

CAFO Fact Sheet series

Fact Sheet #13A: CAFO Requirements for the Poultry Production Area

By Karl VanDevender, University of Arkansas; Glenn Carpenter, USDA-NRCS;
Don Jones, Purdue University; and Peter Wright, Cornell University

Disclaimer

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Introduction

In December 2002, EPA released new rules to define and clarify environmental regulations for concentrated animal feeding operations (CAFOs). The rules contain a new framework for determining what facilities are subject to the federal rules. Producers who in the past may not have known about or responded to these rules may be required to make changes in the ways manure, wastewater, and mortalities are handled on their operations.

One of the two major sections of the new CAFO rules is the Effluent Limitations Guidelines (ELG), which define the minimum technology standards that CAFO operators are required to meet. These guidelines vary slightly across different animal species.

This fact sheet summarizes the federal requirements associated with the production area for poultry operations as well as the new and existing ELG provisions for poultry operations. Be sure to contact your extension service or state permitting authority to identify any additional state requirements and recommendations.

The information presented pertains only to the production area of the operation. The production area is the area where animals are housed and raw materials (such as feed) and manure are stored. For information on land application and other aspects of the operation, refer to *CAFO Fact Sheet #20: What is Required in a Nutrient Management Plan?*

Requirements for Poultry Operations

- The ELG for poultry operations apply only to those operations that have a one-time capacity greater than 30,000 laying hens or broiler facilities with liquid manure systems; 82,000 laying hens for facilities that do not have liquid manure systems; 125,000 chickens other than laying hens for facilities that do not have liquid

manure systems; or 55,000 turkeys. More information on the applicability of the new CAFO regulations can be found in *CAFO Fact Sheet #2: Do I Need to Apply for an NPDES Permit?*

- There must be no discharge of manure, litter, or process wastewater from the production area unless certain requirements are met.
- Rainfall causes the discharge AND
- The production area is designed, operated, and maintained to contain all of the manure, litter, and process wastewater, including storm water, plus runoff from the 25-year, 24-hour rainfall event (100-year, 24-hour rainfall event for newly constructed poultry CAFOs) AND
 - The CAFO is otherwise complying with the inspection, monitoring, record-keeping, and mortality disposal provisions in the rule.

Recommended Best Management Practices (BMPs)

While they may not be requirements of the new EPA regulations, the concepts presented in this section should help producers comply with the regulations. Because these concepts are examples of good environmental stewardship, they are also appropriate for poultry operators to consider even if they are not designated a CAFO.

Keeping the Clean Water Clean

Keeping the clean water clean is vital to the proper management of the production area. The idea is to prevent rainwater from coming in contact with manure, feed, or other sources of potential pollutants. The first step is to protect all manure and feed from rainwater. This is usually accomplished by the existing poultry housing and feed bins.

If manure is to be stored outside of the production houses, some type of manure storage should be used. What constitutes acceptable manure storage depends on the conditions specific to the operation. For an operation that handles its manure in a dry form, a tarp-covered pile for temporary storage or a permanent stacking shed may be acceptable options. For an operation that handles its manure in a liquid form, a tank, holding pond, or lagoon may be acceptable options. In addition, any spilled manure and feed should be collected and stored so that it is protected from the weather. Information and assistance on the design and management of appropriate manure and feed storage options are available through your local county Cooperative Extension Service, Soil and Water Conservation District (SWCD) or Natural Resources Conservation Service (NRCS) employee, or state-registered agricultural engineer.

In some situations, it may be necessary to also re-direct the flow of clean runoff water from roofed areas or up-slope ground surfaces. There are two options for the runoff from a roof. The first is to use gutters to direct the runoff water to downspouts. At each downspout, the water can be either released to flow away from the heavy use area or enter a pipe or drainage channel to flow to an acceptable release point. Normally, gutters are designed for the heaviest 5-minute rain event that is expected to occur about every 10 years. But, when used to prevent roof water from entering manure storage units, a 25-year, 5-minute rain event is often used. In either case, gutters, downspouts, and any drainage channels or pipes should be properly sized.

Rain gutters need to be protected against snow and ice damage. Hanging them lower than the projected roofline prevents snow and ice from sliding off barn roofs and knocking the gutters down. Extra hangers for the gutter, as closely spaced as 16 inches, or ice-breaking obstacles on the roof to stop sliding snow are often required to protect the gutters and keep them working properly.

An alternative to gutters is to use drip trenches under the roof eaves to catch runoff water and direct it to an acceptable release point. Drip trenches may be open surface channels or gravel-filled trenches with perforated pipe in the bottom. All surfaces beneath roof eaves, including drainage channels, should be designed to move the water away from the building and prevent standing water. In general, this area should be sloped at a 1% to 5% grade away from the building.

