

Weather delayed manure application and Iowa's winter liquid manure application law

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In a fall [2018 news release](#), Iowa DNR advised livestock producers to not panic over weather delays in applying manure in what was a very wet fall. The article lists options to deal with fields too wet for normal manure application, and concludes by reminding producers that “while it’s not ideal” there is an emergency exception under Iowa law (emergency includes “unusual weather conditions”) to the prohibition on surface applying liquid manure from a confinement operation with a manure management plan (MMP) on snow-covered ground from Dec. 21 to April 1 and on frozen ground from Feb. 1 to April 1.

The key is to use this emergency exception only as a last resort by first exhausting all reasonable options, such as those listed in the DNR article, to apply manure before winter conditions.

Before discussing the requirements of Iowa’s winter manure application law, producers must remember:

- That manure surface applied under any soil conditions or at any time of year must be applied in compliance with the general manure application requirements. These requirements include:
 - All manure must be applied so as not to cause water pollution.
 - All manure that is not injected or incorporated on the same date must be applied at least 200 feet away from a creek, well or other water body or source and 800 feet away from a high quality water resource as designated by the Iowa DNR. (You can find the lists of high quality water resources [at the bottom of this page of fact sheets.](#))
 - If a confinement operation has an MMP, liquid manure from the operation cannot be applied within 750 feet of a neighbor’s residence, business, church, school, or public use area unless the manure is injected or incorporated within 24 hours or unless the residence, owner, etc. signs a written waiver.
 - If a confinement operation has a DNR MMP, all manure must be applied in compliance with the MMP.
- While it is a good practice to voluntarily exceed legal requirements, manure not regulated by the law (for example, liquid manure from a small animal feeding operation (confinements with 500 or fewer animal units), dry manure from a dry-bedded confinement building or manure from an open feedlot) may be applied on snow or frozen ground subject to the general requirements in the previous bullet point.

The specific provisions of the law on manure application on snow or frozen ground (with practical points in italics) are:

- Liquid manure from a confinement operation that qualifies as a “small animal feeding operation” under DNR rules is exempt from the following requirements. A small animal feeding operation is a confinement operation using formed manure storage that has fewer than 500 animal units of capacity (1,250 head of hogs weighing more than 55 pounds or 10,000 head of pigs weighing less than 55 pounds).

Experience with this law shows that the DNR may receive calls from people who see manure application on snow-covered or frozen ground and believe there is a complete ban. The DNR will investigate these calls. Be proactive; even if you are exempt from the requirements of the law, take the extra step of

contacting the DNR before applying manure so that the DNR can respond accordingly to any complaints.

- Liquid manure from a confinement operation that is injected or incorporated on the same date also is exempt from the following restrictions on application on frozen or snow-covered ground. Injection is applying manure beneath the soil surface and incorporation is soil tillage that mixes the manure into the upper four inches or more of soil.

In other words, even if the ground is frozen or snow-covered between the dates set out below, the liquid manure can be applied without complying with the emergency restrictions if it can be injected or incorporated on the same date, subject to the general requirements discussed previously.

- Surface application of liquid manure from a confinement operation is prohibited on snow-covered ground from Dec. 21 (first day of winter) to April 1 and on frozen ground from Feb. 1 to April 1, except when there is an emergency.

It may seem obvious, but keep in mind that liquid manure from a confinement operation may be applied between these dates if the ground is not frozen or snow covered. Likewise, the manure may be applied before and after these dates even if the ground is frozen or snow covered.

- Frozen ground is ground that is impenetrable because of frozen soil moisture but does not include ground that is frozen in the top two inches or less. Snow-covered ground is ground covered by one inch or more of snow or by one-half inch or more of ice.

The restrictions on liquid manure application on frozen or snow-covered ground apply only to those areas where the ground is frozen or snow covered. If there are areas of a field that do not qualify as frozen or snow covered, manure may be applied in those areas.

