



Sewer Works

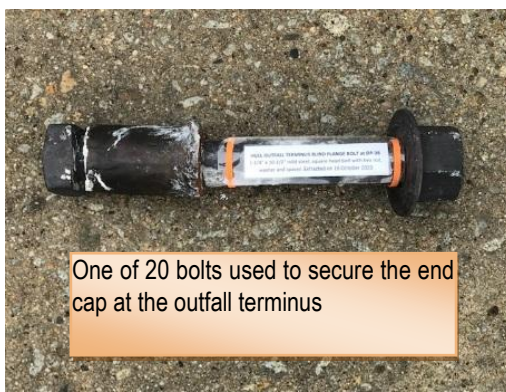
Newsletter of the Hull Sewer Department Fall 2020

Operations Message

Now that the two major sewer projects are complete, the focus has been on the treatment facility and pumping station upgrades. Active projects include:

- Concrete repair and protective coating at the treatment plant and several pump stations to address safety and corrosion concerns.
- Pump replacements with new pumps capable of operating while submerged at the Draper Avenue pump station. Included will be upgraded controls, piping and valves.
- Installation of a valve at the treatment facility to isolate treated water flows from the effluent pump station to allow for replacement of piping, valves and pumps. Piping and valve replacements in the effluent pump room will be made to provide greater reliability and operational flexibility.
- HVAC replacement at the treatment facility which will relocate the mechanical and electrical to the second floor of the Control Building. This will provide greater resiliency and air quality in the building.
- Pemberton pump station replacement.
- Planning and design for the next major phase of treatment facility upgrades. These improvements will replace aging infrastructure, remove hydraulic bottlenecks within the process, and provide resiliency.
- An outfall condition assessment was conducted where divers verified the location and condition of the outfall pipe that extends approximately 2,700 feet offshore towards Boston Light. All 36 diffusers were located, however, only 9 of them were working effectively. Work was done to extend the first 11 diffusers above the sea bottom and continued work will be needed to better protect these diffusers as well as extend and protect the remaining 25 diffusers. The end cap was located and found deeper than expected. This end cap was found to be in relatively good condition after 43 years underwater-see photo of a bolt that was removed from the end cap. This is important since removing the end cap is key to cleaning the pipeline which we know from past investigations is mostly filled with sand.

**John J. Struzziery,
P.E., Director of
Wastewater
Operations**



One of 20 bolts used to secure the end cap at the outfall terminus

Hull Sewer Department COVID-19 Protocol:

The Sewer Department is open during normal business hours during the COVID-19 pandemic however please note that our office and treatment facility currently remains CLOSED TO THE PUBLIC. To contact the Sewer Department please use:

Office Phone: 781-925-1207

Email: sewer@town.hull.ma.us

...

Who owns my grinder pump?

Sewers typically flow downhill by gravity from source to treatment facility. However, it is sometimes necessary to pump wastewater when it must go uphill part of the way before it reaches its final destination. Those property owners who can't use elevation to their advantage have grinder pumps which pump wastewater from their house to the Town sewer. Several neighborhoods in Town are interconnected in what is called a "low pressure sewer" which eventually discharges into a gravity sewer.

The Town undertook two projects in 1996 and in 1997 where we constructed low pressure sewer systems and installed grinder pumps at those properties to connect them to the system. We still own and maintain those grinder pumps today. We have easement agreements with those properties to allow us access to their private property for the purpose of maintaining our infrastructure.

Certain properties in these neighborhoods were vacant land at the time of the low pressure sewer construction. When the lot was eventually developed, the owner would have had to service the property with sewer using a grinder pump. Even in neighborhoods with a gravity sewer, a developer may have had to install a grinder pump to pump uphill to the sewer main in the street. In each of these cases the property owner would have retained ownership of the grinder pump service.

This may be why the Town might own and maintain a certain grinder pump, but not a neighbor's grinder pump. We are not playing favorites! The key to understanding this is whether or not your pump was installed as part of a Town sewer project, or installed by you, a previous owner, or developer.

...



Check the status of construction projects and updates on our web page
<https://www.town.hull.ma.us/sewer-department>



Weekly project updates on the ongoing construction projects are on our Facebook page-check us out and Like us.



Photo-rendering of the proposed berm to serve as flood protection at the WWTF, funded by Coastal Zone Management (CZM).

Grants Update:

- CZM Coastal Resiliency Design: We were awarded a new round of grant funding for the design of a vegetated berm around the perimeter of the WWTF. This grant is over \$200,000 and will take the design from 50% to 100%.
- CEC: An Artificial Intelligence platform is being implemented to analyze and forecast treatment facility flow and load data. We recently launched our aeration system module which is providing real time data to help guide us to reduce blower aeration energy to only what is absolutely necessary for the aerobic processes. This is important because blowers are the most energy-intensive equipment at our treatment plant. This also guides us in optimizing pumping of sludge, thus reducing pumping energy.
- FEMA: We are in the process of signing a grant agreement with FEMA in the amount of \$388,376 that will relocate critical electrical equipment and controls to the second floor of the administration building to maintain treatment system functionality during a significant storm event.

Sewerology

- **Disposable Wipes**: As stated in previous newsletter issues as well as in sewer bills and in newspaper articles, “disposable” wipes continue to be a major problem in municipal sewer systems everywhere. Even though they are labeled as “disposable” and “flushable”, yes, they will flush down the toilet, but they **will** clog your sewer service, the town sewer, or get clogged in one of the many pumps or treatment processes along the way, resulting in unnecessary costs by you and us. We ask that you please dispose of these wipes in your trash barrel after using them and do not flush them down the toilet. Most of these wipes do not break down as quickly as they need to in order to keep flowing through the system. Aside from human waste, toilet paper is the only acceptable item that should ever be flushed down the toilet-**Remember, the three Ps-Paper, Poop and Pee.** [The photo at right illustrates wipes' tendency to clog sewer systems.](#)
- **Sump Pumps**: Town By-Laws prohibit the discharge of sump pumps directly into the sewer system. This includes hard piping to the actual pipe as well as hoses going into a basement sink or laundry drain. All non-sewer disposed water that enters the sewer system adds to the overall wear and tear on the system and treatment process. Please check your sump pit and follow the route that the discharge piping takes you to, to ensure that it discharges into your yard or a dry well. If the pipe leads directly to the sewer line leaving your house, we ask that you have it redirected immediately. If you need help verifying where your sump pump discharges, please call this office.
- **Sewer Blockages** If you are experiencing any type of a sewer back-up, please contact this office immediately. **Do not call** a private plumber first, let us know what is going on and we will dispatch a crew to check the sewer line that runs in front of your house to make sure that the street is flowing properly. If there is a problem in the street, the call to a plumber that you made may cost you money that you didn't need to spend. Once the street is inspected, someone will contact you to tell you the status of their findings and then advise you of what your next steps should be.

