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### Nutrient Management Plans

Topic	Summary
Coverage	Permits (no-discharge) for the generation, handling, storage, treatment, processing and land application of manure require an Animal Facility Management Plan. Permits are required for new or expanded animal facilities.   Nutrient Management Plans are required for CAFOs with an NPDES permit.  Information on who needs an Agriculture Permit can be found <a href="here">here</a> .
Content	<ul> <li>An Animal Facility Management Plan includes: <sup>2</sup></li> <li>Facility location description, information on operation, applicant and operation information including animal type and number, manure generated, and storage capacity.</li> <li>The concentration of constituents in liquid manure, including nutrients and lab conducting analysis.</li> <li>The concentration of constituents in dry animal manure, including nutrients and lab continuing analysis.</li> <li>Animal manure application information, including a crop management plan.</li> <li>Facility and manure utilization area information.</li> <li>Nutrient Management Plans must: <sup>3</sup></li> <li>Ensure adequate storage of manure and process wastewater, including procedures to ensure proper operation and maintenance of the storage facilities.</li> <li>Ensure proper management of mortalities.</li> <li>Ensure that clean water is diverted from the production area.</li> <li>Prevent direct contact of confined animals with waters of the U.S.</li> <li>Identify appropriate site-specific conservation practices to be implemented.</li> <li>Identify protocols for appropriate testing for manure, process wastewater and soil.</li> <li>Establish protocols to land apply manure or process wastewater.</li> <li>Identify specific records to be maintained.</li> <li>A guide for the development of Nutrient Management Plans for land application of manure can be found here.</li> </ul>
Frequency of Updates	Animal Facility Management Plans may be required to be updated on a case-by-case basis.



Paperwork	The NMP is included in the NPDES permit, and the Animal Facility Management Plan must be submitted as part of the state permit application.
Planner Qualifications	NMPs must be prepared by a qualified professional engineer, professional geologist, qualified soil scientist, or qualified agronomist. (r.61.9-61.43)  An Animal Facility Management Plan must be prepared by qualified NRCS personnel or a state-registered professional engineer. Other qualified individuals such as certified soil scientists or state-registered professional geologies may prepare the land application component of the plan.

Manure Storage and Application

Topic	Summary
Overview	South Carolina has additional requirements for Manure Brokers and Land Applicators. Information can be found <a href="https://example.com/here">here</a> .
Storage	Facility Siting/Setback <sup>4</sup> Dairy operations needing a state permit must first request a preliminary site inspection. <sup>5</sup> Required setbacks for barns, stables pens or growing houses include:  - 200 feet from human drinking water wells.  - 500 feet from animal drinking water wells.  - 50 feet from ditches located downslope.  - 200, 400, or 1,000 feet to residencies, depending on the size of operation.  - 100 feet from the waters of the state.  Required setbacks for lagoons or waste storage ponds:  - 200 feet from human drinking water wells.  - 100 feet from animal drinking water wells.  - 50 feet from ditches located downslope.  - 300, 500 or 1,000 feet from a residence, depending on the size of operation.  - 100 feet from the waters of the state.  - 500 feet from trout waters, outstanding resource waters, critical habitat waters for endangered species, and shellfish harvesting waters.  Structure  Lagoons, treatment systems, and manure storage ponds shall be designed by a professional or NRCS engineer. The construction shall be certified by a design engineer or professional engineer licensed in South Carolina. Lagoons and manure storage ponds shall be designed, at a minimum, to NRCS Conservation Practice Standards. <sup>6</sup>



	Storage Length Lagoons and manure storage ponds shall be designed to provide minimum storage for manure, wastewater, normal precipitation less evaporation, normal runoff, residual solids accumulation, capacity for the 50-year twenty-four-hour storm event and at least 2 feet of freeboard. <sup>7</sup>
Application	<ul> <li>Spreading/Incorporation</li> <li>Manure Utilization Setback Areas: <sup>8</sup></li> <li>100 feet from human and animal drinking water wells.</li> <li>50 feet from ditches located downslope.</li> <li>300 feet from residence/property line.</li> <li>100 feet from waters of the state for spray irrigation.</li> <li>75 feet from the waters of the state for incorporation.</li> <li>50 feet from waters of the state for injection.</li> <li>If manure is incorporated within 24 hours, the setback can be reduced to 50 feet.</li> <li>Testing</li> <li>Manure and soil testing are included in the Animal Facility Management Plan and the Nutrient Management Plan. Soil sampling shall be conducted for each field prior to manure application, and each field should be sampled at least once per year. <sup>9</sup></li> </ul>

### Technical Assistance

Topic	Summary
Software Tools	Manure Management Planner (MMP) is a software tool created by Purdue University that includes state-specific information for South Carolina to create manure management plans for crop and animal feeding operations.
Guides / Handbooks	SC NRCS <u>nutrient management 590 standard</u> .  Clemson Cooperative Extension published a <u>step-by-step guide</u> for calibrating solid manure spreaders by container and sheet specifications.
Classes / Trainings	Dairy producers can attend a Confined Animal Manure Managers (CAMM) <u>swine</u> <u>certification training</u> since liquid manure handling is covered in that training (there is no dairy-specific training). Currently, two full-day certification courses are annually (one for swine and poultry and one for poultry only), usually in February or March.



#### Financial Assistance

### Summary

SC NRCS provides assistance through:

- Environmental Quality Incentives Program (<u>EQIP</u>) offers financial cost-share assistance to farmers for the adoption of conservation practices and development of nutrient management plans.
- Conservation Stewardship Program (<u>CSP</u>), which gives producers financial assistance to implement new conservation management practices and enhancements.

<sup>&</sup>lt;sup>1</sup> https://scdhec.gov/description-permitting-process#Animal#Facility#Management#Plans#and#Submittal#Process

https://scdhec.gov/sites/default/files/Library/Regulations/R.61-43.pdf

<sup>&</sup>lt;sup>3</sup> https://scdhec.gov/sites/default/files/docs/Agency/docs/water-regs/r61-9.pdf

<sup>&</sup>lt;sup>4</sup> https://scdhec.gov/set-backs-animal-operations-other-swine

<sup>&</sup>lt;sup>5</sup> https://scdhec.gov/description-permitting-process#perm

<sup>&</sup>lt;sup>6</sup> https://scdhec.gov/sites/default/files/Library/Regulations/R.61-43.pdf

<sup>&</sup>lt;sup>7</sup> https://scdhec.gov/sites/default/files/Library/Regulations/R.61-43.pdf

<sup>&</sup>lt;sup>8</sup> https://scdhec.gov/set-backs-animal-operations-other-swine

<sup>&</sup>lt;sup>9</sup> https://scdhec.gov/sites/default/files/Library/Regulations/R.61-43.pdf#page=67