

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

### Status of Implementation of Agricultural Nonpoint Source Best Management Practices

July 1, 2019

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

### **EXECUTIVE SUMMARY**

Pursuant to state law, the Florida Department of Agriculture and Consumer Services (FDACS) Office of Agricultural Water Policy (OAWP) works with Florida's agricultural producers to adopt and implement best management practices (BMPs) for nutrient reduction, irrigation and water table management, and protection of water resources. This report presents data on the status of implementation of Florida's agricultural BMP program that is required to be provided annually pursuant to s. 403.0675(2), F.S. The report covers the status of BMP implementation statewide, as well as in areas covered by basin management action plans developed by the Florida Department of Environmental Protection.

- Approximately 54 percent of the agricultural acreage is enrolled in the FDACS BMP program (BMP program) statewide.
- Approximately 80 percent of the agricultural operations enrolled in the BMP program, comprising almost 86 percent of the enrolled agricultural acreage, provided responses to surveys regarding the status of implementation of common BMPs.
- More than 3,400 implementation verification site visits were performed statewide out of approximately 11,000 Notices of Intent to Implement BMPs.
- Responses by those agricultural operations that participated in the survey indicated nearly universal compliance with common BMPs.
- The survey responses and additional data utilized during the development of this report informed OAWP of opportunities to improve and prioritize site visits for verification of BMP implementation, improve outreach to producers to increase BMP implementation, improve the prioritization of cost-share funding, and develop methodologies and tools to improve data accuracy and efficiency in gathering data for reporting purposes.
- OAWP continues working to improve data collection and analysis to ensure replicable procedures, accurate data, and meaningful reporting.

### INTRODUCTION

The Florida Department of Agriculture and Consumer Services (FDACS) Office of Agricultural Water Policy (OAWP) is pleased to submit this second annual report on the status of implementation of Florida's agricultural best management practices (BMPs) program. Agricultural water quality and quantity BMPs are an integral part of water resource protection. BMPs are practical measures that agricultural producers undertake to reduce the impacts of their fertilizer and water use and otherwise manage the landscape to further protect water resources. BMPs are developed using the best available science with economic and technical consideration and, in certain circumstances, can maintain or enhance agricultural productivity.

The Florida Legislature has emphasized the importance of BMPs in various statutes, including the 1999 Florida Watershed Restoration Act (FWRA).<sup>1</sup> Under the FWRA, the Florida Department of Environmental Protection (FDEP) establishes water quality targets for impaired waters, known as total maximum daily loads (TMDLs). FDEP then develops and adopts basin management action plans (BMAPs), which are the blueprints for restoring impaired waters to meet TMDLs. As of June 2019, 34 BMAPS have been adopted, and three BMAPs are pending due to legal challenges.

The FWRA directed FDACS to work cooperatively with agricultural producers and other stakeholders to develop, adopt, and implement BMPs to address agricultural nonpoint source water quality concerns.<sup>2</sup> FDACS has adopted nine BMP manuals that cover nearly all major agricultural commodities in Florida. Two additional manuals are under development. Adopted BMPs are initially verified by FDEP<sup>3</sup> before being codified in Title 5M, F.A.C.

When the FDACS BMP program (BMP program) was initially established in 1999, agricultural producer participation was voluntary. In 2005, the Florida Legislature modified the law to require agricultural producers to either implement BMPs or conduct water quality monitoring prescribed by FDEP to demonstrate compliance with water quality standards within BMAP areas.

Producers implementing BMPs receive a presumption of compliance with state water quality standards for the pollutants addressed by the BMPs.<sup>4</sup> Additionally, producers who enroll in the BMP program become eligible for technical assistance and cost-share funding for BMP implementation.

To enroll in the BMP program, producers must meet with OAWP to determine the BMPs that are applicable to their operation and submit a Notice of Intent to Implement the BMPs (NOI) to OAWP, along with the BMP checklist from the applicable BMP manual.

<sup>&</sup>lt;sup>1</sup> Section 403.067, F.S.

<sup>&</sup>lt;sup>2</sup> Section 403.067(7)(c)2., F.S.

<sup>&</sup>lt;sup>3</sup> Section 403.067(7)(c)3., F.S.

<sup>&</sup>lt;sup>4</sup> Id.

Because many agricultural operations are diverse and are engaged in the production of multiple commodities, a landowner may sign multiple NOIs for a single parcel.

The process of enrolling producers in the BMP program is a staff-intensive process that typically requires two or more site visits, an evaluation of production activity and resource concerns, documentation of parcel information, mapping, and data entry. It can take several weeks to complete a single enrollment depending on the intensity of the agricultural operation, the requirements of the applicable BMAP, the size and number of parcels in a producer's operation, the producer's resources to implement BMPs, and the assistance or training needed by the producer to implement BMPs. To achieve the most benefits to water resources, OAWP has focused BMP program enrollment efforts on higher intensity agricultural operations, such as nurseries, and on larger parcels that are greater than 50 acres. Of the larger parcels, the focus is on irrigated acreages, rather than less intensive non-irrigated acreages.

#### Verification of BMP Implementation

FDACS is required to verify that producers are implementing BMPs identified in their NOIs. Procedures used to verify the implementation of agricultural BMPs are outlined in Rule 5M-1.008, F.A.C. BMP implementation is verified using annual status report surveys submitted by producers enrolled in the BMP program and site visits by OAWP. Producers not implementing BMPs according to the process outlined in Title 5M-1, F.A.C., are referred to FDEP for enforcement action after attempts at remedial action are exhausted.

#### BMP Implementation Reports

In 2016, the Florida Legislature required FDACS to begin submitting annual reports on the status of BMP implementation and verification of BMP implementation.<sup>5</sup> Because of the diversity of agricultural production and water resources across the state, OAWP has been working to ensure the reporting is based on an accurate and consistent statewide dataset.

### METHODOLOGY

This 2019 report represents data collected June 1, 2018 to April 30, 2019.

The information in this report is generated using several data sources, including responses to survey questions regarding the status of implementing BMPs, Geographic Information System (GIS) mapping data, and additional information collected by OAWP during field visits with enrolled producers. The data is used to calculate the agricultural acreage where the status of BMP implementation has been reported, along with the corresponding number of NOIs that exist for the acreage.

<sup>&</sup>lt;sup>5</sup> Section 403.0675(2), F.S.

#### Land Use Mapping and Enrollment Tracking

The agricultural acreages presented in this report are based on the land use classification and mapping efforts associated with the Florida Statewide Agricultural Irrigation Demand (FSAID) dataset. Ongoing mapping and ground-truthing efforts of the FSAID dataset provide the best available data on the status of irrigated and non-irrigated agricultural lands in Florida. The statewide agricultural acreage and enrolled agricultural acreage vary year to year due to the dynamic nature of the industry and improved data analysis techniques. The FSAID report provides statewide trends in agricultural land uses. The trends reported include increases in irrigated agricultural lands in north Florida and a decrease in overall agricultural acres statewide. This trend is projected to continue over the next two decades.<sup>6</sup>

Specific FSAID data accuracy improvements from ground-truthing efforts, such as removal of approximately 63,000 acres of the Avon Park Bombing Range in the Lake Okeechobee BMAP area, can significantly impact the amount of enrolled acreage as well as overall agricultural acreage. While some of the federal lands are leased for cattle grazing, the non-grazing portions used for military purposes should not have been designated agricultural nor included in the initial reporting.

