

The Facts About Deep Wells Being Installed by Tyco in PWSA

More than half of those who received Deep Well Agreements have returned signed agreements asking Tyco to build them a private long-term drinking water solution. Other neighbors have asked for additional clarity to better evaluate assertions they've heard and to address their remaining questions. This note responds to those questions.

To address these issues, Tyco would like to highlight 3 key points for which more specifics and proof points are included in the following Q&A.

1. **DNR has encouraged Tyco to continue working with residents who want deep wells, delivering for those neighbors a good, long-term water solution.**
2. **Tyco's deep well construction, water treatment & well monitoring will ensure water quality according to best practice standards and as documented already with DNR.**
3. **If, contrary to testing of the deep aquifer and use of that aquifer by neighboring communities, some water quality issue should develop with a deep well, Tyco will identify & fund a solution to ensure the water is good quality and meets relevant standards.**

Q&A

Alignment with DNR (DNR quotes underlined)

Q: Does DNR support Tyco's plan to install deep wells in the PWSA?

A: Tyco and DNR are aligned on the deep wells that Tyco is installing in the PWSA. Tyco has been working with DNR consistently and according to regulatory process. As DNR said in a 9/8/2022 letter to Tyco/JCI: "Deep private wells can be an acceptable interim action to provide safe drinking water, if the new wells are protective of public health, safety and welfare and the environment." DNR has all the data from Tyco about the best-practice construction, water treatment systems, and long-term monitoring that Tyco is using to ensure water quality.*

We are pleased to have DNR's support and encouragement to continue making progress to install deep wells for those neighbors who want them. DNR said in a 9/8/2022 letter to Tyco/JCI: "The DNR recognizes the outreach that JCI/Tyco has conducted to date with homeowners, appreciates its efforts to deliver safe drinking water to impacted homeowners in the PWSA and encourages JCI/Tyco to continue working cooperatively and in good faith with the affected residents."

Q: Why does DNR call deep wells an interim solution?

A: We are aligned with DNR that properly constructed deep wells can be a quality, long-term drinking water solution. "Final" and "interim" have very specific, technical meanings in the regulatory context. As DNR said in the October 26 Listening Session, "interim" means actions undertaken while the overall Site Investigation is still ongoing. It does not mean an action or solution is insufficient or not permanent. Aligned with this, DNR emphasized that "DNR does not want responsible parties to wait to

act until a site investigation is over, so we allow what we call interim action." Actions like installing deep wells and operating the Groundwater Extraction & Treatment System (GETS) to remediate the site are all considered "interim" until such time that Tyco makes its way through all the steps in the regulatory code book concerning our site as a whole.

DNR said in a 9/28/2022 letter to Tyco/JCI: "DNR expects that any installed deep wells will be subject to sufficient monitoring and reporting to ensure the wells meet the requirements for a permanent solution under state regulations." Tyco is aligned with DNR and has already submitted its long-term monitoring plan to DNR.

Q: Does DNR believe that the preferred alternative for safe drinking water is a public water supply?
Here is precisely what DNR has said on this subject. In its 9/8/22 letter to Tyco and in FAQ updates recently posted on the Marinette page on its website, DNR states: "While the DNR has stated and maintains its preferred alternative for safe drinking water is a public water supply, we recognize the need to address feasibility constraints and be responsive to residents' preferences, including those who prefer deep wells. Deep private wells can be an acceptable interim action to provide safe drinking water...."

FAQs on DNR website updated on Oct. 11, 2022, go on to say: "It may not be practicable or feasible to deliver a public supply of municipal water to all homes, and some residents may not want municipal water. To receive municipal water, there must be a public entity willing and able to extend water service to an area or a public entity able to create and maintain a new water utility. Any expansion or establishment of a municipal system must be approved locally and by the Wisconsin Public Service Commission (PSC)."

Q: Will there be a new Town of Peshtigo municipal water utility that will provide water to Town of Peshtigo residents?
Tyco has been working with the Town of Peshtigo leadership for 4 years, and they have yet to identify a public entity willing to extend water service to the PWSA. It is also unclear if there is support among Town residents for such a Town municipal authority. In Tyco's outreach to PWSA residents, very few people expressed interest in the idea. **Other residents were deeply concerned about the feasibility and cost for the town to support such a water utility.** Financial feasibility is a criterion considered by the PSC in deciding whether to approve a new authority and in small communities this can be a difficult test to meet. At the same time, a significant number of residents in part of the PWSA did express interest in pursuing municipal water from the City of Marinette. **Tyco is supporting these residents in their efforts to see if there is sufficient support since accessing City of Marinette water requires annexation to the City of Marinette.** These efforts are on-going, and neighbors are circulating a petition to see if the requisite numbers and thresholds can be met.

Water Quality & Safety

Q: DNR has stated that: "The water quality for deep wells is not guaranteed." Does this mean there is cause for concern about the quality of water in the deep aquifer?
A: Tyco has already tested the deep water aquifer. The results are clear that the aquifer is a good source of quality drinking water. PFAS was not detected. Naturally occurring elements that were detected (see below) will be addressed by the RO, sediment filter and water softener included in the deep well system. The nearby cities of Peshtigo and Oconto use this water in their municipal water systems and

use similar treatment technologies to ensure its quality. And, Tyco has a long-term plan to monitor the deep aquifer to ensure continued protection of this aquifer under WDNR oversight through a network of deep aquifer monitoring wells being installed within the PWSA.

