Webinar Housekeeping

Attendee Participation

Open your control panel.

Join audio:

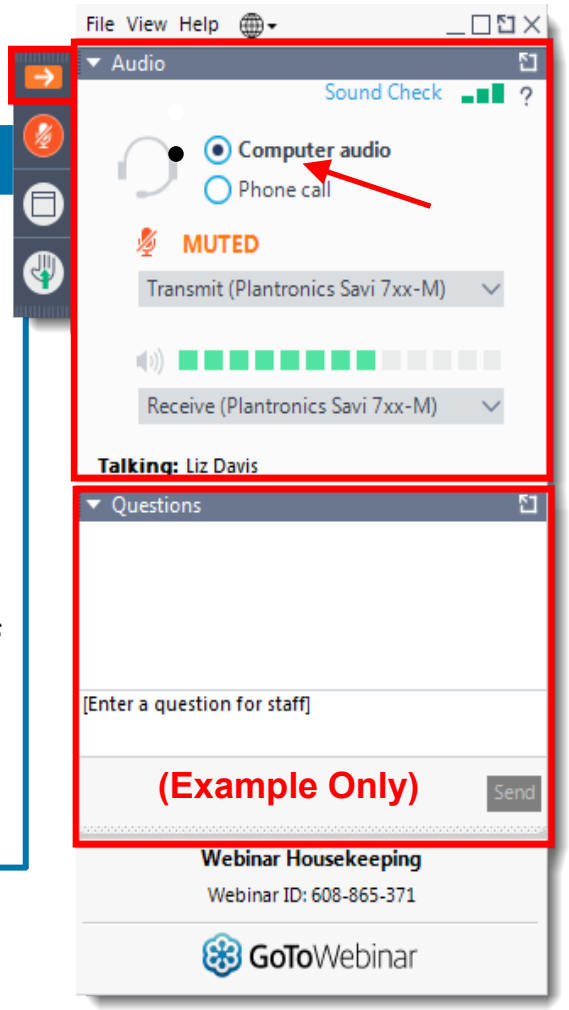
- Choose Computer Audio **or**
- Choose Phone Call and dial using the information provided with your registration

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.



Orange Creek Basin Management Action Plan (BMAP) Annual Meeting

Jessica Fetgatter
Division of Environmental Assessment and Restoration

June 20, 2022

Agenda

- Welcome
- BMAP Background and Update
- Statewide Annual Report
- Clean Waterways Act Requirements
- St. Johns River Water Management District (SJRWMD) Updates
- Florida Department of Agriculture and Consumer Services (FDACS) Updates
- Unenrolled Agricultural Producer Enforcement

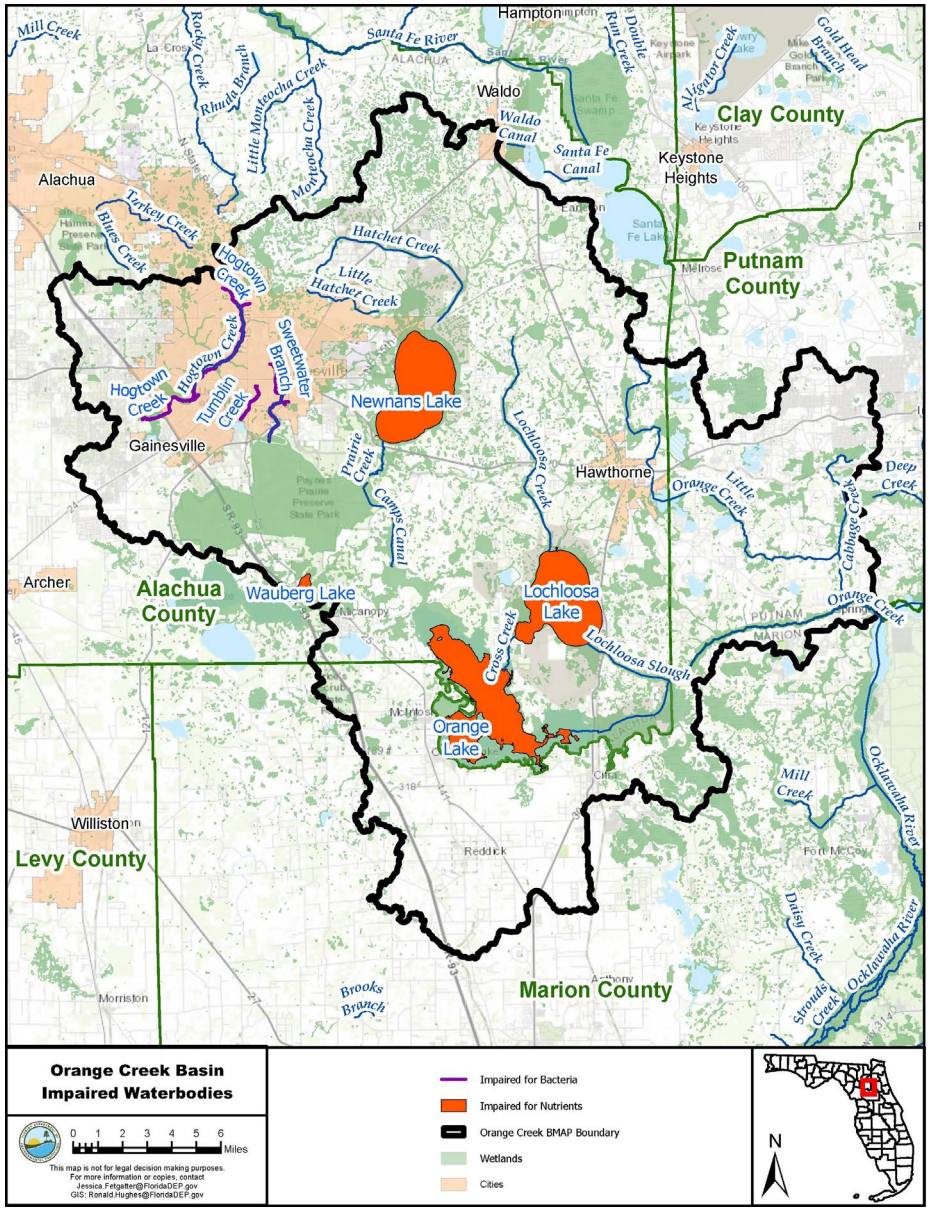
Then and Now

Background

Annual Progress

Orange Creek Background

- Initial adoption 2008
- Amendment adoption 2019



Annual Progress

Estimated Reductions

Waterbodies	TN Required Reductions (lbs/yr)	TN Reductions Achieved (lbs/yr)	Percent Completed	TP Required Reductions (lbs/yr)	TP Reductions Achieved (lbs/yr)	Percent Completed
Lake Wauburg	1,803	167	9.3%	335	34	10.1%
Lochloosa Lake	219,499	6,905	3.2%	5,122	1,210	23.6%
Newnans Lake	230,053	7,253	3.2%	12,999	1,805	13.9%
Orange Lake	NA	NA	NA	12,034	3,805	31.6%
Alachua Sink	65,762	75,498	100%	NA	NA	NA

