“We protect and restore Wisconsin’s water and environmental quality by using regulations, best available science, and public responsibility to prevent and control the discharge of wastewater pollutants.”
The Wastewater Program allows the conditional discharge of wastes through

Wisconsin Pollutant Discharge Elimination System (WPDES) permits (~3,600 individual and general permits)

Wisconsin septage licenses (~380 licenses)
Wastewater Program regulates the land application of...

- Septage (NR 113)
- Sewage Sludge (NR 204)
- Industrial Wastes (NR 214)
  - Industrial liquid wastes
  - By-product solids
  - Industrial sludges
State Regulations Derive from Federal Regulations

- **40 CFR 503 Regulations**
  - Includes metal monitoring/limitations, Pathogen Control, Vector Attraction Reduction
  - NR 204: Municipal POTW sewage sludge (EPA delegated program)
  - NR 113: Septage (exemption for metals)

- **40 CFR 257/258 Regulations**
  - NR 214: Industrial wastes
  - NR 518: Solid waste
DNR Septage Program
NR 113/NR 114
What is septage?

Defined under sub. NR 113.03(55)
Septage Servicing Requirements

1. Apply for septage business license
2. Designate operator-in-charge (OIC)
3. Identify certified operators
4. Register servicing vehicles
5. Renew license every 2 years
Septage Operator-in Charge (OIC)

• OIC = master operator directly responsible for day-to-day business operations.

To become a master operator (MO)...
  • Pass two exams (operator and master operator)
  • Type of exam ("T" or "L") determines disposal options
  • Accumulate 1600 hours of relevant work experience under existing OIC.

After MO designation...
  • 18 continuing education credits (including 3 compliance credits) every 3 years.
Septage Disposal Options (Grade T Operator)
Septage Disposal Options (Grade L Operator)
Why Land Application?

- Beneficial reuse of waste
  - Fertilizer (N, P, K, micronutrients)
  - Soil conditioner (carbon, pH)
- Economical organic fertilizer for farmer
- Economical disposal/reuse option
Land application sites are reviewed and approved prior to spreading.

- Protect public health
- Protect waters of state (surface and groundwater)
Spreading Method(s)
Field Limitations

- Soil suitability
- Setbacks
- Crop limitations
Fields must be approved **prior** to land application, and are evaluated based on several factors...

- **Bedrock depth ≥36”**
- **Groundwater depth ≥36”**
- **Permeability soil ≤6”**
- **Available water holding capacity >5”** (within top 60” of soil profile)
- **Slope**
  - 0-6% Surface application
  - 6-12% Injection/Incorporation only
  - >12% restricted
- **Consider soil erosion** (soils with severe erosion are restricted).

- **Winter restrictions** (limited to holding tanks and/or emergency septic situations)
- **Setbacks**
  - Residences (max 500ft)
  - Private wells (250 ft)
  - Community wells (1,000 ft)
  - Recreational areas (max 500ft)
  - Waterways and wetlands (100-200ft)
  - Dry runs and grassed waterways (25-100ft)
  - Property line (max 50 ft)
Addl. Septage Land Application Requirements...

- Log daily activities
- Weekly hydraulic rate: 13,000 gal/ac
- Yearly rate: 39,000 gal/ac
  - 100 lbs Nitrogen/acre
  - May increase rate...but additional requirements
- Account for additional sources of nitrogen
Addl. Septage Land Application Requirements...

• Pathogen Reduction and Vector Attraction Reduction
  • Food crop limitations
  • Public access limitations
• Treatment
  • Alkali adjustment (pH 12.0 su >30 min.)
• Barrier
  • Injection
  • Incorporation (within 6 hours)
• Litter control
**LAND APPLICATION APPROVAL FORM**

**SECTION 283.31, 283.41 or 281.48, WIS. Stats**

**Form 3400-122 Rev.6-96**

**State of Wisconsin Department of Natural Resources**

**Date: 07/14/1998**

**Page 1 of 1**

---

<table>
<thead>
<tr>
<th>DNR #</th>
<th>Site/Field*</th>
<th>Site Owner</th>
<th>Legal Description</th>
<th>Village/Town</th>
<th>County</th>
<th>Draft</th>
<th>Approved</th>
<th>Acres</th>
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<tbody>
<tr>
<td>42382</td>
<td>COLLINS / M1</td>
<td>Collins Farms Inc</td>
<td>S1/2NW1/4NW1/4 S3T R14E</td>
<td>T of Clinton</td>
<td>Rock</td>
<td>Approved</td>
<td>6.8</td>
<td>214</td>
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</tbody>
</table>

**For Application of:** Industrial WW, Septage

**Conditions:** Application is not allowed in the cross hatched areas marked on the attached map. Avoid all drainageways that would carry rain and runoff off the site. No application is allowed during periods of saturated soil conditions. There are areas on this site with slopes greater than 6%. Injection or incorporation is required on all moderate to severely eroded slopes. Stay off slopes greater than 12%. There are several residences around this site. Be sure to meet all separation distances to homes and wells (500', 250' with permission and incorporation). This site has wetland or surface waters nearby, be sure to observe all separation distances to surface waters, and use good management practices to prevent waste runoff and soil erosion. There must be at least 18' between the surface and bedrock/groundwater. This site is not approved for winter spreading.

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*If the application rate fields are left blank, follow the nitrogen application rates based on the soil test recommendations.

*This approval is subject to the conditions in the Wisconsin Administrative Code and any specific conditions listed above. Failure to comply with the conditions of this approval may result in revocation and shall be grounds for denial for a violation of s. 283.31, s. 283.41 or s. 281.48, Wis. Stats. The Department had not determined whether the approved sites are in government sponsored agricultural programs (i.e., GIP, ACR, etc.), or whether they are subject to any other ordinances. The permittee should contact the appropriate government agency to determine whether any additional restrictions or penalties apply.

**Approved By:** [Signature] 7/6/95

**Telephone Number:** 920-367-7870

---

**DNR #**

**Discharge Limitations**

**Approved Acres**
<table>
<thead>
<tr>
<th>Waste Type</th>
<th>Approved Fields</th>
<th>Approved Acreage</th>
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</thead>
<tbody>
<tr>
<td>Septage</td>
<td>5,718</td>
<td>132,929</td>
</tr>
<tr>
<td>Sewage Sludge</td>
<td>14,940</td>
<td>340,690</td>
</tr>
<tr>
<td>Industrial</td>
<td>24,927</td>
<td>747,423</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>45,585</strong></td>
<td><strong>1,221,042</strong>*</td>
</tr>
</tbody>
</table>

*Septage, sewage sludge, and industrial wastes landspread on ~500,000 acres/year (or ~5% harvested cropland in Wisconsin).*

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**Approved Fields (Septage, Sewage Sludge, and Industrial Wastes)**

*Data-July 2022*
Wisconsin Harvested Agricultural Acres by Waste Type

- **Comm Fert Only:** 44%
- **Other Animal Waste:** 10.0%
- **CAFO Wastes:** 3.9%
- **Industrial Wastes:** 0.8%
- **Biosolids:** 0.9%
- **Septage:**

**Wisconsin Agricultural % Harvested Croplands Total ~9 Million Acres**