



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

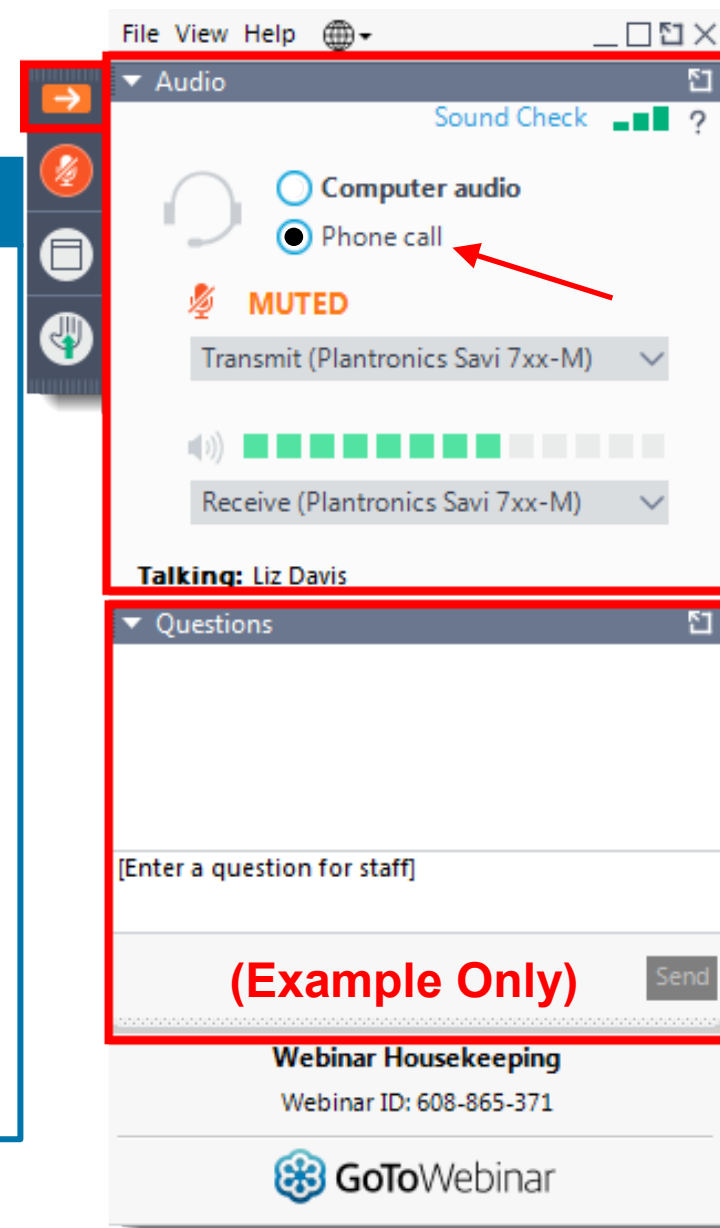
Attendee audio will automatically be muted.

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.

6/2/2022





Lake Okeechobee Basin Management Action Plan (BMAP) Annual Meeting

Diana Turner

Division of Environmental Assessment and Restoration

June 2, 2022



Agenda

- *Background Information*
- *South Florida Water Management District (SFWMD) Updates*
- *Annual Progress*
- *Statewide Annual Report (STAR)*
- *What's Next?*
- *Florida Department of Agriculture and Consumer Services (FDACS) Updates*
- *Unenrolled Agricultural Producer Enforcement*



Background Information

Lake Okeechobee Total Maximum Daily Load (TMDL)

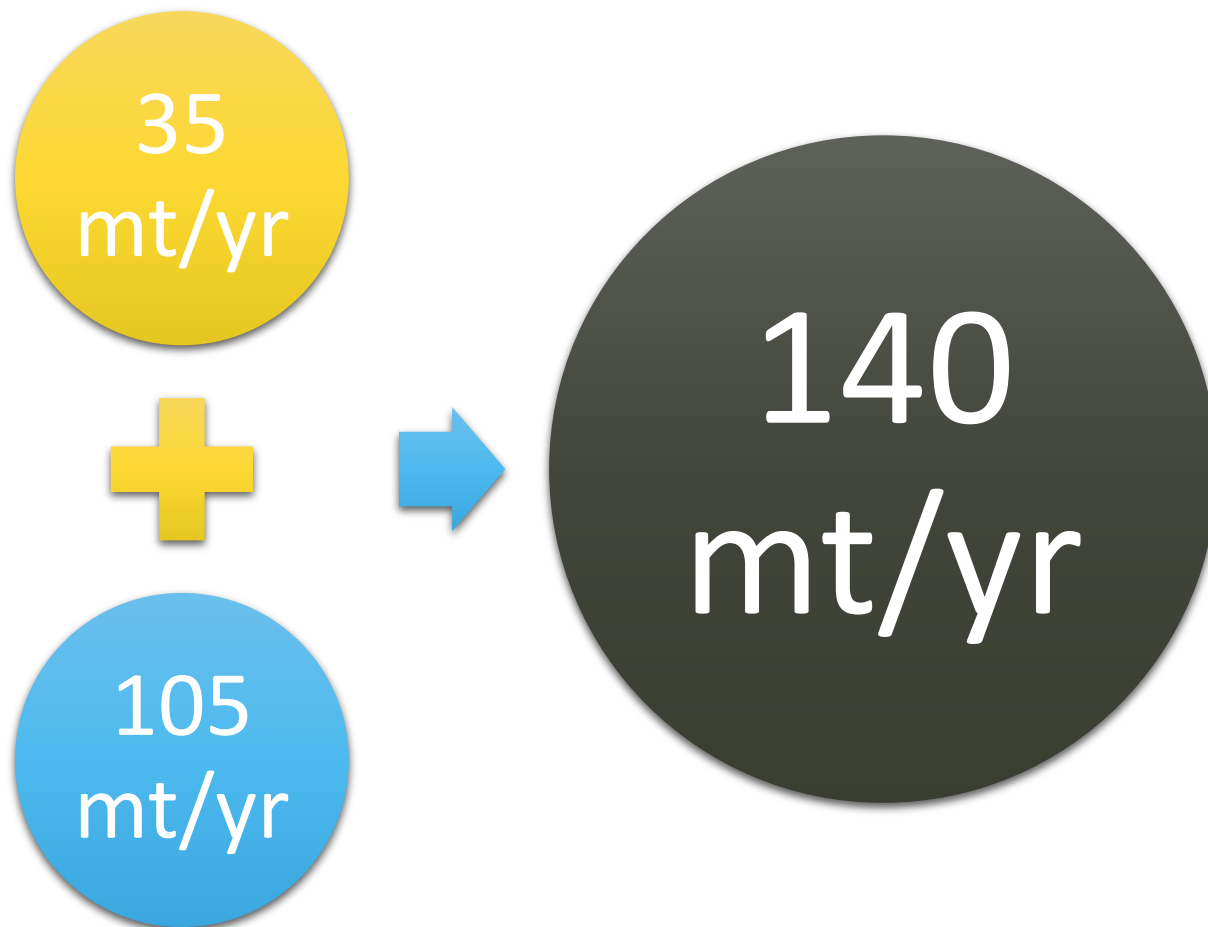
Lake Okeechobee BMAP



Lake Okeechobee TMDL

- Total phosphorus (TP) load of 140 metric tons per year (mt/yr):

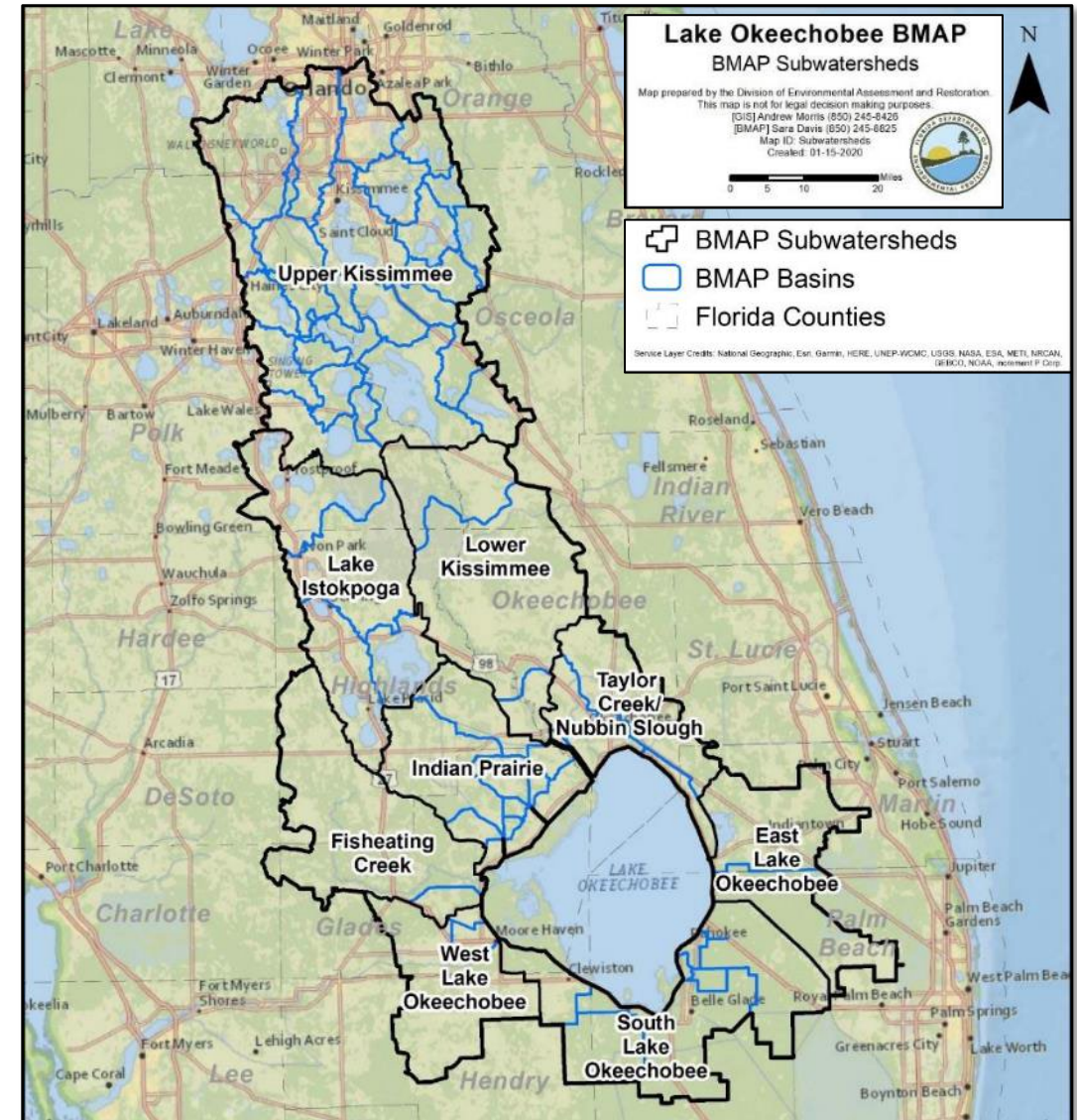
- 35 mt/yr fall directly on the lake through atmospheric deposition
- 105 mt/yr allocated to the entire Lake Okeechobee Watershed (LOW)





Lake Okeechobee BMAP

- Initially adopted in December 2014
- First 5-year review completed December 2019
- Updated BMAP adopted in February 2020





Lake Okeechobee BMAP

Stakeholders/Participants

Type of Entity	Stakeholder/Participant		
Counties	•Glades •Hendry •Highlands	•Martin •Okeechobee •Orange	•Osceola •Palm Beach •Polk
Municipalities	•City of Avon Park •City of Edgewood •City of Kissimmee	•City of Okeechobee •City of Orlando	•City of Sebring •Town of Windermere
Government entities and special districts	•Avon Park Air Force Range •Okeechobee Utility Authority •Istokpoga Marsh Watershed Improvement District	•Reedy Creek Improvement District •Spring Lake Improvement District	•South Florida Conservancy District •Valencia Water Control District
Agencies	•FDACS	•SFWMD	•Florida Department of Transportation (FDOT) District 1 •FDOT District 4 •FDOT District 5



SFWMD Update

Lake Okeechobee Watershed Construction Project

Stacey Ollis, PMP
Principal State Policy Analyst
Everglades and Estuaries Protection Bureau
Lake Okeechobee BMAP Annual Meeting
June 2, 2022

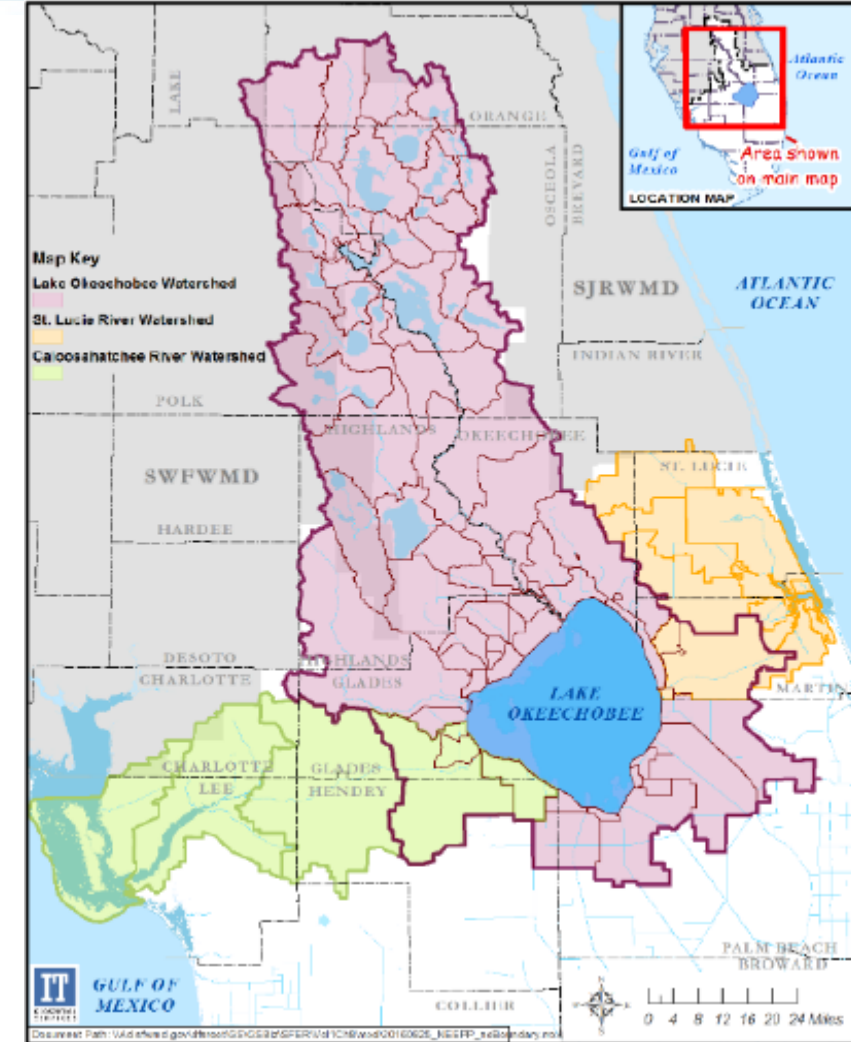
Agenda



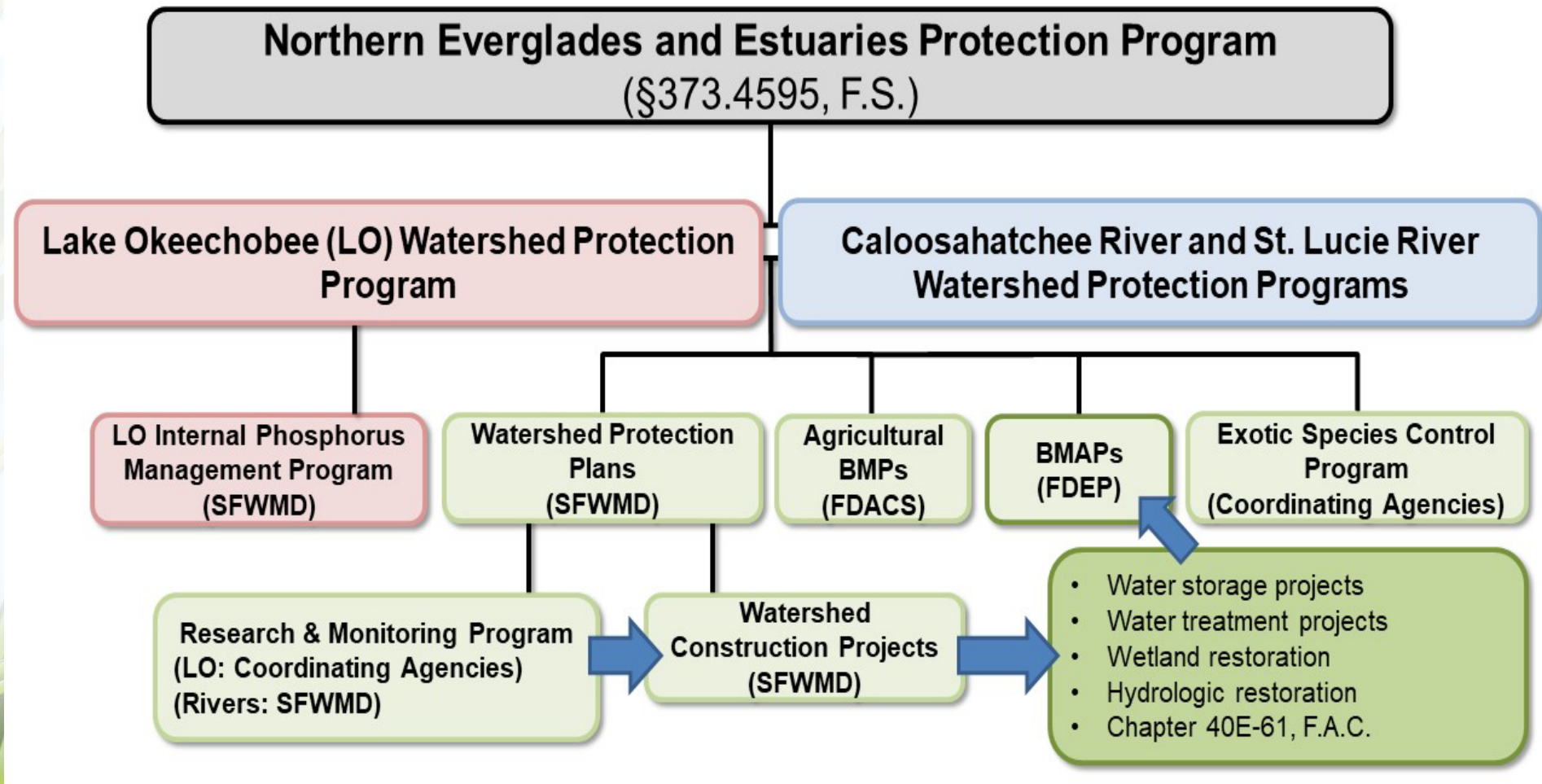
- Northern Everglades Program Overview
- 2021 Lake Okeechobee Watershed Construction Project Review
 - Project Spotlights
 - Water Storage Benefits
- What's New
- Watershed Protection Plan Reporting

