Agenda

• Welcome & Introductions
• DNR Approach
• EPA Petition
• Discussion
• Next Steps
Why are we here?

• Well contamination issues

• Request to EPA

• Sharing approaches and perspectives

• Next steps
Where are we going?

- Internal group formed
- Pull in partners and stakeholders
- Identify sensitive areas
- Explore options
Identifying the Issues...

Reduce risk of GW contamination in susceptible areas

- Land Spreading Practices
- Nutrient Management Planning
- Stakeholders
- Spills
- Communications Plan
- Monitoring
- Wells
- Alternative Manure Management
- Action Plan
- Define Susceptibility
Steps to address identified issues…

1. Identify problem statement and categories
2. Invite partners/stakeholders (ongoing)
3. Form subgroups to tackle identified issues
4. Develop action plan(s) based on subgroup findings
5. Create and implement communication strategy (ongoing)

Revisit steps as needed
CURRENT DNR INFORMATION
FARMS, SPATIAL MAPS, NMPS, CURRENT REGULATIONS

Andrew Craig
NPS Planning Coordinator
Department of Natural Resources
As of April 2013:

15 WPDES Permitted Operations
190 Non-permitted Operations
April 2013
Lincoln Township Agriculture Land Distribution

The spatial distribution of CAFO and non-CAFO land shown in the map provided below is only a snapshot for a particular time in the past and may not accurately represent the current land distribution. Non-CAFO land was derived using aerial photo interpretation while the CAFO land was mapped using the maps provided in the annual nutrient management plan submittals to the Wisconsin DNR.

October 2012
Percent of County’s Cropland with 2013 NM Plans
(calculated from county reported acres and 2007 National Agricultural Statistics Service data of WI county cropland)
Kewaunee County

- 130,000 total acres of ag land
- 103,000 acres under NMP = 79%
- 15 CAFOs and 190 non-CAFO
- 15 CAFOs = 50,000 total acres under NMP = 48%
  - 50,000/103,000 acres
- 15 CAFOs used 30,000 acres* to apply manure = 29%
  - 30,000/103,000 acres

* = Some manure generated by Kewaunee County CAFOs is applied in adjacent counties (Door, Brown, Manitowoc) and manure generated in adjacent counties may be land applied in Kewaunee County
Current Statewide Ag Rules

- CAFO’s must comply with NR 243 + NR 214 requirements and also NRCS technical standard 590
  - DNR is lead agency for CAFOs

- Unless identified as a CAFO, smaller farms do not have to meet NR 243 or NR 214; they must meet NR 151 which requires having and implementing a NMP*

- Via ATCP 50, NMPs must be consistent with NRCS 590 (2005) NM technical standard
  - Typically, County Land Conservation Departments are lead agency for small farms
  - DNR response for manure spills, NOD’s, well contamination cases

* = Not all small farms have or implement a NMP
## Setbacks for Small Farms with 590 NMP

<table>
<thead>
<tr>
<th>Restrictive Feature</th>
<th>Setback</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Public Water Supply Well</td>
<td>50 feet**</td>
</tr>
<tr>
<td>Non-Community Water Supply Well</td>
<td>50 feet**</td>
</tr>
<tr>
<td><strong>Inhabited Dwelling</strong></td>
<td>None</td>
</tr>
<tr>
<td><strong>Depth to Groundwater &amp; Bedrock</strong></td>
<td>None</td>
</tr>
<tr>
<td><strong>Direct Conduit to Groundwater</strong></td>
<td>200 feet**</td>
</tr>
<tr>
<td><strong>Navigable Waters &amp; Conduits</strong></td>
<td>None</td>
</tr>
<tr>
<td><strong>Wetland</strong></td>
<td>None</td>
</tr>
<tr>
<td>SWQMA – Winter</td>
<td>300 feet</td>
</tr>
<tr>
<td><strong>Locally Identified Areas – Winter</strong></td>
<td>TBD</td>
</tr>
<tr>
<td>Areas that convey nutrients, via runoff, to GW conduits or surface waters</td>
<td></td>
</tr>
</tbody>
</table>

*Manure shall not be spread on these features.

**200 foot setback only required for upslope areas unless effectively incorporated within 72 hours.

** = Not all small farms have a NMP
Other Small Farm Requirements – NRCS 590

• **Right Place**
  - No manure within surface waters, established concentrated flow channels (grass waterways), non-harvested permanent vegetative buffers, non-farmed wetlands
  - No manure entry/discharge to drain tiles

• **Right Time**
  - No manure ponding or runoff from application field; no application on saturated soils in SWQMA

• **Right Rate**
  - Applications consistent with UW pub A2809; soil and manure sampling
  - Reduced rates for < 20 inches bedrock, < 12 inches to groundwater

• **Winter Spreading Plan**
  - avoid prohibited areas
  - use P Index to ID low risk fields for winter runoff to areas of concentrated flow and surface waters

• **Document methods, timing, form and rates of application**
### Setbacks for CAFOs