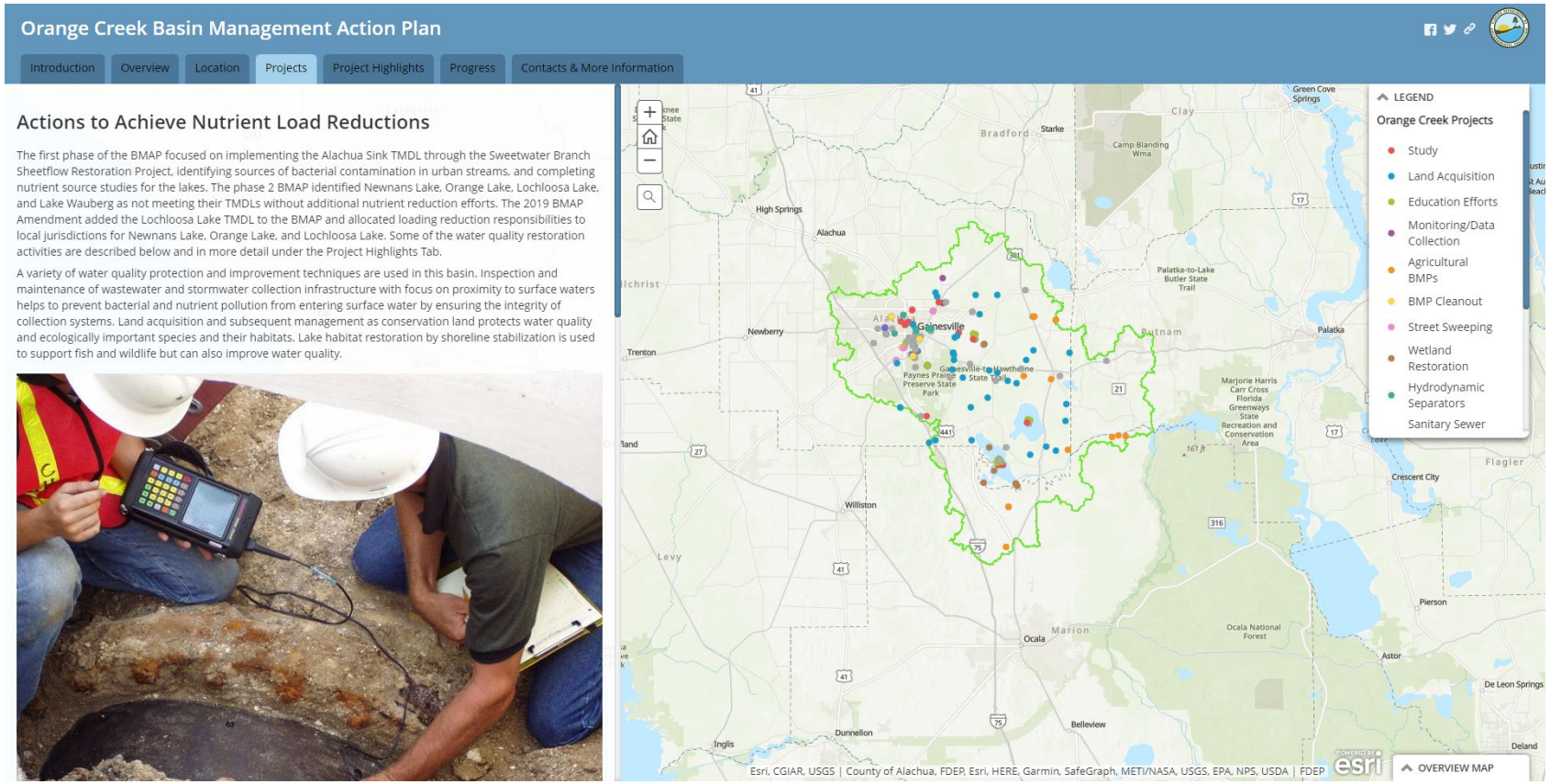
Status of Projects

Through December 31, 2021

Lead Entity	Completed	Ongoing	Planned	Underway	Total
Alachua County	72	18	1	7	103
City of Gainesville	30	25	2	1	66
City of Hawthorne	0	1	1	0	2
City of Waldo	0	1	0	0	1
DEP	4	0	0	0	4
FDACS	6	7	0	0	13
FDOT District 2	9	7	0	0	16
FDOT District 5	2	1	0	0	3
FFS	0	1	0	0	1
FWC	25	3	0	2	30
GRU	13	5	1	2	25
Marion County	2	3	0	0	5
Orange Creek Basin Partnership	1	0	0	0	1
SJRWMD	20	0	1	1	25
Town of McIntosh	0	1	0	0	1
Town of Micanopy	0	1	0	0	1
Town of Reddick	0	1	0	0	1
Total	**184**	**75**	**6**	**13**	**278**

Status of Projects

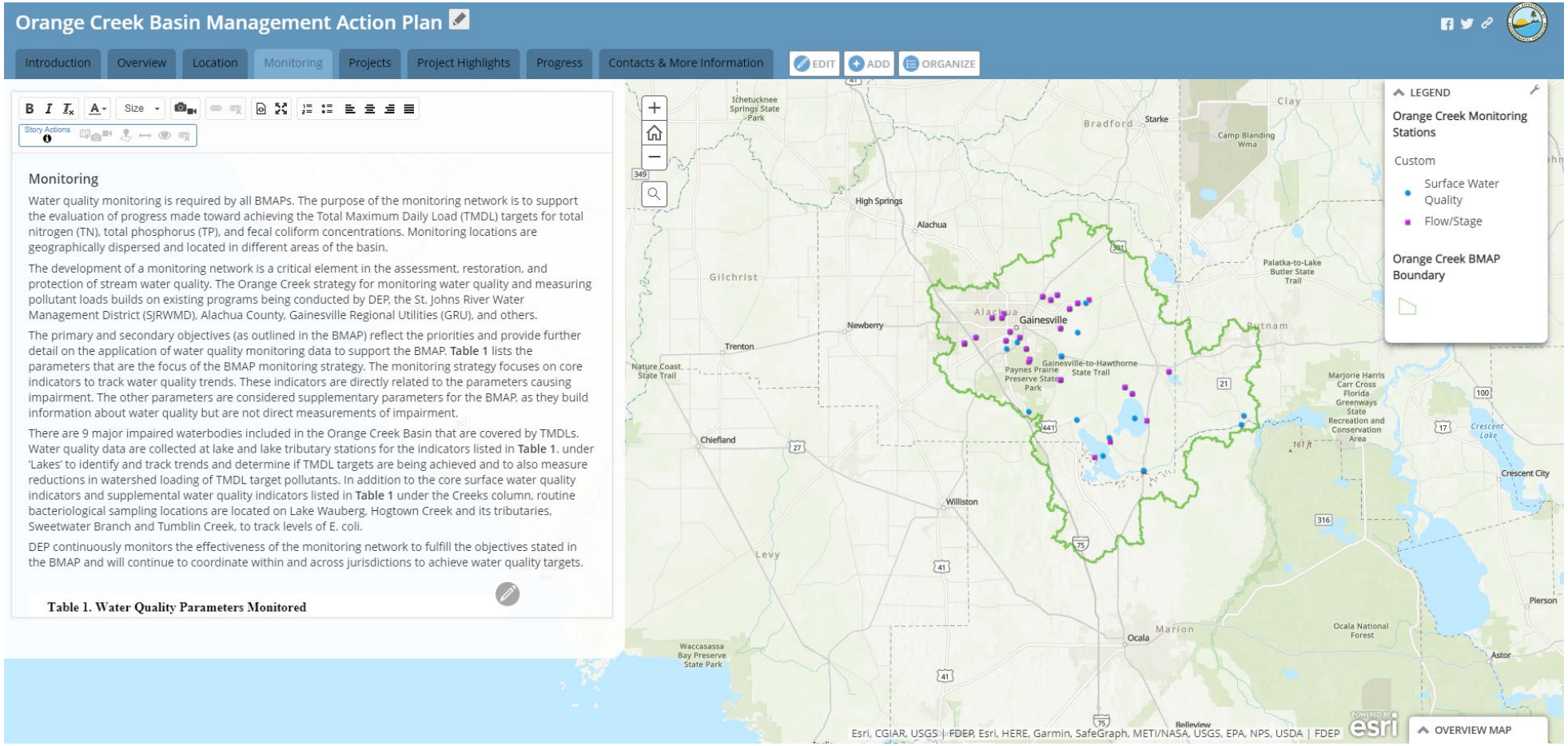
Story Map



https://fdep.maps.arcgis.com/apps/MapSeries/index.html?appid=5843ed77913441019e2f560352c9cbaa

Story Maps

Monitoring

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Statewide Annual Report (STAR)