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



Lake Okeechobee Watershed Construction Project Review

- In 2020, SFWMD initiated annual Lake Okeechobee Watershed Construction Project (LOWCP) 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: 2021 LOWCP Review
 - Key accomplishments during Fiscal Year (FY) 2021 (Oct. 1, 2020–Sept. 30, 2021)
 - Final 2022 SFER – Volume I, Chapter 8B (March 1, 2022) at [SFWMD.gov/SFER](https://www.sfwmd.gov/SFER)

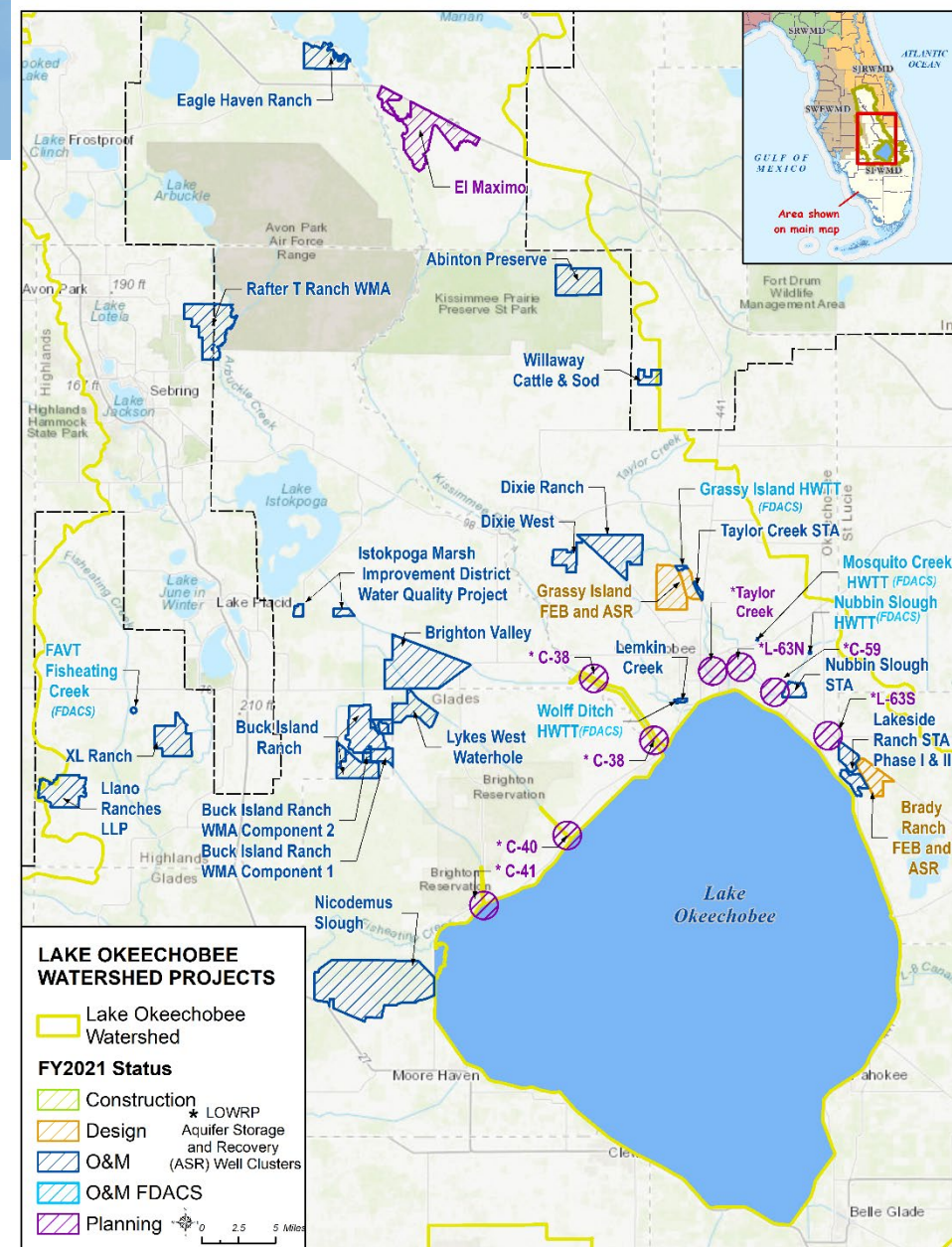
SFWMD Projects

➤ FY2021 LOWCP Status:

- 2 projects – planning
- 2 projects – design
- 18 projects – operations



Brighton Valley DWM



Project Spotlights

- Kissimmee River Restoration Project
- Lake Okeechobee Watershed Restoration Project (LOWRP)
- Lakeside Ranch and Nubbin Slough Stormwater Treatment Areas (STAs)
- Brighton Valley Dispersed Water Management (DWM)



S-191 Pump Station,
Lakeside Ranch STA

Kissimmee River Restoration Project

CONSTRUCTION COMPLETION

- Ribbon Cutting Ceremony July 2021
- 44 miles of historic river channel natural flow reestablished/open to public access

KISSIMMEE HEADWATER REVITALIZATION REGULATION SCHEDULE

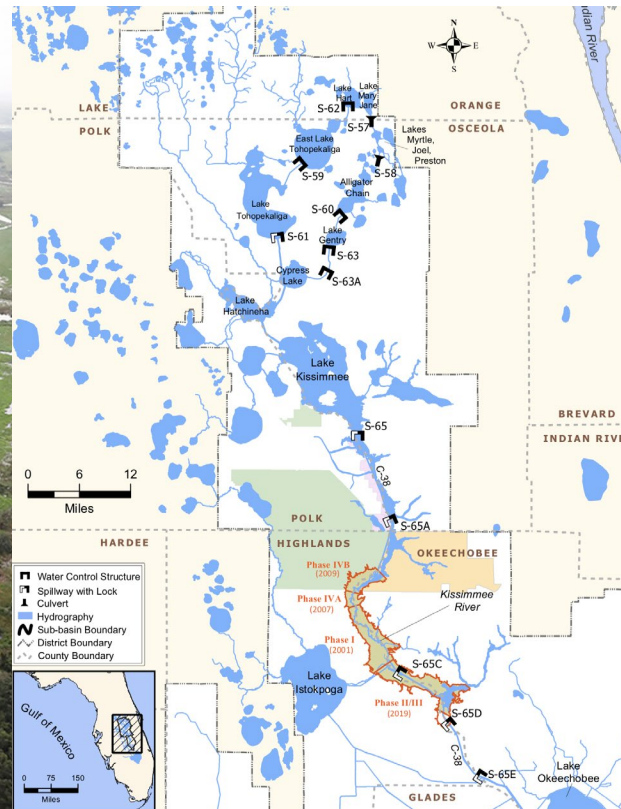
- Incremental Implementation (2022-2026)

EVALUATION MONITORING

- 5-Year Post-Restoration Monitoring Period (2027-2031)



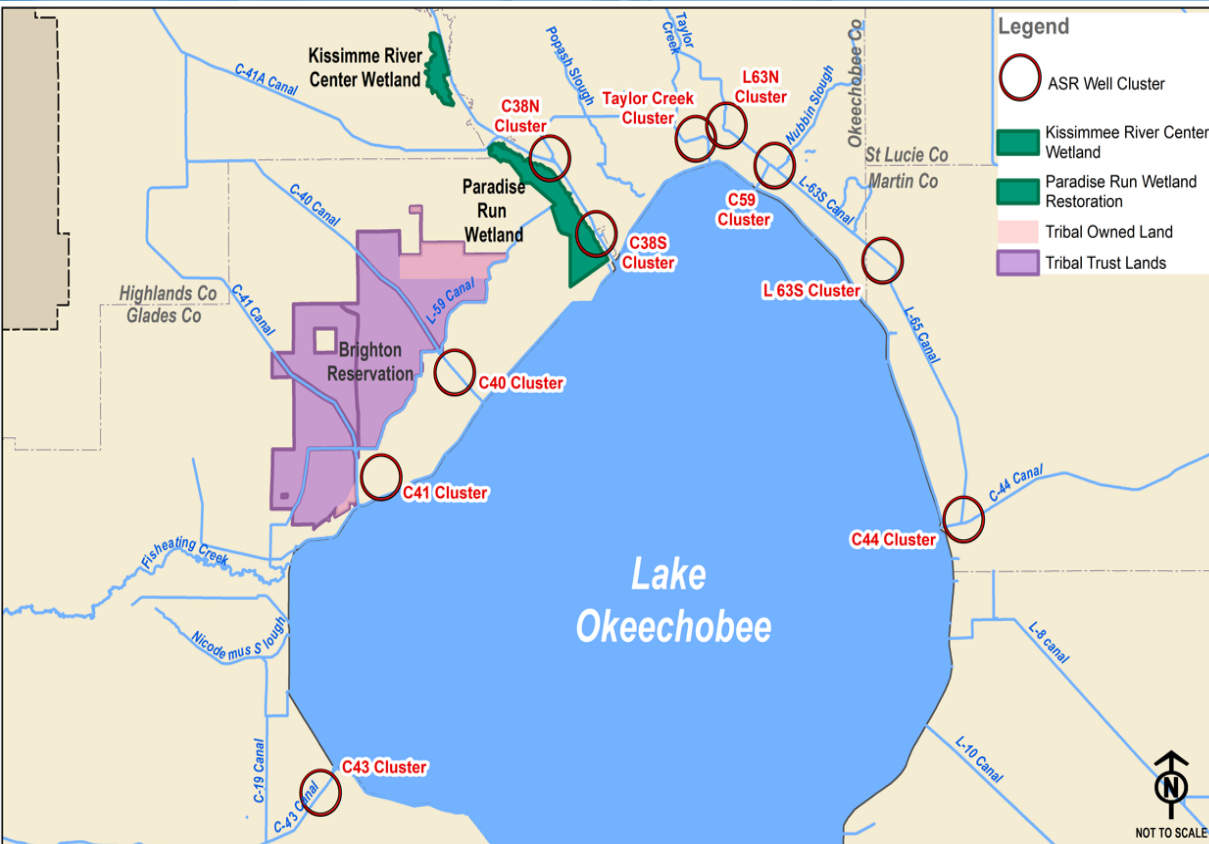
Phase II Restoration Area looking southeast downstream Riverwoods Run and floodplain



Photographs by Brent Anderson
SFWMD, August 2021

S-69 Weir and Phase III
Restoration Area looking upstream

Lake Okeechobee Watershed Restoration Project (LOWRP)



Key benefits of Recommended Plan:

- Increases the amount of time Lake Okeechobee is within the ecologically preferred stage envelope
- Reduces flows to the Caloosahatchee Estuary and St. Lucie Estuary by an additional 21%
- Reduces water supply cutback volume to Lake Okeechobee Service Area by 35%
- Restores ~5,900 acres of wetlands along portions of the historic Kissimmee River floodplain
- Provides public recreational features in the wetland sites

Revised Recommended Plan (September 2021)

Aquifer Storage and Recovery (ASR)

- 55 ASR wells
- 308,000 acre-feet of storage per year

Wetland Restoration

- Kissimmee River Center: ~1,200 acres
- Paradise Run: ~4,700 acres



For more information, visit:

[sfwmd.gov/LOWRP](https://www.sfwmd.gov/LOWRP)

LOWRP (cont.)

Existing KRASR Well Site

- Rehabilitation of existing KRASR Well Site to operate in 2022/2023
- Proof-of-Concept Testing for Treatment Technology (Oct. 2021 - Jan. 2022)

**L63N Cluster Site**

- Rehabilitation of existing APPZ Well; completed Mechanical Integrity Test and Pump Test
- Completed Continuous Core Drilling (late 2021)

**C38S Cluster Site**

- Continuous Core drilling underway
- APPZ and UFA Test/Exploratory Wells underway

**C38N Cluster Site**

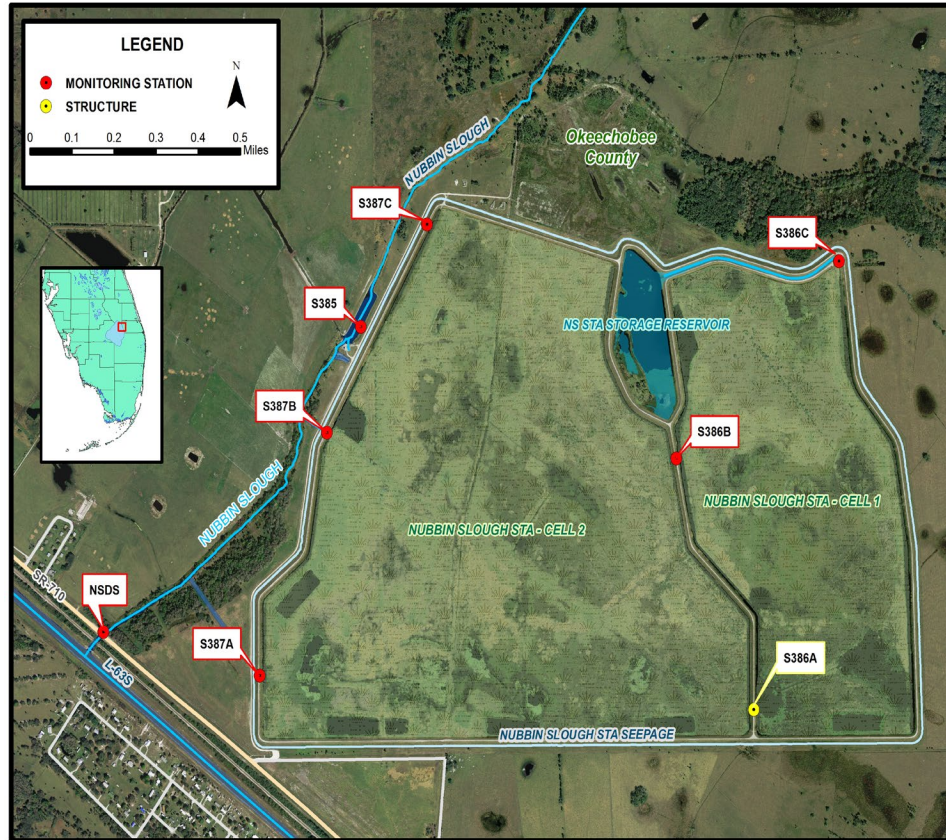
- Continuous Core drilling underway
- APPZ and UFA Test/Exploratory Wells underway

Lakeside Ranch STA



- In Phase III, S-191 Pump Station completed in August 2021
- WY2021 performance: TP reduction = ~14.4 metric tons

Nubbin Slough STA



- Off-line most of WY2020/2021 due to repairs
- Levee and seepage ditch repairs completed in August 2021
- WY2021 performance: TP reduction = ~4.6 metric tons

