

# Sewer Works



## Message from the Director of Wastewater Operations

It's a privilege to serve as the new Director of Wastewater Operations. As some background, my experience includes 42 years as a consulting civil engineer for various public agencies and municipalities in planning, designing, and overseeing construction of sewer systems and civil infrastructure. Many of you may also know that I was chair of the Permanent Sewer Commission for over 35 years and bring that history and experience to this position.

Our wastewater collection and treatment system is over 40 years old and is need of upgrading and renewal. The Town is working with EPA and DEP to perform a Fiscal

Sustainability Plan (FSP) and Capacity Management Operations and Maintenance (CMOM) plan to address past practices, improve operations, and provide better tracking of problem areas and needed improvements. More on this in future updates.

This Newsletter is intended to describe information about the wastewater collection and treatment system, what we do, what you can do to improve operations, and overall provide a better understanding of how your sewer charges are being used.

We hope you like our new title, Sewer Works, as we believe it provides the context of the Sewer



**John Struzziery**  
Director of Wastewater Operations

Commission working for you to improve the water quality and quality of life in Hull.

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## About Your Sewer Bill

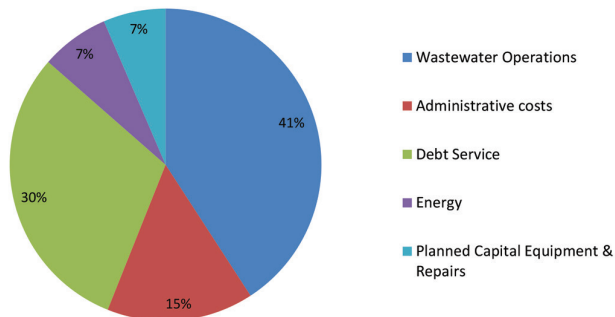
Your sewer bill is based on the amount of water used that must be treated. The Water Usage is the amount of water you used as provided by Aquarion Water Company for the billing period. It is in units of CCF (centum) (hundred) (cubic feet). One CCF is approximately 750 gallons.

Your usage is based on the meter reading of actual water used as recorded or estimated by Aquarion. For this reason, it is important to periodically check for leaks in your water system, since every gallon of water also corresponds to a sewer usage charge - see related article "How to Check for Water Leaks."

This chart shows the various items that make up the sewer bill. What is not included is the projected capital costs to upgrade the system. More on this as we develop our plan for the future.

### What Makes Up the Sewer Bill?

#### Sewer Rate Broken Out by Type of Cost



**Average Semi-Annual Sewer Bill is \$480 or \$80 per month.**  
See next page to make sure you're doing your part to keep costs down.

## Here are three simple things you can do to save money on your water and sewer bills, and/or prevent problems in your service

### Waste Not & How to Check for Water Leaks

Wasting water not only increases your water bill, but also results in a higher sewer bill. Be aware of excess water use in your home - shorter showers, turning water off when hand washing dishes, shaving and brushing teeth, and being aware of water leaks from dripping faucets. All can add to excess water usage and higher sewer bills.

Toilets are typically the largest source of water use in the home. Replacing with a low flush toilet

can reduce water usage by 25% or consider placing a toilet dam such as water-filled plastic bottle with sand or stones for weight in the tank to reduce the volume of water in each flush.

Leaking toilets can be found by doing the following: Lift and remove the top of the tank, place a few drops of non staining food coloring in the toilet tank to give it a good color, let sit for 30 minutes - DO NOT FLUSH. If color then shows in the bowl, it means you have a leak

which typically can be repaired by cleaning or replacing the flush valve or flapper in the bottom of the tank.

A dripping faucet for example can add over 5,500 gallons per year (7 CCF) to your sewer bill. Leaking faucets and showerheads are typically caused by worn rubber washers which are easy to replace. Installing low cost aerators on faucets and showerheads can also reduce the amount of water used.



