



BARNSTABLE
Water Resources



**Town of Barnstable
Comprehensive Wastewater Management Plan
Ad Hoc Committee**

Meeting Minutes

Date: March 31, 2025

Location: Selectman's Conference Room, Town Hall, Second Floor

The meeting will be televised live via Xfinity Channel 8 or high-definition Channel 1072. It may also be accessed via the Government Access Channel live stream on the Town of Barnstable's website:

<http://streaming85.townofbarnstable.us/CablecastPublicSite/watch/1?channel=1>

Committee Members Present (In-Person):

Scott Horsley, Chair; Brian Hughes, Vice Chair; Zee Crocker; Rob O'Leary; Louise O'Neil; Butch Roberts; Glenn Snell; Kris Clark, Town Council; Paul Neary, Town Council; Gordon Starr, Town Council

Committee Members Absent:

Tom Cambareri

Others in Attendance:

Dan Santos, Director, Department of Public Works; Griffin Beaudoin, Town Engineer, Department of Public Works; Amber Unruh, Special Projects Manager, Department of Public Works; Kelly Collopy, Communications Manager, Department of Public Works; Chris Gadd, Communications Assistant, Department of Public Works; Tom McKean, Director, Health Division; Tom Lee, Chairman, Board of Health; Bruce Walton, New England Water Environment Association; Jane Ward, Centerville Resident

Other in Attendance (Via Zoom):

Rob Steen, Assistant Director, Department of Public Works

Agenda:

Call to Order

Scott Horsley, Chair, called the March 31, 2025 meeting of the Comprehensive Wastewater Management Plan (CWMP) Ad Hoc Committee to order at 6:00 PM. The meeting was held with committee members attending in the Selectman's Conference Room, Town Hall. A member of the Department of Public Works staff, Rob Steen, attended remotely.

Administrative Items

a) Recording Notice

Chris Gadd, Communications Assistant, Department of Public Works, read the notice of meeting recording.

b) Roll Call

Chris Gadd, Communications Assistant, Department of Public Works, conducted a roll call from the committee. The attendance of members is reflected above.

c) Approval of Meeting Minutes

Scott Horsley, Chair, entertained a motion to approve the March 4, 2025 meeting minutes. Councilor Clark motions to approve the minutes. Brian Hughes, Vice Chair, seconds. The committee unanimously votes to approve the March 4, 2025 meeting minutes.

d) Next Meeting

Scott Horsley, Chair, opened the discussion on both the next regular meeting of the committee and the committee's visit to the Massachusetts Alternative Septic System Technology Center (MASSTC).

Chris Gadd, Communications Assistant, Department of Public Works, notes that a poll was sent to the committee members with potential dates for the visit to MASSTC. Scott noted his strong recommendation for attending based on the topics of the committee. After some discussion, it was decided that Monday, May 19, 2025 is the preferred time for visiting MASSTC. Scott requested Chris to move forward with scheduling the MASSTC Visit at that time. Chris indicated he will work with the staff at MASSTC to confirm the visit timing and will communicate confirmation details to the committee.

Scott inquired about options for the next regular meeting date of the committee. Chris responded with a list of available times approximately one month from the date of the meeting. After some discussion, it was decided the next meeting of the Committee will be on Tuesday, April 22, 2025 at 6:00 PM.

Scott notes there is a lot of work ahead of the committee. He notes multiple phone calls received in the past week regarding the committee. People are aware of what the committee is doing and there is a fair amount of interest. The committee will soon be moving into crafting recommendations for Town Council.

Discussion with Board of Health and Health Division pertaining to relevant policies

Scott Horsley, Chair, introduces Tom McKean, Director, Health Division, and Tom Lee, Chair, Board of Health. He notes the prior discussion of innovative/alternative solutions and that at least three towns on the Cape have adopted regulations requiring I/A systems with several others in discussions to require these systems. The purpose of this meeting is to determine where the Board of Health/Health Division stands with these technologies. Scott notes he feels there is a likely place for I/A technology to be utilized in addition to the CWMP.

Tom McKean begins a presentation on when I/A systems are required in Barnstable. The current code (310 CMR 15.215) states that properties in Zone II that go above the stated limit of 440 gallons per acre per day can utilize an I/A system to increase to 660 gallons per day.

Tom notes there is a local Board of Health regulation (Article XIII §360-37) that applies to flows over 1,650 gallons per day, in which the Board of Health can require an I/A system to be installed.

- Scott asks where the 1,650 gallons per day came from.
 - Tom McKean responds that it came from a model regulation from the County at the time of writing.
 - Scott notes there are provisions that utilize 2,000 gallons per day.

Tom McKean notes the Board of Health sees many requests for variances, which occasionally utilize I/A systems. This includes when a soil absorption facility (leach field) is less than four feet above the groundwater table; when a leach field is proposed to be less than 50 feet from wetlands; and when too many bedrooms are discovered at a property within a nitrogen sensitive area.

