

Terri A. Guarino
Health Agent

TOWN OF BOURNE BOARD OF HEALTH

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TOWN CLERK BOURNE

REMOTE MEETING MINUTES October 28, 2020

Members in attendance: Kathleen Peterson, Chairwoman; Galon Barlow Jr., Vice Chairman; Stanley Andrews, Donald Uitti; and Kelly Mastria.

Support Staff in attendance: Terri Guarino, Health Agent; Health Inspector, Kaitlyn Shea and Syreeta Amaral, Administrative Assistant.

Meeting was called to order at 5:05pm

- COVID-19 and Phased Re-opening Plans—Terri Guarino, Health Agent to provide information and updates. The Board of Health to discuss and possibly vote as necessary:** Health Agent Terri Guarino started by explaining the updates in regards to COVID-19. Since the last meeting on October 14th, 2020 the governor issued new orders for the closure of ice rinks within the state due to clusters of illness. She added that Governor Baker has spoken in regards to the new breakdown in cases noting that the majority of new cases are occurring in people under the age of 30. Miss Guarino stated that Health Inspector, Kaitlyn Shea has put together a new weekly dashboard for the Town of Bourne which will be posted on the Town's website once a week. Miss Guarino added that these statistics will have implications on schools and certain types of businesses if cases begin to rise. This dashboard will also serve as a heads up to the community if our color designation changes. Ms. Peterson congratulated Ms. Shea on the excellent work that she had performed. Miss Guarino stated that this was an excellent risk communication tool for the Town of Bourne. Ms. Peterson asked Miss Guarino if this dashboard was posted on the town's website. Miss Guarino stated that this new dashboard was posted on the Health Department's website. Ms. Peterson asked if there were any questions from the Board. There were no questions from the Board. Ms. Peterson asked if there were any questions from the public. Mr. Michael Rausch stated that he had no questions.
- ISWM Updates – Dan Barrett, General Manager of the Town of Bourne ISWM Facility – Discussion and possible vote on pilot leachate treatment project instituted at the ISWM Facility.** Mr. Dan Barrett started by thanking the Board for their time so that he could explain what the ISWM department is doing in regards to the leachate created by the landfill. **See exhibit A** Ms. Peterson asked Mr. Barrett to clarify whether or not the MA DEP needed a permit for this process. Mr. Barrett confirmed that he contacted the MA DEP and they decided that the process is basically running water through clay so they were not required to pull any kind of permits. Ms. Peterson asked the Board if they had any questions or comments for Mr. Barrett. Mr. Andrews stated that he had been up to see the new equipment. It looks like a very simple system to him. He is glad that the ISWM department has started a pilot program to deal with the leachate. Mr. Andrews followed his statement with a question that if the rain gets heavy does the department have a back-up plan to pump. Mr. Barrett answered Mr. Andrews by saying there is staff there 7 days a week and that they do pump in the event of heavy rains. Ms. Peterson asked if Mr. Andrews if he had any other questions or concerns. Mr. Andrews stated that he did not have anything to add. Ms. Peterson asked the other Board members if there were any questions or concerns. There were no other questions. Ms. Peterson asked if Miss Guarino had any questions. Miss Guarino stated that she did not have any questions but added that she would like to visit the facility to view the new operation. Mr. Barrett stated that he and the staff

are available whenever Miss Guarino has the time to come to the facility. Ms. Peterson thanked Mr. Barrett for his time.

