

CITIZENS (WOOD COUNTY) GROUNDWATER GROUP MEETING

DATE: Monday, December 20, 2021
TIME: 2:00 p.m.
LOCATION: In-Person (Wood County Courthouse, Room #114) & Teleconference via WebEx

Present: Mark Borchardt, Scott Borgeau, Tucker Burch, Rhonda Carrell, Bill Clendenning, Scott Custer, Bruce Dimick, Gordon Gottbeheit, Dr. Dennis Hancock, Kim Keech, Bill Leichtnam, Carla Romano, Gregg Wavrunek and Rachael Whitehair.

1. **Call Meeting to Order:** Chair Bill Leichtnam called the meeting to order at 2:00 p.m.
2. **Public Comment:** None.
3. **Chair's Remarks**
Bill Leichtnam shared comments throughout the meeting.
4. **Speakers – “Groundwater Protection Research and ideas from the USDA”**
Dr. Dennis Hancock, Center Director (USDA Agricultural Research Service-Marshfield)
Mark Borchardt, Microbiologist (USDA Agricultural Research Service-Madison)
Tucker Burch, Research Agricultural Engineer (USDA Agricultural Research Service-Marshfield)

Highlights of “**Groundwater Protection Research at USDFRC**” presentation:

- Integrated Dairy systems
Nutrition – Cell Wall Biology and Utilization Research Unit
Forage – Dairy Forage Research Unit
Environment – Environmentally Integrated Dairy Management Research Unit
- Value of Integrated Research
Better, understand dairy animal and forage physiology (basic science).
Improve dairy forage production and feeding systems (applied science).
Reduce the environmental footprint of the US dairy industry (environmental science).
- What is quantitative microbial risk assessment (QMRA)?
Risk – Possibility of loss or injury
Hazards – Waterborne gastrointestinal pathogens
- Types of loss/injury?
Infections
Symptomatic Illness
AGI is often self-limiting, but can be severe in immune-compromised and other susceptible hosts.
- Recently Published – Research Companion Papers
 - a. Research “Sources and Risk Factors for Nitrate and Microbial Contamination of Private Household Wells in the Fractured Dolomite Aquifer of Northeastern Wisconsin”.
Website Link: <https://ehp.niehs.nih.gov/doi/10.1289/EHP7813>
 - b. Research “Quantitative Microbial Risk Assessment for Contaminated Private Wells in the Fractured Dolomite Aquifer of Kewaunee County, Wisconsin”.
Website Link: <https://ehp.niehs.nih.gov/doi/10.1289/EHP7815>
- Conceptual Model
Private Septic Systems & Dairy Manure → Private Well → Consumers Drink Water
- Kewaunee County: Summary/Conclusions
Drinking water from private wells in Kewaunee County presents risk of AGI (approximately 300 predicted cases/year).

Priority areas with most potential for risk mitigation:

- a. Wells constructed in deeper depths to bedrock: 250 cases/year
- b. Wells contaminated with bovine fecal material: 230 cases/year
- c. Wells contaminated with cryptosporidium partum: 190 cases/year

- d. Alternatively, any combination of a-c.
- Future Work?
 - Statewide QMRA for groundwater-borne pathogens in private wells.
 - Risk assessed at county level based on public data.
 - Puts Kewaunee in context and guides development of future field studies.
 - Long-term: Simulate interventions – Treatment of systems (alternative management practices).
 - Defines public health value of interventions, support cost-benefit decisions.
- Kewaunee County Groundwater Research
 - The cropland around a well in Kewaunee County, greater the probability that well has nitrate above the health standard.
- Southwest Wisconsin Groundwater and Geology (SWIGG) Study
 - A multi-county effort to better understand drinking water. Preliminary results show that more cropland around a well means greater likelihood of high nitrates.

Highlights of “Celebrating 40 Years of Research and Impact at the U.S. Dairy Forage Research Center” presentation:

- Path forward... Short and long-term impacts of manure applications on soil health.
- Expansions (dependent upon FY22 budget)
 - Cover crop research and outreach.
 - Major inclusion in developing the Ruminant Farming Systems (RuFaS) model.
 - Methane reduction research.
 - Precision Ag approach to manure application and forage management.

5. **Correspondence/Updates/Handouts/Reports:**

Bill Leichtnam shared the following:

- a. Wisconsin Ag Day at the Capitol will be at the Monona Terrace Convention Center in Madison on Wednesday, January 26, 2022. Event sponsored by the Wisconsin Farm Bureau. Main Topic: Water Quality in Wisconsin.
- b. Handouts:
 - “Farm to Faucet? Agricultural Waste and Private Well Contamination in Kewaunee County, Wisconsin” by Wendee Nicole. Website Link: <https://ehp.niehs.nih.gov/doi/10.1289/EHP10034>
 - Research “Sources and Risk Factors for Nitrate and Microbial Contamination of Private Household Wells in the Fractured Dolomite Aquifer of Northeastern Wisconsin”. Website Link: <https://ehp.niehs.nih.gov/doi/10.1289/EHP7813>
 - Research “Quantitative Microbial Risk Assessment for Contaminated Private Wells in the Fractured Dolomite Aquifer of Kewaunee County, Wisconsin”. Website Link: <https://ehp.niehs.nih.gov/doi/10.1289/EHP7815>
- c. Article “Legislative Roadblocks Force DNR to Abandon Water Pollution Protections” by Scott Laeser. Website Link: <https://wisconsinexaminer.com/2021/11/18/legislative-roadblocks-force-dnr-to-abandon-water-pollution-protections/>
- d. A federal bipartisan bill will expand efforts to deliver safe drinking water to Wisconsin by investing in over \$800 million in communities across the state over the next 5 years including \$142 million for 2022 allotment for state revolving loan programs funding water infrastructure projects.
- e. Opinion Column: “GOP rule stymies use of federal funds for safe drinking water” by Bill Berry Website Link: https://captimes.com/opinion/quest-columns/opinion-gop-rule-stymies-use-of-federal-funds-for-safe-drinking-water/article_8e640dbd-725f-5114-8220-3c3d814d2ef8.html
- f. Portage County Groundwater Citizens Advisory committee next meeting tentatively scheduled for Thursday, February 10, 2022.

6. **Action Items proposed to CEED Committee by Citizens (Wood County) Groundwater Group**

Actions proposed by citizens that would go to the Conservation, Education and Economic Development Committee of the Wood County Board. Citizens have access to their board.

Discussion comments:

Clean Water is a health issue.

We all share the same water.

No one has the right to contaminate someone else's water.

7. **Roundtable** None.

8. **Announcements of members / visitors (upcoming parallel events / meetings)** None.
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Portage County Groundwater Citizens Advisory next meeting tentatively scheduled for Thursday, February 10, 2022.

9. **Future Speakers:** Please contact Bill Leichtnam or Bruce Dimick with any suggestions for speakers.
January – Open
February – Open

10. **Agenda Items for next meeting**
Agenda items should be submitted to Bill Leichtnam or Kim Keech by the second Monday of the month.

11. **Next Meeting** Meetings will be the third Monday of each month @ 2:00 p.m.

The next regular Citizens (Wood County) Groundwater Group meeting is scheduled for Monday, January 17th at 2:00 p.m. at Wood County Courthouse in Conference Room #114. A virtual WebEx option will also be available for this meeting.

12. **Adjourn Groundwater Group Meeting** Chair Bill Leichtnam adjourned @ 3:21 p.m.

Notes by Kim Keech, Planning & Zoning Office