



Everglades West Coast & Caloosahatchee River and Estuary BMAPs Annual Meeting

Via Webinar
April 2, 2024
1:00 PM

Webinar Registration Link:

<https://attendee.gotowebinar.com/register/8528079803719458649>

Agenda

- South Florida Water Management District (SFWMD) Updates
- Statewide Annual Report (STAR)
- Everglades West Coast Background and Progress
- Caloosahatchee Background and Progress
- Upcoming BMAP Updates
- Florida Department of Agriculture and Consumer Services (FDACS) Updates

Please note the FTP site for documents pertaining to the various BMAPs:

<http://publicfiles.dep.state.fl.us/DEAR/BMAP/>

For more information on Caloosahatchee, contact: Diana Turner, 850-245-8825, Diana.M.Turner@FloridaDEP.gov

For more information on Everglades West Coast, contact: Evelyn Becerra, 850-245-8547,

Evelyn.Becerra@FloridaDEP.gov



WEBINAR HOUSEKEEPING

Attendee Participation

Open your control panel.

Join audio:

- Choose Computer Audio **or**
- Choose Phone Call and dial using the information provided with your registration

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 file transfer protocol (FTP) site after the webinar.

A screenshot of the GoToWebinar control panel. The top section is titled "Audio" and includes a "Sound Check" indicator. Below this, there are two radio button options: "Computer audio" (which is selected) and "Phone call" (which is unselected). A red arrow points to the "Phone call" option. Below the radio buttons, there is a "MUTED" indicator with a microphone icon. Underneath, there are two dropdown menus: "Transmit (Plantronics Savi 7xx-M)" and "Receive (Plantronics Savi 7xx-M)". The bottom section is titled "Questions" and contains a text input field with the placeholder "[Enter a question for staff]" and a "Send" button. At the bottom of the control panel, the text "Webinar Housekeeping" and "Webinar ID: 608-865-371" is displayed, along with the GoToWebinar logo.



EVERGLADES WEST COAST AND CALOOSAHATCHEE BASIN MANAGEMENT ACTION PLANS (BMAP) ANNUAL MEETING

Diana Turner

Division of Environmental Assessment and Restoration
Florida Department of Environmental Protection

GoToWebinar | April 2, 2024



ANNUAL MEETING AGENDA

Agenda:

- South Florida Water Management District (SFWMD) Updates.
- Statewide Annual Report (STAR).
- Everglades West Coast Background and Progress.
- Caloosahatchee Background and Progress.
- Upcoming BMAP Updates.
- Florida Department of Agriculture and Consumer Services (FDACS) Updates.



SFWMD Update

Caloosahatchee River Watershed Construction Project

Stacey Ollis, PMP

Principal State Policy Analyst

Everglades and Estuaries Protection Bureau

Caloosahatchee River and Estuary BMAP Annual Meeting

April 2, 2024

Agenda

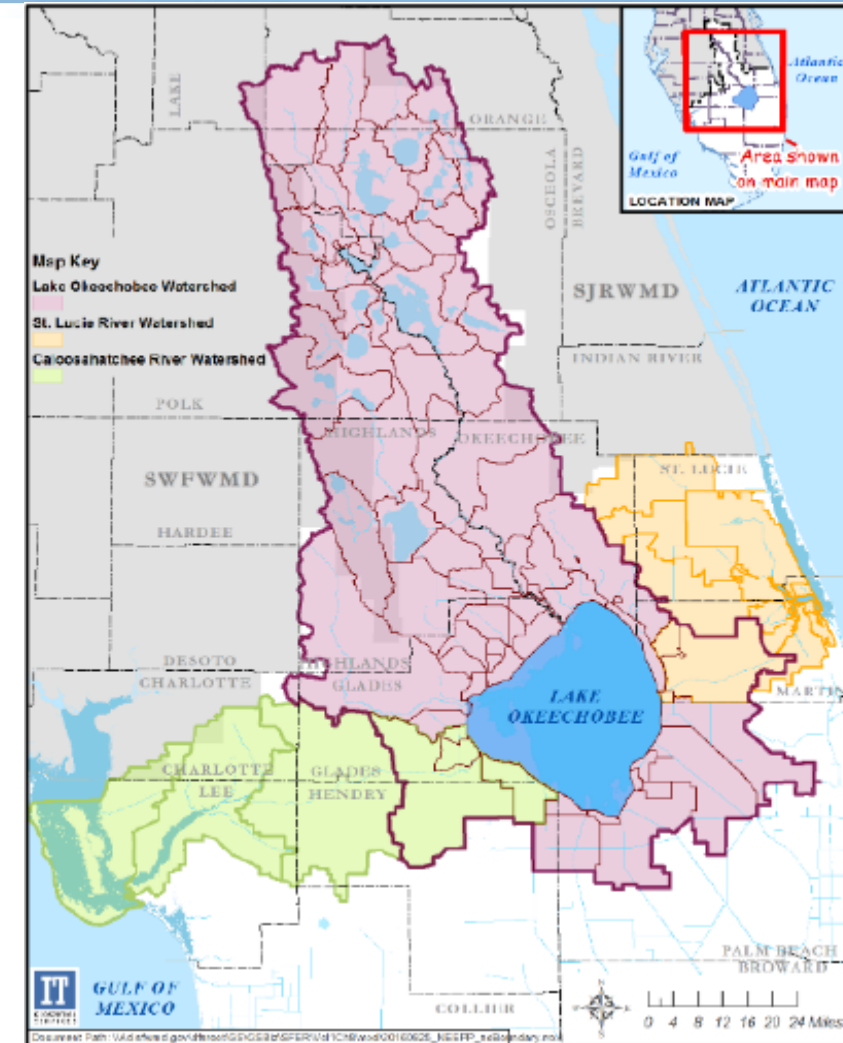


Caloosahatchee Estuary
Oyster Reef

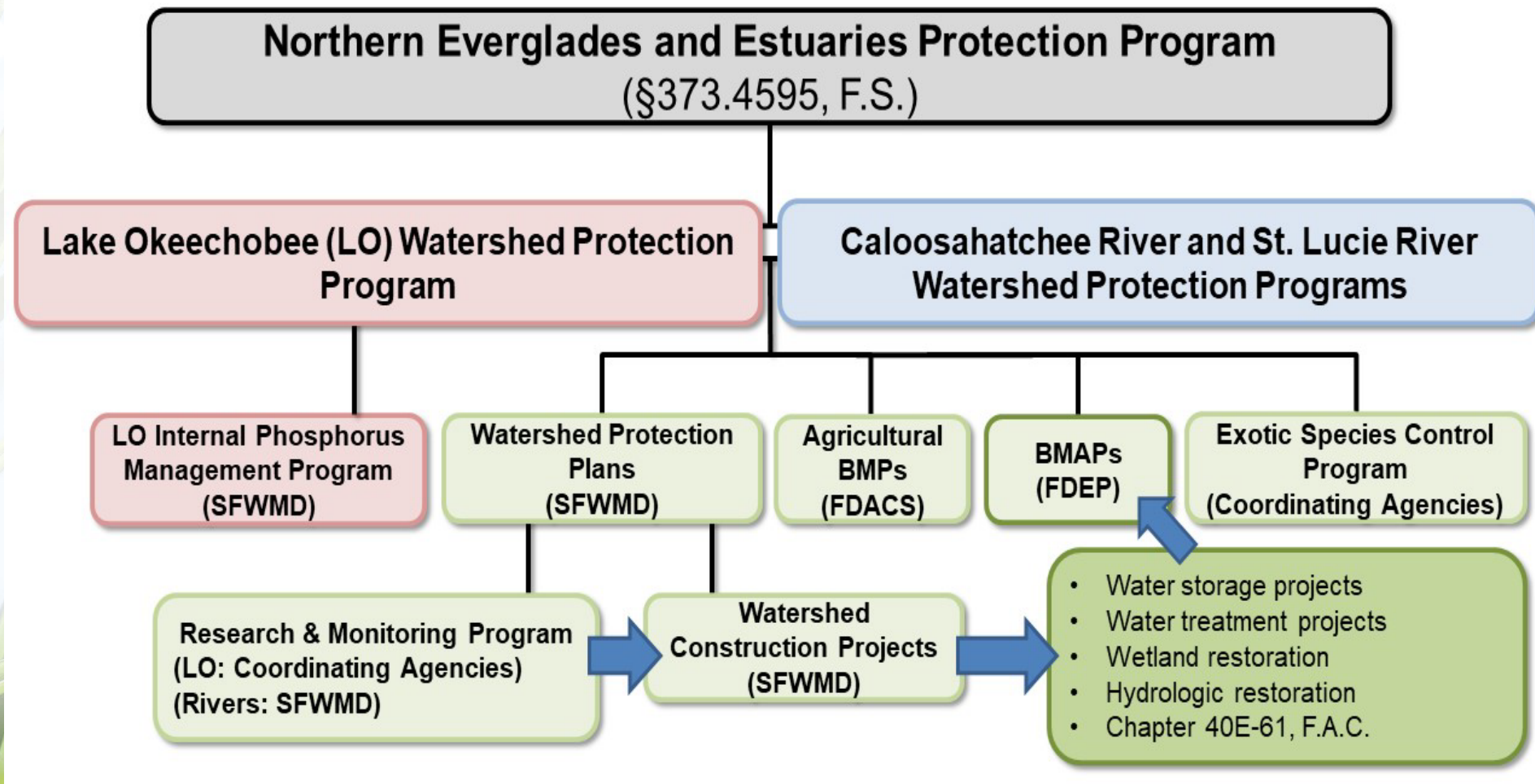
- Northern Everglades Program Overview
- 2023 Caloosahatchee River Watershed Construction Project Review
 - Project Spotlights
 - Water Storage Benefits
- Watershed Protection Plan Reporting

Northern Everglades and Estuaries Protection Program (NEEPP)

- Purpose: Protect and restore surface water resources by improving hydrology and water quality for the Northern Everglades ecosystem (§373.4595, Florida Statutes)
- Goal: Improve Water Quality
 - Lake Okeechobee: Total Phosphorus (TP)
 - Caloosahatchee Estuary: Total Nitrogen (TN)
 - St. Lucie Estuary: TP and TN
- Goal: Manage Water Quantity
 - Increase water storage north of Lake Okeechobee and in Caloosahatchee and St. Lucie River Watersheds



NEEPP: Coordinating Agencies Roles



Caloosahatchee River Watershed Construction Project Review

- In 2020, SFWMD initiated annual Caloosahatchee River Watershed Construction Project (CRWCP) reviews, as part of the Watershed Protection Plan (WPP) reviews
- Annual reviews are important to:
 - Maintain transparency and accountability in BMAP process
 - Assist to progressively move toward achieving state's TMDLs
 - Develop and update WPPs required every five years
 - Consolidate into NEEPP annual progress reporting (South Florida Environmental Report, or SFER) per §373.4595(6), F.S.
- Focus: 2023 CRWCP Review
 - Key accomplishments during Fiscal Year (FY) 2023 (Oct. 1, 2022–Sept. 30, 2023)
 - Final 2024 SFER – Volume I, Chapter 8D (March 1, 2024) at [SFWMD.gov/SFER](https://www.sfwmd.gov/SFER)

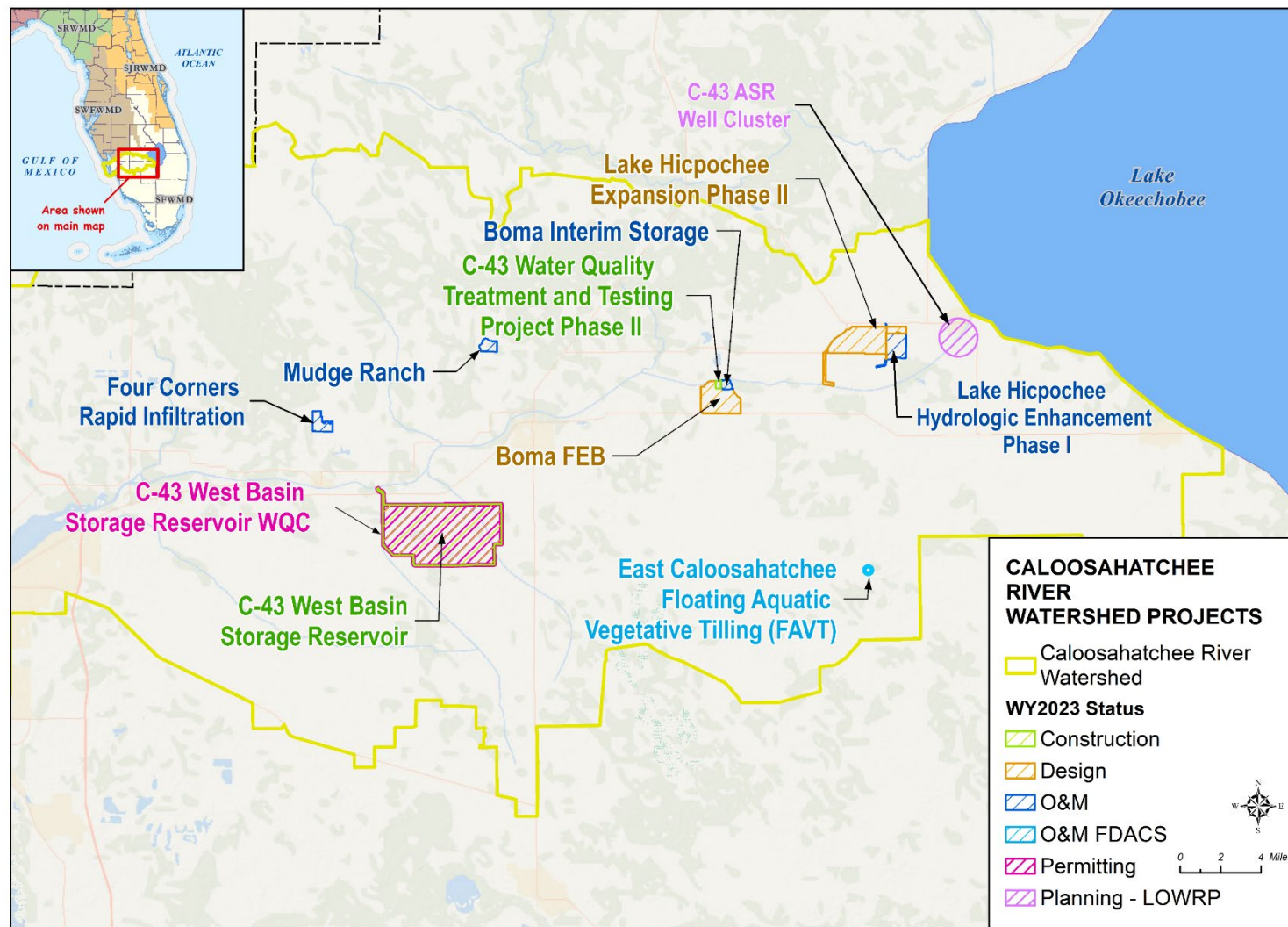
SFWMD Projects

➤ FY2023 CRWCP Status:

- 1 project – planning
- 3 projects – design/permitting
- 2 projects – construction
- 4 projects – operations



Mudge Ranch DWM,
Hendry County



Project Spotlights

- C-43 West Basin Storage Reservoir and Water Quality Component
- Four Corners Rapid Infiltration
- Boma Flow Equalization Basin (FEB)
- C-43 Water Quality Treatment & Testing Facility – Phase II, Test Cells
- Lake Hicpochee Hydrologic Enhancement – Phase II Expansion



C-43 West Basin Storage Reservoir

Southwest corner of C-43 Reservoir



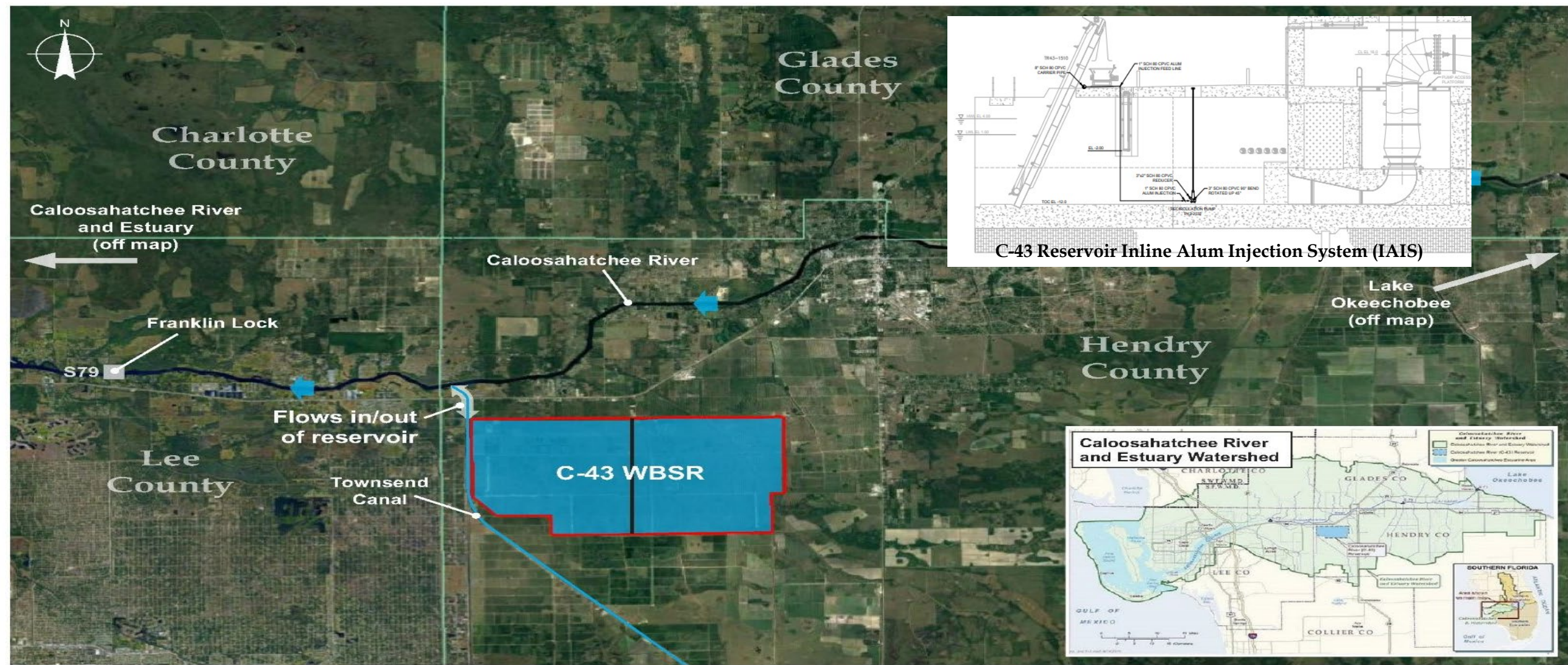
S-470 Pump Station



South side of C-43 Reservoir



C-43 Reservoir Water Quality Component



Four Corners Rapid Infiltration



Four Corners Ribbon Cutting (May 2023)



