



**DEPARTMENT of ENVIRONMENT  
and NATURAL RESOURCES**

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**10 MOST ASKED QUESTIONS  
ABOUT THE STATE GENERAL PERMIT PROCESS FOR  
CONCENTRATED ANIMAL FEEDING OPERATIONS**

**1. WHAT IS THE HISTORY OF ANIMAL FEEDING OPERATION LAWS IN SOUTH DAKOTA?**

The animal feeding operation requirements in South Dakota are based on a federal law passed by Congress in 1972. This law was called the Clean Water Act and specified that certain animal feeding operations were subject to the permitting system created by the Act. This permitting system was called the National Pollutant Discharge Elimination System or NPDES Permit Program. Essentially, the Act requires a NPDES permit for any discharge of pollution that comes from a point source. Congress said that animal feeding operations were considered a point source. In 1974, the U.S. Environmental Protection Agency (EPA) developed regulations establishing the basic requirements animal feeding operations have to meet today.

In the late 1980's and early 1990's, the state began to develop a program that met all federal requirements so the state Department of Environment and Natural Resources (DENR) could implement the Concentrated Animal Feeding Operation (CAFO) program in South Dakota instead of EPA. To do that, the state had to adopt laws and regulations that met the minimum requirements established by Congress and EPA. In December 1993, EPA gave South Dakota the authority to administer the program in South Dakota.

In 1996, the DENR worked cooperatively with the SD Pork Producers Council, many other agriculture groups, and local governments in drafting a proposed general permit that would apply to only swine feeding operations. After several public comment periods and a two-day contested case hearing, the Secretary issued the final permit on January 21, 1997. The permit became effective on February 1, 1997. Based on the success of the general swine permit, the South Dakota Department of Agriculture asked the DENR to develop a second permit that would cover other types of livestock feeding operations. The DENR drafted the permit during the summer of 1997 and provided several opportunities for public comment. After a hearing on January 28, 1998, the Secretary issued a final permit that became effective on February 10, 1998.

In December 2002, EPA revised the Clean Water Act regulation for CAFOs to update the old regulations and address water quality problems. South Dakota rules were revised to conform to the new federal rules and became effective July 1, 2003. All CAFOs were required to get permitted. Elements of the previously existing general permits and the new federal and state rules were incorporated into one general permit for CAFOs that was signed after a public hearing on September 12, 2003, and became effective October 20, 2003.

The new federal CAFO rule was challenged in court by producer and environmental groups. To address the court's decision, EPA proposed new rules which were finalized on October 31, 2008. Delegated states like South Dakota have one to two years to make the changes necessary to implement the federal rules changes. However, the 2008 rule has been challenged by producer and environmental groups once again, and press releases indicate the new administration is going to work with stakeholders to revise this rule. Information on the new 2008 federal CAFO rule can be found at <http://cfpub.epa.gov/npdes/afo/cafofinalrule.cfm>.

The existing South Dakota general permit for CAFOs expired on October 19, 2008, but has been administratively extended and will remain in effect until state rules are changed to reflect the new federal rules and a new permit is issued. In 2007, the department solicited suggestions for changes to the existing general permit from permittees and other interested parties in anticipation of finalization of the federal CAFO rules and permit re-issuance. At some point in the next year or two, a draft permit will be developed and meetings held with producer groups for input and final suggestions prior to public noticing the permit for the formal comment period. Written suggestions for changes to the next permit will be accepted any time between now and when the permit is public noticed. The permit reissuance process includes a 30 day public comment period. The department will respond to all comments received. There will also be an opportunity to request a hearing before the department Secretary on any contested issues.

## **2. WHAT IS A GENERAL PERMIT?**

The Secretary of DENR has the authority to issue a NPDES permit, or a surface water discharge permit as it is called in South Dakota, allowing businesses that have similar types of wastewater discharges to operate. This is called a general permit. A general permit contains standard conditions and limits required by state or federal law. Once the Secretary issues the permit, individual businesses apply to DENR to get approval to operate their business under the general permit. If that business meets the conditions of the permit, DENR authorizes the business to operate under the general permit. If the business cannot meet the conditions of the general permit, then the owner has the option of applying for an individual permit. A general permit and an individual permit are effective for five years and then must be renewed.

## **3. WHAT ANIMAL FEEDING OPERATIONS ARE COVERED BY THE GENERAL PERMIT FOR CAFOS?**

All CAFOs can be covered by the general permit provided the general permit requirements are met. All CAFOs are required to obtain a surface water discharge permit under a general or individual permit.

