

# Regulatory Readiness:

## *How Florida Superintendents Can Prepare for New Environmental Rules*

BEST MANAGEMENT PRACTICES  
FOR THE ENHANCEMENT OF  
ENVIRONMENTAL QUALITY  
ON FLORIDA GOLF COURSES



# Water Quality Challenges

- NPS pollution occurs as rainfall moves over the surface and through the ground picking up natural and man-made pollutants and then depositing them into lakes, rivers, wetlands, coastal waters and ground waters.
- In most states, nonpoint source pollution is the leading cause of water-quality problems that adversely affect drinking water supplies, recreation, and marine life and wildlife.

# Total Maximum Daily Loads (TMDLs)

- In 1972 the Clean Water Act (CWA) was passed by the United States Congress and signed by President Richard Nixon.
  - Section 303(d) of the Act requires States to establish Total Maximum Daily Loads (TMDLs) for impaired waters on a prioritized schedule.
  - TMDLs establish the maximum amount of a pollutant that a water body can assimilate without causing a violation of water quality standards.

# Total Maximum Daily Loads (TMDLs)

- A TMDL is a pollution budget, a scientific calculation of the maximum amount of a pollutant that can be present in a body of water and still meet water-quality standards.
  - The extent of the pollution, the identity of the pollutants (for example, algal, heavy metals, nutrients, pathogens, etc.), and the use of the water (for example, health of aquatic life, public recreation, drinking, etc.) are taken into consideration as the TMDL is developed.



# 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 Quick links

[Basin Management Action Plans \(BMAPs\)](#)

## 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

## Nutrient 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



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).

## Fecal Indicator Bacteria BMAPs



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.

## Nutrient 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



Springs BMAPs identify the sources of nutrient loading to the spring. These BMAPs project the sources of nutrient loading, reduce nutrient loading, and establish priority actions to reduce nutrient loading (such as septic tank upgrades, etc.)

[Caloosahatchee River and Estuary](#)  
[Caloosahatchee Estuary Interactive Story Map](#)

[Everglades West Coast Basin](#)  
[Everglades West Coast Basin Interactive Story Map](#)

## Fecal Indicator Bacteria BMAPs



Bacteria basin management action plans (BMAPs) include management actions to reduce fecal indicator bacteria loading to the basin.

- [2025 Caloosahatchee River and Estuary BMAP](#)
- [2025 Final Order](#)
- Effective date: Nov. 25, 2025
- [Caloosahatchee Estuary BMAP 5-Year Review \(2022\)](#)
- [Caloosahatchee Estuary BMAP 5-Year Review \(2017\)](#)

- [2025 Everglades West Coast Basin BMAP](#)
- [2025 Final Order](#)
- Effective date: Nov. 25, 2025

[Tony Tomalewski](#)

[Evelyn Becerra](#)

## Nutrient 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



Springs BMAPs identify the sources of nutrient loading to the spring. BMAP projects reduce nutrient loading to the spring, prohibit the use of fertilizers (such as lawn and septic tank)

[Caloosahatchee River and Estuary Caloosahatchee Estuary Interactive Story Map](#)

## Fecal Indicator Bacteria BMAPs



Bacteria basin management action plans (BMAPs) include management

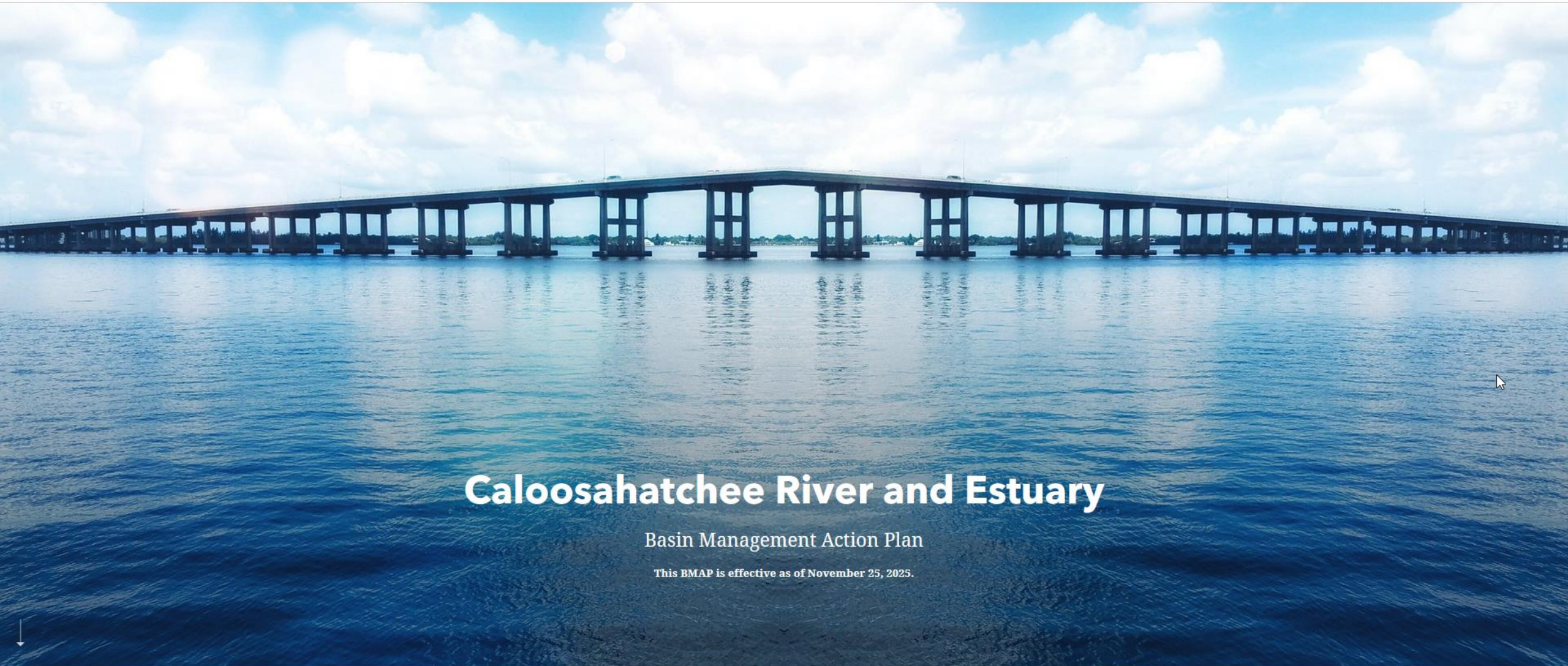
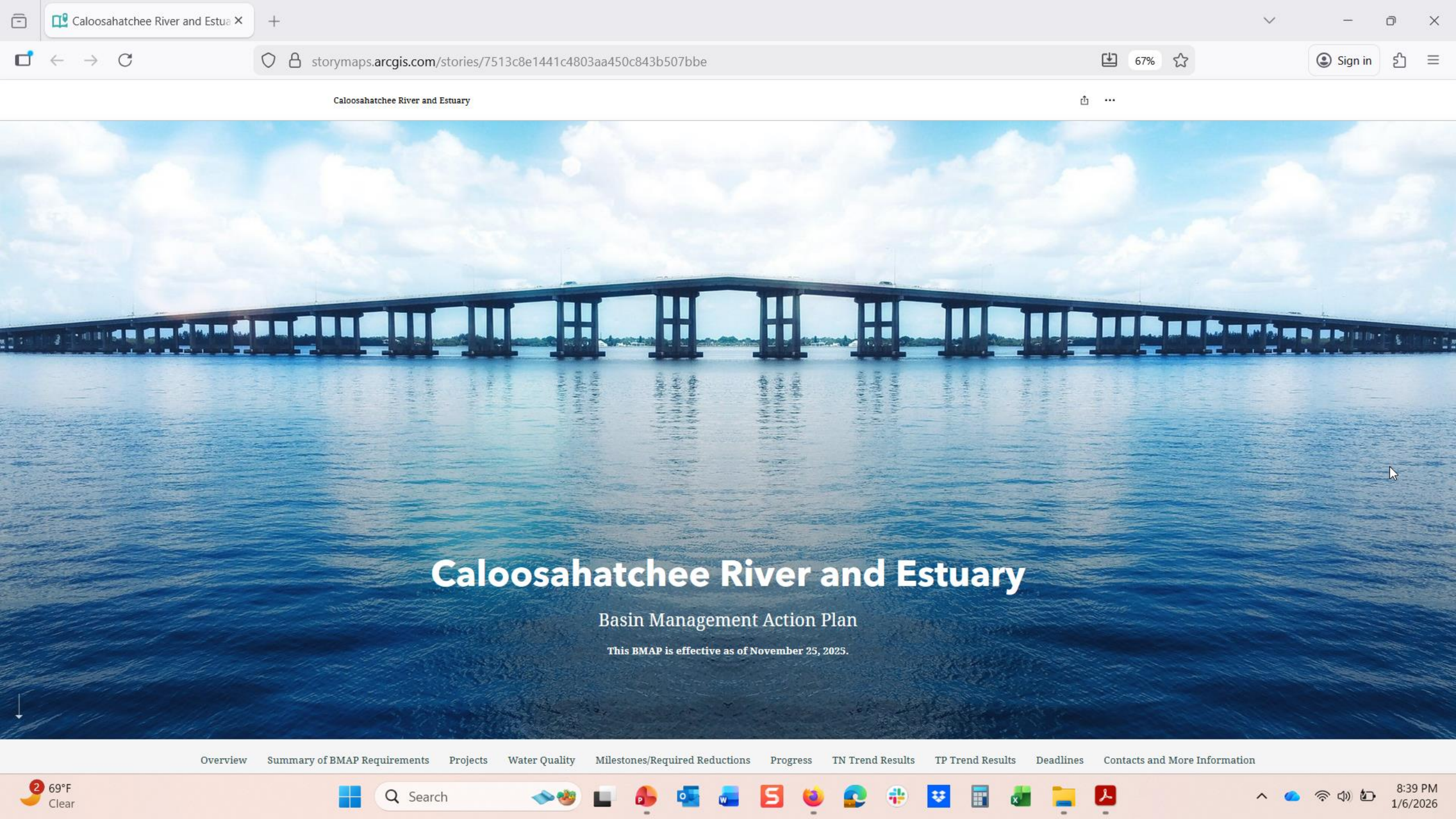
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[Everglades West Coast Basin Interactive Story Map](#)

