

Winter Manure Application

GUIDE TO FROZEN AND SNOW-COVERED GROUND RULES

Winter conditions increase the risks of manure runoff and water contamination—especially when the ground is snow-covered or frozen. To protect Iowa’s waters, DNR recommends all livestock operations avoid winter manure application when runoff is likely to occur. Find some tips and recommendations to safeguard Iowa waters below.



Nutrient loss and water quality problems are more likely in winter. State law limits confinement manure application.

All producers must protect water quality. For confinement producers with more than 500 animal units, state law limits manure application on frozen and snow-covered ground from Dec. 21 to April 1.

For All Producers

RULES

- While limits on winter land application do not apply to open feedlots, dry manure and small confinement producers, all producers must prevent water quality violations. Producers can help protect water quality by using common sense, and choosing application areas far from a stream on flat land with little snow cover.
- Important Reminder: All manure application must meet minimum required separation distances as listed in 567 Iowa Administrative Code 65. Find more information in the [Separation Distances for Land Application of Manure](#) fact sheet.

RECOMMENDATIONS

- Apply to fields with slopes of 4 percent or less, or where adequate controls prevent runoff from reaching surface or groundwater.
- Do not apply manure in grassed waterways. Avoid application near tile intakes, ditches, gullies, and areas of concentrated flow, creeks, streams, lakes or other surface waters.
- Avoid application near water wells, sinkholes, losing streams, areas with shallow bedrock, agricultural drainage wells or other pathways to groundwater.
- Consider field conditions. Generally, the best locations to apply are in areas with more crop residue and shallow snow cover.
- Avoid application during active runoff events, or before predicted rainfall or snowmelt.
- Consider alternatives to applying on frozen or snow-covered ground.
- Generally, applying earlier in the winter is less likely to cause runoff problems.

LAND APPLICATION IS LIMITED

For All Producers	Jan. 1 to Dec. 31	If it will cause a water quality problem
For Confinements	Dec. 21 to April 1	If ground is snow-covered
(>500 animal units)	Feb. 1 to April 1	If ground is frozen

Confinement Rules and Limitations

LIMITS ON WINTER APPLICATION

Except in an emergency, state law prohibits confinement feeding operations with more than 500 animal units from land applying liquid manure on:

- Snow-covered ground - covered with 1 inch of snow or 0.5 inch of ice from Dec. 21 to April 1.
- Frozen ground - soil that is impenetrable due to frozen soil moisture from Feb. 1 to April 1. This does not apply if soil is frozen to a depth of 2 inches or less.

WINTER APPLICATION PERMITTED

Land application of liquid manure is allowed:

- Before or after the applicable dates.
- If the ground is not frozen or snow-covered.
- When manure can be injected or incorporated on the same date.
- Under narrowly defined emergencies, with prior permission from DNR.

SPECIAL CONDITIONS

Additional limitations may apply when facilities:

- Claim points on the Master Matrix for injection or incorporation - they must have permission from the [DNR Field Office](#) before surface applying.
- Have an NPDES (National Pollutant Discharge Elimination System) permit. Permit holders cannot apply open feedlot effluent on frozen or snow-covered ground at any time. They also may not apply effluent when temperatures are below 32°F or during precipitation events.
- Have an NRCS comprehensive nutrient management plan.

EXEMPTIONS

Limitations on winter manure application do not apply to:

- Open feedlots (solid or liquid manure).
- Solid manure from confinements.
- Liquid manure from small animal feeding operations (SAFOs) with 500 animal units or less.

EMERGENCY APPLICATION

What is an emergency? Unforeseen circumstances beyond the control of the owner such as:

- Natural disaster.
- Unusual weather conditions.
- Equipment or structural failure.
- Note: Insufficient storage capacity is not an acceptable reason for emergency application.

Prior to application, a producer or applicator must contact the appropriate [DNR Field Office](#). To obtain authorization for emergency application on frozen or snow-covered ground, the applicant must provide the following information:

- Owner's name, facility name, facility ID number.
- Reason for emergency application.
- Application date(s).
- Estimated number of gallons of manure to be applied.
- Application fields as listed in the manure management plan (MMP).

Additional Requirements:

- Update the MMP to document fields to be used for application.
- Apply only on fields with a phosphorus index rating of two or less.
- Block surface tile intakes within application fields prior to beginning application. Tile intakes must remain blocked for at least two weeks following application.
- Prevent water quality violations.
- Apply only the minimum quantity needed to alleviate the emergency. Apply remaining manure after April 1 when conditions are more suitable.