

Manure application at NPDES permitted feedlots

The latest National Pollutant Discharge Elimination System (NPDES) general permit for animal feedlots is effective from February 1, 2021, through January 31, 2026. In addition to the requirements to land apply at agronomic rates and observe setbacks to sensitive areas, the permit also contains requirements to address concerns over elevated nitrate levels in groundwater resources and manure contaminated runoff from winter

How manure application timing affects NPDES permitted feedlots





September 1 - 30

Cover crop required

• Planted prior to or within 14 days of manure application



December 1 – January 31

Winter application restrictions for frozen or snow-covered fields

- No liquid application
- Solid application allowed if...
 - Field approved in MMP
 - 300 ft setback to waters/intakes
 - Some runoff can be contained in tillage furrows (not filled with snow/ice/water)
 - Slope is 6% or less
 - Under 50% chance of 1/4+ inch rainfall within 24 hours after application
 - If 2+ inches of snow, temp under 40 F for at least 24 hours after application



March 1 - 31

Winter application prohibited to any frozen or snow-covered field

- No liquid application
- No solid application

Manure can be applied to fields that are not frozen or snow covered

October 1 - 14



Nitrogen BMP required - Pick 1 of 4

- Soil temp 50 F or less at application start (MDA soil temp network or in-field measurement)
- Cover crop
- Nitrification inhibitor
- Split application (max of ½ crop N needs)

February 1 - 29 💥



Winter application restrictions for frozen or snow-covered fields

- No liquid application
- Solid application allowed if...
 - Field approved in MMP
 - 300 ft setback to waters/intakes
 - Some runoff can be contained in tillage furrows (not filled with snow/ice/water)
 - Slope is 2% or less
 - Under 50% chance of 1/4+ inch rainfall within 5 days after application
 - If 2+ inches of snow, temp under 40 F for at least 5 days after application

June 1 – August 31



Cover crop required

• Planted prior to or within 14 days of manure application

Note: This is required of all feedlots in MN

For more details, visit: www.pca.state.mn.us/feedlots

Frequently asked questions about the land application requirements

Winter application

- Q: Can I apply manure in March if the ground is not frozen or snow-covered?
 - A: Yes the manure application prohibition only applies when fields are frozen or snow-covered.
- Q: If we get an October/November snowfall can I land apply manure?
 - A: Yes the winter restrictions only apply to applications after November 30th.
- Q: If I can inject, can I apply liquids in early December, even if there is a light coating of snow?
 - A: Yes the winter restrictions do not apply when manure is injected below the soil surface.
- Q: What am I supposed to do if I need to remove snow from my facility in March?
 - A: The permit allows land application of snow during March so long as it is...
 - Applied to a pre-approved field in the MMP
 - Applied at least 300 ft from waters/intakes
 - Limited to the amount necessary to ensure animal welfare
- Q: If I have a water line break and my liquid manure storage area fills up, can I land apply in the winter?
 - A: The permit allows for emergency applications in the winter. The permit has specific limitations applicable to emergency applications. You must notify the MPCA of emergency land applications.

Nitrogen BMPs

- Q: I farm up north and its colder here, why can't I apply before October 15th?
 - A: You can apply manure before October 15th provided the soil temperature is 50°F or less.
- Q: Am I in violation if the soil temperature is 50° F in the morning but goes up as I land apply manure?
 - A: No the temperature at the beginning of that day's land application event is used.
- Q: How do I know what the soil temperature is?
 - A: You can either take a soil thermometer reading at the land application field or utilize the nearest Minnesota Department of Agriculture soil temperate network location: https://app.gisdata.mn.gov/mda-soiltemp/.

Cover crops

- Q: Am I required to plant a specific type of cover crop?
 - A: There are no requirements on the type of cover crop, but plant your cover in accordance with University of Minnesota recommendations. Weeds do not meet the cover crop requirements.
- Q: Will I be penalized if my cover crop doesn't grow?
 - A: Provided you made a good faith effort to plant the cover crop, lack of growth due to adverse weather conditions will not be considered a violation of the permit.
- Q: Do I need a cover crop if I apply manure to a hay/alfalfa field in September?
 - A: No the requirements for cover crops only apply to fields without an actively growing crop.

Transferred ownership

- Q: Do these requirements apply if I transfer ownership of manure?
 - A: No the requirements only apply to manure application to land owned, leased, rented, or otherwise controlled by the feedlot owner or member of the feedlot ownership entity.

More information

For specific permit requirements refer to the NPDES general permit available at: https://www.pca.state.mn.us/sites/default/files/wq-f3-58.pdf.