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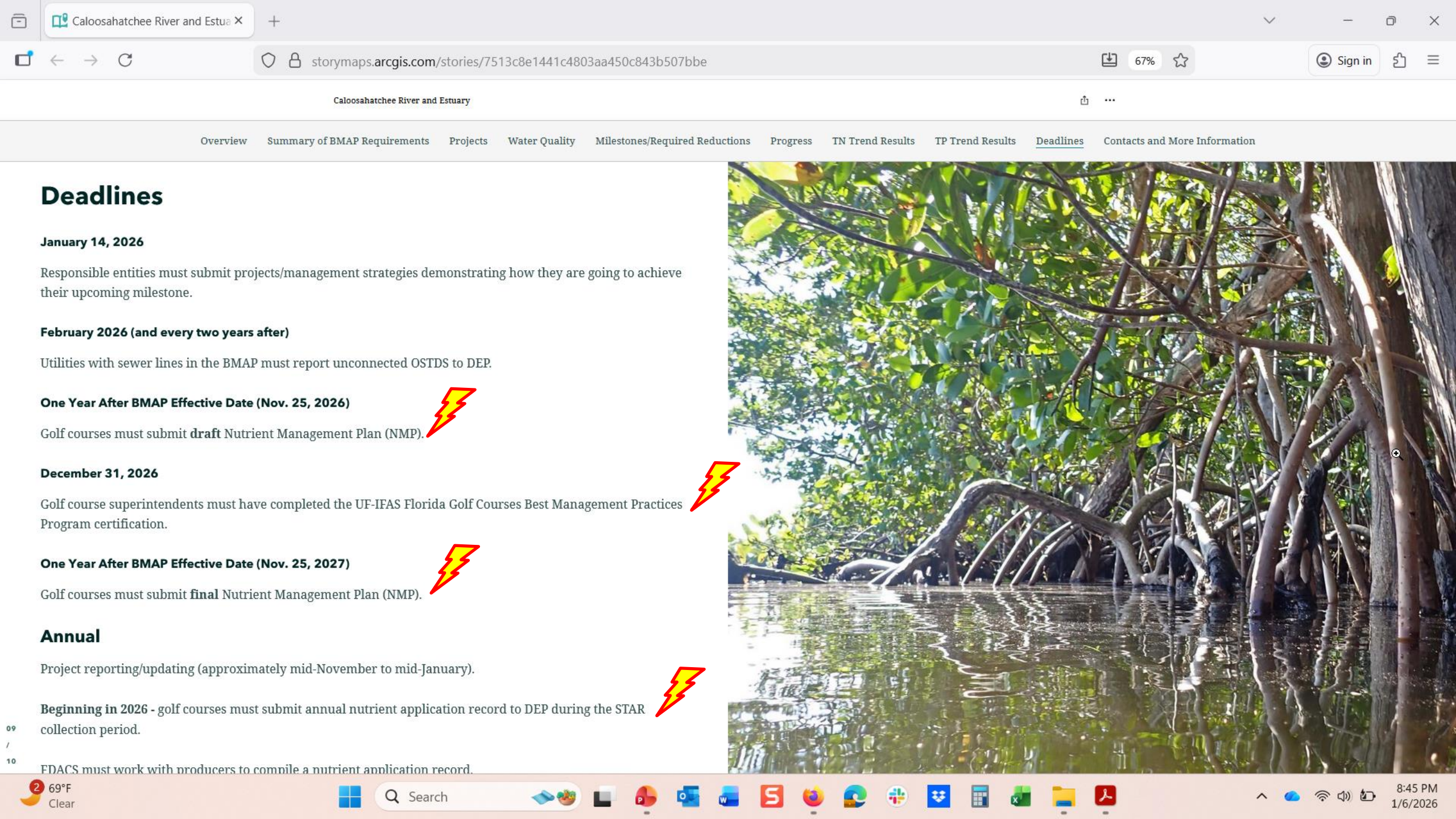
[Evelyn Becerra](#)



# Caloosahatchee River and Estuary

## Basin Management Action Plan

This BMAP is effective as of November 25, 2025.



# Deadlines

## January 14, 2026

Responsible entities must submit projects/management strategies demonstrating how they are going to achieve their upcoming milestone.

## February 2026 (and every two years after)

Utilities with sewer lines in the BMAP must report unconnected OSTDS to DEP.

## One Year After BMAP Effective Date (Nov. 25, 2026)

Golf courses must submit **draft** Nutrient Management Plan (NMP).



## December 31, 2026

Golf course superintendents must have completed the UF-IFAS Florida Golf Courses Best Management Practices Program certification.



## One Year After BMAP Effective Date (Nov. 25, 2027)

Golf courses must submit **final** Nutrient Management Plan (NMP).



