



HARVARD WATER - SEWER COMMISSION

MINUTES

Wednesday, April 27, 2022

Virtual Meeting Held in accordance with Governors Executive Order Suspending
Certain Provisions of the Open Meeting Law

Cindy Russo, Chair

Kyle Hedrick

Richard Maiore

Present: Cindy Russo, Chair, Kyle Hedrick, Commissioner, Rick Maiore, Commissioner, Tim Bragan, Town Administrator, Tim Kilhart, DPW Director, Tom Mahanan.

The meeting was called to order at 10:00 AM.

1. The minutes of March 2, 2022 were approved without correction.
2. Tom Mahanan discussed his memo to Tim Kilhart dated April 26, 2022 (copy attached). The memo states that the first phase of the Pond Road project is almost complete: loam and seed and clean up should be finished this week.
3. The second phase is the installation of liquid chlorination equipment in the vault. RH White will complete this work as a Change Order to the original contract for a price of \$59,035. RH White is looking at scheduling. Tom hopes it can be completed by July 4. A change order will be sent to us for signature.
4. The memo includes preliminary information regarding a possible connection of the water system to Devens. Tom met this morning with Devens staff.
5. Tom shared his screen to discuss possible connection points. At this morning's meeting, Tom learned that a connection could be made to a 12-inch AC water main at Salerno Circle (near hole # 2 of the golf course). This is 3000 linear feet closer than the alternative Patton Road location.
6. The connection to Devens would require: (i) approximately 9000 feet of water main, (ii) a meter placed near the line between Devens and Harvard (iii) a facility with a booster pump and (iv) chlorination prior to serving any users.
7. A discussion followed concerning: (i) the best location for the facility (near town line or at DPW on Depot Road); (ii) whether the tank would still be needed. The tank is approximately 40 years old and would be assumed to have a life of approximately 75 years. Tom said it is not usually recommended to go fully mechanical but he will consider options and (iii) the optimal route for water line (Underpin Road vs. Depot Road, and comparable cost of longer distance vs. more ledge.)
8. The Town will retain our system of pipes and meters.

HSC Minutes April 27, 2022

9. Tom will analyze operational costs and will send us a contract, with an update on June 1. The Select Board must reach a decision on whether to pursue the Devens option by June 30.
10. Tim Bragan presented some information regarding Sewer and Water rates. We will hold a rate hearing on June 1, assuming we are able to advertise it.
11. The meeting was adjourned at 10:25.

Pond Road Wells Treatment Project Update

TO: Tim Kilhart, Director
COMPANY: Harvard Public Works Department
FROM: Tom Mahanna
DATE: April 26, 2022

As a follow up to the Board of Water Commissioners meeting on February 23, 2022, we are providing the Town of Harvard Public Works Department (Town) with an update on the status of the Pond Road Wells Treatment Project.

The Town is currently only operating Well 05G and providing emergency chlorination of this source prior to entering the distribution system. Well 02G was ordered by MassDEP to be taken off-line since late summer 2021 after Ecoli contamination was discovered. In order to reactivate this well, the Town must be able to demonstrate that it can provide 4 log virus protection of this source, should the well experience contamination in the future. In addition to the water main improvements that were completed, a permanent chlorination system with controls must be in place in order to reactivate this source.

Pond Road Water Main Improvements

In December 2021, R.H. White Construction completed the construction of the water main improvements on Pond Road. These improvements will provide the required contact time for disinfection of both Wells 02G and 05G in order to meet 4 log virus removal requirements prior to the first water service connection on Pond Road. As part of this project, the water service connection to the Beach House was relocated from the well vault to the new water main, with a connection beyond the minimum distance that is required to meet CT.

The permanent trench paving work was completed last week. Loaming and seeding of the disturbed areas and general cleanup will be completed this week.

R.H. White Construction has been paid **\$202,935.15** to date. Their original contract amount is **\$273,442.00**.