## **4. WHAT IS THE DEFINITION OF A CONCENTRATED ANIMAL FEEDING OPERATION?**

A CAFO is a lot or facility that stables or confines and feeds or maintains animals for a total of 45 days or more in any 12-month period and meets the following criteria for a large, medium, or small concentrated animal feeding operation:

- A large CAFO as described in Table 1 below.
- A medium CAFO as described in Table 1 below and meets one of the following conditions: 1) Pollutants are discharged into waters of the state through a man-made ditch, flushing system, or

other similar man-made device; or 2) Pollutants are discharged directly into waters of the state which originate outside of and pass over, across, or through the facility or otherwise come into direct contact with the animals confined in the operation.

- A small CAFO as described in Table 1 and designated as a CAFO by the Secretary.

Table 1. Number of Animals to Define Large, Medium, and Small Concentrated Animal Feeding Operations			
Type of Animal Feeding Operation	Concentrated Animal Feeding Operations		
	Large Animal numbers equal to or more than:	Medium Animal numbers equal to:	Small Animal numbers less than:
Dairy cows (mature – milked or dry)	700	200 to 699	200
Veal Calves	1,000	300 to 999	300
Cattle other than mature dairy cows or veal calves <sup>1</sup>	1,000	300 to 999	300
Swine (weighing more than 55 pounds)	2,500	750 to 2,499	750
Swine (weighing less than 55 pounds)	10,000	3,000 to 9,999	3,000
Horses	500	150 to 499	150
Sheep or Lambs	10,000	3,000 to 9,999	3,000
Turkeys	55,000	16,500 to 54,999	16,500
Laying hens or broilers <sup>2</sup>	30,000	9,000 to 29,999	9,000
Chickens, other than laying hens <sup>3</sup>	125,000	37,500 to 124,999	37,500
Laying hens <sup>3</sup>	82,000	25,000 to 81,999	25,000
Ducks <sup>2</sup>	5,000	1,500 to 4,999	1,500
Ducks <sup>3</sup>	30,000	10,000 to 29,999	10,000
Geese	30,000	10,000 to 29,999	10,000

<sup>1</sup> Cattle includes but is not limited to heifers, steers, bulls and cow/calf pairs.

<sup>2</sup> Animal feeding operation uses a liquid manure handling system.

<sup>3</sup> Animal feeding operation uses other than a liquid manure handling system.

**NOTE:** Other animal types not listed in the above table may be considered on a case-by-case basis.

The CAFO definition excludes pastured livestock and most wintering areas from the general permit process. However, that does not mean that these practices do not cause pollution at times and would benefit from participating in a voluntary program to prevent water pollution.

## 5. WHAT DOES THE GENERAL PERMIT DO?

- Establishes the minimum environmental standards for livestock operations defined as a CAFO to ensure protection of the state’s surface and ground waters;
- Establishes a clear process that a producer can follow to obtain state approval, get a state permit, and obtain a certificate of compliance;
- Allows local governments and planning and zoning commissions to concentrate on land-use and zoning issues instead of water pollution control issues;
- Allows interested persons to have input in the permit since the permit issuance process is open to the public; and
- Provides a mechanism that applies the state “bad actor” law to permitted operations.

## 6. WHAT DOES THE GENERAL PERMIT NOT DO?

The permit does not regulate odors or local land use planning. However, by constructing a manure management system and by following the best management practices in the permit, the producer will likely reduce odors – or at least keep them to a minimum.

## **7. HOW DOES A PRODUCER OBTAIN COVERAGE UNDER THE GENERAL PERMIT?**

The general permit lays out the requirements for new, expanding, and existing operations.

- **New and Expanding Operations** - The permit process for new and expanding operations begins when a producer submits an application to the DENR for general permit coverage. The permit application must include completed certification of applicant and notice of intent forms, plans and specifications signed and stamped by a South Dakota licensed engineer, a signed operation and maintenance guideline, a training certification, and a nutrient management plan that meets all the requirements of the permit. Following DENR's review and approval of the permit application, construction of the manure management system can begin. DENR must be notified when construction begins to allow for construction inspections as required by state rules. The project engineer must submit a notice of completion to DENR when construction of the manure management system is completed. DENR then issues a Certificate of Compliance and permit coverage to allow new and expanding facilities to begin using the manure management system.
- **Existing Operations** - The permit process for existing operations begins when a producer submits an application to DENR for general permit coverage. The permit application must include completed certification of applicant and notice of intent forms, a signed operation and maintenance guideline, a training certification, and a nutrient management plan.

