

Actions Related to Groundwater Concerns in Kewaunee County

- **WI Department of Natural Resources (DNR)**
- **WI Department of Agriculture, Trade and Consumer Protection (DATCP)**
- **WI Department of Health Services (DHS)**
- **WI Department of Safety and Professional Services (DSPS)**

What's been done

- **DNR-led study.** DNR commissioned two-year research study to determine types, sources and locations of groundwater and well contaminants so we would have, for the first time, scientific data that can be used to formulate solutions to a problem that's been decades in the making. In May 2015 DNR identified \$80,000 in initial funding; study began November 2015, final results currently being analyzed.
- **Groundwater Collaboration Workgroup.** DNR in conjunction with EPA formed workgroup consisting of Kewaunee County citizens, petitioning groups, agricultural producers and state and federal staff. Met throughout 2015 and early 2016, final report issued in June 2016. Recommendations directed to DNR, EPA, local gov't., agricultural producers and citizens.

What's being done

- **Rule Revisions – NR 151.** DNR developing rule revisions to NR 151. Recently completed meetings with a technical advisory committee (TAC) fall 2016-spring 2017. Discussions originated from recommendations of Kewaunee County Best Management Practices Work Group.
- **Provide emergency drinking water.** Providing emergency drinking water to well owners with wells contaminated by fecal bacteria, such as *E. coli*, from livestock (under NR 738, Wis. Admin. Code, revised fall 2013). Statewide program aligns with other emergency water programs in Kewaunee County provided by Peninsula Pride Farmer-led Council and Algoma School District.
- **DNR reallocated 4 regional positions** to the CAFO program to increase field inspections and address permitting issues.
- **DATCP is revising ATCP 50**, the administrative rule that governs soil and water resource programs. Revisions will increase groundwater protections required in nutrient management planning for ALL Wisconsin farms, and address concerns specific to karst regions.
 - New restrictions will prohibit manure spreading where bedrock is shallow or exposed, and near sinkholes, private wells or other conduits to groundwater at certain times of the year. In some cases, the rule would prohibit spreading in these sensitive areas year-round. It will also require treating manure for pathogens in some cases.
 - Groundwater protections continuing in ATCP 50 include prohibiting manure spreading on saturated soil and areas with snow melt, and capping all fertilizer application rates at crop nutrient needs.
- **DSPS handles septic complaints** on a case-by-case basis to determine if an investigation and maintenance is warranted to the Private Onsite Wastewater Treatment System (POWTS) Program.

Going forward

- **Public hearings** on a revised NR 151 will be conducted in summer of 2017, final draft submittal to State Legislature early 2018.
- **DATCP's revised ATCP 50** is expected to be in place by the winter of 2017.
- **Digester and Water Treatment System.** Governor directed Public Service Commission, DNR and Dept. of Agriculture, Trade and Consumer Protection to establish program that would couple a regional manure digester serving multiple farms to the production of renewable energy with a water treatment system and improved manure and nutrient management. Funding awards anticipated in August 2017.
- **By October 1, 2017**, governmental units are required to conduct, complete and maintain an inventory of all Private Onsite Wastewater Treatment Systems (POWTS) located in its jurisdictional area. **(DSPS)**
- **By October 9, 2019**, governmental units are required to develop and maintain a comprehensive maintenance program of all POWTS that are in the governmental unit POWTS inventory. **(DSPS)**
 - At a minimum, the comprehensive program must contain records of inspection, evaluation, maintenance, and servicing reports and notify owners of POWTS that are delinquent in submitting required reports. The program needs to ensure that required inspections, evaluations, maintenance and servicing are performed and the required reporting to the governmental unit is submitted.

Dept. of Health Services

Background	Health Risk	Response
Shallow depth-to-bedrock in some areas of Kewaunee County makes it easy for septic effluent and materials applied to farm fields to get into groundwater.	People can get sick when drinking water becomes contaminated with diseases (pathogens) and nitrates from livestock and residential waste.	Owners of private wells need to be aware of potential problems and take steps to protect themselves. DHS recommends that all private residential wells should be tested at least once a year for bacteria (total coliform and <i>E. coli</i>) and nitrates.
Some areas of Kewaunee County have very little soil over karst bedrock to filter materials applied to farm fields.	The most harmful pathogens are Salmonella and Campylobacter, Shigatoxin-producing <i>E. coli</i> (STEC), and Cryptosporidium.	If you notice changes in the color or odor of your water, it is best to do not drink the water, and contact your local health department for further advice.
Karst bedrock formations have vertical and horizontal cracks that create paths for water and other materials to travel from the surface to the groundwater.	The amount of pathogens found in livestock waste can vary greatly from herd to herd, and also varies within the same herd over time.	If your well is in an area with shallow, karst bedrock formations it could become contaminated more easily. You may need to test more than once per year.
Private wells in areas where karst bedrock is close to the surface (less than 25 feet) may be at risk.	Nitrates can also enter groundwater from septage or spread livestock waste. Excessive nitrates in water are a problem for infants.	In some cases, new types of tests are being used to determine the source of fecal contaminants.

Agency Resources

DNR

- Temporary water for private well users affected by fecal bacteria contamination from livestock – NR 738: <http://dnr.wi.gov/files/PDF/pubs/tr/RR078.pdf>
- Groundwater collaboration workgroup: <http://dnr.wi.gov/topic/groundwater/collaborationworkgroup.html>
- NR 151 rule revisions process: <http://dnr.wi.gov/topic/nonpoint/nr151strategy.html>

DATCP

- **Online.** We work with the University of Wisconsin-Madison to provide the Wisconsin Manure Management Advisory System website, which provides farmers with maps of their land's susceptibility to runoff and groundwater contamination, and with the Runoff Risk Advisory Forecast which informs farmers about the daily risk of runoff occurring on their farm: <http://www.manureadvisorysystem.wi.gov/app/runoffrisk>
- **Demonstration Farms.** We are working with the USDA-NRCS to establish four demonstration farms in the Door-Kewaunee watershed to showcase conservation practices that protect groundwater.
- **Producer-Led Watershed Protection Grants** Peninsula Pride Farms was established in 2016 with the help of a \$20,000 Producer-Led Watershed Protection Grant, and was funded at the same level this year. The members' goal is to increase the use of conservation practices in the Door-Kewaunee watershed:
https://datcp.wi.gov/Pages/Programs_Services/ProducerLedProjects.aspx

DHS

- Manure contamination of resident wells information: <https://www.dhs.wisconsin.gov/water/manure.htm>
- Water quality information: <https://www.dhs.wisconsin.gov/water/index.htm>

DSPS

- Private Onsite Wastewater Treatment System (POWTS) Program: <https://dsps.wi.gov/Pages/Programs/POWTS/Default.aspx>