Nutrient Management Plans

<table>
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<tr>
<th>Topic</th>
<th>Summary</th>
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<tr>
<td>Coverage</td>
<td><strong>CAFOs</strong> (700 mature dairy cows) regulated under the National Pollutant Discharge Elimination System permits are required to develop a Nutrient Management Plan. Michigan’s voluntary <a href="https://www.michigan.gov/meap">Michigan Agriculture Environmental Assurance Program</a> (MEAP) and <a href="https://www.mdnr.state.mi.us/SARR/">generally accepted agricultural and management practices</a>'s also cover nutrient management topics.</td>
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| Content   | [Michigan NPDES Permit](https://www.mi.gov/permit) requires a Comprehensive Nutrient Management Plan addressing:  
- Waste Storage Structures (detailed below).  
- Best Management Practices.  
- Land Application (detailed below). |
| Frequency of Updates | Under the NPDES permit, the CNMP should be reviewed annually and updated, as necessary. Annual reports are also required. |
| Paperwork | The CNMP must be submitted as part of the permit application.                                                                                                                                 |
| Planner Qualifications | CNMPs must be approved by a certified CNMP provider.                                                                                         |

**Manure Storage and Application**

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<td>Overview</td>
<td>The NPDES permit specifies volume design requirements for storage structure, design and construction requirements, inspection requirements, operation and maintenance.</td>
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| Storage    | **Structure**  
New storage structures shall be constructed in accordance with NRCS practice standard 313 (2017). Existing storage structures must be documented as equivalent to NRCS practice standard 313 (2014). Page 9 of the [permit](https://www.mi.gov/permit) includes additional requirements for waste storage structures.  
  
**Storage Length**  
Waste storage Structures must be designed to contain all waste generated on the operation for 6 months or longer. Additional details can be found on page 7 of the [permit](https://www.mi.gov/permit). |
| Application| **Spreading**                                                                                                                                  |
Land Application requirements are outlined on page 13 of the permit. The requirements include:
- Field by field assessments.
- Field inspections.
- Maximum annual land application rates.
- Land application log.
- Land application summary.
- Method of application.
- Restrictions on certain land application including prohibition of application during January, February or March unless certain conditions are met.
- Setbacks
  - No waste application within 100 feet of any surface water of the state, open tile line intake, sinkholes and agricultural well heads.
  - No waste application within a 35-foot-wide vegetated buffer along any surface water of the state, open tile line intake, sinkhole and agricultural well head.

**Incorporation**
Waste shall be subsurface injected or incorporated into the soil within 24 hours of application. Waste can be applied to crops if it will not enter surface waters of the state. Exceptions and additional requirements related to frozen or snow-covered ground can be found on page 20 of the permit.

**Testing**
Soil and land application sites must be sampled once every three years.

### Technical Assistance

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<td><strong>Software Tools</strong></td>
<td><strong>Michigan State University (MSU)</strong> offers the following resources:</td>
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<td>- The Institute of Water Research’s Computer-Assisted Nutrient Management</td>
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<td>- <strong>EnviroImpact</strong> Tool is an online tool that provides maps showing short-term runoff risks for daily manure application planning purposes—taking into account factors such as precipitation, temperature, soil moisture and landscape characteristics.</td>
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<td><strong>Manure Management Planner (MMP)</strong> is a software tool created by Purdue</td>
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<td>University that includes state-specific information for Michigan producers to create manure management plans for crop and animal feeding operations.</td>
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<th>Guides / Handbooks</th>
<th><strong>Michigan Department of Agriculture and Rural Development (MDARD) provides information on:</strong></th>
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- Michigan Agriculture Environmental Assurance Program (MAEAP) (a voluntary program that gives state assistance on pollution prevention practices):
  - Livestock System verification includes developing a CNMP.
  - Information on MAEAP Livestock Standards [here](#).
- Right to Farm and Generally Accepted Agricultural and Management Practices for [Manure Management and Utilization](#).

Additional information on MAEAP can be found [here](#).

MSU Extension provides:
- A dairy program [webpage](#) providing news and other resources, including a newsletter.
- [Information](#) on site selection for new and expanding livestock operations.

*Note: Due to the complexity of these CNMPs, producers should consult a certified nutrient management planner.*

Classes / Trainings

MDARD hosts [educational sessions](#) across the state and virtually to introduce farmers to MAEAP and update them on new and emerging regulations and opportunities affecting agriculture.

MSU Extension’s dairy program webpage is routinely updated with free [classes](#) and [events](#) available for dairy producers to attend.

Tailored Expert Assistance

MSU Extension’s dairy program [webpage](#) provides producers with access to dairy experts and advisors; producers can view a list of MSU Extension dairy specialists [here](#).

Financial Assistance

**Summary**

Michigan NRCS helps 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.
  - Contact a [local field office](#) for more information and an additional step-by-step guide is available [here](#).
  - The Great Lakes Restoration Initiative ([GLRI](#)) is a regional EQIP initiative that provides support for practices including livestock waste storage and nutrient management.
- [Conservation Stewardship Program (CSP)](#), which gives producers financial assistance to implement new conservation management practices and enhancements.