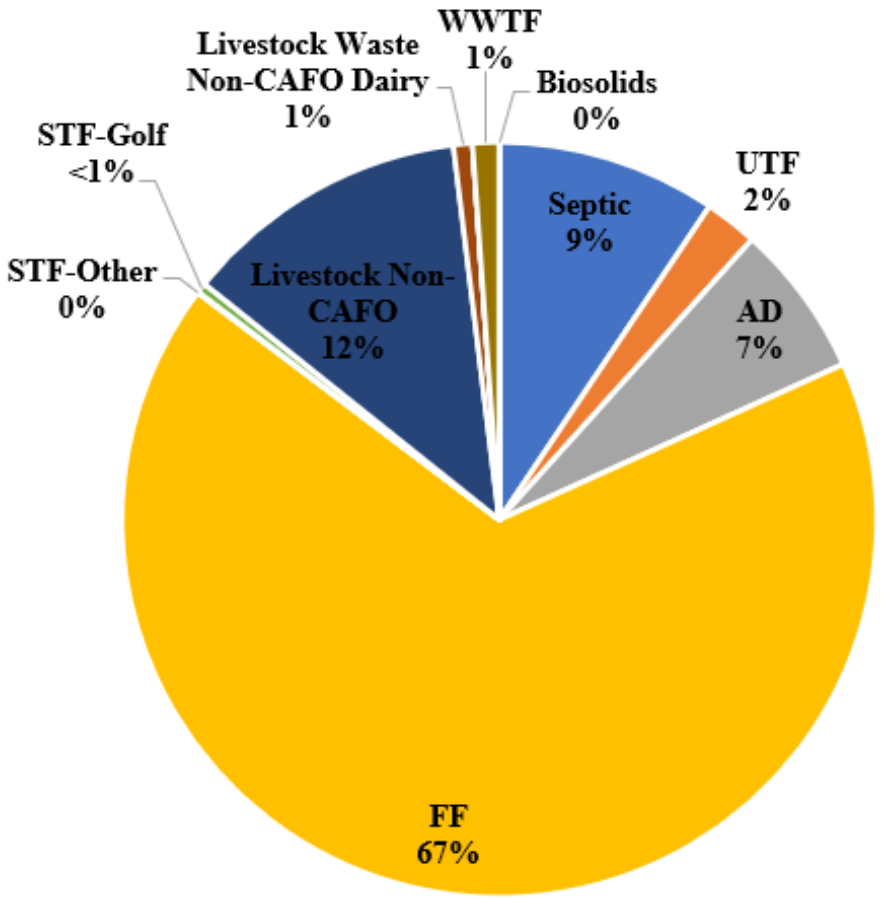


POLLUTANT LOADS

SECTION 2: IMPLEMENTATION TO ACHIEVE TMDL

Loading to groundwater by source in the Hornsby Springshed area

Nitrogen Source	TN Load to Groundwater (lbs/yr)	% Contribution
OSTDS	26,750	9%
UTF	6,466	2%
AD	18,671	7%
FF	190,615	67%
STF	1,316	<1%
LW Non-CAFO Dairy and Poultry	37,341	13%
LW CAFO Dairy	0	0%
Biosolids	0	0%
WWTFs	3,225	1%
Total	**284,383**	**100%**

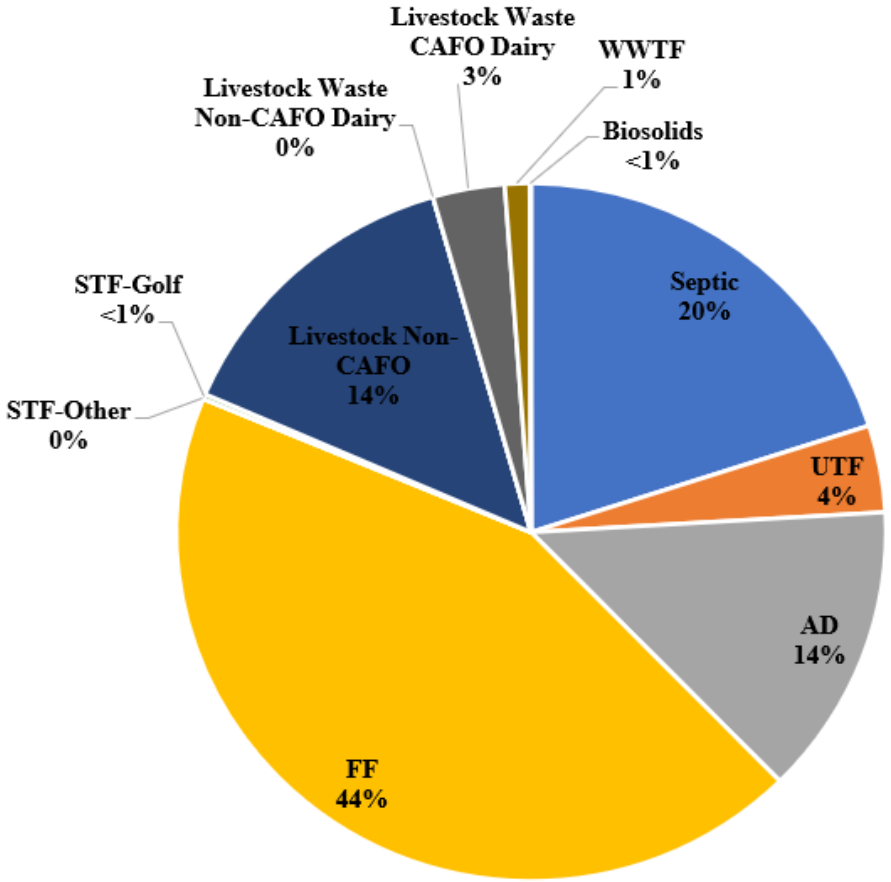


POLLUTANT LOADS

SECTION 2: IMPLEMENTATION TO ACHIEVE TMDL

Loading to groundwater by source outside the springsheds in the Santa Fe River Basin

Nitrogen Source	TN Load to Groundwater (lbs/yr)	% Contribution
OSTDS	196,902	20%
UTF	39,519	4%
AD	133,010	14%
FF	428,054	44%
STF	2,243	<1%
LW Non-CAFO Dairy and Poultry	138,023	14%
LW CAFO Dairy	32,127	3
Biosolids	544	<1%
WWTFs	11,122	1%
Total	**981,544**	**100%**