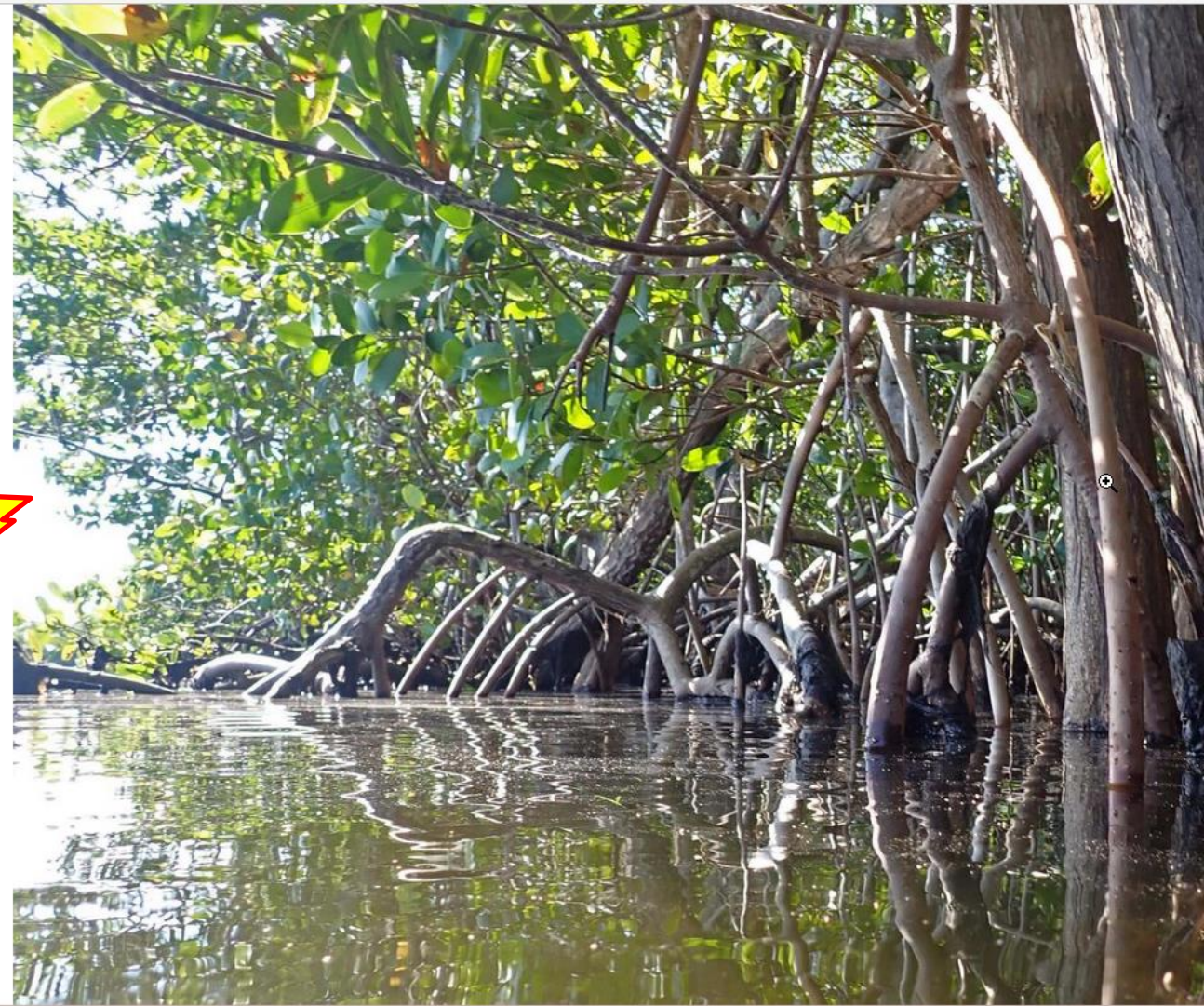
## Annual

Project reporting/updating (approximately mid-November to mid-January).

**Beginning in 2026** - golf courses must submit annual nutrient application record to DEP during the STAR collection period.



FDACS must work with producers to compile a nutrient application record.



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# Basin Management Action Plan Documents

Home » Divisions » Division of Environmental Assessment and Restoration » Water Quality Restoration Program » Basin Management Action Plan Documents

## Water-Quality-Restoration Quick links

[Basin Management Action Plans \(BMAPs\)](#)

[Statewide Annual Report](#)

[Water Quality Grant Opportunities 2025-26](#)

[BMAP Public Meetings](#)

[BMAP Documents, Meeting Materials and Recordings](#)

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

## Adopted Statewide Basin Management Action Plan Documents and Contacts

[Map including BMAPs adopted and in progress](#)



Waterbody	BMAP Documents	Contact
<b>Alafia River Basin</b> <a href="#">Alafia River Basin Interactive Story Map</a>	<ul style="list-style-type: none"><li><a href="#">2025 Alafia River Basin BMAP</a></li><li><a href="#">2025 Final Order</a></li><li>Effective date: June 27, 2025</li></ul>	<a href="#">Anita Stine</a>
<b>Bayou Chico</b> <a href="#">Bayou Chico Interactive Story Map</a>	<ul style="list-style-type: none"><li><a href="#">Bayou Chico BMAP</a></li></ul>	<a href="#">Anita Stine</a>
		<a href="#">Tony Tomalowski</a>

Legend

Florida Total Maximum Daily Load (TMDL)

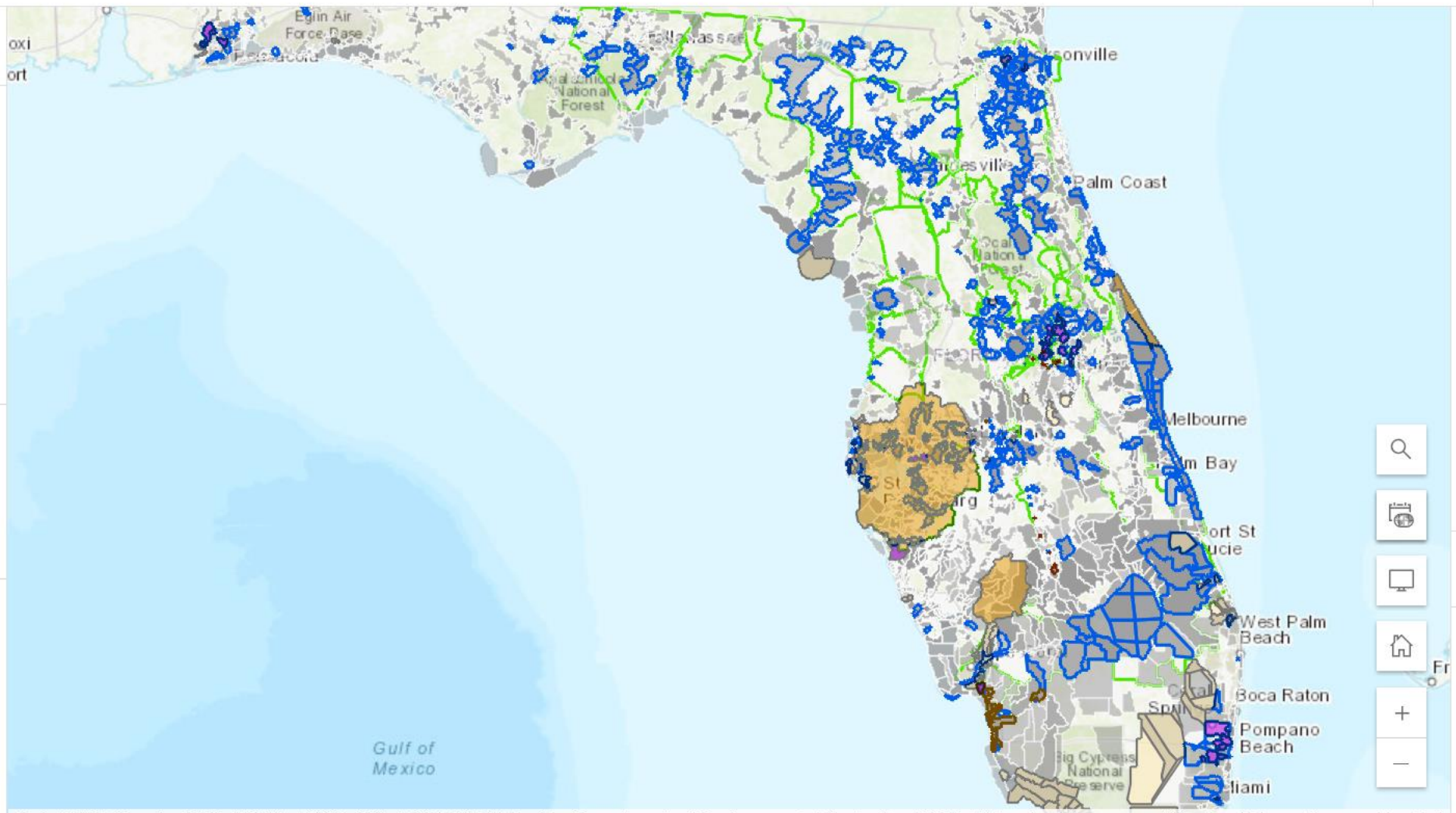
- TMDLs Adopted
- TMDLs Adopted
- TMDL Activities In Progress
- TMDL Activities In Progress