Surface diversions or land grading are generally used to catch the runoff water and divert the flow to an acceptable release point. The diversions or grading should be well vegetated to prevent soil erosion. In high water table areas, subsurface drainage should be used to redirect the flow of water that occurs beneath the ground surface.

A competent conservation contractor, SWCD or NRCS employee, or state-registered agricultural engineer should design these structures.

Treating and Discharging Contaminated Runoff Water

Runoff water that does come in contact with nutrients, sediments, and microorganisms must be stored for later treatment by land application. This storage is usually accomplished with tanks, holding ponds, and lagoons.

Information and assistance with the design and management of liquid storage systems are available through your local county Cooperative Extension

Service, SWCD or NRCS employee, or state-registered agricultural engineer.

Inspections

Storage sites need to be maintained and monitored. Large CAFO operators are required to perform weekly inspections of all storm water diversion devices, runoff collection structures, waste storage structures, and manure or runoff transporting systems. To prevent inadvertent overflows onto production areas or into storage areas, water lines need to be inspected daily. If the production area includes a liquid manure storage, depth markers or staff gauges need to be installed in the storage areas to determine the available storage capacity, ensuring that a 25-year, 24-hour storm (or in the case of new poultry CAFO operations, a 100-year, 24-hour storm) will not overtop the structure. Any deficiencies or

discharges need to be recorded and then addressed as soon as possible.

Record Keeping

Farm owners must keep a complete copy of design, inspection, problem correction, and mortality disposal records for the past five years (see *CAFO Fact Sheet #6: What CAFO Reports Must I Submit?*)

Compliance Checklist

The following checklist is designed to help you determine if your poultry operation is in compliance with the new federal CAFO regulations. *If you answer "No" to any one of these questions, you may not be in compliance with the new rules and may need to take corrective action.* States may have additional requirements, so check with your state permitting authority to identify the requirements that apply to your facility.

1. Is my operation a CAFO? Information to help you answer this question can be found in <i>CAFO Fact Sheet #2: Do I Need to Apply for an NPDES Permit?</i> If you circled "No," the new federal regulations still do not apply to your operation. However, your state may have special requirements that are more stringent than the federal regulations, so check with your state permitting authority to identify the requirements that apply to your facility.	Yes	No
2. I have identified all of my production areas. Production areas include poultry barns and any other areas where animals, manure, feed, or bedding may contact drinking water, process water, or precipitation. They also include lagoons, holding ponds, and conveyances used to transport or store liquid manure and wastewater. You need to be sure that all of your operation's production areas meet the wastewater containment and visual inspection requirements in the federal rules.	Yes	No
3. All of my operation's production areas and any liquid manure or wastewater impoundments have been designed, built, maintained, and operated to contain all of the manure, litter, and process wastewater, including storm water, plus runoff from the required design storm event. The design storm event is a 25-year, 24-hour storm for facilities constructed before April 14, 2003 and a 100-year, 24-hour storm for facilities constructed after April 14, 2003. The design storm event should be the minimum design storm used to size lagoons, runoff holding ponds, and any conveyances (ditches, berms, channels, terraces, or pipelines) whose failure could result in an illegal discharge of wastewater outside the containment area. The magnitude of these precipitation events varies by geographic location.	Yes	No
4. I ensure that a responsible employee conducts an inspection of all of the wastewater and runoff conveyances (see Checklist Item #3 above) This weekly inspection will help identify structural problems, leaks, or other evidence that the conveyances may fail and discharge wastewater or rainfall runoff from the production area.	Yes	No

