

BOARD OF HEALTH
Minutes for Tuesday, June 8, 2021, 7:00 PM
Remote Participation

- 7:00 Minutes 3/23/21; 4/20/21; 4/27/21; 5/11/21; 5/26/21
- 7:15 Birch Lane Septic Installations Fees – request to modify (Brem)
- 7:30 PFAs well testing program
- 8:00 Benfield Farms – Septic System Upgrade
- TCG Review 6/1/21
 - Groundwater Mounding Report (pending)

Discussion Items

Public Health Excellence Grant – work plan (pending)
53E ½ Budget Cap Increase
Engineering and Nursing Contracts – status
Personnel Reviews

The meeting agenda lists all topics reasonably anticipated by the Board of Health at the time of posting. Additional topics not anticipated may be discussed at the meeting under the agenda item New Business. All documents discussed and reviewed at the meeting are available at the Board of Health office.

The meeting was called to Order via remote participation at 7:05 pm. Attendance members: Tony Mariano Chairman, Catherine Galligan, Donna Margolies, Todd Thorsen. Members not in Attendance: Jean Barry Attendance nonmembers: Linda Fantasia Health Agent, Dave Erickson (recorder), Kristin Divris (Water Utility Resilience Program Coordinator, MassDEP), Wanda Avril (Mosquito), Jeffrey Brem, Rachel Freed (Deputy Regional Director, Bureau of Waste Site Resources - MassDEP), Michael Joseph, Rob Frado, Mark Beaudry, Phil Giffie (NOAH), Mark Beaudry (Meridian Engineering)

1. Minutes

The 5/26/21 minutes were tabled to 7/14/21. Changes to the 3/23/21 minutes were suggested and Galligan moved to approve with changes, seconded by Margolies and passed unanimously. Galligan moved to amend and approve the 4/20/21 minutes, seconded and approved. 5/11/21 minutes--amendments were discussed, Galligan moved to accept amended minutes, Margolies seconded, and amended minutes were approved unanimously.

2. Birch Lane Septic

Jeffrey Brem withdrew his request to reduce the fees.

3. PFAS well testing program

Mariano noted that PFAS (Per- and Polyfluoroalkyl Substances) is an emerging issue. The DEP will cover testing of public water wells such as St. Irene’s Church, the library, school, and town hall--there are 14 public water systems in Carlisle – 2 community, 4 transient non-community and 8 non-trans non-community. The current testing for PFAs has been alarming. Carlisle results are unlike any other towns in the program. The Gleason Library is at imminent health hazard (124ppt any level >90ppt triggers chapter 21e), and a Concord Street resident that had an actionable level of pfas. Freed (deputy regional director for bureau of water resources and Divris (section chief for drinking water in the New England office) gave a presentation on PFAS chemicals, which they agreed to allow the board to record. Divris began by noting that pfas chemicals are a large group of manmade chemicals in use since 1940. PFAS are used in many products including fire fighting foam. Airports and military bases can be sources. They don't spread easily but they are difficult to remove. The EPA doesn't regulate them at the federal level but there is a health advisory limiting 2 compounds to 70ppt (parts per trillion). Massachusetts sets the limit at 20PPT for 6 pfas compounds, fortunately, technological advances have made it possible to measure such low levels. 1PPT is 1 drop in 500000 barrels of water or 6" out of 93 million miles. Freed notes that we are still at the beginning of dealing with this issue but there is currently no action other than

testing going on in Carlisle. Freed/Davris will provide links to sites with more information (or check the Mass DEP website: <https://www.mass.gov/orgs/massachusetts-department-of-environmental-protection>). Mariano will forward the presentation recording to the Selectboard. Board members wanted to know what to tell residents with affected wells. Galligan asked about the health effects and if there are medical tests that a resident could ask of their doctor. Divris said there are not any specific tests for this purpose. Studies have shown that PFAs can affect the liver, kidneys, result in developmental delays and affect fetuses. Health effects are being studied. Much depends on the level of contamination and exposure duration. PFAs are found in many other products, not just drinking water. The MA Office of Research and Standards chose 20 ppt as a conservative number. EPA is using 70 ppt. Carlisle results are spread throughout the town. Most private wells in town are fed from a maze of bedrock fractures. This makes it extremely difficult to identify a single source. The Board asked Divris to provide the links to the toxicological studies and she agreed.