Tom McKean continues by noting the enforcement of Accessory Dwelling Units (ADUs), particularly in Nitrogen Sensitive Areas (NSA). While ADUs are by-right, they must also conform to regulations in NSAs.

Tom McKean shows information about composting toilets, which notes they are allowed by right and no variances are needed for their use. He notes an example of the Hyannis Golf Course installing a composting toilet.

Tom McKean shows information about tight tanks, which he explains tend to be used as a bridge between a septic system failing and public sewer becoming available to the property.

- Glenn Snell asks what the size of a tight tank is.
 - Tom McKean responds they are 2,000 gallons minimum and must be alarmed.

Tom McKean ends his presentation by noting the Health Department is getting busier and notes a concern about the delineation of where an I/A system could be installed. He cautions to use science when making any regulatory decisions.

- Scott Horsley asks how many composting toilets are currently in Town.
 - Tom Lee responds approximately half-a-dozen.
- Scott Horsley asks how many tight tanks are in Town.
 - Tom Lee notes the Board of Health is seeing more usage of tight tanks based on when sewer is available, and as such are a temporary fix.
- Councilor Starr asks what the time limit on a tight tank is.
 - Tom McKean responds that it is until sewer becomes available.
- Councilor Starr asks what requirements exist for determining the applicability of a tight tank, such as a letter from DPW identifying when sewer is planned.
 - Tom McKean responds that the Health Division requests input from the Department of Public Works before any determinations are made.
 - Kelly Collopy, Communications Manager, Department of Public Works, responds that the DPW provides the implementation schedule for the property and which project or phase the property is located in.
- Councilor Starr asks if someone was identified as getting sewer in seven years, could they get a tight tank?
 - Tom McKean responds that it is possible and notes several recent examples.
- After discussions to clarify details, Councilor Starr inquires why a specific property was not required to replace a failed septic system prior to selling the property.
 - Tom Lee responds that because the purchase was cash, there was no trigger for the Board of Health to review.
 - Dan Santos, Director, Department of Public Works, notes that a mortgage is what triggers the inspection from the Board of Health.
 - Councilor Neary notes this is to allow for the purchase of a house “as-is” with no contingencies.
- Zee Crocker asks to clarify that if someone wanted to add an ADU to a 1-acre lot, is it mandated to utilize an I/A system, or just have the capacity in the existing Title 5 system.
 - Tom McKean responds that a majority of the time the property is already above the maximum allowable number of bedrooms. The only option to add an ADU is to reduce the number of bedrooms on the property.

- Tom Lee adds that while the state allows ADUs by-right, they are still subject to Title 5 Regulations. There is no additional variance based on nitrogen loading.
- Jane Ward, Centerville, notes a group that focuses on affordable housing and is looking at ADUs with Urine-Diversion and Composting Toilets. This mitigates the issues associated with groundwater.
 - Tom McKean notes there is an example of this technology at MASSTC. He also remarks on a quote which states it is cheaper to treat wastewater before it gets into the ground.
- Scott Horsley acknowledges that the MEP model is not perfect, and the plan to meet it may need to be changed. He remarks that changes sooner are better than changes later. Systems along the shoreline have a shorter time to travel, showing results sooner. Many innovative/alternative systems are proven and tested by MassDEP. Why isn't there more being done to get regulations passed and systems in the ground?
 - Tom McKean notes the systems are very expensive.
 - Tom Lee agrees with the note about cost. He also states that regulating these systems must be done carefully as not all sites are the same. There should be some science of how close to the shoreline a system could be and the effects of it. So far this hasn't been done.
 - Dan Santos responds that Scott's question is why the committee is here. The point of this committee is to make recommendations for modifications to the CWMP and relevant policies.
- Scott notes his agreement with Tom Lee, and that the science seems to be the groundwater flow rate. To him, a good goal for the committee is to enable changes sooner as he sees them as more important. While the sewer is great, he notes it will take several years of flowtime.
 - Tom Lee notes that there may be property owners along the shoreline already anticipated to receive sewer. There needs to be a balance with these properties.
 - Scott agrees and notes many towns are dealing with the issue. Several towns have offered a grace period to connect. The potential usage of I/A systems also falls in areas not anticipated to receive sewer but would have a more immediate effect. To him, the science works, these systems remove 90% of nitrogen, and Cape Cod has good modeling for time to travel.
- Rob Steen, Assistant Director, Department of Public Works, redirects to the relevant question of whether the Board of Health would be supportive of regulations utilizing I/A systems that have reached general approval. He notes that previous Board of Health leadership was not in favor, and at the time no systems were generally approved. Since then, there are some systems that have been generally approved.
 - Tom Lee responds that he is open-minded. If MassDEP were to generally approve a system, he is generally in favor.

- Rob Steen asks Tom Lee’s opinion of a system that is provisionally approved at the time of discussion.
 - Tom Lee responds that it depends on the type of system. He is familiar with some systems, but not all. If a system does not meet the threshold of removing 11 mg/L of nitrogen, it’s a different story.

