

PRIVATE WATER ADVISORY COUNCIL
WNHS Core Lab, Mt. Horeb, WI

Meeting Notes – Nov. 13, 2024

1. Welcome and Introductions

- a) Present: Brian Broga, Tim Jenks, Adam Scheunemann, Marty Nessman, Bob Gundrum, Bruce Walker, Jeff Beiriger, Rick Peterson, Carla Romano, Dennis Crow, Kevin Olson, Terry Marshall, James White – Wellmaster, Mike Brindley – Wellmaster, Pete Chase.
- b) Introducing Carla Romano – New Groundwater Section Manager: After earning her Ph.D. in Civil and Environmental Engineering in the United Kingdom, Carla joined UW-Madison's Department of Geoscience and later worked at the Wisconsin Geological and Natural History Survey as a hydrogeologist, focusing on water movement in fractures and the presence of nitrates and pesticides in groundwater. In 2022, she joined the Wisconsin Department of Agriculture, Trade and Consumer Protection, where she focused on agrichemical contaminants in Wisconsin waters and fostered collaborations with state and local entities. Passionate about water and the environment, Carla enjoys canoeing on the Kickapoo River with her husband and taking daily walks at the Pheasant Branch Conservancy with her furry friend, Ragù.

2. Wellmaster Press X Press® casing connection presentation (James White / Mike Brindley)

Nessman: This is a new product being introduced that does not meet DNR code requirements and is not currently approved for use in Wisconsin. Wellmaster would like to have this product approved for use in Wisconsin. This presentation will introduce the product to the DNR and to Wisconsin water well drillers present at the meeting. The DNR is seeking feedback from water well drillers as to whether this product might be a good fit for Wisconsin.

Wellmaster presentation: Wellmaster has developed a reputation for designing, manufacturing and supplying innovative Press x Press® coupling solutions for ground water drillers. Wellmaster's no-thread, no-weld couplings are made in Ontario and have helped drillers overcome challenges such as broken pipes, damaged threads, and work on artesian wells where threaded or weld-on-casting connections are problematic. Wellmaster manufactures Press x Press® couplings in 4 1/2", 6 5/8", and 7" diameters. The 4 1/2" version was designed specifically for the Florida market where it has been widely adopted as an optimal solution to connect casing and where unit sales have grown exponentially. To make this product broadly applicable for the entire North American and global markets, Wellmaster is developing a 6" version of the coupling. Beyond water well drilling, there is potential to use this design in the structural piling sector, and for drilling potable water wells in water and WASH access challenged areas around the world because of the inherent ability to simplify product procurement and increase in-field drilling resiliency in challenging, remote locations. Benefits of Wellmaster's Press x Press® Couplings Wellmaster's Press x Press® couplings provide a no thread, no weld, friction taper connection for water well casing and structural piling. By using the same downward force used by drillers to advance the borehole, Wellmaster's solution connects and seals the casing.

The Press x Press® design has definitive advantages over existing options, including the ability to accommodate plain end rather than beveled or threaded casing and the fact it does not require welding. The design allows for more durable and simpler systems to be used to make the same parts with fewer materials and in less time. This is particularly important in rural environments as it is a more field ready solution in areas where there is limited access to resources and materials. The Press x Press® couplings have a life expectancy of 50-100 years, which will have a significant social impact because of less pipeline damage and need for repairs, which means safer drinking water. Wellmaster's innovative and unique Press x Press® attributes ultimately reduce input costs and project time versus conventional connections, resulting in increased profitability for drillers. Contact us today to learn more about our Press x Press® couplings or other water well products. Established in 1987, Wellmaster is a leading North American manufacturer and wholesaler of products for the ground water industry. Our customers and distributor network rely on our ingenuity, superior quality and flexible production. Our full range of water well products can be viewed here- water well / environmental drilling products.

