Florida Department of Agriculture and Consumer Services

Office of Agricultural Water Policy

Status of Implementation of Agricultural Nonpoint Source Best Management Practices

July 1, 2024

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. 07/24

Contents

Executive Summary

During 2023, the Florida Department of Agriculture and Consumer Services Office of Agricultural Water Policy (OAWP) continued its efforts to successfully implement the requirements of section 403.067, Florida Statutes (F.S.), by enrolling new agricultural producers and performing site visits to verify the proper implementation of applicable agricultural best management practices (BMP) for producers enrolled in the BMP Program. In 2023, there were weather events that necessitated Emergency Orders deferring implementation verification (IV) site visits while producers recovered. During the deferral of IV site visits for the eighteen counties listed in the Emergency Orders, staff focused on new enrollment visits when possible. OAWP successfully provided cost share and Mobile Irrigation Lab (MIL) assistance to many enrolled agricultural producers facilitating the implementation of BMPs, and it continues to design and build essential data collection and management systems, field staff tools, and training materials to meet data quality, storage, analysis, and reporting requirements.

This report includes information on the status of BMP implementation statewide and within basin management action plans (BMAPs) for calendar year 2023, OAWP's cost share program and Mobile Irrigation Lab program, BMP research, program improvements and next steps.

A Story Map of this report can be found at Agricultural Water Policy / Divisions & Offices / Home - Florida Department of Agriculture & Consumer Services (fdacs.gov). This enables readers to view data and maps in an interactive environment.

Acronyms

ALG	Agricultural Lands Geodatabase
BMAP	Basin Management Action Plan
BMP	Best Management Practice
BMPTS	Best Management Practices Tracking System
DOR	Department of Revenue
F.A.C.	Florida Administrative Code
FDACS	Florida Department of Agriculture and Consumer Services
FDEP	Florida Department of Environmental Protection
F.S.	Florida Statutes
FSAID	Florida Statewide Agricultural Irrigation Demand
FWRA	Florida Watershed Restoration Act
GIS	Geographic Information System
IV	Implementation Verification
LOPP	Lake Okeechobee Protection Plan
NOI	Notice of Intent (to implement BMPs)
OAWP	Office of Agricultural Water Policy
SFWMD	South Florida Water Management District
SOLARIS	State Owned Lands and Records Information System
SWCD	Soil and Water Conservation District
TMDL	Total Maximum Daily Load

List of Tables

Introduction

The Florida Department of Agriculture and Consumer Services (FDACS) Office of Agricultural Water Policy (OAWP) collaborates with Florida's agricultural landowners and producers to implement best management practices (BMPs) for nutrient reduction, irrigation management, and protection of water resources. Agricultural BMPs are an integral part of water resource protection required under the BMP Program implemented by FDACS OAWP. This report presents information required annually pursuant to section 403.0675(2), Florida Statutes (F.S.), on the status of implementation of the FDACS BMP Program.

Section 403.067, Florida Statutes (F.S.), directs the Florida Department of Environmental Protection (FDEP) to develop water quality restoration goals for impaired waterbodies. These water quality restoration goals, known as total maximum daily loads (TMDLs), are the maximum amount of a pollutant that a waterbody can assimilate and remain suitable for its designated use.[1] The designated use is defined in FDEP rule as the present and future most beneficial use of a body of water as designated by the Environmental Regulation Commission.[2] Once a TMDL is adopted, FDEP may develop a basin management action plan (BMAP) that identifies enforceable strategies for restoring the impaired waterbody.[3] The agricultural industry is one of many stakeholders identified in most BMAPs and plays an important role in helping to meet these water quality goals. Florida law requires agricultural producers and landowners located within BMAP areas to either enroll in the FDACS BMP Program and properly implement BMPs applicable to their property and operation or to conduct water quality monitoring activities as required by Chapter 62-307, F.A.C.[4] FDACS strongly encourages producers and agricultural landowners located outside of BMAP areas to also enroll in the BMP Program for the many benefits that enrollment provides. Proper implementation of FDACS agricultural BMPs is the industry's strategy to address agricultural nonpoint pollution sources. Producers or agricultural landowners who are enrolled in the FDACS BMP Program and are properly implementing the applicable BMPs identified on the BMP Checklist are entitled to a presumption of compliance with state water quality standards per section 403.067(7)(c)3., F.S.

For the purposes of the FDACS BMP Program, the term "best management practice" means, a practice or combination of practices determined by the coordinating agencies (FDACS, FDEP, and water management districts), 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 discharges. BMPs must reflect a balance between water quality improvements and agricultural productivity.[5] Section 403.067, F.S., authorizes and directs FDACS to develop and adopt, through rulemaking, BMPs that will help Florida's agricultural industry to achieve the reductions allocated in BMAPs for agricultural pollutant sources.[6]

1. FLA. STAT. § 403.067(7) (2023).
2. FLA. ADMIN. CODE r. 62-302.200(9)(2023).
3. See supra note 1. BMAP information is available at https://floridadep.gov/dear/water-quality-restoration/content/basin-management-action-plans-bmaps.
4. FLA. STAT. § 403.067(7)(b)2.g.(2023).
5. FLA. STAT. § 373.4595(2)(a) (2023).
6. FLA. STAT. § 403.067(7)(c)(1) (2023).

BMPs serve as part of a multidisciplinary approach to water resource restoration and protection that includes public/private partnerships, landowner agreements and regional treatment technologies, which together form the comprehensive strategy needed to meet goals established in BMAPs.

FDACS works closely with the FDEP, water management districts (WMDs), industry experts, and academic institutions to understand the environmental and agronomic effects addressed by BMPs. Newly proposed BMPs are initially verified as effective by the FDEP[7] based on underlying research and best professional judgement. These are then adopted by reference in the applicable agricultural commodity manual under Title 5M, Florida Administrative Code (F.A.C). FDACS has adopted ten (10) separate BMP manuals that cover nearly all major agricultural commodities in Florida.[8]

FDACS is required to perform BMP Implementation Verification (IV) site visits to enrolled operations at least every two years to ensure that BMPs are being properly implemented.[9] Between Jan 1, 2022, and Dec 31, 2023, FDACS staff completed BMP implementation verification activities statewide for over 8,600 Notices of Intent to Implement BMPs (NOIs). Eighty-six percent (86%) of these verification activities occurred within BMAP areas.

Enrolled producers are eligible to receive cost share funds from FDACS to implement certain BMPs based on an evaluation of the operation and the availability of funding. In 2023, FDACS cost shared 418 projects in the amount of $11,714,948. Enrolled producers can also use the free services provided by the FDACS Mobile Irrigation Laboratories (MILs) to evaluate irrigation system efficiency. FDACS staff evaluated 1,310 producer irrigation systems and helped them save approximately 3.3 million gallons of water per day.

Status of BMP Implementation Discussion

Program Enrollment

To initially enroll in the FDACS BMP Program, agricultural landowners and producers must meet with an FDACS representative on site to determine the appropriate practices that are applicable to their operation(s). Producers collaborate with the FDACS representative to complete a Notice of Intent to implement the BMPs (NOI) and the BMP Checklist from the applicable BMP manual. Once the NOI and Checklist are completed, signed, and submitted to OAWP, the producer is formally enrolled in the BMP Program. Enrolled agricultural landowners and producers who are properly implementing the applicable BMPs[10] are entitled to a presumption of compliance with state water quality standards.

7. FL. STAT S 403.067(7)(c)(3)
8. One BMP manual addresses wildlife (State Imperiled Species). The BMP manuals are available at https://www.fdacs.gov/Agriculture-Industry/Water/Agricultural-Best-Management-Practices.
9. FLA. STAT. § 403.067(7)(d)(3) (2023).
10. FLA. ADMIN. CODE r. 5M-1 (2023).

If multiple efforts to contact agricultural landowners and producers within BMAPs about enrollment in the BMP Program are unsuccessful, or if the landowner or producer chooses not to enroll in the BMP Program or to properly implement the applicable BMPs, FDACS refers the landowner to FDEP to either implement water quality monitoring under the requirements of Chapter 62-307, F.A.C., or to be subject to other enforcement action as necessary. Water quality monitoring must demonstrate the producer's compliance with water quality criteria for the parameters addressed by the BMAP.[11]

The process of enrolling agricultural landowners and producers in the BMP Program is staff-intensive, requiring site visits to determine the water resource concerns on the operation and in the surrounding area. The site visit also includes an evaluation of production methods and activities, documentation of parcel information, site mapping, and data entry. The time needed to complete a single enrollment depends on the size and intensity of the agricultural operation, the requirements of any applicable BMP(s), the producer's technical and financial resources, and the assistance or training needed by the producer to properly implement the applicable BMPs identified for the operation. Staff consider site-specific factors when determining the applicability of BMPs including commodity type, topography, geology, location of production, soil type, field size, and type and sensitivity of the ecological resources in the surrounding areas.

The agricultural areas and acreages identified in this report are based on the Florida Statewide Agricultural Irrigation Demand (Version ten) (FSAID10) Agricultural Lands Geodatabase (ALG).[12] The presented data represents the status of BMP Program enrollment and IV site visits at the end of calendar year 2023. As of December 31, 2023, sixty-one percent (61%) of the agricultural acres including eighty-three percent (83%) of irrigated agricultural acres identified in FSAID10 were enrolled in the BMP Program **Table 1**.

11. FLA. ADMIN. CODE r. 62-307.200 (2023).
12. Information on FSAID is available at https://www.fdacs.gov/Agriculture-Industry/Water/Agricultural-Water-Supply-Planning.

Table 1. Status of Statewide BMP Implementation for Producers Enrolled in the BMP Program

Statewide Metrics	Value
Agricultural acres	7,539,880
Agricultural acres enrolled in the BMP Program	4,571,656
Irrigated agricultural acres	1,710,347
Irrigated agricultural acres enrolled in the BMP Program	1,416,380
Number of enrollments (NOIs)	12,407
Number of NOIs represented in IV site visits	2,509

Rates of BMP enrollment and reporting across the state vary by geographic area and are dependent upon factors such as whether a BMAP has been adopted, the date of BMAP adoption, the number and type of agricultural acres within a BMAP or geographic area, and the number of parcels associated with the agricultural acres. Enrollment efforts have previously focused on enrolling parcels that are most impactful to water quality including parcels containing many agricultural acres, irrigated acres, or more intense agricultural land uses. In terms of NOIs, the count of NOIs and enrolled acreage fluctuates when parcels are sold, when leases end or change tenancy, or when production areas downsize or production ceases, among other reasons. Program efficacy is reduced when enrolling less impactful parcels such as smaller parcels or parcels with agricultural activity intended solely for personal use.

To assist with prioritizing enrollment efforts and monitoring progress, FDACS characterizes lands classified as agriculture in FSAID10, but not currently enrolled in the FDACS BMP Program based on owner information, address, and other details at a more granular scale using parcel level data and aerial review. This "unenrolled agricultural lands" characterization provides an indication of which areas are more likely (or unlikely) to have enrollable agricultural activities occurring on them. It also provides insight on where best to focus staff resources and efforts by identifying the number of parcels and the associated agricultural acres deemed to be enrollable. The analysis results displayed statewide and by BMAP can be found in **Appendix I**. More information about the characterization can be found in **Appendix III**.

The agricultural acres enrolled in each adopted BMAP area are summarized in **Table 2**. Based on the results of the characterization of unenrolled lands, FDACS also estimates the "adjusted" agricultural acres within each BMAP by subtracting the acres characterized as unlikely to have enrollable agricultural activities from the BMAP "Agricultural Acres as of December 31, 2023" column in **Table 3**. The adjusted agricultural acres in each adopted BMAP and enrollment percentages are presented in **Table 3**.

Table 2. Status of BMP Enrollment Within BMAPs

Basin Management Action Plan	Year Adopted	Agricultural Acres as of 12/31/23	Percent of BMAP area that is Agricultural	Agricultural Acres Enrolled	Percent of Agricultural Acres Enrolled
Alafia River Basin	2014	9,988	21	4,190	42
Banana River Lagoon	2013	75	0	0	0
Caloosahatchee River and Estuary Basin	2012	434, 305	49	376,117	87
Central Indian River Lagoon	2013	72,166	20	15,087	21
Chassahowitzka-Homosassa Springs	2019	39,034	12	13,656	35
DeLeon Spring	2019	11,375	17	1,939	17
Everglades West Coast Basin	2012	9,537	17	4,976	52
Gemini Springs	2019	884	3	19	2
Hillsborough River Basin	2009	16,698	33	10,475	63
Jackson Blue Spring and Merritt's Mill Pond	2016	41,667	45	24,529	59
Kings Bay and Crystal River Springs Group	2019	13,459	7	3,726	28
Lake Harney, Lake Monroe, Middle St. Johns River, Smith Canal	2012	28,667	12	12,218	43
Lake Jesup Basin	2010	7,778	8	2,142	28
Lake Okeechobee Basin	2014	1,825,200	47	1,524,843	84
Long Branch	2008	524	14	22	4
Lower St. Johns River Basin Mainstem	2008	148,809	8	68,379	46
Lower St. Johns River Basin Tributaries I and II	2009	1,034	2	652	63
Manatee River Basin	2014	930	6	297	32
Middle and Lower Suwannee River Basin	2018	385,713	29	218,193	57
North Indian River Lagoon	2013	6,795	3	613	9
Orange Creek Basin	2008	68,610	18	23,928	35
Rainbow River and Springs	2015	179,875	41	84,980	47
Santa Fe River Basin	2012	245,218	23	104,588	43
Silver River and Springs	2015	156,060	25	40,540	26
St. Lucie River and Estuary Basin	2013	288,434	53	215,849	75
Upper Ocklawaha River Basin	2007	98,890	18	20,655	21
Upper Wakulla River and Wakulla Spring	2015	61,745	7	13,984	23
Volusia Blue Spring	2018	2,339	3	239	10
Wacissa River and Wacissa Spring Group	2019	62,639	19	26,653	43
Weeki Wachee Spring and River	2019	47,639	22	26,254	55
Wekiva River, Rock Springs Run and Little Wekiva Canal	2015	48,496	12	10,434	22
Wekiwa Spring and Rock Springs	2018	16,832	9	4,261	25

Table 3. Analysis and Characterization of Unenrolled Lands Within BMAPs

Basin Management Action Plan	Potentially Enrollable Agricultural Acres	Adjusted Agricultural Acres within BMAP [13]	Adjusted % of the BMAP that is Agricultural	Adjusted % of Agricultural Acres Enrolled	Increase in enrollment % after non-agricultural acres removed
Alafia River Basin	2,876	7,068	15	59	17
Banana River Lagoon	43	43	<1	0	0
Caloosahatchee River and Estuary Basin	28,431	404,718	45	93	6
Central Indian River Lagoon	41,677	56,763	16	27	6
Chassahowitzka-Homosassa Springs	14,634	28,302	9	48	13
DeLeon Spring	5,817	7,771	12	25	8
Everglades West Coast Basin	2,057	7,038	13	71	19
Gemini Springs	186	202	1	9	7
Hillsborough River Basin	4,008	14,491	29	72	10
Jackson Blue Spring and Merritt's Mill Pond	11,515	36,073	39	68	9
Kings Bay and Crystal River Springs Group	5,723	9,449	5	39	12
Lake Harney, Lake Monroe, Middle St. Johns River, Smith Canal	10,342	22,559	9	54	12
Lake Jesup Basin	1,898	4,052	4	53	25
Lake Okeechobee Basin	126,212	1,651,190	42	92	9
Long Branch	170	191	5	12	7
Lower St. Johns River Basin Mainstem	40,211	108,663	6	63	17
Lower St. Johns River Basin Tributaries I and II	102	751	1	87	24
Manatee River Basin	457	750	5	40	8
Middle and Lower Suwannee River Basin	112,275	330,607	25	66	9
North Indian River Lagoon	3,117	3,730	2	16	7
Orange Creek Basin	27,131	51,077	13	47	12
Rainbow River and Springs	74,784	159,814	37	53	6
Santa Fe River Basin	91,838	196,493	18	53	11
Silver River and Springs	78,633	119,213	19	34	8
St. Lucie River and Estuary Basin	40,340	256,248	47	84	9
Upper Ocklawaha River Basin	39,040	59,804	11	35	14

13. Appendix III explains how the acreages were adjusted, using Department of Revenue parcel data, to discount non-agricultural lands captured by the FSAID ALG.

Table 3. Continued

Basin Management Action Plan	Potentially Enrollable Agricultural Acres	Adjusted Agricultural Acres within BMAP [13]	Adjusted % of the BMAP that is Agricultural	Adjusted % of Agricultural Acres Enrolled	Increase in enrollment % after non-agricultural acres removed
Upper Wakulla River and Wakulla Spring	23,303	37,285	4	38	15
Volusia Blue Spring	1,042	1,289	2	19	8
Wacissa River and Wacissa Spring Group	21,827	48,495	15	55	12
Weeki Wachee Spring and River	15,474	41,748	20	63	8
Wekiva River, Rock Springs Run and Little Wekiva Canal	17,093	27,527	7	38	16
Wekiwa Spring and Rock Springs	4,511	8,760	5	49	23

Implementation Verification Site Visits

Florida law requires FDACS to conduct an IV site visit at least every two years to ensure that agricultural landowners and producers are properly implementing the applicable BMPs identified in their NOIs.[14] An IV site visit includes: the review of nutrient records that producers must maintain to demonstrate compliance with the BMP Program; verification that all applicable BMPs are being properly implemented; verification that cost share practices or projects are being properly implemented; and identification of other potential cost share practices or projects that may be available. During the IV site visit, FDACS representatives also identify opportunities for achieving greater nutrient, irrigation, or water resource management efficiencies, and further opportunities for water conservation.

The requirements of sections 403.067 and 373.4595 F.S. impact some of the metrics in this report. NOIs within BMAP areas need IV site visits every two years from the date they are:

- Enrolled in the BMP Program
- Receive an IV site visit or implementation assistance follow-up visit (see next section) or,
- from the date of 7/1/2020 (whichever date is most recent).

Table 4 provides a summary of the IV site visits conducted in the 2-year reporting period between Jan 1, 2022 and Dec 31, 2023 and the IV site visits conducted in calendar year 2023 within BMAP areas. In 2023, 2,344 IV site visits were performed within BMAPs representing ninety-three percent (93%) of all IV sites visits performed statewide. As with previous years, OAWP continues to focus IV visits within the priority BMAPs which include Lake Okeechobee, the Indian River Lagoon, the Caloosahatchee River and Estuary, and Silver Springs. During the 2-year reporting period, IV site visits were performed for more than eighty-five percent (85%) of the NOIs requiring an IV within priority BMAPs.

14. FLA. STAT. § 403.067(7)(d)(3) (2023).

There are 79 Works of the District permits issued by the South Florida Water Management District (SFWMD) located within the Lake Okeechobee watershed's Everglades Agricultural Area and C-139 Basin that implement BMPs regulated under Chapter 40E-63, F.A.C. Agricultural producers are deemed in compliance with the FDACS BMP Program if they are in compliance with their SFWMD permits. As SFWMD conducts its own site visits and collects records to ensure compliance, FDACS did not conduct IV visits on these parcels. Similarly, FDACS does not conduct IV site visits on those portions of production parcels regulated under another agency's permitting framework, such as permitted dairy operations or the nutrient application activities permitted under an FDEP biosolids nutrient management plan.

The statutory requirement to retain certain records pertaining to the application of nitrogen and phosphorus fertilizer during IV site visits began on July 1, 2020.[15] The OAWP amended Chapter 5M-1, F.A.C., and adopted by reference a Nutrient Application Record Form to simplify the record keeping requirements across all BMP manuals. While the Nutrient Application Record Form provides a uniform spreadsheet on which to enter data and manage records, OAWP staff continue to work with their counterparts at FDEP on a Memorandum of Agreement to memorialize the nutrient data collection process in order to collect and share meaningful information between the agencies. Currently, data are aggregated by BMAP or sub-basin and submitted to FDEP upon request. Preliminary results indicate success in establishing a baseline of annual nutrient application on enrolled operations, and within specific basins or sub-basins. For operations where improved BMP implementation is needed, OAWP collaborates with producers on Implementation Assistance to increase nutrient management efficiency and reduce the risk of nutrient loss to water resources.

Hurricane Idalia made landfall in north Florida on August 30, 2023, as a category 3 hurricane. As it passed across the panhandle, the hurricane impacted an estimated 3.3 million acres of agricultural lands and caused up to $390 million in total losses and damages across the state's diverse agricultural sectors.[16] In response to Hurricane Idalia and consistent with the Governors Executive Orders (23-171, 23-172, 23-174, 23-175), the Commissioner of Agriculture issued Emergency Order 2023-010 (executed September 26, 2023) deferring IV site visits in the 18 impacted counties through the end of calendar year 2023. As a result, no IV visits were made in northwest Florida during the final quarter of 2023. IVs in 4 of these counties had been deferred in 2022, due to Hurricane Ian and Nicole.

FDACS continues to refine the data collection and storage applications needed to perform and document implementation verification site visits and store the collected nutrient data. Enrollment, implementation verification site visits, and cost share projects were executed while priortizing filling vacant positions. Throughout 2023 efforts were focused on hiring and training new staff.