3. **26 Indian Trail – Jack Landers-Cauley on behalf of Owners Steven & Jean Cohen – *CONTINUED from Sept. 16 & Oct. 14, 2020*–Requesting relief from State and Bourne Board of Health Title 5 regulations. Requested septic variances include a 4.9 foot variance in the required 10 foot setback from the proposed leaching facility to the front property line and a 63.1 foot reduction from the 150 foot setback requirement from the proposed leaching facility to a coastal bank (plans revised 10/19/2020).** Ms. Peterson asked Miss Guarino for her input on the revised plans for this project. Miss Guarino stated that the revised plans that are dated October 19th, 2020 show the 4 bedroom design which addresses the concerns over the existing 4 bedroom dwelling brought up at the previous meeting. Miss Guarino approves unless there are additional concerns. Ms. Peterson asked the Board if there were any questions in regards to the revised plan dated October 19th, 2020. The Board had no additional questions. Ms. Peterson made a motion to approve the project at 26 Indian Trail based on plans dated October 19th, 2020 prepared for Steven & Jean Cohen for variances that include a 4.9 foot variance in the required 10 foot setback from the proposed leaching facility to the front property line and a 63.1 foot reduction from the 150 foot setback requirement from the proposed leaching facility to a coastal bank. Mr. Barlow seconded the motion. Roll call vote to approve. Mr. Andrews... yes, Skip Barlow Jr.... yes, Kelly Mastria... yes, Mr. Uitti... yes, Ms. Peterson... yes. All were in favor and the motion passed unanimously.
4. **85 Elgin Rd –Jack Landers-Cauley on behalf of owner Charles William Lowney – *CONTINUED from October 14, 2020*- Requesting relief from State and local Board of Health Title 5 regulations. Variances requested include a 49.9 foot reduction from the required 150 foot setback from the soil absorption system to a coastal bank and a 25.9 foot reduction from the required 150 foot setback from the soil absorption system to a wetland.** Ms. Peterson stated that the representative Mr. Jack Landers Cauley from the 85 Elgin Rd agenda item requested to be put on the November meeting agenda. Miss Guarino said it would be good to ask that we waive the timeframe for the meeting. Ms. Peterson asked that the owner send a letter waiving the time frame. Mr. Jack Landers Cauley stated that he would have the owner draft the required letter and that it would be sent to the Health Department tomorrow morning October 29th, 2020.
5. **9 Weetamoe Rd – Jack Landers-Cauley on behalf of owners Christopher, Caitlin and Jared Kent- Requesting relief from State and local Board of Health Title 5 regulations. Requested variances including a 5 foot reduction from the required 10 foot setback from the proposed tank to the foundation wall, a 6 foot reduction in the required 10 foot setback distance from the proposed tank to the property line, an 18.5 foot reduction in the required 20 foot setback distance with an installed poly liner from the proposed S.A.S to the foundation wall and a 7.3 foot reduction from the required 10 foot setback with an installed poly liner from the proposed S.A.S to the property line.** Miss Guarino states that this conventional septic system upgrade does not have an issue with the local 150 ft. setback regulation, it is within a flood zone, it is required to be heard due to property line setbacks under Title 5. Additionally, there are setback reductions to the foundation wall. Typically, these are administrative approvals but due to property lines and flood zone, it must come before the Board. Miss Guarino finds that this is a substantial improvement to the site and mentions that there is a note about sleeving the water service if it cannot be relocated. There is an existing structural wall on the edge of the SAS and there will be a 40 mil poly liner and a new wall (specified on sheet 2 of the plans). Mr. Stanley Andrews asks that the Engineer talk about the property. Mr. Landers-Cauley notes that the Conservation Commission has already approved this project. This is a difficult site and the neighborhood has small lots and elevated groundwater. This is a failed system because the leaching component is directly in the groundwater and the system has to be raised in order to keep the 5 ft. vertical separation. Mr. Landers-Cauley says that they have the ability to request a reduction from 5 ft. to 4 ft. but it is important to keep the 5 ft. for public health reasons. There is no increase in the footprint of the house, number of bedrooms or daily flow. It is designed to meet the maximum feasibility requirements outlined in Title 5. Mr. Andrews has connection issues. No additional questions from the board. Ms. Peterson is pleased with the upgrade and increased environmental protection. Mr. Barlow makes the motion to grant the variances. Ms. Peterson asks if there is anyone else who would like to comment on the project. Ann Howell, direct abutter at 3 Weetamoe Rd, is concerned about distance from the Kent septic system to her foundation. There would only be

