

Approved Minutes of the Technical Advisory Committee Meeting  
December 15, 2022

**Participation by videoconference**

<b>Attendees:</b>	Cristin Ashmankas*	Denise Johnson-Terk
	Mark Bannon*	Justin Willis*
	Craig Heindel*	Roger Thompson*
	Bruce Douglas*	Bryan Harrington*
	Tom DeBell*	Gunner McCain*
	Craig Jewett*	Jeff Williams*
	Sheri Young*	Scott Stewart*
	Terry Shearer	Sille Larsen*
	Claude Chevalier*	Angela McGuire
	Steve Revell*	Eric Deratzian
	Achouak Arfaoui	

\*Technical Advisory Committee members or substitutes

**Scheduled meetings:**

There are no scheduled meetings.

**Agenda:**

The agenda was accepted as proposed with an addition by Steve to discuss composting toilet issues.

**Minutes:**

The draft minutes of November 15, 2022 meeting were reviewed. Craig Heindel noted a misspelled name in the list of attendees. Craig also noted that the section discussing the Typical Driven Well Diagram should say that Claude would be checking with the New York well drillers for any reference material they have. Minutes were accepted as amended.

**Wastewater System and Potable Water Supply Rules (WW Rules) revisions:**

Bruce said that the attorney who had been reviewing the proposed revisions is moving to another position. He will get the proposed changes to the attorney so they can be reviewed prior to the move to the new position. Bruce said that most of the changes have already had a review so the final screening should proceed quickly.

Mark asked if an appendix could be added that would document when significant changes were made in the past. He said that it is sometimes important to know if a project constructed in the past complied with the WW Rules at that time, even if not in compliance with the current WW Rules. Some other states have this feature and Bruce will see if it is practical to add an appendix at this time.

### **Innovative/Alternative Systems:**

Steve discussed an article about composting toilets that recently appeared in the Seven Days newspaper. Steve worked with the property owner and there is a Department of Environmental Conservation (DEC) permit for a composting toilet and a 75% sized mound system for the graywater. Steve said that the toilet in use is not what DEC would consider to be a composting toilet because it is a bucket with periodic additions of sawdust or similar material that is then hand carried to a series of wooden bins. The bins are located on a pad of mound sand to protect the groundwater. The decomposition is mesophilic for the most part. The permit requires covered disposal in an approved location when the bins are emptied. Cristin noted that the WW Rules do not provide any definition or specifications for a composting toilet other than that a 25% reduction in wastewater design flow is allowed and that the ultimate disposal site must meet certain site and soil requirements if the disposal is onsite. This makes it hard for users and regulators to agree on what is required. Terry said that he and the rest of the Regional Office staff spend a lot of time working with people interested in alternative water and wastewater systems, in part because there is no clear definition of what the requirements are for a composting toilet.

There was a bill introduced in the Vermont House in the 2021/2022 Legislative Sessions (H70) to create a study committee to look at alternative water and wastewater systems. While the proposed was not taken, an informal study committee was formed, and the Legislature might make it official during the coming session. Sheri has participated in many of the meetings and explained some of the concerns of the participants which include the right to live as you choose, the cost of systems that comply with the WW Rules, and that some lots cannot be developed under the WW Rules. Bruce and Cristin also attended several of the meetings but have been disinvited for the immediate future. Cristin said that there are a lot of people who are interested using systems not currently allowed in the WW Rules.

Craig Heindel noted that the Technical Advisory Committee (TAC) had reviewed this topic in the past and had come down on the side of public health. Craig Jewett added that in some cases, regulation is needed to protect people even when they don't agree with the requirements. The TAC is concerned about this topic and suggests that a document or presentation be prepared that explains the issues that should be considered if legislators want to discuss the options. The TAC also supports adding a definition of what is needed to be classified as a composting toilet. Sheri suggested having a separate discussion about whether to change the final disposal requirements. Terry said that somewhere in the discussion it should be mentioned

that the process starts with fecal matter and that how it is treated and disposed of is a health question.

**Installer and Service Provider Training Program:**

Cristin said she is working on a request for proposal (RFP) for a \$160,000 grant that will be used to provide training to installers and service providers.

**Instantaneous Peak Demand (IPD):**

The TAC created a subcommittee to review the current information on how to calculate the IPD. The current WW Rules allow the calculation to be made using the Vermont Plumbing Rules, or based on 5 gallons per minute (GPM) per living unit, or another method approved by the Secretary of the Agency of Natural Resources. Licensed Designers have noted that adding a one-bedroom accessory unit to an existing single-family residence raises the IPD from 5 GPM to 10 GPM. Using the Vermont Plumbing Code can result in a larger IPD. This jump in IPD often requires at least a well pump upgrade and in many cases the cost is not justified. The plumbing code referenced in the Vermont Plumbing Rules is quite old and may be outdated. The subcommittee will review updated codes to learn if the changes in plumbing fixtures has reduced the IPD. Bruce said that G.J. Garrow, Chief Plumbing and Heating Inspector, will work with the subcommittee. Bruce will quickly schedule at least two meetings.