15. See s. 13, Ch. 2020-150 Fla. Laws. (SB712).
16. Court, C. D., Qiao, X., Li, M., Mcdaid K. (2023). Assessment Of Agricultural Losses Resulting From Hurricane Idalia. UF/IFAS Economic Impact Analysis Program, Food and Resource Economics Department, University of Florida. Retrieved [date] from https://fred.ifas.ufl.edu/extension/economic-impact-analysis-program/disaster-impact-analysis/hurricane-idalia-damage-assessments/

Table 4. Status of IVs in BMAPs since January 1, 2022 (no adjustment for IVs referred to FDEP)

Basin Management Action Plan	Number of NOIs requiring an IV in reporting period	Number of NOIs with IV site visit complete	Percent of IV site visits completed	Number of IV site visits completed in calendar year 2023 [17]
Alafia River Basin	69	60	87	8
Banana River Lagoon	0	0	0	0
Caloosahatchee River and Estuary Basin	443	413	93	206
Central Indian River Lagoon	85	79	93	20
Chassahowitzka-Homosassa Springs	89	89	100	28
DeLeon Spring	27	21	83	11
Everglades West Coast Basin	12	10	100	2
Gemini Springs	3	2	67	0
Hillsborough River Basin	39	36	92	3
Jackson Blue Spring and Merritt's Mill Pond	145	144	99	53
Kings Bay and Crystal River Springs Group	35	29	83	9
Lake Harney, Lake Monroe, Middle St. Johns River, Smith Canal	26	22	85	7
Lake Jesup Basin	39	37	95	4
Lake Okeechobee Basin	2,007	1,704	85	889
Long Branch	1	1	100	1
Lower St. Johns River Basin Mainstem	242	205	85	66
Lower St. Johns River Basin Tributaries I and II	3	3	100	3
Manatee River Basin	1	1	100	1
Middle and Lower Suwannee River Basin	1,245	1,043	84	151
North Indian River Lagoon	16	15	94	2
Orange Creek Basin	193	166	86	35
Rainbow River and Springs	462	389	84	61
Santa Fe River Basin	682	545	80	258
Silver River and Springs	352	302	86	82
St. Lucie River and Estuary Basin	423	381	90	184
Upper Ocklawaha River Basin	234	201	86	43
Upper Wakulla River and Wakulla Spring	91	82	90	16
Volusia Blue Spring	8	4	50	2
Wacissa River and Wacissa Spring Group	88	78	89	46
Weeki Wachee Spring and River	75	72	96	18
Wekiva River, Rock Springs Run and Little Wekiva Canal	225	200	89	82
Wekiwa Spring and Rock Springs	139	120	86	53

17. This number is affected by the Emergency Orders providing deferral of IVs in 18 counties impacted by Hurricanes Idalia in August 2023. The deferral began September 26, 2023 and continued through December 31, 2023.

Implementation Assistance

During an IV site visit, FDACS representatives may identify BMPs that are not being properly implemented. If this occurs, producers must follow the Implementation Assistance process to ensure compliance with the BMP Program requirements.[18] Under the Implementation Assistance process, the FDACS representative provides the landowner or producer with a list of corrective measures and the timeframes within which they must be completed. If the producer does not fully implement the identified corrective measures within the established timeframes, FDACS issues a letter of non-compliance identifying remedial measures to be taken by the producer and, if necessary, the landowner, to achieve proper implementation of applicable BMPs. FDACS representatives will schedule follow-up site visits to verify the completion of corrective or remedial measures within the established timeframes. The overall timeframe for completion of corrective or remedial measures shall not extend beyond the date of the next implementation verification site visit. If a landowner or producer does not cooperate with FDACS to identify or implement corrective or remedial measures, FDACS must refer them to FDEP for enforcement action.[19]

In 2023, 2,509 IV site visits were performed, of which 17 NOIs required Implementation Assistance. As of this reporting, 4 of the 17 NOIs in Implementation Assistance were resolved and the remaining had resolutions in progress. The results of the IV site visits demonstrate that most of the enrolled landowners or producers are properly implementing the applicable BMPs that were identified on their operation. It should be noted, however, that during many IV site visits, staff identified the need for increased education and assistance regarding the collection and retention of fertilizer application information. The most common types of corrective measures involved deficiencies in record keeping, soil or tissue testing, or exceeding fertilizer application rates.

BMP Cost Share

The BMP cost share program enhances the implementation of BMPs and other practices and projects, especially in priority areas where precision nutrient management strategies have the greatest impact on water quality. The cost share program makes innovative agricultural production and nutrient use efficiency methods more affordable for producers so that they can meet water quality goals while remaining financially viable.

The availability of cost share funds depends on annual appropriations by the Florida Legislature, thus the amount available can vary each year. Cost share for large-scale, regional innovative technologies is provided in South Florida through Fixed Capital Outlay funding in the state budget. Cost share applications may be submitted once a producer has enrolled in the BMP Program and has been assigned a NOI number. Cost share practices are categorized as nutrient management, irrigation management, or water resource protection. BMPs, other practices, and projects eligible for cost share funding may include precision agriculture technologies, variable rate irrigation methods, water control structures, and tailwater recovery systems.

18. FLA. ADMIN. CODE r. 5M-1.009 (2023).
19. Ibid.

OAWP seeks to leverage its cost share funding with other cost share programs offered by FDACS and other state and federal agencies. The United States Department of Agriculture NRCS offers funding through its Environmental Quality Incentives Program, and certain WMDs have agricultural cost share programs. Applicants are encouraged to use OAWP cost share programs in conjunction with other available conservation programs although funding cannot be duplicative.

During 2023, 418 cost share projects were completed statewide. **Table 5** lists the total amount of cost share reimbursements for projects completed in 2023 for each BMAP area and for areas outside of BMAPs. The total cost share reimbursement for projects completed in 2023 was $11,714,948. The sum of the "Total Costs of Projects Completed in 2023" column in **Table 5** is higher than actual cost share reimbursement because some BMAP boundaries overlap, and some projects overlap into two or more BMAP areas. With larger projects, the timing of engineering, designing, permitting, securing of easements and other activities result in expenditures varying greatly from year to year.

Table 5. Cost Share for Projects Completed in 2023 by BMAP

Basin Management Action Plan	Total Costs of Projects Completed in 2023
Alafia River Basin	$47,925
Banana River Lagoon	$0
Caloosahatchee River and Estuary Basin	$831,969
Central Indian River Lagoon	$26,925
Chassahowitzka-Homosassa Springs	$74,451
DeLeon Spring	$54,447
Everglades West Coast	$10,125
Gemini Springs	$0
Hillsborough River Basin	$0
Jackson Blue Spring and Merritt's Mill Pond Basin	$366,580
Kings Bay and Crystal River Spring Group	$0
Lakes Harney, Monroe, Middle St Johns River, Smith Canal	$0
Lake Jesup Basin	$7,050
Lake Okeechobee Basin	$1,555,923
Long Branch	$0

Table 5. Continued

Basin Management Action Plan	Total Costs of Projects Completed in 2023
Lower St. Johns River Basin Main Stem	$1,202,252
Lower St. Johns River Basin Tributaries I and II	$0
Manatee River Basin	$0
Middle and Lower Suwannee River Basin	$1,369,876
North Indian River Lagoon	$0
Orange Creek Basin	$17,850
Rainbow River and Springs	$154,873
Santa Fe River Basin	$649,109
Silver River and Springs	$68,319
St. Lucie River and Estuary Basin	$1,083,420
Upper Ocklawaha River Basin	$149,505
Upper Wakulla River and Wakulla Spring	$76,952
Volusia Blue Spring	$0
Wacissa River and Wacissa Spring Group	$373,050
Weeki Wachee Spring and River	$35,775
Wekiva River, Rock Springs Run, and Little Wekiva Canal	$47,121
Wekiwa Spring and Rock Springs	$12,191
Outside of BMAP areas	$3,499,262

The total amount of cost share reimbursement for projects completed in 2022 for each BMP category is shown in **Table 6**.

Table 6. Cost Share for All Projects Completed Statewide in 2023 by BMP Category

BMP Category	Total Costs of Projects Completed in 2023
Irrigation Management	$4,182,338
Nutrient Management	$5,090,503
Water Resource Protection	$2,442,107

The total amount of cost share reimbursement for projects completed in 2023 for each BMAP by BMP category is shown in **Table 7.**

Table 7. Cost Share Projects Completed in 2023 by BMAP and BMP Category

Basin Management Action Plan	BMP Category	Total Costs of Projects Completed in 2023
Alafia River Basin	Irrigation Management	$47,925
	Nutrient Management	$0
	Water Resource Protection	$0
Caloosahatchee River and Estuary Basin	Irrigation Management	$120,336
	Nutrient Management	$96,248
	Water Resource Protection	$615,385
Central Indian River Lagoon	Irrigation Management	$0
	Nutrient Management	$0
	Water Resource Protection	$26,925
Chassahowitzka-Homosassa Springs	Irrigation Management	$0
	Nutrient Management	$74,451
	Water Resource Protection	$0
DeLeon Spring	Irrigation Management	$54,477
	Nutrient Management	$0
	Water Resource Protection	$0
Everglades West Coast	Irrigation Management	$10,125
	Nutrient Management	$0
	Water Resource Protection	$0
Jackson Blue Spring and Merritt's Mill Pond Basin	Irrigation Management	$145,875
	Nutrient Management	$215,867
	Water Resource Protection	$4,838
Lake Jesup Basin	Irrigation Management	$0
	Nutrient Management	$0
	Water Resource Protection	$7,050
Lake Okeechobee Basin	Irrigation Management	$966,769
	Nutrient Management	$301,415
	Water Resource Protection	$287,738
Lower St. Johns River Basin Main Stem	Irrigation Management	$1,130,507
	Nutrient Management	$71,745
	Water Resource Protection	$0
Middle and Lower Suwannee River Basin	Irrigation Management	$122,015
	Nutrient Management	$1,123,630
	Water Resource Protection	$124,231
Orange Creek Basin	Irrigation Management	$4,606
	Nutrient Management	$13,245
	Water Resource Protection	$0
Rainbow River and Springs	Irrigation Management	$9,154
	Nutrient Management	$129,290
	Water Resource Protection	$16,429
Santa Fe River Basin	Irrigation Management	$4,606
	Nutrient Management	$593,658
	Water Resource Protection	$50,845

Table 7. Continued

Basin Management Action Plan	BMP Category	Total Costs of Projects Completed in 2023
Silver River and Springs	Irrigation Management	$0
	Nutrient Management	$65,693
	Water Resource Protection	$2,626
St. Lucie River and Estuary Basin	Irrigation Management	$13,500
	Nutrient Management	$968,553
	Water Resource Protection	$101,366
Upper Ocklawaha River Basin	Irrigation Management	$99,865
	Nutrient Management	$26,897
	Water Resource Protection	$22,743
Upper Wakulla River and Wakulla Spring	Irrigation Management	$22,004
	Nutrient Management	$42,366
	Water Resource Protection	$12,582
Wacissa River and Wacissa Spring Group	Irrigation Management	$47,486
	Nutrient Management	$128,760
	Water Resource Protection	$196,804
Weeki Wachee Spring and River	Irrigation Management	$0
	Nutrient Management	$35,775
	Water Resource Protection	$0
Wekiva River, Rock Springs Run, and Little Wekiva Canal	Irrigation Management	$13,059
	Nutrient Management	$11,319
	Water Resource Protection	$22,743
Wekiwa Spring and Rock Springs	Irrigation Management	$2,717
	Nutrient Management	$9,474
	Water Resource Protection	$0
Outside of BMAP areas	Irrigation Management	$1,415,269
	Nutrient Management	$1,134,191
	Water Resource Protection	$949,802

Mobile Irrigation Lab

Mobile Irrigation Labs (MILs) provide free, site-specific irrigation expertise in analyzing irrigation systems and educating agricultural property owners on how to improve the efficiency of their water use. The MILs provide recommendations on the improvement of existing irrigation systems and equipment and educate their customers and the general public on water conservation, irrigation planning and irrigation management.

In addition to providing recommendations on irrigation system improvements and management regarding water quantity and efficiency of use, the MILs assist agricultural producers by identifying water quality improvement opportunities available through the application of Florida Department of Agriculture and Consumer Services (FDACS) Best Management Practices.

Presently, there are eight FDACS-funded Agricultural MILs providing service to all agricultural producers throughout Florida. In 2023, FDACS staff evaluated 1,310 producer irrigation systems and helped them save approximately 3.3 million gallons of water per day.

BMP Program Improvements

OAWP substantially improved the BMP Program in 2023 by:

- Developing staff training tools, instructional videos, and web resources for staff to meet enrollment and IV site visit requirements and assist with record keeping for compliance and retention purposes. These tools are essential for ensuring data standardization, improving reporting efficiency, and assisting producers and staff with meeting the requirements of law.
- Refining criteria and Geographic Information System (GIS) methodologies to support in-depth analysis of unenrolled properties identified as agriculture within BMAPs. This analysis helps improve reporting on agricultural production acreage statewide by clarifying land uses that are enrollable under the BMP Program, and identifying rural residences, smaller diversified agricultural operations, fallow lands, and other land uses that require future policy consideration.
- Testing and implementing GIS mapping improvements to enable staff to visualize updated enrollment coverage, IV statuses, cost share participation, MIL visits, and regional projects on a daily basis.
- Augmenting field staff efforts through personnel contracts with the Soil and Water Conservation Districts (SWCD) to address the increased workload resulting from the requirements of s. 403.067, F.S. OAWP paid $1,457,996 for twenty-four SWCD technicians during calendar year 2023.
- Prioritizing BMP Program enrollments within BMAPs and for parcels where enrollment and proper implementation of the applicable BMPs will achieve the greatest benefits to water resources. During the deferral, staff focused on increasing enrollments with a special focus on completing enrollments generated from the Northern Everglades BMAP mailout effort.
- Initiating a program to increase BMP enrollment in the three BMAPs surrounding the Indian River Lagoon using a web-based tool to identify unenrolled properties that have an ag tax exemption and agricultural land use, executing targeted mailout efforts, and tracking landowner responses to make sure OAWP is maximizing our effectiveness with enrollment.

- Targeting cost share funding within BMAPs to achieve the greatest water resource benefits and improving processes to track use of cost share selection and expenditures.
- Supporting research and demonstration projects in cooperation with the University of Florida Institute of Food and Agricultural Sciences and other state universities and Florida College System institutions with agricultural research programs to provide scientific and technical support of the FDACS BMP Program, and to demonstrate BMPs on-farm.

Next Steps

In 2024, OAWP will continue improving programmatic aspects in support of the agricultural industry while addressing the water quality goals of the state by:

- Updating BMP manuals by using a standard template to help clarify the intent of each practice and to ensure consistent implementation by producers and evaluation of each practice by field staff.
- Working to improve the perception of BMPs with stakeholders, partner agencies, and the general public by (1) improving how data relating to BMP implementation is collected, organized, and presented, (2) funding research that evaluates BMP nutrient and water use efficiency, and (3) engaging more individuals through public outreach and presenting the office's successes at conferences.
- Developing a clearly defined process for soliciting, identifying, and funding cost share projects that will help agriculture producers implement BMPs.
- Updating the cost share project agreements to encourage more participation and collection of information that demonstrates the effectiveness of the projects at meeting statutory goals.
- Developing a clearly defined process for soliciting, identifying, and funding agricultural regional projects that will help agriculture further achieve the required load reductions in BMAPs.
- Initiating a program to increase BMP enrollment in the springs coast BMAPs using a web-based tool to identify unenrolled properties that have an ag tax exemption and agricultural land use, executing targeted mailout efforts, and tracking landowner responses to make sure OAWP is maximizing our effectiveness with enrollment.
- Continuing work with cooperative agency partners including FDEP, the water management districts, and local government agencies to better characterize and identify effective solutions to protect and conserve the water resources while maintaining the viability of agricultural production throughout Florida. These formally occur in
    - The Northern Everglades and Estuaries Protection Plan area of South Florida (FDACS, SFWMD, and FDEP).
    - The Suwannee River Partnership (FDACS, SRWMD, and FDEP), and
    - The Tri-County Agricultural Area Water Management Partnership (FDACS, SJRWMD, and FDEP).
- Continuing to develop Learning Management Systems and training modules specific to OAWP staff needs, and programs for inclusion in a new AgWater Academy training catalog.
- Maintaining contractual partnerships with the SWCDs for technicians to assist OAWP in implementing its statutory obligations.
- Improving contract management processes and coordination with state agencies and SWCD partners to ensure the efficient and effective use of funds to achieve water resource conservation goals.
- Developing automated workflows for receiving and tracking research and demonstration projects, funding, and contracts.

- Developing a template for FDACS research data to facilitate data analyses and usability across datasets. This is a critical step in OAWP's long-term goal of standardizing FDACS BMP past, present, and future project data following the FAIR (Findable, Accessible, Interoperable, Reusable) concept of data management.
- Continuing work with the Environmental Systems Research Institute (ESRI) on transitioning the IV process to a digital format to reduce paperwork and the amount of time needed for staff to complete an IV.

Acknowledgements

The collection and presentation of the data in this report would not be possible without the dedication of the OAWP staff responsible for undertaking the required site visits, the data management and policy staff tasked with analyzing and compiling the data, and the project manager responsible for ensuring delivery of the final report.

Appendix I: Summary of BMP Implementation Statewide and by Basin Management Action Plan

This section provides information on the status of the BMP Program and a characterization of lands remaining to be enrolled statewide and for each BMAP area.

It is important to note that several BMAP boundaries overlap, which may result in some NOIs and BMP enrollment acres being counted in more than one BMAP. This means that the sum of the NOIs or NOI acreages in the various BMAPs is likely to be imprecise and may not match statewide values. The statewide summary page captures data from all enrolled parcels, both inside and outside of BMAP areas.

The tables and charts in the one-page summaries listed contain program metrics that were determined using FDACS data within GIS:

- **Table 1:** A breakdown of the agricultural lands within the area of interest by enrollment status and potential applicability for BMP enrollment
- **Figure 1:** The non-agricultural acreages within the BMAP vs the agricultural acreages within the BMAP
- **Figure 2:** The enrolled agricultural acreages based on FSAID10 and OAWP BMP enrollment as of December 31, 2023, and the unenrolled agricultural acreages that are unlikely or potentially enrollable.
- **Figure 3:** A distribution, by acreage, of the unenrolled lands that are potentially enrollable
- **Table 2:** The currently enrolled agricultural acreages by BMP Program manual
- **Figure 4:** A summary of total cost share and by cost share project category (irrigation management, nutrient management, water resource protection)

Table 1, Figure 1, Figure 2: As BMAPs vary in size and land use, knowing what percent of the BMAP is in agricultural use is highly indicative of agriculture potential significance in the restoration strategy. FSAID10 is the starting point for estimating agricultural acreages within a BMAP. Agricultural acres enrolled in the FDACS BMP program and how many of those acres are irrigated are estimated by overlaying FSAID10 and BMP enrollment data. Agricultural acres not enrolled in the BMP Program, are estimated by removing from FSAID10 any areas that overlapped with the BMP enrollment boundaries.

Oftentimes, there are lands initially identified as agriculture which, upon closer evaluation, raise questions as to whether there is agricultural activity and whether it is enrollable within the purview of OAWP. Areas located within state-owned lands and/or water restoration project boundaries are also removed as there is a low probability they contain enrollable agricultural activity. For the remaining unenrolled areas, analyses are performed using property appraiser data such as parcel owner information, agricultural tax valuation for exemption purposes, other parcel land use detail to determine whether the remaining are potentially enrollable. The potentially enrollable acres most accurately represent where the program stands in terms of achieving the

100% enrollment metric within BMAP areas. A detailed characterization methodology can be found in **Appendix III**.

Figure 3: Examines the unenrolled acres found to be potentially enrollable in the land use characterization. The parcels are distributed into bins based on the agricultural acres present within each parcel. The parcel count and the total acres of agriculture encompassed by the parcels are provided for each bin. The number of parcels in each bin is a useful proxy for the level of resource dedication needed to enroll the associated agricultural acres. This provides insight when evaluating where best to focus finite resources and staffing needs to meet the enrollment goals outlined in the BMAPs. In some BMAPs, much of the potentially enrollable acreage is encompassed within many smaller parcels which may require additional resources to evaluate and/or enroll.

Table 2: Shows the acreages enrolled in the BMP Program by commodity. It is important to note that producers often undertake the production of multiple commodities on their operations, resulting in the requirement to implement the applicable BMPs from more than one BMP manual. When this occurs, the acres enrolled under more than one BMP manual are classified as "multiple commodity" and not included in the individual commodity totals to prevent duplication.

Figure 4: Examines the cost share awarded within a BMAP for the calendar year 2023.

