



## Livestock Waste Management and Conservation

### Permit Requirements for the Swine Industry

Tennessee CAFO Factsheet #3

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#### Introduction

Congress passed the Clean Water Act (CWA) in 1972 to “restore and maintain the chemical, physical and biological integrity of the Nation’s waters.” Among its core provisions, it prohibits the discharge of pollutants from a point source to waters of the United States except as authorized by a National Pollutant Discharge Elimination System (NPDES) permit.

EPA’s regulations of Concentrated Animal Feeding Operations (CAFOs) dates to the 1970s. EPA established effluent guidelines for feedlots in 1974 based on the best available technology that was economically achievable for the industry. CAFO regulations issued in 1976 determined which Animal Feeding Operations (AFOs) were defined or could be designated as CAFOs under the CWA, and were therefore subject to NPDES permit regulations. However, many changes have occurred in the U.S. animal production industry since the development of the original regulations. The continued trend toward fewer but larger operations, coupled with greater emphasis on more intensive production methods and specialization, is concentrating more manure nutrients and other animal-waste constituents in some geographic areas.

The new CAFO rules, published February 12, 2003 in the *Federal Register*, were adopted within the

authority of the 1972 CWA as amended to address changes and developments in the animal production industries. These new rules are the result of more than three years of high-profile study and input from the animal feeding industry, academia, environmental groups and the general public through which EPA considered a wide range of potential options that were evaluated technically and economically.

EPA’s revisions to the original regulations make the regulations more effective for the purposes of protecting or restoring water quality. The revisions also make the regulations easier to understand and better clarify the conditions under which an AFO is a CAFO and therefore subject to the regulatory requirements. The revisions are more inclusive of certain sectors of the CAFO industries; remove several permitting exemptions; reflect a greater focus on land application of manure and wastewater; and emphasize accountability, inspections and record keeping while retaining appropriate state flexibility.

The Tennessee regulations and permits come under the authority of the Tennessee Department of Environment and Conservation (TDEC), with review assistance from the Tennessee Department of Agriculture. There is no fee for a Class II CAFO *General Permit*. Class I CAFOs require an *individual*

permit in Tennessee and have a more substantial cost associated with them. Swine operations classified as a CAFO I are those that have more than 2500 hogs weighing more than 55 pounds or 10,000 pigs weighing less than 55 pounds. Producers in this category should contact TDEC for permit information.

**Who Needs a NPDES Permit?**

Most pork producers who confine 750 to 2,499 hogs weighing more than 55 pounds for a period of 45 days during a 12-month period must apply for a CAFO II general permit in Tennessee. Producers who confine from 3,000 to 9,999 pigs weighing less than 55 pounds may also need to obtain a permit. There are some producers in this size category who may not need to be permitted. Check with the Tennessee Environmental Assistance Center (1-888-891-8332) to see if you do or do not qualify. Producers who confine more than these numbers must obtain an *individual* class I CAFO permit.

**Notice of Intent (NOI)**

Producers who meet the requirements of a class II permit must first apply with a **Notice of Intent** submitted to the Tennessee Department of Agriculture on the following schedule:

<u>SITUATION</u>	<u>NOI DUE</u>
Existing site, newly regulated as of the new rules	February 13, 2006
Existing site, previously permitted in Tennessee under CAFO II general permit (but now expired)	Immediately
Existing site, currently permitted with individual permit	180 days before the individual permit expires
New site, meeting CAFO I or II requirements	180 days before operation begins

Operations that have increased in size from a non-CAFO status to a CAFO status after April 14, 2003 (but not a new site)

Within 90 days of becoming a CAFO

A CAFO II-permitted site changes ownership; new operator must submit notice of intent

At least 5 days prior to the purchase of the property

**Notice of Intent** forms may be obtained from any of **Tennessee’s Environmental Assistance Centers**, by calling toll-free 1-888-891-8332 or from the Animal Science Department’s Livestock Waste Management and Conservation Web site (<http://animalscience.ag.utk.edu/WasteManagement/WasteManagement.htm>).

Completed **NOI** forms should be submitted to:

CAFO Notice of Intent  
 Water Resources Program/CAFO  
 Tennessee Department of Agriculture  
 Ellington Agricultural Center  
 440 Hogan Road  
 Nashville, TN 37220

Information Included in a NOI:

- Type of operation (swine, poultry, dairy or beef)
- Liquid- or dry-manure system
- Start-up date for new operation
- Must attach 2 USGS 1:24000 topographic maps showing 1-mile radius
- Site plan showing buildings and property lines identifying the location of the operation
- Name of operation (legal or official name)
- Telephone number
- Operation’s mailing address
- Name of the closest waters of the state to the operation
- Latitude and longitude

- Contact person, address of contact person and telephone number
- Signatures

Other Information Needed at Time of Application:

- A closure/rehabilitation plan for the waste system storage structures that meets or exceeds Natural Resource Conservation Service (NRCS) technical standards and guidelines and addresses maintenance of the facility until proper closure is completed.
- A proposed schedule for closure, not to exceed 360 days.
- Site-specific **Nutrient Management Plan (NMP)**.
- Any additional information that TDEC may require subsequent to the initial NOI review.

**Nutrient Management Plan (NMP)**

All CAFO II operations must develop a **NMP** and get it approved and implemented prior to December 31, 2006. All CAFO I operations must develop a **Comprehensive** Nutrient Management Plan (**CNMP**). In addition, certain CAFO II operations will be required to develop a CNMP if government funding is sought for plan development or waste system development. Comprehensive Nutrient Management Plans must be developed by NRCS or a registered engineer approved by NRCS to develop CNMPs.

