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Managing Snow in the Feedlot

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Figure 1: Snow accumulations around the feedbunk interfere with feeding and consumption. Photo credit: North Dakota State University

Snow accumulation is an unwelcome but unavoidable part of managing open animal feedlots in Iowa. If snow is not removed, it can reduce

animal performance, lead to increased mud, and increase manure loss from the feedlot surface.

Collect feedlot snow with a loader, box scraper or blade as soon as possible following significant snowfall. If necessary, pen snow may be stockpiled temporarily in the pen. Be sure to remove the snow from the pen before melting conditions occur. Store the collected pen snow outside the pens, but within the runoff collection system for the feedlot. Pen snow will contain manure and should be inside the runoff collection system to capture that manure as it melts. Snow from driveways and clean areas (without manure) should be stored outside the runoff collection system.

A few inches of snow in the feedbunk may not interfere with feeding and consumption. Larger amounts should be removed with a shovel, bunk blower or bunk brush.

Ice and snow accumulation on the feedbunk apron or around water fountains can lead to footing and consumption issues for animals. Remove this accumulation with a loader or other mechanical scraper.

As snow begins to melt, monitor your runoff control system to be sure ice is not blocking runoff pathways, pipes or pumps.

Where snow accumulation problems are severe, windbreak fences and shelterbelts upwind from the feedlot can help trap snow outside the feedlot. Consult design guidance information for locating and building snow fences and shelterbelts.

The sooner snow is removed from feedlot pens, the easier it will be to manage. Snowmelt creates extra problems for animals, pen surfaces, and runoff control systems. Protect your profit and water quality with extra attention to snow management in

your open lot. For more information, see this bulletin from North Dakota State University:

<https://www.ag.ndsu.edu/publications/livestock/winter-management-of-feedlot-cattle>

Electronic Filing of Iowa DNR Manure Management Plan Short Form

Iowa DNR has begun the process of electronic filing of the “Short Form” and the associated payments for its manure management plans. Short Form refers only to the updates to the Manure Management Plan. A rule amendment allows Manure Management Plan updates and payments to be submitted electronically became effective on November 15, 2017. Iowa DNR will begin accepting electronic submittals starting in Spring 2018. A webinar to discuss more details about this process is scheduled for February 28, 2018. Interested stakeholders are requested to pre-register for this webinar by visiting www.iowadnr.gov/emmp.

CERCLA reporting required for some livestock and poultry farmers: Update

Livestock and poultry farmers above a certain size may have to report emissions of ammonia or hydrogen sulfide. In December of 2008, EPA published a final rule that exempted most farms from certain release reporting requirements in CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act) and EPCRA. Since that time, this ruling was challenged in the U.S. Court of Appeals and on April 11, 2017, the court struck down the final rule, eliminating the reporting exemptions for farms. EPA has sought additional time from the court to delay the effective date, so that EPA could develop guidance materials to help farmers understand their reporting obligations. On November 22, 2017, the DC Circuit Court of Appeals granted EPA’s motion to further stay the mandate until January 22, 2018. Farms with continuous releases do not have to submit their initial continuous release notification until the DC Circuit Court of Appeals issues its order or

mandate. This mandate is once again delayed, at this point we recommend determining what your status is and how you need to respond when the mandate is issued.

What the current rule requires under this court decision is that farm owners/operators will need to complete CERCLA reporting if the farm releases more than 100-pounds of ammonia or hydrogen sulfide within any 24-hour period. Although the farm could choose to report any time this threshold is exceeded, due to the regular and continuous nature of livestock farms, the recommended method of reporting is the umbrella-type “continuous release” report.

The steps a farm should take are:

Step 1: Determine if your farm must report

Air emissions of ammonia and hydrogen sulfide vary according to the animal species, type of housing, manure management practices, and many other factors. These variables make it difficult to know if reporting is required, but the EPA provides worksheets, charts, and formulas to help farms quantify their potential air emissions based on some of these factors. To assist farmers, Iowa State University Extension and Outreach has created a table (Table 1) of sizes that would trigger mandatory reporting of a continuous release of ammonia. In most cases, this reporting will be triggered from ammonia emissions rather than hydrogen sulfide. Using the animal numbers in Table 1, a farmer can determine whether further action is needed. For example, a grow-finish swine farm that uses deep pits for manure storage and has less than 2,702 head would not need to take any further action. Farms bigger than this size would be required to provide reporting. If a farmer determines their animal numbers exceed the reporting threshold, further action is required. EPA has [provided guidance](#) on their website on how to complete the required report.

