



# Nutrient Management Fact Sheet: North Dakota

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## Nutrient Management Plans

Topic	Summary
Coverage	<p><a href="#">CAFOs</a> seeking coverage under a state animal feeding operation permit must have a Nutrient Management Plan (NMP).<sup>1</sup></p> <p><a href="#">CAFOs</a> seeking coverage under an NDPDES permit must meet the requirements of <a href="#">federal regulations</a>, including a Nutrient Management Plan.<sup>2</sup></p>
Content	<p>An NMP must include, at a minimum:</p> <ul style="list-style-type: none"> <li>- Description of the land to which an operator has access for applying manure or process wastewater.</li> <li>- The proposed method and timing of land application of manure and process wastewater.</li> <li>- The precautions that will be taken to:               <ul style="list-style-type: none"> <li>o Prevent manure and process wastewater from reaching waters of the state; and</li> <li>o Minimize odors to residences and public areas where people are present during transport and land application of manure.</li> </ul> </li> <li>- Other information is specified in the <a href="#">North Dakota Livestock Program Design Manual</a>.</li> </ul> <p>An NMP under an NDPES permit:<sup>3</sup></p> <ul style="list-style-type: none"> <li>- Ensures adequate storage of manure and process wastewater, including procedures to ensure proper operation and maintenance of the storage facilities.</li> <li>- Ensures proper management of mortalities.</li> <li>- Ensures that clean water is diverted from the production area.</li> <li>- Prevents direct contact of confined animals with waters of the United States.</li> <li>- Identifies appropriate site-specific conservation practices to be implemented, including, as appropriate, buffers.</li> <li>- Identifies protocols for appropriate testing of manure, process wastewater, and soil.</li> <li>- Establishes protocols to land apply manure, litter or process wastewater.</li> <li>- Identify specific records that will be maintained.</li> </ul>
Frequency of Updates	There is not a reference to update frequency.
Paperwork	Under the state operating permit, certain facilities must submit a copy of the NMP along with an application with others required to indicate that they have an NMP that meets the department requirements.



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	Under the NDPDES permit, NMPs must be submitted with the permit application.
Planner Qualifications	State documents do not describe required professional qualifications or certifications for the individual preparing the NMP.

### Manure Storage and Application

Topic	Summary
Overview	ND CAFO County and Township Zoning Regulations can be found <a href="#">here</a> .
Storage	<p><a href="#">Facility Siting/Setback</a><sup>4</sup></p> <p>Under the state operating permit, new and expanding facilities must not be located over an unconfined glacial drift aquifer unless approved by the department.</p> <p><a href="#">Structure</a><sup>5</sup></p> <p>Under the state operating permit, manure storage structures should be operated within the standards specified in the <a href="#">North Dakota Livestock Program Design Manual</a>. Storage structures must be designed and constructed to store runoff from a 25-year, 24-hour rainfall event. Liners are required for earthen structures.</p> <p>Under the state operating permit, liquid waste facilities must be designed by the facility owner or designed by or under the direct supervision of an engineer.</p> <p><a href="#">Storage Length</a><sup>6</sup></p> <p>Under the state operating permit, all facilities shall collect and store all manure, process wastewater, and runoff for a minimum of 270 days.</p>
Application	<p><a href="#">Spreading</a></p> <p>Under the operating permit, land application of manure and process wastewater must be done in accordance with the NMP.</p> <p>Under the NDPES permit, a setback of 100 feet (or a 35-foot vegetated buffer) is required for land application of manure or process wastewater from any down-gradient surface waters, open tile line intake structures, sinkholes, agricultural well heads or other conduits to surface waters. Alternative practices may be approved as a substitute for the setback.<sup>7</sup></p> <p><a href="#">Testing</a></p> <p>Under the NDPDES permit, manure must be analyzed a minimum of once annually for nitrogen and phosphorus content and soil analyzed a minimum of once every five years for phosphorus content.<sup>8</sup></p>



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### Technical Assistance

Topic	Summary
Software Tools	<p>The <a href="#">Nitrogen Decision Tool</a> allows farmers to calculate actual nitrogen to be applied, prices of fertilizers applied, and other applicable costs.</p> <p><a href="#">Manure Management Planner (MMP)</a> is a software tool created by Purdue University that includes state-specific information for North Dakota producers to create manure management plans for crop and animal feeding operations.</p>
Guides / Handbooks	<p>North Dakota State University (NDSU) published the following articles to help producers with nutrient and manure management planning:</p> <ul style="list-style-type: none"> <li>- <a href="#">Manure Spreader Calibration For Nutrient Management Planning.</a></li> <li>- <a href="#">Liquid Level or Depth Marker for Earthen Runoff Ponds.</a></li> <li>- <a href="#">North Dakota Manure Fertilizer Use Recommendations.</a></li> <li>- <a href="#">Solid Manure Sampling for Nutrient Management Planning.</a></li> </ul> <p>ND NRCS <a href="#">590 nutrient management standard.</a></p>
Tailored Expert Assistance	<p>NDSU offers a list of <a href="#">North Dakota Custom Manure Haulers.</a></p>

### Financial Assistance

#### Summary

The [Ag PACE loan](#) provides interest buydown on loans to farmers or ranchers investing in nontraditional agriculture activities to supplement farm income, including financing subsurface field tiling projects or purchasing capital improvements for dairy operations.

The [Family Farm Loan Program](#) allows a farmer to purchase or refinance land, equipment, or livestock or to restructure operating debt.

The [Livestock Pollution Prevention Program \(LP3\)](#) offers two options for cost-share assistance - full containment systems and partial containment systems. Producers who choose the full containment option are eligible for up to \$175,000 cost-share, and producers choosing partial containment are eligible for up to \$25,000 cost-share.

The [Livestock Waste Management System Loan Program](#) funds construction, renovation or relocation of an approved waste management system.

ND NRCS provides 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.



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<sup>1</sup> <https://www.legis.nd.gov/information/acdata/pdf/33.1-16-03.1.pdf>

<sup>2</sup> [https://deg.nd.gov/publications/WQ/2\\_NDPDES/AFO\\_CAF0/NDAC\\_33.1-16-01.pdf](https://deg.nd.gov/publications/WQ/2_NDPDES/AFO_CAF0/NDAC_33.1-16-01.pdf)

<sup>3</sup> <https://www.law.cornell.edu/cfr/text/40/122.42#e>

<sup>4</sup> <https://www.legis.nd.gov/information/acdata/pdf/33.1-16-03.1.pdf>

<sup>5</sup> <https://www.legis.nd.gov/information/acdata/pdf/33.1-16-03.1.pdf>

<sup>6</sup> <https://www.legis.nd.gov/information/acdata/pdf/33.1-16-03.1.pdf>

<sup>7</sup> <https://www.law.cornell.edu/cfr/text/40/412.4>

<sup>8</sup> <https://www.law.cornell.edu/cfr/text/40/412.4>