- Rob Steen asks, as the committee moves through the debate of how and where to utilize I/A systems, at what point does the Board of Health want to be brought into the conversation?
 - Tom Lee responds that he believes the Board of Health should be involved at the beginning. He notes he is only one vote of the Board, and it will take time to get the other members of the Board of Health informed.

- Zee Crocker notes that while there is agreement for eliminating Title 5 Systems/Cesspools on Cape Cod, it would be too expensive to replace them all at once. There is a phased approach to the CWMP, and he argues a phased approach for removing Title 5/Cesspools would make the most sense, utilizing existing maps and aiming for the most sensitive areas first. He agrees with needing general approval from MassDEP. A significant factor is cost. These systems seem to be low cost, but there is still a cost.
 - Tom Lee adds that there is a maintenance cost associated with I/A systems as well.

- Zee continues by opining that the committee should be looking at navigating upgrades through time such as when a system fails, when a property is transferred or the property is upgraded, and other potential triggers for an upgrade. He also believes there is an opportunity to act politically to figure out financing for changes. We should look into the potential legislation which allows municipalities to offer additional incentives. He has always seen this as a generational change, acknowledging that it won’t happen overnight. It is worth taking a “bite” out of this and getting started with a transition over time. Zee remarks that other systems do not perform as well as NitROE®, which he compares to Penicillin. While it is unfortunate that other systems are not performing as well, when Penicillin was first invented there was no desire to wait for something else, even though the first option isn’t perfect. We can’t wait to start making changes now, especially in sensitive areas. Different bodies of water may warrant different setbacks, and it may depend on whether a property is near the inflow or outflow.
 - Tom Lee adds that Phosphorous is another concern that will become prevalent in the near future. Technology for phosphorous removal is in its infancy but still important to keep in mind.
 - Tom McKean notes he agrees with what has been said. If the committee suggests 1,000 feet, then that’s what they will do. However, he brings up prior Board of Health meetings where residents are in tears because of the cost (\$125,000) to install an I/A system for a single-family home. I/A systems are not cheap.

- Scott notes a meeting he had with MASSTC where they elaborated on their project to develop a Responsible Management Entity (RME). An advantage of this would be training of local installers and competitive bidding. He brings up an example of a three-bedroom house getting bids for installation of a NitROE® system. Across 5 bids, they ranged from \$42,000 to \$87,000. He notes the importance of getting multiple bids for a project and acknowledges that each property is unique, as such fluctuating in cost. Scott notes there may be some misinformation about the cost of I/A systems. The Tisbury Board of Health typically sees \$40,000-\$45,000 for a new system. Occasionally there is a more expensive system.
- Tom Lee notes that the cost won't go down, pointing specifically to the labor costs to install the system. There are systems that work well but are not widespread due to the cost. He refers to Board of Health Hearings and the cost to connect to municipal sewer, several people will ask for additional time and note they are on fixed incomes and can't afford it.
 - Councilor Neary thanks Tom Lee for bringing up this topic as it is very important.
- Scott recalls Amber's presentation on additional alternatives and discussions with Rob Steen in which an attempt has been made to determine the right setback distance, which so far has not been evident. He notes the qualitative answer of "sooner is better", and getting in the near-shore area makes sense to get benefits sooner. He also cautions about doing things twice, that in a few years it may be necessary to upgrade to I/A systems. If someone recently installed a Title 5 system, that would require additional work and annoyance to residents. We should be opportunistic with new construction and utilize tax credits. There are tools to help people with affording an upgrade.
 - Tom Lee notes he hasn't seen any tools, only the Tax Credit. For a fixed-income family, they are forced to take out a loan.
- Zee asks how the people on fixed incomes will hook up to sewer.
 - Tom Lee responds that the Board of Health directs them to the Cape Cod Aquifund, which the property owner then responds they can't afford because they just fixed a different system for their property.
 - Dan Santos notes a potential problem with this model is that the Board of Health should not be in the finance business. When DPW gives low-income stickers at the Transfer Station, there is proof needed to verify the income requirements. This doesn't exist with the Board of Health, where property owners can say what they want to get a break.
 - Tom Lee asks who the Board of Health should direct financial questions to.
 - Dan responds it should be sent to a financial organization. This is a conversation he is scheduled to have with the Town Manager. Decisions being made by the Board of Health should be on a technical basis for public health purposes. Finance people should make finance decisions and Public Works should make decisions about the sewers.