Justin said that an associated issue is when does a one-bedroom accessory unit meet the definition of being attached. Does the passage from one unit to the other have to be conditioned space, or is an enclosed space or an open breezeway sufficient? DEC should issue a clear statement or do a WW Rule clarification so that the staff and designers know what is required.

**Well Diagram for Completion in Unconsolidated Materials:**

The TAC continued a discussion of the requirements for a well completed in unconsolidated material. The diagram in the current WW Rules includes a well screen even though most wells do not need a screen to work properly. The TAC reviewed a revised diagram provided by Claude without a well screen and agreed that it is an improvement over the one in the current WW Rules. Craig Heindel suggested removing the reference to a bedrock layer to prevent a user from thinking the well casing must end in the proximity of bedrock.

The group then turned to a discussion of how to deal with a situation where the permit for the site is based on a well completed in bedrock, but while drilling the well enough water is found in the unconsolidated material. If the well location meets the isolation distance requirements for wells in unconsolidated material, the change could be covered in the completion inspection report. If the larger isolation distances for wells in unconsolidated materials extends onto, or further onto neighboring land, the notification process is triggered.

If the location of the well does not meet the isolation distances in the WW Rules for wells in unconsolidated material, the isolation distance can be reduced when a hydrogeologic analysis finds that the site-specific conditions protect the well from contamination is approved by the DEC. The most common situation is when there is a sufficiently wide and thick layer of slowly permeable material above the layer in which the well is completed. This layer is often identified as a confining layer. If the vertical travel time for water to move down through the confining layer exceeds two years, the well is considered to be protected. Alternatively, when the water level in the well, under pumping conditions, is above the confining layer the well is usually properly protected. In some cases, the well driller's observation on the type and thickness of material penetrated is sufficient for a decision. In other cases, more information, including review of logs for nearby wells, pump testing, and excavations is needed. The group briefly discussed whether all the requirements could be shown on the well diagram but concluded that more than a diagram is needed.

Claude discussed his experience over many years drilling wells in locations where standard isolation distances cannot be met. These wells are for replacement of failed water supplies and in some situations the isolation distance is reduced to a fraction of the standard isolation distance. He reported that many years of water quality testing has not found any contamination and if there are concerns, a disinfection system can be added. The group discussed this information and noted that bacterial testing, while important, did not prove that the well is protected. Viruses and other contaminants require added testing procedures and may travel further in the aquifer than bacteria. Craig Jewett reported that he is finding widespread perfluorooctanesulfonic acid (PFOS) contamination which is emerging as a major threat to water systems. In addition to needing to test for a range of contaminants, a single test conducted at or soon after the time of well construction does not ensure that the well will remain safe. Depending on the site conditions and the rate of water withdrawal it may take a long time before the contamination appears in the well. Cristin said that depending on water treatment systems and ongoing testing is expensive. The group believes that there is a greater potential for well contamination when standard isolation distances are not met and that when considering a reduction in isolation distances based on site conditions the decision needs to include the Licensed Designer and the DEC.

### **Seasonal Use:**

Bruce asked if Steve's question from an earlier meeting on whether the definition of seasonal use should be retained was resolved. Steve said the earlier discussion had resolved most of the issues and it was well described in the minutes of the November meeting.

### **Annual Report:**

Bruce said he planned to have the report completed by January 15<sup>th</sup>. Roger will do the minutes of this meeting quickly and begin drafting the report. Bruce and his staff will gather the information on permit administration.

## **TAC Appointments:**

Bruce said that he needs to send a list of recommended appointments to the Governor's Office. This is required after each election. Bruce said that the legislation that created the TAC requires at least one member from a number of groups such as engineers, well drillers, town officials, and others interested in the WW Rules. The existing group covers most of the requirements, though Bruce is searching for a town official. Cristin suggested adding a place for installers and service providers which the group supports. The group noted that any non-member who wants to attend meetings and share information has been welcomed. Members are satisfied with the current make up of the group. Bruce will contact existing members and ask if they want to be reappointed. Scott informed the group that he will retire at the end of 2022 and that a replacement should be named.

## **Other Issues:**

Sheri asked about creating a minor permit process for reconstruction of mound systems with existing permits that have failed. Many of the failures occur at the top of the mound at the interface between the mound fill and the leachfield. These failures are easily resolved by removing the distribution system and a thin layer the mound fill which are then replaced in accord with the original permit. Roger asked if this could be handled by expanding the minor repair section which would eliminate the need for a permit entirely. Cristin said that the updated electronic application process would eventually include a minor permit section that might be included in the installation report process.

Sheri also asked if the Vermont Health Department could create a single test kit that would include everything the WW Rules require for each newly constructed well. She noted that it can require ordering up to three different test kits to cover all the requirements. Tom said that they can check into this.