Brighton Valley DWM



Inflow Basin



Outfall Monitoring

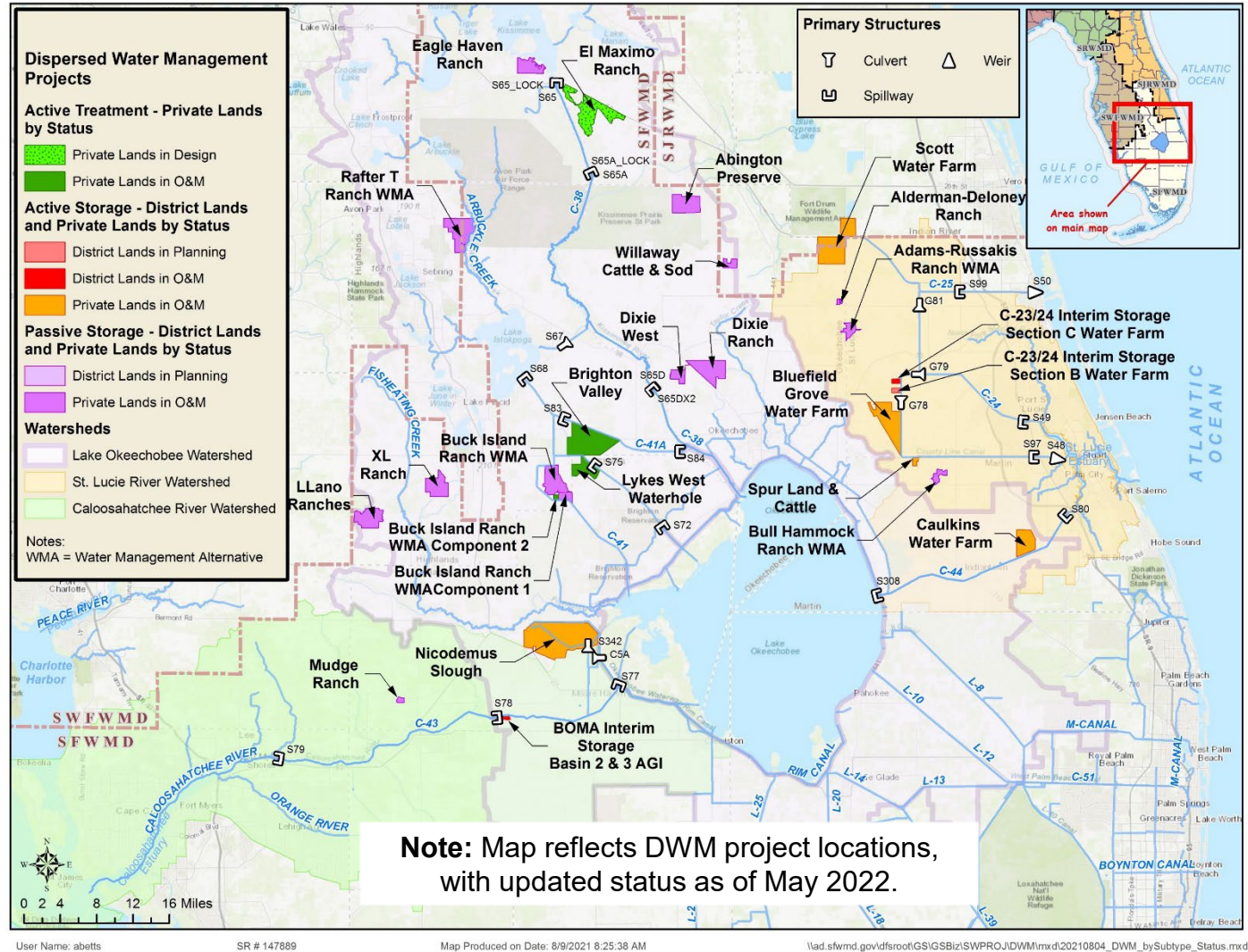


Inflow Pumps



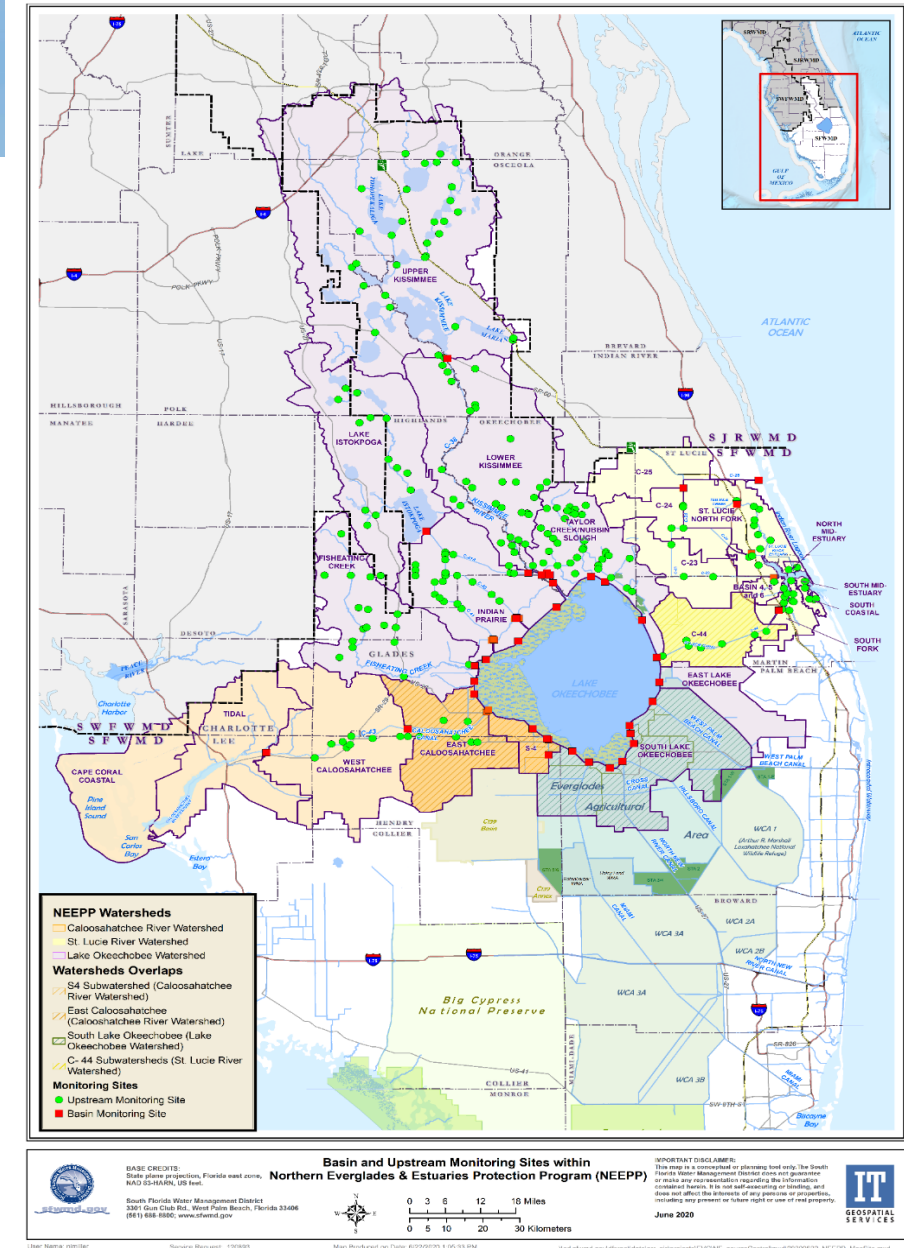
Water Storage Benefits

- Key DWM program benefits:
 - Reduces runoff/discharge to and stores/treats water in regional system
 - Promotes hydrologic enhancement, groundwater recharge, habitat improvements
 - Avoids high cost of land purchase and keeps private lands on local tax rolls
 - Storage and/or treatment provided typically exceeds permit requirements
- In Water Year 2021, 18 SFWMD projects provided ~66,806 ac-ft of storage (59,531 ac-ft, 14 DWM; 7,275 ac-ft, 4 regional)
- Includes 1st full year of Brighton Valley operations; largest DWM project in LOW



New Monitoring Network Expansion

Elements	Basin Level	Upstream Level
# of sites	47 (32 LOW, 8 CRW, and 7 SLRW)	211 (67 added in 2020 with expansion) 150 LOW, 15 CRW, and 46 SLRW
Frequency	Biweekly or Weekly	Biweekly
Monitored parameters	TP, OPO4, TN, NH4, NOx, pH, Temperature, Dissolved Oxygen, Conductivity	TP, OPO4, TN, NH4, NOx, pH, Temperature, Dissolved Oxygen, Conductivity



Final 2022 SFER – Volume I, Appendix 8B-1 at [SFWMD.gov/SFER](https://www.sfwmd.gov/SFER)

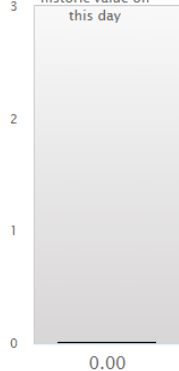
New DBHYDRO Insights



Current Conditions at site TCNS214
@ Sep 30, 2021 8:44:27 PM

Stage

*black line –
historic value on
this day



Water level is not
available

Rainfall

Last 72 hours

Radar
0 Inches



Gauge
N/A

Flow

Current Flow
Rate
0 cfs



7 Day Flow
Volume
N/A
Midnight
Minus 7 Days

All parameters

Get Data

Hydrologic / Other	Start Date	End Date	
Water Quality	Start Date	End Date	Samples
AMMONIA-N	8/10/1988	9/9/2021	758
CHLORIDE	10/10/1989	4/11/2011	669
COLOR	8/10/1988	7/8/1993	89
DEPTH, TOTAL	12/30/1992	6/8/2021	24
DISSOLVED OXYGEN	10/12/1988	9/9/2021	601
KJELDAHL NITROGEN, TOTAL	8/10/1988	2/17/2014	765
NITRATE+NITRITE-N	8/10/1988	9/9/2021	788

Graph

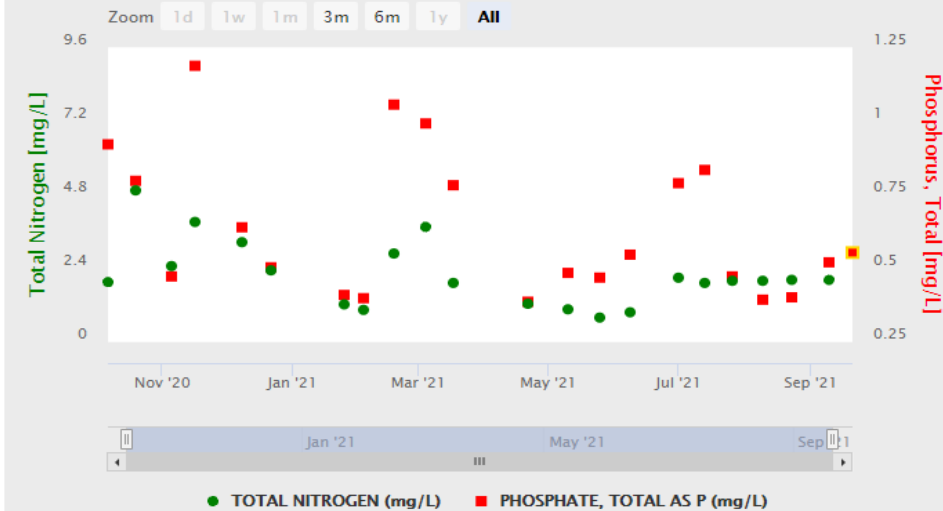
Table

Statistics

Past Year

Site: TCNS214

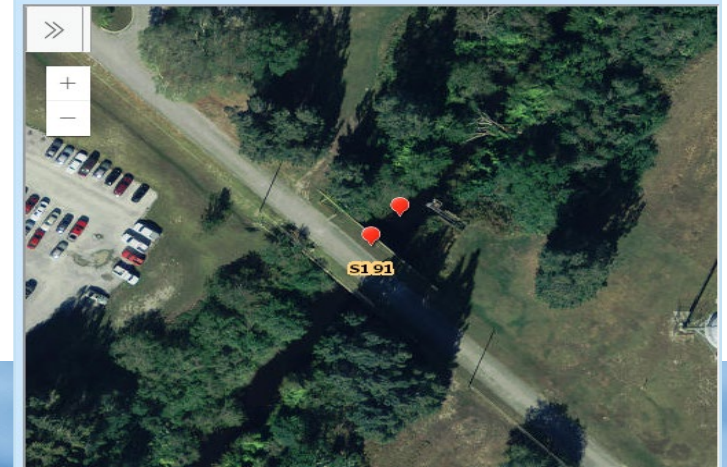
Provisional Data Display: Water Quality results highlighted yellow, Rainfall as a lighter shade of blue, and Others by a dashed line.



WATER QUALITY MONITORING

Active

Latitude: 27.304307
Longitude: -80.819279



[sfwmd.gov/DBHYDROInsights](https://www.sfwmd.gov/DBHYDROInsights)

sfwmd.gov

Presenter: Stacey Ollis

-
- NEEPP Focus Area Assessments**
- Lake Okeechobee Watershed
 - St. Lucie River Watershed
 - Caloosahatchee River Watershed
- Map showing the NEEPP Focus Area Assessments in central and southern Florida. The map displays the Lake Okeechobee Watershed (purple outline), St. Lucie River Watershed (orange outline), and Caloosahatchee River Watershed (blue outline). Key locations include Lakeland, Kissimmee, Orlando, Titusville, Melbourne, Palm Bay, Port St. Lucie, Fort Myers, and Cape Coral. Major roads like SR-400, SR-90, and SR-9 are marked. Water bodies include Lake Okeechobee, Lake Kissimmee, Lake Marion, and Lake Hart. The map also shows various parks and preserves, such as Myakka River State Park and Kissimmee Prairie Preserve. An inset map in the top right corner shows the location of the study area within the state of Florida, with a red box indicating the area shown on the main map. A scale bar at the bottom left indicates distances up to 10 miles.

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 2022 SFER –
Volume I, Chapter 8B)



Contact Information

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Everglades and Estuaries Protection Bureau, State Policy Unit
South Florida Water Management District
sollis@sfwmd.gov; 561-682-2039





Annual Progress

Monitoring Network

Targeted Restoration Area (TRA) Evaluation Update

Subwatershed Goals

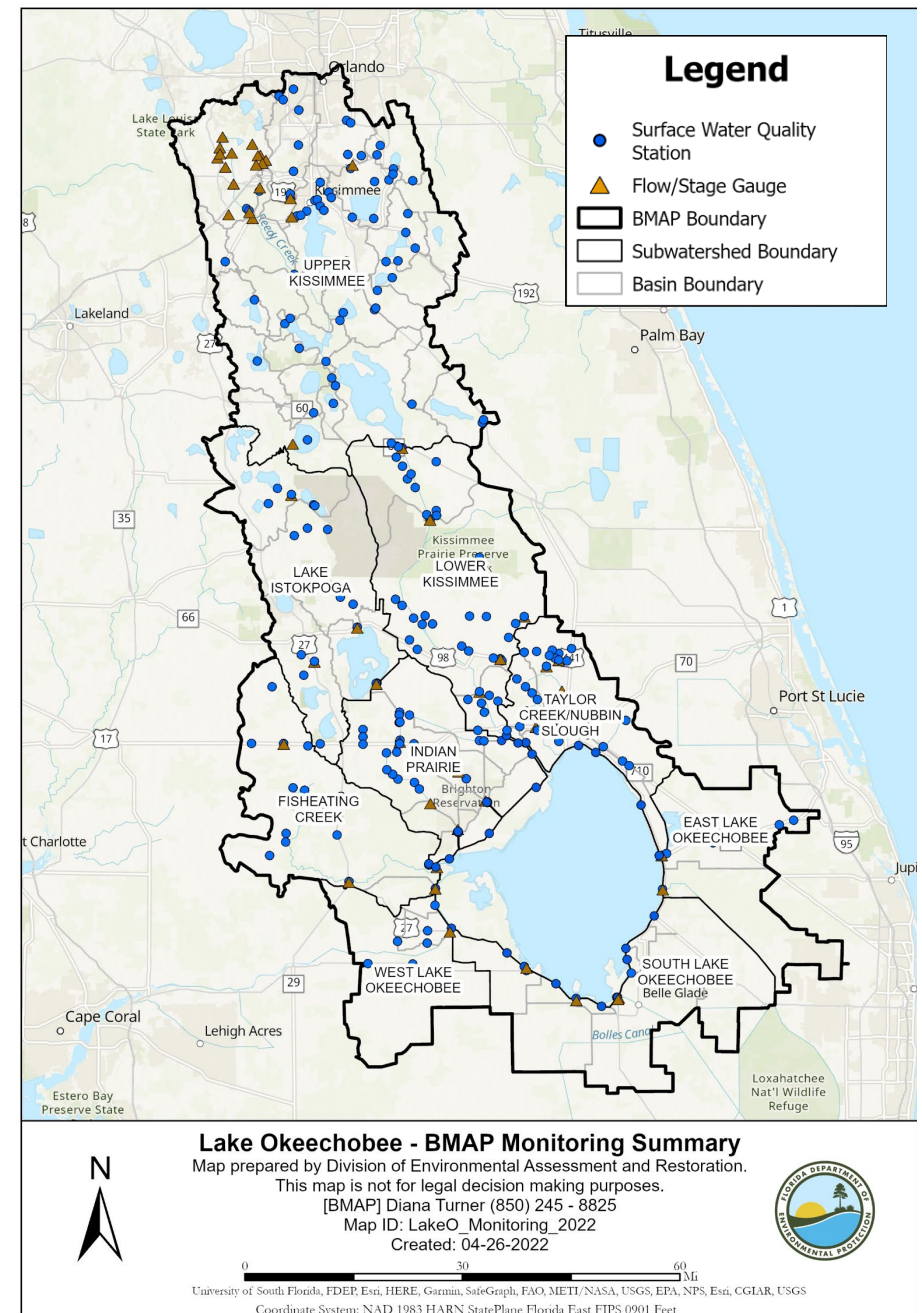
Status of Projects



Monitoring Network

Summary

- 309 stations
- 3-tiered network
- Monitored by local entities, DEP, SFWMD, and U.S. Geological Survey (USGS)

