



Feedlot Environmental Regulations in Minnesota

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As of January 1, 2007, Minnesota ranked 10th in the United States with 285,000 cattle on feed. This is impressive when considering that feedlot producers in Minnesota must comply with strict environmental regulations. Minnesota's environmental regulations have required feedlot producers to be extremely diligent in manure and runoff management and control. Although these regulations have required extensive planning on the part of feedlot producers, it has placed us "ahead of the game" in terms of actions to protect the environment. This proactive approach has been a bonus to Minnesota producers, as feedlots in many other states now have to make major changes to comply with increased environmental regulations in their own states.

There are two primary concerns with feedlots in protecting water in our agricultural areas: 1) Ensuring that manure from a feedlot or a manure storage area does not discharge into water; and 2) Ensuring that nutrient-rich manure is applied at a rate, time, and method that prevents nutrients and other potential contaminants from entering streams, lakes, and ground water. As a result, the Minnesota Pollution Control Agency (MPCA) regulates feedlots through specifications for manure containment, manure management, and nutrient application.

Current Minnesota feedlot rules require that any feedlot capable of holding more than 50 animal units (AU) be registered with the MPCA. In shoreland areas, feedlots with a capacity of 10 or more AU are required to register.

In feedlot terms, one AU is equal to one feedlot steer or heifer. Exemptions to the registration requirements are livestock facilities located on county fairgrounds and pasture and grazing operations without buildings or open lots.

Beyond the basic feedlot registration, operating permits are required for feedlots with greater than 300 AU. At this level, feedlot operators are required to develop a manure management plan (MMP) to show how manure generated at a feedlot facility will be used during the upcoming cropping years. Manure management plans should be annually reviewed and updated by the feedlot operator to adjust for changes in the amount of manure production, manure-nutrient test results, field availability, and crop rotations. Required information for a MMP include: manure storage and application methods, field locations and acreage, amount of manure to be applied to each field, manure-nutrient testing plans, soil-nutrient testing plans, crop-nutrient needs, protective measures when applying in environmentally sensitive areas, and protective measures when applying during winter months. In addition to the MMP, records must be kept with the results of the items listed above as well as dates of manure application and incorporation and any changes to the MMP.

An additional set of requirements regulate feedlots with greater than 1,000 AU capacity. First, an environmental assessment worksheet (EAW) is required when

expanding by more than 1,000 AU or 500 AU in an environmentally-sensitive area. The EAW assesses the impact of the proposed feedlot based on the location in relation to wells and water sources, topography, and neighboring residences. In addition, a National Pollutant Discharge Elimination System (NPDES) permit is required for any feedlot with a total capacity greater than 1,000 AU. These feedlots must comply with both state and federal environmental regulations.

There are many potential sources of pollution hazards that may be present in an existing feedlot that may need to be corrected for that feedlot to continue operation. Some common sources of pollution hazards are: direct discharge from the feedlot surface, silage storage runoff, damage to storage basin liner, improperly maintained manure storage area, runoff from dead animal storage area, and unpermitted liquid manure storage areas. If a pollution hazard exists at an existing feedlot, it will need to be fixed before a permit will be issued. An interim permit may be issued in these situations with the expectation that the pollution hazards be fixed within 24 months.

There are six general requirements related to manure handling and required notifications: 1) All feedlot operators, whether or not they apply for a permit, must comply with the applicable technical requirements if their operation produces, stores, disposes, transports, or utilizes animal manure; 2) Operators who use or dispose of manure other than applying it to the land as fertilizer must do so in a manner that does not cause pollution; 3) Operators who use manure packs or mounds must do so in a way that does not create or maintain a pollution hazard; 4) If constructing or expanding a facility of 500 or more AU, an operator must publish a notification about their proposal in a local newspaper or deliver a written notice of the proposal to each resident within 5,000 feet of the proposed feedlot within 10 days after submitting a permit application with the MPCA; 5) A form must be filled out

and mailed to the MPCA or delegated county 30 days prior to beginning construction or expansion of a feedlot of 300 AU or less. All local zoning authorities must also be notified of proposed construction or expansion of an animal feedlot of any size; 6) For custom cattle feeders, records must be kept detailing who owned any cattle fed at the feedlot for at least the most recent three years.

Manure and manure-contaminated runoff is prohibited from entering sinkholes, fractured bedrock, wells, surface tile intakes, mines, and/or quarries. No discharge is allowed to waters of the state from any feedlot with a capacity of 1,000 AU or greater. New feedlots cannot be constructed in shoreland areas, and expansions of feedlots in shoreland areas are limited to 999 AU. In a floodplain, feedlot expansions are prohibited within 300 feet of a sinkhole, within 100 feet of a private well, and within 1,000 feet of a community water supply or wells serving a school or licensed childcare center. Exceptions are provided that allow for a new feedlot within 1,000 feet of a community water supply well if three conditions are met: 1) The Minnesota Department of Health has approved a drinking water supply management area for the well; 2) The feedlot is not within the drinking water supply management area; and 3) The feedlot is not within 200 feet of the well.

Compliance with state and federal environmental regulations is a key part in maintaining and expanding the feedlot industry in Minnesota. It is important that all feedlot operators understand what is required for their size of operation and allow flexibility for increased regulations in the future. Additional information on regulations, manure management plans, and permitting can be accessed from the MPCA website at www.pca.state.mn.us or at the U of M Beef Industry Center website at www.extension.umn.edu/beef.