Waters Not Attaining Standards (WNAS)

- 

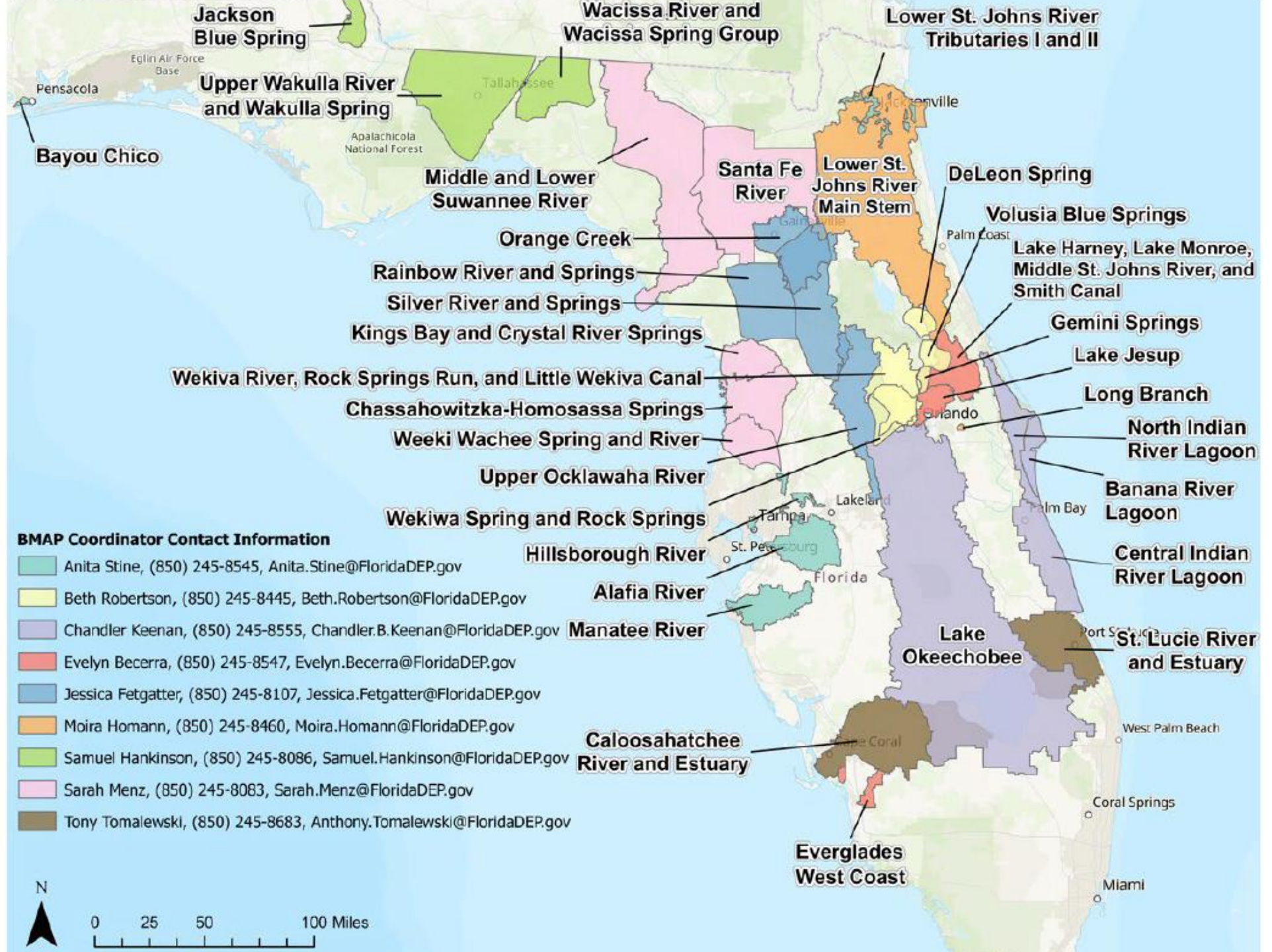
Statewide Basin Management Action Plan (BMAP) General Areas - Statewide BMAP General Areas

- Adopted BMAPs
- Under Development



# Adopted Statewide Basin Management Action Plan Documents and Contacts





FDEP imagery services may be unavailable at this time due to server maintenance.

