Note: This page will be replaced with a copy containing the assigned permit number and indicating whether the permit is a state or federally enforceable National Pollutant Discharge Elimination System permit once coverage is authorized.

SOUTH DAKOTA
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL AVENUE
PIERRE, SOUTH DAKOTA 57501-3182

_____
(Facility Name)

GENERAL WATER POLLUTION CONTROL PERMIT FOR CONCENTRATED ANIMAL FEEDING OPERATIONS

In compliance with the provisions of the South Dakota Water Pollution Control Act and the Administrative Rules of South Dakota, chapters 74:52:01 through 74:52:11, the South Dakota Department of Environment and Natural Resources (DENR) directs Concentrated Animal Feeding Operations to have no discharge from their production areas or manure management systems to waters of the state except for discharges that meet the conditions of this permit.

This permit shall become effective, DATE.

This permit and the authorization to discharge shall expire at midnight, DATE.

Signed this DAY of MONTH, YEAR.

_____
Authorized Permitting Official

Steven M. Pirner
Secretary
Department of Environment and Natural Resources

DRAFT

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1. EFFLUENT LIMITATIONS

1.1. Definitions

1.1.1. A "25-year, 24-hour Storm Event" is the amount of precipitation in a 24-hour period expected to occur only once every 25 years. Typically, the 25-year, 24-hour storm event is about 3 inches in western South Dakota and 5 inches in eastern South Dakota. The map in Appendix E shows the actual amount of precipitation that constitutes the 25-year, 24-hour storm event for South Dakota (*NOAA Atlas 14 Volume 8: Precipitation-Frequency Atlas of the United States, Midwestern States*, 2013). The web site http://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html?bkmrk=sd can be used with an operation's longitude and latitude to find the 25-year, 24-hour storm event for that location.

1.1.2. "Animal Feeding Operation" (AFO) is a lot or facility that stables, confines, and feeds or maintains livestock in either an open or housed lot for a total of 45 days or more in any 12-month period. The open lot does not sustain crops, vegetation, forage growth, or post-harvest residues in the normal growing season over any portion of the lot or facility. Two or more animal feeding operations under common ownership are a single animal feeding operation if they adjoin each other (within one mile), or if they use a common area or system for the disposal of manure.

1.1.3. "ARSD" means the Administrative Rules of South Dakota. These are often referred to as "Standards".

~~1.1.3.~~1.1.4. "Aquifer," a geologic formation, group of geologic formations, or part of a geologic formation that contains sufficient saturated permeable material to yield economical quantities of water to wells and springs;

~~1.1.4.~~1.1.5. "Best Management Practices" (BMPs) means schedules of activities, prohibitions of practice, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants to waters of the state. BMPs also include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge, manure disposal, manure application, manure stockpiles, or drainage from raw material storage. ~~The producer is responsible for implementing BMPs to ensure compliance with the terms and conditions of this permit. The producer shall include the BMPs that shall be implemented at the animal feeding operation in the O&M Guideline and Nutrient Management Plan.~~

~~1.1.5.~~1.1.6. A "Concentrated Animal Feeding Operation" (CAFO) is an animal feeding operation that meets the following criteria for a large, medium, or small concentrated animal feeding operation:

1) A large concentrated animal feeding operation as described in Table 1 on the following page;

2) A medium concentrated animal feeding operation as described in Table 1 on the following page 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;

3) A small concentrated animal feeding operation as described in Table 1 and designated as a concentrated animal feeding operation by the Secretary considering the following factors:

   a. The size of the animal feeding operation and the amount of manure or process wastewater reaching waters of the state;

   b. The location of the animal feeding operation in relation to waters of the state;

   c. The means of conveyance of manure and process wastewater into waters of the state; and

   d. The slope, vegetation, precipitation, and other factors affecting the likelihood or frequency of discharge of manure and process wastewater into waters of the state.

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	Medium	Small
	Animal numbers equal to or more than:	Animal numbers equal to:	Animal numbers less than:
Dairy cows (mature - milked or dry)[1]	700	200 to 699	200
Veal calves	1,000	300 to 999	300
Cattle other than mature dairy cows or veal calves[1 and 2]	1,000	300 to 999	300
Swine (weighing 55 pounds or more)	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[3]	30,000	9,000 to 29,999	9,000
Chickens, other than laying hens[4]	125,000	37,500 to 124,999	37,500
Laying hens[4]	82,000	25,000 to 81,999	25,000
Ducks[3]	5,000	1,500 to 4,999	1,500
Ducks[4]	30,000	10,000 to 29,999	10,000
Geese	30,000	10,000 to 29,999	10,000

[1] Animals are counted individually once separated from the mother.
[2] Cattle includes but is not limited to heifers, steers, bulls and cow/calf pairs.
[3] Animal feeding operation uses a liquid manure handling system.
[4] 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.

1.1.7. "Designed to Not Discharge" is any housed lots with covered manure containment that submits a permit application that complies with this permit. Housed lots or open lots with uncovered manure containment systems that apply for the state permit option of this permit and New Source swine, poultry and veal operations that apply for the NPDES permit option of this permit shall include an

evaluation of their manure management system using the Natural Resource Conservation Service's (NRCS) Soil Plant Air Water (SPAW) hydrology tool or an equivalent model indicating the manure management system with a final modeled result showing no discharges from the designed uncovered manure storage structure to be designed to not discharge. The evaluation shall include all inputs to SPAW for the previous 100 years consistent with the operation's Nutrient Management Plan, with the final modeled result showing no overflows from the designed uncovered manure storage structure. For those operations where 100 years of local weather data for the operation's location is not available, operations may use a simulation with a confidence interval analysis conducted over a period of 100 years.

NOTE: CAFOs that submit an application indicating they are designed to not discharge are processed as a state permit and are issued a state water pollution control permit. CAFOs with a state permit that discharge may be subject to enforcement for discharging without a National Pollutant Discharge Elimination System (NPDES) permit. An NPDES permit is required for CAFOs that discharge to waters of the state. CAFOs with an NPDES permit can discharge in accordance with the requirements of this permit.

1.1.8. "Discharge" an addition of any pollutant or combination of pollutants to surface waters of the state from any concentrated animal feeding operation.

1.1.9. "Housed Lot" means totally roofed buildings that may be open or completely enclosed on the sides. Animals are housed over solid concrete or dirt floors, slotted floors over pits or manure collection areas in pens, stalls, or cages.

1.1.10. "Incorporation" means applying manure using injection, disking into the soil, tilling the soil after application, or using other practices that result in a majority of the manure or process wastewater being placed below the ground surface.

1.1.11. "Land Application" means the application of manure, litter, or process wastewater onto or incorporated into the soil.

1.1.12. "Land Application Area" means land in the initial nutrient management plan to which manure, litter, or process wastewater from the production area is or may be applied.

1.1.13. "Local Government" means county or city governments that can adopt requirements applicable to animal feeding operations located within their respective jurisdictions.

1.1.14. "Major Modification" means an expansion or increase to the lot area or feeding area; change in the location of the animal feeding operation; increase in the maximum permitted animal numbers; change in the methods of waste treatment, waste storage, or land application of waste; change in animal species or type; change in the size or location of the livestock waste control facility; increase in the amount of nutrients from the manure management system land applied, change in crop rotation, or the addition of land application fields.

1.1.15. "Manure" means manure, bedding, compost, and raw materials or other materials commingled with manure or set aside for disposal.

1.1.16. "Manure Management System" means any housed lots, open lots, piping, containment structures, and disposal appurtenances associated with the collection, storage, treatment, and land application of manure, litter, or process wastewater at an animal feeding operation.

1.1.17. "Maximum Operating Level" means the required storage elevation to contain residual solids and process wastewater for the time period required by the permit (see Appendix H). The maximum operating level shall be marked with an appropriate marker set in the containment structure or by other means to indicate when drawdown is needed.

1.1.18. "New or Expanding Operations" means CAFOs commencing construction of a new manure management system on or after February 12, 2003, (New operations) or existing operations proposing to increase the maximum number of animals that may be confined at the facility (Expanding operations).

1.1.19. "New Source" means any building or manure management system at a large CAFO the construction of which commenced after April 14, 2003, where the operation:

1) Constructs a new building, manure management system structure(s), or manure containment system at a location where no other concentrated animal feeding operation exists;
2) Totally replaces the animal housing, production equipment, or manure management system structures associated with the collection, storage, and treatment of manure or process wastewater at a site; or
3) Constructs a new building, manure management system structure(s), or manure containment system at a location where another concentrated animal feeding operation exists where the new operation will be operated substantially independently from the existing operation.

1.1.19. "No-till Cropland" means land which is subject to a conservation farming practice used to establish the soil characteristics necessary to eliminate erosion from runoff; where the soil is left continuously undisturbed and planting or drilling is done in a narrow seedbed or slot created by coulters, row cleaners, disk openers, etc.; No-till cropland typically equates to a Revised Universal Soil Loss Equation (RUSLE) soil tillage intensity rating (STIR) of 20 or less. No-till cropland characteristics **are not** obtained with vertical tillage implements (super coulters, turbo till, etc.).

1.1.20. "Open Lot" means pens or similar confinement areas with dirt and/or paved surfaces. Animals are exposed to the outside environment except for possible small portions affording some protection by windbreaks or small shed type shade areas.

1.1.21. "Overflow" means the discharge of manure or process wastewater resulting from the filling of wastewater or manure storage structures beyond the point at which no more manure, process wastewater, or storm water can be contained by the structure.

1.1.22. "Process Wastewater" means water directly or indirectly used in the operation of the animal feeding operation for any or all of the following: spillage or overflow from animal or poultry watering systems; washing, cleaning, or flushing pens, barns, manure pits, or other animal feeding operation facilities; direct contact swimming, washing, or spray cooling of animals; or dust control. Process wastewater also includes any water which comes into contact with any raw materials, products, or byproducts including manure, litter, feed, milk, eggs, or bedding.

1.1.23. "Producer" means the owner or operator of the concentrated animal feeding operation. When a concentrated animal feeding operation is owned by one person but is operated by another person, the operator shall apply for the permit. The producer is the person with coverage under this permit.

1.1.24. "Production Area" means part of an animal feeding operation that includes the animal confinement area, the manure storage area, the raw materials storage area, and the waste containment areas. The animal confinement area includes but is not limited to open lots, housed lots, feedlots, confinement

houses, stall barns, free stall barns, milk rooms, milking centers, cow yards, barnyards, medication pens, walkers, animal walkways, and stables. The manure storage area includes but is not limited to lagoons, runoff ponds, storage sheds, stockpiles, under house or pit storages, liquid impoundments, static piles, and composting piles. The raw materials storage area includes but is not limited to feed silos, silage bunkers, and bedding materials. The waste containment area includes but is not limited to settling basins, and areas within berms and diversions which separate uncontaminated storm water. Also included in the definition of production area is any egg washing or egg processing facility, and any area used in the storage, handling, treatment, or disposal of mortalities.

1.1.25. "Secretary" means the Secretary of the South Dakota Department of Environment and Natural Resources, or authorized representative.

1.1.26. "Setback" means a specified distance from waters of the state or potential conduits to waters of the state where manure, litter, and process wastewater may not be land applied.

1.1.27. "Shall" means that the condition is an enforceable requirement of this permit.

1.1.28. "Should" means that the condition is a recommendation of the Secretary. If violations of the enforceable requirements of this permit occur, the Secretary will evaluate whether the producer implemented the recommendations contained in this permit that may have helped the producer to avoid the violation.

1.1.29. "Surface waters of the state" are lakes, ponds, streams, rivers, wetlands, and any other body or accumulation of water on the land surface that is considered to be waters of the state, but not waste treatment systems, including treatment ponds, lagoons, leachate collection ponds, or stormwater retention ponds designed to meet the requirements of the CWA.

1.1.30. "Vegetated Buffer" means a permanent strip of dense perennial vegetation established parallel to the contours of and perpendicular to the dominant slope of the field for the purposes of slowing water runoff, enhancing water infiltration, and minimizing the risk of any potential nutrients or pollutants from leaving the field and reaching surface waters. Vegetated buffer areas are maintained and can be harvested.

1.1.31. "Waters of the State" means all waters within the jurisdiction of this state, including all streams, lakes, ponds, impounding reservoirs, marshes, watercourses, waterways, wells, springs, irrigation systems, drainage systems, and all other bodies or accumulations of water, surface and underground, natural or artificial, public or private, situated wholly or partly within or bordering upon the state.

1.2. How to Obtain Coverage Under this Permit

1.2.1 Operations Required to Obtain Permit Coverage:

1. South Dakota Codified Laws (SDCL), Section 34A-2-36.2, requires each concentrated animal feeding operation, as defined by Title 40 Codified Federal Regulations Part 122.23 dated January 1, 2007, to operate under a general or individual water pollution control permit. Once a concentrated animal feeding operation receives general permit coverage, the permit requirements apply to all animal feeding operations at the operation with respect to all manure, litter, and process wastewater generated by those animals or the production of those animals, regardless of the type of animal.
2. An animal feeding operation shall obtain coverage under this permit if required by local government. The Legislature has given the authority to establish setbacks to structures and other land uses to counties and municipal planning and zoning bodies. Local government is

responsible for administering their ordinances. This permit does not supersede or remove liability for compliance with local government ordinances. If the producer has additional animal feeding operations not required by local government to obtain permit coverage, unless they are a CAFO required to be permitted by Section 1.2.1.1., this permit is not required for those operations.

3. Large concentrated animal feeding operations located in other states or in Indian Country that stockpile or land apply un-manipulated manure or process wastewater on land under the jurisdiction of South Dakota shall obtain state permit coverage under this permit for their land application activities in South Dakota. The Secretary may waive this requirement if the South Dakota land application is already covered under a U.S. Environmental Protection Agency issued National Pollutant Discharge Elimination System (NPDES) permit for operations in Indian Country.

4. The Secretary encourages producers with animal feeding operations that do not meet the definition of a large concentrated animal feeding operation to voluntarily request coverage under this permit or voluntarily comply with the terms and conditions of the permit. This will make it easier for the producer should they want to expand the existing animal feeding operation to a size meeting the CAFO definition, thereby required to obtain coverage under this permit. If the producer that voluntarily obtains permit coverage has additional animal feeding operations not required to obtain permit coverage, this permit is not required for those operations.

1.2.2. **Permit Application Requirements.** This section describes the permit application requirements for all operations, new or expanding operations, and existing operations required to obtain permit coverage.

1. **Existing Operations with an Approved Permit Application or General Permit Coverage Prior to the Effective Date of this Permit.** Operations with coverage under the 2003 general permit which was administratively extended continue to have coverage under that permit until the operation is granted coverage under this permit or coverage is otherwise terminated. Existing operations with an approved permit application or coverage under the 2003 general permit have one through four years to submit a permit application and receive permit coverage under this permit. The permit application shall be submitted by the deadline for each operation provided in Appendix J. Information submitted as the permit application shall consist of:

   a. If the applicant is a corporation, partnership, limited liability partnership (LLP), limited liability ~~corporation~~ company (LLC), or trust, the applicant shall provide information on their legal structure including any parent corporation or subsidiary corporations of the applicant. The applicant shall also identify the name, title/position, and residential address (a P.O. Box is not acceptable) of every officer, general partner, LLP partner, LLC member, trustee, investor, director, or person performing a function similar to a director, the applicant, and each person who is the recorded or beneficial owner of 10 percent or more of any class of voting stock of the applicant, or any other responsible official(s) of the applicant with legal or decision making responsibility or authority for the operation. Documentation shall also be submitted indicating the producer has the authority to sign the documents in Sections b. and c. below for the corporation, partnership, LLP, LLC, or trust;

   b. A Certification of Applicant form (Appendix A);

   c. A Notice of Intent (NOI) form (Appendix B). This form contains the DENR mailing address where the permit application is to be sent;

   d. Housed lots or open lots with uncovered manure containment systems designed to not discharge shall include the output of the Natural Resource Conservation Service's Soil Plant Air Water (SPAW) hydrology tool and model inputs indicating their manure containment

system is designed to not discharge and eligible for a state permit. If this requires a revised Operation and Maintenance Guideline a revised guideline shall be submitted with the application;

e. A revised initial nutrient management plan in accordance with Section 1.4.4. of this general permit. With the initial nutrient management plan, the producer shall also submit documentation indicating the producer or an onsite representative has attended an approved environmental training program in the last three years;

f. Existing operations with an approved permit application without having permit coverage under the 2003 general permit for all items shown on the approved plans have until their approval expires (see approval letter), but no later than four years from the effective date of this permit to submit a modified application including the requirements under this permit for reconsideration or to submit a Notice of Completion with any other information required to meet the requirements of this permit to receive permit coverage under this permit; and

g. Operations with coverage under the 2003 general permit planning changes to their permitted operation that consist of an expansion or increase to the lot or feeding area; a change in the location of the animal feeding operation; an increase in the permitted animal numbers; a change in the method of waste treatment or storage; a change in animal species or type; or change in the size or location of the livestock waste control facility shall submit a permit application for coverage under this general permit that includes all of the requirements of Section 1.2.2.2.

2. **New Operations, Operations Making a Major Modification to their Operation, or Operations Without a DENR Approved Manure Management System.** The producer shall submit an application that contains the following information to the Secretary at least 60 days prior to starting construction:

a. If the applicant is a corporation, partnership, limited liability partnership (LLP), limited liability ~~corporation~~ company (LLC), or trust, the applicant shall provide information on their legal structure including any parent corporation or subsidiary corporations of the applicant. The applicant shall also identify the name, title/position, and residential address (a P.O. Box is not acceptable) of every officer, general partner, LLP partner, LLC member, trustee, investor, director, or person performing a function similar to a director, the applicant, and each person who is the recorded or beneficial owner of 10 percent or more of any class of voting stock of the applicant, or any other responsible official(s) of the applicant with legal or decision making responsibility or authority for the operation. Documentation shall also be submitted indicating the producer has the authority to sign the documents in Sections b. and c. below for the corporation, partnership, LLP, LLC, or trust;

b. A Certification of Applicant form (Appendix A);

c. A Notice of Intent (NOI) form (Appendix B). This form contains the DENR mailing address where the permit application is to be sent;

d. Housed lots or open lots with uncovered manure containment systems designed to not discharge (excluding off-site permanent stockpiling sites) should include the inputs and output of the SPAW model indicating the manure management system is designed to not discharge and are eligible for a state permit;

e. New or revised plans and specifications for the manure management system;

1) The plans and specifications shall be sealed, signed, and dated by a South Dakota licensed professional engineer or, to the extent authorized by state law, prepared by the U.S. Department of Agriculture – Natural Resources Conservation Service.

2) The plans and specifications, nutrient management plan, and operation and maintenance (O&M) guideline shall include all necessary items to show that the manure management system will meet all the terms and conditions of this permit once constructed.

3) SDCL 36-18A-46 requires the engineer to perform construction administration as defined in SDCL 36-18A-1(9). The engineer shall submit a construction administration plan with the plans and specifications.

f. A new or revised Nutrient Management Plan developed in accordance with Section 1.4.4.;

g. A new or revised O&M Guideline signed by the producer;

h. Verification that the producer or their onsite representative has attended a DENR approved environmental training course on proper O&M of a manure management system and nutrient management planning. This part of the application need not be submitted prior to the Secretary's approval of the permit application, but shall be submitted before permit coverage can be granted;

i. A Notice of Completion (Appendix A) signed by the producer's engineer indicating the manure management system was constructed in accordance with the approved plans and is complete. This part of the application cannot be submitted prior to the Secretary's approval, but shall be submitted before permit coverage can be granted; and

j. **Best Management Practices (BMPs)**. The producer is responsible for implementing BMPs to ensure compliance with the terms and conditions of this permit. The producer shall include the BMPs that shall be implemented at the animal feeding operation in the O&M Guideline and Nutrient Management Plan. The following sections describe several BMPs that may assist the producer in complying with this permit and prevent pollution. Whenever the word "shall" is used, that is a requirement of the permit that the producer shall meet; and

k. **Location Standards**. This section establishes the minimum standards the producer shall consider when selecting a site for a new concentrated animal feeding operation;

1) The producer shall contact the local planning and zoning office to determine all local requirements. The producer is responsible for complying with all local ordinances and requirements. Local governments may have setback distances, buffer zone widths, and other siting or environmental requirements established in local ordinances.

