


Nessman

Welcome everyone to the Private Water Advisory Council meeting. It's definitely too bad we can't all be together in one room at the Kalahari like we normally would be. Is there any agenda repair we need to do before we get going?

Private Water Advisory Council
January 19, 2022


Meeting Agenda

1. Welcome and Introductions
2. Remembering David Haupt
3. DNR Updates
 - a. PWAC Board Membership
 - i. Thank you to outgoing members
 - ii. Review member terms
 - iii. New members
 - b. Staffing Updates (Nessman/Steinke)
 - c. IT Updates (Nessman)
 - d. Compliance and Enforcement activities (Steinke/Fetter)
 - e. Annual report 2019-2020 follow-up (Fetter)
 - f. NR 812 Revisions (Fetter)
 - i. Board Order DG-25-19 update (PVC Casing)
 - ii. Training for drillers new to PVC Casing
 - g. Licensing (Gundrum)
 - i. Rig Operator Training Update
 - ii. Third Party License Exams
 - iii. 2022 License and Registration Renewals
4. COVID-19 Pandemic – Impacts to Businesses and Industry
 - a. Industry “apprenticeship” and labor shortage discussion (All)
5. November 2021 Meeting Notes
6. WGNHS Updates
7. Old Business
8. New Business
 1. Change in definition of School Wells in NR 812.07(94) (7/20) - Daycares
9. Future Meeting Dates
 - a. April 2022 – Location TBD
 - b. October 2022 – Location TBD



ADVISORY COUNCIL

WISCONSIN DEPARTMENT OF NATURAL RESOURCES | DNR.WI.GOV



Nessman

First on the agenda is welcome and introductions. So, I guess we'll go through and see who all is in the meeting.

Nessman

Marty Nessman, DNR Private Water Section Chief and Co-Chair for the Advisory Council

Hanten

Michael Hanten, Clean Water Testing, exiting Co-Chair for the Advisory Council

Walker

Bruce Walker, Wisconsin Well and Water Systems representing the Wisconsin Geothermal Association

Beiriger

Jeff Beiriger with the Water Well Association, also work with the Well and Pump Suppliers and the Geothermal Association.

Peterson

Rick Peterson of Clean Water Testing also representing the Wisconsin Water Well Association.

Lang

Roger Lang, former Advisory Council member

Crow

Dennis Crow, Water Compliance Specialist out of Lodi representing Wisconsin Water Well Association

Marshall

Terry Marshall, Marshall Well Drilling, past president and former Advisory Council member.

Niffenegger

Matt Niffenegger, Niffenegger Well and Pump, licensed pump installer and licensed well driller.

Van de Yacht

Troy Van de Yacht, Van de Yacht Well Drilling, licensed well driller and licensed pump installer.

Tesmer

Steve Tesmer of Eckmayer Incorporated out of Waterloo, licensed pump installer

Butterfield

Tim Butterfield, Tim Butterfield Well Drilling, Somerset Wisconsin, licensed well driller and pump installer.

Fetter

Frank Fetter, DNR Private Water Drinking Water Policy and Enforcement Specialist

Gundrum

Bob Gundrum, DNR Private Water Licensing Coordinator

Steinke

Stacy Steinke, DNR Private Water Field Supervisor

Chase

Pete Chase, Hydrogeologist with the Wisconsin Geological and Natural History Survey.

Remembering David Haupt



Nessman

We would like to take a moment to remember Dave Haupt who we lost over the holidays. The first time I met Dave was probably 12 years ago at an Advisory Council meeting in Fitchburg. When working on 2012 code revisions, Dave had some really great ideas and presented them in a very logical, very well thought out way. I always appreciated his thoughtfulness, how much he knew, and what he taught me over the years. I really appreciated Dave and I know you guys did too, but sad to hear that he had passed. Dave was quite active on this Advisory Council and also in the Water Well Association over the years. If anyone else has anything they'd like to share, we would like to take time now for that now.

Van de Yacht

I have a funny story from when I first met Dave when I was quite a bit younger. I was talking to him about a drilling situation where I lost my tools on the job. Dave looked at me and said "I have never lost my tools Troy". And I said, you're kidding. He said, "No, I still know where they're at." He always had a good joke.

Beiriger

Thank you for doing that Marty. It's nice that you put that on the agenda.

Peterson

We will mention it at the WWA annual meeting today.

DNR Updates

Wisconsin DNR Updates

- a. PWAC Board Membership
 - i. Thank you to outgoing members
 - ii. Review member terms
 - iii. New members
- b. Staffing Updates (Nessman/Steinke)
- c. IT Updates (Nessman)
- d. Compliance and Enforcement activities (Steinke/Fetter)
- e. Annual report 2019-2020 follow-up (Fetter)
- f. NR 812 Revisions (Fetter)
 - i. Board Order DG-25-19 update (PVC Casing)
 - ii. Training for drillers new to PVC Casing
- g. Licensing (Gundrum)
 - i. Rig Operator Training Update
 - ii. Third Party License Exams
 - iii. 2022 License and Registration Renewals





WISCONSIN DEPARTMENT OF NATURAL RESOURCES | DNR.WI.GOV

PWAC Board Membership

Thank You to Outgoing Members!

Mike Hanten
Gary Kuhn
Wyatt Buttke

THANK YOU



WISCONSIN DEPARTMENT OF NATURAL RESOURCES | DNR.WI.GOV

Nessman

For Advisory Council membership, we have some outgoing numbers. Mike Hanten is leaving. Also, Gary Kuhn and Wyatt Buttke. We want to thank them for their participation and service to the Advisory Council over the years.

Hanten

I've been promoted. I'm no longer officially the lab director of Clean Water Testing. I'm now the Director of Operations at Water Right. I oversee Water Right Inc. and Clean Water Testing finance as well as the retail division at Clean Water Center. I have to refocus and consolidate duties and this is one of the areas that I have to step away from. I'm glad to hear that Dennis is getting involved to carry the torch.

Nessman

This leaves us with three openings. We have two pump installers that need to be appointed by the Water Well Association. Rick has already talked with Dennis Crow and Dennis has agreed to be on the Advisory Council. We still need one more licensed pump installer WWA appointed by WWA.

Advisory Council on Well Drilling and Pump Installing Membership and Terms – as of February 2020						
Appointing Organization Name	1st Term Expires	2nd Term Expires	3rd Term Expires	4th Term Expires	5th Term Expires	6th Term Expires
WWWA - Well Drillers						
Scott Haupt	1/31/23					
Troy Van de Yacht	1/31/21	1/31/24				
Terry Farago	1/31/22	1/31/25				
DNR - Well Drillers						
Eric Schuette	12/31/16	12/31/19	1/31/23			
Tim Butterfield	1/31/24					
WWWA - Pump Installers						
DNR - Pump Installers						
Steve Tesmer	1/31/22	1/31/25				
Matt Niffenegger	1/31/24					
Wisconsin Geothermal Association						
Bruce Walker	12/31/17	1/31/21	1/31/24			
Wisconsin Geologic and Natural History Survey						
Pete Chase	<i>No limit</i>					
Wisconsin Pump and Well Suppliers						
Scott O'Brien	12/31/17	1/31/21	1/31/24			

Nessman

I see that Scott O'Brien is joining.

Beiriger

He's not here today. Was Wyatt Buttke appointed from the Pump and Well Suppliers?

Nessman

There are two appointments from the Pump and Well Suppliers. Scott O'Brien and then Wyatt Buttke was the second one.

Beiriger

So, there's an opening there too.

Nessman

Yes, so there are 3 openings. Since Mike Hanten was the co-chair, at our next meeting in April, we will need to elect a new co-chair. The first order of business at our next meeting will be to welcome the new members and discuss the co-chair.

Marshall

When you have an Advisory Council member that's been on for quite a while and then then had to get off because of the number of years, how long before they can get back on?

Nessman

I don't believe there is anything in the by-laws that would address that. It only limits the number of consecutive terms that can be served.

Marshall

So, you can get back on if you have been off for a while

Nessman

I believe so, although we could open that up for discussion. I don't know if that's something that we want to hold a hard line on.

Hanten

I think a one-year sit-out would be more than appropriate. The people with knowledge should be the people in the room, so I don't think we should try to exclude them in any way.

Nessman

I don't think so either. But it is a bit of a time commitment and we do like to see fresh faces on occasion.

Hanten

I get it and that's all good, but a 1-year sit-out is perfectly fine.

Nessman

OK... We would be happy to have you back Terry.

Marshall

I will leave that up to the Association. I would definitely come back.

Nessman

Well, I will leave that up to the Water Well Association.

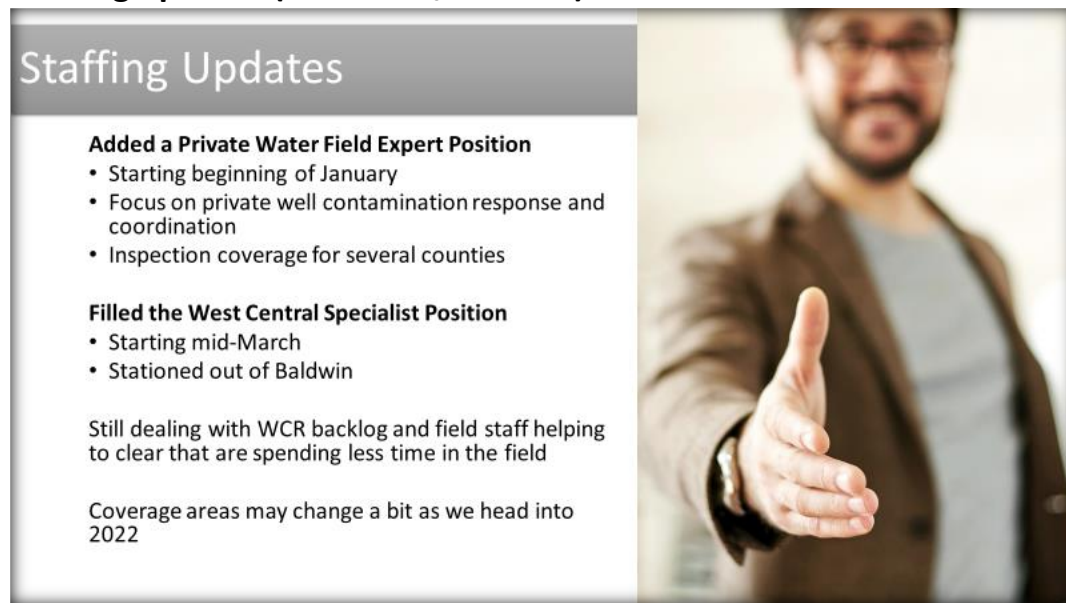
Marshall

Well, I just got a text from Rick asking if I would be interested so the question is answered, I guess. Rick, the answer is yes so, we'll make it public.

Nessman

Okay, we'll make it all official at the next meeting. We will go through the bylaws again in April, and make sure everyone understands what the makeup of the group is and how we operate.

Staffing updates (Nessman / Steinke)



Staffing Updates

Added a Private Water Field Expert Position

- Starting beginning of January
- Focus on private well contamination response and coordination
- Inspection coverage for several counties

Filled the West Central Specialist Position

- Starting mid-March
- Stationed out of Baldwin

Still dealing with WCR backlog and field staff helping to clear that are spending less time in the field

Coverage areas may change a bit as we head into 2022

Steinke

I don't have names to release yet but we added a Private Water field expert position and that will be starting at the beginning of February. The focus for that position will be on private well contamination response and coordination. The person will still have inspection coverage for several counties. So, it'll still be like what the field specialists are already doing. But then some additional statewide duties dealing with the contamination issues. And then we also recently filled the West Central Region specialist position. And that person will be starting in mid-March and will be stationed out of the Baldwin DNR office. We're still dealing a little bit with a backlog of well, construction reports and field staff that are helping with that. We haven't had people in the field as much, but we're still meeting or exceeding our inspection goals, which is good to see. You may see as we move forward here into 2022 and get these people in their new positions, that the county coverages might change for field staff. But I don't anticipate it to be anything drastic. And we'll make sure we get maps out to everybody.