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

Table 1

Non-Agricultural Acres	Agricultural Acres	Enrolled Agricultural Acres	Unenrolled - Unlikely Enrollable Acres *	Unenrolled - Potentially Enrollable Acres
34,544,529	7,539,880	4,571,656	1,083,303	1,883,959

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

Figure 1

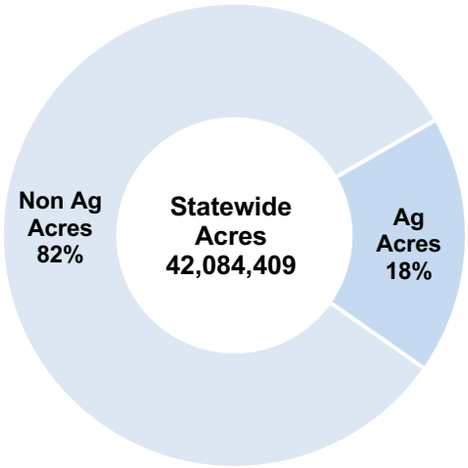


Figure 2

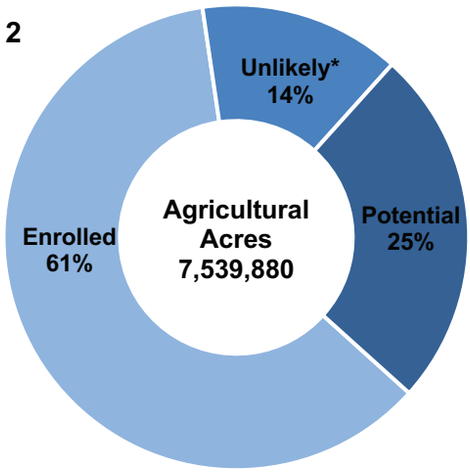


Figure 3
Potentially Enrollable Parcels & Agricultural Acres

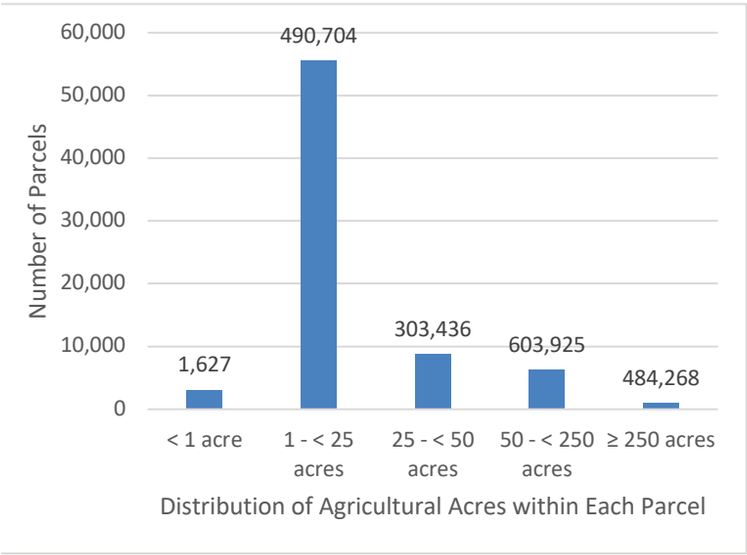


Table 2
Enrolled Agricultural Acres by Manual

BMP Manual	Acres
Citrus	284,539
Conservation Plan	26,336
Cow/Calf	71,781
Dairy	4,786
Equine	188
Fruit/Nut	8,204
Multiple Commodities	251,414
Nursery	22,363
Poultry	19
Row/Field Crop	727,756
Sod	16,640
Temporarily Inactive	2,119
Wildlife	10
Total	**1,415,975**

Figure 4
Cost Share Summary

Status of Implementation of Agricultural Best Management Practices (BMPs) in the Alafia River Basin BMAP

Table 1

Non-Agricultural Acres	Agricultural Acres	Enrolled Agricultural Acres	Unenrolled - Unlikely Enrollable Acres *	Unenrolled - Potentially Enrollable Acres
37,315	9,884	4,190	2,816	2,876

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

Figure 1

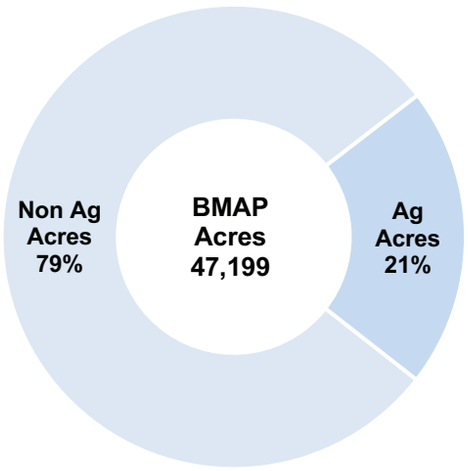


Figure 2

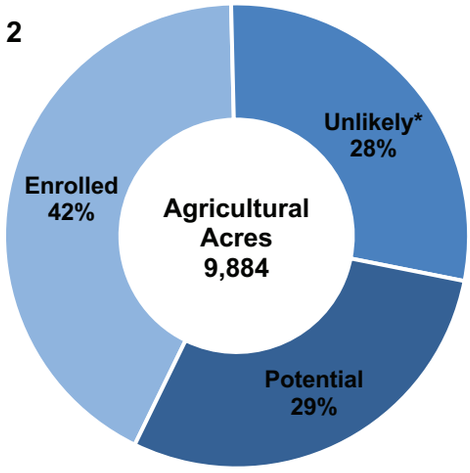


Figure 3
Potentially Enrollable Parcel Distribution & Agricultural Acres

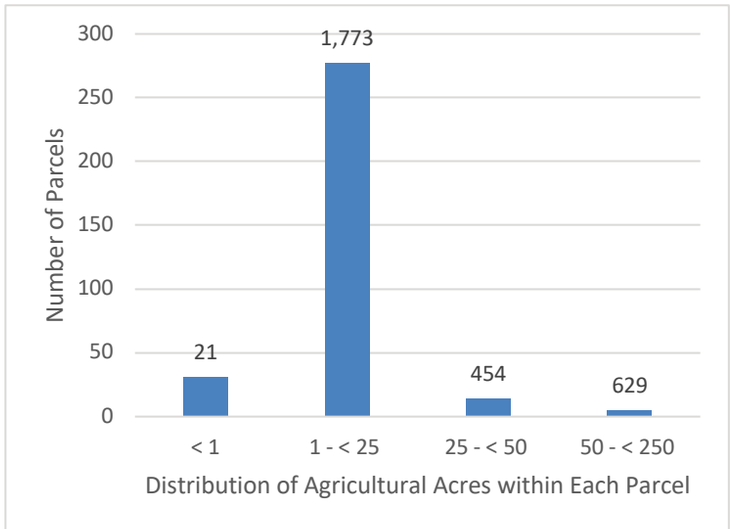


Table 2
Enrolled Agricultural Acres By Manual

BMP Manual	Acres
Cow/Calf	1,101
Equine	29
Fruit & Nut	63
Multiple Commodities	799
Nursery	191
Row/Field Crops	2,007
Total	**4,190**

Figure 4
Cost Share Summary

Status of Implementation of Agricultural Best Management Practices (BMPs) in the Banana River Lagoon BMAP

Table 1

Non-Agricultural Acres	Agricultural Acres	Enrolled Agricultural Acres	Unenrolled - Unlikely Enrollable Acres *	Unenrolled - Potentially Enrollable Acres
97,854	75	0	32	43

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

Figure 1

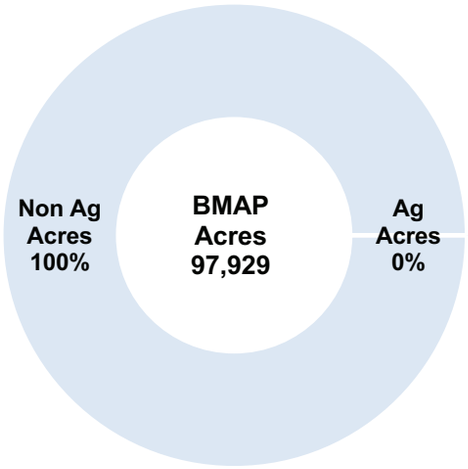


Figure 2

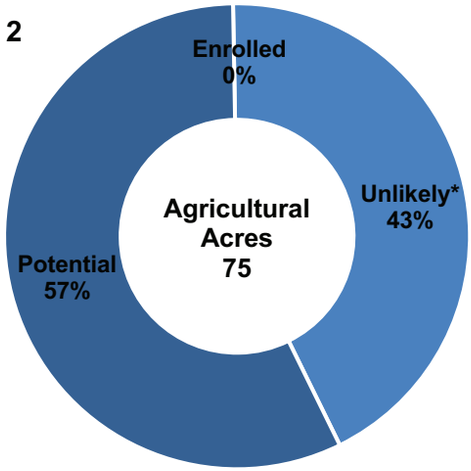


Figure 3
Potentially Enrollable Parcel Distribution & Agricultural Acres

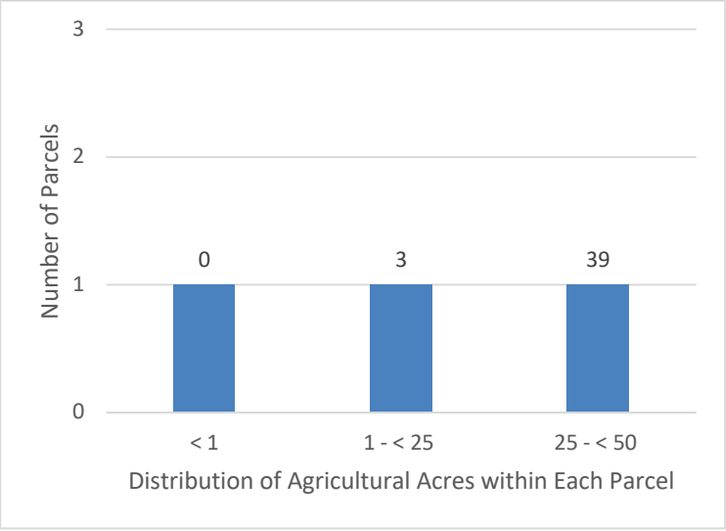


Table 2
Enrolled Agricultural Acres By Manual

BMP Manual	Acres
Total	**0**

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

Table 1

459,632	434,305	376,117	29,587	28,431

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

Figure 1

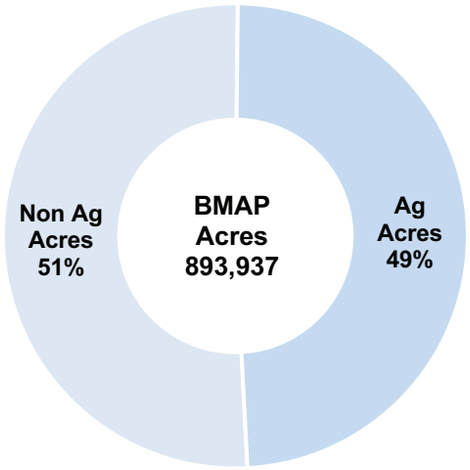


Figure 2

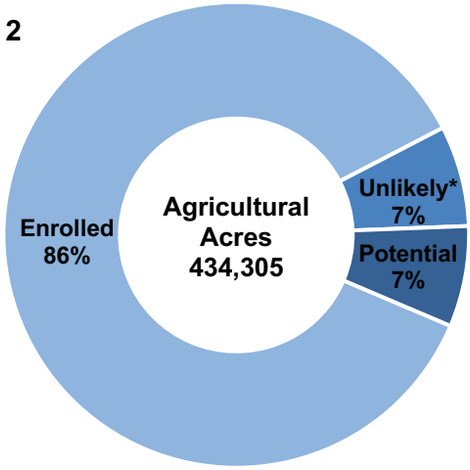


Figure 3
Potentially Enrollable Parcels & Agricultural Acres

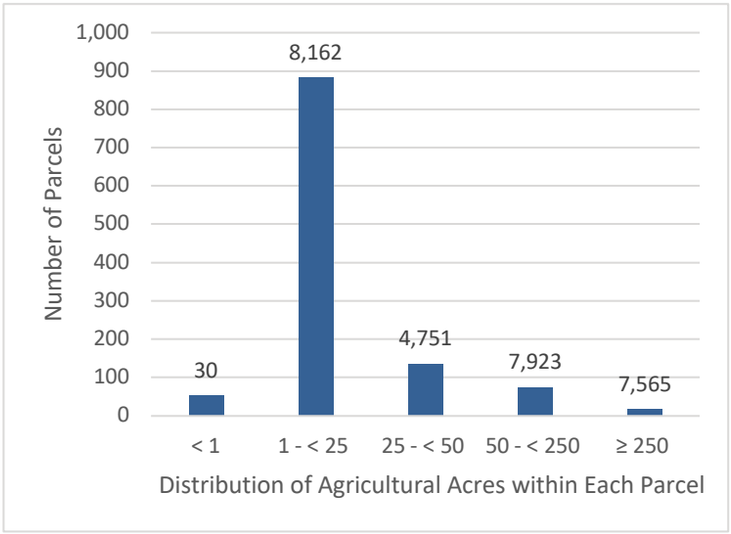
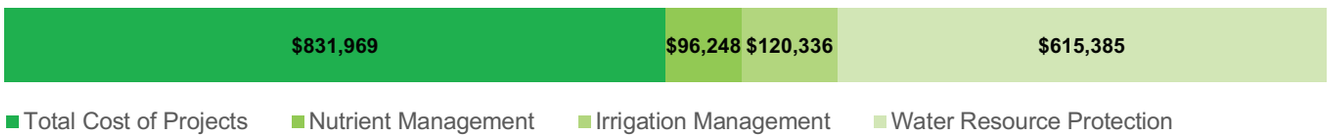


Table 2
Enrolled Agricultural Acres by Manual

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

Figure 4
Cost Share Summary



Status of Implementation of Agricultural Best Management Practices (BMPs) in the Chassahowitzka-Homosassa Springs BMAP

Table 1

Non-Agricultural Acres	Agricultural Acres	Enrolled Agricultural Acres	Unenrolled - Unlikely Enrollable Acres *	Unenrolled - Potentially Enrollable Acres
286,947	39,034	13,656	9,081	14,364

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

Figure 1

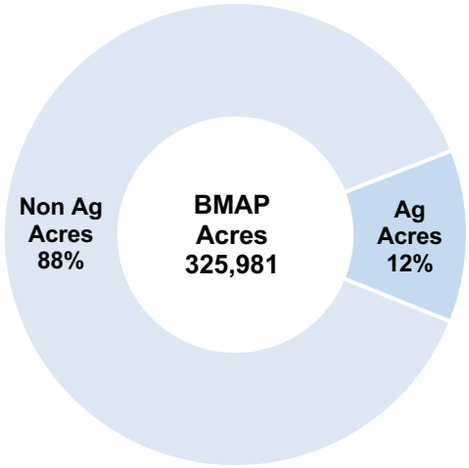


Figure 2

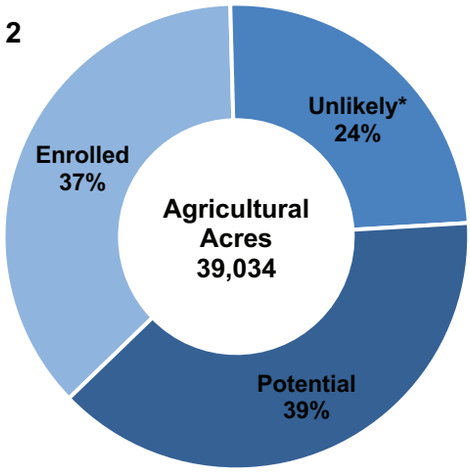


Figure 3
Potentially Enrollable Parcels & Agricultural Acres

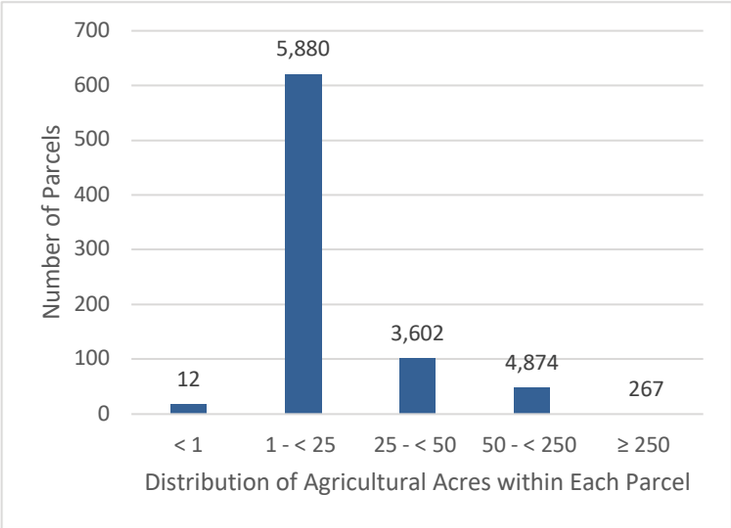


Table 2
Enrolled Agricultural Acres by Manual

BMP Manual	Acres
Citrus	82
Cow/Calf	8,910
Dairy	260
Equine	10
Fruit & Nut	201
Multiple Commodities	2,802
Nursery	957
Row/Field Crops	434
Total	**13,656**

Figure 4
Cost Share Summary

Status of Implementation of Agricultural Best Management Practices (BMPs) in the Central Indian River Lagoon BMAP

Table 1

Non-Agricultural Acres	Agricultural Acres	Enrolled Agricultural Acres	Unenrolled - Unlikely Enrollable Acres *	Unenrolled - Potentially Enrollable Acres
283,258	72,166	15,087	15,403	41,677

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

Figure 1

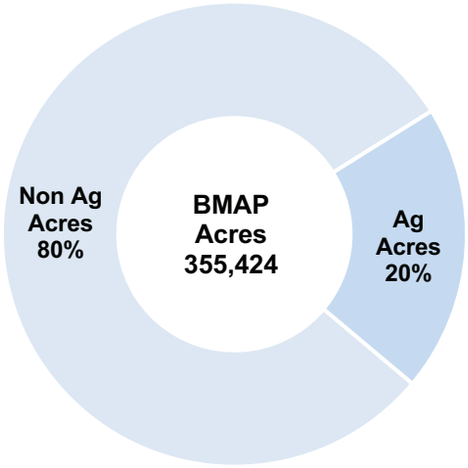


Figure 2

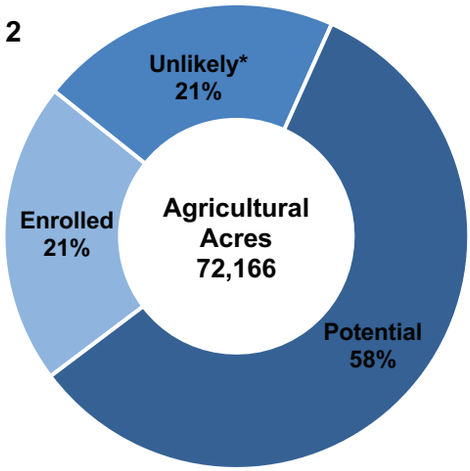


Figure 3
Potentially Enrollable Parcels & Agricultural Acres

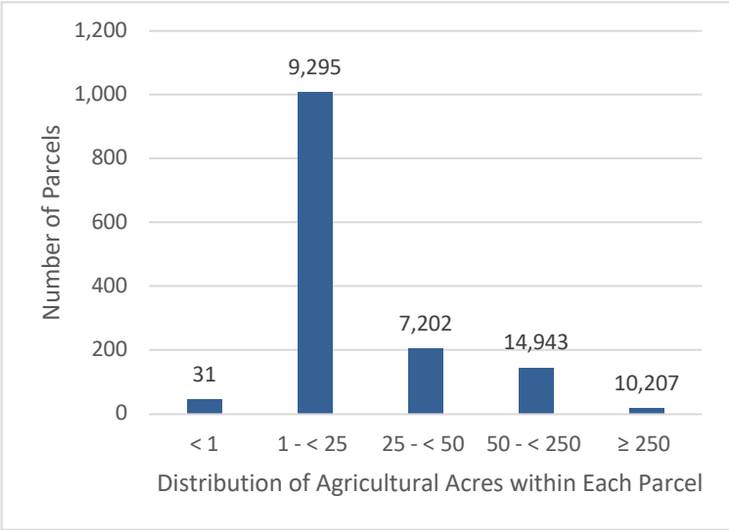


Table 2
Enrolled Agricultural Acres by Manual

BMP Manual	Acres
Citrus	2,620
Cow/Calf	10,305
Equine	21
Multiple Commodities	1,211
Nursery	153
Row/Field Crops	777
Total	**15,087**

Figure 4
Cost Share Summary

Status of Implementation of Agricultural Best Management Practices (BMPs) in the DeLeon Spring BMAP

Table 1

Non-Agricultural Acres	Agricultural Acres	Enrolled Agricultural Acres	Unenrolled - Unlikely Enrollable Acres *	Unenrolled - Potentially Enrollable Acres
54,017	11,375	1,939	3,604	5,817

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

Figure 1

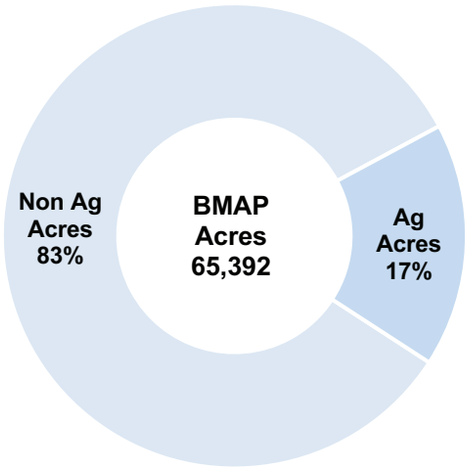


Figure 2

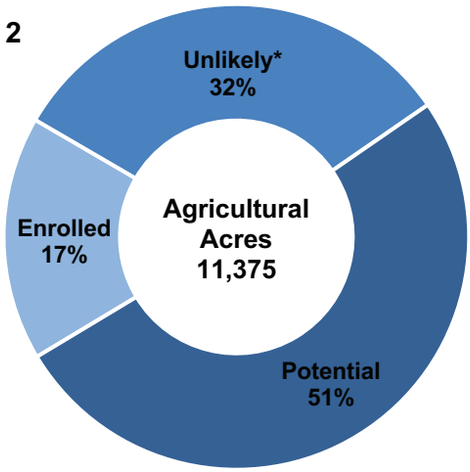


Figure 3
Potentially Enrollable Parcels & Agricultural Acres

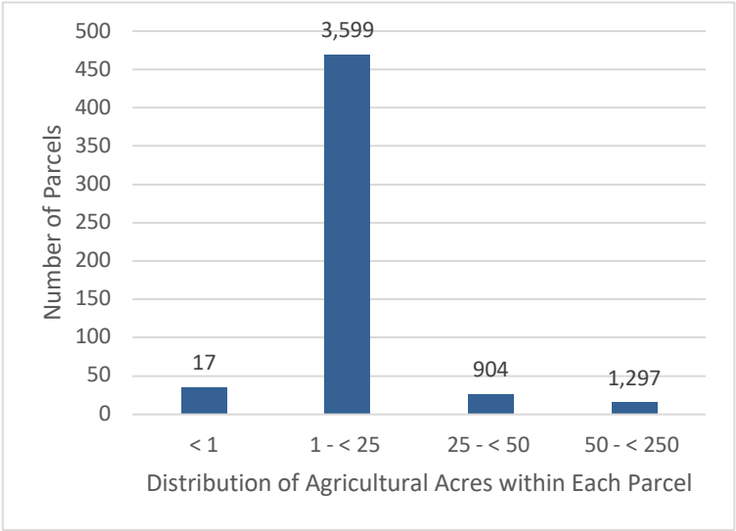


Table 2
Enrolled Agricultural Acres by Manual

BMP Manual	Acres
Citrus	141
Cow/Calf	515
Equine	151
Fruit & Nut	27
Multiple Commodities	35
Nursery	1,070
Total	**1,939**

Figure 4
Cost Share Summary

Status of Implementation of Agricultural Best Management Practices (BMPs) in the Everglades West Coast BMAP

