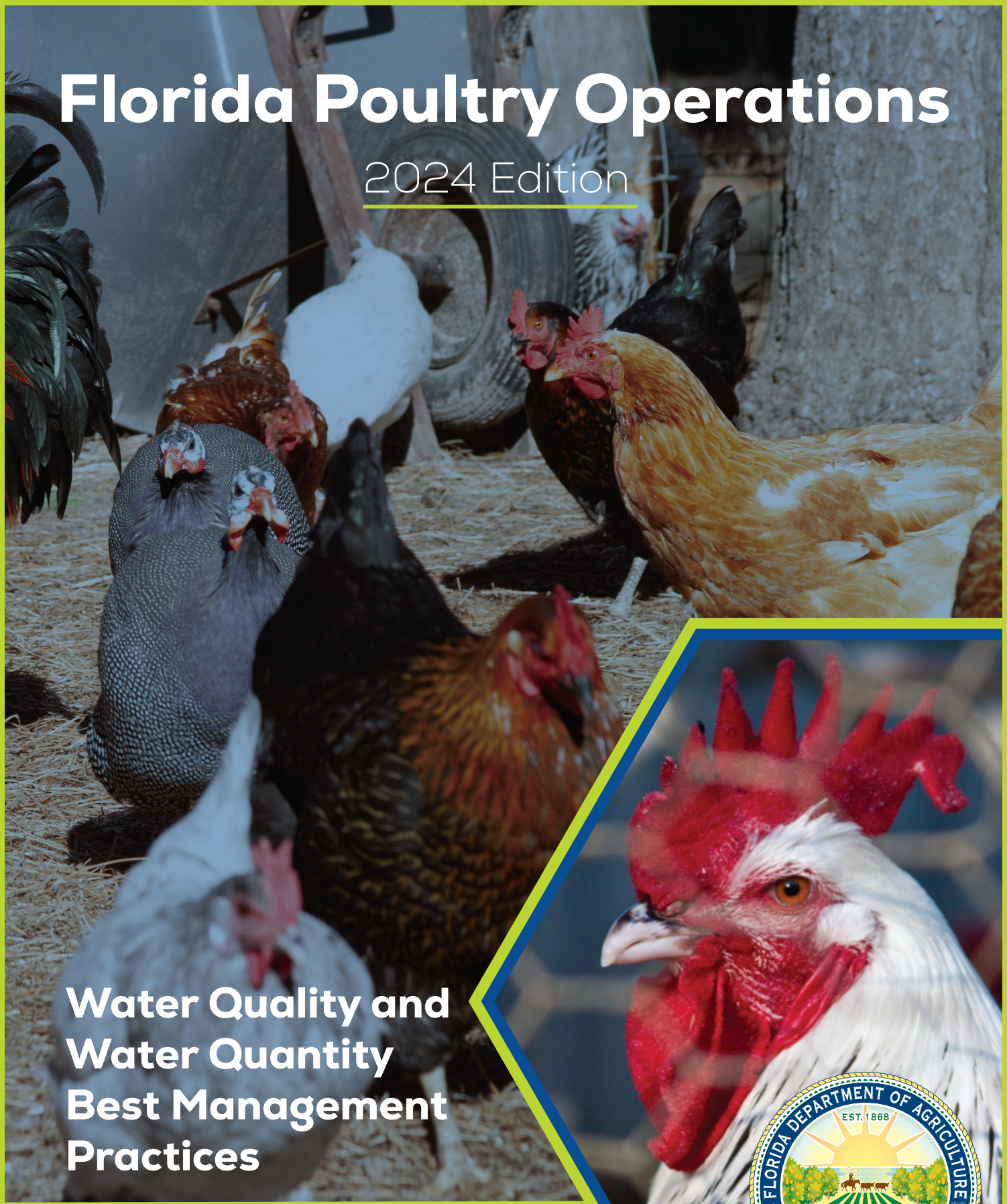
Florida Poultry Operations

2024 Edition



Water Quality and Water Quantity Best Management Practices

FDACS-P-02052 Rev. 11/24

Florida Poultry Operations, 2024 Edition: Water Quality and Water Quantity Best Management Practices

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Acronyms and Abbreviations

BMAP – Basin Management Action Plan

BMP – Best Management Practice

ERP – Environmental Resource Permit

F.A.C. – Florida Administrative Code

F.S. – Florida Statutes

FDACS – Florida Department of Agriculture and Consumer Services

FDEP – Florida Department of Environmental Protection

IV – Implementation Verification

N/A – Not Applicable

NOI – Notice of Intent to Implement Best Management Practices

NPDES – National Pollutant Discharge Elimination System

NRCS – Natural Resources Conservation Service

OAWP – Office of Agricultural Water Policy (FDACS)

TMDL – Total Maximum Daily Load

WMD – Water Management District

Part A

Introduction

Florida's poultry industry is extremely diverse and covers many geographic regions of Florida. Egg laying operations are located primarily in central and south Florida, and broiler operations are located exclusively in the North Florida area. A clean, disease-free environment with biosecurity measures in place is necessary for protecting poultry health and reducing excess nutrients from leaving the poultry house or site.

Operations Applicable to this Manual

This manual applies to operations engaged in selling poultry or eggs from poultry. To benefit from and participate in the Best Management Practices (BMP) Program, poultry producers must work with a Florida Department of Agriculture and Consumer Services (FDACS) representative to complete, sign, and submit a Notice of Intent (NOI) (FDACS-04002, rev. 06/24), incorporated in Rule 5M-1.001(9), Florida Administrative Code (F.A.C.), and the BMP Checklist that is part of this manual.

