

NPDES and SDS permits for feedlots

Determining when a permit is required

A National Pollutant Discharge Elimination System (NPDES) permit is required for any facility that currently has capacity, or is proposing to have capacity, that meets or exceeds any one of the federal large confined animal feeding operation (CAFO) thresholds **and** discharges to waters of the United States. Discharge means the addition of a pollutant to waters. Common discharges include the release of animal manure or manure-contaminated runoff or process wastewater from an open lot, manure storage area, land application site, or feed storage area.

A State Disposal System (SDS) permit is required for any facility that currently has capacity, or is proposing to have capacity, for a total of 1,000 or more animal units (AU). A facility that is required to obtain an SDS permit may choose to obtain an NPDES permit in lieu of the SDS permit. The following table and chart will help you decide if an NPDES or SDS permit is required.

Table: Common large CAFO and 1,000 animal unit feedlots

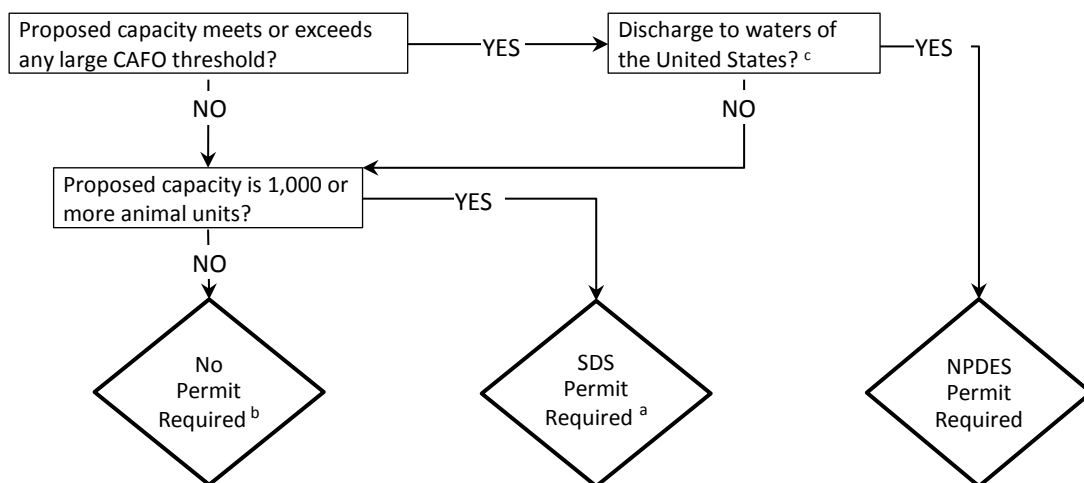
Animal Type	Large CAFO Threshold (Head count)	Animal Unit Factor (AU per head)	1,000 Animal Units ^a (Head count)
Mature Dairy Cows	700	1.4	715
Beef Cattle (steers) ^b	1,000	1.0	1,000
Heifer or Background Feeder ^b	1,000	0.7	1,429
Swine - Finishing	2,500	0.3	3,334
Broiler Chickens >5 lb.	125,000	0.005	200,000
Turkeys >5 lb.	55,000	0.018	55,556

^a The AU numbers from multiple animal types are counted in aggregate to determine the total AU of the facility.

^b All cattle, other than mature dairy cows, are counted in aggregate for the large CAFO threshold.

Flow chart to determine if NPDES or SDS permit coverage is required

(Local permits also may be required; check with local zoning authorities.)



^a An NPDES permit can be issued in lieu of an SDS permit

^b A construction short form (CSF) permit or interim permit may be required – see Minn. Rule 7020.0405

^c Common discharges include a release from an open lot, manure storage area, land application site, or feed storage area

Comparison of NPDES and SDS permits

Similarities

In general, NPDES and SDS permits have similar permit conditions and similar application processing procedures. Below is a list of similarities between NPDES and SDS permits.

- 30-day public notice required prior to issuance and major modifications
- \$620 application fee for issuance and major modifications for general permits
 - \$1,860 for individual permits
- \$345 annual fee for general permit coverage
 - \$1,230 for individual permits
- 30-day public notice required for substantial changes to a manure management plan (MMP). Substantial changes include:
 - Changes to the methodology portion of the MMP that will result in an increase to the maximum field-specific annual rates for nitrogen and phosphorus derived from all sources for each crop;
 - The addition of any crop, and its corresponding rates of application for nitrogen and phosphorus, not included in the methodology portion of the MMP;
 - The addition of application methods not accounted for in the methodology portion of the MMP;
 - Changes in procedures for handling, storage, or treatment of manure that affects rates of application, or;
 - The addition of new acreage to the MMP.

Differences

There are a few notable differences between NPDES and SDS permits, which are summarized below:

NPDES permit:

- Contains both state and federal requirements for construction, operation, and maintenance
- Issued for a five-year term
- Authorizes a discharge to waters of the United States due to excessive rainfall events
- Compliance with the land application requirements of the permit assure that a discharge related to land application activities will qualify for the agricultural stormwater exemption afforded within federal rule.
- Separate NPDES construction stormwater permit coverage is not required.
 - Specific stormwater requirements are included within feedlot permit.

SDS permit:

- Contains only state requirements for construction, operation, and maintenance
- Issued for a ten-year term
- No discharge to waters of the United States in any circumstance
- Does not provide assurance that a discharge related to land application activities qualifies for the agricultural stormwater exemption afforded within federal rule.
- NPDES construction stormwater permit coverage required for a disturbance of five or more acres. This requires a separate permit application and application fee of \$400.
 - For construction that disturbs less than 5 acres the permittee is automatically covered by the general NPDES stormwater permit and must become familiar with and follow all applicable requirements within that permit, available at <http://www.pca.state.mn.us/index.php/view-document.html?gid=18984>.