Table 1

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

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

Figure 1

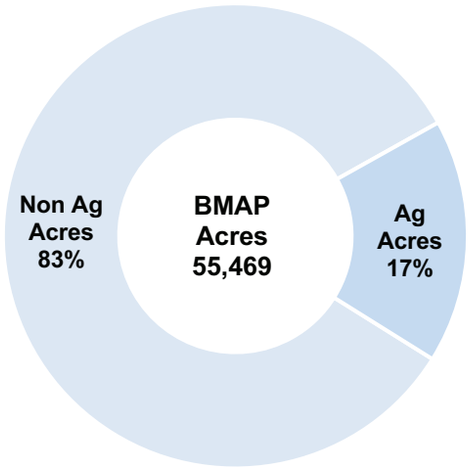


Figure 2

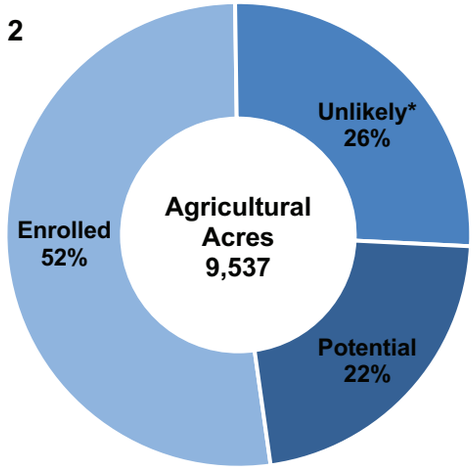


Figure 3
Potentially Enrollable Parcels & Agricultural Acres

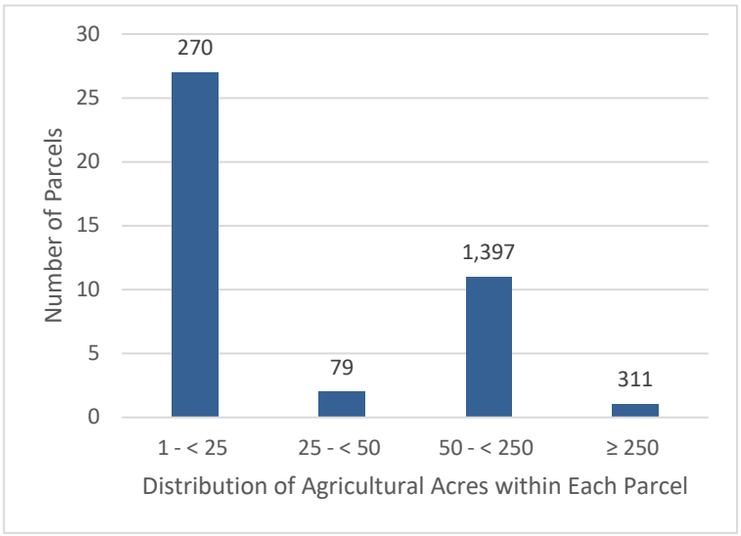


Table 2
Enrolled Agricultural Acres by Manual

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

Figure 4
Cost Share Summary

Status of Implementation of Agricultural Best Management Practices (BMPs) in the Gemini Springs BMAP

Table 1

Non-Agricultural Acres	Agricultural Acres	Enrolled Agricultural Acres	Unenrolled - Unlikely Enrollable Acres *	Unenrolled - Potentially Enrollable Acres
26,406	884	19	682	186

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

Figure 1

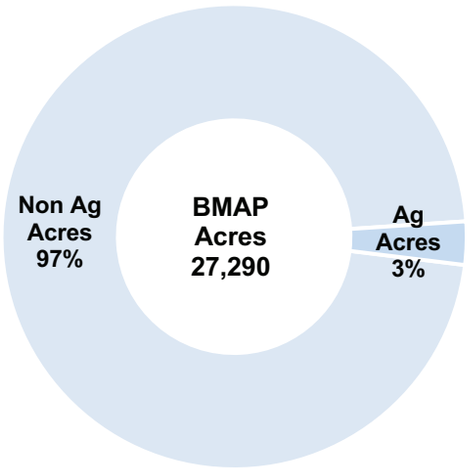


Figure 2

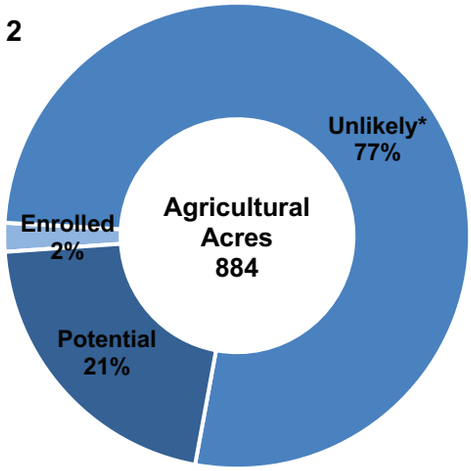


Figure 3
Potentially Enrollable Parcels & Agricultural Acres

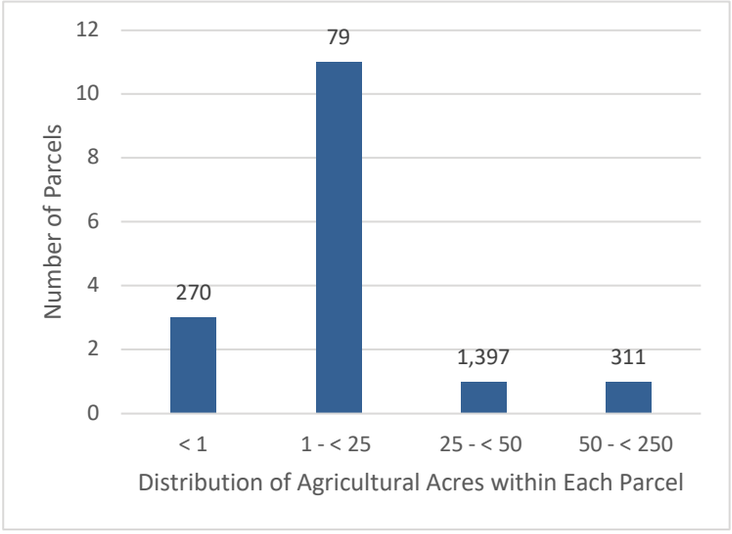


Table 2
Enrolled Agricultural Acres by Manual

BMP Manual	Acres
Multiple Commodities	5
Nursery	14
Total	**19**

Status of Implementation of Agricultural Best Management Practices (BMPs) in the Hillsborough River BMAP

Table 1

Non-Agricultural Acres	Agricultural Acres	Enrolled Agricultural Acres	Unenrolled - Unlikely Enrollable Acres *	Unenrolled - Potentially Enrollable Acres
34,045	16,698	10,475	2,207	4,008

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

Figure 1

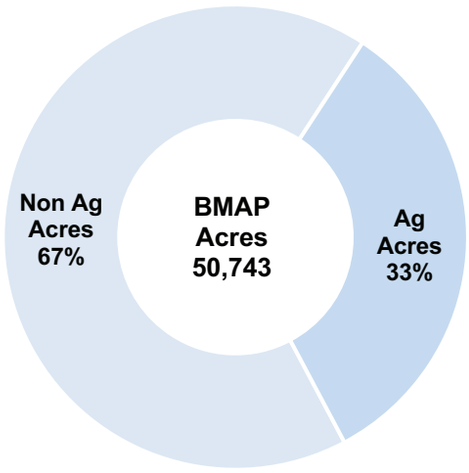


Figure 2

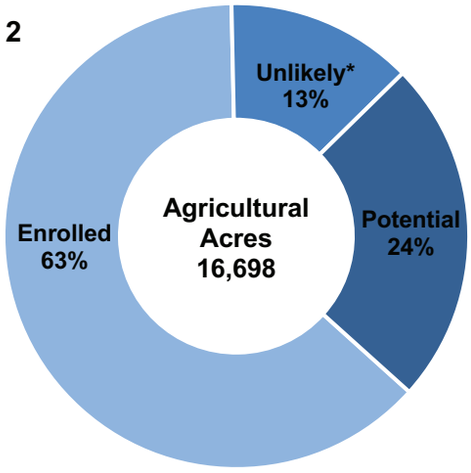


Figure 3
Potentially Enrollable Parcels & Agricultural Acres

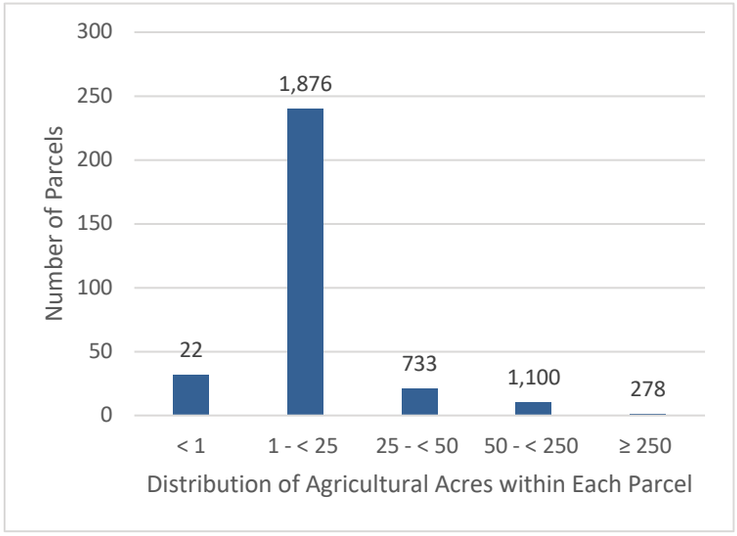


Table 2
Enrolled Agricultural Acres by Manual

BMP Manual	Acres
Cow/Calf	9,336
Equine	5
Multiple Commodities	450
Nursery	8
Row/Field Crop	676
Total	**10,475**

Status of Implementation of Agricultural Best Management Practices (BMPs) in the Jackson Blue Spring BMAP

Table 1

Non-Agricultural Acres	Agricultural Acres	Enrolled Agricultural Acres	Unenrolled - Unlikely Enrollable Acres *	Unenrolled - Potentially Enrollable Acres
51,016	41,667	24,529	5,594	11,515

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

Figure 1

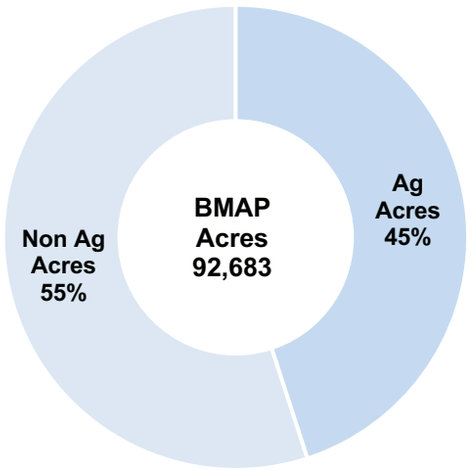


Figure 2

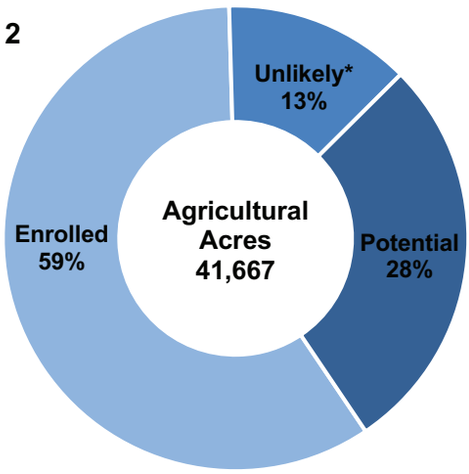


Figure 3
Potentially Enrollable Parcels & Agricultural Acres

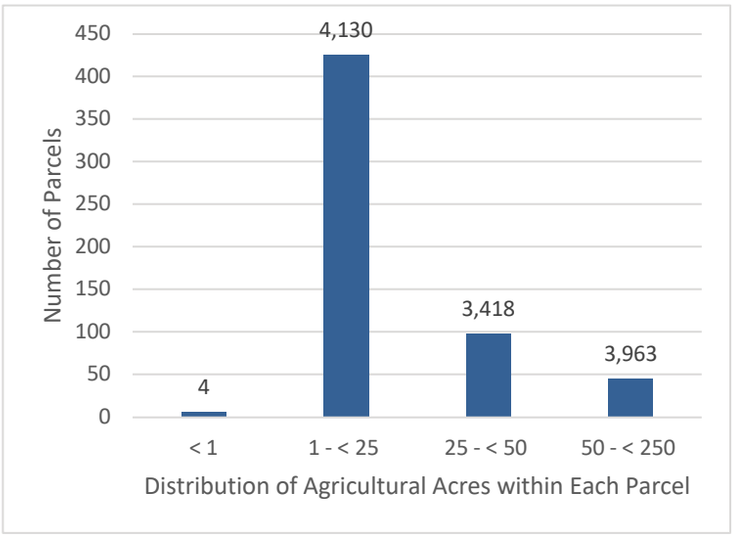


Table 2
Enrolled Agricultural Acres by Manual

BMP Manual	Acres
Cow/Calf	2,459
Multiple Commodities	4,742
Row/Field Crop	17,328
Total	**24,529**

Figure 4
Cost Share Summary

Status of Implementation of Agricultural Best Management Practices (BMPs) in the Kings Bay Crystal River Springs BMAP

Table 1

Non-Agricultural Acres	Agricultural Acres	Enrolled Agricultural Acres	Unenrolled - Unlikely Enrollable Acres *	Unenrolled - Potentially Enrollable Acres
166,823	13,459	3,726	4,010	5,723

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

Figure 1

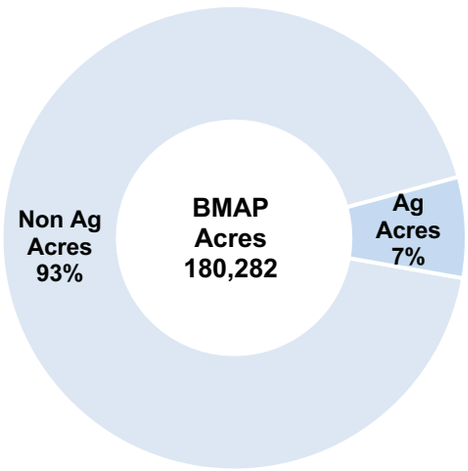


Figure 2

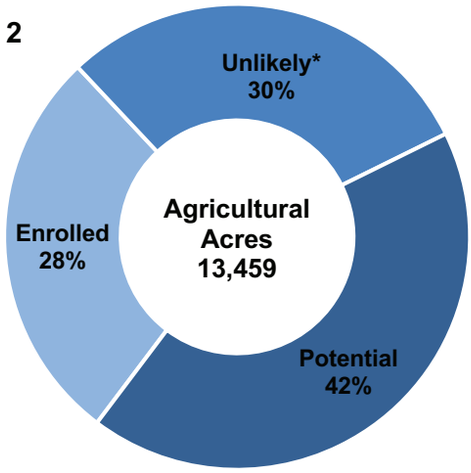


Figure 3
Potentially Enrollable Parcels & Agricultural Acres

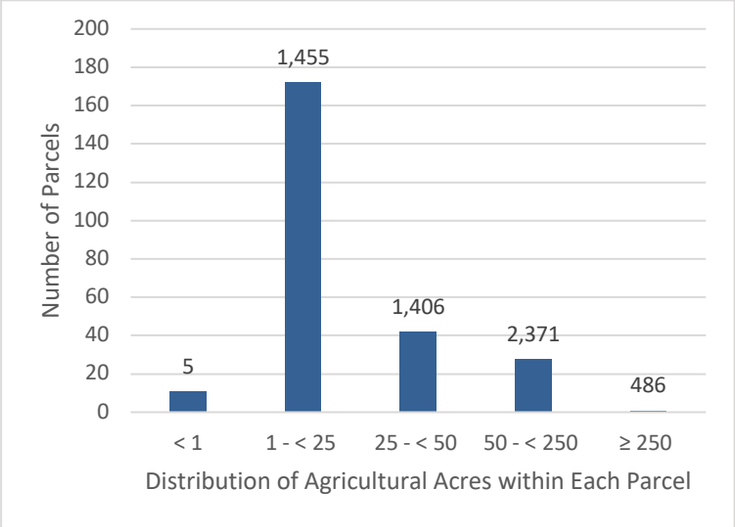


Table 2
Enrolled Agricultural Acres by Manual

BMP Manual	Acres
Cow/Calf	1,996
Equine	39
Fruit/Nut	206
Multiple Commodities	896
Nursery	1
Row/Field Crop	588
Total	**3,726**

Status of Implementation of Agricultural Best Management Practices (BMPs) in the Lake Harney, Lake Monroe, Middle St. Johns River & Smith Canal BMAP

Table 1

Non-Agricultural Acres	Agricultural Acres	Enrolled Agricultural Acres	Unenrolled - Unlikely Enrollable Acres *	Unenrolled - Potentially Enrollable Acres
213,260	28,667	12,218	6,108	10,342

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

Figure 1

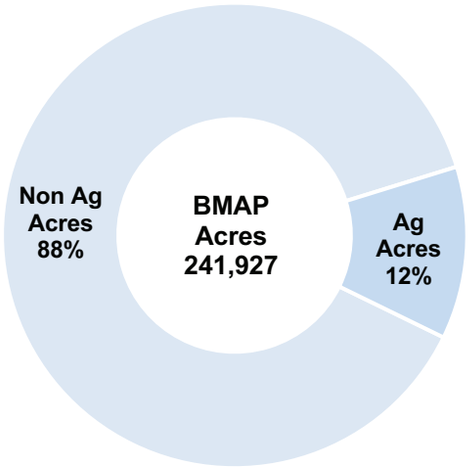


Figure 2

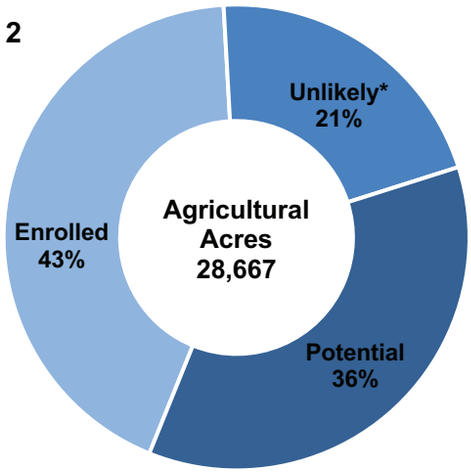


Figure 3
Potentially Enrollable Parcels & Agricultural Acres

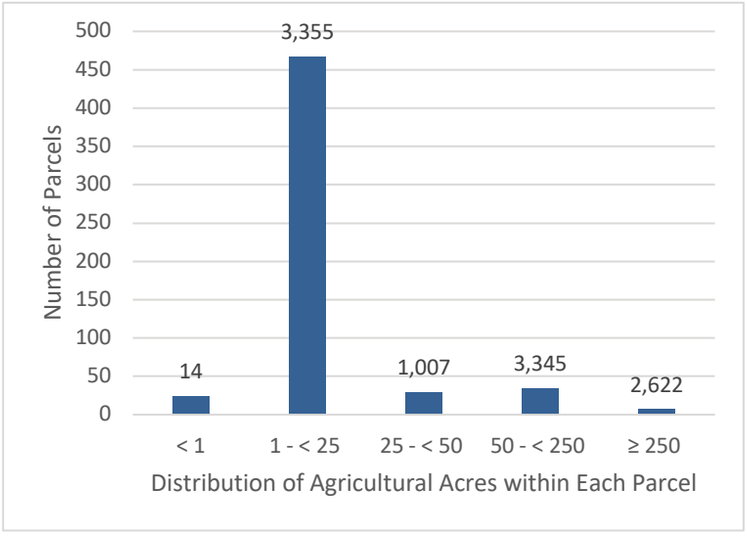


Table 2
Enrolled Agricultural Acres by Manual

BMP Manual	Acres
Citrus	148
Cow/Calf	11,738
Equine	7
Multiple Commodities	40
Nursery	282
Row/Field Crop	3
Total	**12,218**

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

Table 1

Non-Agricultural Acres	Agricultural Acres	Enrolled Agricultural Acres	Unenrolled - Unlikely Enrollable Acres *	Unenrolled - Potentially Enrollable Acres
87,939	7,778	2,142	3,726	1,898

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

Figure 1

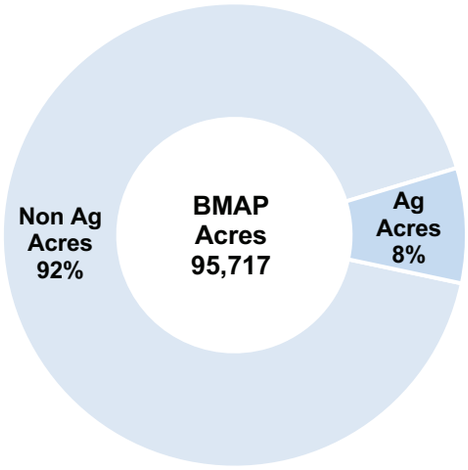


Figure 2

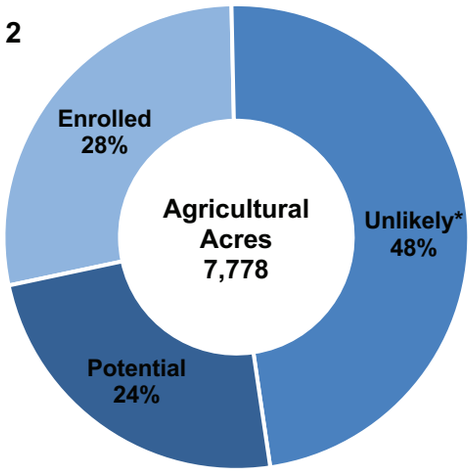


Figure 3
Potentially Enrollable Parcels & Agricultural Acres

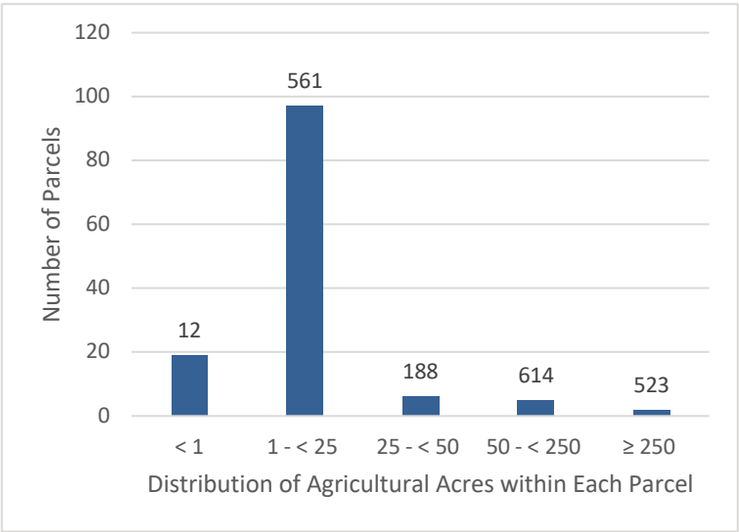


Table 2
Enrolled Agricultural Acres by Manual

BMP Manual	Acres
Citrus	211
Cow/Calf	949
Equine	12
Multiple Commodities	152
Nursery	581
Row/Field Crop	28
Sod	209
Total	**2,142**

Figure 4
Cost Share Summary

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

Table 1

Non-Agricultural Acres	Agricultural Acres	Enrolled Agricultural Acres	Unenrolled - Unlikely Enrollable Acres *	Unenrolled - Potentially Enrollable Acres
2,072,978	1,825,200	1,524,843	174,010	126,212