- Tom Lee notes his agreement and says that the Board of Health is not in the financing business.
- Scott asks Amber Unruh, Special Projects Manager, Department of Public Works, how to pick the right time-of-travel or setback distance. How does the committee get to a place where it can answer that question?
 - Amber responds that it is a question being asked internally at the DPW and attempts have been made to find data supporting certain distances. An issue in Barnstable is the size of estuaries and a mandate within 1,000-1,500 feet wouldn't move the needle in a significant way, as there are so many homes needed to address water quality issues. When conceptualizing this idea, groundwater narrows as it approaches the shoreline. There is a shorter time to travel and less dilution. Many areas anticipated to receive sewer are near those estuaries already, trying to target the nearshore area. The setback distance is what the committee decides.
 - Griffin Beaudoin, Town Engineer, Department of Public Works, suggests providing analysis using arbitrary data (200 feet, 400 feet, etc.) and there can be a report on the number of parcels affected, the amount of wastewater generated, and additional statistics to inform the decision. This will at least give an idea of the number of parcels affected, avoiding a potential scenario where it's assumed only 20 parcels are affected but in reality, it's 200 or 2,000.
 - Dan notes it may be possible to take it a step further and develop an economic model. If the TMDL is 100 units and you're at 200. Dealing with septic systems may not get you down below 100. If you can't get below 100, does it matter? If you are near the 100 unit TMDL, a difference can be made. Combining science and economics could provide a model to help us determine the specifics. It may differ based on the waterbody.
 - Tom Lee thanks Dan and notes the modeling can show the nitrogen reduction as a result of sewer. This can be used to look at septic systems in coastal areas and the additional benefit.
- Scott adds the discussion is a continuum. If actions got us to 90% of the threshold, water quality would be better. It doesn't seem there is necessarily a hard cut-off of when water quality is good or bad.
 - Dan notes it is all based on modeling. There are places where efforts such as I/A systems won't make enough of an impact to matter. There are other places where this will matter.
 - Griffin notes this is an additional goal of gathering data, to see if there is a benefit or if the regulation exists to make people feel better.
 - Dan notes it will be easier to defend a position if there is data to support it.
 - Rob Steen adds that this is a benefit of having the Nitrogen Sensitive Watersheds defined. They have been used by Zoning and other town governances. This would eliminate much of the question pertaining to who is/isn't included in regulations as it is

not defining a new area, instead utilizing an area that has been in use for 20 years. If there is no definitive scientific answer as to why a property on side A of the street falls under regulations but a property on side B doesn't, it will be an eternal fight. There is value in the pre-defined, delineated nitrogen sensitive watersheds which have already been debated and decided on.

- Zee agrees with Rob Steen but adds that adding certain triggers such as failed septic systems or upgrades within a nitrogen sensitive area may need to be combined with regulations to cast a broader range. There is a need for testing. People need to prove a genuine need for financial hardship. He recognizes there are those who truly cannot afford it, and there needs to be mechanisms to help them afford it. He remarks on a previous comment that water departments should have more resources as they make and have a lot of money. There is an income stream separate from municipal streams. There are 5 separate fire and water districts in Town, which he believes is “crazy”.
 - Scott mentions his position as a Cotuit Water Commissioner and at a recent meeting the topic of solutions to this problem came up. Ideas floated sticking to the plan, building their own water treatment facility, and creating a water and sewer district for Cotuit. There are other potential funding mechanisms.
- Councilor Clark, in response to Dan’s point about estuaries on the “tipping point”, notes possible variations in weather such as extraordinarily wet years where the watershed is rinsed or drought years. These are variations we cannot control and don’t have data to extend too far into the future.
- Councilor Clark asks if we are able to learn from towns that have already adopted I/A regulations.
 - Scott believes this is possible, and notes that it is Tisbury, Wellfleet, and Mashpee who have the regulations in place.
 - Tom McKean notes that those towns don’t have the Watershed Permit from MassDEP.
 - Scott acknowledges this and remarks that the regulations were in place prior to the change in MassDEP regulations as those towns wanted to clean up the water.
- Tom McKean, in response to Zee Crocker’s notes about triggers and setback distances, notes a trigger in Title 5 Regulations for new construction, which is clearly defined as adding a new bedroom. This could be a trigger for proposed regulations.
 - Scott offers to talk with Tisbury and Wellfleet who have adopted regulations with homeowner-initiated triggers. This includes building a new house, adding an addition, and property transfers, which comes with a one-year timeline. This allows property owners to pool projects and competitively bid. We can always learn from other towns.