2) The producer should take every precaution to minimize the possibility of exposing the public to nuisance conditions and to prevent locating an animal feeding operation in an area unsuitable or inappropriate. Factors that the producer should consider are:

a) Distance to roads, homes, churches, schools, residential and recreational areas, towns, cities, etc.;

b) Prevailing wind direction;

c) Fencing the lagoon or containment structure for safety and posting signs around the structure;

d) Location of tile drainage systems;

e) Planting trees or shrubs where they will not damage the holding pond's liner and will screen the holding pond or containment structure to help control odors and improve aesthetics; and

f) Distance to public and individual water supplies.

3) The producer should evaluate the design, construction, and operational features of the manure management system to minimize contamination of surface or ground waters. In making this evaluation, the producer should consider the following factors:

   a) Soil conditions;

   b) Depth to the aquifer;

   c) Distance from the feeding operation to the aquifer and nearby drainages, streams, rivers, lakes, wetlands, etc.;

   d) Ground water conditions such as ground water flow rate, quality, and aquifer recharge or discharge conditions;

   e) Active natural processes such as flooding, erosion, settling, submergence, etc.;

   f) Local weather conditions;

   g) Terrain slopes; and

   h) Wastewater or manure containment structures should not be located in wetlands. If required by federal law, the producer shall obtain a Section 404 permit from the US Army Corps of Engineers prior to any dredging or filling of wetlands.

4) Wastewater or manure containment structures should not be located over shallow aquifers. The Secretary shall evaluate whether monitoring wells or a ground water discharge permit will be required on a case-by-case basis. The Secretary shall use SDCL 34A-3A-24 and the conditions of this permit to determine when a ground water discharge permit is required.

5) The producer shall at least maintain the minimum buffer zones required by this permit around wastewater containment structures or land application areas for manure disposal.

6) The producer should consider distances from neighbors, cities, and other residential areas. Proposed sites in areas located in a predominately upwind direction from residential areas should be avoided.

3. **Existing Operations Required to Obtain Permit Coverage.** Upon receipt of a signed complaint, the Secretary will conduct an inspection in response to the complaint to determine whether an existing animal feeding operation is a concentrated animal feeding operation ~~or should be designated as a medium or small concentrated animal feeding operation~~ required to obtain coverage under this permit. After conducting the ~~an~~ inspection ~~in response to the complaint~~, the Secretary will notify the producer of DENR's inspection findings and whether coverage under this permit is required.

   a. Any existing operation that is a concentrated animal feeding operation shall submit a permit application for coverage under this permit following the schedule provided by the Secretary. Permit applications for those operations that do not have existing manure containment systems shall be in accordance with Section 1.2.2.2. Permit applications for those operations that have existing manure containment systems shall be in accordance with Section 1.2.2.2. except the following criteria will be used to determine what needs to be submitted for the plans and specifications element of the application:

      1) AFOs or CAFOs with a manure management system built prior to August 14, 1996, without prior DENR approval.

         a) Documentation prepared by a South Dakota licensed professional engineer or the Natural Resources Conservation Service (NRCS) 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 required Maximum Operating Level marker (see the representative storage structure drawing in Appendix H). 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, location and type of piping, Notice of Completion, etc.

b) If the existing manure or process wastewater containment structure cannot contain 180 days of liquid storage plus the 25-year, 24-hour storm volume, the producer shall submit plans and specifications for a new or modified manure containment structure. The 25-year, 24-hour storm requirement is not applicable for a totally enclosed concentrated animal feeding operation with an enclosed storage structure. Any new enclosed structure or new enclosed structure used in combination with an existing manure containment structure shall have at least 270 days of storage. Any new open lot design shall provide 365 days of storage to account for the annual precipitation volume plus the 25-year, 24-hour storm necessary in the design (see Appendix H).

c) If the producer intends to continue using existing process wastewater containment structures constructed prior to August 14, 1996, the producer shall provide documentation the structure meets the seepage or permeability requirements in Section 1.4.3.4. of this permit if the structure meets one of the following criteria:

i. There is visible evidence of seepage from the containment structure;

ii. The containment structure is located over a mapped shallow aquifer shown in Appendix F of this permit or other shallow aquifers identified in reports published by the South Dakota Geological Survey;

iii. The manure containment structure is located within 150 feet of a river or lake classified in the South Dakota Surface Water Quality Standards, ARSD 74:51:02 and 74:51:03, as a warm water fishery or cold water fishery; or

iv. Impacts to private or public water supplies from the existing manure containment structure have been documented or if the existing manure containment structure is less than 250 feet from a well owned by someone other than the producer or 1,000 feet from an existing public water well, constructed to supply water to water distribution systems as defined by SDCL 46-1-6(17) or surface waters of the state classified by the South Dakota Surface Water Quality Standards, ARSD 74:51:02 and 74:51:03, for a domestic water supply beneficial use.

v. The requirements of this section do not apply to any existing process wastewater containment structure that does not meet any of the four criteria listed above, a manure containment structure constructed from concrete, or any structure with a synthetic liner. If a structure is built with concrete or has a synthetic liner and there are visible signs of leakage, the producer shall include in the application a plan to repair the structure to stop the leakage.

vi. If required to show an existing process wastewater containment structure can meet the seepage or permeability requirements of this permit, documentation complying with one of the following options shall be submitted:

(1) Permeability tests of in-situ samples from soil borings along the perimeter of the structure. The drilling logs and elevation of the top of the borings shall be provided. There shall be at least two soil borings for each manure containment structure. The in-situ samples shall be taken from the boring at the approximate elevation of the pond bottom. The borings shall be drilled on the

side of the structure that has visible leakage, nearest to the river or lake, or adjacent well (see items i, iii, and iv above);

(2) Permeability tests of in-situ samples taken from the sides and bottom of the manure containment structure. One test shall be conducted on each side of the dike and at least one per acre of manure containment structure bottom area. Outside pond perimeter in-situ sampling will be considered if a sampling plan is first submitted to DENR for approval;

(3) Long-term measurements of the level of manure in the containment structure considering evaporation and other losses or gains to the waste volume in the structure;

(4) Plans and specifications for the existing manure containment structure that show in detail how the liner of the containment structure was constructed; or

(5) Other methods that can be shown to reliably predict the seepage or permeability of an existing manure containment structure.

If the documentation shows that the existing manure containment structure cannot meet the seepage or permeability requirements of this permit, the producer shall submit a plan to bring the manure containment structure into compliance with the conditions of this permit. Options include lining the structure with a clay liner, installing a synthetic liner, installing a bentonite layer, abandoning the existing manure containment structure and constructing a new structure in accordance with this permit, obtaining a ground water discharge permit and conducting ground water monitoring, or other options approved by the Secretary. Plans and specifications for any new construction shall be submitted for review and approval by the DENR before construction begins.

4. **Change of Producer.** If the producer will no longer be the owner or operator of the operation, they shall transfer permit coverage to the new producer. The producer shall comply with the following to transfer the permit to a new producer:

   a. The current producer notifies the Secretary at least 30 days in advance of the proposed transfer date by submitting a Change of Producer (Appendix I), Certification of Applicant (Appendix A), and Notice of Intent (Appendix B) forms;

   b. If the applicant is a corporation, partnership, limited liability partnership (LLP), limited liability ~~corporation~~ company (LLC), or trust, the applicant shall provide information on their legal structure including any parent corporation or subsidiary corporations of the applicant. The applicant shall also identify the name, title/position, and residential address (a P.O. Box is not acceptable) of every officer, general partner, LLP partner, LLC member, trustee, investor, director, or person performing a function similar to a director, the applicant, and each person who is the recorded or beneficial owner of 10 percent or more of any class of voting stock of the applicant, or any other responsible official(s) of the applicant with legal or decision making responsibility or authority for the operation. Documentation shall also be submitted indicating the producer has the authority to sign the documents in Sections b. and c. below for the corporation, partnership, LLP, LLC, or trust;

   c. The new producer submits a signed O&M guideline;

   d. The new producer submits either documentation that the current nutrient management plan will continue to be used or a revised nutrient management plan for approval, including appropriate manure application agreements;

e. If the new producer plans to make major modifications to a manure management system so it no longer meets the definition of "designed to not discharge" and is no longer eligible for a state permit, the modifications shall go through the NPDES permit public notice process after being transferred;

f. The current producer is responsible for complying with the permit requirements until permit coverage is transferred to the new producer. The Secretary will notify the current and new producers if the transfer of permit coverage is granted and the effective date of the permit transfer; and

g. The new producer is required to submit documentation indicating an approved environmental training course has been attended in the last 3 years.

h. If no changes to the operation are planned, the permit will be transferred in accordance with the ARSD 74:52:04:02. If changes to the operation are planned, the permit will be transferred in accordance with the ARSD 74:52:04:01.

5. **Continuation of this Permit.** A general permit is effective for five years. If this permit is not reissued prior to the expiration date, it continues in force and effect until the Secretary issues a new general permit so long as the producer remains in compliance with the conditions of this permit, the approved plans and specifications, the BMPs required by this permit to be implemented, and the BMPs incorporated by the producer into the O&M Guideline and the Nutrient Management Plan. Any reissued general permit will contain application requirements for operations with coverage under this permit.

1.2.3. **Permit Application Processing.** To request coverage under this general permit, the producer shall submit a permit application as described in Section 1.2.2. to DENR at the address indicated on the Notice of Intent (NOI) form (see Appendix B).

1. **NPDES Permit Application Processing**

a. Upon receipt, the Secretary shall review the permit application to make a preliminary determination whether it is complete and to verify it meets the requirements of this permit. The Secretary may request additional information if the application is incomplete or if additional information needs to be submitted to verify the requirements of the general permit will be met.

b. The Feedlot Permit Program's recommendation of approval, conditional approval, or denial of permit coverage shall be public noticed once in a newspaper in the general locality of the feeding operation and on DENR's One Stop Public Notice website (http://denr.sd.gov/public/default.aspx). The notice shall appear at least 30 days prior to the Secretary issuing final approval, conditional approval, or denial of the permit application. The producer shall be responsible for paying for the newspaper notice. The notice shall contain information on the feeding operation to include the location, number of animals, a brief description of the proposed manure management system, the legal description of the land in the nutrient management plan, the Feedlot Permit Program's recommendation, and where to obtain further information. The public notice shall include information on how to submit comments or request a contested case hearing. A request for a contested case hearing shall be in writing and shall be prepared and filed in accordance with ARSD 74:50:02:02.

c. The Feedlot Permit Program shall prepare a written response to all written comments received during this period and, if necessary, may require the producer to revise the permit application.

d. If a contested case hearing is requested, the Secretary shall schedule a contested case hearing.

e. The contested case hearing shall be public noticed once in a newspaper in the general locality of the feeding operation and on DENR's One Stop Public Notice website at least 30 days before the hearing.

f. If a contested case hearing is held, the Secretary shall issue a final decision based on the outcome of the hearing and issue permit coverage, issue permit coverage with conditions, or deny permit coverage. At that time if permit coverage is granted, the Secretary shall conditionally approve plans and specifications submitted as part of the permit application. It is a violation of this general permit if a producer does not follow the conditions of the Secretary's approval.

g. If no contested case hearing is requested, the Secretary shall conditionally approve or deny the operation's plans and specifications and grant or deny permit coverage. It is a violation of this general permit if a producer does not follow the conditions of the Secretary's approval.

h. Starting construction of the manure management system before receiving general permit coverage is a violation of this permit. If permit coverage is granted, the producer can begin any construction included as part of their permit application. Once construction has commenced, the producer has three years to complete construction and submit a Notice of Completion. If construction has not started within two years of receiving permit coverage, or if construction has not been completed within three years following the start of construction, approval of the plans and specifications is expired. Operations that received an approval letter from the Secretary under the 2003 general permit with approval that has not expired can proceed with construction of the manure management system as long as the operation will meet the requirements of this permit. If additional documentation is needed to demonstrate the requirements of this permit will be met, it shall be submitted with revised plans or as-built plans with a Notice of Completion.

i. Feedlot Permit Program staff shall conduct a minimum of one construction inspection in accordance with ARSD 74:57:01:03.

j. Upon completion of construction, the producer shall submit to DENR the results of any required construction testing and a Notice of Completion (Appendix A) that has been completed by a South Dakota licensed professional engineer or, to the extent authorized by state law, prepared by the U.S. Department of Agriculture – Natural Resources Conservation Service.

k. If all conditions of approval and permit conditions are met, the Secretary shall issue a Certificate of Compliance and the operation can populate its production area. Populating the production area before the Secretary issues a Certificate of Compliance and at any time exceeding the maximum number of animals listed on the Certificate of Compliance is a violation of this permit.

l. If at any time after a permit application is public noticed and before a Certificate of Compliance is granted, the producer's permit application is significantly changed; the application shall start the permitting process over. This includes a new public notice. Significant changes include:

   1) Any revised or as-built plans that include a change in location of the process wastewater containment system where additional soil borings are required;

   2) A change to the type of manure or process wastewater storage structure;

   3) An increase in the amount of manure or process wastewater generated;

4) A decrease in the manure or process wastewater storage volume in the manure containment system; or

5) A modification to the nutrient management plan resulting in a change in a planned crop rotation or an increase in land application field acres.

m. If after an operation receives a Certificate of Compliance, the producer plans to make a major modification to their operation, excluding an increase in animal numbers, the producer must submit a modified permit application. The Feedlot Permit Program's recommendation for approval, conditional approval, or denial shall only be public noticed on DENR's one stop public notice website (http://denr.sd.gov/public/default.aspx) for 14 days. The notice shall contain information on the feeding operation to include the location, number of animals, a brief description of any proposed modifications to the manure management system or the nutrient management plan, and where to obtain further information. The department shall respond to any comments submitted. A contested case hearing can be requested, but only addressing the modifications being proposed in the notice.

n. If after an operation receives a Certificate of Compliance, the producer plans to have more animals present than the maximum number of animals listed on their Certificate of Compliance, the producer must submit a modified permit application. The Feedlot Permit Program's recommendation of approval, conditional approval, or denial of permit coverage shall be public noticed once in a newspaper in the general locality of the feeding operation and on DENR's One Stop Public Notice website (http://denr.sd.gov/public/default.aspx). The notice shall appear at least 30 days prior to the Secretary issuing final approval, conditional approval, or denial of the permit application. The notice shall contain information on the feeding operation to include the location, number of animals, a brief description of the proposed manure management system, the legal description of the land in the nutrient management plan, the Feedlot Permit Program's recommendation, and where to obtain further information. The public notice shall include information on how to submit comments or request a contested case hearing. A request for a contested case hearing shall be in writing and shall be prepared and filed in accordance with ARSD 74:50:02:02.

2. **State Permit Application Processing**

a. Upon receipt, the Secretary shall review the permit application to make a preliminary determination whether it is complete. The Secretary may request additional information if the application is incomplete or additional information needs to be submitted to verify the requirements of the general permit will be met.

b. If the Secretary makes a preliminary determination that the application is complete, the Secretary shall notify the public as described in Section c. below.

c. For any permit application for a new operation or existing operation covered under this permit increasing its maximum permitted animal numbers the Secretary shall prepare a notice. If an operation has coverage under the 2003 general permit, a public notice is only required if the operation is increasing its maximum permitted animal numbers. The notice shall be published once in a newspaper of general circulation in the locality of the feeding operation and on DENR's one stop public notice website (http://denr.sd.gov/public/default.aspx). The notice shall appear at least 30 days prior to the Secretary issuing approval of the permit application. The producer shall be responsible for paying for the newspaper notice. The notice shall contain information on the feeding operation to include the location, number of animals, a brief description of the proposed manure management system, the legal description of the land in the nutrient management plan, where to obtain further information, and how to submit written comments. There is no opportunity for a contested case hearing on the application.

d. The Feedlot Permit Program shall prepare a written response to all written comments received during this period and, if necessary, may require the producer to revise the permit application.

e. If the Secretary determines the permit application meets the terms and conditions of this permit, the Secretary shall issue an approval letter with or without conditions. It is a violation of this general permit if a producer does not follow the conditions of the Secretary's approval.

f. If the Secretary denies an application, the Secretary shall give written notice of the denial to the applicant giving the applicant 30 days to request in writing a hearing before the Secretary. The Secretary may affirm, modify, or reverse the initial decision based upon evidence presented at the hearing.

g. Approval from the Secretary authorizes the producer to proceed with construction of the manure management system. Starting construction of the manure management system before receiving the Secretary's approval is a violation of this permit.

h. Upon approval from the Secretary, the producer shall start construction of the manure management system within two years. Once construction has commenced, the producer has three years to complete construction and submit a Notice of Completion (Appendix A). If construction has not started within two years of the approval date or if construction has not been completed within three years following the start of construction, approval is expired. Operations that received an approval letter from the Secretary under the 2003 general permit with approval that has not expired can proceed with construction of the manure management system as long as the operation will meet the requirements of this general permit. If additional documentation is needed to demonstrate the requirements of this general permit will be met, it shall be submitted prior to obtaining permit coverage.

i. Feedlot Permit Program staff shall conduct a minimum of one construction inspection in accordance with ARSD 74:57:01:03.

j. Upon completion of construction, the producer shall submit to DENR the results of any required construction testing and a Notice of Completion (Appendix A) that has been completed by a South Dakota licensed professional engineer or, to the extent authorized by state law, prepared by the U.S. Department of Agriculture – Natural Resources Conservation Service.

k. If all conditions of approval and requirements of this permit have been met for issuing permit coverage, the Secretary shall issue coverage under this general permit, a Certificate of Compliance, and a letter informing the producer of when coverage under this general permit begins. The Certificate of Compliance allows the producer to populate the facility up to the maximum number of animals listed on the Certificate of Compliance and to begin using the manure management system in accordance with the conditions of this permit. Populating the production area before the Secretary issues a Certificate of Compliance and at any time exceed the maximum number of animals listed on the Certificate of Compliance is a violation of this general permit.

l. If at any time after a general permit application is public noticed and before general permit coverage is granted, the permit application is modified as follows; it shall start the permitting process over. This includes a new public notice. Modifications include:

   1) Any revised or as-built plans that include a change in location of the process wastewater containment system where additional soil borings are required;

   2) A change to the type of manure or process wastewater storage structure;

3) An increase in the amount of manure or process wastewater generated;

4) A decrease in the manure or process wastewater storage volume in the manure containment system; or

5) A modification to the nutrient management plan resulting in a change in crop rotation or an increase in land application field acres.

m. In the event a discharge occurs at a CAFO designed to not discharge, the operation shall be allowed to maintain its no discharge status and state permit when the following conditions are met:

1) The Secretary determines that the specific cause has been appropriately corrected so the CAFO does not discharge; and

2) The CAFO has not had two discharges at a given site for the same cause in any five year period.

n. If at any time the producer wants to change the status of their operation from designed to not discharge (state permit) to an NPDES permit where a discharge may be allowed, the producer needs to submit a revised Notice of Intent to DENR and DENR shall process their request in accordance with the requirements in Section 1.2.3.1. of this permit where certain discharges are allowed.

1.3. **Permit Termination and Closure Requirements.** The producer shall notify the Secretary if coverage under this permit is no longer necessary because the animal feeding operation is no longer in operation or a change in the operation has eliminated the requirement for a permit and the producer wants to terminate permit coverage. The producer shall use the Notice of Termination of Coverage form provided in Appendix C of this permit for this notification.

1.3.1. The producer is responsible for ensuring that upon closure of the animal feeding operation, all manure and wastewater has been removed and safely land applied in accordance with the terms and conditions of this permit. Once this is complete, the Secretary shall conduct an inspection of the operation to verify all conditions have been met for closure of the operation. The Secretary shall notify the producer if the termination of permit coverage is granted and the effective date of permit termination.

1.4. **Effluent Limits**

1.4.1. **All Operations with a State Permit or New Source Swine, Poultry, and Veal Operations, and Other Housed Lots with Covered Manure Containment Systems with an NPDES Permit.** Effective immediately and lasting through the life of this permit, the producer shall have no discharge of solid or liquid manure, litter, compost, raw material, or process wastewater from the animal feeding operation and the manure management system to waters of the state.

