



University of Arkansas Division of Agriculture

An Agricultural Law Research Project

Application Restrictions Statutes & Regulations

Illinois

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Application Restrictions

STATE OF Illinois

- 1) **415 ILCS § 5/4 (m); 35 Ill. Adm. Code §§ 560.101–208**
- 2) **510 ILCS § 77/20; 8 Ill. Adm. Code § 900.803**

The statutes and Constitution are current through the 2018 regular and special legislative sessions. The statutes are subject to changes by the Illinois Reference Bureau.

1) **415 ILCS § 5/4 (m); 35 Ill. Adm. Code §§ 560.101–208**

§ 5/4. Environmental Protection Agency; establishment; duties.

(m) The Agency shall have authority, consistent with Section 5(c) and other provisions of this Act, and for purposes of Section 303(e) of the Federal Water Pollution Control Act, as now or hereafter amended, to engage in planning processes and activities and to develop plans in cooperation with units of local government, state agencies and officers, and other appropriate persons in connection with the jurisdiction or duties of each such unit, agency, officer or person. Public hearings shall be held on the planning process, at which any person shall be permitted to appear and be heard, pursuant to procedural regulations promulgated by the Agency.

§ 560.101. Purpose.

a) The subject of Chapter 5 of the Illinois Pollution Control Board Rules and Regulations (Title 35, Subtitle E, Chapter I) is Livestock Wastes. Rule 104(e) of Chapter 5 (35 Ill. Adm. code 501.405) calls for the adoption of guidelines for livestock waste application to land.

b) This technical policy statement has been developed in response to Rule 104(e) (35 Ill. Adm. code 501.405), which reads as follows:

Field Application of Livestock Waste. The quantity of livestock waste applied on soils shall not exceed a practical limit as determined by soil type, especially its permeability, the condition (frozen or unfrozen) of the soil, the percent slope of the land, cover mulch, proximity to surface waters and likelihood of reaching groundwater, and other relevant considerations. These livestock waste application guidelines will be adopted pursuant to Rule 105, unless otherwise provided for by Board Regulations.

c) The application of livestock wastes to the land is an acceptable and established practice in Illinois. However, when wastes are not applied in a responsible manner, they can create pollutional problems. The emphasis in land application should be on waste utilization rather than waste disposal. Considering the nutrient value of livestock wastes

there exist economic incentives for the efficient utilization of these nutrients. Environmental concerns should also dictate the wise management and use of livestock wastes.

d) The intent of this document is to present livestock waste application guidelines for the livestock producers of Illinois. The guidelines must of necessity be given in general terms and cannot apply to each particular farm situation. It is the responsibility of each individual who is applying livestock wastes to land to do so in a manner which will not cause pollution problems. In some cases, this may require either more or less stringent application restrictions than indicated by these guidelines.

§ 560.201. Nutrient Loading.

a) Livestock waste application should not exceed the agronomic nitrogen rate, which is defined as the annual application rate of nitrogen that can be expected to be required for a reasonable anticipated crop yield. It should be recognized that, in most cases, if the agronomic nitrogen rate is met, the phosphorus applied will exceed the crop requirements. Thus, in order to make the best use of phosphorus resources, it may be advisable to apply wastes at the agronomic phosphorus rate. It will be considered acceptable, however, to apply at the nitrogen rate. Appendix A contains some general information on agronomic fertilization rates for various Illinois crops.

b) The nutrient contents of livestock wastes are highly variable even on an individual farm. The best way to determine nutrient contents is to perform an actual chemical analysis. Table 1 and Table 2 are intended to serve only as an aid in estimating the nutrient value of various forms of livestock waste.

c) The values in Table 2 may be used to approximate the amount of nitrogen applied in the soil when application is by either of the following methods:

1) Soil injection

2) Surface application immediately followed by incorporation.

d) When livestock waste is surface applied and allowed to dry before incorporation, some ammonia nitrogen loss can be expected. This loss may be in the range of 25 to 50 percent of the total nitrogen applied. Greatest losses may be expected for wastes with high ammonia nitrogen contents, such as poultry manure or liquid swine manure. The nitrogen values in Table 2 may be reduced by 25 to 50 percent to approximate the amount of nitrogen actually reaching the soil when surface application is used.

e) Not all of the organic nitrogen applied in any one year becomes available for crop use during that year. After a series of approximately equal annual applications (perhaps five years), the nitrogen applied in a year is about equal to the amount of nitrogen available to the crop for that year. For example, if organic nitrogen is applied each year at a rate of 150 pounds per acre, the nitrogen annually available to the crop would reach a level of

150 pounds per acre after about five years. However, until this equilibrium is reached, greater annual application rates are needed in order to meet crop requirements.

f) Table 3 provides estimates of annual nitrogen production for various waste management systems and the corresponding number of animal units needed to provide 100 pounds of nitrogen per year. These values consider nitrogen losses during storage and handling, but do not take into account the availability of nitrogen to the crop after application is made. The values in Table 3 can be used as an aid in determining the adequacy of the land area for manure utilization for a given livestock enterprise.