- Dan notes that it ultimately comes down to what is reasonable and justifiable. He remarks that all water that enters the ground on Cape Cod goes to a water body. One line of thinking is to prevent any nitrogen from entering the ground. The other line is the CWMP. Somewhere between those two is middle-ground which will make a difference while not breaking the bank but also not harm the environment.
- Scott adds the concept of adaptive management, as we are learning as we go. He notes that there is data for sewers working, but without known expenses. There is data that I/A systems work to a point, but without known lifecycle costs. The models are not perfect. The CWMP is “awesome” but there may be some uncertainty if it will get us to achieving the TMDLs, especially with climate change. If we have technology that works, why not deploy it and check in again in five years, just as we are now. At that point we’ll have more systems in the ground and more data as a result.
- Rob Steen asks Tom McKean and Tom Lee about cesspools, which seem to be “low-hanging fruit” but always difficult to find due to a lack of knowing where in town they exist. He notes his agreement with natural transitions from Title 5 to I/A Systems, but cesspools are beyond their expiration date. He questions whether the Board of Health/Health Division has attempted any efforts to update those properties with Cesspools.
 - Tom McKean responds that the Board of Health/Health Division hasn’t tried anything because they don’t know where the cesspools are. He notes that if the house is older than 1970, it can be assumed there is a cesspool if they’ve never upgraded. When he first began in 1984, the Health Division allowed properties with failed septic systems to install an overflow leach pit, which just makes a cesspool. There are complications with determining where cesspools may be.
- Rob asks if it would be worthwhile to identify in a plan an assumed location of cesspools where the Board of Health could then go and inspect those properties.
 - Tom Lee notes uncertainty in the Board of Health being allowed to go in to do the inspection.
 - Tom McKean notes permission would still be required.
 - Scott notes that if it’s a cesspool, it’s a failed system.
 - Tom Lee adds that, from his experience with the Conservation Commission, lawyers continuously advise him that property owners must give permission to access their property. He would be cautious in this approach.
- Scott asks if there is an estimate to the number of cesspools in town.
 - Tom Lee notes there is no good record of that.
 - Tom McKean notes there is approximately 25,000 properties in Town. Presumably GIS can filter out pre-1975 homes.
 - Zee notes work done by the Barnstable Clean Water Coalition (BCWC) to identify the age of homes in certain areas. In Phase Three of the CWMP, the average house was built in

1970. He believes this group should recommend a number of parallel tracks. If you have a cesspool, you should be required to upgrade. He recognizes cost constraints but emphasizes that cesspools are out-of-date. He notes that while there is a cost on the property owner, there is a cost of inaction which will burden the community. Actions that start to move the needle are worthwhile. There are many Wellhead Protection Areas. He assumes that if water around those areas were less dirty, it would cost less to clean. Perhaps these can be targeted. We assume there is filtration occurring in the sandy soils of Cape Cod but the math is not there to confirm.

- Dan questions what the discharged nitrogen is compared between a cesspool and a septic system. He is not certain of a vast difference. It may not be necessary to focus on cesspools. They are a public health problem, but not necessarily a nitrogen problem.
 - Scott notes there is an estimated 10-15% nitrogen loss in a septic tank according to MEP. He estimates approximately 10% difference between septic and cesspools, which is not huge.
 - Tom McKean notes that cesspools are an automatic failure, so when real estate transfers or building permits are initiated, the Health Division is alerted.
 - Zee asks if sales between relatives or spouses circumvent the process
 - Tom McKean confirms this is the case.
 - Zee remarks that cesspools are another trigger that have to do with age. Chances are that an existing cesspool won't last much longer.
 - Scott notes that it has already officially failed.
 - Dan notes if a cesspool is still in operation, it's probably not being used too much.
- Brian Hughes, Vice Chair, asks if the town has an inventory of all Title 5 systems.
 - Tom McKean notes that anywhere without sewer would have Title 5, except those with cesspools.
 - Brian notes that by deducting the number of sewer properties and Title 5 properties, that should provide the number of cesspools.
- Jane Ward notes her opinion that the "parallel tracks" concept is a good idea. She suggests the next few years may be economically dire. She notes there needs to be a balance between the desire to get systems such as sewer and I/A operational with the ability to construct and install these systems, including manpower, supplies, and cost. She brings up the concept of contingency plans. If costs go up and labor goes away, there may be a need to focus on less technical solutions. She notes tight tanks and composting toilets are already approved. There is a real concern of people not being able to afford upgrades. If given the option for a composting toilet or tight tank, it may alleviate the cost pressure. She has seen a lot of adaptability for what people are willing to use. In her mind, it's better to stop the pollution at the source. Having parallel tracks allows the town to pivot, including for weather and economic issues.