BMP enrollment data are based on county property appraiser parcels. NOIs for enrolled acreage fluctuate when parcels are sold, when leases are lost, or when production areas decrease or production ceases, among other reasons. When crop types on a specific parcel change, additional NOIs may be required for any new commodities being produced on the parcel, which may result in a reduction in enrolled acreage.

#### BMP Enrollment Data

Enrollment data are collected in the field by OAWP based on the adopted NOI forms and BMP checklists. This information is entered into the Best Management Practices Tracking System (BMPTS2). On a quarterly basis, the BMPTS2 enrolled parcel data are mapped using the Department of Revenue's annual statewide GIS parcel data. The mapped enrolled parcel data are used to identify the enrollment within adopted BMAP areas, which are also compared to the latest FSAID agricultural land use data. Acres are rounded for reporting purposes. GIS boundary data for BMAP areas are provided by FDEP.

#### Common Practices Status Report

An annual status report survey is provided to all enrolled producers to complete and submit online, or it is completed with assistance from OAWP. The survey is included in

<sup>&</sup>lt;sup>6</sup> The Balmoral Group, 2018 FSAID Report, Florida Statewide Agricultural Irrigation Demand Estimated Agricultural Water Demand, 2016-2040. Available from

https://www.freshfromflorida.com/Business-Services/Water/Agricultural-Water-Supply-Planning.

this report. Responses to individual NOIs are integrated with spatial data in GIS to obtain acreage information for this annual report.

#### Composite Score

The status report scores are calculated based on the data entered by OAWP or producers into BMPTS2. Each NOI is evaluated individually. Each answer of In Use/Planned counts toward the score (one point in each of the numerator and denominator). Each answer of N/A does not count to either the numerator or the denominator. Each answer of No does not count toward the score (zero points to the numerator and one point to the denominator). The total numerator is then divided by the total denominator to get the percent score. Each NOI receives four scores, a total score (all the questions) and one for each of the question in the different practice categories, nutrient management, irrigation management, and water resource protection. In each category the total numerator is divided by the total denominator.

The scores for the BMAP areas are compiled the same way as the score for an individual NOI. The numerator for each NOI is totaled for the BMAP and it is divided by the total denominator for all the NOIs in the BMAP. This is done for each of the four scores: total, nutrient management, irrigation management, and water resource protection. The same method is repeated to get the statewide numbers using all NOIs in the state.

#### Site Visits

Site visits are conducted to determine the status of implementation and to verify that cost-share items are in good working order and being implemented correctly. OAWP verifies that all BMPs are being implemented correctly and reviews nutrient and irrigation management records. Site visits are prioritized based on criteria including the date the NOI was signed, date of the last site visit, whether a status report has been completed or not, the composite scores calculated for each category, and whether the operation has received cost share funding.

#### Limitation of Data

It is important to note that the statewide acreage summary includes data from NOIs both inside and outside of BMAP areas. Further, many producers have more than one NOI because they are implementing BMPs from more than one BMP manual and data were not collected on the number of acres for each separate commodity. Where NOIs are in more than one BMAP area, there is also some duplication of responses that results in NOI totals being greater than the statewide response count.

### RESULTS

Currently, 54 percent of the agricultural acres identified in FSAID5 are enrolled in the BMP program under the various manuals. Of the agricultural operations enrolled in the BMP program, nearly 80 percent reported on their status of implementing BMPs, comprising almost 86 percent of the enrolled agricultural acres and about 47 percent of

the total agricultural acres statewide (Table 1). More than 3,400 implementation verification site visits were performed statewide out of approximately 11,000 NOIs.

### Table 1. Status of Statewide BMP Implementation Based on Survey Responsesfrom Enrolled Producers

Statewide Metric	Value
FSAID5 agricultural acres (rounded)	6,835,094
Total number of agricultural acres enrolled in the BMP Program	3,714,922
Total enrolled agricultural acres represented in survey responses	3,144,146
Total number of enrollments (NOIs)	11,876
Total number of NOIs represented in survey responses	9,379

Table 2 provides a summary of the status of implementation within each BMAP boundary. A one-page summary is also provided for each adopted and pending BMAP area in Florida. This information is also available at https://www.freshfromflorida.com/Divisions-Offices/Agricultural-Water-Policy.

Rates of enrollment and reporting vary by geographic area. This is due to several factors including whether a BMAP is adopted, the date that a BMAP was adopted, size of individual parcels within a BMAP or geographic area, types of commodities being produced, and amount of fallow or grazed lands. OAWP utilizes and continues to refine policies for prioritizing enrollment and implementation verification efforts. As a result, enrollment in the BMP program has been steadily increasing in recent years, especially within areas with an adopted TMDL or BMAP.

#### Table 2. Status of BMP Implementation Within Adopted and Pending BMAP Boundaries

Basin Management Action Plan	Year Adopted	Status of Implementation of BMPs	Percentage of FSAID5	Enrollments (NOIs)		Repres Implen Statu	sented in nentation us Data
Alea		Composite Score	Enrolled	Number	Total Ag Acres (FSAID5)	Number of NOIs	Ag Acres (FSAID5)
Statewide (includes areas not in BMAPs)	N/A	99.3	54	11,876	3,714,922	9,379	3,144,146
Alafia River Basin	2014	99.8	52	106	5,130	91	4,774
Caloosahatchee Estuary Basin	2012	97.2	57	46	20,624	26	15,309
Central Indian River Lagoon	2013	99.1	50	208	84,045	170	68,928
* Chassahowitzka-Homosassa Springs	2019	98.3	34	105	13,108	92	12,253
DeLeon Springs	2019	97.2	22	38	2,480	25	1,908
Everglades West Coast Basin	2012	98.4	49	17	5,392	9	4,970
Gemini Springs	2019	97.8	28	7	226	5	212
Hillsborough River	2009	98.8	52	58	7,038	49	6,880
Jackson Blue Spring	2016	99.5	61	206	25,340	192	24,300
Kings Bay & Crystal River Springs	2019	99.7	21	27	2,653	23	2,564
Lake Harney, Lake Monroe, Middle St. Johns River, Smith Canal	2012	98.4	30	29	5,374	17	2,162
Lake Jesup	2010	98.1	54	46	2,950	33	2,541
Lake Okeechobee Basin	2014	99.5	76	2,327	1,293,796	1,986	1,129,848
* Long Branch	2008	Not Reported	42	1	195	0	0
Lower St. Johns River Basin Mainstem	2008	97.9	42	256	55,082	122	26,807
*Lower St. Johns River Basin Tributaries I	2009	Not Reported	78	1	51	0	0
*Lower St. Johns River Basin Tributaries II	2010	Not Reported	43	4	407	1	0
Manatee River Basin	2014	99.0	69	5	948	4	948
Middle & Lower Suwannee River Basin	Challenged	99.6	50	1,079	180,901	976	159,759
North Indian River Lagoon	2013	90.1	4	19	287	10	173
Orange Creek	2008	98.3	31	176	18,246	86	10,264
Rainbow Springs and Rainbow Run	2015	99.9	40	325	68,761	260	39,505
Santa Fe River Basin	2012	99.0	43	709	94,075	484	62,109
Silver Springs Group & Silver River	2015	98.8	19	295	25,237	167	13,211
St. Lucie River and Estuary Basin	2013	98.6	62	302	163,751	258	147,609
Upper Ocklawaha River Basin	2007	98.6	18	350	16,370	174	11,612
Upper Wakulla River & Wakulla Springs	2015	99.8	27	86	15,470	72	11,233
Volusia Blue Springshed	Challenged	88.4	3	6	76	4	65
Wacissa Springs	2019	100	29	58	15,755	54	14,843
Weeki Wachee Springs & River	2019	99.7	47	88	20,607	73	17,159
Wekiva River, Rock Spgs Run, Little Wekiva Canal	2015	95.9	18	311	8,597	128	5,687
Wekiwa Springs	Challenged	96.0	24	194	4,431	84	3,019