A landowner or producer enrolled under this manual is also subject to the requirements of Rule Chapter 5M-1, F.A.C.

A landowner or producer operating under one of the Equivalent Programs listed in Rule 5M-1.001(7), F.A.C., is required to complete a NOI and meet the other requirements for Equivalent Programs specified in Rule Chapter 5M-1, F.A.C.

Completing a BMP Checklist is not required for the enrolled lands subject to the permit or license issued pursuant to an Equivalent Program listed in Rule 5M-1.001(7)(a) or (b), F.A.C. Whether or not an enrollee under an Equivalent Program listed in Rule 5M-1.001(7)(c) or (d), F.A.C., is required to complete a Checklist depends on the specific requirements of the programs identified. References to the BMP Checklist in this manual apply to Equivalent Program enrollments only to the extent provided in Rule Chapter 5M-1, F.A.C.

Enrollees under an Equivalent Program listed in Rule 5M-1.001(7), F.A.C., and meeting the requirements for Equivalent Programs provided in Rule Chapter 5M-1, F.A.C., are provided all the benefits listed under "Benefits of Implementing BMPs" set forth below.

This manual does not apply to free-range poultry operations. Operations that produce crops or livestock other than those covered by this manual or apply poultry litter or manure to the land should enroll in and use the appropriate FDACS BMP manual. Poultry operations with a National Pollutant Discharge Elimination System (NPDES) or Florida Department of Environmental Protection (FDEP) Groundwater Discharge permit must follow their permit requirements, as FDACS BMPs do not replace these requirements.

Best Management Practices and Water Quality

Section 403.067, Florida Statutes (F.S.), directs FDEP to develop water quality restoration goals for impaired waterbodies. These water quality restoration goals, or total maximum daily loads (TMDLs), are the maximum amount of a pollutant that a waterbody can assimilate and remain suitable for its designated use. Once a TMDL is adopted, FDEP may develop a basin management action plan (BMAP) that identifies enforceable strategies for restoring the impaired waterbody. 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 Rule Chapter 62-307, F.A.C. FDACS strongly encourages producers and agricultural landowners outside BMAP areas to also enroll in the BMP Program for the many benefits that enrollment provides. Proper implementation of the FDACS agricultural BMPs is the industry's strategy to address agricultural nonpoint pollution sources.

The FDACS Office of Agricultural Water Policy (OAWP) administers the BMP Program for poultry operations. For the purposes of the OAWP 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 (WMDs)), 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. Section 403.067, F.S., authorizes and directs FDACS to develop and adopt by rule BMPs that will help Florida's agricultural industry achieve the reductions allocated in BMAPs. 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.

Producers or agricultural landowners who are enrolled in the FDACS BMP Program and properly implementing the applicable BMPs identified on the BMP Checklist, or who are in compliance with the Equivalent Program requirements of Rule Chapter 5M-1, F.A.C., are entitled to a presumption of compliance with state water quality standards per section 403.067(7)(c)3., F.S. FDACS is required to perform BMP Implementation Verification (IV) site visits to enrolled operations every two years to ensure that BMPs are being properly implemented. Details on IV site visits are provided herein. Enrollees participating in Equivalent Programs demonstrate compliance with BMPs on the area(s) of the NOI property subject to the Equivalent Program instrument by fulfilling the requirements of Rule 5M-1.008(7), F.A.C.

Benefits of Implementing BMPs

FDACS works closely with the FDEP, WMDs, industry experts, and academic institutions to understand the environmental and agronomic effects addressed by BMPs. Benefits of enrolling in the FDACS BMP Program and implementing BMPs include:

- Reduction of agricultural production impacts on natural resources;
- Eligibility for cost share funding for certain BMPs (as funds are available);
- Availability of free services provided by the FDACS Mobile Irrigation Laboratories to evaluate irrigation system efficiency;
- Technical assistance with BMP implementation;
- Presumption of compliance with state water quality standards for the pollutants addressed by the BMPs;
- Release from the provisions of section 376.307(5), F.S. for pollutants addressed by the BMPs; and
- Avoidance of duplicative local regulation under section 163.3162, F.S.

In many cases, proper BMP implementation may also increase production efficiency, reduce operational costs, and support wildlife habitat.

Permit Exemptions

In most cases, FDACS BMPs do not replace or exempt agricultural operations from complying with applicable permitting or other regulatory requirements. If a permit is obtained, producers are still required to adopt and properly implement BMPs for the aspects of their operation not addressed by the permit.

Some agricultural activities, especially those that alter the hydrology of the land, may require an environmental resource permit (ERP). Check with the appropriate WMD or FDEP before beginning construction activities for a stormwater management system or other onsite activity resulting in hydrologic alteration to determine if an ERP is required, or whether the activities may be exempt from permitting requirements. The following are possible exemptions.

- Section 373.406(2), F.S., authorizes any person engaged in the occupation of agriculture to alter the topography of land for purposes consistent with normal and customary practices of agriculture for the area. These activities, however, may not be for the sole or predominant purpose of diverting or impeding surface waters, or adversely impacting wetlands. If a formal dispute between a landowner and a WMD arises regarding the applicability of a permit exemption, FDACS has exclusive authority to make a binding determination, should either party request it.

