Volusia Blue Spring, Gemini Springs and DeLeon Spring Basin Management Action Plans (BMAPs) Update Meeting

Via Webinar
Webinar Registration Link:
https://attendee.gotowebinar.com/register/6298695741463261273
April 17, 2025
10:00 AM EDT

Agenda

- Volusia Blue Spring, Gemini Springs, and DeLeon Spring BMAPs Background.
- Overview of Draft Volusia Blue Spring, Gemini Springs, and DeLeon Spring BMAPs.
- Next Steps.
- Questions/Comments.

Please note the site for documents pertaining to Volusia Blue Spring, Gemini Springs, and DeLeon Spring BMAPs:
BMAP Public Meetings | Florida Department of Environmental Protection
For more information on the Volusia Blue Spring, Gemini Springs, and DeLeon Spring BMAPs, contact: Moira Homann, 850-245-8460.
Moira.Homann@FloridaDEP.gov

Florida Department of Environmental Protection (DEP)
DeLeon, Gemini, and Volusia Blue Basin Management Action Plans (BMAPs)
Virtual Public Meeting via GoToWebinar
April 17, 2025
10:00 am – 11:11 am EDT

Attendees

Ginger Adair, Volusia County
Lisa Bally, ATM
Evelyn Becerra, DEP
Cora Berchem, Save the Manatee
Marcelo Blanco, DEP
Tiffany Busby, Wildwood Consulting
Carolin Ciarlariello, DEP
Patricia Coffey, FDACS
Cammie Dewey, SJRWMD
Lauren Dorval, FDACS
Molly Duerig, Central Florida Public Media
Kim Duffek, DEP
Chris Fagerstrom, Mead & Hunt
Jessica Fetgatter, DEP
Agustin Francisco, FDACS
Judy Gersony, Citizen
Lawrence Glenn, DEP
Roxanne Groover, FOWA
Sam Hankinson, DEP
Moira Homann, DEP
Jason Icerman, City of Tallahassee
Peter Jensen, DEP
Chandler Keenan, DEP
Stephen Kintner, Citizen
Sue Lamothe, Citizen
Celeste Lyon, RES
Jessica Meinhofer, Citizen
Jennifer Mitchell, SJRWMD
Mark Nelson, Jones Edmunds
Kevin O'Donnell, DEP
Kim Ornberg, Seminole County
Joe Parish, Seminole County
Raulie Raulerson, Florida Farm Bureau
Beth Robertson, DEP
Shannon Salvatori, SJRWMD
Stacey Simmons, FDACS
Tiffany Simpson, DEP
Jennifer Spain, Volusia County
Rachel Sweet, FDOH
The Florida Channel
Anthony Tomalewski, DEP
Diana Turner, DEP
Michael Ulrich, Volusia County
Lisa Van Houdt, DEP
Oscar Vera, Liquid Solutions Group
Ken Weaver, DEP
Tanya Welborn, DEP
Shannon Wetzel, Seminole County
Kelly Young, Volusia County

Overall

The draft BMAP document can be downloaded here: https://floridadep.gov/dear/water-quality-restoration/documents/april-08-2025-dele-draft-bmap-document, https://floridadep.gov/dear/water-quality-restoration/documents/april-08-2025-gemi-draft-bmap-document, and https://floridadep.gov/dear/water-quality-restoration/documents/april-08-2025-

vobl-draf-bmap-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): Will the questions and comments be answered/addressed during this session?
Answer (A): We will be answering questions related to the presentation as they come in. If there are any questions outside the scope of today's presentation, we will follow up after the presentation.

Q: How does FDEP plan to ensure stakeholders are actually meeting their respective reduction load requirements? What sort of enforcement process, if any, will be in place? [Media Request]
A: BMAPs are enforceable as Secretarial Orders. Please follow up with our Press Office (alexandra.kuchta@floridadep.gov) if you have any other questions.

Q: So, for clarity--the goals haven't changed but the timeline to reach the goals has been amended? I know the final hasn't changed but didn't the amount reduction per 5 year "window" shift slightly?
A: The goals have not changed and our timeline hasn't changed either. The final deadline for these BMAPs is still 2038. Yes, that is correct. The required reductions for each 5-year milestone have been revised based on new data and new information.

Q: Will this be the last public meeting before the July BMAP adoption?
A: Yes.

Q: Section 2.8 of the Gemini BMAP lists two sports fields covering 13 acres. Where are these 2 sports fields listed? There are 5 golf courses mentioned in Section 2.8, but I only saw 4 listed in Appendix J. Can you clarify?
A: In the draft Gemini BMAP, Appendix J lists only privately-owned golf courses. One golf course is publicly-owned by the City of Sanford (Mayfair Country Club), so it was not listed in Appendix J, but it is located in the BMAP area. That course's loading is assigned to Sanford.

