

Wisconsin Department of Natural Resource
Sensitive Areas and Management Practices Workgroup
Tuesday August 25, 2015, 12-4pm
Oshkosh Service Center, 625 E. County Road Y

Workgroup Members: (Present) Andrew Craig, Russ Rasmussen, Kyle Burton, Bill Phelps, Mary Ann Lowndes, Brad Holtz, Joe Baeten, Don Niles, Andy Wallander, Sara Williams, Lynn Utesch, Davina Bonness, Sara Walling, Mark Jenks, Ryan Debroux, Nathan Nyssee, Judy Derricks, Betsy Doolittle (Absent) Cheryl Heilman, Kevin Masarik, Kevin Erb, Tom Davenport.

Invited Speakers: Heidi Schmitt Marquez (WDNR)

**Notes below are in order of discussion by Joe Baeten and Andrew Craig.

Welcome and Introductions

Background – how we got here? - Russ Rasmussen

- Request to EPA from Kewaunee County citizens
- WDNR and EPA met and decided WDNR would take the lead
- Three preliminary meetings with various stakeholders (Government agencies, CAFO farms and petitioners) were held in June and July 2015.
- Concluding these three meetings 5 subgroups were created by WDNR: Short Term Solutions, Sensitive Areas and Practices, Compliance, Communications, and Alternative Technologies.

Sensitive Areas and Practices Workgroup Purpose – Andrew Craig

- Workgroup purpose, expected outputs / products, composition, meeting schedule and information, group rules, and scope limitations discussed.
- Comments and concerns regarding workgroup purpose:
 - Each perspective should be equally represented when reaching consensus.
- **Side Note:** if a workgroup member cannot make a future meeting an alternate can be designated by them to participate on their behalf.
- **Full Consensus:** workgroup members accepted the purpose, outputs/products, composition, group rules and scope limitations.

Septage and Industrial Wastewater applications in Kewaunee County – Heidi Schmitt Marquez

- Heidi provided a handout that contained a summary of wastewater land application in Kewaunee County.
- There are three main categories of wastewater application: Industrial, By-Products and Sludges.
- 10 facilities in Kewaunee County are approved to land apply wastewater: 7 municipal, 2 septage and 1 industrial.
- Approximately 18,000 acres in Kewaunee County are approved by WDNR for wastewater application. This is 13.5% of total agricultural acres in the county (130,000 acres).
- Not all WDNR approved acres are used every year; some acres are rarely used or not used at all.

- In last three to five years the number of acres used for applications has declined. Main reason: logistical challenges when using agricultural fields (timing, crop rotation, field conditions, etc).
- Some facilities located outside of Kewaunee County have applied manure or industrial wastewater within Kewaunee County.
- Questions regarding topic:
 - Are fields also approved for agricultural waste?
 - Yes
 - What level of waste treatment do the WDNR permitted facilities have?
 - Varies by facility and waste type – may include solid separation, clarification, aerobic or anaerobic digestion, lime treatment + incorporation, injection.
 - Are industrial wastes coming out of manure storage being applied to fields approved for wastewater?
 - No if the industrial waste makes up 10% or less of the waste.
 - Yes if the industrial waste makes up more than 10% of the waste.
 - Does the DNR track industrial waste going into pits?
 - Yes - tracked by WDNR Wastewater permit and also by CAFO permitted facilities.
 - Are chlorides tested in manure when mixed with industrial waste?
 - No

Additional Workgroup Members

- The workgroup discussed including other parties as part of the workgroup. These other parties included:
 - Kewaunee County Health Department
 - No, already represented on the Short Term Solutions Workgroup
 - Industrial Waste Hauler & wastewater treatment plant manager
 - Workgroup discussed having a wastewater treatment plant manager talk about treatment at the plant. It was decided this would be best for the Alternate Technologies Workgroup.
 - **Full Consensus:** Request industrial waste hauler and wastewater treatment plant manager to present to the workgroup at future meeting.