Pour a few drops of food coloring in tank



Wait 15-30 mins, water in bowl should be clear



If you see color in the bowl-you have a leak

### No Wipes in the Pipes—the Three Ps

One of our biggest issues we deal with is cleaning wipes, rags, diapers, mop heads and other debris not intended to be in the sewer. This is a problem in all sewer systems and has been increasing as so called "disposable" and "flushable" wipes have become more available and common use. Don't believe the

hype even if the package says it is flushable. These claims are not backed up, however your sewer or our pumps might back up! It takes hours before they become dispersed as fibers and in that time, they collect and get tangled with other debris, and have been a major source of maintenance when

they get clogged in our pumps. An easy rule to remember is "**No Wipes in the Pipes.**" Help us keep costs down by disposing of these products, and even dental floss, in the trash can. Another way to remember what can be disposed down the toilet is only the "**Three Ps**" - Paper, Pee, and Poo!"



### Can the Grease

Fats, oils and grease, known as FOG in the wastewater industry, is made up of many items in kitchens and restaurants such as cooking oils, lard, butter, gravy, salad dressing, mayonnaise, and dairy products. When poured down the drain, FOG can solidify and clog pipes and cause sewer backups anywhere on your property or in the sewer system. You are responsible for costs

of dealing with repairs, or even worse backups on your property.

The Sewer Department spends considerable time and money removing FOG from sewer pipes and pumping stations, which impacts our sewer rates.

We ask all users to **Can the Grease** to help keep FOG out of our sewers. When disposing of these items, let the oils and grease solidify, dry

wipe or scrape remaining solids, then dispose of the wiped/scraped material in the trash can, not the drain. Restaurants need to do their part by using and maintaining grease traps and holding tanks.

Being more aware of what causes sewer problems will help reduce problems and keep costs lower.



## Meet the Sewer Department Staff

We have two full time staff at the Sewer Department office located at the Wastewater Treatment Facility.

**Carol O'Connor** is the Bookkeeper and is responsible for tracking all payments to vendors, maintaining the budget and expenditures of the department, and in working with members of Town management to compile the financial impact of decisions in order to develop the sewer billing rate which is presented to the members of the Permanent Sewer Commission for discussion and approval. In addition, Carol performs

customer service, administrative, other financial and record keeping duties to support the daily operation of the Sewer Department, Public Works, and the Sewer Commission.

**Terri Berardinelli** is the Facility Coordinator, responsible for customer service pertaining to sewer billing; responds to inquiries and requests for information to the Sewer Department; maintains records of sewer service connections and grinder pumps; prepares and provides estimated billing information and sump pump inspections prior to property



**Hull Wastewater Treatment Facility**

sales; reviews building permits to determine if the Sewer Department will be impacted by the project; and maintains files pertaining to property owners and contractors.

We also want to thank and acknowledge the work previously done by **Jim Dow** who served as the Chief Facility Manager. Jim is now serving as the Director of Public Works.

## Meet the Sewer Commissioners

The sewer commissioners have primary responsibility in setting sewer department policies and in setting sewer rates. In addition, they monitor sewer department work activities and work of our contract operator. It is a volunteer position and they generally meet on the third Tuesday of every month in the evening.

Present Commission members are Rick Mattila since 2012, Lou Collins since 2001, and Ed Babcock since 2013.

Rick is retired from Genzyme Corporation as the Director of Environmental Affairs and retired US Army Medical Department. Rick also serves on several other committees related to water quality. Lou is an operator with MWRA on Deer Island and brings the operator perspective and understanding to Commission meetings. Ed retired from being an operator at the treatment facility where he worked for 15 years and brings his

Currently, we only have three members of the Permanent Sewer Commission and are looking to fill the two vacant positions.

Anyone who is interested in learning more or in applying, please contact Lori West, Town Clerk, at [lw@town.hull.ma.us](mailto:lw@town.hull.ma.us)

knowledge and that experience to assist in any historical perspective that is needed.

