



BARNSTABLE
Water Resources



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

Meeting Minutes

Date: May 19, 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

Committee Members Present (Via Zoom):

Tom Cambareri

Committee Members Absent:

Paul Neary, Town Council; Gordon Starr, Town Council

Others in Attendance:

Dan Santos, Director, Department of Public Works; Rob Steen, Assistant Director, 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

Agenda:

Call to Order

Scott Horsley, Chair, called the May 19, 2025 meeting of the Comprehensive Wastewater Management Plan (CWMP) Ad Hoc Committee to order at 5:05 PM. The meeting of the committee was held in a hybrid fashion, with committee members attending in both the Selectman's Conference Room (Barnstable Town Hall) and virtually via Zoom.

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 April 22, 2025 meeting minutes. Butch Roberts moves to approve the minutes. Brian Hughes, Vice Chair, seconds. The committee unanimously votes to approve the April 22, 2025 minutes.

Roll Call: Scott Horsley (Abstain), Brian Hughes (Yes), Tom Cambareri (Yes), Kris Clark (Yes), Zee Crocker (Yes), Glenn Snell (Yes), Butch Roberts (Yes)

d) Next Meeting

Scott Horsley, Chair, opens the discussion by inquiring about possible dates and times for the next meeting. Chris Gadd, Communications Assistant, Department of Public Works, provides several possible meeting dates and times. After some discussion, it was decided that the next meeting of the committee will be on Monday, June 16, 2025 at 6:00 PM in the Selectman's Conference Room.

Update on Watershed Permit

Lousie O'Neil joined the meeting in-person

Scott Horsley, Chair, opens the discussion by noting regulations which were enacted since the implementation of the CWMP, which authorizes and requires watershed permits, and he has asked for an update on the status of Barnstable's progress.

Rob Steen, Assistant Director, Department of Public Works, explains that the State's watershed permit is predicated on a watershed plan. The Town submitted their watershed permit in September 2023, and it's

understood that Barnstable was the first community to submit the permit. The permit utilized the CWMP as the watershed plan. There have been numerous conversations with the State, and the Town has received a draft of the permit. It is back in the hands of the State who will conduct a public comment process. The understanding is the process is going well and should be out for public comment “relatively soon”.

- Brian Hughes, Vice Chair, inquires what the watershed permit covers
 - Rob responds that it covers the entire town.
- Tom Cambareri asks who the Town has been talking to at MassDEP.
 - Rob responds that Andrew Osei has taken the lead for MassDEP, but there have been conversations with several people from MassDEP.
- Brian clarifies his question by asking about the action coverage, what does this cover for what the Town will be doing?
 - Rob responds that the regulations by the State require towns to either submit a watershed permit or require everyone to upgrade to Innovative/Alternative (I/A) septic systems within five years. By submitting the watershed permit, the town is prevented from requiring I/A septic systems. This does not exclude the possibility of implementing I/A septic systems in certain areas, it simply removes the requirement from the State to implement I/A septic systems.
- Scott asks if the current lack of an alternative disposal site for effluent affects the watershed permit.
 - Rob responds that the permit uses the CWMP, which acknowledges the current lack of an alternative effluent disposal site. MassDEP is aware of this and knows that there are five-year updates to the plan.
- Scott asks to clarify that the regulations don’t specifically require the effluent disposal site.
 - Rob responds that is correct.
- Tom asks if the reasoning for not requiring an effluent site is due to the five-year flow limits.
 - Rob responds that he can’t speak for MassDEP but assumes that is the case.
- Zee Crocker asks, assuming we get the permit, what happens to continuing development for Title 5 Systems in Town, is there any change due to the watershed permit?
 - Rob responds that this question leads to the crux of tonight’s discussion with what may be recommended as part of the five-year update, including where Title 5 Systems are or are not allowed to be installed.
 - Dan Santos, Director, Department of Public Works, responds that the purpose of the watershed permit is to make it so the Town takes on the issue of wastewater, not having

to be mandated by the State. The recommendations made as part of the five-year update are not related to the permit.

Rob reiterates that the watershed permit does not prevent the Town from doing anything, it only removes the mandate from the State.

- Butch Roberts asks how changes the committee may propose affect the watershed permit.
 - Rob responds that the recommendations from the committee, once they go through the relevant authority, are included in the five-year update to the CWMP, which feeds into the watershed permit. The assumption is that, as the CWMP evolves over time, the watershed permit will evolve with it. Rob notes that the permitting process is still in the early days so there are no examples to see how other entities such as MassDEP may react.
 - Butch notes his thought that MassDEP would want to review the permit with any changes made to the CWMP.
 - Rob notes again that the watershed permit is predicated on the CWMP. He also notes that the permit is clear in identifying levels of nitrogen that need to be removed in a certain timeframe. As long as those goals are met, everything else is bonus. If the decision were made to radically change the CWMP it may re-open the conversation. So long as the modeling shows the nutrient removal will achieve the Total Maximum Daily Loads (TMDLs), then we can continue. The conversation on I/A septic systems is an “and” not an “or”. The hope is that someday alternatives, including I/A septic systems, will give data to MassDEP to the point where they accept it in place of portions of Phase Three of the CWMP. Phase Three was designated as such because it will be the most expensive to sewer due to low density housing and varying elevations.
- Scott notes that Butch’s questions leads into a question on the timing of updates. There will likely come a time when there will need to be an update to the watershed permit, followed closely behind by the CWMP update. Are there any efforts from MassDEP to combine these updates?
 - Rob responds that it is a likely conversation with MassDEP. He again notes that Barnstable is one of the first to undergo this process.
- Zee asks how the watershed permit affects the growth neutral policies that potentially allow for 0% interest rates.
 - Dan responds that the watershed permit is not based on water usage and therefore not related to the growth neutral policies.
 - Rob notes that Town Council will soon be discussing flow neutral.
 - Councilor Clark notes the topic is in the queue for Town Council discussion, but there have been some items that were pushed from previous meetings.