Logistics

- Second meeting will be held September 22, 2015, from 1-4:30pm in Kewaunee County at Luxemburg Fairgrounds Expo Center, 625 Third Street, Luxemburg, WI.
- Third meeting will tentatively be held on October 21, 2015 in Kewaunee County at Luxemburg Fairgrounds Expo Center, 625 Third Street, Luxemburg, WI.

Public Comment Period

- Jody Parins
 - Which CAFOS in Kewaunee County are accepting industrial waste into their pits? Can WDNR produce a list of these farms?
 - Can custom manure haulers spread industrial waste and manure?

- Yes
 - Discussion: CAFOs are not approved to take septage waste into their pits.
 - Non-CAFO, if approved to take waste, can the waste contain human DNA?
 - Yes, it could
 - **Full Consensus:** have Mark Borchardt come talk to the workgroup on groundwater testing for human and bovine DNA.
 - Suggestions/Recommendations:
 - Use 50 feet depth to bedrock for susceptible area criteria
 - establish buffers on impaired surface waters
 - prohibit drain tiles on agricultural fields from discharging directly to streams.
- Dick Swanson
 - 130,000 tillable acres in Kewaunee County
 - We don't know how much is being used; not all acres can receive manure.
 - Suggestions/Recommendations:
 - Stop all liquid manure spreading on soils with 20 feet or less to bedrock *year round*.
 - Limit spreading to 25 tons / acre (liquid manure)
 - All farms with 250 or more cows should install groundwater monitoring wells (not clear for all or some fields)
 - NMPs should have signed land contracts for all fields; new fields should have new soil test completed before inclusion within NM plan
- Comment from workgroup: stopping year round applications on 20 feet to bedrock would put some farmers out of business; they would not be able to spread all or some of their manure.

DNR Sensitive Areas Paper – Andrew Craig

- Workgroup discussed a handout titled '*Areas Susceptible to Groundwater Contamination*'
- Handout has been distributed in the past; very little feedback received from stakeholders during three preliminary meetings.
- Suggestion from WDNR to add well head protection areas to document under the overriding considerations section.
 - This includes community and private wells.
- MEA sent comments on the document to WDNR in June 2015. There comments were not distributed at the meeting. WDNR provide copy of the comments to the workgroup before next meeting for review and discussion.
 - Comments included shallow soils rather than just conduits at the surface.
- Suggestion from Kewaunee Cares for including soil quality / health to document under factors to identify areas susceptible to contamination.
 - Organic matter
 - Is there a reliable classification system for assessing soil quality health?
 - Infiltration / organic matter determine soil health
 - Tests are available to measure biological activity
 - NRCS is in their infancy with measuring soil health
 - Subjective test is available to score soil quality/health.

- What is the potential for organic matter in northeast Wisconsin?
 - Kewaunee County historically was averaging 4% organic matter.
 - This is where the County is currently at.
- Suggestion from Don Niles to consider different types of waste/manure when recommending practices for sensitive areas (e.g., treated/digested manure has lower pathogen risk versus raw/unprocessed/untreated manure).
- Workgroup should consider tile lines and where they discharge.
 - Most tiles discharge to surface waters ; but some tiles may discharge to sinkholes or other groundwater conduits.
- Question to consider: Does the way we classify conduits to groundwater capture all potential features? What about fractures in rock below soil surface – what methods can be used to reliably ID these features?
- What are the associated drainage areas that contribute/discharge to groundwater conduits?
 - Definition (in Kewaunee County ordinance) initially came from NR 151
 - Drainage areas that contribute to GW conduits are something you can readily see on site; typically there is an obvious and visible channel within the drainage area.
 - Defining the areas that contributes to the channel can be difficult in both flat and sloping terrain
 - LIDAR and topo maps may be used to define contributing areas
 - Kewaunee County has limited resources to complete this analysis.
 - Some orange areas on the susceptibility map for Kewaunee County map are gravel areas and are not addressed in ordinance.
 - Ryan Debroux (manure hauler) relies on the NMP writers when interpreting restriction maps.
 - Kewaunee County considers all rock piles in a field as conduits to groundwater.
 - Rock piles have been mapped using 8 different aerial images from different years.
 - The County field verifies these locations and GPS these locations.