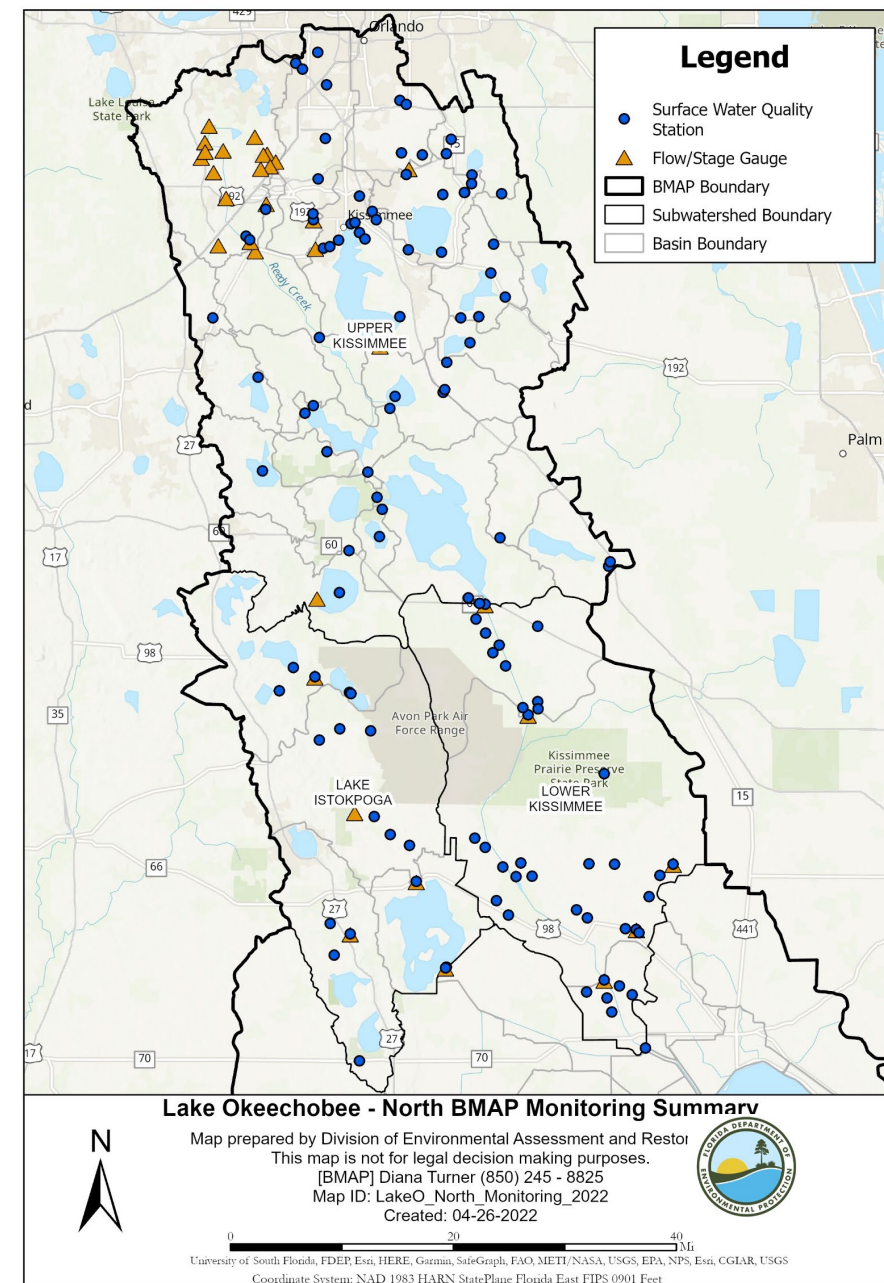




Monitoring Network

North BMAP

- Upper Kissimmee
 - 25 representative
 - 44 other water quality
 - 22 flow
- Lake Istokpoga
 - 5 representative
 - 15 other water quality
 - 5 flow
- Lower Kissimmee
 - 3 representative
 - 33 other water quality
 - 5 flow

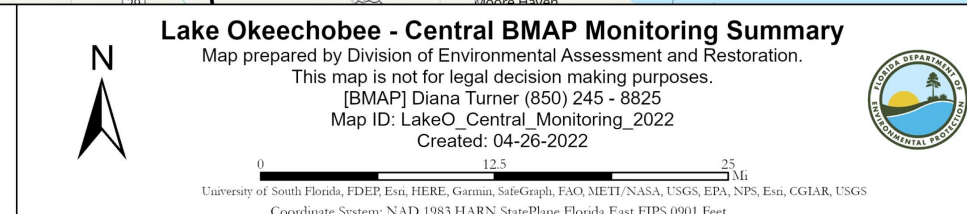
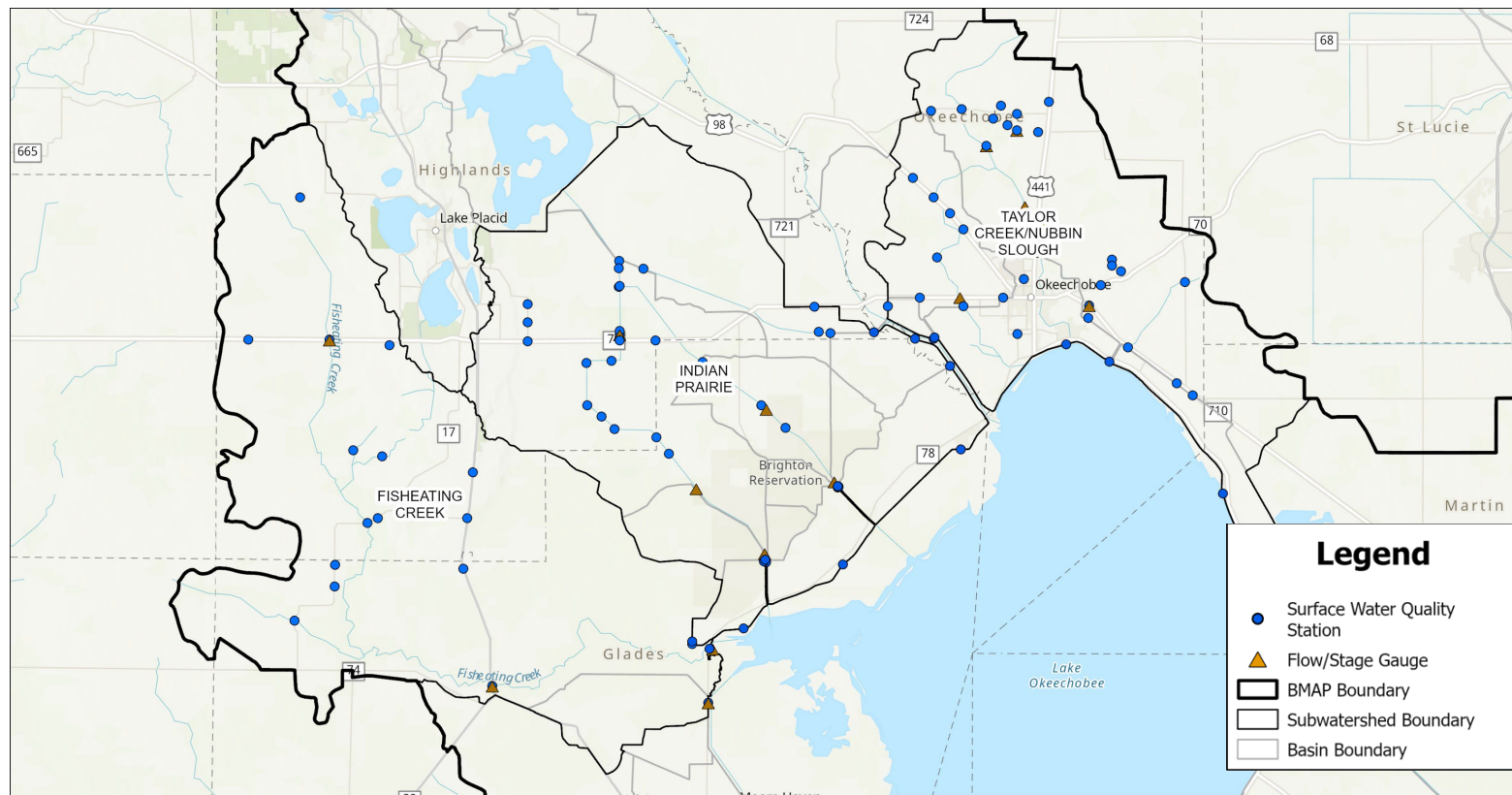




Monitoring Network

Central BMAP

- Fisheating Creek
 - 2 representative
 - 16 other water quality
 - 4 flow
- Indian Prairie
 - 11 representative
 - 28 other water quality
 - 5 flow
- Taylor Creek/ Nubbin Slough
 - 5 representative
 - 34 other water quality
 - 9 flow

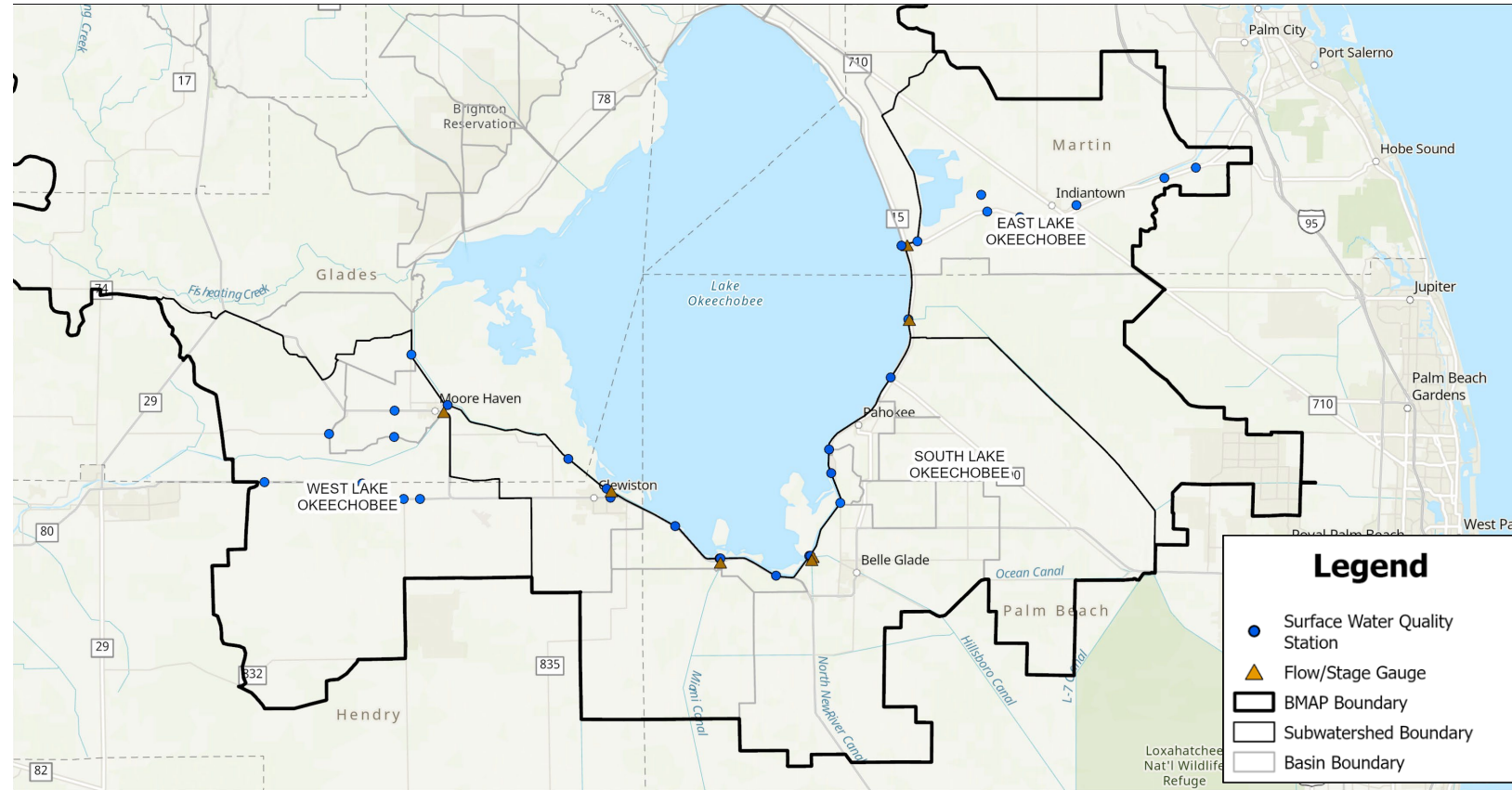




Monitoring Network

South BMAP

- West Lake Okeechobee
 - 3 representative
 - 6 other water quality
 - 1 flow
- South Lake Okeechobee
 - 9 representative
 - 4 other water quality
 - 4 flow
- East Lake Okeechobee
 - 2 representative
 - 7 other water quality
 - 2 flow



Lake Okeechobee - South BMAP Monitoring Summary

Map prepared by Division of Environmental Assessment and Restoration.

This map is not for legal decision making purposes.

[BMAP] Diana Turner (850) 245 - 8825

Map ID: LakeO_South_Monitoring_2022

Created: 04-26-2022



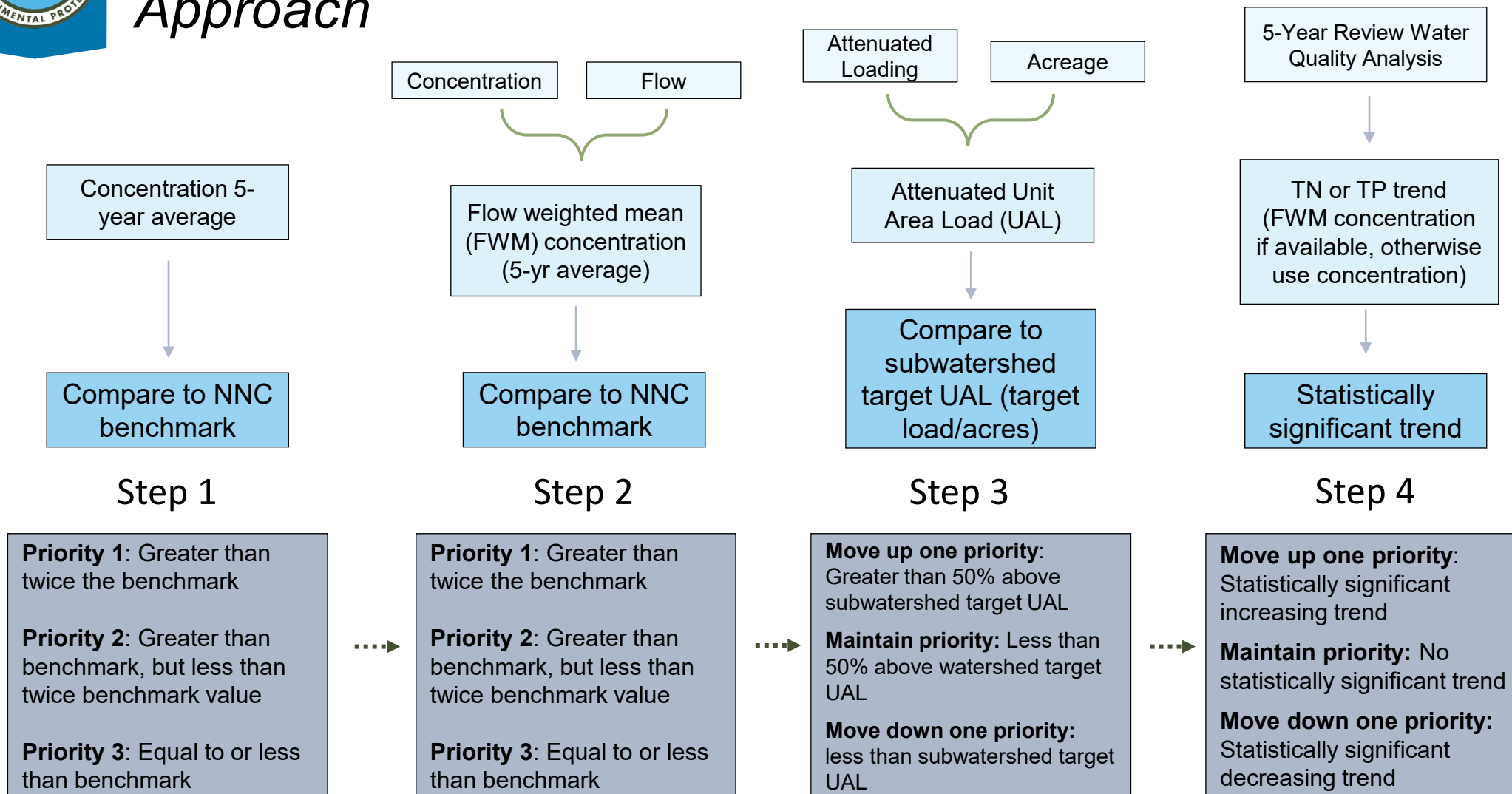
0 15 30 Mi
Esri, CGIAR, USGS, FDEP, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS
Coordinate System: NAD 1983 HARN StatePlane Florida East FIPS 0901 Feet





