

**WAYLAND BOARD OF HEALTH MINUTES
WAYLAND TOWN BUILDING
BOARD OF HEALTH OFFICE
41 COCHITUATE RD, WAYLAND
NOVEMBER 2, 2016**

The meeting was called to order at 7:00 p.m., present were Thomas Klem (TK) chair, Michael Wegerbauer (MW), Elisabeth N. Brewer, M. D. (EB) and John G. Schuler,(JS) M. D. Also present were Julia Junghanns (JJ) Director of Public Health and Patti White, Department Assistant.

7:00 p.m. **Public Comment –there were none**

7:05 p.m. Review Bureau of Resource Protection Title 5/ Drinking Water Programs Zone I Policy and discuss septic system upgrades located in a Zone I of a Public water supply well

The board is reviewing the State policy regarding Septic systems in Zone 1. JJ: the policy explains the minimum requirements for replacing an existing septic system located inside a Zone 1. JS: Are the rules higher or tighter for septic systems in zone I? JJ: it is presumed that any system in a Zone 1 is considered a failure and it should be moved from the zone 1 if feasible and connected to a sewer system.

TK: question regarding page 4 # 4. JS: we can as a board require a higher standard for the system design (inspections, advanced technology, or pumping requirements)

JS: the Town does not have to purchase the property; we (the BoH) can require the higher standards for the system. TK: we need to find a balance; strict requirements and/or the financial constraints to the homeowners. MW: the septic field will be outside the Zone 1, but the tank and force mains will still remain inside the Zone 1. We need to be sure that there will be no increase in the usage. JJ: this is a repair of the existing septic system with no increase in number of bedrooms. MW: the BOPW made and approve a motion to support the repair of the system with a number of suggestions regarding the materials to be used and the design, as well as information regarding restrictions for the construction phase, construction inspections and requirements for operation and Maintenance.

7:25 p.m. 8 Glezen Lane, Septic system repair, Variance for upgrade/repair of a septic system in a Zone I, Owners Frank and Karen Chase, Professional Engineer Bob Drake (BD)

Mike Lowery (ML): reviewed the septic design with the water superintendent, a handout is presented regarding their recommendations for the materials & design, restrictions for the construction phase, construction inspections and operation and maintenance.

The property is pork chop shaped lot with small frontage and it runs back to the house. The existing septic system is a converted cesspool acting as a tank with an attached leaching pit, this system is not compliant with today's standards for a new septic system. It is 4 bedroom house and the new system will be for the same number of bedrooms. The owners are looking to sell, and we were advised that the system would not pass a title 5 inspection. It was recommended to try to locate the leach field outside of the Zone 1 area. The tanks and pump chambers will be by the house, there is a long force main that will have 2 distribution boxes. Passive alternative technology will be used for the leaching area using a Cultec system. There are tight quarters and restricted by soil testing results, so the Cultec chambers will allow for a smaller leach field. The cultec system with infiltrators will be in a grassy area beside the driveway. A continuous pitch of the forcemain back to the pump chamber will be provided. The effluent will be pumped with pumps activated within the pump chamber,

(3 switches and submersible pumps, as the water reaches 9 inches, the pump is activated, there is a 3rd switch; to activate a high water alarm, there is a control panel in the house, with an audio alarm and flashing light. When the alarm goes off, there is storage capacity of 24 hours of estimated waste (590 gal) in the event of a loss of power. Maximum daily design flow of 440 g.p.d., there will no garbage grinder and 2 compartment septic tank is provided. Pumping of the septic tank is recommended (solids 1/3 of tank capacity) as a matter of practice. The best way to figure it out is to pump on the first anniversary and figure future pumping schedules from there based on the solids, to decide if it will be pumped again at 1, 2 or 3 years. A Zabel effluent filter will be inside the outlet tee, designed to retain small particles of solids in the tank. These filters can pop out, so those are recommended that the Zabel filters to be inspected annually or after any heavy usage (holiday party)