- Section 373.406(3), F.S., authorizes any person engaged in the occupation of agriculture to construct an agricultural closed system. This exception, however, is limited to the construction, operation, or maintenance of the agricultural closed system. Part II of Chapter 373, F.S., regarding the consumptive use of water remains applicable, which includes the taking and discharging of water for filling, replenishing, and maintaining the water level in any such agricultural closed system.

- Section 373.406(6), F.S., exempts activities that will have only minimal or insignificant individual or cumulative adverse impacts on the water resources of the district as determined by FDEP or the WMD.

- Section 373.406(9), F.S., exempts environmental restoration activities on agricultural lands that have minimal or insignificant impacts to water resources from ERP permitting requirements. No activity may commence until the producer requests an exemption and the appropriate WMD or FDEP has provided written notice that the proposed activity qualifies for the exemption.

- Section 373.406(10), F.S., exempts interim measures or best management practices adopted pursuant to section 403.067, F.S., that are by rule designated as having minimal individual or cumulative adverse impacts to the water resources of the state.

- Section 373.406(13), F.S., exempts isolated man-made farm ponds up to 15 acres in size, constructed entirely in uplands, from ERP permitting requirements if the

average depth of the pond is less than 15 feet and the pond is located at least 50 feet from a wetland.

Even if an exemption applies, agricultural producers located within an adopted BMAP area must either properly implement applicable BMPs or conduct water quality monitoring in accordance with section 403.067, F.S.

The Florida Right to Farm Act (section 823.14, F.S.) provides that a local government may not adopt any ordinance, regulation, rule, or policy to limit an activity of a *bona fide* farm operation on land classified as agricultural pursuant to section 193.461, F.S., whereon the activity is regulated through properly implemented BMPs or interim measures developed and adopted by FDEP, FDACS, or a WMD as part of a statewide or regional program. Not all activities conducted on a farm are addressed by adopted BMPs or interim measures, so this exemption may not apply to all activities.

BMP Implementation Verification

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 NOI to implement BMPs. An IV site visit includes: review of nutrient records that producers must maintain to demonstrate compliance with the BMP Program; verification that all other applicable BMPs are being properly implemented; verification that cost share practices are being properly implemented; and identification of potential cost share practices, projects or other applicable BMPs not identified during enrollment. During the IV site visit, FDACS representatives also identify opportunities for achieving greater nutrient, irrigation, or water resource management efficiencies, including opportunities for water conservation.

References to IV in this Manual apply to Equivalent Program enrollments only to the extent provided in Rule Chapter 5M-1, F.A.C.

Cost Share

Enrollment in and proper implementation of BMPs makes a producer eligible for cost share for certain BMPs, other practices, and projects. The availability of cost share funds depends on annual appropriations by the Florida Legislature, and therefore, the amount available can vary each year. 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.

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 Natural Resources Conservation Service (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 in conjunction with other available conservation programs although funding cannot be duplicative.

This, and other BMP manuals, can be accessed electronically at:
https://www.fdacs.gov/Agriculture-Industry/Water/Agricultural-Best-Management-Practices.

Guide to Best Management Practice (BMP) Program Enrollment and Implementation

When enrolling, FDACS OAWP representatives will work with producers during an enrollment site visit.

Getting Started

1) **Request On-farm Technical Assistance.** Contact FDACS OAWP representatives for assistance with determining the BMPs that are applicable to the operation. For free assistance, call (863) 467-3250, email AgBmpHelp@FDACS.gov, or contact an FDACS OAWP office.

2) **Identify Applicable BMPs.** FDACS OAWP representatives will work with producers to identify all BMPs that are applicable to the operation and to document the BMPs on the NOI and BMP Checklist. The BMP Checklist will serve as the basis for subsequent implementation verification site visits to verify the proper implementation of the BMPs. If applicable, FDACS OAWP representatives will review other supporting materials such as an NRCS Comprehensive Nutrient Management Plan or FDEP approved Nutrient Management Plan for biosolids application.

   Enrollees under an Equivalent Program listed in Rule 5M-1.001(7), F.A.C., will complete, update, and submit their NOI in accordance with Rule 5M-1.004(3), F.A.C.

3) **Submit an NOI.** FDACS OAWP representatives will assist producers in completing the NOI. Once the producer signs and submits the NOI with all the required information and the BMP Checklist, or documentation required of Equivalent Program Enrollees in accordance with Rule 5M-1.004(3), F.A.C., FDACS will review the information for completeness and enroll the Producer's operation in the BMP Program.

4) **Properly Implement the BMPs.** Producers must properly implement all applicable BMPs as soon as practicable, but no later than 18 months after completion and execution of the NOI and associated BMP Checklist.

   BMPs indicated as “Planned” in the BMP Checklist must include a completion date. Enter the completion date agreed to by the producer and FDACS OAWP representatives in the “Planned” box. Projects must be initiated as soon as the BMP is identified, and cost share is available. The deadline for implementing BMPs that require cost sharing, engineering and design, permitting, or construction will be extended beyond 18 months, as needed. The proper implementation of BMPs requires ongoing record keeping and maintenance of BMPs (see the Record Keeping section below).

   Proper implementation of the applicable nutrient management BMPs also requires that producers demonstrate that N and P are applied at appropriate agronomic rates, when available. Producers should utilize the appropriate calculations and technical assistance tools to demonstrate that nutrient management practices are compatible with appropriate agronomic rates.