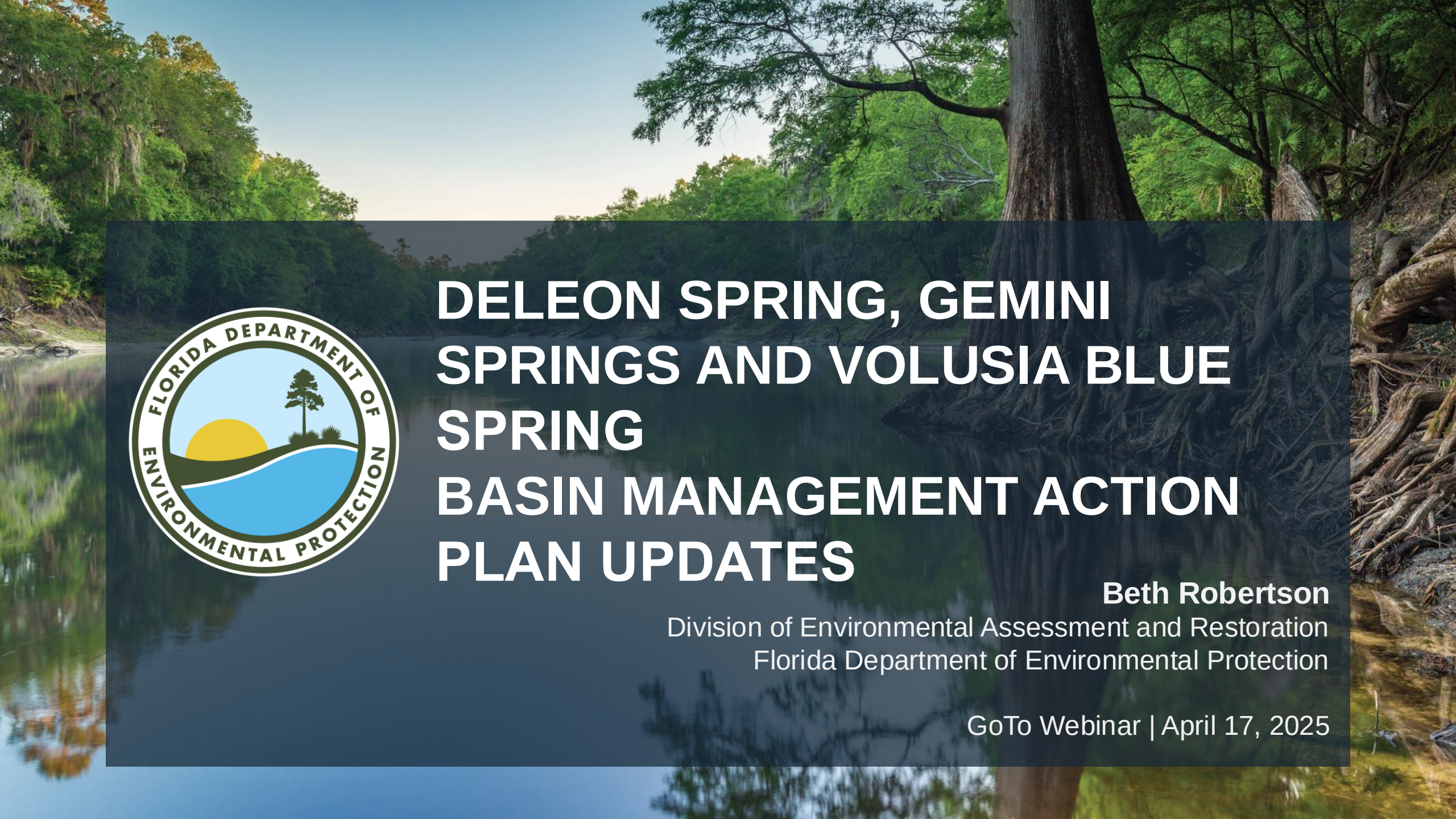
Comments

Comment: I really like the new growth metric.

Comment: I have a few questions and I'll be sending those via email. Thank you.

Adjournment

The meeting ended at 11:11 am EDT.



DELEON SPRING, GEMINI SPRINGS AND VOLUSIA BLUE SPRING BASIN MANAGEMENT ACTION PLAN UPDATES

Beth Robertson
Division of Environmental Assessment and Restoration
Florida Department of Environmental Protection

GoTo Webinar | April 17, 2025

WEBINAR TIPS

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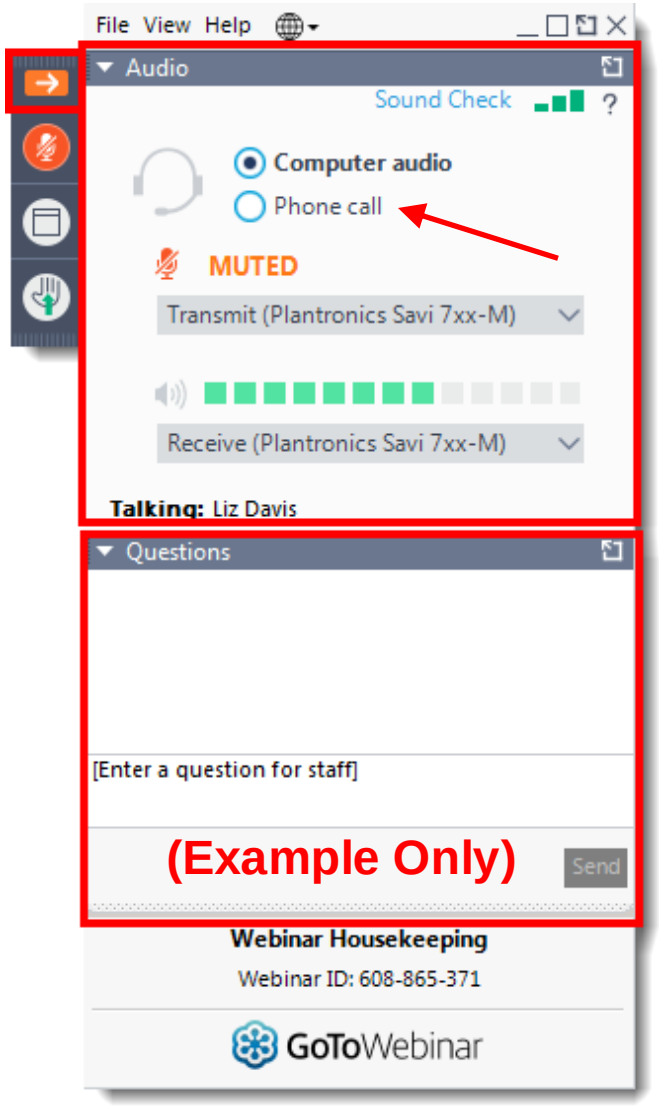
Attendee audio will automatically be muted.

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.

Photo Credit: USFWS

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:

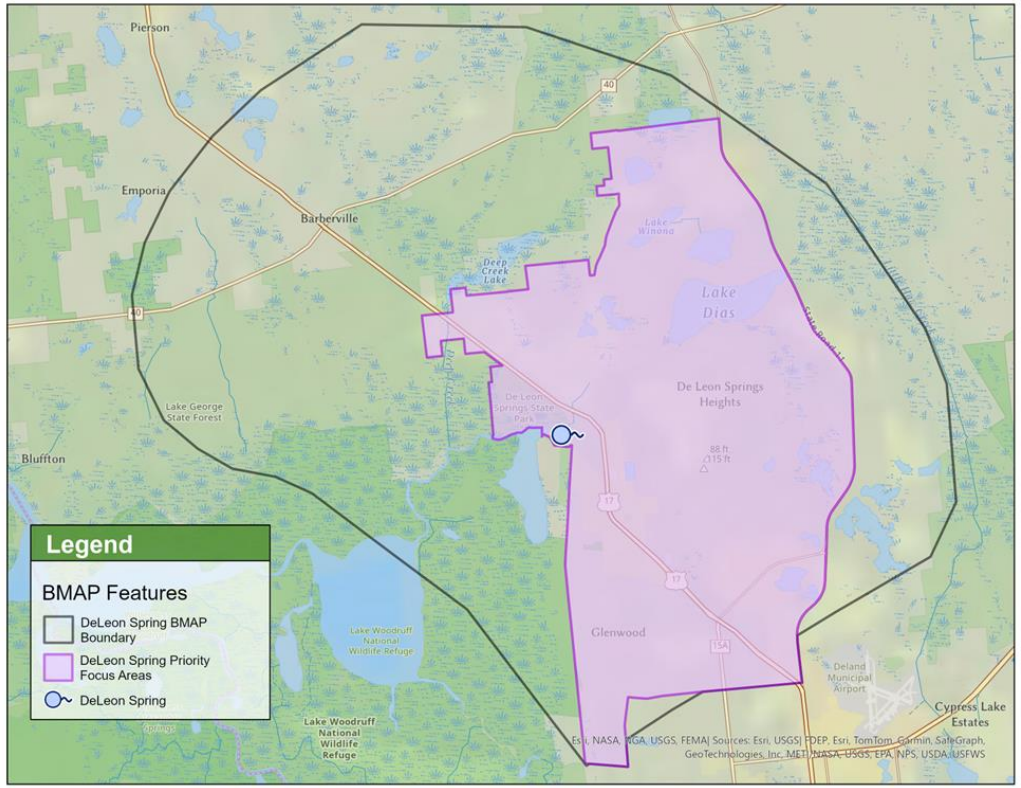
- Implementation timeline.
- Commitment to projects.
- Expected water quality improvement from projects and management strategies.

