Nutrient Management Fact Sheet: **South Dakota**

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Nutrient Management Plans

Topic	Summary
Coverage	CAFOs must have a Nutrient Management Plan under a General NPDES permit. South Dakota Department of Environment and Natural Resources (SD DENR) Nutrient Management form is available here.
Content	A NMP under the NPDES permit includes: - Information on the operation. - Phosphorus Soil Test Results. - Erosion Value and Calculations. - Field Ownership and a manure application agreement if not owned by the producer. - Endangered Species Action Plan. - Education and Training on proper Operation and Maintenance. - Field Maps for Application to Saturated, Snow Covered or Frozen Soil.
Frequency of Updates	Certain changes to the operation require a new permit application.
Paperwork	Annual report must be filed with the SD DENR. All reports (including nutrient management plans) shall be available for public inspection at the offices of the Secretary of the SD DENR. Under the NPDES permit, there are recordkeeping requirements under the NMP (see page 38).
Planner Qualifications	The permit asks if the NMP was developed or approved by a certified nutrient management planner.

Manure Storage and Application

Topic	Summary
Overview	Storage and manure application requirements are included in the NPDES general permits. Local regulations may include additional siting requirements.
Storage	*Facility Siting/Setback* The NPDES General Permit requires that 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. - 1000 feet from an existing public water well or surface water of the state. - 150 feet from a water well supplied by an aquifer.

	Additional details on the setback requirements can be found on page 22 of the general permit. *Structure* The general permit requires an Operation and Maintenance Guideline with detailed information on construction, operation and maintenance of the CAFO on page 19. *Storage Length* Open lot and/or uncovered manure storage structure designs shall provide 365 days of storage of manure and process wastewater. Covered manure storage structures shall have at least 270 days of manure and process wastewater storage. Additional details can be found in Appendix H of the general permit.
Application	*Spreading* Land application of manure must be done in a manner to maintain at least a 100-foot buffer zone or 35-foot vegetated buffer between: - Any downslope surface waters, open tile line intake structures, sinkholes or other conduits to surface waters of the state. - Process water irrigation and any downslope surface waters, open tile line intake structures, sinkholes or other conduits to surface waters of the states. Additional buffers may be required based on the soil test. Detailed restrictions on manure application on saturated, snow covered, or frozen soil are included in the permit. Information can be found on pages 30 and 31 of the general permit. *Incorporation* Liquid manure or process wastewater shall be injected or incorporated within 24 hours of application to non-vegetated cropland. Solid or semi-solid manure shall be incorporated within five days of application to non-vegetated cropland. Additional details can be found on page 30. *Testing* Depth and timing of soil sampling, manure and process water testing is detailed on page 36 of the general permit.

Technical Assistance

Topic	Summary
Software Tools	South Dakota Department of Environment & Natural Resources (SD DENR) provides Nutrient Management/Manure Management Tools for NMP/MMP development assistance.

	Manure Management Planner (MMP) is a software tool created by Purdue University that includes state-specific information for SD producers to create manure management plans for crop and animal feeding operations. SD NRCS created Animal Waste Management engineering spreadsheets: - Animal Waste Storage Facility Design. - SD Vegetative Treatment Area Design Worksheet. - Bedded Pack Barn Design Worksheet - Version 1.0.
Guides / Handbooks	SD DENR lists educational materials that can help producers properly manage their manure, including a CAFO Permit Process Application Checklist. SD NRCS created the following: - The state's 590 nutrient management practice standard. - Technical notes for the VTA and Bedded Pack Barns worksheets can be found here.
Classes / Trainings	South Dakota State University Extension hosts environmental training sessions for operators of Concentrated Animal Feeding Operations.
Tailored Expert Assistance	SD DENR provides: - A Feedlot Consultant list for Manure Management System (MMS) design will provide engineering and geotechnical services related to the design of MMS's. - A Crop Consultant list will provide crop consulting services related to preparing an initial NMP that is part of the application for permit coverage under the general water pollution control permit for CAFOs or preparing annual NMPs. SD NRCS gives producers CNMP assistance with contacts for the Ag Nutrient Management Team.

Financial Assistance

Summary
SD NRCS provide assistance through: - Environmental Quality Incentives Program (EQIP)- offers financial cost-share assistance to farmers for the adoption of conservation practices and development of nutrient management plans. - Conservation Stewardship Program (CSP), which gives producers financial assistance to implement new conservation management practices and enhancements.