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Application Restrictions Statutes & Regulations

Montana

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Application Restrictions

STATE OF MONTANA

1) Mont. Code Ann. §§ 75-5-801, 802; Mont. Admin. R. 17.30.1334 (1), (2), (3), (7), (8), (10), (11), (12)

The statutes are current through chapters effective, February 28, 2019, of the 2019 regular session, 66th Legislature.

1) Mont. Code Ann. §§ 75-5-801, 802; Mont. Admin. R. 17.30.1334 (1), (2), (3), (7), (8), (10), (11), (12)

§ 75-5-801. Definitions.

For the purposes of this part, the following definitions apply:

- (1) “Animal feeding operation” means a lot or facility where the following conditions are met:
 - (a) animals have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12-month period; and
 - (b) crops, vegetation, forage growth, or postharvest residues are not sustained in the normal growing season over any portion of the lot or facility.
- (2) “Concentrated animal feeding operation” means an animal feeding operation that is defined as a large concentrated animal feeding operation or as a medium concentrated animal feeding operation or that is designated as a concentrated animal feeding operation in accordance with 40 CFR, part 122. Two or more animal feeding operations under common ownership are considered to be a single animal feeding operation 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.
- (3) “Large concentrated animal feeding operation” means an animal feeding operation that stables or confines at a minimum:
 - (a) 700 mature dairy cows, whether milked or dry;
 - (b) 1,000 veal calves;

- (c) 1,000 cattle other than mature dairy cows or veal calves;
- (d) 2,500 swine each weighing 55 pounds or more;
- (e) 10,000 swine each weighing less than 55 pounds;
- (f) 500 horses;
- (g) 10,000 sheep or lambs;
- (h) 55,000 turkeys;
- (i) 30,000 laying hens or broilers if the animal feeding operation uses a liquid manure-handling system;
- (j) 125,000 chickens, other than laying hens, if the animal feeding operation uses other than a liquid manure-handling system;
- (k) 82,000 laying hens if the animal feeding operation uses other than a liquid manure-handling system;
- (l) 30,000 ducks if the animal feeding operation uses other than a liquid manure-handling system; or
- (m) 5,000 ducks if the animal feeding operation uses a liquid manure-handling system.

(4) “Medium concentrated animal feeding operation” means an animal feeding operation with the type and number of animals that fall within any of the ranges listed in subsection (4)(a) and that has been defined or designated as a concentrated animal feeding operation. An animal feeding operation is defined as a medium concentrated animal feeding operation if:

- (a) the type and number of animals that it stables or confines falls within any of the following ranges:
 - (i) 200-699 mature dairy cows, whether milked or dry;
 - (ii) 300-999 veal calves;
 - (iii) 300-999 cattle other than mature dairy cows or veal calves;
 - (iv) 750-2,499 swine each weighing 55 pounds or more;
 - (v) 3,000-9,999 swine each weighing less than 55 pounds;

- (vi) 150-499 horses;
- (vii) 3,000-9,999 sheep or lambs;
- (viii) 16,500-54,999 turkeys;
- (ix) 9,000-29,999 laying hens or broilers if the animal feeding operation uses a liquid manure-handling system;
- (x) 37,500-124,999 chickens, other than laying hens, if the animal feeding operation uses other than a liquid manure-handling system;
- (xi) 25,000-81,999 laying hens if the animal feeding operation uses other than a liquid manure-handling system;
- (xii) 10,000-29,999 ducks if the animal feeding operation uses other than a liquid manure-handling system; or
- (xiii) 1,500-4,999 ducks if the animal feeding operation uses a liquid manure-handling system; and

(b) either of the following conditions is met:

- (i) pollutants are discharged into waters of the state through a constructed ditch, flushing system, or other similar constructed device; or
- (ii) pollutants are discharged directly into waters of the state that originate outside of and pass over, across, or through the facility or otherwise come into direct contact with the animals confined in the operation.

§ 802. Permitting—Concentrated Animal Feeding Operation.