TRA Evaluation Update

Approach





TRA Evaluation Update

Process

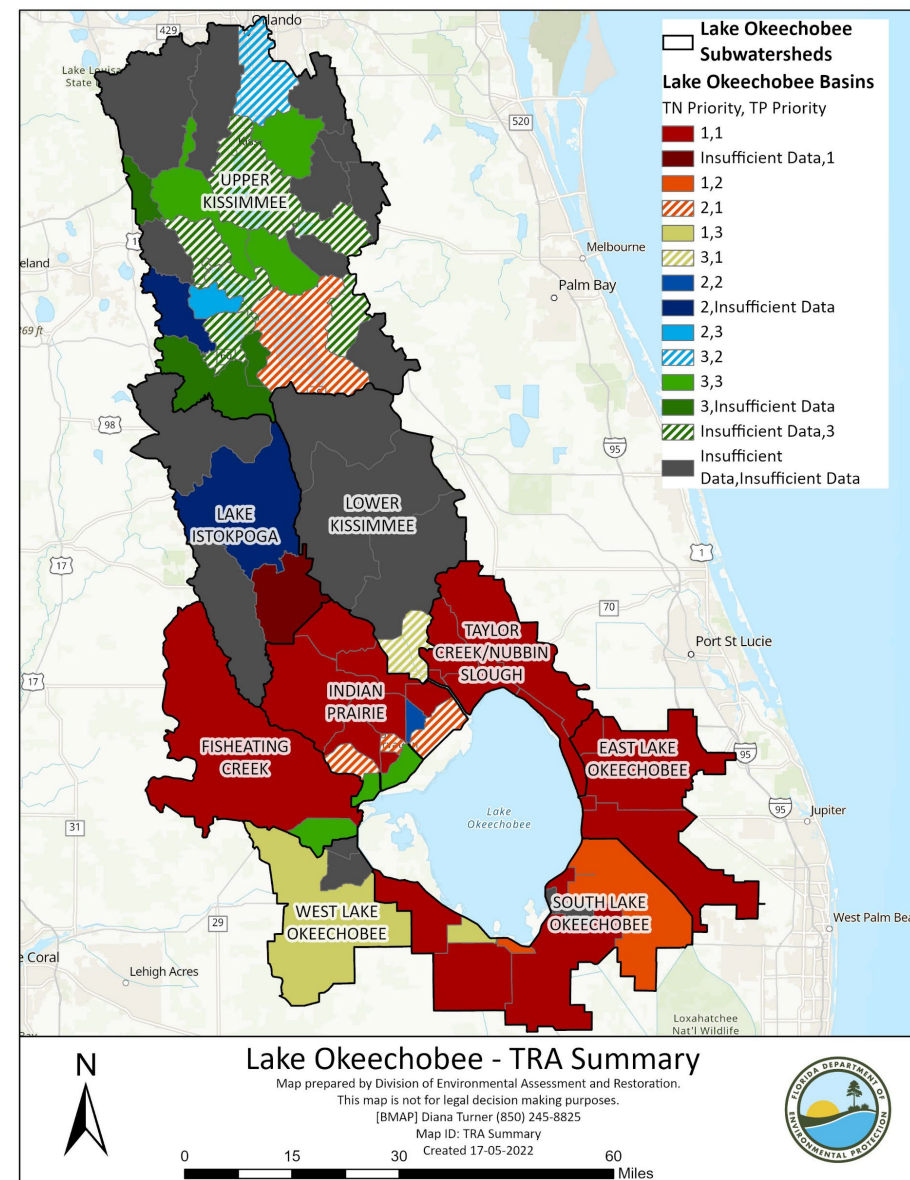
- Obtained data from:
 - Watershed Information Network (WIN)
 - 2022 South Florida Environmental Report (SFER)
 - SFWMD
- Calculated total nitrogen (TN), where needed
 - Used measured data for nitrate + nitrite and total Kjeldahl nitrogen (TKN)
- Updated evaluation period Water Year (WY) 2017-2021
 - Dropped WY2016 and added WY2021
- Results noted as “insufficient data” indicate that no data were collected from that station in at least one of the five WYs



TRA Evaluation Update

Results Summary

- Decreased priority (improved water quality):
 - 1 basin for TN
 - 2 basins for TP
- Increased priority (water quality declined):
 - 1 basin for TN
 - 2 basins for TP
- Insufficient data (missing at least one WY):
 - 23 basins for TN
 - 22 basins for TP

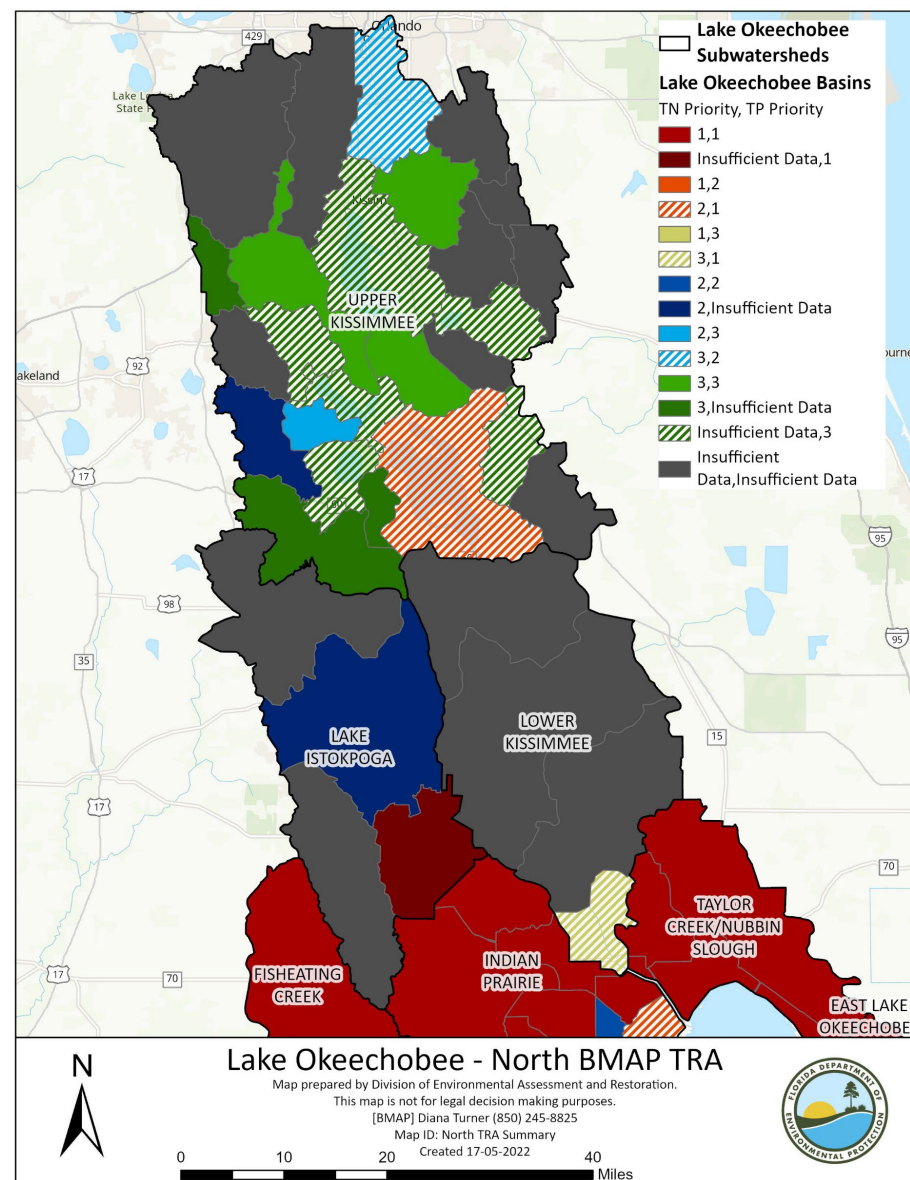




TRA Evaluation Update

Results, North BMAP

- Upper Kissimmee
 - Boggy Creek increase in priority for TP
- Lake Istokpoga
 - Lake Istokpoga still a priority 1 for TP
- Lower Kissimmee
 - Similar to last year's analysis

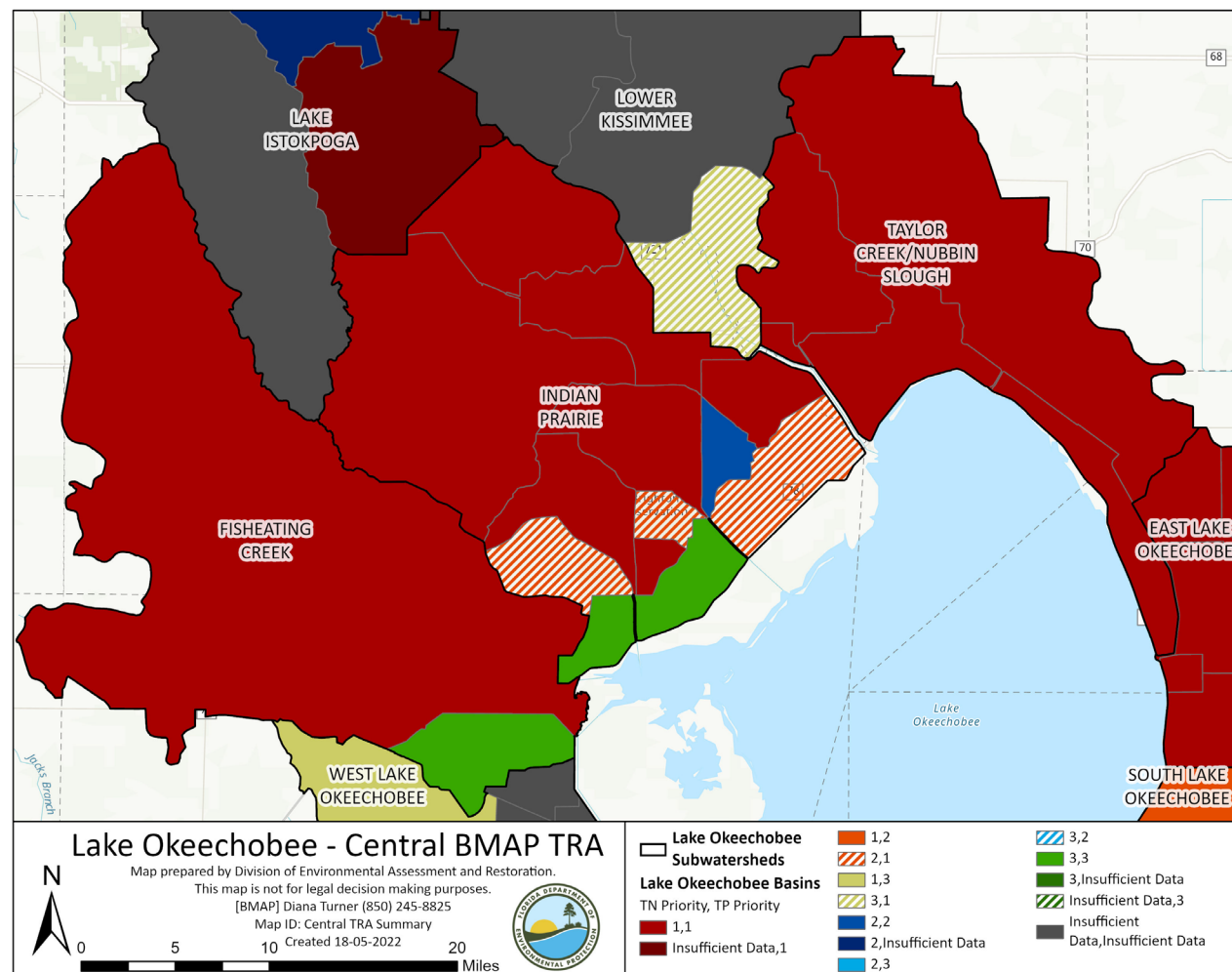




TRA Evaluation Update

Results, Central BMAP

- Fisheating Creek
 - Fisheating Creek/L-61 increased in priority for TN
 - Nicodemus Slough North decreased in priority for TP
- Indian Prairie
 - L-49 decreased in priority for TN
 - L-60W increased in priority for TP
 - S-131 decreased in priority for TP
- Taylor Creek/ Nubbin Slough
 - No changes from last year's analysis

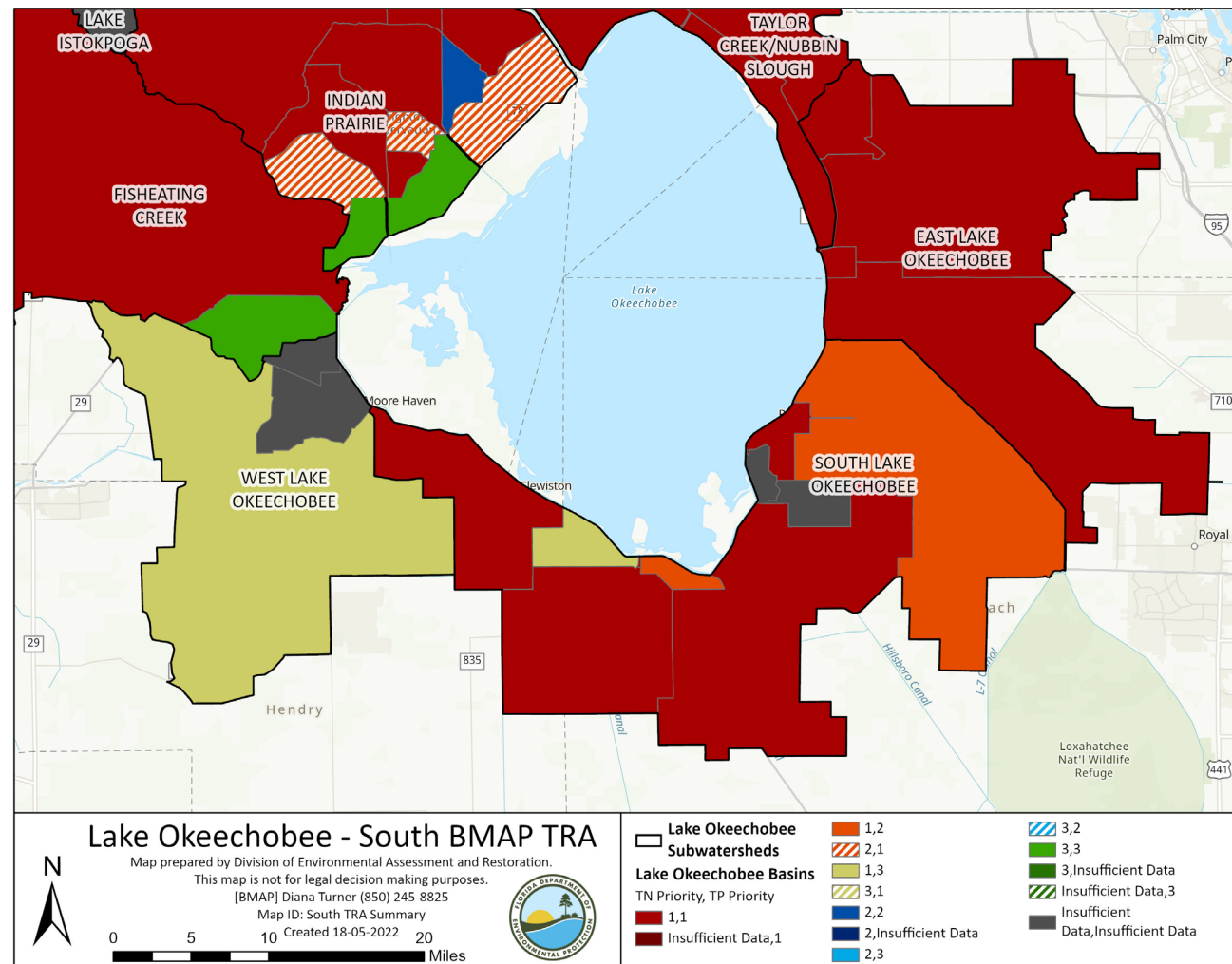




TRA Evaluation Update

Results, South BMAP

- West Lake Okeechobee
 - East Caloosahatchee still priority 1 for TN
 - No changes from last year's analysis
- South Lake Okeechobee
 - Still insufficient data for 715 Farms (Culv 12A) and East Shore DD (Culv 12)
 - No changes from last year's analysis
- East Lake Okeechobee
 - No changes from last year's analysis







