Wisconsin Groundwater Coordinating Council (GCC) Meeting Minutes

Date: May 15, 2026
Time: 10:00 AM – 12:00 PM
Location: DNR South Central Regional Office Fitchburg (Nevin Fish Hatchery), 3911 Fish Hatchery Rd, Fitchburg, Glaciers Edge Conference Room, and via Zoom

1. Meeting Opening and Approval of Previous Minutes

- **GCC Members Present**: Steve Elmore (DNR, facilitating in place of Chair Joe Van Rossum), Robby Personette (DATCP), Barry Paye (DOT), Sue Swanson (WGNHS), Sarah Yang (DHS), Christy Remucal (UW System), Travis Wagner (DSPS), and Steve Dirks (Governor's Representative, joined by phone).
- **Introductions**: Steve Elmore led introductions for members and guests in the room and online, noting that Chair Joe Van Rossum was unable to attend and that Steve Elmore would facilitate the meeting.
- **Minutes Approval**: The minutes from the February 13, 2026 meeting were reviewed and approved with no corrections noted.

2. FY 2028 Joint Solicitation Update — Jen Hauxwell (UW System)

Jen Hauxwell reported that the FY 2027 Joint Solicitation process has concluded, with five of the twenty proposals submitted receiving funding. Funded projects are expected to begin July 1, 2026. Work is now underway on the FY 2028 Joint Solicitation, developed in coordination with participating agencies who have updated their research priorities for inclusion in the call.
The combined pool of funding available from DNR and UW for new FY 2028 projects is approximately $295,000. The Request for Proposals is expected to be released the following week, with an October 2, 2026 proposal deadline. Final touches are being made to the solicitation document, including formatting changes to meet 508 accessibility requirements and a streamlined submission process (eliminating a step for researchers and using a mail-merge process to generate cover sheets). Because the solicitation document carries the names of the GCC Chair and UW lead, Jen asked that Joe Van Rossum and Christy Remucal review and confirm they are comfortable with the substance of the document before it is released; the core content is final, though minor formatting details may still change.

3. Technical Presentation: Cool Stuff We've Learned from the Nitrogen Optimization Pilot Program (NOPP) — Dr. Matt Ruark (UW-Madison, Department of Soil and Environmental Sciences)

Dr. Ruark presented an overview of the Nitrogen Optimization Pilot Program (NOPP), for which UW-Madison serves as scientific advisor. 2026 marks the program's fourth year (Cycle 4).
To date, NOPP has supported nearly 50 projects and about 160 individual on-farm trials. Roughly half are straightforward corn nitrogen-rate trials; about 30% add a second factor (e.g., product testing, cover crops, manure vs. no manure, soil type); and about 20% involve non-corn crops such as cranberry, potato, sunflower, triticale, and hay. With NOPP, farmers choose what to study, with UW providing individualized guidance on experimental design. Farmers collect their own data (soil tests, yield monitor data), which the UW team analyzes, interprets, and returns to each farmer along with a report and in-person discussion.

Each nitrogen response trial is fit with a quadratic-plateau statistical model, generating two key values: the Agronomically Optimum Nitrogen Rate (AONR, where yield plateaus) and the Economically Optimum Nitrogen Rate (EONR, which accounts for diminishing economic returns and is typically somewhat lower than the AONR).
Dr Ruark presented several case studies summarized below:

- *Second-year alfalfa nitrogen credit*: A flat yield response curve at one site prompted investigation using pre-sidedress nitrate testing, which validated a larger-than-assumed nitrogen credit from a second-year alfalfa stand. The program has also begun using post-harvest nitrate testing to flag fields with excess unused nitrogen left in the soil at season's end.
- *Product and soil-test evaluation*: A trial testing a molasses-based crop stimulant showed no yield benefit. A preplant soil test revealed a substantial amount of residual ammonium that a standard nitrate-only test would have missed, helping explain the flat response and pointing to a potential gap in current soil testing protocols.
- *Manure and cover crops*: One site with a spring manure application showed no yield penalty regardless of cover crop use, and retained substantially more residual soil nitrate than expected. The result highlighted how variable manure nitrogen availability can be relative to current nutrient management guidelines (which assume about 30% of manure N is available in the application year), and was flagged as an area needing further validation.

The team has begun estimating unused (potentially leachable) nitrogen by comparing nitrogen uptake at a zero-N rate to uptake at the optimum rate.
Combining NOPP data with historical response data (now several hundred site-years) shows substantial site-to-site variation, indicating that simple single-factor analysis is insufficient.
Post-presentation discussion topics included: the potential for machine learning once a sufficiently large, well-characterized dataset is assembled; interest from council members in expanding trials on manure application timing/placement and split nitrogen applications; linking these estimates on unused nitrogen to actual leaching risk, likely requiring a modeling-based approach; continued engagement with crop consultants as a major channel for expanding participation; and outreach through regional workshops, webinars, and farmer panels.

