



Pleasant Bay Sewer Program Frequently Asked Questions

January 16, 2018

Water
Quality
Harwich

As the Town of Harwich moves forward with implementing its Comprehensive Wastewater Management Plan (CWMP) in order to restore and maintain the quality of all of the town's water resources, several frequently asked questions (FAQs) need to be addressed so that residents and business owners stay informed. This is a critical program for the town and an expensive one. So we want to make sure that important topics related to the program are clearly communicated to all. These FAQs as they relate to Phase 2 of the implementation will be updated with appropriate responses on a regular basis.

SCHEDULE

SQ1. Where are we in the Phase 2 process?

SR1. The town authorized funding for the design of the first phase of sewerage for the Pleasant Bay Watershed area (Phase 2 of the CWMP) at the Annual Town Meeting in spring 2017. The town signed a contract with the consulting firm CDM Smith, Inc. to prepare the design documents for public bidding. CDM Smith contracted with a surveyor to acquire topographic survey and utility information of about 12 miles of roadway in the proposed sewer service area. That work was completed in December 2017. Now preliminary design for the system layout is ongoing. The town intends to seek funding at the spring 2018 Annual Town Meeting to move into the construction phase of this program.

SQ2. What is the overall schedule for implementing the Phase 2 sewer program?

SR2. Overall the Phase 2 implementation is intended to be completed within a five year timeline as outlined below:

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| Town approved Phase 2 design funding | Spring 2017 |
| Design phase | Summer 2017 thru Early 2019 |
| Town to seek Phase 2 construction funding | Spring 2018 |
| Project bidding phase | Early 2019 |
| Construction phase | Spring 2019 thru Spring 2021 |
| Properties connect to sewer | Summer 2021 thru 2022 |

SQ3. As a property owner, when do I connect to the sewer system?

SR3. The sewer system in the Pleasant Bay area and the conveyance pumping station and pipelines to the Chatham treatment plant all need to be designed and constructed first. So as projected in the schedule above, properties would not start to connect until the summer of 2021. Each property owner will receive a notice from the Harwich Board of Selectmen/ Board of Health indicating when the sewer adjacent to their property is ready to receive wastewater flow and that starts the one year timeline required for the property owner to connect to the sewer in the street. Approximately 600 properties will be connected during this Phase 2 program. So it is in the best interest of the property owner to work with an engineer to develop their connection plan and speak with some town-approved licensed contractors (drain layers) about doing the installation. It would be best to wait until the sewer system is fully designed so each property owner will have the necessary information to design their connection. If a property owner wishes to make improvements to their property prior to the summer of 2021 that may impact their connection, then they could install the dry connection without actually connecting until the sewer in the street is ready.

DESIGN PROCESS

DQ1. What does the town design and what do property owners need to design?

DR1. The town contracted with CDM Smith to develop the sewer system design for the Pleasant Bay area and they are also coordinating with Chatham representatives and their engineer for the connection into the Chatham system. CDM Smith has been doing this type of work for over 60 years and so they have a lot of experience in the design, bidding and construction monitoring phases.

The town system will include all of the pipelines in the town's right-of-way and pumping stations where gravity flow cannot be utilized. It will also include a connection from the main pipe in the street over to the property line that the property owner will then connect to once the system is built. The property owner is responsible for all work from that connection point at the property line to their structure and any internal work that may be required. During design one stub connection is allotted per each property. The location of the connection point or stub will be final coordinated with the property owner during the construction phase.

DQ2. When will the survey be completed for my specific property and will I receive a copy of the data to use with my contractors?

DR2. The topographical survey work for the Phase 2 Sewer Project was completed in mid-December. The survey information obtained will be shown on the design drawings

for each street in the project area. Copies of design drawings can be made available to property owners and their contractors if desired.

DQ3. The recent topographic survey performed by surveyors in our neighborhood determined the height of each residence or building's foundation versus the height of the adjacent roadway. How is that information used and will it be available to property owners?

DR3. The survey obtained is used to develop design drawings for the town-owned sewer pipe to be located in the roadway, along with individual service connection stubs that will extend from the main sewer pipe to the property line of each property along the sewer route, all within the town's right-of-way. The individual services for each parcel will be installed, with property owner input during construction, at a location that will allow for the most convenient and cost-effective connection to the waste pipe that exits the house or business. This location may not always coincide with the location of the existing on-site disposal system. Each property owner will receive a Sewer Service Connection Form prior to the start of the main sewer construction on their street, showing their property and asking them to mark the desired service connection location. A representative from CDM Smith will meet with each property owner once the card is returned to verify the location in the field. Once installed, GPS coordinates of the location of the service connection stub installed by the town's contractor will be obtained and will be available for the town and property owner to have for future reference.

The noted topographic survey information is also utilized to help design the overall sewer system. The goal in this sewer service area is to utilize gravity flow sewers wherever it is cost efficient to do so, and thus minimize the use of pumping stations or grinder pumps for service connections. However, that will not be possible in all locations. Several options are being considered now during the design phase of the whole system.

DQ4. Did the recent survey work include locating each property's septic system?

DR4. No, the survey work for the town's sewer system did not locate individual septic systems on each property as they do not impact the layout of the sewer system. Each property owner will need to work with a professional engineer to have their own sewer connection plan appropriately designed per Harwich sewer use regulations and their existing septic system decommissioned per Harwich Board of Health regulations.

DQ5. How will a property owner know if they will have a direct gravity pipe connection or a pressure pump connection?