1.4.2. **Open Lots or Housed Lots with Uncovered Manure Containment Systems with an NPDES Permit.** Effective immediately and lasting through the life of this permit, the producer shall have no discharge of solid or liquid manure, litter, compost, raw materials, or process wastewater from the animal feeding operation and the manure management system to waters of the state. The only time this permit allows a discharge of process wastewater to waters of the state is when precipitation causes a discharge from a manure management system containment structure as long as:

1. The manure containment system is designed, constructed, operated and maintained at all times to contain all manure, litter, and process wastewater, including the runoff and direct precipitation

from a 25-year, 24-hour precipitation event and is in compliance with the terms and conditions set forth in this permit;

2. A daily record of measurable rainfall events shall be recorded. The producer can use an onsite rain gauge to measure precipitation amounts. Measurements taken from the rain gauge must be recorded to the nearest half (½) of an inch. Producers do not need to update their records on any day when there is no precipitation.
3. The producer has inspection records indicating the operation has been properly operated and maintained;
4. The discharge is the result of the precipitation event(s);
5. No feasible alternative to discharging existed;
6. Only manure or process wastewater in excess of the storage capacity of the manure containment system or necessary to prevent system failure is discharged to waters of the state; and
7. DENR is notified in accordance with the twenty-four hour reporting section of this permit, and the county emergency manager for the county where the operation is located is notified.

1.4.3. Design, Construction, Operation, and Maintenance Requirements

1. Producers shall construct, operate, and maintain the CAFO in compliance with the conditions of this permit; the approved plans and specifications; the BMPs required by this permit; and the BMPs incorporated by the producer into the permit application. The producer shall include the BMPs that will be implemented at the animal feeding operation in the O&M Guideline and the Nutrient Management Plan. The producer is responsible for implementing the BMPs to ensure compliance with the terms and conditions of this permit.
2. Each producer's site specific manure management system design, construction, and O&M requirements will be placed in Appendix D of this permit when permit coverage is granted. These requirements are designed to protect South Dakota's surface and ground water quality.
3. **Surface Water Protection.** The producer shall construct, manage, and maintain manure management containment systems to contain the 25-year, 24-hour storm event, plus all sources of process wastewater and liquid and solid manure. The containment structures shall be designed and constructed in accordance with accepted engineering and construction practices.
   a. Ditches, dikes, berms, terraces, or other such structures shall be used to divert peak clean water flows away from a manure containment structure. These structures shall be designed with stable side slopes to carry the peak flow expected during the 25-year, 24-hour precipitation event without overtopping. Where peak flows are used to design ditches, dikes, berms, sediment basins, or other similar structures, appropriate rainfall distributions (MSE1, MSE2, and MSE3) shall be utilized (see the NRCS supplement to the National Engineering Handbook Part 650).
   b. For uncovered manure containment structures, a minimum of one permanent marker shall be installed at the Maximum Operating Level and maintained in each containment structure to show the volume above the permanent marker can contain a 25-year, 24-hour storm event below the High Water Level (see the representative manure storage structure cross section drawing in Appendix H). The marker shall clearly indicate to the producer the elevation of the Maximum Operating Level. The marker shall be constructed so it will not be displaced by ice or other normal South Dakota weather conditions. The producer shall be aware that if the wastewater rises above the Maximum Operating Level, it shall be pumped down below the marker within 14 days to restore the 25-year, 24-hour and freeboard volume above the marker. If the design requires, the producer shall also pump down the containment structure

to the top of the residual volume prior to winter months to provide adequate winter volume. The producer should install a marker indicating this elevation.

c. Ditches, dikes, berms, terraces, or other such structures used to divert process wastewater flows to the manure containment structure shall be designed with stable side slopes to carry the peak flow expected during the 25-year, 24-hour precipitation event without overtopping.

d. Sediment basins shall be designed to drain to the manure containment structure within 72-hours or shall have a liner. Sediment basins shall also be designed with one foot of freeboard. Design calculations indicating the frequency of required sediment basin cleaning and flood routing shall be submitted as part of the design.

e. Gravity PVC piping shall be SDR 26, Schedule 40, Class 100, or 16-gauge as appropriate for the particular pipe material or be constructed of a material able to contain wastewater without corroding and installed to provide a minimum velocity of 2 feet per second. Exposed gravity piping shall be protected from ultraviolet radiation. Gravity sewer piping greater than 100 feet in total length (excluding pull plug barn piping within the barn) shall be water tightness tested in accordance with the requirements in DENR's *Recommended Design Criteria Manual for Wastewater Treatment and Collection Facilities*, March 1991 (http://denr.sd.gov/des/sw/documents/DesignCriteriaManual.pdf) or the Recommend Practice For Low-Pressure Air Testing of Installed Sewer Pipe (UNI-B-6-98) (http://www.uni-bell.org/resources.php?c=39).

f. Pressure testing shall be conducted for any force main piping greater than 100 feet in total length. Pressure test results shall be submitted with a Notice of Completion. Test methods shall meet the requirements for pressure sewers provided in DENR's *Recommended Design Criteria Manual for Wastewater Treatment and Collection Facilities*, March 1991 (http://denr.sd.gov/des/sw/documents/DesignCriteriaManual.pdf). Irrigation piping shall meet or exceed the NRCS' Irrigation Pipeline (430) standard (April 2013).

g. Any piping into a holding pond (excluding interpond piping) where there is no sediment basin or sediment pond shall be at or above the maximum operating level to prevent surcharging.

h. Manure containment structures for housed lots with covered manure storage structures shall provide for a minimum design capacity of 270 days of manure and process wastewater storage below the Maximum Operating Level. Open lot and/or uncovered manure storage structure designs shall provide 365 days of manure and process wastewater storage below the Maximum Operating Level to account for annual precipitation volume necessary in the design. The design volume below the Maximum Operating Level includes the following:

1) Liquid and solid manure and any process- generated wastewater, including flush water;

2) Process wastewater including the mean annual runoff and annual precipitation on any uncovered parts of the production area if the structure receives runoff from the open lots or pens;

3) Normal precipitation less evaporation on the pond surface. The amount of evaporation used in this calculation will be no more than the amount shown on the Mean Annual Lake Evaporation map, U.S. Weather Bureau Technical Paper Number 37 (or other reference approved by the Secretary);

4) If uncontaminated storm water runoff cannot be diverted away from the production area and manure management systems, the manure management system shall include adequate storage capacity for the additional clean water. Clean water includes, but is not limited to, precipitation falling on the roofs of facilities and runoff from adjacent land;

5) Additional water necessary to meet volatile solids loading or other loading rates specified in Item z., on page 23, if the structure is an anaerobic, naturally aerobic or mechanically aerated lagoon; and

6) An allowance of at least one foot shall be provided in the bottom of the containment structure to accommodate materials that are not removed during emptying. In lieu of this volume, operations with concrete structures can have one foot of residual in sumps within the pump out pits and documentation in their O&M guideline that they shall agitate the structure just before or when the structure is emptied (See Appendix H).

i. The design volume above the Maximum Operating Level consists of the following:

1) The 25-year, 24-hour storm event precipitation directly on pond surface, at the top of the pond berms, and the runoff from any open lot and any other drainage area that is directed to the containment structure and sediment basin(s).

2) The freeboard shall not be less than two feet for any containment structure constructed with earthen materials. The freeboard shall not be less than one foot for any manure containment structure constructed with concrete or for above ground manure storage tanks. Freeboard is measured from the High Water Level to the bottom elevation of the emergency spillway or lowest part of the containment structure berm, dike, wall, or embankment (see manure containment structure cross section drawings in Appendix H).

j. A manure containment structure for an open lot may be constructed with an emergency spillway or overflow channel at the top of the freeboard elevation to remove water in a controlled manner when the capacity of the containment facility is exceeded. If present, the emergency spillway shall be designed to safely pass the flow expected from at least a 25-year, 24-hour storm event without causing a nuisance to downstream landowners.

k. Chemicals and other contaminants handled on-site or transferred on-site cannot be disposed of in any manure management system, storm water storage system, or treatment system unless it is specifically designed to treat such chemicals or contaminants and the Secretary approves the disposal method. All wastes from dipping vats, pest and parasite control units, and other facilities utilized for the management of potentially hazardous or toxic chemicals shall be handled and disposed of in a manner sufficient to prevent pollutants from entering the manure, litter, or process wastewater retention structures or waters of the state. The producer's O&M guideline should include any applicable chemical handling protocols.

l. If applicable, the South Dakota Dam Safety requirements in ARSD 74:02:08 shall be met for construction of manure containment systems. A manure containment system shall meet these regulatory requirements if it is at least 25 feet high and holds more than 15 acre-feet of water; or holds more than 50 acre-feet of water and is over 6 feet high.

m. In addition to the other design requirements in Section 1.4.3., new source swine, poultry, and veal calf operations with uncovered manure storage structures shall evaluate the adequacy of the designed manure storage structure to show it will not discharge using the NRCS' SPAW hydrology tool or an equivalent model. The evaluation shall include all inputs to SPAW for the previous 100 years consistent with the operation's Nutrient Management Plan, with the final modeled result showing` no overflows from the designed uncovered manure storage structure. For those operations where 100 years of local weather data for the operation's location is not available, operations may use a simulation with a confidence interval analysis conducted over a period of 100 years.

n. The production area and manure management system, including all clean water conveyances, shall be located on land owned by the producer or the producer shall submit with the application an agreement with the land owner for the planned life of the operation.

o. Interior and exterior slopes of earthen embankment walls of manure containment structures shall be no steeper than one foot vertical to three feet horizontal.

p. Earthen embankments of any manure containment structure shall have a minimum top width of 10 feet.

q. Any earthen lined containment structure having a surface area of five acres or more at the Maximum Operating Level (see manure storage structure cross section drawing in Appendix H) shall be provided with erosion protection. If a DENR inspection indicates that significant dike erosion is occurring on earthen containment structures having a surface area of less than five acres, the Secretary shall require that the erosion be repaired and may require erosion protection be installed in those areas subject to erosion.

r. Any riprap installed for erosion protection shall be hard, durable, and be stable after placement (the use of concrete rubble as riprap is not acceptable). The riprap shall be placed on a securely anchored filter blanket or placed against at least four inches of a filter of sand with gravel and be approximately 6 to 18 inches in diameter. The riprap shall be placed in depths of 8 to18 inches depending upon size, location and configuration of cells.

s. Adequate erosion protection shall be provided on earthen pond berms and floors where erosive flow is possible such as below inlet piping. Splash pads and chutes shall have adequate capacity, shape, and orientation to handle the maximum flow from the inlet pipe without letting flow leave the sides of the chute. The chute and splash pad shall be constructed with the use of reinforced concrete or riprap.

t. Manure containment structures shall not be located within the 100-year flood plain, unless the structure is protected from inundation and damage that may occur during flood events. The top of the freeboard shall be constructed at least one foot above the elevation of the 100-year flood. The water surface elevation of the 100-year flood can be determined by using Federal Emergency Management Agency (FEMA) 100-year flood maps, United States Geological Survey (USGS) 100-year flood prone maps, and/or completing a hydrologic and hydraulic analysis. If no FEMA or USGS 100-year flood delineation is available for the location of the waste storage structure, the 100-year flood elevation shall be determined by completing a hydrologic and hydraulic analysis.

   To determine the 100-year flood elevation using a hydrologic and hydraulic analysis, a 100-year flow shall first be estimated by using USGS published peak-flow 100-year frequency estimates, using USGS flow-frequency regression equations, or utilizing a rainfall runoff model. If using a rainfall runoff model, a 100-year frequency, 24-hour duration storm peak flow estimate shall be determined. Manning's equation or a step-backwater program such as Hec/Ras shall then be used to determine the 100-year flood elevation corresponding to the 100-year flow estimate.

u. All operations with manure containment systems or land application areas within ¼ mile of streams, where according to the U.S. Fish and Wildlife Service, Topeka shiners have been observed or have potentially occupied http://www.sddot.com/business/environmental/endangered/docs/Topeka_dist.pdf shall develop and implement an Endangered Species Action Plan. The Endangered Species Action Plan shall identify BMP(s) that shall be implemented upon receiving permit coverage to minimize the likelihood of a discharge from entering waters of the state occupied by Topeka shiners. The Endangered Species Action Plan shall be included as an element of the submitted initial nutrient management plan or revisions to any initial nutrient management plan.

v. Manure management systems, manure disposal sites, and process wastewater disposal sites shall not be located closer than 250 feet from an existing private water well not owned by the

producer or 1,000 feet from an existing public water well, constructed to supply water to water distribution systems as defined by SDCL 46-1-6(17) or surface waters of the state classified by the South Dakota Surface Water Quality Standards, ARSD 74:51:02 and 74:51:03, for a domestic water supply beneficial use. Manure management systems, manure disposal sites, and process wastewater disposal sites shall not be located closer than 150 feet from a water well owned or proposed to be drilled by the producer supplied by an aquifer where the top of the aquifer is less than 100 feet below the land surface or 100 feet from a water well owned or proposed to be drilled by the producer supplied by an aquifer whose top is 100 or more feet below the land surface. These setback requirements do not apply to manure management systems constructed prior to August 13, 1996.

w. Confined animals shall be prevented from contacting waters of the state.

x. The producer should take precautions while agitating the pond to ensure that the liner is not damaged.

y. Animal mortalities shall be handled to prevent the discharge of manure and process wastewater to surface waters of the state.

1) Unless plans and specifications approved by the Secretary are for systems specifically designed to handle mortalities, manure or process wastewater systems cannot be used for the disposal of mortalities;

2) If mortalities are composted using manure or process wastewater, the composting area shall meet the liner and containment requirements of a permanent stockpiling area in Section 1.4.3.5. and shall be included on plans and specifications submitted to DENR for approval;

3) If manure or process wastewater from the manure management system is not used in a mortality management system, DENR shall receive an aerial photo or site plan showing the location of the system and the animal feeding operation's O&M Guideline shall indicate the mortality management system shall be operated so no discharge occurs; and

4) Animal mortality disposal is regulated by the South Dakota Animal Industry Board. The Animal Industry Board may be contacted at (605) 773-3321.

z. Additional requirements for typical treatment systems are as follows:

1) **Waste Treatment Lagoons.** Plans and specifications for waste treatment lagoons shall meet the requirements of SD NRCS Conservation Practice Standard Waste Treatment Lagoon (359) (October 2014) and the following criteria:

a) **Anaerobic Lagoons.** The design shall be based on volatile solids loading. The loading rate for an anaerobic lagoon shall not exceed 3.0 pounds of volatile solids per 1,000 cubic feet of pond volume. Loading rates less than 3.0 pounds are allowed. The minimum depth of liquid shall be 6 feet;

b) **Naturally Aerobic Lagoons.** The design shall be based on daily biochemical oxygen demand (BOD_5) loading per acre of lagoon. The loading rate for an aerobic lagoon shall not exceed 25 pounds of biochemical oxygen demand (BOD_5) per acre of lagoon per day. Loading rates less than 25 pounds are allowed. The maximum depth of liquid shall be five feet;

c) **Mechanically Aerated Lagoons.** The aeration equipment shall provide a minimum of one pound of oxygen for each pound of biochemical oxygen demand (BOD_5) per day. The minimum depth of liquid shall be 6 feet; and

2) **Anaerobic Digesters.** Plans and specifications for anaerobic digesters shall meet the requirements of SD NRCS Conservation Practice Standard Anaerobic Digester (366) (October 2010). The digester's O&M Guideline shall include performance standards, including gas production, so the producer and the Secretary can determine if the digester is operating properly.

aa. **Calf Hutches.** There shall be no discharge of manure or process wastewater from a calf hutch unless the discharge is directed into the operation's manure management system. Calf hutches that allow animals outside the hutch where the outside areas are not under a roof are considered open lots and runoff from these areas shall be included in the manure containment system.

1) A concrete floor or liner is required unless the in-situ soils can meet the accepted permeability coefficient of $1x10^{-7}$ centimeters per second (cm/sec) or less, unless the producer has a plan in their O&M guideline to move hutches so they are not in the same location for more than 45 days and documents they are meeting this requirement, and

2) Manure removed from calf hutches shall be placed in the operation's manure management system or land applied in accordance with the operation's Nutrient Management Plan.

bb. **Feed and Other Raw Materials Storage.** Storage of feed or other raw materials where the stored material contains thirty percent (30%) or more moisture content or which have free draining liquids shall have any runoff of process wastewater contained. The runoff shall be contained with the raw material, in the manure containment system, or the feed or raw materials storage shall be covered. If feed or raw materials storage is covered, the O&M guideline shall address how the feed shall be kept covered, and how the active face of the material and loading shall be kept clean. Processing areas and storage areas for dry feed or other raw materials cannot cause the generation of process wastewater which is not contained in the manure management system. Examples of dry materials that are excluded from moisture testing are hay, straw, corn stalks or stover. Examples of materials that need moisture testing are silage and distillers grain.

4. **Ground Water Protection.** The producer shall take every precaution to prevent migration of pollutants to the ground water. Process wastewater containment structures shall be constructed with a liner following the BMPs below to ensure protection of ground water:

a. All new or modified process wastewater containment structures that have liners constructed of compacted or in-situ earthen materials shall be constructed in accordance with Appendix 10D of the Agricultural Waste Management Field Handbook (http://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/national/water/?&cid=stelprdb1045935) and the following minimum practices shall be followed to ensure protection of ground water:

1) Earthen liners shall be designed to meet or exceed the requirements in Appendix 10D of the NRCS Agricultural Waste Management Field Handbook (August 2009) and meet the following criteria:

a) clay liner thickness shall be a minimum of 18 inches thick and maximum of 30 inches thick (after compaction), and

b) the permeability coefficient (hydraulic conductivity) is less than or equal to $1x10^{-7}$ centimeters per second (cm/sec), or the specific discharge is less than or equal to 9×10^{-7} centimeters per second (cm/sec) determined at the maximum operating level;

2) Existing manure management systems constructed prior to February 12, 2003, shall demonstrate they have a maximum seepage rate of $1/16^{th}$ inch per day at maximum

operating depth or have a permeability coefficient less than or equal to $1x10^{-7}$ centimeters per second (cm/sec);

3) Material used for the clay liner shall be either Unified Classification CL or CH or other material capable of meeting the liner requirements. Liner materials shall contain no frozen material, sod, roots, or other perishable materials, or rocks larger than 6 inches in diameter. No liner shall be placed on a frozen surface (Reference: SD NRCS Construction Specifications SD-7A Earthfill – Class A, 10/06);

4) Earthen Liners shall be placed in approximately equal thickness, uniform layers with an uncompacted thickness of no more than 9 inches. Within 2 feet of any concrete structure, fill layer thickness shall not exceed 4 inches and equipment loads shall not exceed 400 pounds. (Reference: SD NRCS Construction Specifications SD-7A Earthfill- Class A, 10/06);

5) Soil compaction for liners shall be constructed at 95 percent of standard proctor density at optimum moisture content of minus two to plus three percent or according to the recommendations of the soils testing laboratory;

6) Testing shall be conducted to ensure proper construction of the liner. There shall be at least two in-place moisture and compaction tests conducted on each acre of six inch lift, with a minimum of four tests per lift. Test data shall be furnished as described by ASTM D698, D1556, D2167, or equivalent. In lieu of conducting the density tests, there shall be a minimum of two permeability tests conducted on the completed liner. For ponds larger than two acres, one additional permeability test shall be conducted for each additional acre of liner. The results of either testing procedure shall show that the proper compaction was achieved and the permeability requirements of this permit have been met. The locations of the tests shall be random and equally distributed over the liner bottom and inside embankments. The liner testing results and locations shall be submitted to the Secretary along with the Notice of Completion form;

7) Drain tile shall not be placed closer than 50 feet from the toe of the exterior berm of a holding pond or the foundation of a manure containment system or any other area where process wastewater is generated or stored unless any flow from the tile or leak detection sump shall be directed into the manure containment system. The volume from the tile or leak detection sump shall be included in the capacity calculation for the manure containment system or the application shall indicate documentation of adequate capacity in the manure containment system shall be submitted within one year of any water in a leak detection sump; and

8) If applicable, pipe leakage test records shall be retained and available upon request.

b. If an earthen liner cannot meet the requirements in item 1) above, then an alternative lining material shall be used. These alternative liners shall meet or exceed the permeability coefficient requirements in part a.1) of this section. Alternative liner materials include flexible membrane linings such as 45-mil reinforced high-density polyethylene (HDPE), or 60-mil unreinforced HDPE; asphalt-sealed fabric liners; and bentonite sealants.

c. Process wastewater and manure containment structures may be constructed with concrete. These structures shall be properly designed using adequate structural reinforcement to minimize cracking of the concrete and to ensure the structural integrity of the containment structure. These structures shall also be properly designed to minimize or prevent seepage or leakage. Acceptable standards for concrete design are found in the following sources:

1) Midwest Plan Service (MWPS-36) *Concrete Manure Storage Handbook* (2005 Edition) available from the Extension Service;

2) American Concrete Institute Standards 318-14 (2014) *Building Code Requirements for Structural Concrete*; or

3) American Concrete Institute Standards 350-06 (2006) *Code Requirements for Environmental Engineering Concrete Structures*.

d. Livestock shall be prohibited entry into earthen process wastewater containment structures or on its dikes, and the immediate surrounding area to ensure protection of the liner. Existing operations with unique animal access issues will be addressed on a case-by-case basis.

e. The following recommendations apply unless other separation distances are recommended by an arborist. If shrubs and small trees with a mature height of less than 25 feet are planted near a manure containment system, they ~~shall~~ should be a minimum of 25 feet from the toe of the exterior berm of a holding pond or the foundation of a manure containment system. If trees with a mature height of greater than 25 feet are planted near a manure containment system, they ~~shall~~ should be at least 50 feet from the toe of the exterior berm of a holding pond or the foundation of a manure containment system. Any volunteer trees and shrubs should be removed from the above boundaries depending on the species.

f. Any mechanical or structural damage shall be evaluated by a NRCS Engineer or Professional Engineer licensed in South Dakota within thirty (30) days of the damage and if necessary repaired as soon as possible.

