IOWA CATTLEMEN'S ASSOCIATION
2055 Ironwood Court | Ames, IA 50014 | 515-296-2266

Manure Discharge: When to Report & Special Weather Events

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Reporting a Manure Discharge

Manure spills are often costly for livestock producers and can be harmful to the environment. Manure spills can occur at the animal feeding site, or during transportation of the manure. According to Iowa law, any actual, imminent, or probable discharge of livestock manure from an animal feeding operation structure should be reported to the IDNR within six hours after the spill occurred or was discovered.

Releases that must be reported include any that go to surface water, groundwater, a drainage tile line or intake, or to a designated area resulting from storing, handling, transporting or land-applying manure. It is always best to err on the side of caution. Knowing how to properly handle a manure discharge due to a chronic wet period can keep your operation in compliance with the IDNR and protect environmental quality.

Defining a Discharge

Iowa DNR requirements for open feedlots under 1,000 head are similar to that of medium CAFOs. A medium CAFO is an operation that discharges to a man-made conveyance, such as a road ditch, or has a Water of the U.S. (WOTUS) running through the feedlot. Discharging from a confinement operation in Iowa is illegal, however open feedlot are allowed to have effluent leave the operation if the following requirements are met:

1. Settle all solids before effluent reaches a water of the state; and
2. For all Iowa surface waters, comply with the following requirements:
    a. Waters shall be free from floating debris, oil, grease, scum and other floating materials attributable to wastewater discharges or agricultural practices in amounts sufficient to create a nuisance.
    b. Waters shall be free from materials attributable to wastewater discharges or agricultural practices. Indicators include objectionable color, odor or other aesthetically objectionable conditions.
    c. Waters shall be free from substances attributable to wastewater discharges or agricultural practices in concentrations or combinations which are acutely toxic to human, animal, or plant life.
    d. Waters shall be free from substances, attributable to wastewater discharges or agricultural practices, in quantities which would produce undesirable or nuisance aquatic life.

If the DNR can't document color, odor or "other aesthetically objectionable conditions" in the surface water, then there is no violation for discharging "dirty water" from a feed yard under 1,000 head.

Assess the Scope

There are several questions to ask when determining the severity of a discharge or potential for one to occur. Assessing the following points will aid in preventing the spill from having damaging effects:

- When did the spill occur?
- How did the spill occur?

- In what direction did the discharge flow?
- Did the discharge have an opportunity to reach a waterway or stream?
- What is the average flow of the discharge or total volume?

Prevent Movement – The 4 C's

- **Control** – Stopping the source of the discharge should be the first step in your response. Adding soil to the burm walls, adding transfer pipes, stopping additional water flow, etc. If an engineer developed your manure holding structure, contact them for assistance.
- **Contain** – If at all possible, prevent the discharge from reaching a waterway or stream by building trenches, dams, covering tile inlets, and pumping the discharge to another location.
- **Call –** Contact the IDNR through their 24Hr Emergency Response Spill Reporting Hotline at 515.281.8694. Report the spill to the local sheriff if public safety is a concern.
- **Close** – When possible utilize proper application rates to empty lagoons and maximize storage capacity. Also assess containment structure integrity.

Reporting as a Permitted Operation

- To stay in compliance with NPDES permit regulations, all livestock waste discharges must be reported to the IDNR at the regional level.
    - *The true value to having an NPDES permit is the allowance of a discharge during excessive rainfall.*
- The Livestock Waste Discharge Notification (Form 9) can be found on IMMAG's website at: https://www.extension.iastate.edu/immag/files/page/files/form9wastedischarge.pdf
    - Offers specific details of the spill.
    - Should be included in facility records.
- Contact the IDNR prior to the spill, if not shortly after it occurs at **515-281-8694**. The *sooner the better!*

After the Spill

Document the size and length of the manure spill, and make plans to visit with an engineer or technical service provider (TSP) to arrange and develop prevention plans for future spills. The NRCS is charged to allocate over 60% of EQIP dollars towards livestock operations, so the Iowa Cattlemen's Association strongly encourages you to check with your local NRCS office for funding opportunities.

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NPDES Permit: Wet Weather Discharge

Knowing how to properly handle a manure discharge, or the potential for a discharge, from a cattle open feedlot with an NPDES (National Pollution Discharge Elimination System) permit due to a large rainfall (25 year/24hour storm) or prolonged wet period (chronic precipitation event) can keep your operation in compliance with the IDNR and protect environmental quality. According to Iowa law, any release of manure to surface or groundwater that is not in compliance with an NPDES permit or other minimum control requirements of Iowa law is a violation and must be reported to the IDNR as soon as possible.