Water Quality Assessments, TMDLs, and BMAPs

Sign In

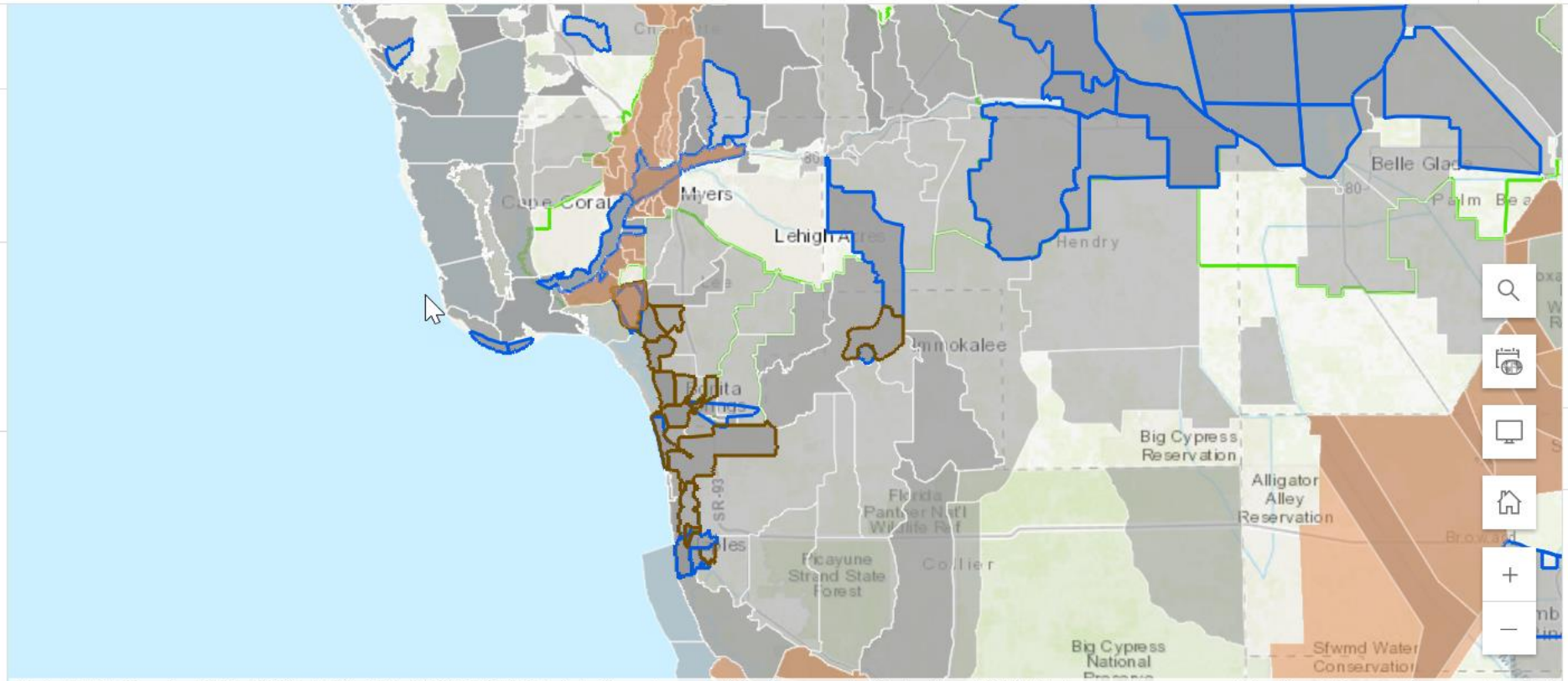
Legend

- TMDL Activities In Progress
- TMDL Activities In Progress

Waters Not Attaining Standards (WNAS)

Statewide Basin Management Action Plan (BMAP) General Areas - Statewide BMAP General Areas

- Adopted BMAPs
- Under Development



Esri, HERE, Garmin, FAO, USGS, NGA, EPA, NPS | FDEP | Florida Department of Environmental Protection (DEP), Watershed Assessment Section | Flor... Powered by Esri

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# BMAP Documents, Meeting Materials and Recordings

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## Water-Quality-Restoration Quick links

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[BMAP Public Meetings](#)

[BMAP Documents, Meeting Materials and Recordings](#)

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

BMAP	Documents	2025 Meeting Materials	2024 Meeting Materials
<b>BMAP Golf Course Requirements</b>		<a href="#">Meeting Materials (Oct 27, 2025)</a> <a href="#">Meeting Recording (Oct 27, 2025)</a> <a href="#">BMAP Golf Course Requirements Q&amp;A Document</a>	
<b>Outstanding Florida Springs</b>	<a href="#">NSILT Technical Support Document</a>		<a href="#">Meeting Materials (Jan 23, 2024)</a> <a href="#">Meeting Recording (Jan 23, 2024)</a>
<b>Alafia River Basin</b>		<a href="#">Meeting Materials</a>	<a href="#">Meeting Materials</a>

<p><b>Caloosahatchee River and Estuary &amp; Everglades West Coast BMAPs</b></p> <p>Basin Coordinator:</p> <p><u><a href="#">Tony Tomalewski</a></u></p>		<p><u><a href="#">Meeting Materials (Apr 08, 2025)</a></u></p> <p><u><a href="#">Meeting Recording (Apr 08, 2025)</a></u></p> <p><u><a href="#">Caloosahatchee Technical Meeting Materials (Aug 26, 2025)</a></u></p> <p><u><a href="#">Caloosahatchee HSPF Water Quality Memo (Aug 26, 2025)</a></u></p>	<p><u><a href="#">Meeting Materials (Nov 20, 2024)</a></u></p> <p><u><a href="#">Meeting Materials (Apr 02, 2024)</a></u></p> <p><u><a href="#">Meeting Recording (Apr 02, 2024)</a></u></p>
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**Caloosahatchee River and Estuary**  
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**[Story Map](#)**

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***Final***

***Caloosahatchee River and Estuary  
Basin Management Action Plan***

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

with participation from the  
 Caloosahatchee River and Estuary Stakeholders

June 2025

2600 Blair Stone Road  
 Tallahassee, FL 32399-2400  
<https://floridadep.gov/>




Exhibit 1

***Final***

***Everglades West Coast  
Management Action Plan***

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

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June 2025

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[Tony Tomalewski](#)

*Caloosahatchee River and Estuary Basin Management Action Plan, June 2025*

**Acknowledgments**

This 2025 Caloosahatchee River and Estuary Basin Management Action Plan was prepared as part of a statewide watershed management approach to restore and protect Florida's water quality. It was prepared by the Florida Department of Environmental Protection with participation from the Caloosahatchee River and Estuary stakeholders identified below.

Florida Department of Environmental Protection  
 Alexis A. Lambert, Secretary

Table ES-1. Caloosahatchee River and Estuary stakeholders

Type of Organization/Entity	Name
Responsible Entities:	Agriculture
	Charlotte County
	Collier County
	Glades County
	Hendry County
	Lee County
	City of Cape Coral
	City of Clewiston
	City of Fort Myers
	City of LaBelle
	City of Moore Haven
	Lucaya Community Development District (CDD)
	Moody River Estates CDD
	Port LaBelle CDD
	Portico CDD
	River Hall CDD
	Sail Harbour CDD
	Verandah East CDD
	Verandah West CDD
	Barron Water Control District
	Clewiston Water Control District
	Collins Slough Water Control District
	County Line Drainage District
	Cow Slough Water Control District
	Devil's Garden Water Control District
	Dixton Island Conservancy District
	Flaghole Drainage District
Gerber Groves Water Control District	
Hendry-Hilliard Water Control District	
Lehigh Acres Municipal Services District	
Sugarland Drainage District	
County Health Departments	
Responsible Agencies:	Florida Department of Agriculture and Consumer Services Florida Department of Environmental Protection Florida Department of Transportation District 1 South Florida Water Management District

**Everglades West Coast Basin**  
**[Everglades West Coast Basin Interactive](#)**  
**[Story Map](#)**

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*Everglades West Coast Basin Management Action Plan, June 2025*

**Acknowledgments**

This Everglades West Coast Basin Management Action Plan was prepared as part of a management approach to restore and protect Florida's water quality. It was prepared by the Florida Department of Environmental Protection with participation from the stakeholders identified below.

Entity	Name
Entities:	Agriculture
	Lee County
	City of Bonita Springs
	Catalina at Winkler Preserve Community Development District (CDD)
	Corkscrew Farms CDD
Entities:	Laguna Lakes CDD
	County Health Departments
	Florida Department of Agriculture and Consumer Services
	Florida Department of Environmental Protection
	Florida Department of Transportation District 1
	South Florida Water Management District

Links to resources referenced in this document. For additional information,

Florida Department of Environmental Protection  
 Environmental Protection  
 Information Program  
 11150  
 Mail Station 3565  
 33424  
 2400  
 @FloridaDEP gov



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### 2.3.2.2 Sports Turfgrass and Golf Courses

Sports turfgrass sources include golf courses and other sporting facilities. Sporting facilities are required to follow the 2025 Sports Turf BMP Manual to protect water resources.

Superintendents of all publicly owned golf courses within the BMAP must obtain a certification for golf course BMPs (University of Florida Institute of Food and Agricultural Sciences [UF-IFAS] Florida Golf Courses Best Management Practices Program) under section 403.9339, F.S. and all golf courses must implement the BMPs described in DEP's golf course BMP manual, *Best Management Practices for the Enhancement of Environmental Quality on Florida Golf Courses* (DEP, 2021). All golf courses located within a BMAP are required to submit a nutrient management plan (NMP) to DEP that is designed to sustain even plant growth while minimizing excessive growth and nutrient losses. Required information for the NMP is available in **Appendix D**. A draft NMP must be submitted to DEP within one year of BMAP adoption and a final document is due two years after adoption. All soil, water, and tissue sampling must include appropriate nitrogen and phosphorous analyses.