LOADING ALLOCATION

SECTION 2: IMPLEMENTATION TO ACHIEVE TMDL

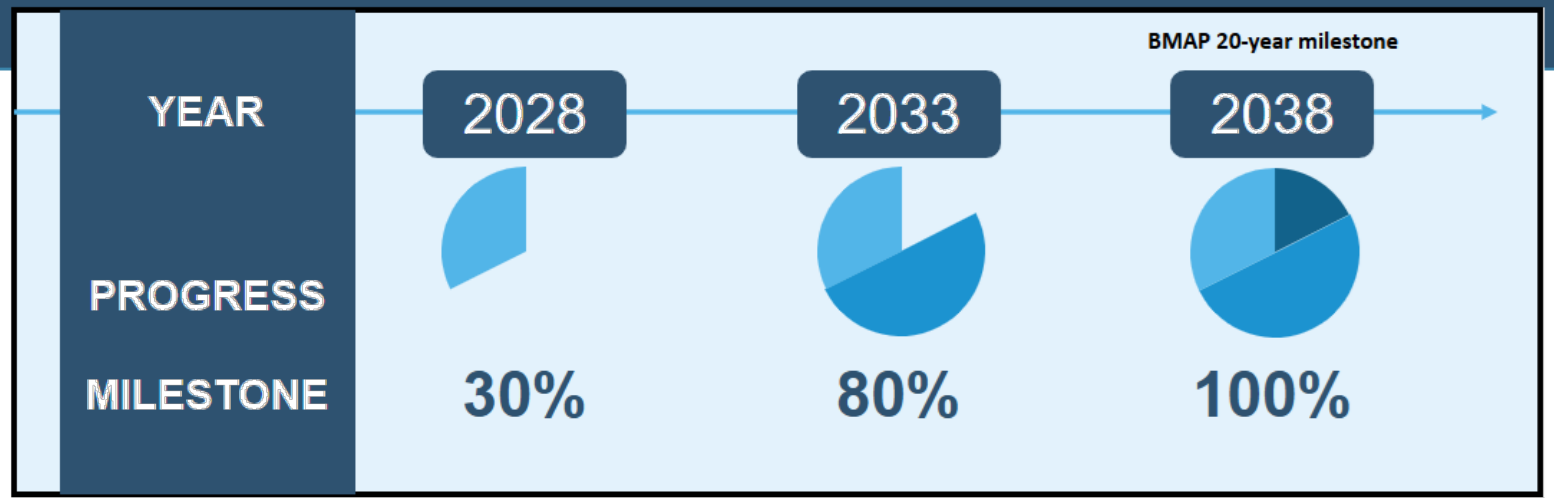
Description	Devil's Ear Nitrogen Loads (lbs/yr)	Hornsby Nitrogen Loads (lbs/yr)	Ichetucknee Nitrogen Loads (lbs/yr)	Outside the Springsheds Nitrogen Loads (lbs/yr)	Notes Regarding Data Used
Total Load at Spring Vent	2,249,219	652,823	347,612	386,236	Upper 95% confidence interval - nitrate data and flow data from 2012 to 2022 (1.33 mg/L and 10.1 cubic feet per second [cfs])
TMDL Load	617,388	474,374	177,042	304,635	TMDL target is 0.35 mg/L and using the spring vent flow data from 2012 to 2022
Percent Reduction	**73%**	**27%**	**49%**	**21%**	Calculated reduction needed based on the total load at the spring vent and the TMDL load
NSILT Load	939,017	284,383	949,121	981,544	Total load to groundwater from the updated NSILT
Required Reduction	**681,266**	**77,736**	**465,725**	**207,373**	**Percent reduction multiplied by the NSILT load**

mg/L = milligrams per liter.

MILESTONES / REDUCTION SCHEDULE

SECTION 2: IMPLEMENTATION TO ACHIEVE TMDL

- Consistent with statutes, entities must provide a list of projects and strategies to DEP that show how entities will meet their required reductions to achieve the next upcoming BMAP milestone, even if the identified project or strategy will not be completed by the milestone.
- All projects needed to achieve milestone targets should be included in the Statewide Annual Report (STAR), even if a funding mechanism is not currently identified, as this information gives the state an understanding of the support is necessary to achieve BMAP goals and assists with the prioritization of projects.
- It is critical for each BMAP that entities plan for and report projects and project updates to the state through the STAR process.



MILESTONES / REDUCTION SCHEDULE

SECTION 2: IMPLEMENTATION TO ACHIEVE TMDL

- Responsible entities must submit a **sufficient list** of additional projects and management strategies to DEP by **Jan. 14, 2026**, to be compliant with the upcoming BMAP milestone or be subject to further department enforcement.
- If any lead entity is unable to submit a sufficient project list, then specific project identification efforts must be submitted **by Jan. 14, 2026**:
  - These responsible entities must submit project identification efforts whose purpose and timeline will provide projects to meet the 5-year milestone.
  - These efforts create a compliance schedule that must reflect the urgency of defining, funding and implementing projects to meet the upcoming and future 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.

ENTITY ALLOCATIONS

SECTION 2: IMPLEMENTATION TO ACHIEVE TMDL

Timeline

- 2028- 30%
- 2033- (+50%) 80%
- 2038- (+20%) 100%

2028 5-year milestone required reductions by entity in the Devil's Ear Springshed area.

Entity	2028 Milestone Assigned Reductions (30%) TN (lbs/yr)	Total Assigned Reductions TN (lbs/yr)
Agriculture	536,405	160,921
Alachua County	5,331	1,599
City of Archer	729	219
City of Newberry	4,433	1,330
Columbia County	22,959	6,888
Town of Fort White	3,635	1,091
Gilchrist County	24,771	7,431
Union County	3,778	1,133
Private WWTFs*	71	21
Total, All Reductions	**602,111**	**180,633**

lbs/yr = pounds/year

*List of facilities is included in the BMAP document.

ENTITY ALLOCATIONS

SECTION 2: IMPLEMENTATION TO ACHIEVE TMDL

Timeline

- 2028- 30%
- 2033- (+50%) 80%
- 2038- (+20%) 100%

2028 5-year milestone required reductions by entity in the Hornsby Springshed area.

Entity	2028 Milestone Assigned Reductions (30%) TN (lbs/yr)	Total Assigned Reductions TN (lbs/yr)
Agriculture	62,312	18,694
Alachua County	4,457	1,337
City of High Springs	496	149
Town of La Crosse	80	24
City of Alachua	5,020	1,506
Private WWTFs*	15	4
Private Golf Courses*	331	99
Total, All Reductions	**72,711**	**21,813**

lbs/yr = pounds/year

*List of facilities and golf courses is included in the BMAP document.

ENTITY ALLOCATIONS

SECTION 2: IMPLEMENTATION TO ACHIEVE TMDL

Timeline

- 2028- 30%
- 2033- (+50%) 80%
- 2038- (+20%) 100%

2028 5-year milestone required reductions by entity in the Ichetucknee Springshed area.

Entity	2028 Milestone Assigned Reductions (30%) TN (lbs/yr)	Total Assigned Reductions TN (lbs/yr)
Agriculture	78,860	262,867
Columbia County	40,012	133,375
City of Lake City	2,870	9,566
Suwannee County	1,265	4,216
Private WWTFs*	294	981
Private Golf Courses*	1,476	4,919
Regional Projects	101	338
Total, All Reductions	**124,777**	**416,261**

lbs/yr = pounds/year

*List of facilities and golf courses is included in the BMAP document.

ENTITY ALLOCATIONS

SECTION 2: IMPLEMENTATION TO ACHIEVE TMDL

Timeline

- 2028- 30%
- 2033- (+50%) 80%
- 2038- (+20%) 100%

2028 5-year milestone required reductions by entity outside the springsheds area.

Entity	2028 Milestone Assigned Reductions (30%) TN (lbs/yr)	Total Assigned Reductions TN (lbs/yr)
Agriculture	37,950	126,499
Alachua County	4,449	14,830
City of Gainesville	66	221
City of High Springs	2,028	6,761
Town of La Crosse	12	41
City of Newberry	37	124
City of Waldo	2	7
Bradford County	3,935	13,118
Town of Brooker	25	84
City of Hampton	109	364
City of Lawtey	125	418

lbs/yr = pounds/year

ENTITY ALLOCATIONS

SECTION 2: IMPLEMENTATION TO ACHIEVE TMDL

Timeline

- 2028- 30%
- 2033- (+50%) 80%
- 2038- (+20%) 100%

2028 5-year milestone required reductions by entity outside the springsheds area.

Entity	2028 Milestone Assigned Reductions (30%) TN (lbs/yr)	Total Assigned Reductions TN (lbs/yr)
City of Starke	641	2,137
Columbia County	1,630	5,433
Town of Fort White	60	201
Gilchrist County	526	1,753
Suwannee County	426	1,420
Union County	1,299	4,330
City of Lake Butler	1,682	5,608
Town of Raiford	48	159
Town of Worthington Springs	24	80
Private WWTFs*	10	1,331
Private Golf Courses*	142	474
Total, All Reductions	**185,392**	**55,227**

lbs/yr = pounds/year

*List of facilities is included in the BMAP document.

ENTITY ALLOCATIONS

SECTION 2: IMPLEMENTATION TO ACHIEVE TMDL

Devil's Ear Springshed Entity	2028 Milestone Assigned Reductions (30%) (lbs/yr)	TN Completed and Ongoing Project Credits (lbs/yr)	TN Reductions from Planned and Underway Projects* (Not Verified) (lbs/yr)	Total Projected** Project TN Reductions by Entity Through 2028 (lbs/yr)
Agriculture	160,921	144,681	254	144,935
Alachua County	1,599	104	0	104
City of Archer	219	0	3,183	3,183
City of Newberry	1,330	354	2,955	3,309
Columbia County	6,888	0	0	0
Town of Fort White	1,091	0	0	0
Gilchrist County	7,431	0	0	0
Union County	1,133	0	0	0
Private WWTFs	21	0	0	0
Total, All Reductions	**180,633**	**145,139**	**6,392**	**151,531**

* Planned and underway project reduction estimates are not verified by DEP.