5. **Stockpiling.** If stockpiling of manure is a usual practice at an animal feeding operation, the producer shall:

a. Stockpile manure either in an approved covered structure or within an area where manure and process wastewater runoff will be directed to the containment structure;

b. Construct a permanent stockpiling area. The manure stockpiling area shall be designed to accommodate the normal manure stockpiling practices implemented at the animal feeding operation;

1) The stockpiling area shall include a liner that minimizes seepage and dikes to contain runoff from stockpiled manure and keep clean water runoff from entering the stockpiling area. An accepted alternative to lining the area is to conduct permeability tests on the in-situ soils. If the in-situ soils can meet the accepted permeability coefficient of $1x10^{-7}$ centimeters per second (cm/sec), a liner will not be required.

2) The process wastewater containment structure for stockpiling sites shall include at a minimum the storage volumes for the 25-year, 24-hour storm event precipitation directly on the containment system at the maximum operating level, the runoff from any stockpiling areas and other drainage area that is directed to the containment structure, and one or two feet of freeboard as required by Section 1.4.3.3.i.2), on page 21.

c. Temporarily stockpile manure for less than 14 days from the date the stockpile was created and in an area that will not cause pollution to waters of the state. The temporary stockpile shall be located at least 200 feet from any natural or manmade drainage, outside setback areas, and on nutrient management plan fields not located over a shallow aquifer (fields with 2-4 foot soil sampling or 0-2 foot post-harvest soil sampling requirements). The producer should consider moving temporary stockpiles to different locations. The producer shall keep records of the date when each temporary manure stockpile was created and the date when the temporary manure stockpile was completely removed or land applied; or

d. Temporarily stockpile manure for longer than 14 days up to 120 days in a temporary stockpile with a compacted soil berm to contain process wastewater runoff from the stockpiling site, or with an impermeable cover. The temporary stockpile shall be located

outside the 100-year flood plain (where identified), at least 200 feet from any natural or manmade drainage, outside setback areas, and on nutrient management plan fields not over a shallow aquifer (fields with 2-4 foot soil sampling or 0-2 foot post-harvest soil sampling requirements). The fields where these temporary stockpiling areas shall be located shall be identified in the initial Nutrient Management Plan or an amendment to the plan. The same stockpiling site cannot be used from year to year. The producer shall keep records of the date when each temporary manure stockpile was created and the date when the temporary manure stockpile was completely removed or land applied.

6. **Requirements for Operations with Process Wastewater Containment Structures located over a Shallow Aquifer.** The process to determine whether process wastewater containment structures are located over a shallow aquifer and whether a ground water discharge permit and/or ground water monitoring is required shall be determined based on SDCL 34A-3A-24, the requirements of this section, and Appendix G.

   a. The producer shall conduct soil borings to provide on-site hydrogeologic information for any new or enlarged process wastewater containment structure. The producer shall provide the drilling logs and the elevation of the top of the boring from soil borings in the vicinity of the containment structure. The elevation shall be relative to the elevation submitted on the manure containment system plans. There shall be a minimum of two soil borings or at least one boring per acre of containment structure surface area at the Maximum Operating Level (see Appendix H). All borings shall be within 200 feet of the proposed location of the containment structure and all borings shall extend to a depth of at least six feet below the bottom of the containment structure. At least one of these borings shall be a deep subsurface boring characterizing the subsurface hydrogeology by using continuous in-situ undisturbed core samples collected from the deep boring. All borings shall be plugged in accordance with South Dakota Well Construction Standards, ARSD 74:02:04. The deep subsurface boring shall extend to a minimum of 25 feet below the ground surface and may stop when one of the following criteria has been met:

      1) At least 15 continuous feet of extremely low permeability, geologic material (unweathered clayey till or shale) is encountered in the boring;

      2) At least 30 continuous feet of low to extremely low permeability, geologic material (weathered or unweathered till or shale) is encountered, if the boring is greater than 50 feet in depth;

      3) The boring reaches an aquifer or bedrock; or

      4) A total depth of 100 feet.

   b. Based on SDCL 34A-3A-24, the criteria listed in 1) and 2) below, and the results of Section 1.4.3.6.a. of this permit, the Secretary will determine if a process wastewater containment structure is located over a shallow aquifer. If the process wastewater containment structure is located over a shallow aquifer, Appendix G will be used to determine if a ground water discharge permit or ground water monitoring is required. The producer shall begin ground water monitoring or obtain a ground water discharge permit before storing manure. The criteria are as follows:

      1) The animal feeding operation is located over a mapped shallow aquifer. County studies and other information shall be used, where available, to determine aquifer locations. Aquifer boundaries are drawn at the discretion of geologists and hydrologists based on best available information. Therefore, actual site specific aquifer boundaries may differ from mapped aquifer boundaries and other information. On-site hydrogeological

information is necessary to verify the location of an animal feeding operation in relation to an underlying shallow aquifer.

2) The animal feeding operation is located over an aquifer not shown on the map in Appendix F, and meets one of the following criteria:

   a) The aquifer is within 50 feet or less below the land surface with 15 feet or less of continuous, overlying, extremely low permeability, geologic material such as unweathered clayey till or shale. Weathered till or highly fractured/weathered shale is not considered to be extremely low permeability material;

   b) The aquifer is greater than 50 feet but less than 100 feet below the land surface with 30 feet or less of continuous overlying low to extremely low permeability geologic material that may be a combination of weathered and unweathered till, shale, or till and shale; or

   c) If the aquifer is greater than 100 feet below the land surface, the vulnerability shall be determined on a case-by-case basis.

c. If ground water monitoring is required, a minimum of three ground water monitoring wells shall be installed around the containment structure. At least one of the wells must be located up-gradient of the process wastewater containment structure and at least two monitoring wells must be down-gradient from the process wastewater containment structure. The monitoring wells shall be installed by a South Dakota licensed well driller.

   1) At least one sample from each well shall be collected from the monitoring wells before storing manure in new manure management systems to determine background ground water quality conditions. The producer shall sample the ground water in each monitoring well on a quarterly basis (for example, during January, April, July and October) for the following parameters:

      a) Total Dissolved Solids;

      b) Sulfate, Dissolved;

      c) Nitrate as Nitrogen;

      d) Ammonia – Nitrogen, Dissolved NH_4 + NH_3 as N;

      e) Chloride, Dissolved; and

      f) Water table elevations.

   2) The producer shall submit the results of the monitoring well sampling to the Secretary once monitoring results are available, to the following address:

      South Dakota Department of Environment and Natural Resources
      Feedlot Permit Program
      523 East Capitol Avenue
      Pierre, SD 57501-3182
      Telephone: (605) 773-3351
      Fax: (605) 773-5286

   3) If the ground water is not impacted after one year of sampling, the producer may request the Secretary to reduce the monitoring frequency. The monitoring frequency may not be less than once per year. However, if the ground water is affected, the Secretary may require more frequent monitoring and reporting, ground water remediation, additional sampling parameters, ~~or~~ a ground water discharge permit, or any other measures deemed necessary to protect ground water quality.

1.4.4. **Manure and Wastewater Land Application Sites.** Effective immediately and lasting through the life of this permit, the producer shall implement the DENR approved nutrient management requirements, O&M Guidelines, and BMPs required by this permit for land application of manure and process wastewater to prevent discharge of manure or process wastewater to waters of the state. The discharge of manure, litter, or process wastewater to waters of the state as a result of land application of that manure, litter, or process wastewater by the CAFO to land it owns, rents, or leases is a discharge except where the manure, litter or process wastewater has been applied in accordance with its approved nutrient management plan. Nutrient management planning can ensure that the 4 R's (Right rate, Right source, Right application method, and Right application timing) provide the proper amount of nutrients to the crop where it is needed while protecting surface and ground water.

1. **BMPs for Land Application of Manure.** The producer is responsible for the safe land application of manure and process wastewater generated at the animal feeding operation. The producer shall comply with all mandatory BMPs listed below, and may use any or all of the recommended BMPs to ensure compliance with this permit and prevent pollution.

   a. The producer shall apply manure for the purpose of growing crops.

   b. The producer shall develop, maintain, and follow a nutrient management plan to ensure safe disposal of manure and process wastewater and protection of surface and ground water.

   c. Containment structures shall be equipped with irrigation, evaporation, liquid removal systems, or a combination of these systems or the producer shall provide documentation pumping equipment shall always be available if needed. These systems shall be capable of dewatering the containment structures for proper land application. The producer shall maintain freeboard in the manure containment structure at all times as required by Section 1.4.3.3.i.2) on page 21 of this permit. The producer shall restore the storage capacity necessary to contain the 25-year, 24-hour storm event within 14 days of any precipitation event or accumulation of manure or process wastewater that results in storage above the Maximum Operating Level of the containment structure. If soil moisture conditions do not allow land application of manure or process wastewater within 14 days, the producer shall contact DENR to discuss restoring the storage capacity of the containment structure. The Maximum Operating Level is the elevation in the containment structure necessary to contain the designed storage of accumulated manure and process generated wastewater and any solids accumulation (see Appendix H). Producers that operate open lots shall have access at all times to equipment capable of dewatering the containment structures.

   d. All manure stockpiles should be removed and land applied as soon as practicable.

   e. The producer shall land apply solids, sludges, manure, or other pollutants in a manner to prevent pollution of surface or ground water.

   f. Any permanent or temporary piping used to transfer manure to land application equipment or an irrigation system shall be designed, constructed, and operated so liquid manure is not discharged to waters of the state at any time during start-up, operation, and shut down. Temporary piping shall not be placed in water or on a bridge unless the piping is in a watertight carrier pipe that would direct any discharge away from the water body.

   g. The producer shall maintain at least a 100-foot buffer zone or 35-foot vegetated buffer between:

      1) Any manure land application areas and any ~~down-gradient~~downslope surface waters, open tile line intake structures, sinkholes, or other conduits to surface waters of the state; and

2) Any irrigation of process wastewater and any ~~down-gradient~~ downslope surface waters, open tile line intake structures, sinkholes, or other conduits to surface waters of the state.

h. Depending on the results of a producer's soil phosphorus test and estimated field erosion, a 100-foot vegetated buffer zone shall be required if the producer wants to apply manure based on the nitrogen needs of the crop and not crop removal of phosphorus (see Table 2 on page 34).

i. Fields should be diked or terraced to prevent the release of applied wastewater.

j. Land to be irrigated or receive manure should have a slope less than 6 percent.

k. Highly erodible soils due to water erosion should be avoided.

l. Manure and process wastewater land application practices should be managed to prevent ponding of wastewater on the land application site and shall be managed to prevent runoff of manure or process wastewater beyond the edge of the field.

m. Mobile land application systems using temporary piping shall use land application equipment with a flow meter and on board radio controller overseen by an applicator during land application. The applicator shall monitor the flow meter and application equipment, and shall shut down the pump should a discharge or other emergency situations occur. The radio controller shall also allow the applicator to idle down the pump when turning around at the end of fields and in other maneuvering situations when low flow is required. The producer should consider hiring applicators with equipment that uses an automatic pump shut-off device in case of pressure loss in the piping.

n. The producer shall inject, or incorporate any liquid manure or process wastewater within 24 hours of application to non-vegetated cropland. If the process wastewater/liquid manure is surface applied, sprinkled, or spray irrigated to cropped fields, grass, alfalfa, pasture land, or no till cropland, incorporation is not required.

o. The producer shall incorporate any solid or semi-solid manure within five days of application to non-vegetated cropland. If the application area is a cropped field, alfalfa, grass, pasture land, or no-till cropland, incorporation is not required.

p. To reduce nutrient discharges from pattern tile, producers should apply nutrients with the right placement, in the right amount, at the right time and from the right source. The producer should consider the following nutrient use efficiency strategies: slow and controlled release fertilizers; nitrification and urease inhibitors; enhanced efficiency fertilizers; timing and the number of applications; coordinate nutrient applications with optimum crop nutrient uptake; Corn Stalk Nitrate Test, Pre-Sidedress Nitrate Test, and Pre-Plant Soil Nitrate Test; tissue testing, chlorophyll meters, and spectral analysis technologies, and other SDSU or NRCS recommendation technologies that improve nutrient use efficiency. Producers should also consider the use of drainage water management, bioreactors, buffers at tile inlets, treatment wetlands, plugging tile outlets during land application, the use of cover crops, and other BMPs to reduce nutrient discharges from tile drainage systems. Additional management considerations can be found in Cornell University Cooperative Extension's Fact Sheet 58 *Subsurface (Tile) Drainage Best Management Practices* and the University of Minnesota Extension's fact sheet *Nitrates in Drainage Water in Minnesota*.

q. A producer applying manure to property owned by other persons shall obtain a written agreement from the legal land owner. Any lands owned by other persons that shall be used for manure application shall be identified in the initial nutrient management plan. The producer shall be responsible for ensuring that the application of manure to the other person's

property is in compliance with the terms and conditions of this permit and the nutrient management plan.

r. The producer, or agent acting on behalf of the producer, should calibrate application equipment to ensure accurate distribution of material at planned rates. The producer, or commercial land applicator acting on behalf of the producer, should consider tillage of the cropped buffer zones and field boundaries prior to land application of process wastewater to help increase the soil porosity in these areas to keep process wastewater in the application areas.

s. **Training and Education**. The producer or onsite representative shall attend an approved environmental training program on proper O&M of a manure management system and proper natural resource management. If the person who attended training no longer works at the operation, a producer or onsite representative shall attend training for the operation within one year. Applicators of manure and process wastewater should consider attending this training so they are aware of the permit's requirements. Anyone wishing to provide an approved environmental training program shall submit an outline of the training program to the Secretary for approval. Upon request, the Secretary shall provide producers with a listing of approved environmental training programs. The producer shall submit training verification prior to receiving a Certificate of Compliance and coverage under this permit.

t. **Manure Application on Saturated, Snow Covered, or Frozen Soil.** Manure and process wastewater shall not be surface applied to saturated soil where the top two inches of soil are so wet or water-logged that farm equipment cannot travel over the area effectively, soil covered by one-inch or more of snow or covered by more than one-half inch of ice, or frozen soil that is impermeable to liquid manure applied to the ground surface due to frozen soil moisture unless planned for in the initial nutrient management plan. The producer shall follow all other applicable requirements of their approved initial nutrient management plan and this permit.

1) If the producer has properly designed, constructed, operated and maintained the manure management system in accordance with this permit and the permit application and the wastewater level in the manure containment system is above the maximum operating level, process wastewater can be land applied to saturated, snow covered, or frozen soil to prevent catastrophic equipment or structural failure or a discharge to waters of the state as long as the following conditions 4) through 12) below are met;

2) If the producer has properly designed, constructed, operated and maintained the manure management system in accordance with this permit and the permit application, solid manure can be land applied to saturated, snow covered, or frozen soils if conditions 5) through 12) below are met.

3) If the producer has properly designed, constructed, operated and maintained the manure management system in accordance with this permit, incidental amounts of manure collected during feedlot snow removal or cleaning of feed bunks to facilitate livestock feeding and handling may be land applied if conditions 6) through 12) below are met;

4) Process wastewater or manure shall not be spray irrigated on saturated, snow covered, or frozen soil;

5) The producer should notify DENR prior to application so DENR may review buffer zone requirements with the producer and respond to inquiries from the public;

6) Manure application should occur in the upper 50% of the topography of an application field;

7) Application rates shall be determined based on a soil test and a manure or process wastewater test that are no more than one year old. No application shall occur on flood plain soils classified as frequently or occasionally flooded on the National Cooperative Soil Survey (http://websoilsurvey.nrcs.usda.gov). When using the survey, click on soil data explorer, then soil properties and quality, then water features to find this information;

8) The producer shall maintain at least a 300-foot buffer zone between any manure land application areas and any down-gradient surface waters, open tile line intake structures, sinkholes, or other conduits to surface waters of the state;

9) Winter applications of nutrients must be set back a minimum of 300 feet from surface waters or water conveyances and a minimum of 1,000 feet from National Hydrography Dataset named lakes, rivers, and perennial streams. ~~The producer shall maintain at least a 1,000-foot buffer zone between any manure land application area and any lake or stream with a beneficial use assigned by the South Dakota Surface Water Quality Standards, ARSD 74:51:02 or 74:51:03 of (8) Limited-contact recreation waters, (7) Immersion recreation waters, (6) Warmwater marginal fish life propagation waters, (5) Warmwater semipermanent fish life propagation waters, (4) Warmwater permanent fish life propagation waters; (3) Coldwater marginal fish life propagation waters, (2) Coldwater permanent fish life propagation waters, and (1) Domestic water supply waters;~~

10) The producer shall only apply manure on land with slopes less than 4 percent. Fields with the lowest predicted water erosion soil loss should have the highest priority for winter application;

11) Field maps showing the items in 6) through 8) above and in Sections 1.4.3.3.v shall be included in the initial nutrient management plan for fields where land application under these conditions may occur;

~~11)~~12) Liquid manure containment structures shall only be pumped down one foot below the maximum operating level or the amount necessary to prevent structural failure; and

~~12)~~13) Manure or process wastewater shall be spread as uniformly as possible.

