



**Minnesota
Pollution
Control
Agency**

Managing manure, land application during adverse weather conditions

Water Quality/Feedlots 8.46 • November 2009

We can't do anything about the weather, but we can be prepared to better deal with the impact of bad weather on manure management and land application.

MPCA Offices:

Rochester:
507/285-7343

Mankato:
507/389-5977

Marshall:
507/537-7146

Willmar:
320/214-3786

Detroit Lakes:
218/847-1519

Brainerd:
218/828-2492

Duluth:
218/723-4660

Metro:
651/296-6300

Toll-Free:
800/657-3864

Cool, wet weather can create extra challenges for land-applying livestock manure.

Under normal conditions, time is limited for pumping manure storage basins and land-applying liquid manure after fall harvest.

When wet weather delays the harvest, producers and land-application services are encouraged to work together and be flexible. Good communication is extremely important. In all cases, producers and manure managers should contact their state or county feedlot program representative, and use all possible measures to mitigate the environmental impact of liquid manure storage and land-application during wet conditions. In most cases solid manure can be temporarily stockpiled.

While planning ahead to be prepared for such situations is essential, many immediate tools are available to manage livestock manure during adverse conditions. All suitable measures should be used to avoid liquid manure storage basin overflow, and in keeping surface-applied liquid manure outside the 300-foot setback from sensitive features.

After Dec. 1, feedlots with a National Pollutant Discharge Eliminations System (NPDES) permit that plan to land apply



liquid manure to frozen soil, must notify their county or state feedlot program representative. This notice should include an aerial photo clearly outlining the location of the proposed land-application. It is also important to contact your county regarding any local ordinances.

Helpful practices

- Begin to land-apply immediately on portions of harvested fields that have dried sufficiently, for example, on higher ground.
- Consider temporary stockpiling of solid manure until more favorable field conditions are present.
- Pump manure storage basins at least partially to avoid any overflow before winter and land apply the remaining manure in spring.

- Look around the area for other available fields from neighboring crop farmers, or other approved manure storage space.
- For better access to wet fields, fill tankers less than capacity.
- Reduce the impact of manure applied to the surface of wet or frozen soil:
 - Avoid steeper slopes – seek fields, or parts of fields with less than 6 percent slope for solid manure, 2 percent for liquid manure, or have greater than 30 percent residue.
 - Stay 300 feet away from sensitive features, such as waters and tile intakes.
 - Perform tillage along contours to create furrows to capture any potential runoff.
- Avoid flood or floodway zones.
- Keep application rate low enough to avoid runoff or ponding during application.
- Check with county regarding local ordinances.
- Report any discharges from land application or liquid manure storage area overflows to the State Duty Officer, 1-800-422-0798, and take immediate action to reduce environmental impact such as:
 - Creating temporary berms to stop discharge.
 - Temporarily plugging culverts and tile intakes to prevent manure inflow.
 - Soak up liquid with absorbent material such as hay, straw or wood shavings.
- Do not construct or modify your basin without approval from the MPCA or county feedlot officer.
- Do not store manure in unpermitted basins.



- Attempt some spring land application to create more fall and winter manure storage.
- Install vegetated buffers and blind tile intakes to alleviate 300-foot setback.
- Develop a contingency plan.
- Ensure that all land-application equipment is calibrated and in good condition.
- Expand liquid manure storage capacity.

For more information, contact your MPCA regional office (phone numbers on first page), or county feedlot officer:

www.pca.state.mn.us/hot/feedlots.html#contacts. MPCA toll free: 1-800-657-3864.

MPCA feedlot Web page:
www.pca.state.mn.us/hot/feedlots.html

Be prepared-plan ahead

We can't do anything about the weather, but we can be prepared to better deal with the impact of bad weather on manure management and land application. A little more investment in storage, conservation practices, and planning can be a very cost-effective form of insurance. It also reduces the risk of economic loss of nutrients from surface-applied manure without incorporation.

- Arrange to have a portion of land-application acres planted with small grains or other early harvest crops.