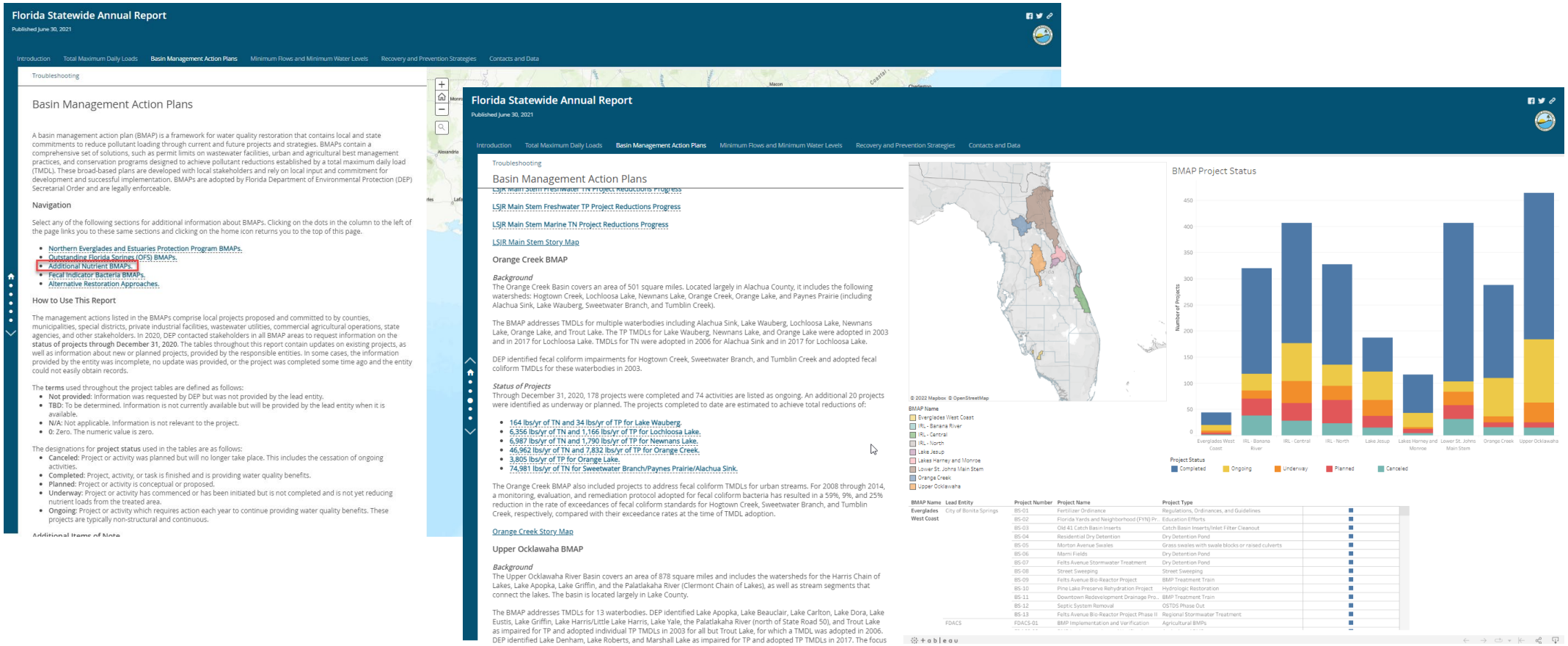
STAR Background and Webpage

STAR 2021 Progress and Timeline

BMAP Project Collection Portal

STAR Background and Webpage

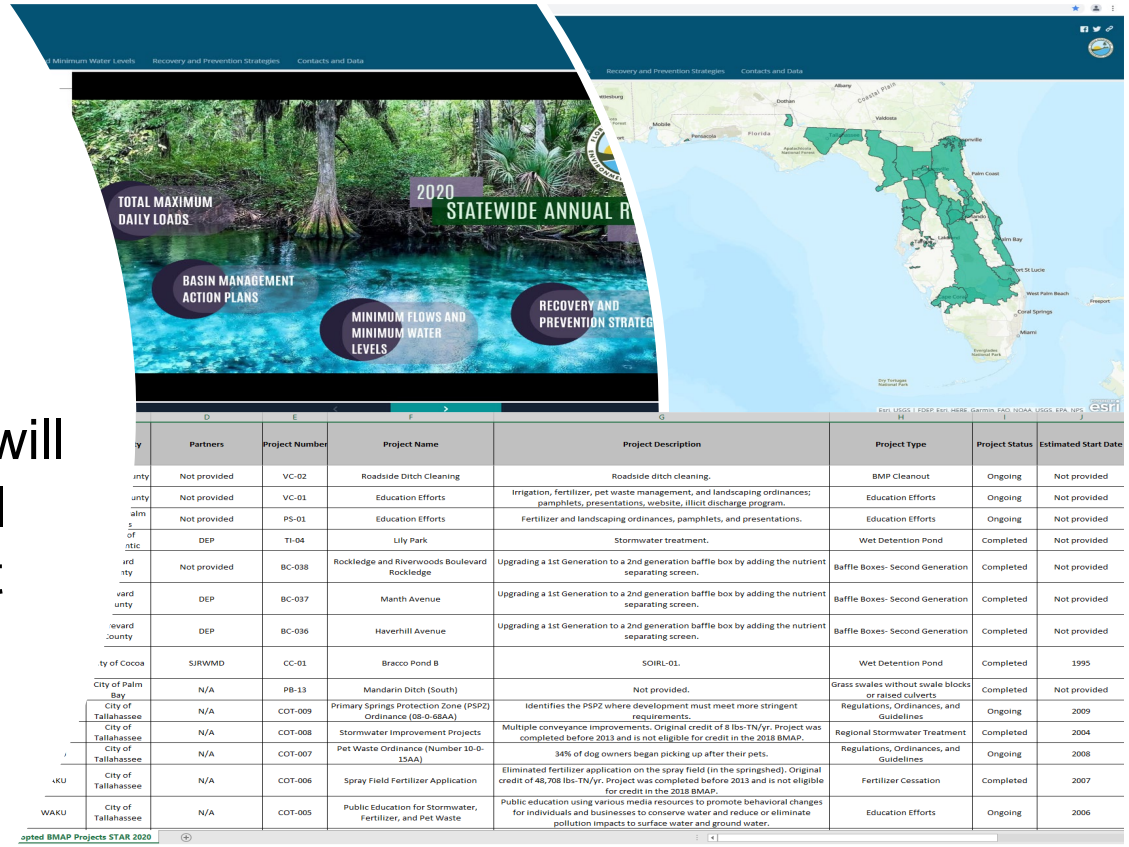
https://floridadep.gov/STAR



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

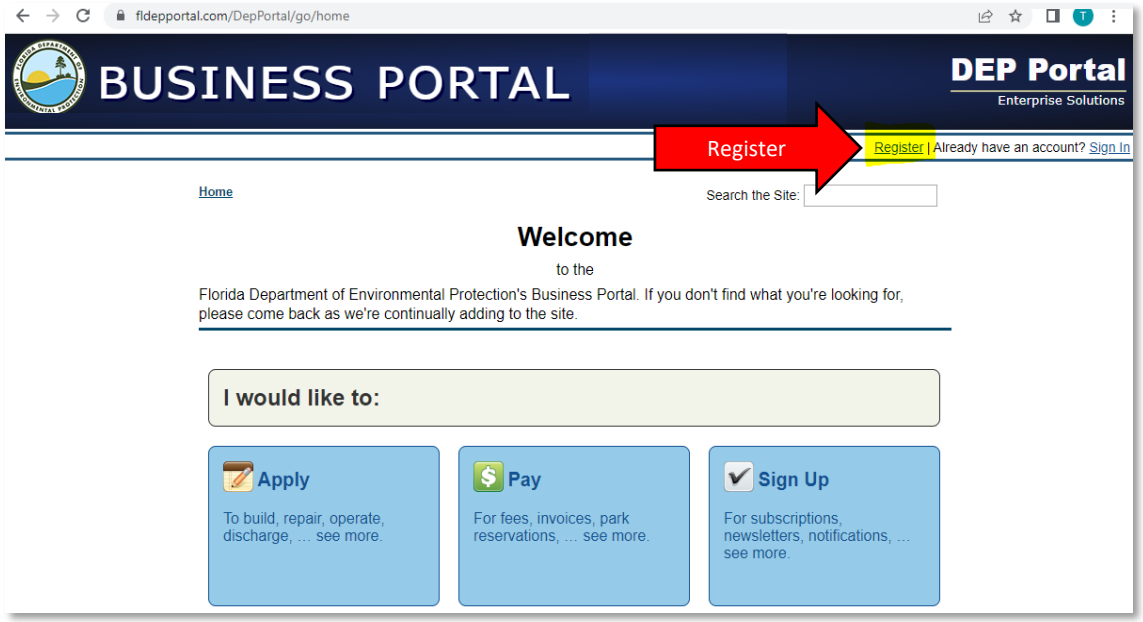


	Partners	Project Number	Project Name	Project Description	Project Type	Project Status	Estimated Start Date
unty	Not provided	VC-02	Roadside Ditch Cleaning	Roadside ditch cleaning.	BMP Cleanout	Ongoing	Not provided
unty	Not provided	VC-01	Education Efforts	Irrigation, fertilizer, pet waste management, and landscaping ordinances; pamphlets, presentations, website, illicit discharge program.	Education Efforts	Ongoing	Not provided
alm	Not provided	PS-01	Education Efforts	Fertilizer and landscaping ordinances, pamphlets, and presentations.	Education Efforts	Ongoing	Not provided
of ntic	DEP	TI-04	Lily Park	Stormwater treatment.	Wet Detention Pond	Completed	Not provided
ard nty	Not provided	BC-038	Rockledge and Riverwoods Boulevard Rockledge	Upgrading a 1st Generation to a 2nd generation baffle box by adding the nutrient separating screen.	Baffle Boxes- Second Generation	Completed	Not provided
vard unty	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
evard 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
ty 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.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What's Next?

Clean Waterways Act Requirements

Update by July 1, 2025

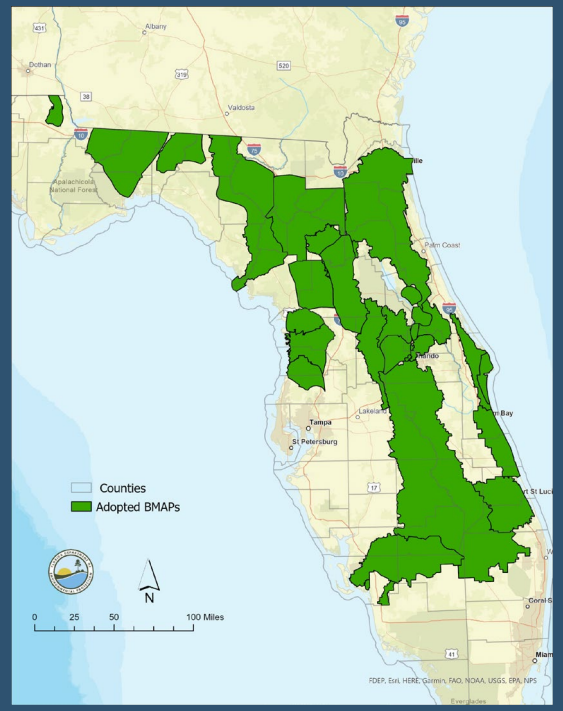
2028 = 20 years for Orange Creek BMAP!

Clean Waterways Act 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 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

You can view our Clean Waterways Act Requirements webinar materials here.

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

What's Next?

Clean Waterways Act Requirements

Update by July 1, 2025

2028 = 20 years for Orange Creek BMAP!


FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION

Orange Creek Water Quality Monitoring Update

Tiffany Trent, St Johns River Water Management District

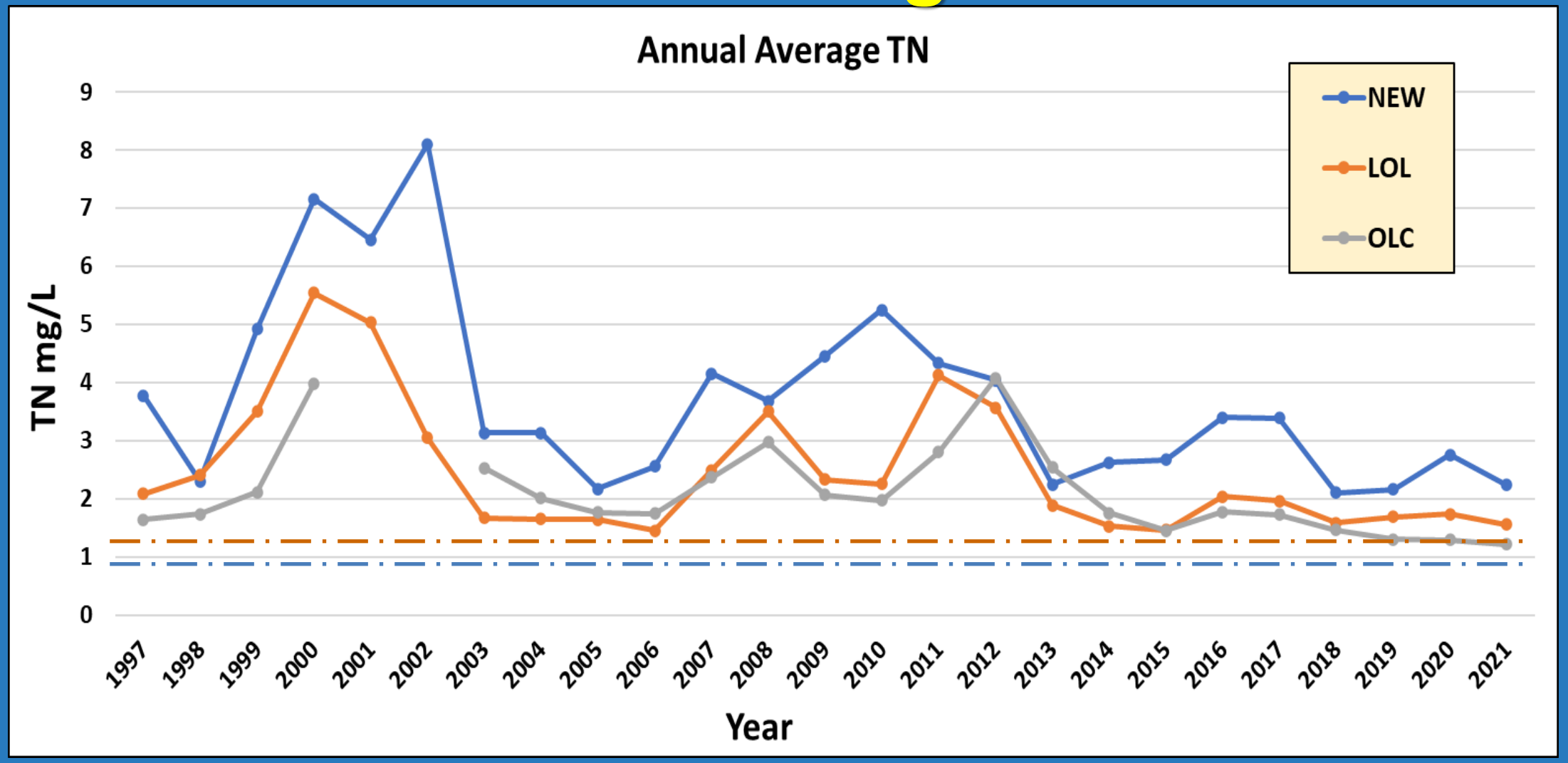
Water Quality Update

- Focusing on 3 analytes: TN, TP, and Chl-a
- Newnans Lake, Lochloosa Lake, Orange Lake
- Water quality data obtained from St Johns River Water Management database.
- Each lake had samples in every quarter, so arithmetic means were used.
- Harmful Algal Bloom Data provided by DEP HAB website.
- Quick update on Orange Lake Weir on Hwy 301 and Orange Creek Restoration Area.

Lake TMDL Summaries

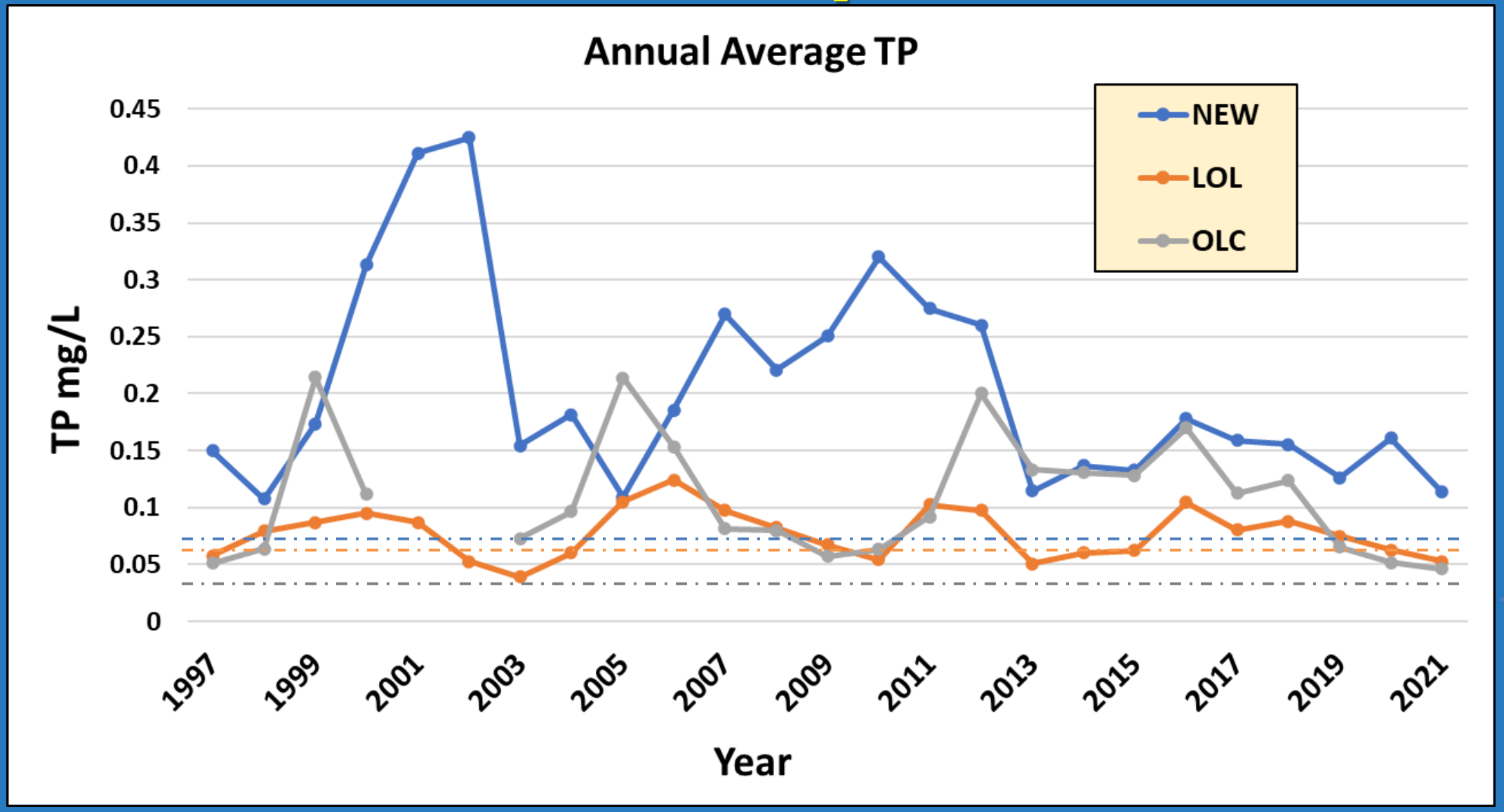
Lake	TN TMDL Target (mg/L)	2021 Average	TP TMDL Target (mg/L)	2021 Average	Chl-a TMDL Target (mg/L)	2021 Average
Newnans	0.97	2.23	0.062	0.12	57.6	57.8
Lochloosa	1.15	1.55	0.055	0.052 ✓	38	36.31 ✓
Orange	N/A	1.21	0.031	0.046	24.1	26.65