Process to assess progress toward achieving the TMDL:

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

DELEON SPRING BMAP

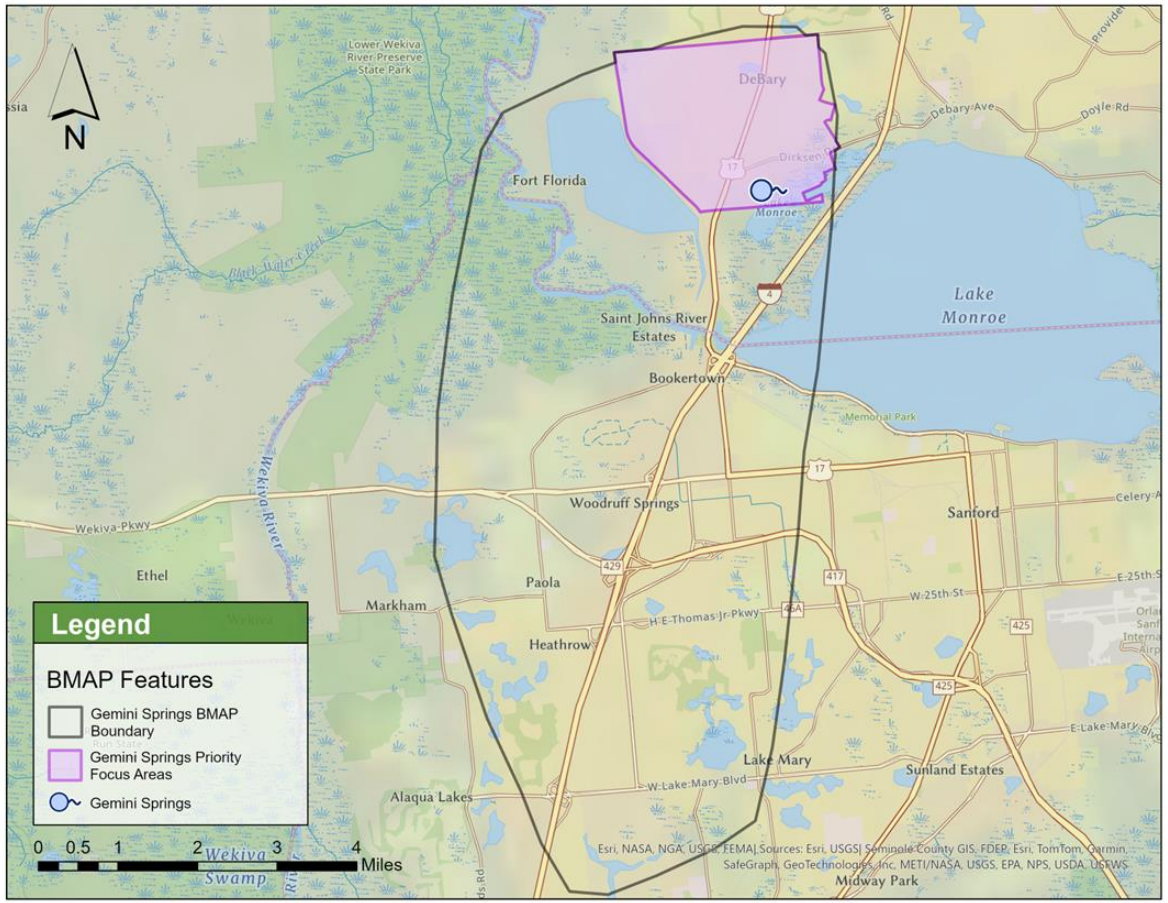
- BMAP area is approximately 65,392 acres located in Volusia County.
- Impaired for the nitrate form of nitrogen.
- TMDL is an annual average target of 0.35 milligrams per liter (mg/L) of nitrate.



Type of Entity	Name
Responsible Entities	Agriculture Volusia County Private Wastewater Treatment Facilities
Responsible Agencies	Florida Department of Agriculture and Consumer Services (DACS) Florida Department of Environmental Protection (DEP) Florida Department of Health (DOH) Florida Department of Transportation (DOT) St. Johns River Water Management District (SJRWMD)
Other Interested Stakeholders	1000 Friends of Florida Agricultural Producers Blue Springs Alliance Florida Farm Bureau Florida Fish and Wildlife Conservation Commission (FFWCC) Florida Native Plant Society Florida Onsite Wastewater Association (FOWA) Residents Save the Manatee Club Septic System Contractors Volusia Water Alliance

