

**PRIVATE WATER ADVISORY COUNCIL**  
**Schmeekle Reserve Visitor's Center, Stevens Point**  
Meeting Notes – April 13, 2023

**1. Introductions**

**Council Member Attendees:** Pete Chase, Steve Tessmer, Scott O'Brien, Bruce Walker, Terry Marshall, Dennis Crow, Kevin Olson, Tim Butterfield, Bob Aune

**Other Attendees:** Jennifer Peth (DNR/DGPW), Matt Silver (DNR/DGGW), Marty Nessman (DNR), Stacy Steinke (DNR), Frank Fetter (DNR), Bob Gundrum (DNR)

**Departing Members:** Eric Scheutte, Matt Niffenegger, Scott Haupt (replaced by Tim Jenks)

**Vacancy:** Pump and Well Suppliers

**2. School Wells (Daycare) Regulation Process – Jennifer Peth (DGPW)**

Jennifer Peth, DNR Northern Region Public Water Supply Specialist, gave a presentation on regulating wells at TN and NN public water system day cares or schools before and after the July 1, 2020, NR 812, Wis. Adm. Code revision. Discussion, questions and comments included:

- Two types of non-community public water systems – TN & NN.
- TN & NN monitoring requirements
- 1994 NR 812.07 "School" definition vs July 2020 definition
- Regulation of existing private water vs public water supplies for day care or school
- Examples of non-conforming daycare and school wells
  - Casing depths in unconsolidated
  - Upper enlarged drillhole and grouting requirements
  - Casing diameter
- Contaminated well requirements and current MCLs and enforcement
- Requirements to replace well that was found to be non-conforming.
  - Plan to replace the well if it is found to be non-conforming.
  - Timing on replacement would be decided through enforcement conference proceedings.
- WALKER raised questions on the definition of "non-conforming" vs "non-complying" and why replacement is required on wells that are brought into compliance and are providing good water.
- What is "non-conforming", when do the well replacement requirements apply and when must the well be replaced?
- If the well that is found to be non-complying is not replaced, the driller or pump installer is in violation. Concerns expressed regarding the code requirement and how it would be enforced near and long term.
  - Stepped enforcement would be used to determine well replacement details.

**3. DNR PFAS Study Update – Matt Silver (DNR Groundwater Program)**

Matt Silver gave a presentation on the prevalence and source tracing of PFAS in shallow groundwater used for drinking water in Wisconsin. Discussion, questions and comments included:

- Samples collected from 450 homes across the state and analyzed for PFAS
- What is PFAS, where is it used, what are the sources and what are its properties?
- Sampling plan, process and analysis
  - Only wells with casing no deeper than 40 ft below water table – uniform depth relative to water table across the state

- Clean hands/dirty hands samplers – minimize potential for environmental influence on sample
- Field sample blanks – water poured from one bottle to another and closes lid. Determines possible environmental influence.
- PFAS prevalence represented by box plots
  - In 70% of the wells sampled, one or more PFAS compounds were detected
  - Detection limit ranges from 0.1 ng/L to 0.5 ng/L for the state lab of hygiene and depends on the PFAS compound.
  - Limit of quantitation used to determine if sample would be used in the study
- Non-PFAS prevalence
  - Human waste indicators
  - Inorganics including nitrates, chloride and TOC
- Land use influences and p-values
  - Agricultural – lower detection, but had 3 highest values
  - Forested – lowest detection
  - Grassland -
  - Developed – no municipal water connection
- No significant correlation found for unconsolidated vs consolidated aquifer types
- Geographic results for PFBA
- Multi-variate analysis – correlations between variables determined
  - PFAS arranged from short to long chains
  - The longer the chain the “stickier” it is. Will stick more to soil or aquifer
  - The shorter the chain, the more likely it will follow water flow through the aquifer
  - Analysis showed that if you find one short chain PFAS, you are likely to find others
  - Long chained PFAS had an even stronger correlation to each other than the short chained PFAS
  - There were also some relationships found between long chain PFAS and short chain PFAS
  - There was a correlation between the occurrence of human waste indicators and the occurrence of PFAS
  - Correlation between inorganics (nitrate and chloride) and short chain PFAS
  - Positive correlation between developed land use and short chain PFAS
- Summary of findings
  - Agriculture tracers and agricultural land not closely correlated with PFAS occurrence, however, 3 highest concentrations of PFAS were found in agricultural areas and may be related to land spreading of waste
  - Septic systems are likely sources of PFAS
- Questions
  - Treatment methods - include granular activated carbon and reverse osmosis
  - NSF tests drinking water treatment systems and certifies them for removal of PFAS
  - Minnesota Department of Health has sampling network for PFAS and are at a point where they can begin to develop trends.
  - Study to determine extent of septic system contribution would be a major study. Direction of local groundwater flow would need to be determined.