4. Technical Presentation: Neonicotinoid Loss from Irrigated Sandy Soils — Evan Fried (UW-Madison, Department of Soil and Environmental Sciences)

Evan Fried, presenting recently completed master's thesis work, examined the loss of neonicotinoid insecticides and their transformation products below the root zone in irrigated, sandy Central Sands soils, an area characterized by shallow sand-and-gravel aquifers and intensive, irrigated agricultural production.
The study was conducted over 19 months across two potato fields at the Hancock Agricultural Research Station. Thiamethoxam and imidacloprid were applied in-furrow at planting under three irrigation treatments (65%, 85%, and 100% of crop evapotranspiration demand) with and without an interseeded barley companion (cover) crop.
Leachate was collected from 24 passive capillary lysimeters per field (48 total) installed below the root zone, sampled biweekly during the growing season and monthly in the off-season, and analyzed by LC-MS for parent compounds and eight transformation products.
Below is a summary of the key results:

- Thiamethoxam was recovered at far higher rates than imidacloprid, a disparity only partly explained by differences in solubility and soil binding; the remainder is thought to reflect degradation to compounds outside the analytical suite or losses not captured by the mass balance. A small number of large drainage events accounted for most of the mass recovered in the lysimeters, underscoring the strong role of drainage/hydrology (rather than treatment) in driving losses.
- Transformation products were detected in nearly all leachate samples, generally at concentrations one to two orders of magnitude below the parent compounds, but they made up the majority of neonicotinoid mass detected in on-site groundwater samples. Monitoring only the standard parent compounds would have captured under half of the total neonicotinoid concentration found in groundwater at this site.
- Irrigation rate and cover crop treatments showed no statistically significant effect on drainage, neonicotinoid leaching, or nitrate leaching, likely due to the relatively small absolute mass losses involved and limited replication.

Recommended future work includes longer-term monitoring without additional neonicotinoid inputs to characterize ongoing transformation in the deeper vadose zone and aquifer, expanding well and compound monitoring, and better quantifying soil-bound residues to close the mass balance.

In discussion, known analytical recovery limitations for the transformation product desnitro-imidacloprid were noted as a likely contributor to the apparent underestimation of imidacloprid mass. DATCP staff confirmed desnitro-imidacloprid is not currently part of the state pesticide monitoring scan (which is adding imidacloprid-olefin and imidacloprid-urea) but noted it as a future priority.

5. Agency Updates

Department of Transportation (DOT) – Barry Paye

- This past winter was difficult for winter maintenance: rather than one major event, a high number of smaller storm events across the state led to salt supply shortages in parts of northern Wisconsin, straining the maintenance budget even before a major snowstorm in March.
- DOT continues to coordinate with DNR on MS4 stormwater permit compliance and runoff modeling/data collection from DOT projects and facilities.
- The department's long-serving Environmental/Engineering Services chief, with the agency over 35 years, is retiring in June; the position is posted.

Department of Agriculture, Trade and Consumer Protection (DATCP) – Robby Personette

- Staff are finalizing several nonpoint monitoring reports (field-edge monitoring, surface water monitoring, and targeted sampling) for posting to the DATCP website, and are evaluating 15 years of surface water monitoring data (presented at the April AWRA meeting).
- For 2026, DATCP will continue coordinating surface water sampling with DNR, focused on the Sugar River watershed. Field-edge monitoring sampling began in April; targeted sampling begins this summer, focused on Dodge, Marquette, and Vernon counties.
- Three new compounds, including two imidacloprid metabolites, have been added to the pesticide monitoring scan, bringing the total number of pesticides tested to 118.

- The Nitrogen Optimization Pilot Program funded 18 projects for 2026 to encourage producers to optimize commercial nitrogen application over at least two growing seasons.
- The Producer-Led Watershed Protection grant program is working on its annual impact report, with no major new updates to share.
- Rule updates: ATCP 52 was updated to incorporate the Nitrogen Optimization Pilot Program and a crop insurance premium rebate for cover crop planting, effective April 1, 2026. ATCP 29 (pesticide use control administrative code) was updated to align with federal changes (40 CFR), effective July 1, 2026.

Department of Health Services (DHS) – Sarah Yang

- DHS is currently interviewing candidates for a new Chief Medical Officer.
- The groundwater team is working on Cycle 13 pesticide recommendations and continues to support DNR and local health departments on site-related work.

Wisconsin Geological and Natural History Survey (WGNHS) – Sue Swanson

- WGNHS published its Biennial Report on April 14, summarizing the survey's groundwater-related activities and updates over the past year.
- A new geologic map covering the Weston and Menomonie South 7.5-minute quadrangles (Dunn County) has been released, continuing work done ahead of countywide mapping to address both groundwater quantity/quality and land-use planning concerns in that area. This county-scale mapping effort was included as a continuation proposal in the survey's new StateMap FY 2026 submission.
- The StateMap proposal also includes additional groundwater-related projects: a bedrock/hydrogeologic mapping effort addressing groundwater quantity and quality concerns in Barron County and Calumet County, and a project in Grant County to evaluate the extent and properties of aquitards overlying the heavily used St. Peter aquifer. A funding decision is anticipated this summer, with an anticipated start date of September 2026.
- WGNHS also announced the retirements of Dr. Dave Hart and Dr. Moe Muldoon, both effective June 30; both have made substantial contributions to groundwater research in Wisconsin. Information on hiring for their positions will be shared in the coming months.