Nessman

I'll just mention on the well construction report backlog, we are chipping away at that now that we have Emily McParlane hired. That's a permanent hire for Sandy Hershberger's position that became vacant

two years ago. She's coming up to speed quickly, doing a lot of reviews. We are making progress on getting rid the backlog. This month and next month, I anticipate the number of new well construction reports to be lower than they have been. We should be able to catch up in the next couple of months. But, as soon as drilling starts up again in the spring, we are going to get behind. It's just inevitable. Hopefully we can get to a place where review lag time is less and allow field staff who are helping clear the back log to get back into the field.

Hanten

Sorry if I missed this, but the Private Water Field Expert position you have starting in February, has that person been selected and hired?

Steinke

I haven't released names yet. The hiring process just completed the beginning of this week. I'm hoping to have that information out to everybody by the end of this week or early next week.

Hanten

Do you know where that person will be stationed?

Steinke

That will be included in the briefing when I send that out that information.

Hanten

Okay, and you have inspection coverage for several counties. Can you define that? Are you talking inspections in relation to private industry or working with counties? Can you define your inspection coverage term there?

Steinke

This position is similar to what the field specialists are already doing. But what makes it a field expert role is that they have statewide field expert duties. This position would still have county coverage like other field staff, but they would also cover well contamination and response coordination statewide. So, the handbook chapters that deal with contamination, special well casing depth area revision and review, or upcoming issues with emerging contaminants like PFAS questions that come in. Once this person gets up to speed, we want them to be the point of contact statewide, not just for their counties. They will help everyone in the industry. They would answer those type of questions, help train field staff and keep everybody on the same page in order to maintain consistency and avoid getting different responses by region.

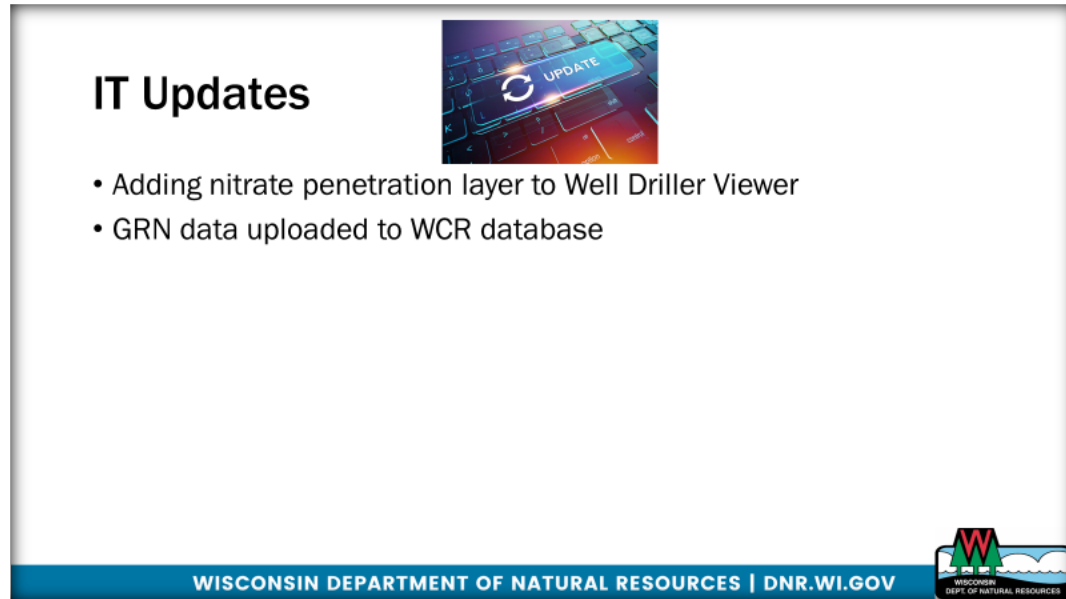
Fetter

Just to clarify for myself, my understanding is that this person will have coverage for several counties, but the number of counties and the geographic area will be smaller with less inspection requirements than other field staff. Is that correct?

Steinke

The number of notifications in the coverage area counties will probably be smaller. We still want to hit our numbers for inspections. Until we are fully staffed, we will sort that out. This is a new position for us, so we'll have to see how everything filters out. One of the really important things is that this field expert position is not an office job, I really didn't think that we could have somebody that's a quote unquote field expert without having a field presence and interacting while well drilling and pump installing work is in progress. There will still be county coverage and inspection requirements.

IT Updates (Nessman)



The slide features a title 'IT Updates' on the left and a graphic of a keyboard with a glowing 'UPDATE' key on the right. Below the title is a bulleted list of updates. At the bottom, there is a blue footer bar with the text 'WISCONSIN DEPARTMENT OF NATURAL RESOURCES | DNR.WI.GOV' and a small logo on the right.

IT Updates

- Adding nitrate penetration layer to Well Driller Viewer
- GRN data uploaded to WCR database

WISCONSIN DEPARTMENT OF NATURAL RESOURCES | DNR.WI.GOV

Nessman

This week we are rolling out a nitrate penetration layer to the well driller viewer. It's a layer to provide more information to drillers. It does not require anything of the driller or homeowner. It's not a special well casing area or requirements. It's just a tool that gives you an idea of where nitrate might be high or penetrating deeper. It will help to make an informed decision with the well owner in areas where historically there have been nitrate issues. There will be one hour of training on the well driller reviewer during the conference tomorrow that includes information on the nitrate penetration layer. It will also be a training module made available online through the Water Well Association. It's not very intuitive. We've tried to provide enough of an explanation to make it easy to use. It may take some time to work through it on your end. You can also talk about it with the water supply specialist in your region. It's a nice tool and using it is not required. We are not putting pressure on you to do anything different. It is just another tool available for you to use.

Nessman

It will allow you to click on a quarter quarter section to bring up nitrate data for that area. It will also show you the depth of the casing for the data and give you an idea of approximate or anticipated nitrate level vs depth. The data that gets pulled is not identifiable to a location, so it does not single out a well within the section.

Nessman

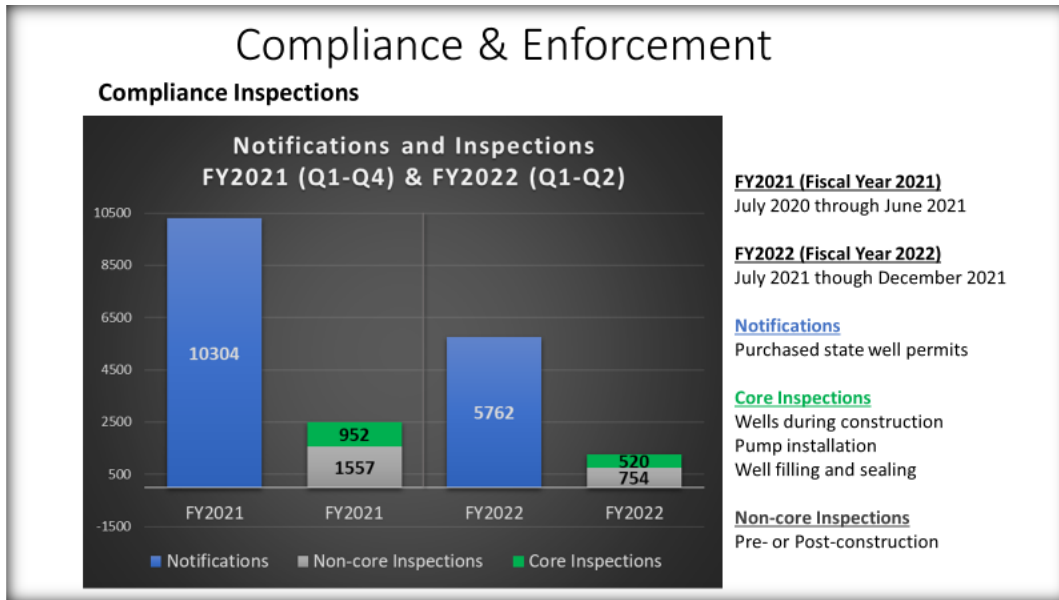
We also have uploaded GRN data, to the well construction report database. This provides the search capability that we had with the wells CD. So, we're bringing some of that data back. GRN data is "Groundwater Retrieval Network" well construction data. When a well is inventoried, sampled and issued a unique well number with an inventory form, that data is now included in the well construction report database. In the past with the well construction report viewer, when you searched for well construction reports within a quarter quarter section, you may have seen "GRN no data". Those are the wells that we are talking about. For the wells that have had unique well numbers assigned to them, if you find them in the database and you think that it is the well that you're looking for for that property, definitely use that unique well number. You can always fill out an NR 812 Compliance Inspection Report and submit it so we can update the data in the well construction report database. For instance, if you measure the casing and the depth, you can submit that form with the unique well number and we'll get that data into the well construction report database. We are also uploading the NR 812 compliance inspection reports that you send when you do work that requires that form, like measuring depth of the casing and things like that. So, we'll assign a unique well number and load the data into the well construction report database so it's available in the future. This is going to make a lot more data available to you. Especially for those real estate inspections where it has been measured and there is no well construction form, now we'll have that well construction information uploaded with a unique well number that you can use going forward.

Nessman

I have one more update. We now have a system for submitting variance requests through our online system. We call it NAT which is NR 812 Approval Tracking system. This is available if you have WAMS ID. You can submit electronically now... we did make that live a few months ago. I just want to remind you of that. It's not required, but if you have an interest in submitting electronically, you can do that now.

Compliance and Enforcement Activities (Steinke/Fetter)

COMPLIANCE INSPECTIONS:



Steinke

This (Compliance Inspections) slide details comparison between last fiscal year (July 2020, through June 2021). The first two bars on the left side of the graph shown in blue give the total number of notifications for fiscal year 2020 2021. We were just over 10,000. You can see where inspections fall out there. The green is our core inspections. Those are the ones that we're doing on site generally, while the work is being completed during well construction during pump installation, or during filling and sealing. The inspections shown in gray just below that are preconstruction or post construction inspection when we're not interacting with a well driller or pump installer in the field. The two bars on the right side are showing the first two quarters of fiscal year 2022. So, since July of this last year, you can see where the number of notifications is over half of what 2021 was. Our inspections are pretty much in line with the 520. We are still above 10% and looking good as we go into 2022. The way things are looking through winter, and with this quarter, we will easily surpass the number of notifications for 2022 that we did for fiscal year 2021. The pandemic affected the initial part of fiscal year 2021. Everything picked up in the summer of July 2020 through August and September. But there was still some impact. Everything I'm hearing from the field indicates that people are incredibly busy. Things have slowed down for winter, but it hasn't slowed down as much as it has in the past.

Unknown

Quarter one and quarter two of 2022?

Beiriger

It is the fiscal year that they use just be in June.

Steinke

It's a little confusing. We start our fiscal year in July. Those are the bars on the left-hand side of the graph and then bars on the right are from July of 2021 to December of 2021, or the first half of what we consider the fiscal year.



Nessman

Also, we had over 10,000 well construction notifications received for the calendar year 2021 for the first time since 2008. So, things are in an upward direction. That's including the last six months of 2021 that you see on the right. If that holds for the first six months of this year, we'll be over 10,000 again in this this calendar year.

Annual report 2019-2020 follow-up (Fetter)

Compliance & Enforcement

- **Total NONs issued in 2021: 51**
- **Most common violations:**
 - Noncomplying casing height (8)
 - Failure to fill & seal (8)
 - Well construction without required landfill variance (7; other well location NONs = 3)
 - Dual aquifer/Maquoketa Shale violation (3)
 - Noncompliant fill & seal (3)
- **NONs since November 11, 2021: 15**



WISCONSIN DEPARTMENT OF NATURAL RESOURCES | DNR.WI.GOV

Fetter

These 2021 totals are for the calendar year. So, January 1 through December 31, 2021. So, in 2021, we issued a total of 51 notices of noncompliance and that is entirely field staff with a couple of NONs sprinkled in from Jared Niewoehner, and I. That's pretty consistent with what I've seen since I came on board back in 2019 for field staff. My first year as the enforcement coordinator was Sandy Hershberger's last year. In that particular year, she issues 318 NONs. Now that we have a permanent replacement for Sandy in Emily McParlane, expect that reporting NONs are almost certainly going to start climbing. I don't think they're going to shoot right up to the 300 range anytime soon, but expect reporting notices of noncompliance to increase over the next year.