4. **WGNHS Updates** – Pete Chase, Hydrogeologist

Pete Chase gave an update on Wisconsin Geologic and Natural History Survey projects. Discussion, questions and comments included:

- **New director:**
  - Search is currently underway, and appointment of new director expected within the next 6 months.

- **Recent hires:**
  - New hydrogeologist Amy Wiersma hired to focus on county based hydro studies.
  - Wiersma recently finished her PhD on radium concentrations in groundwater and has worked with municipalities across Wisconsin.
- **Projects: (Mapping, Groundwater and Outreach & Education)**
  - Mapping projects underway in 10 counties
  - USGS grants to be matched by the Survey
    - 20% of \$470,000 grant went to drilling
    - Well drillers around the state have been contracted by WGNHS
    - Environmental drillers hired to do shallow unconsolidated jobs
    - Local county well drillers are contacted to determine interest in bidding on projects that are available through WGNHS
    - 3 bids required for projects to \$5000 or more
    - Projects for \$50,000 or more must go out for public bid
    - As a state agency, WGNHS must take the lowest bidder of the 3 bids
  - Groundwater studies
    - Door county manure spreading regulations
      - Monthly nitrate and bacteria samples
      - Quarterly microbial sampling and analysis using hemodialysis filters
      - Some iron bacteria problems encountered with very shallow wells where overburden is 3 to 10 ft.
    - Statewide groundwater monitoring network
      - About 100 wells around the state
      - Some are former DOT wayside wells that are not used except for head measurements
      - Some of these wells are failing and need to be replaced and well drillers are being contracted for this work
    - PFAS projects underway
      - Rhinelander & Peshtigo studies
      - La Crosse well drilled to 500' to the top of the Precambrian bedrock to see if PFAS free public water source is available there for French Island.
    - Artesian well survey for Bayfield County
      - There was intent by one party to fill tanker with artesian water and bottle in Duluth
      - County denied use permit pending study of artesian wells in the county
      - 180 artesian wells in Bayfield county
      - 60 have been sampled, the majority had good quality water, but in 6 wells levels of arsenic were found.
      - Results of sampling presented to Bayfield County Board
    - Synopsis of work done in 2022 and more project information available at WGNHS website.

## 5. DNR Updates

### **Governor's budget – Marty Nessman**

- Proposed well compensation revisions will bring requirements closer to those required for ARPA well grant compensation
- Nitrate levels not tied to livestock
- Some proposed revisions have already been introduced to legislature
- It has been six months since start of ARPA well compensation program and the department has processed around 175 applications where in previous years the number was around 10.
- Comments:

- MARSHALL commented that \$16,000 does not cover the typical cost of drilling a new well.
- BUTTERFIELD commented that in Minnesota, pea gravel can be added with the cement grout. He does it on all 8 x 4 wells he drills. In fractured limestone, step grout from bottom up to fractured zones and then add pea gravel while pumping.
- MARSHALL questioned how step grouting was accomplished on 4" casing using air.
- 1" galvanized used along side the 4" pipe
- Pea gravel is added from the surface while pumping cement. BUTTERFIELD suggested that Wisconsin consider allowing the use of pea gravel in grouting process similar to Minnesota.
- Proposed well notification fee increase would provide revenue for Private Water improvements
- Proposed variance application fee revenue would be used to improve the well approval tracking system
  - MARSHALL questioned whether revenue might be used to put more DNR staff in the field?
  - BUTTERFIELD expressed concern regarding planning required for projects with farmers needing high cap wells. Needs to be done before they plant. Asking DNR to classify approvals and prioritize by need. There have been instances where application is in que for a year and then is forgotten. NESSMAN commented that this is handled by "Water Use" and not Private Water so cannot comment.
  - BUTTERFIELD has similar experience with landfill variances. With the fee change, can the DNR establish timelines for completion of variance requests. Not sure why it takes 6 months on the same paperwork that was submitted 3 years ago. Carbon copy of previous application, just a different lot number. NESSMAN commented that he is trying to get additional support in order to provide better customer service.

