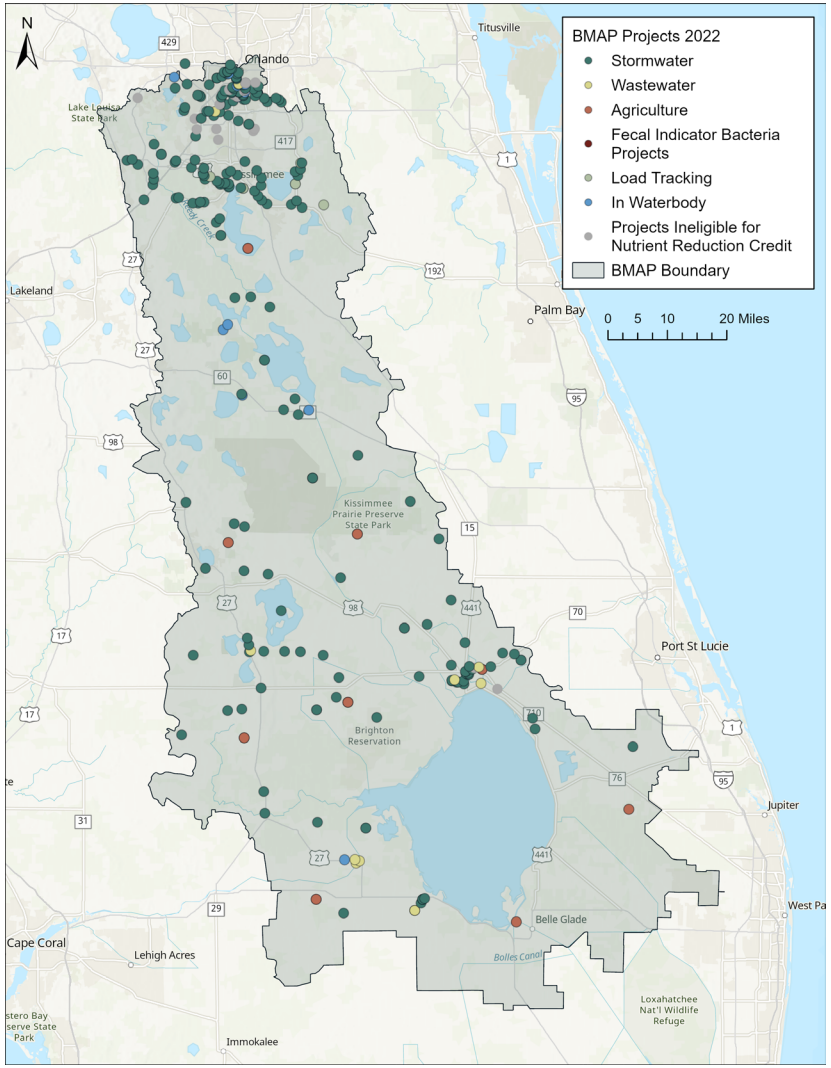
NORTHERN EVERGLADES BASIN MANAGEMENT ACTION PLANS

Kim Shugar
Director, Division of Environmental Assessment and Restoration
Florida Department of Environmental Protection

SFWMD Headquarters | Sept. 22, 2023

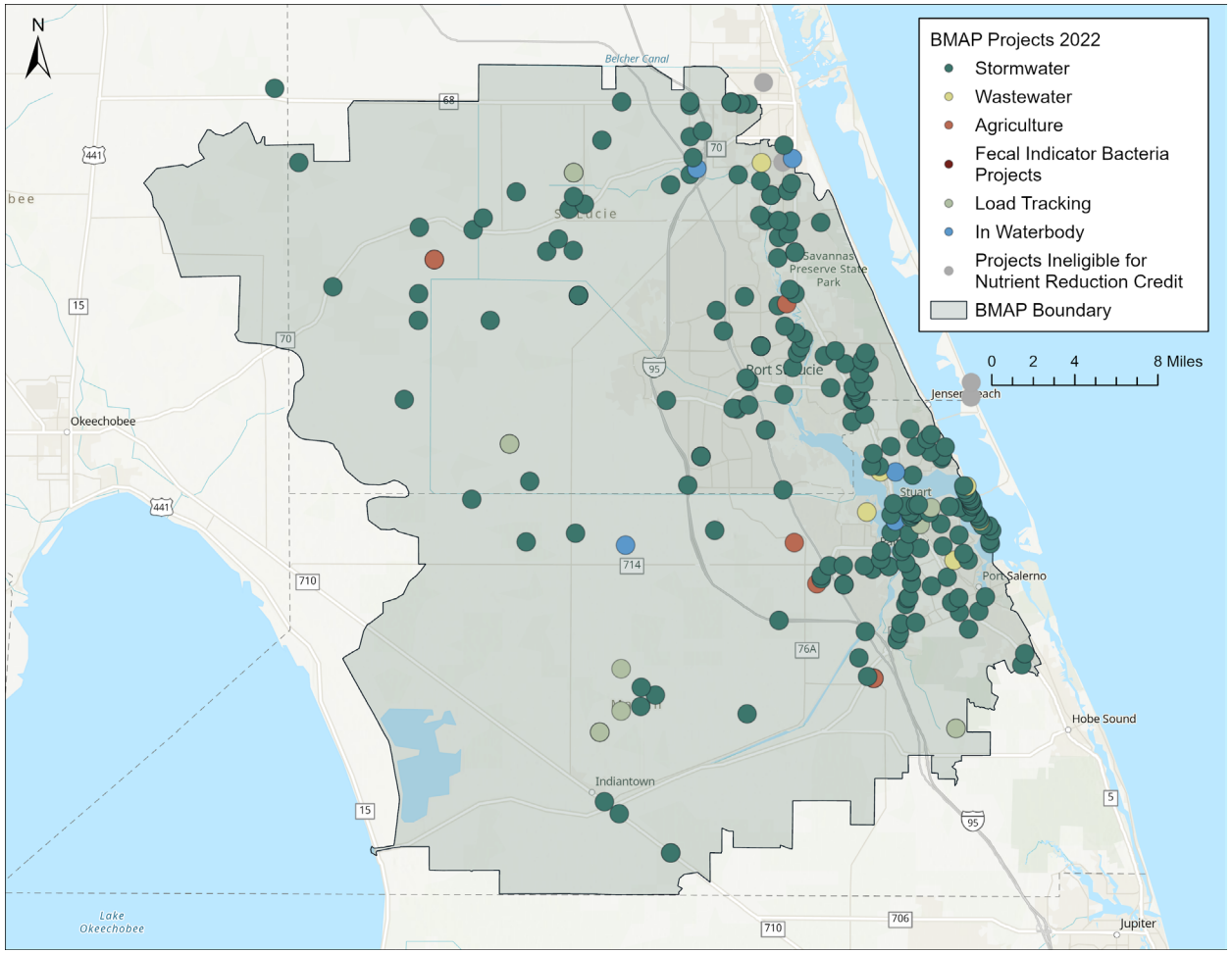
LAKE OKEECHOBEE BMAP

- Adopted 2014.
- Updated in 2020 per Executive Order (EO) 19-12.
- Next five-year review 2024.
- Water quality impairment:
  - Total phosphorus (TP).



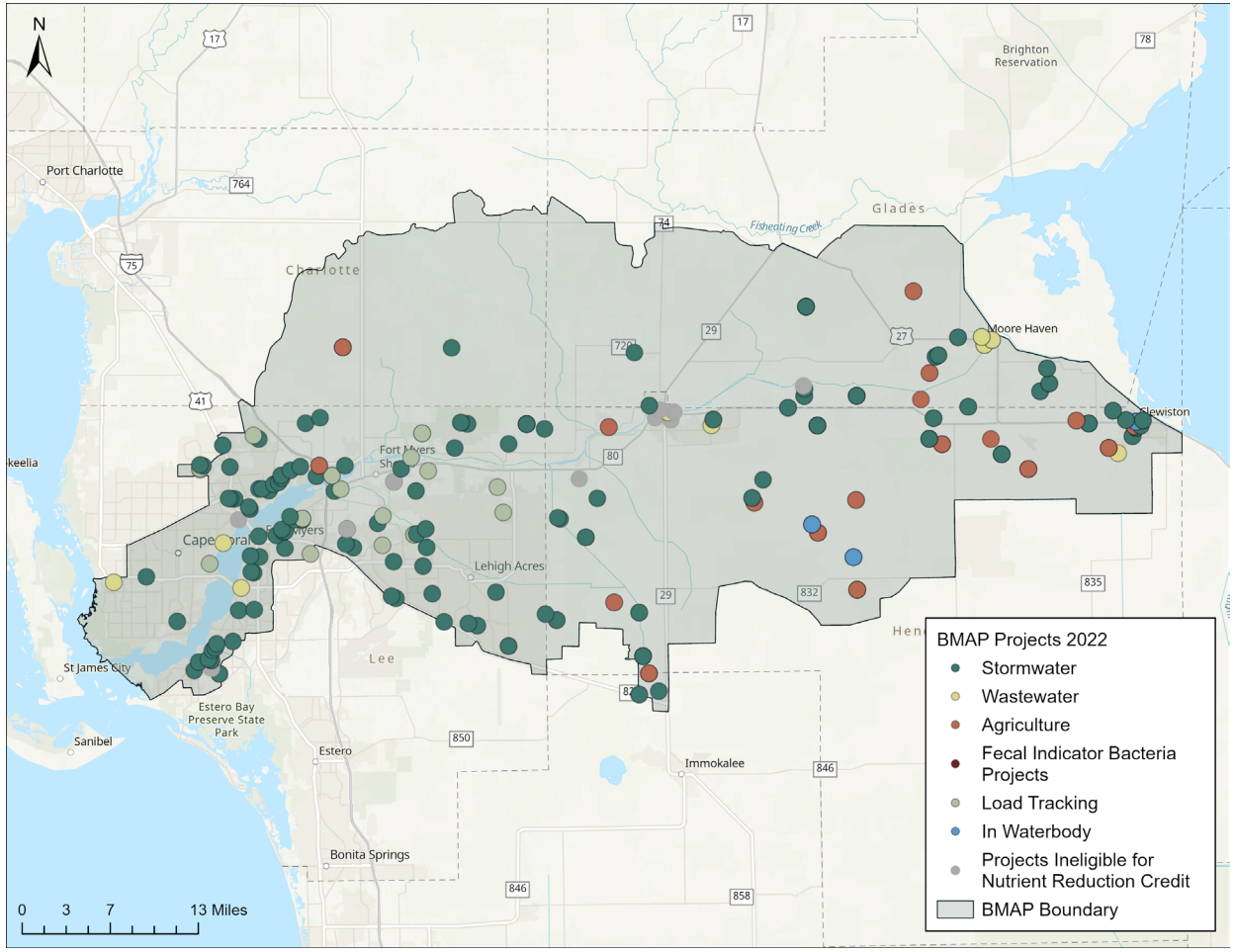
ST. LUCIE RIVER AND ESTUARY BMAP

- Adopted 2013.
- Updated in 2020 per EO 19-12.
- Completed a five-year review in 2023.
- Water quality impairments:
  - Total nitrogen (TN).
  - TP.
  - Biochemical oxygen demand.



CALOOSAHATCHEE RIVER AND ESTUARY BMAP

- Adopted 2012.
- Updated in 2020 per EO 19-12.
- Completed a five-year review in 2022.
- Water quality impairments:
  - TN.
  - TP.
  - Biochemical oxygen demand.



HB1379: ENVIRONMENTAL PROTECTION

Enhances Water Quality Protection in the Indian River Lagoon.

Strengthens Water Quality Protections and Basin Management Action Plans.

Improves Local Government Long-Term Comprehensive Planning.

Expands Funding Opportunities to Address Water Quality Impairments.

HB 1379 – STRENGTHENING BMAPS

PROJECTS AND MILESTONES

List of Identified Projects:

- Requires BMAPs be assessed and updated every five years as needed to include implementation milestones and other requirements.
- Requires a list of projects and strategies that will achieve the five-year implementation milestones to meet total maximum daily loads (TMDLs).
- Requires each identified project to include an estimated amount of nutrient reduction, a planning-level cost estimate and an estimated date of completion.
- Requires DEP to increase coordination with local governments, water management districts and other stakeholders to identify projects.

Agricultural Nonpoint Sources:

- Where agricultural nonpoint sources contribute at least 20 percent of nonpoint source nutrient discharges, requires a list of cooperative agricultural regional water quality improvement element(s) submitted by the Department of Agriculture and Consumer Services which, in combination with the best management practices, additional measures and other management strategies, will achieve the nutrient reductions established for agricultural nonpoint sources.

IMPROVING DOMESTIC WASTEWATER

Wastewater Facility Upgrades:

- By 2033 – requires all wastewater facilities discharging to an impaired water to upgrade to advanced waste treatment (AWT).
- After July 1, 2023 – requires any facility discharging to a waterbody impaired for nutrients or subject to a BMAP or reasonable assurance plan (RAP) area to upgrade to AWT within 10 years.

More Stringent Wastewater Treatment Standards:

- Authorizes DEP to require a more stringent treatment standard (greater than AWT) if required to meet the TMDL within a BMAP.

On-site Sewage Treatment Disposal Systems (OSTDS):

- Requires new OSTDS on lots 1 acre or less within a BMAP to connect to central sewer if available, or if unavailable, to upgrade to an enhanced nutrient-reducing system or other wastewater system that achieves 65 percent reduction.

IMPROVING COMPREHENSIVE PLANNING

BMAP Projects:

- Requires local governments to include BMAP projects in their comprehensive plans so these projects can be prioritized to achieve restoration benefits.

Sanitary Sewer:

- Except for rural areas of opportunity, requires local governments to assess the feasibility of providing sanitary sewer for developments of more than 50 lots on a 10-year planning horizon.
  - → Deadline for updates with new sanitary sewer requirements is July 1, 2024.

Wastewater Facility Upgrades:

- Requires prioritization of advanced waste treatment in comprehensive plans.

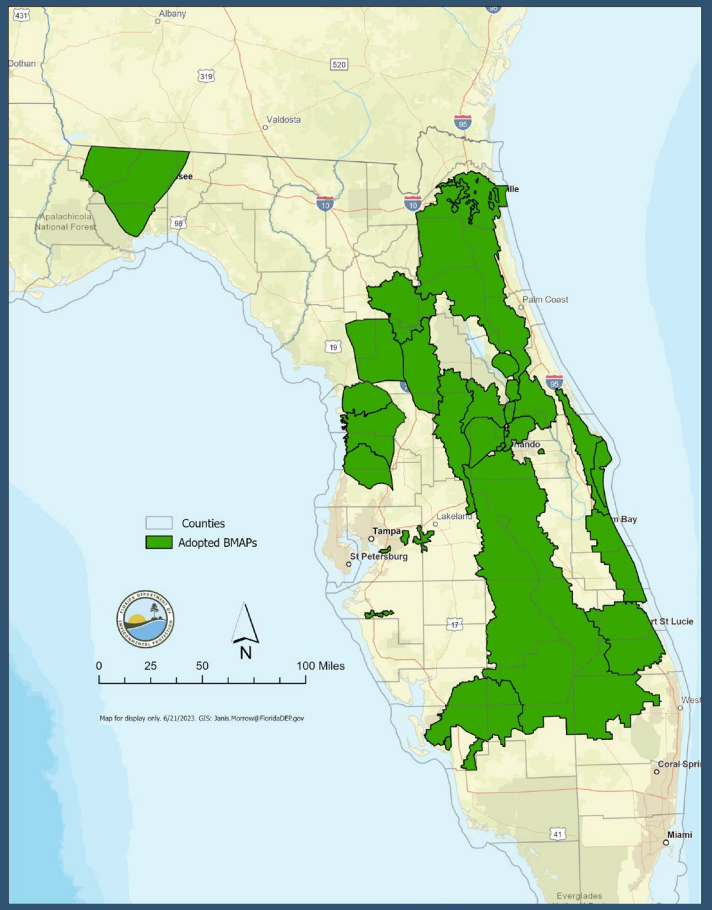
CLEAN WATERWAYS ACT (2020)

Domestic Wastewater Requirements

Wastewater Treatment Plans

- Inventory of WWTFs within jurisdiction of local governments.
- Summary of each facility's current status, which may include:
  - Permitted capacity.
  - Average discharge.
  - Permitted nutrient limits.
  - Average nutrient concentration.
  - Estimated average nutrient load.
- Summary of capacity analysis for each facility, including future growth.
- Ranking or list of facility upgrades needed to meet requirements.
- Timelines/milestones for all projects.
- Funding estimates for all projects.

Nutrient BMAPs



Adopted by July 1, 2025

OSTDS Remediation Plans

- Inventory of OSTDS within jurisdiction of local governments.
- Plan to address OSTDS in the future.
  - Areas for sewering and/or enhancements & prioritization of those areas.
  - Summary of capacity analysis for wastewater facilities that would accept newly sewered areas.
  - Timelines/milestones for projects.
  - Funding estimates for all projects.
  - Future growth considerations.

UNENROLLED AGRICULTURAL LANDOWNER ENFORCEMENT - NEEPP

- More than 98% of the unenrolled agricultural parcels identified by FDACS and referred to DEP have been brought into compliance.
  - That is 99% of the total acres.

- Most parcels remaining out of compliance are less than 10 acres.

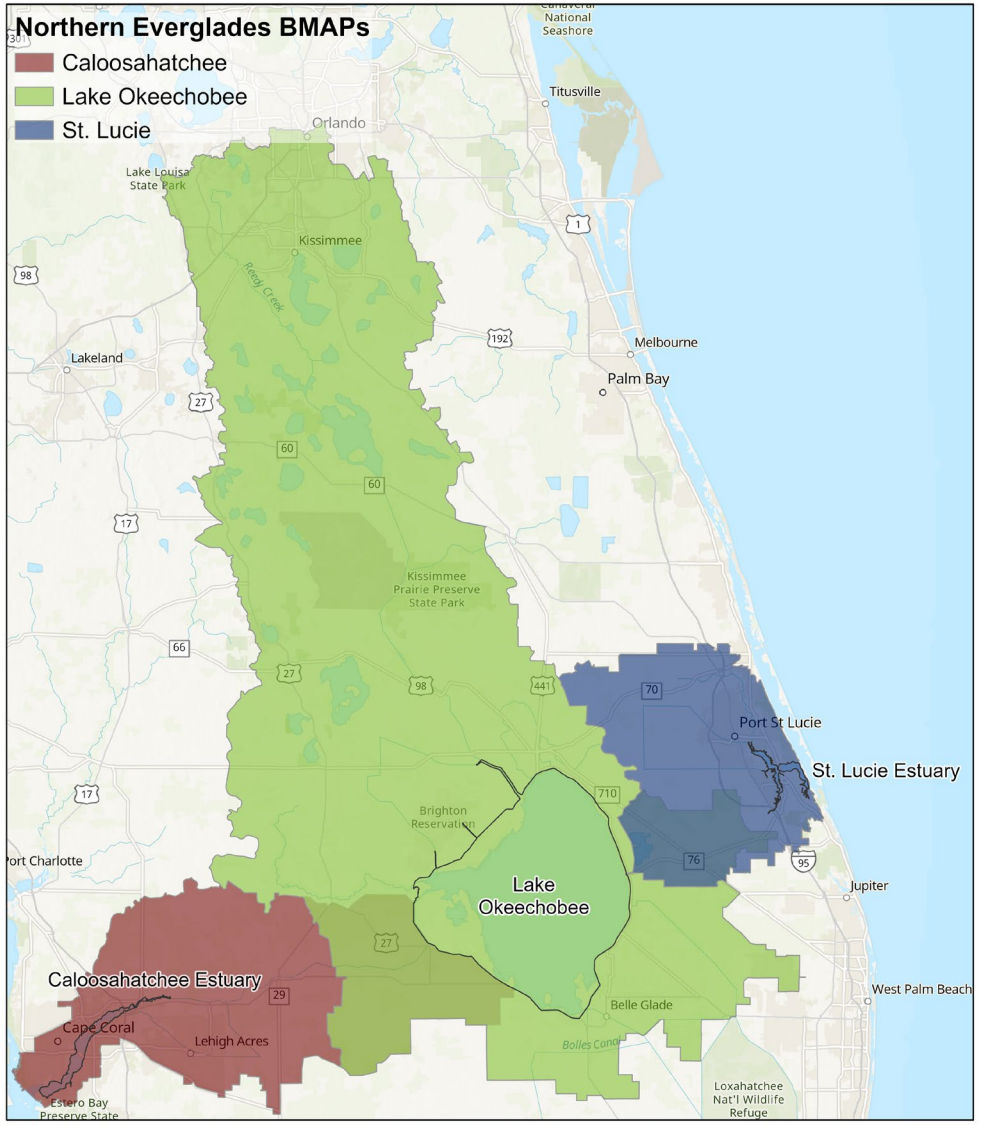
- DEP is engaged in an ongoing campaign to educate landowners of their requirements and bring them into compliance quickly through additional outreach and on-site visits.