Fetter

The most common violations in 2021, were for non-compliant casing height, failure to fill and seal and well construction without a required landfill variance (those would have been from Jared Niewoehner). Other well location NONs would have been added to that. Also, there were three NONs for dual aquifer / Maquoketa shale issue, and 3 for non-compliant fill and seal. The rest were all ones and twos. Since our last Advisory Council meeting, field staff, Jared Niewoehner, and I have issued 15 notices of noncompliance. So, we're about on pace to repeat what we did in 2021. So that's primary enforcement.

Van de Yacht

I would like to comment on that. Before these letters go out, there's are situations we have in a couple counties like Sheboygan, Manitowoc, and Calumet, where we have enforcement down there. If this gentleman would just make a phone call to us prior to writing these letters, to find out a little bit about the situation, prior to sending letters out to our customers, I think it would just alleviate a lot of time and a lot of paperwork. I don't know what the protocol is, but this person in particular just sends out a letter without ever asking. I had two instances in the past year. I had one where I drilled a well prior to the basement being in. When the excavator came in, he filled in around the casing, because it was all of the excavation material. The basement was not backfilled yet, and this guy came out and he got me on the casing height. He sends out a letter to the guy immediately. Well, once it's backfilled, they push the dirt back around, it was now exposed 16 to 18 inches. And instead of writing that in a letter, call me up and say, "what's the situation?" and I'll just simply explain, this is what's going to take place. And I just, that's very frustrating on our end. So, I don't know what the protocol is for, for writing these NONs.

Fetter

You're talking about the field staff for those counties?

Van de Yacht

Correct?

Fetter

That's something that maybe Stacy and I can discuss with the field staff. That might be an excellent discussion for our field call next week.

Steinke

Every field specialist maybe handles some of these situations a little differently. It's probably just a little bit of relationship building that needs to go on so it would be more of a first instinct to make a phone call and get an explanation. I can tell you that especially with the casing height, it is tough to predict situations like that and know who's doing the grading and when. Oftentimes those letters do end up going to the property owner because it's the property owner who's done the grading and made your well non-compliant. That happens statewide so I understand the frustration. I've heard the same frustration from other drillers across the state. It's one of those things where oftentimes the property owner knows who did it and knows who to contact so that it can get fixed.

Van de Yacht

Instead of the letter going out, it would work towards relationship building if you only given us a call. Then we can make the call. These people get in a panic when they get these letters.

Steinke

I understand. I maybe should have added it to my slides or mentioned it before, but we did start initiative where in each region of the state, there's going to be a certain number of randomly selected pump installers who go on notice. I'm asking field staff to reach out to those people to try to build that relationship. Oftentimes we don't see those folks in the field so it's tough to have that relationship

where somebody is able to just pick up the phone and call. So, exchanging phone numbers and getting to know people all goes along with it .

Fetter

Thanks, Troy. Any other questions or comments on the primary enforcement stuff?

Marshall

In reference to Troy's situation, and with any type of noncompliance that's seen out there, this goes back many years. David Haupt was very instrumental in trying to work with the DNR on this, to get that letter sent out to the drillers prior to the homeowner seeing it. David was very adamant about that. And that was at that time, somewhat corrected. And it started back in the Sandy Hershberger days. So, we had like a memorandum of understanding you guys, that before you would send it to the homeowners, the drilling company or pump installing company got first notification, so they could actually address the owners themselves and get back to you. Otherwise, it makes the company look bad. And I think Stacy, you recognize that. So, I think we do need to carry that memorandum forward, write it up that way or however we can. Would you agree with that Troy?

Van de Yacht

I would absolutely agree. That'd be wonderful. I have no problem getting that letter, make a phone call to the DNR agent, discussing it, rectify the situation. And then take it from there. Absolutely.

Steinke

I think that's something we can definitely discuss. I just have a quick question for you guys then. This casing height instance is something we see frequently. How would you handle that? Oftentimes, what happens is you've left the site and you're done and you're maybe not coming back to do the pump work. Somebody else is. If the DNR reaches out to you and says that the site has been graded and there's only six inches of casing above grade, what would be your approach to a situation like that?

Van de Yacht

I would say post grading, we can address the situation whether it's by another pump installing company or the pump installer I'm working with. I would contact them and say guys, we need to rectify this situation and make it right.

Steinke

So, you would prefer that it comes to you and that's fine. I think those are definitely some discussions we can have. We have a meeting with field staff next week and we'll have the discussion.

Hanten

Correct me if I'm wrong, but if the homeowner said to you "No, this is my yard I had the landscaper in, and I'm done, and I refuse to grade". Then you would want the DNR to issue that NON to the homeowner. Right? And follow up with you?

Walker

If I may echo what Terry had said earlier and Troy's specific recommendation, NR 812 calls it a final casing height and if it's obviously not final because the basement is being constructed and hasn't been backfilled. It's certainly not final casing height and it might add some poor optics for the DNR for the customer to say "it's obviously not finished yet. It's in process. So, come back when it's finished and then make a determination." Correct?

Steinke

That's definitely a discussion we can have. I'm sure you all understand that oftentimes we don't get back to those sites and it's tough with that one picture in time, and you may not come back to it once the well is drilled. So, if you're preferring that we make that contact with you and you then coordinate with the property owner, or the pump installer, whoever that might be to figure out if this is going to come into compliance, or if it's an issue that needs to go directly to the property owner, you might still get the call to weld on another six inches of casing, which nobody likes to do, but at least you're aware of it.

Fetter

Terry, you mentioned that there was a MOU or a memorandum of understanding something like that. I'm not familiar with that document, if it's out there, or was it more of a de facto sort of handshake understanding? Because if it is an MOU, then I will go find it. If not, I'm perfectly willing to work with Stacy in the field staff to come up with something that is more of a policy issue without having to make it so much formal, as long as we can get it to work to everyone's satisfaction.

Marshall

I don't remember seeing something in writing as much as I remember talking about it and having an agreement. So, I know, David had many documents that he wrote and had sent in. I think it was addressed with all the section chiefs, you know, that we've been through in time. So, I don't remember seeing one wrote as much as more of an agreement that we have to start sending the letters to the contractors first, because it was putting a bad outlook on the contractors out there, to have all these letters going out to homeowners.

Fetter

Unless anyone has any objections to this, my inclination would be to make this more of an internal policy for us, insofar as we get it to work to everyone's satisfaction without making it more formal, just to keep that sort of paperwork, if you will, to a minimum. I'm open to suggestions along those lines.

Marshall

I think it's something that we can discuss in April.

Steinke

Sounds like a plan. Thanks for bringing it up.



Butterfield

It all starts with communication. I think the current DNR, staff is using cell phones and communicating with the contractors. We have a good communication back and forth which helps us tremendously in these situations, because a lot of times it's almost impossible for the DNR to know what communication is happening with the customer to the contractor. So, this six-inch well height might be holding up a \$25,000 payment and now the customer is using that angle to not pay the bill. It's nice to hear that you are going to work through the contractor to start with, and if the contractor isn't willing to do something, then obviously take it from there. But communication is the key so it's a great idea to start with a call and work with us, so you know some details.

Secondary Enforcement (Fetter)

Compliance & Enforcement

- **Secondary enforcement:**
 - **NOVs issued in 2021: 3**
 - PI work on noncomplying system= 2
 - PI work without a license= 1
 - Citations issued, 2021 = 2
 - Pumpwork on a noncomplying system
 - PTWI without a license
 - Active cases: 4 (all pump install violations)
 - 2 from 2020
 - 2 from 2021
- **Referrals to DOJ, 2021: 0**
 - 1 current DOJ referral (2017) (still) nearing closure
- **Reporting enforcement will increase in 2022**



WISCONSIN DEPARTMENT OF NATURAL RESOURCES | DNR.WI.GOV

Fetter

Moving to secondary enforcement. In 2021, we issued three notices of violation. All three were for pump installing work. Two were for work on a non-compliant system. One was for doing work without a PI license. Citations were issued in two of those cases in 2021. One of them was for pump work on a non complaint system and the other one was for property transfer well inspection without a license, which was the PI working without a license. Obviously, they needed that license to be able to do the property transfer well inspection. As of today, we still have four cases. They're all still Pump installing violations. Two are still carried over from 2020. And two are carried over from 2021. There are three investigations going on that look like they're likely to turn into secondary enforcement or in other words a notice of violation in an enforcement conference. Those are all well drilling enforcements. They all have a reporting component. But one is also a heat exchange related violation. And one is a more standard water well construction related violation. So, there are three coming down the pike that will probably be active by the April meeting or maybe even resolved by then if all goes well. We did not have any new referrals to the Department of Justice. But we still have one current DOJ referral that's been hanging on since 2017. I think I've been saying this for the last at least two or three Advisory Council meetings that it's nearing closure, I am told that it is crossing T's and dotting eyes, but it's just the DOJ has not closed it out in their records. But as far as our active work on it, we're done. So, it's just the DOJ

finishing that up. And then I mentioned this before, I just want to give everyone a heads up that reporting enforcement will increase in 2022. Emily McParlane is on board now and she'll be getting up to speed on all the things that Sandy did. As she gets better at her job, I would expect that she will be issuing more notices of noncompliance. And it's very likely that some well drillers will be seeing NONs from me based on the annual report data that we have from 2019 to 2020. Any other questions about secondary enforcement last year or to date this year?

Nessman

Frank, I just want to also mention a couple of things that in the past Sandy used to handle. One was sending out well stickers. We have been talking about the value of sending out a well sticker. You are not relying on someone having a sticker to tell you what the unique well number of the well is. You're looking at the well construction report system or the well driller viewer to try to find that well. Since we haven't sent out stickers in two years, we would need to send out something like 15,000 to 20,000 of them. What does it really get us? We have much better data now that shows a house location and which wells are listed there. So, we decided to discontinue that practice. If you do measure a while and you submit a NR 812 compliance inspection report to us and we assign a unique number, we're going to send them the stickers. But for new wells, we're going to drop that practice. If we sent them out now, we'd get back 40 to 50% of them as undeliverable because someone sold the house, or it's not sent to the well owner. So, for the amount of work that's required, we really don't gain a lot.

Nessman

Something else we have not done in a while is the "replaced well" letters where we ask anyone who's replaced a well to make sure that the old well has been filled and sealed or that it's still compliant and is still going to be used. So, we are going to do that this winter. Hopefully before the spring, we're going to send out some letters on the wells that have been replaced over the last couple of years. And those will get copied to the well drillers who drilled the well, so you will get notified of those. I know that's also generated a lot of calls for you guys. But I wanted to give you a heads up that that's starting again. And we're going to revise our letter to hopefully make it a little clearer that it's what's expected. They don't have to call you right away. But they do need to let us know the status of their well

Hanten

I have lots of comments, but I'm biting my tongue. I can tell you, it's always nice to have a sticker when you're on a real estate inspection. I also think that the previous program was flawed in that it went to the owners address to your point 40% would get there, it'd be nice if at one they were sent to the well address. I also think when they're sent to the homeowner's address, a lot of the new ones don't get put in the right place or stickered up because the homeowner is too busy at the time of their building a new house, they're swamped. So, if you sent it a year later, I think the homeowner would be more likely to put the stickers where they belong. I also think there's an education piece of this where a homeowner should care about their well and should care about the construction aspect of it. And the DNR should try to educate the homeowners on what they have and the importance of it.

Walker

I agree having a sticker on the well can also eliminate the problems where there might be a typo in the land description or something where it's difficult to place that well or the address didn't exist at the time

that the well was constructed. But when somebody goes and looks, they can see that there's a sticker there and at least be able to match up to what was drilled in the first place. I like the stickers.

Unknown

I think you need to reconsider that. I think you need to mark again. It's more information and education and they got to care about it.

Nessman

Okay, well, we can certainly reconsider that. It's yeah.