JS: if we want to protect the town water supply, we don't know their party schedule, how do we set up safeguards to pump and check the filter? BD: we can set up an O & M policy regarding inspections? BD: We need to be sure owners are educated regarding what they can and cannot be put into the septic system. BD: The tank and pump configuration is pretty standard. Inside zone 1, these pump systems have been around for 30 years, most of the components are stainless steel. We recommend they have someone come by and inspect and maintain the pumps. The probably would need some work at about 10 year time frame. If there is a problem with the pumps, they are constructed to allow for a fairly quick repair and replace. JS: if there is a problem, and the house is not occupied (vacation) how will the town know? BD: the tank is a water tight, monolithic tank and would not break out, it would likely go into the house. TK: how uncommon is the 500 ft. forcemain? Is it a possible problem? BD: it is a longer than usual run, a ½ h.p. pump can still push out 500 '. There has been discussion that they consider putting a 1h.p. pump in, we also looked at a duplex system (2 pumps) if one dies the other works, it can be set up as an alternating system, so one pump does not sit idle. I do believe a dual pump system would not be a bad requirement (adds about \$1,000.00 to the estimated cost). TK: what is the price range for the complete job? : BD: With possible work on the driveway, I estimate the cost to be about \$50K; including the long trenching for the forcemain. An average system on a standard shaped lot runs about \$25K. The Infiltrator chambers are more costly, the additional length of the force main, 2 distribution boxes and additional venting. There was discussion of possibly installing 2 force mains; if there should be a problem with the force main at some time in the future; putting both mains in at the trench would provide the ability to switch force mains without having to dig up the 400' of piping to find the error, just switch over to the second main in the trench.

BD: the Alternative Technology proposed is a passive system; manufacturing in operation for over 25 years. BD: installing stone inside the leaching components, will allow for additional protection to the chambers, (it is off the driveway) maybe put a post and rail fence around the leach area, to protect the field, so no one could drive off the driveway and over the system. New vents now looking like hitching posts, which would also protect the area from people driving over the area. JS: We need to be looking down the road 20 years when the property has been transferred and owners may not understand the importance of protecting the water supply. BD: I think as long as we have the documents on file with the Registry of Deeds explaining what needs to be done to protect and care for their system. JS: How would you know if there is a problem with the force main? BD: if there was a rupture in the pipe, effluent in that area, would be 250 to 350 feet from the wells, it would be well filtered in the ground before reaching the ground water. BM: is a tight tank an alternative? JJ: a tight tank is typically not a good solution, if it fails then you have raw sewerage effluent breaking out. BD: I am comfortable with the security of the two tanks and the O/M policy and the required inspections, a person purchasing this home will be well informed regarding the system and maintenance. JS: Are there any higher quality products that can be used? BD: Yes, using schedule 80 pvc pipe would be a good idea. The pipe will be at least 4' below grade and some places are 7' below. I don't believe a protective sleeve would be needed. Mike Lowery(ML) speaking as BoPW member- DPW has a number of comments: TK: there are a number of items in BoPW letter, do we make our decision tonight or let BD talk with the homeowner? BD: We are looking specifically at the variance to install the system partially inside Zone 1. The particulars of the system can be done at a staff level. MW: This plan will need to go through BoH for final approval. We should try to get this approved tonight, as BPPW did approve this design, we might be able to say we are working together ML: I urge the board to not grant an approval tonight with all these details to be addressed, BoPW would not be happy if all these details are not all written down and

supported. JS: I agree that the final design should be agreeable to us and the BoPW. Also suggest that if we need to require more upgraded design if burdensome to owner, that the town supplement additional costs? MW: as the owners are looking to sell, this can be added into the purchase price. TK: well that is a slippery slope, we should not bring the town in.

Linda Segal- Aqueduct Road speaking as private resident: Thanks to BOH, BOPW and staff for working on this project. There are at least 12 properties inside zone 1. The website for BOPW has the Wellhead protection Plan which shows the locations of the houses and their septic systems. The Committee looked at solutions for property owners and public water policy. Be aware of other items on property, chicken coop and workshop, if there is an agreement, please do not lose track of other items that should be addressed. Verify by land survey to identify where things are metal pipes can disintegrate, so PVC does have an advantage. DEP in 2002 told all Towns that have private water supply wells to either own or control what happens in Zone 1.

ML: thanks to all involved. 2 weeks ago there was a force main breakout on rt. 20. We should go the extra mile to create the most robust plan as possible. BD suggested several items the BoPW suggested and some he did not. BD will meet with the Water Superintendent to review this list of questions and suggestions regarding materials and design and come back to the BoH.

Include items from list:

- 1) When we cross water and sewer lines, we sleeve the pipe. Sleeving is probably recommended by the water superintendent
- 2) Depth of force main regarding freezing
- 3) We measure 540 feet, with a total of 29 joints, if there is a possibility to use a seamless forcemain and sleeve it?
- 4) Double wall the tank with a concrete foundation, or monolithic tanks?
- 5) Concern regarding the driveway and the forcemain, the main will be nearly adjacent to the driveway, can the driveway be moved out to keep it out from the forcemain? Fencing around leaching area for protection.
- 6) Consider using a heavier PVC pipe- schedule 80, depth and cover material for protection

MW: does BD or JJ have any issues with the above list: BD: if you wish to continue the meeting I will go over the items with Don Millett to revise the plans. There are some things with sleeving and double walling, that should be discussed with the Water Superintendent and BoPW regarding the specifics of the plan and how things will work with the Board.