Total Nitrogen



Dotted lines represent TMDL with respective lakes by color

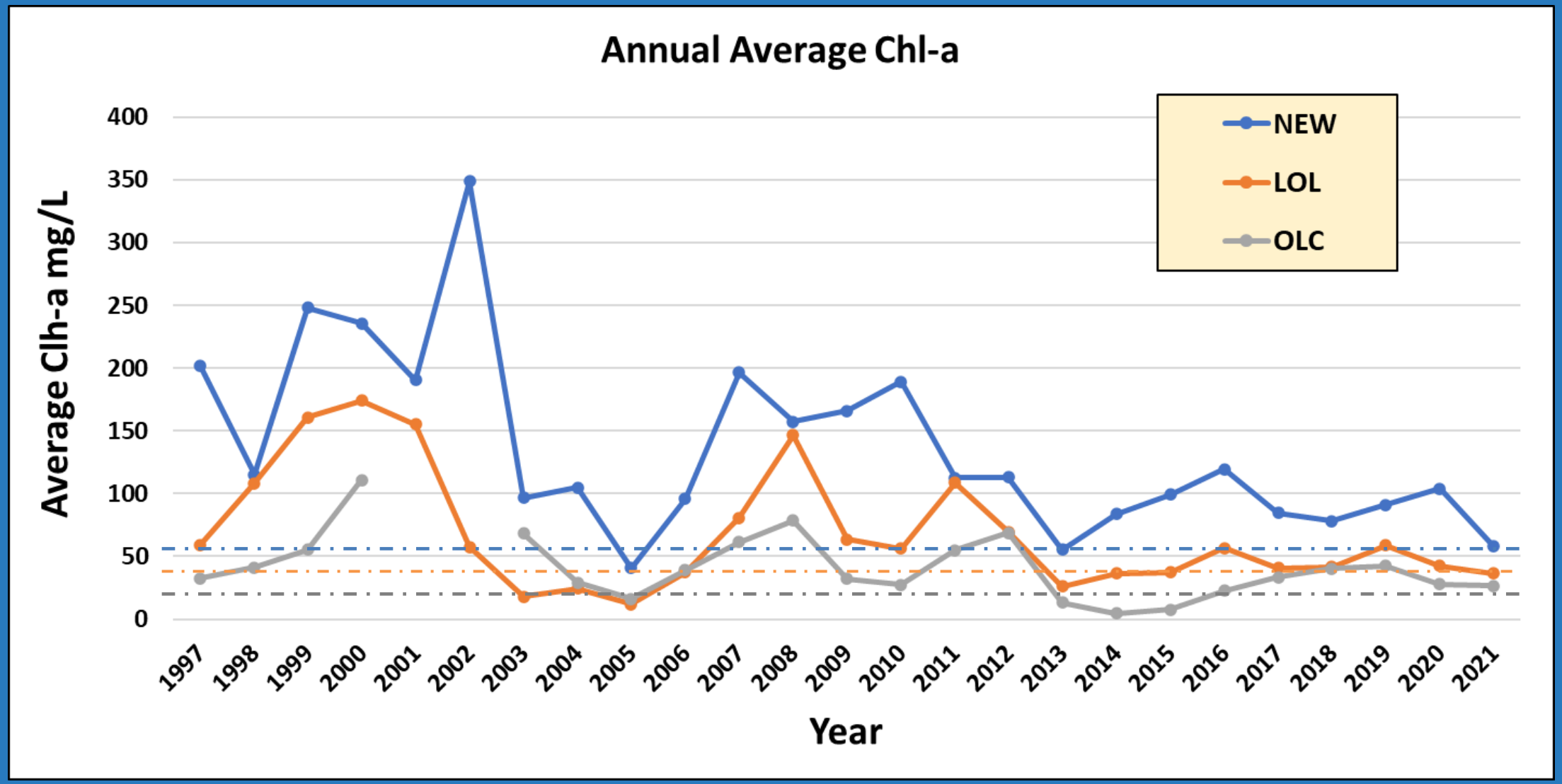
Total Phosphorus



Dotted lines represent TMDL with respective lakes by color

St. Johns River Water Management District

Chlorophyll-*a*



Dotted lines represent TMDL with respective lakes by color

Harmful Algal Blooms

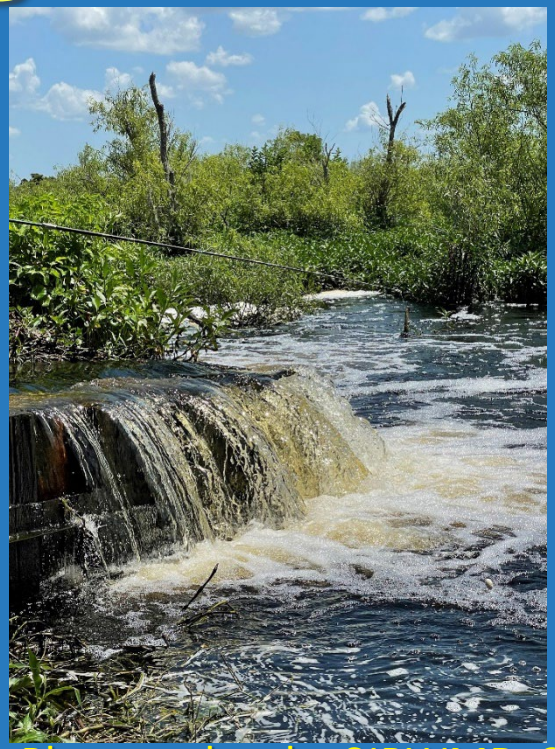
- HAB data was obtained from the DEP website. Newer sample results going back through 2022: https://fdep.maps.arcgis.com/apps/webappviewer/index.html?id=a91827d2b4fc4b739b999cf3c99307f1
- Older results from 2017-2021 can be found at: https://floridadep.gov/dear/algal-bloom/content/algal-bloom-sampling-results

- No algal toxin samples collected in 2021 in lakes Newnans, Lochloosa, and Orange had any detectable levels of microcystin, cylindrospermopsin anatoxin, or nodularin.
- Two samples taken in Orange lake in the first week of March 2022 had microcystin toxin levels exceeding the EPA recreational limit of 15ppb (McIntosh Bay).

Water Quality Summary

- From 2020 to 2021 TP, TN, and Chl-*a* levels have improved in Lakes Newnan, Lochloosa and Orange.
- TMDLs were only met in Lochloosa with TP and Chl-*a*. However, Chl-*a* for Newnans and Orange Lakes and TP for Orange Lake came very close.
- While Chl-*a* levels improved in Orange lake in 2021, Orange lake expired elevated levels of microcystin in the spring of 2022, suggesting elevated Chl-*a* values.