- Rob notes that, from watching recent Town Council meetings, there seems to be genuine interest from Town Council in discussing a flow neutral policy.
- Dan notes the plan was for a first read in early June. This may be adjusted from the last meeting running late.
- Zee notes that he assumed water in and water out were connected.
- Brian asks to clarify that the permit does not relate to taking anything out of the watershed.
 - Rob responds that is correct.
- Scott comments that he is surprised MassDEP is not pressing more on the disposal element. Other towns have been pressed on the matter. Are we confident that MassDEP will issue a permit even though we don't know where the water's going?
 - Rob responds that he has seen an early draft of the permit.
 - Dan responds the next step in the process is for the Town to do public outreach.
 - Tom notes that Barnstable having an existing disposal site may work in our favor. Other towns are starting from scratch and don't have any effluent disposal sites.
 - Scott notes his interest in the conversation about effluent disposal sites and what should be done with effluent.
 - Zee notes the Water Quality Committee in Falmouth will soon be getting an update on offshore plans.

Overview of MASSTC Visit

Scott Horsley, Chair, opens the discussion by thanking everyone for attending. He tests the committee by asking what SUP stands for (Septic Utility Program) and what it does (a system for managing all septic or I/A septic systems). He also tests what BANRT stands for (Best Available Nitrogen Reducing Technology). Scott reminds that the new name for Enhanced Innovative/Alternative septic systems is "Nitrogen Reducing (N/R) Septic Systems".

Rob O'Leary joins the meeting in-person.

Scott notes that MASSTC gave a great presentation. Louise O'Neil added that the tour portion was interesting, and she learned from it.

- Rob Steen asks if Urine Diversion (UD) was discussed while at MASSTC.
 - Scott Horsley responds they did hear from Brian Horsley about UD.
 - Tom Cambareri notes Brian Horsley did a great job and was heartened to hear the issue is being addressed, as it makes a lot of sense. He notes the reported cost estimates of urine diversion being significantly less expensive than I/A septic systems.
- Rob O'Leary asks to what extent the systems are State-Certified.

- Scott responds that there are three levels of approval (Pilot, Provisional, General). A pilot-approved system is limited in number to how many can be installed. Provisionally approved systems have no limit but there is more frequent testing and inspections. General approval is less testing and less inspections.
- Rob O’Leary asks where each system is at in terms of approval
 - Scott references back to the BANRT list, which contains five existing technologies. These are approved if a municipality were required to upgrade to I/A septic systems as discussed earlier with the watershed permit discussion. The BANRT list includes some provisionally approved systems and some generally approved technologies.
- Rob Steen asks whether NitROE and Nitrex are on the BANRT list.
 - Scott responds that they are both provisionally approved and on the BANRT list.
- Rob O’Leary asks how long it takes for systems to move through the approvals process.
 - Scott responds that it is highly variable. Nitrex has been on the list for 7-8 years. There is a requirement for upgrading from provisional to general to have 50 systems in the ground for 3 years.
 - Zee Crocker notes that there is a belief that the NitROE system is approximately one year away from general approval. Nitrex is provisionally approved but there are a limited number installed.
 - Scott notes that it’s listed by MassDEP on the BANRT list because the State believes the technologies are the best available, reliable, systems.
- Zee notes a nuance with an expectation that some Boards of Health would not mandate systems on the BANRT list.
 - Rob Steen responds that he sees the BANRT list as the “cover” that Boards of Health and Towns would be looking for. This is a potential gamechanger as there is an official sanction for I/A septic systems.
- Tom asks if anyone knows what the effluent on provisional systems is permitted for.
 - Scott responds that it depends on the system. Nitrex and NitROE are at 10 mg/L and 11 mg/L, respectively. Those numbers only relate to what was applied for and are not reflective of monitoring data.
- Tom notes that it’s “strange” how Nitrex, despite being around for many years, has never grabbed hold in Massachusetts. He notes its broad use in New York.
 - Scott notes that the most common system on Long Island, NY, is the Fuji System, which is not in the Massachusetts process yet, despite there being thousands installed on Long Island. The cost of a Fuji system is approximately \$30,000 and is 100% paid for by the

government. Homeowners are given the choice between installing a system equivalent to a Title 5 septic system at their own cost or the Fuji system for free.

