Evaluating NMP Implementation in the Field

Scheduling & Conducting Inspections
Outcomes
Lessons Learned
Raise Your Hand if...

• You’re interested in successful NMP Implementation...

• Your agency conducts field evaluations of NMPs...

• You’ve been part of those evaluations...
Scheduling Inspections

- Announced & Unannounced Inspections
- Before, During, & After Manure Application
- Site Selection or Complaint Response
- Office Prep
Pro Tip

• Battery pack

• Boots!

• Mason Jar

• Farm/Agency Contact Info
Conducting Inspections

• Alone or Accompanied

• Documenting Observations

• Weather Considerations

• Wrap up Discussion
**DNR CAFO Land Application Site Inspection Checklist**

**Form 3400-215 (R 09/16)**

<table>
<thead>
<tr>
<th>Inspection purpose:</th>
<th>○ Complaint</th>
<th>○ Audit (Announced)</th>
<th>○ Audit (Unannounced)</th>
<th>○ Spill / Runoff</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Inspection Date:**

<table>
<thead>
<tr>
<th>Application Date:</th>
<th>Permittee Name:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Field Location:**

<table>
<thead>
<tr>
<th>Field ID:</th>
<th>Applicator Name:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</tbody>
</table>

**Application Rate:**

<table>
<thead>
<tr>
<th>Previous/current crop:</th>
<th>DNR Inspector Name(s):</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</table>

**Weather conditions:**

<table>
<thead>
<tr>
<th>Soil conditions:</th>
</tr>
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<tbody>
<tr>
<td></td>
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</tbody>
</table>

**Application Method(s):**

- [ ] Surface
- [ ] Incorporated
- [ ] Injected
- [ ] Other: _______________________

**Equipment Used:**

- [ ] Tractor/Tanker
- [ ] Semi Truck
- [ ] Tractor/t-hose
- [ ] Other: _______________________

**Any manure runoff (left field boundaries)?**

- [ ] Yes
- [ ] No

**If yes, check resource(s) impacted:**

- [ ] Surface Waters
- [ ] Wetlands
- [ ] Potential Groundwater
- [ ] None

**Notes:**

**Manure Setbacks and Restrictions (during non-frozen or snow covered conditions):**

<table>
<thead>
<tr>
<th>Requirement Met?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>100 feet from private wells (1000 feet to municipal wells when applicable)</td>
</tr>
<tr>
<td>100 feet from other groundwater conduits</td>
</tr>
<tr>
<td>25 feet from wetlands</td>
</tr>
<tr>
<td>25 feet to surface waters/conduits to surface waters (incorporated or injected)</td>
</tr>
<tr>
<td>100 feet setback to surface waters/conduits to surface waters (surface applied)</td>
</tr>
<tr>
<td>No manure spread in grassed waterways (non-conduits to surface waters)</td>
</tr>
<tr>
<td>No excessive ponding or runoff within field boundaries</td>
</tr>
<tr>
<td>Depth to groundwater greater than 24 inches (if checked, need to dig hole)</td>
</tr>
<tr>
<td>Depth to bedrock greater than 24 inches (if checked, need to dig hole)</td>
</tr>
<tr>
<td>All observed restrictive features labeled on existing restriction map</td>
</tr>
</tbody>
</table>

**Notes:**

Note: "NA" means the requirement does not apply due to absence of setback feature, method, etc.
Pro Tips

• Clip board
• Business cards
• Agency ID or credentials
• Scheduling email copy
• Wear Hi-Vis safety vest
2017 Outcomes

- 84 total audits
  - 37 announced
    - 8 (22%) resulted in enforcement
  - 23 complaint
    - 8 (35%) resulted in enforcement
  - 4 spill response
    - 4 (100%) resulted in enforcement
  - 20 unannounced
    - 3 (15%) resulted in enforcement
- Complaints had the highest enforcement
2017 Outcomes

- 19 of 84 resulted in a NON (23%)
- 4 of 84 resulted in a NOV (5%)
- Enforcement Cases:
  - 9 of 23 had manure leave field boundary
  - 20 of 23 had setback issues
  - 1 of 23 had manure discharge via tile
  - 6 of 23 had tillage or erosion issues
2017 Outcomes

- **Setbacks**
  - 100 feet to Private Well
    - Observed 47 times
    - Violated 4 times (9%)
  - 100 feet to GW Conduits
    - Observed 13 times
    - Violated 2 times (15%)
  - 25 feet to wetlands
    - Observed 29 times
    - Violated 6 times (21%)
  - 25 feet to SW (inc./inj.)
    - Observed 32 times
    - Violated 7 times (22%)
2017 Outcomes

- **Setbacks**
  - 100 feet to SW (surface)
    - Observed 22 times
    - Violated 7 times (32%)
  - Manure in Waterway
    - Observed 32 times
    - Violated 7 times (22%)
  - Ponding/Runoff in field
    - Observed 78 times
    - Violated 17 times (22%)
  - Depth to GW
    - Observed 16 times
    - Violated 3 times (19%)
2017 Outcomes

• **Setbacks**
  - **Depth to bedrock**
    • Observed 4 times
    • Violated 0 times (0%)
  - **Features on maps**
    • Observed 68 times
    • Violated 18 times (26%)
2017 Outcome Summary

- Application rate was a factor in compliance
  - Non-compliance and rate had a direct relationship

- Application method was a factor in compliance
  - More than half of dragline or hose applications had setback violations
  - *Dragline Equip had issues w/ turnaround areas*

- Low disturbance equip couldn’t manage *normal* application rates
Comments & Questions?

Ben Uvaas
CAFO Compliance & Enforcement Coordinator
Wisconsin Dept. of Natural Resources
Benjamin.Uvaas@Wisconsin.gov
Bonus!

• Why is it harder to meet manure application restrictions with dragline equipment?