- (1) For the purpose of permitting concentrated animal feeding operations, the board shall adopt, by reference, the federal regulations and definitions contained in 40 CFR, parts 122.23 and 412.
- (2) Subject to the provisions of subsection (3), concentrated animal feeding operations that meet the requirements of 40 CFR, part 412, must be authorized by the department under a general permit.
- (3) If, upon review of an application for a general permit authorization for a concentrated animal feeding operation production area, the department discovers site-specific information that indicates that a general permit authorization is not sufficiently protective of water quality, the department shall require an individual permit.

.1334 Technical Standards for Concentrated Animal Feeding Operation

(1) The owner or operator of a CAFO as defined in ARM 17.30.1330 that is subject to the requirements of 40 CFR 412 Subparts C or D shall develop and implement a nutrient management plan (NMP) in accordance with the requirements of this rule and 40 CFR 122.42(e). The NMP must address the form, source and amount of nutrients, and the timing and method of application for all manure, litter, and other process wastewater that is applied to land under the ownership or operational control of the CAFO.

(2) For purposes of this rule, the following terms have the meaning and interpretations as indicated below and are supplemental to the definitions contained in ARM 17.30.1304:

(a) "expected crop yield" means the estimated crop yield, expressed as bushels per acre or tons per acre, in a future year based on one of the following:

(i) if historic crop yield data are available, the expected crop yield must be based on the average of at least three years of previous crop yield data (past average yield) using the formula: $\text{estimated crop yield} = 1.05 \times \text{past average yield}$; or

(ii) if historic crop data are unavailable, expected crop yield must be based on realistic yield goals determined from other sources and described in the facility's NMP;

(b) "field" means an area of land that is capable of supporting vegetation and is homogeneous with respect to crop or cover type where manure is to be applied and is under the control of a CAFO owner or operator;

(c) "manure" means manure, litter, or process wastewater, including bedding, compost, and raw materials or other materials comingled with manure or set aside for disposal;

(d) "multiyear phosphorus application" means phosphorus applied to a field in excess of the crop needs for that year;

(e) "Olsen soil test" means the concentration of phosphorus in the soil as determined by the Olsen sodium-bicarbonate extraction in accordance with method code 4D5 in United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS), Soil Survey Laboratory Methods Manual, Soil Survey Investigations Report No. 42, Version 4.0, November 2004;

(f) "process wastewater" means water directly or indirectly used in the operation of a CAFO for any or all of the following:

- (i) spillage or overflow from animal or poultry watering systems;
- (ii) washing, cleaning, or flushing pens, barns, manure pits, or other CAFO facilities;
- (iii) direct contact swimming, washing, or spray cooling of animals;
- (iv) dust control; or
- (v) any water that comes into contact with any raw materials, products, or byproducts including manure, litter, feed, milk, eggs, or bedding;

(g) "site vulnerability rating" means the narrative description of a field for phosphorus loss as determined by Table 4 (Site/Field Vulnerability to Phosphorus Loss) in United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS), No. 80.1 Nutrient Management, Agronomy Technical Note MT-77 (revision 3), January 2006; and

(h) "total phosphorus index value" means the sum of the weighted risk factors for a field as determined by Table 3 (Phosphorus Index Assessment) in United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS), No. 80.1 Nutrient Management, Agronomy Technical Note MT-77 (revision 3), January 2006.

(3) Except as provided in (10), application rates for manure applied to each field must be determined based on the criteria given in (a) through (c).

(a) The CAFO shall complete a field-specific assessment to determine the appropriate basis (nitrogen- or phosphorus-based) for application of plant nutrients. The field-specific assessment for CAFOs applying manure on fields that are located in a watershed that is listed as impaired for nutrients (total phosphorus or total nitrogen) must follow the method listed in (i). The field-specific assessment for CAFOs applying manure on fields that are not located in a watershed that is listed as impaired for nutrients (total phosphorus or total nitrogen) may follow the procedures in either (i) or (ii).