- Glenn Snell asks where the money for providing these systems is coming from
 - Scott responds that it is from the state sales tax.
- Glenn asks if there are any boundaries to where these systems are being installed, such as distances from a wetland.
 - Scott responds that they are being installed “pretty much everywhere”. Suffolk County made a policy decision that a fund would be created from the sales tax and half would go towards sewer and half towards I/A septic systems. I/A septic systems were identified as being useful in less dense areas.
- Glenn asks if there is any data on what they consider as “less dense”
 - Scott responds he does not have that data.
- Rob O’Leary asks why the Fuji System is not at MASSTC
 - Scott responds that the Massachusetts approval process is rigorous and can cost around \$1 million.
 - Zee responds that it can also take a long time for a system to make its way through the approvals process. Proponents of the long approval process would note that it limits the number of old, inefficient technologies installed. The goal is to install systems that can achieve well below the 10 mg/L threshold, which there are no current systems capable of. The Water Pollution Control Facility (WPCF) will get the numbers from the sewer down to 3 mg/L.
- Rob Steen responds that a problem with a system such as Fuji is that when it fails, there is no treatment at all. When a system such as NitROE fails it reverts to, essentially, a Title 5 system. As the discussion concludes of where to install I/A septic systems, it will be necessary to define what I/A septic systems are allowed to be installed. He notes that Massachusetts only accepts data from testing on Massachusetts soil. While Long Island may have thousands installed, data from them would not count for Massachusetts.
 - Scott responds that Massachusetts claims to accept data from other states but has never seen it happen. It’s understood that the EPA was doing well on getting collaborative data to work but suddenly stopped.
- Rob O’Leary asks if the issue of accepting out-of-state data has been brought up with MassDEP
 - Scott responds that he has been in numerous meetings with staff from MassDEP who asked to have the data sent to them, but nobody ever did. It’s unclear why it has never happened.

- Scott remarks that Fuji may not see it as worthwhile investing in Massachusetts testing as they have plenty of customers on Long Island and may even be struggling to keep up with the demand.
 - Brian Hughes, Vice Chair, notes the market size is much larger on Long Island, so they don't need to care about us.
 - Scott agrees with this and notes the competitive aspects of other systems.
 - Zee notes his belief that if there is a system that works really well, we should go with it. He compares this to the invention of penicillin and how people were inclined to go with it and not wait for the second or third option that was not yet invented. Zee's conversations with MassDEP indicate that if a system is working, the market will flock to it. The timeline is frustrating but there are good products on the market now. Zee notes that an aspiration from Long Island is figuring out how to pay for it.

Discussion of where to recommend policy on Nitrogen Reducing (NR) Septic Systems

Scott Horsley, Chair, opens the discussion by asking where NR septic systems may make sense. Rob Steen, Assistant Director, Department of Public Works, expands on this thought. He indicates prior conversations and the sense that it is “nuts” to allow Title 5 Systems to be replaced by Title 5 Systems in certain areas. “Certain areas” has not been defined, and a good first step would be to identify these areas. This would be separate from any triggers such as home upgrades. Decisions on what may trigger an upgrade will come later. There is data shown at this meeting about how many homes are a certain distance from the water. Efforts were made to look for scientific proof that a set distance from water makes a difference, which no proof was found. There are also pre-defined boundaries such as Zoning, and geographic boundaries, such as south of Route 28 that could be used. There is a potential conversation of requiring it town-wide. This committee can recommend anything from 10 feet from water to the entire town. He recalls a past experience with a failed cesspool and the Town requiring a Title 5 System to be installed. This connects to the CWMP by collecting data and results on alternative methods and petitioning MassDEP to accept the alternatives in lieu of elements of the CWMP.

Scott adds that the model being used by the Massachusetts Estuaries Project (MEP) is approximately 20 years old. As with all models, the MEP model is not perfect.

Scott also notes that the climate is getting warmer. There is visual proof with algal blooms. We can't get too invested in treating the MEP model as “perfect” and should work on doing more to offset potential shortcomings. A potential policy is to not allow Title 5 systems to be replaced in nitrogen sensitive watersheds when a Title 5 system fails.

- Zee asks Rob Steen to clarify that there was no evidence found of any setback distance being relevant for contribution.
 - Rob Steen explains that the effort was looking for data akin to Phosphorous, which within 300 feet of a waterbody is taken up. There is no definitive number that can be pointed to as one that makes a difference. He also notes that the CWMP is the minimum

that needs to be done. Alternative solutions should be done as well, and hopefully it will affect the CWMP.

Amber Unruh, Special Projects Manager, Department of Public Works, begins presenting data on various setbacks in watersheds. The data presented shows the number of parcels that would be affected with regulations at 500, 1000, 1500, and 2000 feet increments from estuaries. This data includes parcels in the Centerville River Estuary, Popponesset Bay, and Marstons Mills River. Across all areas, there are 1,892 parcels within the 500-foot boundary. There are approximately 357 parcels that have no septic system at all, and 1,062 are included in the CWMP. There are 473 parcels that are not in the CWMP but are in the 500-foot setback.

- Brian Hughes, Vice Chair, asks for clarification on the parcels that are identified as having no septic system.
 - Amber responds that these are mainly empty lots.

Amber continues with a similar map, focusing only on those parcels that would be affected outside of the CWMP.