Orange Lake Weir at 301

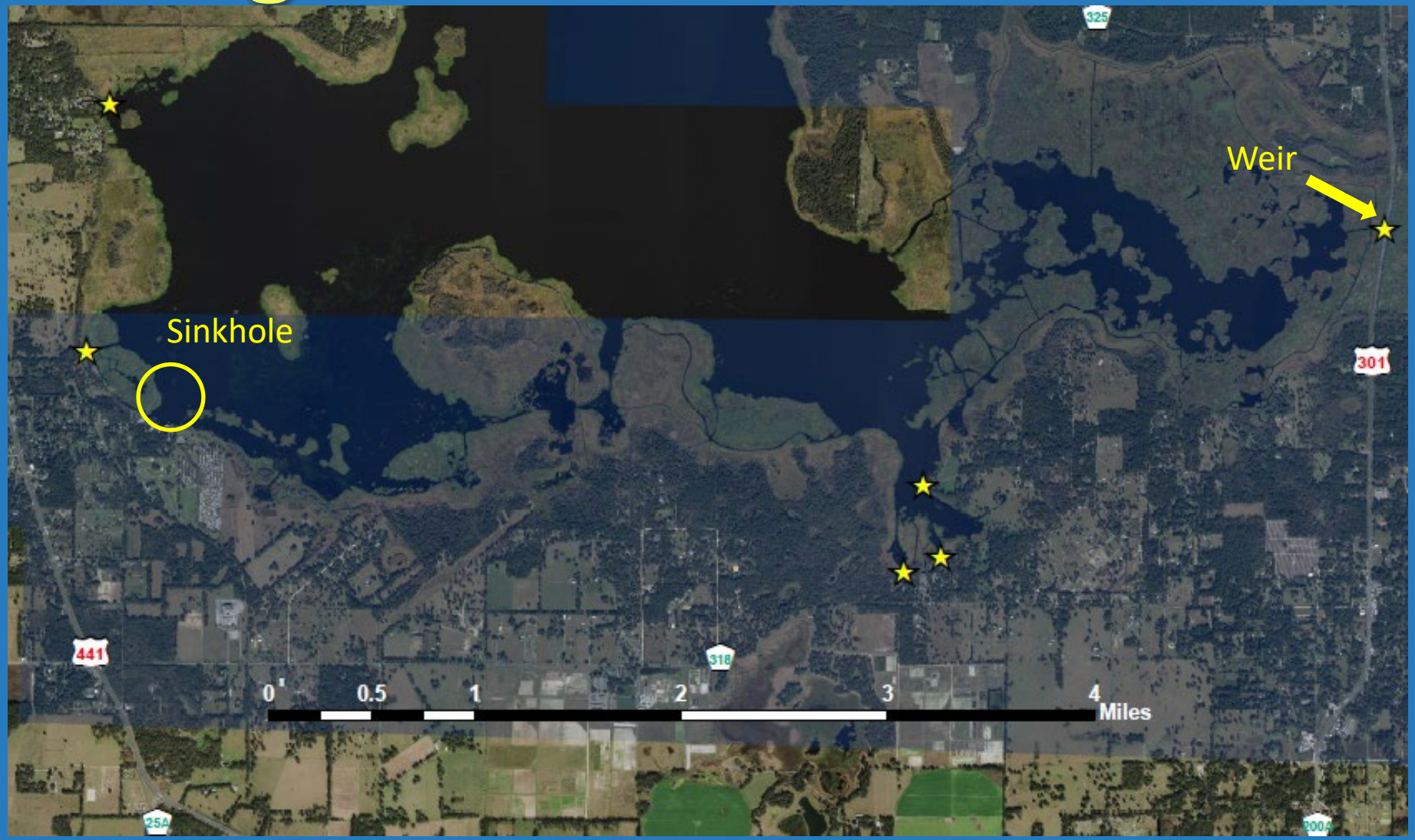


Photos taken by SJRWMD, 2022

Photos taken by FWC, 2012

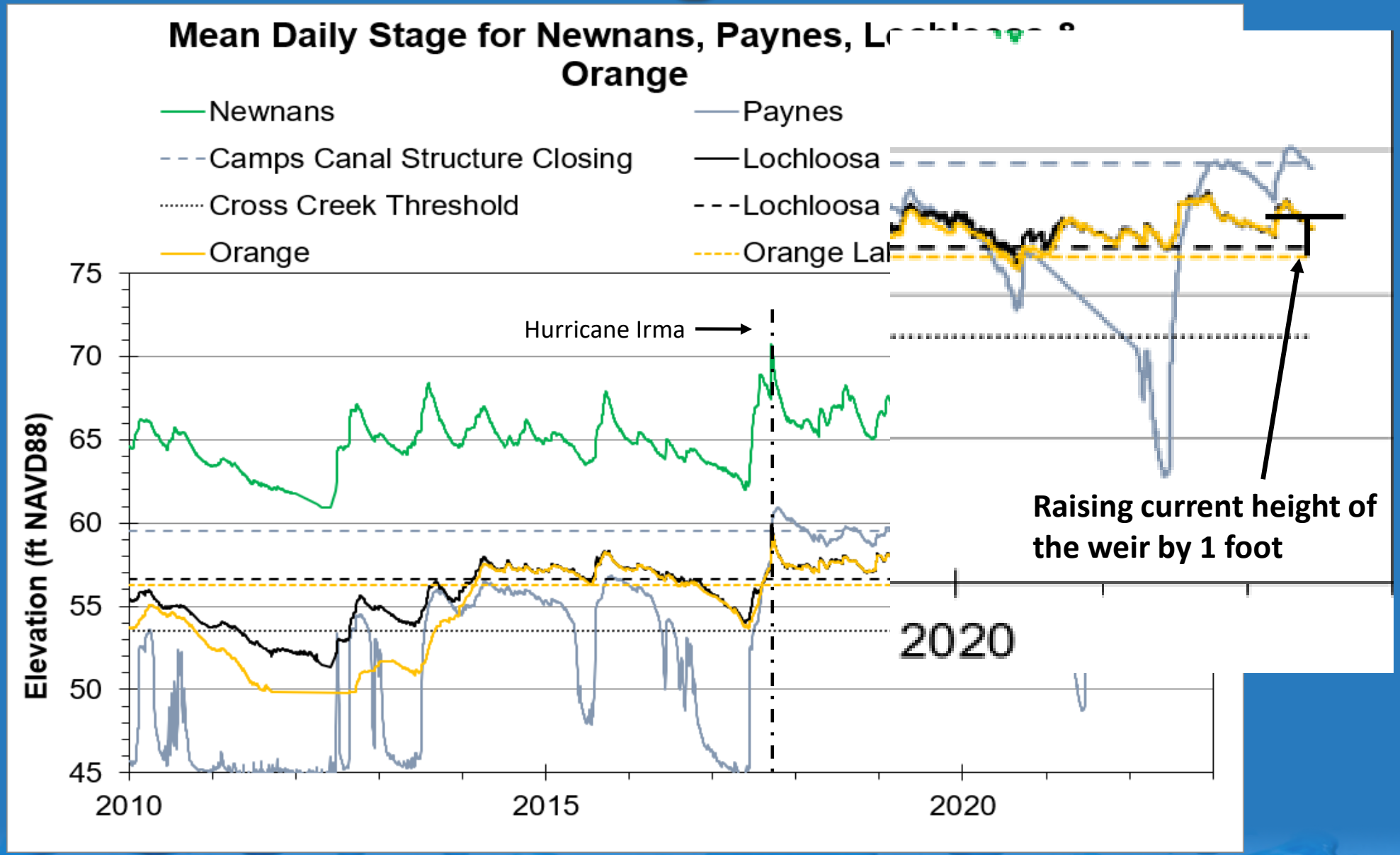
St. Johns River Water Management District

Orange Lake Areas of Interest



Areas of concern for flooding if an additional foot was added to the current weir.

OCB Stage Levels



Orange Lake Areas of Interest

Visual inspections of lower lying areas around Orange Lake in April 2022.

Orange Lake Restoration Area

- In 2021, large floating vegetation islands were harvested from the OC restoration area to measure the costs effectiveness of nutrient removal.
- District is continuing these efforts to improve water quality in this area.
  - TN: $1,313/mt
  - TP: $94,574/mt
  - TC: $584/mt

Questions?

Orange Creek BMAP Annual Meeting

June 20, 2022

Cori Hermle

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 Orange Creek BMAP
- 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

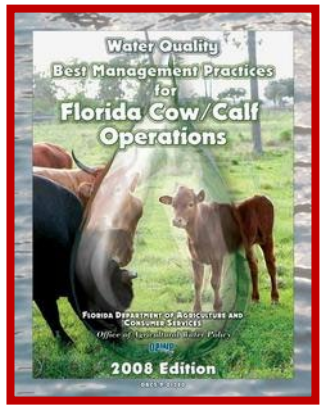
Benefits of Agricultural Best Management Practices

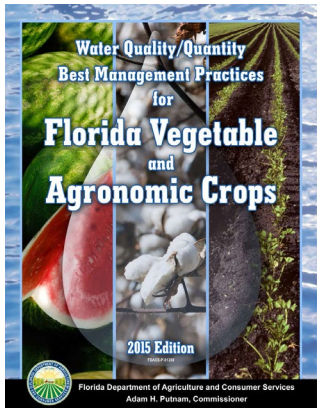
- Increase efficiencies in nutrient, irrigation and water management
- Conservation and protection of water and environmental resources
- Improve soil health
- Promote groundwater recharge
- Enhancing wildlife habitat

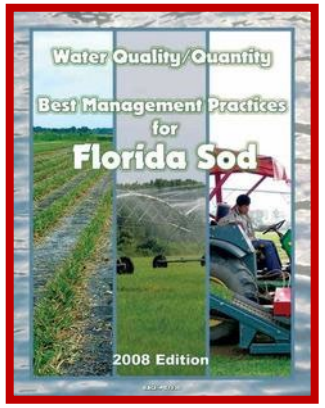
FDACS Role in BMP Implementation

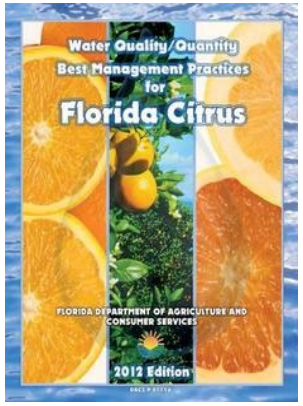
- Develop BMPs in Manuals and adopt BMPs by Rule
- Assist Producers with BMP Enrollment
- Identify and support targeted cost-share of select BMPs
- Fund research to develop new, innovative BMPs that improve nutrient and irrigation use efficiencies
- Verify proper implementation through site visits and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

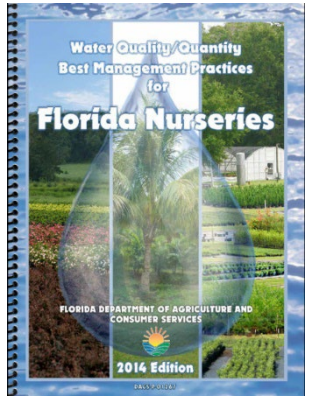
Adopted BMP Manuals

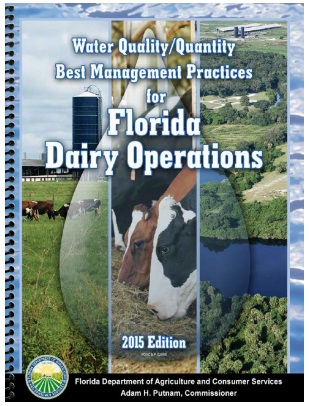


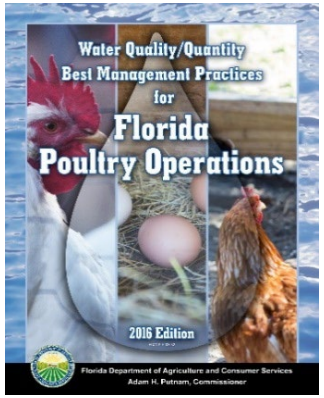


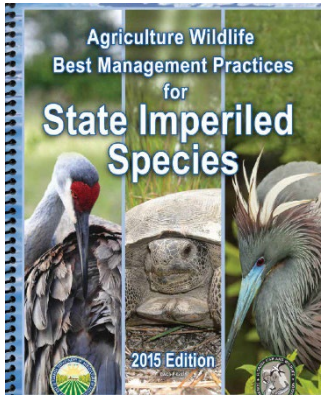












Producer Options in BMAP Areas

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 Orange Creek BMAP

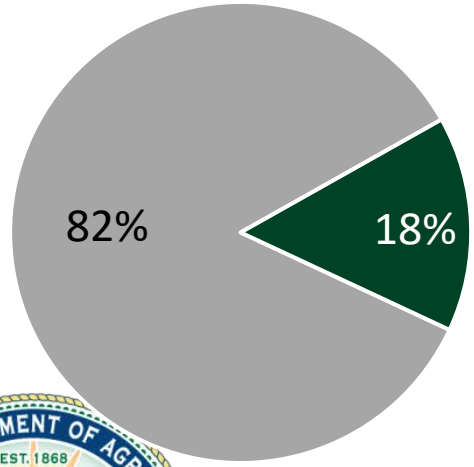
- 39% of all agricultural acres are enrolled in the BMP program
  - Total Ag Acres = 68,512
  - Enrolled Ag Acres = 26,695
- 72% of all irrigated agricultural acres are enrolled in the BMP program
  - Total Irrigated Ag Acres = 3,712
  - Enrolled Irrigated Ag Acres = 2,684
- Majority of enrollments are Cow/Calf