Project Inflow Pumps

Boma Flow Equalization Basin & C-43 Water Quality Treatment & Testing Facility

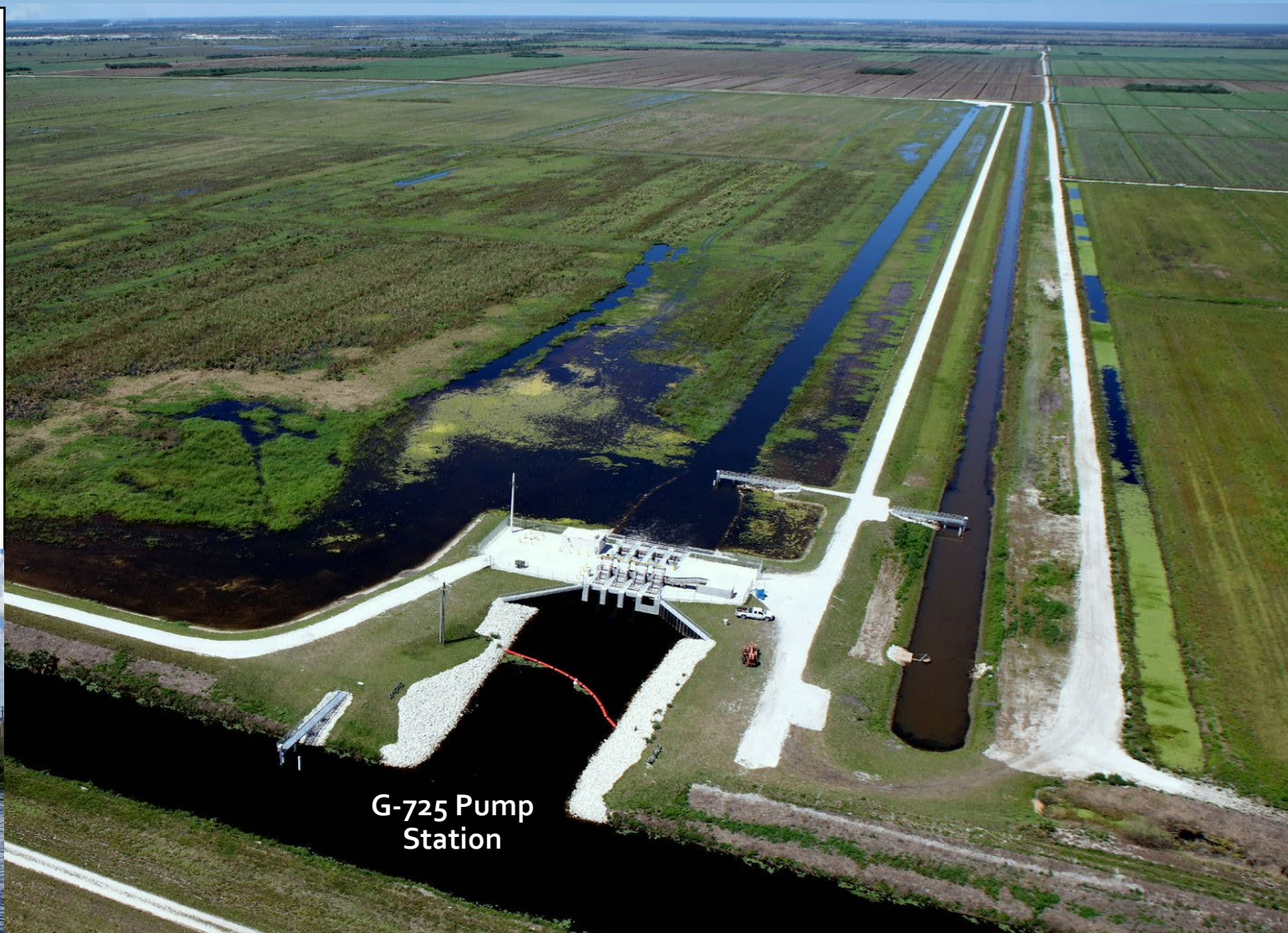
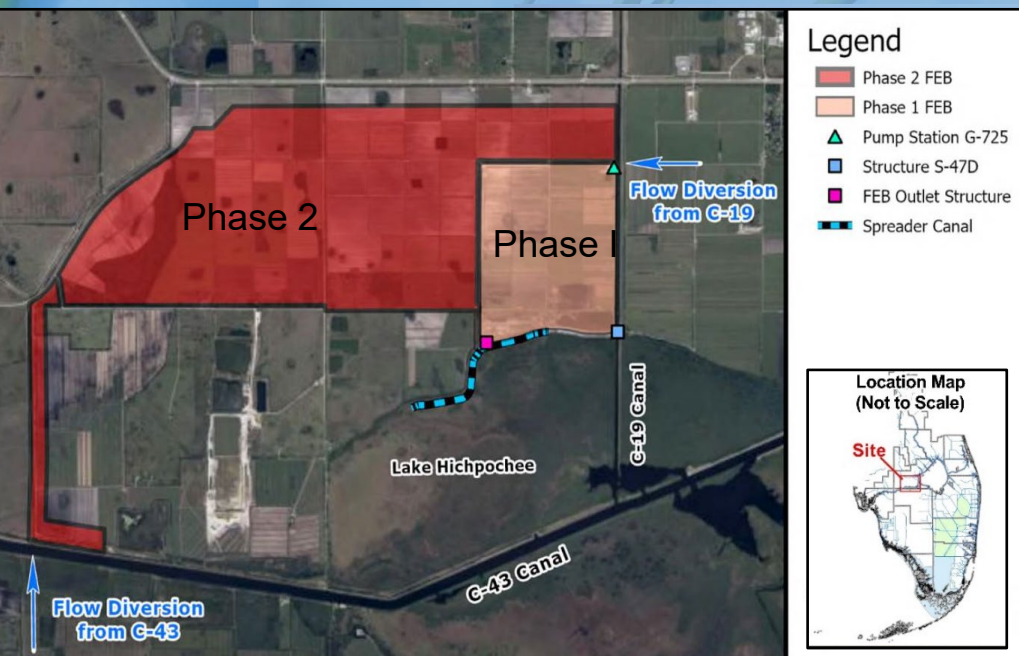


Test Cell Facility construction at Boma property



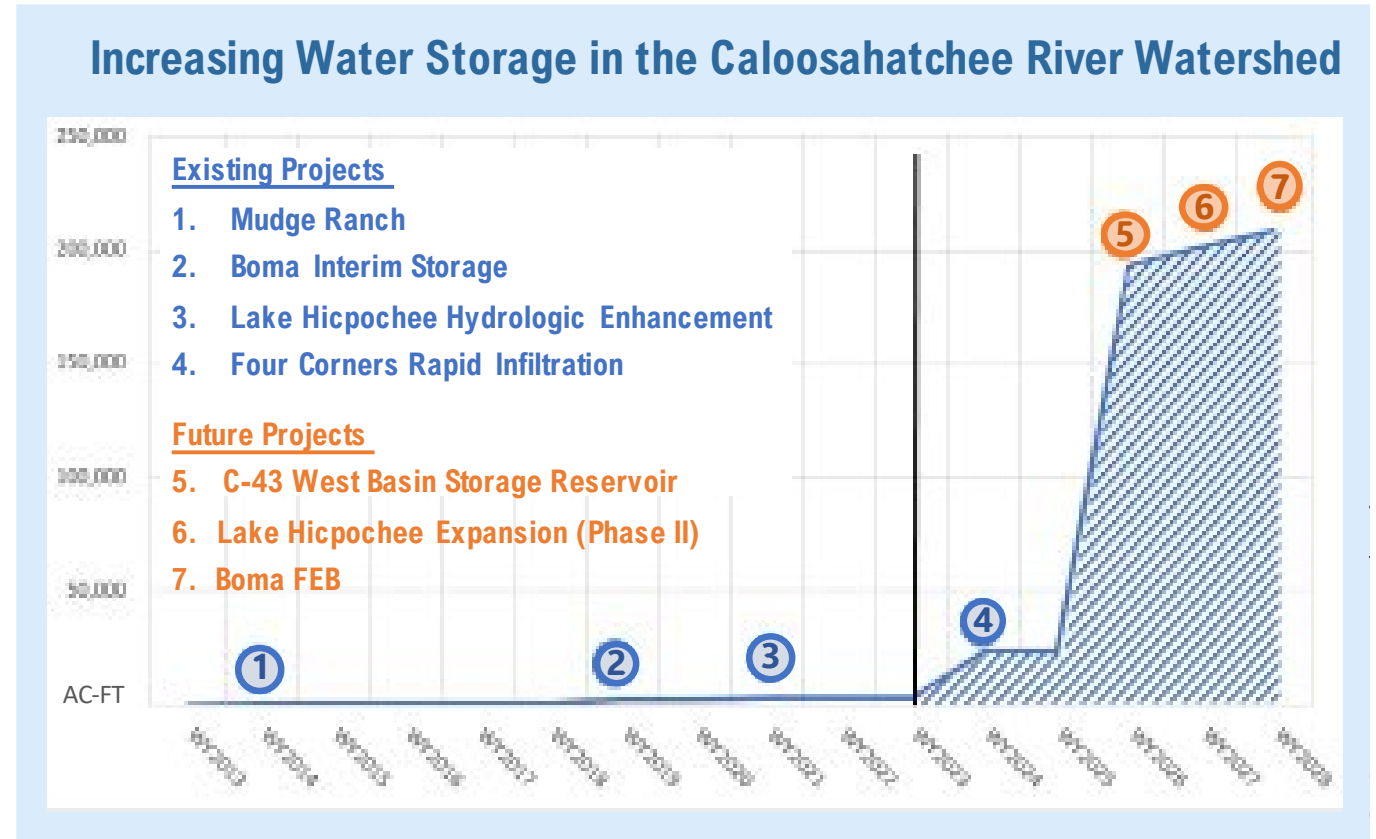
Test cells construction site

Lake Hicpochee Hydrologic Enhancement



Water Storage Benefits

- Key DWM program benefits:
 - Reduces runoff/discharge to and stores/treats water in regional system
 - Promotes hydrologic enhancement, groundwater recharge, improves habitat
 - Avoids high cost of land purchase and keeps private lands on local tax rolls
 - Storage and/or treatment provided typically exceeds permit requirements
- During WY2023, 3 SFWMD projects provided 4,989 ac-ft of storage (3,767 ac-ft, 2 DWM; 1,222 ac-ft, 1 regional)
- Future projects are planned to add storage capacity of more than 185,000 ac-ft over the next five years



Watershed Protection Plan Reporting

For more information, visit:

[SFWMD.gov/WPPs](https://www.sfwmd.gov/WPPs)

and

[SFWMD.gov/SFER](https://www.sfwmd.gov/SFER)

(Final 2024 SFER –
Volume I, Chapter 8D)



2024 SOUTH FLORIDA ENVIRONMENTAL REPORT HIGHLIGHTS
Water Year 2023 (May 1, 2022–April 30, 2023) • Fiscal Year 2023 (Oct. 1, 2022–Sept. 30, 2023)

The South Florida Environmental Report (SFER) documents an important year of restoration, scientific and engineering accomplishments in the Kissimmee Basin, Lake Okeechobee, Everglades and South Florida coastal areas. The report also provides extensive peer reviewed research summaries, data analyses, financial updates and a searchable database of environmental projects. The report covers environmental information for Water Year 2023 (WY2023; May 1, 2022–April 30, 2023) and project budgetary and construction information for the South Florida Water Management District (SFWMD or District) for Fiscal Year 2023 (FY2023; October 1, 2022 – September 30, 2023).

This year's SFER Highlights also cover the many achievements and progress made over the past five years in accelerating key water quality improvements and Everglades restoration projects, in line with the Executive Order 19-12 (Achieving More Now for Florida's Environment, January 2019) and Executive Order 23-06 (Achieving Even More Now for Florida's Environment, January 2023). The full 2,991-page report is available at [SFWMD.gov/SFER](https://www.sfwmd.gov/SFER).

Mark Your Calendars



2024 SFER Open House Poster Sessions

April 10 & 11, 2024 at 1 pm

SFWMD Headquarters

B-1 Auditorium & Lobby

3301 Gun Club Road

West Palm Beach, FL

For more information, visit:

[SFWMD.gov/news-events/meetings](https://www.sfwmd.gov/news-events/meetings)

Contact Information

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South Florida Water Management District

sollis@sfwmd.gov; 561-682-2039





STAR







STATEWIDE ANNUAL REPORT

The Statewide Annual Report 2022

The state of Florida is prioritizing the protection and restoration of our waterways by implementing sound, science-based solutions to current and future environmental challenges. Under the leadership of Governor Ron DeSantis, the Florida Department of Environmental Protection (DEP) is working with local, state and federal partners on short- and long-term strategies to protect water quality and quantity, including investment in long-term restoration projects. DEP has prepared the 2022 Statewide Annual Report (STAR) to detail the status of many of these strategies in an interactive application format, which is best viewed on a desktop computer screen using Google Chrome or Microsoft Edge.



As required by section 403.0675, Florida Statutes, and to report on additional restoration efforts, this report updates the status of protection and restoration actions through total

Total Maximum Daily Loads	Basin Management Action Plans	Alternative Restoration Plans	Minimum Flows and Water Levels	Recovery and Prevention Strategies	Contacts and Project Data
					



STAR STATEWIDE ANNUAL REPORT

Florida Department of Environmental Protection Statewide Annual Report 2022
Basin Management Action Plans

Introduction | Total Maximum Daily Loads | Basin Management Action Plans | Alternative Restoration Plans | Minimum Flows & Water Levels | Recovery & Prevention Strategies | Contacts & Project Data

How to Use This Report | What Is the STAR? | Reductions Summary | What Are Nutrients? | What Are FIB? | What Are BMAP Projects?

Nutrient BMAPs | Fecal Indicator Bacteria BMAPs | **BMAP Projects** | Project Table

Sorted by Alphabetical Order

- Caloosahatchee River and Estuary Basin
- Central Indian River Lagoon Basin
- Chassahowitzka-Homosassa Springs Basin
- DeLeon Spring Basin
- Everglades West Coast Basin
- Gemini Springs Basin

Click on a point to find out more information on a specific project. Or click on the Contacts and Project Data card above for a full project list.

BMAP Projects 2022

- Stormwater
- Wastewater
- Agriculture

All Basins TN Reductions Achieved by Completed and Ongoing Projects as of Dec. 31, 2022

Legend: Load Tracking, Wastewater, Stormwater, Agriculture

Units are in pounds per year.

Nitrogen Reduction | Phosphorus Reduction

- Report will be published by July 1, 2024, with reporting through Dec. 31, 2023.
- Summarizes accomplishments in the BMAPs statewide.
- Reports on restoration projects and management strategies.
- Data download available.



STAR BMAP PORTAL FOR PROJECT COLLECTION

- Be sure to let your BMAP coordinator know if changes in access to your projects in the portal are needed.

The screenshot displays the DEAR Restoration Project Collection Portal interface. At the top, it shows the DEP Business Portal logo and the user's name, Alex Smith, with a session timeout warning. The main section is titled "Project Workbook" and includes a search criteria field, an "Updates Complete?" section with a "Notify Coordinator" button, and an "Exports" section. Below these is a "Search Results" section with a table of project workbooks. The table has columns for User Action Icons, Review Stage, STAR Year, Saved But Not Submitted, BMAP ID, Project ID, Lead Entity, Project Number, Project Name, Project Type Category, Project Type, Project Status, and Estimate Completion Date. Two rows are visible, both showing "Coordinator Verification /Validation Approved" status and "Completed" project status.

Project Workbooks List	User Action Icons	Review Stage	STAR Year	Saved But Not Submitted	BMAP ID	Project ID	Lead Entity	Project Number	Project Name	Project Type Category	Project Type	Project Status	Estimate Completion Date
<input type="checkbox"/>	<input type="checkbox"/>	Coordinator Verification /Validation Approved	2023		OKEE	3654	SFWM	SFWM-04	Otter Slough Restoration	Stormwater	Hydrologic Restoration	Completed	2009
<input type="checkbox"/>	<input type="checkbox"/>	Coordinator Verification /Validation Approved	2023		OKEE	3630	SFWM	SFWM-10	West Waterhole	Stormwater	Dispersed Water Management (DWM)	Completed	2009



EVERGLADES WEST COAST BMAP BACKGROUND

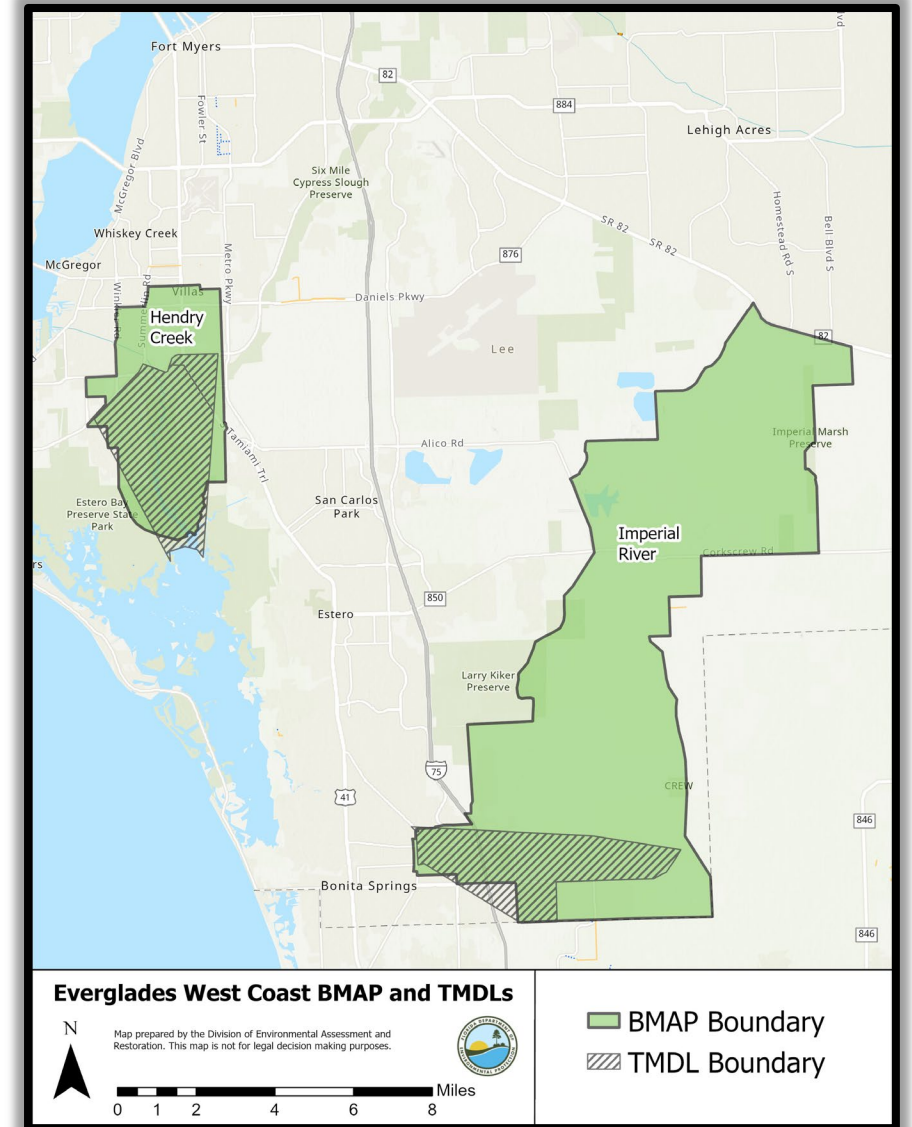
Everglades West Coast Total Maximum Daily Loads (TMDLs)

Hendry Creek and Imperial River

Adopted in 2008:

- Dissolved oxygen (DO) impairments.
- Total nitrogen (TN) reductions.

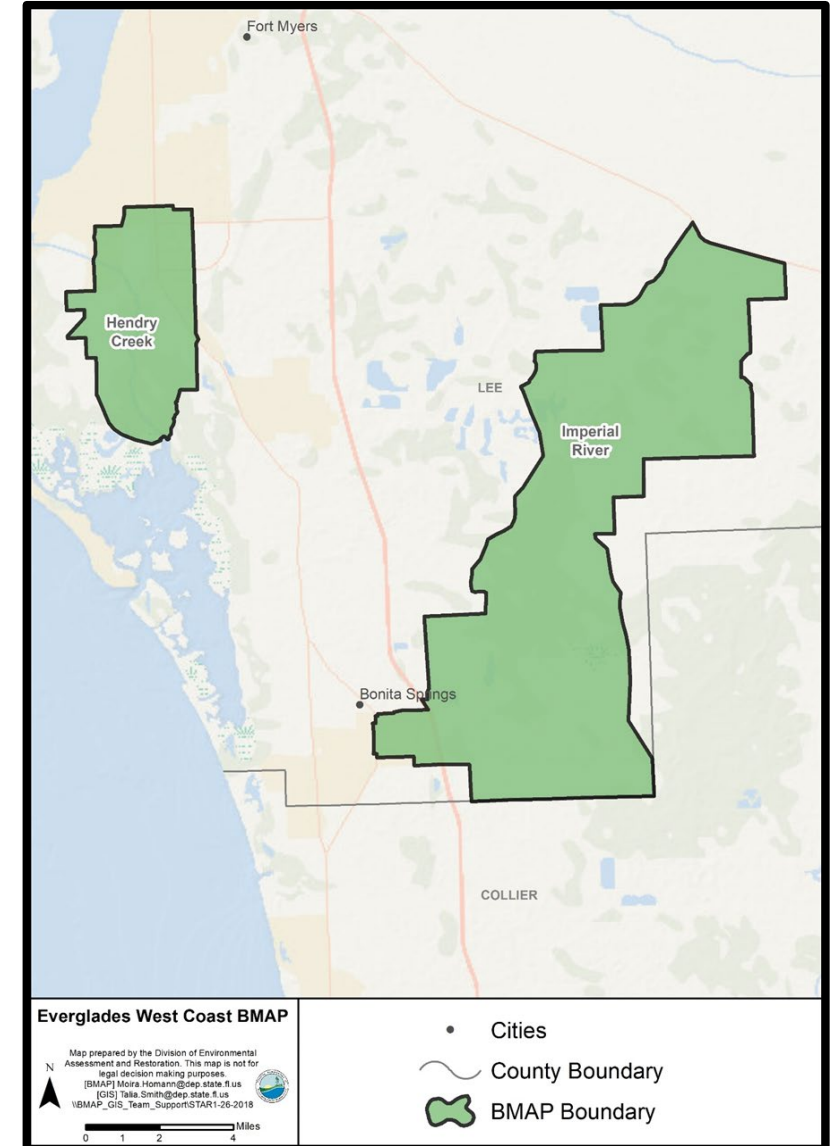
Target concentration 0.74 milligrams per liter (mg/L) TN.