- Scott asks to confirm that this is the same data as the previous map, just showing the areas outside of the planned sewer.
 - Amber confirms this is correct.
- Rob O’Leary questions if this is in Phase Three of the CWMP.
 - Amber responds that the parcels identified on the map are not included in any phase of the CWMP.
- Scott notes areas of higher density on the map and questions why the area was not included to be sewered.
 - Rob Steen responds that the area was not identified as needing nitrogen removal. There is a similar area between Lake Wequaquet and Shubael’s Pond that is very dense but not required to remove nitrogen from.
 - Amber responds that the Massachusetts Estuaries Report for the Centerville River was used in the creation of the CWMP, which got the TMDLs to where they need to be.
- Zee Crocker asks if the distances shown line up with the sub-watershed map.
 - Amber responds that this can be added to the map, but initial efforts did not compare the boundaries to sub-watersheds. She asks what the thought process is for overlaying the sub-watersheds
 - Zee responds that, to him, it goes back to time-to-travel. Whatever is hitting the water soonest is most damaging in time. He acknowledges that there is contaminated water

behind any boundary we were to implement, ultimately buying time, which he believes is worth it.

- Zee also notes research done that shows the average age of the home in Phase Three of the CWMP which is 1975, and approximately 85% of septic systems in those houses will fail within the 20 years before sewer construction reaches them. He recommends mandating upgrades in those areas, starting as soon as we feel there is technology that is capable of what we want.
- Councilor Clark asks about the parcels identified as having no septic, is it possible that the parcels have cesspools?
 - Amber responds that it was not looked at whether there was a cesspool or not.
 - Councilor Clark responds that they may not be vacant land.
 - Amber responds that it is possible that the parcels have cesspools.
 - Rob Steen responds that the way Board of Health knows a parcel has a cesspool is because the parcel “isn’t anything else” but has a home on it.
- Scott comments that the only science he sees with distances is time-of-travel, which he believes is important. He notes that we have not seen things getting better yet, and theorizes that, because the MEP model took a “snapshot” of everything existing, it did not account for homes built in the last 10 years but have a 30-year flowtime. Over time, with no action things will get worse. Actions such as sewerage will help, but there is more nitrogen coming from these new developments. He also comments that the climate is getting warmer, drawing from personal experience of seeing blooms on the bay earlier each year. The benefit of the 500-foot setback is quick results, with an approximately 2-year flowtime.
 - Rob Steen notes that the MEP model was updated by the Town in 2019 with new water and flow data.
 - Scott notes there is a new United States Geological Survey (USGS) being conducted on Long Island that is being discussed for Cape Cod, which accounts for time-of-travel.
- Tom Cambareri notes that he has sent shape files with the time-of-travel that he hopes to see overlaid on these maps. There is a lot to consider, and we should be looking at an array of perspectives.
 - Scott notes that it would be nice if Tom could present additional information on time-of-travel at future meetings. He also notes that a similar approach was carried out for Buzzard’s Bay.

Amber continues her presentation, noting that time-of-travel is not included in the data presented at the meeting, with this effort focused only on the setbacks. She offers to gather the data for the next meeting. She presents close-up data of each estuary, following the same format and design of the initial maps.

- Tom asks if there is a way to tell which parcels are in Phases 1 or 2 based on the presented color scheme.
 - Amber responds that the color scheme only applies to the setback distance and does not coincide with any of the CWMP phases, citing an over-abundance of colors.
 - Tom notes it would be beneficial to have an outline of the CWMP phases overlaid on the map.
- Scott notes, based on the map of the Popponesset Bay Setbacks, there were conversations about connecting to Mashpee's wastewater collection system, which is no longer being discussed.
 - Rob Steen notes a conversation approximately 1.5 years ago with Mashpee, wherein there was an idea to collect sewer in Barnstable and pay Mashpee to treat it at a nearby plant. After some analysis, it was determined that the combined effort would not be able to handle the flow.
- Tom notes, based on the map of the Santuit River Setbacks, that because the river is the boundary between Mashpee and Barnstable, it would be helpful to know how many parcels would be required to satisfy Barnstable's share. He notes that we are picking arbitrary distances, so having data to justify these distances will be helpful.
 - Rob Steen notes that the Santuit River watershed doesn't have an existing plan. Initially, analyses were made of an all-I/A approach, which would not meet the requirements. There are thoughts to sewer the main roads and implement I/A septic systems along the smaller roads that are more difficult to sewer. There has not been modeling done on this portion yet.
 - Amber notes the additional question of what Barnstable's share is.
 - Rob Steen responds that the share is 9% of the watershed. He notes that initial conversations were to trade that share away, but due to the effects on Barnstable it was decided to retain it. This is why the CWMP includes Stages, allowing additional time to analyze the possibilities. There is further conversation about traditional versus I/A septic systems versus hybrid in the area. Numbers have not been run yet on a hybrid approach, but calculations of only I/A systems showed the TMDL would not be met.
 - Scott asks what the assumed effluent was of the I/A septic systems in the modeling
 - Rob Steen responds that he would have to look back at the numbers for certainty, but believes they looked at 5 mg/L and 10 mg/L.

Amber concludes her presentation by showing a table of the data presented previously, which includes the number of parcels, wastewater flow, and nitrogen load, as well as separating out between the total number, those included in the CWMP, and those not included in the CWMP.

- Zee notes that at 500 feet there is a significant amount of flow and nitrogen load being addressed.
 - Amber notes the data is in grams per day.