GEMINI SPRINGS BMAP

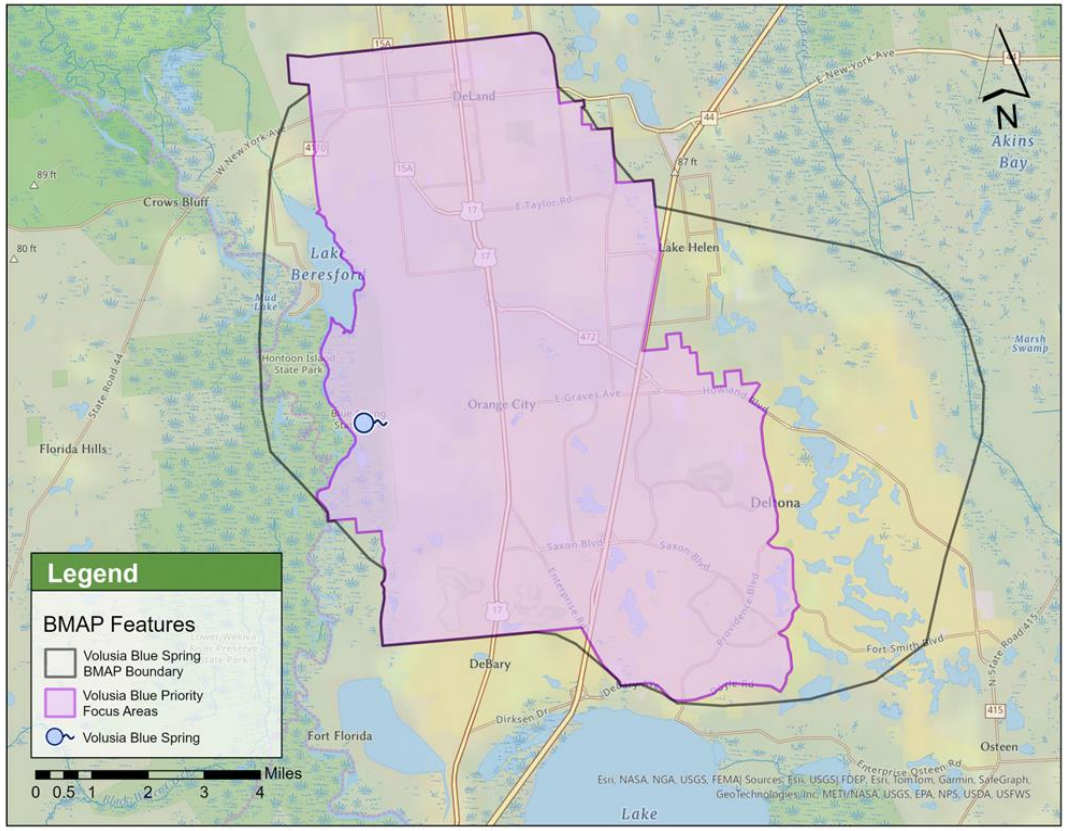
- BMAP area is approximately 27,290 acres in Seminole and Volusia counties.
- Impaired for the nitrate form of nitrogen.
- TMDL is an annual average target of 0.35 mg/L of nitrate.



Type of Entity	Name
Responsible Entities	Agriculture City of DeBary City of Lake Mary City of Sanford Seminole County Volusia County Private Wastewater Treatment Facilities Private Golf Courses
Responsible Agencies	DACS DEP DOH DOT SJRWMD
Other Interested Stakeholders	Agricultural Producers Blue Springs Alliance Residents/Homeowners East Central Florida Regional Planning Council Florida Farm Bureau FOWA Save the Manatee Club Septic System Contractors Volusia Blue Audubon Volusia Water Alliance

VOLUSIA BLUE SPRING BMAP

- BMAP area is approximately 69,046 acres in Volusia County.
- Impaired for the nitrate form of nitrogen.
- TMDL is a monthly average target of 0.35 mg/L of nitrate.



Type of Entity	Name
Responsible Entities	Agriculture City of DeBary City of DeLand City of Deltona City of Lake Helen City of Orange City Volusia County Private Wastewater Treatment Facilities Private Golf Courses
Responsible Agencies	DACS DEP DOH DOT SJRWMD
Other Interested Stakeholders	1000 Friends of Florida Blue Spring Alliance Residents/Homeowners Florida Farm Bureau FFWCC Florida Native Plant Society FOWA Save the Manatee Club Septic System Contractors Stetson University University of Florida Institute of Food and Agricultural Sciences Volusia Water Alliance

BMAP UPDATE COMPONENTS

ADOPT BY JULY 1, 2025

- Nitrogen Source Inventory and Loading Tool (NSILT) update.
- Entity allocated reductions.
- Management strategies.
- Future growth update.
- Incorporate the 2020 Clean Waterways Act, 2023 House Bill (HB) 1379 and 2024 HB 1557 requirements.
- Incorporate regional projects.
- Water quality data evaluation:
  - Evaluation of the monitoring networks.
  - Groundwater Analysis.
- 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 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.
  - Several meetings 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 Area

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

- **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

Section 3: Monitoring and Reporting

Section 4: Commitment to Plan Implementation

Section 5: References

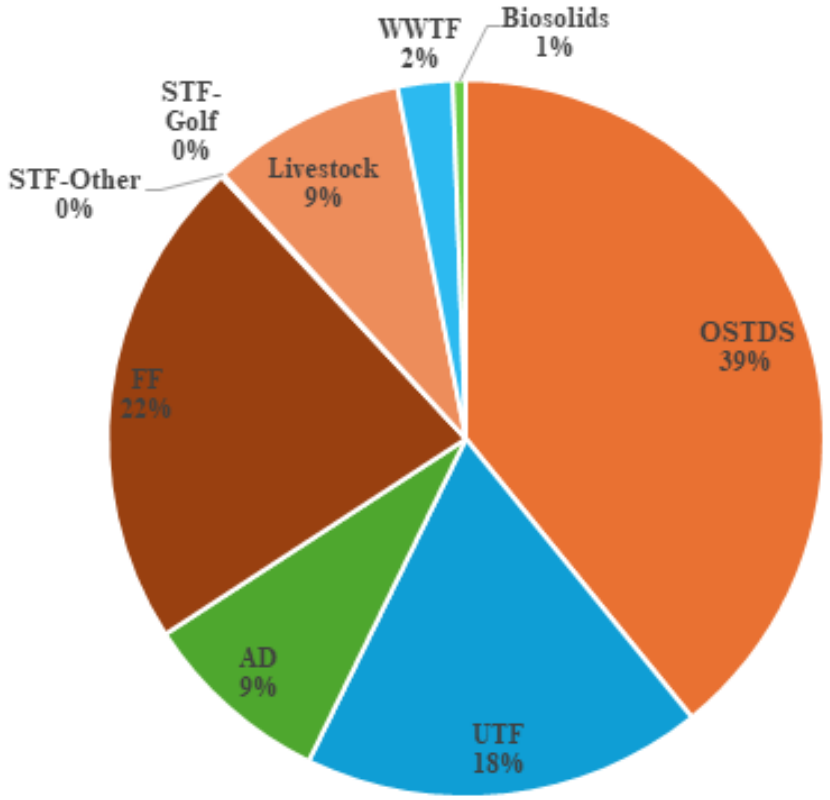
Appendices

DELEON - POLLUTANT LOADS

SECTION 2: IMPLEMENTATION TO ACHIEVE TMDL

Nitrogen Source	Total Nitrogen (TN) Load to Groundwater (lbs/yr)	% Contribution
OSTDS	60,192	39%
UTF	27,804	18%
Atmospheric Deposition (AD)	13,224	9%
Farm Fertilizer (FF)	34,148	22%
STF	211	<1%
STF – Golf	12,135	2%
Livestock Waste (LW)	13,459	9%
Biosolids	906	<1%
WWTFs	3,812	2.5%
Total	**584,121**	**100%**