>100 ac	50-99 ac	25-49 ac	10-24 ac	<10 ac	Total
0	1	7	15	25	48

*Number of parcels referred for enforcement remaining out of compliance as of 9.1.23

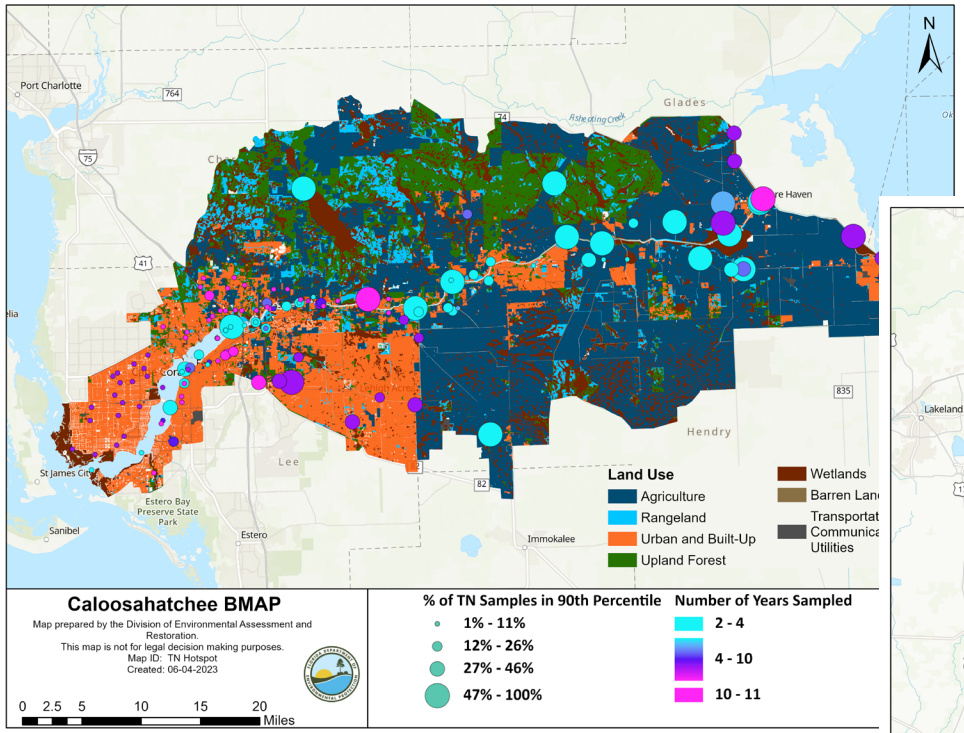
UPCOMING EFFORTS

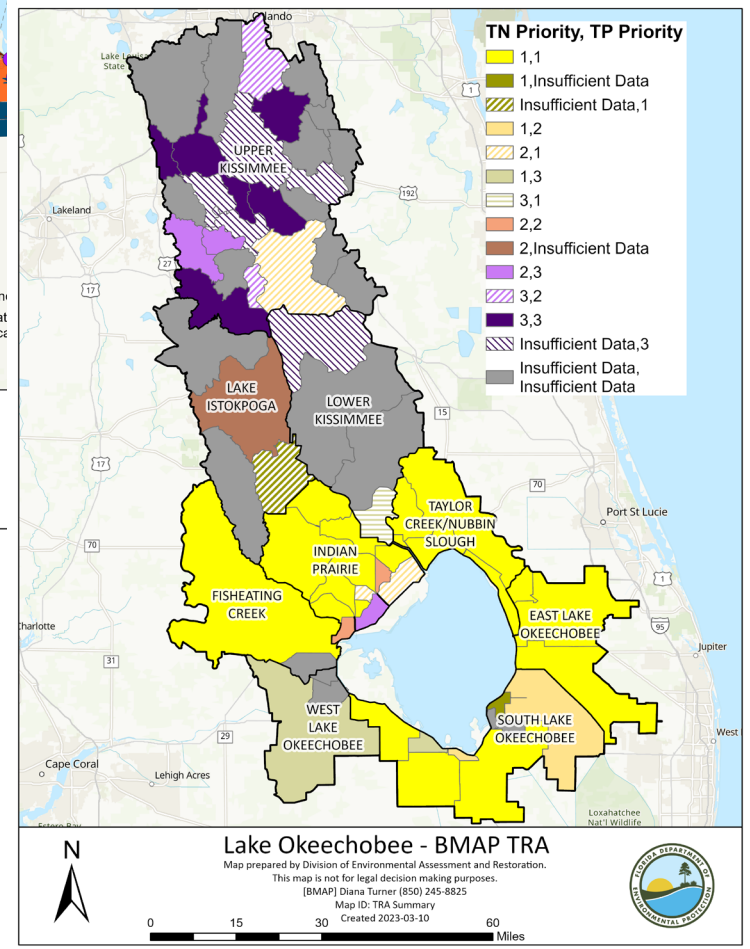
- Water quality data evaluation.
- Water quality trend analyses.
- Hotspot analysis – methodology is under development.
- Evaluation of the monitoring network.
- Planning and development of regional projects with partner agencies.
- Development/revision of allocations in BMAPs.
- Identification of projects for BMAP milestones.
- Incorporation of Clean Waterways Act requirements.
- Incorporation of HB 1379 requirements.

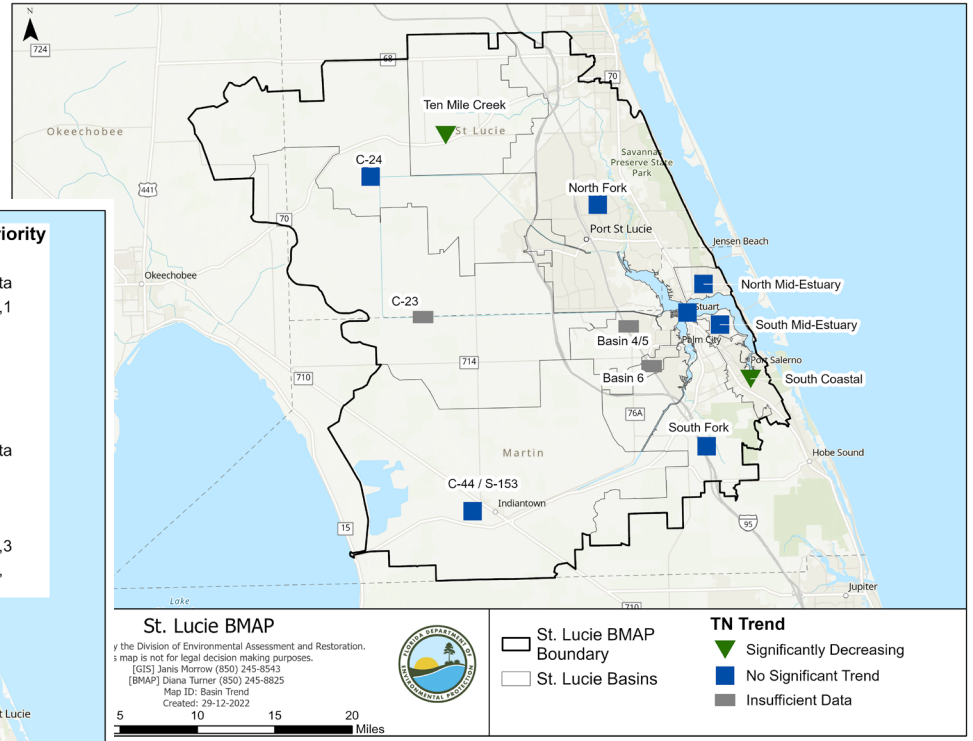


EXISTING DATA AND TOOLS

WATER QUALITY ANALYSES







EXISTING DATA AND TOOLS

TOOLS AND INFORMATION FOR STAKEHOLDERS

B18 | Required pieces of information (listed below)*

11/8/2021

BMP Verification Helper

First: Select a BMAP in the orange cell below, for the earliest acceptable start date (year).

BMAP List

Select a project type from pick list in the cell below.	
Select a Project Type by clicking this cell and choosing from this dropdown list.	
Category 1:	Select a project type in cell B10
Category 2:	Select a project type in cell B10
Message about the project type selected:	Definition of the project type selected:
Please select a project type in the yellow cell at the top of this table and have a great day!	Select a project type in cell B10 next to the yellow arrow.
Select a project type in cell B10	*Select a project type in cell B10*
Required pieces of information (listed below)*	Optional pieces of information (listed below)

Instructions:

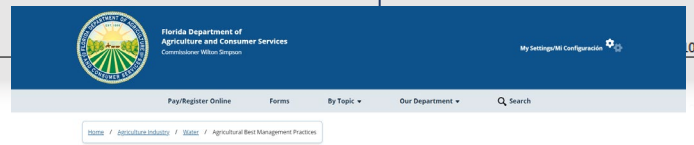
1. Will this project be eligible based on start date? Each BMAP tracks projects starting with a specific year and forward. Projects that began before this date are not typically eligible for credit. Select the BMAP basin in the orange cell, B4. As always, contact your BMAP coordinator if you are unsure.

2. What is the project type? Review the project types table (tab called Project Types) and identify the project type that suits the project you are submitting. Project types are categorized for easier identification (ex. stormwater or wastewater). Click on a project type to read the definition in a pop-up. Pop-ups for project types currently ineligible for credit suggest the reader review definitions for creditable project types with similar names.

3. What information is needed for credit verification? Select the project type from the dropdown list in cell B10 (next to the yellow arrow). Confirm that categories 1 and 2 match your project. Read the message box and the definition to confirm you have selected the best option. If not, select another project type that better matches.

4. Pro… BMP I… Optio… during…

5. If yo…



Home / Agriculture Industry / Water / Agricultural Best Management Practices

Agricultural Best Management Practices

For the purposes of the Florida Department of Agriculture and Consumer Services' Best Management Practices (BMP) program, a BMP is defined by law as a means, a practice or combination of practices determined by the coordinating agencies, based on research, field testing and expert review, to be the most effective and practicable on-location means, including economic and technological considerations, for improving water quality in agricultural and urban discharges. According to Section 373.4595(2)(a), Florida Statutes, BMPs for agricultural discharges must reflect a balance between water quality improvements and agricultural productivity.

What Are Agricultural Best Management Practices?

Categories of practices include:

- Nutrient management to determine nutrient needs and sources and manage nutrient applications (including manure) to minimize impacts to water resources.
- Irrigation management to address the method and scheduling of irrigation to reduce water and nutrient losses to the environment.
- Water resource protection using buffers, setbacks and swales to reduce or prevent the transport of sediments and nutrients from production areas to waterbodies.

The Florida Department of Agriculture and Consumer Services' Office of Agricultural Water Policy (FDACS OAWP) develops and adopts BMPs by rule for different types of agricultural commodities. Florida law provides for agricultural producers to reduce their impacts to water quality through the implementation of applicable BMPs adopted by FDACS.

Agricultural Best Management Practices

BMP Research

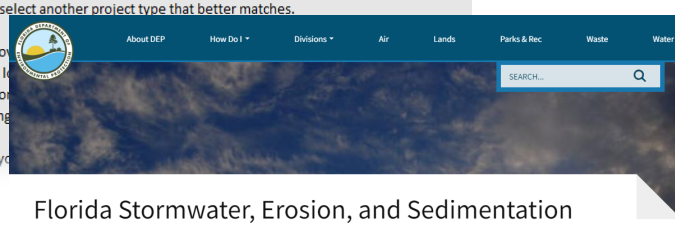
BMP Success Stories

Program Resources

- Brochure: What Are Agricultural Best Management Practices? [82.1 kB]
- Nutrient Application Record Form and Instructions [ ]
- Producer Record-Keeping Tool [1.6 MB]
- Producer Portal

Contact Us

For assistance with BMP enrollment or implementation:
(863) 467-3250
AgBmpHelp@FDACS.gov



Florida Stormwater, Erosion, and Sedimentation Control Inspector Training & Certification Program

Home » Divisions » Division of Environmental Assessment and Restoration » Florida Stormwater, Erosion, and Sedimentation Control Inspector Training & Certification Program

Florida Stormwater, Erosion, and Sedimentation Control Inspector Training & Certification Program Quick Links

- Florida Stormwater, Erosion, and Sedimentation Control Inspector Training Certification Program
- FSESCI Manual (External Link)
- FSESCI Classes (External Link)
- All Florida Stormwater, Erosion, and Sedimentation Control Inspector Training & Certification Program Content

The Florida Stormwater, Erosion, and Sedimentation Control Inspector Training & Certification Program

The Water Quality Restoration Program is currently implementing the **Florida Stormwater, Erosion, and Sedimentation Control Inspector (FSESCI) Qualification Program**. The goals of this program are to better educate installers and inspectors on proper Best Management Practice (BMP) selection, installation, layering, and maintenance; and to train and qualify inspectors to correctly inspect BMPs for use during and after construction so that impacts from uncontrolled erosion and sedimentation on the construction site are minimized.

For a list of upcoming classes, or for general questions, please visit our external program website at www.fsesci.com.

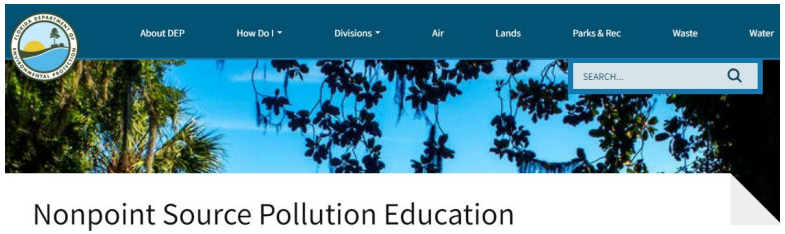
To request a replacement certificate, please visit www.fsesci.com.

You may also verify qualification status at www.fsesci.com/verify/.

The Inspector's Training Program

This program is a two-day class that follows the curriculum provided in the **Florida Stormwater, Erosion and Sedimentation Control Inspector's Manual Tier I, and Tier II**. Upon the completion of the class, a proctored examination is administered and approximately 1 hour is given to complete the exam. In order to obtain the DEP qualification certificate, a minimum passing grade of 70 percent must be made on the exam.

The objectives of this training and qualification program are:



Nonpoint Source Pollution Education

Home » Divisions » Division of Water Restoration Assistance » Nonpoint Source Funds » Nonpoint Source Pollution Education

Nonpoint Source Funds Quick Links

- Contacts
- How to Apply?
- Program Resources
- Frequently Asked Questions (Grants Q&A)
- Nonpoint Source Pollution Education
- Green Infrastructure/Low Impact Development (leaving Nonpoint Source Management website)
- Story Map of Florida's Nonpoint Source Projects (leaving Nonpoint Source Management website)
- All Nonpoint Source Funds Content

DEP's Nonpoint Source Pollution Management Program (NPSM) is committed to educating the public about and helping to prevent nonpoint pollution, which can affect water quality. Nonpoint source pollution is the result of runoff from stormwater picking up and carrying natural and human-made pollutants from diffuse sources and depositing them into lakes, rivers, springs, wetlands, coastal waters and ground water. Common nonpoint source pollution sources include sediment, leaf litter, pet waste, landscape inputs such as fertilizers, herbicides and insecticides, and nutrients from septic systems.

*To sign up for updates on nonpoint source pollution education information, meetings and bulletins, please enter your email address under the **Subscribe** section below.*

The NPSM program offers the following campaigns and resources for educators throughout the state:

Flip My Florida Yard Television Series

The successful DEP-sponsored Flip My Florida Yard (FMFY) television series is funded and overseen by the NPSM program. FMFY is a Florida-based gardening-themed television show that "flips" select Florida yards (in eight hours) to become more Florida-friendly, while the homeowners visit one of the state's award-winning state parks. The show provides public education about and promotion for the Florida-Friendly Landscaping™ (FFL) Program. Two seasons of FMFY have been produced and aired/are streaming on PBS stations and the Discover Florida Channel. Season three of the show is currently underway.

Florida-Friendly Landscaping™ Website

The Florida-Friendly Landscaping™ (FFL) program was established in 1993 as a partnership between DEP and the University of Florida's Institute of Food and Agricultural Sciences. The program teaches environmentally friendly landscaping through nine science-based principals: 1) Right Plant, Right Place; 2) Water Efficiently; 3) Fertilize Appropriately; 4) Mulch; 5) Attract Wildlife; 6) Manage Yard Pests Responsibly; 7) Recycle; 8) Reduce Storm Water Runoff; and 9) Protect the Waterfront. The program's overall goal is to reduce nonpoint source pollution through proper fertilization, irrigation, and pesticide use on residential and commercial landscapes.

Green Stormwater Infrastructure Website

Green Stormwater Infrastructure (GSI) is the use of plants and pervious surfaces to retain and treat stormwater. GSI reduces pollution and treats stormwater by retaining rainfall near its source instead of directing it to a centralized pond or treatment system.

Nonpoint Publication Tool

The Nonpoint Publication Tool is a free resource for state, municipal, nonprofit and other nonpoint educators, with the goal of unified messaging and increased positive behavior change through public outreach publications. This tool empowers individuals to quickly and easily build print-ready PDF files, without the need for professional designers or expensive software. Created files can be stored for repeat use and shared with other members of your team.

EXISTING DATA AND TOOLS

TOOLS AND INFORMATION FOR STAKEHOLDERS

Instructions for BMAP stakeholders for OSTDS Septic to Sewer Projects or Enhancement/65% Treatment or More Projects

1 Projects in springs BMAPs should use the green-colored tabs, not other methods. Use springs calculations for the following BMAPs: Crystal River/Kings Bay; DeLeon; Gemini; Homosassa/Chassahowitzka; Jackson Blue; Rainbow; Santa Fe; Silver; Suwannee; Volusia Blue; Wacissa; Wakulla; Weeki Wachee/Aripeka; and Wekiwa.

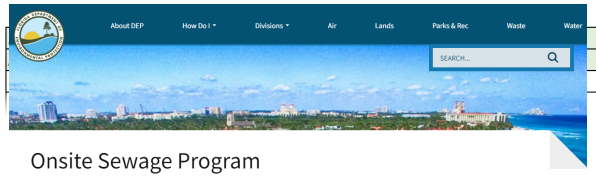
2 Sheets with orange tabs indicate methods for surface waters. Seek guidance from your basin coordinator before using a specific potential method.