- Scott asks what the difference is between CWMP and Non-CWMP
 - Amber responds that the CWMP column includes those parcels identified as receiving sewer as part of the CWMP. The non-CWMP column is parcels identified as not planned for receiving sewer as part of the CWMP.
- Some discussion is had about the conversion of the presented 28,232 gallons per day (g/d) of nitrogen load and converting it to kilograms per year (Kg/year). A rough estimate is 9,000 Kg/year.
 - Zee notes this is “not quite” 50% of the goal TMDL.
- Tom notes that the CWMP removes enough nitrogen to meet the TMDL.
 - Rob Steen notes that certain areas such as Grand Island are direct input into the estuaries and would not provide value with sewerage.
 - Amber notes that, as part of the MEP, the focus was directed to the nitrogen removal within the North Bay Watershed. Efforts in the Cotuit area would not have as much impact due to the existing amount of flushing in the area.
- Zee notes the irony that, as Scott pointed out, Cotuit Bay has been declining in water quality.
 - Tom notes the MEP model doesn’t have time included. If areas close to the water could be addressed, there would be an immediate result in the water.
- Scott notes that the MEP model was calibrated with the load coming from everything that existed at the time. The actual nitrogen coming into the bay is a subset of the watershed because not all nitrogen made its way to the bay.
 - Amber states that data was collected on hydrodynamics of the water flushing to understand the length of time it took for a parcel of water to exit the bay. There were a number of nitrogen loading factors to every parcel within the watershed. With this, they calculated the load to the estuary. They also used hydrodynamic models to calculate the nitrogen concentration in the estuary. They then attempted to match the measured data with the calculated data.
 - Scott indicates his desire to chat with Amber about this topic offline.
- Zee questions what we would be “telling the world” if we choose to require I/A septic systems within a certain setback, such as 500 feet. Are there certain triggers or a number of years this would be done in?
 - Scott responds this is the next question in the discussion.
 - Rob Steen remarks on the requirement to upgrade from Cesspool, which included triggers such as a failed system or selling a house or other natural triggers. This is alternative to the watershed permit regulation which requires everyone to install I/A systems regardless of the age of the system, when it was installed, or other triggers.

There is a possibility that the setback distance can determine when a system needs to be upgraded. A parcel within 500 feet could be required to upgrade immediately but parcels further than 500 feet could utilize the natural lifetime of systems. Ultimately this will end up in the political realm.

- Zee notes this can be looked at by pulling data from the Health Division about how many septic systems fail per year.
- Scott notes his agreement that the MassDEP mandate of five years to replace a system is draconian and remarks there were negative comments by many communities about the regulation. He likes the homeowner-initiated issues such as building a new house, constructing an addition, or adding an ADU. At these times the yard is being dug up anyways, so the installation of an I/A system is a marginal cost.
 - Zee notes it could be worthwhile to have a requirement to design in space for an I/A septic system
 - Rob Steen clarifies that this would be if we were to allow Title 5 Systems to be installed, then space for an I/A septic system must be made.
- Rob Steen questions Councilor Clark on her interpretation of where Town Council may be in regard to I/A septic systems.
 - Councilor Clark responds she is unable to say at the moment but notes there is an election coming up in the fall. Half the council will be up for election. If there is a high price tag associated with the effort, there will be little support. By the time this committee is completed, there will be a reconstituted Town Council.
 - Rob Steen notes we plan to bring recommendations to Town Council in September, before the election.
 - Councilor Clark notes this is risky. Councilors are not going to want to tax their constituents. She notes the decision to reduce the sewer assessment cap to \$10,000 which was, in part, a political decision because it was an election year.
 - Kelly Collopy, Communications Manager, Department of Public Works, adds that an additional consideration is the potential need to educate new councilors on the issues.
- Scott asks if there is any reason why the cost to the homeowner could not be subsidized, as is done now with the sewer assessment.
 - Rob Steen notes that any subsidization would be on top of the \$1.4 billion that is currently on the books.
 - Zee notes this cost may be reduced if Phase Three were to utilize I/A septic systems.
 - Rob Steen acknowledges this but notes we can't promise that yet. Any subsidy now would be on top of the \$1.4 billion.

- Rob O’Leary asks if the subsidization would apply to wealthy homeowners. He makes the note that if someone lives within 500 or 1,000 feet of the water, they are the “luckiest person in town”.
 - Rob Steen notes this is a possibility.
 - Scott notes a difficulty in identifying those individuals.
 - Zee notes there is a tax credit of \$18,000, which is regressive and will primarily benefit wealthy individuals, those making more than \$95,000. He notes it is possible to identify, within the 500 of 1,000 feet area, who is a resident and therefore qualify for the tax credit. Additional outreach could occur to incentivize those property owners to change to I/A septic systems.