Peterson

The letter was also an opportunity to suggest to the homeowner that if they were concerned that this would be the time to get an arsenic test. Because that new construction never has one. Again, that's an important thing. Nobody seems to suggest that to the homeowner.

Hanten

It's another opportunity to educate a well owner. And that historically has always been a part of the DNR's and the industry's responsibility. But it's another opportunity to educate a well owner on how to own operate, maintain, test, and monitor their well and water system. For the DNR just give up that opportunity. I think it's a mistake.

Nessman

There are other internal things that went into that, but we could certainly talk about it and reconsider it. Especially based on this feedback. I would have brought this up in November, but I had to leave for a testimony. Both of those things involve workload for us, but we're willing to do them if you guys feel it's important.

Marshall

I don't know how Troy's company handles it. But for the ones that we get back, the DNR sends them to the contractor. The contractor has a little bit to get used to at first, but we see the importance of having them out there. So, we look it up, (the office staff does) and send them off. We get it done. Yeah, it's more paperwork and time. But when we send guys out to work on a well, that we can't find a report for, there might be a unique number out there and that really helps a lot. So, I think we need to go back to it and get them out there.

Van de Yacht

We try to do a lot of work through our contractors, not so much homeowners. We deal a lot with the contractors, and educate them on this is what you do when you get these stickers, because they're going to go to our builder, per se. So, it goes to the builder and then we want them to, in turn send them back to their homeowner.

Nessman

We'll give you guys a heads up if we are sending those out again. We'll get something out by Gov delivery. And we'll let the Water Well Association know as well. I appreciate this discussion. It's



something that should have been brought up before we talked about eliminating it, but it's not too late. We haven't gotten to the point where we were ready to do either of those things yet. But we are getting close.

Fetter

There was a question on what this picture is of. This is a picture taken by one of our field staff that I think is a great illustration of why it is very important to do a proper spring development. This is a spring box that clearly was non-compliant, based on the fact that there were dead rats and the remains of dead rats in the spring box. It was a potable and was being used as a potable water supply.

Compliance & Enforcement

- **Secondary enforcement:**
 - **NOVs issued in 2021: 3**
 - PI work on noncomplying system= 2
 - PI work without a license= 1
 - Citations issued, 2021 = 2
 - Pumpwork on a noncomplying system
 - PTWI without a license
 - Active cases: 4 (all pump install violations)
 - 2 from 2020
 - 2 from 2021
- **Referrals to DOJ, 2021: 0**
 - **1 current DOJ referral (2017) (still) nearing closure**
- **Reporting enforcement will increase in 2022**



WISCONSIN DEPARTMENT OF NATURAL RESOURCES | DNR.WI.GOV

Fetter

Most of you got a letter from me back in early November saying that we hadn't heard anything from you on an annual report that we had sent out in July. Almost immediately, I started getting calls from people saying, what are you talking about? We never got anything from you in July. And so, it became clear that a lot of the folks that got this second letter, or what we thought was a follow up letter to the annual report, never got their annual report. Just to back up a little bit. We recognized that with Sandy gone, we hadn't been sending out the annual reports for two years. So, I was tasked with generating that report and sending them out. When I contacted our mail contractor after we started getting these reports back from my November letter, they first said oh no, they went out just fine. Well, please check. So, they checked and got back to me said of the 1112 annual reports that you gave us to send, we only sent 530 of them. And we have no idea who did and who didn't get their annual reports. So, for those of you who may have been in contact with me after that November letter, you probably heard me say, out of the gate, "So did he get the annual report?". Needless to say, about 75% of the people who got this following letter did not. So, what I've done is I have resent the annual report. We also included the notification with no corresponding well construction report records to everyone who asked for them. So, 112 of the 138 people who got those letters, asked for the annual report, and or the notification records to go through them, sent them out again. However, Marty and I decided that we still don't know who did and didn't get their annual reports. So, you're probably for those of you who did get one in July, and then may have gotten another one after I sent you follow up information, you may be

getting a third copy of the 2019 2020 Annual Report. We're working with that mail contractor to make sure that this screw up doesn't happen again. We'll send them out again, hopefully soon. So far, I don't have an ETA from them, but hopefully, it'll be in the next couple of weeks. That said, most of the folks that contacted me after the November letter have either explained where the data disconnects are, or have given me their information, and it's pretty clear where that's going on. So, there are a handful, and ironically, they're the outfits that have the worst looking data disconnects, never responded even to the November letter. Some enforcement will likely come out of this from me. I will probably be sending out some NONs for reporting issues. I have already given Emily McParlane the heads up that I'm handing this off to her for March for the 2021 annual report which should go out in March. I'll be working with her to make sure that she's up to speed on everything. From 2021 forward, we should be getting those annual reports out to everyone more or less on time as Sandy did before she retired. We do know that a lot of the data that show up in the Annual Report like missing samples and stuff, there are absolutely legitimate reasons for that. And or we do know that somehow, the data are getting shunted into the wrong table in our database, somewhere between the person taking the sample, getting to the lab, the lab reporting it to us and then sometimes it's being placed in the GRN table, which is not where we draw those data for the annual report. We draw that from a different table. The acronym is WATRS.

Marshall


On the sampling issues. And I don't like to blame things on the pandemic, but it's very true that because, of the way building has been this last year, it is so difficult with a lot of our contractors not being able to get projects done in time. Some projects get put off. I've got samples piling up on my desk right now, for next spring. We may be done, and we may have our installs done, but if we didn't pull a sample off of a test pump, our sample naturally is late. Natasha noted on the bottom of the report that it's going to be delayed. But I think the sampling issue needs to be kind of looked at very carefully as far as the NONs on it. Because people just aren't able to do things in a timely manner because of material delays and stuff like that.

Fetter

That's a great point, Terry. I have two things to say on that. First of all, if it's noted that the sample will be late on the on the well construction report, that does show up in the Annual Report with an asterisk, and that is not something that concerns us terribly. And secondly, and most importantly, I would have to say that the issue that you described is, by far, the biggest problem that we've had with missing samples, samples not linked to a WCR. I would say, 80% of the folks that responded that had numbers in that column. At least some of them were that issue, and we're aware of that those folks are not going to get NONs. We recognize that that's not something that really anyone has any control over. The folks that are probably going to get NONs are the people that just aren't responding to us when we're saying, Okay, we sent you an annual report, we sent you a follow up letter, we sent you another Annual Report, we're still not hearing anything, and you've got really disturbing looking reporting numbers. So, and, and then again, something that I point out, when I'm talking about notices of noncompliance, notices of noncompliance should be worded saying, "we think you may not be in compliance, we're not saying we are alleging you are out of compliance, we're saying this doesn't look right, we think there may be a problem. Can you help us with it? So, when we allege that you've done something wrong, that's when we're in secondary enforcement realm. I tell field staff that notices of noncompliance are essentially an assertive ask for assistance and a notice that something doesn't look right.


NR 812 Revisions (Fetter)

NR 812 Rule Revisions



- PVC Casing Rule Revision – DG-25-19
 - PVC Study group met again on 11/30/21 at the request of the WWA to address concerns
 - Agreements reached on several points
 - Use of PVC casing in crystalline bedrock prohibited
 - Maximum annular space requirement removed
 - Estimated *potential* annual savings to well owners reduced to \$727,195 from previous estimate of \$893,095.
 - “Green Sheet” is currently being routed for signatures
 - Plan is to go before the NRB in February 2022

WISCONSIN DEPARTMENT OF NATURAL RESOURCES | DNR.WI.GOV



Fetter

The PVC casing rule revision or Board order DG-25-19. After the public hearing, Marty and Jeff had a discussion about the Water Well Association's objections. We decided to reconvene the PVC study group to see if we could address the concerns that the Water Well Association brought up. So based on that meeting, we did revise the Board order and the two main issues that we have changed are that we have removed the ability to use PVC casing in crystalline bedrock. Crystalline bedrock is granite, gabbro quartzite, etc. It is defined in the term bedrock in NR 812.07. We are not going to allow the use of thermoplastic casing that terminate in crystalline bedrock. The other one was where we initially had a maximum annular space of four inches. It was pointed out to us that this could be violated by the geology without the driller having anything to do with it. We are trying to go to a performance-based code as much as possible. And so, the drillers should be on the hook to make sure that their grout envelope does not cause heat of hydration and pressure damage to the casing. That also required that we modify the economic impact analysis. Initially, our estimate of potential annual savings to well owners (I say potential, that's not what we predict would happen), the best-case scenario savings to potential well owners initially was \$893,095. That's been revised downwards to \$727,195. The green sheet (in other words, the materials that get routed around the DNR for signatures for us to be authorized to go before the Board) was currently being routed. We have all the signatures, so we have the go ahead to go before the Natural Resources Board at the February 2022 meeting. With that, I know that there is probably going to be a lot of comments about this.

Chase

Why was the use of PVC casing and crystalline bedrock prohibited?

Fetter

One of the issues was the concern about really tight crystalline bedrock formations that don't yield enough. We initially thought that we would allow some drill through for reconstruction of wells when

there isn't enough yield. The Water Well Association and industry members of the PVC casing study group, were very much opposed to that. My understanding is that in crystalline bedrock, you're going to have too many wells with insufficient yield. If we use thermoplastic casing, there will be no alternative other than filling and sealing the well and constructing a new one. Did I get that right Marty?

Nessman

The primary concern is that if you can't drill through it, why install it in first place? If you can't reconstruct a granite well, and deepen it or fracture it, why would we allow it to be drilled in the first place? In our original proposal we were allowing for drill through for the reconstruction, but then we removed that from the revision as well.

Fetter

It never got into the original Board order but our recommendations out of the PVC study group were primarily for allowing drill through came from DNR staff and after we presented those recommendations, it was pretty clear that that was not something that our industry partners, nor the Water Well Association was willing to support. After our meeting on November 30th, we tried to figure out how we could massage that. And so, in the reconstruction or in allowing what tool could be placed down the casing for development of the well, we did use the term reconstruction, which infers the use of a tool, or drill through. That was not going to fly with the Water Well Association. And so, we removed it.

Beiriger

Remind me of the dates for that NR Board meeting?

Fetter

I think it's the 22nd or 23rd. I'll have those dates for you before the meeting closes.

Beiriger

That sounds right, given their typical timing, but okay.

Unknown

With this drilling terminated in bedrock, is that only six-inch thermoplastic casing?

Fetter

Yes, six-inch casing is still the minimum for bedrock.

Marshall

You took the maximum annular space requirement and removed it. What are you calling the annular space requirement, then? Because if you're setting your PVC casing in an upper hole, you've almost got to have a 10-inch upper hole to run your tremie pipe to the depth that you need to. This almost has to be done tremie method. Am I not correct?

Nessman

You are correct. That was a maximum requirement not a minimum.

Marshall

So, minimum would be 10 inches then?

Peterson

I'm not sure if we specified the minimum, I think we specified the minimum as two inches larger than the nominal casing diameter. So, it has to be at least eight, but we had a maximum of 10 in the code before. That's what we removed.

Marshall

This isn't enough. Troy, I need you to step in here. We all know what it's like to try and run three quarter and half inch tremie lines down alongside of pipes.

Van de Yacht

Yeah, on a seven- and eight-inch hole, you're going to build so much pressure on your tremie line. It's going to be a nightmare.

Marshall

I went from doing eight-inch rolls and fighting to get the different types of grout lines and stuff like doing cloud plastic. We just totally switched over to the bigger the whole, the easier to run the grout pipe in and out. It just it saved a lot of hassle. I don't agree with this going to eight inch when running tremie pipe? I need to look at it.

Nessman

Would you apply that to any drilling or just to the PVC?

Marshall

You're going to have to look at it for other types. Whenever you're running a tremie pipe, you got to have a bigger a bigger annular hole. if you're pressure building, it's a totally different story. If you're Braden head or some other type of method, it's a different story. But when you're running a tremie pipe it's been a problem getting tremie pipes in.

Nessman

We've certainly seen problems getting tremies out too.

Marshall

So, this needs to be looked at guys.