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

Figure 1

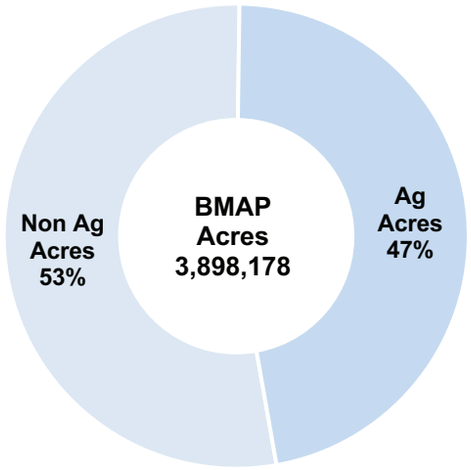


Figure 2

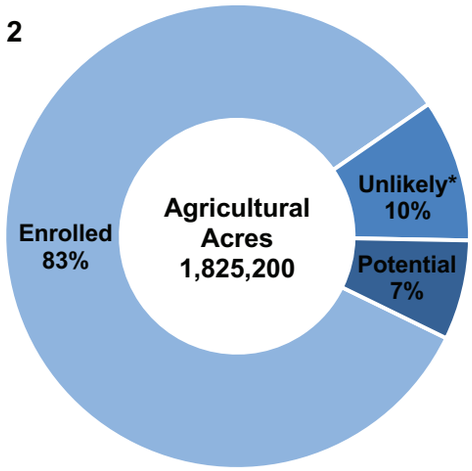


Figure 3
Potentially Enrollable Parcels & Agricultural Acres

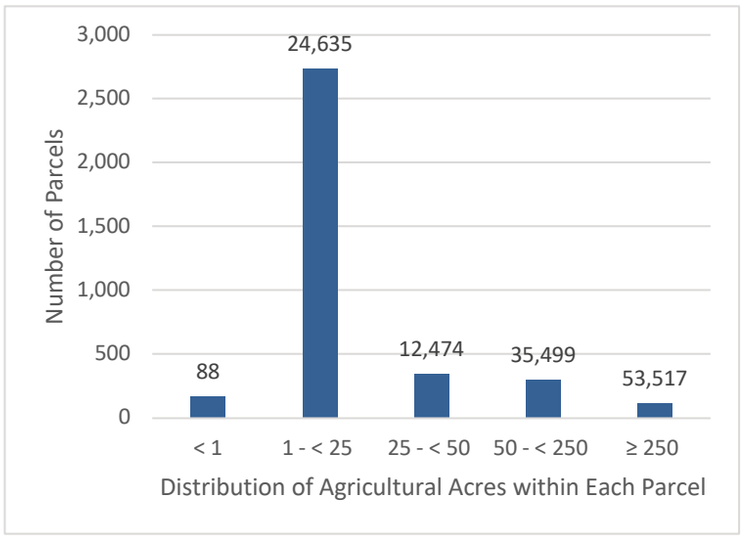
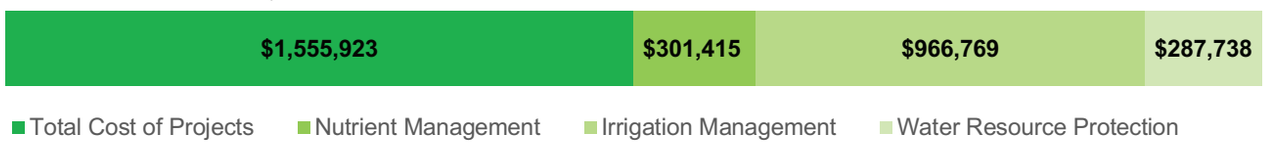


Table 2
Enrolled Agricultural Acres by Manual

BMP Manual	Acres
Citrus	91,117
Conservation Plan	160,294
Cow/Calf	523,355
Dairy	1,963
Equine	740
Fruit/Nut	1,128
LOPP	1,143
Multiple Commodities	332,727
Nursery	3,928
Poultry	135
Row/Field Crop	398,032
Sod	10,281
Total	**1,524,843**

Figure 4
Cost Share Summary



Status of Implementation of Agricultural Best Management Practices (BMPs) in the Long Branch BMAP

Table 1

Non-Agricultural Acres	Agricultural Acres	Enrolled Agricultural Acres	Unenrolled - Unlikely Enrollable Acres *	Unenrolled - Potentially Enrollable Acres
3,104	524	22	333	170

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

Figure 1

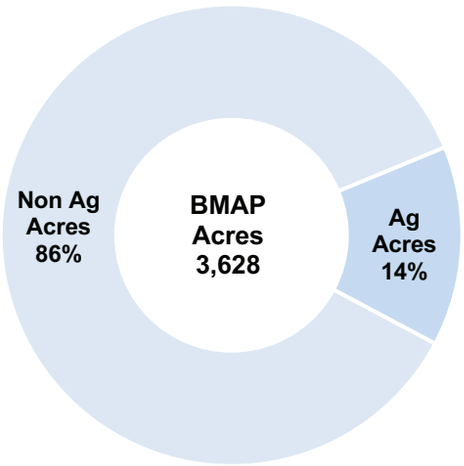


Figure 2

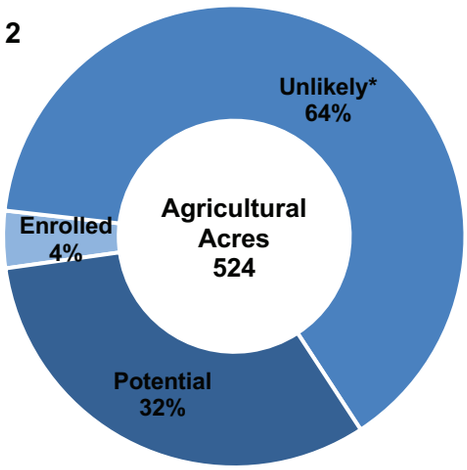


Figure 3
Potentially Enrollable Parcels & Agricultural Acres

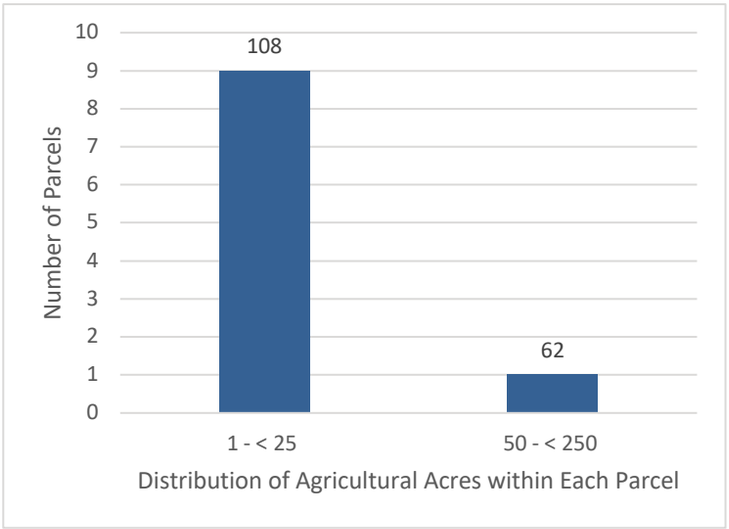


Table 2
Enrolled Agricultural Acres by Manual

BMP Manual	Acres
Cow/Calf	22
Total	**22**

Status of Implementation of Agricultural Best Management Practices (BMPs) in the Lower St. Johns Mainstem BMAP

Table 1

1,658,584	148,809	68,379	40,146	40,211

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

Figure 1

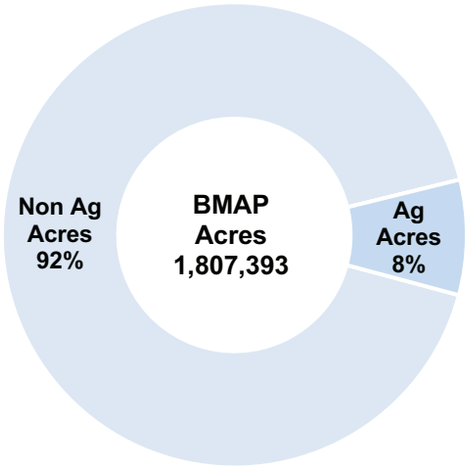


Figure 2

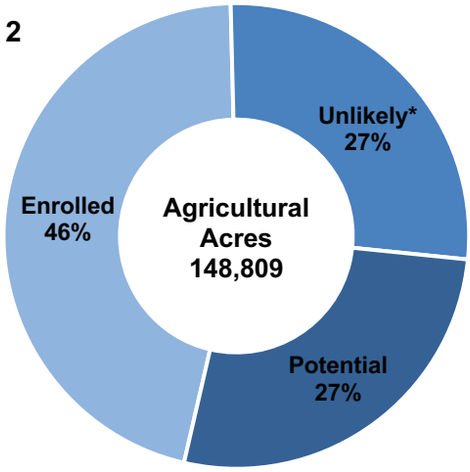


Figure 3
Potentially Enrollable Parcels & Agricultural Acres

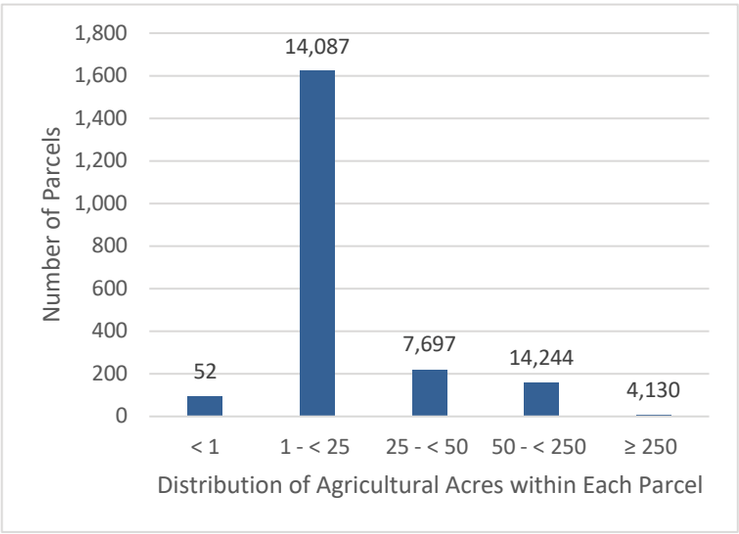
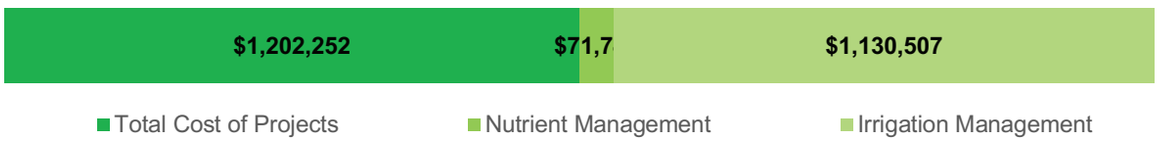


Table 2
Enrolled Agricultural Acres by Manual

Citrus	37
Cow/Calf	26,896
Equine	23
Fruit & Nut	307
Multiple Commodities	10,912
Nursery	2,583
Row/Field Crops	25,206
Sod	2,415

Figure 4
Cost Share Summary



Status of Implementation of Agricultural Best Management Practices (BMPs) in the Lower St. Johns River Basin Tributaries I and II BMAP

Table 1

Non-Agricultural Acres	Agricultural Acres	Enrolled Agricultural Acres	Unenrolled - Unlikely Enrollable Acres *	Unenrolled - Potentially Enrollable Acres
66,246	1,034	652	283	102

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

Figure 1

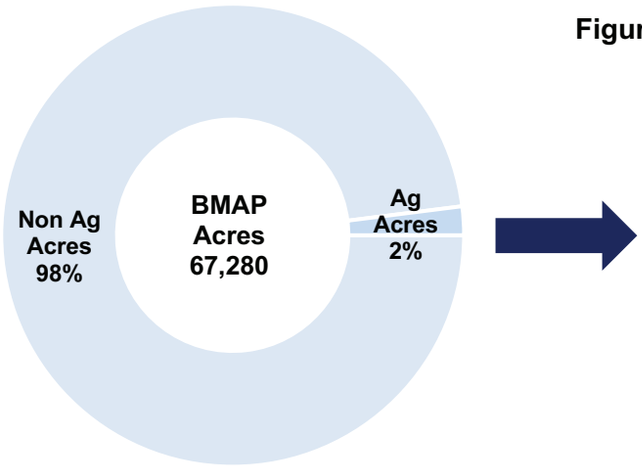


Figure 2

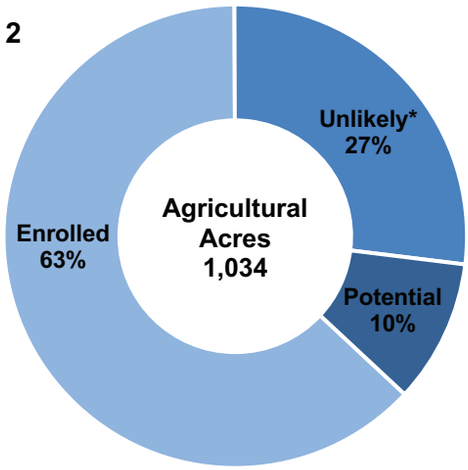


Figure 3
Potentially Enrollable Parcels & Agricultural Acres

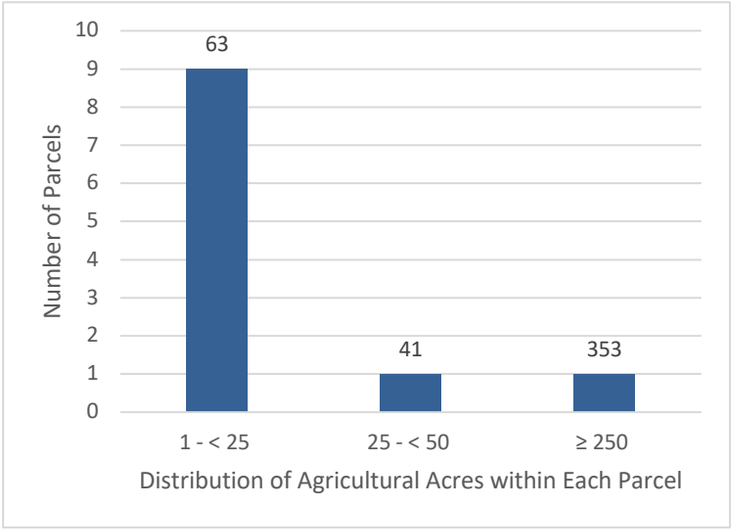


Table 2
Enrolled Agricultural Acres by Manual

BMP Manual	Acres
Cow/Calf	364
Multiple Commodities	254
Row/Field Crops	34
Total	**652**

Status of Implementation of Agricultural Best Management Practices (BMPs) in the Manatee River BMAP

Table 1

Non-Agricultural Acres	Agricultural Acres	Enrolled Agricultural Acres	Unenrolled - Unlikely Enrollable Acres *	Unenrolled - Potentially Enrollable Acres
15,098	930	297	180	457

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

Figure 1

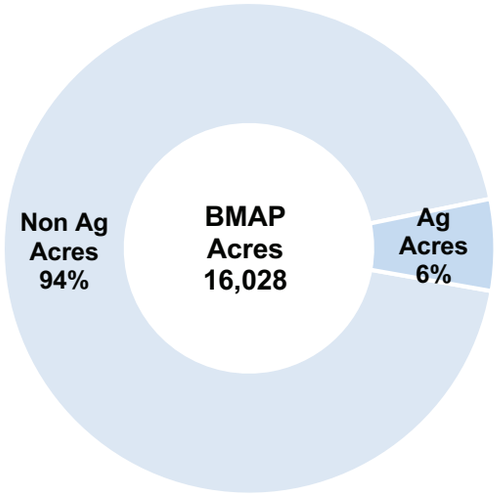


Figure 2

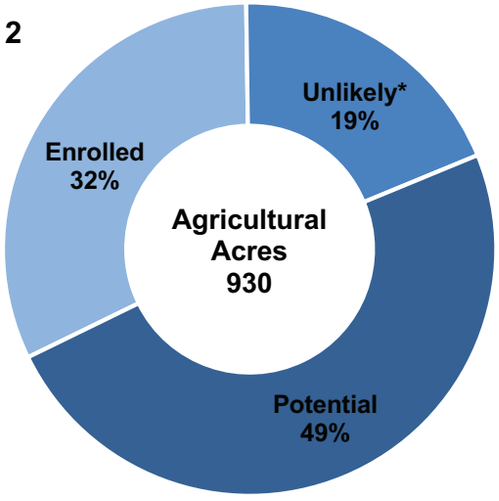


Figure 3
Potentially Enrollable Parcels & Agricultural Acres

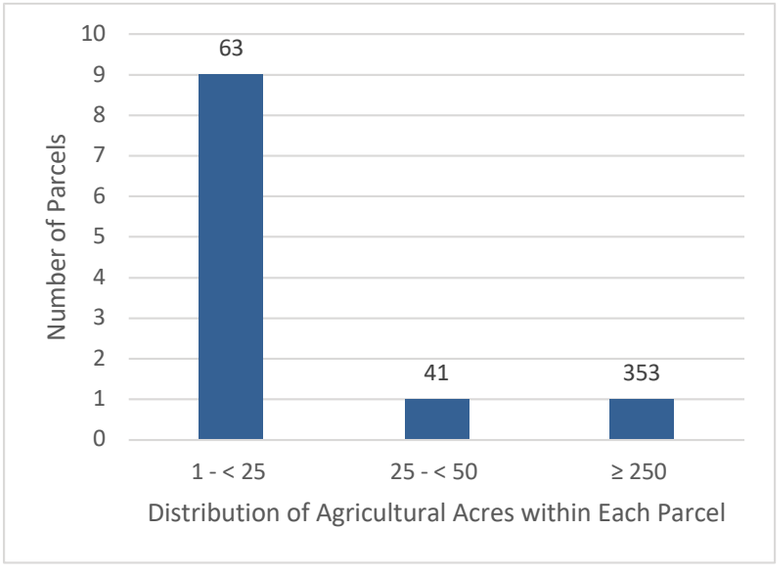


Table 2
Enrolled Agricultural Acres by Manual

BMP Manual	Acres
Cow/Calf	297
Total	**297**

Status of Implementation of Agricultural Best Management Practices (BMPs) in the Middle and Lower Suwannee River BMAP

Table 1

Non-Agricultural Acres	Agricultural Acres	Enrolled Agricultural Acres	Unenrolled - Unlikely Enrollable Acres *	Unenrolled - Potentially Enrollable Acres
959,136	385,713	218,193	55,106	112,275

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

Figure 1

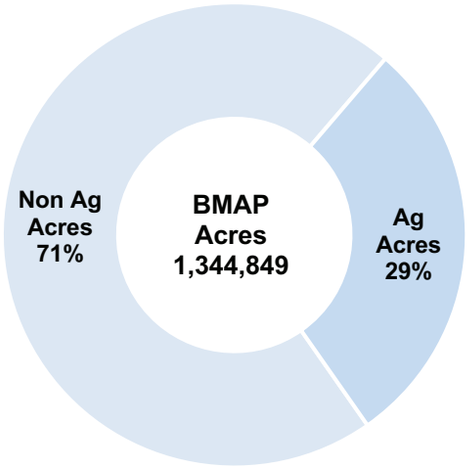


Figure 2

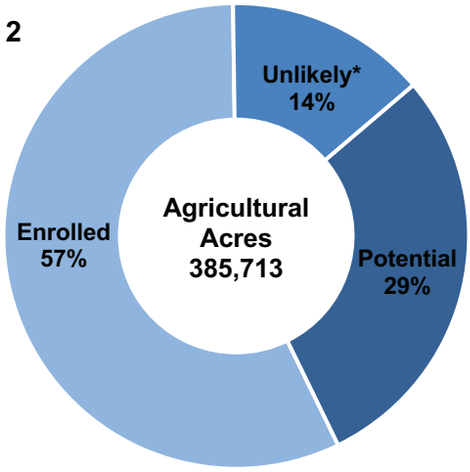


Figure 3
Potentially Enrollable Parcels & Agricultural Acres

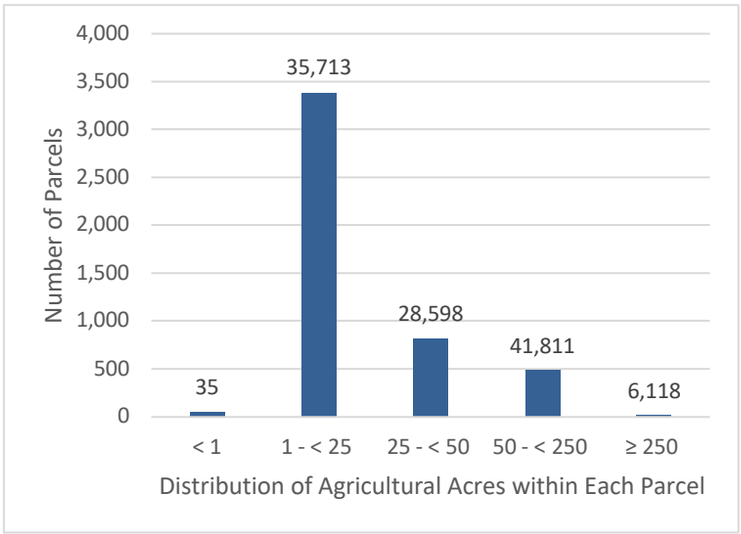


Table 2
Enrolled Agricultural Acres by Manual

BMP Manual	Acres
Citrus	5
Cow/Calf	30,581
Dairy	5,669
Equine	53
Fruit & Nut	497
Multiple Commodities	86,625
Nursery	438
Poultry	248
Row/Field Crops	93,647
Sod	430
Total	**218,193**

Figure 4
Cost Share Summary

Status of Implementation of Agricultural Best Management Practices (BMPs) in the North Indian River Lagoon BMAP

Table 1

Non-Agricultural Acres	Agricultural Acres	Enrolled Agricultural Acres	Unenrolled - Unlikely Enrollable Acres *	Unenrolled - Potentially Enrollable Acres
210,295	6,795	613	3,065	3,117