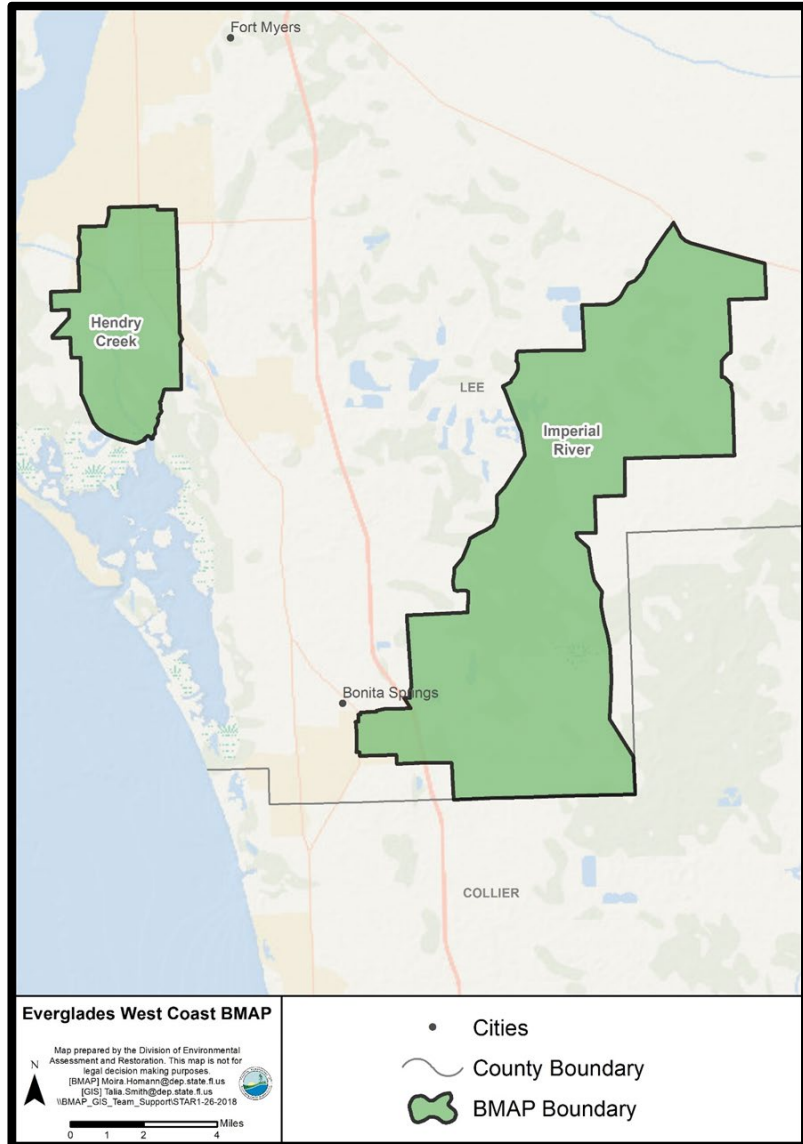
EVERGLADES WEST COAST BMAP BACKGROUND

- Initially adopted November 2012.
- Total required reductions:
 - Hendry Creek: 10,320 lbs/yr TN.
 - Imperial River: 60,125 lbs/yr TN.





EVERGLADES WEST COAST BMAP STAKEHOLDERS



Stakeholders	BMAP Basin
City of Bonita Springs	Imperial River
Lee County	Hendry Creek, Imperial River
DACS	Hendry Creek, Imperial River
Florida Department of Transportation (FDOT)	Hendry Creek, Imperial River



EVERGLADES WEST COAST BMAP

***PRELIMINARY** 2023 STAR UPDATES

Projects Through Dec. 31, 2023.

Lead Entity	Completed	Ongoing	Planned	Underway	Total
City of Bonita Springs	8	3	2	2	15
DACS	0	2	0	0	2
FDOT District 1	8	4	0	0	12
Lee County	11	4	0	1	16
Total	27	13	2	6	45

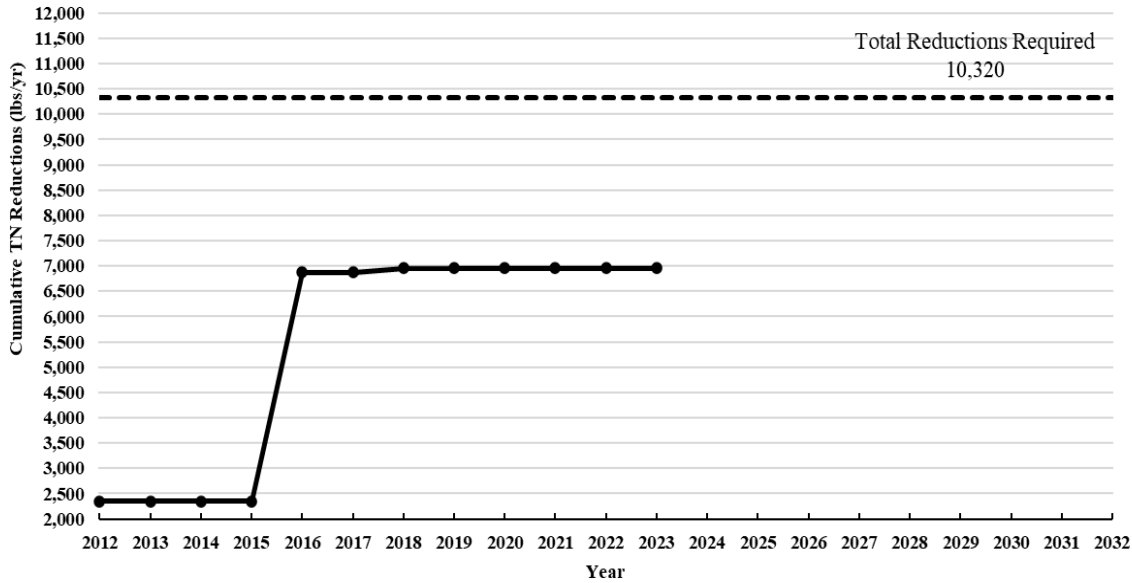


EVERGLADES WEST COAST BMAP

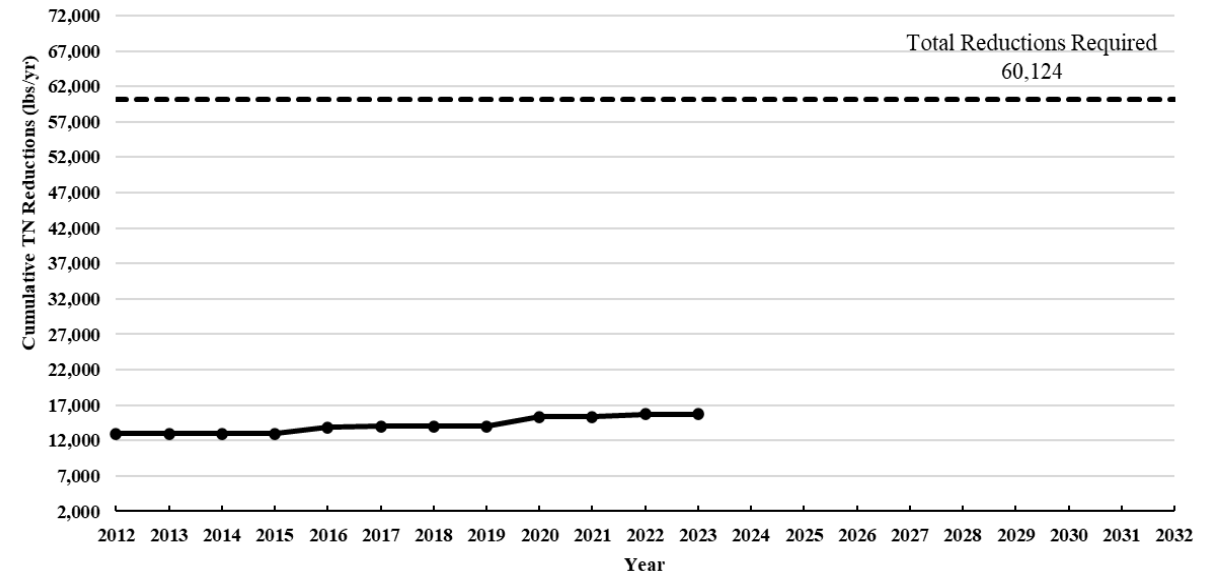
***PRELIMINARY** 2023 STAR UPDATES

Progress through Dec. 31, 2023.

Everglades West Coast TN Project Reductions (Hendry Creek)



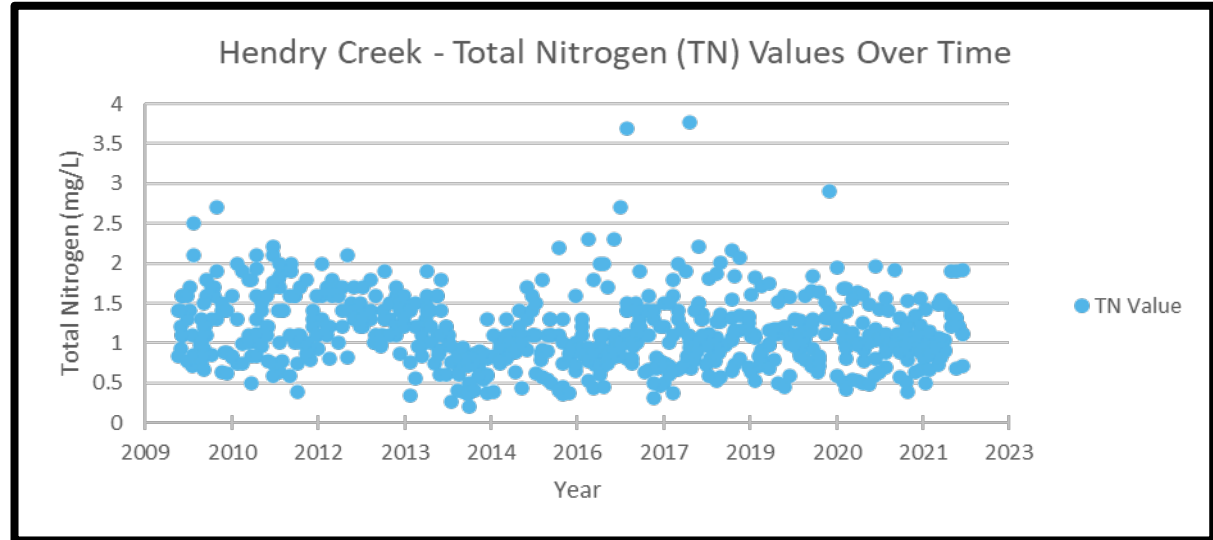
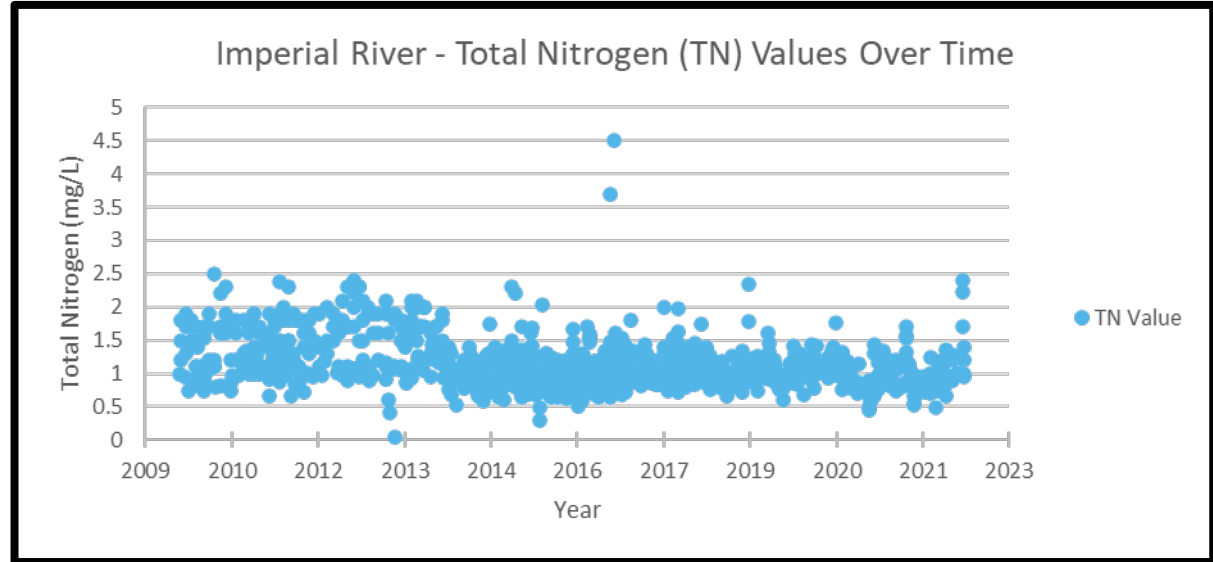
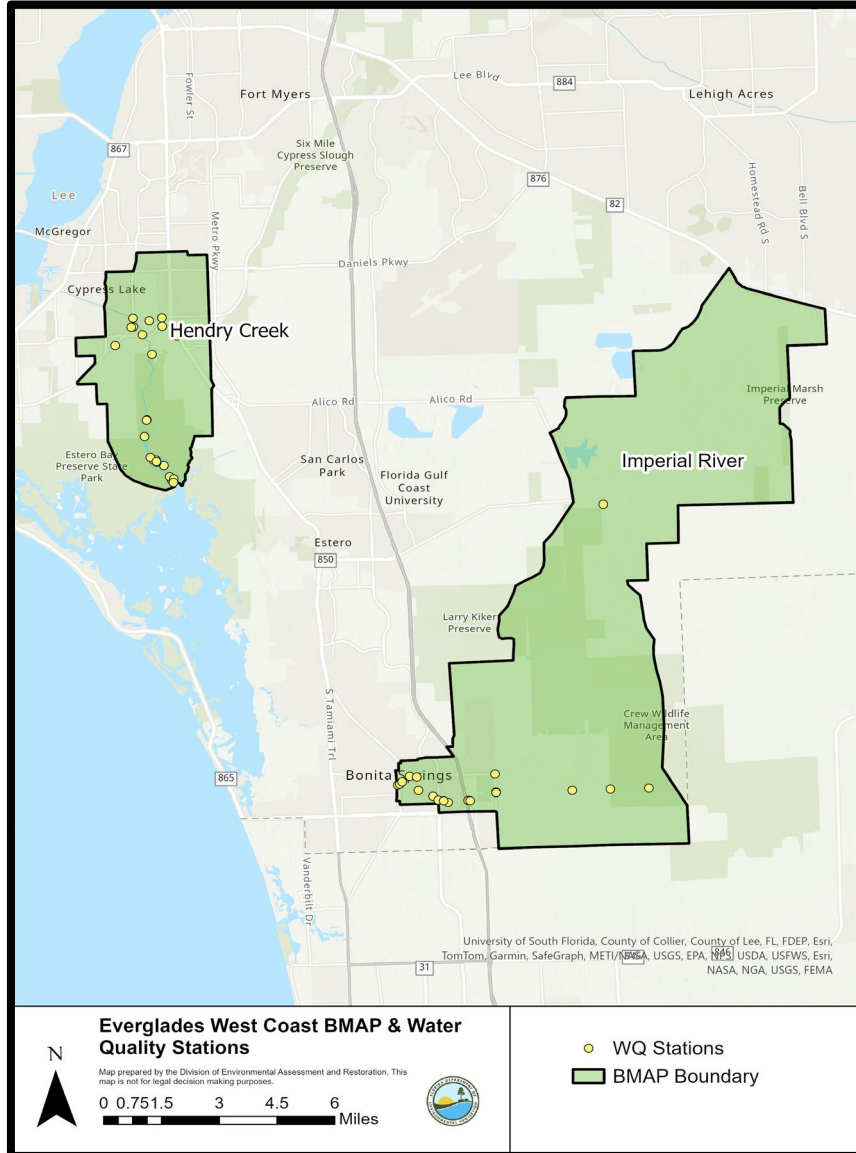
Everglades West Coast TN Project Reductions (Imperial River)



Completed and ongoing projects only.



EVERGLADES WEST COAST BMAP WATER QUALITY





EVERGLADES WEST COAST BMAP STORYMAP

[Introduction](#) [Overview](#) [Location](#) [Water Quality](#) [Projects](#) [Progress](#) [Contacts & More Informatio...](#)

Introduction

Welcome to the Everglades West Coast Basin Management Action Plan Story Map

A Basin Management Action Plan (BMAP) is a framework for water quality restoration, containing local and state commitments to reduce pollutant loading through current and future projects and strategies. 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 (TMDL).

These broad-based plans are developed with local stakeholders and rely on local input and commitment for development and successful implementation. BMAPs are adopted by DEP Secretarial Order and are legally enforceable.

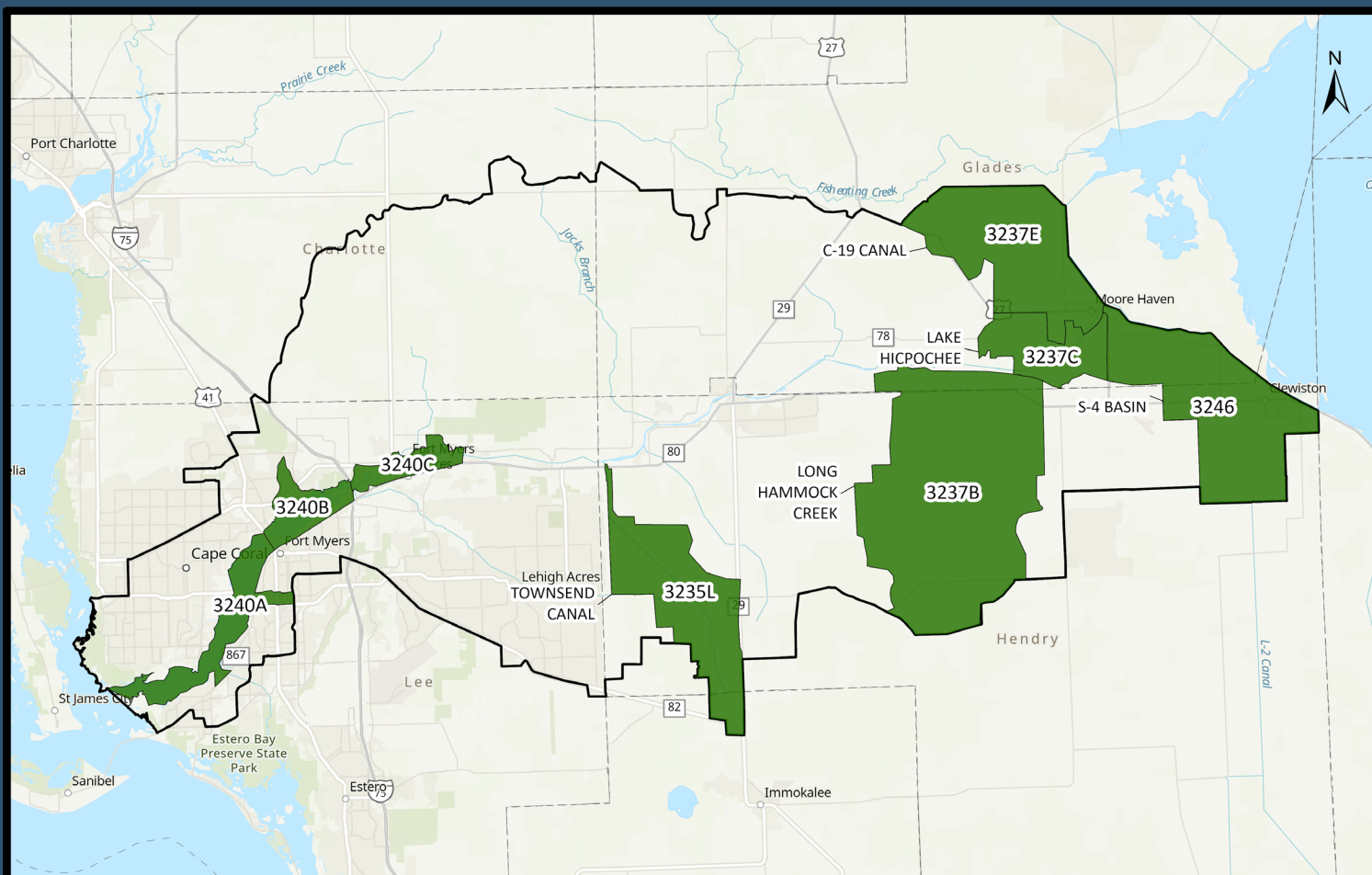
This Story Map reflects the status of BMAP projects most recently published in the Statewide Annual Report ([STAR](#)). Please use the tabs above to navigate through this Story Map and learn more about the Everglades West Coast BMAP. Last updated June 2023.

** The story map will display differently depending on the screen size and resolution being used. Story map best viewed in Chrome or Firefox.*





CALOOSAHATCHEE RIVER & ESTUARY BMAP BACKGROUND



Tidal BMAP:

- Developed in 2012 to address TN in the estuary.