lbs/yr = pounds/year



DELEON - LOADING ALLOCATION

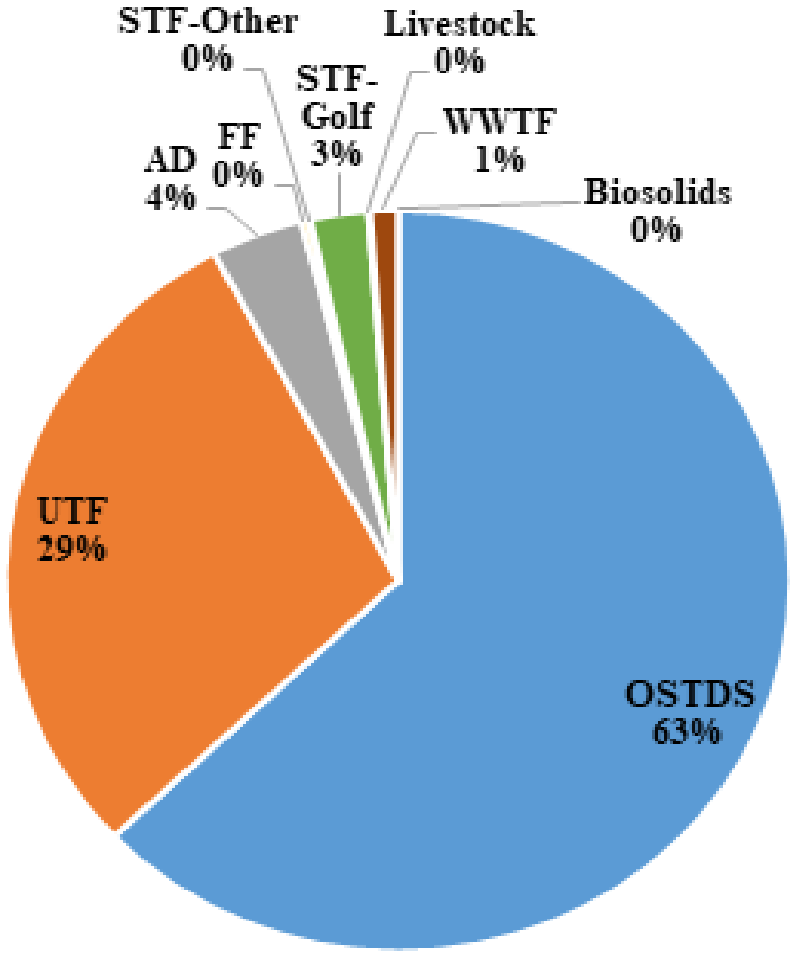
SECTION 2: IMPLEMENTATION TO ACHIEVE TMDL

Description	Nitrogen Loads (lbs/yr)	Notes Regarding Data Used
Total Load at Spring Vent	30,556	Upper 95% confidence interval - nitrate data and flow data from 2012 to 2022.
TMDL Load	16,278	TMDL target is 0.35 mg/L and using the same flow data and proportions.
Percent Reduction	47	Calculated reduction needed based on the total load at the spring vent and the TMDL load
NSILT Load	153,756	Total load to groundwater from the updated NSILT.
Required Reduction	**71,846**	**Percent reduction multiplied by the NSILT load.**

GEMINI - POLLUTANT LOADS

SECTION 2: IMPLEMENTATION TO ACHIEVE TMDL

Nitrogen Source	TN Load to Groundwater (lbs/yr)	% Contribution
OSTDS	43,325	63%
UTF	20,218	29%
AD	2,612	4%
FF	192	< 1%
STF	61	< 1%
STF-Golf	1,627	2%
LW	89	< 1%
WWTFs	766	1%
Total	**68,890**	**100%**



GEMINI - LOADING ALLOCATION

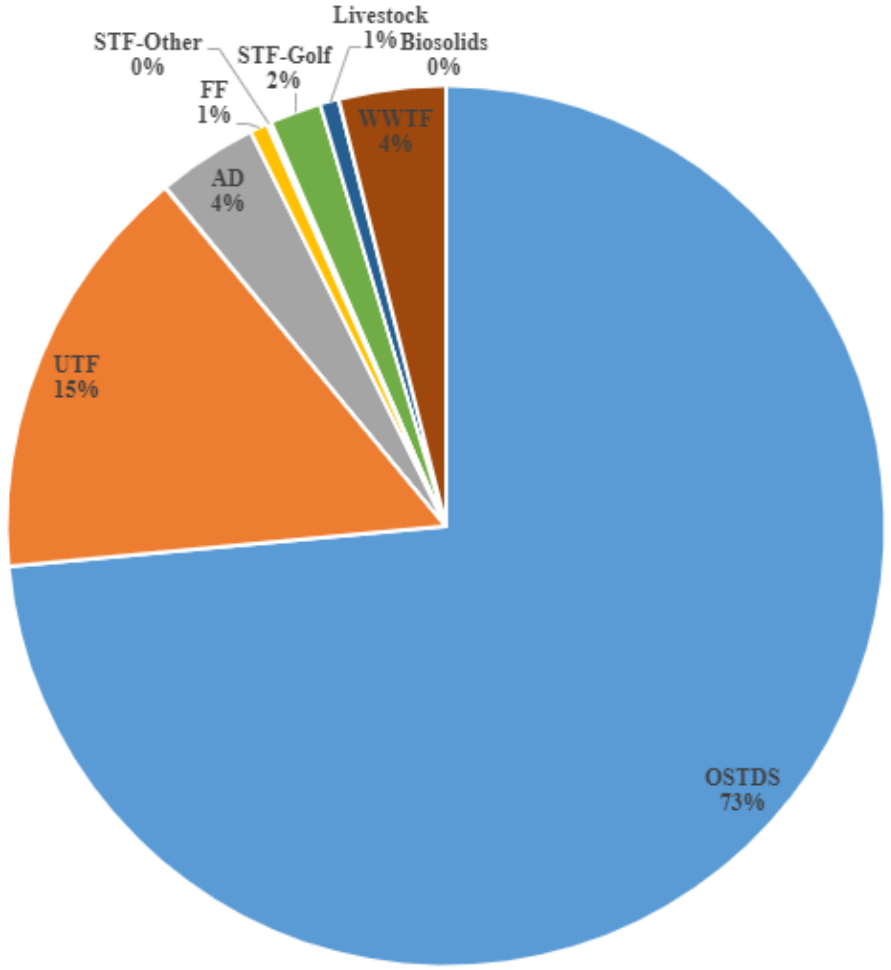
SECTION 2: IMPLEMENTATION TO ACHIEVE TMDL

Description	Nitrogen Loads (lbs/yr)	Notes Regarding Data Used
Total Load at Spring Vent	26,467	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	6,948	TMDL target is 0.35 mg/L and using the spring vent flow data from 2012 to 2022.
Percent Reduction	74	Calculated reduction needed based on the total load at the spring vent and the TMDL load
NSILT Load	68,891	Total load to groundwater from the updated NSILT.
Required Reduction	**50,807**	**Percent reduction multiplied by the NSILT load.**