Existing operations without a manure containment system must submit plans and specifications stamped by a South Dakota licensed engineer for a manure containment system. Existing operations with a manure containment system must submit plans and specifications of the existing structure showing the size and shape of the manure containment structure, the calculated capacity of the structure, and the existing or proposed location and elevation of the permanent marker. The producer shall also submit any information that is available detailing the construction of the existing structure to include as-built drawings, cross-sectional views of the structure, and location and type of piping.

In some cases the department may already have approved plans and specifications for the operation. If the operation's manure management system and maximum animal numbers have not changed and the producer is not having pollution issues occurring because of the existing manure management system, no additional information regarding the plans and specifications may be needed. The project engineer must submit a notice of completion to DENR indicating the plans and specifications are representative of the facility.

Following DENR's review and approval of the permit application and an inspection verifying the plans and specifications accurately represent the facility, a Certificate of Compliance and permit coverage will be issued to the producer.

## **8. WHAT ARE THE REQUIREMENTS OF THE GENERAL PERMIT?**

- **Planning Requirements**

- a. The producer must contact local governments and obtain approval, if required.
- b. The producer must follow permit application procedure to obtain state approval.
- c. The permit contains location standards the producer needs to consider when siting a new operation.

- **Collection & Storage of Manure**

- a. New structures used to store manure must be able to hold at a minimum all the manure and wastewater generated during 270 days. Existing structures must be able to hold at a minimum all the manure and wastewater generated during 180 days.
- b. Manure storage structures used to store runoff from open lots must contain the annual runoff expected from the lot plus the 25-year, 24-hour storm event (100-year, 24-hour storm event for new swine, poultry, and veal operations).
- c. Earthen storage structures must have at least two feet of freeboard above the required storage to ensure protection of the dikes.
- d. To minimize leakage, all earthen storage structures must be lined with at least 18 inches of properly compacted clay. Synthetic liners or concrete may be used.
- e. The design engineer must obtain information on soils and ground water beneath the containment structures by drilling borings at the site.

- **Protection of Surface and Ground Water**

- a. Discharges of manure to surface water are not allowed from a housed lot. Discharges of manure are allowed from an open lot only if the 25-year, 24-hour storm is exceeded, which is a federal standard.
- b. Feeding operations located over shallow aquifers have to conduct ground water monitoring or obtain a ground water discharge permit.
- c. Lagoons and manure application areas have to be at least 1,000 feet away from public drinking water supplies, 250 feet away from a private well, and 150 feet away from the producer's well.

- **Nutrient Management Plan**

The producer must develop and submit an initial nutrient management plan describing how and where the manure generated at the operation will be land applied. The plan must be based on the application of nitrogen and include a field specific phosphorus assessment. Existing operations have until December 31, 2006, to implement the phosphorus assessment portion of the permit.

- New and expanding operations with construction starting after February 12, 2003, must submit a nutrient management plan meeting all requirements of the permit to show there is adequate land available to land apply the manure generated at the operation. This plan includes field specific phosphorus assessments.

- Operations existing prior to February 12, 2003, without prior permit coverage must submit a nutrient management plan that meets all the requirements of the permit, however, the phosphorus application portions of the nutrient management plan are not required to be implemented until December 31, 2006. Existing operations with DENR approved nitrogen based application nutrient management plans may continue to use the approved plan with the revised buffer zone requirements in the current general permit. A revised nutrient management plan which includes field specific phosphorus assessment must be submitted to the department by July 1, 2006, and implemented by December 31, 2006.
- The phosphorus assessment requires a field specific assessment for the initial nutrient management plan and before land application if any of the information from the initial plan has changed. For each field, the producer needs: a representative phosphorus soil test, a soil loss value which can be obtained from the local NRCS office, and whether or not the field has a 100-foot vegetated buffer to any waterway or wetland. Using the table below from the permit and the information mentioned above, the producer determines whether manure application is based on strictly nitrogen need, phosphorus crop removal, or if no application allowed.

<b>Nitrogen Need/Phosphorus Crop Removal Manure Application Determination Table</b>						
Soil Test Phosphorus ppm		Soil Loss – Erosion, Sheet and Rill Number (Tons per Acre)				
		Less than 4		4 to 6		Greater than 6
		100 Foot Vegetated Buffer		100 Foot Vegetated Buffer		
Olsen	Bray-1	Yes	No	Yes	No	
0-25	0-35	Nitrogen need	Nitrogen need	Nitrogen need	Nitrogen need	No application
26-50	36-75	Nitrogen need	Nitrogen need	Nitrogen need	Phosphorus crop removal <sup>1</sup>	No application
51-75	76-110	Nitrogen need	Phosphorus crop removal	Phosphorus crop removal	Phosphorus crop removal	No application
76-100	111-150	Phosphorus crop removal	Phosphorus crop removal	Phosphorus crop removal	Phosphorus crop removal	No application
Greater than 100	Greater than 150	No application	No application	No application	No application	No application

<sup>1</sup>Phosphorus crop removal is the amount of phosphorus a crop removes in a one year crop rotation.