- No-thread, no-weld; drop on and start driving steel casing connection
- Lab and field-tested equivalent connection to thread and coupled, and welded casing
 - Watertight
 - Pull tested
- Significantly lower net cost for installed casing
 - >80% reduction in installation time compared to welded connection
- More resilient connection during installation
- Increased driller health and safety
- Press X Drive Shoe also available.
- Conforms to NSF International Standard. American National Standard NSF/ANSI 61-2008
- Test data shows all elements of the Wellmaster coupling conform with NSF 61 standards.
- Validation criteria developed in consultation with Florida St. John's River Water Management District
- Exceeds the minimum pull back test strength requirements of casing.
- Exceeds the in-field pull back capacity in most circumstances
- NR 812.11 Well construction equipment and materials discussed. Wellmaster wishes to work with the DNR and Wisconsin drillers to develop a path forward and to determine next steps towards approval in Wisconsin.

QUESTIONS:

- Is it required that casing be driven to the stops in the coupling?
 - It is recommended that casing be driven to the stop. Casing diameter may be a factor in rare cases where casing is not driven to the stop.
- What is the cost comparison with welded casing?
 - Should be less. With cable tool casing for example, the threaded coupling cost is about \$5/ft. The Press X Press coupling is more expensive than a drive shoe or a couple of welding sticks, but there are savings in other areas depending on the process used.
- How does the cost compare to a weld-on drive shoe?
 - The cost would be comparable. Your distributor would be able to tell you how the costs compare. It is more expensive to produce the Press

X Press because there is more material and more machining required to produce it.

- Because of tolerances, you can have a drive shoe with a little bit of wiggle when it goes on to the end of the casing. This can lead to the drive shoe be welded on crooked which can then lead to a number of other problems. The Press X Press would not have this problem.
- Also, eliminates fire risk that comes when welding casing.
- There is also the possibility of poor-quality welds occurring on welded casing. The quality of the welder and site conditions can factor in to the welding process and integrity of the weld.
- This product is not intended for use in an upper enlarged drillhole.
- In addition to Florida, North Carolina and Oregon are looking at it or have already approved this product.
- Who are the distributors in this area?
 - 2M, Preferred Pump, Drillworks. Wellmaster works with all the distributors.
- What are the next steps needed to move forward?
 - Nessman: There is another meeting coming up in January. Drillers should think about whether they would like to move forward with approval of the product. In the meantime, the DNR will address the legal questions. We want to have DNR attorneys confirm that the code is being interpreted correctly and determine whether this product actually does meet the current code. If it does meet code, we need to determine if we want to approve the product for Wisconsin. If it does not meet code, it cannot be added to the current NR 812 revision. Current code is not specific to placement in an upper enlarged drillhole. This item will be put on the agenda for the Advisory Committee meeting in January.
- Will this presentation be posted with the meeting minutes? - Yes

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3. WGNHS Updates and tour of Mount Horeb Core Lab (Pete Chase)

- a) This meeting is taking place at the WGNHS Research and Education facility. The main WGNHS office is located in Madison.
- b) Cores in this facility had been stored at UW Milwaukee. It took 54 semi loads to transfer cores from Milwaukee to Mount Horeb. There are now 650,000 linear feet of core from Wisconsin at this location. Most of the core comes from mineral exploration. The Survey is also involved in map making. All maps and references are available for download from the internet. Resources at this facility are catalogued for researchers and explorers of minerals in Wisconsin. Coring is an expensive method of advancing a drillhole. Currently coring runs at about \$150/ft to depth of 200ft. From there the cost increases significantly as you go deeper. With 650,000 ft valued at \$150/ft, the value of samples stored at the Mount Horeb facility is significant. The cuttings themselves are not of much value, but replacement cost is significant.
- c) Pete Chase provided a tour of the facility.