Why choose an NPDES permit when not required

The owner of a large CAFO should consider maintaining coverage under an NPDES permit even when not required as the NPDES permit offers some considerable benefits. One of the largest benefits to an NPDES permit is that it contains all the necessary requirements and procedures to allow the owner to qualify for an exemption (agricultural stormwater) within federal law for any discharges related to land application activities, provided the owner complies with the NPDES permit. An owner of a large CAFO that does not obtain an NPDES permit will be responsible for determining and ensuring with proper documentation that the facility qualifies for this exemption.

Another significant benefit is that the NPDES permit offers protection from citizen lawsuits under the Clean Water Act, provided the owner complies with the NPDES permit. The NPDES permit is often called a “zero discharge” permit; however, while the NPDES permit does prohibit discharge in most instances, it does authorize a discharge during extreme or chronic rainfall events. An owner of a large CAFO that does not obtain an NPDES permit would be subject to citizen lawsuits in response to a discharge to water of the United States under any circumstances, including those instances related to excessive rainfall events. Additionally, in this situation, the owner would also be subject to legal action by the permitting authority for failure to obtain a permit to authorize the discharge.

An added benefit with coverage and compliance with an NPDES permit is that discharges resulting from chronic rainfall events or runoff from a field that has received manure are allowed regardless if the discharge is to waters of the United States or waters of the State. This eliminates any potential confusion between the two types of waters.

Finally, all large CAFOS and feedlots with 1,000 or more AU are required to comply with the federal effluent limitations, which include the requirement that the feedlot be designed and operated to contain all manure, litter, and process wastewater including the runoff and direct precipitation from a 25-year, 24-hour rainfall event. Given the identical discharge standards and annual permit fees, the NPDES permit provides an extra “insurance” at a very limited, or in some cases no, additional annual cost.

Options for sites with current NPDES permit coverage

As a result of recent statutory and rule changes, owners of existing feedlots with NPDES permit coverage may desire to change the type of permit coverage they maintain or even terminate permit coverage.

Neither NPDES nor SDS permit required

When neither NPDES nor SDS permit coverage is required, the owner may submit a permit termination form at this time or simply take no action and allow the current NPDES coverage to expire on January 31, 2021, without re-applying for continued coverage.

Maintain NPDES permit coverage

When the owner desires to maintain NPDES permit coverage, the owner does not need to do anything at this time, but will need to re-apply for permit coverage in August of 2020 as the current NPDES permit expires on January 31, 2021.

Convert permit coverage from NPDES to SDS

No action is necessary at this time. The owner can simply apply for issuance of the SDS permit at the point in time when they would be required to re-apply for NPDES permit coverage (August of 2020). If the owner desires to switch coverage to the SDS permit immediately, the SDS permit application can be submitted now and upon issuance of coverage under the SDS permit coverage under the NPDES permit will be terminated.

Examples of permit scenarios

The following scenarios identify the permit options for common permitting situations:

Scenario 1

An existing feedlot houses 3000 finishing hogs (900 AU) in total confinement barns with concrete manure storage pits below the barns. There is no discharge from the facility under normal operating conditions. The facility has current coverage under the general NPDES permit.

Required Permit: This feedlot is a large CAFO that does not discharge and has less than 1,000 animal units; therefore, neither an NPDES nor SDS permit is required. The owner has the option to either continue coverage under an NPDES permit or terminate permit coverage. Even though there is a limited possibility of discharge from the facility, consideration should be given to maintaining coverage under an NPDES permit to address potential concerns over possible discharges from land application activities.

Scenario 2

The facility is a cattle operation that houses 3,000 steers (3,000 AU) on open lots where runoff is directed to a liquid manure storage area to prevent a discharge to surface waters.

Required Permit: This facility is a large CAFO and has more than 1,000 animal units; therefore, an SDS permit is required. The owner may choose to obtain an NPDES permit in lieu of the SDS permit. Consideration should be given to maintaining coverage under an NPDES permit as an extreme rainfall event could lead to a discharge from an overflow of the liquid manure storage area.

Scenario 3

An existing 500-cow (700 animal units) dairy is proposing to add another 500 cows (700 animal units) to the operation, for a total of 1,000 cows, or 1,400 animal units. Manure and process wastewater will be stored in an existing manure storage basin that will also be expanded. There are no open lots and site is designed not to discharge.

Required Permit: Currently the feedlot is not a large CAFO and does not exceed 1,000 animal units, so neither an NPDES nor an SDS permit is currently required. However, the feedlot is proposing to expand and will be a large CAFO that also exceeds 1,000 animal units. As a result, the owner is required to apply for an SDS permit, with the option of obtaining an NPDES permit. Consideration should be given to maintaining coverage under an NPDES permit as an extreme rainfall event could lead to a discharge from an overflow of the liquid manure storage area.

Scenario 4

The facility is a 1,200-head heifer raising operation (840 AU) that houses the animals on open lots with runoff leaving the site through vegetation and eventually entering a stream.

Required Permit: The proposed site is a large CAFO but not over 1,000 AU. As the runoff is being discharged to waters of the United States, an NPDES permit is required. Only an NPDES permit can authorize a discharge to waters of the United States.

More information

For more information, please contact your regional MPCA office feedlot staff. Contact numbers for MPCA regional office staff are located on the MPCA feedlot program website at www.pca.state.mn.us/index.php/topics/feedlots/index.html#contacts.

For additional feedlot program information, including permit application materials, visit the MPCA feedlot program homepage at www.pca.state.mn.us/index.php/topics/feedlots/index.html.