** Projected reductions include projects with a project status of completed, ongoing, planned and underway.

ENTITY ALLOCATIONS

SECTION 2: IMPLEMENTATION TO ACHIEVE TMDL

Hornsby Springshed Entity	2028 Milestone Assigned Reductions (30%)(lbs/yr)	TN Completed and Ongoing Project Credits (lbs/yr)	TN Reductions from Planned and Underway Projects* (Not Verified) (lbs/yr)	Total Projected** Project TN Reductions by Entity Through 2028 (lbs/yr)
Agriculture	18,694	36,977	0	36,977
Alachua County	1,337	76	0	76
City of High Springs	149	0	0	0
Town of La Crosse	24	0	0	0
City of Alachua	1,506	0	0	0
Private WWTFs	4	0	0	0
Private Golf Courses	99	0	0	0
Total, All Reductions	**21,813**	**37,053**	**0**	**37,053**

* Planned and underway project reduction estimates are not verified by DEP.

** Projected reductions include projects with a project status of completed, ongoing, planned and underway.

ENTITY ALLOCATIONS

SECTION 2: IMPLEMENTATION TO ACHIEVE TMDL

Ichetucknee Springshed Entity	2028 Milestone Assigned Reductions (30%)(lbs/yr)	TN Completed and Ongoing Project Credits (lbs/yr)	TN Reductions from Planned and Underway Projects* (Not Verified) (lbs/yr)	Total Projected** Project TN Reductions by Entity Through 2028 (lbs/yr)
Agriculture	78,860	87,503	0	87,503
Columbia County	40,012	0	8,100	8,100
City of Lake City	2,870	0	0	0
Suwannee County	1,265	0	0	0
Private WWTFs	294	0	0	0
Private Golf Courses	1,476	0	0	0
Regional Projects	101	0	0	0
Total, All Reductions	**124,777**	**87,503**	**8,100**	**95,603**

* Planned and underway project reduction estimates are not verified by DEP.

** Projected reductions include projects with a project status of completed, ongoing, planned and underway.

ENTITY ALLOCATIONS

SECTION 2: IMPLEMENTATION TO ACHIEVE TMDL

Outside the Springsheds Entity	2028 Milestone Assigned Reductions (30%) (lbs/yr)	TN Completed and Ongoing Project Credits (lbs/yr)	TN Reductions from Planned and Underway Projects* (Not Verified) (lbs/yr)	Total Projected** Project TN Reductions by Entity Through 2028 (lbs/yr)
Agriculture	37,950	28,815	1,832	30,647
Alachua County	4,449	888	19	906
City of Gainesville	66	57	0	57
City of High Springs	2,028	0	0	0
Town of La Crosse	12	0	0	0
City of Newberry	37	0	0	0
City of Waldo	2	0	0	0
Bradford County	3,935	0	0	0
Town of Brooker	25	0	0	0
City of Hampton	109	0	0	0
City of Lawtey	125	0	0	0

* Planned and underway project reduction estimates are not verified by DEP.

** Projected reductions include projects with a project status of completed, ongoing, planned and underway.

ENTITY ALLOCATIONS

SECTION 2: IMPLEMENTATION TO ACHIEVE TMDL

Outside the Springsheds Entity	2028 Milestone Assigned Reductions (30%) (lbs/yr)	TN Completed and Ongoing Project Credits (lbs/yr)	TN Reductions from Planned and Underway Projects* (Not Verified) (lbs/yr)	Total Projected** Project TN Reductions by Entity Through 2028 (lbs/yr)
City of Starke	641	0	0	0
Columbia County	1,630	0	0	0
Town of Fort White	60	0	0	0
Gilchrist County	526	0	0	0
Suwannee County	426	0	0	0
Union County	1,299	0	0	0
City of Lake Butler	1,682	0	0	0
Town of Raiford	48	0	0	0
Town of Worthington Springs	24	0	0	0
Private WWTFs	10	0	0	0
Private Golf Courses	142	0	0	0
Total, All Reductions	**55,227**	**29,760**	**1,851**	**31,610**

* Planned and underway project reduction estimates are not verified by DEP.

** Projected reductions include projects with a project status of completed, ongoing, planned and underway.

WASTEWATER
SECTION 2: IMPLEMENTATION TO ACHIEVE TMDL

Recent legislative updates have expanded the requirements for addressing wastewater sources within BMAPs.

Clean Waterways Act (2020)

- Requires local governments within a nutrient BMAP to develop wastewater treatment plans and/or OSTDS remediation plans to be incorporated into BMAP updates.

Reclaimed Water Senate Bill (SB) 64 (2021)

- Subsection 403.064(16), Florida Statutes (F.S.), requires domestic wastewater utilities that dispose of effluent, reclaimed water or reuse water by surface water discharge to submit for DEP review and approval, a plan for eliminating non-beneficial surface water discharge by Jan. 1, 2032.
  - A utility must fully implement the approved plan by Jan. 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 Jan. 1, 2028.

WASTEWATER
SECTION 2: IMPLEMENTATION TO ACHIEVE TMDL

Recent legislative updates have expanded the requirements for addressing wastewater sources within BMAPs.

Environmental Protection HB 1379 (2023)

- Requires facilities discharging to a waterbody impaired for nutrients or subject to a BMAP to upgrade to AWT within 10 years.
- Requires applicants for new septic systems serving lots of one acre or less within BMAPs to connect to central sewer if available, or if unavailable, to install an enhanced nutrient-reducing system or other wastewater system that achieves a nitrogen reduction of 65%.

Environmental Protection HB 1557 (2024)

- Requires advanced treatment of reclaimed water within BMAPs (403.086, F.S.).
- DEP has determined that the use of reclaimed water is causing or contributing to the nutrient impairments being addressed in this BMAP area.
- The facilities listed in the BMAP - Appendix D have 10 years from BMAP adoption to meet the applicable AWT standards.

WASTEWATER
SECTION 2: IMPLEMENTATION TO ACHIEVE TMDL

The nitrogen effluent limits 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.

Nitrogen effluent limits for wastewater facilities

Facility Capacity (gpd)	Surface Water Discharges (mg/L)	WWTFs Not Listed in Appendix G — Rapid Rate Land Application Effluent Disposal System (mg/L)	WWTFs Not Listed in Appendix G — All Other Disposal Methods, Including Reuse (mg/L)
Greater than 100,000	3	3	3
20,000 to 100,000	3	3	6
Less than 20,000	3	6	6

gpd = gallons per day.
mg/L = milligrams per liter.

EXISTING OSTDS REMEDIATION

SECTION 2: IMPLEMENTATION TO ACHIEVE TMDL

Section 373.807, F.S.

- Requires BMAPs to include an OSTDS remediation plan if OSTDS contribute at least 20% of nonpoint source nitrogen pollution, or if DEP determines OSTDS remediation is needed to achieve the TMDL.
- In this BMAP, OSTDS contribute less than 20% of nonpoint source nitrogen pollution to the Outstanding Florida Spring (OFS).
- The remediation plan for this BMAP does not include requirements for the addition of enhanced nitrogen reducing treatment to conventional systems upon the need for modification or repair of existing OSTDS.

Subsection 403.067(7)(a)9., F.S.

- Requires local governments to develop an OSTDS remediation plan 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.
- Loading from OSTDS in this BMAP does not meet the 20% contribution threshold and local governments were not required to submit an OSTDS remediation plan.

WASTEWATER
SECTION 2: IMPLEMENTATION TO ACHIEVE TMDL

Biosolids

- To provide assurance that nitrogen losses to surface water and groundwater are minimized from the permitted application of biosolids and septage in the BMAP, requirements in accordance with Chapter 62-640, Florida Administrative Code (F.A.C.), apply to newly-permitted application sites and existing application sites upon permit renewal.

Source: DEP

STORWMWATER AND URBAN TURFGRASS

SECTION 2: IMPLEMENTATION TO ACHIEVE TMDL

Fertilizer Ordinance

- Subsection 373.807(2), F.S., requires local governments with jurisdictional boundaries within an OFS to develop, enact and implement a fertilizer ordinance by July 1, 2017.