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

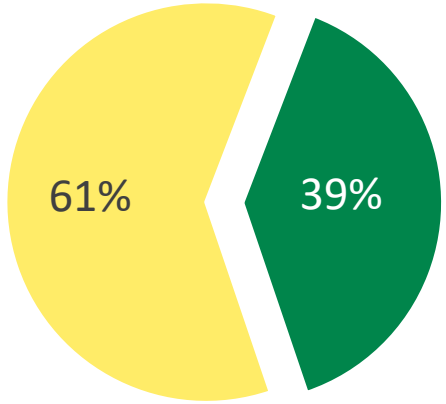
Agricultural Lands within Orange Creek BMAP

Non-Agricultural Acres	Agricultural Acres	Enrolled Agricultural Acres	Remaining Agricultural Acres	Unlikely Enrollable Acres	Potentially Enrollable Acres
385,271	68,512	26,695	41,817*	12,922	26,274

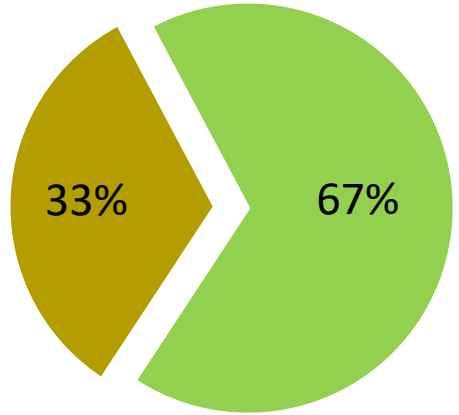
Non-Ag Acres vs Ag Acres



Enrolled Ag Acres vs Remaining Ag Acres



Unlikely Enrollable Acres vs Potentially Enrollable Acres



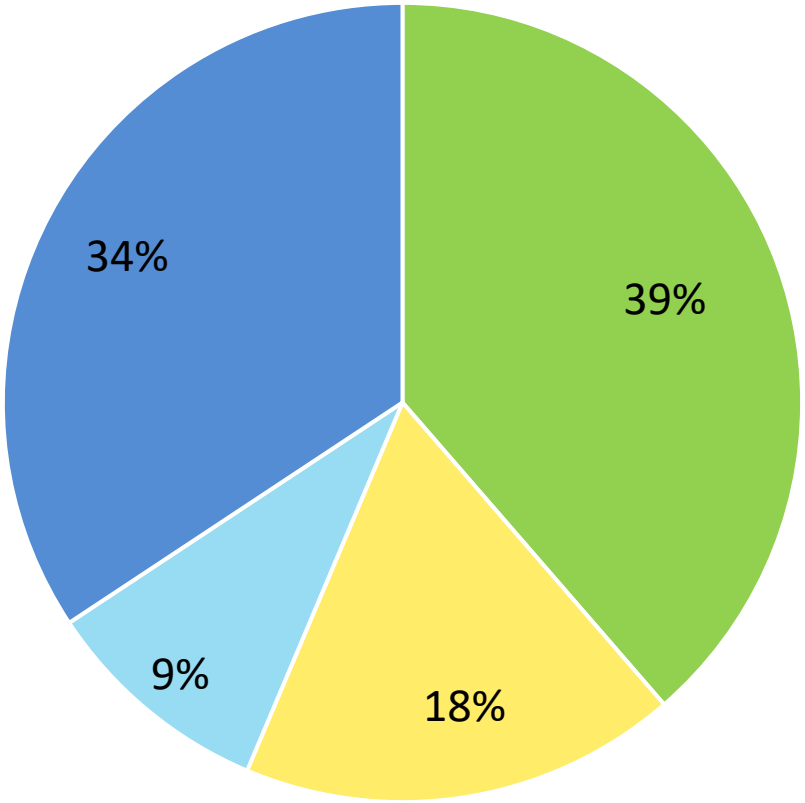
*This value includes 2,646 acreages within state-owned properties that are not included in the 'unlikely enrollable' or 'potentially enrollable' acres categories

Unlikely Enrollable Agricultural Lands within Orange Creek BMAP

Category	Acres
State Lands, CERP, Surface Water Projects	2,646
Timberland and Aquaculture	4,993
DOR Use Code 70-99 (industrial or institutional use, acreage not zoned agricultural), Non-Ag Entity	2,290
Missing Parcel Information, Slivers, No Overlap	1,208
No or Conflicting Ag Tax Class or DOR Land Use	4,432

Unlikely Enrollable Acres: 12,922

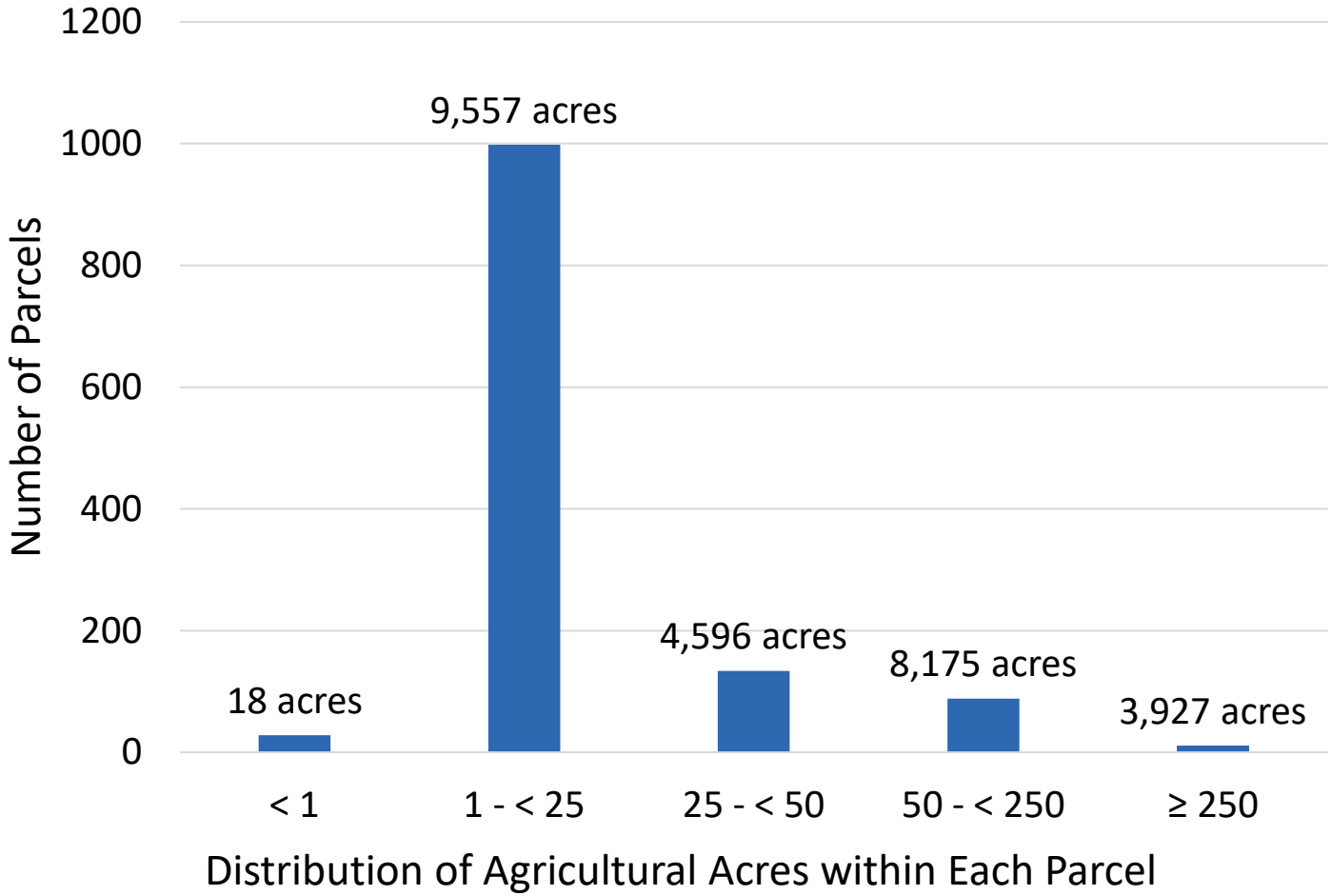
Remaining Acreage: Unlikely Ag Breakdown



Potentially Enrollable Agricultural Lands within Orange Creek BMAP

Ag Acres within Parcel	Parcel Count	Total Ag Acres
< 1	28	18
1 - < 25	998	9,557
25 - < 50	134	4,596
50 - < 250	88	8,175
≥ 250	11	3,927

Potentially Enrollable Acres: **26,274**



BMP Implementation Verification (IV)