3 As more information is known, the methods may change over time.

Brief Q&A to Guide Method Selection

	Question	Answer
1	Is your project in a BMAP springshed?	Use the springs residential property or springs commercial property method, as applicable
2	Are you looking for a nitrogen reduction estimate for a surface water that is not a lake?	Use the NLM or SJRWMD method, or you can use the ArcNLET Model
3	Are you looking a nitrogen reduction estimate for a lake?	Use the TMDL Method, NLM, or SJRWMD methods, or you can use the ArcNLET Model

Springs OSTDS Loading Calcs (Spring BMAPs ONLY)	
Approved for BMAP Springs Credit Calculations	**Advantages**
Point of Contact: Moira Homann, DEP	Consistent use across springs BMAPs.
	Uses census data for the persons per household, which is easy to find (online or in the dropdown options here)



Onsite Sewage Program

Home > Divisions > Division of Water Resource Management > Onsite Sewage Program

Onsite Sewage Program Quick Links

- Program Transfer
- Enhanced Nitrogen Reducing Systems
- Private Provider Inspections
- Contact Us!
- FAQ - Permitting
- Forms and Publications
  - Interoffice Memoranda
- Technical Advisory Committee (OSTDS TAC)
- OSP Rule Development
- Product Listings and Approval Requirements
  - Alternative Repair Methods
  - Additives/Product Composition
- Variances
- Septic Tank Contracting
  - Contractors
  - Contractor

Onsite sewage treatment and disposal systems (OSTDS), commonly referred to as septic systems, are currently used for wastewater disposal by approximately 30% of Florida's population. With an estimated 2.6 million systems in operation, Florida represents 12% of the United States' septic systems.

Proper design, construction and maintenance of systems are important to help protect Florida's ground water, which provides 90% of the state's drinking water. Permitting and inspection of OSTDS is handled by the Environmental Health section of the Florida Department of Health in each county. If you have a question or concern about an issue that is located entirely within one county, versus statewide, please contact your local county health department directly.

Onsite Sewage Program News & Rule Development

- "NEW" OSTDS Permitting of Enhanced Nutrient Reducing Onsite Sewage Treatment and Disposal Systems (ENR-OSTDS), House Bill 1379
- Private Providers of OSTDS Inspections
- DEP 4015 (all pages) are fillable forms as of September 30, 2022
- Current program focus areas: implementation of the July 1, 2022 Private Provider Inspections Legislation and updates on rule development
- Onsite Sewage Rule Updates June 2022 Informational PowerPoint
- Sign up to receive rulemaking updates on 62-6, Florida Administrative Code
- Division of Water Resource Management Rule Development for Onsite Sewage

Program Transfer

Please Note: Some documents are still in the process of being updated to reflect the transfer of the Onsite Sewage Program from the Florida Department of Health to the Florida Department of Environmental Protection and the location of some documents may have changed. If you have questions, please contact OSTDS_Feedback@FloridaDEP.gov.

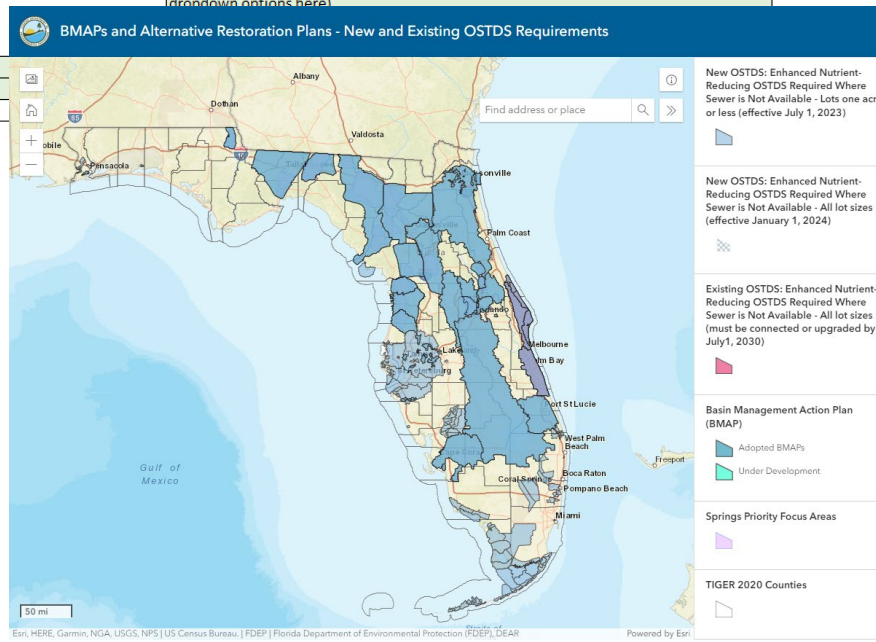
Permitting of Enhanced Nutrient Reducing Onsite Sewage Treatment and Disposal Systems (ENR-OSTDS), House Bill 1379

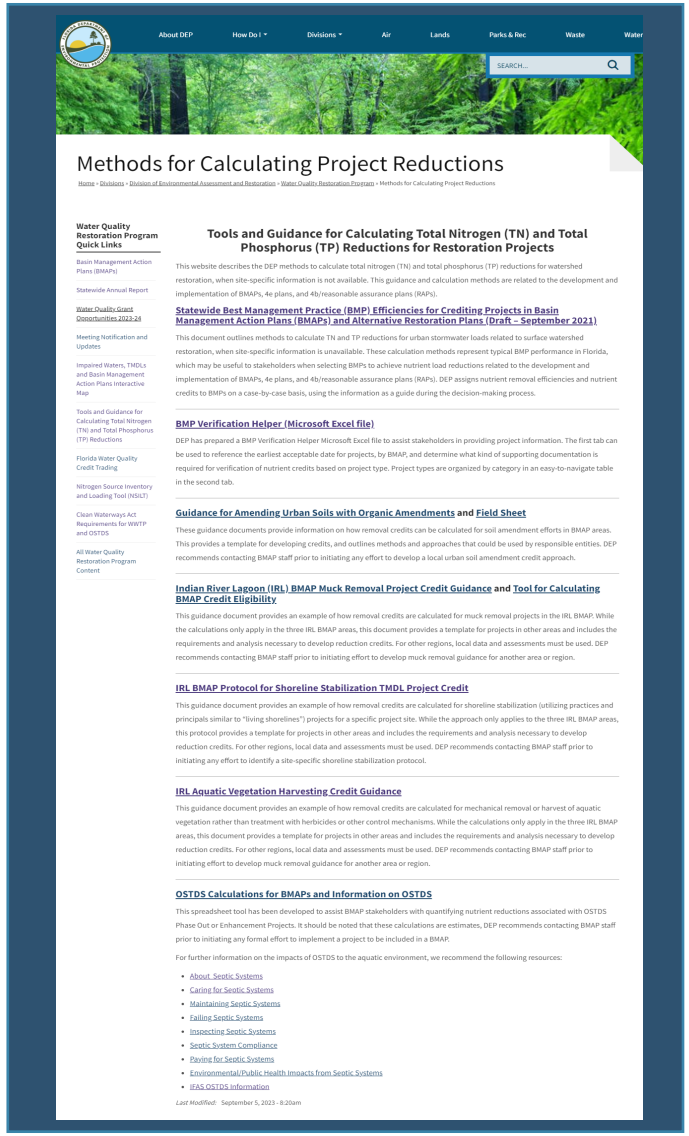
Map: BMAPs and Alternative Restoration Plans - OSTDS Requirements

Springs Protection and Basin Management Action Plans (BMAPs)

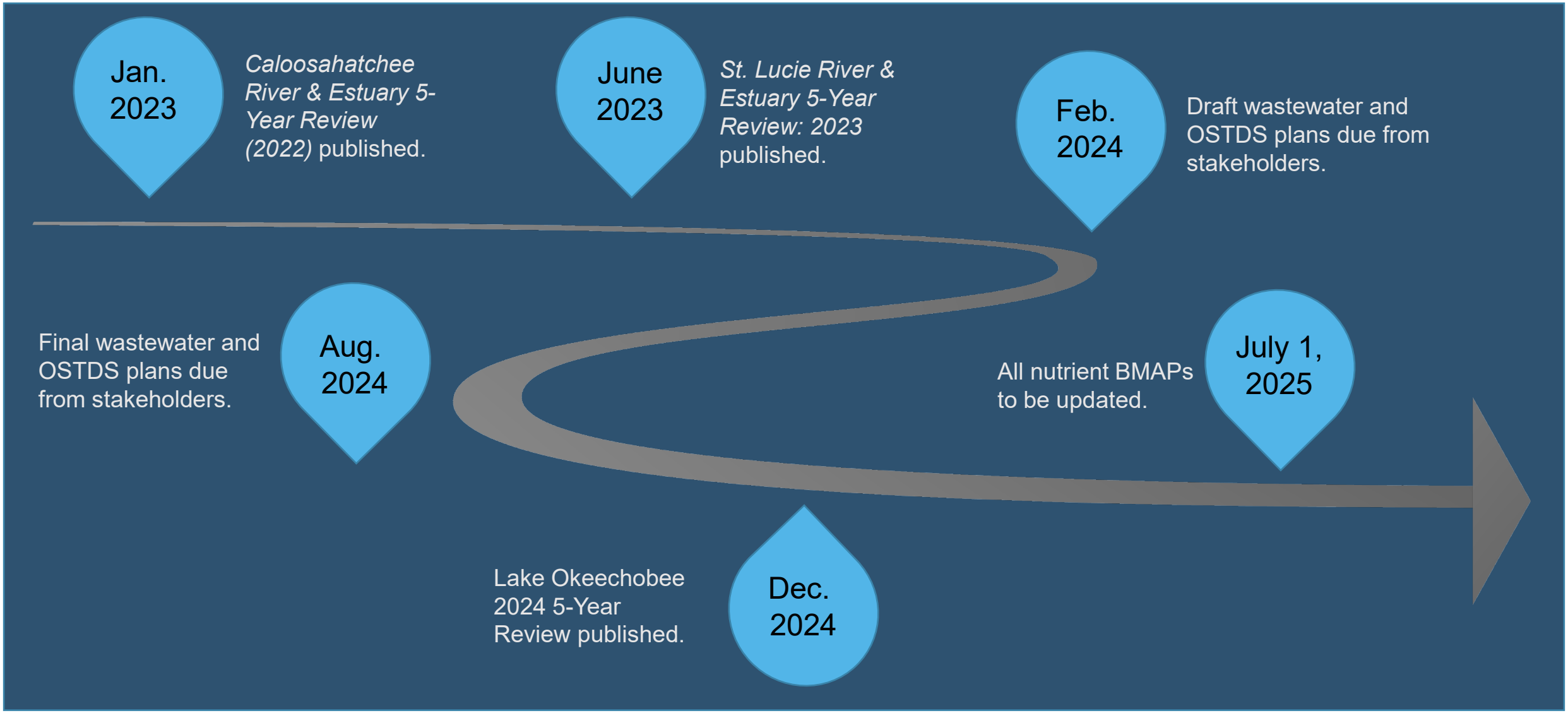
Enhanced Nitrogen-Reducing OSTDS to meet requirements of House Bill 1379/ Laws of Florida 2023-169

Nitrogen-Reducing Systems Product List





NEEPP BMAP UPDATES TIMELINE



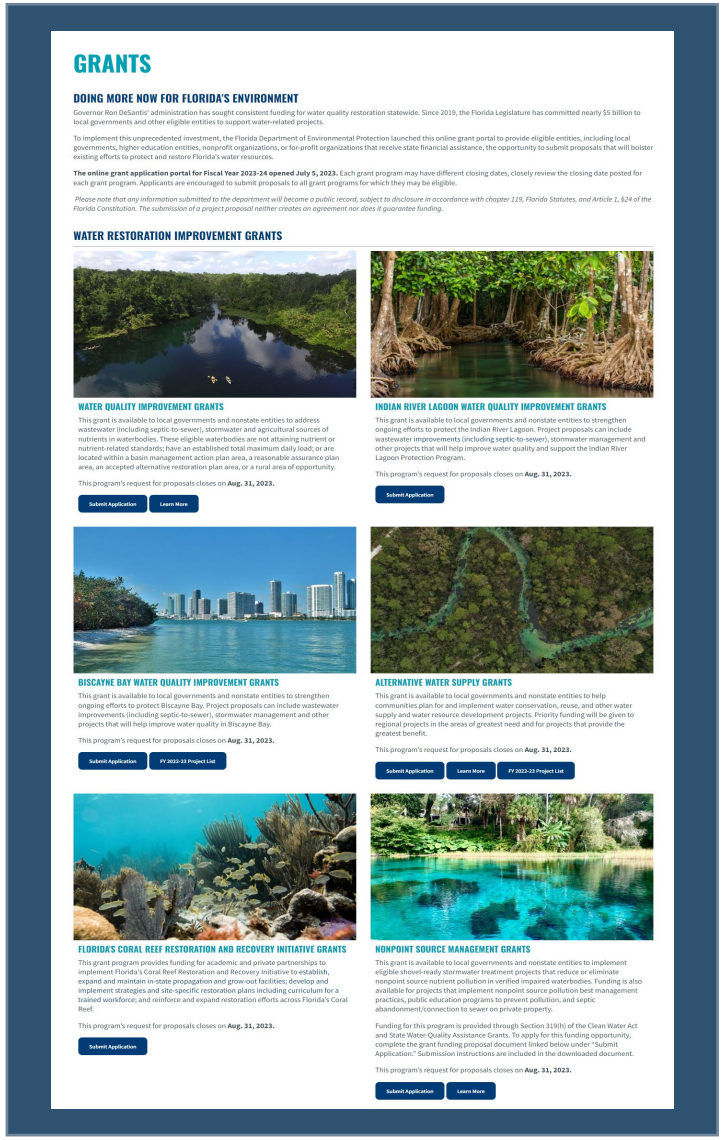
MORE INFORMATION

- BMAP webpage:
  - Includes all BMAPs and other relevant documents/resources.
  - StoryMaps.
    - Each BMAP.
    - Each BMAP type (NEEPP, IRL, Bacteria, Springs).
  - Interactive maps.
  - Tools for responsible entities - BMP and project guidance.

- Statewide Annual Report (STAR):
  - Updated annually.
  - Information on projects.
  - Other BMAP information.

EXPANDING GRANT OPPORTUNITIES

ACCELERATING PROJECT IMPLEMENTATION



GRANTS

DOING MORE NOW FOR FLORIDA'S ENVIRONMENT

Governor Ron DeSantis' administration has sought consistent funding for water quality restoration statewide. Since 2019, the Florida Legislature has committed nearly $5 billion to local governments and other eligible entities to support water-related projects.

To implement this unprecedented investment, the Florida Department of Environmental Protection launched this online grant portal to provide eligible entities, including local governments, higher education entities, nonprofit organizations, or for-profit organizations that receive state financial assistance, the opportunity to submit proposals that will bolster existing efforts to protect and restore Florida's water resources.

The online grant application portal for Fiscal Year 2023-24 opened July 5, 2023. Each grant program may have different closing dates, closely review the closing date posted for each grant program. Applicants are encouraged to submit proposals to all grant programs for which they may be eligible.

Please note that any information submitted to the department will become a public record, subject to disclosure in accordance with chapter 119, Florida Statutes, and Article 1, §24 of the Florida Constitution. The submission of a project proposal neither creates an agreement nor does it guarantee funding.

WATER RESTORATION IMPROVEMENT GRANTS

WATER QUALITY IMPROVEMENT GRANTS

This grant is available to local governments and nonstate entities to address wastewater (including septic-to-sewer), stormwater and agricultural sources of nutrients in waterbodies. These eligible waterbodies are not attaining nutrient or nutrient-related standards; have an established total maximum daily load; or are located within a basin management action plan area, a reasonable assurance plan area, an accepted alternative restoration plan area, or a rural area of opportunity.

This program's request for proposals closes on **Aug. 31, 2023.**

Submit Application | Learn More

INDIAN RIVER LAGOON WATER QUALITY IMPROVEMENT GRANTS

This grant is available to local governments and nonstate entities to strengthen ongoing efforts to protect the Indian River Lagoon. Project proposals can include wastewater improvements (including septic-to-sewer), stormwater management and other projects that will help improve water quality and support the Indian River Lagoon Protection Program.

This program's request for proposals closes on **Aug. 31, 2023.**

Submit Application

BISCAYNE BAY WATER QUALITY IMPROVEMENT GRANTS

This grant is available to local governments and nonstate entities to strengthen ongoing efforts to protect Biscayne Bay. Project proposals can include wastewater improvements (including septic-to-sewer), stormwater management and other projects that will help improve water quality in Biscayne Bay.

This program's request for proposals closes on **Aug. 31, 2023.**

Submit Application | FY 2022-23 Project List

ALTERNATIVE WATER SUPPLY GRANTS

This grant is available to local governments and nonstate entities to help communities plan for and implement water conservation, reuse, and other water supply and water resource development projects. Priority funding will be given to regional projects in the areas of greatest need and for projects that provide the greatest benefit.

This program's request for proposals closes on **Aug. 31, 2023.**

Submit Application | Learn More | FY 2022-23 Project List

FLORIDA'S CORAL REEF RESTORATION AND RECOVERY INITIATIVE GRANTS

This grant program provides funding for academic and private partnerships to implement Florida's Coral Reef Restoration and Recovery Initiative to establish, expand and maintain in-state propagation and grow-out facilities; develop and implement strategies and site-specific restoration plans including curriculum for a trained workforce; and reinforce and expand restoration efforts across Florida's Coral Reef.

This program's request for proposals closes on **Aug. 31, 2023.**

Submit Application

NONPOINT SOURCE MANAGEMENT GRANTS

This grant is available to local governments and nonstate entities to implement eligible shovel-ready stormwater treatment projects that reduce or eliminate nonpoint source nutrient pollution in verified impaired waterbodies. Funding is also available for projects that implement nonpoint source pollution best management practices, public education programs to prevent pollution, and septic abandonment/connection to sewer on private property.

Funding for this program is provided through Section 319(h) of the Clean Water Act and State Water-Quality Assistance Grants. To apply for this funding opportunity, complete the grant funding proposal document linked below under "Submit Application." Submission instructions are included in the downloaded document.

This program's request for proposals closes on **Aug. 31, 2023.**

Submit Application | Learn More

Expanded Eligibility:

- Previously included projects within BMAPs, RAPs (4b) and a RAO.
- Now *also* allows for projects that provide water quality improvements to a waterbody not attaining a nutrient or nutrient related standard, including those with a TMDL or a pollutant reduction plan (4e).

Expanded Project Types:

- Previously included septic-to-sewer, advanced waste treatment expansion or upgrades, and OSTDS upgrades.
- Now *also* includes stormwater, regional agricultural projects, and a broader suite of wastewater projects such as collection systems and domestic wastewater reuse.

Project Prioritization:

- Prioritizes projects that have the maximum nutrient load per project, demonstrate project readiness, are cost-effective, have a cost-share by the applicant (except for RAOs), have previous state commitment and are in areas where reductions are most needed.