\*Not included to prevent disclosure of confidential information. Note: No reports are included for the Bayou Chico or Banana River Lagoon BMAPs as there are no mapped agricultural operations in those areas.

### **NEXT STEPS**

OAWP is developing additional tools and methods to further facilitate ground truthing to help improve data accuracy and prioritize BMP implementation verification site visits and coordination with agricultural producers. As the data requirements and resource needs for the BMP program continue to evolve, the enrollment, reporting, and educational tools used by OAWP and producers will also continue to improve and become more refined to reflect current programmatic needs and legislative direction. OAWP is undertaking measures to improve data quality for reporting that include:

- Improving coordination with other producers, agencies, stakeholders, and legislative staff;
- Improving digital tools to complete enrollments and BMP implementation verification in the field;
- Updating and improving data management systems and processes; and
- Improving training resources and training frequency for staff and producers and training tools, to increase accuracy of data and consistency with reporting.

The utilization of cost-share funding has greatly enhanced the implementation of BMPs in prioritized areas that involve the implementation of innovative technologies and assist agricultural producers that face economic challenges in implementing BMPS. The information in this report informs OAWP efforts to continue improving the process of prioritizing projects for cost-share funding, tracking the use of cost-share funding, and enhancing data management systems and tools that improve efficiency and accuracy of BMP implementation and BMP implementation verification. Year to year comparisons of BMP program data will also assist OAWP with identifying areas that require increased enrollment efforts and resources.

OAWP is currently implementing several improvements to existing programs that will enhance the ability of the office to assess the success of the BMP and cost-share programs, as well as take the next steps in improving the ability of those programs to support the water and environmental goals of the state in cooperation with the agricultural stakeholders participating in those programs. Those improvements include:

- The re-examination of each BMP manual to achieve consistency in formatting, assess the veracity of each manual, and to examine and incorporate, where appropriate, current research results to improve the manual;
- Processes as part of budget development and contract management that will
  result in a more efficient and effective utilization of cost-share funds in prioritized
  areas for those projects and expenditures found to be most effective in achieving
  environmental priorities; and
- Undertaking targeted research projects, pursuant to the recommendations of the OAWP Research Committee and collaboration with other agency and stakeholder partners, that will address pressing research needs and further inform future updates of the BMP manuals and expenditure of cost-share funds.

#### Status of Each Adopted and Pending BMAP



Note: No reports are included for the Bayou Chico or Banana River Lagoon BMAPs as there are no mapped agricultural operations in those areas.

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

Enrollment and Response Summary	2018	Change from 2017
Total agricultural acres statewide	6,835,094	-249,708
Total agricultural acres enrolled	3,665,556	-83,775
Percentage of agricultural acres enrolled	54%	1%
Enrolled agricultural acres represented in implementation status reporting	3,144,146	73,219
Total irrigated acres	1,903,788	26,255
Total irrigated acres enrolled	1,454,839	47,522



#### Agricultural Acres in the BMAP

Agricultural Acres Enrolled in BMAP Areas		
BMP Manuals	Acres	
Citrus	486,269	
Conservation Plan Rule	178,475	
Cow/Calf	1,493,141	
Dairy	50,245	
Equine	9,507	
Fruit & nut	16,059	
Lake Okeechobee Protection Plan (LOPP)	55,523	
Multiple Commodities	310,885	
Nursery	32,816	
Poultry	200	
Row/Field Crops	1,002,056	
Sod	30,380	
TOTAL	3,665,556	

# Status of Implementation of Agricultural Best Management Practices (BMPs) in the Alafia River Basin (BMAP initially adopted 2014)



Agricultural Lands in BMAP Area



Enrolled Agricultural Lands in BMAP Area

Enrollment and Response Summary	2018	Change from 2017
Total agricultural acres in the BMAP	9,953	1,532
Total agricultural acres enrolled	5,130	1,504
Percentage of agricultural acres enrolled	52%	8%
Enrolled agricultural acres represented in implementation status reporting	4,774	1,884



Agricultural Acres Enrolled in BMAP Area		
BMP Manual	Acres	
Citrus	0	
Cow/Calf	1,249	
Equine	19	
Fruit & Nut	275	
Multiple Commodities	229	
Nursery	255	
Row/Field Crops	3,103	
Sod	0	
TOTAL	5,130	

#### Status of Implementation of Agricultural Best Management Practices (BMPs) in the Caloosahatchee Estuary Basin (BMAP initially adopted 2012)



Agricultural Lands in BMAP Area



Enrolled Agricultural Lands in BMAP Area

Enrollment and Response Summary	2018	Change from 2017
Total agricultural acres in the BMAP	36,257	-1,763
Total agricultural acres enrolled	20,624	12,394
Percentage of agricultural acres enrolled	57%	35%
Enrolled agricultural acres represented in implementation status reporting	15,309	7,136



Agricultural Acres Enrolled in BMAP Area		
BMP Manual	Acres	
Citrus	0	
Cow/Calf	7,460	
Equine	0	
Fruit and Nut	31	
Multiple Commodities	12,637	
Nursery	215	
Row/Field Crops	35	
Sod	246	
TOTAL	20,624	

# Status of Implementation of Agricultural Best Management Practices (BMPs) in the Central Indian River Lagoon (BMAP initially adopted 2013)



Agricultural Lands in BMAP Area

![](_page_13_Figure_3.jpeg)

Enrolled Agricultural Lands in BMAP Area

Enrollment and Response Summary	2018	Change from 2017
Total agricultural acres in the BMAP	167,229	32,615
Total agricultural acres enrolled	84,045	21,630
Percentage of agricultural acres enrolled	50%	4%
Enrolled agricultural acres represented in implementation status reporting	68,928	24,699

![](_page_13_Figure_6.jpeg)

Agricultural Acres Enrolled in BMAP Area		
BMP Manual	Acres	
Citrus	39,226	
Cow/Calf	23,263	
Dairy	5,311	
Equine	22	
LOPP	2,866	
Multiple Commodities	1,951	
Nursery	251	
Row/Field Crops	11,155	
TOTAL	84,045	

