Minnesota Pollution Control Agency

Livestock and the Environment

Feedlot Program Overview

August 2011

Introduction

In Minnesota there are about 25,000 registered feedlots, ranging in size from small farms to large-scale commercial livestock operations. Agriculture including livestock comprises a major portion of the state's economy. Many organizations and programs work with livestock producers to ensure that we continue to have a healthy livestock industy and a healthy natural environment.

The Minnesota Pollution Control Agency (MPCA) regulates the collection, transportation, storage, processing and disposal of animal manure and other livestock operation wastes. The MPCA Feedlot Program implements rules governing these activities, and provides assistance to counties and the livestock industry. The feedlot rules apply to most aspects of livestock waste management including the location, design, construction, operation and management of feedlots and manure handling facilities.

The MPCA feedlot staff of engineers, hydrologists, soil scientists and pollution control specialists are located in St. Paul and six regional offices: Brainerd, Detroit Lakes, Mankato, Marshall, Rochester, and Willmar. They work in the areas of land application of manure, permitting, data management, technical assistance, and compliance with feedlot rules.

Protect water

There are two primary concerns about feedlots in protecting water in our agricultural areas:

- Ensuring that manure on a feedlot or manure storage area does not run into water;
- Ensuring that nutrient-rich manure is applied to cropland at a rate, time and method that prevents nutrients and other possible contaminants from entering streams, lakes and ground water.

The MPCA works with farmers to make sure their feedlots are environmentally safe. It provides technical assistance to farmers, and conducts inspections at feedlots to be certain they comply with environmental requirements. Some of those requirements for feedlots include:

- Construction specifications that ensure the feedlot will properly contain the manure;
- Manure management plans for many medium and large-sized feedlots;
- Requirements for the amount and placement of nutrients spread on fields.

Feedlot rule revised in 2000

In October 2000 a major revision of the feedlot rule (Minn. R. ch. 7020) went into effect. The main goals for the feedlot rule are:

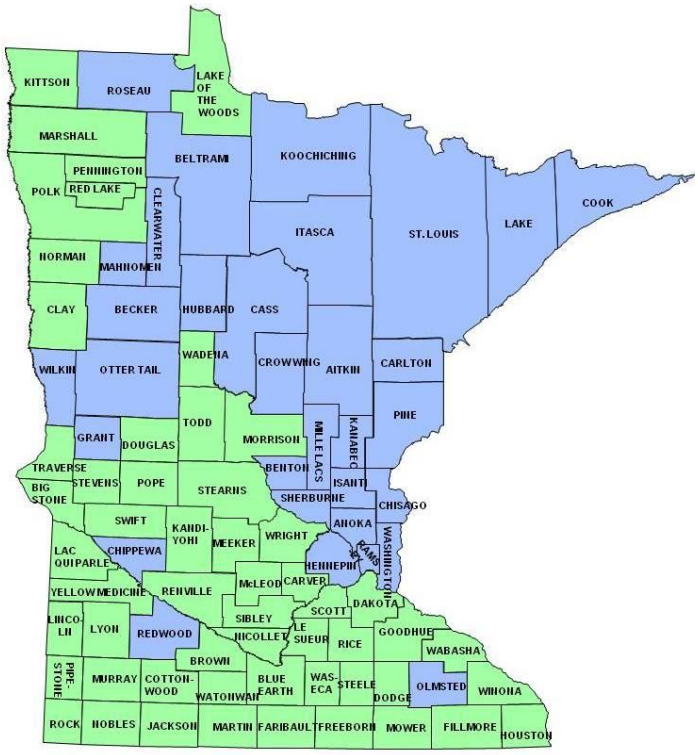
- Register all feedlots capable of holding 50 or more animal units (10 in shoreland areas).
- Focus on animal feedlots and manure storage areas that have the greatest potential for environmental impact;
- Expand the role of delegated counties in the feedlot program;
- Increase agency and delegated-county staff field presence.

The feedlot rule does not specifically regulate pasture operations; however, they still must abide by Minnesota Rules chapter 7050 prohibiting pollution of state waters.

Delegated county program

In 55 counties the feedlot program is conducted through a cooperative arrangement between the MPCA and county government. County feedlot programs have responsibility for implementing state feedlot regulations for facilities with fewer than 1,000 animal units (AU), or those that do not require federal permits. These responsibilities include: registration, permitting, inspections, education and assistance, and complaint follow-up.