DR5. The sewer system is being designed with the intent to maximize gravity service to as many properties as possible. However, in some cases, either an individual property or

a group of properties will need to connect to the main town sewer with a grinder pump due to the local topography in the area. Once the design has progressed and these properties are identified, the town will notify the individual property owners.

It is anticipated that if a property will be required to utilize a grinder pump pressure sewer connection that the property owner would purchase the grinder pump units (pump structure, pump and internal controls) to be located on their property. Those property owners would then pay to hire appropriate contractors (drain layer, plumber, electrician, etc.) to install the grinder pump units. The property owners would also be responsible for operation and maintenance costs of the grinder pump units.

CONSTRUCTION PROCESS

CNQ1. How many contractors will be involved in building this project?

CNR1. It is anticipated that the projected will be divided into two construction contracts so that the town receives competitive bidding. So, two general contractors would conceivably be involved.

CNQ2. What is the normal construction sequence for this type of project?

CNR2. Construction is anticipated to occur over a two year period. That should allow time for potential weather impacts during the winter and for potential work restrictions that may be placed on certain areas during the peak summer tourist periods. Street detours and/or one-way traffic passage can be expected at certain times. Emergency vehicle access will always be maintained.

Once a general contractor is selected through a competitive bidding process they will start with installing the main gravity flow pipes typically located in the middle of the streets, starting from the low end of the system and working upstream. Once that pipe is installed and backfilled they will come back and install the connections from the sewer over to the property line to provide a future connection to each parcel. Those two types of pipes are the deepest beneath the road surface. Pressure pipes and pumping stations will be done after that work is complete. Trenches are backfilled daily and temporary paving done on a regular basis. After trenches have been compacted and paved a final overlay of the full road width will be done at the end of the project.

CNQ3. Will the town be utilizing the Clean Water Trust State Revolving Fund (SRF) loan program to fund the construction program?

CNR3. Should the town authorize the construction funds at the spring 2018 Annual Town Meeting, then the town will be utilizing the SRF program. A Project Evaluation Form (PEF) was already filed by CDM Smith on behalf of the town with the Clean Water Trust. Based on review of the PEF, this project received the highest ranking in this competitive

loan process. The interest rate will be between zero and two percent for the construction program loan.

PROPERTY OWNER COSTS

PQ1. How was the town's estimate of \$5,000 to \$7,000 for a property owner house connection developed?

PR1. The town's estimate of \$5,000 to \$7,000 is based on information received from recent similar sewer construction projects in Chatham and other communities. The estimated cost includes development of a professional engineer connection plan which typically costs \$500 to \$1,500 depending on complexity. The actual overall cost of the homeowner connection will vary depending on a number of factors, including location, depth, length, groundwater elevation, presence of ledge/boulders, landscaping impacts and other restoration costs. The cost of the connection is the responsibility of the homeowner and is a private transaction with a town-approved contractor (licensed drain layer) and potentially a plumber and electrician, if required. The town recommends that homeowners obtain several proposals for their connection from professional engineers and town-approved drain layers. Additionally, it is suggested that property owners join together with their neighbors and solicit proposals from town-approved drain layers to perform multiple connection installations in order to receive more favourable pricing. This pricing should include all costs associated with connecting the house waste line to the sewer service stub installed by the town at the property line, along with decommissioning the existing on-site subsurface disposal system.

PQ2. How much of the landscape around a home will be disrupted by the sewer service connection, and will it vary depending on type of connection?

PR2. The amount of landscaping that will be disrupted will vary greatly for each property depending on the location of the waste pipe as it exits the house, the location and extent of the landscaping and the location of the service connection to the main town sewer pipe at the property line. Property owners may be able to minimize the disruption by carefully selecting the location of the sewer service stub to be installed by the town at the property line. Revising internal plumbing to relocate the waste pipe as it leaves the building may also help minimize this impact. Gravity pipe connections (6-in diameter) require a deeper trench during construction than a pressure pipe (1 ¼- to 1 ½-in diameter) from a grinder pump connection. Both must be deep enough to prevent any freezing.

PQ3. What funding programs are available to assist property owners with paying for the sewer connection?

PR3. The town had the coordinators for the Barnstable County Septic Loan Program (doc: <http://www.barnstablecountysepticloan.org/wp-content/uploads/2016/03/>

SepticLoanApp.pdf) present at a Selectmen's meeting on their program which is available for property owners to use for connecting their property to the sewer. This loan program has been utilized in some other communities on Cape Cod for sewer connection purposes. Loans from local banks may potentially be available at lower interest rates today. Funding this sewer connection is the responsibility of the individual property owner.

COMMUNICATIONS

CQ1. If I have a question about this program today, who do I contact?

CR1. The Phase 2 project is currently in the design phase. A lot of information is posted on the town website under the Wastewater button. However, if you have a specific question, please contact the Town Administrator's Office at 508-430-7513 and Chris Clark will get you your answer or direct you to the appropriate staff.

CQ2. How will property owners and residents get information during the construction phase?

CR2. Several methods of communicating during the construction phase are being discussed. They include regular updates on the town website, regular updates in the local newspaper, electronic message boards in the work areas and updates posted on cable to name a few. It will be important for several reasons to make sure those involved and those who live in the Pleasant Bay area are informed about the construction activities. The town is also discussing who will be part of the team of resources available for answering questions, performing inspections and resolving issues that may arise. CDM Smith will also have experienced representatives in the field during construction helping to monitor the general contractor's work and to coordinate with local residents and business owners.

Link to Town of Harwich website: <http://www.harwich-ma.gov/>