THANK YOU

Kim Shugar
Director, Division of Environmental Assessment and Restoration
Florida Department of Environmental Protection

Contact Information:
850-245-7518
Kim.Shugar@FloridaDEP.gov


FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION

Progress Update on the Northern Everglades and Estuaries Protection Program (NEEPP) Public Workshop

Sept 22, 2023

Angela Chelette

Florida Department of Agriculture and Consumer Services

Office of Agricultural Water Policy

Overview

- Agricultural Best Management Practices (BMP)
- FDACS Role in BMP Implementation
- Enrollments within the NEEPP area
  - Unenrolled Agricultural Lands Classification
- BMP Implementation Verification (IVs)
- Projects within the NEEPP area
- 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

OAWP Staff

- **Angela Chelette;** Chief of Policy Planning and Coordination (PPC) Angela.Chelette@FDACS.gov
- **Jennifer Thera;** Environmental Consultant-PPC Jennifer.Thera@FDACS.gov
- **Rebecca Elliot;** Environmental Consultant-PPC Rebecca.Elliot@FDACS.gov
- **Bonnie Wolff Pelaez;** Chief of Field Services Bonnie.WolffPelaez@FDACS.gov
- **Vanessa Stephen;** Environmental Administrator-Field Services Vanessa.Stephen@FDACS.gov

Agricultural Best Management Practices (BMPs)

- Management strategies, tools and practices that improve water quality, conserve water, enhance soil health and protect water resources
- Based on the best available science and technology
  - Developed in coordination with FDEP staff
- Must balance production and water resource protection

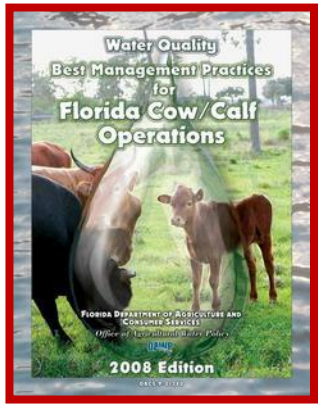
Benefits of Agricultural BMPs

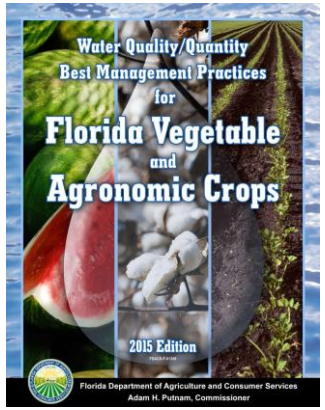
- Increase efficiencies in nutrient, irrigation and water management
- Conservation and protection of water and environmental resources
- Improve soil health
- Promote groundwater recharge
- Enhance wildlife habitat

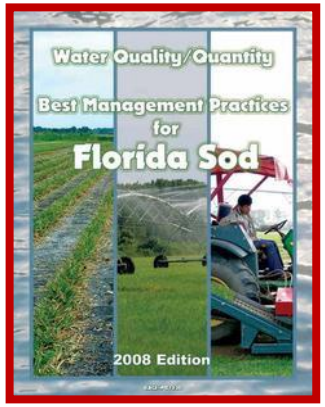
FDACS Role in BMP Implementation

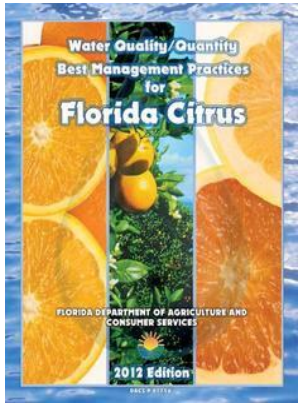
- Develop BMPs in Manuals and adopt BMPs by Rule
- Assist Producers with BMP Enrollment
- Identify and support targeted cost-share of select BMPs
- Fund research to develop new, innovative BMPs that improve nutrient and irrigation use efficiencies
- Verify proper implementation through site visits and record review

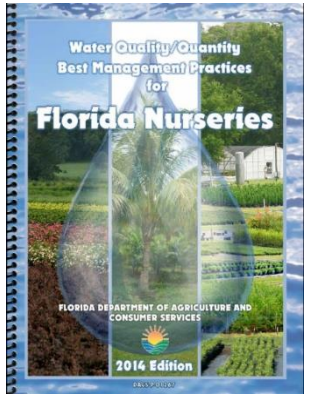
Adopted BMP Manuals

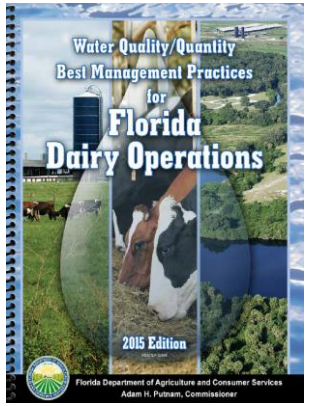


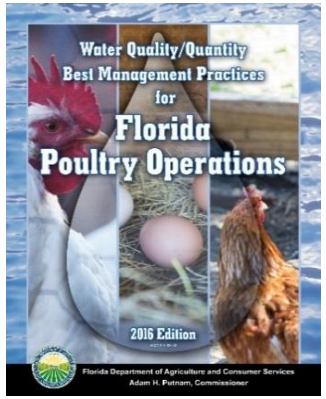


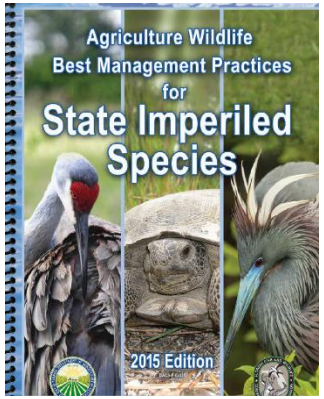










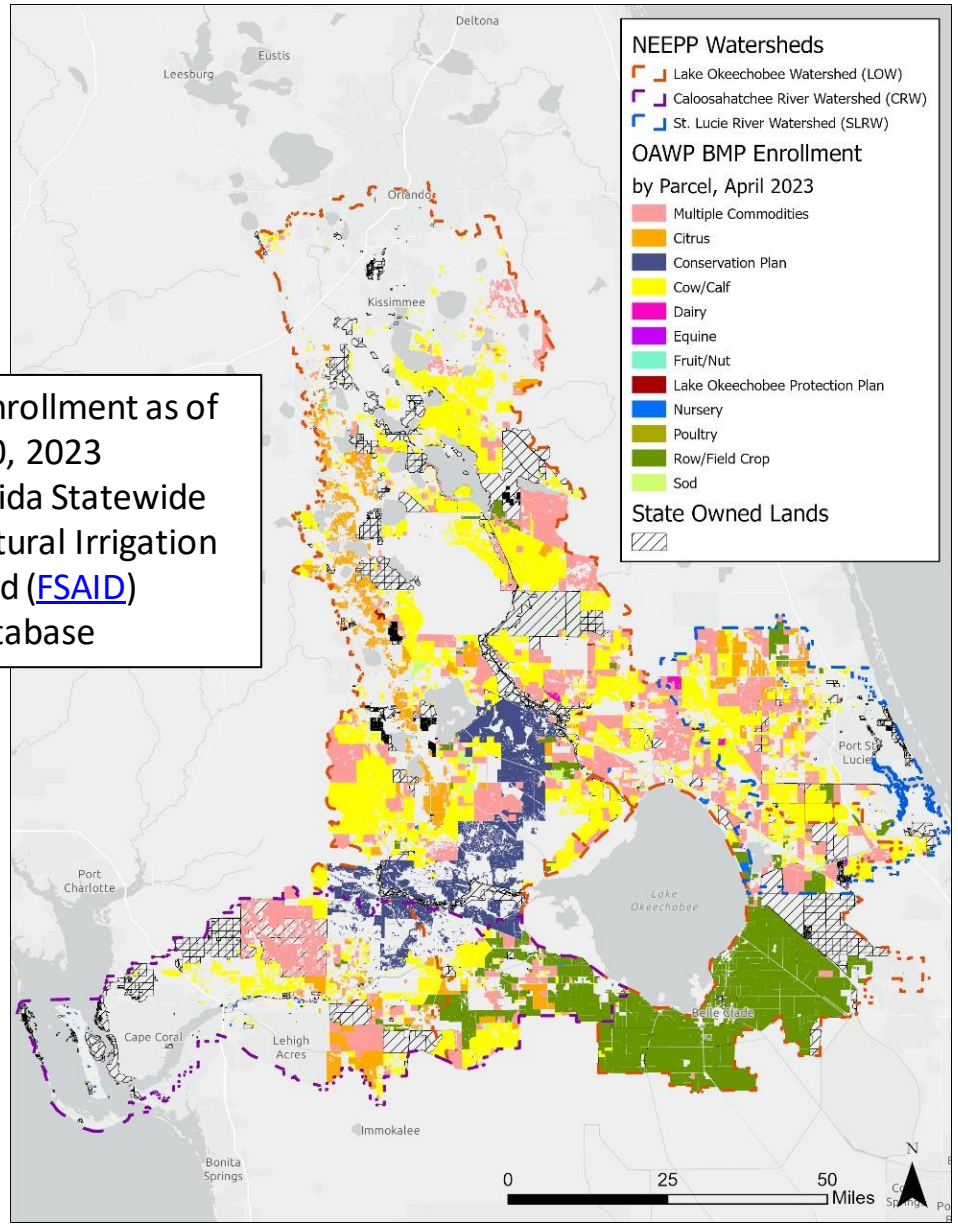


Producer Options in BMAP Areas

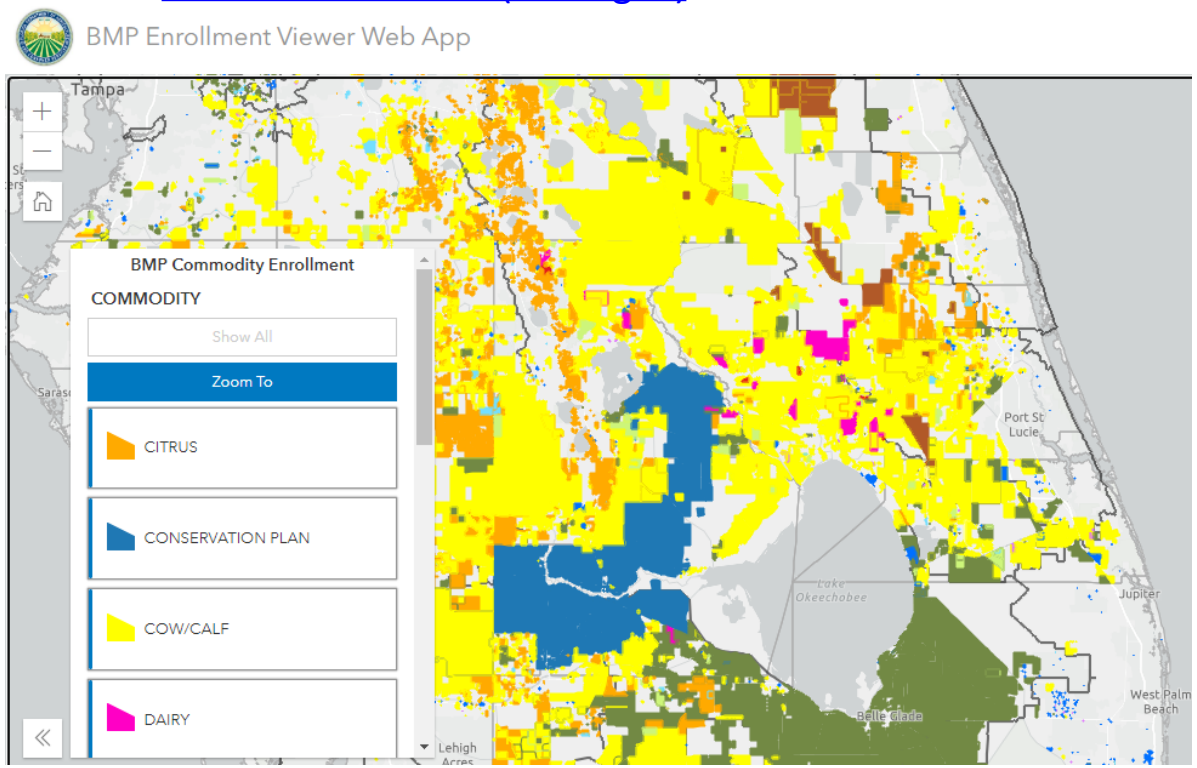
1. Sign a Notice of Intent (NOI) and properly implement applicable BMPs for presumption of compliance, OR
2. Follow an FDEP or WMD-prescribed water quality monitoring plan at a Producer's expense

FDACS BMP Enrollments within NEEPP

- BMP enrollment as of April 30, 2023
- 9th Florida Statewide Agricultural Irrigation Demand (FSAID) Geodatabase



- New Online Feature
  - BMP Enrollment Viewer Web App
  - Agricultural Best Management Practices / Water / Agriculture Industry / Home - Florida Department of Agriculture & Consumer Services (fdacs.gov)



BMP Enrollments within NEEPP*

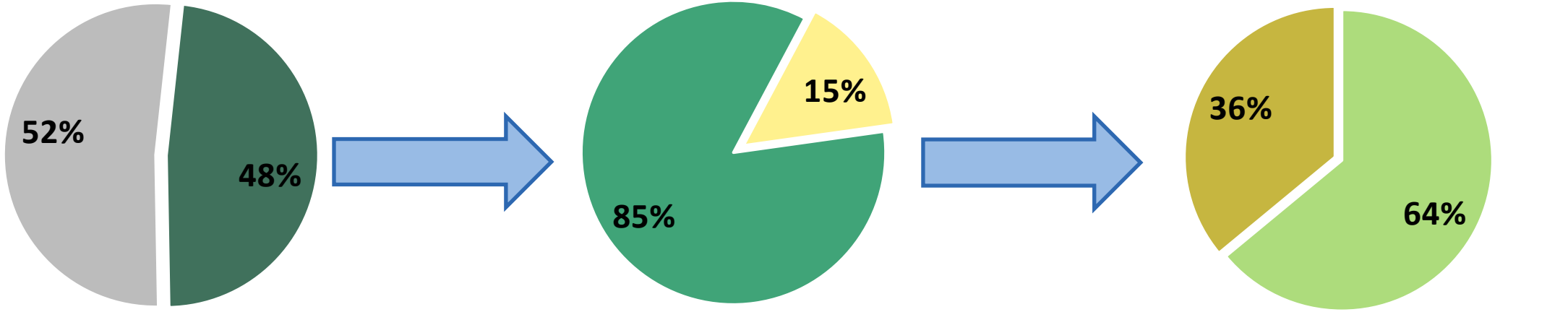
	Caloosahatchee River Watershed	Lake Okeechobee Watershed	St. Lucie River Watershed
Total Ag Acres	443,344	1,827,665	374,716
Enrolled Ag Acres	374,622	1,560,013	307,194
Percent Enrolled	**84%**	**85%**	**82%**
Total Irrigated Ag Acres	181,000	641,112	89,002
Enrolled Irrigated Ag Acres	168,274	603,674	81,090
Percent Enrolled	**93%**	**94%**	**91%**

FDACS BMP Program enrollment as of April 30, 2023 and the 9th Florida Statewide Agricultural Irrigation Demand (FSAID) Geodatabase

*The boundaries of the LOW overlap with those of the CRW and SLRW; therefore, the enrollment acreages provided for the different watersheds may include the same NOIs

Status of Agricultural Lands within the NEEPP Boundary*

Non-Agricultural Acres	Agricultural Acres	Enrolled Agricultural Acres	Remaining Agricultural Acres**	Unlikely Enrollable Acres	Potentially Enrollable Acres



The entire NEEPP area

Agriculture in the NEEPP area

Unenrolled Agriculture in the NEEPP area

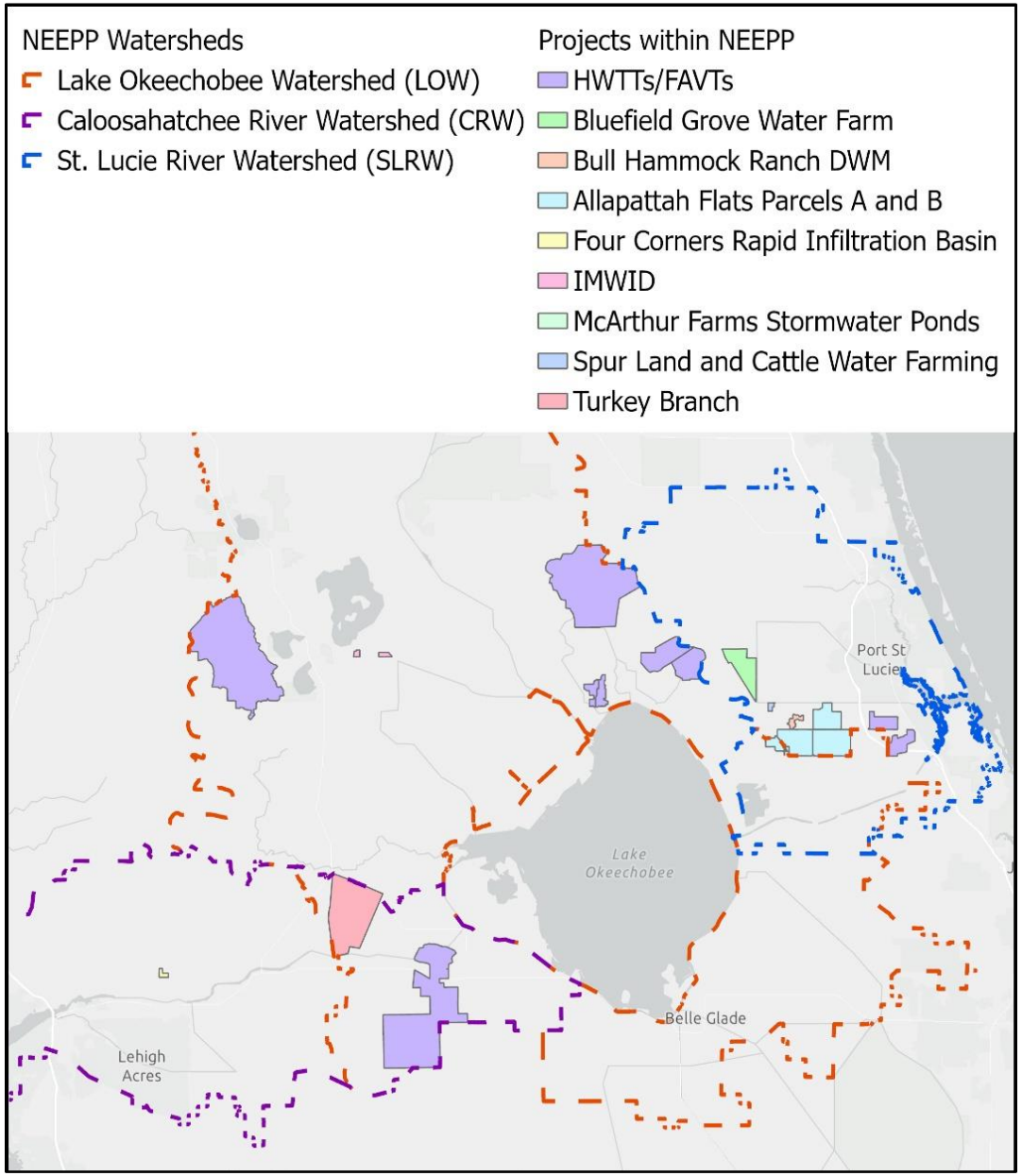
* These estimated percentages were calculated by combining the three Northern Everglades BMAP areas together and may include enrollment acreages associated with more than one watershed. For more information and a summary for the individual BMAPs, see *Status of Implementation of Agricultural Nonpoint Source Best Management Practices* (FDACS 2023), which can be found at https://www.fdacs.gov/Divisions-Offices/Agricultural-Water-Policy

** This percentage includes acreages within state-owned properties and/or surface water project areas that are not included in the 'unlikely enrollable' or 'potentially enrollable' acres categories

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
    - IVs completed in calendar year 2022
      - 1,878 NOIs (99%) in the Lake Okeechobee BMAP
      - 369 NOIs (99%) in the Caloosahatchee Estuary BMAP
      - 422 NOIs (97%) in the St. Lucie River and Estuary BMAP
  - 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

Projects within NEEPP



Hybrid Wetland Treatment Technology (HWTT) & Floating Aquatic Vegetation Tillage (FAVT) Projects:

- Caloosahatchee River Watershed
  - East Caloosahatchee FAVT
    - 19,073 ac-ft (27.4 m^3) treated
    - 1.9 t TP and 12.2 t TN removed
- Lake Okeechobee Watershed
  - 5 HWTT facilities (Lemkin Creek, Wolff Ditch, Grassy Island, Nubbin Slough, and Mosquito Creek
    - 10,314 ac-ft (14.8 million m^3) treated
    - 3.1 metric tons (t) TP and 9.7 t TN removed
  - Fisheating Creek FAVT
    - 3,994 ac-ft (5.7 million m^3) treated
    - 0.9 t TP and 4.5 t TN removed.
- St. Lucie River Watershed
  - 3 HWTT facilities (Ideal 2 Grove, Bessey Creek, and Danforth Creek)
    - 2,582 ac-ft (3.7 million m^3) treated
    - 0.7 t TP and 2.1 t TN removed