a 9 ft. setback to her foundation from the Kent septic system as she is only 5 ft. from the Kent property line. Miss Guarino asks for clarification. Is the structure of Ms. Howell's dwelling closer to the street than the abutting one at 9? Ms. Howell stated that is just about the same distance. Her foundation has a setback distance of about 8 ft. from the property line. Mr. Andrews stated that the engineer drew a 40 mil barrier around the whole system on the plan and it would protect the flow from going to Ms. Howell's home. Ms. Peterson requests that Mr. Landers-Cauley shares the plans on the Zoom screen. Ms. Howell asks about the reasoning of the 10 ft. setback. Mr. Landers-Cauley states that the DEP holds the position that there needs to be some distance between neighbors' properties to build a system. Variances are expected from small properties, which provides the BOH the right to review and ensure that sound engineering practice is being upheld. Ms. Peterson asks if Ms. Howell feels comfortable with the answers. Ms. Howell states that she wants to make sure that this is the only possible place that this system can go and asks if they have explored other areas on the lot that don't have the abutter's foundation so close. Miss Guarino states that this is being approved under maxim feasible compliance as a repair upgrade and it does appear that the location of the SAS is the most feasible and it takes relief being requested into consideration, particularly the amount of protection to any resources. There shouldn't be any impacts to Ms. Howell's foundation in regards to this sewage disposal system, having mitigation in the form of a 40 mil poly liner. Ms. Peterson states that if this is approved it will be approved under the condition that Mr. Landers-Cauley meet with Ms. Howell in person and explain exactly how, what and where they are installing this system and why it is not going to impact her property. Ms. Howell will need to contact the BOH afterwards to state that she is comfortable. Ms. Howell asks if this location is because it is the most affordable. Ms. Peterson asked Mr. Landers-Cauley if there are other locations the system can be installed? Mr. Landers-Cauley states that there is not enough room in the back of the house. The only other potential location is the opposite front side. The problem with that location is that the same issue would come up with the neighbor on the other side. Someone will always be next to this system, whether it is the house to the north or south. The plumbing comes out on the south side of the house which is why they chose this current location. There is less space between the house and property line on the north side. The actual physical house is closer by about 4 ft. to the northern property line. This seems like the only place to put the system. If the system was in the front of the house, the owner would not be able to drive on their property. Ms. Peterson asks if there is anywhere else the system can go. Mr. Landers-Cauley says this is the best place to put it. Mr. Andrews asks that this be open to discussion. Mr. Stanley says it is the Board's decision to choose if this is the most feasible location. Mr. Stanley agrees that the northern location is tighter. Mr. Stanley asks where the existing septic system cesspool is located. Mr. Landers-Cauley says it is a small circle on the south side of the property on the plan, just outside the footprint of the deck. Mr. Stanley notes that the existing cesspool is close to the neighbor's property as well. Mr. Stanley says this appears to be the best feasible location and it is a far superior system compared to what is there today. Ms. Peterson and Mr. Uitti agree. Ms. Peterson asks if Ms. Howell has any other statements to make regarding this project, as it appears that the Board, Engineer and Health Agent all feel that the system is going in the best feasible location and is a significant upgrade. Ms. Howell agrees that this is an upgrade, but her big concern is that the neighboring house to the north is further from the property line and she asks that the other side of the house be considered. Mr. Stanley states the 40 mil barrier gives great protection to Ms. Howell's property. Ms. Peterson states that they will go forward with the motion on the table. Ms. Peterson asks Mr. Barlow to add to his motion that Mr. Landers-Cauley needs to show Ms. Howell what was voted on and show her the plans. Mr. Barlow amends his motion. Mr. Stanley seconds the motion. Roll call vote; Stanley Andrews... yes, Skip Barlow... yes, Kelly Mastria... yes, Don Uitti... yes, Kathy Peterson... yes. All were in favor and the motion passed unanimously. Ms. Peterson asked Ms. Howell to call the Health Department once she has met with Mr. Jack Landers-Cauley.

6. **76 Jefferson Rd – Jack Landers Cauley on behalf of owner Ellen Garrett- Requesting relief from State and local Board of Health Title 5 regulations. Requested variances include an allowance for a 2 bedroom septic design with a recorded deed restriction, a 4.4 foot reduction in the 10 foot setback distance from the proposed S.A.S to the slab foundation and a 70 foot reduction in the required 150 foot setback from the proposed S.A.S to the top of a coastal bank.** Miss Guarino started off by explaining that the Health Department has received plans that were revised per her request most recently from September 3, 2020. The proposed system is a two-bedroom design, which under title five requires a two-bedroom deed restriction recorded with the registry of deeds due to design flow being less than 330 gpd. The plan also shows difficulties meeting set back

