



WISCONSIN LEGISLATIVE COUNCIL INFORMATION MEMORANDUM

Wisconsin Pollutant Discharge Elimination System (WPDES) Permits for Large Livestock Facilities

As the nature of livestock production continues to change rapidly and dramatically, the industry has moved towards large operations that confine hundreds or thousands of animals on small tracts of land. Animal waste disposal has therefore become an issue of concern in Wisconsin, particularly with respect to the impact it has on water quality.

The federal Clean Water Act (Act) prohibits the discharge of pollutants to navigable waters unless the discharge is authorized by a National Pollutant Discharge Elimination System (NPDES) permit. The Act allows states to implement their own permit programs as long as the standards in the state program meet or exceed those of the federal program. Pursuant to this authority, Wisconsin has authorized the Department of Natural Resources (DNR) to establish, administer, and maintain a state pollutant discharge elimination system in order to restore and maintain the chemical, physical, and biological diversity of Wisconsin's waters. Generally, the discharge of any pollutant into any state waters is unlawful unless the discharge is completed in accordance with a Wisconsin Pollutant Discharge Elimination System (WPDES) permit. DNR has established particular WPDES permit requirements for large livestock facilities such as Concentrated Animal Feeding Operations (CAFOs).

This Information Memorandum provides general background information on CAFOs and describes the WPDES application process and requirements for large CAFOs.

BACKGROUND INFORMATION ON CAFOS

The number of CAFOs in Wisconsin has increased significantly over the past several decades. According to DNR, Wisconsin had 282 CAFOs as of July 2016. A CAFO is an animal feeding operation¹ where any of the following apply:

¹ Generally, an "animal feeding operation" is a lot or facility, other than a pasture or grazing area, where animals have been, are or will be stabled or confined, and will be fed or maintained for a total of 45 days or more in any 12-month period. [s. NR 243.03 (4), Wis. Adm. Code.]

- The operation has 1,000 animal units² or more at any time and either stores manure or process wastewater³ in a below or at grade storage structure or applies manure or process wastewater to land. An operation with 1,000 animal units or more is a “large CAFO.”
- The operation has between 300 and 999 animals and has a category I unacceptable practice.⁴ This type of operation is a “medium CAFO.”
- The operation has 999 animal units or less and either is a significant contributor of pollutants to navigable waters or has caused fecal contamination of well water. If the operation has between 300 and 999 animal units, it is a “medium CAFO.” If the operation has less than 300 animal units, it is a “small CAFO.”

[s. NR 243.03 (12), (31), (39), and (59), Wis. Adm. Code.]

This Information Memorandum focuses on WPDES permit requirements for large CAFOs only, which are described above.

WPDES PERMITTING PROCESS FOR LARGE CAFOS

As previously mentioned, the federal Clean Water Act generally prohibits the discharge of any pollutant to navigable waters from any point source. Federal law defines “point source” as any “discernible, confined and discrete conveyance” and provides examples including a pipe, channel, conduit, as well as any CAFO. Under federal law, a point source such as a CAFO may discharge pollutants to navigable waters only according to the terms of a NPDES permit. The U.S. Environmental Protection Agency has authorized Wisconsin to implement its own permit program, the WPDES permit program, in accordance with federal law. [33 U.S.C. ss. 1311 (a), 1362 (12) and (14), and 1342.]

In Wisconsin, any person who owns or operates a large CAFO is required to obtain a WPDES permit if the operation stores manure or process wastewater in a structure at or below grade or applies manure or process wastewater to land. A CAFO with 1,000 animal units or more that does not have a WPDES permit may not discharge pollutants from manure or process wastewater into waters of the state. [s. NR 243.11 (3), Wis. Adm. Code.] The following sections discuss the WPDES permit application process and requirements for large CAFOs.

² An “animal unit” is a unit of measure used to determine the total number of animal types located at a n animal feeding operation. [s. NR 243.03 (5), Wis. Adm. Code.] Section NR 243.05, Wis. Adm. Code, provides instructions for calculating the number of animal units located at an operation.