University of Wisconsin System (UW) – Christy Remucal

- Part of the funding for the Joint Solicitation comes from USGS; the associated Notice of Funding Opportunity (NOFO) is expected in June, and UW is preparing to apply for future-year funding.
- The Water@UW networking group held a well-attended spring event (about 120 attendees) on the benefits and challenges of AI as it relates to water resources.
- The Freshwater@UW Summer Research Opportunity Program, which places undergraduates across the state, will welcome 29 students this summer, including several working on groundwater-related projects.
- UW-Madison has launched a new website for its PFAS Working Group, connecting researchers across campus working on PFAS; a networking event with the group and other interested campus and community members is planned for September.
- Dave Hart (different from the WGNHS staff mentioned above) is retiring in July from his role as UW-Extension lead for the Aquatic Sciences Center.

Department of Safety and Professional Services (DSPS) – Travis Wagner

- The hydrograph procedure, used to help set elevations for septic systems, remains suspended pending further research; Travis thanked Sue Swanson and WGNHS for their continued work supporting this effort.
- Minor updates were made this winter to commercial wastewater flow requirements in the administrative code appendix.
- DSPS is wrapping up winter/spring training for licensed soil testers, plumbers, inspectors, and plan reviewers. A new electronic plan review system has been implemented. Plan review volumes remain on pace with the last two years despite high construction costs, since a sanitary permit is required to obtain a building permit for new septic systems; growth continues to be concentrated in Oneida and Vilas counties.

Governor's Representative – Steve Dirks

- Steve Dirks joined by phone but had to leave before the agency updates; no report was given on his behalf.

Department of Natural Resources (DNR) – Steve Elmore

- Rule updates: NR 146 (well driller/pump installer licensing) and NR 812 (private well construction) took effect March 1, 2026. NR 140 rulemaking to establish groundwater quality standards for six PFAS compounds is ongoing; a draft economic impact analysis was published in April with comments due May 7, which the agency is now compiling, with a further public comment period on draft rule language expected later this year. In February, DNR sent DHS a formal request for recommended groundwater standards for 21 additional substances, including several pesticides.
- NR 809 (Safe Drinking Water Code) revisions are underway to incorporate federal EPA maximum contaminant levels and the new Lead and Copper Rule, along with updates to Consumer Confidence Report requirements. The Lead and Copper Rule revisions were published May 1, 2026; the remaining NR 809 revisions are expected to be published July 1, 2026.
- New PFAS legislation passed by the state legislature and signed by Governor Evers in April 2026 creates new PFAS grant programs. Initial program focus areas, expected to launch this summer or fall, are private wells, schools/childcare facilities, and biosolids/wastewater testing; a second phase in 2027 will focus on grants related to irrigation and agricultural sampling, wastewater, and landfill leachate. Public input on program implementation is welcome via the DNR PFAS Laws website.
- Ongoing PFAS sampling of private wells in Oneida County shows about 14% of tested wells above the DHS drinking water health advisory level and about 23% with detections below the advisory level. Initial monitoring results under the new federal PFAS MCLs for public water systems from March through April 2026: 6.4% of tested systems exceeded the PFAS MCLs, and 2% exceeded the EPA Hazard Index.
- The next PFAS External Advisory Group meeting is scheduled for June 19, 2026.
- Information on regulated PFAS sites is available through BRRTS and the DNR's PFAS interactive data viewer; the most recently reported site is the Brown County Airport.
- Staffing updates: Joe Lourigan, hydrogeologist in the Waste Materials Management program, retired on May 8; the program is recruiting for an emerging contaminants hydrogeologist position as well as Joe's former position. In the Drinking Water Program, DNR hired Ben Degner as a new hydrogeologist in the Private Water Supply Section and

Stephen Bartlett as a hydrogeologist in the Groundwater Section. DNR is also interviewing for the Public Water Supply Section Manager position, following Adam Dewees's retirement in January 2026.

- Reminder: GCC report edits are due June 1; members without a My Wisconsin ID or having other access issues should contact Robin Wagner.
- Steve Elmore acknowledged the recent retirement of Bill Phelps, a longtime active contributor to this group, noting he will also be recognized at the next Natural Resources Board meeting.

6. Closing Remarks

- The council confirmed the next meeting will be held August 21, 2026; suggestions for locations, speakers, or topics can be sent to Carla Romano.
- The meeting was adjourned following a motion and a second, with all members in favor.