If a facility (either golf course or other sporting facility) uses fertilizer rates greater than those in the BMP manuals, the facility is required to conduct water quality monitoring prescribed by DEP or a WMD that demonstrates compliance with water quality standards.

	Nutrient BMAPs	Spring BMAPs
Implement BMPs	All golf courses	All golf courses
BMP Certification Program	<u>Public</u> Course Superintendents Jan. 14, 2026 – tell FDEP yes/no Dec. 31, 2026 – must be certified	<u>All</u> Golf Course Superintendents Jan. 14, 2026 – tell FDEP yes/no Dec. 31, 2026 – must be certified
Nutrient Management Plan	All golf courses Beginning in 2026, must submit each year during the BMAP statewide annual reporting process – TBD.	All golf courses Beginning in 2026, must submit each year during the BMAP statewide annual reporting process – TBD.

#### Appendix D. Golf Course NMPs

The fertilizers used to maintain golf courses can be significant sources of nutrients in certain watersheds that are impaired for nitrogen and/or phosphorous. To achieve the TMDL targets, all nutrient sources need to reduce their nutrient loading. Similar to other sources, golf courses are required to implement management strategies to mitigate their nutrient loading and be in compliance with the BMAP. Florida BMAPs are adopted by Secretarial Order and therefore legally enforceable by DEP. Requirements for golf courses located in BMAPs are below.

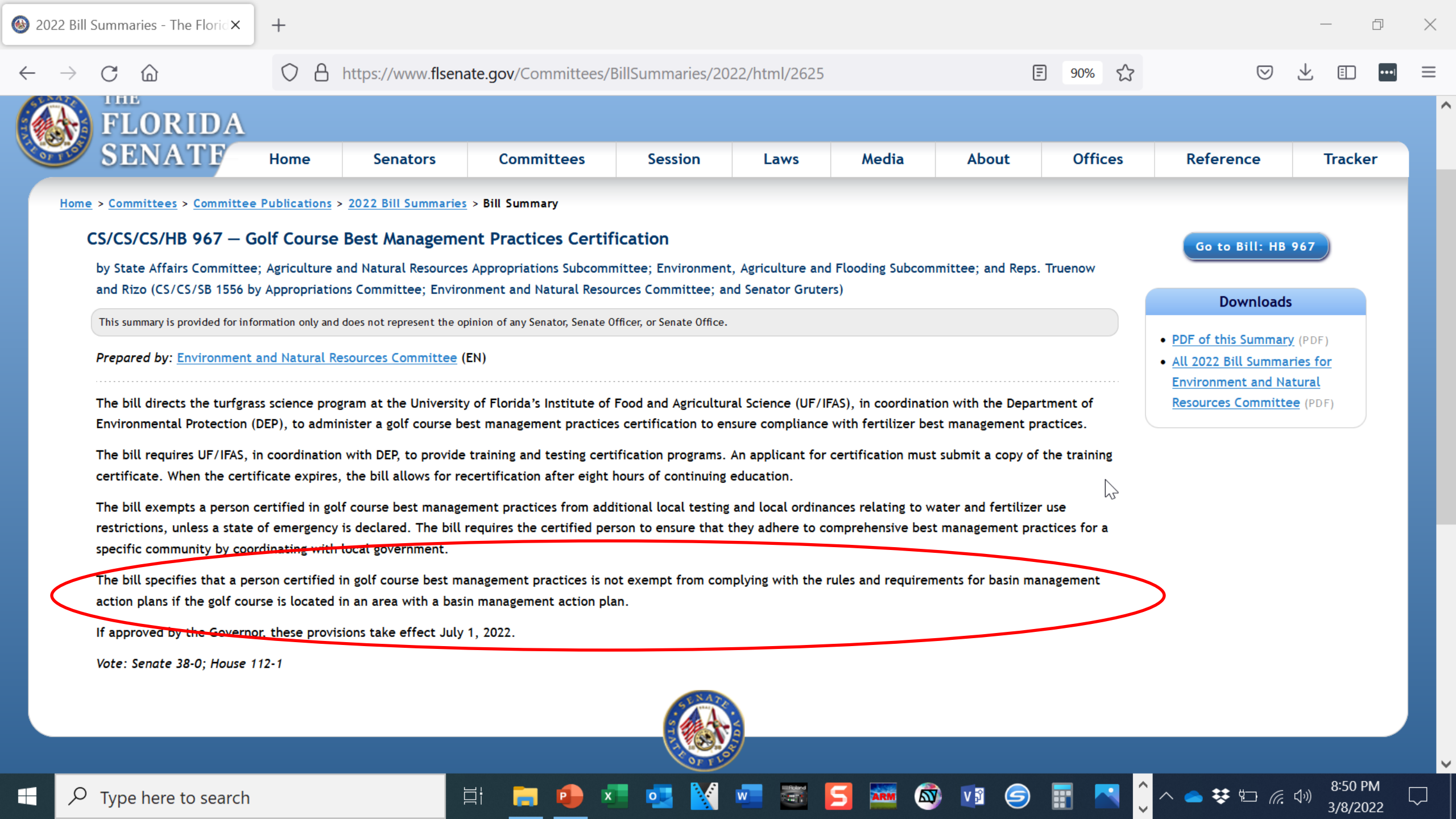
##### 1. Golf Course BMP Certification, Implementation, and Reporting.

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e. Example golf course BMPs applicable to protecting water quality are listed below.

- Use slow release fertilizer to prevent volatilization.
- Use of lined media in stormwater features.
- Use of denitrification walls.
- Use of rain gardens.
- Use of tree boxes.
- Use of bioswales.



Home > Committees > Committee Publications > 2022 Bill Summaries > Bill Summary

### CS/CS/CS/HB 967 – Golf Course Best Management Practices Certification

Go to Bill: HB 967

by State Affairs Committee; Agriculture and Natural Resources Appropriations Subcommittee; Environment, Agriculture and Flooding Subcommittee; and Reps. Truenow and Rizo (CS/CS/SB 1556 by Appropriations Committee; Environment and Natural Resources Committee; and Senator Gruters)

This summary is provided for information only and does not represent the opinion of any Senator, Senate Officer, or Senate Office.

Prepared by: [Environment and Natural Resources Committee](#) (EN)

**Downloads**

- [PDF of this Summary](#) (PDF)
- [All 2022 Bill Summaries for Environment and Natural Resources Committee](#) (PDF)

The bill directs the turfgrass science program at the University of Florida’s Institute of Food and Agricultural Science (UF/IFAS), in coordination with the Department of Environmental Protection (DEP), to administer a golf course best management practices certification to ensure compliance with fertilizer best management practices.

The bill requires UF/IFAS, in coordination with DEP, to provide training and testing certification programs. An applicant for certification must submit a copy of the training certificate. When the certificate expires, the bill allows for recertification after eight hours of continuing education.

The bill exempts a person certified in golf course best management practices from additional local testing and local ordinances relating to water and fertilizer use restrictions, unless a state of emergency is declared. The bill requires the certified person to ensure that they adhere to comprehensive best management practices for a specific community by ~~coordinating with local government.~~

The bill specifies that a person certified in golf course best management practices is not exempt from complying with the rules and requirements for basin management action plans if the golf course is located in an area with a basin management action plan.

If approved by the Governor, these provisions take effect July 1, 2022.

Vote: Senate 38-0; House 112-1



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##### 1. Golf Course BMP Certification, Implementation, and Reporting.

- a. In areas with an adopted BMAP, all golf courses must implement the BMPs described in DEP's golf course BMP manual, *Best Management Practices for the Enhancement of Environmental Quality on Florida Golf Courses* (DEP, 2021).
- b. At minimum, superintendents of publicly owned golf course must obtain and maintain certification through the UF-IFAS Florida Golf Courses Best Management Practices Program. It is highly recommended that course managers and landscape maintenance staff also participate in the certification program to ensure proper BMP implementation

a. In areas with an adopted BMAP, all golf courses must implement the BMPs described in DEP's golf course BMP manual, *Best Management Practices for the Enhancement of Environmental Quality on Florida Golf Courses* (DEP, 2021).