Stormwater

- The National Pollutant Discharge Elimination System (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 a Municipal Separate Storm Sewer System (MS4) permit and designate eligible entities as regulated MS4s, in accordance with Chapter 62-624, F.A.C.
- Chapter 62-330 F.A.C. (2024).
  - Updated Florida's stormwater rule for design criteria and to strengthen the operation and maintenance requirements.
  - Applicants must demonstrate a level of treatment sufficient to accomplish the greater of the following nutrient load reduction criteria through calculations or modeling that the future stormwater management systems would provide additional treatment to meet new Environmental Resource Permits stormwater treatment performance standards of 80% reduction for Total Phosphorous (TP) and 55% reduction for TN or post-development condition average annual loading of nutrients does not exceed the predevelopment condition nutrient loading, along with additional requirements that would apply where a project discharges to Outstanding Florida Waters or impaired waters.

SPORTS TURFGRASS
SECTION 2: IMPLEMENTATION TO ACHIEVE TMDL

Sports Turfgrass and Golf Courses

- Sporting facilities are required to follow the 2025 Sports Turf BMP Manual.
  - DEP and University of Florida/Institute of Food and Agricultural Sciences (UF/IFAS) are collaborating the develop this manual.
- Superintendents of golf courses within the BMAP must obtain a certification for golf course BMPs under section 403.9339, F.S. and all golf courses must implement the BMPs described in the 2021 DEP golf course BMP manual.
- All golf courses located within a BMAP are required to submit a Nutrient Management Plan (NMP).
  - A draft NMP must be submitted to DEP within one year of BMAP adoption and a final document is due two years after adoption.

AGRICULTURE

SECTION 2: IMPLEMENTATION TO ACHIEVE TMDL

Dairy Operations with CAFO Permits, Chapter 62-670, F.A.C.

- Waste storage ponds must be lined and demonstrate no leaking.
- Sampling for TN and TP or land-applied effluent/wastewater must be included in the monitoring plan.

Livestock Operations Without CAFO Permits

- Section 403.067, F.S., requires livestock operations not large enough to require a NPDES CAFO permit must enroll in and implement the applicable DACS BMP Program **OR**
- Conduct a monitoring program approved by DEP or the applicable water management district.

Aquaculture

- Chapter 597, F.S., required DACS to create a program 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.

Silviculture

- The Florida Forest Service 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.

AGRICULTURE

SECTION 2: IMPLEMENTATION TO ACHIEVE TMDL

Agricultural Cooperative Regional Elements (ACE)

- Section 403.067, F.S., requires the DACS, DEP and agricultural producers to work together to establish an ACE.
- DACS 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.
- DACS is assigned the lead role on project solicitation, development, selection and implementation; however, 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.
- 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.
- DACS will report on projects annually through the DEP 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.

ATMOSPHERIC DEPOSITION

SECTION 2: IMPLEMENTATION TO ACHIEVE TMDL

- Atmospheric sources of nutrients are local, national and international.
- Recent data indicate that the deposition of nitrogen has been generally decreasing in Florida with an up to 55% decrease in atmospheric deposition by 2028 possibly as result of the following:
  - Power plant fuel source changes.
  - Air treatment upgrades.
  - Increased use of electric vehicles.
  - Decreasing mobile sources.
- No specific nitrogen reductions were assigned to this source category in this BMAP.
- Atmospheric deposition sources and trends will be re-evaluated periodically.

FUTURE GROWTH

SECTION 2: IMPLEMENTATION TO ACHIEVE TMDL

Assessed additional loading to the basin by 2040 under different growth management scenarios.

- 2040 population “additional people” based on Bureau of Business and Economic Research (BEBR) medium growth projections per county.
- Growth distributed to jurisdictional boundaries based on available land area.
- Determined percentage of population sewered based on Florida Water Management Inventory (FLWMI) parcel to point data.
- Applied per person loading values for portions of future population on centralized sewer or OSTDS.
- Assumed increase in urban turfgrass loading based on percentage of available acres developed using low and high intensity landscaping, using a general percent turf cover and turfgrass species fertilization rates.
- Ran three management scenarios to look at loading by entity, source and overall basin.

FUTURE GROWTH

SECTION 2: IMPLEMENTATION TO ACHIEVE TMDL

Scenario 1

By 2040:

- **90%** or more of **new population** is connected to central sewer.
- All wastewater treating to **3 mg/L.**
- Remainder of new population has **enhanced OSTDS.**
- **2% of available land** developed using **low intensity** landscaping (10% turf cover using centipede grass).

Scenario 2

By 2040:

- **New population** is connected to central sewer at **same rate as today.**
- All wastewater treating to **3 mg/L.**
- Remainder of new population has **enhanced OSTDS.**
- **10% of available land** devel oped using **low intensity** landscaping (10% turf cover using centipede grass).

Scenario 3

By 2040:

- **New population** is connected to central sewer at **same rate as today**.
- All wastewater treating to **6 mg/L.**
- Remainder of new population has **conventional OSTDS.**
- **17% of available land** developed using **high intensity** landscaping (25% turf cover using St. Augustine grass).

FUTURE GROWTH ANALYSIS

SECTION 2: IMPLEMENTATION TO ACHIEVE TMDL

Entity	2040 People	Scenario 1 TN (lbs/yr)	Scenario 2 TN (lbs/yr)	Scenario 3 TN (lbs/yr)
Alachua County	19929	13,563	41,599	370,997
Alachua	2058	1,276	3,842	37,405
Archer	421	213	788	7,650
Gainesville	721	527	1,166	12,741
High Springs	1382	1,098	4,687	29,330
La Crosse	305	127	294	4,995
Newberry	3533	1,465	4,256	59,537
Waldo	30	12	38	504
Bradford County	1452	1,707	15,334	258,891
Brooker	3	4	34	570

In every scenario, additional loading is expected in the basin by 2040 due to increasing populations. Entities should be working now to both remediate existing loading and plan to mitigate loading from future growth.

FUTURE GROWTH ANALYSIS

SECTION 2: IMPLEMENTATION TO ACHIEVE TMDL

Entity	2040 People	Scenario 1 TN (lbs/yr)	Scenario 2 TN (lbs/yr)	Scenario 3 TN (lbs/yr)
Hampton	4	5	44	753
Lawtey	9	11	97	1,637
Starke	39	47	426	7,040
Columbia County	4808	3,601	25,140	421,249
Fort White	30	22	154	2,608
Lake City	140	109	773	12,361
Gilchrist County	1326	1,142	8,684	147,614
Suwannee County	64	75	661	11,233
Union County	1633	1,605	13,174	223,887
Lake Butler	18	18	148	2,506
Raiford	4	4	35	590
Worthington Springs	6	6	51	873
Basin Totals	**37,917**	**26,636**	**121,423**	**1,614,969**

2040 Loading — Basin Totals

Scenario 1 Total	Scenario 2 Total	Scenario 3 Total
3,827	**11,448**	**19,570**

DRAFT DOCUMENT

Section 1: Background

Section 2: Implementation

Section 3: Monitoring and Reporting

Section 4: Commitment to Plan Implementation

Section 5: References

Appendices

Methods for Evaluating Progress

Adaptive Management

Water Quality and Biological Monitoring

Groundwater Analysis

WATER QUALITY MONITORING

SECTION 3: MONITORING AND REPORTING

Primary objectives:

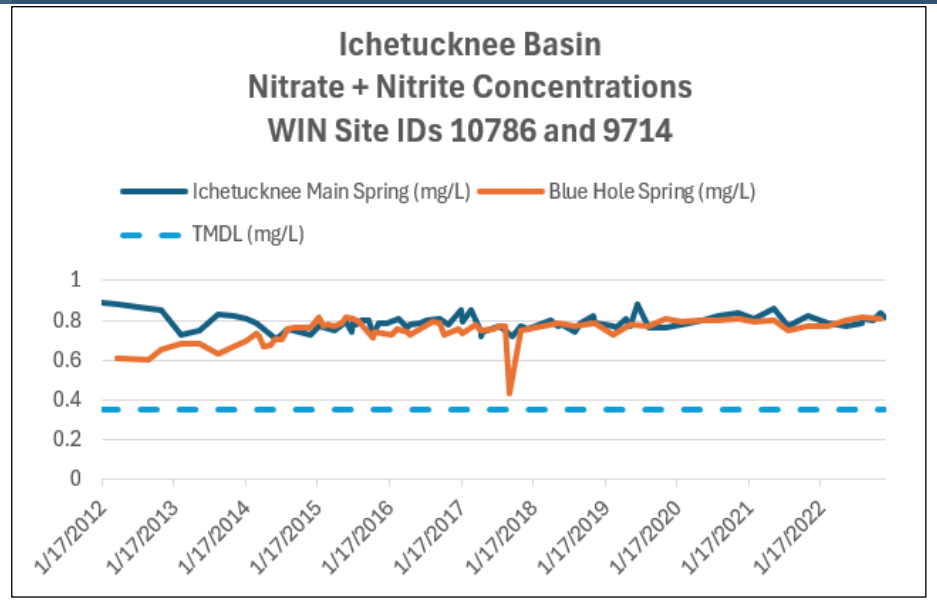
- Measure the water quality and biological response in the impaired springs and groundwater at the beginning of the BMAP period and during implementation.
- Document nutrient trends in the springshed.