(i) The field-specific assessment must be based on the phosphorus index assessment method described in United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS), No. 80.1 Nutrient Management, Agronomy Technical Note MT-77 (revision 3), January 2006. The nutrient application basis is determined as follows:

(A) nitrogen-based application, if the site vulnerability rating is low (total phosphorus index value is less than 11);

(B) phosphorus-based, if the site vulnerability rating is medium (total phosphorus index value is between 11 and 21);

(C) phosphorus-based application up to crop removal, if the site vulnerability rating is high (total phosphorus index value is between 22 and 43); or

(D) no application, if the site vulnerability rating is rated as very high (total phosphorus index value is greater than 43).

(ii) The field-specific assessment must be based on a representative soil sample, as described in (5), using the Olsen soil test method. The nutrient application basis is determined as follows:

(A) nitrogen-based application, if the Olsen phosphorus soil test is less than 25 mg/L;

(B) phosphorus-based application, if the Olsen phosphorus soil test is greater than 25.1 mg/L and less than 100 mg/L;

(C) phosphorus-based up to crop removal, if the Olsen phosphorus soil test is greater than 100.1 mg/L and less than 150.0 mg/L;

(D) no application, if the Olsen phosphorus soil test is greater than 150 mg/L.

(b) The CAFO shall complete a nutrient need analysis for each crop to determine the acceptable amounts of nitrogen and phosphorus to be applied to the field based on the appropriate basis (nitrogen- or phosphorus-based application) as determined in (a). The nutrient needs must be determined based on Montana State University Extension Service Publication 161, Fertilizer Guidelines for Montana Crops or other relevant sources. For crops not listed in Bulletin 161, the department may approve a fertilizer application rate provided by the local county extension service or other qualified source. The CAFO must identify the source of the nutrient needs analysis in the nutrient management plan.

(c) The CAFO shall complete a nutrient budget based on the nutrients needs of the crop as determined in (b) that accounts for all sources of nutrients available to the crop. Other sources that must be addressed where applicable include those in (i) through (vi).

(i) The nitrogen needs determined in (b) must be reduced based on nitrogen fixation credits if a legume crop was grown in the field in the previous year. Nitrogen reduction for annual legume crops is ten pounds per acre and for perennial legumes is 50 pounds per acre, unless appropriate justification is given showing a lower rate is appropriate, but

not less than 35 pounds per acre for all perennial legumes except black medic and annual sweet clover, for which the rate is not less than 15 pounds per acre, and lentils and chick peas, for which the rate is not less than 30 pounds per acre.

(ii) The nitrogen needs determined in (b) must be reduced based on nitrogen residuals from past manure applications based on nitrogen mineralization rates given in Schedule I.

Schedule I. Nitrogen Mineralization Rates

Type of Wastes	First Year(1)	Second Year
Fresh poultry manure	0.90	0.02
Fresh swine manure	0.75	0.04
Fresh cattle manure	0.70	0.04
Fresh sheep and horse manure	0.60	0.06
Liquid manure, covered tank	0.65	0.05
Liquid manure, storage pond	0.65	0.05
Solid manure, stack	0.60	0.06
Solid manure, open pit	0.55	0.05
Manure pack, roofed	0.50	0.05
Manure pack, open feedlot	0.45	0.05
Storage pond effluent	0.40	0.06
Oxidation ditch effluent	0.40	0.06

Schedule I. Nitrogen Mineralization Rates

Type of Wastes	First Year(1)	Second Year
Aerobic lagoon effluent	0.40	0.06
Anaerobic lagoon effluent	0.30	0.06

⁽¹⁾If irrigated, reduce first year mineralization by 0.05.

(iii) The nitrogen needs determined in (b) must be reduced based on any nutrients provided by commercial fertilizer, irrigation water, or other sources. The CAFO shall provide the basis for the nutrients adjustments on the NMP.

(iv) Nitrogen availability may be adjusted to reflect the method of application given in Schedule II. For phosphorus-based application, the nitrogen availability is 1.0.

Schedule II. Nitrogen Availability and Loss by Method of Application

Application Method	Loss Factor
Injection (sweep)	0.90
Injection (knife)	0.95
Broadcast (incorporated within 12 hours)	0.7
Broadcast (incorporated after 12 hours but before four days)	0.6
Broadcast (incorporated after four days)	0.5
Sprinkling	0.75

(v) The nutrient budget must be completed on forms provided by the department.