Delegated counties receive state grants to help fund their programs. Funds are awarded based on the number of feedlots in the county with more than 50 AU (10 in shoreland) and the level of inspections completed. In recent years annual grants statewide have totaled nearly $2 million.



Green shaded counties are in the MPCA County Feedlot Program as of August 2011

Feedlot permits

The revised feedlot rule eliminated the need for most smaller-sized feedlots to have permits. Most large feedlots operate with state and federal permits. The National Pollutant Discharge Elimination System (NPDES) permit and the State Disposal System (SDS) permit require specific conditions to comply with state law and the federal Clean Water Act. Of the nearly 1,200 feedlots currently operating with an NPDES permit, most have a general permit, and about 40 have individual permits. A general permit is a single document that can apply to all livestock facilities whose operations are similar. The MPCA or delegated counties also issue permits for feedlot construction, and interim permits allowing feedlots with pollution problems to operate in a two-year period during which the problems are corrected.

Nutrient and manure management

Livestock manure is a valuable resource if managed properly. It has been estimated that the amount of manure generated by livestock in Minnesota would be equivalent to that of a human population of about 50 million. Land application removes livestock manure from feedlots and provides fertilizer for crops. There are many ways to ensure that land-applied manure does not run off into waters, and is not over-applied beyond crop nutrient needs. Manure management plans are required when producers need to apply for a feedlot permit, or when a facility has 300 or more AU and does not use a licensed commercial applicator. Manure management plans help ensure that application rates do not exceed crop nutrient needs, and that setbacks from waters and drain tile intakes are observed.

Environmental assessment at large feedlots

An environmental assessment looks at how a proposed feedlot project will affect the air, water and land, and at ways to mitigate any problems so that the project can go forward and be environmentally safe. Environmental Assessment Worksheets (EAWs) are mandatory for proposed feedlots over 1,000 AU, or over 500 AU in a sensitive area. More information is available on the Environmental Quality Board Web site: www.eqb.state.mn.us/.

Pasture

Pastures are a common type of livestock operation. Typical examples include beef grazing and cow/calf operations. Distinguishing pastures from other types of livestock operations is not always easy. Some operations include both pasture and feedlot components. Pastures are exempt from feedlot rules, but not exempt from Minnesota's water quality rules (Minn. R. ch. 7050 and 7060). A pasture developing feedlot conditions, such as manure accumulation and lack of vegetative cover within the immediate vicinity of supplemental feeding or watering devices, working areas, and access lanes (including winter feeding areas), will not be considered a feedlot and is exempt from feedlot rules. Seasonal or crop residue grazing also is exempt, provided that feedlot conditions are not allowed to develop.

Air quality

As some livestock operations have grown larger and more people are choosing to live near livestock farms, odor (particularly hydrogen sulfide) has become an issue. There are regulations for hydrogen sulfide and ammonia, which can be toxic at high levels. The MPCA does not regulate odor in general; however some local units of government may have restrictions related to odor.

The MPCA does regulate hydrogen sulfide emissions and requires the following:

- Requiring odor management plans to be included in the permits of large feedlots.
- Monitoring hydrogen sulfide emissions at feedlots where there have been odor complaints.

Training and technical assistance

The MPCA provides training opportunities and assistance to counties and livestock producers. County feedlot officers receive inspection and permitting training, covering all aspects of the program. MPCA technical staff conduct workshops and presentations for county staff and producer groups.

Feedlot program statistics

- About 25,000 registered feedlots.
- Approximately 1,200 large, federally-permitted feedlots.
- 55 counties delegated to administer the program not including large feedlots with federal permits.
- About 7,364 feedlot inspections 2002-10.

Contacts

For more information about the Feedlot Program contact
Courtney Ahlers, 651-757-2183, or Forrest Peterson at (320) 441-6972. More information is also available on the MPCA Web site at www.pca.state.mn.us/hot/feedlots.html.

More information

Producer organizations also provide environmental management information to their members. Many dairies have qualified for the Environmental Quality Assurance designation through the Minnesota Milk Producers Association. The following Web sites are good information sources for feedlots and manure management:

- Manure and Odor Education Research – University of Minnesota Extension: www.manure.umn.edu/
- Minnesota Department of Agriculture www.mda.state.mn.us/animals.aspx
- National Agriculture Compliance Assistance Center
  www.epa.gov/oecaagct/anafocom.html