4. Benfield Farms – status report

Mariano notes that a lot has happened over the last couple of weeks. Frado has reviewed the design. Frado said that he found the main issue to be that what was presented was a non-pressure dose system, but it appears that a pressure dose system is required. A 2009 bulletin from DEP says there cannot be a pretreatment unit when pressure treatment is required and unfortunately, over 2000gpd requires pressure dosing, Frado asked Beaudry to clarify. Frado noted there was a 33 mpi perc test encountered near the proposed leaching area. All tests within 30' of the proposed leach field should be used as the basis for the design. The proposed Presby Enviro-Septic Design calculations have a range of 1-9 mpi but a 2 mpi was used in the Leaching Design Criteria. Beaudry agreed to consider using 5 mpi for the design. He will discuss this further with Frado. Frado has also received emails from Claire Golden of DEP saying that class III or IV soil requires pressure dosage (33min/in is class 3 soil). Item 3 is a request of 1' reduction (3' to mounded groundwater). Frado does not recommend that based on the poor soil quality, there are pockets of restrictive soil which are believed to have caused the original failure and we would like to get as far from that as possible. Item 4 refers to specific areas where compact layers were found during deep hole testing--in some it was deep enough that they are probably ok but in others they should be removed. There should be detailed instructions for the installer on mitigating these latter areas. Item 5 refers to replacing old compliance wells--typically we decommission old wells so there should be a notation detailing how this is to be done. Notes should be added to Item 6, specifically the minimum size of manhole covers with rubber gaskets to prevent odors. The installer should also determine whether the groundwater is high enough to require waterproofing the tank that should be up to engineer. Item #7, local regulations require a scaled profile. Item 8 refers to May 17 cover letter from Beaudry where he asks to just install leaching area and optimize existing fast system before adding new components, Frado asks for details on the monitoring process--quarterly is the minimum regulatory requirement but the BOH should determine if they want something more frequent

Mariano said there were also concerns in the evaluation by Hydroanalysis. Based on Frado's review and some of the concerns noted in Hydroanalysis report Mariano saw an email from Beaudry indicating that they are going to reconsider the design. We will need to wait until Frado's issues are addressed and we may need to modify enforceable agreement.

Beaudry noted that GeoHydrocycle came up with a 1.6' mound (varies over site) 1.6' in middle of system but dissipates as you go to edges--on revision on Shanahans' report, mound is going up to 2.2'--approaching 2.6-2.7' mound in the Northeast. When considering 2.2' mound we are looking at a system 30" out of the ground--adding tremendous cost and ConsCom will have a problem with that amount of disruption. We have gone full circle back to Perc-rite and we first need to optimize the shape of the disposal area. Pete Shanahan and Smith say the system should move south--getting away from no flow boundary--glacial till/outwash boundary--some things the Beaudry disagrees with--should we redesign for 30"/min that if 4' in the ground so he doesn't seem we should design for 33min/" to the designed 5min/".

Mariano asked Frado how confident he was that a design can be done that would allow the system to be on this ConsCom land--or should we be looking elsewhere such as the Recreation Commission parcel. Frado thinks that

we are basically in the same type of soil. Frado doesn't think Perc-Rite failed but that the soil failed and that we have to deal with restrictive soils, either by removing the restrictive soil or by moving the system. Rob commented that in residential systems with poor till, you can mitigate the problem by excavating until you get to a good layer. However, the size of the Benfield system makes it an order of magnitude different.

Frado wanted to know how the current design differs from the original design. Beaudry says there is a huge difference here, under the failed system they found a layer in excess of 60min/" and dug down 60" and didn't get below the restrictive area. Every site tested in the new area had 4-5' over the restrictive areas or broke out fairly quickly. Frado agreed and asked whether we could remove the relatively thin layers of impermeable material. Mariano asked if there is a plan to address restrictive areas, and also some data to give confidence that we have identified all those spots. Mariano would like to see enough data points so we can extrapolate. The Board needs a level of confidence that the new design can work. Beaudry said the upgrade will be installed much more carefully. Additional inspections during the process should identify any pockets of compacted soils. These will then be dealt with. Beaudry plans on being onsite during this process. Giffie senses a lot of progress and thinks Frado, and Beaudry are not that far apart and that they will come up with a system Beaudry and Frado are comfortable with.

Mariano is looking to modify the Enforceable Agreement; he proposed the following dates: 7/8 – design submittal, 7/9 delivered to Frado, 7/28 BOH review final design and drafts conditions; 8/11 BOH vote; construction to start end of August and a Certificate of Compliance 11/30/21. Mariano and Fantasia will finalize these dates.

4. Public Health Excellence Grant

Fantasia said the group has not completed the work plan. The goal is to hire a public health nurse for Concord, Lincoln and Carlisle.

5. 53E ½ Budget Cap Increase

Fantasia: we reached the spending cap and submitted a letter to increase it by \$15,000. Frado's May invoice is being withheld. Mariano said the fees were collected but we need approval to spend the money.

6. Engineering and Nursing Contracts – status

Engineering and Nursing Contracts - status Fantasia asked has requested proposals from both Emerson Home Care and Technical Consulting Group (TCG). TCG typically offers a three-year contract.

7. Personnel Reviews

Personnel reviews should be done, the BOH is waiting for the forms.

8. Margolies and Thorsen

This is their last meeting and members of the board expressed appreciation and admiration for their service.

9. Adjourn

Margolies moved to adjourn, Thorsen seconded it and it was approved unanimously, adjourned at 21:49. The next meetings will be June 30, July 14, July 28, and August 11.

Respectfully submitted,

David Erickson,
Recorder