§ 560.202. Method of Application.

Surface application may be used when the land slope is no greater than 5% or when the yearly average soil loss is less than 5 tons per acre (regardless of slope) as determined by the Universal Soil Loss Equation (see Appendix B). Injection or surface application with immediate incorporation should be used when the land slope is greater than 5% and the yearly average soil loss is greater than 5 tons/acre. However, even at land slopes less than 5%, soil losses and associated pollution may reach an unacceptable level.

§ 560.203. Proximity to Water.

Livestock waste should not be applied within 200 feet of surface water unless the water is upgrade or there is adequate diking. There should be a vegetative strip between the application area and any surface water. Waste should not be applied within 150 feet of any water well. Conservative loading rates should be used in the case of a high water table or shallow earth cover to fractured bedrock. Caution should be exercised in applying wastes, particularly on porous soils, so as not to cause nitrate or bacteria contamination of ground waters. Such shallow ground waters are often the source of private wells in rural areas.

§ 560.204. Flooding.

Livestock waste should not be applied in a 10 year flood plain unless the injection or incorporation method of application is used.

§ 560.205. Waterways.

Livestock waste should not be applied in waterways.

§ 560.206. Frozen or Snow-Covered Ground.

Waste application on frozen or snow-covered land should be avoided. If wastes are spread on frozen or snow-covered land, such application should be limited to land areas on which:

- a) Land slopes are 5 percent or less, or

b) Adequate erosion control practices exist.

§ 560.207. Rainfall.

Livestock waste should not be applied during a rainfall or to a saturated soil. Application should not be made by spraying immediately after a rainfall event. Judgment should be used in planning waste applications in conjunction with weather patterns.

§ 560.208. Odors.

It should be recognized that odors from improperly stored or applied livestock wastes can seriously interfere with the enjoyment of life and property for people living in the area. Although there will be some odors associated with land application of livestock wastes, soil injection or incorporation can significantly reduce these odors. Consideration of climatic conditions and judicious selection of application areas can also help to maintain desirable relationships with neighbors.

§ 560 Appendixes & Tables

[Regulation Appendixes & Tables](#)

2) 510 ILCS § 77/20; 8 Ill. Adm. Code § 900.803

§ 77/20. Handling, storing and disposing of livestock waste.

(a) The livestock management facility owner or operator shall comply with the requirements for handling, storing, and disposing of livestock wastes as set forth in the rules adopted pursuant to the Illinois Environmental Protection Act [415 ILCS 5/1 et seq.] concerning agriculture related pollution.

(b) The livestock management facility owner or operator at a facility of less than 1,000 animal units shall not be required to prepare and maintain a waste management plan.

(c) The livestock management facility owner or operator at a facility of 1,000 or greater animal units but less than 5,000 animal units shall prepare and maintain on file at the livestock management facility a general waste management plan. Notwithstanding this requirement, a livestock management facility subject to this subsection may be operated on an interim basis but not to exceed 6 months after the effective date of the rules promulgated pursuant to this Act to allow for the owner or operator of the facility to develop a waste management plan. The waste management plan shall be available for inspection during normal business hours by Department personnel.

(d) The livestock management facility owner or operator at a facility of 5,000 or greater animal units shall prepare, maintain, and submit to the Department the waste management plan for approval. Approval of the waste management plan shall be predicated on compliance with provisions of subsection (f). The waste management plan shall be approved by the Department before operation of the facility or in the case of an existing facility, the waste management plan shall be submitted within 60 working days after the effective date of the rules promulgated pursuant to this Act.

The owner or operator of an existing livestock management facility that through growth meets or exceeds 5,000 animal units shall file its waste management plan with the Department within 60 working days after reaching the stated animal units.

The owner or operator of a livestock management facility that is subject to this subsection (d) shall file within 60 working days with the Department a revised waste management plan when there is a change as provided in subsection (e) of this Section that will materially affect compliance with the waste management plan.