VOLUSIA BLUE - POLLUTANT LOADS

SECTION 2: IMPLEMENTATION TO ACHIEVE TMDL

Nitrogen Source	TN Load to Groundwater (lbs/yr)	% Contribution
OSTDS	437,414	74%
UTF	91,784	15%
AD	21,938	4%
FF	3,885	1%
STF	962	<1%
STF- Golf	11,330	2%
LW	4,051	1%
WWTFs	23,461	3.9%
Total	**594,824**	**100%**



VOLUSIA BLUE - LOADING ALLOCATION

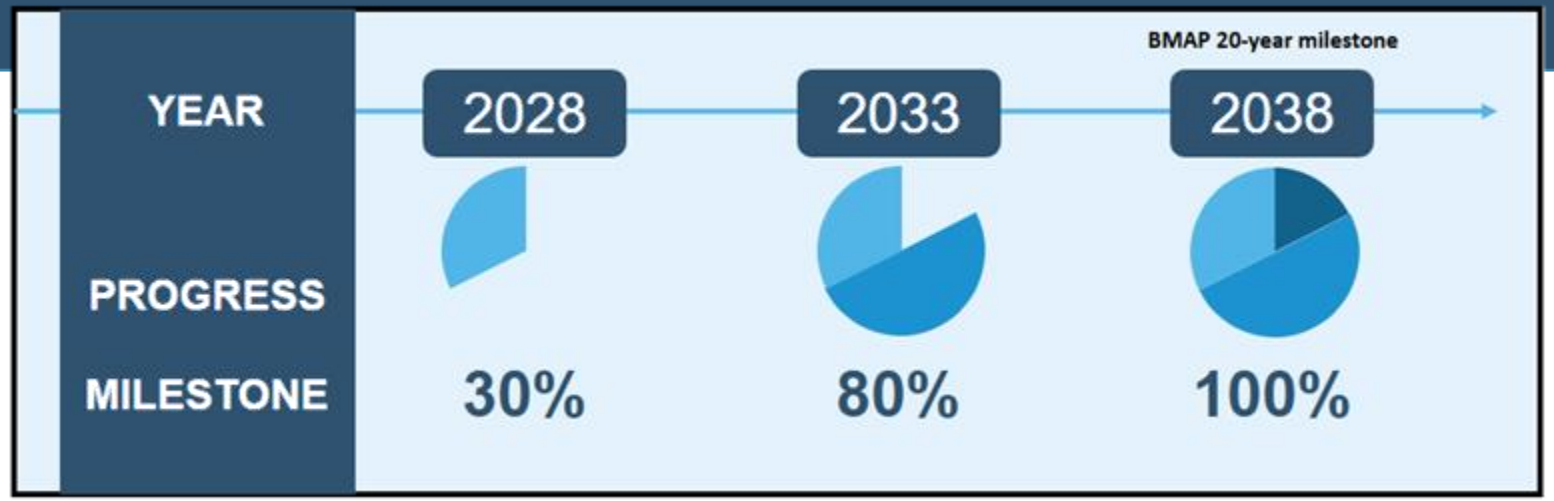
SECTION 2: IMPLEMENTATION TO ACHIEVE TMDL

Description	Nitrogen Loads (lbs/yr)	Notes Regarding Data Used
Total Load at Spring Vent	196,247	Upper 95% confidence interval - nitrate data and flow data from 2012 to 2022.
TMDL Load	96,649	TMDL target is 0.35 mg/L and using the same flow data and proportions.
Percent Reduction	51	Calculated reduction needed based on the total load at the spring vent and the TMDL load
NSILT Load	594,824	Total load to groundwater from the updated NSILT.
Required Reduction	**301,881**	**Percent reduction multiplied by the NSILT load.**

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.

DELEON — ENTITY ALLOCATIONS

SECTION 2: IMPLEMENTATION TO ACHIEVE TMDL

Timeline

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

Entity	2028 Milestone Assigned Reductions (30%) TN (lbs/yr)	Total Assigned Reductions TN (lbs/yr)
Volusia Co.	12,364	41,213
DeLand- Wiley M. Nash WRF	313	1,045
Private WWTFs*	246	820
Agriculture	6,801	22,668
Total	**19,724**	**65,747**

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

GEMINI —ENTITY ALLOCATIONS

SECTION 2: IMPLEMENTATION TO ACHIEVE TMDL

Timeline

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

Entity	2028 Milestone Assigned Reductions (30%) TN (lbs/yr)	Total Assigned Reductions TN (lbs/yr)
Seminole County	1,023	3,409
City of Lake Mary	759	2,530
City of Sanford	285	952
Volusia County	0	0
City of DeBary	12,080	40,266
Agriculture	62	207
Private WWTFs*	1	2
Private Golf Courses*	287	958
Regional Projects	167	557
Total	**14,664**	**48,881**

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

VOLUSIA BLUE —ENTITY ALLOCATIONS

SECTION 2: IMPLEMENTATION TO ACHIEVE TMDL

Timeline

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

Entity	2028 Milestone Assigned Reductions (30%) TN (lbs/yr)	Total Assigned Reductions TN (lbs/yr)
Volusia Co.	22,273	74,243
DeBary	2,308	7,694
Deland	12,311	41,036
Deltona	40,029	133,432
Lake Helen	1,827	6,089
Orange City	4,905	16,351
Blue Spring State Park	45	151
Private WWTFs*	145	484
Private Golf Courses*	1,725	5,750
Agriculture	1,208	4,028
Regional Projects	447	1,490
Total	**87,224**	**290,747**

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

DELEON — PROGRESS

SECTION 2: IMPLEMENTATION TO ACHIEVE TMDL

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)
Volusia Co.	12,364	715	0	715
DeLand — Wiley M. Nash WRF	313	0	0	0
Private WWTFs	246	0	0	0
Agriculture	6,801	7,015	0	7,015
Total	**19,724**	**7,730**	**0**	**7,730**

* 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.

GEMINI — PROGRESS

SECTION 2: IMPLEMENTATION TO ACHIEVE TMDL

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)
Seminole County	1,023	200	0	200
City of Lake Mary	759	37	0	37
City of Sanford	285	216	0	216
Volusia County	0	719	10,908	11,627
City of DeBary	12,080	544	5,602	6,146
Agriculture	62	38	0	38
Private WWTFs	1	0	0	0
Private Golf Courses	287	0	0	0
Regional Projects	167	41	0	41
Total	**14,664**	**1,795**	**16,510**	**18,305**

* 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.

