

Approved Minutes of the Technical Advisory Committee Meeting

March 27, 2018

Attendees:	Roger Thompson	Rich Wilson
	Ken White	Carl Fuller
	Scott Stewart	Steve Revell
	Justin Willis	Gunner McCain
	Peter Boemig	Graham Bradley
	Craig Heindel	Sille Larsen
	Mary Clark	John Beauchamp
	Jessanne Wyman	Ernie Christianson

Scheduled meetings:

April 3, 2018 1-4 PM Annex Building

Minutes: The minutes for the prior meeting of March 21, 2018 were accepted as drafted.

Rule Review: The group resumed review of subchapter 11. The previous meeting ended with a discussion of isolation distances for cemeteries. The group recommends having a single category for cemeteries without any variation based on how the body is, or is not, prepared for burial.

Ken asked about the isolation distances for storm water infiltration basins and noted that there can be an impact on the neighboring properties that is like the impact from water and wastewater systems. Gunner asked if a designer would need to know if there are any storm water systems that are permitted, but not constructed, if there is a first in time approach. The group expressed concerns about the relatively large isolation distances that are proposed. The “hot spot” concept applied by the storm water section that prohibits subsurface discharge from some areas, such as gas station fueling areas, might reduce the chances that a storm water discharge would create a large risk to a drinking water source. The group noted that there are some required storm water disposal systems, such as rain gardens, that present a low risk that would have a large isolation distance under the proposed rules. Ernie will discuss these concerns with the Storm Water Section and the TAC will discuss the response at a future meeting.

Steve asked if the proposed isolation distances related to agricultural operations will be included in the revised rules. Ernie said that they would be for now, but we need to decide how to address types of water supplies not identified by the Agency of Agriculture and if we agree with these isolation distances for our rules. Ernie also said that he will be having discussions with the Agency of Agriculture to consider how to balance the impacts on farmers and their neighbors.

Ken asked that there be specific language related to a reduction in isolation distance around a drinking water source and that the language address the use of extra casing and grouting as a

basis for a reduction in isolation distance. The discussion covered both variances and waivers. Variances can only be used for repairs or replacement of existing systems and may result in less health or environmental protection when full compliance is not possible. Waivers can be granted for new projects, or for increases in design flow for existing projects when the site conditions and/or construction techniques ensure as much health and environmental protection as the prescriptive requirements in the rules. The group suggested adding references to these provisions in other places in the rules to make designers and applicants aware of these options. A decision to use additional casing and/or grouting as part of a variance can be made by a Licensed Well Driller when replacing a water source for a single-family residence on its own lot. Other variances or waivers will be based on a site specific hydrogeologic evaluation

Gunner noted that the isolation distances in the table are reversed for storm sewers.

The issue of confined and unconfined aquifers was raised. The hydrogeological subcommittee will meet to discuss and clarify the language.

Sille asked about the diagram illustrating how to draw an isolation zone around a well. The diagram is not correct. Ernie said that the diagram has been updated.

Craig said that the rules should be clear that isolation distance reductions can be applied to both water and wastewater systems.

Steve, Rich, Scott, and others discussed the relative position of section 1-1106 and some of the following sections. The group discussed the options and Ernie will determine if a rearrangement would make the rules easier to use.

Sille asked about the contents of tables 11-6 and 11-7. Some new water sources must be tested, and the tables specify which contaminants must be evaluated. Sille noted that these lists are different than the recommended list used by the Vermont Health Department. John provided a detailed background on how the list was developed based on which contaminants are likely to be naturally occurring in Vermont. The group discussed why there is a required list of secondary contaminants when these contaminants do not determine if the system is a failed water system or not. John noted that there are health concerns, such as for sodium, by some users at relatively low levels and that the information is useful to the well users. John also noted that other secondary standards, such as pH provide information about why some systems have physical deterioration and suggest treatment methods to protect the system. The question of whether lead should be added to the list of primary standards was considered. The primary source of lead in drinking water systems is from the piping system rather than from the aquifer. Therefore, it may be appropriate to reserve the testing for those water systems with older piping systems. Ernie asked if the list of secondary standards should remain as a requirement in the rules. The TAC recommended retention of the testing requirement.

Roger asked if section 1-1112(e)(4) should specify a level of treatment. The group decided that because this is a section that requires a design by a Professional Engineer, and that the levels of treatment for the final product are specified, the performance of the individual components should be left to the Professional Engineer. Ken suggested that the rules should require a solenoid valve with all systems using ultra-violet light that would stop the water flow when the light intensity falls below the required level. The group supports this. John noted that there have been many improvements in ultra-violet light systems, including the ability to neutralize the adenovirus. He also noted that there is support for requiring the use of chlorine because of its effectiveness against a broad range of biological contaminants commonly found in surface water while the risk of chlorination byproducts is low.

The level of chlorination needed to disinfect new or repaired water systems was discussed: i.e. “shock-chlorination.”. Sille expressed concern with the proposal to reduce the level to 10 mg/l. The current rules require 50 mg/l of free residual chlorine and 100 mg/l is recommended by the Health Department for shock-chlorination. Either of these two recommended levels make the water unusable for human contact until the system is flushed after a recommended 12-hour contact time. This seems like a reasonable requirement for health protection. The water pumped during flushing of the system should be discharged to the ground surface in location without direct flow to surface water. Ken noted that in a situation where the water source provides a very low flow, such as a well with a yield of ½ GPM with a few hundred feet of casing storage, it can take many days before the system is flushed enough to be drinkable.

The next meeting will start reviewing subchapter 9.

Executive Committee: Steve Revell, Ernest Christianson, Roger Thompson
Alternates – Claude Chevalier, Craig Heindel

Subcommittees:

Hydrogeology

Craig Heindel, Bill Zabiloski, Mark Bannon, Scott Stewart, Steve Revell, Mary Clark, Roger Thompson, Peter Boemig, Ernie Christianson

Bottomless Sand Filters

Peter Boemig, Mark Bannon, Mary Clark, Denise Johnson-Terk, Craig Heindel, Ernie Christianson

Seasonal High-Water Table Monitoring

Craig Heindel, Steve Revell, Roger Thompson, Ernie Christianson, Bill Zabiloski, Mary Clark

Well Driller’s Reporting Form

Rodney Pingree, Craig Heindel, Claude Chevalier, Peter Boemig, Mary Clark, Ernie Christianson

Surface Water Sources

Tim Raymond, John Beauchamp, Ray Soloman, Peter Boemig, Mark Bannon, Claude Chevalier,
Perry Thomas, Mark Clark, Scott Stewart, Rodney Pingree, Chris Russo, Ernie Christianson