Beiriger

In theory, are you suggesting that you need to have a 4-inch space?

Marshall

Basically, this is going to apply to plastic more than anything. Because with the steel casing, you can Braden head grout it, whatever you want to do. And then you can do your eight inch. And there's a lot of guys that do the Braden head grout. So, it's just not just six inch only. I mean, you can't say that. It's

when you're running the tremie pipe, if you elect to do it that way, it should be a 10 inch. Would that make more sense, right.

Van de Yacht

I agree. Even with the new code revision and running high solids bentonite, our practice here is very rarely do we ever put in more than 60 feet of tremie pipe, even on an 8 and $\frac{3}{4}$ inch hole. If we go any deeper than that in bedrock we will automatically Braden head it because it works so much better. You get your tremie pipe out all the time. 60 feet you can get out 80 feet. There's always hang ups trying to pull that stuff back and to get it down. I agree with you Terry, it's going to be tough to get longer strings down there, when it gets to deeper depths.

Nessman

I don't know if we can do anything about the language at this point, unfortunately. But we'll take a look at it again, and make sure we were straight on what we're actually proposing.

Marshall

I think on the PVC you can change the language, though. You can't change it for steel.

Nessman

It's already on its way to the Natural Resources Board. So, I guess I'm not sure what we can change.

Fetter

Maybe I'm missing something, but it sounded to me like what you're talking about is that you need adequate annular space to get a tremie pipe down regardless of the casing type. Braden head and those types of grouting processes aren't really going to be appropriate for PVC casing, so we're really talking about something that would be a larger issue than just for PVC casing. If, I'm understanding your point, we actually should address a minimum annular space for any upper enlarged drill hole that is being grouted using a tremie.

Marshall

You can do that, but with PVC casing, it is so much more important here, that you get adequate seal all the way around it and that pipe is centralized. With steel casing, most guys are doing what David Haupt stressed very much. Putting a steel casing in I have the opportunity to drive on it, create a seat. And then if you have a problem getting a tremie all the way down or if it hangs up, it's getting done, and you're doing a good job. It's a little bit more critical here with the PVC.

Fetter

I think certainly this is something that I will add regardless of what happens with this particular Board order, addressing the potential need for a minimum annular space for tremie grouted wells should be on the list for the next code revision. Because I think what you're describing may be more important for thermoplastic casing, but if I understood you correctly, it really could be an issue for steel cased wells as well.

Marshall

The issue is how drillers are handling it. Some guys would take and tape a piece of coil plastic to the bottom of their pipe. And when they got to the bottom, they Jerk it off, and then they'd retrieve it as they go. But with PVC you don't have the ability to that. I just think it's a quite a bit more serious with PVC.

Fetter

I agree. But also remember, we are trying to make the code performance based. The idea was we need to let the well driller use their expertise and their knowledge to do what they know works. Give them those options while keeping it within the bounds of the code. I'm not trying to argue the point so much as to remember that we are trying to keep that in mind while we are making code revisions.

Nessman

We'll take a look at what we have in the revision and see if we can address that before it goes final.

Marshall

One other question I have is when you're constructing these types of boreholes with an upper hole, then you have your pilot hole set. You go back in and then drill your lower hole. Are you requiring all these types of wells to be drilled with a drilling mud? Or are they also being allowed to be drilled with air?

Fetter

We don't specify. You need to keep the upper and enlarged borehole open. Again, it's a performance-based idea. If you can't keep the hole open with air, then PVC probably isn't the appropriate casing to use for that particular well.

Marshall

I understand that. When you take and you construct the entire hole, with this type of theory, you're drilling down into the water table 40, 60, 100 feet, whatever, and if there is any type of contamination up above, and your air drilling it are we possibly introducing or having a better potential of introducing contamination into our aquifers? In some of these hilly areas like Elroy or Mauston, we'll set 200 feet of pipe, but we're setting this to take care of the sloughing and we're normally not into the water table. Are we possibly creating a problem down the road that we're not seeing? Troy can you help understand where I'm coming from?

Van de Yacht

To be honest, the way it has been described to me how this is going to be done, I can't see how using PVC will ever work for me. I don't see it happening and there's going to be too many variables. To drill the hole top to bottom. I went down to Lafayette, Indiana and I worked with Gildan brothers and what they did is drill the larger hole and put in a five-inch casing drove a five-inch hole in the limestone. All their other holes are drilled down in limestone with tricone and hammer bits. So, when I caught wind of how this is going to happen, on paper it's nice to use PVC, but it's just not applicable to the driller.

Fetter

In Indiana, they were drilling through the casing?

Van de Yacht

Yes. They would high solid bentonite, set it down with Braden head and tremie pipe. And then they would drill out the bottom either with a tricone or a or a hammer bit. They reduce the size a hole and then they went to five inch. I thought about this so many times thinking okay, it'd be nice to use PVC, but how am I going to do it? We don't know if we're going to have water or not. So, you try to construct this well, you go down and set this PVC which you think you have the water, and you go to develop it and there's nothing there. Now what?

Marshall

That could definitely happen. Because some of that water could be coming from up above and you're not realizing it.

Van de Yacht

I don't see us ever using it the way it's written right now.

Butterfield

In my company as well, we would never consider setting PVC into the bedrock. Your seal is everything. If the pipe is a foot from the bottom of the actual true drill hole, you got to be able to pound it to get the proper seal at the bottom or the whole process of grouting isn't adequate. You don't have the flexibility with plastic to do anything like that. Any plastic I've ever drilled out of, I broke the pipe on the bottom. So, attaching some sort of steel at the bottom of the PVC you're going to run into a problem cracking the casing unless, that casings grouted which no one's has the time to do let it grow out and then drill later. The seal is everything in the bottom and half the time, the point you're running through, you'll have lenses of hard and soft rock. Sometimes that can occur for hundreds of feet. So, I just don't know how you have the option to do anything. You have no option to do anything in the borehole with PVC.

Van de Yacht

Not to mention, if you're drilling in from top to bottom, if you don't upper large drill hole and a lower, those lower holes are going to offset. There are times when it's going to offset and it's going to stay to one side of the eight inch or the nine-inch hole, and then you're never going to have to seal. How it was written, is just not going to work.

Marshall

Even if someone were using the pilot type style bit like a reamer, even with that being set, even if you've got that pilot hole going off the bottom and it's somewhat centered, when you go to set your PVC in the hole with the shale trap, that's not saying that that thing is going to set straight in that hole, it could still be off to one side, and you're not going to know it, you are absolutely not going to know it because those shale traps, they fold. They don't always hold out as stiff as one thinks that they do. And now you're going to have the offset hole, you're not going to have the proper seal, and you're not going to know until you're done.

Van de Yacht

Right. It hasn't even crossed our mind to use it.

Marshall

These are things that I really didn't get into thinking about when we're at some of our other conversations. But the more you started looking into this, and thinking about the different things that can happen, I realized this is a performance code situation that you're trying to go to, and I realize that you want to do training for drillers in the DNR. But I just see too many issues that can happen down the road that you're not going to know until later on. And then we got all these customers coming at us. And now the industry's got a bad name. I really am a little scared about that. I think I said enough.

Van de Yacht

I could reach out to those guys in Indiana. They're great guys and they know what they're doing. And just to see what some of their remedies are, and how they make this successful. If their attaching some sort of shoe or something like that, but you still can't drive a pipe. Something that needs to sit on top of that rock to make a good seal.

Walker

If I may address some of those things because I've been part of the process long enough. I appreciate the feedback. I want to roll back to where Frank was talking about the maximum annular space requirement removed. And I might be a little confused with what you were asking Terry, because if you remove the maximum annular space requirement, that means the driller has the ability to drill a larger hole if necessary, so that he can get a tremie pipe down. However, there is going to have the responsibility to ensure that he knows what the mechanics and the physics or the heating the hydration, if he's using the cement grout for instance, so that the PVC casing integrity is maintained.

Marshall

Then state it as minimum and have a minimum diameter there.

Walker

We're not talking about minimums, as far as I understand right?

Marshall

No, they want to take the word maximum out, but then put a minimum annular space requirement, and then have your 10 inch there for four inch larger.

Fetter

So just to clarify, and to make sure that we are all singing from the same hymnal, we already do have a minimum annular space requirement in code that we are not changing

Marshall

For the PVC or steel?

Fetter

For casing... for the upper enlarged borehole, annular space around the casing. We're not making a different minimum annular space for PVC than we are for steel. It would be the same for both.

Marshall

And I think that's where we're going to have an issue, because the tremie pipe situation, for steel casing, you can grout many different ways. With PVC, you cannot. I think we need to note that there is going to be a difference.

Van de Yacht

I think the steel casing should have one set of rules, and the PVC should have another.

Steinke

So just a quick question, is this an issue with the use of a tremie pipe? Is it something where we should have standards for the size of the annular space just when you're using a tremie pipe for grouting? Or do you really want to split it up between PVC and steel casing?

Marshall

I think you need to split it.

Beiriger

The only thing you'd be able to address right now is the PVC issue because of the scope statement. You would have to pick the other one up on NR 812 when you make another revision

Marshall

I agree with that.

Walker

The driller will be responsible for making the hole big enough to get his own tremie pipe down. Whether it is 8-inch, 10-inch 12 inch, it's up to the driller.

Marshall

I disagree with that. I want to eliminate the problem before it starts.

Walker

I agree that the driller has the responsibility to make sure that it's grouted properly. And if he's trying to drill an upper large hole that's two inches larger than the nominal size of the casing, he's not going to be able to grow it properly. And that's going to end up with an issue. But he's going to have more issues than that too. So that kind of folds back in what you were asking about too with training, which I understand is going to be dealt with to. People are going to have to learn how to do this in areas they've never done it before. You mentioned things like a shale trap bending on the bottom. Well, shale trap is probably not the correct tool to use when you're centering the casing in the bottom of the hole on a consolidated well that's been drilled prior to the casing being set. Either a regular K Packer style or a Jazz Well Packer would be a better tool for that job that would have good structural integrity around the perimeter. A shale trap almost certainly would not. There would be a consideration that you might not have thought about where there's lots and lots and lots of liners that go into wells every single year where the steel casing is in grouted in place, and then the driller drills further and finds out there's a formation below that all of a sudden, we need to put a smaller diameter pipe in in order to solve this

caving, sloughing crevice formation. Well, if you drill the entire hole before the casing goes in, you know that that's there and you simply drill the upper enlarged hole past the problematic formation and you know, there would be less of a call to have to deal with that. Now, Wisconsin is not one geology. There's not one tool in our toolbox. It's not going to be the right fit for every circumstance. There are circumstances where thermoplastic pipe casing will work just fine. There are other circumstances where the best tool for jobs going to be steel. One other thing that I didn't see on here and this is probably to Frank the DNR folks we have discussed the potential of using bentonite chips for PVC casing, and it's my understanding, as I wrote to you that there's near uniformity in support for including chips for PVC, with dissenting caveat being that it will not be available for steel at this point in time because of what Jeff said, the scope statement doesn't include steel, and there's a reluctance on the DNRs part that grouting procedures are split up, but then that could be addressed in the next code revision too. But the industry seems to be very supportive and the evidence that the DNR has looked at appears to support that, and it will go back to what Terry was talking about earlier. We're not going to want a two-inch annular space, to try to use bentonite chips to drill to grout any kind of well, whether it's steel or PVC. But again, that's going to circle back to the driller being responsible to construct a borehole that's going to allow proper grouting of that well. Centering on the bottom like what Terry mentioned using a pilot to do the bottom portion of that is one responsible way to make sure that your holes are concentrically centered. So that's pretty much it for me for the moment.

Marshall

Frank, I see that we've got many things here that still need to be discussed. I realize you turned something into the Natural Resources Board. I understand all that. But something of this magnitude and this serious for the state of Wisconsin, I think that this needs to be brought up to more of the drilling companies and people having more chances to talk about it. And I think one way of doing it is like what we did years ago, is during our continuing education course, we actually bring this out as a topic in a drilling segment. And so that way, it gets talked about more, because with this last year, everybody being as busy as they've been, and what's been going on, people have not had the time to go online to read newsletters, but they're at continuing education courses, they hear it first-hand there. I think this needs to be addressed more, you guys.