   For Enrollees under an Equivalent Program listed in Rule 5M-1.001(7), F.A.C., implementation verification shall be undertaken by the agency that issued the permit, license or other instrument, pursuant to its statutory and/or rule authority.

Preparing for a Site Assessment/Enrollment Visit

1) Review the BMP manual and note any question(s) regarding specific BMPs, unfamiliar terms, or content. Be ready to confirm the parcels of land to be enrolled in the BMP Program to ensure the accuracy of the information that will be submitted on the NOI.
2) During the site visit, the FDACS OAWP representatives will assist the producer with identifying potential pollutant sources and the most likely pathways to surface waters and groundwater. Representatives may ask to review previous soil tests, past fertilization practices, and other data to help with identification.
3) The FDACS OAWP representative will observe production-related activities near water resources such as wetlands, streams, sinkholes, springs, ponded or poorly drained areas, and any conveyances that discharge off site, and will discuss the BMPs that apply to these areas. Having a preplanned route will make the assessment and enrollment process more efficient.

The following web resources can be helpful for creating an inventory of the property's natural features, structures, and other improvements. The reference material listed below is for informational purposes and is not incorporated by reference.

- United States Department of Agriculture Natural Resources Conservation Service (NRCS) soil survey maps (http://websoilsurvey.nrcs.usda.gov/app/).
- United States Geological Survey topographic maps (https://www.usgs.gov/programs/national-geospatial-program/topographic-maps).
- National Wetlands Inventory (http://www.fws.gov/wetlands/).
- County Property Appraiser (http://floridarevenue.com/dor/property/appraisers.html).

Make sure that someone who is familiar with the nutrient and irrigation regimen of the operation is available on the day of the enrollment site visit.

Record Keeping

Enrollees who submit a Checklist must document the proper implementation of the applicable BMPs, producers must keep records in accordance with Rule 5M-1.011, F.A.C., for BMPs noted with the pencil icon (✏) on the BMP Checklist. All BMP records should be accurate, clear, well-organized, and retained for at least five years. Record keeping examples are provided in Appendix 2 but are not adopted as a rule.

All documentation required to verify the proper implementation of applicable BMPs are subject to inspection. Please note that falsification of records is a first-degree misdemeanor under Florida law.

In accordance with subparagraphs 403.067(7)(c)6., and (7)(d)3., F.S., agricultural records relating to processes or methods of production, costs of production, profits, other financial information, or nitrogen and phosphorus fertilizer application records collected by the Department during implementation verification are confidential and exempt from disclosure. Any such claim must be asserted at the time of submission by stamping the words "confidential and exempt information" on each page containing such information so the Department may handle them appropriately.

Best Management Practices (BMP) Checklist

BMP Checklist Instructions

With the exception of those enrolling under one of the Equivalent Programs listed in Rule 5M-1.001(7), F.A.C., producers must work with an FDACS representative to identify the applicable BMPs to be implemented on the subject parcel and to complete the BMP Checklist. Refer to the *Guide to BMP Program Enrollment and Implementation* section above. Failure to properly implement the applicable BMPs may subject your operation to compliance measures including referral to FDEP for enforcement.

1) Check "In Use" for BMPs that are currently being implemented and can be observed on the operation at the time of enrollment or the IV site visit.

2) Check "Planned" for BMPs that will be implemented within a specific timeframe, but no later than 18 months after completion and execution of the NOI. ***The producer understands that they are expected to implement this practice by the completion date entered into the "Planned" box. Projects must be initiated as soon as the BMP is identified and cost share becomes available. However, the deadline for implementing BMPs that require cost sharing, engineering and design, permitting, or construction will extend beyond 18 months as needed. Include practices that can't be observed at the time of site visit.***

3) Check "N/A" for BMPs that are not applicable to the operation. This status may be selected for individual BMPs or categories of BMPs where nitrogen and phosphorus are not applied in any form (Nutrient Management section), or where the operation does not include an irrigation system (Irrigation Management section). Producers are required to provide justification for any BMPs that are marked "N/A."

4) Enter the anticipated completion date for any planned practices (month and year) in the "Planned" box of the BMP Checklist during enrollment.

5) Producers must keep records of items indicated on the BMP Checklist. BMPs that require record keeping are noted by the pencil icon (). Enrolled producers are required to provide records upon request for review during a BMP implementation verification site visit.

6) After completion of all of the above steps, including the site visit and assessment, producers are enrolled upon submitting to FDACS the NOI and the BMP Checklist. Producers enrolling under one of the Equivalent Programs are enrolled upon submitting to FDACS the NOI and documentation required of Equivalent Program Enrollees in accordance with Rule 5M-1.004(3), F.A.C. FDACS will provide written confirmation of enrollment. Keep a copy of each document.

7) Producers will work with the FDACS representative to modify the NOI or BMP Checklist, if needed, after initial enrollment. FDACS will provide written confirmation of any proposed changes.