- Zee notes the complicated question of determining how close someone is to receiving sewer, in terms of time, with those not close enough being told to implement I/A systems. Is there then a credit for the installation before being hooked up to municipal sewer when it comes.
 - Rob Steen notes this is part of the conversation at hand. If someone receives sewer in 20 years or 2 years the decision is easy, but the time between those is the difficult decision that will need to be made.
 - Kelly Collopy, Communications Manager, Department of Public Works, notes this as one of the most commonly heard concerns, where property owners don’t want to be forced to install a septic system then be forced to connect to sewer. There is a significant cost to both those actions.
 - Zee notes this may expand and contract as more people switch over, requiring the territory to expand to achieve the same reductions as modeled. He does not believe that someone should be forced to switch to municipal sewer so long as they have a system that can achieve 90-95% of the target.
 - Rob Steen notes a hypothetical where a Title 5 System fails and is replaced 10 years prior to receiving sewer. When sewer is available the septic is within its anticipated lifetime. If we were to allow the property owner not to connect, they would not pay the betterment until being required to connect. Additionally, we are bound by the watershed permit which dictates the amount of nitrogen removed by year 10, 20, etc. By year 20 we anticipate having 80% of the nitrogen required out of the system. The issue of time does present a significant discussion. He anticipates numerous meetings to settle on an answer. He acknowledges that the proposed approach does make sense, but there would need to be additional sewerage or other activities to offset the nitrogen removal and still meet the nitrogen removal goal.

- Scott asks how Rob Steen recommends going about making decisions on recommendations.
 - Rob Steen notes that when the Water Resources Advisory Committee (WRAC) was helping create the CWMP, the DPW came in with recommendations for the WRAC to then deliberate and decide on.

- Amber asks if the desire is to have the numbers presented broken down further to represent greater than or less than 10 years for time-to-travel.
 - Scott responds that it is not necessary, as an assumption can be made that 1,000 feet is approximately 3 years' travel time.
 - Tom responds that he would like to see the time-to-travel broken out.
 - Scott asks how having the breakdown would be beneficial, noting uncertainty in how it would be different from the differences.
 - Amber responds that the time-to-travel is affected by the location within the watershed.
 - Tom notes that time-to-travel can be affected significantly by rivers.
 - Amber responds that she will work on a breakdown of the presented data by time-to-travel.
- Brian Hughes, Vice Chair, notes the data from Shubael Pond which showed the groundwater flowing east, but measurements indicated it was flowing west.
 - Zee notes this is an important consideration. We should look at the time-to-travel and the sub-watersheds. He notes an area near Lake Wequaquet where groundwater forms a teardrop shape from west to east that the town is sewerage around. If he was in charge, he would look at the sub-watershed and figure out a solution in that area. Other areas may not be as important because groundwater flows around it.
- Zee notes the question of money is relevant as the failure in Title 5 Systems is typically the leaching field. There is work being done to investigate shrinking the leaching field by a considerable amount, which would save \$7,000 off the cost of these systems. He notes the efforts on Long Island to reduce the cost of engineering by eliminating the need for an engineered plan, allowing it to be hand-sketched in. If the cost can get down to \$30-35,000 and if approximately 60% of the population qualifies for the Massachusetts State Tax Credit, potentially the cost is cheaper than municipal sewer.
 - Rob Steen asks if this is for I/A septic systems or Title 5 systems
 - Zee responds it is for I/A septic systems.
- Rob Steen notes that when the State switched from cesspools to Title 5, it was "just a requirement". There was no financial incentive.
- Glenn Snell asks what the typical cost for a Title 5 System is.
 - Scott responds that it is \$25,000-50,000.
 - Rob Steen responds that it depends on where the system is installed on the property.
 - Zee responds that he believes the cost is approximately \$16,000-18,000.
- Scott remarks Long Island has been able to get the cost of an I/A septic system down to \$30,000.

- Rob Steen responds that if the cost gets down to \$30,000, it can be assumed to be comparable to municipal sewer.
- Scott notes that for any project there is a need to get 5-10 bids, which no property owner does. He remarks a property owner in Truro did this and found the price of installation doubled. On Long Island they utilize a Responsible Management Entity (RME) which does the bidding for the property owner.

Scott takes an informal poll of the committee, asking how many people want to make a recommendation about requiring I/A systems within a certain setback.

- Overall, the committee agrees this is needed.
- Brian notes the committee is not ready to do it yet, but it is something that needs to be done.
- Councilor Clark notes an effort should be made to investigate within the 500-foot setback where there are existing cesspools as it's time to clean that batch up.
- Councilor Clark asks, if a cesspool were to be upgraded to an I/A System, would it then become a tight tank which contributes nitrogen?
 - Rob Steen responds that a cesspool is essentially a large circular tank with holes in it. From a nitrogen standpoint, anything is better than a cesspool.

Scott asks an additional question of the committee, noting there are two options for when an upgrade would be required. It can be tied to a time-constraint (such as within 5 years of passing the regulation) or with homeowner-initiated triggers such as construction of an addition, new builds, or failures of the system.

- Brian notes that homeowner-initiated triggers will be an easier sell.
- Rob O'Leary asks, in response to the question, what is the result of each action and the effect that occurs. If the incremental approach is taken, there may not be much impact.
- Scott notes that in Wellfleet they recommended the homeowner-initiated trigger approach, which Selectboard members noted would cause people to avoid putting on additions and "play games" to avoid upgrading.
- Glenn asks what Wellfleet ended up doing, what regulations were passed.
 - Scott responds that Wellfleet passed a regulation with homeowner-initiated triggers, but they are considering pausing for some time. Currently the regulation is townwide, but they are considering a more limited approach such as using setbacks.
- Rob Steen remarks on the temporal aspect of the committee, in which there will be continuing 5-year updates. If, for example, the committee were to recommend 500 feet because of what they think could make it through the Town Council and other politics, the next update could expand the recommendation to 1,000 feet or more. Eventually you get to a much larger area. The CWMP is required because of regulations, this extra effort is being made because of morals. Nothing that's said now can't be expanded with the next iteration of the committee.