Fetter

I think that's a pretty good transition to my next slide. It's not an exact transition. I don't want to speak for Marty, but for me, your point is noted. I think we're going to have to discuss that idea internally. But we're also past the halfway point by 20 minutes of our meeting. So, I would like to suggest we take a brief break and come back with the next slide, which is talking about how to train drillers to drill using PVC casing. Whether or not that meets what you're proposing, Terry, I think we do you need to move on in this meeting. We can address this like I said internally and get back to you guys. Does that make sense Marty?

Nessman

Things are in motion, but that doesn't mean they can't be modified. What we can modify and what the time is going to be is something for us to discuss. But we'd also want to have discussions internally and then with the Water Well Association as well. So, we should take a break.

Training for drillers new to PVC Casing

PVC Casing Rule Revision – DG-25-19

- Still to be addressed is how to train drillers new to PVC casing
 - NR 146 requires drillers using PVC for the first time complete 10 well under the supervision of a supervisory driller. (NR 146.08(8))
 - DNR plans to make this a notification requirement during the first 10 wells
 - How to provide adequate/appropriate supervisory drillers?



WISCONSIN DEPARTMENT OF NATURAL RESOURCES | DNR.WI.GOV



Fetter

Granted, based on the discussion we just had before the break, at some point I we will have PVC casing allowance in this state. And one of the issues that was brought up by the Water Well Association is how do we train drillers who are new to PVC casing. And just to give you some insight, NR146 requires drillers using PVC for the first time to complete 10 wells under the supervision of a supervisory driller. If the supervisory driller for drilling company does not have any experience in PVC casing that makes things a little tricky. In addition, once this expansion of use of PVC goes into place, we intend to make this a notification requirement for those first 10 wells. So, if a driller starts using PVC for the first time, we will have them on notification for those first 10 PVC wells so that assuming our field staff has the time, they can get out there and observe the construction process. So, the question was raised as to how we provide adequate appropriate supervision or supervisory drillers for these companies that are new to well drilling? Jeff, do you want to paraphrase what the issue is, and I think Bruce, probably will want to weigh in on this.

Beiriger

First, let me let me make a comment on what you just said. Our role, your role, the agency's role, our role as an association, the study group, all of that, is to do exactly what's happening right now, which is to hack this thing through until we have a rule that is going to be presented, but at some level, whatever is presented is going to be a discussion at the NR Board, the governor's office, various legislative committees, there's a whole lot of other people that are going to weigh in on all of this. So, I've been around this long enough to know that weird things happen. Our desires may mean little or nothing in the long run. So, the main reason we're talking about training and not to get cart before the horse is that it was a fundamental part of what the association wanted to have happen if the rule moves forward. So, this isn't a condition of "it must if this happened", but it was just one of those kind of, we need to be prepared to talk about this. Because exactly as you're saying, Frank, how do you get experience doing something that is currently not allowed in the state. So the only people who would have any experience

would be people who are currently drilling into the bedrock in Illinois, or in Minnesota, it is allowed in other states, but it would basically mean an out of state driller or a multi-state driller would be the only one to be able to have that experience, every driller in Wisconsin would have to gain their experience from somebody who is a competitor, possibly who was out of state with the exact same situation when we did the geothermal drill holes. Nobody had experience with it. And so, we had to craft a way that extended the experience of wells of a certain depth and such to allow people to say that I can go ahead and do a heat exchange drill hole, I've never done one before. But I know I can do it based on a certain experience that we created criteria. Here, I don't think we can necessarily say that there's some equivalent, if what we're talking about is something that's this important. And that's why our perspective was, what could we do that would say that somebody is ready to go out and do this in the field? What will that take? And I don't really know what we can do. But I know that there's an issue with NR 146 that's going to say, we have to have some check and balance that says somebody who's going out to do this has gone to a class that the association and the DNR have put on that they've been out on a field day. These wells are going to be supervised by NR staff. The field people are attending and listening in and asking questions and ideas and we have to pull talent in from other states. The point is, is that we've got to get this right from the beginning. You can't have 10 practice wells, that aren't constructed properly, because some of the things that you all just talked about, if this rule went through exactly the way that it does, right now you're relying on the drillers, decision making, which is fine if you've drilled 1000 steel case wells, and you're making a decision on what do we do in that situation? Not so fine if we're saying I've never done one of these before, and I don't know. Because we have to have that structure in place to say that somebody has been there, that there's another step beyond on a licensed well driller and therefore I'm allowed to do this. No, you're not by 146. And so, we've got to have this kind of work around and I think that's the point is, is that if this looks like it's going to become a final rule, we have to be jumping on this and coming up with what that training looks like, it's not something we cannot address. If the rule gets passed, and it goes into effect on the first day of the first month following, 30 days isn't enough time for us to put together a training program before somebody could legally do one of these wells, we have to address that 146 question, in parallel with this, even if the rule doesn't pass, it still has to get addressed. Now, it's not a cart before the horse, it's just the urgency with which we'll have to do it, if it passes. Makes sense?

Fetter

Absolutely. And maybe using the term cart before the horse was probably not as accurate as I should have made it? Yes, I absolutely agree that there needs to be some training. You know, we need to discuss the how, when and who for the training. And it's not just throw them out on a rig with a supervisory driller. Certainly, it's going to require and Bob, you can jump in on this if you like, but it's going to require modification of our license exam. Currently, we don't have anything about that on our license exam. So, there would be an opportunity for passive training, from the perspective of the study guide. Continuing education is obviously really good idea. Field Day is a really good idea. We've talked generally about getting a Tech College involved in this and taking a more active role. All of those things make sense. Assuming that the Natural Resources Board approves the current Board order, we would be sometime in probably the summer of 2023 before the rule would go into effect. So not that I think we have the opportunity to relax about it. But we would have some time to work on this and get something specific in place. That is not to try to get our ducks lined up in a hurry, we could be methodical about it because we essentially have at least a year between approval and the code going into effect.

Beiriger

Frank, let me make a comment that might be more general than it relates to this. Here, what we're talking about is that the 146 requirement, I think compels us to answer this question. We're not going to be able to do it the way 146 says. So, we have to, we're compelled to do that. Where I'm hoping there's a way for someone to say, absent taking this training, you don't have that endorsement, where you can go out there and do this new technique. At the same time though (this is where I'm going a little far afield) when there's a major code change, I sure would like to see where somebody requires people to attend that code change class in their next continuing education cycle, because the idea that somebody cannot go to a code class, after there's been a major code change is really, really scary. Then you could choose another class and ignore a code change. And here we have a code change. It's great for everybody to know about it. But some of the things we're talking about whenever we do a major code change, is that there has to be required education for everybody out there. And I don't know how to do that. But I'm just getting to that point of how do we compel people to go to something here? I think 146 helps us. I don't know that that's what the letter of the rule says. But I think it's where we have to hang our hat, or we got to get an interpretation or something, or we just do it. But it's really critical. And that was one of the important parts that the Association asked if this would proceed. It can't be done blindly by people just poking holes in the ground and learning on the on the go. That's just not acceptable.

Fetter

I think that's a good point. Bob, do we have the mechanism to require what Jeff just described, in other words, some sort of required training for rule revisions, either as part of continuing ed or something like that? I know that for the last rule revision, we were out there doing as much training and getting the word out as much as we could. But there were still drillers out there who managed to ignore the whole thing until they started having enforcement issues for not following the revised code.

Gundrum

The way the code reads, when it's talking about continuing education requirements, it's continuing education that's sanctioned by the department. So, I believe we have the ability to require what Jeff is suggesting that someone must attend a session on a code revision to fulfill their annual requirements. We have the ability to do that. I'm just going by the verbiage and the language that's in NR 146 regarding continuing education. So, I believe we have the ability to require that based on the way things are written.

Beiriger

So that would apply to all code changes, but what about related to this? I mean, are we able to invoke 146? so that this is a condition of somebody sort of bypassing the experiential part of being able to perform certain types of drilling? Because I don't think that sanction language is in there. And that's referring to continuing education here. This is gateway education is what I would describe as North Central technical college rankings..

Gundrum

I'm not sure. Jeff, if I can answer that directly here without looking specifically at all the details.

Fetter

Well, I have sort of a clarifying question, Jeff. I'm not sure I'm comfortable with allowing someone to move forward without some experiential training, that is the 10 wells drilled under a supervisory driller. I might be misconstruing what you're asking. Because the issue is, how do we find supervisory drillers? I'll just use Bruce as an example. Is Bruce going to want to train the Niffenegger crew on what they need to do as a supervisory driller when they're competitors. Or Terry Marshall I guess, Bruce and Terry are more likely to be drilling in the same area. Will Bruce want to be the supervisory driller for Terry's well drillers? If Terry Marshall doesn't have the required experience, and that's the thing that kind of concerns me the most. Does that make sense? I think the other issue could probably be worked out fairly. I don't think the issues would be terribly difficult to fit into the current regulatory framework, whether or not we want to, you know, kick some required continuing ed out in order to insert the code revision, something like that. I mean, that's sort of the nuts that we could work out. But I, I think the pre on the job training for want of a better term is not what has me concerned, it's how do we get adequate on the job training that fits into NR 146.08?

Walker

If I may respond a little bit to that, Frank. As most of you know, I also work very closely with Matt Kouba of Kouba drilling, he will be conducting one of the sessions for continuing education starting tomorrow. And we've had a discussion about this very thing where he and I are entirely comfortable with being part of a mechanism or looking at a mechanism that will assist in providing infield training to persons that are interested. Now, this could be way out in left field, and it's just my own personal opinion, but there's probably a number of drillers in the state that aren't necessarily equipped to drill PVC wells yet, and maybe aren't interested in drilling PVC wells and don't want to step outside of their wheelhouse until they get trained, they want to get trained before they do this. So, I'm not sure that if this goes into effect on August 1st of 2023, all of a sudden, on August 2nd the state's going to be full of people trying to do this. I tend to think drillers are going to move a little more responsibly as a species. So that they understand what they're going to need to do in order to be able to do this in a code compliant manner. And it's going to take time, and will have the ability to set up an infrastructure so that they are trained and ready by the time that the code goes into place, not just with knowledge or an infrastructure to be able to train them, but with the required equipment and processes involved with that.

Marshall

As I understand the rule, if it were to go through, currently today, there is no supervisor well driller, because we've never done this type of drilling in the state of Wisconsin. You don't have one person out there. Because this is a whole different ballgame. You have guys putting in PVC screen wells, which is under the current rule, anybody can do that. So, you can't just say this guy just because he puts in PVC screen walls, that he is knowledgeable to do the rock drilling and doing the lower hole and setting the pipe and grouting. This is a whole new ballgame. Everybody's in the same boat from day one. Would I not be correct?

Fetter

I'll give two other examples of someone who could potentially be a supervisory well driller because they do drill bedrock wells using thermoplastic casing that would be **Al Smith from ?**, he drills, bedrock wells

using PVC in Illinois, and Mark Trout, who drills in Wisconsin. So, I'm not saying that we have a plethora of people that could do it. I have no idea I've never approached either Mark or Al or anyone else who has experienced drilling bedrock wells in our neighboring states, whether they would be willing to provide the same services that Bruce offered. But on top of all that, and again, Bob, weigh in on this, please, I think at some point we have to designate what makes a supervisory driller for this stuff. And I'm not sure how constrained we are by statute and code to do that. We could in consultation with the Water Well Association and this body, determine what constitutes a supervisory driller for PVC. Did I way overstep there, Bob?

Gundrum

I'm actually looking if there is a definition for supervisory driller in the code, I don't think it is specifically spelled out as far as what needs to happen in order to be assigned to the title supervisory well driller. The way it works now, a supervisory driller for any company has to be licensed and has to complete a certificate of supervision saying they're responsible for the work done by the company. Outside of that, I'd be hard pressed to give you what's "required" in order to have the supervisory designation assigned to a driller.