requirements in general and an issue with a water line that may not be able to be moved. The proposed plans are for a conventional title 5 system and is a voluntary upgrade from a cesspool, Miss Guarino recommends approval conditioned upon a red stamp indicating no future additions, renovations or upgrades can be done without first being heard before the Board of Health. She believes this upgrade is a step in the right direction, and any future plans could trigger an IA system requirement. Peter Valeri is attending the meeting on behalf of Mrs. Garrett. He states his client if voluntarily upgrading to a title 5 system for her own comfort at her property. He plans to sleeve existing waterline due to proximity to the existing garage, part of the driveway will be removed and replaced to get the system in there. Mr. Valeri states his client is already agreeable to the two bedroom deed restriction and red stamp conditions, as she has no plans to sell or renovate. He also explains they have moved the system as far away from the coastal bank as possible given the plot size. Ms. Peterson asks the Board if they had any questions. The Board members did not have any questions. Mr. Uitti moves the Board approves the requested variances, including an allowance for a 2 bedroom septic design with a red stamp condition, a recorded deed restriction, a 4.4 foot reduction in the 10 foot setback distance from the proposed S.A.S to the slab foundation and a 70 foot reduction in the required 150 foot setback from the proposed S.A.S to the top of a coastal bank. Mr. Andrews seconded the motion. Roll call vote to approve. Mr. Andrews... yes, Mr. Barlow Jr.... yes, Mrs. Mastria... yes, Mr. Uitti... yes and Ms. Peterson... yes. All were in favor and the motion passed unanimously.

7. **Approve the Minutes – Approve the minutes from the previous meetings dated September 16, 2020 & October 14, 2020.** Ms. Peterson asks the board if they have had time to review the minutes from the September 16th meeting. Mr. Andrews states he did not have time to review the minutes. No vote will be made on the minutes tonight. Ms. Peterson makes a motion to continue the minutes to the next meeting. Mr. Uitti seconded the motion. Mr. Andrews... yes, Mr. Barlow Jr... yes, Mrs. Mastria... unable to vote, Mr. Uitti... yes, Ms. Peterson... yes. All were in favor and the motion passed unanimously,
8. **Set tentative date for next meeting and adjourn.** Ms. Peterson asks Miss Guarino for confirmation of the meeting date of November 18th, 2020, and she concurs. Miss Guarino also offers up December 16th as the date for the December meeting. Ms. Peterson asked the Board if they were available at that time. All members of the Board were in agreement with these dates.

Mr. Andrews made a motion to adjourn the meeting. All were in favor and the meeting adjourned at 6:27pm

Taped & Typed by Stephanie Fitch, Health Inspector & Syreeta Amaral, Administrative Assistant

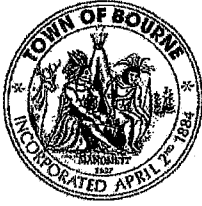
Kathleen Peterson _____

Stanley Andrews _____

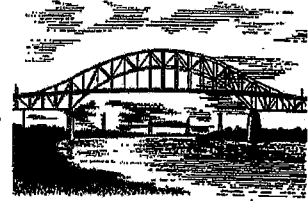
Galon Barlow Jr. _____

Don Uitti _____

Kelly Mastria _____



TOWN OF BOURNE
Department of
Integrated Solid Waste Management



Mailing:
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Location:
201 MacArthur Blvd
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TO: Bourne Board of Health

FROM: Daniel Barrett, General Manager
Town of Bourne, ISWM Department

DATE: October 28, 2020

RE: Landfill Update

Pilot Leachate Treatment Project:

The disposal of landfill waste water known as leachate has always been a challenge for ISWM. Advancements in analytical technology now allow scientists to accurately detect contaminants at levels of parts per trillion (ppt) or the equivalent of 4 grains of sugar in an Olympic size pool. Along with these technological developments came the ability to now quantify the concentration of previously undetectable chemicals that have become known as Chemicals of Emerging Concern (CECs). CECs specifically in ISWM's case, per and polyflouralalkyl substances (PFAS) now present a significant challenge not only to the solid waste industry but also the waste water industry, biosolids recyclers and the providers of safe drinking water. Keep in mind that none of these essential service providers including those of us in the solid waste disposal industry utilize or profit from PFAS chemicals, rather we are simply receivers of these chemicals.