2023 FDACS Legislative Report

Florida Department of Agriculture and Consumer Services

Office of Agricultural Water Policy

Status of Implementation of Agricultural Nonpoint Source Best Management Practices

July 1, 2023

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. 07/23

Table 2. Status of BMP Enrollment Within BMAPs

Basin Management Action Plan	Year Adopted	Agricultural Acres as of 12/31/22	Percent of BMAP area that is Agricultural	Agricultural Acres Enrolled	Percent of Agricultural Acres Enrolled
Alafia River Basin	2014	9,988	21	4,182	42
Banana River Lagoon	2013	75	0	0	0
Caloosahatchee River and Estuary Basin	2012	444,226	50	377,444	85
Central Indian River Lagoon*	2013	72,479	20	14,862	21
Chassahowitzka-Homosassa Springs	2019	39,026	12	14,619	37
DeLeon Spring	2019	11,384	17	1,993	18
Everglades West Coast Basin	2012	9,551	17	5,304	56
Gemini Springs	2019	904	3	365	40
Hillsborough River Basin	2009	16,719	33	10,610	63
Jackson Blue Spring and Merritt's Mill Pond	2016	41,372	45	26,734	65
Kings Bay and Crystal River Springs Group	2019	13,427	7	3,710	28
Lake Harney, Lake Monroe, Middle St. Johns River, Smith Canal	2012	28,723	12	12,398	43
Lake Jesup Basin	2010	7,790	8	2,228	29
Lake Okeechobee Basin	2014	1,827,425	47	1,550,683	85
Long Branch	2008	524	14	229	44
Lower St. Johns River Basin Mainstem	2008	148,789	8	70,284	47
Lower St. Johns River Basin Tributaries I and II	2009	1,034	2	654	63
Manatee River Basin	2014	930	6	297	32
Middle and Lower Suwannee River Basin	2018	386,056	29	220,048	57
North Indian River Lagoon	2013	6,685	3	593	9
Orange Creek Basin	2008	68,515	18	26,514	39
Rainbow River and Springs	2015	179,905	41	86,608	48
Santa Fe River Basin	2012	245,629	23	109,686	45
Silver River and Springs	2015	155,928	25	37,726	24
St. Lucie River and Estuary Basin	2013	288,739	53	234,812	81
Upper Ocklawaha River Basin	2007	99,104	18	20,150	20
Upper Wakulla River and Wakulla Spring	2015	61,695	7	15,172	25
Volusia Blue Spring	---	2,339	3	238	10
Wacissa River and Wacissa Spring Group	2019	62,515	19	27,379	44
Weeki Wachee Spring and River	2019	47,664	22	25,055	53
Wekiva River, Rock Springs Run and Little Wekiva Canal	2015	48,343	12	10,025	21
Wekiwa Spring and Rock Springs	2018	16,674	9	4,607	28

*FDEP changed this BMAP area boundary in 2021. Consequently, values going forward are not comparable to prior years.

8

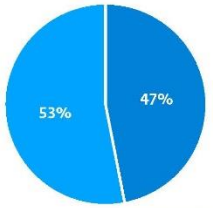
Status of Implementation of Agricultural Best Management Practices (BMPs)

Lake Okeechobee BMAP

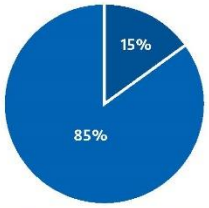
Non-Agricultural Acres	Agricultural Acres	Enrolled Agricultural Acres	Remaining Agricultural Acres*	Unlikely Enrollable Acres	Potentially Enrollable Acres
2,070,753	1,827,425	1,550,683	276,594	72,667	119,563

*This value includes acreages within state-owned properties and/or surface water project areas that are not included in the 'unlikely enrollable' or 'potentially enrollable' acres categories.

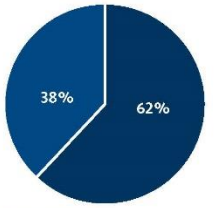
Non-Ag Acres vs. Ag Acres



Enrolled Ag Acres vs. Remaining Ag Acres



Unlikely Enrollable Acres vs. Potentially Enrollable Acres



Enrollment and IV Site Summary	2022	2022 Percent Enrolled
Total agricultural acres in the BMAP	1,827,425	85%
Total agricultural acres enrolled	1,550,683	
Total irrigated acres	641,764	94%
Total irrigated acres enrolled	603,041	
Number of NOIs within BMAP	2,448	
Completed IV site visits	381	

Potentially Enrollable Parcel Distribution by Agricultural Acreage

Agricultural Acres Within Parcel	Number of Parcels	Total Agricultural Acres
< 1	259	149
1 - 25	3,091	28,254
25 - < 50	378	13,318
50 - < 250	298	33,365
≥ 250	99	44,478
TOTAL	4,125	119,563

Agricultural Acres Enrolled

BMP Manuals	Acres
Citrus	103,339
Conservation Plan	160,292
Cow/Calf	532,185
Dairy	1,382
Equine	470
Fruit/Nut	996
LOPP	1,911
Multiple Commodities	332,507
Nursery	3,660
Poultry	135
Row/Field Crop	403,273
Sod	10,532
Temporarily Inactive	1
TOTAL	1,550,633

35

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

Thank You!

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

Angela Chelette, Chief, Bureau of Policy Planning and Coordination

Angela.Chelette@fdacs.gov – (850) 617-1719

Jennifer Thera, NEEPP Coordinator

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

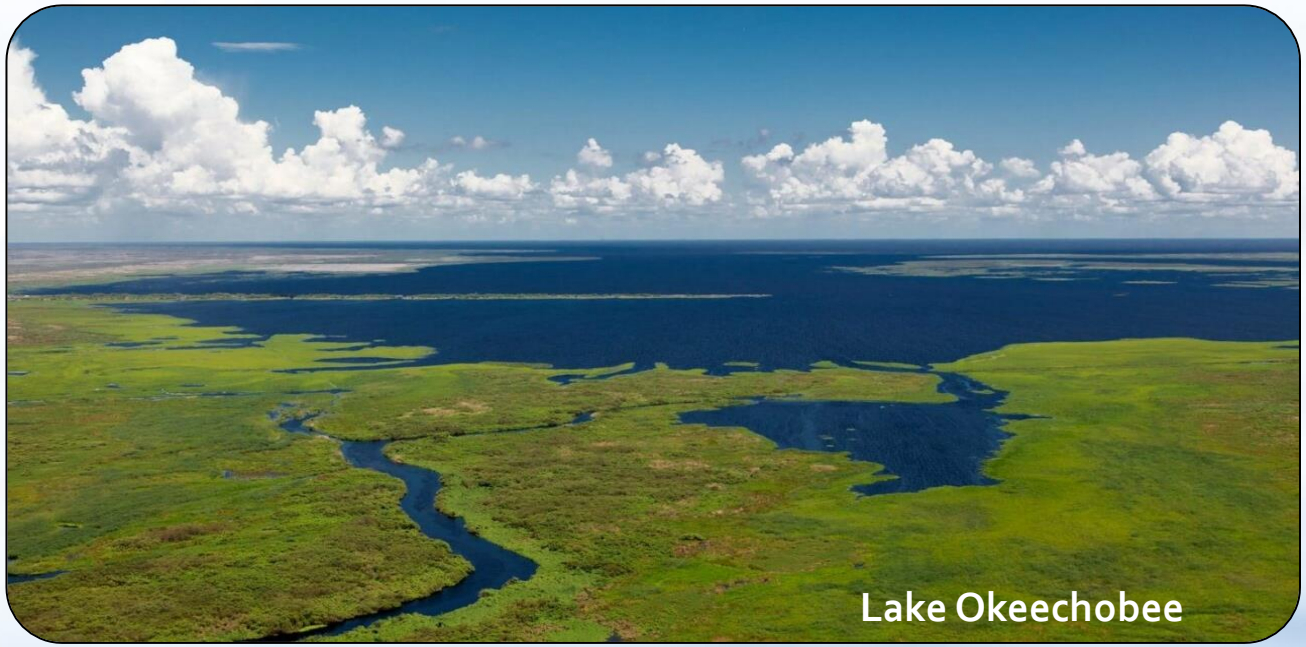
SFWMD Update

Progress on the Northern Everglades Watershed Construction Projects

Megan Jacoby, Bureau Chief
Everglades and Estuaries Protection Bureau
South Florida Water Management District
NEEPP Workshop, West Palm Beach, FL
September 22, 2023

SFWMD Role in Achieving Water Quality Goals

- Achieve TMDLs using a combination of:
  - Research
  - Monitoring
  - Projects

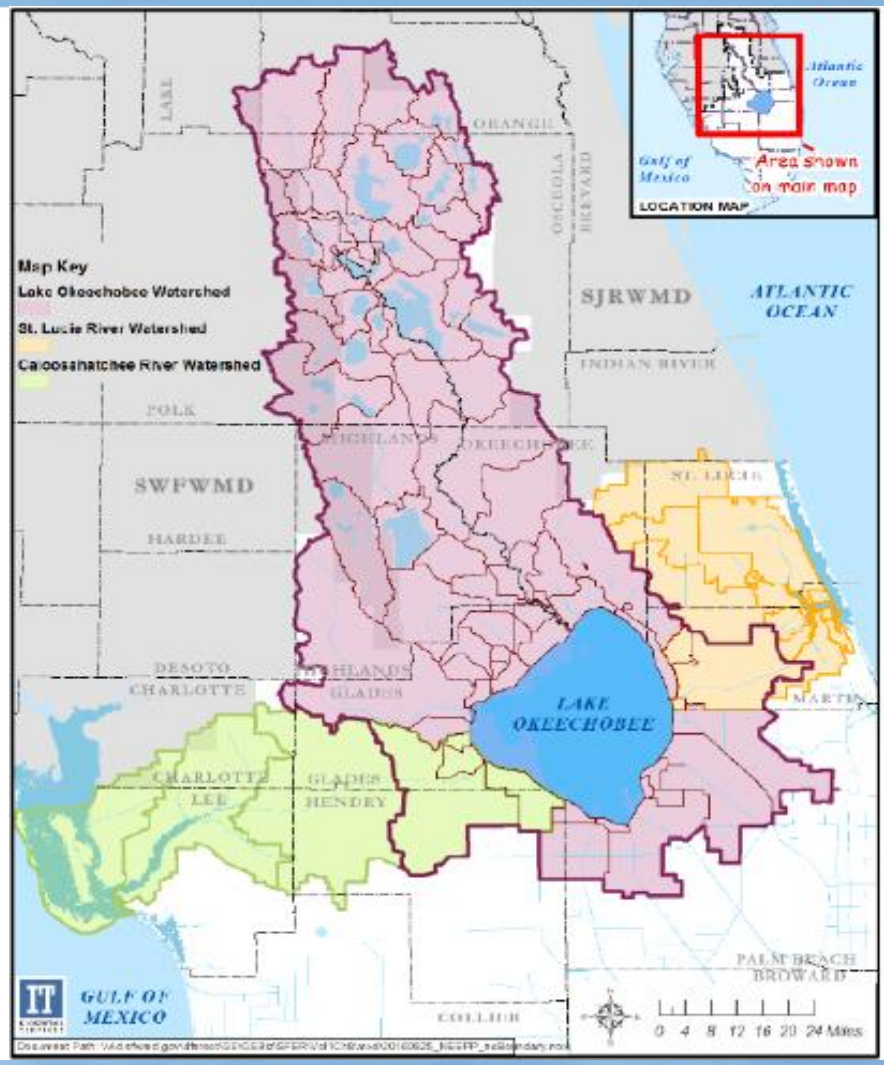

Lake Okeechobee


Caloosahatchee River Estuary

Presenter: Megan Jacoby

Watershed Protection Plans

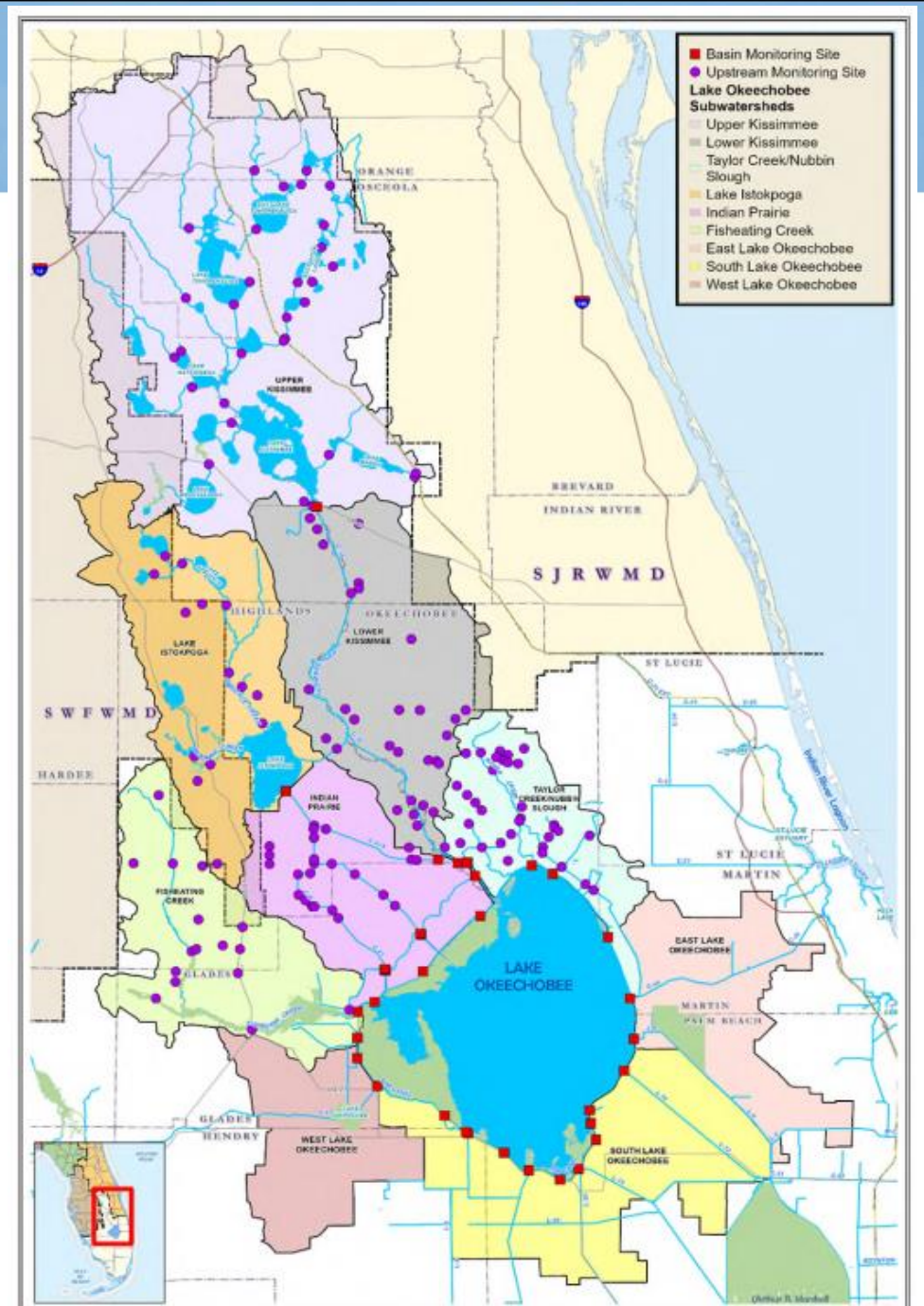
- Science-driven plans comprised of:
  - Research & Water Quality Monitoring
  - Watershed Construction Projects
- 3 Watersheds:
  - Lake Okeechobee
  - St. Lucie River
  - Caloosahatchee River
- Progress reported annually in the South Florida Environmental Report
  SFWMD.gov/SFER



Monitoring

- Water quality monitoring is collected at basin outflow (red) and upstream sites (purple)

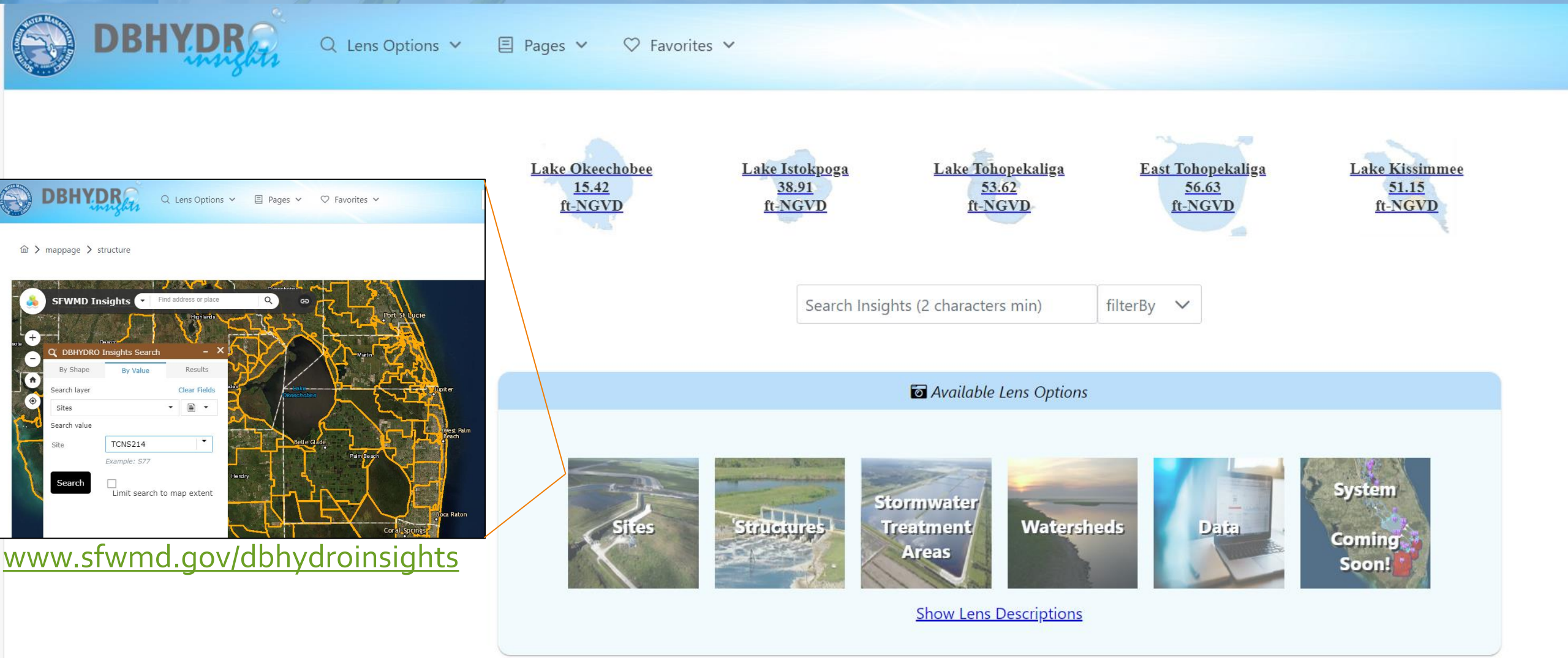
- Monitoring program expanded in 2019 to include 60 more locations sampled at higher frequency
  - Basin – 37 sites
  - Upstream – 150 sites