# Status of Implementation of Agricultural Best Management Practices (BMPs) in the Chassahowitzka-Homosassa Springs Basin (BMAP initially adopted 2019)

![](_page_14_Figure_1.jpeg)

Agricultural Lands in BMAP Area

![](_page_14_Figure_3.jpeg)

Enrolled Agricultural Lands in BMAP Area

Enrollment and Response Summary	2018	Change from 2017
Total agricultural acres in the BMAP	38,893	166
Total agricultural acres enrolled	13,108	4,941
Percentage of agricultural acres enrolled	34%	13%
Enrolled agricultural acres represented in implementation status reporting	12,253	6,686

![](_page_14_Figure_6.jpeg)

Agricultural Acres Enrolled in BMAP Area		
BMP Manual	Acres	
Citrus	866	
Cow/Calf	8,073	
Dairy	256	
Equine	20	
Fruit and Nut	534	
Multiple Commodities	1,161	
Nursery	811	
Row/Field Crops	1,387	
TOTAL	13,108	

#### Status of Implementation of Agricultural Best Management Practices (BMPs) in DeLeon Spring (BMAP initially adopted 2019)

![](_page_15_Figure_1.jpeg)

Agricultural Lands in BMAP Area

![](_page_15_Figure_3.jpeg)

Enrolled Agricultural Lands in BMAP Area

Enrollment and Response Summary	2018	Change from 2017
Total agricultural acres in the BMAP	11,072	610
Total agricultural acres enrolled	2,480	360
Percentage of agricultural acres enrolled	22%	2%
Enrolled agricultural acres represented in implementation status reporting	1,908	214

![](_page_15_Figure_6.jpeg)

Agricultural Acres Enrolled in BMAP Area		
BMP Manual Acres		
Citrus	116	
Cow/Calf	1,017	
Equine	166	
Fruit & Nut	0	
Multiple Commodities	0	
Nursery	1,162	
Row/Field Crops	19	
Sod	0	
TOTAL	2,480	

#### Status of Implementation of Agricultural Best Management Practices (BMPs) in Everglades West Coast (BMAP initially adopted 2012)

![](_page_16_Figure_1.jpeg)

Agricultural Lands in BMAP Area

![](_page_16_Figure_3.jpeg)

Enrolled Agricultural Lands in BMAP Area

0

5,392

Enrollment and Response Summary	2018	Change from 2017
Total agricultural acres in the BMAP	11,075	1,153
Total agricultural acres enrolled	5,392	403
Percentage of agricultural acres enrolled	49%	4%
Enrolled agricultural acres represented in implementation status reporting	4,970	271

![](_page_16_Figure_6.jpeg)

Agricultural Acres Enrolled in BMAP Area	
BMP Manual	Acres
Citrus	815
Cow/Calf	69
Equine	0
Fruit & Nut	0
Multiple Commodities	97
Nursery	55
Row/Field Crops	4,356
Sod	0

TOTAL

# Status of Implementation of Agricultural Best Management Practices (BMPs) in Gemini Springs Basin (BMAP initially adopted 2019)

![](_page_17_Figure_1.jpeg)

Agricultural Lands in BMAP Area

![](_page_17_Figure_3.jpeg)

Enrolled Agricultural Lands in BMAP Area

Enrollment and Response Summary	2018	Change from 2017
Total agricultural acres in the BMAP	793	-12%
Total agricultural acres enrolled	226	17
Percentage of agricultural acres enrolled	28%	3%
Enrolled agricultural acres represented in implementation status reporting	212	212

![](_page_17_Figure_6.jpeg)

Agricultural Acres Enrolled in BMAP Area		
BMP Manual	Acres	
Citrus	5	
Cow/Calf	191	
Equine	0	
Fruit & Nut	0	
Multiple Commodities	0	
Nursery	30	
Row/Field Crops	0	
Sod	0	
TOTAL	226	

18

# Status of Implementation of Agricultural Best Management Practices (BMPs) in the Hillsborough River Basin (BMAP initially adopted 2009)

![](_page_18_Figure_1.jpeg)

Agricultural Lands in BMAP Area

![](_page_18_Figure_3.jpeg)

Enrolled Agricultural Lands in BMAP Area

Enrollment and Response Summary	2018	Change from 2017
Total agricultural acres in the BMAP	13,664	-1,674
Total agricultural acres enrolled	7,038	-1,908
Percentage of agricultural acres enrolled	52%	-7%
Enrolled agricultural acres represented in implementation status reporting	6,880	-1,970

![](_page_18_Figure_6.jpeg)

Agricultural Acres Enrolled in BMAP Area		
BMP Manual	Acres	
Citrus	1	
Cow/Calf	5,995	
Equine 7		
Fruit & Nut 7		
Multiple Commodities 232		
Nursery 28		
Row/Field Crops 768		
Sod	0	
TOTAL	7,038	

# Status of Implementation of Agricultural Best Management Practices (BMPs) in the Jackson Blue Springs Basin (BMAP initially adopted 2016)

![](_page_19_Figure_1.jpeg)

Agricultural Lands in BMAP Area

![](_page_19_Figure_3.jpeg)

Enrolled Agricultural Lands in BMAP Area

Enrollment and Response Summary	2018	Change from 2017
Total agricultural acres in the BMAP	41,208	13,070
Total agricultural acres enrolled	25,340	9,439
Percentage of agricultural acres enrolled	61%	5%
Enrolled agricultural acres represented in implementation status reporting	24,300	14,840

![](_page_19_Figure_6.jpeg)

Agricultural Acres Enrolled in BMAP Area		
BMP Manual Acres		
Citrus	0	
Cow/Calf	2,197	
Equine	0	
Fruit & Nut	0	
Multiple Commodities	2,673	
Nursery	0	
Row/Field Crops	20,470	
Sod	0	
TOTAL	25,340	

# Status of Implementation of Agricultural Best Management Practices (BMPs) in the Kings Bay & Crystal River Springs Basin (BMAP initially adopted 2019)

![](_page_20_Figure_1.jpeg)

Agricultural Lands in BMAP Area

![](_page_20_Figure_3.jpeg)

Enrolled Agricultural Lands in BMAP Area

Enrollment and Response Summary	2018	Change from 2017
Total agricultural acres in the BMAP	12,636	577
Total agricultural acres enrolled	2,653	1,708
Percentage of agricultural acres enrolled	21%	13%
Enrolled agricultural acres represented in implementation status reporting	2,564	1,626

![](_page_20_Figure_6.jpeg)

Agricultural Acres Enrolled in BMAP Area		
BMP Manual	Acres	
Citrus	0	
Cow/Calf	1,964	
Equine	0	
Fruit & Nut	0	
Multiple Commodities	289	
Nursery	0	
Row/Field Crops	400	
Sod	0	
TOTAL	2,653	

#### Status of Implementation of Agricultural Best Management Practices (BMPs) in Lake Harney, Lake Monroe, Middle St. Johns River, and Smith Canal Basin (BMAP initially adopted 2012)

![](_page_21_Figure_1.jpeg)

Agricultural Lands in BMAP Area

![](_page_21_Figure_3.jpeg)