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

Figure 1

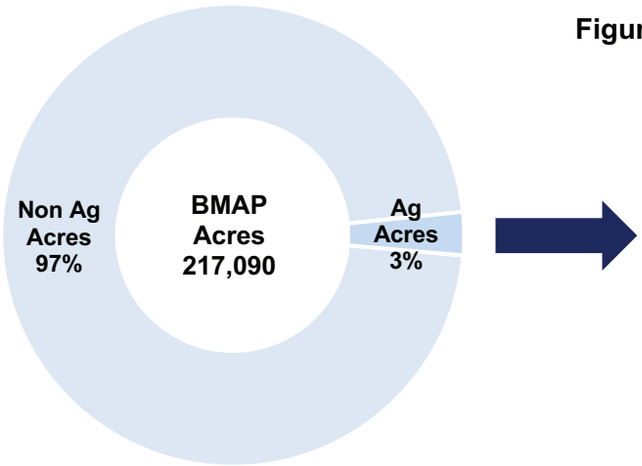


Figure 2

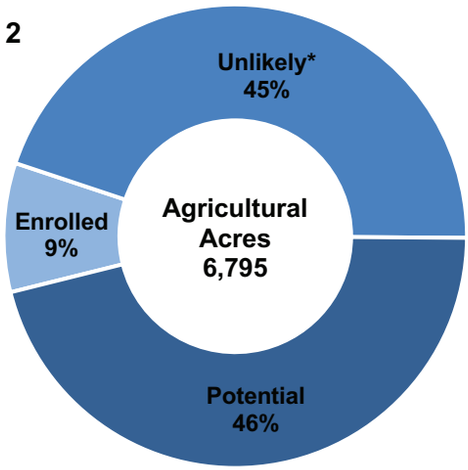


Figure 3
Potentially Enrollable Parcels & Agricultural Acres

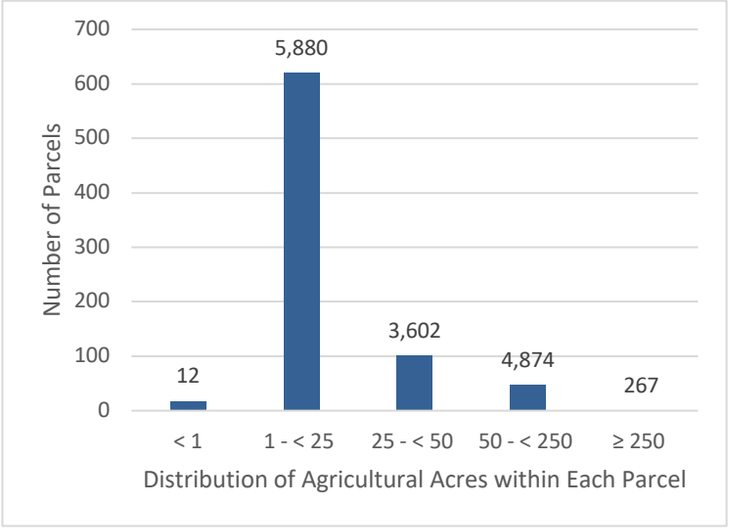


Table 2
Enrolled Agricultural Acres by Manual

BMP Manual	Acres
Citrus	246
Cow/Calf	189
Fruit & Nut	34
Multiple Commodities	143
Nursery	1
Total	**613**

Status of Implementation of Agricultural Best Management Practices (BMPs) in the Orange Creek BMAP

Table 1

Non-Agricultural Acres	Agricultural Acres	Enrolled Agricultural Acres	Unenrolled - Unlikely Enrollable Acres *	Unenrolled - Potentially Enrollable Acres
316,659	68,610	23,928	17,533	27,131

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

Figure 1

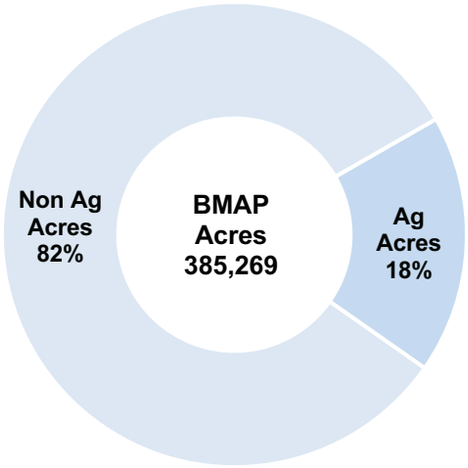


Figure 2

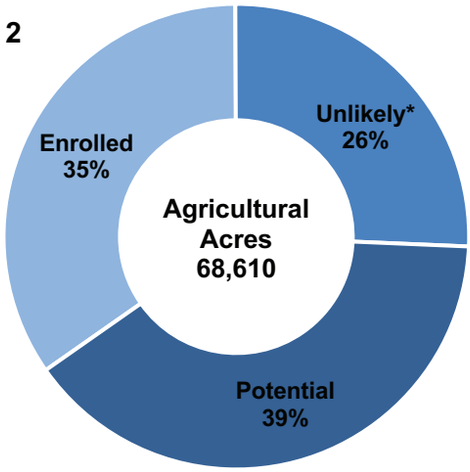


Figure 3
Potentially Enrollable Parcels & Agricultural Acres

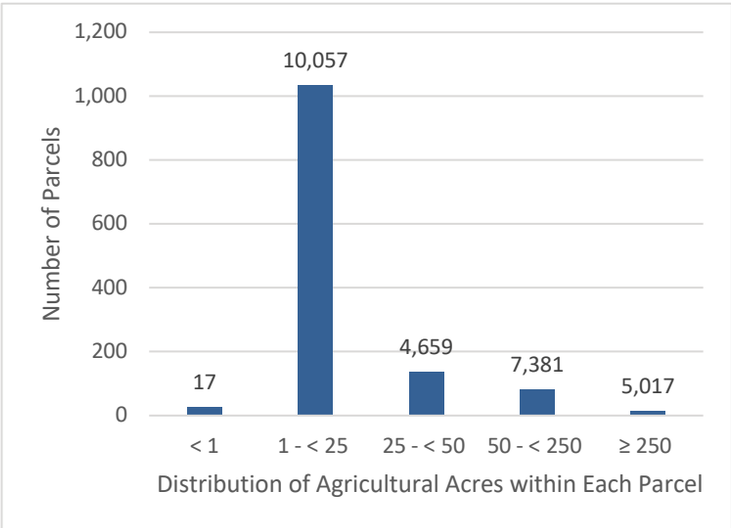


Table 2
Enrolled Agricultural Acres by Manual

BMP Manual	Acres
Cow/Calf	12,892
Dairy	244
Equine	2,562
Fruit & Nut	801
Multiple Commodities	5,063
Nursery	46
Row/Field Crop	2,256
Sod	64
Total	**23,928**

Figure 4
Cost Share Summary

Status of Implementation of Agricultural Best Management Practices (BMPs) in the Rainbow Springs and River BMAP

Table 1

Non-Agricultural Acres	Agricultural Acres	Enrolled Agricultural Acres	Unenrolled - Unlikely Enrollable Acres *	Unenrolled - Potentially Enrollable Acres
254,928	179,875	84,980	20,061	74,784

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

Figure 1

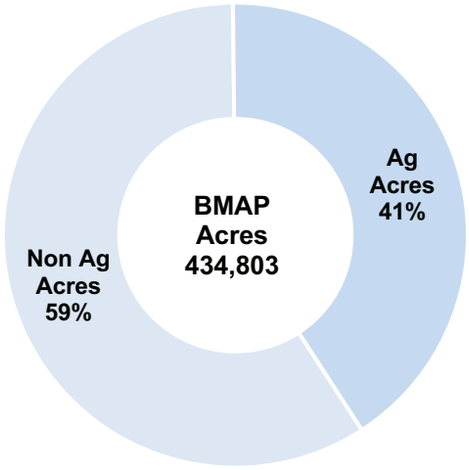


Figure 2

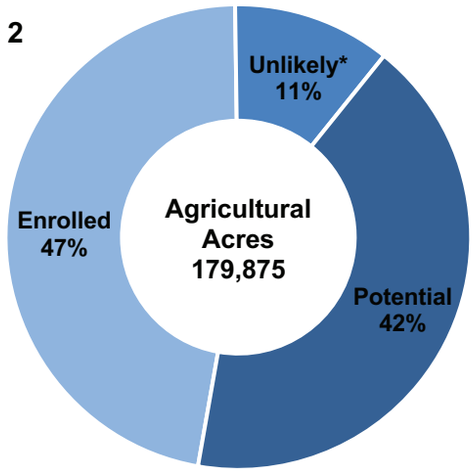


Figure 3
Potentially Enrollable Parcels & Agricultural Acres

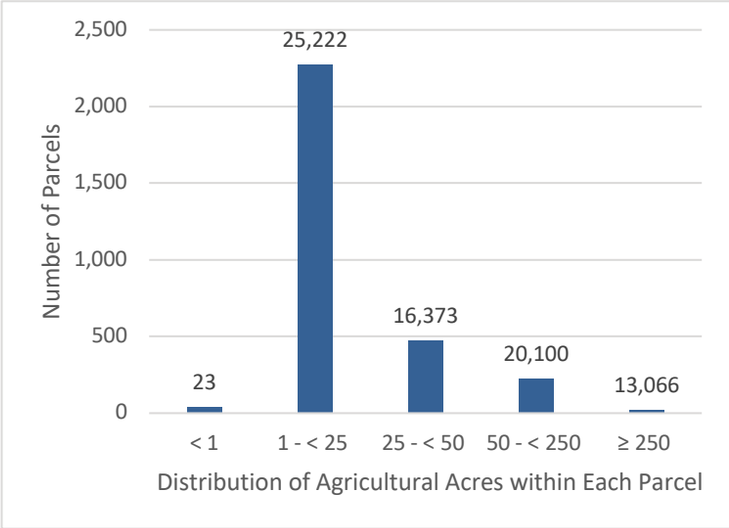
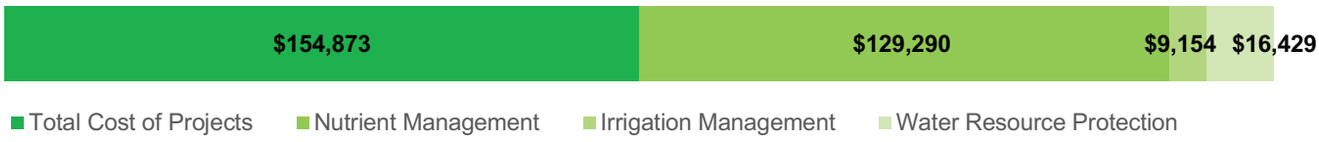


Table 2
Enrolled Agricultural Acres by Manual

BMP Manual	Acres
Cow/Calf	21,409
Equine	12,551
Multiple Commodities	44,750
Nursery	752
Row/Field Crop	5,518
Total	**84,980**

Figure 4
Cost Share Summary



Status of Implementation of Agricultural Best Management Practices (BMPs) in the Santa Fe River BMAP

Table 1

Non-Agricultural Acres	Agricultural Acres	Enrolled Agricultural Acres	Unenrolled - Unlikely Enrollable Acres *	Unenrolled - Potentially Enrollable Acres
831,434	245,218	104,588	48,725	91,838

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

Figure 1

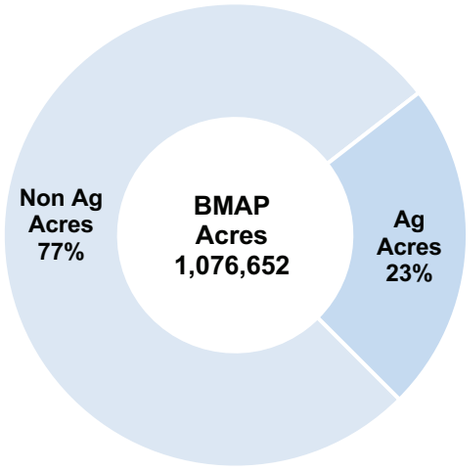


Figure 2

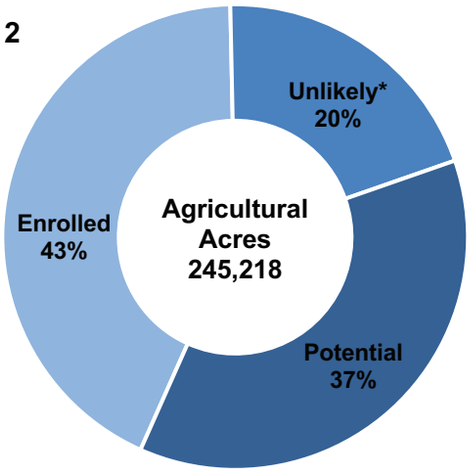


Figure 3
Potentially Enrollable Parcels & Agricultural Acres

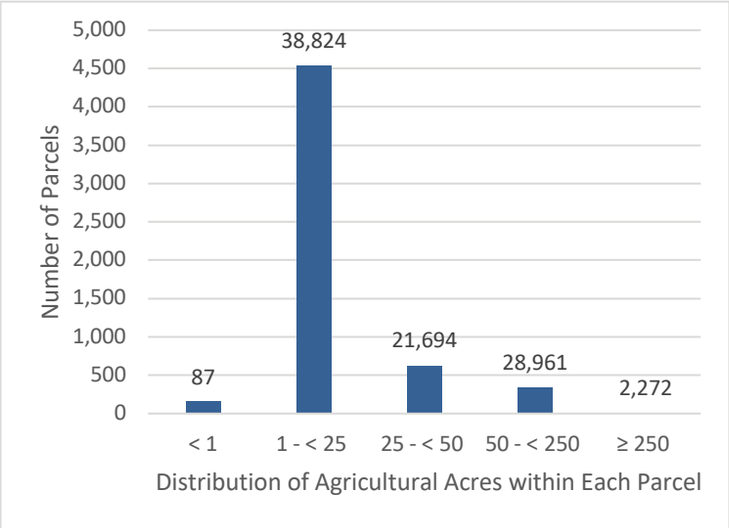
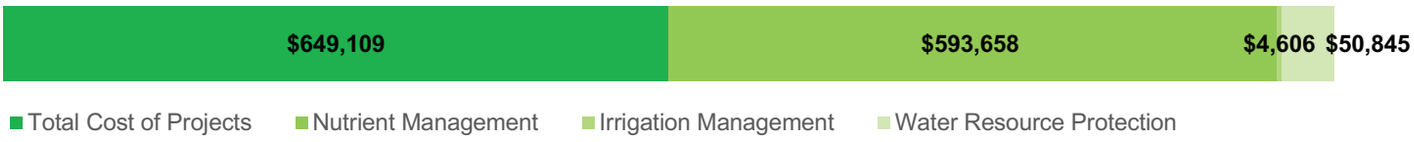


Table 2
Enrolled Agricultural Acres by Manual

BMP Manual	Acres
Citrus	11
Cow/Calf	34,321
Dairy	887
Equine	51
Fruit & Nut	336
Multiple Commodities	42,930
Nursery	695
Poultry	96
Row/Field Crop	24,848
Sod	413
Total	**104,588**

Figure 4
Cost Share Summary



Status of Implementation of Agricultural Best Management Practices (BMPs) in the Silver River and Springs BMAP

Table 1

Non-Agricultural Acres	Agricultural Acres	Enrolled Agricultural Acres	Unenrolled - Unlikely Enrollable Acres *	Unenrolled - Potentially Enrollable Acres
476,746	156,060	40,540	36,847	78,633

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

Figure 1

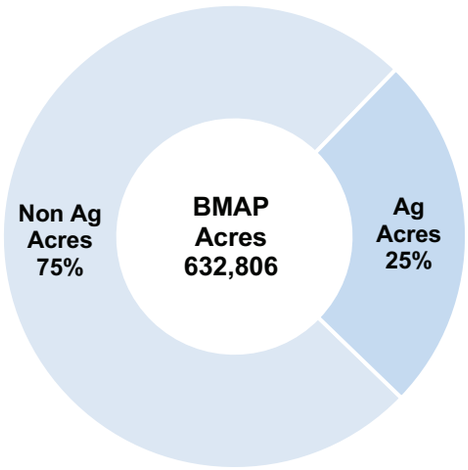


Figure 2

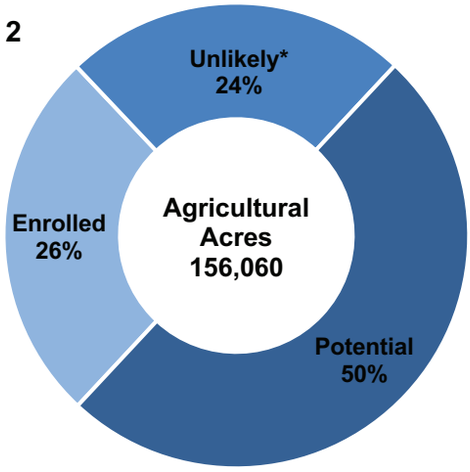


Figure 3
Potentially Enrollable Parcels & Agricultural Acres

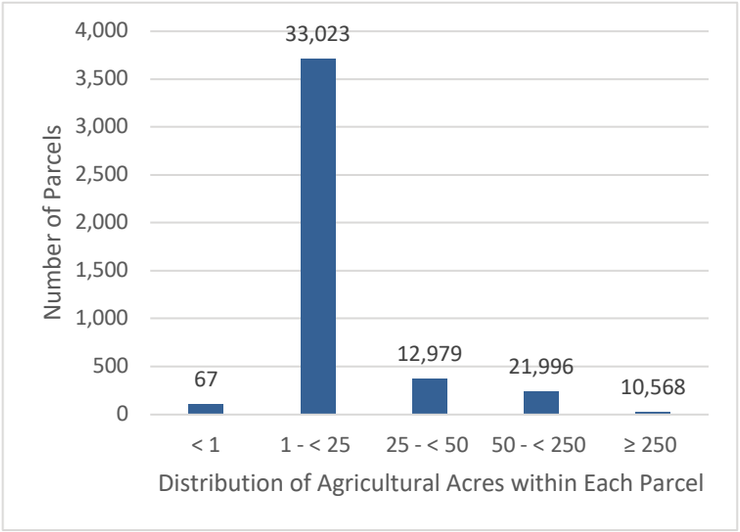


Table 2
Enrolled Agricultural Acres by Manual

BMP Manual	Acres
Citrus	558
Cow/Calf	21,532
Dairy	244
Equine	3,976
Fruit & Nut	695
Multiple Commodities	8,932
Nursery	238
Row/Field Crop	4,327
Sod	38
Total	**40,540**

Figure 4
Cost Share Summary

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

Table 1

Non-Agricultural Acres	Agricultural Acres	Enrolled Agricultural Acres	Unenrolled - Unlikely Enrollable Acres *	Unenrolled - Potentially Enrollable Acres
251,308	288,434	215,849	32,186	40,340

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

Figure 1

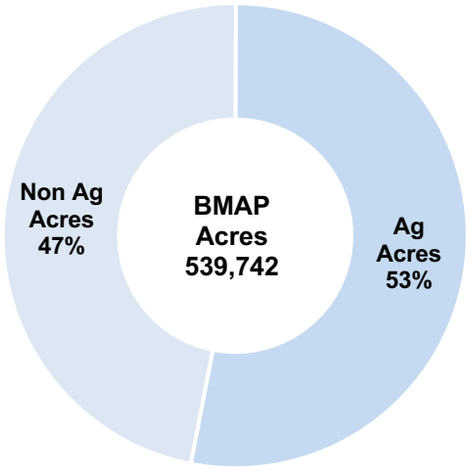


Figure 2

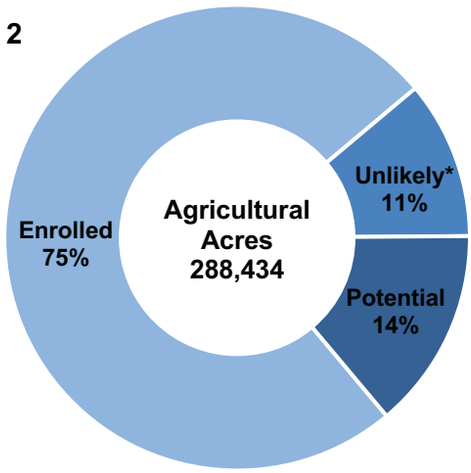


Figure 3
Potentially Enrollable Parcels & Agricultural Acres

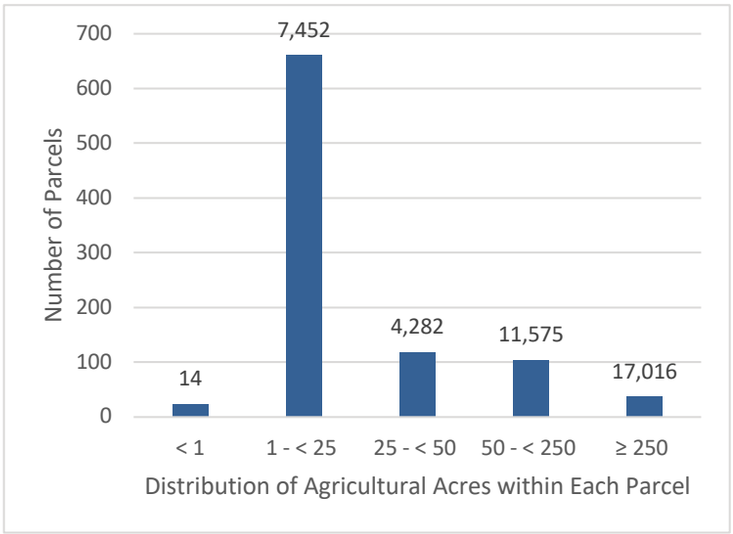


Table 2
Enrolled Agricultural Acres by Manual

BMP Manual	Acres
Citrus	6,321
Cow/Calf	121,142
Dairy	617
Equine	657
Fruit & Nut	224
LOPP	3
Multiple Commodities	70,927
Nursery	935
Poultry	42
Row/Field Crop	14,041
Sod	930
Wildlife	10
Total	**215,849**

Figure 4
Cost Share Summary

Status of Implementation of Agricultural Best Management Practices (BMPs) in the Upper Ocklawaha River BMAP

Table 1

Non-Agricultural Acres	Agricultural Acres	Enrolled Agricultural Acres	Unenrolled - Unlikely Enrollable Acres *	Unenrolled - Potentially Enrollable Acres
463,108	98,890	20,655	39,086	39,040