**Staffing updates: NESSMAN**

- Two compliance review assistants hired to assist with well construction and well filling and sealing reports backlog
  - Kelcie Fuhrman
  - Sophia Ziehr
- Sara Fry has filled the position vacated by Sandy Hershberger

**Compliance and enforcement field activities (field): STEINKE**

- 9552 well notifications for 2022 calendar year (purchased state well permits)
- 940 core inspections
- 1168 well notifications for 2023 as of 3/31/2023
- 129 core inspections conducted for 2023
- Now have more field experts on staff with focus on specific areas where the need is greatest
- Current initiatives include:
  - Consistency across regions in inspection and enforcement
  - Trouble shooting gaps in water sample data
  - Pump installer installs pump before WCR is submitted – no WUWN available to tie water sample to a well number
  - Proposed budget initiatives include more developer time for data acquisition and process improvement
  - Planned outreach/property transfer well inspection training and information being provided to realtors
  - Also looking at improving variance application approval processes
- Private Water Variances
- **Compliance and enforcement activities: FETTER**

- Primary Enforcement (Enforcement up to Notice of Noncompliance – NON)
  - Sara Fry is taking over Annual Report responsibilities
  - Expect some enforcement (mostly primary) from annual reports
  - Mostly “needs improvement” letters
  - BUTTERFIELD – The DNR issuing NONs for people not being diligent with paper work when there is a significant backlog in WCR processing may be seen as contradictory by some.
  - FETTER - Sara has worked through the annual reports and has identified those that are not attributable to data errors on the DNR’s part. Those have been taken out. There may be some data discrepancies that remain. But for the most part, those who receive “needs improvement” letters have been confirmed delinquent.
  - STEINKE – All of our background systems that house this data are outdated and have been undergoing upgrades. As data is migrated from one system to another, gaps have been created. The links that existed in DWS need to be reestablished. This is a process that we are working through.
  - BUTTERFIELD – Is there and estimated time frame when you expect the new systems of be caught up?
  - For the Public Water side of things, the new data system is expected to be in place by July 1<sup>st</sup>.
  - BUTTERFIELD – The Well Driller Viewer has become a good resource of information for well drillers.
  - STEINKE – At some point in the future, there will be no need for annual reports because drillers and pump installers will be able to see the same data that DNR staff see, They will be aware of what is late without the DNR having to tell them.
  - BUTTERFIELD – Any update on metal tags used for well identification?
  - NESSMAN – Too much money required to continue with metal ID tags. Other ways of accomplishing the same well identification are being looked at. Tags are useful to notify well owner of the need for maintenance.
  - OLSON – Will new system provide well number with the well notification permit.
  - MARSHALL – If someone else drills the well, you lose that number and the fee payment. It can’t be transferred to another well.
  - BUTTERFIELD – There are some drillers who purposely neglect to include the address on the well, they provide the job site address.
  - STEINKE – To mitigate some of the address and location issues, you will be required to drop a pin on the map in the proximity of where you hope to drill the well. You will be able to zoom into a map with lot lines, locate the well and drop a pin which will eliminate a lot of the current location issues. And you will be able see if you are within a certain distance from a landfill or in a special well casing depth area.
- Secondary Enforcement (Environmental Enforcement Staff involved)
  - MARSHALL – So for the closed case regarding sampling, you should be able to tell us what the violation was and how much the citation was?
  - FETTER – The citation was \$867.50, do not recall the details on the violation.
  - STEINKE – The WWWA is looking to present DNR enforcement data at quarterly meetings. They will do quarterly open records requests for that.
  - NESSMAN – the citation had to be related to more than one sampling issue.

- STEINKE – The citation was for a pump installer knowingly doing work on a noncompliant point well in a noncomplying pit. There were several other issues related to it, but the citation was written for a failure to collect water samples. They did not notify the owner of the noncomplying features and they did not bring the well into compliance. They did not take a sample and did not submit test results to the owner.

**Board Order DG-07-22(E) and DG-08-22 update (Type IL Cement)**

- Worst case and assuming options for extensions are exhausted, the emergency rule will expire on 10/8/23
- The permanent rule does not go into effect until 12/1/2023
- There may be a period of 6 weeks when we are not covered by emergency or permanent rule.
- If there is a gap, and following emergency rule expiration, the rule will not be enforced until the permanent rule goes into effect.