2. **Initial Nutrient Management Plan Requirements for Permit Application.** The initial nutrient management plan is a planning document to ensure the producer has enough land available to apply generated manure and process wastewater. The DENR and the Natural Resources Conservation Service have a nutrient management planning tool (a Microsoft Excel spreadsheet) available to assist with developing an initial nutrient management plan (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs141p2_035958.xlsm). The producer may use other initial planning tools provided the alternate plan contains all the information necessary to determine compliance with conditions of this general permit. The initial nutrient management plan shall contain and address the following items:

   a. The Secretary shall approve a nutrient management plan or a modification to a nutrient management plan before land application of any manure and process wastewater can occur on any fields in the plan.

   b. General information on local requirements and whether the producer has complied with those requirements.

   c. The maximum animal numbers and average weight throughout the production cycle for all types of animals that will be confined. For each animal type, the maximum number of days livestock will be present per year shall also be provided.

d. An estimate of the total nitrogen and phosphorus in pounds that will be available for crop production. The producer may use either estimated nutrient concentrations for the animal manure or nutrient concentrations from laboratory analysis. If laboratory analysis is conducted, the analysis shall be included with the plan. If estimated concentrations are used to determine the total nutrients available, the source of the estimated concentrations of nitrogen for the animal manure shall be provided.

e. An estimate of the daily and annual amount of manure produced in tons of wet manure.

f. The type or types of manure containment structures and manure handling practices.

g. The method(s) and timing of manure application. Percent of nitrogen retained after application shall be determined based on Table 3 at http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs141p2_035958.xlsm or a basis provided by SDSU or NRCS.

h. The initial nutrient management plan shall include the proper mineralization rates for subsequent years of manure and process wastewater application to account for the potential buildup of nitrogen (See Table 4. at http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs141p2_035958.xlsm or provide basis from SDSU or NRCS).

i. The legal description of all fields to be used for land application, information indicating whether the land is owned, rented, or leased by the producer, the crop to be planted on each field for each of five years, the number of acres in each field, and whether the field is irrigated. Land identified or classified as wetlands, lakes, rivers, or streams, farmsteads, tree belts, or other buffer zones that cannot or will not be used for manure application shall not be included in the total number of acres available for land application. Wetlands may be farmed on a case-by-case basis if it would be a normal practice to apply fertilizer to them and this can be done without impacting surface or ground water. Also, if either this permit or local governments require setback distances or buffer zones, areas within those buffer zones shall be identified on the field maps and cannot be included in the total available number of acres.

j. A copy of each written agreement for a minimum of one year executed with the legal land owner where manure will be applied. The written agreement shall indicate the acres that manure from the animal feeding operation may be applied and the length of the agreement. The producer shall ensure that there is enough land to apply manure consistent with the approved initial nutrient management plan.

k. A detailed map showing the outline of each field listed in item i. above and all buffer zones and separation distances required by this permit (including those in Sections 1.4.3.3.v., 1.4.4.1.g. and any local government required buffers. If application to saturated, snow covered, or frozen soil may occur routinely or in an emergency, separate maps for each land application field showing the outline of each field and all winter buffer zones and separation distances shall be submitted.

l. A soils map for each land application field, identifying the predominate soil type for each field.

m. Realistic yield goals for each field and crop listed in item i. above. The yield goal for initial nutrient management planning shall be determined from the 3 highest yields used for purchasing multi-peril crop insurance plus 10 percent; proven yields on a field-by-field or farm-by-farm basis for a continuous 3-year average plus 10 percent; the NRCS Crop Yield Tables (Productivity Indexes and 5 year average of continuous South Dakota Agricultural Statistics Service published yield) plus ten percent, or the South Dakota Agricultural Statistics Service published continuous five-year average plus ten percent. Yield goals based on multi-peril crop insurance or field by field/farm by farm basis shall include documentation used to calculate the yield. For new crops or varieties, industry-demonstrated yield and

nutrient utilization information may be submitted and used until SDSU information is available.

n. Times of the year that land application is planned.

o. The results of a representative 0 to 6 inch soil phosphorus test from each field included in the nutrient management plan no older than two years from when the application was submitted. To get a representative sample, a minimum of 15 soil sample cores shall be taken from each field or landscape position to determine the soil test phosphorus in the field.

p. Identify the annual average soil loss value for the sum of wind and water erosion for each field to be included in the nutrient management plan using the most current soil loss prediction technology used by the South Dakota Natural Resources Conservation Service. References can be found in the South Dakota Natural Resources Conservation Service Field Office Technical Guide, Section 1, and Erosion Prediction at the following web site: http://efotg.nrcs.usda.gov/ or local Natural Resources Conservation Service office. The soil loss number may be adjusted by implementing alternative crop rotation and cropping practices, or implementing conservation practices such as contour farming, cross-slope farming, buffer strips, strip cropping, or terracing.

q. Identify whether fields in the nutrient management plan can be used to land apply manure based on nitrogen need or phosphorus crop removal. Table 2 shall be used to make this determination for each field by considering the level of phosphorus in the soil, the soil loss number, and the presence or absence of a 100-foot vegetated buffer. Only fields identified as eligible for nitrogen based manure application can be included in the total acres available for manure application in the initial nutrient management plan. Fields requiring a phosphorus based plan can be listed in the plan and used for manure application. However, these acres cannot be used to show a producer has enough land to apply manure generated at the operation to meet the permit requirements.

Table 2. Nitrogen Need/Phosphorus Crop Removal Manure Application Determination Table[1]

Soil Test Phosphorus (ppm)		**Predicted Annual Erosion – Sum of Wind and Water Erosion (tons per acre per year)[2]**				
		Less than 6		6 to 8		Greater than 8
		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	Five Year Phosphorus crop removal
26-50	36-75	Nitrogen Need	Nitrogen Need	Nitrogen Need	Five Year Phosphorus crop removal	One Year Phosphorus crop removal
51-75	76-110	Nitrogen Need	Five Year Phosphorus crop removal	Five Year Phosphorus crop removal	Five Year Phosphorus crop removal	One Year Phosphorus crop removal
76-100	111-150	One Year Phosphorus crop removal	One Year Phosphorus crop removal	One Year Phosphorus crop removal	One Year Phosphorus crop removal	No application
Greater than 100	Greater than 150	No application	No application	No application	No application	No application

Crop removal is the amount of phosphorus a crop removes in one crop year (SDSU-Extra 8009). Five year phosphorus crop removal is phosphorus removal for up to a five year crop sequence.

[1] South Dakota's nutrient management planning tool also includes a Phosphorus Loss Risk Assessment which categorizes phosphorus loss as a Low Risk for fields with a Nitrogen Need determination, a

Moderate Risk for fields with a Five Year Phosphorous crop removal determination, and a High Risk for fields with a One Year Phosphorus crop removal determination.

[2] Wind erosion calculations shall be completed for all fields with predominate soils having a wind erodibility index (I) ≥ 134.

r. An estimate on the number of years it would take to raise all fields in the initial nutrient management plan to a phosphorus soil test level over 50 parts per million using the Olsen test or 75 parts per million using the Bray-1 test.

s. Determination of the total amount of nitrogen (based on crop need) and phosphorus (based on crop removal) that can be applied to each field based on the crop planted at that field, the realistic yield goal, any residual nitrogen left in the field from past agricultural practices or crops, and the phosphorus soil test level. Applications of biosolids, starter fertilizers, or pop-up fertilizers shall be accounted for in the nutrient budget.

t. Comparison of the total nitrogen requirement and crop removal of phosphorus for each field to the total nitrogen and phosphorus available in the manure. If the nitrogen in the manure exceeds the field nitrogen requirements, the producer shall identify additional fields that can be used for the application of manure.

u. A list indicating out of state landowners or landowners in “Indian Country” who will be sold or given manure for its fertilizer value, the county and number of acres where manure will be applied, and the estimated amount of manure or process wastewater that will be given to each landowner. The producer shall annually provide each landowner with the manure or process wastewater sample results for total nitrogen, inorganic nitrogen, and total phosphorus. The producer shall maintain records documenting the manure and litter transferred including the date of transfer, nutrient content, and the quantity transferred.

v. A producer can sell or give away up to 100 cubic yards of solid manure per year without including that manure in their annual nutrient management plan. The producer shall provide each landowner with the manure sample results for total nitrogen, inorganic nitrogen, and total phosphorus. The producer shall also let each landowner know that they cannot place or cause to be placed any manure in a location where it is likely to cause pollution of any waters of the state. Once the producer has completed the requirements of this section, the producer is no longer responsible for how the manure is stored or applied. ~~t~~The person who receives the manure assumes ~~is~~ responsibility~~responsible~~ for storing the manure and land applying the manure so it does not cause pollution of waters of the state. This manure may be subject to the South Dakota Department of Agriculture commercial fertilizer law, SDCL 38-19.

w. If any changes are made to the fields approved for use in the nutrient management plan, the producer shall submit an amendment to DENR for review and approval prior to the change taking effect.

x. Two or more separately permitted operations within two miles of each other with approved nutrient management plans or having adjacent nutrient management plan fields can submit a written agreement signed by both producers and legal landowner(s) for application fields. The agreement between producers shall indicate which operation is responsible for maintaining both initial nutrient management plans, annual nutrient management planning requirements, record keeping, and reporting requirements. Upon approval by DENR, manure from any of the permitted operations covered by the agreement can be applied on any field in either approved nutrient management plan.

y. The Secretary shall determine on a case-by-case basis whether a land application site is located over a shallow aquifer. This shall be done using the published South Dakota

Geological Survey county studies, hydrologic reports, and first occurrence of aquifer materials maps, and well log information located near the fields.

3. **Annual Nutrient Management Plan Requirements.**

a. Upon receiving permit coverage and prior to land applying manure, the producer shall use the following procedure to determine the appropriate application rates of manure and process wastewater based on nitrogen or phosphorus (see Table 2). Upon determining the application rate, the producer shall apply the manure and process wastewater according to the calculated rate. Applying manure above the calculated rate is a violation of this permit. The following is the procedure for calculating the application rate:

1) Before manure application, each field where manure or process wastewater will be land applied shall be sampled for phosphorus from a depth of 0 to 6 inches and for nitrate-nitrogen from 0 to 2 feet. If manure application sites are located over shallow aquifers, prior to application of nitrogen above starter application rates, the producer shall also either:

a) Take soil samples for nitrate-nitrogen from both 0 to 2 and 2 to 4 feet prior to manure application, or

b) Take soil samples for nitrate-nitrogen to a depth of 2 feet both prior to manure application and within four weeks after harvesting the crop. This shall apply to all fields in the nutrient management plan located over a shallow aquifer. Once the producer takes the post-harvest soil samples, in lieu of the 2 to 4 foot samples, it shall become a condition of this permit to continue taking post-harvest samples for the fields located over shallow aquifers. If a producer does not take the required 2 to 4 foot samples prior to land application of manure, the post-harvest sampling shall then be required. In either case, the producer shall no longer have the option of taking the deep soil samples.

2) If the post-harvest soil sample results indicate the residual nitrate-nitrogen in the soil is above 100 pounds per acre, this field shall not be available for manure application until one full growing season has passed. After one full growing season has passed another soil test shall be taken and if it shows nitrate-nitrogen levels have dropped below 100 pounds per acre then manure application may commence based on the producer's annual nutrient management plan calculations. A minimum of 15 soil sample cores shall be taken from each field or landscape position in the field. Soil sample cores that represent similar soil and landscape position may be composited into one sample. Soil sampling shall be done in accordance with the NRCS Guidance, Sampling Soils for Nutrient Management SD-NRCS-FS-50 (June 2012) (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs141p2_036444.pdf) or SDSU's Recommended Soil Sampling Methods for South Dakota FS935 (May 2006) (http://pubstorage.sdstate.edu/AgBio_Publications/articles/FS935.pdf). The laboratory analyzing the soil samples shall participate in the North American Proficiency Testing Program (NAPT) Proficiency Assessment Program (PAP) (http://www.naptprogram.org/pap/labs).

3) The producer shall take a representative sample each year of the manure or process wastewater that will be land applied and have each sample tested for total nitrogen, inorganic nitrogen, and phosphorus. Organic nitrogen is equal to the total nitrogen minus the inorganic nitrogen. Sampling shall be done in accordance with the NRCS guidance Sampling Manure for Nutrient Management SD-NRCS-FS-36 (November 2002) (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs141p2_036089.pdf). The laboratory analyzing the manure samples shall be certified by the Manure Testing

Laboratory Certification Program (http://www2.mda.state.mn.us/webapp/lis/manurelabs.jsp).

4) Nitrogen-based application. Based on a soil test, a manure test, type of crop to be grown, expected crop yield, legume credits, and sampling date, the producer shall determine the total nitrogen that can be applied to each field. When determining the nitrogen application rate, the producer does not have to use the yield goal listed in the initial nutrient management plan. The producer may use a yield goal that is reasonably expected for that field. The total nitrogen that can be applied shall be determined as follows:

   a) The total nitrogen necessary to meet the expected yield goal in pounds of nitrogen per acre shall be determined using the South Dakota State University Cooperative Extension Service publication EC750, Fertilizer Recommendations Guide. This value is determined by the crop to be grown and the expected yield. In addition to the manure nitrogen allowed in the nutrient management plan, other nitrogen necessary to obtain the realistic yield goal, as indicated by soil nitrogen test results, may be applied to the field.

   b) Nitrogen credits shall be subtracted from the total nitrogen value determined in item a) above. The following credits shall be subtracted from this value.

      i. The results from the 0 to 2 foot nitrate soil test conducted in accordance with item 1) on page 36. If a 2 to 4 foot deep nitrate test is required and the result of the test is greater than 30 pounds of nitrogen, then reduce the nitrogen recommendation an additional four pounds of nitrogen for each five pound increment above 30 pounds (for example, if there are 50 pounds of nitrate nitrogen in the 2 to 4 foot depth, 16 pounds of nitrogen in addition to the 0 to 2 foot deep test shall be subtracted).

      ii. Any legume credits. To determine legume credits, please see the SDSU Cooperative Extension Service publication EC750, Fertilizer Recommendations Guide.

      iii. Sampling date adjustment. Breakdown of organic material continues to release nitrates until soils cool in the fall. Therefore, the nitrogen requirement shall be adjusted if the soil samples are taken between July 1st and September 15th. To make this adjustment, reduce the nitrogen requirement by 0.5 pounds of nitrogen per day prior to September 15th. The maximum adjustment is 23 pounds. Soil samples from fallow fields do not need to be adjusted for time of sampling because most of the residue from the previous crop should have mineralized during the fallow period.

      iv. Any other sources of nitrogen used.

      v. The resulting value in pounds of nitrogen per acre is the maximum amount of additional nitrogen that may be applied to the field.

5) Based on the results of the manure testing required in item 3) on page 36, the producer shall apply manure to each field at a rate not to exceed the rate calculated in item 4) above. NOTE: If the yields that are used to calculate the application rate are not consistently attained, residual nitrogen will increase in subsequent years and will decrease the amount of manure that can be applied to that field during future applications. This nitrogen carry-over will be evident in future soil sampling.

6) **Phosphorus Based Application.** If the manure application is required to be based on phosphorus crop removal as determined by using Table 2 on page 34, the application rate

shall be based on phosphorus removed in the harvested portion of the crop as listed in the most current version of SDSU Extension Publication EXEX 8009, Quantities of Plant Nutrients Contained in Crops. Application can be based on a five-year or one-year phosphorus crop removal (see Table 2) but cannot exceed the one year nitrogen crop need, and no manure may be applied to that field again until the applied phosphorus has been removed from the field via harvest and crop removal. In addition to all other nutrient management planning requirements of this permit, the producer shall submit an amendment to their initial nutrient management plan that includes a soil phosphorous drawdown strategy implementation plan, and a site assessment for nutrients and soil loss to determine mitigation practices that are required to protect water quality.

7) Manure or process wastewater shall be spread as uniformly as possible.

8) **Precision/Variable Rate Nutrient Management Planning**. The following additional components shall be included in a precision/variable rate nutrient management plan:

   a) Document the geo-referenced field boundary and data collected that was processed and analyzed as a Geographic Information Systems (GIS) layer or layers to generate nutrient or soil amendment recommendation;

   b) Document the nutrient recommendation guidance and recommendation equations used to convert the GIS base data layer or layers to a nutrient source material recommendation GIS layer or layers;

   c) Document if a variable rate nutrient or soil amendment application was made; and

   d) Provide application records per management zone or as applied map within individual field boundaries (or electronic records) documenting source, timing, method, and rate of all applications that resulted from use of the precision agriculture process for nutrient applications.

4. **Nutrient Management Plan Record Keeping.** Each producer shall maintain on-site, for a period of five years from the date they are created, a complete copy of the nutrient management plan for their operation and the records specified below. The producer shall make these records available to the Secretary upon request.

   a. A copy of the general permit including the initial nutrient management plan;

   b. Expected crop yields;

   c. The date(s) manure, litter, or process waste water is applied to each field;

   d. Weather conditions at time of application and for 24 hours prior to and following application;

   e. Test methods used to sample and analyze manure, litter, process waste water, and soil;

   f. Results from manure, litter, process waste water, and soil sampling;

   g. Explanation of the basis for determining manure application rates, as provided in the technical standards established by this permit;

   h. GIS precision/variable rate electronic records of the GIS data layers and nutrient applications

   i. Calculations showing the total nitrogen and phosphorus (if required) to be applied to each field, including sources other than manure, litter, or process wastewater;

   j. Total amount of nitrogen and phosphorus (if required) actually applied to each field, including documentation of calculations for the total amount applied;

   k. The method used to apply the manure, litter, or process wastewater; and

l. Date(s) of manure application equipment inspection.

1.4.5. **Site Inspection Requirements.** At a minimum, the producer shall visually inspect and document the following:

1. Weekly inspect all storm water diversion devices, runoff diversion structures, barns, mortality management facilities, and devices channeling process wastewater to the process wastewater containment structure;
2. Daily inspect water lines, including drinking water or cooling water lines;
3. Weekly inspect manure, litter, and process wastewater containment structures; the inspection will note the level of the manure and process wastewater in the process wastewater containment structures in relation to the maximum operating level marker;
4. The producer, or agent acting on behalf of the producer, shall inspect the land application equipment, land application sites and irrigation equipment, if used, on a daily basis while land application of process wastewater or manure is occurring. This inspection is to ensure that the land application equipment is not leaking and runoff from the land application site and irrigation system is not occurring. If a discharge or leak is found where process wastewater or manure is reaching any surface waters of the state, flowing onto property not owned by the producer, or not included in the nutrient management plan, the producer is responsible for taking immediate steps to stop the discharge or leak and following the reporting requirements of this permit. The producer shall keep documentation of these inspections so the Secretary can review them upon request or during an inspection; and
5. Any deficiencies found as a result of these inspections shall be documented when they are found and when they are corrected.

1.4.6. **Record Keeping Requirements for Production Area.**

1. Records documenting the required inspections.
2. Weekly records of the level of the manure and process wastewater in the process wastewater containment structures in relation to the maximum operating level marker.
3. Records documenting any actions taken to correct deficiencies required. Deficiencies not corrected within 30 days shall be accompanied by an explanation of the factors preventing immediate correction.
4. Records of mortalities management and practices used by the concentrated animal feeding operation.
5. Records documenting the current design of any manure, process wastewater, or litter containment structures, including volume for solids accumulation, design treatment volume, total design volume, and approximate number of days of storage capacity.
6. Records of the date, time and estimated volume of any overflow or discharge of manure or process wastewater from the manure management system.

1.4.7. **Annual Reporting Requirements.**

1. On or before March 28th of each year, the producer shall submit an annual report to the Secretary, on a form provided by the Secretary, to the following address:

South Dakota Department of Environment and Natural Resources
Feedlot Permit Program
Joe Foss Building

523 East Capitol Avenue
Pierre, SD 57501-3182

2. The annual report shall be for the previous calendar year and shall include:
   a. The type of animals confined (swine weighing 55 pounds or more, swine weighing less than 55 pounds, beef cattle, mature dairy cows, dairy heifers, veal calves, sheep and lambs, horses, ducks, turkeys, geese, broiler chickens, layer chickens, or other), the maximum number of each type of animal confined at any one time, and whether confined in open lots or housed under roof;
   b. A summary of all manure, litter and process wastewater discharges that have occurred from the production area or during land application, including date, time and approximate volume;
   c. Estimated amount of total manure, litter and process wastewater generated by the producer (tons/gallons);
   d. Estimated amount of total manure, litter and process wastewater transferred to other persons by the producer (tons/gallons);
   e. Total number of acres for land application covered by the nutrient management plan developed in accordance with this permit;
   f. Total number of acres under control of the producer that were used for land application of manure, litter and process wastewater;
   g. A statement indicating whether the current version of the permittee's nutrient management plan was developed or approved by a certified nutrient management planner; and
   h. For operations with an NPDES permit, the annual report shall include the actual crop(s) planted and actual yield(s) for each field where manure, litter, or process wastewater was applied, copies of the results from manure, litter, process wastewater and soil sampling, copies of the calculations showing the total nitrogen and phosphorus (if required) to be applied to each field including the amount of any supplemental fertilizer applied during the previous 12 months for fields owned, rented, or leased by the producer.