VOLUSIA BLUE — PROGRESS

SECTION 2: IMPLEMENTATION TO ACHIEVE TMDL

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)
Volusia Co.	22,273	1,662	0	1,662
DeBary	2,308	235	0	235
Deland	12,311	542	5,652	6,194
Deltona	40,029	1,317	0	1,317
Lake Helen	1,827	68	0	68
Orange City	4,905	2,389	0	2,389
Blue Spring State Park	45	0	0	0
Private WWTFs	145	0	0	0
Private Golf Courses	1,725	0	0	0
Agriculture	1,208	1,185	0	1,185
Regional Projects	447	174	0	174
Total	**87,224**	**7,572**	**5,652**	**13,224**

* 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 these BMAPs.

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.
- The follow applies to all three BMAPs:
  - This remediation plan establishes a remediation policy (Appendix E) applicable to **all existing OSTDS** within the **PFA on lots of one acre or less**.
  - This remediation plan was included in the 2018 BMAP and has not been modified for this update.

EXISTING OSTDS REMEDIATION

SECTION 2: IMPLEMENTATION TO ACHIEVE TMDL

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.
- These BMAPs contain a remediation plan for OSTDS consisting of management actions, including those described in **Appendix B** in the draft BMAP documents.

Source: DEP

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

URBAN TURFGRASS
SECTION 2: IMPLEMENTATION TO ACHIEVE TMDL

Fertilizer Ordinance

- Subsection 373.807(2), F.S., requires local governments with jurisdictional boundaries within an Outstanding Florida Spring (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 an 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 Concentrated Animal Feeding Operations (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 nitrogen emissions have been generally decreasing in Florida with an up to 55% decrease in emissions by 2028 possibly as result of the following:
  - Power plant fuel source changes.
  - Air treatment upgrades.
  - Increased use of electric vehicles.
  - Decreasing mobile sources.
- Nitrogen reductions from this source category were not assigned to responsible entities.
- 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, based on 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 centipedegrass).

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** developed using **low intensity** landscaping (10% turf cover using centipedegrass).

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 augustinegrass).

DELEON - 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)
DeLand	0	0	0	0
Pierson	27	8	36	163
Volusia County	8212	2,636	10,235	48,035

2040 Loading — Basin Totals

Scenario 1 Total	Scenario 2 Total	Scenario 3 Total
2,644	**10,271**	**48,198**

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.

GEMINI — 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)
Seminole County	3298	1,899	3,291	18,930
Lake Mary	1314	683	1,541	7,998
Sanford	970	368	591	4,811
Volusia County	33	23	106	402
DeBary	1236	855	2,969	13,021

2040 Loading — Basin Totals

Scenario 1 Total	Scenario 2 Total	Scenario 3 Total
3,827	**8,498**	**45,162**

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.

VOLUSIA BLUE — 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)
Lake County	55	32	116	447
Volusia County	5028	2,667	10,234	49,284
DeBary	888	396	978	7,045
DeLand	1911	1,321	4,961	20,872
Deltona	4663	3,225	17,712	62,150
Lake Helen	520	178	199	3,378
Orange City	1187	405	548	7,898

2040 Loading — Basin Totals

Scenario 1 Total	Scenario 2 Total	Scenario 3 Total
8,224	**34,747**	**151,075**

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.

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.

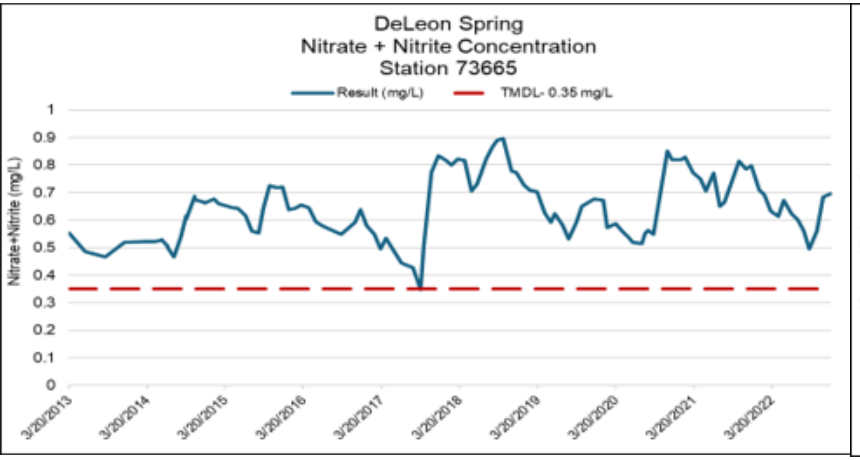
Secondary objectives:

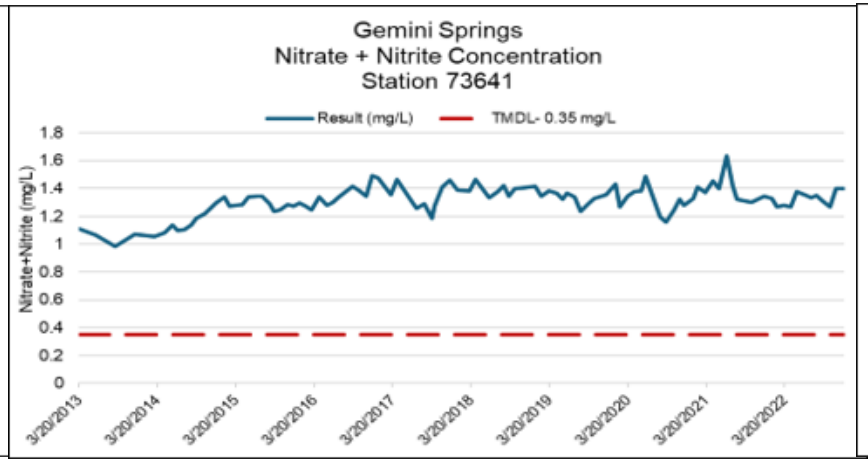
- Identify areas where groundwater data and modeling might help in understanding the hydrodynamics of the system.
- Evaluate groundwater quality trends and nutrient loading to the aquifer across the basin.
- Confirm and refine nutrient removal efficiencies of agricultural and/or urban BMPs, projects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

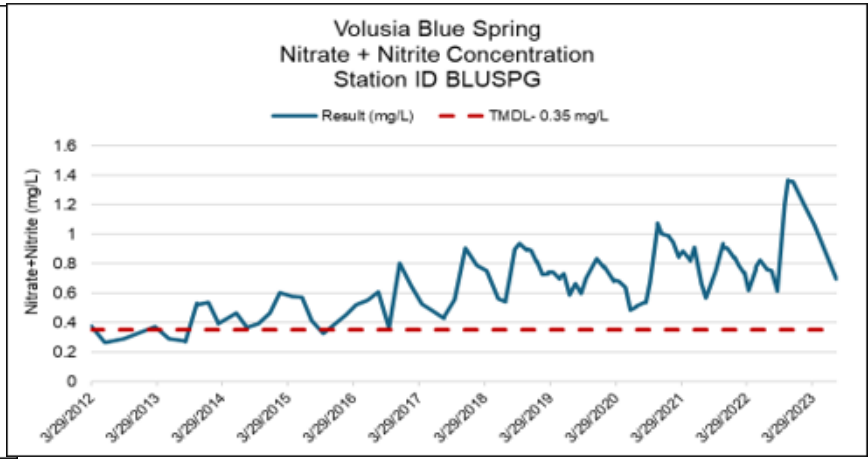
WATER QUALITY MONITORING

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.