- Councilor Neary notes this conversation is ultimately a financial one. There is still a cost to pump a tank which can be around \$350. There needs to be pressure exerted across all levels of government to develop a means to the end. He agrees that the sooner items can be addressed, the sooner there may be pressure taken off of areas. Five years ago when the CWMP was being formulated the topic of finance was huge. He often hears about the cost of installing sewer, remarking that there are more costs than with just septic. Everyone is feeling the effects, especially the younger generation. He believes it is important to bring a plan to Town Council that anticipates costs.
- Scott asks how much flexibility the Town has to differentiate cost-sharing. For example, does a \$20 million property need to be subsidized by the Town for the installation of a system, compared to a young family that has genuine financial difficulties. It would seem like an easy target is new construction. It's assumed that those with new construction can afford installation relatively easily and could be asked to do that. He acknowledges that this is a question best answered by Mark Milne, Director, Finance Division.
 - Dan notes he is uncertain if this is possible but offers a possibility to require this in certain areas of Town, specifically those of higher affluence.
- Councilor Starr notes the closest approximation would be a Transfer Tax. These typically focus on those transactions above \$1 million. This is something that should be pushed for.
 - Dan asks for clarification, asking if Councilor Starr means to get money from the State.
 - Councilor Starr clarifies that it is asking for approval from the State to permit the Town to do it.
 - Dan notes there is an existing millionaire's tax.
 - Councilor Neary notes that on Martha's Vineyard there is a 2% transfer tax for every property. This could be a possibility to bring to Town Council and, if approved, dedicate to certain areas. This has been discussed in relation to how the Town can generate revenue for projects.
- Scott asks if the previous conversation of different ways to generate revenue is within the jurisdiction of the committee.
 - Dan notes it is difficult to propose a plan that hasn't considered economics, so yes to an extent it fits within the committee.
 - Brian notes that at the first meeting part of the conversation was to consider the economics of the plan.
- Tom McKean notes that another concern is the maintenance of an I/A system. He has seen people neglect and unplug systems. There are only so many people in the Board of Health, if they were to be the ones responsible for ensuring compliance.
 - Scott notes prior experience with remote monitoring that can be installed as part of an I/A system. These can be pulled up on a phone.

- Zee comments that I/A systems need to be monitored and they need to be enforced. Without enforcement, the systems become nothing. He notes recent experience with an I/A system of a two-bedroom house that became a four-bedroom, which was later sold and became a daycare, increasing the load. Another sale occurred and the I/A system monitoring showed an issue, which turned into several issues with the property itself. He remarks that “people are going to do what they are going to do”. As we recommend a plan, enforcement and monitoring are essential. All systems require power so it should be easy enough to see if power is on or off.
- Kelly Collopy, Communications Manager, Department of Public Works, comments that in addition to enforcement, there needs to be massive amounts of education, which is a large reason why she’s present. There has been significant education done, along with BCWC and other groups, on alternatives. She agrees that any policy decisions need to be easily defensible to the public. This is work that will occur as policies go forward and we work to educate, answer questions, and mitigate misinformation.
 - Scott suggests Kelly visit MASSTC with the committee as it will talk about the Responsible Management Entity Septic Utility Program, which deals with cooperatively managing systems.
 - Zee agrees with Kelly, and notes a big problem will come after a policy is approved when people are asking “now what”, and finding out who the contractors are, where to find information, etc. He notes the concern of disparity between estimates.
 - Councilor Starr notes there is an issue when a house is sold as a four-bedroom but Board of Health records show it as a two- or three-bedroom house. There is some education missing with realtors on the topic.
 - Brian Hughes notes his agreement with multiple tracks, but also that it makes education harder.
 - Jane Ward notes that economics may determine what track a property owner is on.
 - Butch Roberts adds that the current septic systems are not working to remove nitrogen. They appear to be but are not actually. When someone says their system is working, there should be education explaining that it’s not working.
- Rob Steen comments that at the end of the day, the committee must comply with Total Maximum Daily Loads (TMDLs). The regulations from MassDEP require those identified to upgrade their system to remove nitrogen, not just those who can afford it. He acknowledges there should be an attempt to accommodate and deal with all issues presented, but the fundamental task of the CWMP is to fix estuaries and comply with TMDLs. There is not a lot of flexibility to allow people to pick and choose based on finances or personal wishes.
- Scott asks Tom Lee how, assuming the CWMP Ad Hoc Committee moves forward with recommending I/A Systems in some form, the committee can help him and the rest of the Board of Health to advance the regulations.

- Tom Lee responds it is a learning curve for the other board members. They are mostly doctors and dentists, and do not necessarily have the knowledge of I/A systems. They would need to be brought up to speed.
- Dan notes a recent example where the Board of Health was looking at grease trap variances, which affect the sewer system. The DPW presented information to the Board to explain the effects of grease in the sewer system, which in turn educated them to make better decisions and be more stringent on grease trap variances.
- Scott asks if we should prepare a presentation to the Board of Health on the topic.
 - Dan notes the Board of Health is very willing to have discussions about the issues.
 - Jane Ward suggests the Board of Health visit MASSTC.
 - Tom Lee notes he has been to MASSTC multiple times. He would need to discuss with the rest of the Board.
 - Tom McKean notes that several members of the Board of Health are retired so may be easier to get them to attend.
 - Tom Lee notes there are five members of the Board of Health, with one alternate.
- Scott asks if we should invite the Board of Health to MASSTC when the committee visits on May 19.
 - Tom Lee says we can invite them and see who is available.
- Zee asks about the possibility of marketing ADUs as a possibility on smaller lots, letting people get an extra bedroom. He notes that work done by BCWC has shown that even with an additional bedroom, a NitROE® system can reduce the overall waste of the property by 85%. There are many people asking to add an extra bedroom, and there could be a way to make this a possibility. Incentivizing people is easier than simply forcing regulations.
 - Tom Lee notes his understanding of this approach, and that the property owner is likely to go to the Health Division asking how to get an extra bedroom. He also notes MassDEP is looking at Title 5s under the ADU regulations in the coming months.
- Scott asks if there are any additional questions or comments before proceeding to the next agenda item.
 - Tom McKean, responding to Zee, notes there is a Town ordinance which limits the ability to add a bedroom with an I/A system. Town Council will need to be asked to revise the Wastewater Discharge Ordinance. Current regulation limits to 330 gallons per acre, with no exceptions.
 - Zee notes that the discussion of load versus flow frequently comes up, and this provides an excellent opportunity.
 - Rob Steen notes that the TMDL is about load, not flow. It is about the amount of nitrogen being put into the ground. If the regulations were to be changed to allow a bedroom and require nitrogen load of a property to be lower than its