Current BMAP:

- Developed in 2020 to encompass complete watershed and include new tributary TMDLs.

Caloosahatchee TMDLs

Map prepared by the Division of Environmental Assessment and Restoration.
This map is not for legal decision making purposes.
[GIS] Janis Morrow (850) 245-8543
[BMAP] Diana Turner (850) 245-8825
Map ID: TMDL
Created: 1-14-2021



- Caloosahatchee BMAP boundary
- State Adopted and EPA Approved TMDLs
- Florida Counties

0 2.5 5 10 15 20 Miles



CALOOSAHATCHEE RIVER & ESTUARY BMAP

STAKEHOLDERS

Local Governments:

- 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.

Community Development Districts (CDDs):

- Lucaya.
- Mirada.
- Moody River Estates.
 - Port LaBelle.
 - Portico.
- River Hall.
- Sail Harbour.
- Sugarland.
- Verandah East.
- Verandah West.

Special Districts:

- Barron Water Control District (WCD).
 - Clewiston WCD.
 - Collins Slough WCD.
- County Line Drainage District.
 - Cow Slough WCD.
 - Devil's Garden WCD.
- Disston Island Conservancy District.
 - Flaghole Drainage District.
 - Gerber Groves WCD.
 - Hendry-Hilliard WCD.
- Lehigh Acres Municipal Services District.
 - Sugarland Drainage District.

Agencies:

- FDACS.
- Florida Department of Environmental Protection.
 - (FDOT) District 1.
 - SFWMD.



CALOOSAHATCHEE RIVER & ESTUARY BMAP

*PRELIMINARY 2023 STAR UPDATE – ESTUARY

LeadEntity	Completed	Ongoing	Underway	Planned	Total
Barron WCD	1	1	3	0	5
Charlotte County	0	1	0	0	1
City of Cape Coral	14	3	1	1	19
City of Clewiston	3	3	0	0	6
City of Fort Myers	11	2	3	1	17
City of LaBelle	0	0	0	5	5
City of Moore Haven	1	0	1	0	2
Clewiston Drainage District	1	1	3	0	5
Collins Slough WCD	1	1	3		5
County Line Drainage District	1	1	0	3	5
Cow Slough WCD	1	1	3	0	5
Devil's Garden WCD	1	1	3	0	5
Disston Island Conservancy District	1	1	3	0	5
FDACS	0	6	0	0	6
FDOT District 1	29	2	0	0	31
Flaghole Drainage District	1	1	3	0	5
Gerber Groves WCD	1	1	3	0	5
Glades County	2	0	0	2	4
Hendry County	1	0	4	3	8
Hendry-Hilliard WCD	1	1	3	0	5
LA-MSID (formerly ECWCD)	15	1	1	1	18
Lee County	44	2	4	1	51
Lucaya CDD	0	2	0	0	2
Mirada CDD	0	2	0	0	2
Port LaBelle CDD	0	0	1	0	1
Portico CDD	3	1	0	0	4
SFWMD - Coordinating Agency	3	0	3	2	8
Sugarland Drainage District	1	1	3	0	5
Verandah East CDD	0	1	0	0	1
Verandah West CDD	0	1	0	0	1
Total	137	38	48	19	242

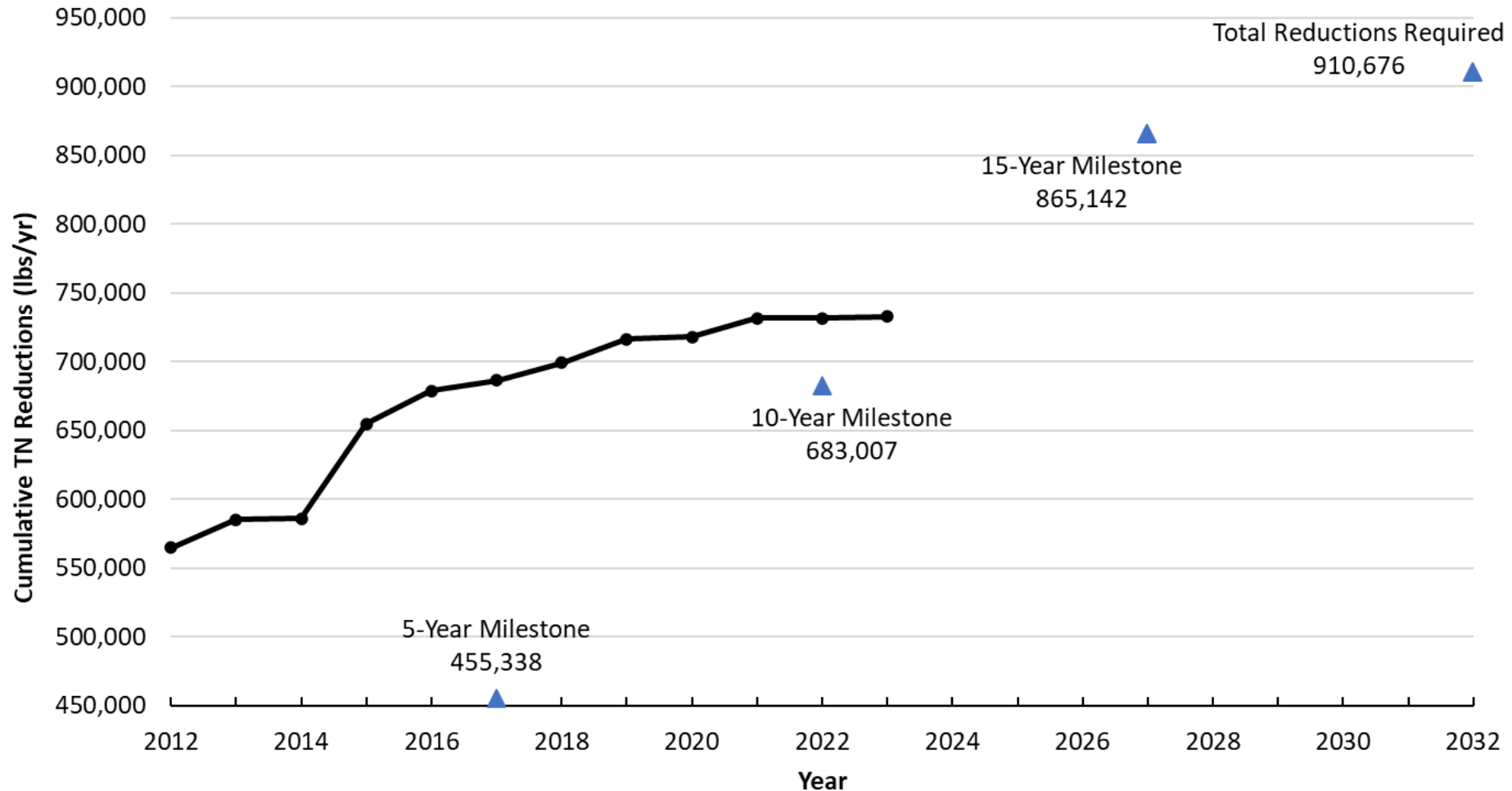


CALOOSAHATCHEE RIVER & ESTUARY BMAP

***PRELIMINARY** 2023 STAR UPDATE – ESTUARY

*Completed and Ongoing Projects.

Caloosahatchee Estuary TN Project Reductions





CALOOSAHATCHEE RIVER & ESTUARY BMAP

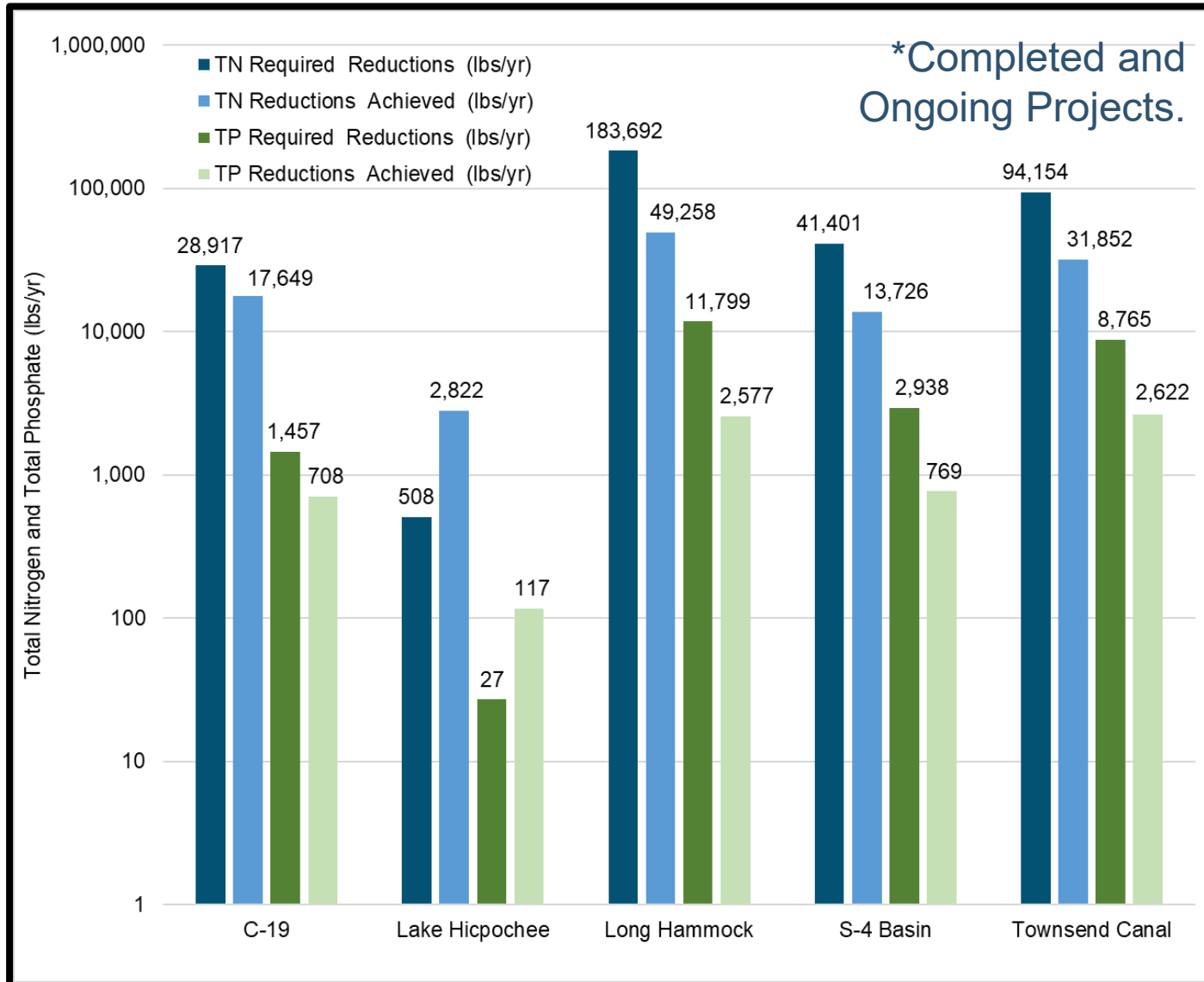
*PRELIMINARY 2023 STAR UPDATE – TRIBUTARIES

Lead Entity	Completed	Ongoing	Underway	Planned	Total
Barron WCD	1	1	3	0	5
City of Clewiston	3	3	0	0	6
City of Moore Haven	1	0	1	0	2
Clewiston Drainage District	1	1	3	0	5
Collier County	0	1	0	0	1
Collins Slough WCD	1	1	3	0	5
Cow Slough WCD	1	1	3	0	5
Devil's Garden WCD	1	1	3	0	5
Disston Island Conservancy District	1	1	3	0	5
FDACS	0	10	0	0	10
FDOT District 1	2	0	0	0	2
Flaghole Drainage District	1	1	3	0	5
Glades County	5	0	0	2	7
Hendry-Hilliard WCD	1	1	3	0	5
Port LaBelle CDD	0	0	1	0	1
SFWMD - Coordinating Agency	1	0	3	1	5
Sugarland Drainage District	1	1	3	0	5
Total	21	23	32	3	79



CALOOSA HATCHEE RIVER & ESTUARY BMAP

*PRELIMINARY 2023 STAR UPDATE – TRIBUTARIES





CALOOSAHATCHEE RIVER & ESTUARY BMAP STORYMAP

[Introduction](#) [Overview](#) [Location](#) [Water Quality](#) [Projects](#) [Progress](#) [TN Trend Results](#) [TP Trend Results](#) [Contacts & More Informatio...](#)

Introduction

Welcome to the Caloosahatchee Basin Management Action Plan Story Map

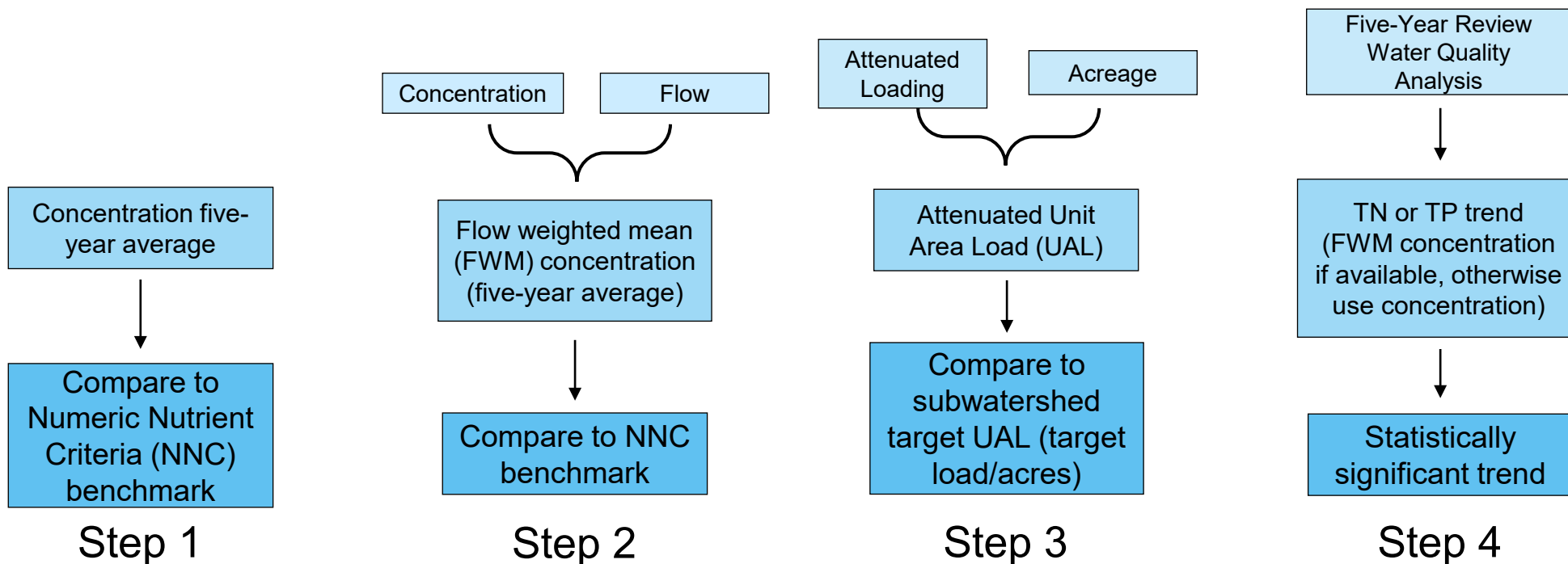
A Basin Management Action Plan (BMAP) is a framework for water quality restoration, containing local and state commitments to reduce pollutant loading through current and future projects and strategies. BMAPs contain a comprehensive set of solutions, such as permit limits on wastewater facilities, urban and agricultural best management practices, and conservation programs designed to achieve pollutant reductions established by a Total Maximum Daily Load (TMDL).

These broad-based plans are developed with local stakeholders and rely on local input and commitment for development and successful implementation. BMAPs are adopted by DEP Secretarial Order and are legally enforceable.





TARGETED RESTORATION AREA (TRA) EVALUATION UPDATE APPROACH



Priority 1: Greater than twice the benchmark.

Priority 2: Greater than benchmark, but less than twice benchmark value.

Priority 3: Equal to or less than benchmark.

or

Priority 1: Greater than twice the benchmark.

Priority 2: Greater than benchmark, but less than twice benchmark value.

Priority 3: Equal to or less than benchmark.

Move up one priority: Greater than 50% above subwatershed target UAL.

Maintain priority: Less than 50% above watershed target UAL.

Move down one priority: less than subwatershed target UAL.

Move up one priority: Statistically significant increasing trend.

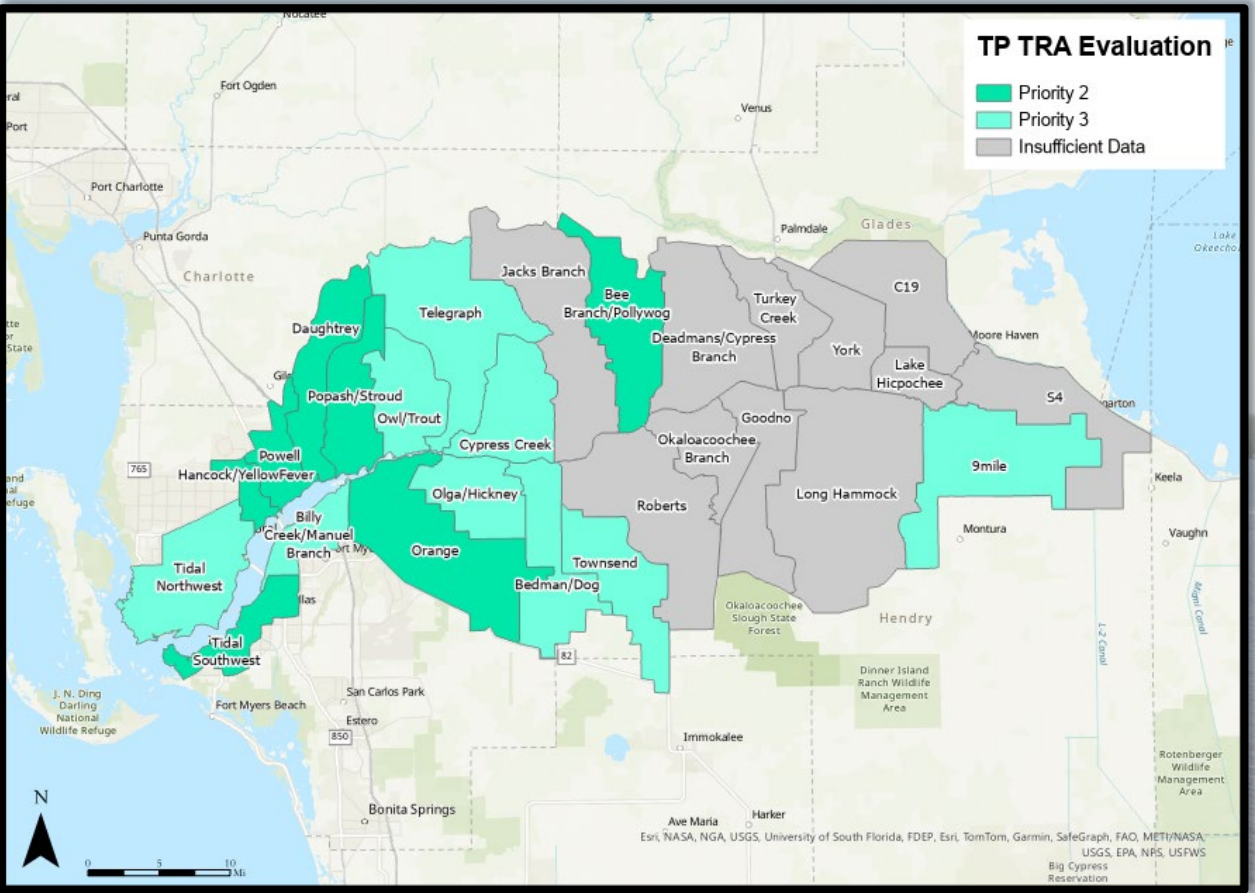
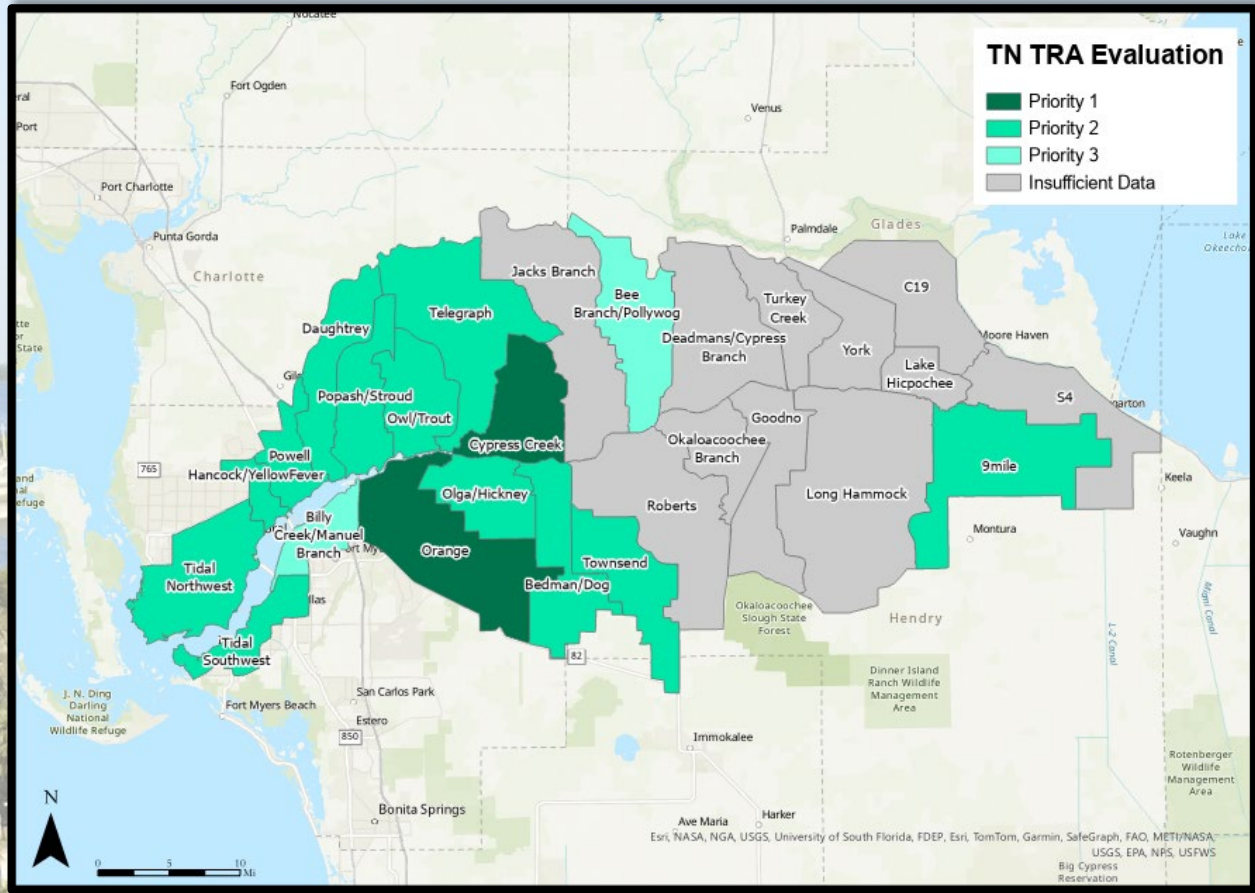
Maintain priority: No statistically significant trend.

