

Approved Minutes of the Technical Advisory Committee Meeting

July 16, 2024

Participation by videoconference

Attendees:	Bruce Douglas*	Eric Deratzian
	Sheri Young*	Steve Revell*
	Craig Heindel*	Roger Thompson*
	Cristin Ashmankas*	Sille Larsen*
	Frederic Larsen	Craig Jewett*
	Jeanne Allen	Megan Kane
	Kevin Eaton	Gunner McCain*
	Cristian Jablonski	Terry Shearer
	Denise Johnson-Terk	Sheryl Ervin
	Jared Willey	

*Technical Advisory Committee (TAC) members or substitutes

Scheduled Meetings:

All meetings are scheduled as virtual meetings.

September 17, 2024	2-4 PM
October 15, 2024	2-4 PM
November 19, 2024	2-4 PM
December 17, 2024	2-4 PM

Agenda:

The proposed agenda was accepted as drafted.

Minutes:

The draft minutes of the June 19, 2024 meeting were accepted as drafted.

Updates:

Bruce said that the proposed rule corrections have been submitted to the Secretary of States Office. They will review and either approve or deny. Approval is expected. Bruce will send copies of the revised WW Rules to the TAC.

Innovative/Alternative (I/A) Technology:

Cristin said that there were no applications ready for review by the Technical Advisory Committee (TAC).

I/A Rules, Subchapter 4 of the Wastewater System and Potable Water Supply Rules (WW Rules):

Cristin noted that Vermont Statute 10 V.S.A. §1978 provides direction on how I/A technology should be included in the WW Rules. The statute specifies that several systems including sand filters and constructed wetlands shall be approved for use and prohibits a requirement for a bond or immediate construction of a backup system when the I/A system is approved for routine use. The 2002 version of the WW Rules included generic requirements for sand filters and constructed wetlands and these systems do not require an individual I/A approval.

The group briefly discussed the classification of wastewater from a residence and the difference between gray water and black water. The usual separation is to classify toilet wastewater as black water and everything else as gray water. In the WW Rules, all wastewater that includes pathogens, which is all the water from bathing, laundry, food preparation, and other household use, is subject to the same requirements. Gunner suggested adding a definition making it clear that black water and gray water are both subject to the same requirements.

Sheri asked about reuse of treated water and mentioned the treatment system at the Sharon Rest Area. The rest area has an advanced treatment system, and the treated wastewater is used for toilets. Apparently, no annual reports on the operation of the system have been submitted. Cristin said that the I/A approval process can allow for reuse for toilet flushing if there is separate water supply piping for the toilets. Bruce said that the Vermont Plumbing Board may have some information about the effects of reuse on toilet fixtures. The TAC wants to discuss gray water reuse in more detail.

Cristin reviewed some of the requirements for filtrate effluent systems. She noted that while there is a standard that requires reduction of Biological Oxygen Demand (BOD) to no more than 30 mg/l and reduction of Total Dissolved Solids (TDS) to no more than 30 mg/l, there is no maximum for the total amount of fat, oil, and grease (FOG) in the filtrate effluent.

Bruce discussed the separation requirements for mound system applying filtrate effluent. There must be at least 6” of unsaturated soil above the induced ground water level at the toe of the mound. When installed, the bottom of the crushed stone or other distribution method such as leaching chambers or drip dispersal, shall be at least 18” above the induced water table.

Bruce asked for comments on §1-402 for general approval, §1-403 for pilot approval, and §1-404 for experimental approval. Cristin said that every applicant wants general use approval

but unless there is testing and use experience in locations with climate conditions like those in Vermont, she offers pilot or experimental approvals depending on how much information the applicant can provide. Bruce said that it requires a lot of work for a full review of a proposed technology and that, in Vermont, there is no fee to the vendor required for this work. Sheryl Ervin asked if load testing, such as H-10 wheel loading, changed the approval category. The answer to Sheryl's question was no. Approval letters for use of substitute products such as effluent filters and distribution methods are no longer required. Craig J. said that it would be helpful if the WW Rules made it clear when approval letters are no longer required.

Prefabricated pump stations were discussed. Jared said that they are distribution methods covered under the WW Rules. Craig H. asked if some systems are not covered. Jared said that the Orenco Company has a prefabricated pump station, including the electronic controls, and asked when systems need an I/A approval. Cristin replied that I/A approval is needed when the pump station does not meet the requirements of §1-1008 of the WW Rules. Bruce added that energy use is a concern, and that energy savings might justify an I/A approval. Cristin said that a system that works by evaporating all the liquid from wastewater might be subject to, and non-complying with, Federal Air Quality Standards.

Jared asked if using ultraviolet disinfection requires I/A approval. Cristin replied that the use of ultraviolet light is included in the WW Rules for potable water treatment. An I/A permit is needed for use to treat wastewater. Craig H. said he supports Cristin's statement that use of ultraviolet disinfection on wastewater does not result in an approvable system when the disposal site does not meet the required isolation distance in the WW Rules. Jared noted that ultraviolet disinfection is widely used on water systems with a lake water source. Bruce and Cristin said that future discussion of ultraviolet disinfection is needed.