(vi) If after the first three years of implementing the NMP the yield does not average at least 80% of the planned expected crop yield, the NMP must be amended to be consistent with the documented yield levels unless sufficient justification for the use of the higher yield is approved by the department. The amendment must be submitted as an amendment in accordance with ARM 17.30.1365.

[. . .]

(7) Manure must be applied to fields at times and under conditions that will hold the nutrients in place for crop growth and protect surface and ground water using best management practices described in the nutrient management plan. The intended target spreading dates must be included in the NMP. Manure must not be land applied under the following conditions:

(a) on land that is flooded or saturated with water;

(b) during or within 36 hours of a rainfall event that exceeds four hours in duration or 0.25 inches or more of precipitation; or

(c) to frozen or snow-covered ground (winter application), except for fields meeting the following criteria:

(i) the application area must be at least 300 feet from lakes, streams, intermittent streams, irrigation canals and ditches, open intake structures, property lines, and road right-of-ways;

(ii) permanent vegetative cover or standing stubble with crop residue greater than 50 percent; and

(iii) land slope of the field must not exceed the following criteria:

(A) six percent for application of solid manure (total solids content greater than 15 percent); or

(B) three percent for application of slurry or liquid waste (total solids content of 15 percent or less).

(8) If winter application is proposed, the CAFO must identify fields suitable for winter application in the nutrient management plan and application rates for manure must not exceed those identified in the nutrient budget as determined in (3)(c).

[. . .]

(10) A multiyear phosphorus application is allowed for fields that require a nitrogen-based application based on a site-specific assessment (site vulnerability rating less than 22) as described in (3). When such application is made, the following conditions apply:

- (a) the application may not exceed the recommended nitrogen application rate during the years of application which may include a calculation for fertilizer inefficiencies or the estimated nitrogen removal in harvested plant biomass during the year of application when there is no recommended nitrogen application;
- (b) conservation practices must be included in the NMP and implemented to minimize the risk of phosphorus loss from the field; and
- (c) no additional manure may be applied to the field until the phosphorus applied in the single application has been removed through plant harvest.

(11) As an alternative to the manure application rates based on the criteria given in (3), the CAFO may develop application rates for manure based on United States Department of Agriculture (USDA), Natural Resource Conservation Service (NRCS), Conservation Practice Standard, Code 590 (November 2006), provided that the following conditions are met:

- (a) a field-specific assessment of the potential for nitrogen and phosphorus transport from the field to surface waters must be conducted;
- (b) the form, source, amount, timing, and method of application of manure and any other nutrients to each field must be based on realistic production goals, and minimizing nitrogen and phosphorus movement to surface water must be addressed;
- (c) the appropriate flexibilities for the CAFO must be maintained to implement a multiyear phosphorus application as described in (9);
- (d) manure must be sampled a minimum of once annually for nitrogen and phosphorus and must be analyzed based on procedures and methods given in (4) and (5);
- (e) soil must be analyzed a minimum of once every three years for phosphorus content;
- (f) the results of the manure and soil sampling analysis must be used in determining manure application rates; and
- (g) the nutrient budget must be completed on forms provided by the department.

(12) The board adopts and incorporates by reference the following, which may be obtained from the Department of Environmental Quality, Water Protection Bureau, P.O. Box 200901, Helena 59620-0901, or on the department's web site at <http://deq.mt.gov/default.mcp>.

(a) United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS), No. 80.1 Nutrient Management Agronomy Technical Note MT-77 (revision 3), (January 2006);

(b) United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS), Method 4D5 (Olsen Sodium-Bicarbonate Extraction), Soil Survey Laboratory Methods Manual, Soil Survey Investigations Report No. 42, Version 4.0, (November 2004);

(c) United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS), Sampling Soils for Nutrient Management Manure Resource Series, MT (April 2007);

(d) Montana State University Extension, MontGuide, Interpretation of Soil Test Reports for Agriculture, MT200702AG, (July 2007);

(e) Montana State University Extension Service Publication 4449-1, Soil Sampling and Laboratory Selection, (June 2005); and

(f) United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS), Conservation Practice Standard, Nutrient Management, Code 590, (November 2006).