With the opening of the Phase 6 landfill cell, ISWM was once again vulnerable to collecting vast amounts of leachate on the open liner. At the same time, waste water outlets were beginning to ratchet down on the amount of landfill leachate they were willing to receive. As a result we developed a plan to focus on what waste water outlets were available to accept the volume we currently produce. We then focused on what constituents in our leachate made it problematic for these facilities. At this point we retained the services of Civil & Environmental Consultants, Inc. and their waste water team lead by Ivan Cooper, BCEE.

CEC's task was to develop a list of treatment options with pretreatment effluent goals capable of being active in the near future, based on results of the disposal option investigation. The disposal option investigation revealed that the most promising short term treatment option was to remove PFAS. By the end of May 2020 the field of qualified technologies had been narrowed to 3; CleanHarbors, Cetco Fluoro-sorb and HTX Technologies. CEC developed Bench Test Work Plans and proceeded with the

tests. Just prior to bench testing HTX Technologies dropped out as they were unable to provide key information about their process due to lack of data. They will continue to be part of the ongoing system development as they showed promising technology for the reduction of metals and Total Dissolved Solids (TDS) which may come into play later on.

Both CleanHarbors (CH) and Cetco Fluoro-Sorb showed promising results. Further analysis of the results indicated that CH with its three column system relying on Granular Activated Carbon (GAC) media produced the highest percentage of PFAS removal (99.96%) but tended to deplete faster with organic matter increasing operating costs. CETCO with its two vessel Fluoro-Sorb media system which does not attract organic matter ran longer between change-outs with a 99.58% removal rate and was therefore more efficient and cost effective. Both technologies can achieved compliance with the recently promulgated MADEP drinking water standard of 20 part per trillion.

For the reasons stated above ISWM decided to pursue the CETCO Fluoro-sorb system as the preferred Pilot Test option. Again, the goal is to produce an effluent that is more attractive to waste water treatment facilities as quickly as possible, thus expanding the ISWM options for leachate disposal.

The CETCO Fluoro-sorb system consists of 4, 21,000 gallon portable water storage tanks known as Frac Tanks with secondary containment and one treatment/control skid with secondary containment, contained in an enclosed storage box. Raw leachate contained in the first Frac tank which has a built-in weir system to settle out suspended solids, is pumped into the control/treatment skid where it passes through a course strainer to remove solids. It then passes through a set of 200 micron disk filters that have a backwash cycle to clean them. The backwash is contained in the second frac tank. Liquid from the second tank can be recirculated back to the Raw tank and run through the process again. Once through the disk filter the leachate moves on to a set of 5 micron cartridge filters. After passing through the cartridge filters the leachate proceeds into the first Fluoro-sorb treatment vessel and then passes on through the second treatment vessel. The treatment vessels are configured in a lead lag series with a sample point in between the two vessels. By testing between the vessels we can get an idea of when the lead vessel needs to be switched out. With this configuration we will be able to run the system on one vessel while the other is being changed. From the treatment vessels the treated effluent is sent into the remaining (2) 21,000 gallon Treated Effluent tanks where it will await removal after confirmatory sampling is completed.

The only waste produced by this process is the treatment media which consists of 800 lbs of Fluoro-Sorb, 400 lbs in each vessel. The media consists of primarily bentonite (clay) with a volume of approximately 16 cubic feet per change out. Once the media reaches break through and is changed out it will have a high concentration of PFAS. It is our intent to dispose of the spent media in the landfill but have it permanently sequestered so as not to be able to be reintroduced into the leachate stream. Dr. Daniel Cassidy of Western Michigan University has done research on stabilization of PFAS in solids. He is familiar with Fluoro-Sorb but has not studied it specifically. He suggests the releases would be minimal if any. He suggested that the spent media be solidified with cement and put back into the landfill, his research indicates that use of simple cement in the correct proportion is an excellent form of sequestration. Dr. Cassidy has indicated that he is interested in assisting with this project and has since provided more detailed information regarding the sequestration process. We will be using his guidance as we proceed.