Subwatershed Goals

Targets Summary

Subwatershed	WY2014– WY2018 TP Load (mt/yr)	% Contribution of Load	TP Load Required Reduction (mt/yr)	TP Target (mt/yr)	WY2017– WY2021 TP Load (mt/yr)	% Contribution of Load	TP Load Required Reduction (mt/yr)	TP Target (mt/yr)
Fisheating Creek	72.4	12	59.7	12.7	55.2	10.3	44.4	10.8
Indian Prairie	102.5	17	84.5	18.0	76.2	14.2	61.3	14.9
Lake Istokpoga	47.7	8	39.3	8.4	41.1	7.7	33.0	8.1
Lower Kissimmee	125.9	21	103.8	22.1	135	25.2	108.5	26.5
Taylor Creek/Nubbin Slough	113.6	19	93.7	19.9	101.3	18.9	81.4	19.9
Upper Kissimmee	90.5	15	74.6	15.9	84	15.7	67.5	16.5
East Lake Okeechobee	16.8	3	13.9	2.9	21.7	4.1	17.4	4.3
South Lake Okeechobee	29.0	5	23.9	5.1	21	3.9	16.9	4.1
West Lake Okeechobee	0	0	0	0	0	0	0	0
Total	598.4	100	493.4	105	535.5	100	430.5	105



Subwatershed Goals

Progress

Subwatershed	TP Load Required Reduction (mt/yr)	TP Reduction Through December 31, 2021 (mt/yr)	TP Reductions Achieved Through December 31, 2021 (%)
Fisheating Creek	44.4	15.3	34%
Indian Prairie	61.3	23.0	38%
Lake Istokpoga	33.0	2.7	8%
Lower Kissimmee	108.5	13.2	12%
Taylor Creek/Nubbin Slough	81.4	32.3	40%
Upper Kissimmee	67.5	17.9	27%
East Lake Okeechobee	17.4	2.3	13%
South Lake Okeechobee	16.9	3.0	18%
West Lake Okeechobee	0.0	0.6	100%
Total	430.5	110.3	26%



Status of Projects

Through December 31, 2021

Lead Entity	Canceled	Completed	Ongoing	Planned	Underway	Grand Total
Avon Park Air Force Range	-	1	-	-	-	1
City of Avon Park	-	2	1	-	-	3
City of Clewiston	-	1	3	-	1	5
City of Edgewood	-	-	3	-	-	3
City of Kissimmee	-	5	2	2	-	9
City of Moore Haven	-	1	-	1	-	2
City of Okeechobee	-	2	1	2	-	5
City of Orlando	1	7	10	-	-	18
City of Sebring	-	1	1	-	-	2
Coordinating Agency	1	-	-	-	-	1
FDACS	-	11	18	4	1	34
FDOT	-	34	13	-	5	52
Glades County	-	3	2	-	3	8
Hendry County	-	-	-	-	1	1
Highlands County	-	3	4	-	-	7
Istokpoga Marsh Watershed Improvement District	-	1	-	-	1	2
Martin County	-	-	-	-	1	1
Okeechobee County	-	8	-	-	-	8
Orange County	3	55	7	3	16	84
Osceola County	-	29	3	2	1	35
Polk County	-	1	3	-	-	4
Reedy Creek Improvement District	-	-	3	-	-	3
SFWMD	-	29	-	9	-	38
Spring Lake Improvement District	1	1	-	-	-	2
Town of Windermere	-	1	-	-	-	1
Valencia WCD	-	1	1	-	-	2
Grand Total	6	197	75	23	30	331



Status of Projects

Story Map

Lake Okeechobee Basin Management Action Plan

Introduction Overview Location **Projects** Progress Contacts & More Information



Photo: Wayne Jones CC BY-NC-ND 2.0 (g)

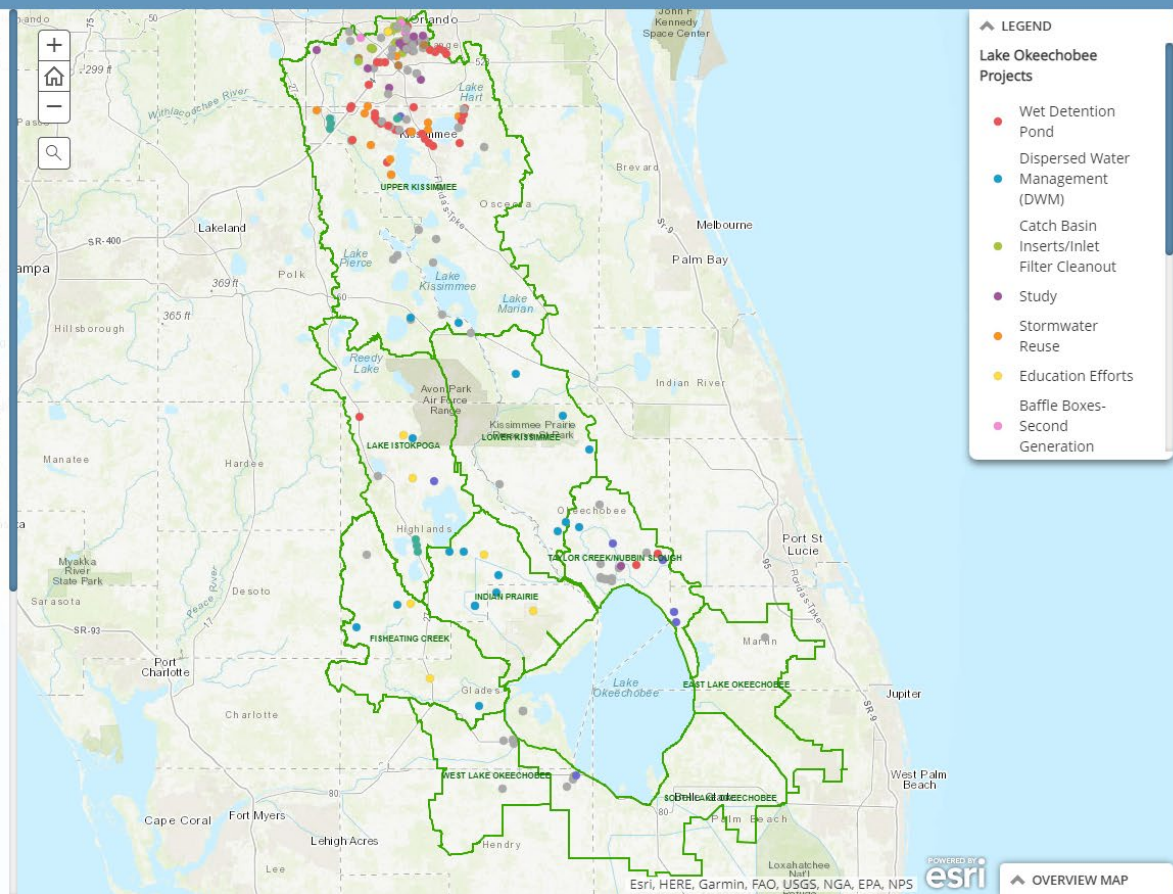
Actions to Achieve Nutrient Load Reductions

The Lake Okeechobee BMAP is designed to be implemented in a phased approach to allow for adaptive management. The phased BMAP approach allows for the implementation of projects designed to achieve incremental reductions, while simultaneously monitoring and conducting studies to better understand the water quality dynamics (sources and response variables) in the watershed.

For the first BMAP phase, DEP focused on project implementation in the six subwatersheds north of Lake Okeechobee. Under the 2020 BMAP, projects and strategies are tracked in all nine sub-watersheds.

Municipal, regional, state, and federal agencies, as well as agricultural producers, have responsibilities under the BMAP to implement structural and nonstructural activities to reduce TP to Lake Okeechobee. Public-private partnerships and regional projects represent many management strategies in the LOW.

All agricultural nonpoint sources in the BMAP area are statutorily required either to implement appropriate best management practices or to conduct water quality monitoring that demonstrates compliance with state water quality standards. The Florida Department of Agriculture and Consumer Services' Office of Agricultural Water





Statewide Annual Report (STAR)

STAR Background and Webpage

STAR 2021 Progress and Timeline

BMAP Project Collection Portal



Published June 30, 2021

Troubleshooting

Basin Management Action Plans

A basin management plan (BMAP) is a framework for water quality restoration that contains 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 Florida Department of Environmental Protection (DEP) Secretarial Order and are legally enforceable.

Navigation

Select any of the following sections for additional information about BMAPs. Clicking on the dots in the column to the left of the page links you to these same sections and clicking on the home icon returns you to the top of this page.

- Northern Everglades and Estuaries Protection Program BMAPs.
- Outstanding Florida Springs (OFS) BMAPs.
- Additional Nutrient BMAPs.
- Fecal Indicator Bacteria BMAPs.
- Alternative Restoration Approaches.

How to Use This Report

The management actions listed in the BMAPs comprise local projects proposed and committed to by counties, municipalities, special districts, private industrial facilities, wastewater utilities, commercial agricultural operations, state agencies, and other stakeholders. In 2020, DEP contacted stakeholders in all BMAP areas to request information on the **status of projects through December 31, 2020**. The tables throughout this report contain updates on existing projects, as well as information about new or planned projects, provided by the responsible entities. In some cases, the information provided by the entity was incomplete; no update was provided, or the

Florida Statewide Annual Report

Published June 30, 2021

Introduction	Total Maximum Daily Loads	Basin Management Action Plans	Minimum Flows and Minimum Water Levels	Recovery and Prevention Strategies	Contacts and Data
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Troubleshooting

Basin Management Action Plans

Lake Okeechobee BMAP

Background

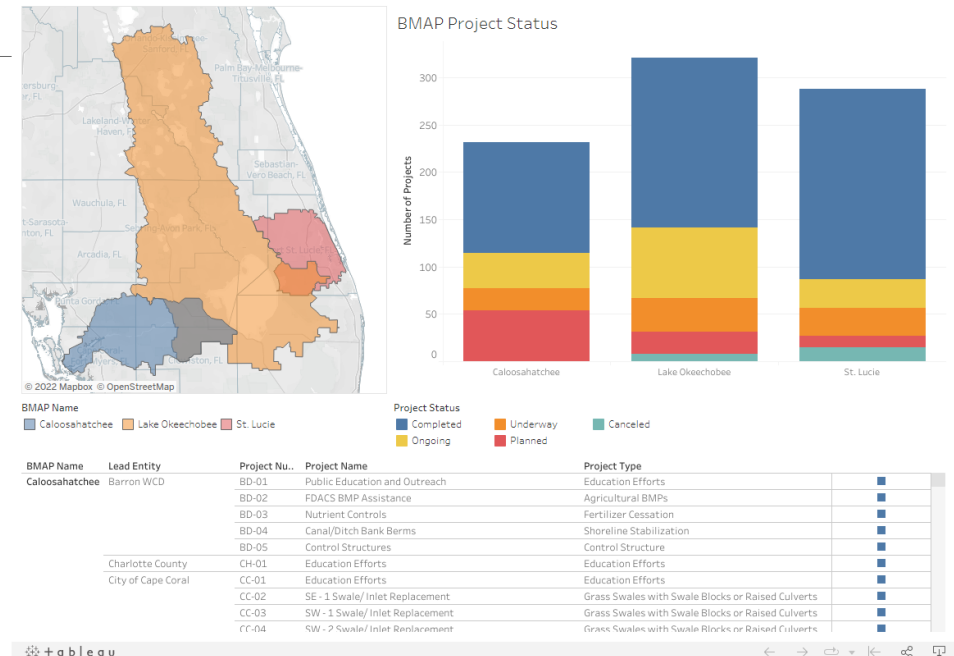
Lake Okeechobee, the largest lake in the southeastern U.S., is a shallow, eutrophic lake with an average depth of 9 feet. The Lake Okeechobee Watershed covers more than 2.9 million acres and consists of 9 subwatersheds. In 2001, DEP adopted a TP TMDL for Lake Okeechobee after it was identified as impaired for TP. The TMDL is a TP load to Lake Okeechobee of 308,647 lbs/yr (140 metric tons per year), of which 77,162 lbs/yr fall directly on the lake through atmospheric deposition. The remaining 231,485 lbs/yr of TP are allocated to the entire Lake Okeechobee Watershed. The Lake Okeechobee BMAP was first adopted in December 2014 to implement the TP TMDL.

The Lake Okeechobee BMAP is governed by Paragraph 373.4595, F.S., as part of the Northern Everglades and Estuaries Protection Program. The primary goal of this program is to restore and protect the state's surface water resources by addressing the quality, quantity, timing, and distribution of water to the ecosystem. The statutory milestones for implementation and water quality improvement, and the associated water quality monitoring component, were included in the 5-Year Review for the Lake Okeechobee BMAP in December 2019. Executive Order 19-12 required an update to this BMAP in 2020, and the 5-Year Review was included as part of the updated BMAP that was adopted in February 2020.

Status of Projects

Load reductions in this report are based on modeling and other information from the 2020 BMAP and are considered for projects located in all 9 subwatersheds. Through December 31, 2020, 180 projects were completed and 74 activities are listed as ongoing. An additional 59 projects are identified as underway or planned. The projects completed to date are estimated to achieve total reductions of 208,492 lbs/yr of TP, or 21% of the reductions needed to meet the TP TMDL.

Lake Okeechobee TP Project Reductions Progress

[Lake Okeechobee Story Map](#)



STAR Progress and Timeline





BMAP Project Collection Portal

- 2015 began STAR
- Portal Pilot testing ran November 2021 – 2022
- For STAR 2022, all entities will be required to use the portal to review and submit project updates