present amount, it seems like an all-around win. The property may still need to be sewerred in the future, but at least immediately it is better than it was.

- Scott notes there may be items like this with the Conservation Commission, specifically adding an I/A system in.
- Zee comments that the Conservation Commission may have more potential influence. Regulations appear to say the regulation is only in affect within 100 feet of a water body, but the regulations also say, “unless there is evidence to the contrary”. He argues that in almost every case within town there is “evidence to the contrary”. Because of this, the Conservation Commission should have further reach. The Conservation Commission works on many things where there could be leverage to get somebody to install an alternative septic system. Incentivizing the right choice to benefit the community can be a good decision overall. He notes that Wellfleet and Truro have taken similar approaches. There should be a focused approach on incentivizing people in certain sensitive areas to do the “right thing”.

Public Comment/Questions

Scott Horsley, Chair, opens the floor for public comments and questions. He begins by introducing Bruce Walton, Chair of the Innovative/Alternative Onsite Wastewater Treatment Systems Task Force for the New England Water Environment Association who has been working towards similar goals as this committee and communicating with Scott throughout.

- Bruce notes that the “trigger” issue is one of the most important things the committee can do. The alternative is to do nothing for another three years until they are forced to. He notes there is learning that comes from getting your toes in the water and starting to manage systems before having large quantities. He remarks on a conversation with officials in Tisbury who have trigger regulations and how they have been adjusted 2-3 times as they learn and adapt. The idea of phasing, review, and evolution should be part of the thinking process. At the very least get something going, even if it’s just new construction.
- Bruce provides context on The Nature Conservancy, which are interested in this. There is a recently published summary from a Summit held in December, which he can send to the committee. It puts into context multiple topics that had been discussed, including workforce development, funding, and financing. There is a desire to help the State understand that the MassDEP process for approving I/A systems protects the State, but is so onerous, time-consuming, and expensive that nobody is doing it. There is no vendor other than one that has more than half a dozen systems in the grounds, compared to the 50 needed for MassDEP approval. Relationships need to be built at all levels of government to inform and educate.
- Bruce notes that The Nature Conservancy has been working on modeling financially the split between sewer and I/A systems. The swing between full sewer and full I/A could be \$7-\$8 billion,

based on a quick look. The model includes interest and inflation. The model is in beta mode and should be public in May.

- Bruce notes that an issue that exists is even if everything were to be sewerred tomorrow, there is an issue of travel time, which amounts to decades. There is a company with oxygen nanobubble technology, aka Ultra Fine Bubbles (UFB). These are effective on golf courses. The Nature Conservancy has engaged one of its members to submit a letter of intent for \$350,000 of Environmental Protection Agency (EPA) Funds to test nanobubbles in ponds around Cape Cod. Amber has provided feedback. There is nothing firm yet, but a possibility is the Duck Pond near DPW. He explains that nanobubbles don't float but get into the muck and start eating and processing. He is hoping to study this technology for application on the Cape.
- Bruce notes that in five or six years, as volume installations are approached, the permitting load will double or triple. Bruce's team is looking at one platform that will help manage permits while keeping staffing levels the same.
- Jane Ward notes agreement with Bruce's comments on the slow approval process through MassDEP. She has a FujiClean I/A system installed at her house, which reduces both nitrogen and phosphorous and is the first in the USA to remove both. There has been a lot of interest and support about the system. They are provisionally approved. The systems are around the country in other states, and she notes multiple examples around the country. She expresses frustration that there are millions installed worldwide but it will take multiple years to get it approved in Massachusetts. She thinks some leverage towards MassDEP from elected officials would be beneficial.
- Jane also notes that the committee should consider alternatives that are affordable, especially urine diversion in public buildings. She believes some systems could be piloted at yacht clubs, schools, or Cape Cod Community College. A study showed that 16% of the town's nitrogen reduction goal could be accomplished with such technologies.
- Jane also expresses support for working with other towns on the Cape to fund the next step of a Urine Diversion pilot at MASSTC. They are working with Falmouth to fund the whole thing, but it will benefit the entire Cape. She would like to push for additional funding at the county level, approximately \$1 million. This funds a single fixture installed in 50 homes for 3 years for MassDEP approval. Cities around the world make money from urine-diversion in large scale ways, such as fertilizer.