- Scott notes that the previous comment of “go big or go home” continues to reverberate with him
 - Rob Steen agrees but alludes to Councilor Clark’s point that the politics of the situation play a major factor.
- Zee lobbies for an incentive to upgrade. He notes ADUs may be a low-hanging fruit, with incentives for ADUs being installed with I/A Systems. He questions what options the town may have to complete this and notes a conversation with Mark Milne, Finance Director, Town of Barnstable, where he brought this up.
 - Rob Steen asks if Mark Milne commented on the legality of such an approach.
 - Zee responds that the State Legislature would need to do something to allow the town to do this.
 - Zee also notes the current Town Council’s concerns with housing and that there is the new ADU Law. As we are attempting to do something with I/A Septic Systems, it may be worth attempting to tie them together.
 - Councilor Clark notes that, from her understanding, ADUs are not very prevalent due to the high cost of building.
 - Zee understands this but notes the bank can provide a loan for it. He notes his belief that the property owners within 500-1,000 feet of the waterbody can afford it.
- Rob O’Leary questions whether putting an I/A requirement on the ADU Law conditions it in such a way where it violates the by-right nature of the Law.
 - Zee clarifies that I/A would be incentivized, not required.
 - Dan Santos, Director, Department of Public Works, notes the incentive would be done in the form of a tax break.
 - Zee notes his understanding that the ADU can be done by right, but the ADU must also solve for wastewater. It becomes an “If/Then” scenario if we were to recommend a regulation.
- Butch Roberts remarks on the newsletter from Barnstable Clean Water Coalition which touched on the cost difference between sewer and I/A Septic Systems. One reason people won’t want to do this is because it is an additional expense. Should we be taking a broader look at the CWMP and seeing if the sewerage cost could be reduced by increasing the number of I/A Septic Systems.
 - Rob Steen notes his opposition but notes that, as per earlier discussions, if the Town were to implement I/A systems and be able to prove to MassDEP that they remove acceptable levels of Nitrogen, then Phase Three can be possibly removed or adjusted. He notes others’ disagreements with the model but notes that is what the town is regulated by. The first iteration of the CWMP came back from MassDEP noting that more sewers were needed, not less. He notes that when sewers are used, it brings the nitrogen level down to 0 mg/L, not 5 mg/L or 10 mg/L like with I/A Septic Systems. There is currently

- no alternative technology that can achieve the same level of reduction. This would also cause everything to have to be re-modeled and start from scratch.
 - Scott emphasizes the main concern as he sees it is the cost, and if cost can be reduced for Phase Three it may be beneficial.
 - Rob Steen agrees but notes that the cost for Phase Three cannot be taken off the table yet. The hope is that this cost will eventually be adjusted.
 - Scott notes the probability of reducing the cost by millions should be explained to the Town Council when we bring recommendations to them.
 - Rob Steen emphasizes that the adjustment of Phase Three is a possibility, not a probability. He believes in the technology but does not know yet whether they will reach the necessary goals.
- Butch asks if we are at a point where the Town refuses to fund a system.
 - Rob Steen notes uncertainty that the town would have the ability to refuse. The regulations require the Town to do this. Additionally, the Conservation Law Foundation (CLF) is working to ensure the Town is complying with regulations. To date, this has been accomplished and satisfies the courts that our actions are diligent, correct, and appropriate. If the Town were to stop the project, it would not go well for the community.
 - Butch responds that if a high enough tax bill is brought to the voters, they will say “no” regardless of what the courts say. Is there a way to make the total bill less expensive to make I/A Septic Systems more viable.
 - Rob Steen responds that it is likely not possible at this point.
- Tom notes that the 0 mg/L in the Three Bays Watershed that Rob Steen noted earlier in the meeting relies on the solving of the effluent disposal and the banking for cost of an engineered approach.
 - Rob Steen clarifies that the 0mg/L refers to the nitrogen at any individual property on sewer.
- Glenn suggests starting with I/A Septic Systems in the places where the sewer will not be brought to. Start there, then go to Phase Three.
 - Scott agrees with this and notes it is part of what Amber presented.
 - Brian notes there can be some balancing between areas with the fluctuation of sewer and I/A Systems.
 - Louise notes this suggestion is very basic and is in favor of it.
 - Tom notes some may look at the high density of areas in Osterville not being sewered and may request additional time to look at a conventional approach or other approaches such as a neighborhood sewer.

- Scott notes a conversation should be had about neighborhood sewer systems. These are another option in addition to traditional sewer and I/A Septic Systems. He has had some discussions before but believes it would be worth having a discussion with the committee about it.
 - Lousie notes this approach was mentioned during the MASSTC visit.
 - Rob Steen notes this approach was looked at with the WRAC. There were several studies at the time that showed the impact of economies of scale. It is a more expensive way of treating wastewater and does not fully remove the nitrogen from the watershed as regulated.
 - Scott notes it may be worth looking at cluster systems in areas not identified in the CWMP.
 - Rob Steen asks who would manage the system. There is capital cost and operating cost.
 - Scott notes he would still like a discussion on the topic.