<table>
<thead>
<tr>
<th>Restrictive Feature</th>
<th>Setback Inject, Incorporate Tanker</th>
<th>Setback Manure Irrigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Public Well</td>
<td>1000 feet</td>
<td>1000 feet</td>
</tr>
<tr>
<td>Private &amp; Non-Community Well</td>
<td>100 feet</td>
<td>250 feet</td>
</tr>
<tr>
<td>Inhabited Dwelling*</td>
<td>0 feet</td>
<td>500 feet*</td>
</tr>
<tr>
<td>Depth to Groundwater &amp; Bedrock</td>
<td>2 feet</td>
<td>5 feet – all year</td>
</tr>
<tr>
<td>Direct Conduit to Groundwater**</td>
<td>100 feet</td>
<td>100 feet</td>
</tr>
<tr>
<td>Navigable Waters &amp; Conduits**</td>
<td>25-100 feet</td>
<td>25-100 feet</td>
</tr>
<tr>
<td>Wetland**</td>
<td>25 feet</td>
<td>25 feet</td>
</tr>
<tr>
<td>Winter – SWQMA** + GW conduits</td>
<td>300 feet</td>
<td>300 feet</td>
</tr>
<tr>
<td>Winter - Depth to Bedrock</td>
<td>5 feet</td>
<td>5 feet</td>
</tr>
<tr>
<td>Winter – Areas of Channelized Flow</td>
<td>200 feet</td>
<td>200 feet</td>
</tr>
</tbody>
</table>

*Distance to dwellings may be reduced with written consent of any affected owners and occupants.

**Manure shall not be spread on these features.
Other CAFO Requirements

- **Right Place**
  - No manure within surface waters, established concentrated flow channels (grass waterways), non-harvested permanent vegetative buffers, non-farmed wetlands
  - ID drain tiles; No manure entry/discharge to drain tiles
  - No fecal contamination of a well

- **Right Time**
  - No manure ponding or runoff from application field; no application on saturated soils

- **Right Rate**
  - Manure and Soil Sampling required
  - Applications consistent with UW pub A2809

- **Winter Spreading Plan**
  - Avoid prohibited areas
  - No applications Feb – March; when snow is melting and running off field
  - ID low risk fields for winter runoff to areas of concentrated flow and surface waters
  - Fields must have Winter Acute PI of 4 or less
  - Process Wastewater must meet NR 214.17(2) to (6)

- **Document and report methods, timing, form and rates of application**
IDENTIFYING THE PROBLEM STATEMENT

Bill Phelps
Agricultural NPS Implementation Coordinator
Department of Natural Resources
Step 1:

Identify problem statement and categories

Reduce risk of GW contamination in susceptible areas

Nutrient Management Planning
Partners/Stakeholders
Spills
Communication Strategy
Definie Susceptibility
Wells
Monitoring
Action Plan
Risk of GW contamination in susceptible areas
First: Define the Area

Before jumping to solutions, start with identifying the geographic area.
Factors for Determining Susceptibility

1. Depth to Bedrock or Groundwater
2. Soil Type & Characteristics
3. Land Use
Depth to Bedrock…

Influences the potential for groundwater contamination based on the available soil for treatment purposes.
... or Groundwater

(0 – 10 inches)
(10 – 20 inches)
(20 – 40 inches)
(40 – 60 inches)
(60 – 80 inches)
(80 + inches)

Spring

Fall

Whichever is more restricting
Soil Type & Characteristics

- Determine water holding capacity
- Infiltration rates
- Filtering abilities
- Treatment capabilities
Land Use

Activities occurring on the landscape will have an impact on what contaminants are being introduced to the system.
Over-riding Considerations

Regardless of depth to bedrock/groundwater, soil type or land use, these factors can increase the potential for susceptibility:

 Conduits to Groundwater
 Weather
Geologic Features
Manmade Features
Channels that Drain to Features
Drainage Areas
Weather

- Weather conditions can change the way soils react in certain situations, increasing or decreasing susceptibility.
  - Drought
  - Frozen Conditions
  - Precipitation
## Contamination Vulnerability Ranking

*Northeast WI Karst Task Force Report, 2007:*

<table>
<thead>
<tr>
<th>Level of protection required</th>
<th>Criterion</th>
<th>Relative vulnerability to contamination</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Less than 5 feet (60 inches) to carbonate bedrock, and/or closed depressions or any drainage areas that contribute water to sinkholes/bedrock openings.</td>
<td>Extreme</td>
</tr>
<tr>
<td>2</td>
<td>5-15 feet to carbonate bedrock</td>
<td>High</td>
</tr>
<tr>
<td>3</td>
<td>&gt;15-50 feet to carbonate bedrock</td>
<td>Significant</td>
</tr>
<tr>
<td>4</td>
<td>Greater than 50 feet to carbonate bedrock</td>
<td>Moderate</td>
</tr>
</tbody>
</table>

Recommend also including depth to groundwater
Next Steps

- Apply criteria to identify a geographic area
- Begin reviewing other components with stakeholders