A 25 year, 24-hour storm is a rainfall event where the total rainfall accumulation over a continuous 24-hour period has a 4% chance of occurring in any given year. In other words, it would typically only happen about once every 25 years.

Prevention 1st

Written in each NPDES permit are parameters that are general across all operations as well as individual to specific operations. Here are steps you can and need to take regularly to get ahead of the game when it comes to managing basin levels prior to a rain event that will affect your ability to comply.

1. Maintain a strong working relationship with the design engineer for your facility. These experts are invaluable when it comes to understanding your designed structures and how they should be managed.
2. Ensure that your management is consistent with the terms of your permit. If your facility is required to maintain a specific level of free board space for additional capacity, ensure that manure is disbursed in a manner that allows your facility to work as it was designed.
3. When excess moisture is predicted, take opportunities to dewater your basin to prepare for additional volume.

When there is potential for basin overflow:

1. Make sure you have location specific weather and precipitation information. Many storms are localized and your burden of proof regardless if it's a 25 year/24hour rain event or a chronic precipitation event (see discussion in the next section) is important as the process unfolds.
2. Contact your design engineer, not only do they understand the strengths of your structure, but they too will be invaluable when it comes to problem solving potential challenges when moisture is abundant.
3. Notify the IDNR if you believe an overflow may occur. Your permit compels you to notify your district office and if an overflow is the end result, your connection to this resource is important in the process.
    a. Document your call (Date, Time, Person Contacted, Discussion).
    b. DNR should advise you as to the specific procedure to properly discharge by reducing your basin levels while at the time trying to avoid an overflow.

Chronic Wet period Exception

NPDES permits are written specifically to an operation's capacity and area weather conditions. The benefit to having an NPDES permit is the ability to discharge during a 25-year, 24-hour rainfall event. Unfortunately, or maybe fortunately, these weather events are a rarity. More commonly, Iowa cattlemen

have experienced extended periods of rainfall, none of which meet the 25-year, 24-hour level, during summer and spring months that produce challenges for feedyard operators. Both the IDNR and Environmental Protection Agency (EPA) have recognized the occurrence of these "chronic precipitation events" as allowable discharge events. In February of 2012, the EPA recognized an exception for qualified feedyards in the EPA NPDES Permit Writers' Manual for Concentrated Animal Feeding Operations (EPA 833-F-12-001) regarding chronic precipitation events. This guidance allows feedyards to discharge pursuant to 40 CFR 122.42€(1)(i)) and 40 CFR 412.31(a)(1)(i) if a chronic precipitation event occurs. To qualify, a storage structure must have been designed, constructed, operated, and maintained to contain all manure plus the runoff and direct precipitation from a 25-year, 24-hour rainfall event.

A chronic precipitation event is defined as a series of wet-weather conditions that could preclude dewatering of liquid retention structures. During a chronic precipitation event, the remaining capacity of the storage structure is reduced. When dewatering is not possible, a rainfall event of any size, both smaller and larger than the 25-year, 24-hour storm event, could result in an overflow that complies with effluent limitations based on 40 CFR part 412. In Iowa, the IDNR has the ability to determine if wet weather period conditions are prevalent.

The chronic precipitation period exception does not allow feedyards to discharge without first working with the local IDNR office. Following a review of dewatering records by the IDNR, authorization to discharge may be provided. CAFOs that do not actively maintain the capacity of the storage structure, such as CAFOs that dewater only when the storage structure is completely full, are not entitled to chronic storm event discharge authorization. It is unlikely that any given series of storms would result in an overflow from a properly developed liquid storage structure, unless the series of storms occurs so close to the end of the designed storage period that the storage structure is already filled close to capacity at the beginning of the chronic rainfall event.

All feedyards with NPDES permits that have followed the dewatering requirements in their permit should qualify for the chronic precipitation event discharge exception, regardless of whether the following chronic event text is the current permit. However, it is preferable to have the following text included under Section1.A of the NPDES permit:

> *When a precipitation event equal to or greater than a 25-year, 24-hour precipitation event or when a precipitation event that is a chronic precipitation event causes an overflow, then pollutants in the overflow may be discharged to waters of the United States provided the manure control system is designed, constructed, operated and maintained to contain all manure including the runoff and the direct precipitation from a 25-year, 24-hour rainfall event.*