Break 2:25-2:40pm

Kewaunee County Ordinance – Davina Bonness

- 87% passing rate when ordinance was proposed via referendum.
- The ordinance is a public health ordinance (pursuant to s. 92.11 Wis. Stats.)
- No mechanical application of waste on soils with 20 feet or less to bedrock between January 1st to April 15th, unless exemption is issued by Land Conservation Committee.
- No mechanical application of waste on soils with 20 feet or less to bedrock when soils are frozen, snow covered or saturated; when snow is actively melting such that water is flowing off the field; or precip capable of producing runoff is forecast within 24 hours of application.

- These first two prohibitions may increase no waste application period for November and December months if soils become frozen or snow covered and for Late April and May if soils are or become saturated.
- County started with the bedrock map from 1987 to determine the areas with bedrock within 20 feet of the ground's surface. The county spatially mapped these areas and continuously is updating the areas. Maps are on the County's website.
- Farm can request a variance; such a variance would be a one time and only for that year.
- Comment: the ordinance should be flexible especially if we have an early spring.

- Approximately 8% of Kewaunee County cropland has soils with bedrock within 5 feet of the ground surface.
- Approximately 20% of Kewaunee County cropland has soils with bedrock within 20 feet of the ground surface.
- The highest frequency of drinking water well contamination occurs in March and April and lesser contamination events occur in October and November.
- Does Section 3(2)(c) - Wastes shall not be mechanically applied to direct conduits to groundwater, or allowed to directly drain to direct conduits to groundwater - apply year round?
 - Yes. The other prohibitions apply Jan-April 15 or during periods with frozen, snow covered conditions
- Question: Is the ordinance more restrictive than NR 243?
 - Yes, NR 243 does not require identifying areas that directly drain to groundwater conduits.
 - Yes, NR 243 prohibits application of manure and process wastewater on soils less than 5 feet to bedrock when soils are frozen and snow covered and on soils with less than 2 feet to bedrock during growing season (i.e., when soils are not frozen, snow covered or saturated)
- The April 15 deadline was established because it allows the soils to warm to get the bugs working.

Karst Task Report (2007)

- Workgroup discussed vulnerability ranking table on page 7
 - Workgroup should consider other factors such as timing, soil conditions, and technology in addition to different depths.
- Workgroup discussed the recommendations of page 9 – 3 recommendations
 - Suggestion: should the restriction on 20 feet to bedrock be considered year round.
 - Suggestion: should we have a reduced application rate(s) on areas with 20 feet to bedrock.
 - Split applications another option.
 - Concerns about larger costs and practicality of recommendations to farmers
- Before next meeting on Sept 22, WDNR will distribute copy of Karst Report with highlighted sections for further review and discussion by workgroup. Highlighted areas will note various code requirements related to waste spreading (CAFO, non-CAFO, industrial waste spreading)

and report recommendations for waste spreading to protect groundwater quality from both bacterial and nitrate contamination.

- WDNR requests workgroup members come to next meeting with Karst report recommendations that they fully or partially support for use within the Sensitive Areas and Practices Workgroup recommendations.
- Workgroup discussed the types of data related to the project: spatial, NMP maps, etc.
 - There is a need for a common database.
 - Sharing data is important for ID of sensitive areas and to determine where practices can be implemented.
 - Developing and maintaining spatial or other databases is time intensive; there are limited staff resources at WDNR and Kewaunee County to complete this type of work.
 - Can Kewaunee County to share its spatial karst data layers with DATCP for inclusion on 590 restriction maps? Need for

DRAFT NRCS 590 Standard

- Due to limited time, this information did not receive workgroup review and discussion. This item will be put on agenda for September 2015 meeting.

Future Workgroup Meetings

- **Full Consensus:** the next two workgroup meetings will be held in Kewaunee County - Luxemburg Fairgrounds Expo Center, 625 Third Street, Luxemburg, WI
- The next workgroup meeting will be Sept 22, from 1-430pm
- The following workgroup meeting is tentatively set for October 21. This meeting date and time period will be confirmed at the Sept 22 meeting

2nd Public Comment Period

No written or verbal requests were received for a second public comment period.

Adjourn at 4pm.