1.4.8. **Other Permits and Requirements That May Be Needed.**

1. Water Rights Permit. A water right permit is required for a private water supply if the water use by the feeding operation is more than 25,920 gallons per day (18 gallons per minute) or if the combined maximum pump capacity exceeds 25 gallons per minute. Any producer submitting a permit application for this permit for a new or expanding operation which results in a total population that will be at least two times the minimum threshold identified in Table 1 for a large CAFO and gets water for their operation from a combination of wells or surface water sources, and does not have a Water Right permit at the time they submit an application for this permit, shall install a flow meter between the water source(s) and the first water use location. The flow meter shall be used to document the operation does not exceed the maximum allowable daily water volume and flow rate allowed without having a Water Right permit. Flow documentation shall be maintained onsite for review during DENR inspections. This requirement does not apply to operations that get their water from rural water systems or other sources that have a water right permit. For more information, contact DENR's Water Rights Program at (605) 773-3352.
2. Storm Water Construction Permit. A storm water construction permit is required if one or more acres of land will be disturbed during construction of the animal feeding operation or the manure management system. For more information on storm water permit requirements, please call 1-800-SDSTORM (1-800-737-8676).

3. All large CAFOs shall notify state and local emergency response officials if they emit 100 pounds of ammonia or hydrogen sulfide from their operations during any 24-hour period. For more information, please look at the following web page http://denr.sd.gov/des/gw/SARATitleIII/Emissions_from_Animal_Waste.aspx or call (800) 433-2288.
4. Manure management systems emitting at least 25,000 metric tons of CO_2 equivalent per year may be required to report to the federal Environmental Protection Agency. For more information contact ~~Mark Komp~~Chris Dresser with EPA, Region 8, at (303) 312-6385~~(303) 312-6022~~.
5. If the operation has sources that release air contaminants to the ambient air, it may need an air quality permit. Examples of equipment that may be regulated in the permit are boilers, emergency generators, and incinerators. **If a permit is required the facility will need to obtain a permit under the Air Quality Program before construction begins.** Please contact the DENR's Air Quality Program at (605) 773-3151 for a permit application, additional information, or if you have any questions.
6. If an operation will encroach, damage or destroy any of the historic sites identified at the following websites: http://history.sd.gov/Preservation/NatReg/NatReg.aspx or http://www.nps.gov/nhl/find/statelists/sd/SD.pdf, the producer shall first contact the State Historic Preservation Office at (605) 773-3458.
7. If manure application will involve placing hoses or other equipment in a state highway right of way (for example, in a road ditch or through a culvert), the producer must first obtain a Permit to Occupy Right of Way. Application for this permit may be made through the local South Dakota Department of Transportation area office. In addition, please contact your county highway superintendent to determine if your county has similar requirements.
8. The producer is responsible for contacting your local planning and zoning office to determine if there are any local ordinances or requirements with which you need to comply.

1.5. **Retention of Records.** The producer shall retain records of all monitoring information, maintenance and inspection records, copies of reports required by this permit, and data used to complete the Notice of Completion for this permit. The producer shall keep the records for at least five years from the date of the sample, measurement, report, or application. Data collected and a copy of this permit shall be kept at the animal feeding operation or the usual place of business where employees of the operation have access to them.

1.6. **Twenty-four Hour Reporting.** The producer shall report any discharge of manure or process wastewater that leaves the exterior boundary of the production area, manure management system, or land application field, reaches water of the state, or may endanger health or the environment as soon as possible, but no later than twenty-four (24) hours from the time the producer first became aware of the discharge. The report shall be made to the South Dakota Department of Environment and Natural Resources at (605) 773-3351. If after normal business hours (8:00 am to 5:00 pm Central Time, Monday through Friday), the producer shall report the discharge by calling the South Dakota Office of Emergency Management at (605) 773-3231. The producer shall also take immediate steps to stop the discharge and notify anyone downstream that may be impacted by the discharge. Within 15 days of the discharge the producer shall submit a written report on the discharge, indicating the time the discharge started and was stopped, amount of manure and process wastewater discharged, and steps planned to be taken to prevent a discharge from happening again. If construction is necessary plans and specifications with a construction schedule shall be submitted for approval.

1.7. **Bankruptcy Reporting.** Within 10 days after commencement of a voluntary or involuntary bankruptcy proceeding naming a producer as a debtor, the producer shall notify the Secretary by certified mail at the address listed in Section 1.4.7.1. of the general permit. The notice shall provide

information on the producer's continued ability to operate and maintain the operation in compliance with this general permit and include the bankruptcy bar date. If a trustee or other entity becomes responsible for the operation, including the responsibility for compliance with this permit, the Secretary shall be notified within 10 days of that change.

1.8. **Inspection and Entry:**

1.8.1. The producer shall allow the Secretary, upon presentation of credentials, to:

1. Enter the premises of an animal feeding operation or where records are kept;
2. Inspect any animal feeding operation covered under this general permit;
3. Access and copy, at reasonable times, records specified under this general permit; and
4. Sample or monitor any substance or parameter, at reasonable times, to determine compliance with this permit or other requirements of the South Dakota Water Pollution Control Act.

1.8.2. The Secretary shall only have access to the animal confinement areas if it becomes absolutely necessary to determine compliance with this general permit. If access becomes necessary, the Secretary will abide by all security measures implemented by the producer to ensure protection of the health of the animals at the animal feeding operation. The Secretary will also follow all security measures the producer has implemented for all offsite visitors at open lot facilities.

1.8.3. In accordance with ARSD 74:57:01, the Secretary shall inspect concentrated animal feeding operations with at least 2,000 animal units at least annually; and all those with under 2,000 animal units at least once every three years of operation. All operations shall be inspected at least once in the first 18 months of operation.

1.9. **Permit Fee.** In accordance with SDCL 34A-2-125, there is an annual permit fee. The fee is two hundred fifty dollars ($250) for operations with two thousand or more animal units, one hundred seventy-five dollars ($175) for operations with one thousand to one thousand nine hundred ninety-nine animal units, and one hundred dollars ($100) for operations with less than one thousand animal units. The obligation to pay the fee is on the producer and accrues on September 30th of each year. DENR shall notify the producer when the fee is due.

2. COMPLIANCE RESPONSIBILITIES

2.1 **Duty to Comply.** In accordance with ARSD 74:52:03:02, the producer shall comply with all the conditions of the general permit; the approved plans and specifications; the BMPs required by this permit to be implemented; and the BMPs incorporated by the producer(s) into the operation's O&M Guideline and Nutrient Management Plan.

2.2. **Penalties for Violations of Permit Conditions.** The South Dakota Water Pollution Control Act provides that any producer in noncompliance with this general permit may be subject to a fine of not more than $10,000 per day per violation.

2.3. **Need to Halt or Reduce Activity not a Defense.** In enforcing violations of this permit, the Secretary will not consider that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the permit.

2.4. **Duty to Mitigate.** Each producer shall take all reasonable steps to minimize or prevent any discharge in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

2.5. **Proper Operation and Maintenance.** Each producer shall at all times properly operate and maintain the manure management system in a manner to achieve compliance with the conditions of this permit.

2.6. **Removed Substances.** The producer shall accumulate, transport, and store the manure in accordance with the conditions of this permit to prevent any pollution of surface or ground water of the state or create a health hazard. The manure from the feeding operation shall be land applied in accordance with this permit and the initial nutrient management plan developed for the feeding operation.

3. GENERAL REQUIREMENTS

3.1. **Planned Changes.** The producer shall give notice to the Secretary as soon as possible of any planned physical alterations or additions that significantly change the permitted animal feeding operation. During and after implementation of those changes, the producer is bound to the terms and conditions of this general permit.

3.2. **Permit Actions.** The Secretary may modify, revoke and reissue, or terminate this permit in accordance with ARSD 74:52:04:03. If the Secretary decides to modify or revoke and reissue the permit, the terms and conditions of this general permit will remain in effect until a new or modified permit becomes effective.

3.3. **Duty to Reapply.** Before the expiration of this permit, the Secretary will provide each producer authorized to operate under this permit with a renewal application. The producer shall be responsible for returning the Notice of Intent to Retain Coverage Form to the Secretary to receive coverage under the new permit at least 60 days before the expiration of the existing permit. Producers need not continue to seek permit coverage or reapply for a permit if:

1. They have notified the Secretary that their operation has ceased operation or is no longer a concentrated animal feeding operation; and
2. The Secretary has notified the producer that the operation is no longer a concentrated animal feeding operation.

3.4. **Duty to Provide Information.** The producer shall provide any information that the Secretary requests in order to determine whether cause exists for revoking or terminating coverage under this permit. The Secretary may also request information to determine if the producer is in compliance with this permit. The producer shall provide to the Secretary, upon request, copies of records that the permit requires the producer to keep.

3.5. **Other Information.** If the producer becomes aware that any relevant facts in the Notice of Completion and Certification of Applicant Forms were not submitted, or incorrect information was submitted, the correct information shall be promptly submitted to the Secretary.

3.6. **Signatory Requirements.** The producer shall sign and certify all reports submitted to the Secretary.

1. The producer who owns or operates the animal feeding operation shall sign all permit applications or forms to receive coverage under this permit.
2. The producer, or a duly authorized representative, may sign all reports required by the permit and other information requested by the Secretary. A person is a duly authorized representative only if:
   a. The authorization is made in writing by the producer and submitted to the Secretary; and

b. The authorization specifies either an individual or a position having responsibility for the overall operation of the animal feeding operation. This position may be a manager, operator, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. A duly authorized representative may thus be either a named individual or any individual occupying a named position.

3. Changes to authorization. If an authorization under Section 3.6.2. is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Section 3.6.2. shall be submitted to the Secretary prior to or together with any reports, information, or applications to be signed by an authorized representative.

4. Certification. Any person signing a document under this section shall make the following certification:

   "I also certify under penalty of law that this document and all other plans and application documents to obtain coverage under the animal feeding general permit were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are penalties for submitting false information."

3.7. **Penalties for Falsification of Reports.** Any person who knowingly makes a false statement in any record submitted or required to be maintained under this permit, shall be subject to enforcement under the South Dakota Water Pollution Control Act.

3.8. **Availability of Reports.** Except for data determined to be confidential under ARSD 74:52:02:17, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Secretary. The Secretary will not consider applications, O&M guidelines, nutrient management plans, notices of completion, permits, plans and specifications, and monitoring data, or any correspondence related to these items, to be confidential information.

3.9. **Property Rights.**

1. The Secretary's issuance of this permit, adoption of design criteria, and approval of plans and specifications, does not convey any property rights of any sort, any exclusive privileges, any authorization to damage, injure or use any private property, any authority to invade personal rights, any authority to violate federal, state, or local laws or regulations, or any taking, condemnation or use of eminent domain against any property owned by third parties.

2. The State does not warrant that the permittee's compliance with this permit, design criteria, approved plans and specifications, and operation under this permit, will not cause damage, injury or use of private property, an invasion of personal rights, or violation of federal, state or local laws or regulations. The permittee is solely and severably liable for all damage, injury or use of private property, invasion of personal rights, infringement of federal, state or local laws and regulations, or taking or condemnation of property owned by third parties, that may result from actions taken under the permit.

3.10. **Severability.** Any portion of the general permit that is found to be void, or is challenged, shall not affect the validity of the other permit requirements that are not voided or challenged.

3.11. **Transfers.** The Secretary will transfer a permit application approval or coverage under this permit to a new producer if the requirements in Section 1.2.2.4. on page 13 of this permit are met.

3.12. **Reopener Provision.** If state or federal statutes or regulations change, the Secretary may reopen and modify this permit (following proper administrative procedures) to include appropriate conditions (and a compliance schedule, if necessary), to address the additional requirements.

3.13. **Appeals Provision.** If the Secretary recommends revoking, suspending, or modifying a permit, the Secretary shall give written notice of the action to the permit holder. The permit holder may request a hearing before the Secretary. The hearing shall be held within thirty days of receipt of the written request. The Secretary may affirm, modify, or reverse the initial decision based upon the evidence presented at the hearing.

3.14. **Requiring an Individual Permit.** The Secretary may deny coverage or require any producer requesting coverage under the general permit to apply for an individual permit. The Secretary's decision to deny coverage under this permit and require an individual permit will be based on the following:

1. Ability of the producer to comply with the state's environmental requirements for animal feeding operations;
2. Past compliance history of the producer based on disclosures made under the Certification of Applicant form;
3. The proposed location of the animal feeding operation such as its proximity to a drinking water source;
4. The producer plans to sell or give away more than 100 cubic yards of solid manure or any process wastewater where the manure or process wastewater will not be land applied in accordance with the operation's approved nutrient management plan to fields located in South Dakota (See Section 1.4.4. of this permit);
5. Treatment or disposal technology proposed to be used at the animal feeding operation is beyond the scope of the conditions contained in this permit. For example: a vegetative treatment system is beyond the scope of the conditions presented in this permit due to the federally required design specific permit elements, immaturity of design models, and the site specific nature of locating and designing these systems; and
6. Any other relevant factors.

The Secretary will notify the producer in writing if an individual permit is required. When the Secretary issues an individual permit to a producer, the producer is responsible for complying with the terms and conditions of the new individual permit and relieved from responsibility of complying with this general permit.

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APPENDIX A

NOTICE OF COMPLETION
and
CERTIFICATION OF APPLICANT FORMS

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NOTICE OF COMPLETION OF
MANURE MANAGEMENT SYSTEM CONSTRUCTION

Please complete this form for receiving a Certificate of Compliance from the Department of Environment and Natural Resources. Use this form if a licensed Professional Engineer in the State of South Dakota designed the manure management system. Please return the form to:

South Dakota Department of Environment and Natural Resources
Feedlot Permit Program
Joe Foss Building
523 East Capitol Avenue
Pierre, SD 57501-3182

FACILITY (Please print): _____(PRODUCER)
LAST NAME FIRST NAME

_____
ADDRESS

_____
CITY STATE ZIP CODE

Construction of the manure management system for the above producer that had plans and specifications approved by letter by the DENR on _____ (date) is completed. The system was designed for a _____ (animal type) operation for _____ (animal number and type) and _____ (number) acres of drainage area. I hereby certify that I am a licensed professional engineer in the State of South Dakota. To the best of my knowledge, information and belief, the _____ _____was constructed in general conformance with the plans and specifications, and in my professional opinion, is in compliance with applicable laws, codes, and ordinances as of the date of construction (or this date).

Dated at _____, South Dakota this _____ day of _____, 20_____.

_____
Design Engineer's Signature

(Stamp)

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STATE OF SOUTH DAKOTA

BEFORE THE SECRETARY OF

THE DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

IN THE MATTER OF THE APPLICATION OF	)	
	)	**CERTIFICATION OF**
_____	)	
	)	**APPLICANT**
STATE OF _____	)	
	)	
COUNTY OF _____	)	

I, _____, the applicant in the above matter after being duly sworn upon oath hereby certify the following information in regard to this application:

I have read and understand South Dakota Codified Law Section 1-40-27 which provides:

"The secretary may reject an application for any permit filed pursuant to Titles 34A or 45, including any application by any concentrated swine feeding operation for authorization to operate under a general permit, upon making a specific finding that:

(1) The applicant is unsuited or unqualified to perform the obligations of a permit holder based upon a finding that the applicant, any officer, director, partner, or resident general manager of the facility for which application has been made:

(a) Has intentionally misrepresented a material fact in applying for a permit;

(b) Has been convicted of a felony or other crime involving moral turpitude;

(c) Has habitually and intentionally violated environmental laws of any state or the United States which have caused significant and material environmental damage;

(d) Has had any permit revoked under the environmental laws of any state or the United States; or

(e) Has otherwise demonstrated through clear and convincing evidence of previous actions that the applicant lacks the necessary good character and competency to reliably carry out the obligations imposed by law upon the permit holder; or

(2) The application substantially duplicates an application by the same applicant denied within the past five years which denial has not been reversed by a court of competent jurisdiction. Nothing in this subdivision may be construed to prohibit an applicant from submitting a new application for a permit previously denied, if the new application represents a good faith attempt by the applicant to correct the deficiencies that served as the basis for the denial in the original application.

All applications filed pursuant to Titles 34A and 45 shall include a certification, sworn to under oath and signed by the applicant, that he is not disqualified by reason of this section from obtaining a permit. In the absence of evidence to the contrary, that certification shall constitute a prima facie showing of the suitability and qualification of the applicant. If at any point in the application review, recommendation or hearing process, the secretary finds the applicant has intentionally made any material misrepresentation of fact in regard to this certification, consideration of the application may be suspended and the application may be rejected as provided for under this section.

Applications rejected pursuant to this section constitute final agency action upon that application and may be appealed to circuit court as provided for under chapter 1-26."

I certify pursuant to 1-40-27, that as an applicant, officer, director, partner, or resident general manager of the activity or facility for which the application has been made that I; a) have not intentionally misrepresented a material fact in applying for a permit; b) have not been convicted of a felony or other crime of moral turpitude; c) have not habitually and intentionally violated environmental laws of any state or the United States which have caused significant and material environmental damage; (d) have not had any permit revoked under the environmental laws of any state or the United States; or e) have not otherwise demonstrated through clear and convincing evidence of previous actions that I lack the necessary good character and competency to reliably carry out the obligations imposed by law upon me. I also certify that this application does not substantially duplicate an application by the same applicant denied within the past five years which denial has not been reversed by a court of competent jurisdiction. Further;

"I declare and affirm under the penalties of perjury that this claim (petition, application, information) has been examined by me, and to the best of my knowledge and belief, is in all things true and correct."

Dated this _____ day of _____ , 20____ .

_____
Applicant (print)

_____
Applicant (signature)

Subscribed and sworn before me this _____ day of _____ , 20_____ .

_____
Notary Public (signature)

My commission expires: _____

(SEAL)

PLEASE ATTACH ANY ADDITIONAL INFORMATION NECESSARY TO DISCLOSE ALL FACTS AND DOCUMENTS PERTAINING TO SDCL 1-40-27 (1) (a) THROUGH (e). ALL VIOLATIONS MUST BE DISCLOSED, BUT WILL NOT AUTOMATICALLY RESULT IN THE REJECTION OF AN APPLICATION

APPENDIX B

NOTICE OF INTENT FORM

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DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

NOTICE OF INTENT FOR COVERAGE
UNDER THE GENERAL WATER POLLUTION CONTROL PERMIT
FOR CONCENTRATED ANIMAL FEEDING OPERATIONS

This form is required to be submitted by applicants for permit coverage. Please submit this form to the following address:

South Dakota Department of Environment and Natural Resources
Feedlot Permit Program
Joe Foss Building
523 East Capitol Avenue
Pierre, SD 57501-3182
Telephone: (605) 773-3351 FAX: (605) 773-5286

PLEASE PRINT OR TYPE

I am applying for a: State permit ☐ NPDES permit ☐

3. **Existing Permit Number (*if applicable*):** _____
4. **Name of Animal Feeding Operation / Name of Owner or Operator:** _____
5. **Location of Facility (*legal description*):** _____

   Mailing address of Producer:

   Name: _____ Phone: _____

   Street: _____ Fax or Email: _____

   City: _____ State: _____ County: _____ Zip Code: _____
6. **Latitude and Longitude of the entrance to the production area:**

   Latitude: _____ degrees

   Longitude: _____ degrees
7. **Submit a topographic map of the area in which the animal feeding operation is located showing the specific location of the production area(s).** ***Attach map to back of form***.
8. **Number of animals and housing information:**

   a. **Open lots**

   Swine weighing *less* than 55 pounds: _____ Swine weighing 55 pounds *or more*: _____

   Beef Cattle: _____ Mature dairy cows: _____ Dairy heifers: _____ Veal calves: _____

   Sheep and lambs: _____ Horses: _____ Ducks: _____ Turkeys: _____

   Chickens: Broilers: _____ Layers: _____ Geese: _____

   Other *(Explain):* _____

   b. **Housed lots**

   Swine weighing *less* than 55 pounds: _____ Swine weighing 55 pounds *or more*: _____

   Beef Cattle: _____ Mature dairy cows: _____ Dairy heifers: _____ Veal calves: _____

   Sheep and lambs: _____ Horses: _____ Ducks: _____ Turkeys: _____

   Chickens: Broilers: _____ Layers: _____ Geese: _____

   Other *(Explain):* _____

9. **Type of Manure Containment and Storage Capacity:**

Manure Containment *(Check all that apply):* ☐ Anaerobic Lagoon(s) ☐ Roofed Storage Shed(s) ☐ Storage Pond(s)

☐ Above-ground storage tank(s) ☐ Under-floor Pit(s) ☐ Below-ground storage tank(s)

☐ Approved Stockpiling Area(s) ☐ Other *(Explain):* _____

Total Capacity for manure, litter, and process wastewater storage *(in tons and/or gallons):*

_____ tons _____ gallons

10. **Total number of acres available for land application of manure, litter, or process wastewater *(owned and/or covered by signed manure application agreements)*:** _____ acres

11. **Estimated amounts of manure, litter, and process wastewater generated per year *(in tons and/or gallons)*:**

Depending on the animal feeding operation's manure management system, use one or more of the following blanks:

Liquid: _____ gallons Solid: _____ tons

12. **Estimated amounts of manure, litter, and process wastewater transferred to other persons per year *(in tons and/or gallons)*:**

Depending on the animal feeding operation's manure management system, use one or more of the following blanks:

Liquid: _____ gallons Solid: _____ tons

By signing this form I understand that I will need to continue to operate my system in accordance with my general permit application, DENR approval, and the requirements of the general permit. If anything in my original application is no longer accurate, I will contact DENR at (605) 773-3351 and work with DENR to amend my application within 60 days from the date the department mails this form.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for knowing violations. In addition, I certify that I am aware of the terms and conditions of the General Water Pollution Control Permit for Concentrated Animal Feeding Operations and I agree to comply with those requirements.

