

EXHIBIT C

PART 651 - AGRICULTURAL WASTE MANAGEMENT FIELD HANDBOOK

Chapter 1 - Laws and Regulations

SOURCE: MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY

GENERAL PERMIT FACT SHEET

FOR

CONCENTRATED ANIMAL FEEDING OPERATIONS (CAFO)

Introduction

On June 10, 1974, the Federal Environmental Protection Agency (EPA) delegated authority to Montana for administration of the Montana Pollutant Discharge Elimination System (MPDES). The MPDES issues permits to control point source discharges of pollution. A CAFO is defined in Section 502 of the Clean Water Act as a point source of pollution. Discharges from CAFOs require a permit. Confined livestock can generate waste accumulations that are potential sources of pollutants to state surface and ground waters. As potential point sources of pollution, CAFOs are subject to the provisions of the Montana's Water Quality Act and the Montana Pollutant Discharge Elimination System (MPDES) permitting. The provisions prohibit pollution of surface and ground water and require permits for discharges containing pollutants. This fact sheet describes the provisions of the law that apply to CAFOs and describes the process for determining which CAFOs require permits.

The Montana Water Quality Act

Discharges of pollutants to state waters are governed by The Montana Water Quality Act (75-5-101 et seq. MCA). Section 605 of the Act identifies prohibited activities. It is unlawful to cause pollution of any state waters or to place wastes in a location where they will cause pollution (75-5-605 (1)(a) MCA). In addition, Section 605 states that it is unlawful to discharge sewage, industrial waste, or other wastes into any state waters without a current permit from the Department of Environmental Quality (75-5-605 (2)(c) MCA).

State waters are defined as a body of water, irrigation system, or drainage system, either surface or underground (75-5-103(25) MCA). Surface waters that flow periodically in ephemeral and intermittent channels are state waters. The definition excludes non-discharging, waste containment or treatment ponds and irrigation systems from which there is no return flow to state waters. Irrigation canals and other man-made ditches which otherwise return to surface waters are considered state waters subject to regulation. The term "state waters" identifies that which is protected under the law. The term conveys no right of ownership of water bodies.

Livestock owners need to ask the key question: "Do waterborne wastes discharge, or have the potential to discharge, from my livestock operation into any state waters?" If the potential to discharge pollutants exists, a permit is required.

Not all Animal Feeding Operations (AFO) are concentrated animal feeding operations. A facility that houses animals is considered an AFO when **both** of the following criteria are met:

1. Animals are stabled, confined, and fed or maintained for a total of **45 days or more** in any 12-month period;
2. Crops, vegetation forage growth, or post-harvest residues are **not sustained** in the normal growing season over any portion of the facility.

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An AFO is a CAFO when:

1. it contains more than 1,000 animal units;
2. it contains between 301 and 1,000 animal units and a discharge occurs through a man-made conveyance; or pollutants are discharged directly into state waters which originate outside of the facility and pass over, across, or through the facility;
3. or, it is **designated as a CAFO on a case-by-case basis by the Department of Environmental Quality (DEQ).**

"Animal unit" means a unit of measurement for any animal feeding operation calculated by adding the following numbers: The number of slaughter and feeder cattle multiplied by 1.0, plus the number of mature dairy cattle multiplied by 1.4, plus the number of swine, weighing 55 pounds or more, multiplied by 0.4, plus the number of sheep multiplied by 0.1, plus the number of horses multiplied by 2.0 (CFR 40, Part 122, Appendix B).

A case-by-case designation of a CAFO, the following must be considered:

Size of the operation:

1. Amount of wastes reaching state waters;
2. Location of the facility relative to state waters;
3. Means of conveyance of wastes to state waters;
4. Slope, vegetation, rainfall, and other physical factors affecting the likelihood or frequency of discharge;
5. Other relevant factors that may include proximity to public water supplies, quality of the receiving waters, or public concern.

The Permit Program

The CAFO permitting authority is with the Montana DEQ, Water Protection Bureau. The Department has developed a five-year general CAFO permit that contains effluent limits and performance standards. A CAFO operator applies for the General Permit by completing an application and paying a \$600 fee. The application fee (\$600) and first year annual fee (\$600) must be paid at least 30 days prior to operation of the discharge. The application requests information on facility ownership, location, size, physical surroundings, and waste control and land application plans. The Department must receive application fees prior to the application review. Once the signed authorization and copy of the General Permit are received from DEQ, the owner or operator of a CAFO is authorized to discharge under the provisions of the permit. Compliance with the permit reduces the annual fee to \$450.

The DEQ also has the authority to issue individual CAFO permits under certain circumstances. An individual permit would be required by a substantial change in the operation, occurring after the general permit authorization, that would require limitations or controls that are not contained in the general permit. Individual permits may also be required in cases of chronic non-compliance.

Effluent Limits and Performance Standards

The conditions of the general CAFO permit hold the permittee to certain discharge limits and standards of performance. A discharge of pollutants to surface waters of the state from a CAFO may only occur

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whenever rainfall events, either chronic or catastrophic, cause an overflow from a facility designed, constructed, and operated to contain all process-generated wastewater plus the runoff from a 25-year, 24-hour storm for the location of the CAFO.