<p>5. I have at least one depth marker on lagoons, holding ponds, or other wastewater storage structures associated with my production area to indicate design volume and minimum capacity necessary to contain the design rainfall event including freeboard. The design rainfall event is a 25-year, 24-hour event for facilities constructed before April 14, 2003 and a 100-year, 24-hour event for facilities constructed after April 14, 2003.</p> <p>Depth markers make it easy to determine if liquid levels in these impoundments are within regulatory limits. Reasons to monitor depth markers might include maintaining the minimum treatment volume in an anaerobic lagoon, ensuring adequate storage capacity for the next precipitation event, or ensuring that an ongoing rainfall event does not overtop an earthen embankment. For more information on the installation and use of depth markers, see <i>CAFO Fact Sheet #15: Liquid Level Markers for Uncovered Manure Storages and Lagoons</i>.</p>	Yes	No
<p>6. I ensure that a responsible employee inspects all of the depth markers at least once a week.</p> <p>Weekly inspections are the minimum requirement. Electronic instrumentation, available to automate depth measurements, operate emergency signals, and notify key employees, is not a substitute for this weekly visual inspection.</p>	Yes	No
<p>7. I ensure that a responsible employee inspects all wastewater holding ponds, lagoons, and other retention structures at least once a week.</p>	Yes	No
<p>8. I ensure that a responsible employee inspects all water lines in the production areas at least daily.</p> <p>This inspection includes water lines used for both drinking water and cooling. Leaks in these water lines put an extra load on wastewater conveyances and the retention structures that were not designed to receive, convey, and store this normally uncontaminated water.</p>	Yes	No
<p>9. Animal mortalities are removed promptly from the production area and are disposed in an acceptable way. They are NOT placed in wastewater impoundments, other liquid manure storage facilities, or process wastewater systems (unless designed specifically to treat mortalities).</p> <p>Proper mortality disposal is vitally important both to protect water quality and to preserve good community and neighbor relations.</p>	Yes	No
<p>10. I respond quickly to any deficiencies noted in any of the daily and weekly inspections of the production area, water lines, and wastewater impoundments and conveyances.</p> <p>The federal rules do not specify a fixed time interval within which deficiencies must be corrected; the rule's standard is "as soon as possible." Deficiencies in any of these systems represent an increased risk of illegal discharge and should have a high priority relative to other CAFO activities or responsibilities.</p>	Yes	No
<p>11. On the CAFO property, I maintain an active record of all inspections, pond depth measurements, mortalities, and corrective actions pertaining to the production area.</p> <p>According to the federal rules, you are required to keep these records onsite for at least five years from the time they are created.</p>	Yes	No
<p>12. I also maintain records documenting the design of all manure, wastewater storage, and conveyance systems, including volumes of solids accumulation as well as treatment and storm water capacity; number of days of storage capacity; and records of any overflows that occur from any of the wastewater storage structures or conveyances, including the date, time, and estimated volume of wastewater released.</p>	Yes	No
<p>13. My operation's facilities divert clean water not included in a designed manure storage/treatment system away from the production area.</p> <p>This water includes rainwater and snowmelt from roofs, parking lots, and other areas outside where the animals are produced, fed, or processed and where manure and wastewater are stored or conveyed.</p>	Yes	No
<p>14. My production area is designed and operated to contain all the manure plus runoff from ALL storm events.</p> <p>The new rules distinguish between these operations, which normally involve full confinement under roof without significant open lot area, and beef/dairy operations, which normally have significant open lot area subject to rainfall runoff.</p>	Yes	No

Is Cost Sharing Available?

USDA-NRCS has allocated money that may be used to cost share the BMPs needed to correctly handle animal manure. Check with your local NRCS or SWCD to see what funds are available and to determine if you qualify. *CAFO Fact Sheet #4: Financial and Technical Assistance Available to CAFO Owners/Operators* will help you identify cost share programs for which you may be eligible.

Time Line for Compliance with Production-Area Provisions of the New CAFO Rule

The time line for compliance with the new rules is fairly complex. Some provisions take effect upon adoption of the rule on April 14, 2003; others do not take effect until the year 2006. *CAFO Fact Sheet #3: How Soon Must I Apply for an NPDES Permit?* details these compliance deadlines and provides a means for you to determine what deadlines your CAFO faces.

Supporting Sections

40 CFR Part 412.40-47 Effluent Limitations Guidelines—Concentrated Animal Feeding Operations (CAFO) Point Source Category, Subpart D: Swine, Poultry and Veal Calves

Summary

CAFO production areas have previously been regulated under the federal CAFO rules and continue to be regulated, with a small number of changes having been adopted in April 2003. Existing farms that fall under the CAFO rules (see *CAFO Fact Sheet #2*) need to apply for a permit and implement a nutrient management plan by December 31, 2006, controlling the runoff from the production area and storing it appropriately. All CAFOs covered by the new rule must comply with its inspection, monitoring, record-keeping, and mortality disposal provisions. States may have additional, more stringent requirements.

Definition of Terms

Production area—That part of a CAFO used to feed, maintain, convey, or process live animals, including anywhere animal manure, feed, or bedding can contact drinking water, process-generated wastewater, or precipitation.

Drip trench—A system of channels and berms that collects roof water at the base of the roof, preventing clean water from entering a production area and preventing polluted water from the production area from mixing with the clean roof runoff.

Authors

Karl VanDevender, an extension engineer at the University of Arkansas, can be reached at kvan@uaex.edu; Glenn Carpenter, an agricultural economist at USDA-NRCS, can be reached at glenn.carpenter@usda.gov; and Don Jones, a professor at Purdue University, can be reached at jonesd@purdue.edu. Peter Wright, a manure management specialist at Cornell University, can be reached at pew2@cornell.edu.