Enrolled Agricultural Lands in BMAP Area

Enrollment and Response Summary	2018	Change from 2017
Total agricultural acres in the BMAP	17,667	-2,742
Total agricultural acres enrolled	5,374	-290
Percentage of agricultural acres enrolled	30%	3%
Enrolled agricultural acres represented in implementation status reporting	2,162	376

![](_page_21_Figure_6.jpeg)

Agricultural Acres Enrolled in BMAP Area		
BMP Manual	Acres	
Citrus	198	
Cow/Calf	4,930	
Equine	7	
Fruit & Nut	0	
Multiple Commodities	0	
Nursery	239	
Row/Field Crops	0	
Sod	0	
TOTAL	5,374	

# Status of Implementation of Agricultural Best Management Practices (BMPs) in the Lake Jesup Basin (BMAP initially adopted 2010)

![](_page_22_Figure_1.jpeg)

Agricultural Lands in BMAP Area

![](_page_22_Figure_3.jpeg)

Enrolled Agricultural Lands in BMAP Area

Enrollment and Response Summary	2018	Change from 2017
Total agricultural acres in the BMAP	5,509	-31
Total agricultural acres enrolled	2,950	552
Percentage of agricultural acres enrolled	54%	10%
Enrolled agricultural acres represented in implementation status reporting	2,541	1,662

![](_page_22_Figure_6.jpeg)

Agricultural Acres Enrolled in BMAP Area		
BMP Manual	Acres	
Citrus	230	
Cow/Calf	1,747	
Equine	12	
Multiple Commodities	39	
Nursery	691	
Row/Field Crops	24	
Sod	207	
TOTAL	2,950	

### Status of Implementation of Agricultural Best Management Practices (BMPs) in the Lake Okeechobee Basin (BMAP initially adopted 2014)

![](_page_23_Figure_1.jpeg)

Agricultural Lands in BMAP Area

![](_page_23_Figure_3.jpeg)

Enrolled Agricultural Lands in BMAP Area

Enrollment and Response Summary	2018	Change from 2017*
Total agricultural acres in the BMAP	1,672,215	-46,234
Total agricultural acres enrolled	1,279,105	-76,901
Percentage of agricultural acres enrolled	76%	-3%
Enrolled agricultural acres represented in implementation status reporting	1,129,848	-1,097

\*Approximately 63,000 non-agricultural acres of the Avon Park Bombing Range were included in the initial reporting and have now been removed.

![](_page_23_Figure_7.jpeg)

Agricultural Acres Enrolled in BMAP Area		
BMP Manual	Acres	
Citrus	123,879	
Conservation Plan	137,964	
Cow/Calf	500,096	
Dairy	17,012	
Equine	457	
Fruit & Nut	847	
LOPP	47,577	
Multiple Commodities	46,204	
Nursery	4,112	
Poultry	39	
Row/Field Crops	386,024	
Sod	14,894	
TOTAL	1,279,105	

Status of Implementation of BMPs values do not include NOIs operating under South Florida Water Management District (SFWMD) permits within the EAA/C139 basins. For those NOIs, SFWMD reports that none of the permittees have been determined to be out of compliance with their permits. (Personal communication, June 28, 2019).

# Status of Implementation of Agricultural Best Management Practices (BMPs) in the Long Branch Basin (BMAP initially adopted 2008)

![](_page_24_Figure_1.jpeg)

Agricultural Lands in BMAP Area

![](_page_24_Figure_3.jpeg)

Enrolled Agricultural Lands in BMAP Area

Enrollment and Response Summary	2018	Change from 2017
Total agricultural acres in the BMAP	469	-21
Total agricultural acres enrolled	195	0
Percentage of agricultural acres enrolled	42%	2%
Enrolled agricultural acres represented in implementation status reporting	0	0

![](_page_24_Figure_6.jpeg)

Agricultural Acres Enrolled in BMAP Area		
BMP Manual	Acres	
Citrus	0	
Cow/Calf	195	
Equine	0	
Fruit & Nut	0	
Multiple Commodities	0	
Nursery	0	
Row/Field Crops	0	
Sod	0	
TOTAL	195	

Status of Implementation of Agricultural Best Management Practices (BMPs) in the Lower St. Johns River Basin – Main Stem (BMAP initially adopted 2008)

![](_page_25_Figure_1.jpeg)

Agricultural Lands in BMAP Area

![](_page_25_Figure_3.jpeg)

Enrolled Agricultural Lands in BMAP Area

Enrollment and Response Summary	2018	Change from 2017
Total agricultural acres in the BMAP	130,632	-4,961
Total agricultural acres enrolled	54,271	-3,321
Percentage of agricultural acres enrolled	42%	0%
Enrolled agricultural acres represented in implementation status reporting	26,807	-5,705

![](_page_25_Figure_6.jpeg)

Agricultural Acres Enrolled in BMAP Area		
BMP Manual	Acres	
Citrus	94	
Cow/Calf	20,318	
Equine	83	
Fruit & Nut	243	
Multiple Commodities	3,066	
Nursery	2,465	
Row/Field Crops	25,330	
Sod	2,672	
TOTAL	54,271	

### Status of Implementation of Agricultural Best Management Practices (BMPs) in the Lower St. Johns River Basin – Tributaries I (BMAP initially adopted 2009)

![](_page_26_Figure_1.jpeg)

Agricultural Lands in BMAP Area

![](_page_26_Figure_3.jpeg)

Enrolled Agricultural Lands in BMAP Area

Enrollment and Response Summary	2018	Change from 2017
Total agricultural acres in the BMAP	65	0
Total agricultural acres enrolled	51	0
Percentage of agricultural acres enrolled	78%	0%
Enrolled agricultural acres represented in implementation status reporting	0	0

![](_page_26_Figure_6.jpeg)

Agricultural Acres Enrolled in BMAP Area		
BMP Manual	Acres	
Citrus	0	
Cow/Calf	51	
Equine	0	
Fruit & Nut	0	
Multiple Commodities	0	
Nursery	0	
Row/Field Crops	0	
Sod	0	
TOTAL	51	

# Status of Implementation of Agricultural Best Management Practices (BMPs) in the Lower St. Johns River Basin – Tributaries II (BMAP initially adopted 2010)

![](_page_27_Figure_1.jpeg)

Agricultural Lands in BMAP Area

![](_page_27_Figure_3.jpeg)

Enrolled Agricultural Lands in BMAP Area

Enrollment and Response Summary	2018	Change from 2017
Total agricultural acres in the BMAP	953	40
Total agricultural acres enrolled	407	-1
Percentage of agricultural acres enrolled	43%	-2%
Enrolled agricultural acres represented in implementation status reporting	0	-408

![](_page_27_Figure_6.jpeg)

Agricultural Acres Enrolled in BMAP Area		
BMP Manual	Acres	
Citrus	0	
Cow/Calf	112	
Equine	0	
Fruit & Nut	0	
Multiple Commodities	272	
Nursery	0	
Row/Field Crops	23	
Sod	0	
TOTAL	407	

# Status of Implementation of Agricultural Best Management Practices (BMPs) in the Manatee River Basin (BMAP initially adopted 2014)