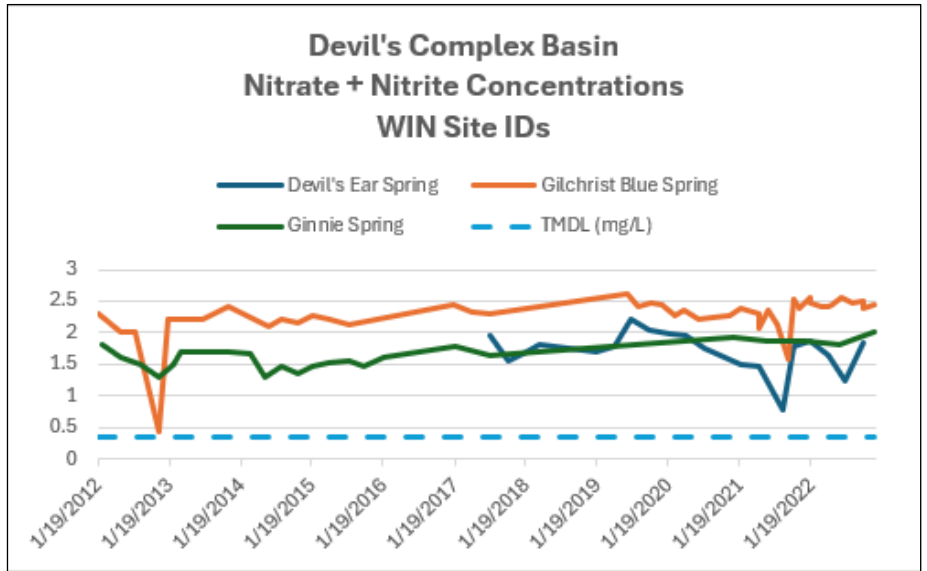
Secondary objectives:

- Identify areas where groundwater data and modeling might help in understanding the hydrodynamics of the system.
- Evaluate groundwater quality trends and nutrient loading to the aquifer across the basin.
- Confirm and refine nutrient removal efficiencies of agricultural and/or urban BMPs, projects and other management efforts

WATER QUALITY MONITORING

SECTION 3: MONITORING AND REPORTING



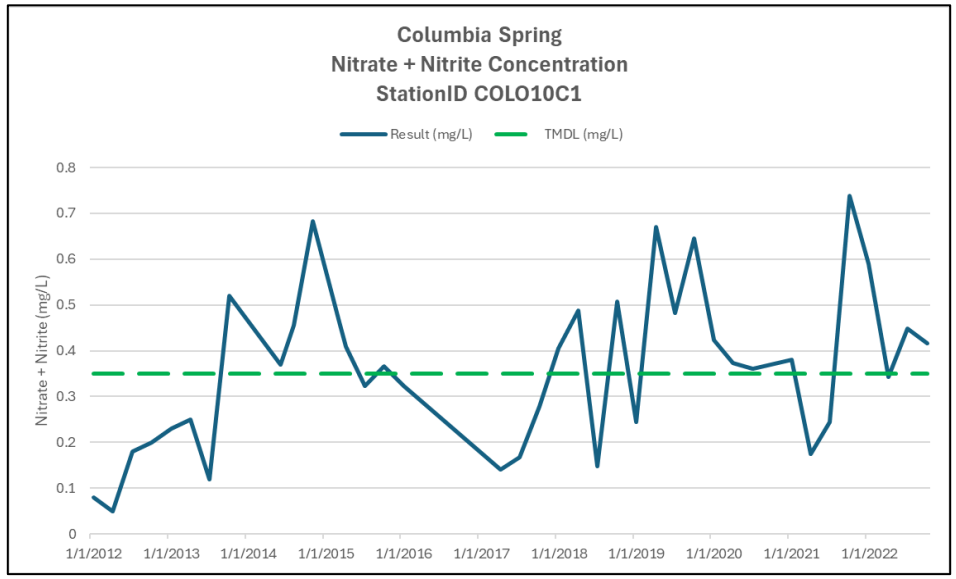


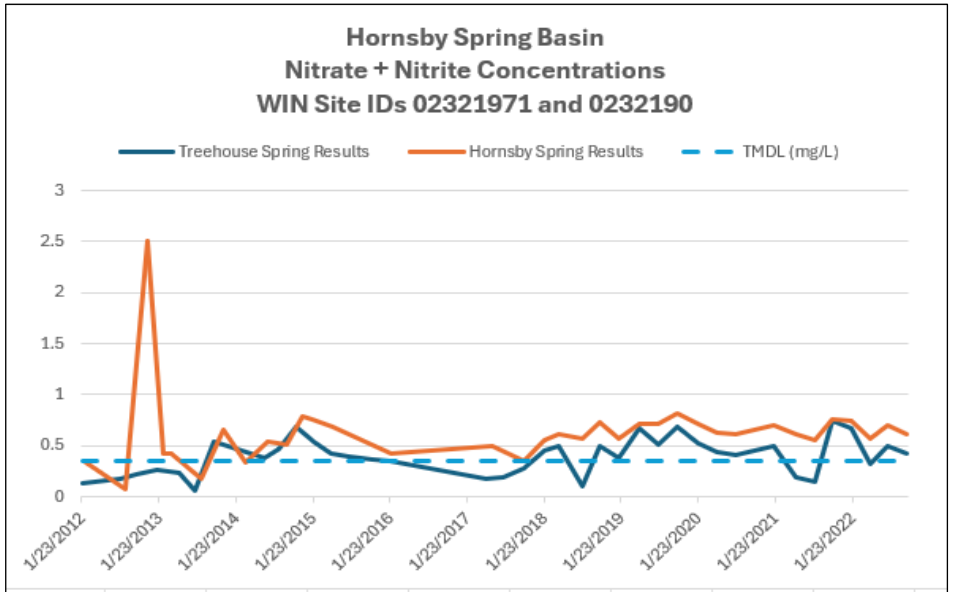
- Available water quality data will be analyzed during BMAP implementation to determine trends in water quality and the health of the biological community.

- A wide variety of statistical methods are available for the water quality trend analyses.
  - The selection of an appropriate data analysis method will depend on the frequency, spatial distribution and period of record available from existing data. Specific statistical analyses were not identified during BMAP development.