Drip dispersal was discussed. It was noted that the WW Rules require advanced treatment of the wastewater before discharge into a drip dispersal system while there are drip dispersal systems with I/A approval that do not require advanced treatment. This is allowed because the I/A approval for the system includes a determination that the specific configuration of the drip dispersal system will operate in compliance with the WW Rules without requiring pretreatment to advanced treatment standards.

The design and operation of I/A systems was discussed. I/A systems may be designed by Class 1 Licensed Designers. Class B(W) Licensed Designers may design I/A systems approved for General Use except those used to reduce waste-water strength from high to low strength or those systems that specifically require that the design be prepared by a Class 1 designer. Class A Designers are not approved to I/A systems unless the approval specifically allows for a design by a Class A Designer. The inspection reports required for a system with an I/A approval must be filed online as are the installation certifications. The systems are tracked and if the report is more than one year overdue a referral to the compliance section can be made. An attempt at voluntary compliance is made first and it is usually successful. Cristin would like to have a

process where if a particular approval product is later approved for less frequent inspections, the reduction would automatically apply to older permits.

There has been an increase in the use of I/A systems. There has been an increase in compliance with the inspection requirements. Some failures to report are because there was a change in ownership and the new owner is unaware of the requirement. Cristin is working on a process to ensure that a new owner is informed about the operation and inspection requirements. Gunner noted that the tracking system indicates that more I/A systems are being approved than inspection reports are being filed. Cristin said that not all I/A systems need inspection reports, including some that are commonly used.

Cristin said that there are several systems that have been approved for use in Vermont that have never been used. There are concerns about the effort needed to process the renewal of these products if they are never used. Some vendors maintain the approval to demonstrate a large number of approvals by various states.

Construction deadlines were discussed. One category would include all new permits. This would be a major revision of the past approach where a permit remains in effect unless revoked. This approach is not being promoted or supported by the Department of Environmental Conservation (DEC).

Sheri said that there should be a limited process to switch from one I/A system to another. Cristin replied that there is a process for this type of change.

Service providers were discussed. There is an ongoing training program with a second module being prepared. One goal is that with additional training a service provider will be able to work with many different I/A systems. Sheryl noted that the paperwork involved can be a burden. Cristin said that moving all the work online should reduce the time required. The current approach requires vendors to approve installers and service providers. This is sometimes difficult for vendors, but some vendors require this as part of providing a warranty for their system. Craig H. suggested forming a subcommittee to work on this topic. Jared said that the cost of doing operating and maintenance is going up, but the work is needed both to keep the systems operating and to comply with permit conditions. Cristin said that potential owners of I/A systems need to know the requirements and expected costs for using a particular I/A. Sheri said that people pumping septic tanks are a potential source of service providers. Cristin said that some are already approved as service providers. There may also be installers who would like to become service providers.

The Department of Environmental Conservation (DEC) is also looking at the energy efficiency of I/A systems. There are more passive systems approved than before and some which do not require electricity if the distribution system can operate by gravity flow.

Bruce discussed two recent court decisions. The cases are:

1. VT Supreme Court: “In re DJK, LLC WW & WS Permit”; <https://www.vermontjudiciary.org/sites/default/files/documents/op22-296.pdf>
2. VT Superior Court: “In re: 15 Bull Moose1 Wastewater & Water Supply Permit Appeal; <https://www.vermontjudiciary.org/sites/default/files/documents/15%20Bull%20Moose%20Road%20Wastewater%20Permit%2023ENV07%20Merits%20Decision.pdf>

The Vermont Supreme Court affirmed a decision upholding the issuance of a permit that complied with the WW Rules despite the objection of a neighbor based on isolation distances that extended onto their property. This is sometimes described as “overshadowing.” The Vermont Supreme Court is required to review any appropriate appeal that is filed. The Court relied, in part, on a report prepared by the Technical Advisory Committee entitled A Review of the 'Overshadowing' of Water Supply-Wastewater System Isolation Distances, that was submitted to the Vermont Legislature.

In a separate case, the Vermont Environmental Court upheld a permit that complied with the WW Rules over the objection of a neighboring farmer who was concerned that the extension of isolation distances onto their property would limit their activity. In upholding the permit, the Environmental Court noted the earlier decision by the Supreme Court. V.S.A. Title 10, Chapter 64, §1973(j) requires that neighboring property owners be notified when isolation distances for proposed water or wastewater systems extend onto their property. This is intended to inform neighboring property owners who may negotiate with the permittee but does not override the requirements in the WW Rules.

Bruce said that Jeff Williams asked if there is interest in having a training session with well drillers including observation of a well drilling rig in operation. The group would like such a session. Cristin will determine if continuing education requirements for Licensed Designers can be approved.

Gunner said that he is still working to get a practical and timely solution when a replacement for a failed wastewater system must be constructed in a wetlands buffer area. Steve said that the online Wetlands Atlas is not comprehensive, and that because of a lack of staff, it is difficult to arrange for site visits with the Wetland Program Staff so that site specific information can be used in lieu the information in the Wetlands Atlas. Bruce and Cristin are aware of the problems and DEC is working to fix the problem.

Cristin noted that she has received hydrogeologic reports submitted under a name other than that of the person who did the original work. The TAC supported the rejection of the information and encouraged the notification of the original author.