- d. Fertilizer rates should be no greater than the UF-IFAS recommendations to help prevent leaching (Table D-1). This includes nutrients from reuse or any other source applied. If a facility uses fertilizer rates greater than those in the BMP manual they are required to conduct water quality monitoring prescribed by DEP or WMD that demonstrates compliance with water quality standards.
- e. Example golf course BMPs applicable to protecting water quality are listed below.
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- b. At minimum, superintendents of publicly owned golf course must obtain and maintain certification through the UF-IFAS Florida Golf Courses Best Management Practices Program. It is highly recommended that course managers and landscape maintenance

c. Beginning in 2026, nutrient application records and management action updates (fertilizer, reuse, BMPs, etc.) must be submitted each year during the BMAP statewide annual reporting process.

- d. Fertilizer rates should be no greater than the UF-IFAS recommendations to help prevent leaching (Table D-1). This includes nutrients from reuse or any other source applied. If a facility uses fertilizer rates greater than those in the BMP manual they are required to conduct water quality monitoring prescribed by DEP or WMD that demonstrates compliance with water quality standards.
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- a. In areas with an adopted BMAP, all golf courses must implement the BMPs described in DEP's golf course BMP manual, *Best Management Practices for the Enhancement of Environmental Quality on Florida Golf Courses* (DEP, 2021).
- b. At minimum, superintendents of publicly owned golf course must obtain and maintain

d. Fertilizer rates should be no greater than the UF-IFAS recommendations to help prevent leaching (**Table D-1**). This includes nutrients from reuse or any other source applied. If a facility uses fertilizer rates greater than those in the BMP manual they are required to conduct water quality monitoring prescribed by DEP or WMD that demonstrates compliance with water quality standards.

- e. Example golf course BMPs applicable to protecting water quality are listed below.

- Use slow release fertilizer to prevent volatilization.
- Use of lined media in stormwater features.
- Use of denitrification walls.
- Use of rain gardens.
- Use of tree boxes.
- Use of bioswales.

#### Appendix D. Golf Course NMPs

The fertilizers used to maintain golf courses can be significant sources of nutrients in certain watersheds that are impaired for nitrogen and/or phosphorous. To achieve the TMDL targets, all nutrient sources need to reduce their nutrient loading. Similar to other sources, golf courses are required to implement management strategies to mitigate their nutrient loading and be in compliance with the BMAP. Florida BMAPs are adopted by Secretarial Order and therefore legally enforceable by DEP. Requirements for golf courses located in BMAPs are below.

##### 1. Golf Course BMP Certification, Implementation, and Reporting.

a. In areas with an adopted BMAP, all golf courses must implement the BMPs described in

e. Example golf course BMPs applicable to protecting water quality are listed below.

- Use slow release fertilizer to prevent volatilization.
- Use of lined media in stormwater features.
- Use of denitrification walls.
- Use of rain gardens.
- Use of tree boxes.
- Use of bioswales.

- Use of denitrification walls.
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**Table D-1. Nutrient ranges for warm season turfgrass species**

Note: For more information refer to the *Best Management Practices for the Enhancement of Environmental Quality on Florida Golf Courses* (DEP, 2021).

Nutrient	Bermudagrass (%)	St. Augustinegrass (%)	Seashore Paspalum (%)	Centipedegrass (%)	Zoysia (%)
Nitrogen	1.95-4.63	1.53-2.41	2.80-3.50	1.5-2.9	2.04-2.36
Phosphorus	0.15-0.43	0.30-0.55	0.30-60	0.18-0.26	0.19-0.22
Potassium	0.43-1.28	1.1-2.25	2.00-4.00	1.12-2.50	1.05-1.27
Calcium	0.15-0.63	0.24-0.54	0.25-1.50	0.50-1.15	0.44-0.56
Magnesium	0.04-0.10	0.20-0.46	0.25-0.60	0.12-0.21	0.13-0.15
Sulfur	0.07-0.02	0.15-0.48	0.20-0.60	0.20-0.38	0.32-0.37
Sodium	0.05-0.17	0.00-0.17	-	-	-

- All golf courses located within a BMAP are required to submit a NMP that is designed to, while maintaining even plant growth, prevent nutrient losses to the Floridan aquifer and surrounding surface waters. A draft NMP must be submitted to DEP within one year of BMAP adoption and a final document is due two years after adoption. The NMP must include the following:

**2. All golf courses located within a BMAP are required to submit a NMP that is designed to, while maintaining even plant growth, prevent nutrient losses to the Floridan aquifer and surrounding surface waters. A draft NMP must be submitted to DEP within one year of BMAP adoption and a final document is due two years after adoption. The NMP must include the following:**

Greens		
Fairways		
Roughs		
<b>Total</b>		

**Fertilizer Application**

Sample fertilizer application table

Month	Turf Type	TN Application Rate (lbs/acre)	TP Application Rate (lbs/acre)	Number of Applications	Total TN Applied (lbs/acre)	Total TP Applied (lbs/acre)
January	Tees					
	Greens					

**Let's divide and conquer!**

**Table D-1. Nutrient ranges for warm season turfgrass species**

Note: For more information refer to the *Best Management Practices for the Enhancement of Environmental Quality on Florida Golf Courses* (DEP, 2021).

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Sodium	0.05-0.17	0.00-0.17	-	-	-

2. All golf courses located within a BMAP are required to submit a NMP that is designed to, while maintaining even plant growth, prevent nutrient losses to the Floridan aquifer and surrounding surface waters. A draft NMP must be submitted to DEP within one year of BMAP adoption and a final document is due two years after adoption. The NMP must include the following:

a. *A brief description of the goals of the NMP.*

This should be a paragraph that describes the goals of your NMP. Talk about how you are managing for high quality turf and water quality.

Turf Type	Turf Species	Acreage
Tees		
Greens		
Fairways		
Roughs		
Total		

**Fertilizer Application**

Sample fertilizer application table

Month	Turf Type	TN Application Rate (lbs/acre)	TP Application Rate (lbs/acre)	Number of Applications	Total TN Applied (lbs/acre)	Total TP Applied (lbs/acre)
January	Tees					
	Greens					

**Table D-1. Nutrient ranges for warm season turfgrass species**

Note: For more information refer to the *Best Management Practices for the Enhancement of Environmental Quality on Florida Golf Courses* (DEP, 2021).

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Sodium	0.05-0.17	0.00-0.17	-	-	-

- All golf courses located within a BMAP are required to submit a NMP that is designed to, while maintaining even plant growth, prevent nutrient losses to the Floridan aquifer and surrounding surface waters. A draft NMP must be submitted to DEP within one year of BMAP adoption and a final document is due two years after adoption. The NMP must include the following:

***b. Identification of areas where nutrient applications will be made including greens, tees, fairways and roughs.***

Discuss the areas of the course where you plan to use fertilizer, and why. Also discuss the areas that do not need or get any fertilizer applications. Include a GIS shapefile identifying all of these areas. Complete the table(s) detailing your nutrient application practices.

Fertilizer Application

Sample fertilizer application table

Month	Turf Type	TN Application Rate (lbs/acre)	TP Application Rate (lbs/acre)	Number of Applications	Total TN Applied (lbs/acre)	Total TP Applied (lbs/acre)
January	Tees					
	Greens					

**Table D-1. Nutrient ranges for warm season turfgrass species**

Note: For more information refer to the *Best Management Practices for the Enhancement of Environmental Quality on Florida Golf Courses* (DEP, 2021).

