



# Wisconsin Manure Applicator Update

## Full storage, frozen fields and mud: What are the options?

Kevin Erb, UW Extension - November 4, 2019

2019 is a year of frustrating challenges for manure application. Early season cold weather is not making things any easier. If there is a silver lining, it's that the industry and agencies are really working together to help farmers through this difficult time - things go better if the farmer is proactive rather than reacting to a problem the neighbor noticed. While there are no "simple solutions", there are things to keep in mind over the next few months.

CAFO/permitted operations should check with both the WI DNR and the county Land and Water Conservation Department ( LWCD) before taking any action, as pre-approval may be required.

### **"My storage is full! I don't have enough room to make it through the winter"**

- Find other storage:** The easiest solution for producers is to find space in someone else's existing storage. Work with the county LWCD as they likely have a list of manure storages built according to proper engineering standards. Do not assume that any older storage is ready to use – check with the LWCD first. Your farmers may know of dairies that are no longer milking cows nearby that have available storage as well.
- Add to/Modify existing storage:** Some farms have already added soil on top of their existing berm to add capacity. The problem is – this greatly increases the risk of seepage or storage collapse. The topsoil between the storage's compacted clay and what is added can allow seepage, and un-compacted soil will move with only a small amount of head pressure. Seepage between compacted and un-compacted soil is causing issues across the state. As wet as it has been, any equipment on the berm may create more problems. Work with county LWCD staff to determine how to safely modify the storage, and the right way to do it.
- Take to a sewage treatment plant:** This option can be very expensive, but not knowing what you are doing can make it much more expensive. Some plants have the capacity to take manure, others do not. Start the conversation with the plant manager a few days before you need this option. The fee per gallon will depend on the nutrient and solids concentration, so take the most diluted water. A couple of tips are to not agitate and load out from the corner of the storage farthest away from entry points of barn pipes/concentrated silage leachate. Work with the treatment plant manager to determine best time of day for delivery, gallons per hour that can be accepted, and where to unload into their system.

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## **“I have no option but to land apply”**

- **The farmer should work with the farmer’s Nutrient Management Planner/Agronomist and the County Land/Water Conservation Department (CAFOs should also include their DNR contact):** These people are going to be able to help identify the fields with the lowest risk and alert you to any permissions/permits needed. They may also be able to connect the farmer with non-livestock neighbors who may have fields suitable for application.
- **Apply to fields with the lowest risk:** Risk factors for manure moving off the field include field slope, soil type, soil roughness and previous crop as well as how wet the soil is. A low risk field when you can inject/incorporate may become a high risk field when the ground freezes. The agronomist/agency staff person can help decide which fields are lowest risk based on current and expected conditions. Don’t be afraid to ask about using different fields in the farmer’s plan.
- **Consider non-traditional fields:** Pastures, grasslands and CRP (Conservation Reserve Program) acres may be options in limited cases. Most of these likely don’t have a recent soil test, so identifying these fields before the ground freezes, and having the agronomist pull soil samples and prepare setback maps/determine rates is critical. Some fields (CRP, other programs) may require additional permissions before application can occur.
- **Watch the weather forecast, and take screenshots:** Use the Runoff Risk Advisory Forecast (RRAF) to gauge the risk. <http://www.manureadvisorysystem.wi.gov/runoffrisk/index> Document both the weather forecast and the RRAF for each field by taking screenshots used to inform your decision. Combine this information with the advice of the agronomist/agency staff.
- **Reduce rates/cover only part of the field/inject across the slope:** With the soil saturated, manure ponds on the surface and remains more slurry-like when injected. Lower rates will reduce the chances of movement. In saturated conditions, injected manure can ooze, over time, downslope and pond weeks after application in low areas of the field. Inject across the slope rather than up and down. Cover only part of the field (in strips) and come back later and apply in between previous strips.
- **BEWARE CONCRETE FROST:** In a normal winter, liquid manure and slowly melting snow will soak into the soil. After several January thaws, sometimes all of the air pockets (pores) in the soil are full of water when the soil re-freezes, forming concrete frost. This year, many fields will have concrete frosts as soon it freezes this fall. With concrete frost, very little manure or melting snow soaks in and runoff occurs every time it warms up throughout winter.

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## **“I have no option but to land apply”** *(Continued from page 2)*

- **Frozen/snow covered soils:** If these can't be avoided, work with the agronomist and agency staff to modify both setbacks and rates.
- **Working fields before land application:** Rough soil has depressions that will contain some runoff, (it's almost always a good idea to think working the field borders before a regular application before the ground freezes, *even more so this year*). Be careful, however. Working part of, or an entire field may impact the farmer's eligibility for crop insurance and other benefits (not following their conservation plan) or impact their soil health management system. This decision needs to be made by the farmer and their agronomist.
- **Walk the field, increase setbacks:** New sinkholes and wet areas may have developed during this wet year, so take a close look at the field before applying. Don't be afraid to increase the setback from water resources/receiving waters and sinkholes to reduce the risk.
- **Borrow/rent a tanker and get some applied:** Taking out even a small volume may give you some breathing room this fall until the custom applicator is available. Work with your agronomist to make sure you have the most up to date information on rates and setbacks.
- **Document that you did the best job possible.** Take photos to document the work that you completed. If a spill happens/runoff occurs, calling the DNR Spills hotline (800-943-0003) is an essential part of documenting that you are taking the right steps to address a situation.

The information above was gathered with input from staff with UW Discovery Farms, UW Madison Division of Extension, county LWCDs, NRCS and DATCP.

### **Online Employee Training Available**

New hire? Busy the day the classroom training session was held? A free online training course is now available for manure applicators in Wisconsin.

The course is available through the end of the year by registering at <https://campus.extension.org/course/view.php?id=1672> (after Dec 31, the course will still be available at no charge, but at a different internet location).

The course includes several equipment safety walkthrough videos, as well as an update on the current regulations **How to enroll:** This video ([https://www.youtube.com/embed/GpCO00gMV\\_g?rel=0](https://www.youtube.com/embed/GpCO00gMV_g?rel=0)) will walk you through the process.

For more information, contact Kevin Erb at 920-391-4652



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- ⇒ **Online Employee Training**