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

Figure 1

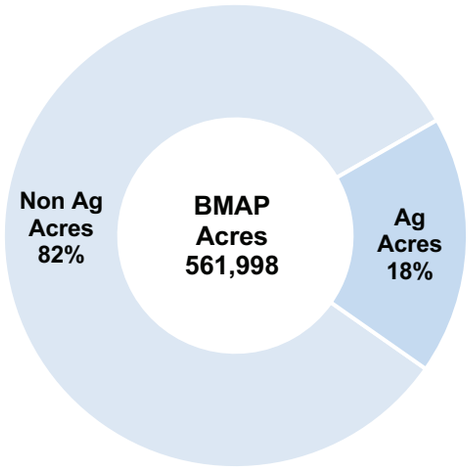


Figure 2

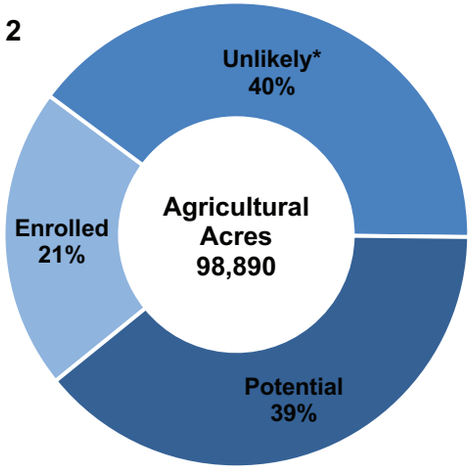


Figure 3
Potentially Enrollable Parcels & Agricultural Acres

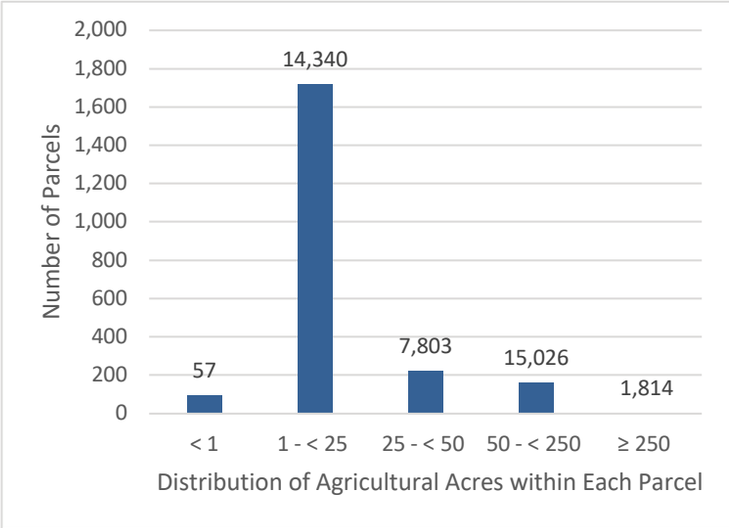
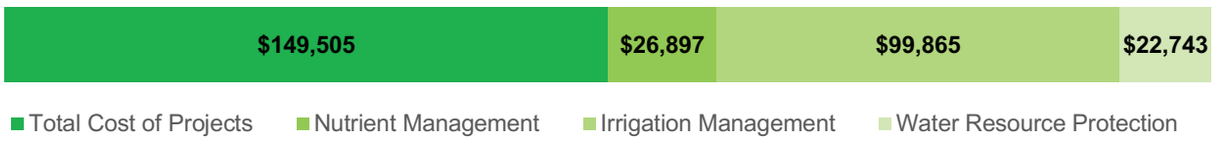


Table 2
Enrolled Agricultural Acres by Manual

BMP Manual	Acres
Citrus	3,909
Cow/Calf	10,034
Equine	148
Fruit & Nut	632
Multiple Commodities	2,716
Nursery	2,021
Row/Field Crop	808
Sod	387
Total	**20,655**

Figure 4
Cost Share Summary



Status of Implementation of Agricultural Best Management Practices (BMPs) in the Upper Wakulla River and Wakulla Spring BMAP

Table 1

Non-Agricultural Acres	Agricultural Acres	Enrolled Agricultural Acres	Unenrolled - Unlikely Enrollable Acres *	Unenrolled - Potentially Enrollable Acres
786,740	61,745	13,984	24,460	23,303

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

Figure 1

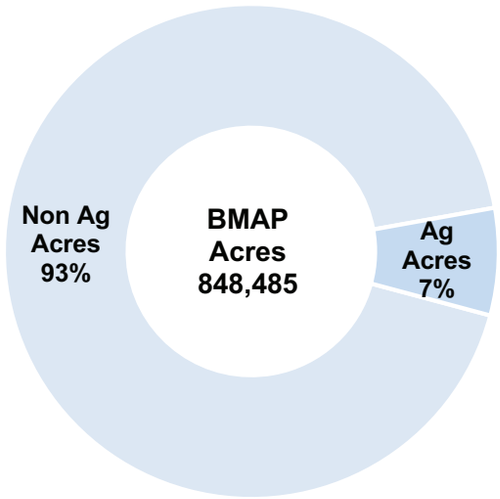


Figure 2

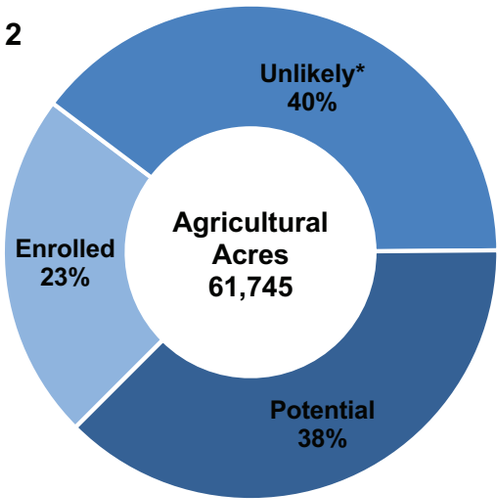


Figure 3
Potentially Enrollable Parcels & Agricultural Acres

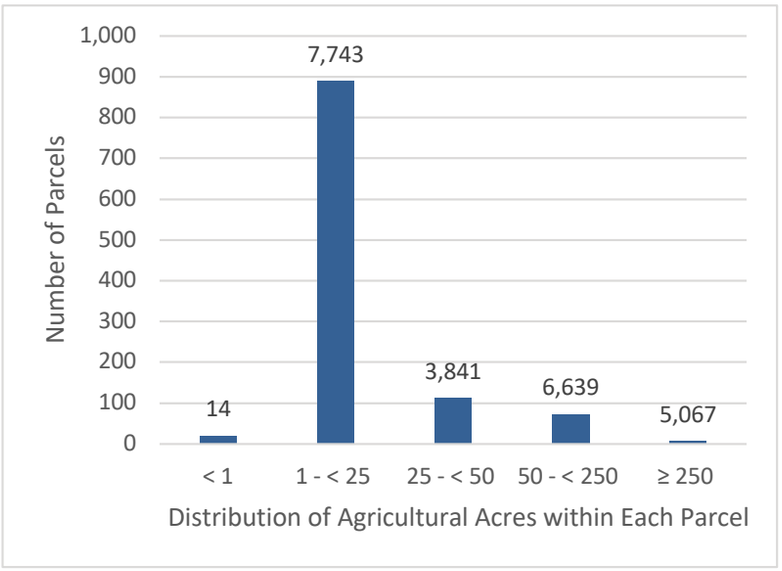
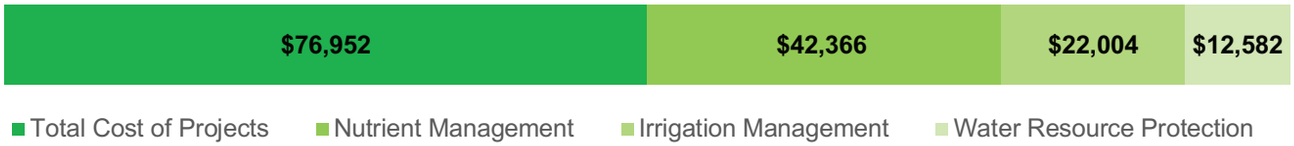


Table 2
Enrolled Agricultural Acres by Manual

BMP Manual	Acres
Citrus	87
Cow/Calf	4,903
Equine	5
Fruit & Nut	557
Multiple Commodities	2,102
Nursery	1,228
Row/Field Crop	4,245
Sod	857
Total	**13,984**

Figure 4
Cost Share Summary



Status of Implementation of Agricultural Best Management Practices (BMPs) in the Volusia Blue Spring BMAP

Table 1

Non-Agricultural Acres	Agricultural Acres	Enrolled Agricultural Acres	Unenrolled - Unlikely Enrollable Acres *	Unenrolled - Potentially Enrollable Acres
66,707	2,339	239	1,050	1,042

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

Figure 1

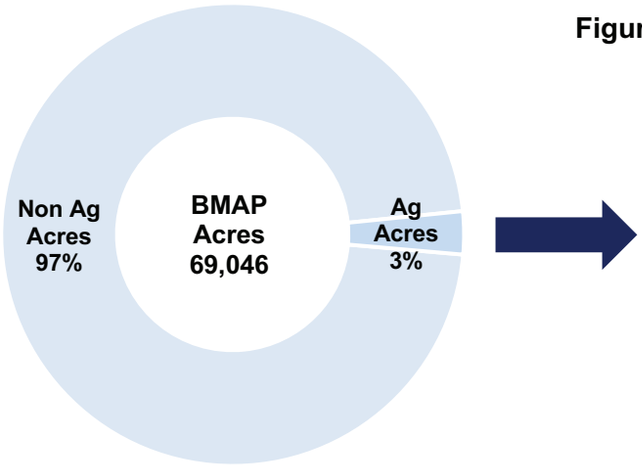


Figure 2

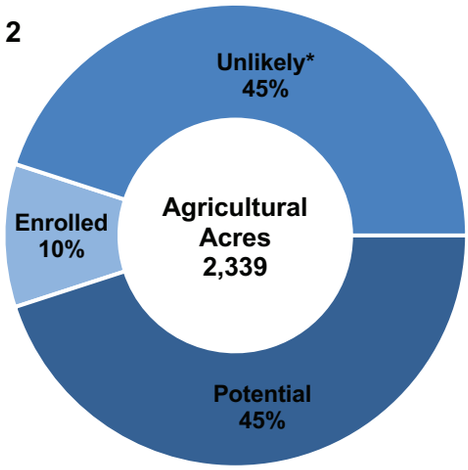


Figure 3
Potentially Enrollable Parcels & Agricultural Acres

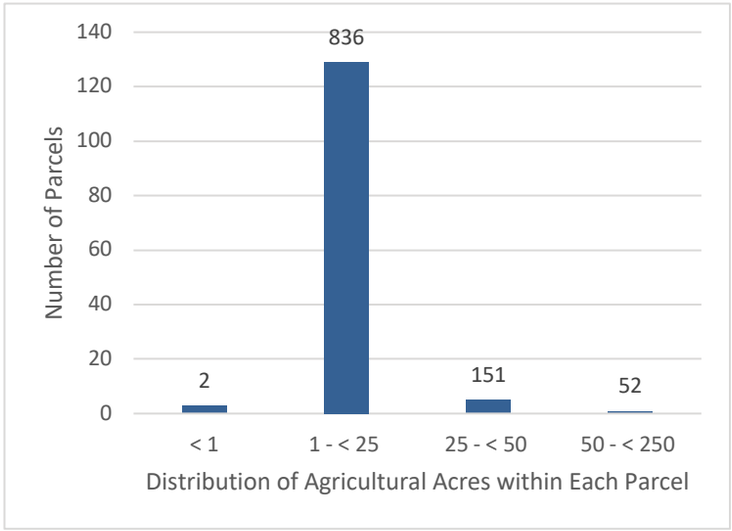


Table 2
Enrolled Agricultural Acres by Manual

BMP Manual	Acres
Cow/Calf	204
Multiple Commodities	11
Nursery	24
Total	**239**

Status of Implementation of Agricultural Best Management Practices (BMPs) in the Wacissa River and Wacissa Spring Group BMAP

Table 1

Non-Agricultural Acres	Agricultural Acres	Enrolled Agricultural Acres	Unenrolled - Unlikely Enrollable Acres *	Unenrolled - Potentially Enrollable Acres
264,945	62,639	26,653	14,144	21,827

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

Figure 1

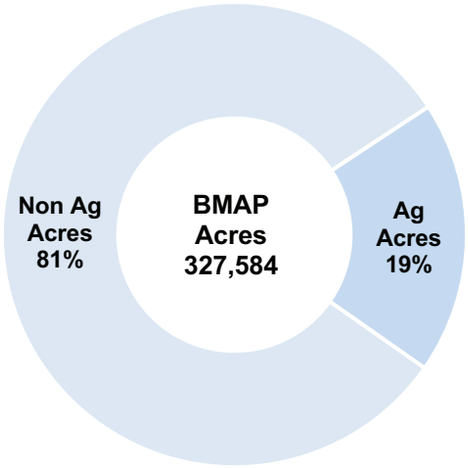


Figure 2

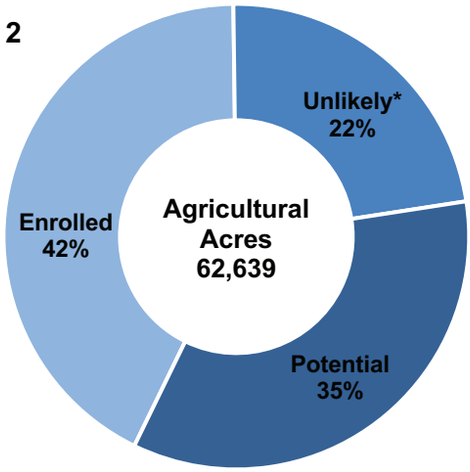


Figure 3
Potentially Enrollable Parcels & Agricultural Acres

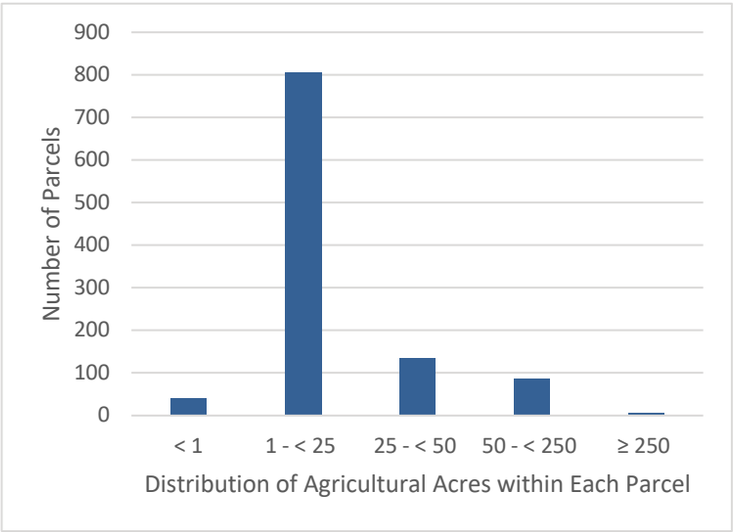
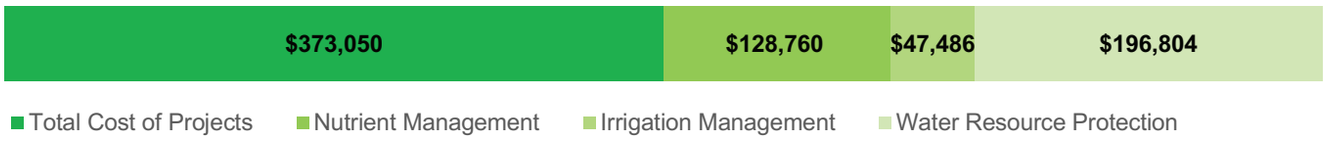


Table 2
Enrolled Agricultural Acres by Manual

BMP Manual	Acres
Citrus	113
Cow/Calf	7,232
Dairy	1,317
Multiple Commodities	9,942
Nursery	541
Row/Field Crop	7,508
Total	**26,653**

Figure 4
Cost Share Summary



Status of Implementation of Agricultural Best Management Practices (BMPs) in the Weeki Wachee Spring and River BMAP

Table 1

Non-Agricultural Acres	Agricultural Acres	Enrolled Agricultural Acres	Unenrolled - Unlikely Enrollable Acres *	Unenrolled - Potentially Enrollable Acres
166,133	47,639	26,264	5,891	15,474

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

Figure 1

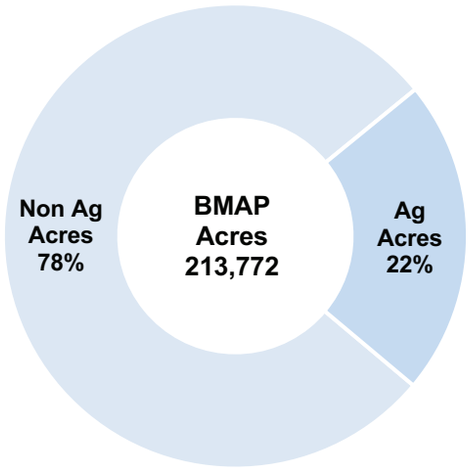


Figure 2

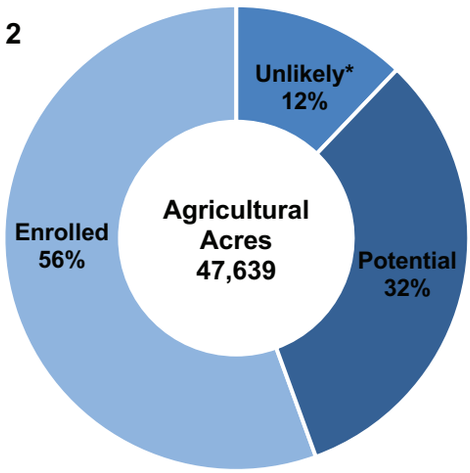


Figure 3
Potentially Enrollable Parcels & Agricultural Acres

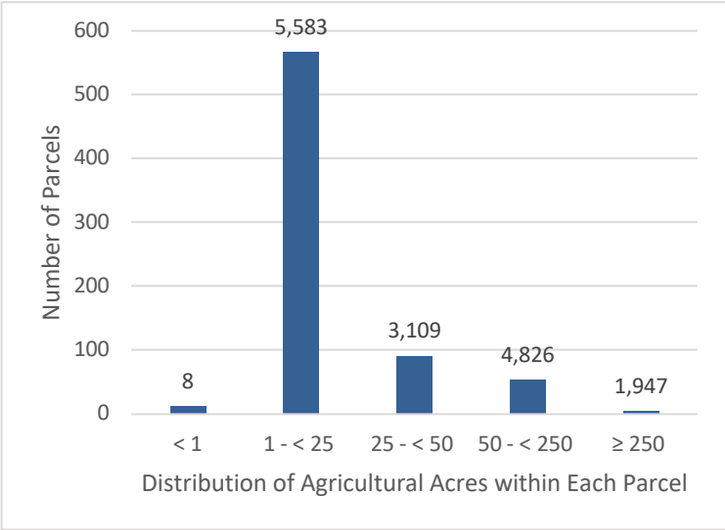


Table 2
Enrolled Agricultural Acres by Manual

BMP Manual	Acres
Citrus	109
Cow/Calf	20,773
Equine	16
Fruit & Nut	424
Multiple Commodities	4,240
Nursery	86
Row/Field Crop	616
Total	**26,264**

Figure 4
Cost Share Summary

Status of Implementation of Agricultural Best Management Practices (BMPs) in the Wekiva River, Rock Springs Run, and Little Wekiva Canal BMAP

Table 1

Non-Agricultural Acres	Agricultural Acres	Enrolled Agricultural Acres	Unenrolled - Unlikely Enrollable Acres *	Unenrolled - Potentially Enrollable Acres
342,841	48,496	10,434	20,969	17,093

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

Figure 1

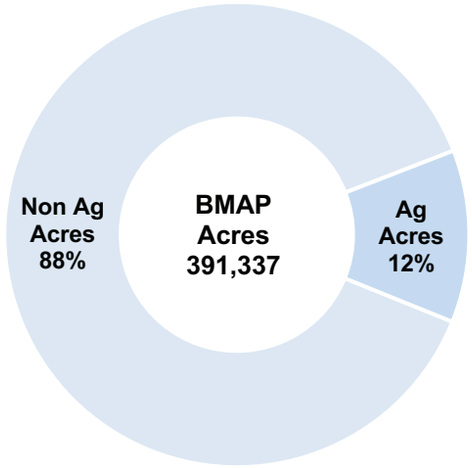


Figure 2

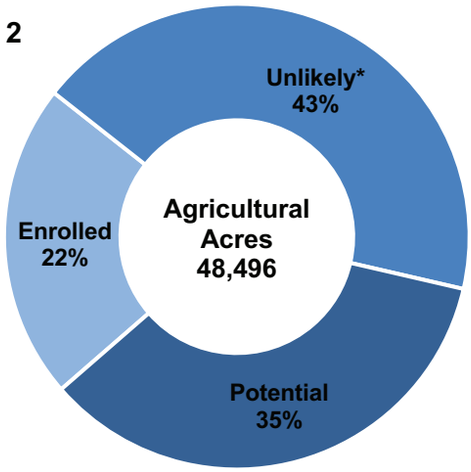


Figure 3
Potentially Enrollable Parcels & Agricultural Acres

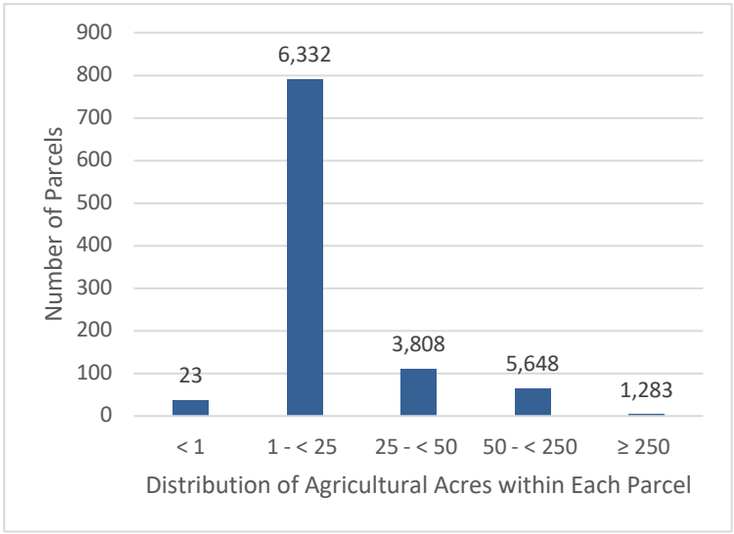
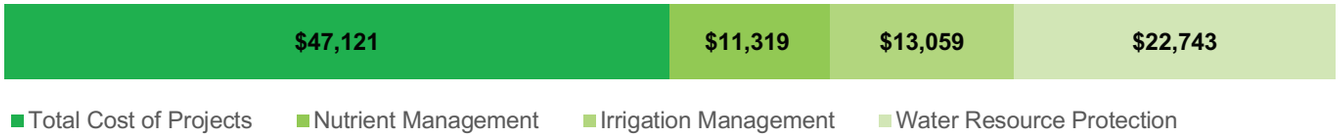


