

TOWN OF HULL
Sewer Department

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2022 ANNUAL REPORT

To the Honorable Select Board and Citizens of Hull:

The Hull Sewer Department is pleased to submit our 2022 Annual Report.

Overall, our facility has performed well in the past year, with all of our processes operating efficiently and effectively. We have continued to meet all state and federal regulations for the treatment of wastewater, and have made several improvements to the facility to ensure that we can continue to do so in the future. These upgrades will help to ensure that our facility continues to operate at peak efficiency and reduce the likelihood of equipment failures.

We have also implemented programs to improve the sustainability of our operations. We have increased our energy efficiency by adopting artificial intelligence (AI) software which tracks energy usage and identifies potential energy savings. We have also redesigned several treatment processes to be more energy efficient and these are implemented through past and ongoing upgrades projects. For example, we recently received another grant to improve energy efficiency through our influent pumping process. These upgrades have been bid and awarded and construction will be starting this Spring.

We are pleased to continue our partnership with the MA Department of Public Health and Biobot Analytics to monitor the presence of COVID-19 in our wastewater, at no cost to the Town. This monitoring has provided valuable data to public health authorities throughout the pandemic along with many other communities nationwide.

Please read the newsletter that is included with each sewer bill to find helpful hints on ways to decrease your possibility of experiencing a sewer back-up as well as tips and pointers as to what you should and shouldn't discard into the municipal sewer system (please no "flushable" wipes). Also note the section "Sewerology" where you can learn all about sewer terms, how the system works, and the challenges faced in this industry.

The Sewer Department operates as an enterprise account and as such is required to raise all revenue to cover operating expenses. These revenues are raised through sewer user fees and permit receipts. In addition, every year we seek out grants to help fund our capital improvements, of which several have been awarded.

2022 was a dry year; the average flow to the treatment plant was approximately 1.35 million gallons per day (MGD) which is down from 1.48 mgd in 2021. The wastewater treatment facility was designed to treat an average of 3.07 mgd.

PERMANENT SEWER COMMISSION

Rick Mattila (Chair), Peter Pyclik (Vice-Chair), Andrew Grosso, and welcoming our new commissioners B. Scott Taylor and Paul Norton.

SEWER DEPARTMENT STAFF

John Struzziery (Director), Brian Kiely (Assistant Director), Catherine Joaquim (Bookkeeper/Clerk), Michael McDonough (Facility Coordinator).

CONTRACT OPERATOR

Woodard & Curran is our contract operator for the treatment facility and collection system and staffs the facility seven days a week, 365 days per year. Woodard & Curran also provides some of our engineering services related to the treatment facility and collection system.

SEWER DEPARTMENT PROJECTS

Many projects voted at prior Town Meetings are now in motion in various stages of planning, design and construction. Work for the priority projects included:

- ***Design/Planning***
 - WWTF Coastal Resiliency Measures: Project to protect the WWTF from coastal flooding with a berm and gravity wall, incorporating deployable flood gates at vehicle entrances. Design completed June 2021, we applied for a FEMA grant in December to fund 90% of the construction.
 - Pump Station 9 Replacement: design completed in Fall 2021 for the replacement of the pump station in the Pemberton Commuter Lot. Congressionally directed funding in the amount of \$2M is pending.
 - Ocean Outfall Rehabilitation: design is complete and ready to go out to bid. We are working out timing this project around marine construction restriction windows for late Summer 2023.
- ***Construction***
 - Pump Station #9 Force Main: Installed a new access vault on Harborview beach in order to inspect and map the force main.
 - Influent Process, Aeration, and Control Building Upgrades: This project upgrades the Influent Pumping and Aeration Processes to modernize their design, replace aging equipment and increase efficiency. The project includes the electrical upgrades grant-supported by FEMA and the influent pumping upgrades grant-supported jointly by Mass. Clean Energy Council and the Department of Energy Resources. The contractor has been given notice to proceed and submittal review is underway.
 - WWTF HVAC Upgrades: This project provides much-needed upgrades to the HVAC and mechanical systems, and interior design of the Control Building. Contractors are finishing up with punch list items, old lab demo, and a control system. The project is expected to be complete in March.

MAINTENANCE AND UPGRADES

Our Operations and Sewer Department staff routinely maintains and upgrades our treatment facility and collection system to keep our wastewater system reliable, efficient, and resilient to storm events.

Highlighted work items include:

- Primary clarifier repairs
- Secondary Clarifier rake arms and shear bolts
- WWTF yard hydrant replacements
- Replaced an inoperable screenings box valve in front of the aeration process
- Purchased a 6-inch portable pump for emergency purposes
- Ongoing Town-owned grinder pump replacements/repairs

OPERATIONS

The facility complied with discharge permit requirements throughout the year with only one permit exceedance in June for fecal coliform. This exceedance was due to the low flow conditions from the extended dry weather period. We subsequently made process adjustments, adding more aeration during secondary treatment, in order to remedy the condition.

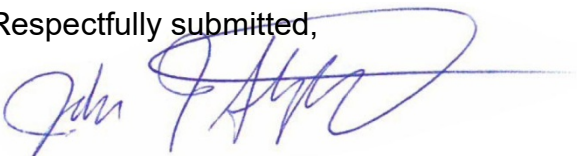
In 2022, we conducted the following inspections:

- 140 sump pump inspections, generating \$5,650, at the time of home sales
 - Identified 2 illicit sump pump connections to the sewer which were then disconnected by the owner.
- 4 inspections for new buildings subject to a rehabilitation fee which generated \$25,500 in revenue
- Sewer inspections for private properties
 - 17 second meter inspections, generating \$600 in revenue
 - 37 sewer permits generating \$5,570 in revenue

In addition, we responded to 1 sanitary sewer overflow, 24 resident backup calls, inspected 14 loud manhole frame and covers called in by residents, marked out 463 DigSafes, and responded to 39 grinder pump calls.

We once again thank Woodard & Curran our contract operators, the Permanent Sewer Commission, and our office staff. We also thank the Town for your support of our goals and mission to improve the resiliency and reliability of the Town's sewer system for years to come.

Respectfully submitted,



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