WATER QUALITY MONITORING

SECTION 3: MONITORING AND REPORTING





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- A wide variety of statistical methods are available for the water quality trend analyses.
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GROUNDWATER MONITORING

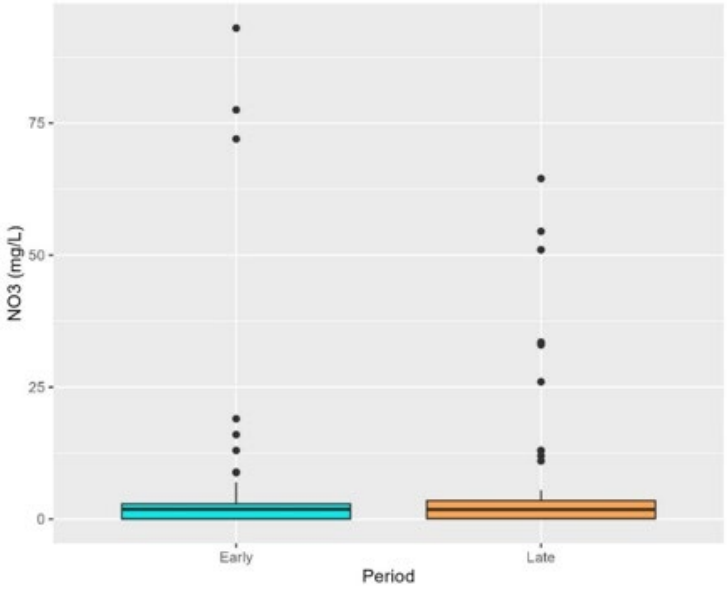
SECTION 3: MONITORING AND REPORTING

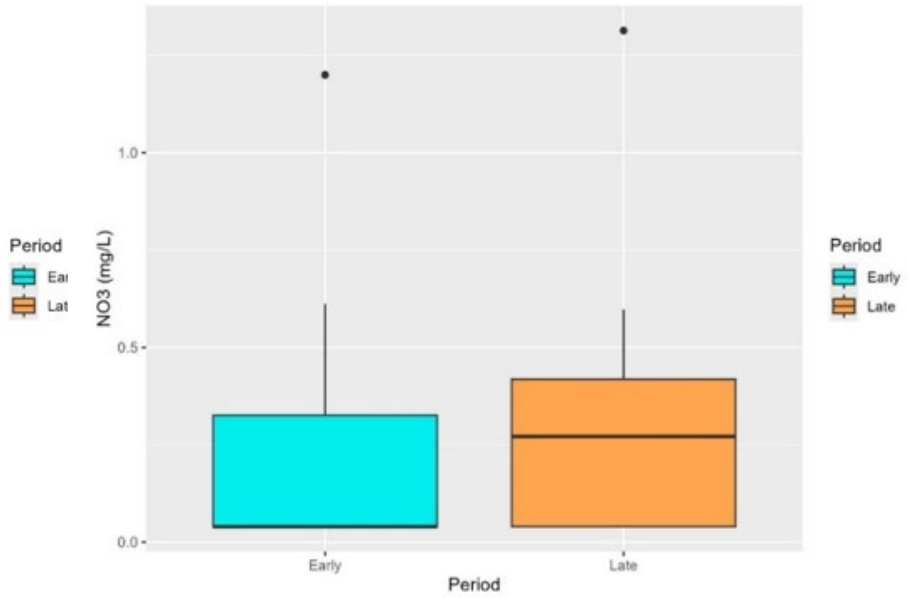
Groundwater monitoring gives us a look at the health of the aquifer before water discharges at spring vent.

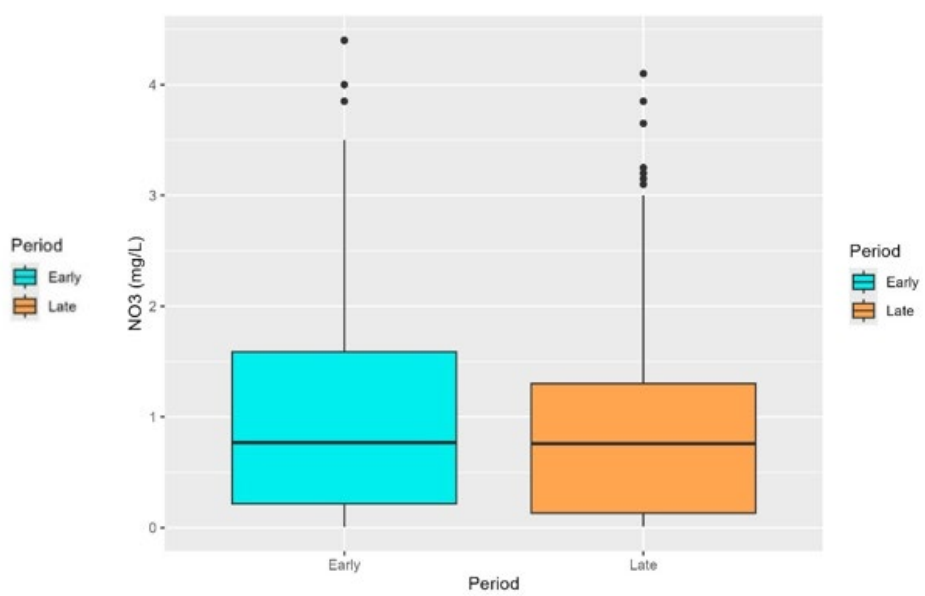
- Uses measured data (nitrate- total and dissolved) from groundwater monitoring wells from DEP's Water Information Network (WIN) and the WMDs.
- A visual analysis was performed using the annual median as boxplots.
- Wells that were sampled regularly through the period of record were considered “fixed”. Wells with inconsistent sampling (i.e. less than four samples over the period of record) were considered “sporadic”.
- Data from the fixed wells were preferred for analyses because comparisons between time periods represent changes in the same set of wells.
- To create the box plots, the period of record was divided into early (2017-2020) and late (2021-2024) subperiods.
- Future considerations:
  - Stratifying data by land use, distance to spring vent, other factors.
  - Trends analysis for multiple 5-year periods to see changes over time.
  - Well specific trends analysis.

GROUNDWATER MONITORING

SECTION 3: MONITORING AND REPORTING







Devil's Ear Springshed
NO3 concentrations of early and late periods, with outliers.

Median Early = 1.85 mg/L.
Median Late = 1.80 mg/L.

Hornsby Springshed
NO3 concentrations of early and late periods, with outliers.

Median Early = 0.04 mg/L.
Median Late = 0.27 mg/L.

Ichetucknee Springshed
NO3 concentrations of early and late periods, with outliers.

Median Early = 0.77 mg/L.
Median Late = 0.76 mg/L.

DRAFT DOCUMENT

Section 1: Background

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Appendices

Adoption Process

Tracking Reductions

Revisions to the BMAP

ADAPTIVE MANAGEMENT

SECTION 4: COMMITMENT TO PLAN IMPLEMENTATION

Tracking Reductions:

- Required loading reductions are expected to be met by 2038.
- Each entity is responsible for implementing management actions to meet their upcoming 5-year milestone.
- The statewide annual report will provide an annual update of progress made in implementing load reductions tracking the implementation status of the management actions listed in the BMAP.

Revisions to the BMAP:

- Section 403.067, F.S., requires that the plan be revised, as appropriate.
  - Assessment of progress toward 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.

DRAFT DOCUMENT

Section 1: Background

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Appendices

BMAP UPDATE DOCUMENT

APPENDICES

- **NEW:** Important links
- **Updated:** Projects to Reduce Nitrogen Sources.
  - Projects submitted by responsible entities through the BMAP portal through October 2024.
  - Includes projects from the 2020 Clean Waterways Act WWTF and OSTDS plans submitted by local governments August 2024.
- **NEW:** Planning for Additional Management Strategies
  - Examples of project efforts entities can identify to meet their milestone reduction requirements.
- PFA Report

- **Updated:** OSTDS Remediation Plan
- **NEW:** Technical Support Information
  - NSILT methodology.
- **NEW**: Wastewater Facilities
  - List of facilities with reclaimed water that are causing or contributing to nutrient impairments
- **NEW:** Golf Course Nutrient Management Plans
- **Updated:** Agricultural Enrollment and Reductions (provided by DACS)
- **NEW:** Private Wastewater Treatment Facilities and Private Golf Courses with Reduction Allocations.