Table 2
Enrolled Agricultural Acres by Manual

BMP Manual	Acres
Citrus	807
Cow/Calf	3,327
Equine	529
Fruit & Nut	198
Multiple Commodities	2,215
Nursery	2,230
Row/Field Crop	741
Sod	387
Total	**10,434**

Figure 4
Cost Share Summary



Status of Implementation of Agricultural Best Management Practices (BMPs) in the Wekiwa Spring and Rock Springs BMAP

Table 1

Non-Agricultural Acres	Agricultural Acres	Enrolled Agricultural Acres	Unenrolled - Unlikely Enrollable Acres *	Unenrolled - Potentially Enrollable Acres
175,451	16,832	4,261	8,072	4,511

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

Figure 1

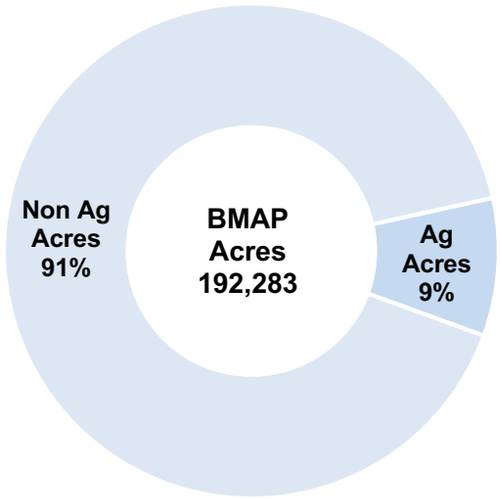


Figure 2

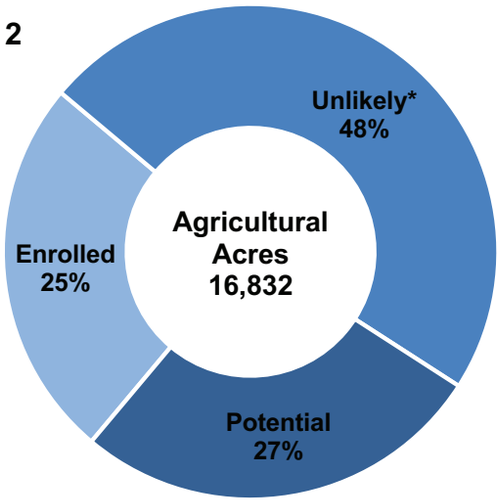


Figure 3
Potentially Enrollable Parcels & Agricultural Acres

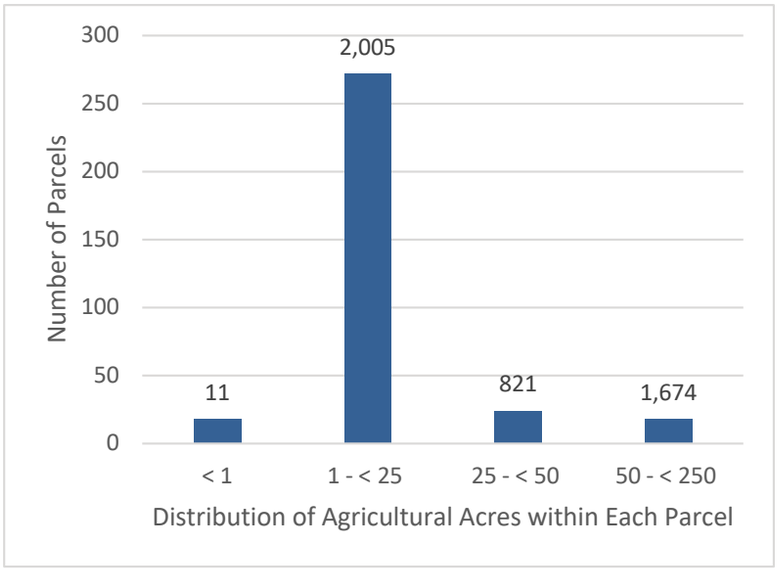
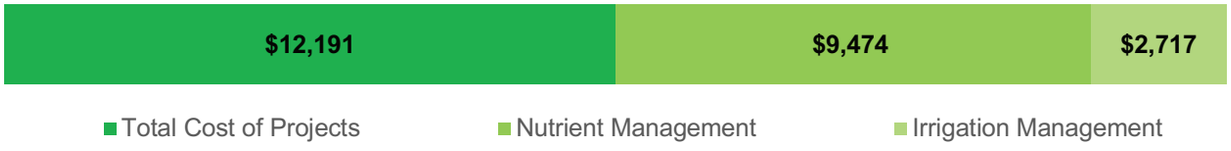


Table 2
Enrolled Agricultural Acres by Manual

BMP Manual	Acres
Citrus	430
Cow/Calf	461
Equine	39
Fruit & Nut	156
Multiple Commodities	974
Nursery	1,289
Row/Field Crop	547
Sod	365
Total	**4,261**

Figure 4
Cost Share Summary



Appendix II: Data

The BMP Implementation Verification site visit data used in this report was collected between January 1 and December 31, 2023. The data range and reporting align with the FDEP Statewide Annual Report on Total Maximum Daily Loads, Basin Management Action Plans, Minimum Flows or Minimum Water Levels, and Recovery or Prevention Strategies Report (STAR Report), and some data generated for this report has been provided to FDEP for inclusion in the STAR Report prior to reporting here. Aligning these timeframes ensures consistency between FDACS and FDEP reporting and provides an opportunity for collaboration between agencies.

In addition to information collected during IV site visits, data sources used in this report include Geographic Information System (GIS) mapping data, WMD data, and county property appraiser parcel data. OAWP continuously works to ensure that the data used for reporting is based on an accurate and consistent statewide dataset, and that standard operating procedures for data entry and analyses are followed.

FSAID

The agricultural areas identified in this report are based on the Florida Statewide Agricultural Irrigation Demand (FSAID) datasets. Information on FSAID is available at https://www.fdacs.gov/Agriculture-Industry/Water/Agricultural-Water-Supply-Planning. This annual report is based on FSAID10. Statewide agricultural acreage and enrolled agricultural acreage vary year to year due to the dynamic nature of the agricultural industry. Ground-truthing efforts are essential for ensuring accuracy when determining the land use types and amount of overall agricultural acreage in the state, as it then becomes the denominator for many analyses in this report. FDACS continues to ground truth and refine the FSAID datasets to ensure accurate identification of agricultural lands in Florida and to spot trends in agricultural land uses and intensities over time. FSAID agricultural land use datasets are updated annually through a combination of methods including consumptive water use permit review, Department of Revenue land use comparison, and ground-truthing. Ground-truthing of the irrigated agricultural lands is undertaken each year in specific counties, which are rotated throughout the state on a five-year cycle. FDACS provides updated datasets to FDEP and the water management districts each year. Work is ongoing with these coordinating agencies to incorporate the FSAID agricultural data into the statewide land use dataset. The water management districts currently use the FSAID agricultural acres for water supply planning, though some perform their own volume calculations. FDEP BMAPs (including reports and BMAP updates) have different agricultural land use acres and calculations because these reports were adopted up to 15 years ago. Further, some of the more recently adopted BMAPs and models continue to use older datasets, so the agricultural acres identified in the BMAPs may not match the current agricultural acres that FDACS uses for analyses and BMP enrollment efforts.

BMP Program Enrollment Data

Each enrolled parcel ID is recorded on the NOI form as a condition of enrollment. Data from each completed and signed NOI and BMP checklist, including the parcel IDs, is entered into the Best Management Practices Tracking System database (BMPTS2). On a monthly basis, the BMPTS2 enrolled parcel data is mapped using the DOR annual statewide GIS parcel data. The mapped enrolled parcel data is used to identify overall BMP enrollment statewide and within adopted BMAP areas, which are also compared to the latest FSAID agricultural land use data.[20]

Limitations of Enrollment Data

FSAID Data Limitations

Constant fluctuations in agricultural land use make it difficult to compare previous year data to current year data. Consequently, an agricultural acreage comparison to last year's report is not provided in this report.

Parcel Data Limitations

Parcel IDs and parcel geometry change every year and introduce challenges when trying to map NOIs. FDACS staff uses the most up-to-date parcel information available on the relevant county property appraiser website to enroll new landowners or producers in the BMP Program and to verify details about the parcels that are currently enrolled (e.g., owner information, parcel number, parcel acreage, etc.). Parcel information available on a county property appraiser's website does not include GIS data for mapping purposes. Enrollments are mapped spatially using parcel data from each county that is submitted to the Florida Department of Revenue (FDOR) and compiled in GIS once per year by FDACS GIS staff. Therefore, information contained in this dataset may be outdated compared to information on the 67 property appraisers' websites during the time of enrollment.

Market Fluctuations

The dynamic nature of Florida's agricultural industry creates challenges with comparing agricultural acres and BMP Program enrollment numbers from year to year. For example, the number of NOIs and the number of acres enrolled in the BMP Program fluctuate when parcels are sold, leases are terminated, production areas decrease, or production ceases. When crop types or commodities on a specific parcel change, additional NOIs may be required if the crop or commodity falls under a different BMP manual. New commodities may also result in a reduction or increase in the acreage enrolled in the BMP Program.

Data Management

OAWP continues to analyze best management practices for spatial data accuracy, integrity, accessibility, and integration to support reporting and program management. In 2023, staff began evaluating the existing database (BMPTS2) architecture to inform the spatially enhanced redesign of BMP data collection. OAWP is developing digitally enabled forms to collect program information and improve record-keeping processes and will be phasing out physical paperwork. Process refinements include spatializing data to accommodate visualization for prioritization of staff workload, analysis, and reporting. The GIS Services Group (GSG) will continue phased development, testing, and implementing spatial systems within FDACS enterprise GIS.

20. Acreage figures are rounded for reporting purposes. GIS boundary data for BMAP areas is provided by FDEP.

Appendix III: Land Use Characterization

Unenrolled Agricultural Lands Characterization

Overview:
In an FDEP-adopted BMAP, agricultural landowners are required to either enroll in the appropriate FDACS BMP Program and implement applicable BMPs or conduct water quality monitoring prescribed by FDEP or a water management district (WMD). FDACS endeavors to get 100 percent of the enrollable agricultural acres into the appropriate BMP Program by evaluating statewide agricultural land use data using parcel level datasets containing owner information, addresses, and other details at a more granular scale.

Examining statewide agricultural lands at the parcel level provides insight into the challenge of meeting the 100 percent enrollment goal. FDACS identifies parcels that are unlikely to have agricultural activity, either via aerial review, or by classifications within the data, such as parcels that do not have an agricultural tax valuation. In addition, FDACS identifies parcels that require further evaluation, such as those that have agricultural activity intended solely for personal use ancillary to a residence, those that do not have an agricultural land use as determined by the property appraiser, as well as parcels where there is no current activity to enroll.

To monitor progress and allocate staff resources, FDACS analyzes unenrolled agricultural lands annually for all BMAPs and the results are summarized in FDACS's report to the legislature on statewide BMP implementation. Results of these analyses inform staffing and budget requests as well as FDACS's discussions related to inactive operations, urban agriculture, rural homesteads, fallow agricultural lands and more. An unenrolled agricultural land analysis is also performed when FDEP is developing a new BMAP or updating an existing BMAP, and a summary is included in the BMAP's Agriculture Appendix. FDACS continues to work with DEP so that BMAP iterations utilize the analysis results to supplement decisions made when modeling land use, allocations, and load estimations. As FDACS performs this analysis on an annual basis, FDACS presents the unenrolled agricultural lands characterizations at BMAP stakeholder meetings and provides spatial coverages to FDEP for consideration as part of future BMAP iterations.

This Appendix:
- Describes how FDACS executes the unenrolled agricultural lands characterization
- Explains why the ability to implement agricultural BMPs under the OAWP BMP Program is limited or not possible for some of the lands
- Provides recommendations for how these lands should be considered by FDEP within BMAPs

Method:
The unenrolled agricultural lands are characterized at the parcel level using geographic information systems (GIS) software by overlaying FDEP's FL-SOLARIS database, WMD surface water restoration projects (if any), and the latest FL DOR Property Appraiser parcel data with the unenrolled agricultural lands. Based on the location of the unenrolled agricultural lands within these datasets, and using information such as aerials, property appraiser use codes, land use descriptions, agricultural tax valuations, and owner names, FDACS determines if there is agricultural activity and if a parcel is enrollable within the purview of an existing BMP manual. Parcel characterization can be grouped into 4 main bins suggested by DEP:

- Forestry/aquaculture
- Not agricultural land
- Not currently enrollable
- Enrollable agricultural lands

The next section provides details regarding the FDACS characterization categories and DEP bins. **Table 8** provides a summary of the categories and bins.

Bins:

Timberland (Forestry) /Aquaculture
Unenrolled agricultural lands located within parcels that have a land-use designation of Aquaculture or Timberland may be agriculture although that cannot be determined based solely on remote data review. Only site-specific review by FDACS can determine whether the agricultural activity is enrollable in FDACS's Aquaculture BMP Program, Forestry BMP Program or one of the OAWP BMP Programs. Lands covered by FDACS's Aquaculture BMP or Forestry BMP are not included as enrollable in OAWP's BMPs for purposes of the BMAP because they are addressed by the BMPs of other FDACS programs.

Not Agriculture
Unenrolled agricultural lands located within parcels that meet the criteria listed below should not be considered as agriculture and should be removed from the acreages and nutrient loads assigned to agriculture within a BMAP. Any incidental parcels that meet the criteria below but do contain agricultural activity are still subject to the requirements of law and FDACS will pursue enrollment.

DOR Use Code 70-98: Parcels that have a use code of 70-98 are associated with industrial or institutional use such as schools, mines, military lands, churches/cemeteries, rights of way, utilities, government entities, and similar uses. These parcels are not expected to be used for agriculture.

DOR Use Code 99: Parcels that have a use code of 99 have a land use description of "acreage not zoned agricultural – with or without extra features." These parcels are often vacant and have been found (through responses to the FDEP's mailout efforts) to not be utilized for agriculture.

Parcels without agricultural tax valuation and with a non-agricultural land use: The "Just Value of Land Classified Agricultural" indicates if a parcel is classified agricultural by the county property appraiser pursuant to s. 193.461, F.S. FDACS recognizes the criteria for a parcel to receive this valuation varies from county to county and that these valuations, like other property information, change rapidly. If the data shows a parcel has neither an agricultural tax valuation nor an agricultural land use, the parcel is not expected to be used for agriculture.

Parcels without agricultural tax valuation and with an agricultural land use: Sometimes there are parcels that the county property appraiser has not granted an agricultural valuation despite having assigned the parcel an agricultural land use. Analysis shows that there are not many of these cases and they typically consist of smaller acreage. Considering the nature and infrequent occurrence of this combination of parameters, these parcels are not expected to be used for agriculture.

SOLARIS: Parcels in the Florida State Owned Lands and Records Information System (FL-SOLARIS), developed and maintained by FDEP, are "owned, leased, rented, or otherwise occupied" by a state government entity and are not expected to be used for agriculture. FDACS actively seeks leasing information from FDEP, the WMDs, Florida Division of Management Services, and other government entities, and is working with the State Lands division to include standard language for BMAP requirements in future lease documents.

Water Management District Projects: Parcels within a state or WMD restoration or water storage project boundary, where the purpose is to restore, protect, and preserve the water resources, or to capture and redirect water to areas where it is needed most, are not expected to be used for agriculture.

Not Enrollable

Unenrolled agricultural lands located within parcels that meet the criteria listed below are likely agricultural in nature but are not enrollable in a current BMP manual for one reason or another. Many of the acreage types in this bin are not expected to be enrolled under current circumstances and should not count against the percent enrollment numbers. These unenrolled agricultural lands will be checked at the time of each BMAP evaluation, and possibly more frequently, to determine whether they should be placed in another bin or can be enrolled.

No Overlap: Unenrolled agricultural areas that do not overlap with the property appraiser parcel data. This lack of overlap is due to the space between parcels, delineation, and sometimes missing parcels. Given that enrollment is based on DOR owner information, OAWP cannot pursue enrollment if there is no parcel information available.

Slivers: A parcel that has only a small percentage of its total area identified as agricultural land is known as a "sliver." Slivers are produced when datasets such as land use and parcel boundaries are overlaid and due to small differences in geometry, the resulting spatial boundaries do not align precisely. Slivers are not enrollable because they are an artifact of the geospatial analysis and do not represent lands with active agricultural practices. These acreages are not expected to be enrolled and should not count against the percent enrollment numbers.

Tribal Lands: Sovereign lands under tribal ownership with agricultural activities are not subject to the requirements of Section 403.067, F.S., or other state requirements. Agricultural lands under tribal ownership are not required to enroll or monitor water quality, and the acreages and nutrient loading are recognized to be beyond the authority of current programs within a BMAP. These acreages are not expected to be enrolled and should not count against the percent enrollment numbers.

Parcels with an agricultural tax valuation and with a non-agricultural land use: Unenrolled agricultural lands within a parcel that the county property appraiser has granted an agricultural tax valuation despite having assigned the parcel a non-agricultural land use. Parcels that fall within the "Timber/Aquaculture" or "Not Agriculture" bin are removed from unenrolled agricultural lands prior to evaluation for this category. The typical non-agricultural land use categories that have an agricultural tax valuation are residential categories such as single family, mobile homes, miscellaneous residential, multi-family, or vacant residential. FDACS does not expect these parcels to be used for agriculture. These acreages are not expected to be enrolled and should not count against the percent enrollment numbers.

Agriculture

Parcels with agricultural tax valuation and have an agricultural land use: The "Just Value of Land Classified Agricultural" indicates if a parcel is classified agricultural by the county property appraiser pursuant to s. 193.461, F.S. FDACS recognizes the criteria for a parcel to receive this valuation varies from county to county and that these valuations, like other property information, change rapidly. However, if DOR data indicate that the county property appraiser has granted a parcel this valuation and assigned the parcel an agricultural land use, FDACS considers the parcel agriculture.

Table 8. FDACS Categories and DEP Bins

Category	Ag Yes or No	BMAP Action	DEP Bin
Aquaculture	Yes	Handle loads separately. Include Aquaculture narrative in BMAP.	Timberland/ Aquaculture
Timberland (Forestry)	Yes	Handle loads separately. Include Timberland/ Forestry narrative in BMAP.	
DOR Use Code 70-98	No	Reassign acreages and nutrient loads.	Not Agriculture
DOR Use Code 99	No	Reassign acreages and nutrient loads.	
Non-Agricultural Entities	No	Reassign acreages and nutrient loads.	
Agricultural tax valuation = No AND Parcel Land Use = Not Agriculture	No	Reassign acreages and nutrient loads.	
Agricultural tax valuation = No AND Parcel Land Use = Agriculture	No	Reassign acreages and nutrient loads.	
Within SOLARIS	No	Reassign acreages and nutrient loads.	
Within WMD Project	No	Reassign acreages and nutrient loads.	
No Overlap	Yes	Agriculture load. Include narrative in BMAP regarding enrollment limitations.	Not Enrollable
Sliver	Yes	Agriculture load. Include narrative in BMAP regarding enrollment limitations.	
Tribal Lands	Yes	Agriculture acreages and loads but handle separately. Include Tribal Lands narrative in BMAP.	
Agricultural tax valuation = Yes and Parcel Land Use = Not Agriculture	TBD	Initially included as agriculture load. Include narrative in BMAP regarding enrollment limitations. FDACS will provide list to DEP for consideration of exclusion loads and acreages at the time of next BMAP update.	
Remaining Agricultural Lands (Ag tax valuation = Yes AND Parcel Land Use = Ag)	Yes	Agriculture load.	Agriculture

Appendix IV: Research and Demonstration Projects

FDACS funds research projects to provide the scientific and technical basis for the OAWP BMP Program, to investigate new, innovative practices, and to demonstrate practices that improve nutrient use efficiencies. Funding priorities for 2024 were:

- Expanding the use of soil moisture sensor technology to understand soil water, nitrogen, or phosphorus movement within or below the crop root zone.
- Developing decision support tools for selecting appropriate BMPs that incorporate economic and environmental factors.
- Determining soil health impacts on water quality and/or water conservation.
- Cover crop research related to water quality and/or water conservation and impacts on subsequent cash crops.
- Evaluating water quality and/or water conservation impacts associated with rotational cropping or integrated crop and livestock operations.
- Assessing nutrient and/or water conservation improvement through capture and reuse of drainage water
- Comparing nitrogen or phosphorous movement and/or water conservation between irrigation drain tile, subsurface drip, and conventional seepage irrigation.
- Understanding controlled release fertilizer use in plasticulture.

Florida law requires OAWP to prepare research plans and legislative budget requests to support projects each year.[21] Research conducted in support of the BMP Program has demonstrated reduced nitrogen fertilizer inputs when using precision agriculture technologies such as fertilizer banding equipment, and variable rate irrigation, and by applying the right nutrients at the right time based on plant growth stage. Decision support tools such as soil moisture sensors demonstrate improved irrigation efficiency and reduced nutrient loss to the environment. Research and demonstration projects are ongoing on the use of cover crops to build soil health and reduce fertilizer needs, the use of controlled release fertilizers to improve nutrient use efficiencies, integrating crop and livestock systems, and for the development of decision support tools and models to assist with site-specific guidance.

Results from research integrating grazing cattle and perennial grass into a crop rotation demonstrated improved soil health, increased crop yields, reduced nitrate leaching past the root zone, and reduced fertilizer and water needs. Studies in the Tri-County Agricultural Area and Suwannee River basin have also demonstrated that total fertilizer applications can be reduced using soil mapping, GPS, and banding equipment. These, and other study results point to the benefits of using precision agricultural methods to reduce nutrient applications and improve nutrient use efficiency. Past research project results and a summary of current projects can be found on the FDACS OAWP BMP Research website.

21. . FLA. STAT. § 403.067(7)(f) (2023)

In 2023, FDACS OAWP worked with a team from the University of Florida's Agricultural and Biological Engineering Department to develop a simple spreadsheet-based framework for describing experiments related to FDACS BMPs. The goal is to assist the research community with developing a long-term data resource that better supports specification of BMPs for Florida producers. By applying tools such as meta-analyses, simulation modeling and artificial intelligence to the multiple, harmonized dataset, we expect that recommended practices can be better matched to the needs of specific locations while allowing more rapid adaptation of BMPs as the physical environment and economic conditions evolve.

Publication No: FDACS-P-01924 Rev. 07/24