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.

- Looked at measured data (nitrate — total and dissolved) from groundwater monitoring wells from DEP's Water Information Network (WIN) and the WMD's to do a visual analysis 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 are preferred for analyses because comparisons between time periods represent changes in the same set of wells. If there was insufficient data from fixed wells, sporadic well data was also considered.
- There is insufficient data to perform an analysis of groundwater within these BMAP areas.
- DEP is working to develop a groundwater monitoring network within these basins so that future changes in groundwater nutrient concentrations can be evaluated.
- Future considerations:
  - Stratifying data by land use, distance to spring vent, other factors.
  - Trends analysis to see changes over time.

DRAFT DOCUMENT

Section 1: Background

Section 2: Implementation

Section 3: Monitoring and Reporting

Section 4: Commitment to Plan Implementation

Section 5: References

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

Section 2: Implementation

Section 3: Monitoring and Reporting

Section 4: Commitment to Plan Implementation

Section 5: References

Appendices

BMAP UPDATE DOCUMENT

APPENDICES

- **Updated:** 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 Allocations.

NEXT STEPS

BMAP update document draft review:

- Draft document sent out via GovDelivery **April 10, 2025**.
- Stakeholder review comments due **May 2, 2025**.

Submit comments to:
Moira.Homann@FloridaDEP.gov

UPCOMING SCHEDULE

- Jan. 2024, NSILT methodology public meeting.
- Spring/Fall 2024, Technical BMAP update public meetings.
- Summer/Fall 2024 One-on-one stakeholder meetings.
- April 2025, Draft BMAP update public meetings.
- April/May 2025, Draft BMAP update comment period.
- July 1, 2025, Statutory deadline for updated nutrient BMAPs.

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...

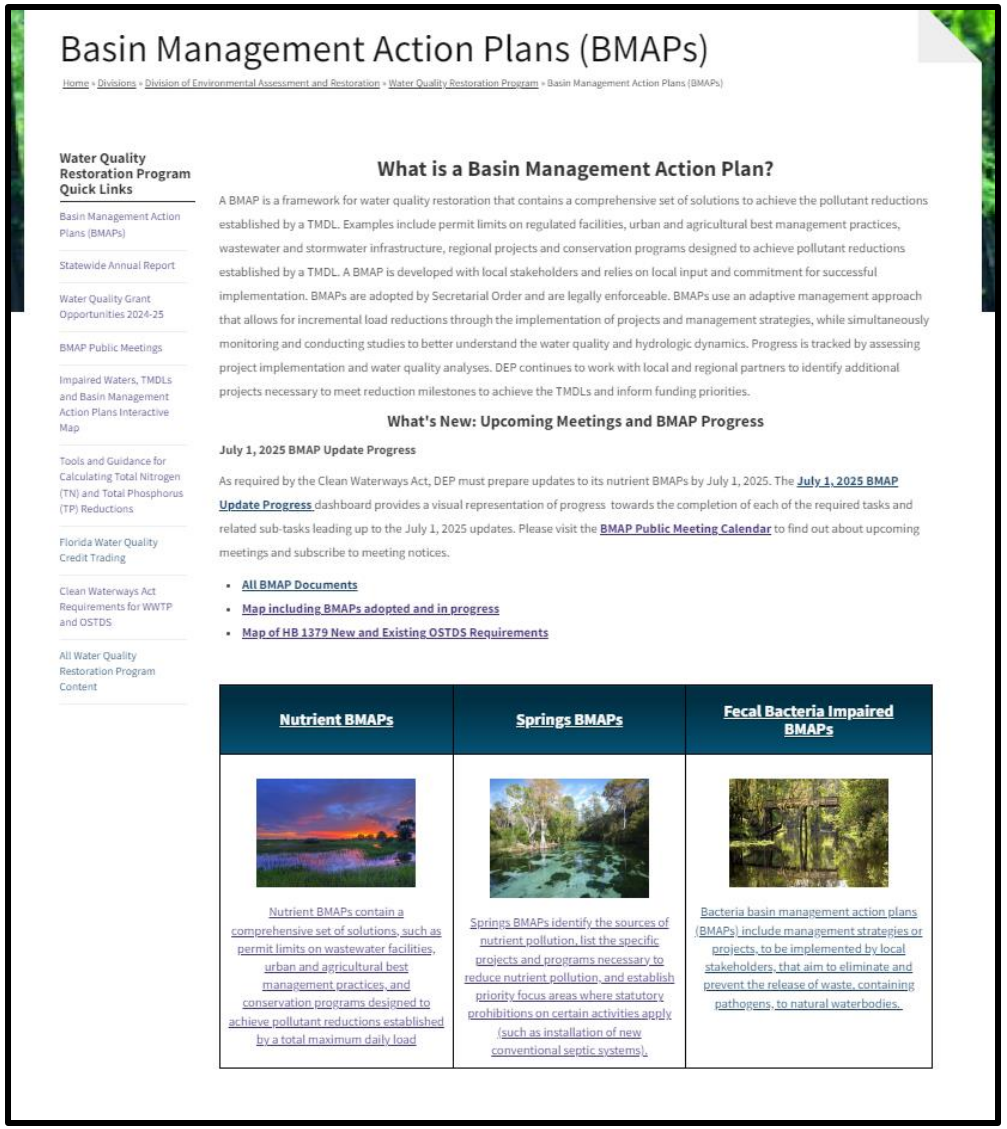
6 Jackson Blue and Merritts Mill Pond BMAP Story Map

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]



Basin Management Action Plans (BMAPs)

Home » Divisions » Division of Environmental Assessment and Restoration » Water Quality Restoration Program » Basin Management Action Plans (BMAPs)

Water Quality Restoration Program Quick Links

- Basin Management Action Plans (BMAPs)
- Statewide Annual Report
- 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.

THANK YOU

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Environmental Consultant

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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.