Best Management Practices Checklist for Poultry Operations

The producer agrees to implement the following items either checked as “In Use” or “Planned”:

Nutrient Management					
			In Use	**Planned**	**N/A**
1.1	**Nutrient Management BMPs for Poultry Operations**				
	1	Store feed material so it has no contact with rainwater.			
	2	Store all composted animal waste (defined as litter, manure, or animal carcasses) in a composting structure or under a waterproof cover and on an impervious surface.			
COMMENTS					
Water Resource Protection					
			In Use	**Planned**	**N/A**
2.1	**Springs and Sinkholes**				
	1	Never dispose of any materials into sinkholes.			
2.2	**Erosion Control**				
	1	Ensure that rainwater from the roof of a building does not enter the building by sloping the grade away from the building, or by installing gutters and downspouts.			
2.3	**Wellhead Protection**				
	1	Inspect wellheads and pads for significant leaks or cracks and make any necessary repairs.			
	2	Prevent contamination by using backflow prevention devices at wellheads if injecting fertilizer or chemicals, or if shared with a potable use source.			
	3	Cap or valve any existing flowing wells.			
2.4	**Industrial Materials Storage and Handling**				
	1	Store pesticides separate from fertilizers in an enclosed, roofed structure with an impervious floor and lockable door, at least 100 feet away from wells, surface waters, or sinkholes.			
	2	Mix and load pesticides on an impermeable surface, use portable mix/load stations, or conduct any field mix/load activities at random locations in the field.			
	3	Recycle or properly dispose of chemicals, used oil, solvent bath waste, and antifreeze in accordance with state and federal laws.			
	4	Ensure all pesticide application equipment is calibrated according to the manufacturer’s specifications for the type of pesticide used.			
	5	Use a check valve or air gap separation to prevent backflow when filling a sprayer.			

2.5	**Additional Water Resource Protection BMPs for Poultry Operations**				
	1	Composting structures (defined as litter or manure storage and carcass disposal storage) or below ground burial area must be at least 100 feet from ditches and adjacent properties.			
	2	Composting structures (defined as litter or manure storage and carcass disposal storage) or below ground burial area must be at least 200 feet from watercourses, streams, wetlands, wells, springs and spring runs, or sinkholes. If no alternatives exist, use filter strips, buffers, berms, grassed waterways, or vegetative swales to protect water resources.			
	**3**	Below ground burial areas must be at least 2 feet above the seasonal high ground water table and allow for at least 2 feet of cover. Identify burial sites on a map and keep it available for future reference.			
COMMENTS					

PART B

Best Management Practices for Poultry Operations

The purpose of the narrative set forth below is to provide information for producers to consider while implementing the BMPs established in their BMP Checklist and to assist in planning, development, and production efforts for their operation. The contents of the narrative shall not be interpreted or construed as creating additional obligations or requirements that exceed the BMPs detailed in the BMP Checklist. The reference materials cited in the narrative have been utilized for technical and scientific support for the manual but are not incorporated by reference herein.

In implementing BMPs, it is recognized that each producer's operation is unique and individual. The information set forth in the manual is not exhaustive and does not address or identify all the factors that may affect production practices for poultry operations. Producers may determine that it may be necessary to add practices to the BMP Checklist to fit specific production unit needs. In doing so, the producer may consult the BMP manual and other publications and information as part of the analysis of the site's individual characteristics, historical uses, economic and technical considerations, market factors, and changes in production.

1.0 Nutrient Management

Beneficial nutrient management decisions for poultry operations are based on nutrient sources of commercial feed, animals, and poultry litter or manure. Composted poultry litter and carcasses contain valuable nutrients and are usually exported off site for fertilizer, as it is ideal for land application on crop land. Producers are encouraged to develop a nutrient management plan for the operation to reduce potential effects on water resources.

1.1 Nutrient Management BMPs for Poultry Operations

Nutrient Management BMPs for Poultry Operations 1.1.1.	Store feed material so it has no contact with rainwater.
1.1.2.	Store all composted animal waste (defined as litter, manure, or animal carcasses) in a composting structure or under a waterproof cover and on an impervious surface.

Guidance: Feed and composted animal waste (defined as litter, manure, or animal carcasses) can be a significant source of nutrients if not properly stored and handled. Clean up feed spills immediately and re-use, compost, or place in an appropriate container. Store feed and animal waste on an impervious surface that is protected from rainfall and nutrient leaching by covering with impervious material or storing under a roof. Composting, using the proper ratios of all materials, for small operations can occur inside the poultry house, but it is recommended that a separate composting barn be constructed for larger operations.

For all composted animal waste transported offsite, keep records of the amount and contact information of the hauler or broker. Operations that produce crops or livestock other than those covered by this manual or apply poultry litter or manure to the land should enroll and use the appropriate FDACS BMP manual for that commodity receiving the litter or manure.

2.0 Water Resource Protection

The following section describes several types of waterbodies and methods for protecting them from potential water quality effects.

2.1. Springs and Sinkholes

Springs and Sinkholes 2.1.1.	Never dispose of any materials into sinkholes.

Guidance: Sinkholes provide direct access to the groundwater that supplies drinking and irrigation water; therefore, never use sinkholes to dispose of trash, clippings, or other material. Vegetated buffers around sinkholes and visible karst features may be required in some cases to prevent runoff into groundwater.

2.2. Erosion Control

Site characteristics such as clay soils, sandy soils, or sloped terrain can significantly increase the risk of erosion and offsite sediment transport. Removal of natural vegetation and topsoil further increases the potential for soil erosion. The most effective method of erosion control uses vegetation to hold soil in place and decrease the velocity of runoff water.

Erosion Control 2.2.1.	Ensure that rainwater from the roof of a building does not enter the building by sloping the grade away from the building, or by installing gutters and downspouts.

Guidance: Minimize downstream transport of sediments around poultry houses, composting areas, and other impervious surfaces. Prevent rainwater from entering buildings either as wind-blown rain or as runoff from the ground and any roof leaks should be fixed immediately. Efforts should focus on stabilizing the surrounding soils with vegetative buffers.