(d-5) The owner or operator of multiple livestock management facilities under common facility ownership where the cumulative animal units of the facilities are equal to or greater than the animal unit numbers provided for in subsection (c) of this Section shall prepare and keep on file at each facility a waste management plan in accordance with the requirements of subsection (c). The owner or operator of multiple livestock management facilities that are under common facility ownership where the cumulative animal units of the facilities are equal to or greater than the animal unit numbers provided for in subsection (d) of this Section shall prepare and file with the Department a waste management plan in accordance with the provisions of subsection (d). Cumulative animal units shall be determined by combining the animal units of multiple livestock management facilities under the common facility ownership based upon the design capacity of each facility. For the purposes of this subsection (d-5), “under common facility ownership” means the same person or persons own, directly or indirectly, through majority owned business entities at least 51% of any person or persons (as defined by Section 10.55 [510 ILCS 77/10.55]) that own or operate the livestock management facility or livestock waste handling facility located in the State of Illinois.

(e) The owner or operator of a livestock management facility shall update the waste management plan when there is a change in values shown in the plan under item (1) of subsection (f) of this Section. The waste management plan and records of livestock waste disposal shall be kept on file for three years.

(f) The application of livestock waste to the land is an acceptable, recommended, and established practice in Illinois. However, when livestock waste is not applied in a responsible manner, it may create pollutional problems. It should be recognized that research relative to livestock waste application based on livestock waste nutrient content is currently ongoing. The Dean of the College of Agricultural, Consumer and Environmental Sciences at the University of Illinois, or his or her designee, shall annually report to the Advisory Committee on the status of phosphorus research, including research that has been supported in whole or in part by the Illinois Council on Food and

Agricultural Research. The Advisory Committee may also consult with other appropriate research entities on the status of phosphorus research. It is considered acceptable to prepare and implement a waste management plan based on a nitrogen rate, unless otherwise restricted by this Section. The waste management plan shall include the following:

(1) An estimate of the volume of livestock waste to be disposed of annually, which shall be obtained by multiplying the design capacity of the facility by the appropriate amount of waste generated by the animals. The values showing the amount of waste generated in Table 2-1, Midwest Plan Service's, MWPS-18, Livestock Waste Management Facilities Handbook or Design Criteria for the field application of livestock waste adopted by the Agency may be used.

(2) The number of acres available for disposal of the waste, whether they are owned by the owner or operator of the livestock waste management facility or are shown to be contracted with another person or persons for disposal of waste.

(3) An estimate of the nutrient value of the waste. The owner or operator may prepare a plan based on an average of the minimum and maximum numbers in the table values derived from Midwest Plan Service's, MWPS-18, Livestock Waste Management Facilities Handbook, the Agency's Agriculture Related Pollution regulations, or the results of analysis performed on samples of waste. For the purposes of compliance with this subsection, the nutrient values of livestock waste may vary as indicated in the source table. In the case of laboratory analytical results, the nutrient values may vary with the accuracy of the analytical method.

(3.5) Results of the Bray P1 or Mehlich test for soil phosphorus reported in pounds of elemental phosphorus per acre. Soil samples shall be obtained and analyzed from the livestock waste application fields on land owned or under the control of the owner or operator where applications are planned. Fields where livestock waste is applied shall be sampled every 3 years. Sampling procedures, such as the number of samples and the depth of sampling, as outlined in the current edition of the Illinois Agronomy Handbook shall be followed when soil samples are obtained.

(3.6) If the average Bray P1 or Mehlich test result for soil phosphorus calculated from samples obtained from the application field is 300 pounds or less of elemental phosphorus per acre, livestock waste may continue to be applied to that field in accordance with subsection (f) of this Section. If the average Bray P1 or Mehlich test result for soil phosphorus for an application field is greater than 300 pounds of elemental phosphorus per acre, the owner or operator shall apply livestock waste at the phosphorus rate to the field until the average Bray P1 or Mehlich test for soil phosphorus indicates there is less than 300 pounds of elemental phosphorus per acre. Upon the development of a phosphorus index that is approved subject to the provisions established in Section 55 of this Act [510

ILCS 77/55], the owner or operator shall use such index in lieu of the 300 pounds of elemental phosphorus per acre.

(4) An indication that the livestock waste will be applied at rates not to exceed the agronomic nitrogen demand of the crops to be grown when averaged over a 5-year period.

(5) A provision that livestock waste applied within $\frac{1}{4}$ mile of any residence not part of the facility shall be injected or incorporated on the day of application. However, livestock management facilities and livestock waste handling facilities that have irrigation systems in operation prior to the effective date of this Act or existing facilities applying waste on frozen ground are not subject to the provisions of this item (5).

(6) A provision that livestock waste may not be applied within 200 feet of surface water unless the water is upgrade or there is adequate diking, and waste will not be applied within 150 feet of potable water supply wells.

(7) A provision that livestock waste may not be applied in a 10-year flood plain unless the injection or incorporation method of application is used.

(8) A provision that livestock waste may not be applied in waterways.

(9) A provision that if waste is spread on frozen or snow-covered land, the application will be limited to land areas on which:

(A) land slopes are 5% or less, or

(B) adequate erosion control practices exist.