Chlorination System in Well Vault

The Board of Water Commissioners voted at the February 23, 2022 meeting to proceed with the installation of new chlorine feed equipment, a new continuous analyzer, and controls within the existing underground well vault. As part of the water main improvements project, a new sample line was installed into the vault that can be used to provide a continuous sample of water entering the distribution system. A new chlorine analyzer and sample sink will be installed to continuously monitor the chlorine levels prior to the first customer and transmit alarms in the event of either high or low chlorine levels. We previously provided a cost opinion of **\$60,000** to complete this work.

We contacted both R.H. White and Harbor Controls to provide cost proposals on the equipment and work required for this system. Our updated project cost is summarized on the following table:

Description	Cost
General Conditions	\$2,800
Interior Piping Modifications (including flow meter)	\$13,330
Chemical Feed Equipment	\$10,170
New Chlorine Analyzer and Sample Sink	\$5,720
Electrical Upgrades	\$8,300
Subtotal Construction (R.H. White)	\$40,320
SCADA Upgrades (Harbor Controls)	\$4,715
Engineering Services	\$14,000
TOTAL UPDATED PROJECT COST	\$59,035

R.H. White has indicated that material delivery could take up to **12 weeks**. We have prepared Change Order No.1 for R.H. White Construction to complete this work as a change order to their existing contract. Their revised contract amount will now be **\$313,762.01**. We included a **120 day** time extension as part of this change order. Harbor Controls will invoice the Town directly for their work. Tighe & Bond is finalizing the permit application to MassDEP for installation of this chlorination equipment. We have addressed all of MassDEP's previous comments and will provide the Town with a copy for their review prior to submission.

Interconnection to Devens Distribution System

The Town has directed Tighe & Bond to investigate constructing an interconnection with the Devens water distribution system. This public water system is the closest public water supply to the Town's water distribution system. Constructing an interconnection with Devens could reduce the treatment requirements and operational costs for the Town of Harvard. The Board of Water Commissioners expressed interest in reviewing this alternative before considering whether to construct a permanent treatment facility.

Tighe & Bond will be meeting with the Devens Utilities staff on April 27th to request information in order to complete our study. In regard to demand, Devens does not have any concerns about being able to supply the volume of water (15,000 gallons/day) that is needed to supply Harvard's customers. We need to verify the hydraulic grade lines of the two water systems to determine whether a booster pumping station would be needed at the Town line.

The closest connection point to the Devens water system is on Patton Road near the Red Tail Golf Course. In order to connect the two water systems, approximately **12,000 l.f. (2.25 miles)** of 8-inch and 12-inch water main will need to be installed across Devens to Depot Road and eventually connect to Harvard's water system at Ayer Road near the Town Center. This water main extension will also require crossing an active rail line on Devens, and crossing under Route 2 on Depot Road. The total distance could be reduced approximately 3,000 l.f. if it is determined that Devens has existing infrastructure on Marne and Shiloh Streets that could be used for this interconnection. The approximate cost of the water main extension alone is **\$3.6M**, which does not include contingencies, engineering, or construction of a booster pumping station.

We look forward to discussing the project in detail at the next Board of Water Commissioners meeting on April 27, 2022. Please let us know if you have any questions or require any additional information.

Below are the proposed water and sewer rate changes for 2022. This increase is due to escalating costs to operate both water and sewer systems. A hearing on the proposed rates will be held on June 1, 2022 at 10 AM virtually.

Current Rates

	Water Rates	Sewer Rates
Base/Minimum Charge	27.50	27.50
tier 1 < 1,125 c.f.	0.0266	0.0333
Tier 2 1,126 - 2,250 c.f.	0.0532	0.0666
Tier 3 > 2,250 c.f.	0.0799	0.0999

Proposed Rates

	Water Rates	Sewer Rates
Base/Minimum Charge	50.00	50.00
tier 1 < 1,125 c.f.	0.0319	0.0399
Tier 2 1,126 - 2,250 c.f.	0.0638	0.0798
Tier 3 > 2,250 c.f.	0.0959	0.1199