4. DNR Updates

- a) Staffing Updates (Nessman)

1. Carla Ramano is supervisor of the Groundwater Section. The Groundwater Section supports the Drinking Water and Groundwater Program. They support Public Water Supply by providing casing recommendations for public wells with nitrate or other issues that need to be addressed. They also support Private Water Section with private wells having issues that need to be corrected.
2. Private Water Field Supervisor vacancy will likely be filled in January. This is a replacement for Stacy Steinke's position.
3. Policy Coordinator position is still open. This is the position that was held by Frank Fetter. There was a hiring freeze that resulted due to budget issues with in the Drinking Water and Groundwater Bureau. Things have opened up and the hiring freeze has now been lifted.
4. Question: Beiriger: Does the DNR get trickle down money from the federal government that would affect staffing of this program? If there is a pullback in federal funding to the EPA, would it affect this program? Currently, DHS people are concerned about this.
 - Nessman: Funding for the Private Water Section comes from a variety of sources. Much of it comes from EPA funding. Some comes from general revenue. The funding through the EPA comes from the Safe Drinking Water Act funding and source water protection. Its hard to say. There has been reduced funding in the past, so it is possible. Current positions will be filled, and we will keep an eye on this moving forward. There have been no preliminary discussions about federal funding cut backs.

b) Compliance and Enforcement activities (Scheunemann/Nessman)

1. The most common issues being seen is conduit that is being used on well installations, caps and seals, and grouting issues. There have been occurrences of mud and cuttings used where is should not. Also, some instances of missing landfill variances.
 - The issues with conduit have been using schedule 40 instead of schedule 80, the use of white drop pipe, the use of flexible conduit instead of rigid.
 - Schedule 40 conduit was in use for many years. The change to schedule 80 was made in 2014. With property transfer well inspections, it is noted that schedule 40 must be converted to schedule 80 whenever the well is worked on.
 - Schedule 80 does not fit the schedule 40 connector. This is a weak point that is susceptible to breakage – mostly from lawn mowers running into t
 - The DNR code requirements related to conduit were revised to mirror the electrical code.
 - Bruce Walker: Is there a provision in electrical code for the use of flexible conduit? Flexible conduit would be less susceptible to breaking.
 - BX metal flexible type conduit is allowed. Plastic flexible conduit is not.
 - Including flexible plastic conduit as part of the current code revision can still be considered if a comment is submitted.
 - Discussion on flexible conduit should be added to the agenda for the next meeting.
2. Scheunemann reported that there have been reports of individuals doing property transfer well inspections without a license.

3. Marshall mentioned that sampling requirements are becoming more difficult to keep up with in the last few years. It could be six months after the well is drilled that a sample can be taken. This is noted on the well construction report. With current construction and working with contractors, meeting sampling requirements has become more difficult.
- c) Rule Revisions (Nessman/ Gundrum)
1. Nessman reported that advisory committee meetings have been completed for now and Economic Impact Analysis and Board Orders are in progress. The Board Order includes everything that will change in each of the codes. The NR 146 and NR 812 revisions are on the same timeline for completion. Based on discussions with the advisory group, minimal economic impact is expected from each revision. The public comment period will be from January 6th to January 20th. The comment period is for the economic impact analysis, but comments will also be accepted on the board orders. The internal review process is underway and will be completed in the next couple of weeks. Approval for the comment period will be coming from the NRB is December. Updates will be provided to all at the Advisory Council meeting in January. The public hearing on the rule revision will likely be in spring. After the public comment period, comments will be summarized, and responses provided. They will then go before the NRB for final approval. The governor and legislature will need to approve them as well. The rule revisions then take affect 6 months after being published. That will be some time in 2026. There really are not any controversial issues contained in either of the rule revisions. The requirement to sample when replacing a pressure tank has been removed. The number of approvals required for installation of a non-pressure storage tank have been reduced. Approval of non-pressure storage tanks would not be required if installed above ground. Setbacks have been changed so that they do not apply to above ground non-pressure storage tanks. Use of hydrated bentonite chips has been expanded in fractured formations in bedrock to allow chips to come to the surface instead of transitioning to cement grouting at the surface. The requirement for a platform around a hand-pump has been removed unless it is a public well. The revision proposes removing requirement for approval of every well-head product or pitless adaptor. It is also proposed that a 5" well in limestone does not need to be identified. If installed before 1992 and less than 6" diameter, it is OK unless it is in granite. There have been some buried water line changes made to match the DSPS code. The variance section of NR 812 has been rewritten.
 2. Gundrum reported on the NR 146 rule revision, there was focus placed on defining the supervisory role for drillers and pump installers. Separate definitions have been provided for each license type. The definition was applied to supervisory roles in contractual agreements. Rig operator training requirements were revised to lessen total hours required. Revisions include changes to grouting and drilling fluids as well as Wisconsin Well Codes training. Lakeshore College in Cleveland is putting together a 6-hour training session tailored specifically to water well drillers. An alternative to the 6-hours of training will be provided as a 2G vertical fixed pipe performance qualification test. Required online renewal will be codified. To date, online renewals for 2025 are well ahead of online renewals at the same time last year. A provision is now in place to pay for online renewal using electronic bank transfer that does not add a convenience fee.