³ “Processwastewater” is wastewater directly or indirectly used in the operation of a CAFO that results from certain events or activities. These events and activities include at least one of the following: (1) spillage or overflow from animal or poultry watering systems; (2) washing, cleaning, or flushing pens, barns, manure pits, or other CAFO facilities; (3) direct contact swimming, washing, or spray cooling of animals or dust control; or (4) water that comes into direct contact with any raw materials or animal byproducts including manure, feed, milk, eggs, or bedding. [s. NR 243.03 (53), Wis. Adm. Code.]

⁴ A category I unacceptable practice arises when an operation does either of the following: (1) discharges pollutants into navigable waters through a man-made ditch, flushing system, or other similar man-made device; or (2) discharges pollutants into navigable waters that originate outside the operation and pass over, across, or through the operation, or otherwise come into direct contact with confined animals. [s. NR 243.24 (1) (a), Wis. Adm. Code.]

WPDES PERMIT APPLICATION PROCESS AND CONTENTS

The owner or operator of a proposed large CAFO must file a preliminary application for a WPDES permit at least 12 months before the intended date on which the operation will become a large CAFO. The owner or operator must then submit a final WPDES permit application at least 180 days before the intended date on which the operation will become a large CAFO. The operation may not discharge pollutants from manure or process wastewater into waters of the state until DNR has issued an individual WPDES permit to the operation or has issued a general permit allowing for such discharges.⁵ A final application consists of the following:

- The location of the existing or proposed site on maps, including aerial photos and soil survey maps.
- A scaled drawing of existing and proposed animal housing, feed storage structures, and other raw materials storage areas.
- A description and scaled drawing of existing and proposed manure storage or composting facilities, process wastewater storage or treatment facilities, and any other treatment systems.
- A description and scaled drawing of existing and proposed runoff control systems, groundwater monitoring systems, water supply wells, permanent spray irrigation systems, or other landspreading or treatment systems.
- A description and scaled drawing of any existing and proposed ancillary service and storage areas and outside animal lots.
- A complete nutrient management plan. See below for a discussion of this application requirement.
- Any other information requested by DNR in order to comply with environmental analysis and review requirements in ch. NR 150, Wis. Adm. Code.

[s. NR 243.12 (1) (a) and (2) (a), Wis. Adm. Code; see also s. 283.37 (2), Stats.]

A WPDES permit can have an initial term of up to five years. [s. 283.53 (1), Stats.] An owner or operator of a large CAFO that already holds a WPDES permit must reapply at least 180 days prior to the expiration date of the current permit. A reissuance application consists of the following:

- Information on changes that have occurred during the current permit term and anticipated changes during the upcoming permit term.
- The location of the existing site and proposed modifications to the site on maps, such as aerial photos and soil survey maps.

⁵ DNR may issue a WPDES general permit to cover a category or group of CAFOs where DNR has determined that the operations will not be covered by individual permits. [s. NR 243.121 (1), Wis. Adm. Code; see also s. 283.35, Stats.]

- Scaled drawings and descriptions of existing and proposed animal housing, manure storage, composting and treatment facilities, process wastewater storage or treatment facilities or systems, runoff control structures or systems, feed storage structures, groundwater monitoring systems, water supply wells, ancillary and service storage areas, loafing and outside lot areas, and feed storage areas.
- An updated nutrient management plan reflecting any changes that have occurred since the previous permit issuance.
- A description of permanent spray irrigation systems and any other landspreading or treatment systems.
- Any other information requested by DNR in order to comply with environmental analysis and review requirements in ch. NR 150, Wis. Adm. Code.

[s. NR 243.12 (1) (d) and (2) (b), Wis. Adm. Code; see also s. 283.53 (3), Stats.]

WPDES PERMIT REQUIREMENTS

Section 283.31 (4), Stats., sets forth standard WPDES permit requirements for all permittees, regardless of the type of point source. The following permit requirements apply to all WPDES permittees:

- Each permit must specify a maximum level of permissible discharges. A discharge of any pollutant in excess of the permit terms constitutes a permit violation.
- Facility expansions, production increases, or process modifications that alter or increase pollutant discharges in excess of the permit terms must be reported to DNR.
- All facilities and control systems installed to ensure compliance with the operation's WPDES permit must be maintained in good working order and operate as efficiently as possible.
- DNR officials must be allowed to enter the premises in order to access records and inspect monitoring equipment.

[s. 283.31 (4) and (5), Stats.]