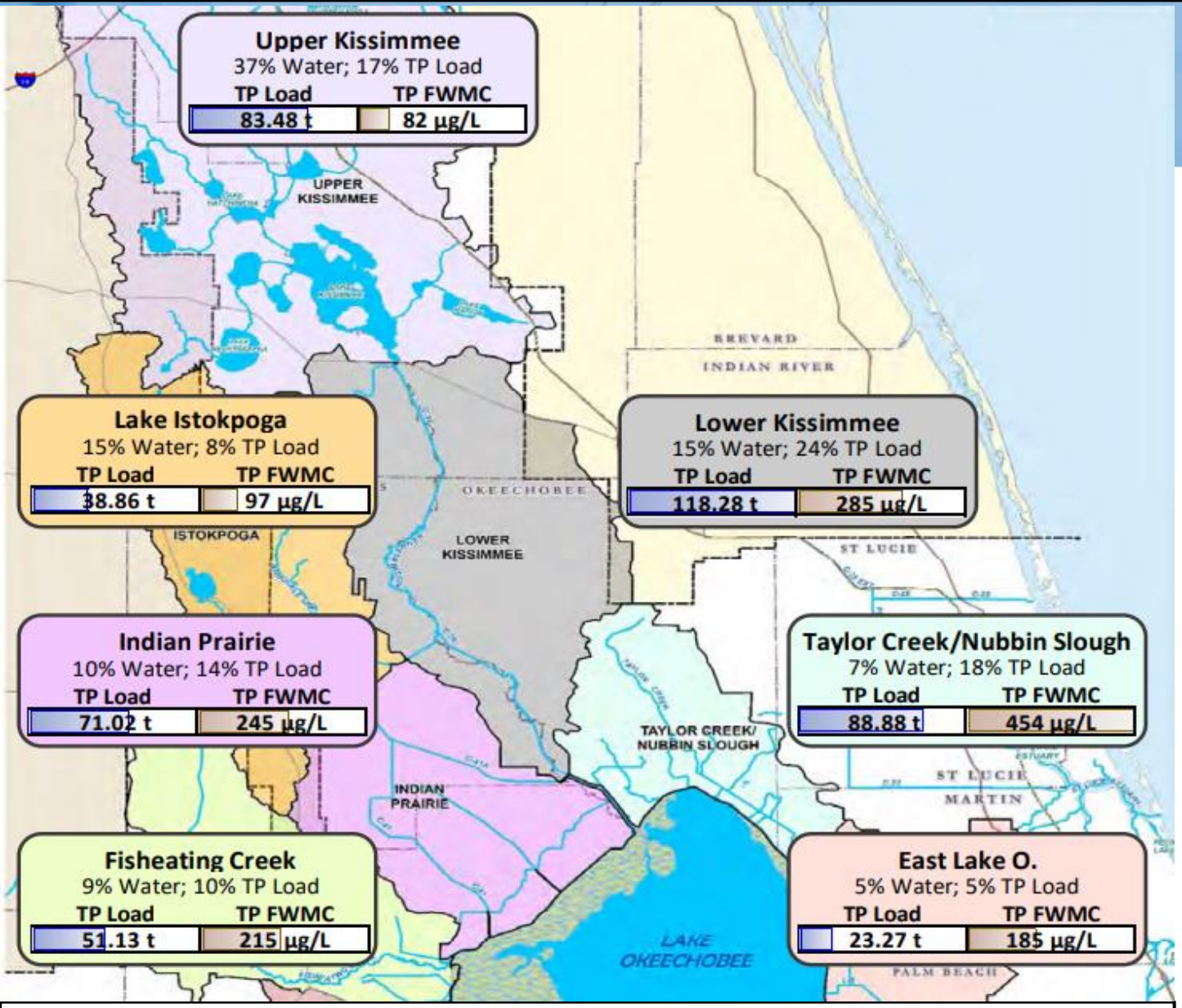
Presenter: Megan Jacoby

DBHYDRO Insights

www.sfwmd.gov/dbhydroinsights



Presenter: Megan Jacoby



Subwatershed WY2018–WY2022

Relative flow and TP load contributions expressed as percentages of total

Lake Okeechobee Watershed Status – WY2022

More treatment and storage projects needed

District projects removed

- Total Phosphorus – 30.8 mt
- Total Nitrogen – 162.1 mt

	Total Phosphorus	Storage
Watershed Goals	**140** metric tons	**900k-1,200,000** acre feet
WY2022	**285** mt	**65,000** ac-ft

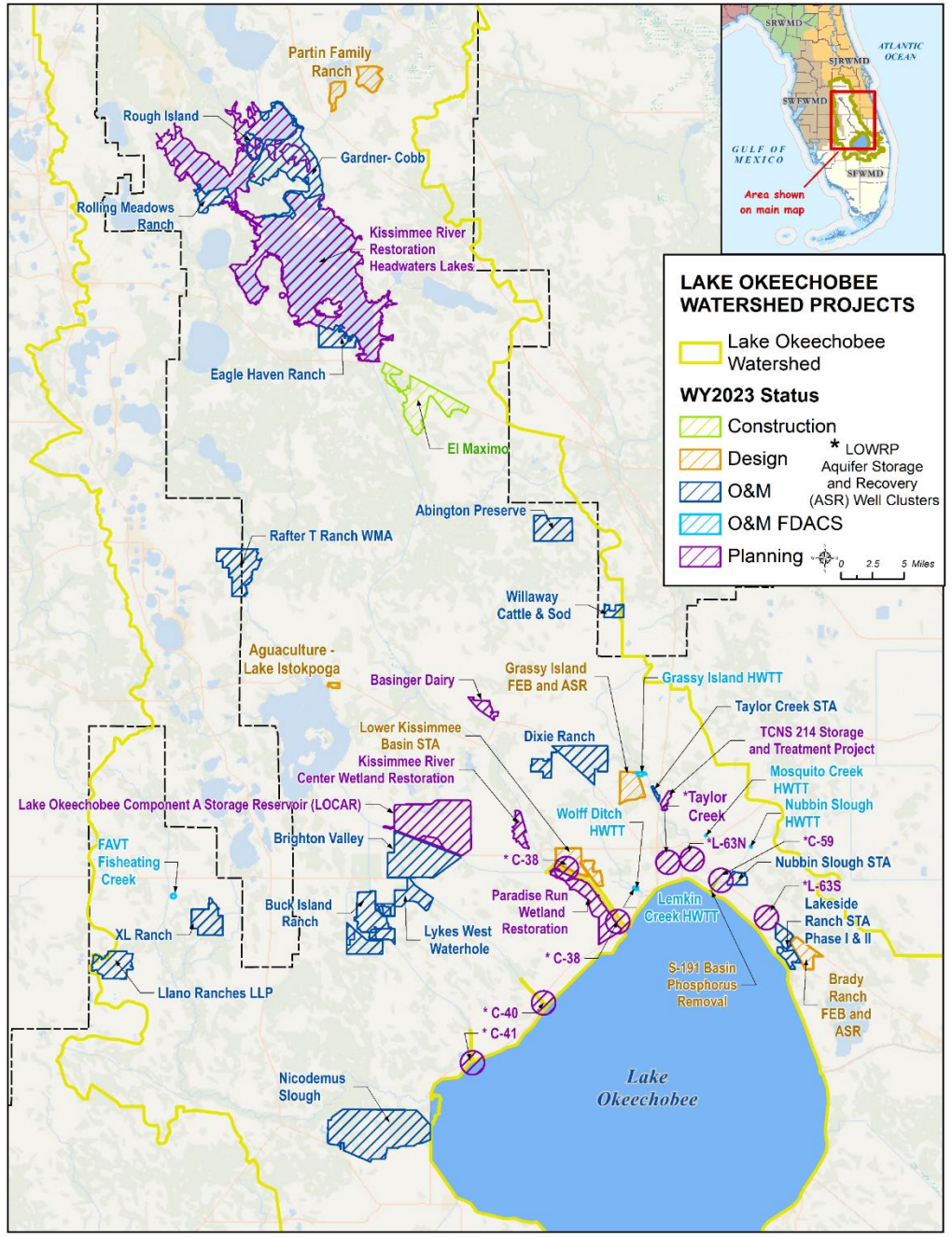
Important to know

- Total flow and phosphorus load to the Lake were lower

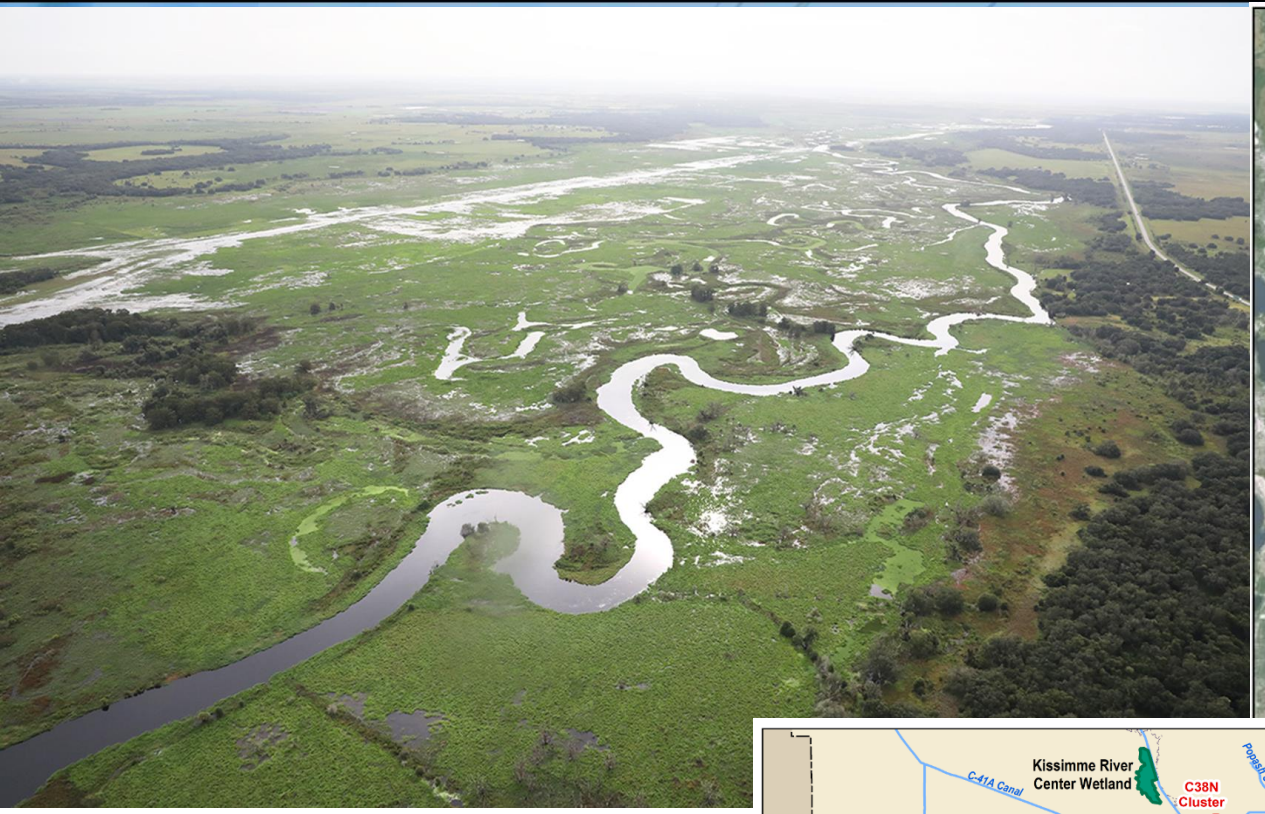
Presenter: Megan Jacoby

Lake Okeechobee Watershed Projects

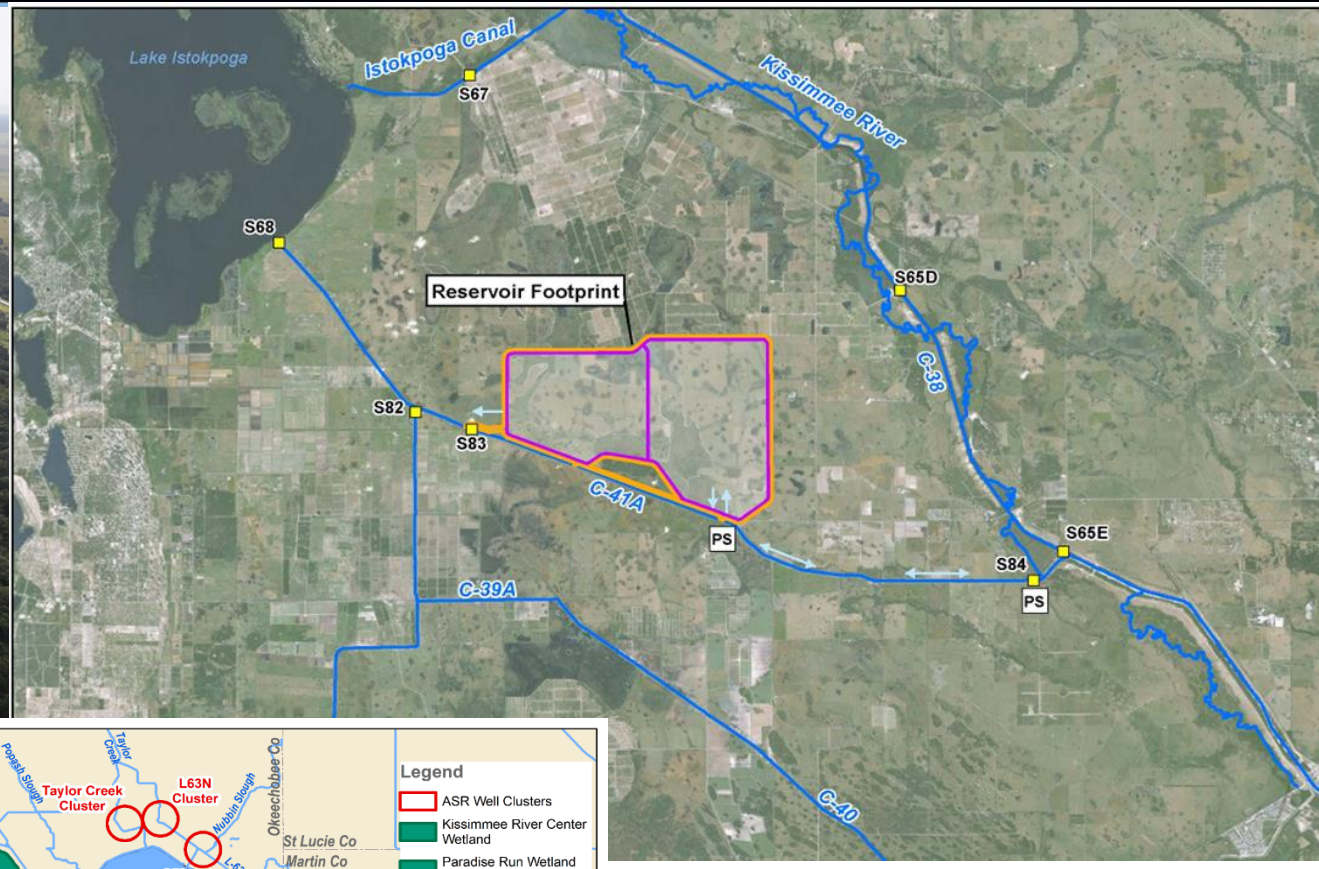
- FY2023 LOWCP Status:
  - 11 projects – planning/design
  - 1 project – construction
  - 17 projects – operations



Presenter: Megan Jacoby

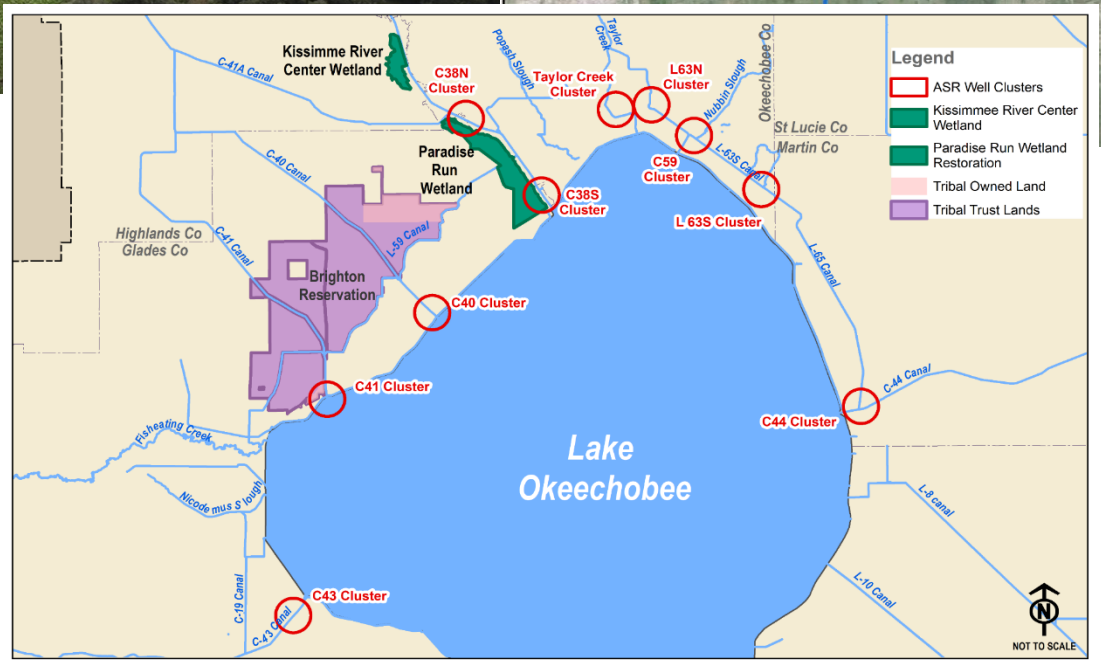


Kissimmee River Restoration Area looking southeast downstream Riverwoods Run and floodplain



North of Lake Okeechobee Storage Reservoir (LOCAR)

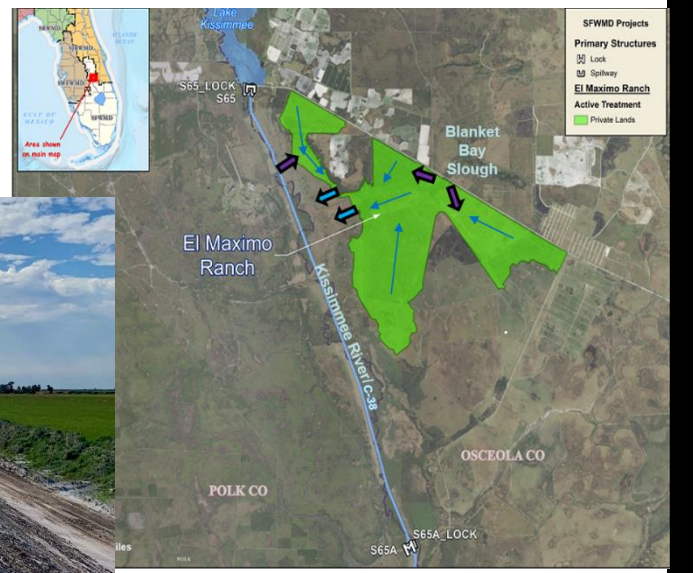
Lake Okeechobee Watershed Restoration Project (LOWRP)