- Dennis Crow provided comment regarding the need to process the business registration and individual license renewal separately when renewing online. It would be better if these could be combined to one online renewal transaction.

An estimate on cost savings to the department for mandatory online renewal was presented. It is estimated that up to 300 department man-hours will be saved each year if 85% of the regulated community renews online.

3. There has been an increase in the number of applications for the Wisconsin Water Well Driller license. New pump installer and driller data will be shared at the Advisory Council meeting in January.

5. Old Business (none)

6. New Business

- a) When will water sampling report cards for 2024 be going out?
 1. These usually go out in March or April.
- b) Nessman reported that some programmers were lost over the past year. For fiscal year 2026 which starts in July of 2025 there will be a project to combine well construction report, well abandonment report, NAT and notifications into one platform. It is unknown how long it will take to accomplish this.
- c) Marshall asked what can be done to speed up the variance process for high cap approvals.
 1. Nessman: After the first of the year, Aaron Kent will be receiving additional support which will speed things up in this area.
 2. Scheunemann suggested that drillers call the local field rep and request assistance. This may result in things being processed quicker. Aaron Kent will prioritize out-of-water issues if he is aware of them.
 3. High cap was also seeing backlogs due to staffing issues.
- d) Dennis Crow asked if there would be any fee changes on licensing with the rule revision.
 1. Nessman: Licensing fees are set in statute and would require a change by legislature. A proposal has been put forward to legislature for an increase in fees for high-cap and well notification applications.
 2. Nessman: A fee structure will also be introduced for community municipal supply application reviews.
 - Marshal: Doubling the application fees for high cap will likely meet with resistance as this increase would cause the fees to be too high.
 1. Would it be possible to revise the GPM criteria for high-cap. 100 gpm would be a good number.
 1. Nessman: That would be statutory and require a change in the definition of a high cap well. No proposal has been put forward on that. It is recommended that Adam Freihoefer be contacted on that. Nessman will mention the inquiry to Freihoefer.
 2. Jeff Beiriger was asked if something could be put forward on this.
 3. Marshall: It would be interesting to learn how many approvals there are for low-cap wells on high-cap property.
 4. Kevin Olson: Whether or not it is a high cap should be determined by what the ultimate use is for the property.
 5. Scheunemann asked drillers present if they have noticed issues with pressure tests on high-cap wells related to

pitless adapters? Instances of pinholes in the pitless adapter have been noted in the field.

1. Kevin Olson had an example of this where the pinhole occurred in the faceplate of the pitless adapter.
 2. Tim Jenks reported finding new pitless adapters off the shelf with pinholes in them.
 3. Nessman commented that the industry needs to work with the manufacturer on these issues.
 4. Examples of pinholes have been seen on Maas and Baker adapters. Maas has not been receptive to feedback from the industry in the past. The portion where the problem is occurring is outsourced by the manufacturer.
- e) Positive comments were given regarding the Wellmaster presentation. The group as a whole thought that there is a place in the Wisconsin drilling industry for this type of product. Jenks reported that there are instances of bad welding of casing that would be resolved with the use of this product.
7. April Meeting Minutes
8. Future Meeting Dates
- a) January 8, 2025 – Kalahari/Lake Delton
 1. Dennis Crow, Bruce Walker will not be attending.