6/2/2022

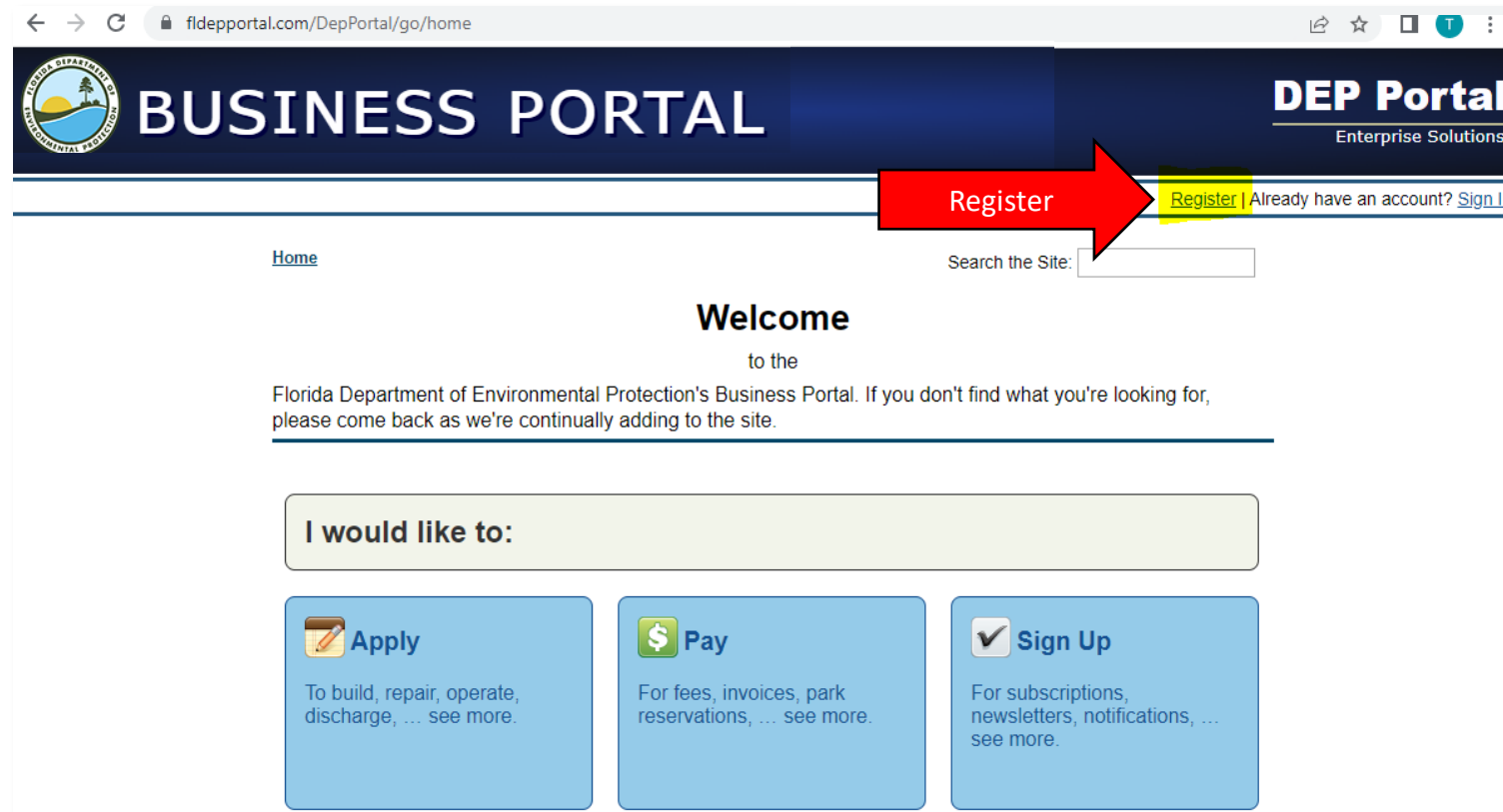
County	Partners	Project Number	Project Name	Project Description	Project Type	Project Status	Estimated Start Date
County	Not provided	VC-02	Roadside Ditch Cleaning	Roadside ditch cleaning.	BMP Cleanout	Ongoing	Not provided
County	Not provided	VC-01	Education Efforts	Irrigation, fertilizer, pet waste management, and landscaping ordinances; pamphlets, presentations, website, illicit discharge program.	Education Efforts	Ongoing	Not provided
County	Not provided	PS-01	Education Efforts	Fertilizer and landscaping ordinances, pamphlets, and presentations.	Education Efforts	Ongoing	Not provided
County	DEP	TI-04	Lily Park	Stormwater treatment.	Wet Detention Pond	Completed	Not provided
County	Not provided	BC-038	Rockledge and Riverwoods Boulevard	Upgrading a 1st Generation to a 2nd generation baffle box by adding the nutrient separating screen.	Baffle Boxes- Second Generation	Completed	Not provided
County	DEP	BC-037	Manth Avenue	Upgrading a 1st Generation to a 2nd generation baffle box by adding the nutrient separating screen.	Baffle Boxes- Second Generation	Completed	Not provided
County	DEP	BC-036	Haverhill Avenue	Upgrading a 1st Generation to a 2nd generation baffle box by adding the nutrient separating screen.	Baffle Boxes- Second Generation	Completed	Not provided
County of Cocoa	SJRWMD	CC-01	Bracco Pond B	SOIRL-01.	Wet Detention Pond	Completed	1995
City of Palm Bay	N/A	PB-13	Mandarin Ditch (South)	Not provided.	Grass swales without swale blocks or raised culverts	Completed	Not provided
City of Tallahassee	N/A	COT-009	Primary Springs Protection Zone (PSPZ) Ordinance (08-0-68AA)	Identifies the PSPZ where development must meet more stringent requirements.	Regulations, Ordinances, and Guidelines	Ongoing	2009
City of Tallahassee	N/A	COT-008	Stormwater Improvement Projects	Multiple conveyance improvements. Original credit of 8 lbs-TN/yr. Project was completed before 2013 and is not eligible for credit in the 2018 BMAP.	Regional Stormwater Treatment	Completed	2004
City of Tallahassee	N/A	COT-007	Pet Waste Ordinance (Number 10-0-15AA)	34% of dog owners began picking up after their pets.	Regulations, Ordinances, and Guidelines	Ongoing	2008
City of Tallahassee	N/A	COT-006	Spray Field Fertilizer Application	Eliminated fertilizer application on the spray field (in the springshed). Original credit of 48,708 lbs-TN/yr. Project was completed before 2013 and is not eligible for credit in the 2018 BMAP.	Fertilizer Cessation	Completed	2007
City of Tallahassee	N/A	COT-005	Public Education for Stormwater, Fertilizer, and Pet Waste	Public education using various media resources to promote behavioral changes for individuals and businesses to conserve water and reduce or eliminate pollution impacts to surface water and ground water.	Education Efforts	Ongoing	2006



BMAP Project Collection Portal

Timeline

- Stakeholders need to register in the DEP Business Portal as soon as possible, but no later than **July 31st**
- Trainings will be held in October
- Portal will open in mid-November for project updates
- BMAP project updates will be due in the **DEAR – Restoration Project Data Portal** no later than January 13, 2023





BMAP Project Collection Portal



Go to <https://www.fldepportal.com/DepPortal/go/home>
or follow the QR Code above to register.





What's Next?

Clean Waterways Act Requirements

Upcoming 5-Year Review and Update



Clean Waterways Act Requirements

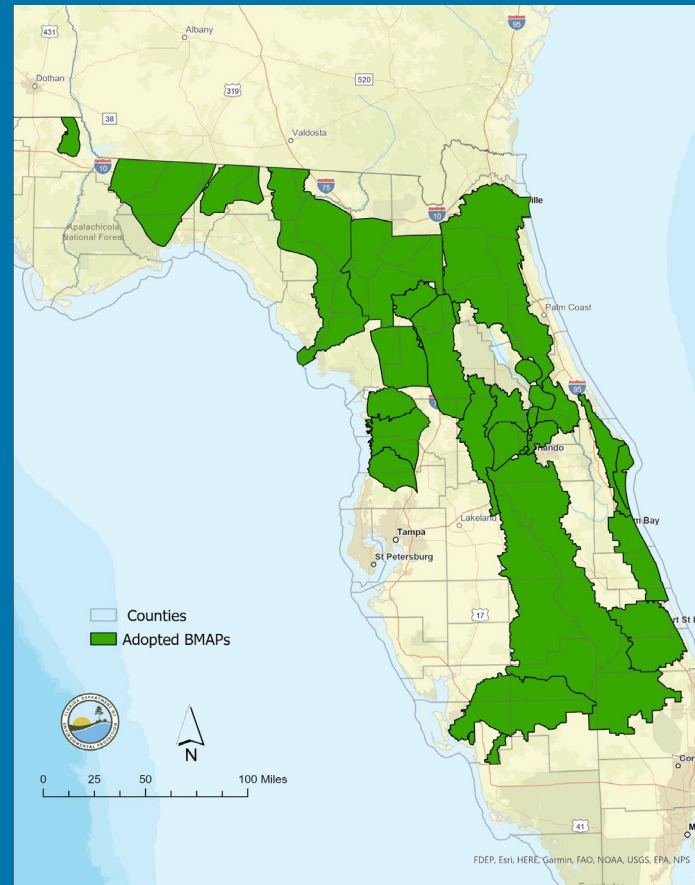
Wastewater and Onsite Sewage Treatment and Disposal Systems (OSTDS) Plans

[publicfiles.dep.state.fl.us - /DEAR/BMAP/2025 BMAP Updates/Meetings/2022/Clean Waterways Act WWTF and OSTDS Requirements](https://publicfiles.dep.state.fl.us/-/DEAR/BMAP/2025+BMAP+Updates/Meetings/2022/Clean+Waterways+Act+WWTF+and+OSTDS+Requirements) March 31/

Wastewater Treatment Plans

- Inventory of wastewater treatment facilities (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 plans for 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

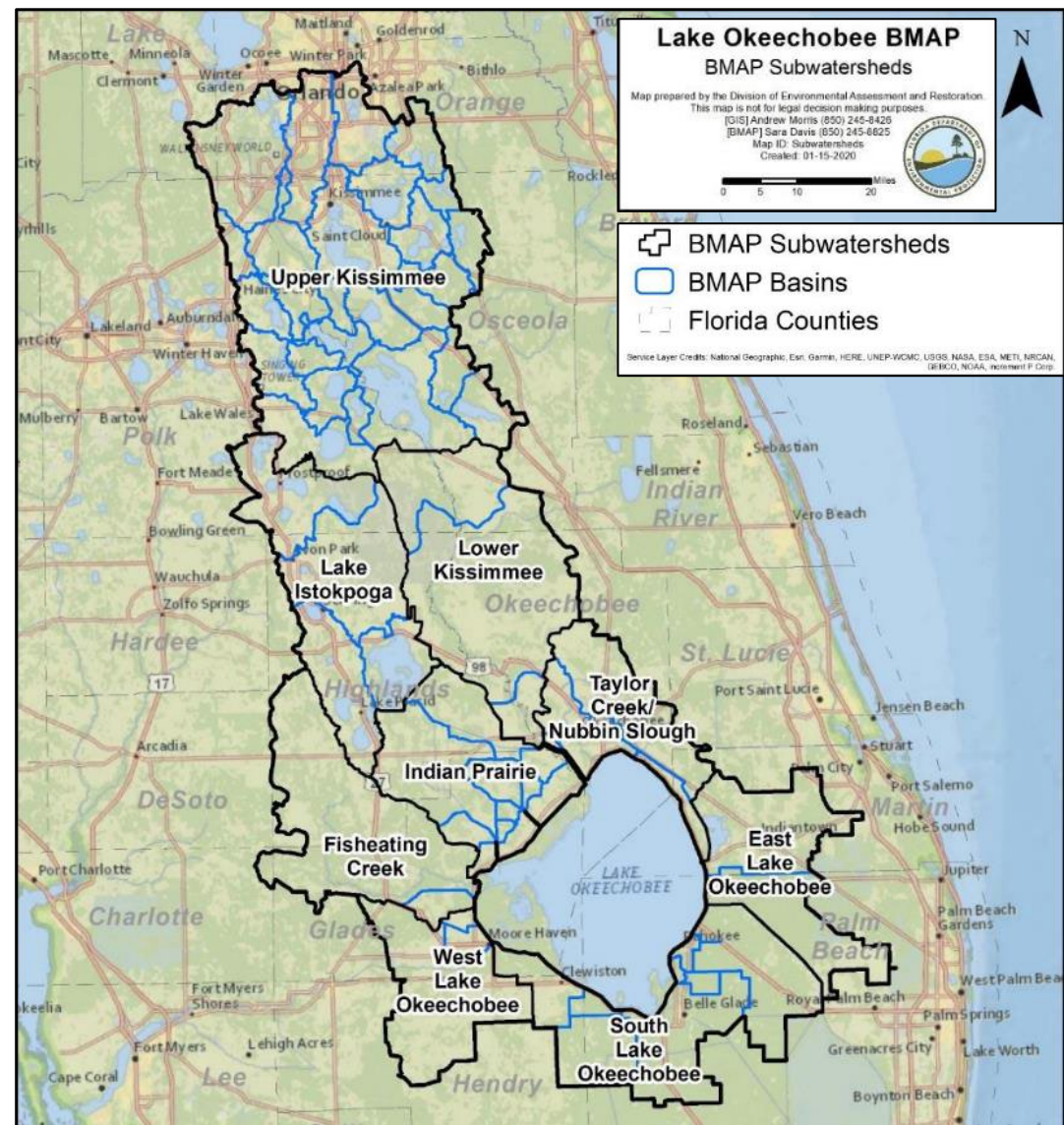
- Inventory of OSTDS within jurisdiction of local governments
- Plan to address OSTDS in the future:
 - Areas for sewerage and/or enhancements & prioritization of those areas
 - Summary of capacity analysis for wastewater facilities that would accept newly sewerage areas
 - Timelines/milestones for projects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



5-Year Review & Update

- 5-Year Review in 2024
- Update by July 1, 2025

6/2/2022





Lake Okeechobee BMAP Annual Meeting

June 2, 2022

Jennifer Thera

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



Florida Department of Agriculture and Consumer Services

Overview

- Agricultural Best Management Practices (BMP)
- FDACS Role in BMP Implementation
- Enrollments within the Lake Okeechobee Basin
- BMP Implementation Verification (IVs)
- Research Program
- Legislative Report



Agricultural Best Management Practices

- 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
 - Work closely with FDEP staff
- Must balance production and water resource protection



Benefits of Agricultural Best Management Practices

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

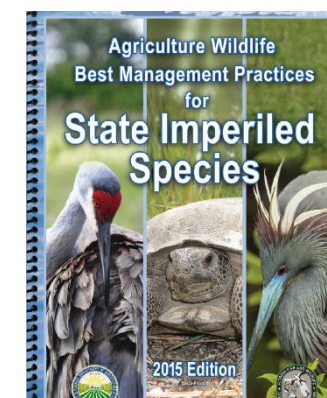
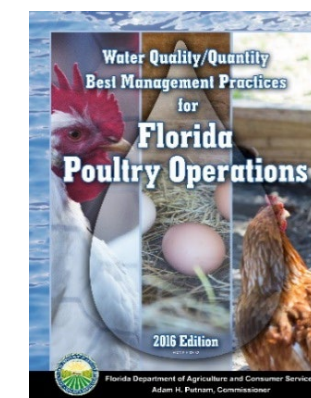
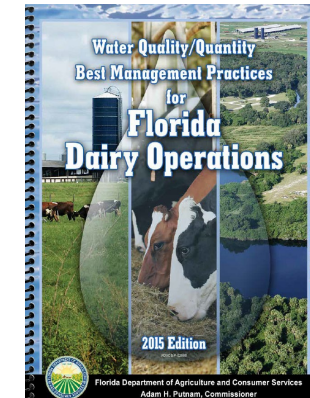
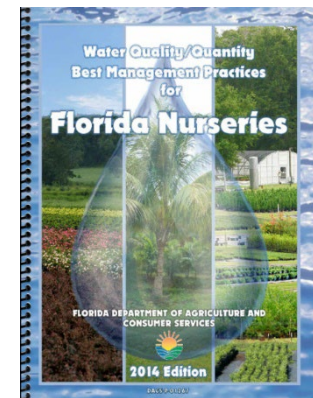
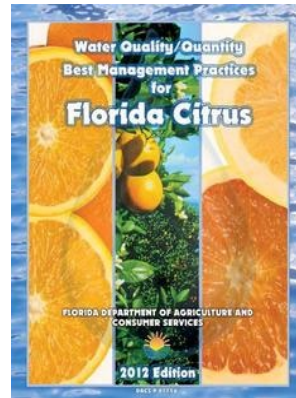
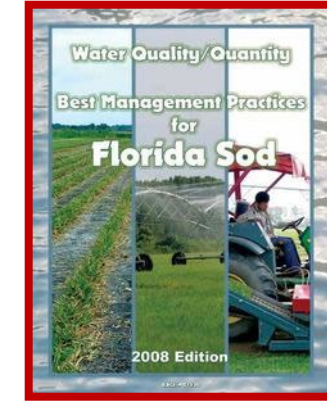
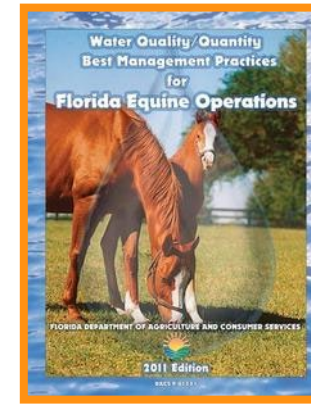
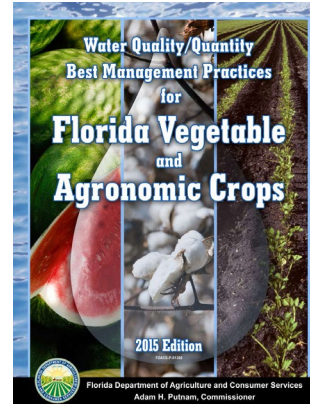
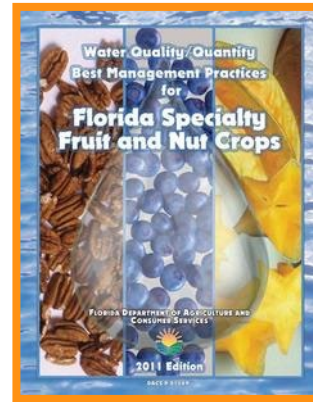
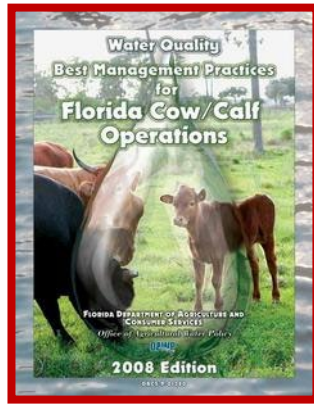


FDACS Role in BMP Implementation

- 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



Florida Department of Agriculture and Consumer Services

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 Lake Okeechobee BMAP

Subwatershed	Total Ag Acres	Enrolled Ag Acres	% Enrolled	Irrigated Acres	Enrolled Irrigated Acres	% Enrolled
East Lake Okeechobee	94,773	78,194	83	40,218	37,605	94
Fisheating Creek	212,740	196,689	92	19,363	17,389	90
Indian Prairie	230,095	189,848	83	65,399	54,308	83
Lake Istokpoga	126,480	101,747	80	51,969	46,862	90
Lower Kissimmee	262,539	220,157	84	23,682	22,744	96
South Lake Okeechobee	332,390	318,911	96	321,399	315,275	98
Taylor Creek/Nubbin Slough	148,877	124,507	84	12,821	11,698	91
Upper Kissimmee	276,793	196,835	71	44,691	39,630	89
West Lake Okeechobee	150,090	134,598	90	87,152	80,988	93



BMP enrollment as of Dec 2021 and the 8th Florida Statewide Agricultural Irrigation Demand ([FSAID](#)) Geodatabase