Step 2: File a “continuous release” notification

Farms that exceed the reportable quantities for ammonia or hydrogen sulfide should file a continuous release notification by completing the following actions.

1. Notify the National Response Center with your “initial notification of continuous release.” This can be done via sending an email to farms@uscg.mil. In the subject line state “initial continuous release notification.” In the email, provide the name of the farm, the location of the farm by city/town and state, and the name of the substance that will be released(e.g., ammonia), You will receive an automated email response with “CR-ERNS” number that should be used in all future correspondence and reporting. The EPA says that it may take some time to receive this response email. The EPA also states on its website that multiple farms can be submitted in one email.
2. Within 30 days after the court issues the mandate submit a written ‘initial notification of continuous release’ for each farm location to the appropriate EPA Regional Office. The EPA is in the process of creating a form for this step and several livestock associations have developed forms to use as a substitute, so check with your association to see if they have a form available. The following information will be required:
 - General Information:
 - the CR-ERNS number
 - operation name
 - physical address
 - person in charge
 - phone number
 - latitude and longitude
 - number of people/towns within a one-mile radius
 - Source Information:
 - livestock species
 - hazardous substance released (e.g., ammonia)

- and medium affected (air)
- substance information
 - lower and upper bounds of the emission rate calculated according to worksheets provided by EPA.

Step 3: Complete follow-up reporting

Within 30-days of the first anniversary of the ‘initial (written) notification of continuous release’ completed in step 2, you must file a follow-up report to the EPA. The follow-up report requires the same information and should update any information that has changed.

Table 1. Threshold Animal Numbers for Triggering a Continuous Reporting Requirement Under CERCLA.

Swine	
Pull-plug, scrape, flush, shallow pit	
Breeding & Gestation	1,020
Farrowing	625
Nursery	5,263
Grow-Finish	1,818
Swine	
Deep-pit	
Breeding & Gestation	1,923
Farrowing	4,545
Nursery	21,739
Grow-Finish	2,702
Dairy	
All Styles	1,429
Broilers	
40-d, built-up litter	31,310
49-d, built-up litter	26,240
52-d, built-up litter	29,870
63-d, built-up litter	21,020

Up to 52-d, new litter 49,850

Laying Hens

High-Rise Housing	28,200
Manure Belt + Storage (Daily Removal)	343,940
Manure Belt + Storage (3 to 4 day removal)	162,140

Turkeys

21-d brooding	108,000
28-d brooding	56,000
35-d brooding	42,000
36 to 140-d toms	12,970

Beef

Finishing - Open Lot, 60% NH ₃ Loss	463
Finishing - Bedded pack, 40% NH ₃ Loss	694
Finishing - Deep pit, 40% NH ₃ Loss	694
Cow - Bedded pack, 40% NH ₃ Loss	595
Growing Calf - Bedded pack, 40% NH ₃ Loss	862
Cows – Pasture, 20% NH ₃ Loss	1190
Growing Calf – Pasture, 20% NH ₃ Loss	1724

Manure Applicator Training Continues

Confinement site and dry manure certification workshops began last week and will continue through the end of February. Training opportunities can be found on [our website](#). When you come to a training session, be sure to bring your CMS or CNS card and license. This will help assist you in filling out the paperwork.

If you are unable attend one of the scheduled workshops, you can contact your local county extension office about reshowing these programs. There is no charge for attending the workshops or viewing the video on the scheduled reshow date and time. However, applicators requesting to view the training materials at non-scheduled times will be charged a fee. Additionally, the DNR also offers [E-Learning for both Commercial, Confinement Site, and Dry Applicators](#).

Events

February 16, 2018 – [Making Sense of Treatment Technology Options for Livestock Farms Webinar](#)



Figure 2: Reporting emissions of ammonia and hydrogen sulfide may be required in the future. Photo credit: Rachel Kennedy, Iowa State University Extension and Outreach