(10) Methods for disposal of animal waste.

(g) Any person who is required to prepare and maintain a waste management plan and who fails to do so shall be issued a warning letter by the Department for the first violation and shall be given 30 working days to prepare a waste management plan. For failure to prepare and maintain a waste management plan, the person shall be fined an administrative penalty of up to \$1,000 by the Department and shall be required to enter into an agreement of compliance to prepare and maintain a waste management plan within 30 working days. For failure to prepare and maintain a waste management plan after the second 30 day period or for failure to enter into a compliance agreement, the Department may issue an operational cease and desist order until compliance is attained.

§ 900.803. Waste Management Plan Contents.

The livestock waste management plan shall contain the following items:

- a) Name, address, and phone number of the owners of the livestock facility;
- b) Name, address, and phone number of the managers or operators if different than the owners;
- c) Address, phone number, and plat location of the facilities;
- d) Type of waste storage for the facilities;
- e) Species, general size, number of animals, and number of animal units at the facilities;
- f) Aerial photos or maps depicting fields available and intended for livestock waste applications with available acreage listed and indicating residences, non-farm businesses, common places of assembly, streams, wells, waterways, lakes, ponds, rivers, drainage ditches, other water sources, and areas restricted for application by this Subpart;
- g) For application fields not owned or rented, copies of waste application agreements between the owner or operator of the livestock facilities and the owner of the land where livestock waste will be applied;
- h) Cropping schedule for each field for the past year, anticipated crops for the current year, and anticipated crops for the next two years after the current year;
- i) Targeted crop yield goal for each crop in each field;
- j) An estimate of the nutrient value of the waste [510 ILCS 77/20(f)(3)];
- k) Livestock waste application methods;
- l) Results of the Bray P1 or Mehlich test for soil phosphorus reported in pounds of elemental phosphorus per acre [510 ILCS 77/20(f)(3.5)];
- m) Calculations showing the following:
 - 1) An estimate of the volume of livestock waste to be disposed of annually [510 ILCS 77/20(f)(1)];
 - 2) Nitrogen loss due to the method of storage, if applicable;
 - 3) Amount of nitrogen available for application;
 - 4) Nitrogen loss due to the method of application;

5) Amount of plant-available nitrogen including first-year mineralization of organic nitrogen;

6) Amount of nitrogen required by each crop in each field based on targeted crop yield goal;

7) Nitrogen credits from previous crops, from other sources of fertilizer applied for the growing season, and from any manure applications during the previous three years for each application field;

8) Livestock waste application rate based on nitrogen for each application field; and

9) Land area required for application;

n) A listing of fields and the planned livestock waste application amounts for each field;

o) A provision that livestock waste applied within 1/4 mile of any residence not part of the facility shall be injected or incorporated on the day of application. However, livestock management facilities and livestock waste handling facilities that have irrigation systems in operation prior to May 21, 1996, or existing facilities applying waste on frozen ground, are not subject to the provisions of this subsection (o) [510 ILCS 77/20(f)(5)];

p) A provision that livestock waste may not be applied within 200 feet of surface water unless the water is upgrade or there is adequate diking and waste will not be applied within 150 feet of potable water supply wells [510 ILCS 77/20(f)(6)];

q) A provision that livestock waste may not be applied in a 10-year flood plain unless the injection or incorporation method of application is used [510 ILCS 77/20(f)(7)];

r) A provision that livestock waste may not be applied in waterways. [510 ILCS 77/20(f)(8)] For the purposes of this Part, a grassed area serving as a waterway may receive livestock waste through an irrigation system if there is no runoff, the distance from applied livestock waste to surface water is greater than 200 feet, the distance from applied livestock waste to potable water supply wells is greater than 150 feet; the distance from applied livestock waste to a non-potable well, an abandoned or plugged well, a drainage well, or an injection well is greater than 100 feet; and precipitation is not expected within 24 hours;

s) A provision that if waste is spread on frozen or snow-covered land, the application will be limited to land areas on which:

1) land slopes are 5% or less; or

2) adequate erosion control practices exist [510 ILCS 77/20(f)(9)];

t) For livestock facilities utilizing an earthen lagoon or other earthen waste storage structure, a provision that the owner, operator, or certified livestock manager shall inspect all bermtops, exterior berm sides, and non-submerged interior berm sides for evidence of erosion, burrowing animal activity, and other indications of berm degradation on a frequency of not less than once every two weeks; and

u) A provision that livestock waste may not be applied during a rainfall or to saturated soil and that conservative waste loading rates will be used in the case of a high water table or shallow earth cover to fractured bedrock. Caution should be exercised in applying livestock wastes, particularly on porous soils, so as not to cause nitrate or bacteria contamination of groundwaters.