Feedlot SDS and NPDES general permit development

The Minnesota Pollution Control Agency (MPCA) State Disposal System (SDS) and National Pollutant Discharge Elimination System (NPDES) general permits for feedlots are nearing their expiration dates. As a result, the MPCA will begin a public notice and comment period for two new general permits.

You will find information in this fact sheet about the proposed NPDES permit and the SDS permit.

Manure management plan (MMP) development and submittal

The permit's requirements are designed to minimize the risk of surface and groundwater contamination and include development of an MMP.

Applicants for the new permits – both the SDS and NPDES permits – are required to use the Nutrient Management Tool to develop their manure management plan and submit it electronically.

The Nutrient Management Tool will be available starting in Fall 2024; it's an online service that replaces MPCA's Manure Management Plan Spreadsheet. Among the features that will help applicants with manure management plan development and submitting to the MPCA are:

- The ability to import most data from the existing MPCA manure management plan spreadsheet.
- Support for more manure sources and more fields.
- GIS mapping of fields with sensitive areas are automatically identified.
- Integrated six-year soil phosphorus management at land application fields.
- Integrated record keeping for the previous six crop years (including transferred manure records).

Transfer of manure ownership

Manure recipients must follow the land application requirements of the permits.
If you receive manure from a feedlot, you are required to follow the manure management plan (MMP) of the feedlot that generated the manure. National Pollutant Discharge Elimination System (NPDES) and State Disposal System (SDS) feedlots that have permits must include the land application requirements of the permit in their manure management plan. Under state feedlot rules, those receiving manure must comply with the permit requirements as it relates to land application and protection of surface and ground water resources.

Permittees must annually report more information about land application of transferred manure.
Under changes to the permit, those who receive manure must share information about the crops, total nutrients applied and soil test results with the person who has the permit. The feedlot holding the permit must report this information annually. This change allows the MPCA to get a more complete picture of manure application.

The MPCA has developed a form to assist in implementation of manure transfer changes.
The feedlot that has the permit must use the Nutrient Management Tool to create a Manure Transfer Tracking form to help comply with the requirements outlined above. The form will be given to the manure recipient and will outline the land application requirements. Those that receive the manure will use the form and return it to the feedlot that holds the permit.

Land application inspections

Manure recipients and feedlots with permits must inspect for signs of discharge wherever the manure is applied. Those inspections must occur at:

- Down gradient field edges
- Tile intakes
- Water features and
- Any other potential point of discharge from the fields.

And the inspections must take place:

- At least once during the application process.
- At the end of each workday.
- When it rains more than a half inch within 14 days of the end of application *unless* the manure is worked into the soil.

That inspection must occur within 24 hours of the rain event.

If discharge is observed, you must report it to the Minnesota State Duty Office and the MPCA. The responsible party must take all actions to minimize the discharge, recover the material that was released and mitigate impacts to state waters.

Reducing runoff potential and mitigating nitrate impacts

Manure can enhance overall soil health. Also, just as with any plant nutrient source, we must limit the impacts to the environment and human health when manure is used as a crop fertilizer.

Nitrogen, which is found in manure, is particularly noted for environmental losses in the form of nitrate. Nitrate in lakes, rivers and streams is toxic to fish and other aquatic life. In drinking water, it's potentially harmful to people.

More than 70% of the nitrate in Minnesota waters comes from cropland, including land that uses manure as a crop nutrient source.

Because of this, additional measures will be required under the new permits to reduce runoff and mitigate nitrate impacts.

Vulnerable groundwater areas.
A vulnerable groundwater area is where nitrate can move easily through soil and into groundwater. Those areas include:

- Areas with underlying karst susceptible bedrock;
- Coarse textured soils;
- Shallow depth to bedrock, and;
- Highly vulnerable drinking water supply management areas.

You can find a map of vulnerable groundwater areas in Minnesota at: www.pca.state.mn.us/feedlots. This map – the vulnerable groundwater area map – aligns closely with the Minnesota Department of Agriculture Fall Fertilizer Restriction Map. That map also has the goal of limiting nitrate impacts from cropland in these most vulnerable areas.

Required best management practices to reduce runoff potential and mitigate nitrate impacts.
The permits require certain best management practices based on the anticipated effectiveness. That effectiveness is determined by typical weather and soil conditions during a specific time of year. Both the permit holder and those who receive manure must follow these best management practices.

The information below summarizes existing and proposed requirements based on application date. Proposed requirements are indicated by ***italicized text***.

June, July, August, and September • One of the following nitrogen best management practices (BMP) are required:

- *Application to a growing perennial or row crop.*
- Cover crop planted prior to or within 14 days of application.

October 1 – 14 • *Unless the requirements for vulnerable groundwater areas apply*, one of the following nitrogen BMPs are required:

- Soil temperature below 50°F at start of application.
- Cover crop or growing crop as required for June – September.
- Nitrification inhibitor.
- Split application.

October – November in vulnerable groundwater areas • *Beginning January 1, 2028, one of the following nitrogen BMPs are required:*

- *Application to a growing perennial or row crop.*
- *Cover crop planted prior to or within 14 days of application.*
- *Perennials crops are included in the rotation at least 2 years during any 5-year period and the soil temperature is below 50°F at the start of application.*

December - February • No liquid manure application to frozen or snow-covered fields

- Solid manure application to frozen or snow-covered fields allowed if all of the following apply:
- Field is approved in MMP.
    - *Manure is not applied to vulnerable groundwater areas*.
    - 300 ft setback to waters/tile intakes.
    - Some runoff storage in tillage furrows.
    - Slope is 6% or less (2% or less in February).
    - Under 50% chance of ¼ inch or more rainfall within 24 hours of application (24 hours increases to 5 days for application in February).
    - If 2 or more inches of snow, temperature must be below 40°F for 24 hours after application (24 hours increases to 5 days for application in February).

March • No liquid or solid manure application to frozen or snow-covered fields.

More information

More information about the general permit development process, links to the draft permit language, as well as opportunities for public input and comments can be found at: www.pca.state.mn.us/feedlots.

For more information about the differences between SDS and NPDES feedlot permits, see the *NPDES and SDS Permits for Feedlots* fact sheet available at: www.pca.state.mn.us/feedlots.