![](_page_28_Figure_1.jpeg)

Agricultural Lands in BMAP Area

![](_page_28_Figure_3.jpeg)

Enrolled Agricultural Lands in BMAP Area

Enrollment and Response Summary	2018	Change from 2017
Total agricultural acres in the BMAP	1,380	114
Total agricultural acres enrolled	948	289
Percentage of agricultural acres enrolled	69%	17%
Enrolled agricultural acres represented in implementation status reporting	948	289

![](_page_28_Figure_6.jpeg)

Agricultural Acres Enrolled in BMAP Area		
BMP Manual	Acres	
Citrus	0	
Cow/Calf	357	
Equine	0	
Fruit & Nut	0	
Multiple Commodities	476	
Nursery	0	
Row/Field Crops	115	
Sod	0	
TOTAL	948	

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

![](_page_29_Figure_1.jpeg)

Agricultural Lands in BMAP Area

![](_page_29_Figure_3.jpeg)

Enrolled Agricultural Lands in BMAP Area

Enrollment and Response Summary	2018	Change from 2017
Total agricultural acres in the BMAP	362,548	29,927
Total agricultural acres enrolled	180,901	22,749
Percentage of agricultural acres enrolled	50 <b>%</b>	2%
Enrolled agricultural acres represented in implementation status reporting	159,759	43,719

![](_page_29_Figure_6.jpeg)

Agricultural Acres Enrolled in BMAP Area		
BMP Manual	Acres	
Citrus	0	
Cow/Calf	25,328	
Dairy	20,193	
Equine	36	
Fruit & Nut	363	
Multiple Commodities	50,115	
Nursery	0	
Poultry	48	
Row/Field Crops	84,818	
Sod	0	
TOTAL	180,901	

# Status of Implementation of Agricultural Best Management Practices (BMPs) in the North Indian River Lagoon Basin (BMAP initially adopted 2013)

![](_page_30_Figure_1.jpeg)

Agricultural Lands in BMAP Area

![](_page_30_Figure_3.jpeg)

Enrolled Agricultural Lands in BMAP Area

Enrollment and Response Summary	2018	Change from 2017
Total agricultural acres in the BMAP	7,154	3,260
Total agricultural acres enrolled	287	27
Percentage of agricultural acres enrolled	4%	-3%
Enrolled agricultural acres represented in implementation status reporting	173	118

![](_page_30_Figure_6.jpeg)

Agricultural Acres Enrolled in BMAP Area		
BMP Manual	Acres	
Citrus	248	
Cow/Calf	39	
Equine	0	
Fruit & Nut	0	
Multiple Commodities	0	
Nursery	0	
Row/Field Crops	0	
Sod	0	
TOTAL	287	

# Status of Implementation of Agricultural Best Management Practices (BMPs) in the Orange Creek Basin (BMAP initially adopted 2008)

![](_page_31_Figure_1.jpeg)

Agricultural Lands in BMAP Area

![](_page_31_Figure_3.jpeg)

Enrolled Agricultural Lands in BMAP Area

Enrollment and Response Summary	2018	Change from 2017
Total agricultural acres in the BMAP	58,801	-957
Total agricultural acres enrolled	18,203	799
Percentage of agricultural acres enrolled	31%	2%
Enrolled agricultural acres represented in implementation status reporting	10,264	76

![](_page_31_Figure_6.jpeg)

Agricultural Acres Enrolled in BMAP Area		
BMP Manual	Acres	
Citrus	0	
Cow/Calf	9,363	
Dairy	77	
Equine	2,465	
Fruit & Nut	1,420	
Multiple Commodities	1,982	
Nursery	44	
Row/Field Crops	2,852	
Sod	0	
TOTAL	18,203	

# Status of Implementation of Agricultural Best Management Practices (BMPs) in the Rainbow River and Spring Basin (BMAP initially adopted 2015)

![](_page_32_Figure_1.jpeg)

Agricultural Lands in BMAP Area

![](_page_32_Figure_3.jpeg)

Enrolled Agricultural Lands in BMAP Area

Enrollment and Response Summary	2018	Change from 2017
Total agricultural acres in the BMAP	170,958	-7,504
Total agricultural acres enrolled	68,761	-4,343
Percentage of agricultural acres enrolled	40%	-1%
Enrolled agricultural acres represented in implementation status reporting	39,505	-11,757

![](_page_32_Figure_6.jpeg)

Agricultural Acres Enrolled in BMAP Area		
BMP Manual	Acres	
Citrus	0	
Cow/Calf	25,714	
Equine	4,562	
Fruit & Nut	180	
Multiple Commodities	25,804	
Nursery	16	
Row/Field Crops	12,259	
Sod	226	
TOTAL	68,761	

# Status of Implementation of Agricultural Best Management Practices (BMPs) in the Santa Fe River Basin (BMAP initially adopted 2012)

![](_page_33_Figure_1.jpeg)

Agricultural Lands in BMAP Area

![](_page_33_Figure_3.jpeg)

Enrolled Agricultural Lands in BMAP Area

Enrollment and Response Summary	2018	Change from 2017
Total agricultural acres in the BMAP	215,766	7,128
Total agricultural acres enrolled	92,811	12,129
Percentage of agricultural acres enrolled	43%	4%
Enrolled agricultural acres represented in implementation status reporting	62,109	17,349

![](_page_33_Figure_6.jpeg)

Agricultural Acres Enrolled in BMAP Area		
BMP Manual	Acres	
Citrus	0	
Cow/Calf	35,853	
Dairy	3,787	
Equine	26	
Fruit & Nut	534	
Multiple Commodities	22,780	
Nursery	752	
Poultry	23	
Row/Field Crops	28,842	
Sod	214	
TOTAL	92,811	

# Status of Implementation of Agricultural Best Management Practices (BMPs) in the Silver River and Springs Basin (BMAP initially adopted 2015)

![](_page_34_Figure_1.jpeg)

Agricultural Lands in BMAP Area

![](_page_34_Figure_3.jpeg)

Enrolled Agricultural Lands in BMAP Area

Enrollment and Response Summary	2018	Change from 2017
Total agricultural acres in the BMAP	134,745	2,185
Total agricultural acres enrolled	25,194	1,824
Percentage of agricultural acres enrolled	19%	1%
Enrolled agricultural acres represented in implementation status reporting	13,211	-756

![](_page_34_Figure_6.jpeg)

Agricultural Acres Enrolled in BMAP Area		
BMP Manual	Acres	
Citrus	819	
Cow/Calf	11,622	
Dairy	77	
Equine	3,062	
Fruit & Nut	974	
Multiple Commodities	2,901	
Nursery	335	
Row/Field Crops	5,365	
Sod	39	
TOTAL	25,194	

# Status of Implementation of Agricultural Best Management Practices (BMPs) in the St. Lucie River and Estuary Basin (BMAP initially adopted 2013)

![](_page_35_Figure_1.jpeg)

Agricultural Lands in BMAP Area

![](_page_35_Figure_3.jpeg)