2.3. Wellhead Protection

Wellhead Protection 2.3.1.	Inspect wellheads and pads for significant leaks or cracks and make any necessary repairs.
2.3.2.	Prevent contamination by using backflow prevention devices at wellheads if injecting fertilizer or chemicals, or if shared with a potable use source.
2.3.3.	Cap or valve any existing flowing wells.

Guidance: With most of Florida's water supply originating from groundwater, it is important for agricultural operations to protect wellheads from contamination. Contact your WMD before

installing a new well to determine if a construction permit and/or Consumptive Use Permit is required.

Locate new wells away from likely pollutant sources, such as petroleum storage tanks, septic tanks, chemical mixing areas, or fertilizer storage facilities. Regularly inspect wellheads and pads for leaks or cracks, and repair structures to prevent possible groundwater contamination. For existing wells, backflow prevention devices are required if injecting any fertilizers or chemicals or if connected to any potable water use.

2.4. Industrial Materials Storage and Handling

Industrial Material Storage and Handling 2.4.1.	Store pesticides separate from fertilizers in an enclosed, roofed structure with an impervious floor and lockable door, at least 100 feet away from wells, surface waters, or sinkholes.

Guidance: Proper storage, handling, and disposal of pesticides, solvents, and other chemicals can help avoid adverse environmental effects, protect the water supply, and reduce exposure of the owner to legal liability for contamination and cleanup. Store these materials away from fertilizers, under a roof, and ideally on an impervious surface that does not have floor drains. Because some pesticides include active ingredients that are toxic or poisonous to humans, they should be stored in a more secure manner than fertilizers.

Industrial Material Storage and Handling 2.4.2.	Mix and load pesticides on an impermeable surface, use portable mix/load stations, or conduct any field mix/load activities in random locations in the field.
2.4.3.	Recycle or properly dispose of chemicals, used oil, solvent bath waste, and antifreeze in accordance with state and federal laws.

Guidance: Load pesticides into application equipment away from wells and surface waterbodies. A concrete or asphalt pad with rainfall protection is an ideal mix/load site, as this permits easy recovery of spilled material. If this is not feasible, loading at random locations in the field is acceptable and will prevent a buildup of pesticide residues in one location. Clean up spilled material immediately.

Chemicals should never be disposed of in the wastewater system or in ditches or creeks. Return unused or outdated chemicals to the supplier or take them to the local landfill or other authorized collection center.

Industrial Material Storage and Handling 2.4.4.	Ensure all pesticide application equipment is calibrated according to the manufacturer's specifications for the type of pesticide used.
2.4.5.	Use a check valve or air gap separation to prevent backflow when filling a sprayer.

Guidance: Regular equipment calibration helps ensure proper application. Calibrate equipment according to the manufacturer's recommendations and whenever wear or damage is suspected to have altered the delivery rate and pattern. Install anti-siphon devices or ensure that there is an air gap between the hose and the tank when sprayers are filled.

2.5. Additional Water Resource Protection BMPs for Poultry Operations

Additional Water Resource Protection BMPs for Poultry Operations 2.5.1.	Composting structures (defined as litter or manure storage and carcass disposal storage) or below ground burial area must be at least 100 feet from ditches and adjacent properties.
2.5.2.	Composting structures (defined as litter or manure storage and carcass disposal storage) or below ground burial area must be at least 200 feet from watercourses, streams, wetlands, wells, springs and spring runs, or sinkholes. If no alternatives exist, use filter strips, buffers, berms, grassed waterways, or vegetative swales to protect water resources.

Guidance: Protect surface waters and groundwater from nutrient runoff and leaching from poultry litter and carcasses. Site characteristics such as clay-type soils and/or sloped terrain can significantly increase the risk of erosion and off-site sediment transport. Composting structures or below ground burial areas must be at least 100 feet from ditches and adjacent properties, and at least 200 feet from watercourses, streams, wetlands, wells, springs and spring runs, or sinkholes. When practicable, locate the structures down-gradient from springs or wells.

The primary BMP to treat runoff is to direct runoff away from a waterbody and through non-fertilized vegetated buffer strips, berms, and grassed waterways that are not less than 25 feet wide.

Additional Water Resource Protection BMPs for Poultry Operations 2.5.3.	Below ground burial areas must be at least 2 feet above the seasonal high ground water table and allow for at least 2 feet of cover. Identify burial sites on a map and keep it available for future reference.

Guidance: Onsite below ground burial should be considered as the last option for poultry producers. In addition to distance requirements, carcasses must be buried with a minimum of two

feet above the seasonal high ground water table (available in the soil survey for the county) and a minimum of at least two feet of cover surrounding all sides of the carcass(es). A mound system with the carcass(es) resting above the ground surface but still surrounded by the required amount of soil might need to be constructed in areas with high water tables. Identify burial sites on a map and keep it available for future reference.

3.0 Reference Materials

The reference materials listed below are intended for informational purposes and is not intended to be incorporated by reference pursuant to Rule 1-1.013, F.A.C.

Nutrient Management References

1. Feed and Animal Management for Poultry. 2003. Nutrient Management Technical Note No. 4. United States Department of Agriculture Natural Resource Conservation Service. http://www.nrcs.usda.gov/ Internet/FSE_DOCUMENTS/stelprdb1044381.pdf
2. Bucklin, R.A., Jacob, J.P., Nordstedt, R.A., Sloan, D.R., Tervola, R. S. and Mather, F.B., 1997. Storage of Broiler Litter. PS15. Gainesville: University of Florida Institute of Food and Agricultural Sciences. Revised May 2004 and reviewed January 2012.