ML: yes I think Mr. Drake's suggestions would work well for the discussion, it would help to make the BoPW more comfortable to protect the water system.

LS: will this happen before special town meeting?

MW: I think we need to take a sense of the board for the approval of an appropriately robust and redundant soil absorption system lying outside the Zone 1 area. JS: Julia, BD and Water Dept. Superintendent, can we have information for the 2 boards in principal before the Special Town meeting to have an agreement to allow the BOPW feel comfortable to withdraw the article for Town Purchase. The board had a discussion and feels that we are working towards a plan that the BoH supports to upgrade this septic system. JJ: will keep the board informed and updated on the information regarding this septic repair design and all the changes/suggestions that were discussed this evening before STM.

7:45 p.m. Discuss Special Town Meeting Articles 8 and 9

EB: I don't agree with purchasing the property. It is understood that the BoPW will be pulling the Warrant article to purchase 8 Glezen Lane. MW: I feel the opinion of the board would be the purchase is the safest. JJ: the property 107 Old Sudbury is not in a zone 1. We have no information on that property. There is no

information in the file as to where the existing septic system is located or where an upgraded septic would be located.

7:55 p.m. 46 Orchard Lane, Variance from BoH Innovative and Alternative Technology policy for new construction; using a Fast system to reduce nitrogen in a Zone II, Owner David Spagnuolo (DS) David Schofield (DS-SEG) of Schofield Engineering Group

DS-SEG The owners are proposing an addition to add 2 bedrooms going from 4 to 6, the lot is 42,590 sq. ft., in a Zone II; without treatment, the State Title 5 Regulations allow 1 bedroom per 10k sq. ft of land area. Soil testing was done in the front of the property, the soils were good and the system will fit in the front yard. The only item that needs approval is the variance for the use of the Fast system to reduce nitrogen on an undersized lot. It is the most recognizable name in the industry, the company has been doing residential nitrogen reduction for over 12 years, the first system in Wayland was at 12 Doran Rd. (singular). Fast is now a provisional system with maybe 1000 installed in Massachusetts, the system can achieve an 80% removal of nitrogen. I understand that there were concerns that there have been homeowners that will not keep up with their contracts. Annual maintenance (active treatment) there are no passive nitrogen reduction systems. This is a cycle and air system, there are no chemicals used.

TK: They are using I/A technology for a renovation and adding bedrooms? DS: Yes, the addition is triggering new construction requirements and they are adding bedrooms and lot size.

JJ: they are doing a renovation over 60% and adding bedrooms, both of which meet the definition of new construction in Wayland. DS: we are a family of 6 and are adding room to allow for future care of elder parents, we will plan to stay in town.

JJ: do you have floor plans for the house showing the Size of house sq. ft.? what is the existing sq. ft.? DS: 3,100 total now, after 5625, 85% increase in square footage. BOH policy for sq footage? The policy does not include a guideline for a 6 bedroom house. JJ: The board policy created in 2011 has been used as a guideline for the board to make decisions since then, however, it is not a regulation. DEP does allow this type of system with an increase in bedrooms on an undersized lot, in a Zone II, if nitrogen reduction is done with I/A technology. The state Title 5 Regulations does not include regulating the square footage of homes for construction. Regulating or restricting the size of a home would be a zoning related bylaw.

MW: the policy was created for a repair situation, not for the addition of bedrooms.

DS-SEG: they are installing a new 6 bedroom system, so why are they not allowed to do the addition of sq. footage? By adding the I/A system they are protecting the water with the treatment being added.

JJ: Darren and I have reviewed this to see if there is any compromise reducing to 5 bedrooms?

DS: My wife's parents are nearby, and my parents are not well, we would like the 6th bedroom for parents.

JS: I feel that our primary concern is protecting the water supply. The I/a system will protect the water supply. I feel the bedroom count is secondary if proper design of a septic system is provided as per the Title 5 Regulations.

DS-SEG: annual maintenance is a one year annual contract. JS: pumping requirements? DS-SEG: the additional treatment may actually reduce the need for pumping.

TK: motion to approve the request for variance at 46 Orchard Lane for use of I/a technology for an addition greater than 60% and a 2 bedroom increase. The board requires an O/M plan to be in effect for 4 years, The establishment of an escrow with a deposit of one year o/m cost (approx. \$500.00) signed prior to the issuance

of C of C. The motion is subject of staff approval to the septic plan submitted (rec'd 10/25/16) plans of 10/13/16 and subject to staff review of architectural plans submitted at meeting 11/02/16. Second MW vote 4-0 all in favor.