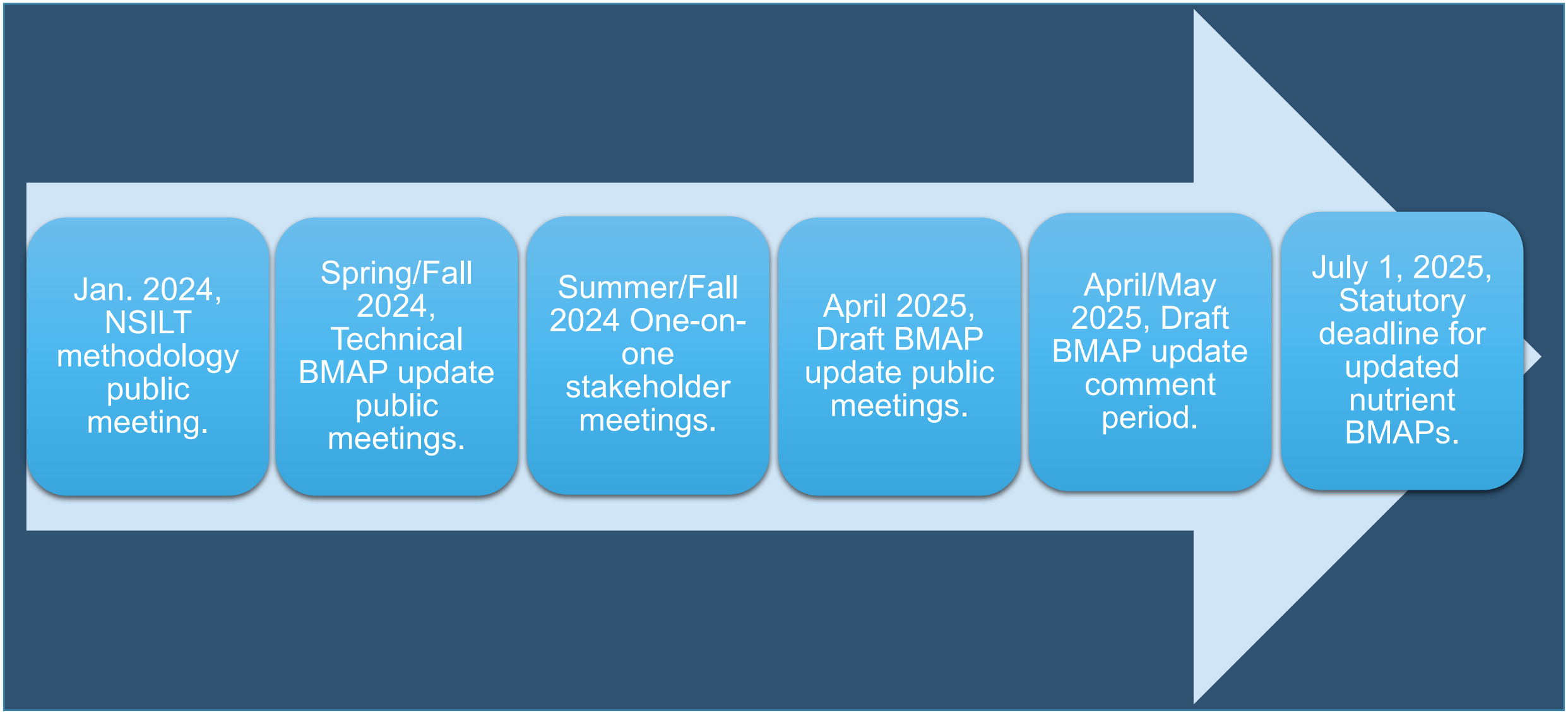
NEXT STEPS

BMAP update document draft review:

- Draft document sent out via GovDelivery **April 4, 2025**.
- Stakeholder review comments due **May 2, 2025**.

Submit comments to:
Moira.Homann@FloridaDEP.gov

UPCOMING SCHEDULE



RESOURCES
BMAP WEBSITE AND STORYMAPS

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...

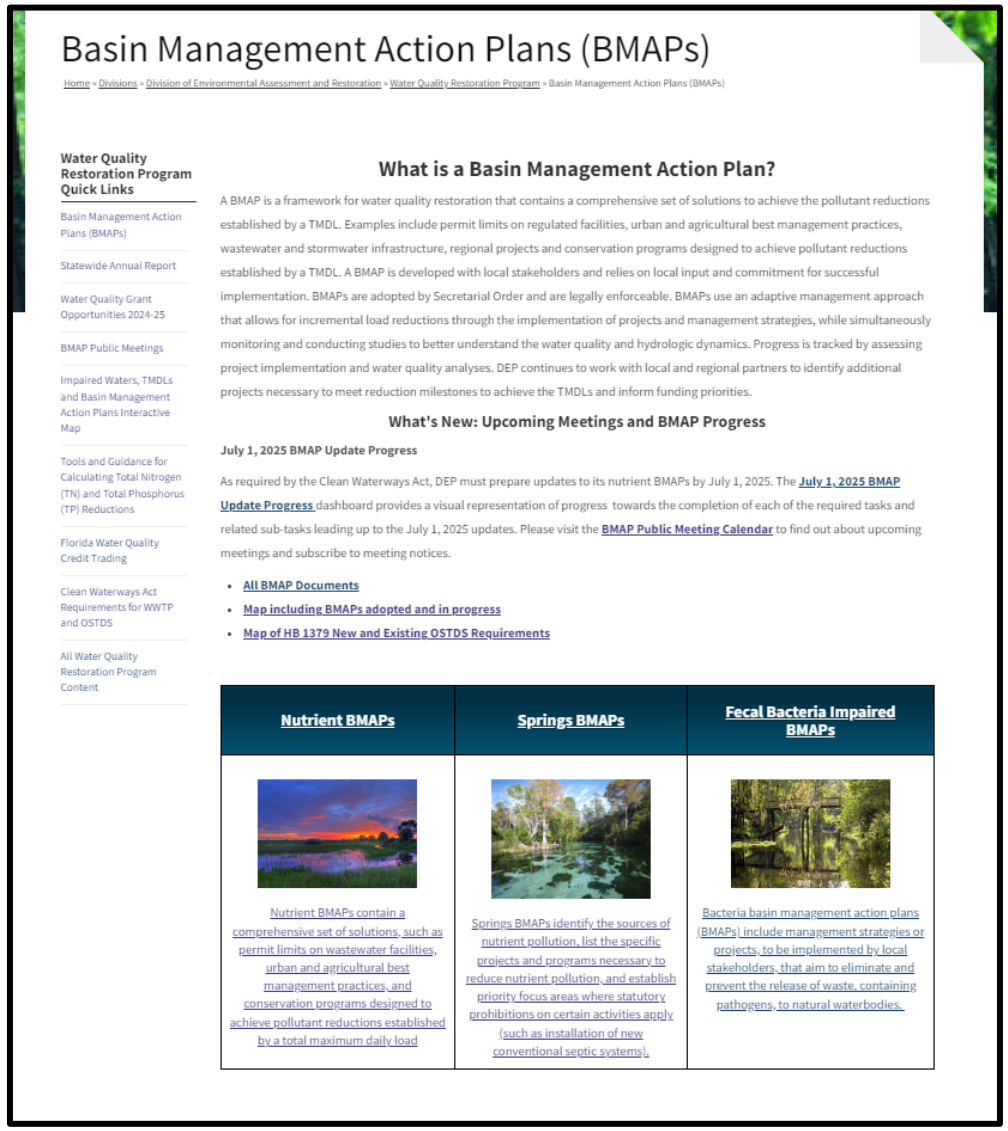

6 Jackson Blue and Merritts Mill Pond BMAP Story Map


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

[Basin Management Action Plans (BMAPs) | Florida Department of Environmental Protection]