Move down one priority: Statistically significant decreasing trend.



TRA EVALUATION UPDATE

2023 EVALUATION RESULTS





UPCOMING BMAP UPDATES

UPDATE BY JULY 1, 2025

Everglades West Coast:

- Wastewater effluent limits based on size of facility and effluent disposal method utilized.
- Onsite sewage treatment and disposal system (OSTDS) requirements for new systems on lots one acre or less.
- Development of a hot spot analysis.
- Evaluation of the monitoring network.
- Update to land use and allocations.
- Inclusion of entity milestones.
- Inclusion of the Clean Waterways Act requirements.

Caloosahatchee River and Estuary:

- Evaluation of wastewater effluent limits.
- OSTDS requirements for new systems on lots one acre or less.
- Inclusion of regional projects.
- Development of a hot spot analysis.
- Evaluation of the monitoring network.
- Update to allocations.
- Inclusion of entity milestones.
- Inclusion of the Clean Waterways Act requirements.



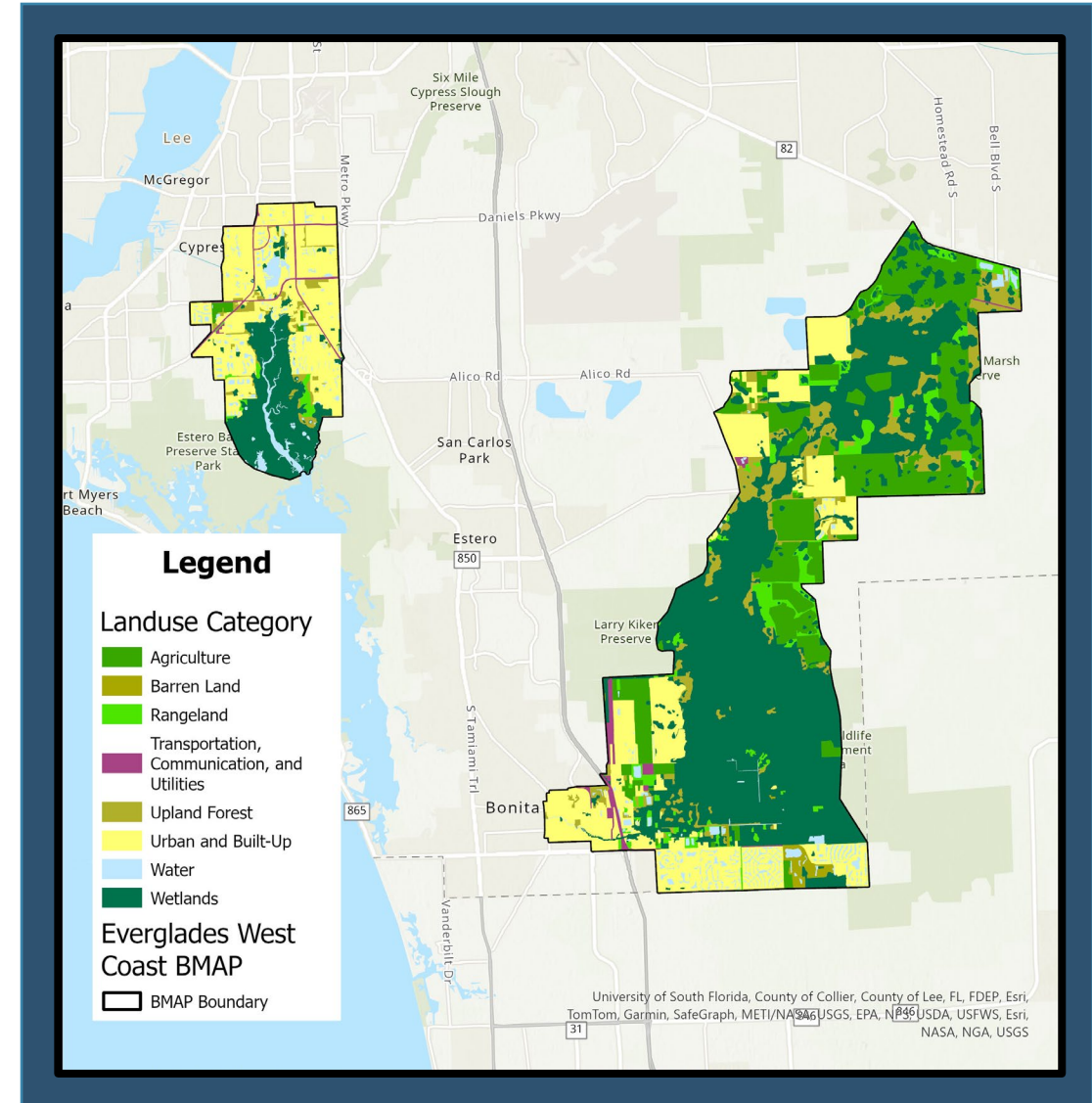
EVERGLADES WEST COAST LAND USE UPDATE

Hendry Creek

Land Use Category	Acres in Current BMAP	Acres Updated with SFWMD 2017-19 Land Use
Urban	5,184	5,905
Agriculture	98	219
Natural Lands	5,182	4,369

Imperial River

Land Use Category	Acres in Current BMAP	Acres Updated with SFWMD 2017-19 Land Use
Urban	6,160	8,857
Agriculture	11,597	8,821
Natural Lands	27,203	27,270



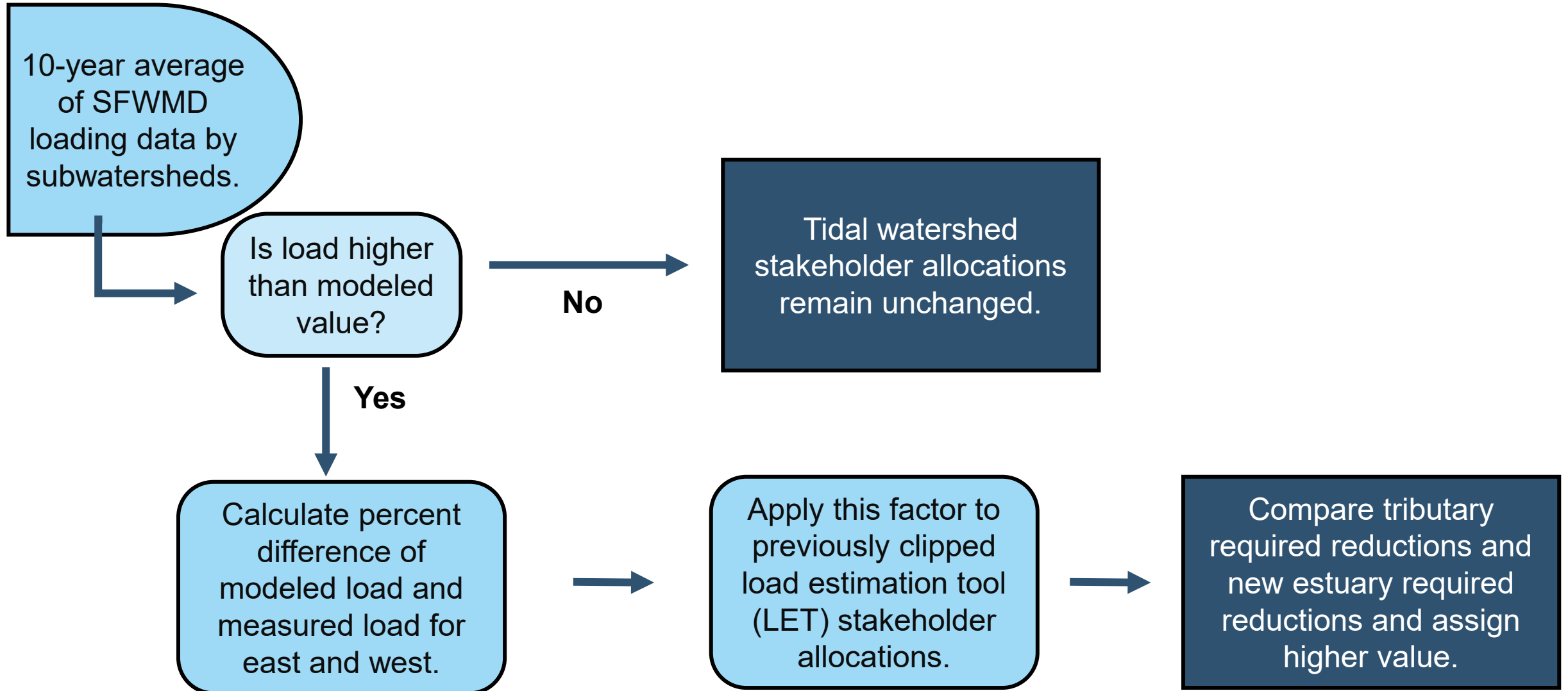


CALOOSAHATCHEE REQUIRED REDUCTIONS UPDATE

- Recent monitoring data from the South Florida Environmental Report (SFER) reported a much **higher loading of TN** to the Caloosahatchee Estuary than had been determined by the BMAP model using data through 2015.
- The 2022 Five-Year Review made recommendations to **update the loading** in the BMAP to better match measured data and to then also **update required reductions**.



CALOOSA HATCHEE REQUIRED REDUCTIONS UPDATE





CALOOSAHATCHEE REQUIRED REDUCTIONS UPDATE

Subwatershed	BMAP TN Start Load (lbs./yr.)	TN Required Reduction (lbs./yr.)	10-Year Average Water Year 2013–22 (lbs./yr.)	Percent Increase
East Caloosahatchee	1,008,818	232,028	1,329,467	31.78%
Tidal Caloosahatchee	1,200,195	276,045	1,137,632	▼5.21%
West Caloosahatchee	1,750,448	402,603	2,457,362	40.38%
Total	3,959,461	910,676	4,924,461	24.37%

Allowable Load = 3,048,785 lbs/yr
 New required reductions: ~1,938,241 lbs/yr



HOTSPOT ANALYSIS DEVELOPMENT OVERVIEW

Purpose:

- To find more specific areas to focus restoration activities.
- To highlight areas where projects might have stronger results.
- To highlight areas where more investigation is needed.

Analysis is NOT to determine BMAP or TMDL compliance.

Compliment to the TRA Evaluation:

- Analysis uses stations with two to five years of data, allowing more monitoring stations to be used.
- Can help narrow down more specific areas in need of attention within the TRA basins.
- Components are independent, rather than sequential.



HOTSPOT ANALYSIS DEVELOPMENT

COMPONENTS OF THE HOTSPOT INDEX

These four statistics calculated for the BMAP overall and used to compare against each station average:

- TN or TP concentration average.
- TN or TP 90th percentile.
- TN or TP Standard Deviation (SD).
- TN or TP Percent Frequency of Samples over BMAP Threshold.

BMAP Threshold:

- Caloosahatchee River and Estuary:
 - TN – Peninsular Numeric Nutrient Criteria (NNC) – 1.54 mg/L
 - TP – Peninsular NNC – 0.12 mg/L



HOTSPOT ANALYSIS DEVELOPMENT

INDEX RANKING APPROACH

Station Concentration Average Rank

Compare to BMAP Threshold and overall BMAP average.

- Rank 0:** Station average below BMAP threshold.
- Rank 1:** Station average above threshold but below BMAP average.
- Rank 2:** Station average 2x above BMAP average.

Percentiles Rank

Compare to BMAP Threshold and 90th percentile for the whole BMAP.

- Rank 0:** Station average below BMAP threshold.
- Rank 1:** Station average above threshold but below 90th percentile.
- Rank 2:** Station average above 90th percentile.

Standard Deviation (SD) Rank

Compare to overall BMAP SD.

- Rank 0:** Station average below BMAP average + 0.5 SD.
- Rank 1:** Station average at or above average + 0.5 SD but less than BMAP average + 1 SD.
- Rank 2:** Station average at or above BMAP average + 1 SD.

Frequency Rank

Compare to BMAP Threshold.

- Rank 0:** Station percent exceedance below 5% of samples.
- Rank 1:** Station exceedances between 5% and 49% of samples.
- Rank 2:** Station exceedances over 50% of samples.



HOTSPOT ANALYSIS DEVELOPMENT

FINAL OVERALL RANK

Average Rank
+
Percentile Rank
+
SD Rank
+
Frequency Rank

=

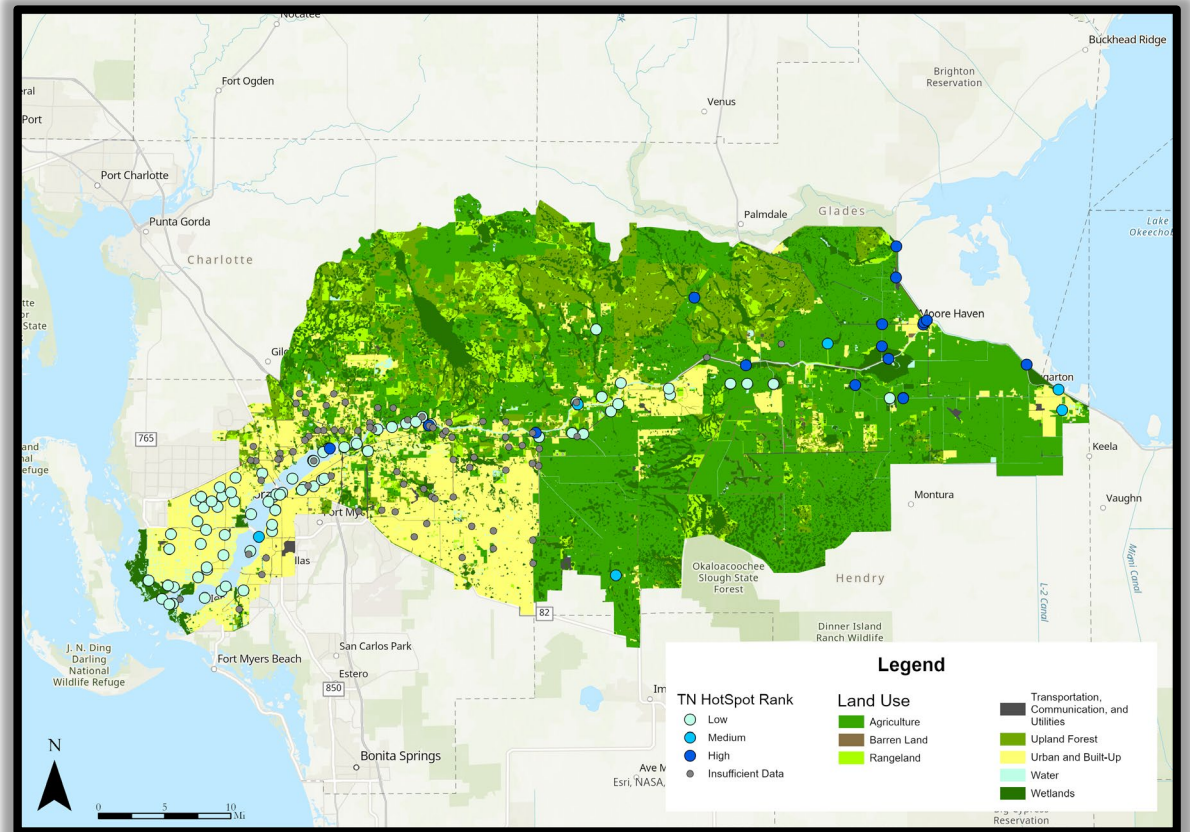
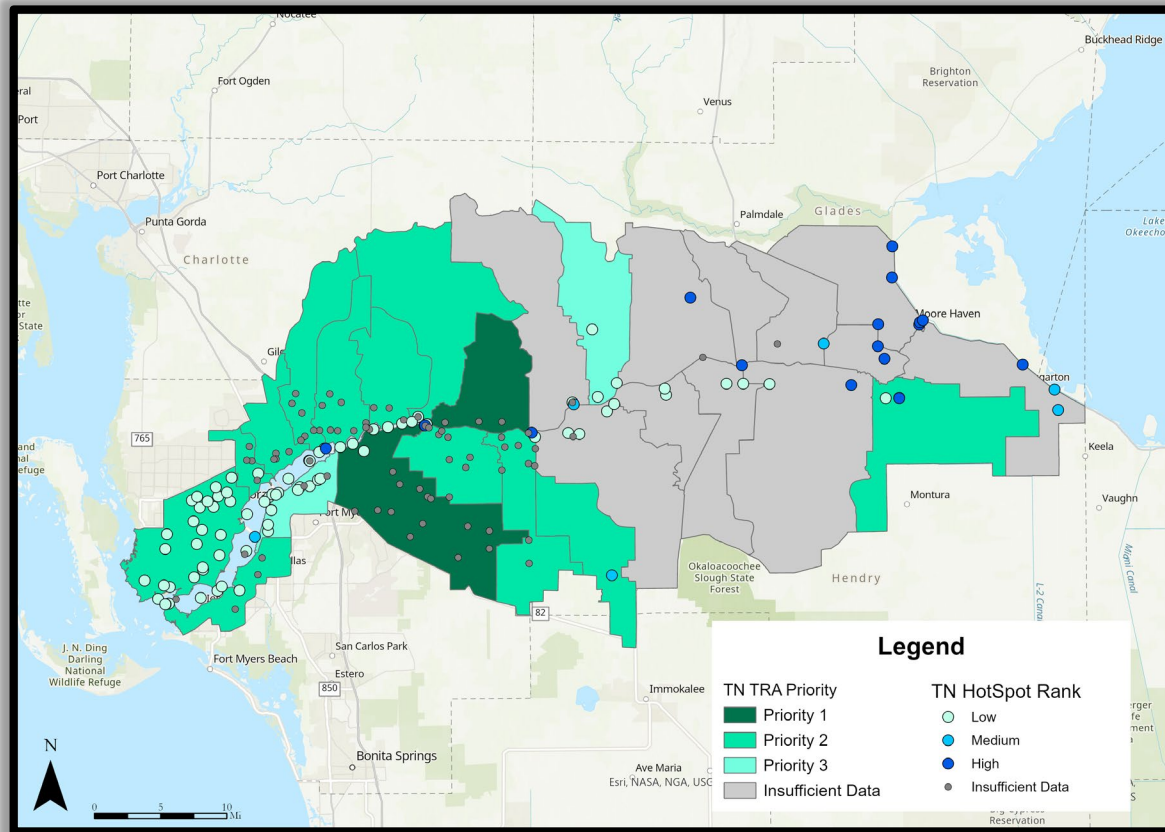
Total Index Rank

Rank 0 = Least Concern
Rank 8 = High Concern



HOTSPOT ANALYSIS RESULTS EXAMPLE

CALOOSA HATCHEE TN RESULTS





UPCOMING SCHEDULE

Feb.
2024

Draft wastewater and OSTDS plans due from stakeholders.