*A Nutrient Management Plan Must:*

1. Ensure best management practices and procedures necessary to implement applicable effluent limitations and standards.

2. Ensure adequate storage of manure, litter and processed wastewater, including procedures to ensure proper operation and maintenance of the storage facilities.
3. Ensure proper management of dead animals.
4. Ensure that clean water is diverted from the production area.
5. Prevent confined animals from direct contact with waters of the state.
6. Ensure that chemicals and other contaminants handled on-site are disposed of in an approved manner.
7. Identify appropriate site-specific conservation practices to be implemented, including buffers or equivalent practices to control runoff of pollutants to waters of the state.
8. Identify protocols for appropriate testing of manure, litter process wastewater and soil that are approved by the University of Tennessee.
9. Establish protocols to land-apply manure that insures appropriate nutrient utilization.
10. Identify specific records that will be kept to document the implementation and management of the elements described in the NMP as outlined in the CAFO documentation from the Department of Environment and Conservation (TDEC).

**Requirements of a Liquid-Waste System**

No CAFO liquid-waste management system shall be constructed, modified, repaired or placed into operation after April 13, 2006 unless it is designed, constructed, operated and maintained in

accordance with the final design plans and specifications that meet or exceed standards in the NRCS Field Office Technical Guide and other guidelines as accepted by TDEC or TDA.

Any new or additional confinement buildings and all waste-handling facilities must be located in accordance with NRCS Conservation Practice Standard 313.

A subsurface investigation for earthen holding pond, pit, sump, treatment lagoons or other earthen storage/containment structure suitability and liner requirements shall be a component of the system design. The subsurface investigation will include a detailed soils investigation, with special attention to the water table depth and seepage potential. The investigation must evaluate soils to a depth of 2 feet below the planned bottom grade of the storage structure. Deeper investigations may be required in Karst regions. A soils/geologic investigation shall be performed by a soil scientist and qualified geologist who is a registered professional geologist licensed by the state of Tennessee. Unless relevant information is available to the contrary, compliance with this provision during design and construction of the facility will normally demonstrate that the hydrologic connection does not exceed a maximum allowable specific discharge of 0.0028 ft/day

#### **Records That Must Be Kept:**

1. Copy of the nutrient-management plan.
2. Documentation of weekly inspections of all storm water-diversion devices, runoff-diversion structures and devices channeling contaminated storm water to the wastewater- and manure-storage and containment structure.

3. Daily inspections of water lines, including drinking and cooling water lines.
4. Weekly inspections of the manure, litter and process wastewater impoundments, noting the liquid level in the impoundment.
5. Weekly records of the depth of the manure and process wastewater in the liquid impoundment as indicated by the required depth marker. This marker indicates the minimum capacity necessary to contain the runoff and direct precipitation of the 25-year, 24-hour rainfall event or, in the case of new sources, indicates the runoff and direct precipitation from a 100-year, 24-hour rainfall event.
6. Corrective action taken (if deficiencies are not corrected within 30 days of notice of deficiency, the records must include an explanation of the factors preventing immediate correction.)
7. Mortalities management and practices used to comply with the nutrient-management plan.
8. Records documenting the current design of any manure- or litter-storage structures, including volume for solids accumulation, design treatment volume, total design volume and approximate number of days of storage capacity.
9. Records of the date, time and estimated volume of any overflow.
10. Estimated and actual crop yields where land application was used.
11. Dates manure, litter or processed wastewater is applied to each field.
12. Weather conditions at time of application and for 24 hours prior to and following applications.
13. Test methods used to sample and analyze manure, litter, process wastewater and soil.
14. Results from manure, litter, process wastewater and soil sampling.

15. Explanation of the basis for determining manure application rates as provided in the technical standards established by the NRCS or as otherwise approved by the director of the TDA.
16. Calculations showing the total nitrogen and phosphorus to be applied to each field, including sources other than manure, litter or process wastewater.
17. Total amount of nitrogen and phosphorus actually applied to each field, including documentation of calculations for the total amount applied.
18. The method used to apply the manure, litter or process wastewater and the dates of inspection and calibration for the manure-application equipment.
19. The date, recipient name and address and approximate amount of manure, litter or process wastewater transferred to a 3<sup>rd</sup> party.

### Annual Reports

Producers must submit to TDEC and TDA an annual report between January 1 and February 15 each year. The report will contain the following information:

1. The number and type of animals on site, whether in open confinement or housed under roof.
2. Estimated amount of total manure, litter and process wastewater generated by the CAFO in the previous calendar year.
3. Estimated amounts of total manure, litter and process wastewater transferred to a 3<sup>rd</sup> party in the previous calendar year.
4. Total number of acres for land application covered by the NMP.

5. Total number of acres under control of the CAFO that were used for land application.
6. A summary of all manure, litter and process wastewater discharges to waters of the state from the production area that have occurred in the previous calendar year, including date, time and approximate volume.
7. A statement indicating whether the current version of the CAFO's nutrient-management plan was developed or approved by a certified nutrient-management planner.

*Send Duplicate Annual Reports to the Following:*

CAFO Annual Report TDEC Division of Water Pollution Control 6 <sup>th</sup> Floor L&C Annex, 401 Church Street Nashville, TN 37243- 1534	CAFO Annual Report Water Resources Program/CAFO Tennessee Department of Agriculture 440 Hogan Road Nashville, TN 37220
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### References

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Portions reprinted from Tennessee Department of Environment and Conservation publication on Class II concentrated animal feeding operations, Tennessee NPDES Permit, Paul E. Davis, Director, Division of Water Pollution Control, 2004.

This fact sheet does not contain complete information concerning the CAFO regulations in Tennessee. Additional information may be obtained from the Department of Environment and Conservation, Division of Water Pollution Control at the address listed above or on the Animal Science Department's Livestock Waste Management Web site at: <http://animalscience.ag.utk.edu/WasteManagement/WasteManagement.htm>