Q: Will the RO system take care of all other unpleasant or harmful elements such as radium and sulfur that can cause bad taste and/or smell in water?

A: Tyco tested the deep aquifer water for more than 40 naturally occurring elements. Three naturally occurring elements – radium, strontium, and sulfates – were found at elevated levels in the deep aquifer and the **Reverse Osmosis system, Water Softener & Sediment Filter Tyco is installing are proven, approved treatment systems that ensure the water meets all relevant standards, while also improving taste.** The RO system is NSF/ANSI 58 certified to treat water for radium at the levels found. These systems will also treat for sulfate. But, before connecting the new well, we will also test for sulfur and address any related taste or odor issues, if there are any, with **specific water softener filters designed to remove sulfur.** Keep in mind, Tyco will also test the system’s effectiveness after the well is installed and the RO is connected.

Q: Since naturally occurring radium has been found in aquifer tests done by Tyco, is a reverse osmosis system installed under the kitchen sink sufficient, or is it necessary to have the system treat water in the bathroom for brushing teeth or taking a shower?

A: Ingestion is the primary pathway for radium exposure.** Tyco has been focused on the kitchen sink because that is the primary source of drinking water in the home. When we received resident requests for connections to bathroom taps, **we worked with Culligan to identify an RO unit that can be placed in the basement and connected to multiple drinking water taps.** Not every home is configured for using this RO, so installation will be evaluated on a case-by-case basis if requested.

Q: If a lot of deep water wells are installed, will they pull from the shallow water source that has been impacted by PFAS and spread contamination to the deeper level? Also, does the aquifer have the capacity for new wells?

A: The nearby cities of Peshtigo and Oconto already use this water in their municipal water systems and don’t need any mechanisms to remove PFAS since the deep aquifer is non-detect for PFAS. **These community wells pull a large volume of water from this very large aquifer and 100-200 more private wells would be a minimal addition.** Tyco also tested the water from wells in the PWSA that are currently in the deep aquifer and PFAS was non-detect. Water in the deeper aquifer is protected from contamination in the shallow water because **there is a level of bedrock that separates the 100 ft-overburden layer where most wells in PWSA currently exist from the deeper aquifer.** In addition to the natural geologic barriers to PFAS migration, Tyco is using best-in-class well design and construction methods to further prevent cross contamination. Specifically, **individual Deep Wells will use steel casing cemented into solid bedrock to prevent shallow groundwater from moving into the deeper aquifer.**

Tyco’s Commitment

Q: A neighbor has asserted that if the wells test under 70 ppt, Tyco is off the hook and town residents will be responsible for testing, remediation, etc. when the EPA sets a new health advisory of .004 ppt, which means that any PFAS is unsafe.

A: **This is incorrect.** Tyco has made clear it will utilize the enforceable drinking water standards put in place by DNR. **If DNR has not put in place an enforceable groundwater standard, Tyco states in the Deep Well Agreement that it will then follow standards applicable to municipal water systems in Marinette for PFAS.**

Q: **I heard that Tyco will test for one (1) year, then they are off hook and town residents will be responsible for testing, is that true?**

A: Tyco has a **long-term plan to monitor the deep aquifer** to ensure continued protection of this aquifer under DNR oversight through a network of deep aquifer monitoring wells being installed within the PWSA. As indicated in the Deep Well Agreement, **if one of our monitoring wells indicates levels of PFAS above enforceable limits, we will sample private deep wells in the area and work in cooperation with the Property Owner and DNR to determine appropriate next steps for ensuring safe drinking water.** Tyco will take responsibility for implementing and funding the solution.

Q: **If you sign a Deep Well agreement and a deep well is installed, do you waive your rights to make any claim against Tyco about water quality?**

A: **No. The Agreement does not require citizens to release claims against Tyco related to water quality.** Tyco is a long-standing neighbor, and we will be here for the long run. If there is an issue with a deep well such that it is no longer a good drinking water solution, Tyco will take responsibility for implementing and funding a solution to make the water safe.

Q: **The agreement says that the property owner won't make claim against Tyco for an alternative water source. Does that mean if I get a deep well, I can't later get Tyco to pay for a connection to a municipal water line?**

A: Tyco stated in the agreement that it will pay for just one water solution per well owner, and **won't pay for a second option, if the first solution is providing safe water,** if a neighbor changes their mind down the road.

Q: **Some people say Tyco is supporting deep wells because they are the cheapest long-term water solution, is that correct?**

A: **This is not correct.** Engineering analyses for Tyco and done by the Town of Peshtigo produced four options that could be considered for long-term good drinking water. Tyco conducted extensive outreach with well owners in the PWSA to gauge neighbor interest in each of the four options. The results were clear: most neighbors favored either deep wells or municipal water through annexation to the City of Marinette. Both options are moving forward with Tyco beginning work on deep wells for those neighbors who have made that choice while providing support to neighbors who want to pursue annexation for municipal water. Given Tyco's plan for special construction, technology to ensure water quality and taste, and the depth of deep bedrock wells, the cost for deep bedrock wells is considerable - much more than the cost of a shallow overburden drinking water well. **All options have significant costs,** including connecting to Marinette municipal water if annexation is approved in the proposed annexation area, and the total cost of each option can go up or down based on several factors.

*See Sept. 27 deep well submission to DNR at [tycomarinette.com/Latest Updates](https://tycomarinette.com/Latest%20Updates)

**Any radiation received externally through showering, washing or other uses is not a hazard since alpha particles do not travel through your skin," Illinois Department of Public Health.