A 25-year, 24-hour storm refers to the number of inches of rainfall in a 24-hour period that is expected to occur once every 25 years. The size of the storm is a statistical calculation of the National Weather Service. Discharges from a permitted facility that result from rainfall greater than the 25-year, 24-hour storm are not violations of the permit where adequate containment is properly designed, constructed and operated. Discharges resulting from rainfall that is less than the 25-year, 24-hour storm are violations. Absent a permit, all discharges of process wastewater to state waters are violations of the Montana Water Quality Act. An AFO that discharges runoff only as a result of an amount of precipitation greater than the 25-year, 24-hour storm is not a CAFO and a permit is not required.

A discharge of pollutants to ground waters of the state may only occur when the seepage or leachate volume from a CAFO, combined with the volume of ground water beneath the source, results in ground water pollutant concentrations in compliance with ground water quality standards. Nitrate plus nitrite as nitrogen ($\text{NO}_3 + \text{NO}_2$ as N) and fecal coliform bacteria are the principal parameters of concern for ground water quality as affected by CAFOs. The applicable $\text{NO}_3 + \text{NO}_2$ as N standard differs according to the classification of the underlying ground water and the operational history of the CAFO.

Ground water is placed in four classification categories based on its value for Specific Conductance (SC). Specific conductance is an index of the amount of dissolved solids in the water. The classification categories, associated SC values and applicable $\text{NO}_3 + \text{NO}_2 - \text{N}$ standards are given in Table 1 (pursuant to ARM 17.30.1006).

Table 1. Ground water classification categories, associated SC values and applicable $\text{NO}_3 + \text{NO}_2 - \text{N}$ standards.

Category	SC (microSiemens/cm)	$\text{NO}_3 + \text{NO}_2 - \text{N}$ (mg/L)
Class I	$\leq 1,000$	10
Class II	$>1,000$ and $\leq 2,500$	10
Class III	$>2,500$ and $\leq 15,000$	10 if SC $\leq 7,000$; 50 if SC $>7,000$
Class IV	$>15,000$	50

The $\text{NO}_3 + \text{NO}_2 - \text{N}$ standards given in Table 1 for Class III and Class IV ground waters do not apply if it can be demonstrated to the satisfaction of the Department that the field hydraulic conductivity in the affected aquifer is less than 0.1 feet per day. However, all existing and anticipated beneficial uses must be protected in these low-yielding aquifers.

CAFOs that are new or increased sources (discharging on or after April 29, 1993) must meet the non-degradation standard of 7.5 mg/L $\text{NO}_3 + \text{NO}_2 - \text{N}$ when discharging to Class I and Class II ground waters and Class III ground waters having SC values less than or equal to 7,000 microSiemens/cm. The standard for new or increased sources discharging to Class III ground waters having SC values greater than 7,000 microSiemens/cm and Class IV ground waters is 50 mg/L, as indicated in the table. The applicable standard for fecal coliform bacteria is a concentration less than one organism per 100 ml.

The general permit also specifies that those land areas used for the application of manure or other wastes must provide waste treatment through plant nutrient uptake during the growing season following application. That is, the annual land application rate of solid manure, liquid manure or other solid or liquid wastes must not exceed annual crop requirements.

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All facilities used for the collection, storage or treatment of manure, bedding materials, feeds and other substances having a waste contributing potential must be managed to prevent any pollutant from such materials from entering state waters. All wastes from dipping vats, pest and parasite control units and other facilities used for the application of hazardous or toxic chemicals must be handled and disposed of in a manner that prevents pollution of state waters.

The general permit requires that all CAFOs having 1,000 animal units or more prepare and implement a Nutrient Management Plan (NMP) within one year of the authorization date. The recommended minimum components of the NMP are:

1. A description of animal feed management to, minimize feed wastes and prevent feed wastes and feed additives from entering state waters;
2. A description of manure handling procedures and manure storage structures and facilities that prevent water pollution; divert clean water from contact with confinement lots, holding pens and stored manure; construction and maintenance of waste collection, conveyance and storage systems that prevent discharges of organic matter, sediment, nutrients, and pathogens to ground or surface water in amounts greater than that allowed by the effluent limitations and applicable water quality standards;
3. The application of manure to cropland that balances soil and fertilizer nutrients with crop requirements; soils and manure testing to determine nutrient content; land application methods and timing that prevents the loss of nutrients to surface water and minimizes loss of nutrients to ground water; and calibration of application equipment to ensure the planned application rate; and,
4. Crop residue management, grazing management, and implementation of other conservation practices to minimize movement of soil, organic materials, nutrients, and pathogens from land application areas to surface and ground water.

The NMP must be updated annually to quantify the amount of wastes generated by the facility and demonstrate how and where the facility provides treatment through land application.

Should you have any questions regarding the CAFO permitting process, contact the DEQ Water Protection Bureau.