- Rob O’Leary asks where other towns are going with I/A Septic Systems.
 - Scott responds that Falmouth is doing a lot of work with I/A Systems but is still working to figure it out.
 - Rob Steen responds that Chatham is 100% sewer
 - Scott responds that Wellfleet is approximately 40% sewer, 60% I/A Septic Systems
 - Rob Steen responds that Yarmouth appears to be going for traditional sewers
 - Rob Steen responds that Mashpee is taking an interesting approach with shell fishing, but also building three plants for a traditional approach
 - Rob Steen responds that Sandwich is primarily traditional, with nothing heard about I/A.
 - Scott notes that all six towns on Martha’s Vineyard are looking at I/A systems as some component, with Edgartown looking at a very small amount, and Chilmark and Aquinnah going 100% I/A due to density.

- Rob O’Leary follows up on his question, noting it would be beneficial to look into the specifics of other towns and how they are determining where to use I/A Septic Systems, whether they are using time-to-travel, whether they are requiring it as a general rule, phasing it in, etc.
 - Scott agrees but also points to Long Island who are “10 years ahead of us”. They split 50/50, with sewers being downtown and I/A systems elsewhere.
 - Kelly Collopy, Communications Manager, Department of Public Works, recommends looking at the policies, noting there can be misinformation and general feedback. She notes that Barnstable has a 6-month sewer connection deadline, while Mashpee has 90 days. She notes that we tend to keep the end user in mind, where other towns may be more aggressive in their policies.

- Butch notes that, at the conclusion of the CWMP, there will be 47% of the town that won’t be sewerred at all.
 - Rob Steen responds that this is due to how the modeling works, which is off of the sub-watersheds. While we are required to meet requirements in the watershed, each sub-

watershed requires a different level of action to meet the requirement throughout the watershed. Just because we sewer an area, that does not necessarily contribute to the requisite nitrogen removal down the road. Two homes in different parts of the town contribute different values.

- Scott requests, due to time, that Rob Steen and Chris Gadd draft a potential recommendation that can be brought to the committee.
 - Rob Steen responds this is possible, noting it will address the 500-foot setback, tax incentives, and natural life of the system.
 - Scott notes he is concerned with timing, that this is “the big one” but there are several other topics to discuss.
 - Rob Steen asks if the recommendation should stipulate a specific number (i.e. 500 or 1,000 feet) or should be left blank
 - Scott responds to go with both 500 and 1,000 feet.
- Lousie O’Neil asks how the policy falls into water recharge areas or wells.
 - Rob Steen responds that the topic at hand is purely about distance from a waterbody, not encompassing wells.
 - Lousie asks if there is any possibility of implementing a setback from wellheads.
 - Rob Steen responds it is possible. He notes that 400 feet from a wellhead is protected due to being in Zone I.
- Scott notes that Wellfleet is doing a similar approach and included setbacks from wetlands boundaries. He asks to confirm what the setback distances Amber presented are based on.
 - Amber responds that the data was collected using the boundary of the estuary.
 - Scott asks if wetlands are included in the calculation.
 - Amber responds that wetlands are included in the calculation, assuming it is a parcel.
- Scott confirms with Rob Steen about producing a recommendation and whether it can be sent to the committee ahead of time.
 - Rob Steen confirms this can be done.
- Tom asks whether the 500-foot setback will be added to existing language, or some other method.
 - Rob Steen responds that the DPW will work to capture the essence of the night’s meeting, talking about the 500-foot setback, natural life of the system, encourage use of tax incentives, and put into a paragraph for review.
 - Tom notes, in addition to the items mentioned, there was discussion of excluding those parcels already identified in Phase One of the CWMP. He reiterates his desire to see maps with time-to-travel, sub-watersheds, and the phases of the CWMP.

- Scott requests to have the recommendation paragraph sent to himself and Brian prior to the next meeting.
 - Rob Steen confirms this, noting there is an agenda setting meeting that Chris Gadd will set up with Scott and Brian.
- Brian adds that there has been discussion about many other methods of nitrogen removal that are smaller parts of the plan but should not be neglected, such as ponds and lakes management.

Scott concludes by asking if there is anything else to add to the discussion or for the DPW to capture in their recommendation. Nothing else is heard.

Public Comment/Questions

No matters were heard.

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 6:58 PM.

Roll Call: Scott Horsley (Yes), Brian Hughes (Yes), Tom Cambareri (Yes), Kris Clark (Yes), Zee Crocker (Yes), Rob O’Leary (Yes), Louise O’Neil (Yes), Butch Roberts (Yes), Glenn Snell (Yes)

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 (Held 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 (Held May 19, 2025)
 - Formulation of recommendations to be made to Town Council
- Meeting #9 (Scheduled for June 16, 2025)
 - Formulation of recommendations to be made to Town Council
- 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
- Meeting #12 (Tentatively September)
 - Review of feedback from Town Council on proposed recommendations
 - Around this time the goal is to make presentations to Town Council
- 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.