- Fields requiring phosphorus crop removal based land application, using the table on the previous page, can be listed in the initial nutrient management plan and used for manure application but the field acres cannot be included in the total acres needed for a nitrogen based plan.
- For fields requiring phosphorus crop removal application, the producer may land apply enough manure to meet the nitrogen fertilizer needs of the crop but cannot go back to that field with manure until subsequent crops remove the phosphorus from that manure application.

### Soil and Manure Testing

- a. The producer must take annual soil and manure samples and have samples tested for nitrogen and phosphorus content. Based on the soil and manure sample results, the type of crop planted, and the expected yield, the application rate of manure is calculated. A nutrient management worksheet is available to assist producers with manure application rate calculations.
- b. The proper manure application rate is designed to supply the nitrogen needs of the crops. By applying nitrogen to meet the needs of the crop, it will minimize any nitrogen left in the field. The less residual nitrogen left in the field, the less chance there is for nitrogen to leach down through the soil and into ground water.
- c. The producer is required to keep certain records on manure application: soil and manure testing results, records of application rates and calculations used, fields used for manure application, dates and times of application, and methods of manure application. DENR has a handbook to assist producers with keeping records.

### **Manure Application Restrictions**

- a. Spray irrigation or surface broadcast of manure is allowed provided manure is incorporated within specified time frame. Incorporation is not required if the field is no-till cropland. A 35-foot permanently vegetated or 100-foot buffer zone is required to be maintained to wetlands or waterways.
- b. Incorporation of manure is not required for cropped fields, pasture, grassland, and alfalfa fields.
- c. Spray irrigation of liquid manure on frozen ground is prohibited.
- d. Surface broadcasting liquid manure on frozen and snow-covered ground should be avoided. If surface broadcasting liquid manure on frozen or snow-covered ground is absolutely necessary, the land must have slopes of less than 4%, a 100-foot buffer zone must be maintained to wetlands and waterways, and DENR shall be notified prior to application.
- e. Applying dry or solid manure on frozen and snow-covered ground should be avoided. If manure is surface broadcast on frozen or snow-covered ground, the land must have slopes of less than 4% and a 100-foot buffer zone must be maintained to wetlands and waterways.

### • **Other Producer Responsibilities**

- a. **Training and Education.** Producers applying for coverage under the general permit must submit verification to DENR that the producer has taken a training program on the operation and maintenance of a manure management system and natural resource management. SDSU Cooperative Extension Service currently offers a one-day training course about four times a year to meet this requirement. To find out more information on the training, please call (605) 688-5144.
- b. **Inspections.** Producers must inspect the manure containment structure on a weekly basis. Producer must inspect the land application sites on a daily basis while manure application is occurring. Inspections must be documented and records maintained for five years.

- c. **24-hour Reporting.** Producers must report any discharge to DENR within 24 hours of becoming aware of the discharge.

**9. WILL THESE OPERATIONS BE INSPECTED?**

Yes. As required by state regulation, DENR will inspect these operations as follows:

- Construction Inspections - DENR will inspect each new operation applying for coverage under the general permit at least once during construction.
- Operational Inspections - DENR will inspect the larger operations at least once per year, while the other feeding operations will be inspected at least once every three years. All new operations will be inspected at least once during the first 18 months of operation.
- Complaint Inspections - DENR will respond to complaints made in accordance with the SD Complaint Law.

**10. ARE THERE OTHER STATE PERMITS THAT DENR MAY REQUIRE FOR CAFOs?**

Yes. Other state permits that may be required are:

- Water Right Permit – If operation’s water use is over 18 gallons per minute (26,000 gallons per day with a maximum withdrawal rate of 25 gallons per minute) from well or wells.
- Storm Water Construction Permit - If one or more acres of land will be disturbed during construction.
- Dewatering Permit – If surface or ground water will be pumped during construction to waters of state and the facility does not have a storm water construction permit.
- Ground Water Discharge Permit – For sites located over shallow aquifer and meeting the criteria listed in state law.