Feb.- Dec.
2024

Stakeholder meetings/technical analyses/draft document.

Aug.
1, 2024

Final wastewater and OSTDS plans due from stakeholders.

Northern Everglades and Estuaries Protection Program (NEEPP) Workshop.

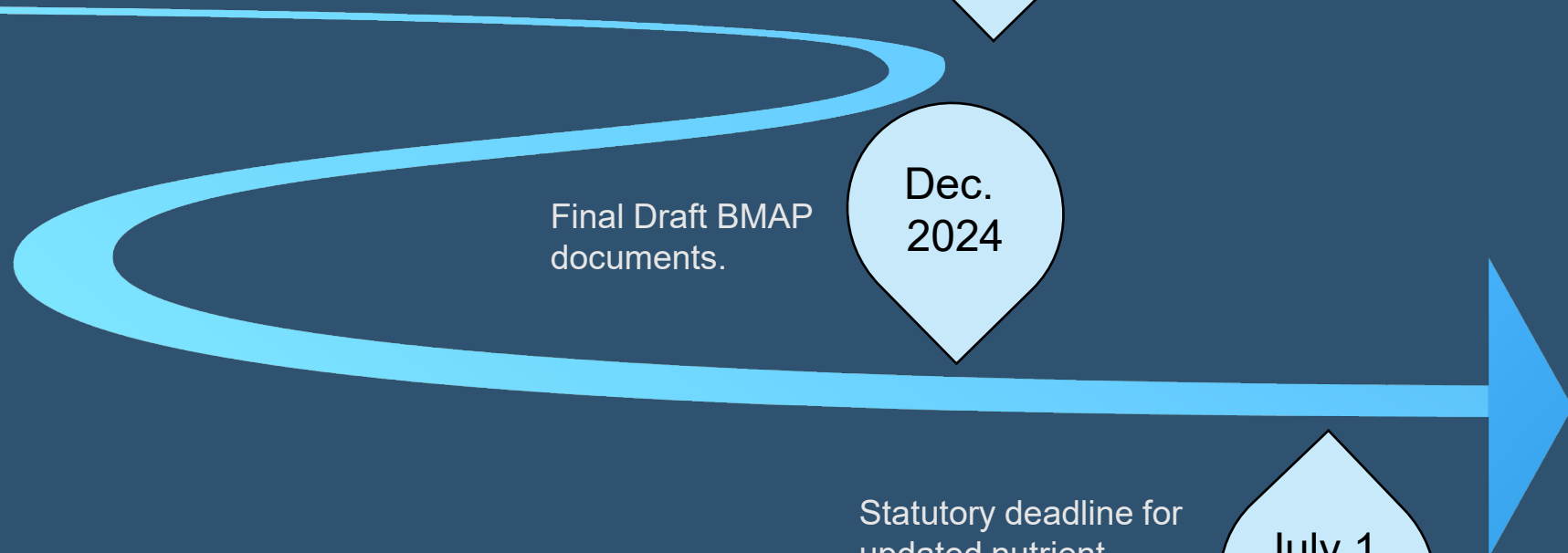
Fall
2024

Final Draft BMAP documents.

Dec.
2024

Statutory deadline for updated nutrient BMAPs.

July 1,
2025



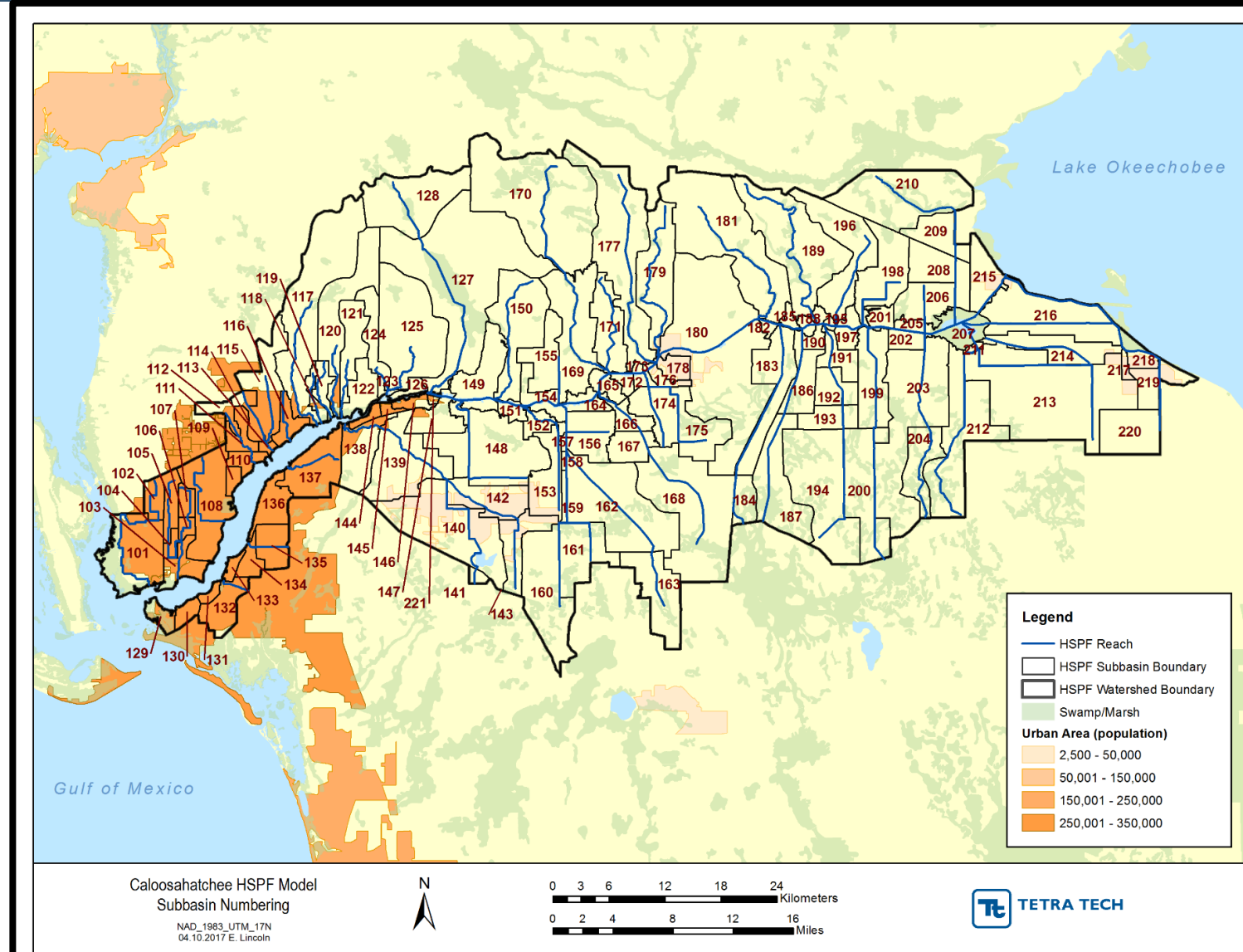


CALOOSAHATCHEE MODEL UPDATE

GENERAL OVERVIEW

To be completed after the 2025 Update and used in later BMAP update.

- Updating the current Hydrological Simulation Program – FORTAN (HSPF) model.
- Updating data used in model:
 - Flow.
 - Water quality.
 - Wastewater facility and OSTDS.
 - Land use.
- Updating allocations.
- Stay tuned for updates!



Caloosahatchee River & Estuary & Everglades West Coast BMAP Annual Meeting

April 2, 2024

Jennifer Thera

Florida Department of Agriculture and Consumer Services

Office of Agricultural Water Policy



Florida Department of Agriculture and Consumer Services

Overview

- Office of Agricultural Water Policy (OAWP) Staff and Responsibilities
- Agricultural Best Management Practices (BMP)
- BMP Manual Update
- Enrollment and Unenrolled Agricultural Lands Classification
 - Caloosahatchee River and Estuary Basin
 - Everglades West Coast Basin
- BMP Implementation Verification (IVs)
- BMP Enrollment Viewer Web App
- Legislative Report



Office of Agricultural Water Policy (OAWP)

- **West Gregory**; Director West.Gregory@FDACS.gov
- **J.P. Fraites**; Asst. Director John.Fraites@FDACS.gov
- **Bret Prater**; Asst. Director Bret.Prater@FDACS.gov
- **Angela Chelette**; Chief of Policy Planning and Coordination
Angela.Chelette@FDACS.gov
- **Steve Smith**; Chief of Field Services Steve.Smith@FDACS.gov



OAWP Staff

- **Yesenia Escribano;** Environmental Administrator-BMAPs
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- **Jennifer Thera;** Environmental Consultant-PPC Jennifer.Thera@fdacs.gov
- **Rebecca Elliott;** Environmental Consultant-PPC Rebecca.Elliott@fdacs.gov
- **Raulie Raulerson;** Environmental Administrator-Field Services
Raulie.Raulerson@fdacs.gov
- **Vacant;** Environmental Manager-Field Services
- **Sheila Kitaif;** Biological Administrator-Field Services Sheila.Kitaif@fdacs.gov



OAWP Responsibilities



Development and implementation of agricultural best management practices (BMPs)

Implementation of cost share programs

Water supply and water quality planning and coordination

Scientific and technical research

Other policy development and statutory responsibilities

Binding determinations



Benefits of Agricultural Best Management Practices

Management strategies, tools and practices that improve water quality, conserve water, and protect water resources (Efficiency)

Best available science and technology

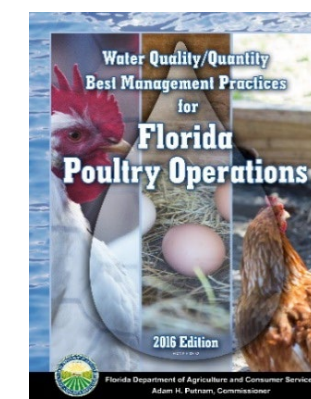
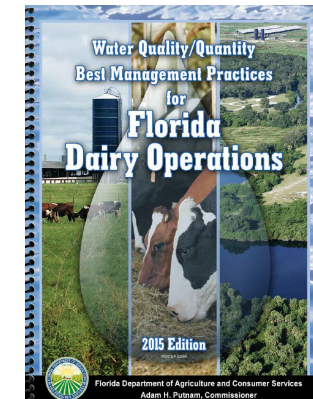
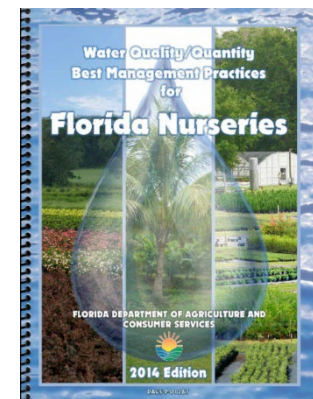
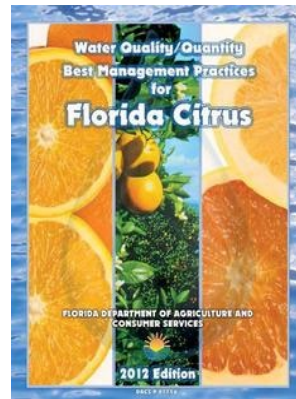
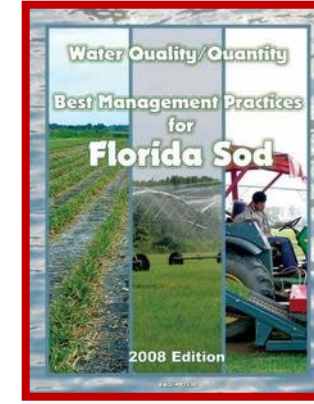
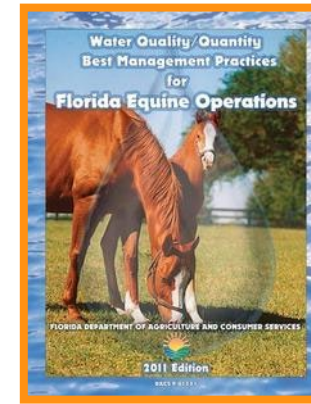
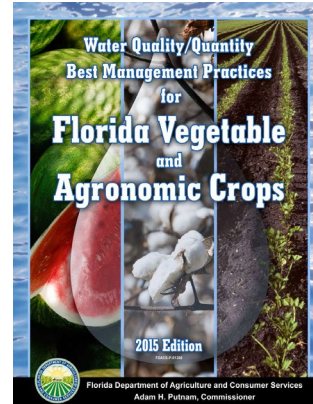
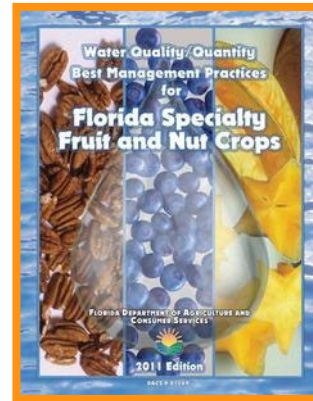
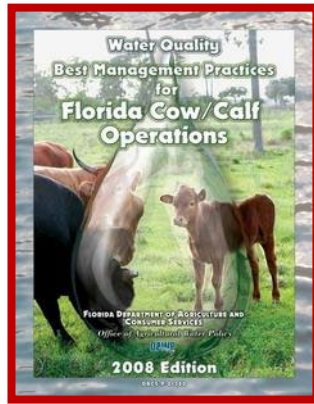
Technical and economic feasibility (Manual)

Balance productivity with water quality improvement

Proper implementation confirmed through implementation verification (IV) site visits



BMP Manuals

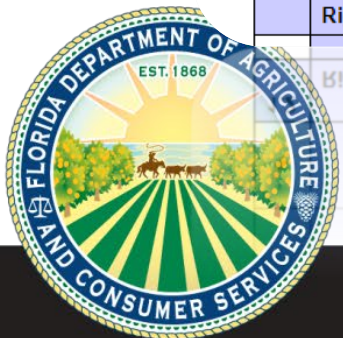


Update BMP Manuals: Status

Best Management Practices (BMPs)

The producer agrees to perform the following items either checked as "In Use" or "Planned":

Nutrient Management				
Do you apply nutrients or plan to apply nutrients in any form on the operation associated with this NOI?		Yes	No	-
		In Use	Planned	N/A
1.1	Right Source			
	1 If using commercial fertilizer (including Class AA biosolids), identify and document the nitrogen (N), phosphorus (P), and potassium (K) concentrations using the guaranteed analysis or product label information prior to application.			
	2 If using manures, poultry litter, compost, or other sources, determine and document the N, P, and K concentrations of those materials prior to application. Acceptable alternatives to laboratory analysis include supplier analysis, NRCS guidelines or values established in scientific literature.			
	3 If using Class A or Class B biosolids, account for the nutrient concentrations and follow the requirements of the FDEP permit.			
1.2	Right Rate			



Producer Options in BMAP Areas

1. Sign a Notice of Intent (NOI) and properly implement applicable BMPs for presumption of compliance, OR
2. Follow an FDEP or WMD-prescribed water quality monitoring plan at a producer's expense



Enrollments within the Caloosahatchee BMAP

Subwatershed	Total Ag Acres	Enrolled Ag Acres	% Enrolled	Irrigated Acres	Enrolled Irrigated Acres	% Enrolled
Tidal Caloosahatchee	58,932	46,358	79%	5,657	5,083	90%
West Caloosahatchee	180,837	153,794	85%	53,769	49,768	93%
East Caloosahatchee	194,532	176,131	91%	113,456	107,913	95%



BMP enrollment as of Dec 2023 and the 10th Florida Statewide Agricultural Irrigation Demand ([FSAID](#)) Geodatabase

Enrollments within the Caloosahatchee Tributaries BMAP

Tributary	Total Ag Acres	Enrolled Ag Acres	% Enrolled	Irrigated Acres	Enrolled Irrigated Acres	% Enrolled
Townsend Canal	28,868	26,813	93%	19,349	19,281	100%
C-19	24,545	23,240	95%	13,480	12,595	93%
Lake Hicpochee	5,189	4,675	90%	3,299	3,291	100%
Long Hammock Creek	68,807	57,233	83%	33,846	31,832	94%
S-4	29,203	27,728	95%	27,476	26,531	97%



BMP enrollment as of Dec 2023 and the 10th Florida Statewide Agricultural Irrigation Demand ([FSAID](#)) Geodatabase

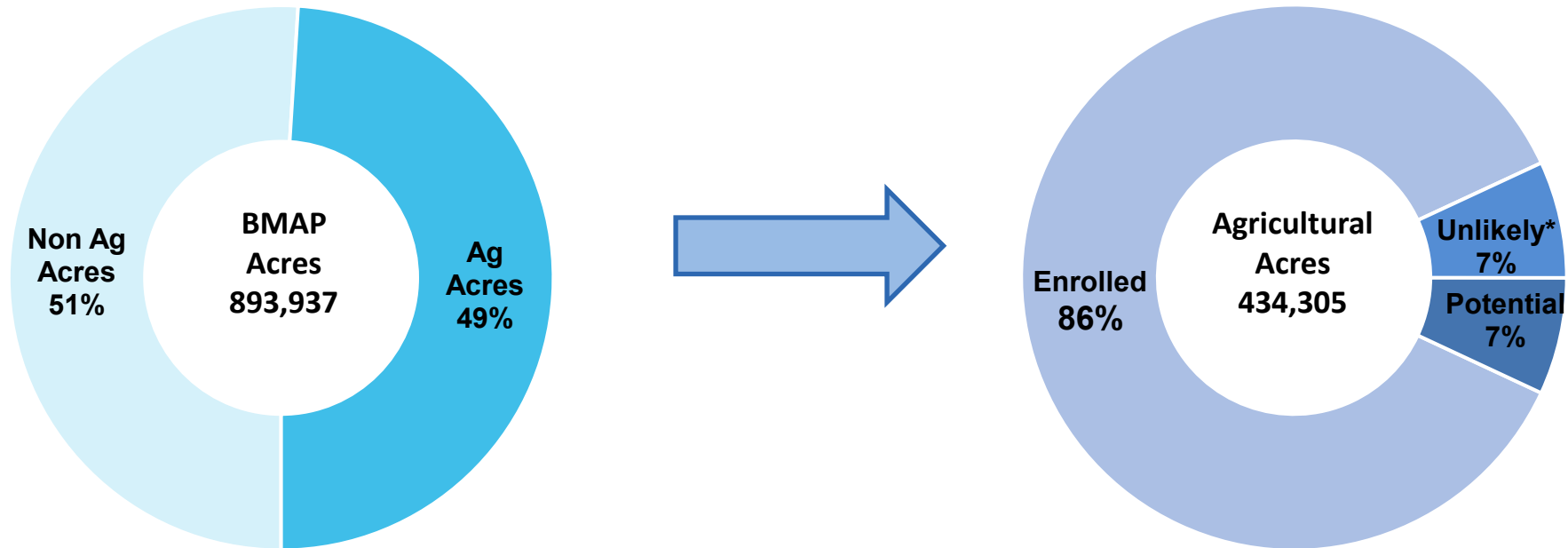
Agricultural Acres Enrolled within Caloosahatchee BMAP

BMP Manual	Acres
Citrus	38,572
Conservation Plan	43,840
Cow/Calf	99,553
Equine	43
Fruit & Nut	463
Multiple Commodities	104,174
Nursery	1,054
Poultry	56
Row/Field Crop	85,012
Sod	940
TOTAL	376,117



Agricultural Lands within Caloosahatchee BMAP

Non-Agricultural Acres	Agricultural Acres	Enrolled Agricultural Acres	Unenrolled - Unlikely Enrollable Acres *	Unenrolled - Potentially Enrollable Acres
459,632	434,305	376,117	29,587	28,431

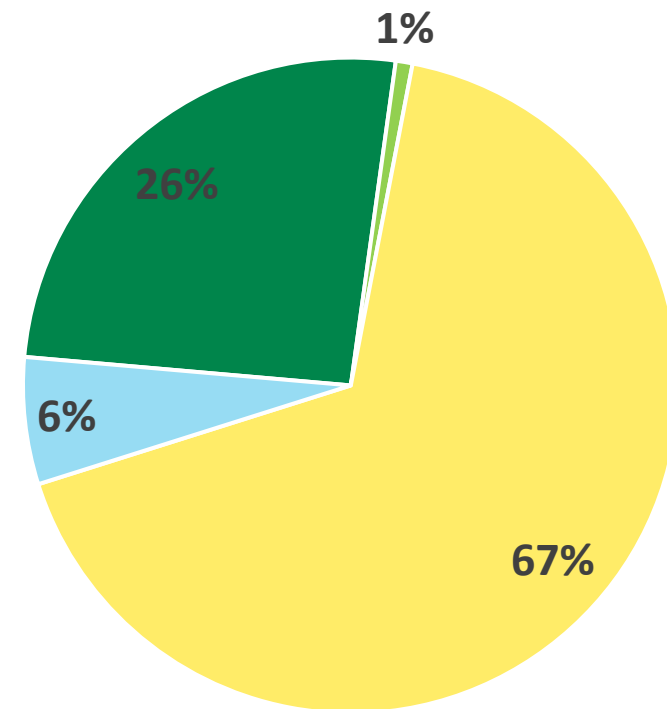


*This value includes acreages within state-owned properties and/or surface water project areas