Section NR 243.13, Wis. Adm. Code, establishes the standard WPDES permit requirements for large CAFOs only. Permit conditions depend in part on the primary livestock housed at the CAFO.⁶ However, permits also include general conditions that apply to all large CAFOs, regardless of differences in livestock. The following permit requirements apply to all large CAFOs:

- A discharge of manure or process wastewater pollutants to waters of the state must comply with surface water and groundwater quality standards.

⁶ Some permit conditions vary depending upon whether the CAFO has the following livestock: (1) dairy cows, cattle, and ducks; (2) swine, poultry other than ducks, and veal calves; and (3) horses and sheep. [s. NR 243.13 (2) to (4), Wis. Adm. Code.]

- A discharge of contaminated storm water to waters of the state from ancillary service and storage areas must comply with groundwater and surface water quality standards.
- Livestock may not come into direct contact with navigable waters in the production area.
- Livestock and poultry may not access surface waters or wetlands located in or adjacent to CAFO outdoor vegetated areas unless approved by DNR.
- Disposal of an animal carcass may not result in a discharge of pollutants to surface waters, violate groundwater standards, or impair wetland functional values.
- A permittee must develop or update an emergency response plan designed to address unauthorized spills or discharges within 30 days of the permit issuance.

[s. NR 243.13 (1) and (5) to (8), Wis. Adm. Code.]

NUTRIENT MANAGEMENT PLAN

As previously mentioned, a nutrient management plan is one of the components of a final WPDES permit application. Generally, CAFO owners or operators are responsible for the storage, management, and land application of all manure and process wastewater generated by the operation. [s. NR 243.142 (1), Wis. Adm. Code.] A nutrient management plan provides the amounts, timing, locations, and methods for land application of manure and process wastewater. The plan must contain information indicating how the operation plans to comply with restrictions in NRCS Standard 590,⁷ applicable DNR regulations, and conditions in the operation's WPDES permit. [s. NR 243.14 (1), Wis. Adm. Code.]

Generally, DNR rules prescribe how, when, and where a permittee may apply manure and process wastewater to land. In addition to these general restrictions, there are some restrictions that apply under particular circumstances. For example, permittees must implement special practices when applying manure or process wastewater to areas of fields within a surface water quality management area (SWQMA).⁸ Furthermore, permittees must implement particular land application methods in order to assess and minimize the potential for delivery of phosphorus to waters of the state. Permittees are also required to follow special land application restrictions during the winter months for solid and liquid manure. [s. NR 243.14 (2) and (4) to (7), Wis. Adm. Code.]

To ensure that wastes are properly stored and applied in accordance with the WPDES permit, nutrient management plan, and DNR regulations, all permittees must maintain adequate

⁷ "NRCS" refers to the Wisconsin Natural Resources Conservation Service, and "NRCS Standard 590" is the technical standard for nutrient management published in Appendix B to ch. ATCP 51, Wis. Adm. Code. [s. NR 243.03 (43) and (44), Wis. Adm. Code.]

⁸ A SWQMA refers to land near various types of navigable waters. SWQMA can refer to all of the following: (1) the area within 1,000 feet of the ordinary high water mark of navigable waters that consist of a lake, pond, or flowage; (2) the area within 1,000 feet of the high water mark of navigable waters that consist of a glacial pothole lake; (3) the area within 300 feet from the ordinary high water mark of navigable waters that consist of a river, stream, or other non-lake navigable waters; and (4) the area within 300 feet of conduits to navigable waters. [s. NR 243.03 (66), Wis. Adm. Code.]

storage for manure and process wastewater generated at the operation. For liquid manure, adequate storage means a minimum of 180 days of storage. [s. NR 243.14 (9), Wis. Adm. Code.]

MONITORING AND OVERSIGHT OF PERMITEES

MONITORING AND INSPECTION PROGRAM

A CAFO is required to submit a monitoring and inspection program designed to determine overall compliance with the facility's WPDES permit. The program should identify the areas for inspection, the person responsible for conducting the inspections, and the process for recording and submitting the inspections to DNR. The permittee must take corrective action as soon as practicable to address any problems identified through inspections. [s. NR 243.19 (1), Wis. Adm. Code.]