9:10 p.m. 11 Springhill Road, Use of Infiltrator leaching chambers (passive alternative technology) for a new construction septic system, Owner Barbara Holtz, David Schofield of Schofield Engineering Group

MW left the meeting @ 9:10 p.m.

Existing 2 bedroom system, not in zone II, previous design was a traditional stone and pipe and there were several large trees that would be impacted by the leaching area excavation and probably taken down. DS is looking at the redesign to save the trees and allow for a possible future expansion. The current system is a single cesspool. The present house is approximately 1000 sq. ft. This is a passive I/A system, (infiltrator) this is an open bottom (no stone) the state approval allows the leach field to be reduce by 40%. The field was reduced 40% and it was designed at 650 sq. ft. using a 40 mill barrier on downside to prevent breakout. This field does not have to be pitched on the hill. This is a general use technology. JJ: there are various types of leaching field options that exist for an engineer to choose from depending on the topography, soil types, and other challenges of the property. This passive technology is a tool for engineers to use for certain issues, wetland proximities, lot size restrictions. TK: is there a larger fee for this? JJ: the reason this is before the board is that the Board policy for I/A systems does not speak to differentiate between active/passive technology. This design could be approved at a staff level otherwise.

TK: motion to approve the use of the Infiltrator (passive) I/A technology for new septic system construction at 11 Springhill Rd. as shown on revised plans dated 10/25/16. Second EB vote 3-0.

9:25 p.m. Claypit Hill School Nursing needs and request for increase in Substitute Nursing Salary Line item for FY18

JJ: PHN/Nurse Leader Ruth Mori and I have done a lot of investigation and data gathering regarding the nursing needs at Claypit Hill Elementary School. We met with CHN Noreen D'Amico and reviewed/analyzed information and data gathered, met with the School Superintendent and the Director of Student Services as well as High School CHN Amy Schoeff. JJ referenced the documents that were provided to the board with numbers of visits to the nursing offices of all schools including numbers of students needing some type of assistance/medicine administered from the nurse. The numbers at Claypit Hill stand out due to sheer volume. Some students are requiring multiple daily visits to the nurse office for health reasons and medications to be administered which is requiring increased nursing needs and takes more time. For this year we are requesting 2 hours per day of sub-nursing assistance for this school during the pre and post lunch times, will ensure the proper coverage of health needs at this time and safety of the students as well as providing adequate assistance for the nurse to ensure she can function successfully and safely fulfilling her duties as the CHN. Lunch hour is the busiest time as there are many regular visits to the nurse office in addition to any students that need more time due to medications that need to be administered.

Although it is difficult to predict the exact shortfall for this year (FY17), it appears that we will run short this year by approximately \$10, 837.00 (with the assumption of 2 hrs per day of sub-nursing coverage, and other typical sub-nursing needs for other schools and this school throughout the rest of this year). For FY18 the expected future additional needs are for an additional \$24, 017.80.

TK: motion to approve the request for additional funding for the sub nursing line item for FY18 by \$24, 017.80 to a total of \$52,941.80. JS. second, vote 3-0 all in favor.

8:35 p.m. **Review Food Permit Fees**

The food inspector and staff have reviewed the fees being charged for various food related permits/fees to see if the amount is covering the cost being charged for the inspections required and any follow up visits required.

EB: do we have a charge for inspections for power outages? Or reinspections after power outage?

\$50 fee for weather related re-inspection fee.

TK: motion to approve the revised food permit fees as submitted at the meeting 11/2/16 second EB vote 3-0 all in favor.

9:55 p.m. The Board will review the annual report and email Julia with any changes

9:55 p.m. General Business

The bills have been signed

Approval of minutes of September 12, 2016 and September 26, 2016

TK: approval of minutes of 9/26/16 as presented and minutes 9/12/16 as revised second JGS vote 3-0

9:56 p.m. **Update of 188 Commonwealth Rd.**

JJ: A letter received from Holmes and McGrath Inc., the engineering company for Royal Wayland Nursing and Rehabilitation. The letter mentions a proposal for installing a SoilAir unit as an added measure of protection, the office has received information on the SoilAir system. A title 5 inspection will be done next week, office staff will do a site visit during the inspection. Based on the report findings they will set a contract for specific pumping timelines.

Royal Wayland is looking for 12 month extension on deadline of November 12, 2016 for the installation of the new septic system. JS: we need to wait till after we see Title 5 report and understand what the situation there is. JJ: the pumping of more than 4 times a year deems the system as in a state of failure.

Future meeting dates: November 21, or 28th. EB cannot do 21.

10:00 p.m. **TK: motion to adjourn**

Respectfully submitted
Patti White
Department Assistant
Health Department
110216minutes
APPROVED 010317