Enrolled Agricultural Lands in BMAP Area

Enrollment and Response Summary	2018	Change from 2017
Total agricultural acres in the BMAP	263,467	48,862
Total agricultural acres enrolled	163,751	27,971
Percentage of agricultural acres enrolled	62%	-1%
Enrolled agricultural acres represented in implementation status reporting	147,609	28,121

![](_page_35_Figure_6.jpeg)

Agricultural Acres Enrolled in BMAP Area		
BMP Manual	Acres	
Citrus	17,499	
Conservation Plan	219	
Cow/Calf	101,340	
Dairy	6	
Equine	120	
Fruit & Nut	44	
LOPP	4,600	
Multiple Commodities	8,250	
Nursery	805	
Poultry	42	
Row/Field Crops	29,288	
Sod	1,538	
TOTAL	163,751	

# Status of Implementation of Agricultural Best Management Practices (BMPs) in the Upper Ocklawaha River Basin (BMAP initially adopted 2007)

![](_page_36_Figure_1.jpeg)

Agricultural Lands in BMAP Area

![](_page_36_Figure_3.jpeg)

Enrolled Agricultural Lands in BMAP Area

Enrollment and Response Summary	2018	Change from 2017
Total agricultural acres in the BMAP	91,757	13,136
Total agricultural acres enrolled	16,370	1,121
Percentage of agricultural acres enrolled	18%	-2%
Enrolled agricultural acres represented in implementation status reporting	11,612	-155

![](_page_36_Figure_6.jpeg)

Agricultural Acres Enrolled in BMAP Area		
BMP Manual	Acres	
Citrus	7,229	
Cow/Calf	3,758	
Equine	26	
Fruit & Nut	739	
Multiple Commodities	1,075	
Nursery	2,265	
Row/Field Crops	776	
Sod	502	
TOTAL	16,370	

#### Status of Implementation of Agricultural Best Management Practices (BMPs) in the Upper Wakulla River and Wakulla Spring Basin (BMAP initially adopted 2015)

![](_page_37_Figure_1.jpeg)

Agricultural Lands in BMAP Area

![](_page_37_Figure_3.jpeg)

Enrolled Agricultural Lands in BMAP Area

Enrollment and Response Summary	2018	Change from 2017
Total agricultural acres in the BMAP	58,020	-7,136
Total agricultural acres enrolled	15,470	139
Percentage of agricultural acres enrolled	27%	3%
Enrolled agricultural acres represented in implementation status reporting	11,233	71

![](_page_37_Figure_6.jpeg)

Agricultural Acres Enrolled in BMAP Area		
BMP Manual	Acres	
Citrus	82	
Cow/Calf	3,904	
Equine	0	
Fruit & Nut	254	
Multiple Commodities	708	
Nursery	2,243	
Row/Field Crops	7,910	
Sod	369	
TOTAL	15,470	

#### Status of Implementation of Agricultural Best Management Practices (BMPs) in the Volusia Blue Spring River Basin (BMAP adoption pending)

![](_page_38_Figure_1.jpeg)

Agricultural Lands in BMAP Area

![](_page_38_Figure_3.jpeg)

Enrolled Agricultural Lands in BMAP Area

Enrollment and Response Summary	2018	Change from 2017
Total agricultural acres in the BMAP	2,233	80
Total agricultural acres enrolled	76	-9
Percentage of agricultural acres enrolled	3%	-1%
Enrolled agricultural acres represented in implementation status reporting	65	39

![](_page_38_Figure_6.jpeg)

Agricultural Acres Enrolled in BMAP Area		
BMP Manual	Acres	
Citrus	0	
Cow/Calf	48	
Equine	0	
Fruit & Nut	0	
Multiple Commodities	11	
Nursery	17	
Row/Field Crops	0	
Sod	0	
TOTAL	76	

# Status of Implementation of Agricultural Best Management Practices (BMPs) in the Wacissa Springs Basin (BMAP adopted 2019)

![](_page_39_Figure_1.jpeg)

Agricultural Lands in BMAP Area

![](_page_39_Figure_3.jpeg)

Enrolled Agricultural Lands in BMAP Area

Enrollment and Response Summary	2018	Change from 2017
Total agricultural acres in the BMAP	53,937	-1,644
Total agricultural acres enrolled	15,755	-1,051
Percentage of agricultural acres enrolled	29%	-1%
Enrolled agricultural acres represented in implementation status reporting	14,843	321

![](_page_39_Figure_6.jpeg)

Agricultural Acres Enrolled in BMAP Area		
BMP Manual	Acres	
Citrus	11	
Cow/Calf	4,564	
Multiple Commodities	649	
Nursery	43	
Row/Field Crops	10,488	
TOTAL	15,755	

### Agricultural Acres in BMAP Area

#### Status of Implementation of Agricultural Best Management Practices (BMPs) in the Weeki Wachee Spring and River Basin (BMAP adopted 2014)

![](_page_40_Figure_1.jpeg)

Agricultural Lands in BMAP Area

![](_page_40_Figure_3.jpeg)

Enrolled Agricultural Lands in BMAP Area

Enrollment and Response Summary	2018	Change from 2017
Total agricultural acres in the BMAP	43,945	-1,758
Total agricultural acres enrolled	20,607	6,543
Percentage of agricultural acres enrolled	47%	16%
Enrolled agricultural acres represented in implementation status reporting	17,159	3,514

![](_page_40_Figure_6.jpeg)

Agricultural Acres Enrolled in BMAP Area		
BMP Manual	Acres	
Citrus	341	
Cow/Calf	17,121	
Equine	17	
Fruit & Nut	881	
Multiple Commodities	1,174	
Nursery	152	
Row/Field Crops	921	
Sod	0	
TOTAL	20,607	

### Agricultural Acres in BMAP Area

#### Status of Implementation of Agricultural Best Management Practices (BMPs) in the Wekiva River, Rock Springs Run, and Little Wekiva Canal Basin (BMAP initially adopted 2015)

![](_page_41_Figure_1.jpeg)

Agricultural Lands in BMAP Area

![](_page_41_Figure_3.jpeg)

Enrolled Agricultural Lands in BMAP Area

Enrollment and Response Summary	2018	Change from 2017
Total agricultural acres in the BMAP	48,186	6,309
Total agricultural acres enrolled	8,597	1,412
Percentage of agricultural acres enrolled	18%	+1%
Enrolled agricultural acres represented in implementation status reporting	5,687	1,438

![](_page_41_Figure_6.jpeg)

Agricultural Acres Enrolled in BMAP Area		
BMP Manual	Acres	
Citrus	2,208	
Cow/Calf	1,421	
Equine	435	
Fruit & Nut	430	
Multiple Commodities	58	
Nursery	2,467	
Row/Field Crops	847	
Sod	731	
TOTAL	8,597	

#### Agricultural Acres in BMAP Area

# Status of Implementation of Agricultural Best Management Practices (BMPs) in the Wekiwa Spring and Rock Spring Basin (BMAP initially adopted 2019)

![](_page_42_Figure_1.jpeg)

Agricultural Lands in BMAP Area

![](_page_42_Figure_3.jpeg)

Enrolled Agricultural Lands in BMAP Area

Enrollment and Response Summary	2018	Change from 2017
Total agricultural acres in the BMAP	18,734	373
Total agricultural acres enrolled	4,431	1,019
Percentage of agricultural acres enrolled	24%	5%
Enrolled agricultural acres represented in implementation status reporting	3,019	1,006

![](_page_42_Figure_6.jpeg)

Agricultural Acres Enrolled in BMAP Area		
BMP Manual	Acres	
Citrus	1,546	
Cow/Calf	85	
Equine	16	
Fruit & Nut	203	
Multiple Commodities	23	
Nursery	1,479	
Row/Field Crops	776	
Sod	303	
TOTAL	4,431	

Do you apply nutrients in any form (e.g., commercial fertilizer, organic material) in the operation associated with this NOI?