Unenrolled - Unlikely Enrollable Acres within Caloosahatchee BMAP

Category	Acres
State Lands, Surface Water Projects	7,635
Timberland and Aquaculture**	245
Not Agriculture [e.g., DOR Use Code 70-99 (industrial or institutional use, acreage not zoned agricultural)]	19,854
Not Enrollable [e.g., missing parcel information, no overlap, conflicting parcel info, slivers]	1,852

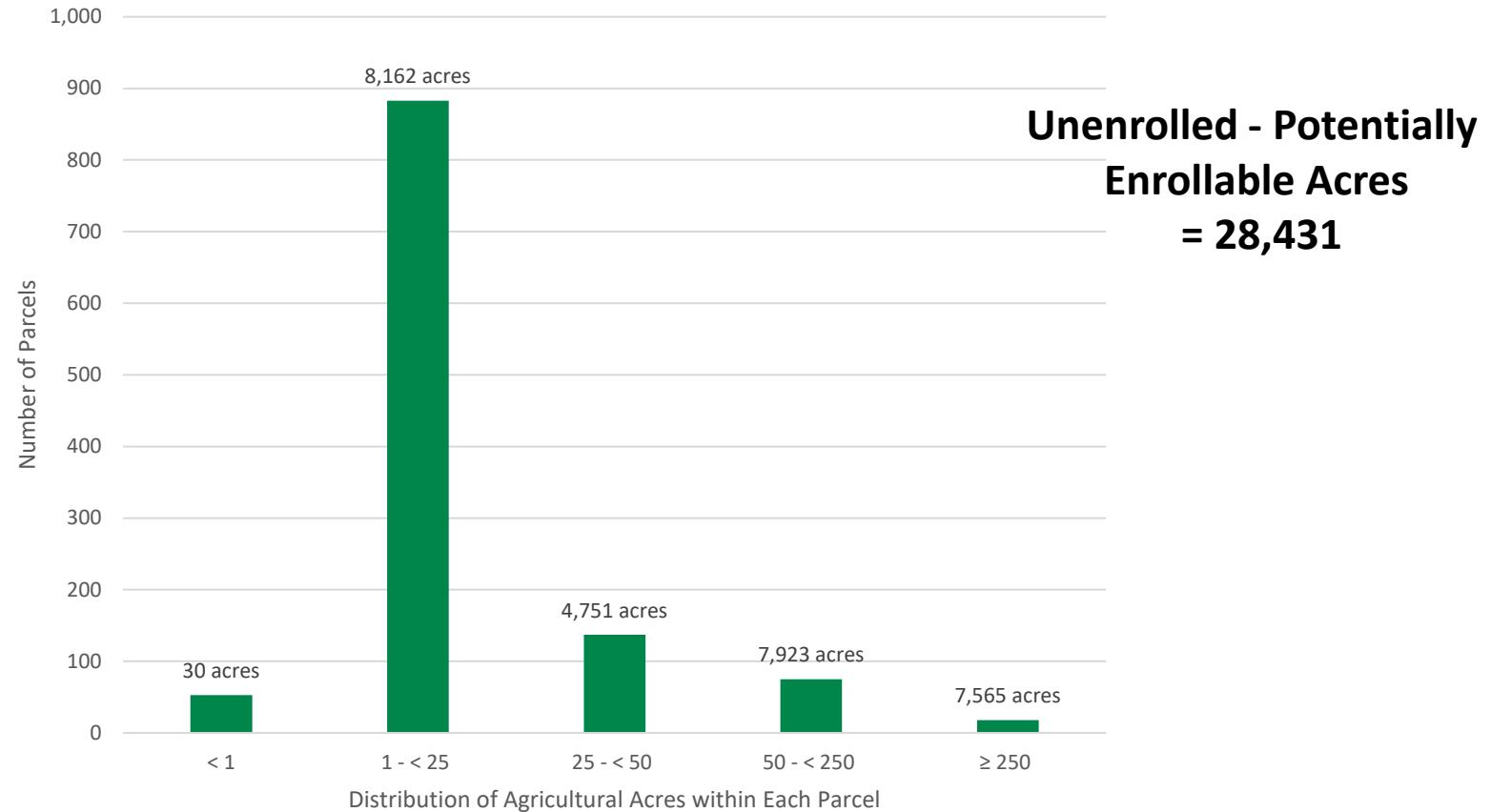


Unenrolled - Unlikely Enrollable Acres = 29,587

** May be eligible to be enrolled under the FDACS Florida Forest Service's Silviculture BMP Manual or the FDACS Division of Aquaculture's Aquaculture BMP manual.



Potentially Enrollable Parcels & Agricultural Acres within Caloosahatchee BMAP



Enrollments within the Everglades West Coast BMAP

Tributary	Total Ag Acres	Enrolled Ag Acres	% Enrolled	Irrigated Acres	Enrolled Irrigated Acres	% Enrolled
Hendry Creek	103	0	0%	75		0%
Imperial River	9,431	4,977	53%	3,137	3,101	99%



BMP enrollment as of Dec 2023 and the 10th Florida Statewide Agricultural Irrigation Demand ([FSAID](#)) Geodatabase

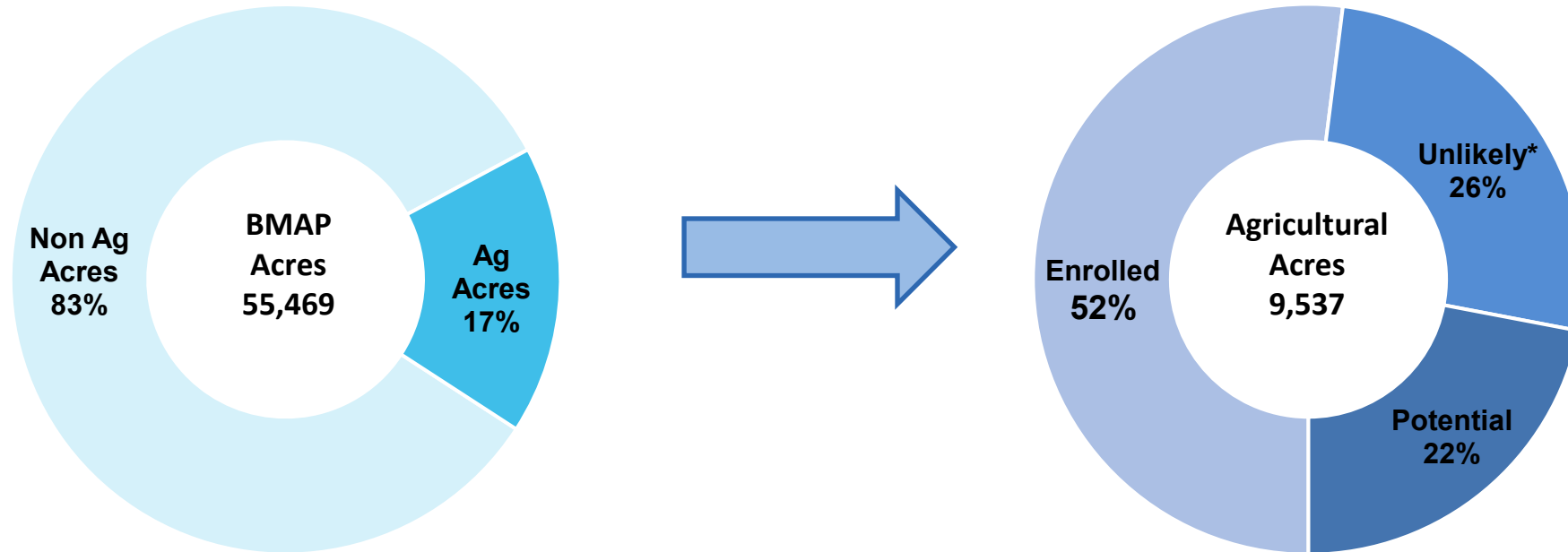
Agricultural Acres Enrolled within Everglades West Coast BMAP

BMP Manual	Acres
Citrus	630
Cow/Calf	444
Multiple Commodities	99
Nursery	22
Row/Field Crop	3,781
TOTAL	4,976



Agricultural Lands within Everglades West Coast BMAP

Non-Agricultural Acres	Agricultural Acres	Enrolled Agricultural Acres	Unenrolled - Unlikely Enrollable Acres *	Unenrolled - Potentially Enrollable Acres
45,932	9,537	4,976	2,499	2,057

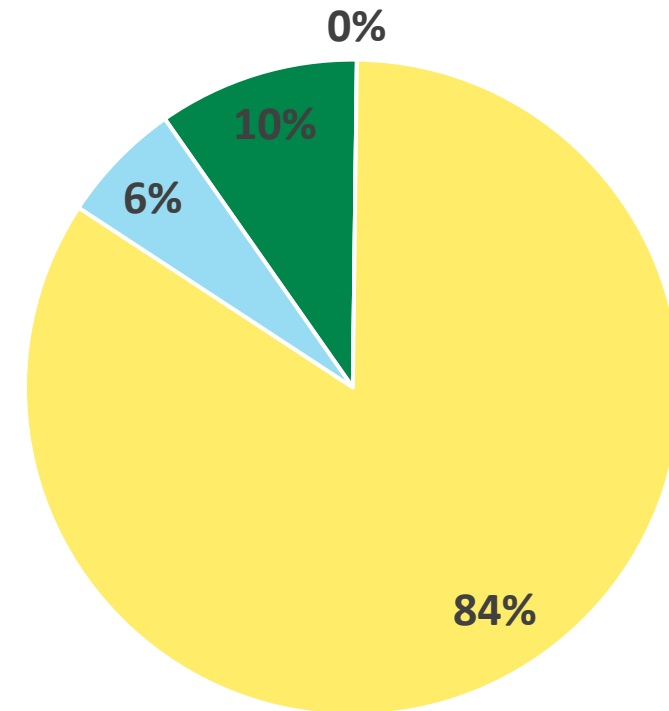


*This value includes acreages within state-owned properties and/or surface water project areas



Unenrolled - Unlikely Enrollable Acres within Everglades West Coast BMAP

Category	Acres
State Lands, Surface Water Projects	248
Timberland and Aquaculture**	0
Not Agriculture [e.g., DOR Use Code 70-99 (industrial or institutional use, acreage not zoned agricultural)]	2,101
Not Enrollable [e.g., missing parcel information, no overlap, conflicting parcel info, slivers]	151

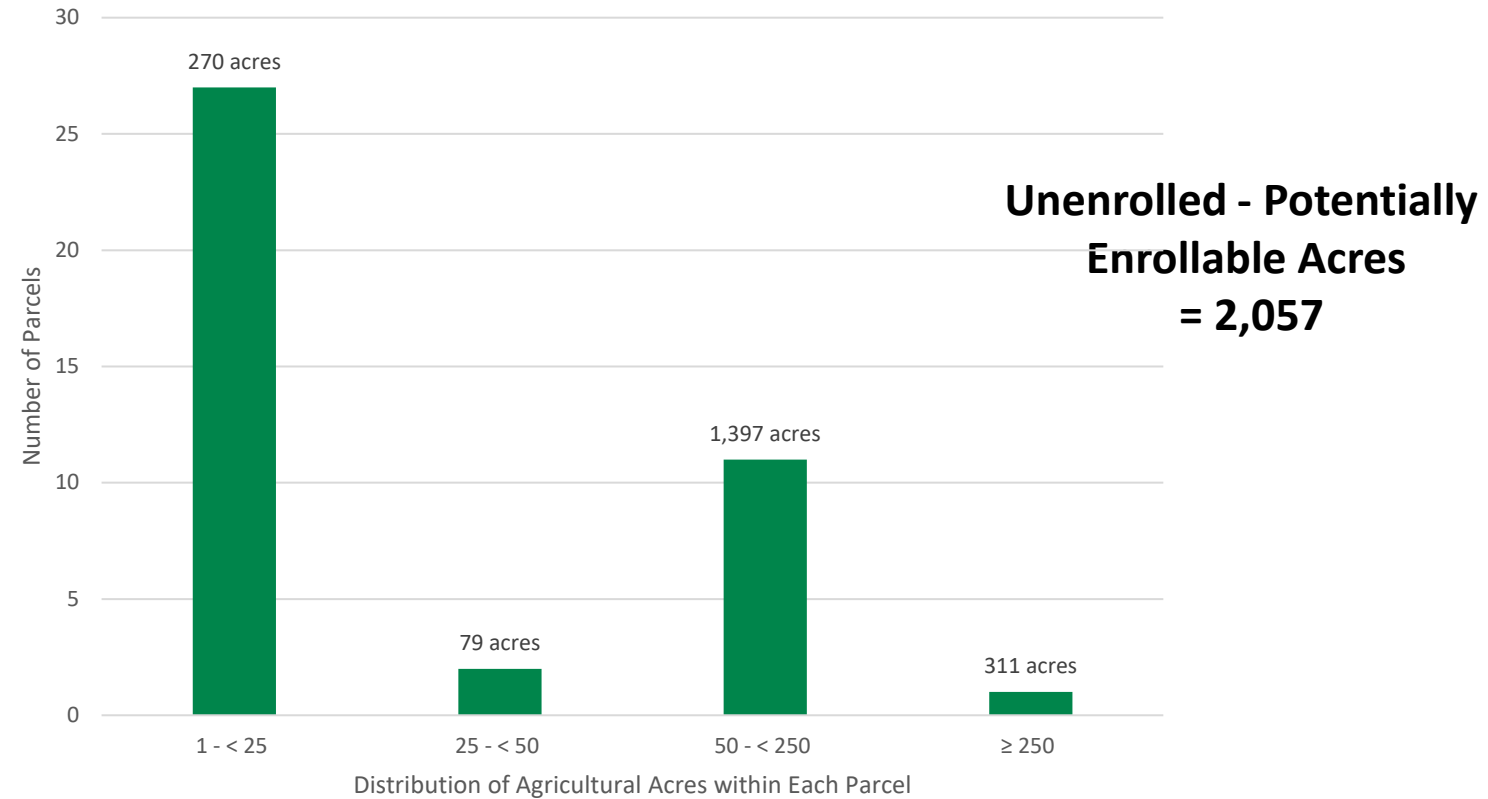


Unenrolled - Unlikely Enrollable Acres = 2,499

** May be eligible to be enrolled under the FDACS Florida Forest Service's Silviculture BMP Manual or the FDACS Division of Aquaculture's Aquaculture BMP manual.



Potentially Enrollable Parcels & Agricultural Acres within Everglades West Coast BMAP



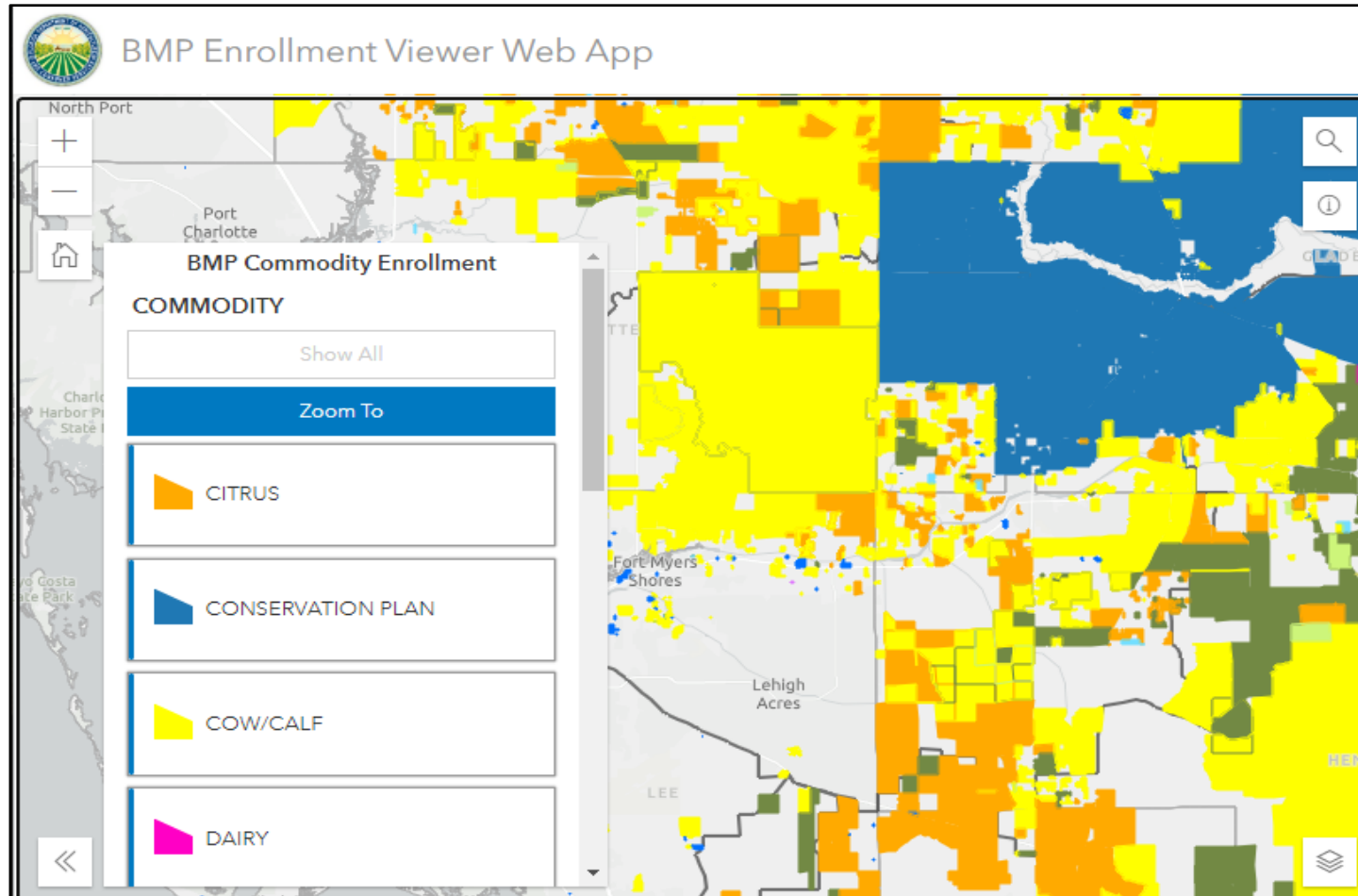
BMP Implementation Verification (IV)

- Process to verify the status of implementation of BMPs
- **Clean Waterways Act - SB 712 (July 2020)**
 - Requires IV site visits every 2 years
 - 93% completed* – Caloosahatchee
 - 83% completed* – Everglades West Coast
 - Requires collection, review, and retention of N and P fertilizer records
 - Nutrient Application Record Form (NARF)
 - FDACS reports total N and P applications to FDEP for utilization in BMAP assessments

* IVs completed as of Dec 31, 2023



BMP Enrollment Viewer Web App



[Office of Agricultural Water Policy: BMP Enrollment Map \(fdacs.gov\)](https://fdacs.gov)



2024 FDACS Legislative Report

Florida Department of Agriculture and Consumer Services
Office of Agricultural Water Policy



Available July 1, 2024

Status of Implementation of Agricultural Nonpoint Source Best Management Practices

Report to the Governor, the President of the Senate, and the Speaker of the House
Pursuant to Section 403.0675(2), F.S.