Beiriger

Maybe we don't have to settle everything in today's meeting, in the interest of time. I do think there's urgency. But if you're going to explore a range of options, you have to find a way to let people do the work. But if NR 146 creates an impossible circular "you know, you can't do it because nobody's done it", then either, you need to look at NR 146 at some point and address the language there. Or in this particular case, could you use an emergency rule that would create a window during which somebody has to get that training? And if the emergency rule expires, or is extended one time, you've got 60 or 90 days, or whatever it is, and that's it, rules closed? At that point, it is what it is, there's no other way to do this. But could an emergency rule be used in a way that would allow people to get that training during that period of time, under some conditions that we draft, as a group here that says notwithstanding NR 146.08, an individual that attends this class, can be licensed to do PVC and bedrock, just tossing out an idea. But what I'm trying to do is preserve the integrity of 146. But at the same time, answer the question of how could we do this, that would allow you to do it in a short-term step. And then if you want to address what this language says, you know, going forward, great, when 146 opens up, again, deal with it. But for now, that's just, possibly a way of dealing with it. You wouldn't start working on emergency rule, until this rule has been passed. So, it will extend a little bit the time it would take before somebody could do the work, but at least it would create an avenue. The discussions can kind of be happening parallel so that it could happen fairly quickly, if this were to become final code make sense?

Fetter

Absolutely. As a matter of fact, when I was making this slide, I was thinking, what we do internally here is we have what are called winter workgroups. And in sort of, in a normal non pandemic type of year, when things slow down a little bit, field staff and central office staff have some time to work on some of these broader policy issues and deal with ongoing and emerging issues that are coming up. And I was thinking, what this almost points to is some sort of de facto, quote unquote, winter work group that Marty and Mike as his last task as the outgoing co-chair, designate several someones from the DNR and several someone's from this body or the Water Well Association, to sit down and start working on this

because it would be good to have a process in place for this. You're right Jeff, this is a larger issue than just PVC casing.

Nessman

We definitely have to be thinking of this, parallel to the rest of the steps of the rule. We can also go through our process to get our legal opinion from our attorneys as to what does the code require. What does the statute require? How can we make this fit? Until we actually have the final rule, and we know what's going to happen, we haven't been doing that yet. It's good to think about and we'll, definitely take that into account. But in the interest of time, I think we do have to move on to the rest of our agenda. Because we only have about a half hour left here. So, these are all things we'll continue to talk about.

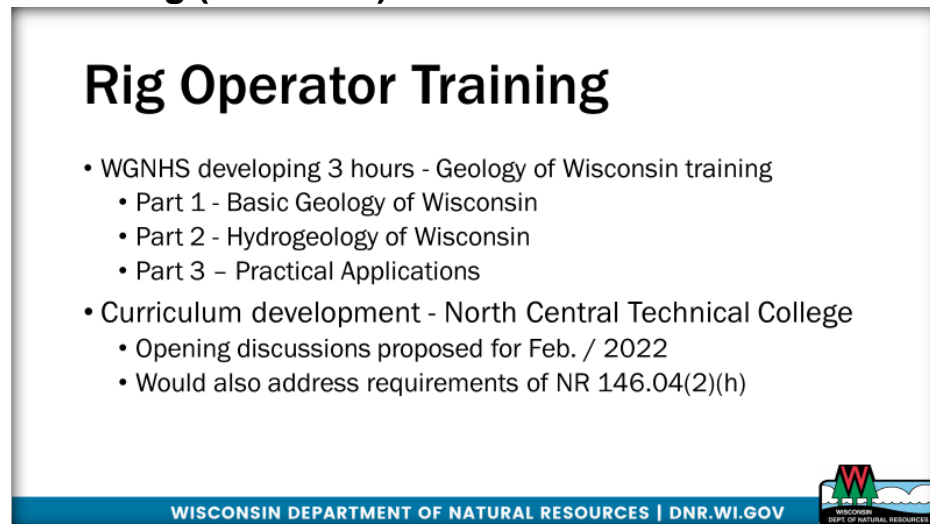
Beiriger

Hover until at least February when the NR Board meets. Unless this thing is changed before it's presented to them, you might as well just fly in a pattern above the airport because there's nothing to land until after they've made their evaluation. So, it's got time, so I think you're probably right.

Marshall

Frank, I feel one thing here and I want to get this mentioned. By doing what you're saying here, are we sending the wrong message to the NR Board that the industry and the DNR are in total favor of this well construction? Are we sending the wrong message by addressing this training thing that fast?


Licensing (Gundrum)



Rig Operator Training

- WGNHS developing 3 hours - Geology of Wisconsin training
 - Part 1 - Basic Geology of Wisconsin
 - Part 2 - Hydrogeology of Wisconsin
 - Part 3 - Practical Applications
- Curriculum development - North Central Technical College
 - Opening discussions proposed for Feb. / 2022
 - Would also address requirements of NR 146.04(2)(h)

WISCONSIN DEPARTMENT OF NATURAL RESOURCES | DNR.WI.GOV

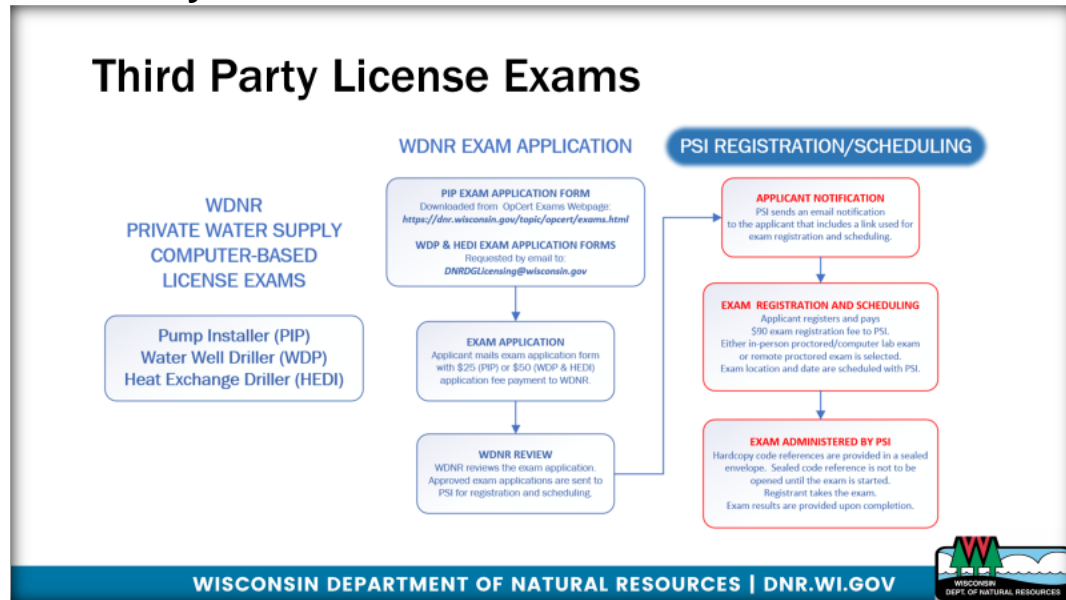


Gundrum

The DNR met with the Wisconsin Geologic and Natural History Survey including Pete Chase, Ken Bradbury, and Carson Ames on December 6th. We discussed development of the Geology of Wisconsin training that would meet the three-hour requirement of NR 146. Target offering date for the training is February or March of 2022. From our discussion, the Survey drafted an outline which we are looking at currently. It's broken into three parts based on the topics that we thought were most pertinent to Rig Operators who are seeking license exam eligibility. As Jeff mentioned, and Frank alluded to, there have

been some preliminary discussions with North Central Technical College regarding the development of curriculum for a rig operator certification program that would provide the classroom and hands on instruction in Water Well Drilling. Jeff has initiated contact with North Central College Technical College, and I believe discussion along these lines is slated to begin sometime maybe in in February.

Third Party License Exams



Gundrum

Third-party license exams are currently underway. The DNR has transitioned to all online licensed exams facilitated by a third-party administrator PSI. To get scheduled for a license exam, it requires a two-step process. We touched on this during our last meeting, there's an application sent to the DNR that's then approved and sent to PSI. PSI then contacts the applicant and sets up the exam. That's either at 1 of 7 computer lab locations around the state or it can be taken by Remote Proctor from home or your workplace if your computer is equipped for that sort of thing. There's an application fee that's paid to the DNR. There's also a \$90 registration fee paid to PSI. The exams are offered six days a week, and from the time that someone submits an application that is received by the DNR, it will be at the most four weeks from application submittal to scheduling with PSI for that exam. Code references, we talked about the open code references, those are going to be provided to all exam applicants. They will receive these references in a sealed, clear plastic envelope with instruction sheet that they can see from the outside that tells them do not open this until the time of the exam. And so again, the first exams are now being scheduled. If they fail the exam, it's a 30-day waiting period before they can reapply.

Beiriger

Just one comment, and it's probably not a big deal. Because of the emergency rule and the extension of the emergency rule, there's going to be at least a two-month gap where the emergency rule expires, and a permanent rule would not be finished. So, there's going to be a time where you won't be able to do testing because it won't be allowed. Okay, it I don't know how they're going to get around that, but they can only extend the emergency rule one time, I think and there's no chance that another rule is going to

be made permanent. So, I don't know what it's going to be but just keep an eye out for it because you may have people looking to test in a window that's they're not going to be able to test in. And they'll just going to have to sit and wait for a month or two or three until they finalize that other rule.

Gundrum

Would that also apply to Remote Proctor? You talking about in-person exams? Correct?

Beiriger

I'm talking about third party exams period. Whether it's remote or in person, if it's done with a third party, under the emergency rule that's in effect now. That's going to expire, it'll get extended, but the final rule probably won't be done before the emergency rule expires. That would apply to whatever third party testing with this the rule related to NR 146.

Nessman

We're keeping an eye on that. The permanent rule is actually going to be before the Board soon. We're on a pretty fast track to get that through. I'm not sure how that's all falling into place.

Beiriger


Just keep an eye on it. Just so you're communicating with people that want to apply for exams. Just keep an eye on it so you're communicating with people that want to take the test.

2022 License and Registration Renewals

2021 CE Attendance and Renewals Data

- 2021 CE Attendance Not Fulfilled – License Expirations
 - Pump Installers – 126 (39 in 2020)
 - Water Well Drillers – 11 (8 in 2020)
 - Heat Exchange Drillers – 2 (0 in 2020)
- Renewals Processed for 2022 Calendar Year

	Total	Not Renewed	Renewed	% Renewed	Renewed Online	% Online
Business Registrants	536	119	417	78%	218	41%
Licensees + Rig Operator Registrants	1256	250	1006	80%	581	46%

WISCONSIN DEPARTMENT OF NATURAL RESOURCES | DNR.WI.GOV


Gundrum

We had a little bit of an uptick this year in the amount of folks who did not complete the continuing education that was required during the 2021 calendar year. We made a few efforts to keep people aware of where they were as far as their continuing education, but still, there were quite a few who elected to wait until December to start addressing it. Quite a few folks. We had 126 Pump Installers, 11

well drillers, and a couple of heat exchange drillers who did not meet their requirements in 2021. As far as renewals, the total number of licensees and registrants renewed is at about 80% . If you factor in the folks who did not complete continuing education and are not be eligible to renew, that's going to probably bring these percentages up to close to 90% who have renewed for 2022.

Beiriger

Can you send this slide deck out to us afterwards? Because the way you guys are positioned on the screen, it's kind of cutting off some of the numbers. So, I don't know if there's anything to the right of percentage online, we just see the first couple numbers. But if you could just send the slide deck out afterward. That'd be great. Just in case there's anything that you know we missed.

Fetter

The PowerPoint should be posted to the Advisory Council webpage. I'll make sure I send it to our web master today.

Walker

So, we've lost 20% of the license holders from last year?

Gundrum

No. There's a total of 1256 licensees and registrants. Out of that 1256 there were 126 Pump installers, 11 well drillers, and a couple of heat exchange drillers with licenses that are expiring because they have not met their continuing education requirements.

Nessman

That 80% is how many have renewed by today, they can renew late. But we've had 80% that renewed either before the deadline of December 31, or since December 31st. But that number is going to come up to probably 90%.