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Sulfur	0.07-0.02	0.15-0.48	0.20-0.60	0.20-0.38	0.32-0.37
Sodium	0.05-0.17	0.00-0.17	-	-	-

2. All golf courses located within a BMAP are required to submit a NMP that is designed to, while maintaining even plant growth, prevent nutrient losses to the Floridan aquifer and surrounding surface waters. A draft NMP must be submitted to DEP within one year of BMAP adoption and a final document is due two years after adoption. The NMP must include the following:

a. A brief description of the goals of the NMP.

**c. Current BMP implementation.**

Describe existing BMPs and other nutrient management actions here.

**Turf Details**

Turf Type	Turf Species	Acreage
Tees		
Greens		
Fairways		
Roughs		
Total		

**Fertilizer Application**

Sample fertilizer application table

Month	Turf Type	TN Application Rate (lbs/acre)	TP Application Rate (lbs/acre)	Number of Applications	Total TN Applied (lbs/acre)	Total TP Applied (lbs/acre)
January	Tees					
	Greens					

Table D.1. Nutrient ranges for warm season turfgrass species

*d. Soil sampling methods and results for each area receiving fertilizer applications. Areas receiving fertilizer applications shall be sampled once every three years. Soil samples shall be collected and analyzed according to UF-IFAS/DEP recommendations or standard industry practice. Soil samples shall be analyzed, at minimum, for:*

1. Nitrogen.
2. Phosphorus.

Describe existing soil sampling here. Describe your planned soil sampling schedule. Provide information about how long you have been soil sampling and what part of the course you are prioritizing. If soil samples from areas of similar soil, fertilizer use and management are combined, describe the process and justify combining for a “representative” sample. Keep all soil test results (or copies of them) in this file as part of your nutrient management plan. Please do not send them in to DEP individually. If you have been soil testing for years, remember to add copies of all those past results to your NMP file.

Table D-1. Nutrient ranges for warm season turfgrass species

Note: For more information refer to the *Best Management Practices for the Enhancement of Environmental Quality on Florida Golf Courses* (DEP, 2021).

Perennial	St. Augustine	Seashore Paspalum	Centipedes	Zoysia
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***e. Water quality sampling methods and results. Water quality sampling and analysis should be conducted in accordance with DEP’s Standard Operating Procedures. Water quality samples shall be analyzed, at minimum, for:***

1. Nitrogen.
2. Phosphorus.

If applicable, describe existing water quality sampling. Describe your planned water quality sampling schedule. Provide information about how long you have been doing water quality sampling and what part of the course you are prioritizing. Keep all water quality test results (or copies of them) in this file as part of your nutrient management plan. Please do not send them in to DEP individually. If you have been testing for years, remember to add copies of all those past results to your NMP file.

Month	Turf Type	TN Application Rate (lbs/acre)	TP Application Rate (lbs/acre)	Number of Applications	Total TN Applied (lbs/acre)	Total TP Applied (lbs/acre)
January	Tees					
	Greens					

**Table D-1. Nutrient ranges for warm season turfgrass species**

Note: For more information refer to the *Best Management Practices for the Enhancement of Environmental Quality on Florida Golf Courses* (DEP, 2021).

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Magnesium	0.04-0.10	0.20-0.46	0.25-0.60	0.12-0.21	0.13-0.15
Sulfur	0.07-0.02	0.15-0.48	0.20-0.60	0.20-0.38	0.32-0.37
Sodium	0.05-0.17	0.00-0.17	-	-	-

***f. Tissue sampling methods and results. Tissue samples shall be collected and analyzed according to UF-IFAS/DEP recommendations or standard industry practice.***

(Describe existing tissue sampling plan. Keep all test results (or copies of them) in this file as part of your nutrient management plan. Please do not send them in to DEP individually. If you have been testing for years, remember to add copies of all those past results to your NMP file.)

Greens		
Fairways		
Roughs		
Total		

**Fertilizer Application**

**Sample fertilizer application table**

Month	Turf Type	TN Application Rate (lbs/acre)	TP Application Rate (lbs/acre)	Number of Applications	Total TN Applied (lbs/acre)	Total TP Applied (lbs/acre)
January	Tees					
	Greens					

**Table D-1. Nutrient ranges for warm season turfgrass species**

Note: For more information refer to the *Best Management Practices for the Enhancement of Environmental Quality on Florida Golf Courses* (DEP, 2021).

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Calcium	0.15-0.63	0.24-0.54	0.25-1.50	0.50-1.15	0.44-0.56
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Sulfur	0.07-0.02	0.15-0.48	0.20-0.60	0.20-0.38	0.32-0.37
Sodium	0.05-0.17	0.00-0.17	-	-	-

2. All golf courses located within a BMAP are required to submit a NMP that is designed to, while maintaining even plant growth, prevent nutrient losses to the Floridan aquifer

***g. Soil, tissue and water quality sample results shall be maintained for a minimum of five years. Please provide records.***

***h. When developing new (or expanding) golf courses, pre and post monitoring should be implemented in accordance with UF-IFAS/DEP recommendations.***

**Turf Details**

Turf Type	Turf Species	Acreage
Tees		
Greens		
Fairways		
Roughs		
<b>Total</b>		

**Fertilizer Application**

Sample fertilizer application table

Month	Turf Type	TN Application Rate (lbs/acre)	TP Application Rate (lbs/acre)	Number of Applications	Total TN Applied (lbs/acre)	Total TP Applied (lbs/acre)
January	Tees					
	Greens					

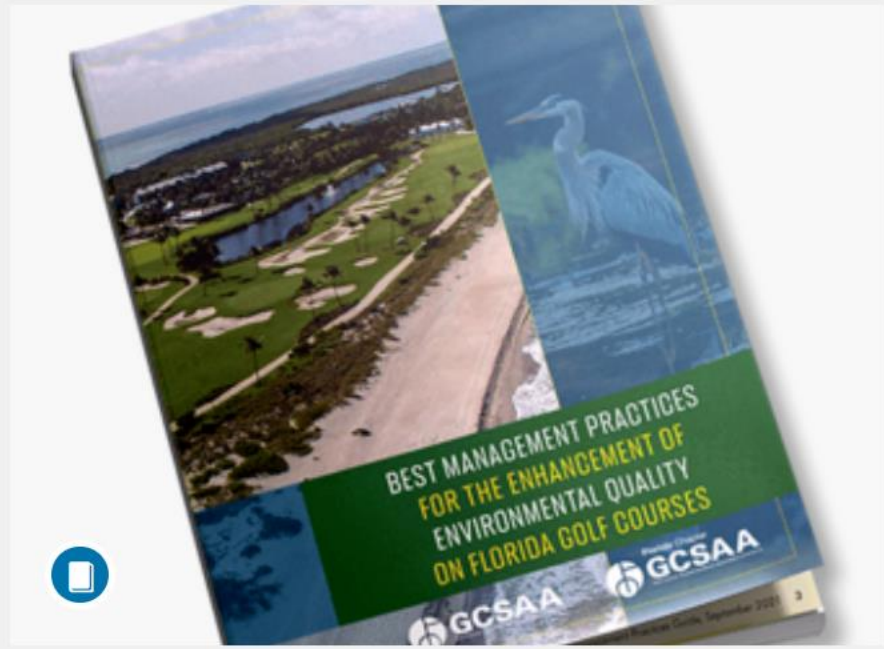
# Best Management Practices for the Enhancement of Environmental Quality on Florida Golf Courses



Environmental stewardship begins with an understanding of the environment and how it can be harmed. From there, it is not difficult to look at each management practice, and take steps to prevent contamination, waste, and habitat loss. Once identified, past errors can be corrected, and the effects of existing situations can be lessened resulting in a better balance with the environment.

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