Water Resource Protection References

1. FDACS/FDEP, Best Management Practices for Agrichemical Handling and Farm Equipment Maintenance Manual. www.floridaagwaterpolicy.com/BestManagementPractices.html
2. Florida Water Permits. http://flwaterpermits.com/
3. Florida Animal Producer Guidance for Routine Disposal of Animal Carcasses. FDACS. http://www. flsart.org/acmwg/
4. Hess, J. B. and Macklin, S. K. 2019. Evaluating Water Quality for Poultry. Auburn University, Alabama Cooperative Extension. Publication No. ANR-1201. https://www.aces.edu/blog/topics/farming/evaluating-water-quality-for-poultry/
5. Macklin, S. K., Hess, J. B., Donald, J.O., Blake, J.P. 2021. Construction of a Dead-Poultry Composter. Auburn University, Alabama Cooperative Extension. Publication No. ANR-0604. https://www.aces.edu/blog/topics/farming/construction-of-a-dead-poultry-composter/
6. Protecting Florida's Springs, Land Use Planning Strategies and Best Management Practices, FDEP. www.dep.state.fl.us/springs/reports/files/springs- manual_2002.pdf.
7. Water Well Permitting and Construction Requirements Rule, Rule Chapter 62-532, F.A.C. (n.d.). www.dep.state.fl.us/legal/Rules/rulelistnum.htm

The following NRCS Field Office Technical Guide documents were referenced in the compilation of this manual and used to support FDEP initial verification.

NRCS Conservation Practice Code

Nutrient Management

Code 313	Waste Storage Facility
Code 316	Animal Mortality Facility
Code 317	Composting Facility
Code 318	Short Term Storage of Animal Waste by Products

Water Resource Protection

Code 319	On-Farm Secondary Containment Facility
Code 351	Well Decommissioning
Code 360	Waste Facility Closure
Code 527	Karst Sinkhole Treatments
Code 629	Waste Treatment
Code 633	Waste Recycling
Code 634	Waste Transfer
Code 642	Water Well
Code 755	Well Plugging

4.0 Appendices

Appendix 1: Glossary

The definitions that follow only apply to *Florida Poultry Operations, 2024 Edition: Water Quality and Water Quantity Best Management Practices*.

Basin management action plan (BMAP) – (section 403.067(7)(a), F.S.). The "blueprint" for restoring impaired waters by reducing pollutant loadings to meet the allowable loadings established in a total maximum daily load (TMDL). A BMAP represents a comprehensive set of strategies (permit limits on wastewater facilities, urban and agricultural BMPs, conservation programs, financial assistance, revenue generating activities, etc.) designed to implement the pollutant reductions established by the TMDL. BMAPs are broad-based plans developed with local stakeholders. BMAPs rely on local input and local commitment and are adopted by FDEP Secretarial order to be enforceable. Enrollment and proper implementation of BMPs, when verified by IV site visits and record retention, fulfills agricultural responsibilities under a BMAP.

Best management practice (BMP) – (section 373.4595(2)(a), F.S.). A practice or combination of practices determined by the coordinating agencies, based on research, field-testing, and expert review, to be the most effective and practicable on-location means, including economic and technological considerations, for improving water quality in agricultural discharges. BMPs for agricultural discharges shall reflect a balance between water quality improvements and agricultural productivity.

Biosolids – (Rule 62-640.200, F.A.C.) Means the solid, semisolid, or liquid residue generated during the treatment of domestic wastewater in a domestic wastewater treatment facility, formerly known as “domestic wastewater residuals” or “residuals.” Not included is the treated effluent or reclaimed water from a domestic wastewater treatment plant. Also not included are solids removed from pump stations and lift stations, screenings and grit removed from the preliminary treatment components of domestic wastewater treatment facilities, other solids as defined in subsection 62-640.200(30), F.A.C., and ash generated during the incineration of biosolids. Biosolids include products and treated material from biosolids treatment facilities and septage management facilities regulated by FDEP.

Note: Class AA biosolids, which are considered commercial fertilizer, are excluded from regulation under Rule Chapter 62-640, F.A.C.

Fertilizer – (section 576.011, F.S.) any substance which:

(a) Contains one or more recognized plant nutrients and promotes plant growth; or
(b) Controls soil acidity or alkalinity; or
(c) Provides other soil enrichment; or
(d) Provides other corrective measures to the soil.

The term “fertilizer” does not include unmanipulated animal or vegetable manures, peat, or compost which make no claims as described in paragraphs (a)-(d).

Karst – A type of topography formed by dissolution of bedrock in areas underlain by limestone, dolostone or, as in some western states, gypsum. Such terrain has underground drainage

systems that are reflected on the surface as sinkholes, springs, disappearing streams or even caves. (Florida Geological Survey, 2019).

Manure – (Rule 62-701.200, F.A.C.) Means a solid waste composed of excreta of animals, and residual materials that have been used for bedding, sanitary or feeding purposes for such animals.

Nonpoint source pollution – Any source of water pollution that does not meet the legal definition of "point source" in section 502:(14) of the Clean Water Act. "**Point source**" means any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include agricultural storm water discharges and return flows from irrigated agriculture.