THANK YOU

Chandler Keenan
Environmental Administrator

Contact Information:
850-245-8555
Chandler.B.Keenan@FloridaDEP.gov

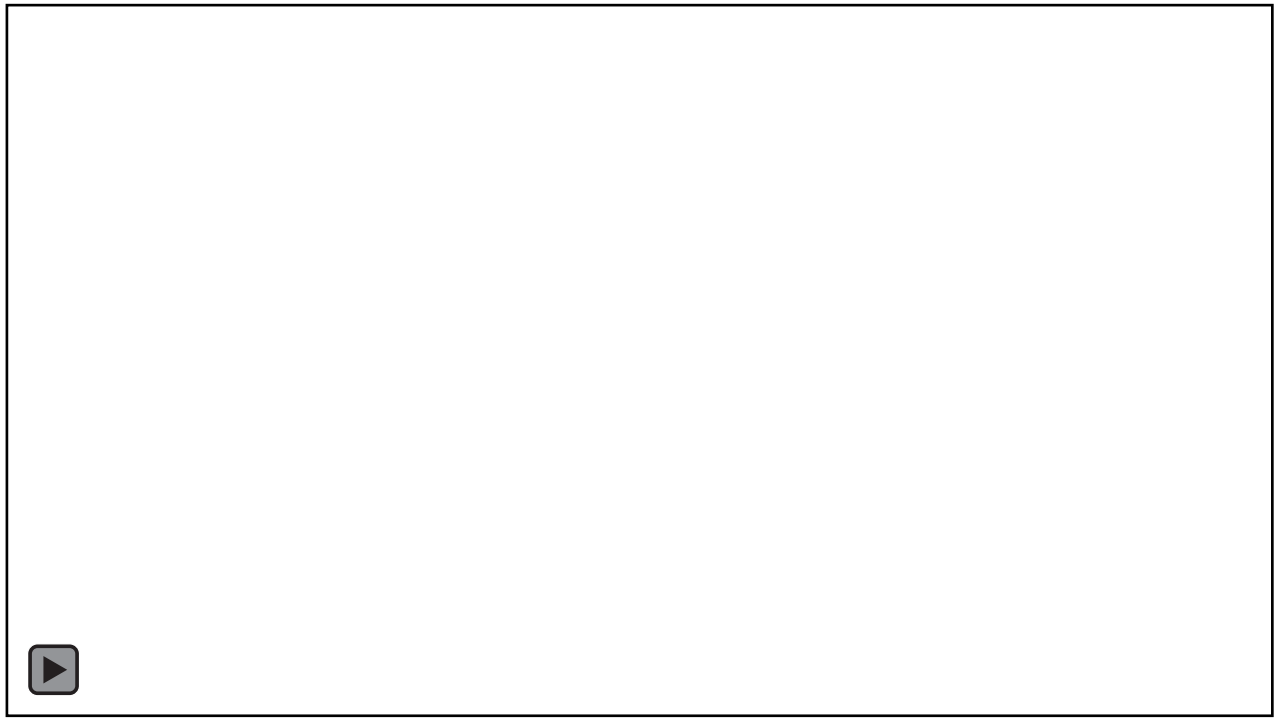
BMAP MEETING
PUBLIC QUESTIONS PERIOD

Verbal Questions

- We ask that questions and comments be limited to **two minutes** so that we may hear from everyone.

Written Comments

- Submit written comments concerning today's meeting to: BMAPProgram@FloridaDEP.gov.



Florida Department of Environmental Protection (DEP)
Santa Fe Basin Management Action Plan (BMAP)
Virtual Public Meeting via GoToWebinar
April 10, 2025
2:00 pm –3:45 pm EDT

Attendees

Eiman Abbas, City of Alachua
Sally Adkins, City of Gainesville
Nicole Bailey, City of Newberry
Julianna Belitz, DEP
Amy Brown, SRWMD
Tiffany Busby, Wildwood Consulting
Stacy Cecil, SJRWMD
Terry Clark, Staff Connections
Caryn Crabb-Nelson, DACS
Mary Diaz, SRWMD
Chloe Dougherty, Florida Springs Council
Bryanna Edgar, Citizen
Samantha Epstein, SJRWMD
Kristine Eskelin, SRWMD
Jessica Fetgatter, DEP
Corrine Flumerfelt, DEP
Cathy Foerster, Drummond Carpenter
Laura Goss, Florida Peanut Federation
Stacie Greco, Alachua County
Tedd Greenwald, Citizen
Roxanne Groover, FOWA
Sam Hankinson, DEP
Madeline Hart, DACS
Kenny Hayman, DEP
Margarita Hernandez, Citizen
Susie Hetrick, SRWMD
George Hochmuth , Citizen
Robin Holland, DACS
Moira Homann, DEP
Porter Horne, Citizen
David Hudson Tuthill, Step Up For Students
Luke Hutchinson, Infrastructure Consulting & Engineering
Emma Janecek, DACS
David Jenkins, Citizen
Chandler Keenan, DEP
Chris Keller, Wetland Solutions
Sean King, SRWMD
Kevin Korus, University of Florida
Gregory Lang, Mittauer and Associates
Conor Lucey, DEP
Celeste Lyon, RES
Wynn McDonald, SRWMD
Haley Moody, Florida Springs Institute
Morgan Morrow, DACS
Jessica Mostyn, DEP
Jim Myles, DB Environmental
Brittney O'Neal, DACS
Rhea Oaks, Amp Up Today
Kevin O'Donnell, DEP
Lindsey Pavao, Alachua County
Steven Peene, Applied Technology & Management
Beth Robertson, DEP
Kristen Sealey, Gainesville Regional Utilities
Tiffany Simpson, DEP
Mary Szoka, Alachua County
Debby Tipton, DEP
Emanuela Torres-Marquis, Florida Springs Institute
Joanne Tremblay, Our Santa Fe River
Diana Turner, DEP

Lisa Van Houdt, DEP
Ken Weaver, DEP
Stefani Weeks, Citizen
Carol White, Citizen
Barton Wilder, DACS
Shane Williams, City of Gainesville
Katrina Yancey, DEP

Overall

The draft BMAP document can be downloaded here https://floridadep.gov/dear/water-quality-restoration/documents/250410-safe-draft-document. Comments on the draft BMAP document are due by May 2, 2025. Verbal comments at this meeting were welcome. Written comments submitted at the meeting were invited. Comments after the meeting should be sent to BMAPProgram@FloridaDEP.gov by May 2, 2025.

Questions and Answers

Question (Q): If a local government has a strong fertilizer ordinance, can that be used to reduce future growth loading?
Answer (A): The future growth loading is not being assigned to the local governments in this BMAP update, so there will not be credit against these potential loads. However, strong ordinances could be a future refinement to the future growth estimation method and strong ordinances are one of the main tools that DEP recommends in order to abate the impact of additional population growth. Fertilizer ordinances are incorporated into the NSILT estimations, so local governments with strong fertilizer ordinances have a reduced starting load to groundwater. Appropriate ordinances are credited to local governments for urban acres once development has occurred as long as the public education and ordinances are ongoing. In the future growth estimation method and scenarios presented today, the strength of the local fertilizer ordinance was not factored in. While no credit will be given against future growth estimates, DEP credits local governments for up to 6% of their existing urban loads, in consideration of specific source control ordinances and public education activities. As DEP has mentioned in some meetings, a DEP review is underway to refine the crediting and reporting of these public education and ordinance measures, to ensure that these activities are effective enough to continue the 6% (or a smaller percentage, depending on the entity's suite of efforts) credit. DEP is not considering increasing the 6% credit, but adjustments to the reporting and evaluation of public education efforts up to 6% are being discussed.

Q: How do we get credit for strong ordinances? Isn't the credit for ordinances lumped with outreach so maxed out at 6%?
A: Up to 6% credit on urban loading is currently available, including consideration of four ordinances that address nutrient sources: Landscaping; irrigation; pet waste; and fertilizer ordinances. As mentioned, DEP is reviewing these crediting practices and entities should expect DEP to amend the reporting approach for entities to maintain their credits.

Q: What is deadline for comments and best address to which to send them?
A: You can send comments to Moira.Homann@FloridaDEP.gov by May 2, 2025.

Q: How do I go about learning more about how Newberry's and Archer's plans to reduce nutrient loading?
A: The best place to see what projects are being planned and implemented by responsible entities is to review the project list in Appendix B within the draft BMAP document. You can also download the 2023 project list from the Statewide Annual Report at this site: https://floridadep.gov/dear/water-quality-restoration/content/statewide-annual-report. The download is an Excel workbook that allows you to sort and filter projects to suit your interest, including by Lead Entity (i.e., City of Newberry or City of Archer). The BMAP project list in Appendix B has been updated since the 2023 Statewide Annual Report list posted online.

Q: The University of Florida (UF) has been increasing their turf areas. Will they be included in the nutrient reductions?
A: DEP will be engaging UF as a stakeholder in this process

Q: If I heard correctly, the future growth is load to groundwater, correct? And they are load to the land surface and do not take into account the attenuation factors applied by Nitrogen Source Inventory Loading Tool (NSILT)?
A: The future growth estimates are load to groundwater estimates and consider the recharge factors and attenuation factors used in the NSILT.

Comments

Comment: In the draft BMAP document, page 77, Figure 16 has "Lower Suwannee springshed" – this should be "Ichetucknee."

Adjournment

The meeting ended at 11:55 pm EDT.