Public-Private Partnerships

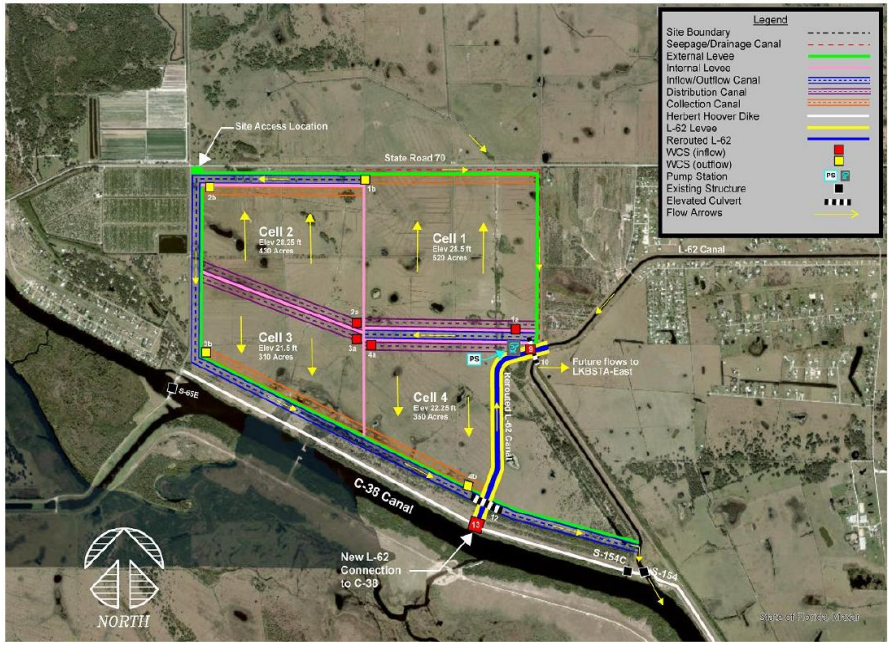
El Maximo

- Active treatment and flow attenuation to detain water from Kissimmee River and Blanket Bay Slough, before discharging to river
- Construction began in August 2022, with planned completion in 2024
- Estimated benefits (per year):
  - 2,500 ac-ft storage
  - 2.4 mt TP removal
  - 7.0 mt TN removal




El Maximo Ranch DWM under construction, Feb'2023

Lower Kissimmee Stormwater Treatment Area

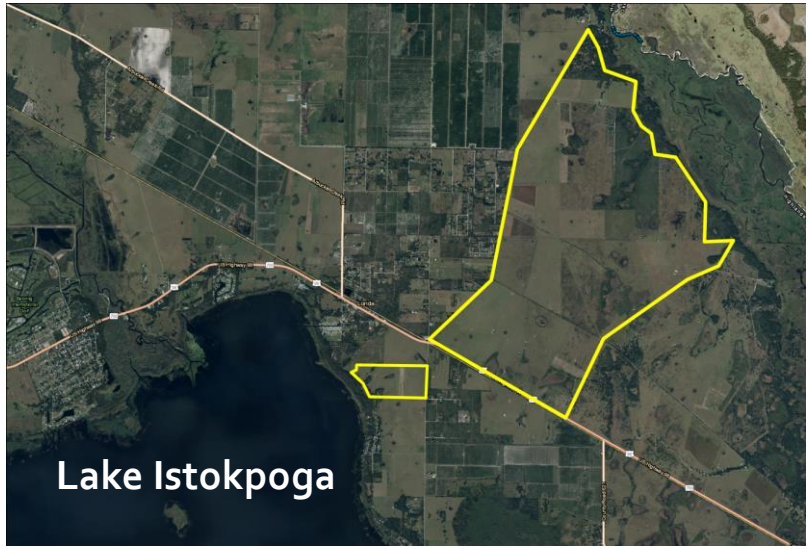


- FDEP BMAP Project to address high nutrient areas in priority basins (S-154 and S-154C)
- New STA will treat water from L-62 and C-38 Canals and Lake Okeechobee
- Multi-phased implementation

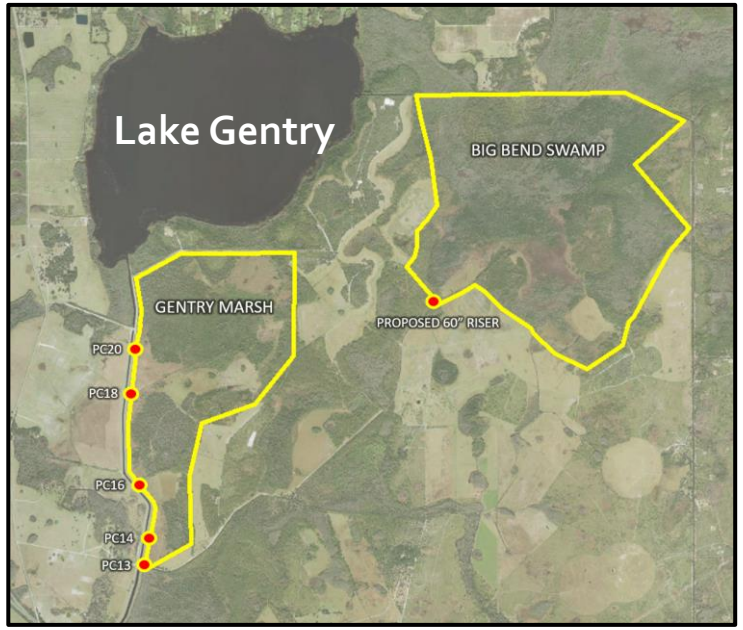
New Northern Everglades Water Retention and Nutrient Load Reduction Projects

Aguaculture Nutrient Removal

- Nutrient reduction project:
  - Mechanical harvesting of wetland vegetation and unconsolidated muck from Lake Istokpoga
  - Applied as a nutrient amendment on private lands
- Estimated benefits (per year):
  - 4.54 mt TP removal
  - Pay-for-performance basis



Partin Family Ranch



- Water and nutrient retention project:
  - 3,050 acres on private land in Osceola County
- Estimated benefits (per year):
  - 4,270 ac-ft storage
  - 0.4 mt TP removal
  - 5.2 mt TN removal

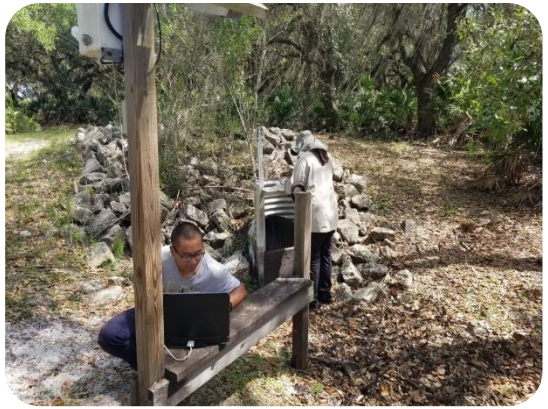
New Northern Everglades Water Retention and Nutrient Load Reduction Projects (cont.)

Buck Island Ranch
Indian Prairie Subwatershed

- 10-year DWM contract renewal (until 2032)
- 4,796-acre passive storage on wetlands//improved areas
- Estimated benefits: 2,193 ac-ft/year storage

Eagle Haven Ranch
Upper Kissimmee Subwatershed

- 10-year DWM contract renewal (until 2032)
- 3,418-acre passive storage on weirs/ditches network
- Estimated benefits: 374 ac-ft/year storage



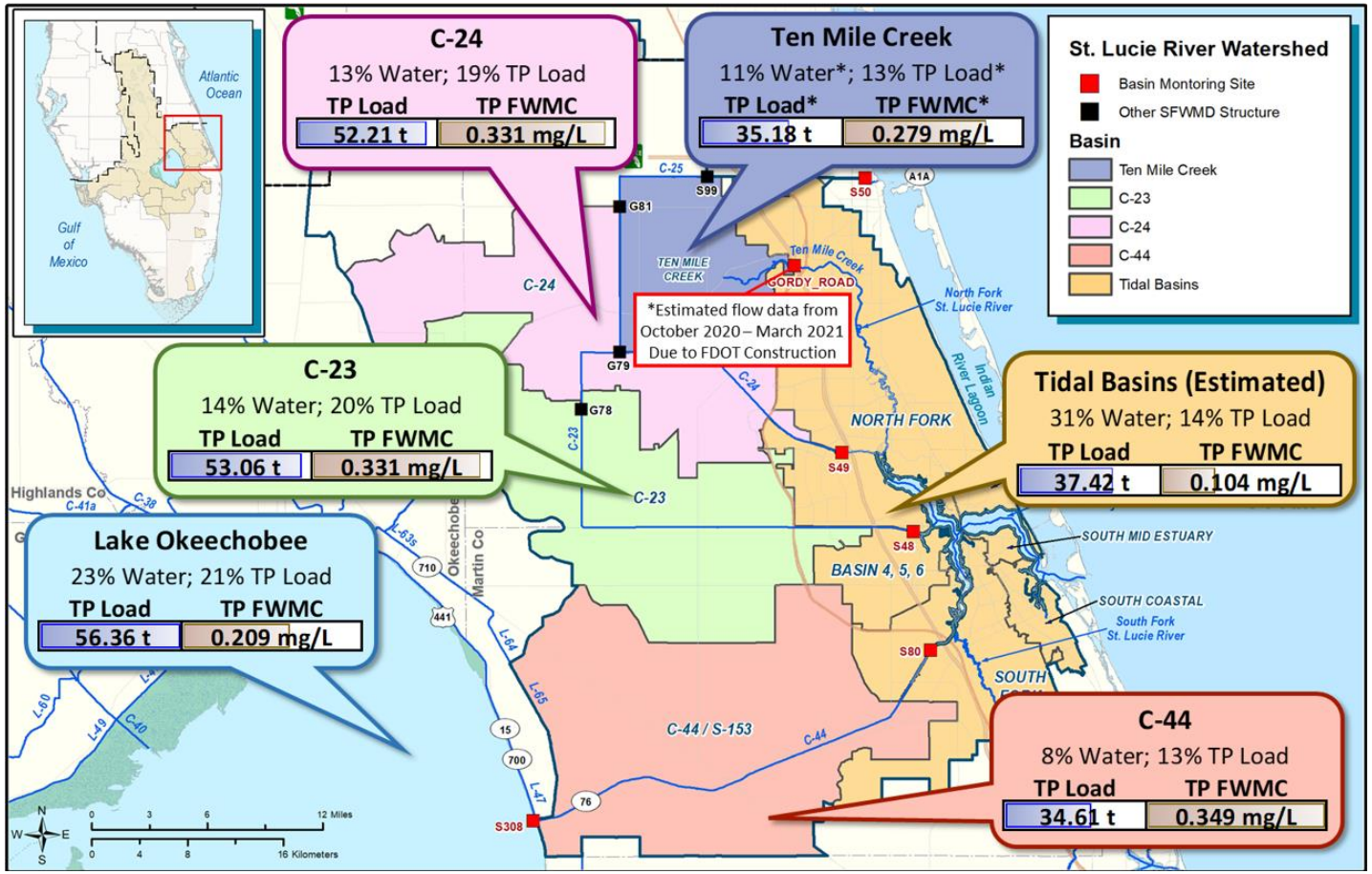
XL Ranch
Fisheating Creek Subwatershed

- 10-year DWM contract renewal (until 2032)
- 765-acre passive storage on wetlands/reservoir areas
- Estimated benefits: 887 ac-ft/year storage

Dixie Ranch
Lower Kissimmee Subwatershed

- 10-year DWM contract renewal (until 2032)
- 3,063-acre passive storage on private ranchland
- Estimated benefits: 315 ac-ft/year storage

St. Lucie River Watershed Status – WY2022



Subwatershed WY2018–WY2022

Relative flow and TP load contributions expressed as percentages of total

District projects removed

- Total phosphorus – 77 mt
- Total nitrogen – 359 mt

	Total Phosphorus	Storage
Watershed Goals	**0.081** mg/L (SE-03)	**200,000** acre feet
WY2022	**0.143** mg/L	**63,098** ac-ft

Important to know

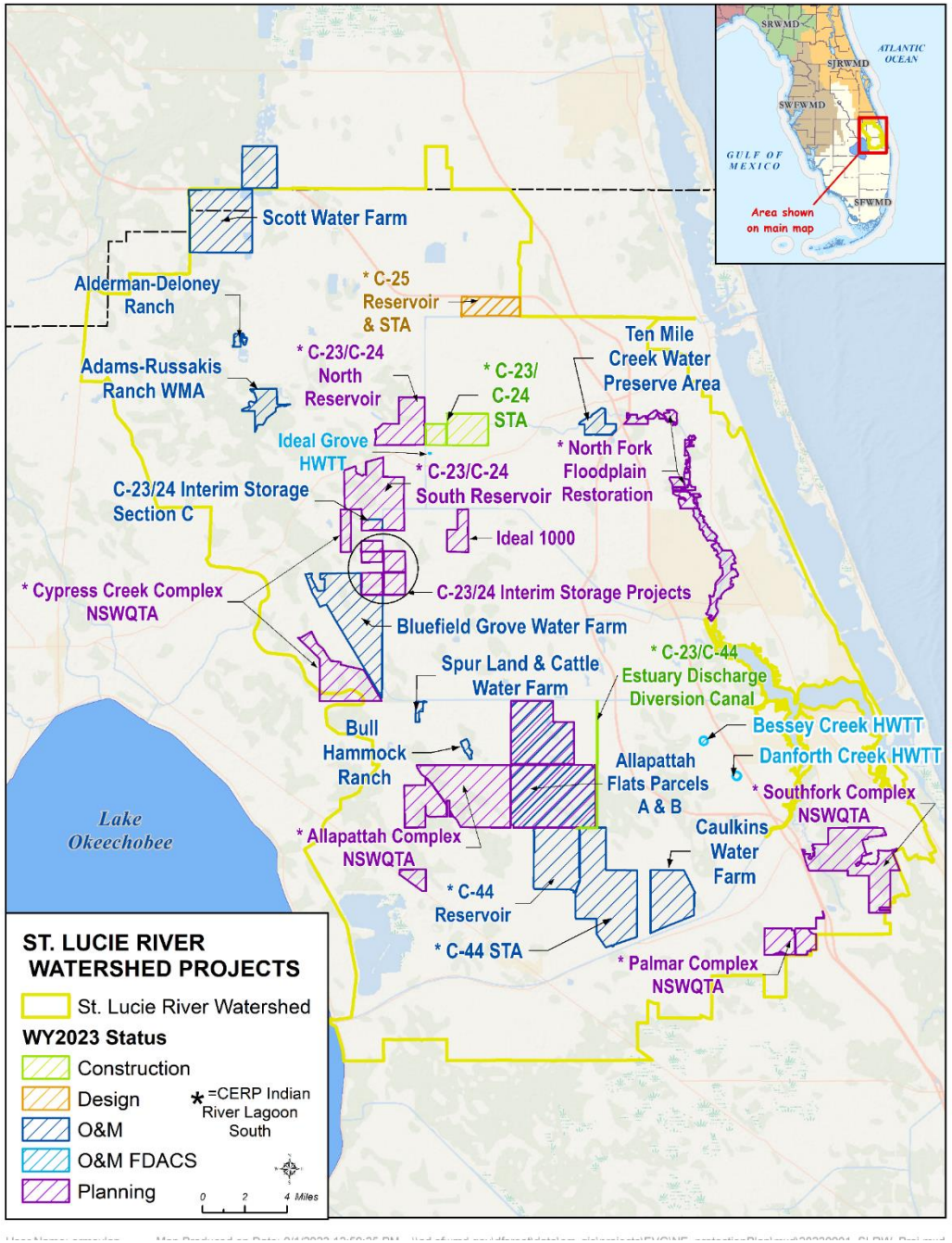
- Total Phosphorus has been declining
- SAV and oysters showed signs of improvement

Presenter: Megan Jacoby

St. Lucie River Watershed Projects

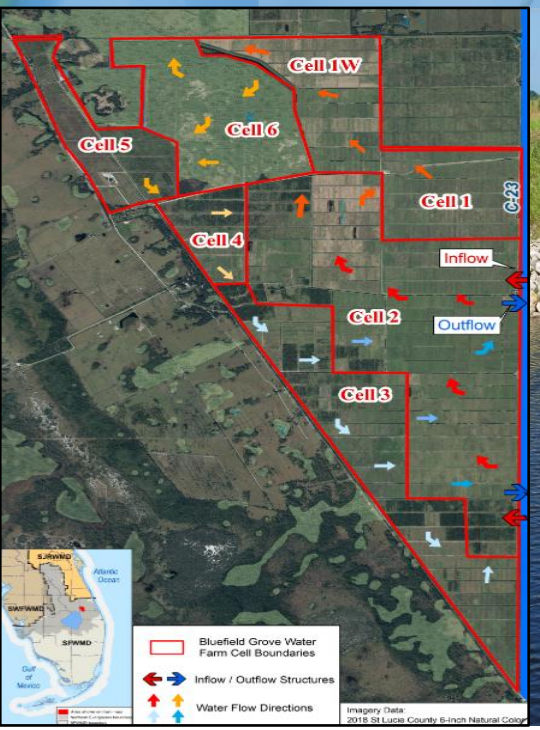
- Status:
  - 10 projects – planning/design
  - 2 project – construction
  - 10 projects – operations

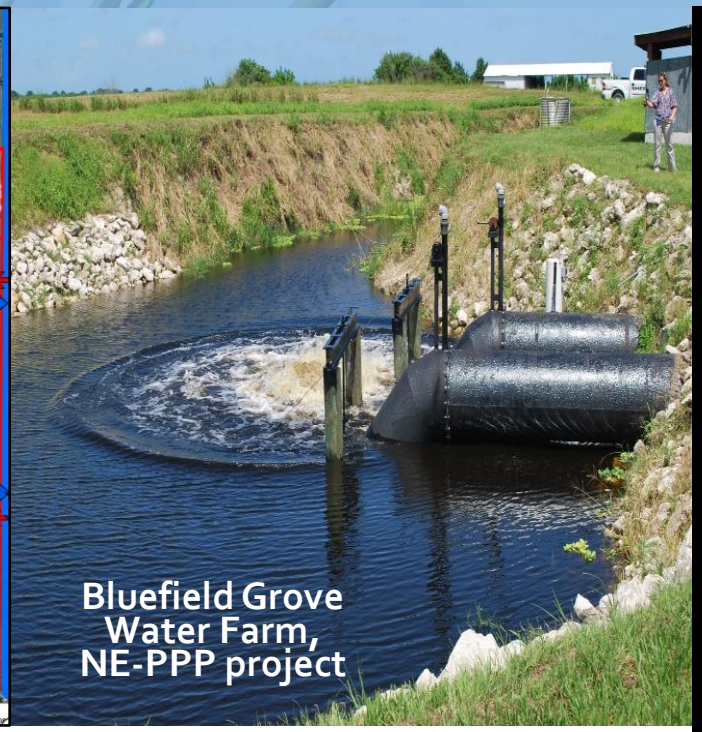

C-44 Reservoir & STA



Presenter: Megan Jacoby

Bluefield Grove & Scott Water Farms





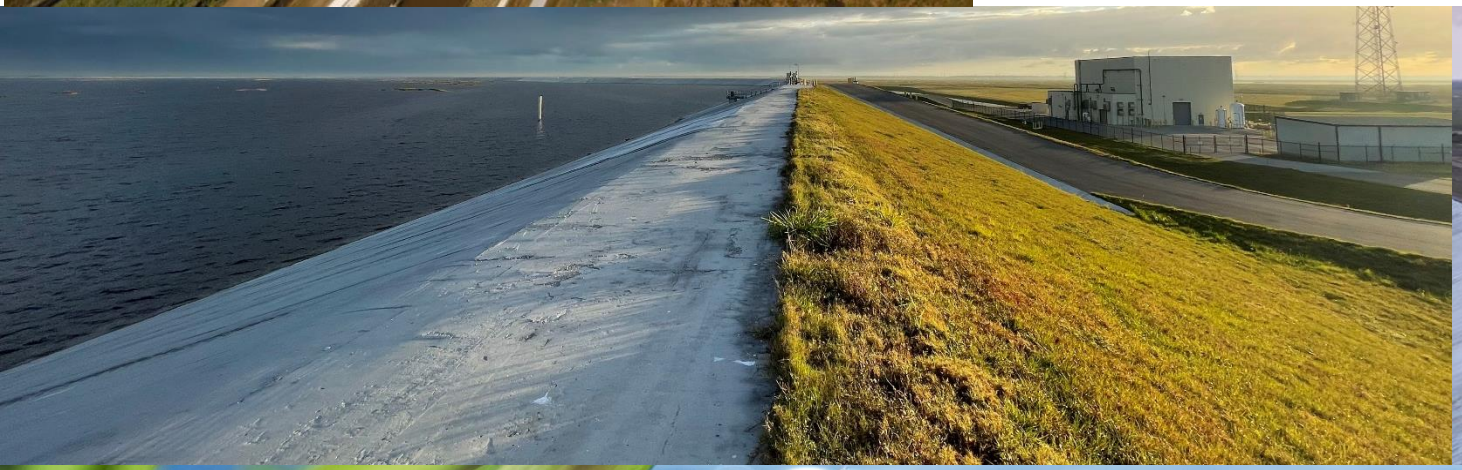
- Large-scale stormwater storage and treatment
  - 6,104 acres on private land, prior citrus operation
  - In operations since August 2021
- Estimated benefits (per year):
  - 28,360 ac-ft storage
  - 5.1 mt TP removal
  - 25.5 mt TN removal