Publication No: FDACS-P-01924 Rev. 07/22

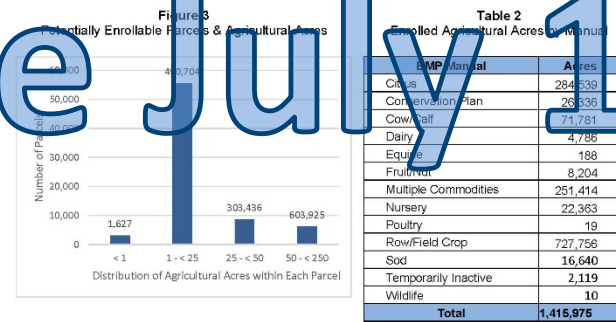
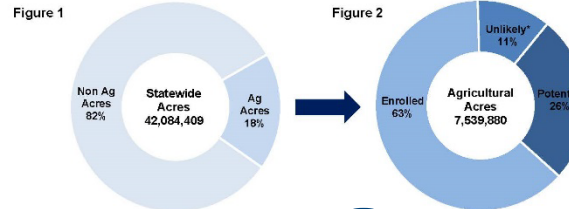


Status of Implementation of Agricultural Best Management Practices (BMPs) Statewide

Table 1

Non-Agricultural Acres	Agricultural Acres	Enrolled Agricultural Acres	Unenrolled - Unlikely Enrollable Acres *	Unenrolled - Potentially Enrollable Acres
34,544,529	7,539,880	4,571,656	856,331	1,883,959

*This value includes acreages within state-owned properties and/or surface water project areas

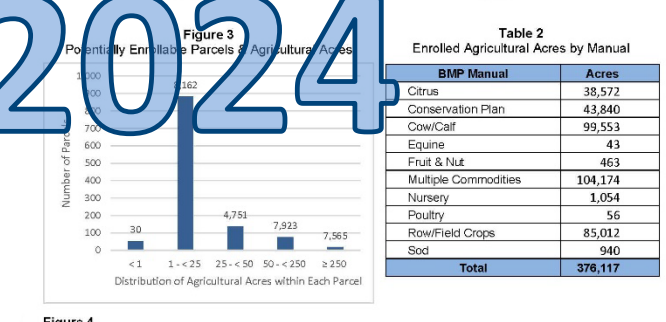
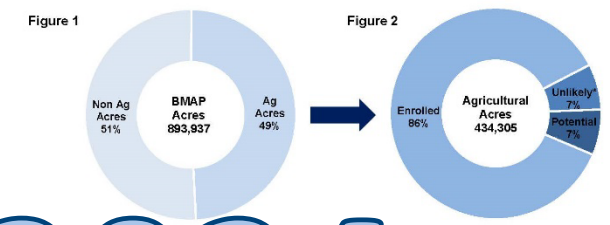


Status of Implementation of Agricultural Best Management Practices (BMPs) in the Caloosahatchee River and Estuary BMAP

Table 1

Non-Agricultural Acres	Agricultural Acres	Enrolled Agricultural Acres	Unenrolled - Unlikely Enrollable Acres *	Unenrolled - Potentially Enrollable Acres
459,632	434,305	376,117	29,587	28,431

*This value includes acreages within state-owned properties and/or surface water project areas



<https://www.fdacs.gov/Divisions-Offices/Agricultural-Water-Policy>

Florida Department of Agriculture and Consumer Services

Thank You!

<http://www.fdacs.gov/Divisions-Offices/Agricultural-Water-Policy>

Jennifer Thera, Environmental Consultant
Jennifer.Thera@FDACS.gov – (850) 617-1722



Florida Department of Agriculture and Consumer Services



THANK YOU

Diana Turner

Division of Environmental Assessment and Restoration
Florida Department of Environmental Protection

Contact Information:

850-245-8825

Diana.M.Turner@FloridaDEP.gov

**Caloosahatchee River and Estuary and Everglades West Coast
Basin Management Action Plans (BMAPs) Annual Meeting
Webinar Summary**

Tuesday, April 2, 2024

1:00 pm – 2:35 pm

Participants

Cassandra Armstrong, SFWMD
Charles Avery, Citizen
Christian Avila, SFWMD
Taufiqul Aziz, DEP
Bill Baker, MacVicar Consulting
Lisa Bally, ATM
Evelyn Becerra, DEP
David Bortell, Citizen
Beth Brady, Save the Manatee
Andrea Browning, Lee County
Patricia Burke, SFWMD
Trevor Campbell, AECOM
Lauren Campbell, DEP
John Cassani, Calusa Waterkeeper
Stacy Cecil, SJRWMD
Carolin Ciarlariello, DEP
Brad Cornell, Audubon
Kevin Coyne, AMP
Susan Dahod, Citizen
Tim Denison, Johnson Engineering
Diane DiPascale, Collier County
Amy Eason, Martin County
Kate English, Pavese Law Firm
Yesenia Escribano, FDACS
Amanda Exposito-Ferree, Atkins Realis
Edgar Fernandez, Anfield Consulting
Jay Ferrin, Florida Senate
Jessica Fetgatter, DEP
Phil Flood, SFWMD
Jake Fojtik, FFBF
Marcy Frick, Tetra Tech
Joe Gilio, Citizen
Beverly Grady, Citizen
Kyle Grandusky, GMA Water
Jennifer Green, FDOT
Roxanne Groover, FOWA
Raichel Gulde, RES
Chris Guth, Federico and Associates
Ron Hamel, FGCU
Maddy Hart, FDACS
Kenny Hayman, DEP
Derek Hendrie, Lykes
Carolina Hernandez, SFWMD
Maira Homann, DEP
Laila Hudda, Citizen
Stephen Hume, Citizen
Nenad Iricanin, SFWMD
Megan Jacoby, SFWMD
Wes Kayne, Barraco & Associates
Chandler Keenan, DEP
Chris Keller, Wetlands Solutions
Steven Kelly, FDOT
Evan Key, DEP
Lisa Kreiger, Lee County
Tricia Kyzar, UF
Juli LaRock, SFWMD
Laura Layman, SFWMD
Bill Lynch, Jones Edmunds
Alexandra Mattingly, SFWMD
Daniel McDevitt, McDevitt Law
Valentina Miele, FL Oceanographic Society
Brandon Moody, Charlotte County
Jessica Mostyn, DEP
Ryne Nimmo, DEP
Kevin O'Donnell, DEP
Stacey Ollis, SFWMD
Steffany Olson, SFWMD
Roland Ottolini, Lee County
Rachel Perley, Four Waters Engineering
Ximena Pernet, RES
Jon Perry, ESA
Mark Perry, Florida Oceanographic Survey
Codty Pierce, Calusa Waterkeeper
Libby Pigman, FWMD
Jason Pim, Sharkinetics
Nicolas Pisarello, ATM
Robert Potts, ATM
Jeff Prater, USACE

Irene Quincey, Pavese Law
Jennifer Reynolds, SFWMD
Ethan Richardson, DEP
Mary Kay Robbins-Kralapp, Citizen
Steven Rodriguez, SDPA
Rhonda Roff, Citizen
Maria Romero, Lee County
Zach Sampson, Tampa Bay Times
Warren Schirado, Citizen
Marlene Severino, DEP
Mailin Sotolongo- Lopez, DEP
Courtney Stevenson, Bonita Springs Utilities
Danielle Taylor, SFWMD
Drew Thacker, Westervelt

The Florida Channel
Jennifer Thera, FDACS
Richard Thompson, City of Fort Myers
Ansley Tilley, RES
Bill Tredik, ATM
Diana Turner, DEP
David Tyler, DEP
Rachel Vitek, RES
Shreya Vuttaluru, Tampa Bay Times
Tommy Walker, Alico
Youchao Wang, SFWMD
Rhonda Watkins, Collier County
Ken Weaver, DEP

The webinar recording and supporting materials are posted to the Florida Department of Environmental Protection (DEP) file transfer protocol (FTP) site at https://publicfiles.dep.state.fl.us/DEAR/BMAP/Caloosahatchee/Meetings/2024_Annual_Meeting/ or https://publicfiles.dep.state.fl.us/DEAR/BMAP/EWC/Meetings/2024_Annual_Meeting/.

Questions and Answers

Question on the South Florida Water Management District (SFWMD) presentation: When will DEP determine the C-43 operational water quality certification? C-43 water quality certification is for Water Quality-Based Effluent Limits (WQBELs).

Answer from Diana Turner, DEP: I do not know that at this time but I can look into that.

Follow-up Answer: DEP will issue an operating permit for the C-43 West Basin Storage Reservoir project prior to final completion. According to SFWMD, construction of the C-43 reservoir is anticipated to be completed in December 2024. Please note that since this is a reservoir and not a stormwater treatment area, there is no WQBEL for this project.

Question the SFWMD presentation: Some great projects in the works. What efforts are being made in identifying additional projects and securing lands to address the shortfall of storage needs in the Caloosahatchee Watershed?

Answer from Stacey Ollis, SFWMD: The District is working in collaboration with DEP over the next year. We are in preparation now for our five-year Water Protection Plan reviews and those will be published in the 2025 South Florida Environmental Report (SFER). We are working on the collaboration for identifying additional projects and those will include identifying both public and possible other areas that would allow us to place additional projects. There will be more to come on that in the 2025 SFER.

Question on the DEP presentation: When will the next iteration of the Everglades West Coast BMAP be released/updated?

Answer from Diana Turner, DEP: We are going to be updating this BMAP by July 1st of next year and I will talk a lot more about what is coming up for that update later on in the presentation. It will be updated by next July.

Question on the DEP presentation: My question is about the nitrogen concentrations. Are they summaries/averages over time?

Answer from Marcy Frick, Tetra Tech: Those are the total maximum daily load (TMDL) concentrations, I am assuming. If they are then we are looking at some long-term averages.

Answer from Diana Turner, DEP: If it was about the scatter plots I showed for Everglades West Coast, that was all sample data over time. We do look at trends, particularly in Caloosahatchee.

Clarification: Yes, scatter plots.

Question on the DEP presentation: What projects are in place to improve the year-over-year total nitrogen (TN) reduction to meet the 20 year plan?

Answer from Marcy Frick, Tetra Tech: The projects that we have shown so far are the projects submitted by all of our local stakeholders that were shown in the slides earlier as well as ones that the Coordinating Agencies, that is the South Florida Water Management District, Florida Department of Agriculture and Consumer Services, and Florida Department of Environmental Protection, are looking to do on a more regional scale. Each year as part of the Statewide Annual Report we ask for updates and new projects to continue to meet those targets.

Answer from Diana Turner, DEP: As part of the BMAP updates we will be asking for projects to include in the BMAPs so that is something that we look at as we do the updates.

Question on the DEP presentation: Are the TN reductions noted for the 10-year milestone based on modeling or actual measured/monitored amounts?

Answer from Marcy Frick, Tetra Tech: The answer to that is it is a combination. Depending on the project type, we use the BMAP model for the starting load as well as some defined efficiencies based on studies and literature values to calculate the reductions. Some other projects do have measured reductions that we report on.

Question on the DEP presentation: Are the phosphorus concentrations measured or calculated?

Answer from Marcy Frick, Tetra Tech: If that is for the projects, it is a combination of measured reductions and calculated.

Question on the DEP presentation: How often are the loads coming from the watershed updated?

Answer from Diana Turner, DEP: Every year with the South Florida Environmental Report, they report on loads coming off the watershed every year.

Answer from Marcy Frick, Tetra Tech: For the BMAP, our model starting load remains constant but we do always look at those measured watershed loads that the SFWMD reports on.

Question on the DEP presentation: Where can we see the trends?

Answer from Marcy Frick, Tetra Tech: Those are in SFWMD's South Florida Environment Report and we do the five-year water quality trends for the BMAPs as part of those 5-Year Reviews. The Caloosahatchee trends were in the last 5-Year Review from the year before last.

Answer from Diana Turner, DEP: It is also on the StoryMap.

Question on the DEP presentation: What was the TN reduction number for 2023?

Answer from Marcy Frick, Tetra Tech: We would have to go back into the Statewide Annual Report (STAR) to look at what we got for that. [Note: Based on the draft STAR information, an additional 1,232 pounds per year of total nitrogen were achieved in 2023.]

Question on the DEP presentation: Do those new loads that factor into the TMDL?

Answer from Marcy Frick, Tetra Tech: We will talk about next steps shortly on how we will factor in those new loads.

Question on the DEP presentation: Are the reductions calculated or are you referring to the actual monitoring data as reported by the SFWMD in the five major basins?

Answer from Marcy Frick, Tetra Tech: The project reductions are either calculated using the model and literature or study efficiencies or monitoring data, where available. In terms of the watershed loads, some of that information does come from the SFWMD's South Florida Environmental Report.

Question on the DEP presentation: With the Florida Department of Agriculture and Consumer Services (FDACS) updating their best management practice (BMP) books and practices, how is DEP monitoring those BMP credits? Will there be an increase in sample monitoring to verify compliance?

Answer from Diana Turner, DEP: FDACS is pretty early in the process of updating those BMP manuals so I am not sure exactly what that will look like yet. We are still working through that process with them.

Question on the DEP presentation: Not seeing the same progress reported here as noted in the South Florida Environmental Report (SFER) on a basin or subwatershed perspective. Can you clarify?

Answer from Marcy Frick, Tetra Tech: We did talk about in the 5-Year Review and last year's meeting that there are increasing watershed loads. These progress charts are compared to the estimated loading at the time of the BMAP and Diana will shortly talk more about next steps on how we plan on addressing the increased watershed loads as part of the next BMAP update.

Question on the DEP presentation: Does the total phosphorus (TP) and TN loading account for the inflows from Lake Okeechobee?

Answer from Marcy Frick, Tetra Tech: For the BMAP, we are focused on the loads from the watershed that the local stakeholders are able to reduce. Those are the loading values that we are looking at in the BMAP.

Question on the DEP presentation: Are data reported here including excess Lake Okeechobee discharges as occurring today?

Answer from Marcy Frick, Tetra Tech: The data here are through Water Year 2023, which end at the end of April 2023 so we are not looking at current discharges. That will be reflected in the next targeted restoration area (TRA) update.

Question on the DEP presentation: What is the source of nitrogen in Cypress Creek and Orange River?

Answer from Marcy Frick, Tetra Tech: We have kind of looked into it and I know Lee County has done some studies and we are continuing to try and find sources so that we can address that. I do not think we have a set answer to that yet.

Question on the DEP presentation: Why is insufficient data so prevalent in the eastern basins after 12 years of BMAP?

Answer from Marcy Frick, Tetra Tech: The eastern area was just added in 2020 so we started monitoring those in 2020. As I mentioned, starting next year, we will have quite a few less insufficient

because we will have the five years of data.

Question on the DEP presentation: While the modeled BMAP load for TN was 3.9 million pounds per year, the 2022 measured 5-year average for the watershed was 5.2 million pounds per year. Has this problem of modeled versus measured 5-year averages disparity been addressed to get more realistic status assessments?

Answer from Marcy Frick, Tetra Tech: We will talk about that shortly.

Question on the DEP presentation: Can you comment on the status of House Bill 1557/Senate Bill 1386? Has Governor DeSantis signed yet? The bill adds some further requirements for wastewater treatment facilities specific to BMAPs and TMDLs.

Answer from Diana Turner, DEP: I do know that it has passed. I do not believe it has been signed yet as far as I know.

Answer from Moira Homann, DEP: I do not believe he has signed it yet so we're keeping an eye on that. Once it is signed, we will start talking about how we will incorporate those new requirements into our BMAPs for the updates for next year.

Question on the DEP presentation: Will also update stakeholders in the Everglades West Coast to include any community development districts (CDDs), as you did for the Caloosahatchee River and Estuary?

Answer from Marcy Frick, Tetra Tech: Yes, we did get information from Lee County to do that.

Question on the DEP presentation: Are municipal separate storm sewer system (MS4) permitted programs in compliance with BMAP load reduction targets? If a MS4 is in a BMAP area it requires accountability with the BMAP load reduction.

Answer from Diana Turner, DEP: The MS4s have certain permit requirements that are handled by the MS4 group.

Answer from Marcy Frick, Tetra Tech: Everyone has been submitting projects and updates and making progress towards reductions so I believe that means they are in compliance.

Answer from Diana Turner, DEP: I believe so.

Question on the DEP presentation: How did we get a reduction in urban land use? Or is the 2017-2019 the current?

Answer from Marcy Frick, Tetra Tech: It does not look like there was a reduction. They both increased. The "Acres in Current BMAP" are from the 2012 BMAP with that land use coverage, which 2010 was probably the newest. The updated 2017-2019 coverage is the latest available. There was an increase in urban and a reduction in natural and agriculture.

Question on the DEP presentation: What happens in 2032 if required reductions have not been attained?

Answer from Diana Turner, DEP: There are a couple of things that can happen. We will have to evaluate where we are in 2032 to see if we need to extend the BMAP or if we need to take enforcement because BMAPs are a Secretarial Order so if we need to take enforcement we can.

Answer from Moira Homann, DEP: With the requirements of Senate Bill 1379 where stakeholders have to meet milestones every five years, we'll be able to keep tabs of where we are hopefully way ahead of time before we hit that 2032 deadline and we will be able to work to adaptively manage our

projects and work with stakeholders to ensure that we've got as many projects for the highest amount of reductions as possible before we hit that deadline. At that point we would reconsider if we need to make adjustments to our timeframes.

Comment: This feels like we are kicking the can down the road folks!

Question on the DEP presentation: How confident are you in the 10-year average loading data while also reporting insufficient data for the East and West basins?

Answer from Marcy Frick, Tetra Tech: The 10-year average loading data used in the BMAP are from the model. It is the last ten years of the model period and that was calibrated to data available at that time. The reason we are reporting insufficient data for East and West is for the TRA process we needed five consecutive years of monitoring and those basins have not previously been monitored consistently. As you can see, we do have data that Diana represented in the hotspot analysis. We just did not have the five consecutive years for the TRA approach. These are all just different ways of tracking progress to help inform where we really need to be focusing our efforts moving forward.

Question on the DEP presentation: Will DEP continue to allow excess BMAP load reduction credits for environmental resource permit (ERP) applications?

Answer from Marcy Frick, Tetra Tech: Any BMAP credits have to be above and beyond any permit requirements. If any permitted stormwater treatment projects do have more treatment provided than required, we can give some additional credit.

Question on the DEP presentation: What is TRA?

Answer from Marcy Frick, Tetra Tech: That is the targeted restoration area approach that we described a few slides ago.

Question on the DEP presentation: How are you handling "I" qualified data in the TN calculations?

Answer from Diana Turner, DEP: "I" data is included. We take a look to make sure there is no other qualifier codes with it.

Question on the DEP presentation: In the hotspot data map, there are still lots of insufficient data points. Does that mean no data are being collected in these locations? How can that be addressed?

Answer from Diana Turner, DEP: I have to go back and look at the station list. I do not recall if this is every single station that exists. There are some stations that just by the nature of what the purpose is of the station, they are only sampled a couple of times and then they are done. That could be some of these stations. It could be that they are newer stations so they maybe only have one year of data. There are a couple of different possibilities.

Question on the DEP presentation: Are data sorted by whether there are lake discharges at the time of sampling?

Answer from Diana Turner, DEP: No, I do not believe so.

Question on the DEP presentation: Will the results of the TRA and hot spot analysis be included in future BMAP Report and/or BMAP Story Map?

Answer from Marcy Frick, Tetra Tech: Yes, they will.

Question on the FDACS presentation: Are there any plans to conduct audits to verify BMP compliance?

Answer from Jennifer Thera, FDACS: Every two years we go out and do the site visit and make sure they are doing everything correctly and implementing everything they need to be doing. It is a two-step process to determine if the BMPs are being properly implemented. We first give them corrective measures and then if a producer does not properly implement, we turn them over to DEP for enforcement.

Question on the FDACS presentation: Despite 95% enrollment in East Caloosahatchee that is where the most nutrient hotspots are. Is there a connection between BMPs implemented and measured outcomes in downstream impaired waters?

Answer from Jennifer Thera, FDACS: For all the BMPs verified effective by DEP, there is a presumption of compliance with water quality standards and there is no onsite monitoring on an operation. Through monitoring, DEP identifies and tracks water quality trends in the waterbody to identify areas in the watershed that are exhibiting high loadings of TN or TP, the hotspot analysis that they talked about, to better focus our management efforts. We are currently working cooperatively with DEP and SFWMD to identify adaptive management strategies and regional projects that will help meet the TMDL.

Question on the FDACS presentation: What portion of agricultural operations have chosen the water quality monitoring option for BMP assessment?

Answer from Jennifer Thera, FDACS: As of today, that we know of, no one has selected the monitoring in lieu of enrolling in our program and implementing FDACS' BMPs.

Question on the FDACS presentation: Why is unenrolled acreage so high in the Everglades West Coast basin? Isn't enrollment required when in a BMAP area?

Answer from Jennifer Thera, FDACS: Of the 48% that is being remained to be enrolled, 26% of those acreages are unlikely agriculture. If we account for what is likely enrollable, we are at 71% enrolled.

Question on the FDACS presentation: Is DEP in charge of BMP enrollment enforcement? If so, what is being done to require enrollment?

Answer from Diana Turner, DEP: Yes, DEP is in charge of enrollment enforcement. Our resident expert in charge of the enforcement program is not with us today so I will follow up with you and we will post an answer online as well. [Note: please refer to the 2023 annual meeting folder on the FTP site for an explanation on what the BMP enrollment enforcement efforts are:

https://publicfiles.dep.state.fl.us/DEAR/BMAP/Caloosahatchee/Meetings/2023_03_17_Annual_Meeting/]

Marcy Frick, Tetra Tech: We did cover that in the last two or three years in annual meetings. Some of that information is posted in past presentations, as well, if you want to look back at the FTP site.

Question on the DEP presentation: What model will be used to update the Everglades West Coast BMAP?

Answer from Marcy Frick, Tetra Tech: That will be another land use based model like was used before. We are just updating the land use year as Diana showed.