A permittee must complete visual inspections at certain intervals throughout the year in accordance with the following guidelines:

- Daily inspections for leakage in water lines that might come into contact with pollutants or drain into storage or containment structures or runoff control systems.
- Weekly inspections to ensure proper operation of storm water diversion devices and devices channeling contaminated runoff to storage or containment structures.
- Weekly inspections of liquid storage and containment structures for signs of structural damage. The level of material in the structure should also be measured at this time.
- Quarterly inspections of the production area and outdoor vegetated areas.
- Periodic inspections and calibration of landspreading equipment to detect leaks and ensure accurate application rates for manure and process wastewater.
- Inspections for run-off each time manure or process wastewater is applied to frozen or snow-covered ground.

[s. NR 243.19 (1) (a), Wis. Adm. Code.]

In addition, permittees are required to sample manure, process wastewater, and soil on fields used for land application in accordance with DNR regulations and WPDES permit conditions. Manure and process wastewater must be analyzed at least annually for nitrogen, phosphorus, and percent solids. [s. NR 243.19 (1) (c), Wis. Adm. Code.]

RECORDKEEPING

CAFOs are also required to retain certain records onsite for at least five years from the date the record was created. Permittees must follow different recordkeeping requirements depending on whether the information is related to the production area, land application activities, sampling, or inspections. [s. NR 243.19 (2), Wis. Adm. Code.]

REPORTING REQUIREMENTS

If a permittee fails to take corrective action within 30 days of identifying a problem during an inspection as described above, the permittee must notify DNR immediately following the 30-day period and provide an explanation for the failure to take action. [s. NR 243.19 (3) (a), Wis. Adm. Code.]

In addition to the corrective action reporting requirement, a CAFO must follow quarterly and annual reporting requirements. The written quarterly report must summarize the results of the facility's production area inspections and contain the following information:

- Identified permit violations. This includes discharges of manure or process wastewater to surface waters, overflows of liquid manure or process wastewater storage and containment structures, and missed inspections.
- Dates, times, and volume of discharges of manure or process wastewater to surface waters.
- Corrective actions taken.
- A description of the condition of runoff control systems and storage and containment structures.
- Recorded levels of materials in liquid storage and containment structures.
- Other information requested by DNR or required by the WPDES permit.

[s. NR 243.19 (3) (b), Wis. Adm. Code.]

A permittee must submit a written annual report by the date specified in the facility's WPDES permit. The annual report must include the following information:

- Quarterly reports, described above.
- The number and type of manure and immature animals at the operation and whether the animals are in open confinement or housed.
- The total amount of material in storage or containment facilities.
- Lab analyses of manure and process wastewater land applied in the previous 12 months, and the most recent soil test analysis completed for fields receiving manure or process wastewater in the previous 12 months.
- An annual spreading report summarizing manure and other process wastewater land application activities.
- Dates on which storage facilities were emptied to the 180-day storage level indicator.
- The total amount of manure and process wastewater distributed to another person in the previous 12 months.
- The total number of acres for land application covered by the nutrient management plan.
- The total number of acres actually used for land application of manure and process wastewater in the previous 12 months.
- A statement indicating whether the operation's nutrient management plan was developed or approved by a certified nutrient management planner.
- The results of land application equipment inspections and calibration.

- Other information requested by DNR or required by the WPDES permit.

[s. NR 243.19 (3) (c), Wis. Adm. Code.]

PERMIT VIOLATIONS AND ENFORCEMENT

DNR may modify, suspend, or revoke a WPDES permit in whole or in part if DNR finds that the owner or operator of a CAFO violated a term or condition of its WPDES permit. DNR must notify the permittee if it takes action in accordance with this authority. [s. NR 243.31 (1), Wis. Adm. Code; see also s. 283.53 (2), Stats.]

Furthermore, if DNR finds that the owner or operator of a CAFO is violating his or her WPDES permit, a statutory or regulatory requirement, or that the operation is discharging manure or process wastewater to waters of the state without a WPDES permit, DNR may refer the matter to the Department of Justice for enforcement. In an enforcement action, DNR may seek the civil and criminal penalties established in statute, such as a temporary or permanent injunctive relief, forfeiture, and imprisonment. [s. NR 243.31 (2), Wis. Adm. Code; see also ss. 283.89 and 283.91, Stats.]

This memorandum is not a policy statement of the Joint Legislative Council or its staff.

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