NOTE: Notice of Intent shall be signed by the authorized chief executive officer of the applicant, or by the applicant, if an individual.

_____ _____

Name *(print)* Title

_____ _____

Signature Date

Additional information or comments you wish to provide: _____

_____

_____

APPENDIX C

NOTICE OF TERMINATION OF COVERAGE FORM

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DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

NOTICE OF TERMINATION OF COVERAGE
UNDER THE GENERAL WATER POLLUTION CONTROL PERMIT
FOR CONCENTRATED ANIMAL FEEDING OPERATIONS

This form is required to be submitted when a discharge permit is no longer required or necessary. Submission of this form shall in no way relieve the producer of permit obligations required prior to submission of this form. Please submit this form to the following addresses:

Original to: South Dakota Department of Environment and Natural Resources
Feedlot Permit Program
Joe Foss Building
523 East Capitol Avenue
Pierre, SD 57501-3182
Telephone: (605) 773-3351 FAX: (605) 773-5286

PLEASE PRINT OR TYPE

1. **Name of animal feeding operation:** _____

2. **Mailing Address of Producer:**

   Name: _____ Phone: _____

   Street: _____ Fax: _____

   City: _____ State: _____ County: _____ Zip Code: _____

3. **Mailing address of the animal feeding operation (if different from producer):**

   Name: _____ Phone: _____

   Street: _____ Fax: _____

   City: _____ State: _____ County: _____ Zip Code: _____

4. **Check the reason for termination of permit coverage:**

   ☐ You are no longer the operator of the facility

   ☐ Concentrated Animal Feeding Operation is no longer in operation

   ☐ Other reason(s): _____

I certify under penalty of law that all concentrated animal feeding operations at the above facility that are authorized by a Surface Water Discharge permit have been eliminated or that I am no longer the operator of the facility. I understand that by submitting the Notice of Termination, I am no longer covered under the General Water Pollution Control Permit for Concentrated Animal Feeding Operations. I also understand that the submittal of this Notice of Termination does not release me from liability for any violations of this permit or the South Dakota Water Pollution Control Act. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NOTE: Notice of Termination shall be signed by the authorized chief executive officer of the applicant, or by the applicant, if an individual.

_____ _____
Name *(print)* Title

_____ _____
Signature Date

Permit Number: _____ Date Received: _____ Date Terminated: _____ PCS: _____

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APPENDIX D

NUTRIENT MANAGEMENT PLAN

INSERT THE SITE SPECIFIC NUTRIENT MANAGEMENT PLAN HERE

APPENDIX E

25-YEAR, 24-HOUR

PRECIPITATION MAP

FOR SOUTH DAKOTA

ftp://hdsc.nws.noaa.gov/pub/hdsc/data/mw/nd25y24h.pdf

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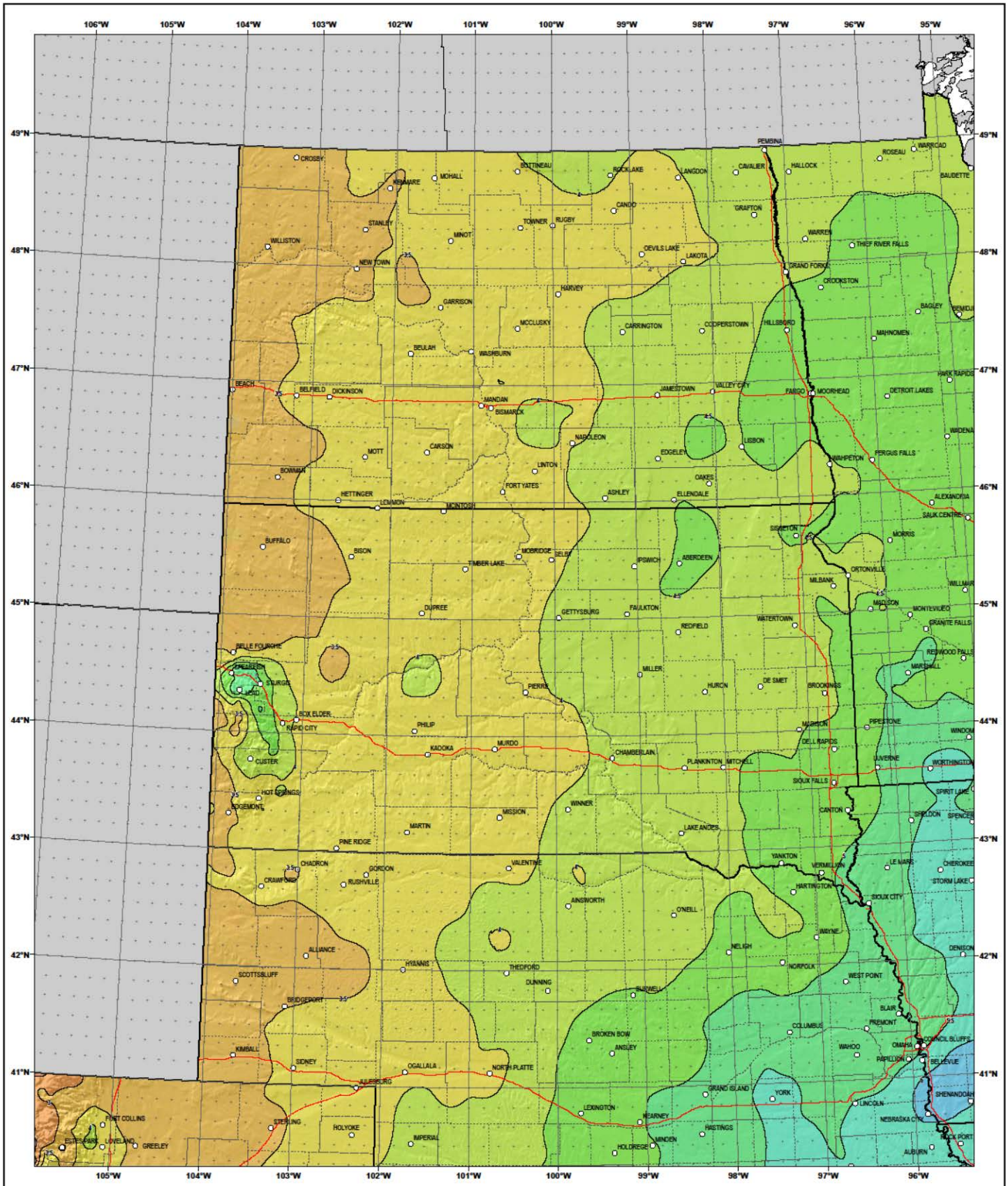

NOAA Atlas 14, Volume 8, Version 2
Midwestern States

NORTH DAKOTA, SOUTH DAKOTA

Isopluvials of 25-year 24-hour precipitation in inches

SCALE 1:2,250,000

Prepared by U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL WEATHER SERVICE
OFFICE OF HYDROLOGIC DEVELOPMENT
HYDROMETEOROLOGICAL DESIGN STUDIES CENTER
April 2013

0 5 10 20 30 Miles
0 10 20 40 60 Kilometers

Projection: Lambert Conformal Conic; Datum NAD83; Standard Parallels: 44° N and 48° N; Central Meridian 100.5° W.

1.52 - 2.00	3.51 - 4.00	5.51 - 6.00	7.51 - 8.00
2.01 - 2.50	4.01 - 4.50	6.01 - 6.50	8.01 - 8.50
2.51 - 3.00	4.51 - 5.00	6.51 - 7.00	8.51 - 9.00
3.01 - 3.50	5.01 - 5.50	7.01 - 7.50	9.01 - 9.24

Legend based on entire Volume 8 project area.

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APPENDIX F

MAPPED AQUIFERS INCLUDED IN THE STATEWIDE GROUND WATER QUALITY MONITORING NETWORK

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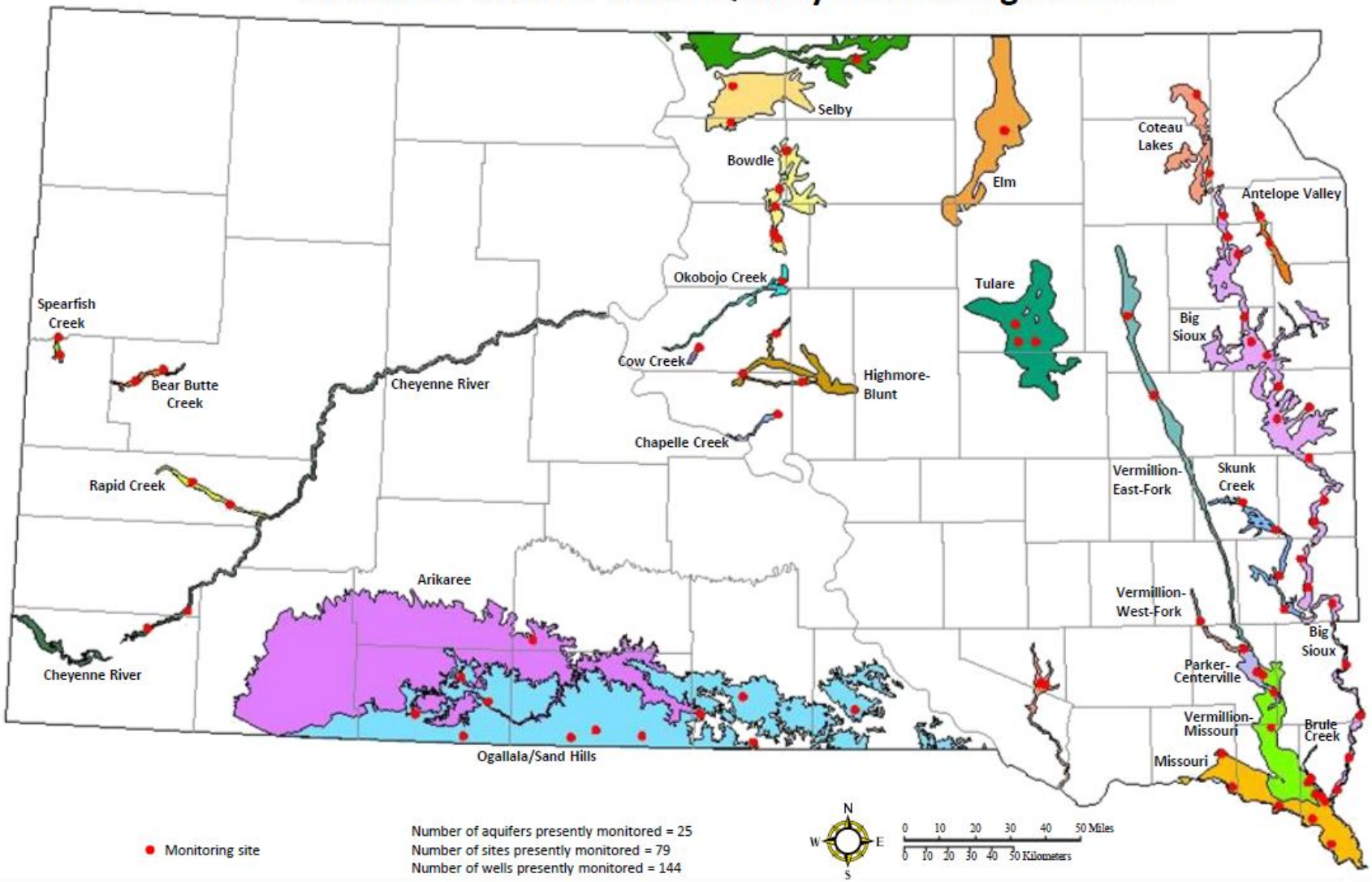
Aquifers and Monitoring Sites in the Statewide Ground Water Quality Monitoring Network



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APPENDIX G

DENR CRITERIA TO DETERMINE GROUND WATER DISCHARGE AND MONITORING REQUIREMENTS FOR LIVESTOCK FEEDING OPERATIONS

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APPENDIX G

DENR Criteria to Determine Ground Water Discharge and Monitoring Requirements for Concentrated Animal Feeding Operations				
Located over a Shallow Aquifer*				Not Located over a Shallow Aquifer
Counties without Zoning and Wellhead Protection Ordinances			Counties with Zoning and Wellhead Protection Ordinances	
Large CAFOs		Medium and Small CAFOs Units	Any Size Operation	Any Size Operation
New Feeding Operation (After July 1, 1997): • Ground Water Discharge Permit and ground water monitoring required.	Existing or Expanding Feeding Operation: • Ground water monitoring required.	• If the county requires state approval or a valid water pollution complaint is filed on the livestock feeding operation, or the producer requests coverage under a state general permit, DENR will use the criteria described in the general permit for concentrated animal feeding operations to determine if a ground water discharge permit and/or ground water monitoring is required. • If a producer is not required by either local or state law to obtain coverage under a state general permit, but requests plans and specifications approval, ground water monitoring will be required. • Producer has the option of applying for a ground water discharge permit.	• Operation shall comply with local government ordinances. • If a valid water pollution complaint is filed, or if the producer requests coverage under a state general permit, ground water monitoring will be required. • If a producer is not required by local or state law to obtain coverage under a state general permit but requests plans and specifications approval, ground water monitoring will be required. • If the operation is outside a wellhead protection area, the producer has the option of applying for a ground water discharge permit.	• Ground Water Discharge Permit not required • Monitoring may be required if site-specific conditions warrant monitoring to protect localized, shallow ground water supplies.

All feeding operations shall be in compliance with South Dakota Ground Water Quality Standards. A Ground Water Discharge Permit allows the producer to have a limited zone where ground water may be impaired.

*Shallow aquifer is defined in SDCL 34A-3A-24 passed by the 1997 Legislature.

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APPENDIX H

CROSS SECTIONS OF MANURE
CONTAINMENT STRUCTURES

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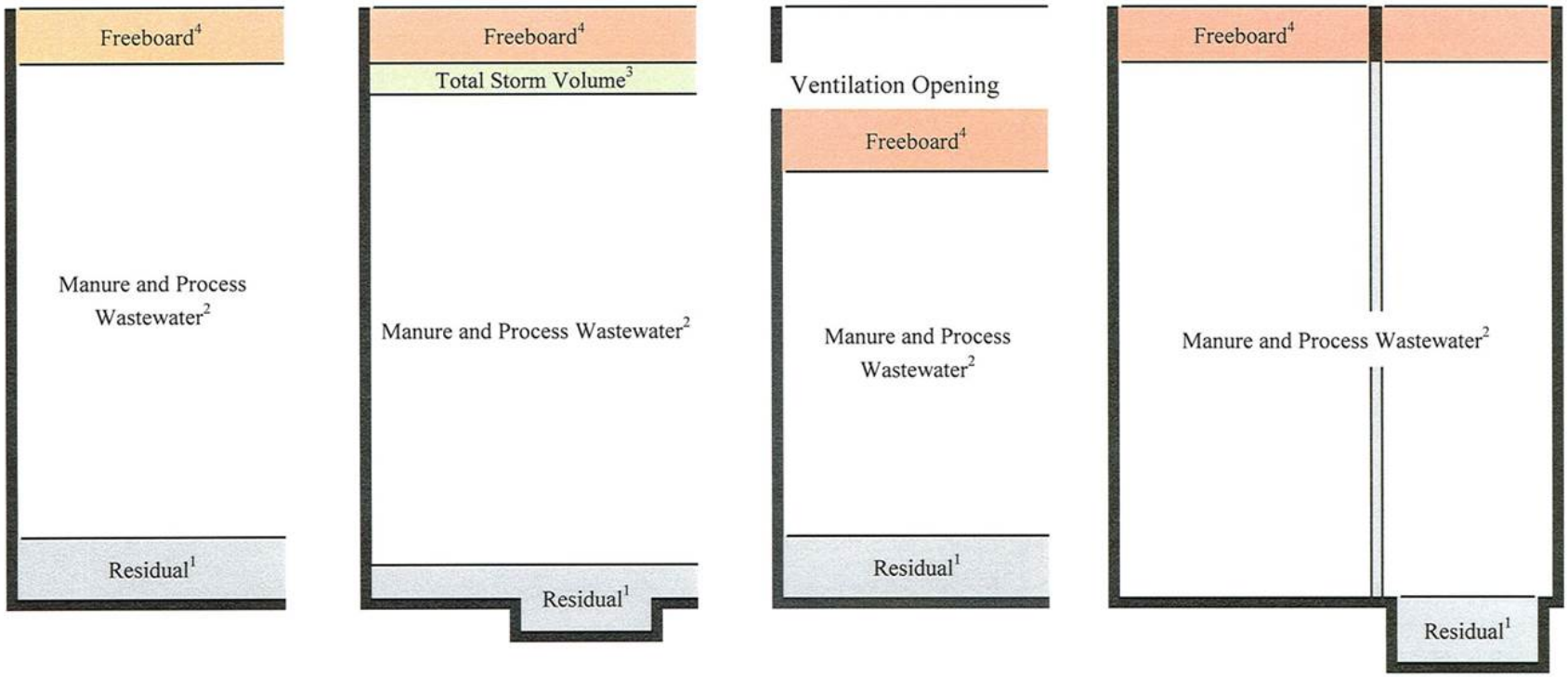
CROSS SECTION FOR A CONCRETE OR STEEL MANURE CONTAINMENT STRUCTURE



Covered Concrete or Steel Structure without a Sump

Un-covered Concrete or Steel Structure with a Partial Sump

Deep Pit with Ventilation Openings and NO Sump

Deep Pit with a Sump located within the Pumpout Pit

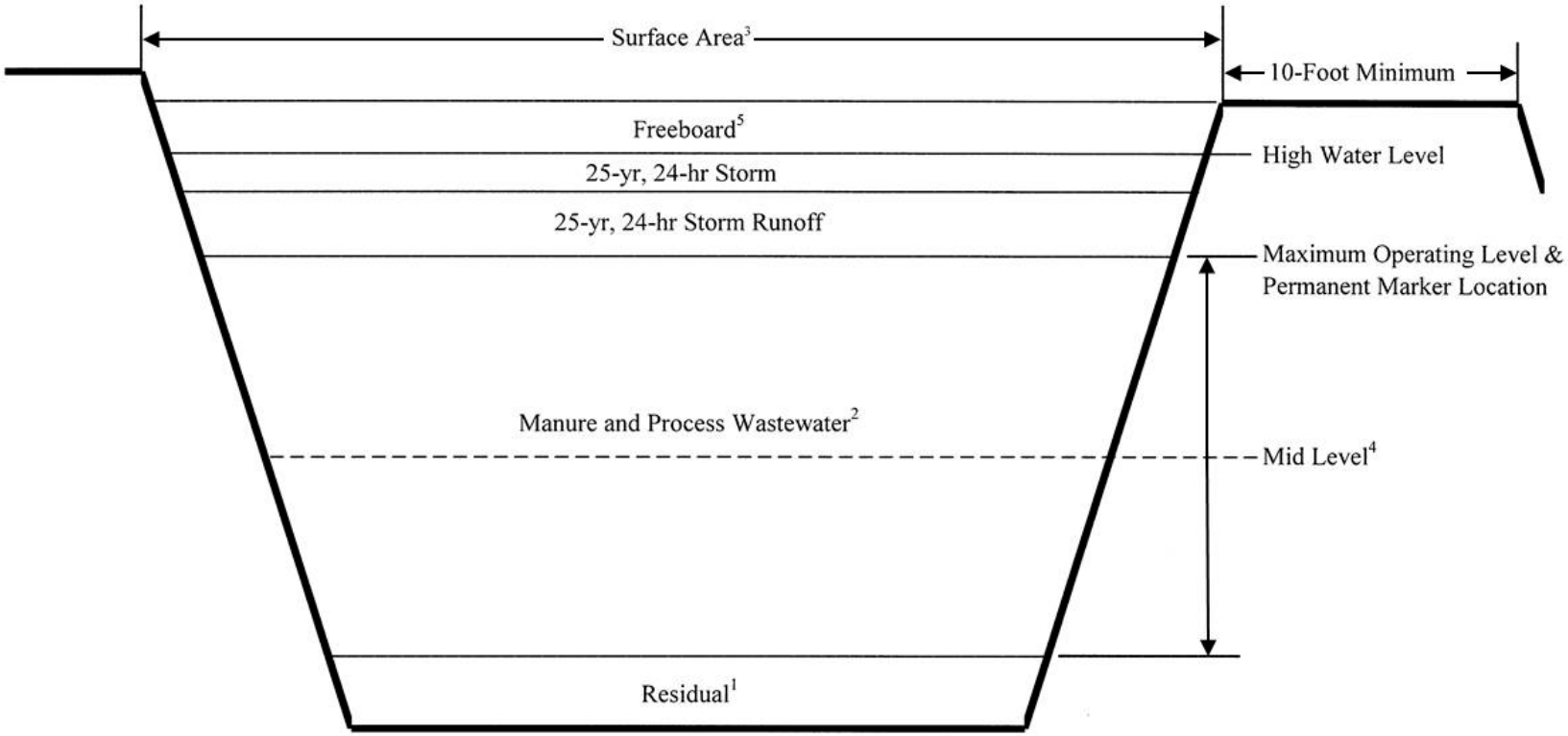
[1] A minimum of 1-foot is required for residual solids accumulation but a portion of or all of the residual depth may be accounted for in a sump. If a structure includes a sump, the O&M guideline must include the procedure for agitating the contents of the structure prior to or during manure and process wastewater removal.

