

# RATIONALE

## **State of Tennessee National Pollutant Discharge Elimination System (NPDES) General Permit for Concentrated Animal Feeding Operations (CAFOs)**

Tennessee Division of Water Pollution Control

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### **1. Introduction**

The purpose of this rationale is to provide the basis for State of Tennessee permit conditions and related general permit procedures for any new or existing operations meeting the definition of a CAFO (concentrated animal feeding operation) that is required to seek permit coverage under the NPDES General Permit per the requirements of TDEC Rule 1200-4-5-.14(2).

Since the activities and nature of CAFOs are similar, with respect to impact on the water environment, and the needed controls to protect waters of the state, it is the opinion of the Division of Water Pollution Control that this category of sources would be controlled more appropriately under a general permit. CAFOs requiring coverage under a general permit requires the same monitoring, recordkeeping, and best management practice (BMP) requirements.

### **2. Background**

Concentrated animal feeding operations (CAFOs) considered in this draft permit and rationale are those that meet the definition of a medium (Class II) CAFO that have discharged and are designed, constructed, operated or maintained such that a discharge could occur. A CAFO is an AFO<sup>1</sup> that meets the large (Class I) CAFO size criteria of Rule 1200-04-05-.14(3), the medium (Class II) criteria of Rule 1200-04-05-.14 (4) or has otherwise been designated as a CAFO by the director of the Division of Water Pollution Control. AFOs meeting or exceeding the size thresholds indicated in the second column in the table below are considered large (Class I) CAFOs and require an individual NPDES permit. AFOs within the range given in the third column are considered medium (Class II) CAFOs if any of the following conditions are met:

- a. The AFO is located on a waterbody that has been identified by the department as being impaired for nutrients or pathogens; or
- b. The AFO began operation on or after May 1, 1999; or
- c. The AFO expanded its operation on or after the promulgation date of this regulation.

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<sup>1</sup> An "Animal Feeding Operation" (AFO) is a facility that (1) stables, confines and feeds or maintains animals (other than aquatic animals) for a total of 45 days or more in any 12-month period and (2) does not sustain crops, vegetation, forage growth, or post-harvest residues in the normal growing season over any portion of the facility. Two or more AFOs under common ownership are considered to be a single AFO for the purposes of determining the number of animals at an operation, if they adjoin each other or if they use a common area or system for the disposal of wastes.

The table below summarizes the size thresholds for Class I and Class II CAFOs.

<b>Animal Type</b>	<b>Class I (Large CAFO)</b>	<b>Class II (Medium CAFO)</b>
Dairy Cows	700+	200 – 699
Cattle	1,000+	300 – 999
Swine	2,500+ (≥ 55 lbs) 10,000+ (≤ 55 lbs)	750 – 2,499 (≥ 55 lbs) 3,000 – 9,999 (≤ 55 lbs)
Chickens (liquid)	30,000+	9,000 – 29,999
Chickens (dry)	125,000+ (non-layers) 82,000+ (layers)	37,500 – 124,999 (non-layers) 25,000 – 81,999 (layers)
Horses	500+	150 – 499
Sheep/lambs	10,000+	3,000 – 9,999
Turkeys	55,000+	16,500 – 54,999
Ducks	5,000+ (liquid waste management) 30,000+ (dry waste management)	1,500 – 4,999 (liquid waste management) 10,000 – 29,999 (dry waste management)

### 3. Description of Activity

#### 3.1. Currently permitted CAFOs in Tennessee

The division currently has 280 CAFOs that are either permitted or that have applied for permit coverage; the operations consist of poultry (broilers and layers), swine, dairy, and feedlots. Of these CAFOs, fifty-two operations would be covered under this permit if they meet the eligibility requirements listed in part 2 above.

#### 3.2. Water quality issues

The primary issue of water quality concern at a CAFO is the volume of waste generated and the potential that waste or wastewater be released into waters of the state. The pollutants of concern are primarily nutrients (i.e., phosphorus and nitrogen) and pathogens.

Other water quality concerns for CAFOs include the use/disposal of the manure, litter, and process wastewater and proper management/disposal of mortalities (i.e., dead animals). Manure, litter, and process wastewater is routinely used as fertilizer for agricultural crops both on the CAFO owner/operator’s own property and by third parties who obtain the animal waste from the CAFO owner/operator. Use of animal waste as fertilizer is a beneficial use of this waste source, but care must be taken to ensure that the waste is properly applied and managed so that it doesn’t cause pollution of waters of the state. Another notable concern from the operation of a CAFO is the proper management/disposal of mortalities. Mortalities that are not properly managed or disposed of can not only cause pollution to waters of the state, but can also be a source of odor resulting from improper mortality handling and can be a vector for the transport of disease or other pathogens.

### 4. Proposed Permit Conditions

The following is a brief summary of the major requirements of this permit.

#### 4.1. Notice of Intent

Operators wishing to obtain coverage under this permit must submit a completed notice of intent (NOI) using the form provided in Appendix A of the draft permit. The division will review the NOI for completeness and accuracy and, when necessary, investigate the proposed operation for potential impacts to waters of the state. NOIs shall be submitted not more than 30 days following the effective date of the permit for existing operations. New operations must seek to obtain coverage at least 180 days prior to the time that they plan to commence operation. The NOI must be submitted to both the division of Water Pollution Control and to the Tennessee Department of Agriculture.

