



**TOWN OF HULL**  
Sewer Department

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## **2020 ANNUAL REPORT**

To the Honorable Select Board and Citizens of Hull:

The Hull Sewer Department is pleased to submit our 2020 Annual Report. 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.

Considering the COVID-19 pandemic, this was a challenging year for everyone and we quickly adapted our operations to continue uninterrupted wastewater service to the Town.

### **PERMANENT SEWER COMMISSION**

Rick Mattila (Chair), Peter Pyclik, Richard Booth, Louis Collins, Andrew Grosso.

We thank Louis Collins, who served as Vice Chair and recently retired from his role on the Commission, for his 20 years of volunteer service. Lou brought valuable experience and perspective to this role since he not only worked as an operator of a wastewater treatment facility he also worked at the Hull facility in the past. He served the Commission and the Town well and we thank him for his years of service and dedication to this position.

### **SEWER DEPARTMENT STAFF**

John Struzziery (Director), Brian Kiely (Assistant Director), Carol O'Connor (Bookkeeper/Clerk), Terri Berardinelli (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 engineering services related to the treatment facility and collection system.

### **SEWER DEPARTMENT PROJECTS**

Thank you for voting for the many initiatives approved for funding at the Annual Town Meeting. Many projects are now in motion in various stages of planning, design and construction. Work for the priority projects included:

- HVAC system replacement for the administration building at the treatment facility.
- Effluent Pump Station and Pump Station 5 Improvements which will replace pumps, piping, valves, electrical equipment and rehab aging pipes. Construction to begin February 2021.
- We completed a Sanitary Sewer Evaluation Study which identified defects and infiltration and inflow sources across Town.

- Sewer System Remedial Repairs which must be designed and constructed prior to this year's roadway paving.
- WWTF Nature-Based Resiliency Measures funded by a grant from Coastal Zone Management (CZM) to protect the facility from future floods at sea level rise/climate change projections.
- The WWTF Facilities and Resiliency Plan was completed which assessed and prioritized the many needed improvements and system upgrades at the WWTF and pumping stations.
- We were awarded a FEMA grant to relocate critical electrical equipment to the second floor of the control building, above flood levels. We solicited engineering proposals and selected a firm to design the project. The project will be designed and constructed over the 2-year grant period.
- **Construction**
  - Headworks Concrete Repair and Influent Pipe at the treatment facility completed January 2021.
  - Rehabilitation of the Nantasket Ave Sewer Interceptor was completed early Summer 2020.
  - Atlantic Avenue/Gunrock Area Sewer Improvements was completed Fall 2020.
  - Sewer system remedial repairs in conjunction with the Town's Roadway Paving Program was completed.
- **Planning**
  - Conducted sewer assessments in advance of the Town's roadway pavement management capital plan. Any corrective actions requiring roadway work will be done prior to paving to avoid damage to new finished pavement.
  - Conducted investigations and assessments on the ocean outfall as well as performed remedial repairs to a number of diffusers.
  - Installed an Artificial Intelligence platform funded by a grant from the Clean Energy Council (CEC) which predicts and forecasts sewer flows and loads to improve energy efficiency and overall operations at the WWTF.
  - We on-boarded an Owner's Project Manager (OPM) with wastewater expertise to peer review designs and help manage projects.

## **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. Our 40+ year-old wastewater system needs regular upgrades to replace aging equipment. Highlighted work items include:

- Secondary clarifier gear box replacements and repairs
- Gravity thickener gear box replacement and repairs
- Aeration system repairs (Tank #1)
- Return sludge piping slip liner repair
- Multiple Headworks shut downs and rerouting flows for the influent wet well liner and for the Headworks concrete repairs. Joint contractor O&M assistance.

- Replaced primary sludge line and part of waste activated sludge line
- Pump Station 5: large excavation and installation of new 8-inch bypass and forcemain isolation valve, new electrical service
- D Street pump upgrades, VFDs and piping
- Effluent Pump Room demolition of old equipment, sealed off wall penetrations, added heat and dehumidifier
- Demolition of Gravity Thickener #2 for future repurposing, possibly as an odor control process
- Cleaned out Sludge Holding Tank #1 for future use

## **OPERATIONS**

In 2020, the average flow to the treatment plant was approximately 1.29 million gallons per day (mgd) which is down from 1.66 mgd in 2019 thanks to our infiltration and inflow control investments.

Due to COVID-19 protocol, regular inspections were limited for the safety of our staff and the public. We performed real estate, abatement, rehabilitation, and second meter inspections when allowed by, and always strictly following, state and local guidelines and policies.

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 new section "Sewerology" where you can learn all about sewer terms, how the system works, and the challenges faced in this industry.

We thank Woodard & Curran our contract operators, the Permanent Sewer Commission, and our office staff. We would also like to thank the Town for your patience with the noise, detours and any other disruption from our construction projects.

We are pleased to have served you throughout the COVID-19 pandemic and look forward to better years for us all.

Respectfully submitted,



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