**NR 146 revisions: GUNDRUM**

- MARSHALL – Could you elaborate on what “contractual agreements” refers to?
- NESSMAN – An example would be a driller who has a contract to drill a well and then subcontracts that work to another driller. Another example would be someone business relationships between different entities, one company buys another company, but the purchased company continues to advertise as a pump installing or well drilling business, but all their business actually goes to someone else. Who is working for who and who is the supervisory individual?
- BUTTERFIELD – For some, liability is a deterrent to new entries into the well drilling and pump installing business.
- NESSMAN – We need to look at current barriers to new entries that exist in the code. We can change code language, but not the statute. A current barrier to new licensed drillers is the education requirements.
- MARSHALL – Another example where responsibility in contractual agreements may not be clear is when you have a company that advertises for pump installing and well drilling that contracts all work out on his own estimate sheet, and invoices back to the business even though they don’t do any well drilling or pump installing.
- NESSMAN – You could have driller who provides an estimate on a well and contracts out to another driller. Something doesn’t go right on the well and the cost exceeds the estimate. The well owner asks why they are paying more than what was estimated and why they are making payment to someone that they did not contract with.

**NR 812 revisions: FETTER**

- NRB approves scope statement: 9/27/2023
- Estimated rule effective date: 5/1/2026
- The intent is to have the NR 146 time in sync with NR 812 revision
- MARSHALL: When changes were made for heat exchange drilling in 2014, there was a single group for both NR 146 and NR 812 revisions.
- NESSMAN – If you’re a Well Driller, you wouldn’t be involved in a pump installer code revision. There will likely be some overlap between the groups.

**Licensing and continuing education**

- WALKER – How much does it save the department when someone renews online vs renewing by mail?



- GUNDRUM – The actual savings has not been quantified, but when errors occur in mailed application processing (missing signatures and late fees) the processing time for the department increases dramatically.
- WALKER – Could the department offer a discount for renewing online that would provide more of an incentive to use that option over mailed in renewals?
- NESSMAN – The renewal fee amount is set in statute, so the fee can not be reduced without revising the statute.
- CROW – The service charge that is added when renewing online is seen by some to be a deterrent to renewing online. They don't like to pay the additional fee. Postal fees are increasing, so this may become less of a deterrent to online renewal.
- NESSMAN – Renewal fees have not been changed since 1985, so it may be something that will be looked at in the future.

## 6. **Old Business**

Driller Track to Licensing – Jeff Beiriger not present, hold discussion for next meeting.

## 7. **New Business**

### **Bacteria Sampling after well is drilled, but before pump installation; why?**

- NESSMAN – Intent is to provide the best well possible. If sampling was only done after pump installation, this would be shifting responsibility away from driller and to the pump installer. This may be something that can be addressed with the code revision of NR 812 subchapter III. It would be a big change to have sampling by the driller and sampling only by the pump installer.
- BUTTERFIELD – The concern is with the validity of the sample. You should sample the end product which is after the pump is installed. I think the requirement to sample before the pump is installed should be removed. There is no reason for generating an invalid sample unless you are just trying to create more sampling.
- WALKER – In the western part of the state where wells can be to 400', there may not be an opportunity to use a test pump.
- NESSMAN – This was added with the code change in 2014, and if it is going to be revised, now would be the time to do it with the next code revision.
- MARSHALL – If there are two different companies on the job, I take the sample up front before the pump is installed, because of there is a nitrate issue, the only recourse to the end user is reverse osmosis treatment. I prefer to take the sample before anyone else does work on the well. Filling and sealing should not be the responsibility of the driller and that should be changed in the code.
- FETTER – that may be difficult to include in the scope statement.
- OLSON – You have instances when the homeowner doesn't want to decommission the well. If I don't fill and seal the well, I am in violation.
- FETTER - An NON is intended to communicate a need for clarification where something is suspected to be out of compliance. It is not an allegation. It is supposed to be an assertive ask.
- WALKER – The homeowner should be the only one receiving these notifications regarding the need to fill and seal a well. They are responsible for getting it done.
- Keep on agenda for next meeting

## 8. **Notes from January 2023 meeting -**

## 9. **Future Meeting Dates**

- a) October 2023 – WGNHS Research Collections & Educational Center, Mt. Horeb (or GEF2, Madison)
- b) January 2024 – WWA Convention, Wisconsin Dells