All commissioners provide thorough review, good thinking and fairness in their responsibilities.

## Woodard & Curran - Our Contract Operator

Woodard & Curran (W&C) is responsible for the operations and maintenance of the wastewater treatment facility and sewer collection system, including 7 pumping stations and one stormwater pumping station.

W&C operates over 53 facilities under contract with governmental and private clients. As our contract operator, W&C is responsible for all staffing, treatment compliance, odor control, staffing, maintenance, emergency

response, and other assistance to the Sewer Department. W&C Area Manager, Frank Cavaleri has a long history in Hull and served with the first contract operator many years ago, and knows the system well. Frank is supported by Assistant Area Manager, Rob Scott. The daily staff includes Project Manager, Aram Varjabedian; Assistant Project Manager, Bill Boornazian, Lead Operator, Joe Basler; and Operations & Maintenance Technicians Eric Sutton, Rick Clark; and John Currier.



**L to R: Eric Sutton, Joe Basler, Plant Manager Aram Varjabedian, John Currier, Rick Clark, Assistant Plant Manager Bill Boornazian**

In addition, other support staff, specialists and engineers are available for any special need.

W&C provides staffing at the facility seven days per week all year.



## Featured Ongoing Work

Since the start of the new year work continues to provide stabilization and reliability to day to day operations. One big work item has been the change out and replacement of one of the two pumps at our pumping station off George Washington Boulevard. One pump was changed out, another pump removed to get rebuilt and suction piping cleaned from clogs due to rags, grease, and other debris.

To complicate the work, one of



**Pump being removed to be rebuilt**

the valves that isolate the station is broken open and we needed to plug the sewer to divert flow using another surface bypass pump as shown in the photograph. Plans are being made to replace the broken valve. This station serves the south end of town including flows from Cohasset and Hingham.

At the treatment facility, we have many projects underway and/or planned. Perhaps one of the biggest

issues we are facing is the lack of redundancy and backup of much of the equipment. Since most of the equipment and piping is over 40 years old, runs 24 hours per day, and has either already been repaired, rebuilt or replaced, there is considerable wear, corrosion, and loss of efficiency. This will necessitate reviewing each component to assess its risk of failure and consequence of failure as a means to prioritize what work gets done.

This is also part of implementing our asset management grant that will provide an inventory, risk assessment, criticality, and consequence of failure of all equipment which will help prioritize our planning of future upgrades and replacements.

Many of you may have heard about the American Society of Civil Engineers (ASCE) Report Card of



**Surface bypass pump to divert water**



**40 years of corrosion is taking a toll on all of our piping**

our nation's infrastructure. This has been a regular feature of ASCE to raise attention regarding the lack of funding and poor condition of our underground utilities and surface infrastructure. This is typically reflective of our aging infrastructure that has reached or is nearing its designed service life.

Hull is not much different than our nation in the sense that much of our sewer infrastructure is aging and has reached or is nearing its service life. Most of our infrastructure must operate 24 hours per day, 365 days per year. Over the next number of years we intend to justify needed improvements, prioritize what improvements will be made, and plan the improvements over time. We will do this responsibly and with purpose

as part of our long-term capital improvement program knowing how such costs will impact sewer user fees. The overall goals for the program going forward are to provide reliability, redundancy, and affordability.

After the plant failure in 2013, we appropriated \$6.9 M of which \$5.1 M has been spent mostly on emergency response actions, getting the plant operational while focusing on electrical, mechanical, and process functionality. The remaining balance of \$1.8M will be used for other capital improvements and other upgrades to allow adaptability for pumping and flow control improvements. More about our capital program will follow as it is developed.

## Communications

We expect in time we will have other means of social media to interact with you. We believe it is important to show you more of what we do every day, provide information important to you, and advise of happenings that you may want to know about.

Watch for more as we roll this communication out over time. Look for information in our next newsletter on how our sewer system works and how our treatment system works.

**Contact Information**  
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