Matters Not Reasonably Anticipated by the Chair

No matters were heard.

Adjournment

Rob O’Leary motions to adjourn the meeting. Councilor Clark seconds. The meeting is adjourned at 7:43 PM

Respectfully submitted by Christopher Gadd, Communications Assistant, Barnstable Department of Public Works

Addendum 1: Proposed Meeting Topics

All meetings are subject to change. Official agendas will be posted to the Town of Barnstable's Website in accordance with Open Meeting Laws.

Meeting Held/Topic Discussed
Next Meeting/Topic
Future Meeting/Topic

- Meeting #1 (Held Tuesday, October 22, 2024)
 - Introductions and overview of Town Council & DPW wishes for the committee.
- Meeting #2 (Held Monday, November 18, 2024)
 - Opportunity to ask questions from assigned homework to get up to speed on the current CWMP.
- Meeting #3 (Held Monday, December 16, 2024)
 - Presentation on Enhanced Innovative & Alternative Septic Systems.
- Meeting #4 (Held Tuesday, January 28, 2025)
 - Presentation on Growth
 - Presentation on Accessory Dwelling Units
- Meeting #5 (Held Tuesday, March 4, 2025)
 - Presentation on Additional Alternatives such as dredging and cranberry bog restoration
 - Amber Unruh, Special Projects Manager, Department of Public Works
 - Presentation on overall approach to funding of the CWMP
 - Mark Milne, Director, Finance Division
- Meeting #6 (Held March 31, 2025)
 - Discussion with Board of Health/Health Division on relevant policies
 - Tom McKean, Director, Health Division
 - Tom Lee, Chair, Board of Health
- Meeting #7 (Scheduled for April 22, 2025)
 - Discussion of the view of the CWMP through the lens of the Local Comprehensive Plan (LCP)
 - James Kupfer, Director, Planning Board
- Meeting #8 (Tentatively May)
 - Formulation of recommendations to be made to Town Council
- Meeting #9 (Tentatively June)
 - Meeting topic TBD based on Meeting #8
- Meeting #10 (Tentatively July)
 - Meeting topic TBD based on Meeting #9
- Meeting #11 (Tentatively August)
 - Update on Water Pollution Control Facility nitrogen reduction upgrade and effluent disposal evaluations
 - Rob Steen, Assistant Director, Department of Public Works
 - Around this time the goal is to make presentations to Town Council
- Meeting #12 (Tentatively September)
 - Review of feedback from Town Council on proposed recommendations
- Meeting #13 (Tentatively October)
 - Final recommendations, discussions, and any other related topics.
- Meeting #14 (Tentatively November)
 - Hold for final discussions.
- Meeting #15 (Tentatively December)
 - Potentially not needed
 - CWMP must be submitted to MassDEP in December 2025

Addendum 2: Potential Policy Discussion Items

Accessory Dwelling Units (ADU)

- *Information on ADUs was presented by James Kupfer at the 01/28/25 Meeting.*
- ADUs recently became codified under Massachusetts Law
- Specific questions pertaining to ADUs include:
 - Can sewerage and I/As incentivize ADUs, and vice versa?

Grinder Pumps

- *A request for this practice to be discussed was made by a resident through the DPW staff.*
- The current practice for grinder pumps is the first pump is purchased by the Town then becomes the responsibility of the property owner.
- Specific questions pertaining to grinder pumps include:
 - Should the existing practice be formulated/continued as is?

Innovative/Alternative (I/A) Systems

- *Information on I/A Systems was presented by Zee Crocker at the 12/16/24 Meeting.*
- Enhanced I/A systems are approaching general approval by MassDEP and the committee could evaluate recommending I/A systems as part of the CWMP.
- Specific questions pertaining to I/A systems would include:
 - How to determine the usage of specific technologies
 - When could I/A systems be required to be used?
 - How could I/A systems be implemented & funded?
 - Would I/A systems be used in specific watersheds or across town?

Private Roads

- *A request for this practice to be discussed was made by DPW Staff*
- The current practice for private roads is for the Town to obtain an easement for sewer installation.
- Specific questions pertaining to private roads include:
 - Should the existing practice be continued as is?
 - Alternatively, should the Town take the road?

Sidewalks

- *A request for this practice to be discussed was made by DPW Staff*

- The current practice for sidewalks is to not include them in a CWMP project, instead submitting them as their own individual project.
- Specific questions pertaining to sidewalks include:
 - Should the existing practice be continued as is?

State Revolving Fund (SRF) and 0% Interest Loans

- *Information on SRFs and 0% interest loans was presented by Andrew Gottlieb at the 01/28/25 Meeting.*
- Town Council is workshopping potential changes.