#### 1.1 Right Source

1. Prior to application, determine the nitrogen, phosphorus, and potassium content in commercial fertilizer using the guaranteed analysis on the label.

2. If using fertilizer plant floor sweepings, reclaimed water, manures, poultry litter, compost, or biosolids, account for the nutrient content of those materials prior to application. Acceptable alternatives to laboratory analysis include supplier analysis or NRCS guidelines.

3. Keep records of all nutrient applications that contain Nitrogen or Phosphorus.

#### 1.2 Right Rate

1. Perform a soil test or tissue tests as provided in the BMP manual under which the operation is enrolled to appropriately plan and manage fertilizer applications. If using split (multiple) applications, a soil test is required only once a year.

2. Use a laboratory that performs a phosphorus extraction method accepted by UF-IFAS Extension Soil Testing Laboratory, alternative test methods that have a calibrated crop response, or an alternative test method described in the BMP manual under which the operation is enrolled. If the Mehlich-3 method is not used, indicate the method used and the justification in the comments.

3. Prior to applying nutrients, manage the pH of the soil according to the laboratory results and crop requirements or as provided in the BMP manual under which the operation is enrolled.

4. Limit phosphorus fertilization based on soil test results and crop requirements. The relevant UF-IFAS application recommendations or alternative recommendations described in the BMP manual under which the operation is enrolled are reviewed and followed or adjusted as necessary for site-specific conditions. Maintain the documentation used to calculate applications, including justification for application rates exceeding UF-IFAS recommendations.

5. Base the nitrogen fertilization rate on the crop nutrient requirement. The relevant UF-IFAS application recommendations are reviewed and followed or adjusted as necessary for site-specific conditions. Crop nutrient requirements may be adjusted based on tissue testing results. Maintain the documentation used to calculate applications, including justification for application rates exceeding UF-IFAS recommendations.

6. Keep records of all field sampling locations and laboratory test results.

7. Keep records of all nutrient applications that contain Nitrogen or Phosphorus.

#### 1.3 Right Time

1. Match plant growth stage nutrient requirements and minimize loss through leaching or runoff by using seasonal applications, split applications, or controlled release fertilizer.

#### 1.4 Right Place

1. Require that all fertilizer application equipment is calibrated.

2. Prevent application of fertilizer to waterbodies, sinkholes, or to swales or field ditches that have standing water.

1.5 Fertilizer Storage and Handling

1. Store fertilizer material (all organic and commercial sources) under a waterproof cover unless used or applied promptly after delivery.

2. Store and load fertilizer material at a location and in a manner that prevents impacts to wetlands, waterbodies, or sinkholes.

**1.6. Special Nutrient Management Practices** 

2.0 Irrigation and Water Table Management

Do you use an irrigation system in the operation associated with this NOI?

2.1 Crop Water Requirements and Irrigation Scheduling

1. Manage irrigation based on soil moisture sensor data. If soil moisture sensors are not used, follow practices 2.1.2 and 2.1.3 below.

2. Maintain the water table (saturated zone) at the lowest level consistent with plant rooting depths when using seepage irrigation.

3. Use decision support tools and information to plan irrigation events; describe these tools in the comments. Tools may include weather stations, soil moisture sensors, or other methods.

4. Keep records of rainfall events and amounts, and install rain gauge(s) if needed.

2.2 Irrigation System Maintenance and Evaluation

1. Contact a Mobile Irrigation Laboratory (MIL) or other qualified person to request an

irrigation efficiency evaluation of your pressurized irrigation system at least every five years.

2. Adjust and repair irrigation system components as recommended by your system's evaluation.

3. Keep records of all MIL evaluation results and recommendations.

4. Clean and maintain filtration equipment so that it operates within the recommended pressure range.

5. Inspect sprinkler nozzles or emitters annually for wear and malfunction and replace as necessary.

6. Flush and treat irrigation lines regularly to prevent emitter clogging.

7. Keep records of all irrigation system maintenance and repairs.

8. Ensure that flow meters are properly calibrated and correctly measuring water usage.

9. Periodically test irrigation water to identify issues with water chemistry that may result in irrigation system plugging of pressurized systems. Users of reclaimed water can use water analysis from the supplier. Parameters that contribute to plugging may include calcium, total carbonates, hardness, iron, total dissolved solids, and pH.

2.3 Special Irrigation Management Practices (placeholder for commodity-specific practices)3.0 Water Resource Protection

3.1 Stream Protection

1. Maintain a riparian buffer or vegetated filter strips on fields or pastures adjacent to natural perennial streams.

2. Repair rills and small channels that develop within the riparian buffer where those features reduce the function of the buffer.

3. Revegetate bare areas along natural perennial stream banks and in riparian buffers if the bare areas reduce the function of the buffer.

4. Locate and size stream crossing areas to minimize impacts to riparian buffers. Refer to NRCS Stream Crossing Code 578 for guidance.

5. Stabilize access roads that cross streams and creeks. Refer to NRCS Access Road Code 560 for guidance.

3.2 Springs and Sinkholes

1. Buffer springs and spring runs with a minimum of 100 feet of non-fertilized vegetation.

2. Buffer sinkholes and other visible karst features with a minimum of 50 feet of non-fertilized vegetation.

3. Never dispose of any materials into sinkholes.

3.3 Wetlands and Lakes

1. Buffer wetlands and lakes with a minimum of 25 feet of non-fertilized vegetation.

2. Buffer lakes that have TMDLs with a minimum of 50 feet of non-fertilized vegetation.

3. If fencing through wetlands, keep cleared areas no wider than 25 feet.

#### 3.4 Ditch Maintenance

1. Maintain perennial vegetation on all ditch banks to protect them from erosion, or provide an alternative means for preventing sediment from moving offsite.

2. Install water control structures to retain water and improve surface water quality where necessary to manage off-site impacts.

3. Do not remove sediments below the ditch's original invert elevation, which can be determined by engineering drawings, or changes in soil characteristics and color.

3.5 Erosion Control

1. Construct above-grade access roads so that they do not impede or divert surface water flow.

2. Maintain vegetative cover to stabilize road banks.

3. Ensure that the pump intake is sufficiently elevated from the ditch bottom for offsite discharges using lift pumps, so that nutrients in sediments and debris are not carried into the water.

3.6 Wellhead Protection

1. Inspect wellheads and pads for significant leaks or cracks, and make any necessary repairs.

2. Use backflow prevention devices at wellheads if injecting fertilizer or chemicals.

3.7. Special Water Resource Protection Practices