

MARBLEHEAD WATER AND SEWER COMMISSION



THE FLOW N' GO

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COMMISSION FORESIGHT CONTRIBUTES TO SAFE, EFFICIENT, AND COST-EFFECTIVE WATER AND SEWER SYSTEMS

In this issue of *The Flow N' Go* we continue our review of the history of the water and sewer departments in Marblehead and the evolution of the boards that oversaw them.

Whether it be known as the water board, water commission, sewer board, or water and sewer commission, historically the residents who have been elected to serve on these boards have brought their expertise in engineering, construction management, insurance and business to the oversight of the water and sewer departments. These individuals always have been and always will be fully dedicated to maintaining water and sewer systems that are safe, efficient, and cost effective.

The last issue took a look at the Town's water system, which got its start around 1869 to supply water for fire-fighting purposes. The state legislature created the Marblehead Water Company in 1883 and a three-member Water Commission was first elected in 1887 to oversee the water system. Attention of the new Commission turned to establishing a drinking water supply and in 1888 land in Salem was purchased by the Commission and a pumping facility was constructed. In 1952 the Commission received legislative approval to connect to the then-Metropolitan District Commission water supply and, when the MDC was abolished as a state agency, to the Massachusetts Water Resources Authority (MWRA) in 1984. This move proved very beneficial to Marblehead in that today, while many non-MWRA communities often need to impose water restrictions during times of drought, members of the MWRA are well-served by the 39 square mile, 412 billion gallon capacity of the Quabbin Reservoir located some 90 miles from Marblehead in central Massachusetts. This vast water supply has prevented the need for water restrictions. Joining the MWRA was fiscally-responsible and has given the Town access to one of the premier water resources and systems in the entire country.

The Flow N' Go will now offer a glimpse into the history of the sewer department, including the establishment of the original sewer board and the legislation that authorized the joining of the Water Commission and Sewer Commission into the combined Water and Sewer Commission in 1979. We will also take a look at the foresight of the Commission to join the South Essex Sewerage District for wastewater treatment and the recent major repair that had to be made to the sewer lines running under Salem Harbor.

It is every resident's responsibility to research and vote for the best-qualified individuals who volunteer to run for the Water and Sewer Commission, and for other elected Town boards and commissions. Elected boards give residents direct access to the information and operations of the departments they oversee.

Marblehead deserves nothing less.

SEWER SYSTEM IN MARBLEHEAD GOT ITS START IN 1916

In the Special Acts of 1916, the Massachusetts General Court authorized the Town of Marblehead to "lay out, construct, maintain and operate a system or systems of main drains and common sewers for a part or the whole of its territory ... as may be required for a system of sewage disposal ..."

This was the beginning of a sewer system

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Did you know ... ?

On rare occasions, the sanitary sewer system can experience a sewer overflow. This can be caused by several factors, including:

- *Heavy rains
- *Collapsed sewer pipes
- *Ground water infiltration
- *Blockages from tree roots, rags, grease, and other debris.

In the next issue of *The Flow N' Go* we will look deeper into the causes of sewer overflows, what the Commission is doing to prevent them, and what you can do to avert an overflow.

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SEWER SYSTEM REQUIRES CONSTANT UPDATING TO MAINTAIN EFFICIENCY

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for Marblehead. (You can use your imagination as to what was done with the waste prior to that. “Down Bucket!”)

This Act also established a Board of Sewer Commissioners to oversee the sewer system and provided for the election of a three-member board. Further, it authorized the Commission to charge assessments for sewer services and that the “said receipts shall be used for no other purpose . . .” other than for sewer system expenses. The department today still operates with only the revenue received from receipts. No tax dollars are used.

The Annual Town Reports offer an interesting picture of how the sewer system has evolved over the years. The 1916 report of the sewer commission shows that \$500.00 was appropriated and only \$81 of that amount was spent.

By 1925, the Annual Report showed the progress that had been made. Four miles of sewer main had been installed and two districts had been established (the Gregory Street District and what was referred to as the Eastern District, which included the Fort Beach Pumping Station) at a cost of \$314,427. The Report further indicated that an additional 18.25 miles of sewer line was planned for installation at a cost of \$451,053

As the population expanded, the Com-

mission responded appropriately. Today, the sewer system consists of over 100 miles of sanitary sewer main and 28 pumping stations.

Most of these stations are built underground and are covered by a ground-level metal plate, much like the picture of the Nahant



Street Station shown above. Other stations are located in small buildings similar to the Green Street Station in the picture to the left.

If any of these stations should ever fail, it would not be able to pump the wastewater from low-laying areas up-hill to the gravity lines that deliver wastewater to the South Essex Sewerage District (SESD) facility in Salem for treatment. Should this happen it could result in a major sewer backup.

Therefore, it is of vital importance that the pumping stations be constantly updated to ward off any potential failure.

In 2016 the Water and Sewer Commission approved a just-over \$1.4 million project for the complete replacement of the Clifton Street Pumping Station. This project was completed in 2018.

That project was followed with a total

rehabilitation of the Sargent Road Pumping Station at a cost of \$1.3 million.

Recognizing the need to maintain all of the pumping stations in good operational order, the Commission is in the process of developing a 20-year Pumping Station Capital Improvement Plan. A thorough evaluation of all of the stations has been done and the stations are being prioritized based on their potential of a failure and the ramifications a failure would cause.

The Commission is also cognizant of the threat of climate change and rising sea levels. To protect the Fort Beach Pumping Station (which is located just feet from the ocean’s edge) from flooding, the seawall around the station was rebuilt during the summer of 2021. All future projects will be designed taking rising sea-levels into consideration.

All of this was in addition to several sewer main replacement and lining projects that the Commission has approved over the years.

Besides these major projects, the Commission has instituted a structured program for the day-to-day preventive maintenance of the pumping stations to assure that each station is functioning appropriately. This pro-active maintenance program lessens the likelihood of a pump failure and sewer backup.

JOINING SESD WAS AN IMPORTANT DECISION FOR MARBLEHEAD SEWER

One of the most important (and best) decisions ever made by the then-Marblehead Sewer Commission was to join the South Essex Sewerage District (SESD) for the treatment of the Town’s wastewater.

In 1972, legislation was passed by the Massachusetts General Court authorizing the Town of Marblehead to send its wastewater to the SESD treatment plant in Salem. Today, the District includes the cities of Salem, Peabody, Beverly and the Towns of Danvers and Marblehead.

Before deciding to join SESD, there was consideration given to constructing

our own treatment plant, which would have been located on land near Devereux Beach. After reviewing all alternatives, the Commission made the wise decision that a regional approach would be in the best interest of the Town.

The regional approach for treatment of wastewater has proven to be efficient and cost-effective. This was shown to be especially true when a secondary treatment of the wastewater would be required in the early 1990’s.

On March 3, 2013, a break in the sewer line running under Salem Harbor taking the Town’s wastewater to the

Salem treatment plant was discovered. After a complete assessment, severe corrosion was found in the 20-inch and 24-inch ductile iron force mains. These mains were replaced with high-density polyethylene (HDPE) pipes.

This nearly \$13 million project was partially funded with a \$10.6 million loan from the Massachusetts State Revolving Fund. The loan was originally scheduled to be repaid over 20 years.

Once again, the wisdom of the Commission was to repay the loan over ten years, saving sewer rate-payers nearly \$1 million in interest.