Florida Department of Agriculture and Consumer Services

Agricultural Acres Enrolled within Lake Okeechobee BMAP

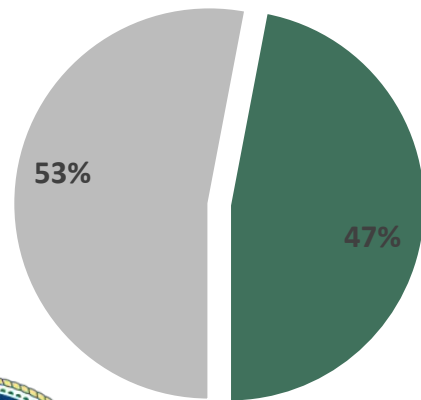
BMP Manual	Acres
Citrus	109,967
Conservation Plan	160,185
Cow/Calf	526,398
Dairy	1,382
Equine	428
Fruit/Nut	874
LOPP	2,473
Multiple Commodities	340,044
Nursery	3,429
Poultry	135
Row/Field Crop	402,613
Sod	13,566
Total	1,561,494



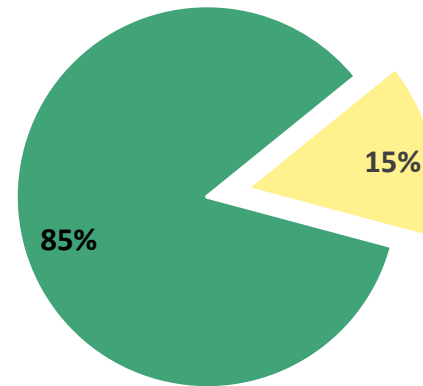
Agricultural Lands within Lake Okeechobee BMAP

Non-Agricultural Acres	Agricultural Acres	Enrolled Agricultural Acres	Remaining Agricultural Acres	Unlikely Enrollable Acres	Potentially Enrollable Acres
2,063,396	1,834,800	1,561,494	273,306*	44,818	55,054

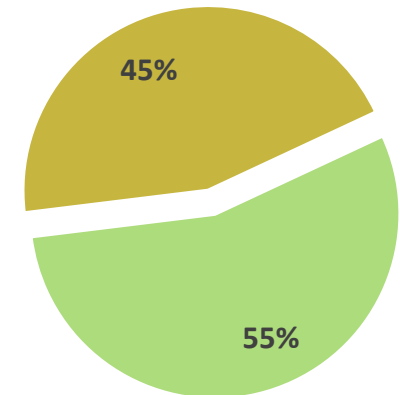
Non-Ag Acres vs.
Ag Acres



Enrolled Ag Acres vs.
Remaining Ag Acres



Unlikely Enrollable Acres
vs. Potentially Enrollable
Acres



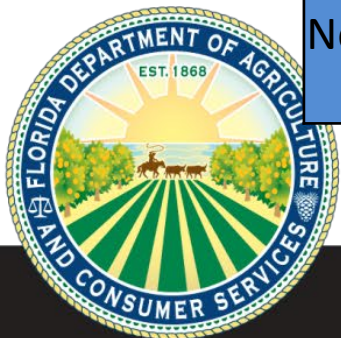
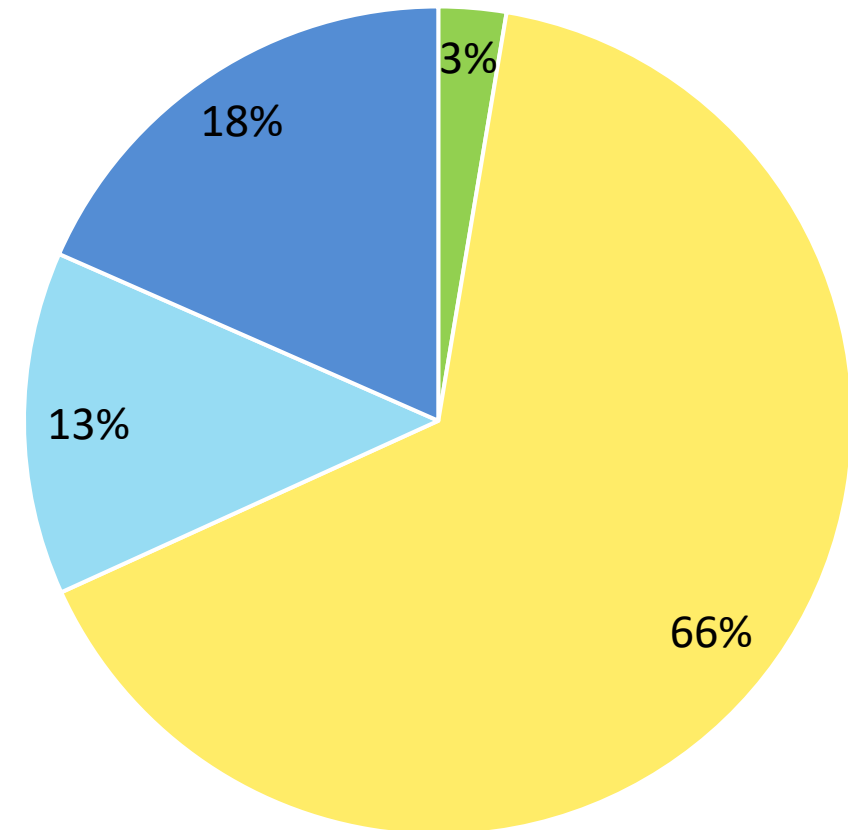
*This value includes 174,326 acreages within state-owned properties and/or surface water project areas that are not included in the 'unlikely enrollable' or 'potentially enrollable' acres categories

Unlikely Enrollable Agricultural Lands within Lake Okeechobee BMAP

Category	Acres
State Lands, CERP, Surface Water Projects	174,326
Timberland and Aquaculture	1,183
DOR Use Code 70-99 (industrial or institutional use, acreage not zoned agricultural), Non-Ag Entity	29,385
Missing Parcel Information, Slivers, No Overlap	6,001
No or Conflicting Ag Tax Class or DOR Land Use	8,249

Unlikely Enrollable Acres: 44,818

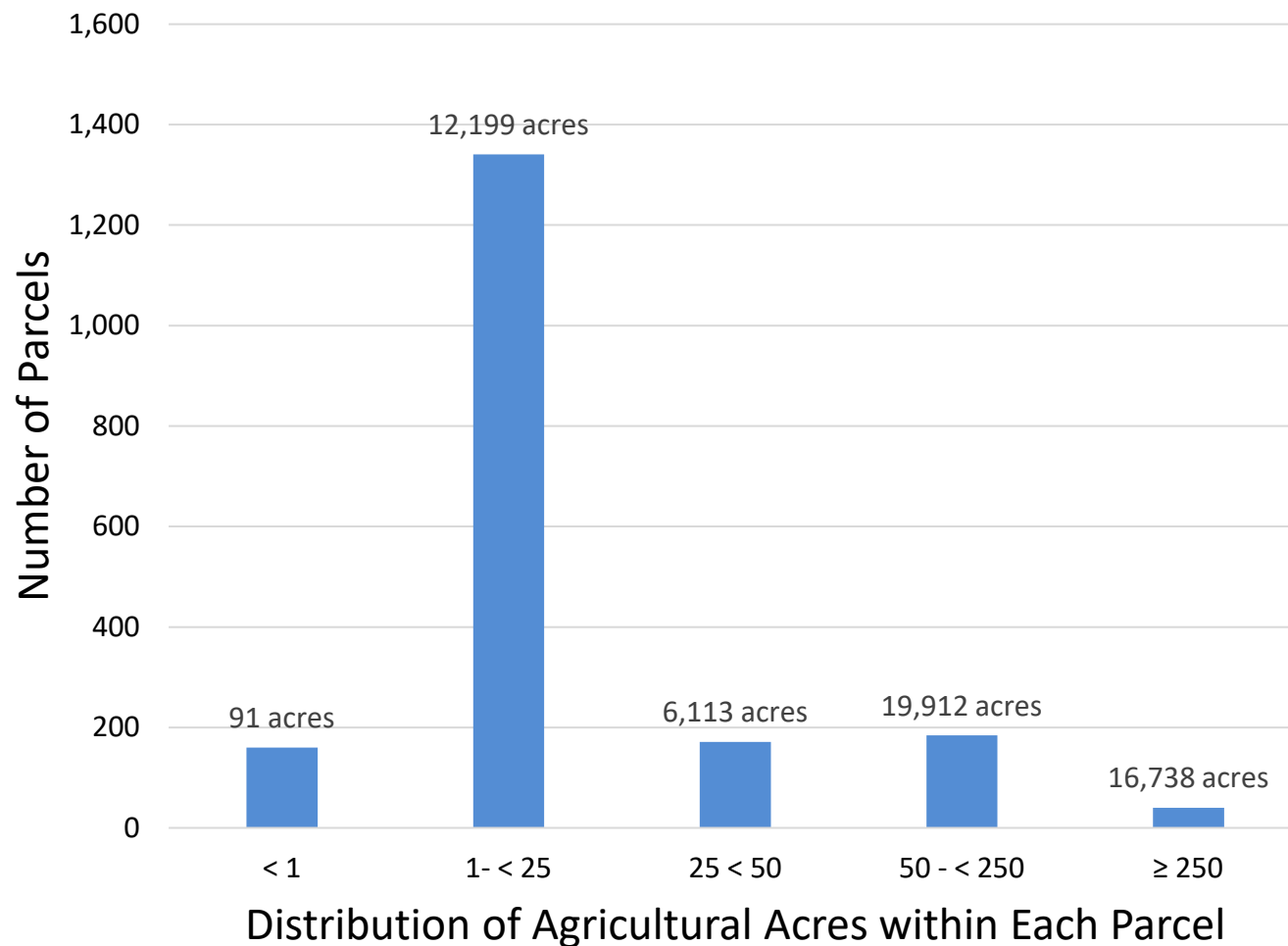
Remaining Acreage: Unlikely Ag Breakdown



Potentially Enrollable Agricultural Lands within Lake Okeechobee BMAP

Ag Acres within Parcel	Parcel Count	Total Ag Acres
< 1	160	91
1 - < 25	1,341	12,199
25 - < 50	171	6,113
50 - < 250	184	19,912
≥ 250	40	16,738

Potentially Enrollable Acres: 55,054



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
 - 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



OAWP Implementation of SB 712

Producer Outreach

- FAQs Document
- Technical Assistance under development
- Video Assistance
 - [OAWP YouTube Playlist](#)
- Continued collaboration with UF/IFAS Extension to raise awareness



Commissioner Nicole "Nikki" Fried

Pay/Register Online Forms By Topic Our Department

Home / Agriculture Industry / Water / Agricultural Water Policy FAQ

Agricultural Water Policy FAQ

Frequently asked questions about the Florida Department of Agriculture and Consumer Services' (FDACS) Office of Agricultural Water Policy, Best Management Practices (BMPs), and other topics

For information on the passage of Senate Bill 712 and new requirements for agricultural producers and landowners enrolled in the FDACS BMP program, see our [Senate Bill 712 FAQ](#) [PDF 2.7 MB].

For more information about BMPs, see our [Agricultural BMPs FAQ](#) [PDF 1.4 MB].

Select a question below to expand the answer.

- > What programs are administered by the FDACS Office of Agricultural Water Policy?
- > What is a BMP?
- > Are landowners required to implement BMPs?
- > How are BMPs adopted?
- > Does the FDACS Office of Agricultural Water Policy participate in BMP research and demonstration projects?

Water

- [Agricultural Best Management Practices](#)
- [Agricultural Permit Exemption Determinations](#)
- [Agricultural Water Policy FAQ](#)
- [Agricultural Water Supply Planning](#)
- [Mobile Irrigation Labs](#)
- [Office of Agricultural Water Policy](#)

OAWP Research Program

Build and maintain a BMP Research Program [s. 403.067(7)(c)3., F.S. and 373.813 F.S.]

FDACS OAWP supports research to provide the scientific and technical justification for the BMP program and to investigate new, innovative practices that improve nutrient and irrigation use efficiencies. Studies must address at least one OAWP research priority.

For information, visit the FDACS BMP Research website:

<https://www.fdacs.gov/Agriculture-Industry/Water/Agricultural-Best-Management-Practices/BMP-Research>



Florida Department of Agriculture and Consumer Services

Current OAWP Research Priorities

- **Nutrient management systems**
 - **Agonomic rate recommendations** that balance production with water resource protection through the inclusion of water quality monitoring
 - **Soil and tissue test calibrations and correlations**
 - **Controlled Release Fertilizer use efficiency**
 - **Fertigation to improve nutrient use efficiency**
 - **Software and data collection tool development**
- **Irrigation application and management technologies**
- **Water resource protection** using methods and treatment technologies for on-farm or edge-of-farm
- **Soil Health** specific to Florida
 - **Mixed species or cover crops for improving nutrient utilization**
 - **Rotational cropping or integrated crop/livestock systems for improving nutrient utilization**
- **Demonstrations of water quality improvement** projects that provide information on FDACS BMP benefits to water resources with specific reductions in nutrients (lbs/ac) and quantities of water savings



2021 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, 2021

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. 07/21



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

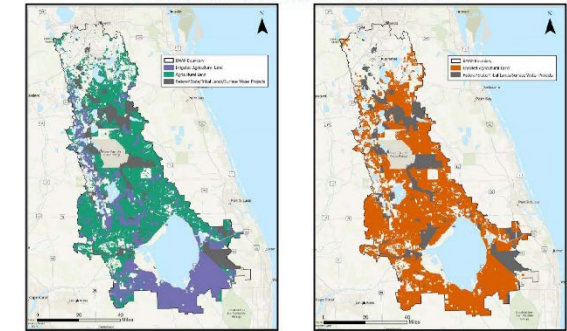
Enrollment Summary	2020
Total agricultural acres statewide	7,582,111
Total acres enrolled	4,672,975
Percentage of agricultural acres enrolled	62%
Total irrigated acres	1,877,118
Total irrigated acres enrolled	1,534,442
Percentage of irrigated acres enrolled	82%

FSAID Agricultural Acres Enrolled

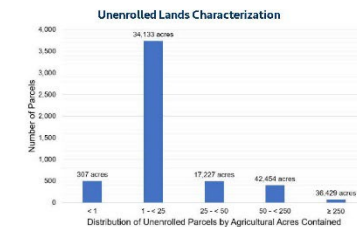
BMP Manuals	Acres
Citrus	490,788
Conservation Plan Rule	182,295
Cow/Calf	1,952,719
Dairy	54,550
Equine	20,758
Fruit & Nut	20,593
Lake Okeechobee Protection Plan (LOPP)	21,707
Multiple Commodities	777,918
Nursery	33,828
Poultry	1,235
Row/Field Crops	1,067,891
Sod	33,887
Wildlife	14,660
Temporarily Inactive	146
TOTAL	4,672,975

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Status of Implementation of Agricultural Best Management Practices (BMPs) in the Lake Okeechobee Basin



Agricultural Lands in BMAP Area	Enrollment and Response Summary	2020	2020 Percent Enrolled
Total agricultural acres in the BMAP		1,841,433	85
Total agricultural acres enrolled		1,569,697	
Total irrigated acres		671,681	93
Total irrigated acres enrolled		626,176	
Number of NOIs within BMAP		2,631	
Completed IV site visits		225	



Agricultural Acres Enrolled

BMP Manuals	Acres
Citrus	125,947
Conservation Plan	160,198
Cow/Calf	606,304
Dairy	20,252
Equine	461
Fruit & Nut	851
LOPP	20,995
Multiple Commodities	114,148
Nursery	3,264
Poultry	719
Row/Field Crops	419,523
Sod	17,635
TOTAL	1,569,697

Completed Implementation Verification Site visits values do not include NOIs operating under South Florida Water Management District (SFWMD) permits within the EAA/C39 basins. For those NOIs, SFWMD reports that none of the permittees have been determined to be out of compliance with their permits. (Personal communication, February 9, 2021). The Federal and State lands identified on the map in gray areas were initially considered agriculture. These lands are not expected to contain agricultural activities.

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<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



Unenrolled Agricultural Producer Enforcement

David Frady, Ph.D.
Program Administrator

Division of Environmental Assessment and Restoration
Florida Department of Environmental Protection



Unenrolled Agricultural Producer Enforcement

FDACS
Identifies non-
compliant
producers

- FDACS uses various database to identify parcels within a BMAP that may be agricultural operations.

FDACS refers
non-compliant
producers to DEP
for enforcement

- After confirming agricultural activity and attempting to enroll the producer in the BMP program, FDACS refers non-compliant producers to DEP for enforcement.

DEP conducts
outreach and
engagement to
bring producers
into compliance

- It saves taxpayers money and is better for the environment to bring producers into compliance quickly through education and outreach efforts prior to taking formal enforcement action against small farmers.

DEP Initiates
enforcement
action

- If an agricultural producer fails to come into compliance, DEP initiates a civil suit to compel them to come into compliance.
- DEP is prioritizing enforcement actions based on parcel size and impact to the environment.



Outreach and Engagement Has Been Successful

- More than 69% of the unenrolled agricultural parcels identified by FDACS and referred to DEP have been brought into compliance
 - That is more than 83% of the total acres
- There are no parcels greater than 100 acres out of compliance and the majority are smaller 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



THANK YOU

David Frady

Division of Environmental Assessment and Restoration
Florida Department of Environmental Protection

CONTACT INFORMATION:

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Contact Information

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Environmental Administrator

Lake Okeechobee BMAP Coordinator

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