- Large-scale stormwater storage and treatment
  - 7,444 acres on private land, prior citrus operation
  - In operations since November 2021
- Estimated benefits (per year):
  - 29,005 ac-ft storage
  - 3.3 mt TP removal
  - 13.7 mt TN removal

Indian River Lagoon – South


C-44 Reservoir and STA

- Reduce freshwater inflows and generate habitat/water quality improvements in St. Lucie Estuary/Indian River Lagoon (IRL)
- C-44 Reservoir and STA completed October 2021; operational testing and monitoring until 2025
- C-23/C-24 STA and C-23 Estuary Discharge Diversion construction under way, both planned for completion in 2025
- C-25 Reservoir and STA and C-23/C-24 N & S reservoirs design under way; construction completion by 2028 and 2030




S-401 Pump Station

C-23/24 Interim Storage: Section C and Other Parcels


Section C Interim Storage


Section C pump area

- Section C is operational
  - Provides ~2,900 ac-ft storage per year
- Feasibility Study for Section A&B Water Farms completed in 2021; further evaluation done in 2022-23 to help maximize nutrient reduction in this area
- C-23/C-24 District Lands Hydrologic Enhancements Project in planning for Section B and other District-owned parcels

New Northern Everglades Water Retention and Nutrient Load Reduction Projects

Alderman-Deloney Ranch
C-25 Basin

- 170-acre wetland management area in C-25 Basin, upstream of BMAP
- Estimated benefits: 147 ac-ft/year storage

Spur Land and Cattle
C-23 Basin

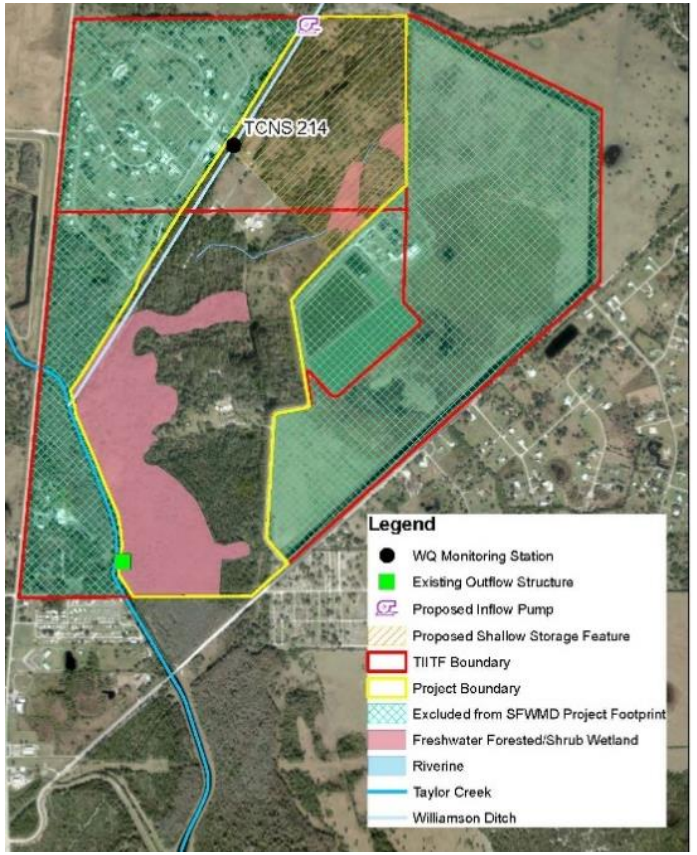
- 210-acre water farm, retains rainfall and water from C-23 Canal
- Estimated benefits: 1,500 ac-ft/year storage

Nutrient Reduction Projects

Basinger Dairy Legacy Phosphorus

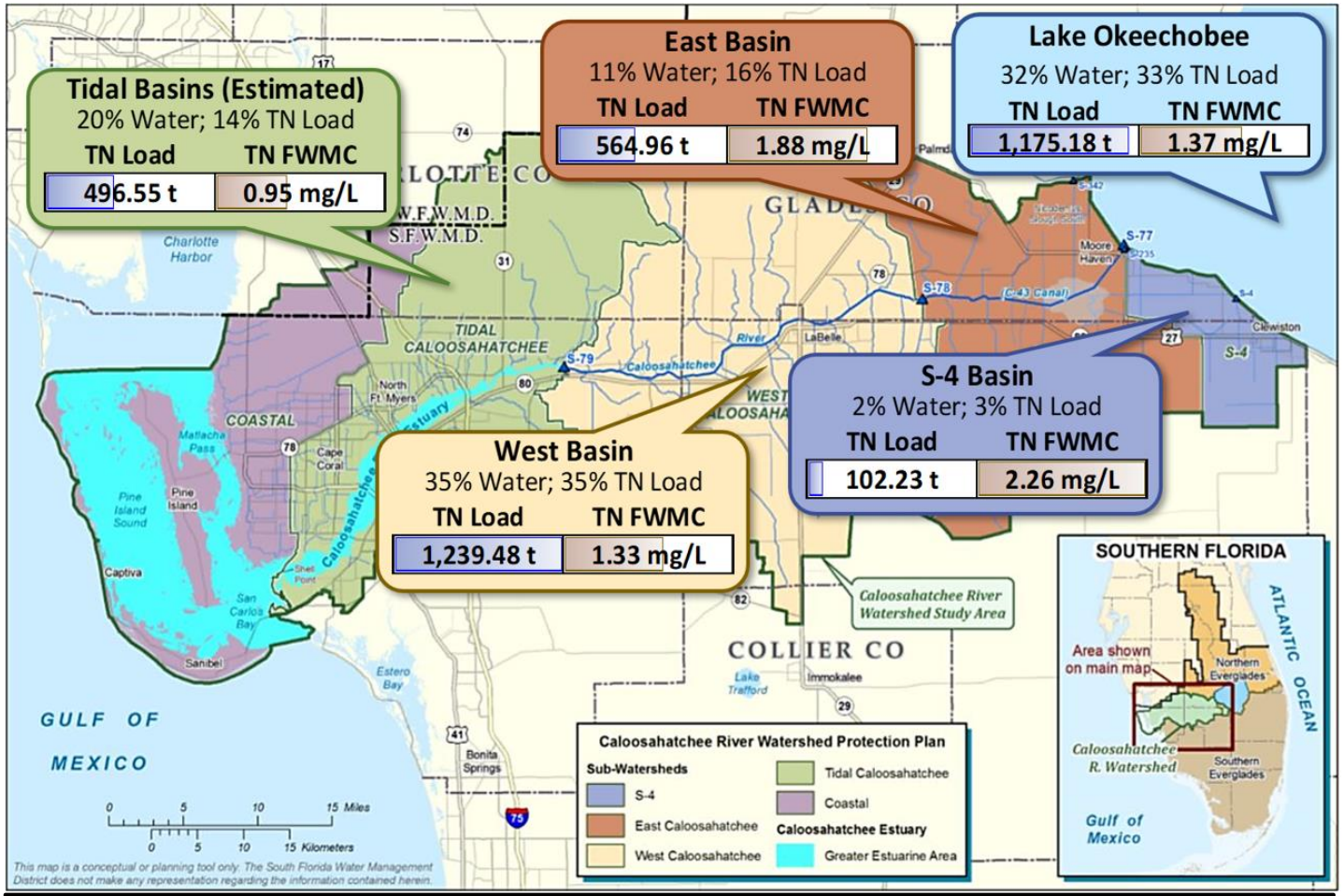
- Public-Private Partnership to reduce and remove phosphorus at a former dairy farm
  - Coordinating Agency participation
- ~1,300 acres in Okeechobee County
  - Located ~2 miles upstream of Kissimmee River in S-65D priority basin
  - Operational dairy farm for over 50 years
- Unique opportunity to support lake BMAP

TCNS 214 Treatment and Storage



- Project will divert water from the Williamson Ditch tributary (TCNS 214 ditch) for treatment before water is released into Taylor Creek
- Planning (2023); Design (2025); construction (2027), operations (2028)
- Estimated benefits (per year):
  - 670 ac-ft storage
  - 1.0 mt TP removal
  - 4.0 mt TN removal

Caloosahatchee River Watershed Status – WY2022



Subwatershed WY2018–WY2022

Relative flow and TN load contributions expressed as percentages of total

More storage projects needed

District projects removed

- > 27 mt nitrogen
- >2 mt phosphorus

	Total Nitrogen	Storage
Watershed Goals	**1,383** mt	**400,000** acre feet
WY2022	**3,074** mt	**8,860** ac-ft

Important to know

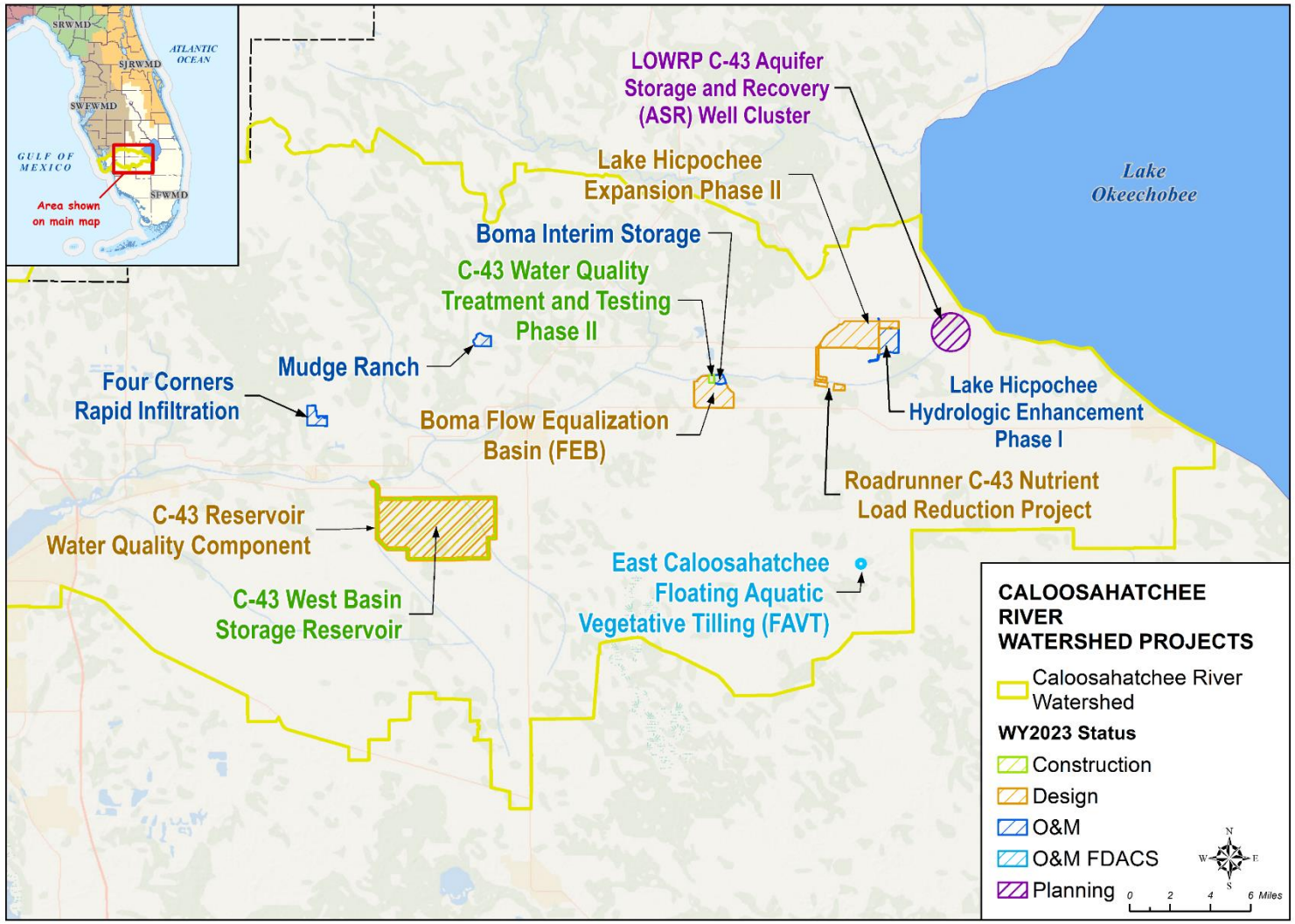
- Total flow and total Nitrogen were lower in WY2022

Presenter: Megan Jacoby

Caloosahatchee River Watershed Projects

- Status:
  - 4 projects – planning/design
  - 2 projects – construction
  - 4 projects – operations

C-43 Reservoir



Presenter: Megan Jacoby

C-43 West Basin Storage Reservoir

- 170,000 ac-ft storage reservoir
- Will reduce lake discharges (wet season); provide freshwater flow to Caloosahatchee (dry season)
- In construction since 2019; planned completion (2025), followed by operations (2026)

C-43 Reservoir Water Quality Component

- Feasibility Study (2020); Siting Evaluation (2021)
- *In-Reservoir Alum Injection* identified as most cost-effective technology to suppress algae, while optimizing discharges to Caloosahatchee Estuary
- Final design/permitting (late 2023); construction complete (mid-2024), followed by operations

Boma Flow Equalization Basin (FEB)

- ~7,200 ac-ft FEB on Boma property
- Attenuate high flows and store excess runoff to reduce harmful releases to Caloosahatchee Estuary
- Design (late 2023); construction complete (2027), followed by operations start (2028)

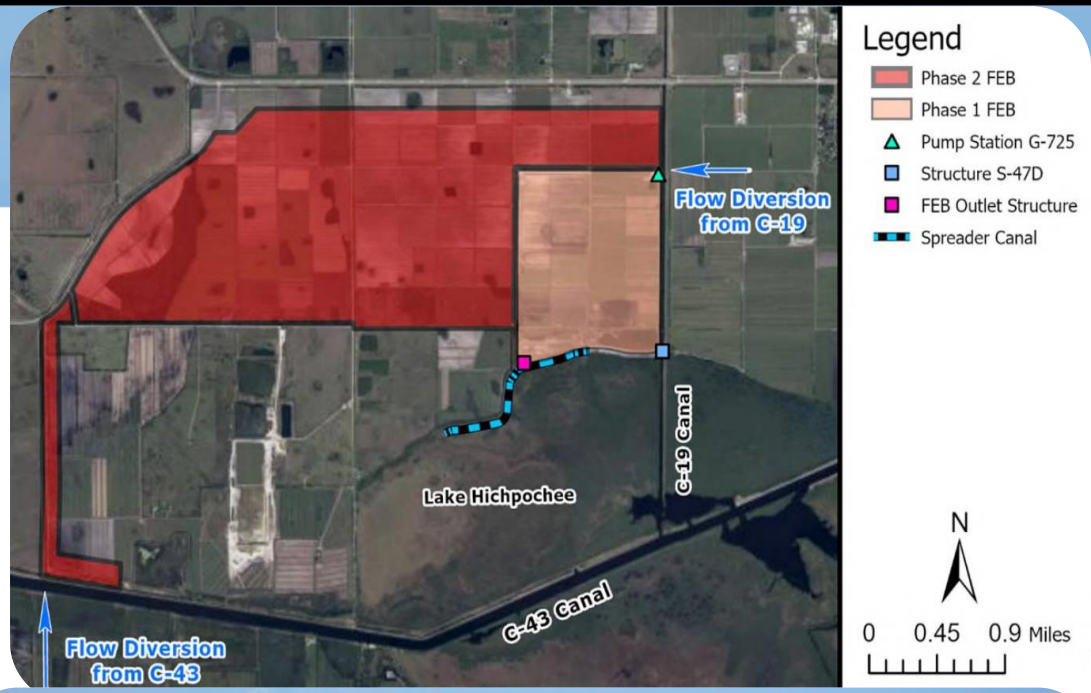
C-43 Water Quality Treatment & Testing Facility

- Co-located with FEB to maximize water quality and storage benefits at Boma property
- Phase II – evaluate effectiveness of constructed wetlands to reduce TN at test-cell scale
- Construction underway (complete in 2024); multiyear research to follow, starting in 2025

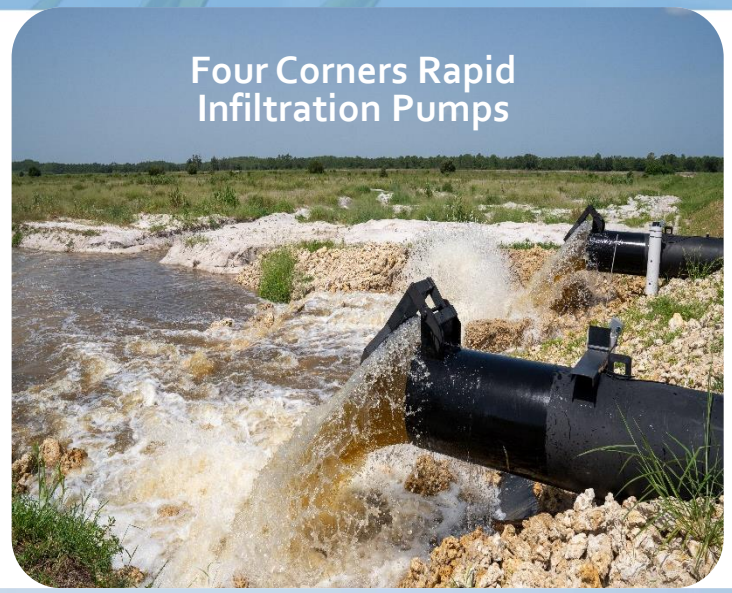

Boma Facility

Lake Hicpochee Hydrologic Enhancement (Phase I) and Expansion (Phase II)

- Holds water in shallow storage and redistributes it to reduce harmful discharges to Caloosahatchee River
- Phase I – 692-acre FEB (2019); average storage capacity ~1,297 ac-ft/yr
- Phase II – 2,200-acre FEB and pump station; additional storage capacity ~17,162 ac-ft/yr
  - Final Design (late 2023); construction complete (2026)



New Northern Everglades Water Retention and Nutrient Load Reduction Projects



Four Corners Rapid Infiltration Project

- Water and nutrient retention project:
  - 366-acre above-round impoundment and water control features
- Construction complete and operations began in summer 2023
- Estimated benefits (per year):
  - 20,000 ac-ft storage
  - 1.23 mt TP removal
  - 39.4 mt TN removal

Presenter: Megan Jacoby

Watershed Protection Plan Reporting


Lake Tohopekaliga

COMING SOON!

For more information on NEEPP progress, view the *Draft 2024 South Florida Environmental Report* (October 2023) at:

SFWMD.gov/SFER

Contact Information

Megan Jacoby, Bureau Chief

Everglades & Estuaries Protection Bureau

South Florida Water Management District

mjacoby@sfwmd.gov; 561-682-6517