Pesticide – (section 487.021, F.S.) Means any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any insects, rodents, nematodes, fungi, weeds, or other forms of plant or animal life or viruses, except viruses, bacteria, or fungi on or in living humans or other animals, which the department by rule declares to be a pest, and any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant; however, the term "pesticide" does not include any article that:

(a) Is a "new animal drug" within the meaning of section 201(w) of the Federal Food, Drug, and Cosmetic Act;
(b) Has been determined by the Secretary of the United States Department of Health and Human Services not to be a new animal drug by a regulation establishing conditions of use for the article; or
(c) Is an animal feed within the meaning of section 201(x) of the Federal Food, Drug, and Cosmetic Act bearing or containing an article covered in this subsection.

Pollutant – A constituent that results in pollution, as defined in section 403.031(11), F.S.

Potable water well – (Rule 62-521.200, F.A.C) Means any water well which supplies water for human consumption to a community water system or to a non-transient non-community water system. For the purpose of this rule, any potable water well installed by an installation used to serve that installation's operation is excluded from this definition.

Sinkhole – A naturally occurring geological feature that has an open connection to groundwater. Areas that have topsoil and a root zone over the entire area or ponded areas that do not have an open connection to groundwater are not considered sinkholes for the purposes of this manual.

Spring – (Florida Geological Survey Bulletin 66, 2004). A point where underground water emerges to the earth's surface (including the bottom of the ocean). Springs flow naturally from underlying aquifers and are classified based on their magnitude, or amount of flow coming from the spring vent. First magnitude springs discharge 64.6 million gallons per day (MGD) or more; second magnitude springs discharge from 6.46 to 64.6 MGD.

Springshed – (section 373.802(7), F.S.). Areas within the groundwater and surface water basins which contribute, based upon all relevant facts, circumstances, and data, to the discharge of a spring as defined by potentiometric surface maps and surface watershed boundaries.

Stream – (section 373.019(20), F.S.). Any river, creek, slough, or natural watercourse in which water flows in a defined bed or channel.

Surface waters – (Rule 62-302.200, F.A.C.). Water upon the surface of the earth, whether contained in bounds created naturally or artificially or diffused. Water from natural springs is classified as surface water when it exits from the spring onto the earth's surface.

Total maximum daily load (**TMDL**) – (section 303(d) of the Clean Water Act, 33 U.S.C. §1251 et seq. (1972)). The calculation of the maximum amount of a pollutant allowed to enter a waterbody so that the waterbody will meet and continue to meet water quality standards for that particular pollutant. A TMDL determines a pollutant reduction target and allocates load reductions necessary to the source(s) of the pollutant.

Waters – (section 403.031, F.S.). Include, but are not limited to, rivers, lakes, streams, springs, impoundments, wetlands, and all other waters or bodies of water, including fresh, brackish, saline, tidal, surface, or underground waters. Waters owned entirely by one person other than the state are included only in regard to possible discharge on other property or water. Underground waters include, but are not limited to, all underground waters passing through pores of rock or soils or flowing through in channels, whether manmade or natural. Solely for purposes of section 403.0885, F.S., waters of the state also include navigable waters or waters of the contiguous zone as used in s. 502 of the Clean Water Act, as amended, 33 U.S.C. ss. 1251 et seq., as in existence on January 1, 1993, except for those navigable waters seaward of the boundaries of the state set forth in s. 1, Art. II of the State Constitution. (Additional text pertaining to waters of the state is provided in the statute).

Well – (section 373.303(7), F.S) Means any excavation that is drilled, cored, bored, washed, driven, dug, jetted, or otherwise constructed when the intended use of such excavation is for the location, acquisition, development, or artificial recharge of groundwater, but such term does not include any well for the purpose of obtaining or prospecting for oil, natural gas, minerals, or products of mining or quarrying; for inserting media to dispose of oil brines or to repressure oil-bearing or natural gas-bearing formation; for storing petroleum, natural gas, or other products; or for temporary dewatering of subsurface formations for mining, quarrying, or construction purposes.

Wellhead – The structure directly over or adjacent to a well.

Wetlands – (section 373.019(27), F.S.) Means those areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soils. Soils present in wetlands generally are classified as hydric or alluvial or possess characteristics that are associated with reducing soil conditions. The prevalent vegetation in wetlands generally consists of facultative or obligate hydrophytic macrophytes that are typically adapted to areas having soil conditions described above.

Appendix 2: Example Record Keeping Forms

Practices on the BMP Checklist preceded with a pencil icon () require records that must be kept for a minimum of five years to demonstrate compliance with the applicable BMPs for the subject parcel. All records are subject to collection and review pursuant to the requirements of section 403.067, F.S.

Producers are encouraged to maintain their records in electronic form for ease in completing the required implementation verification (IV) site visit. Examples of records are shown below. OAWP has developed an Excel spreadsheet, available upon request, that can assist producers with keeping nutrient records. Contact an FDACS representative for a copy of the spreadsheet, choose commercially available recordkeeping software suited to your operation, or develop your own record keeping system to assist with IV site visit requirements.

Well Records

Location	Year Constructed	Constructed By	Last Modified	Modified By	Records Location

Ditch/Waterway Records

Location	Design Cross Section	Current Cross Section	Date of Last Cross Section Inspection	Records Location

Offsite Transfer of Wastes

Date	Recipient's Name and Address	Solid or Liquid	Number of Loads	Average Size of Loads (lbs/gals)	Nitrogen	Phosphorus	Analysis Date