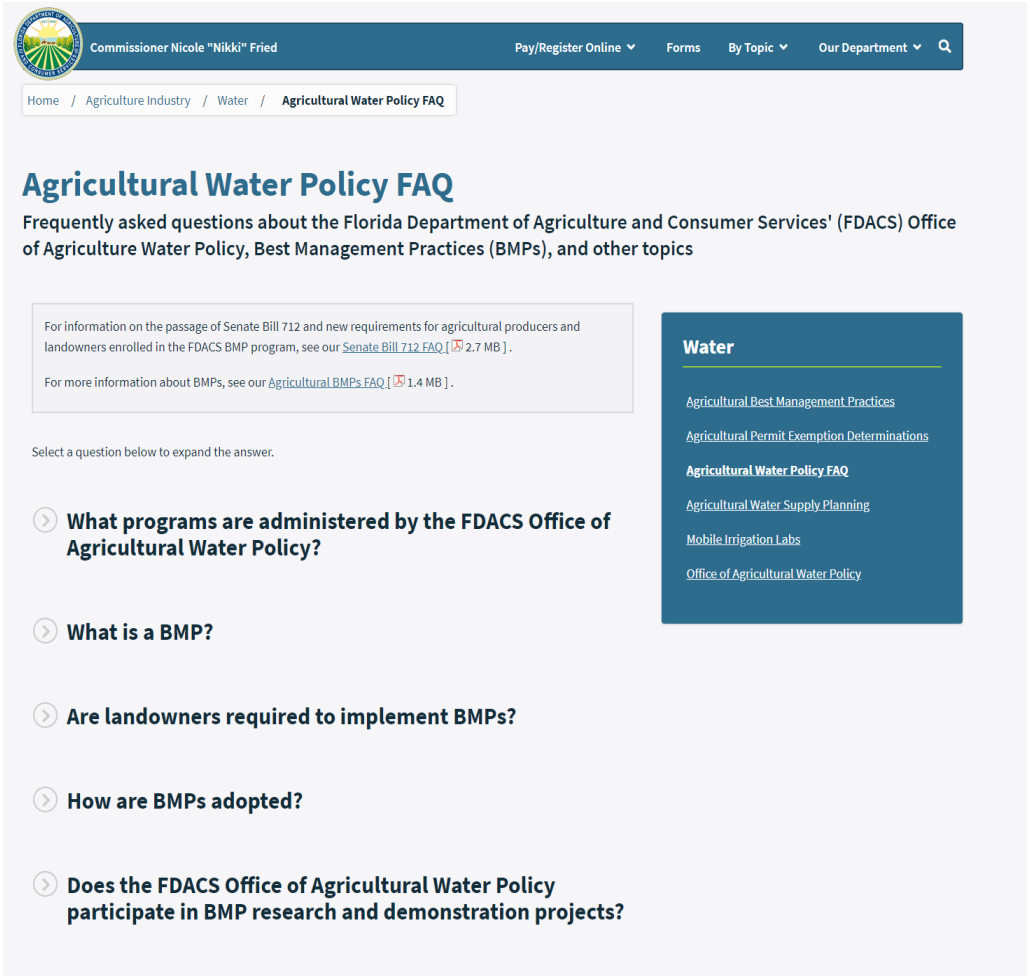
- Process to verify the status of implementation of BMPs
- **Clean Waterways Act - SB 712 (July 2020)**
  - Requires IV site visits every 2 years
    - 91% completed**
  - Requires collection, review, and retention of N and P fertilizer records
    - Nutrient Application Record Form (NARF)
  - FDACS reports total N and P applications to FDEP for utilization in BMAP assessments

** IVs completed as of June 1, 2022

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



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

Current OAWP Research Priorities

- **Nutrient management systems**
  - **Agronomic 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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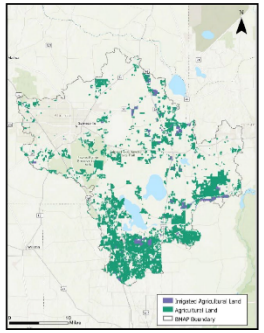
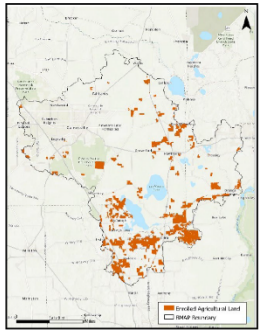
Status of Implementation of Agricultural Best Management Practices (BMPs) in the Orange Creek



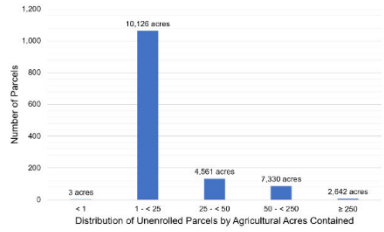
Agricultural Lands in BMAP Area



Enrolled Agricultural Lands in BMAP Area

Enrollment and Response Summary	2020	2020 Percent Enrolled
Total agricultural acres in the BMAP	68,389	41
Total agricultural acres enrolled	27,789	
Total irrigated acres	3,655	77
Total irrigated acres enrolled	2,824	
Number of NOIs within BMAP	214	
Completed IV site visits	37	

Unenrolled Lands Characterization



Agricultural Acres Enrolled

BMP Manuals	Acres
Citrus	0
Cow/Calf	15,451
Dairy	79
Equine	2,782
Fruit & Nut	1,397
Multiple Commodities	4,559
Nursery	43
Row/Field Crops	3,475
Sod	0
TOTAL	27,789

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

Thank You!

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

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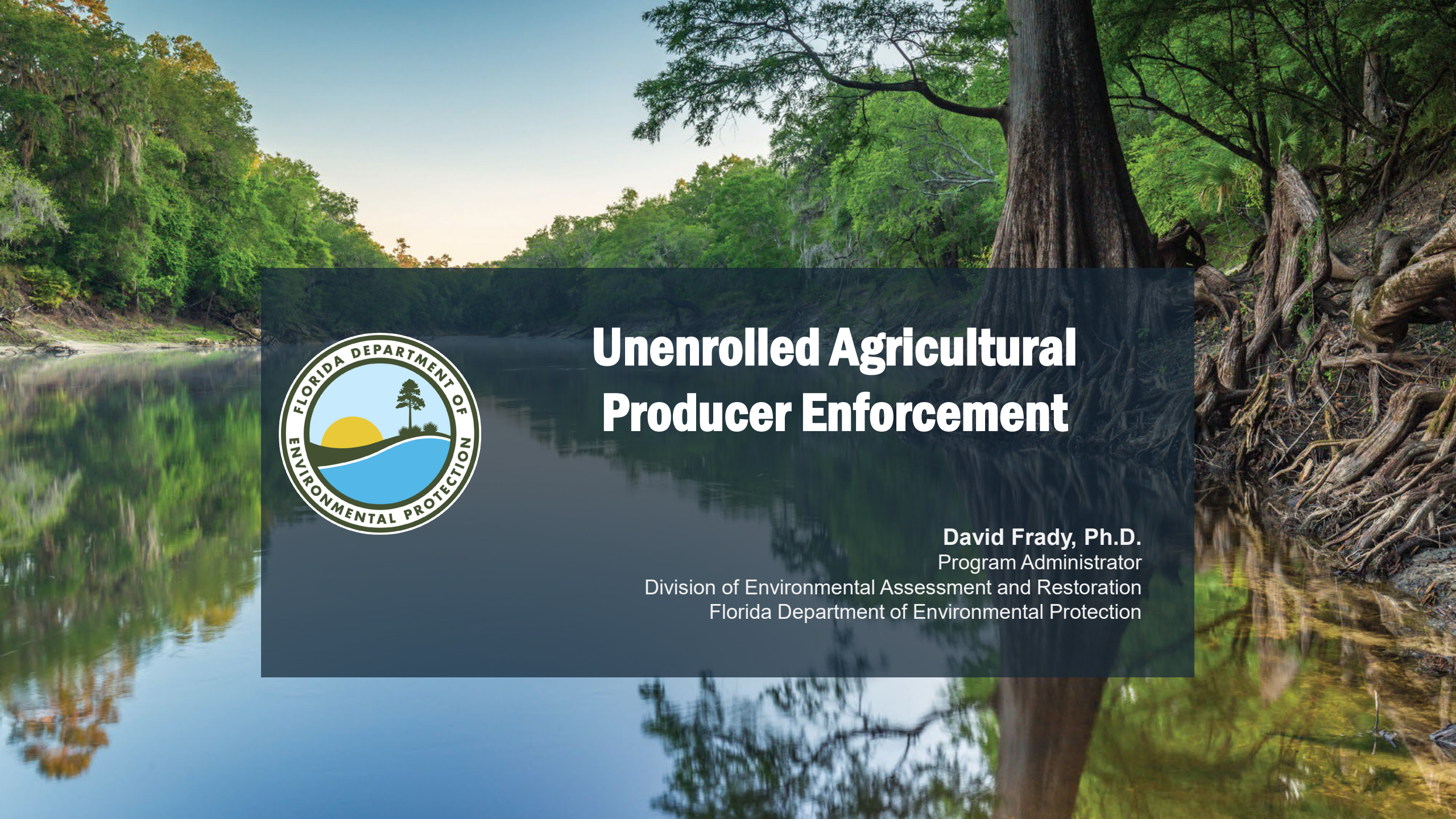

Unenrolled Agricultural Producer Enforcement

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 FDEP for enforcement

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

FDEP 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

FDEP Initiates enforcement action

- If an agricultural producer fails to come into compliance, DEP initiates a civil suit to compel them to come into compliance
- FDEP 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 FDEP 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

- FDEP 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

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