Beiriger

That other number 126 plus 11 plus 2, they're not eligible to renew because they didn't fulfill. Correct? You already reduced the number down to 1256.

Gundrum

The 126 pump plus others adds up 139 that would have to come out of the 1256. That would bring the percentage renewed to 90%. So, these numbers were generated before the expirations went into effect.

Beiriger

These would not be eligible to renew, because they didn't fulfill their CE requirements.

Gundrum

That's right, they're going to have to take the exam to reinstate your license.

Beiriger

Assuming they want to. I guess that's kind of my concern is when I see those numbers, it's disturbing, because we're not in a world where we can give up 10% of our workforce. Some of those may be just pump installers that are old plumbers that never really used it and are retiring. But that's a disturbing trend to lose 10% of our workforce, and then to see what might ultimately be 85% renewal this year. If that's going to continue, that is a disturbing trend.

Gundrum

Just for comparison for pump installers, there were 126 this year, 39 that were in that same situation last year, the year prior was 51, and in 2018, it was 65. So, we were going down, but last year for whatever reason, there was a significant increase in pump installers who did not complete continuing education and whose license expired without renewal eligibility.

Beiriger

It can't possibly be for lack of work, that people are leaving the industry for another opportunity. There's plenty of work out there. So that's disturbing.

Unknown

We said this five years ago.... we did that survey and looked around. We saw the average age; I think was what 56 or 57 in the room. Now you added five years, they're in their mid-60s, and even with what we've dealt with in the last two years,

Hanten

Do you have any metrics on the 126? Or the 139? Whatever that dropped off? Do you have any average age? Is that something we can generate?

Gundrum

I don't think we have age related data in our in our database. The only time we're asking for age is when a rig operator is registering, because they have to be 18. But outside of that we don't have that data.

Nessman

We may have some years of experience, like when they were first licensed. We could look at that maybe but that would take a little manipulation of what we have in the ELC.

Gundrum

Is that something you want to see?

Unknown

I don't know. I'll leave it up to the group. It might not be that they quit. They maybe just didn't get their CE done.

Gundrum

That would appear to be the case for a lot of these individuals. With it all being online and not having the conference in January, which a lot of people usually rely on.

Beiriger

Maybe the more interesting number for us from a predictive value would be how many of the 139 actually retested and became part of the industry again. Is it reasonable to expect that they're going to reengage and want to be back in the industry? I don't know that that's totally predictive, but at least it gives us an idea that that 139 number might ultimately only be a bleed out of 60 people instead of 140. So, if you can answer that question. How long would they have to reinstate it? They would just be starting all over again, right?

Gundrum

According to NR 146, their license is expired, and they should not be engaging in the busines. So, I would think that a majority of these folks would be motivated to take that license exam and get their business back on track.

Beiriger

There's no reinstatement path other than retaking the exam. So, we could get a number based on that group of people, how many of them retook an exam to reinstate their license. That's the number I'd be interested in. And tracking that 139 over the course of the year, if you could report back to us in April, how many of them were tested in the first quarter of this year that will give us an idea of just how big that number actually is, as opposed to what it looks like right now?

Gundrum

Sure. That can be done.

Unknown

The numbers 129, 11, and 2 were from December 31st?

Gundrum

Those are licenses that expired as of 12/31/2021 and are not eligible to renew because CE requirements were not met.

Walker

You guys had a PDF slide up in the last meeting that established the number of registered pump installers, the number registered heat exchange, the number of well drillers over the past 10 years and how the well drilling has dropped off nearly 30%. And I'm looking for that slide in the notes from last meeting, but it's just notes. So, I would be interested in seeing that more. Because if that trend continues, the states could have a crisis on their hand in less than a decade.

Gundrum

Well, this data can certainly be added to the dataset from that chart and made available at the next meeting.

Walker

We don't know why these registrants haven't done their 2021 CE. Maybe it's because they're retiring, maybe they're doing it because they've fallen ill, maybe they're just haven't gotten around to taking their continuing education. But the numbers are continuing to dwindle.

Nessman

That's to be determined. It's definitely still to be determined. And we'll update you again next quarter in April. That will tell you more of what you want to know.

Fetter

We have 8 minutes left, and we still have a lot of ground to cover. Do we want to extend the meeting? Or pick what we should address next?

Nessman

We should hear from Pete Chase on updates from the Natural History Survey.

WGNHS Updates

Private Water Advisory Council

- **Wisconsin Geologic and Natural History Survey Updates**

WISCONSIN
Geological & Natural History Survey

WISCONSIN DEPARTMENT OF NATURAL RESOURCES | DNR.WI.GOV

Chase

I'll try to sneak in a brief one. So, because I know we're running short on time. I have to leave at 1 o'clock anyway, for another Zoom meeting. I just wanted to update you on a couple of the kind of more pertinent stuff to well drillers. The airborne electromagnetic survey that they did over northeastern Wisconsin was super successful for both depth to bedrock, differentiating the thickness and extent of the Maquoketa shale, and some other really useful data that I think will be very valuable inputs for the Hydro Data Viewer and water well driller when they're defining some of those dual aquifer systems. That data only covered southern Door County, Kewaunee, parts of Calumet, Manitowoc and I think northern Sheboygan County. They're going to do another set of lines in southwestern Wisconsin in the next couple of weeks to help define some of the geology in Grant, Crawford and Lafayette counties. That data is used for depth to bedrock mapping. They're trying to do a more high resolution, statewide

depth to bedrock map. That can be that data can be gleaned from that airborne electromagnetic survey. The one up in the northeastern part of the state was more focused on the shallow surface layers. They were really interested in the thickness of bedrock because of the manure spreading restrictions in that part of the state. The ones they're doing in the southwest part of the state, they're going to try to be dialed a little bit deeper. So, they can look at more of the lithology that are potential aquifers in that part of the state. That data is used for the mapping that they're doing in Grant and Lafayette counties. We're also working on a county map for Jefferson County. And the statewide Monitoring Network, which is something that I do a fair bit of work on myself, has received another grant from the USGS to install and maintain some of the wells in the statewide network. That data can be found really easily if you just Google "groundwater watch". A very intuitive website that the USGS has, you can zoom in on Wisconsin, pick any of these well in the network. Click on that and see, you know, the depth of water changes over time that you may interpret or run into when you're drilling in the neck of the woods have an idea how much variation there is in that static water table. Last year, we the survey contracted with 10 different water well drillers to install wells or do maintenance on wells in Wisconsin for us. Probably going to do about the same number next year, including a bunch of wells in the north west part of the state that we're going to group together. Since everybody's so busy, we're having a hard time getting competitive bids on individual wells. So, we're going to group like five of them together and publicly bid those and see if we can get a better response. The last most important bit I want to mention is that Ken Bradbury, who was the director of the state survey has been there over 25 years and has done a lot of research and outreach and education on the groundwater in Wisconsin is going to retire in July.

Nessman

Thanks, Pete. What was next on our agenda?

Fetter

What was next was to discuss the labor shortage and industry apprenticeships. You also had one thing on new business, which I think is a toss-up, which is more important.

Nessman

Remind me what the new business was.

Fetter

I'll just pull it up.... Change the definition of school wells.

Nessman

I'll leave it up to everyone else. Do you guys want to talk about school wells? Or do you want to talk about the other topic keeping in mind we have very short time.

Beiriger

I recommend you defer on the apprentice one because I haven't had any conversation with the folks at North Central yet. And I think it would be helpful to kind of have some sense of what they're doing to talk about it. I think we've defined we have a labor shortage, but I would defer on that one to just do this. And I may have one other update on a couple of legislative things that we should know about to.

Nessman

I can jump into that legislative thing after this daycare thing. So, I just wanted to put this on the agenda. for you guys. We did highlight this in the continuing education and the training we did on the previous code revision that took effect in 2020. But the definition of a school well was changed in NR 812 and it defines it by saying, in another code, school is defined as this. So that definition includes daycare centers. It's something I'm going to address in my talk tomorrow. But if you're drilling well, and they say, well, it's for my new daycare business, that well is a school, well, it needs to be approved before you drill it. It needs to meet different part of 812... 812.151, or 152. It's a school, well and there's different setbacks. There's a lot of different things that come into play for a school well. Just keep that in mind going forward and spread the word.

Unknown

Its licensed daycares, correct? Or is it all day cares?

Nessman

There's a different entity, and I'm forgetting what their acronym is. But there is another governmental agency that licenses daycares. And I believe licensed daycares is what we're talking about. Someone's taking care of three kids in their home. Is it a daycare? They're not going to be asked to have a school well if they're not licensed. So, yes, I would say it's licensed daycares?

Nessman

Okay, then legislation. I did want to mention that I testified in front of an assembly committee on a bill that's companion to the Senate bill that caused me to miss most of the last Advisory Council meeting, that will make changes to the well compensation program to allow bacteria nitrate to be eligible. The bacteria would not have to be tied to livestock. And the nitrate would not have to be tied to livestock. You wouldn't have to have livestock in the nitrate wouldn't have to be over 20. Testimony was the same as I gave for the previous iteration of the bill in the Senate. And generally, we're welcoming these changes. All of the other public input at that meeting was in favor of those changes to well comp. Some even said it didn't go far enough. But I'm pretty hopeful that this will finally change. But it's still to be determined, they didn't vote yet.

Beiriger

There's two different bills out there now, not just assembly and senate. I'm trying to make sure that we're all talking about the same ones. So, Rob Coles did one that had a number of different changes in it that included the well compensation fund. That was SB 676. Is that the one you're referring to?

Nessman

Yes.

Beiriger

So yesterday, AB 806 was heard on the Assembly Committee of the environment and all that bill does is eliminate the livestock requirement on nitrate wells. They heard the bill and did an executive session on the bill in the same day. So, they're obviously fast track and that one but it's different because this one is PERTS is the lead on it and the lead Senate author is tested. And so, this is coming more out of, of more

central sands kind of folks than it is the other bill that has some larger goals and checks and balances on additional financing. All this one does is remove the livestock requirement. You have to use the well 3 months at greater than 40 parts per million. So, it's a separate bill. I just want to make sure we're all talking about the same one. It got introduced, heard and exec all within two days.

Nessman

I have also been asked to provide some feedback on that. That would do almost nothing to increase the access to the well comp program. We'd see maybe one or two claims a year that would be allowed for that. Although it's hard to know, because if someone's not eligible, they're not applying. And we don't really have a way to track that at the moment. But we're working on that as well. Yeah, the bill that I testified on a couple of weeks ago, was the one that's companion to that Senate Bill, that's the previous one that has additional changes. I just saw that the dairy business association was hoping that the legislature would act on that bill, the one that opens up bacteria and nitrate. That one may still need a couple tweaks before it's ready for bringing to a vote. I don't know why this other one's being fast tracked.

Beiriger

The other one has bipartisan support. This one is all Republicans on the bill. And the only group registered at all on it is us, and we didn't register for it or against it. But it's definitely the Coles bill, the one that you testified on is the one that's got legs. I just didn't know if that was something you guys are tracking to?

Nessman

We've heard about it. We don't think it does much.

Beiriger

Good to know. I see. But can I just add before we just one more thing is just the other bill that we've been following is just keep in mind, you know, there's another bill out there about those groundwater recharge systems that's floating around out there as well. It just had another hearing in the Senate now. So, it's had hearings, I don't expect it to move. I expect the administration will veto it even if it didn't move, but it's still out there and floating around. What they're looking for, in a sense, is a redefinition of what constitutes a well, because what they don't like is the idea of something that is deeper than its wide, isn't working for them, they want to circumvent that, and in and of itself, that might create some other issues that we need to be mindful of. So, I don't think the bill is going to go anywhere this session. But I also learned to not play defense if the other team can't even seem to score.

Nessman

Any other new business we need to talk about before we go?

Nessman

The next meeting will be in April with the location to be determined. But hopefully in-person. We will make every effort to make that happen. And thank you again to the folks that are leaving the council (Michael). I don't think Gary is on today, but I appreciate his service as well. And Wyatt Buttke, so thanks, everyone. We'll see you in April.