[2] Process wastewater is any process generated wastewater and any precipitation (rain or snow) that comes into contact with the animals, manure, litter, bedding, feed, or other portions of the animal feeding operation, and includes any runoff from an open lot.

[3] Volume required for the 25-year, 24-hour storm which includes the direct storm precipitation on an un-covered structure and the storm runoff from any drainage area that may be associated with the system.

[4] A minimum of 1-foot of freeboard is required. The top of the freeboard begins at the lowest opening in a structure, if present, or the top of the structure.

CROSS SECTION FOR AN EARTHEN MANURE CONTAINMENT STRUCTURE



[1] There must be a minimum of 1-foot available for residual solids accumulation in all earthen structures.

[2] Process wastewater is any process generated wastewater and any precipitation (rain or snow) that comes into contact with the animals, manure, litter, bedding, feed, or other portions of the animal feeding operation, and includes any runoff from an open lot.

[3] Annual precipitation and the storm precipitation for an un-covered structure is determined by using the surface area at the top of the structure.

[4] Annual evaporation for an un-covered structure is determined by the surface area at the mid level of a structure which is midway between the maximum operating level and the top of the residual.

[5] A minimum of 2-foot of freeboard and the top of the freeboard is established at the lowest berm elevation.

APPENDIX I

CHANGE OF PRODUCER FORM

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DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

CHANGE OF PRODUCER FORM
FOR THE GENERAL WATER POLLUTION CONTROL PERMIT
FOR CONCENTRATED ANIMAL FEEDING OPERATIONS

In accordance with the Administrative Rules of South Dakota, Chapter 74:52:04, a permit may be transferred to a new producer if the current permittee notifies the secretary at least 30 days in advance of the proposed transfer date. This form and a Certification of Applicant form shall be completed and submitted prior to a change in ownership at a concentrated animal feeding operation. This form shall serve as a request by the current and new owner to modify the permit solely for a change in ownership.

NOTE: If the new producer plans to make changes to the permitted manure management system or nutrient management plan, additional information showing that the changes will meet the requirements of the general permit shall be submitted with this form. If applicable, any written agreement between the permittee and the land owner where manure will be applied shall be written so it is transferable or new agreements shall be submitted.

Please submit this form to the following address:

South Dakota Department of Environment and Natural Resources
Feedlot Permit Program
Joes Foss Building
523 East Capitol Avenue
Pierre, South Dakota 57501-3182
Telephone: (605) 773-3351 Fax: (605) 773-5286

PLEASE PRINT OR TYPE

1. **Facility Information:** Permit Number _____ Location of Operation _____ _____ _____ / _____ _____
   ¼ Section Section Township / Range County

2. **Producer Information Prior to Change**:
   Legal name of facility prior to change _____
   Name of Owner Prior to Change _____ Phone: _____
   Street _____ Fax: _____
   City _____ State _____ Zip Code _____

3. **New Producer Information:**
   Legal name of facility after ownership change _____
   Name of New Owner _____ Phone: _____
   Street _____ Fax: _____
   City _____ State _____ Zip Code _____

4. **Proposed Transfer Date of Permit Responsibility:** Date: _____

5. **Description of Facility Modifications:**
   The new producer shall complete this section and check only one of the following boxes:

   ☐ Modifications consist only of a change in ownership of the facility. No other modifications affecting the manure management system are proposed for this facility.

   ☐ Modifications consist of a change in ownership of the facility and the additional modifications are described in detail below. Contact DENR for information required to be submitted. Attach additional pages if necessary.

6. **Producer Training:**
   Permittees are required to attend a DENR approved environmental training course.

   ☐ I have attended training (please submit a copy of your training certificate).
   ☐ I will attend the next DENR approved environmental training course (please submit a copy of your training certificate after the training).

7. **Operation and Maintenance Guideline:**

   ☐ A new O&M Guideline signed by the new permit applicant is attached.

8. **New Producer Certification**:
   I hereby certify that I am the new owner of the facility described above and that I have read and understand the requirements identified in this form. I hereby certify that the construction and/or operation of the facility referenced above will be in accordance with the plans, specifications, reports, permit application submittals approved by DENR. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment for knowing violations.

Name of Current Permittee (print): _____ Signature of Current Permittee: _____ Date: _____

Name of New Permittee (print): _____ Signature of New Permittee: _____ Date: _____

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APPENDIX J

SCHEDULE FOR SUBMITTING PERMIT APPLICATION AND REVISING INITIAL NUTRIENT MANAGEMENT PLAN

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SCHEDULE FOR SUBMITTING PERMIT APPLICATION AND REVISING INITIAL NUTRIENT MANAGEMENT PLAN			
Submit within 1 year from the effective date of this permit	**Submit within 2 years from the effective date of this permit**	**Submit within 3 years from the effective date of this permit**	**Submit within 4 years from the effective date of this permit**
Academy Pork Swine Facility	4-F Pork Haven	Aberdeen Livestock Sales Co.	Bronson Dairy
Alban Dairy	A & B Feedlot	Armadale Farms, Inc.	Cameron Colony
Arhart Farms	Albert J. Selland & Sons Feedlot	Belle Fourche Livestock Exchange	CBM Land and Cattle, LLC
BAP Enterprises, LLC	Alliance Family Farms, LLC	Ben & Matt Waxdahl Swine Finisher Barn	Clark Feeders
BCM Pork Swine Facility	Archibald Brothers Feedlot	Binger Ranch Feedlot	Dakota Plains Dairy, LLC
Bill Charles Farm	Bar K Cattle LLC	Bixler Farms	Fairview Feeders
Blumengard Colony	Britannia Dairy	Blom Feedyard	Faith Livestock Commission
Bly Brothers Farms	Calhoon Ranch	Bluestem Farms, LLC	Fast View Farms
Boadwine Farms, Inc.	Carpenter Feedlot	Bottum Brothers Partnership	Fast View Farms South Unit
Bob Rietema AWMS	Castlewood Dairy	Brad Greenway Swine Confinement	Firesteel Finishers, LLC
Bob Walloch Farm 1	Cederberg Dairy	Brandt Swine Finisher	Fischer Farms, LLC
Bob Walloch Farm 2A & 2B	Christensen Farms & Feedlots, Inc.	Braun Farms, Inc.	Foot Hill Properties Feedlot
Bon Homme Colony	Cox Farms, LLC	Brent Preslicka Feedlot	Fort Pierre Livestock Auction, Inc.
Brad Lagg AWMS	Coyote Flats #1 Swine Facility	Bret & Raechel Fliehs Feedlot	Fred Kubal Livestock Facility
Brentwood Colony	Coyote Flats #2 Swine Facility	Broken Heart Ranch	Glacial Lakes Livestock, Inc.
Bronson Custom Farms, Inc.	Crosswind Jerseys, LLC	Bryan Nagel Feedlot	Heartland Pork LLC (Kopfmann Ranch)

SCHEDULE FOR SUBMITTING PERMIT APPLICATION AND REVISING INITIAL NUTRIENT MANAGEMENT PLAN			
Submit within 1 year from the effective date of this permit	**Submit within 2 years from the effective date of this permit**	**Submit within 3 years from the effective date of this permit**	**Submit within 4 years from the effective date of this permit**
Bruce Burkhart AWMS	Dakota 10, LLC	C Dale Sybesma Farms, Inc.	Heine Farms Feedyard, LLC
Buffalo Ridge Ranch	Dakota 17, LLC	Caleb Baer, Inc. Swine Facility	Herreid Livestock Auction, Inc.
Bye Brothers Swine Facility	Dale Swanson Feedlot	Cannon River Ranch	Hillside Enterprises, LTD
Cedar Grove Colony	David Walloch AWMS	Clark Colony	Hillside Feeders, Inc.
Christopher Katzer Swine Facility	DD Pazour Feedlot	Clint Overskei Swine Finisher	Hoeksema Feedlot
Claremont Colony	DNA Production, LLC	County Line Feeders	Holland Ranch
Classic Farms, LLC	Drumgoon Dairy	Cowan Ranch East Feedlot	Homestead Pork
Clearfield Colony	Evergreen Colony	Cowan Ranch South Feedlot	Hoogendoorn Feedlot
Coyote Ridge Cooperative	Fall River Feedyard, LLC	Cynthia M. DeJong Living Trust Feedlot	Hub City Livestock Auction, Inc.
Creekside Pork	Fieber Dairy	Darwin Hazel - Headquarters Site	Huron Continental Marketing Company
Curt Olinger Feedlot	Five F Feeders, LLC	Dean & Barb Watzel Feedlot	J & K Feeders
Dakota Layers, LLP	Fox Run RE, LLC	Dean Tolzin AWMS	Jackrabbit Family Farm, LLC
Dakota Superior Gilts	Fremark Feedlot	DeBerg Farms, Inc.	James Chicoine Swine Operation
Dale Fraser AWMS	Gary Balbach AWMS	Deerfield Colony	Jason Bartels Feedlot
Darrell Nelson AWMS	Glendale Colony	DeHaan Livestock & Grain Farms, Inc.	Jerome Mack AWMS
Darrin Ihnen AWMS	Global Dairy	Doug Lamont Feedlot	John Lindstrom Swine Operation

SCHEDULE FOR SUBMITTING PERMIT APPLICATION AND REVISING INITIAL NUTRIENT MANAGEMENT PLAN			
Submit within 1 year from the effective date of this permit	**Submit within 2 years from the effective date of this permit**	**Submit within 3 years from the effective date of this permit**	**Submit within 4 years from the effective date of this permit**
Delton Gimbel AWMS	Golden Dakota Farms	Dougherty Cattle Co.	Jon Deal Feedlot
Docter Feedlot, Inc.	Goldenview Colony	Dry Run Cattle Co., Inc.	Jon Hoffman Feedlot
Dolph Creek Pork Swine Facility	Gracevale Colony	Dutch Dakota Dairy, LLC	Jon Nelson Cattle Feedlot
DSM Finisher	Granite View Farm, Inc.	Dwight Warkenthien Feedlot	Jorgensen Land & Cattle Partnership
Ed Luckhurst AWMS	Grass Land Colony	Lee Gatzke Feedlot	Kellen Egg Farm
El Dorado, LLC	H L Brunner & Sons Feedyard	Les Rensink AWMS	Kenzy Feedlot
Farmers Pork, LLC	Hamilton Farms	Long Lake Colony	Kevin Triebwasser Swine Facility
Firesteel Ranch	Haverhals Feedlot, Inc.	Magnum 43, LLC	Larson Brothers Dairy, Inc.
Fordham Colony	Heartland Pork	Mark Sip AWMS	Larson Livestock, Inc.
Fox Ridge, LLC	Heeren's Lucky 7	Marlow Christensen Feedlot	LDL Cattle Company
Fred Ligtenberg AWMS	Hiles Farms	Maschhoffs, LLC (Oahe Facility)	Long View Farm, LLP
Gaddis Farms	Hoffman Farms AWMS	Mayfield Colony	Louis VanderLaan AWMS
Goodwin Heritage Cattle, Inc.	Hurley Farms, LLC	Medicine Creek Feedlot	Luze & Sons Feedlot
Grass Ranch Colony	Hutterville Colony	Meyerink Farms, Inc.	Mack Farms
Great Plains Swine, LLC	J & R Farms	Mill Valley Dairy	Magness Livestock Market
Greenwood Colony	Jamesville Colony	Millbrook Colony	Mark Klein Feedlot

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Hammink Dairy	Jensen Hogs	Mobridge Livestock Market AWMS	Marrs Ranch, LLC
Heiberger Farms	Jerry Law AWMS	Munkvold Land & Cattle Facility	Meadowvale Dairy, LLC
Hillcrest Colony	Joel Berens Swine Facility	N & H Hog Farms	Michael Randall Feedlot
Hillside Colony	John Nagel AWMS	Newport Colony	Mike Grubl AWMS
Hilltop Dairy	John Rasmussen Cattle Company, Inc.	Nick Mack Feedlot	Millard Brothers
Huron Colony	Joseph M. Redder AWMS	Northern Prairie Swine Facility	Mitchell Livestock Marketing, LLC
ILC Enterprises, Inc.	Joshua Bieber AWMS	Opportunities Farm (SDSU Foundation)	MJ Fuller Feedyard
Jared Storm Farm	JPJ Enterprises, Inc.	P Spear Ranch Feedlot	Modak Dairy
JDP, LLC	Karban Farms	Pazour Livestock	Moes Feedlot, LLC
John Jones Farm	Keith Anderson Farm	Pechous Feedlot	Moke Swine
John Swanson Farm	Keith Schroeder AWMS	Peterson Farm, Inc.	Mooody County Dairy, LP
John Van Ballegooyen AWMS	Kjerstad Livestock Partnership	Petrik Finishing Facility	Mossings Dairy
KC Dairy, LLP	Koch Cattle	Philip Livestock Auction	Mustang Pass, LLC
Kevin Ortberg AWMS	KP Farms	Pleasant Dutch Dairy	N Lazy L Feedlot
KL Inc.	LaFleur Brothers Company	Prairie Creek Ranch	Nathan Meland Feedlot
Klumb Feedlot & Finisher Site	Lakeview Colony	Presho Livestock Auction	Niewenhuis Feedlot

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Kramer Farms	Larry Andrews AWMS	Providence Dairy	Nilsson Feedlots
Larry & Janet Haak Swine Facility	Larsen Farms	Rasmussen Feedlot	Norfeld Colony Turkey Operation
Les Wieczorek Swine Facility	Lazy Lot Dairy	Raymer Farms, Inc.	Northern Prairie Swine II
Lester Moeller Swine Facilities	Plainview Colony	RedStone Feeders, LLC	P.J. Werdel & Sons, Inc.
Ligtenberg Farms, LLC	Plamp Farms Swine Facility	Richard Sleep Feedlot	Pat Taggert Feedlot
Linde Dairy	Platte Colony	Roger Robbins Feedlot	Paul Oberlitner Feedlot, LLC
Mack Finishing, LLP (Mina Unit)	Randy Bauer AWMS	Rolland Colony	Peterson Swine, LLC
Mann Swine Facility	Ringling Cattle Company	Schiltz Goose Farm, Inc.	PIC Apex GN
Maple Pork	Riverside Colony	Schley Farms	Pleasant Valley Colony
Marshall Dairy	Rockport Colony	Schultz Brothers Dairy	Poinsett Colony
Matt Ortberg Swine Facility	Rosedale Colony	Seidel, Inc	Randall Enterprise, LLC
Matthew Moeller AWMS	Rustic Acres Colony	Shannon Colony	Randy Schouten Swine
Maxwell Colony	Ryan Randall Feedlot	Sharp Brothers Feedlot	Rawhide, LLC Swine Finisher
Mayer Ranches, Inc.	Ryan Storm AWMS	Shelter Belt Bacon	Red Willow Colony
McElhany Hogs, LLC	Schultz AWMS Finishing Facility	Sieck Cattle Co.	Remington, LLC Swine Finisher
Media Pork Swine Facility	Schuring Farms, Inc.	Sioux Falls Regional Livestock	Robinson Feedlot

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Mid-River Pork	Schwartz Farms, Inc.	Sjovall Feedyard	Ron Cleveland AWMS
Mike Johnson Cattle Facility	Shamrock Colony	Sneesby Farms	Rydbom Swine
Millerdale Hutterite Colony	Smokey Lake Hog Farm	Spring Creek Colony	Schneider Dairy Cattle, Inc.
Mitchell R. and Carolyn S. Truebenbach Swine Facility	Spring Lake Colony	Spring Valley Colony	Scott Bebo Feedlot
Mr. Pork	Spring Tree Finisher	St. Onge Livestock Market	Shortfoot Calf Ranch, Inc.
Muckey Farms, LLC	Spring Valley	Stacy Eide Farm	Shortfoot East
National Foods Corporation	Starburst Farms Cooperative	Steve Masat Feedlot	Sisseton Livestock Auction, Inc.
New Elm Springs Colony	Steineke Farms	Steve Rommereim Farm	South Dakota Livestock Sales of Watertown, Inc.
New Fashion Pork, LLP	Steve Ollerich Feedyards	Stockmen's Livestock, Inc.	Spink Colony
Norfeld Colony Swine Operation	Sundance Finisher	Sumption Farms	Stanley Steinheuser Feedlot
Norswiss Dairy	Sunset Colony	Sunrise Dairy	Steve Peterson Feedlot
Oak Lane Colony	Thunderbird Colony	Sybesma Farms, Inc.	Symens Brothers Feedlot
Odegaard Family Farms, Inc.	Tschetter Colony	Terry Balvin AWMS	Tacke Cattle Company
Old Elm Springs Colony	Turner County Dairy	Terry Dolan Hog Confinement	Teton, LLC
Orland Colony	Turner County Dairy (North), LLP	Todd Olinger Feedlot	Thunder Ridge RE, LLC
Pearl Creek Colony	Van Vuuren Farms	United Feeders	Todd Sundal Swine Finishing Barn

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Pembrook Colony	Victory Farms	Upland Colony	Tom Brunner AWMS
Pig Time Pork	Volga Dairy	Van Ballegooyen Brothers AWMS	Tracy Johnson Feedlot
Smallfield Farms	Winner Circle Feed Yard, LLP	Vannorsdel's, Inc.	Triple J Cattle Company
Upland Colony (Kizer)	Yankton Land and Cattle Company	VanWinkle Dairy	Tyler Chicoine Swine Operation
		Warkenthien Cattle Feedlot	Union Valley Feedlot
		Wayne Robbins Cattle Feedlot	Valley View Dairy Bruce, LLC
		Wolf Creek Colony	Van Berkel Farms
		Zuehlke Feedlot	Vermillion River II
			Victory Farms South
			Virchow Farms
			Vogel & Sautner Farms & Cattle Feeding Operation
			Walter Feedlot
			Warner Dairy
			Wayne Olson Feedlot
			Westwood Colony
			White Rock Colony

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			Wild Rose Dairy
			Windmill Ridge, LLC
			Any other operation with coverage under the 2003 general permit or with an approved permit application without general permit coverage