Also, the critical factor is the condition of the ground at the time the manure is applied. For example, if the ground is snow covered early in the day but not later in the day, then manure may be surface applied later in the day without being subject to the emergency restrictions. The same applies to manure applied on ground that becomes snow covered or frozen after the application. Thus, to ensure compliance with DNR requirements, a producer should document the condition of the ground at the time the manure was applied by keeping a detailed log and/or taking photos.

- An emergency is when there is an immediate need to apply manure because the manure storage structure is full due to unforeseen circumstances affecting the storage of liquid manure and which are beyond the producer's control. The law specifically states that these unforeseen circumstances must be beyond the control of the producer and include natural disaster, unusual weather conditions, or equipment or structural failure.

The most common example of unusual weather conditions is a prolonged wet period in the fall that delays crop harvest and therefore prevents manure application until the ground is frozen. The most common example of an equipment or structural failure would be a broken water line that fills a manure pit with water.

- To apply liquid manure on frozen or snow-covered ground due to an emergency, the law and DNR rules require the producer or applicator to comply with all of the following:

(1) **Telephone the DNR before application.**

The producer must telephone the DNR field office where the confinement operation is located before the manure application. The producer must give the producer's name, DNR facility name, DNR facility ID number, reason for the emergency application, application date, estimated number of gallons to be applied, and the fields in the MMP where the manure will be applied. The producer must document the emergency upon request by DNR.

See [this page for a current field office map](#) with contact information. The DNR field office telephone numbers are:

<i>Manchester</i>	<i>563-927-2640</i>	<i>Mason City</i>	<i>641-424-4073</i>	<i>Spencer</i>	<i>712-262-4177</i>
<i>Atlantic</i>	<i>712-243-1934</i>	<i>Des Moines</i>	<i>515-725-0268</i>	<i>Washington</i>	<i>319-653-2135</i>

In addition, a producer who has taken points under the master matrix for injection or incorporation of manure (matrix item 26(e)) may surface apply the manure if injection or incorporation is not feasible because of an emergency and if before the manure is applied the producer obtains written approval for an emergency waiver from a DNR field office.

(2) **Apply the liquid manure on land identified in the MMP for emergency application.**

The land must be identified in the MMP before the manure application. The MMP can either be the original MMP that has been submitted to the DNR or the original MMP can be amended and kept in the producer's records and then submitted to the DNR with the next required updated MMP.

(3) **Apply the liquid manure on land with a Phosphorus Index of 2 or less.**

If there is no land in the MMP with a P Index of 2 or less, the producer must add land to the MMP that qualifies. If that is not a viable option, the producer should contact a consultant or DNR for other options.

(4) **Block any surface tile intake on land in the MMP and down-grade from the application during application and for at least two weeks after.**

(5) **Properly manage the manure storage structure, including properly accounting for the amount of manure to be stored.** DNR rules state that due to the possibility that ground could be snow covered and frozen for the entire period from Dec. 21 to April 1, a confinement operation should not plan to apply liquid manure during that time. Confinement operations without alternatives to manure application must have enough storage capacity to store the manure from Dec. 21 to April 1 under normal circumstances. However, confinement operations with no manure storage structures constructed after May 26, 2009 (the date the legislation went into effect) that don't have enough capacity to store manure from Dec. 21 to April 1 under normal circumstances may utilize emergency manure application provisions to apply on snow or frozen ground.

- (6) **For manure storage structures constructed after July 1, 2009, construct the structure to have at least 180 days of manure storage.**
- (7) **Implement additional measures necessary to contain runoff as necessary to prevent violation of federal EPA effluent standards.**

The DNR encourages all producers faced with emergency manure applications to contact the appropriate DNR field office as soon as possible so that the field office may assist the producer with taking all reasonable steps to handle the situation. This contact also provides the DNR with the necessary information to respond to any public inquiries.

Finally, producers should notify neighbors that they will be surface applying manure and work with them to minimize any negative impacts. The critical message to neighbors is that application on frozen or snow-covered ground is the last resort and that their understanding in an emergency situation is appreciated.