4.2. Nutrient Management Plan

All permittees under this permit must develop, submit for state approval, implement and keep on site either a comprehensive nutrient management plan (CNMP) or a site-specific nutrient management plan (NMP). The appropriate plan (either a CNMP or a NMP) must be submitted to the division along with the NOI. (C)NMPs typically address such issues as feed management, manure and wastewater handling and storage, nutrient management, land treatment practices, record keeping, and other manure and wastewater utilization options.

4.3. Special Conditions

The following special conditions were included in the permit.

- a. **Best Management Practices** – The permit includes best management practices (BMPs) that are required for all CAFOs covered under the permit. The BMPs include conditions on how the CAFO shall be operated to ensure that toxic materials are not introduced into the animal waste and thus applied to agricultural fields when the animal waste is land applied and also conditions for discharge or spill response and reporting.
- b. **BMPs for the Land Application of Animal Waste** – In addition, the permit contains additional BMPs for operations that land apply animal waste. These BMPs require the incorporation of field-specific assessments of the potential for nitrogen and phosphorus transport from the field. Proper incorporation of these BMPs will help CAFO operators maximize the use of animal waste for its nutrient content and will help minimize pollution to streams receiving storm water runoff from waste application sites.
- c. **Liquid Waste Management System Requirements** – The permit contains several requirements pertaining to liquid waste management systems and specifies design standards to help prevent pollution introduced from a liquid waste management system.
- d. **Transfer to Third Party** – The permit also includes record keeping requirements for operations that transfer more than 100 tons of manure, litter or process wastewater per year to a third party for disposal and requires that the CAFO provide recipients of animal waste a copy of the most recent waste analysis. This requirement will let waste recipients know the nutrient content of the waste and will help them determine proper application rates to prevent the over application of this fertilizer source to the receiving crop land.
- e. **Closure Plan** – A closure plan, addressing how animal barns and waste systems will be shut down if a CAFO discontinues operations, is required by the permit to help ensure that the potential pollutants left from the discontinuation of an operation do not adversely impact the surrounding environment and adjacent waterbodies.
- f. **Mortality Management** – The permittee must ensure proper management of mortalities (i.e. dead animals) so that they are not disposed of in liquid manure, stormwater, or process wastewater storage or treatment system that is not specifically designed to treat animal mortalities. This requirement is important to help ensure that mortalities are not able to cause pollution to receiving waters or provide a transport mechanism for disease and other pathogens.

4.4. Record Keeping

The permit requires applicable records and information to be kept on site for a minimum of five years.

4.5. Annual Report

This permit requires an annual report (requirement details in the permit), to be submitted to the local EFO and TDA.

4.6. Notification requirements

Any discharge of wastewater from a CAFO is prohibited. If for any reason there is a discharge to a water body of the state the permittee shall make immediate oral notification within 24-hours to the division. In addition, the permittee must analyze the discharge per the requirements of section 4.3.1 of the permit and report the results to the division.

## 5. General Permit Issuance Procedures

This general permit is drafted in accordance with the Tennessee Water Quality Control Act (§ 69-3-101 et seq.), and the department's permit issuance regulations (Rules of the department 1200-4-1-.05 and 1200-4-10.01 through .03).

## 6. Permit Issuance and Public Notice Procedures

This general permit is drafted in accordance with the Tennessee Water Quality Control Act (T.C.A. § 69-3-101, et.seq.), and the TDEC's permit issuance regulations in TN Rule 1200-4-05.

The division will publish notice of its intent to issue the General NPDES Permit for Concentrated Animal Feeding Operations (CAFOs) and notice of one or more public hearings to receive comments on the draft permit. At least 30 days notice will be given for the public hearings. Comments will be received at least 10 ten days after the last hearing. Any interested person may request copies of the rationale (fact sheet) and draft permit and submit written comments on the draft permit.

The Division of Water Pollution Control proposes to issue this permit with the described requirements and standard conditions. These conditions are tentative and open to comment. Interested persons are invited to submit comments for consideration, by letter or at the scheduled public hearings. Hearings will be held pursuant to Rule 1200-4-1-.05 on the following dates and locations:

Date	City	Location	Time
Thursday, January 28, 2010	Martin	Martin City Hall 101 University Street Martin, TN 38327 (731) 587-3126	1:00 PM CST
Tuesday, February 2, 2010	Greeneville	Greeneville Light & Power G Thomas Love Boardroom 110 North College Street Greeneville, TN 37745 (423) 639-7105	1:00 PM EST
Tuesday, February 9, 2010	Shelbyville	Bedford County Courthouse 1 Public Square, Suite 101 (First Floor Courthouse) Shelbyville, TN 37160 (931) 684-7944	4:00 PM CST
Wednesday, February 10, 2010	Cleveland	Cleveland Public Library 795 Church St. Cleveland, TN 37311 (423) 472-2163	1:00 PM EST
Thursday, February 11, 2010	Livingston	Livingston City Hall 301 McHenry Circle Livingston, TN 38570 (931) 823-1269	1:00 PM CST

For additional information, or to submit comments, contact:

**Ms. Erin O'Brien**  
**Tennessee Division of Water Pollution Control**  
**6th Floor L & C Annex, 401 Church Street**  
**Nashville, TN 37243**

**Phone:** (615) 532-0684  
**E-mail:** [Jim.McAdoo@tn.gov](mailto:Jim.McAdoo@tn.gov)  
**URL:** <http://www.tn.gov/environment/permits/cafo.shtml>