

Town of Harwich
2018 TOWN REPORT - WATER DEPARTMENT

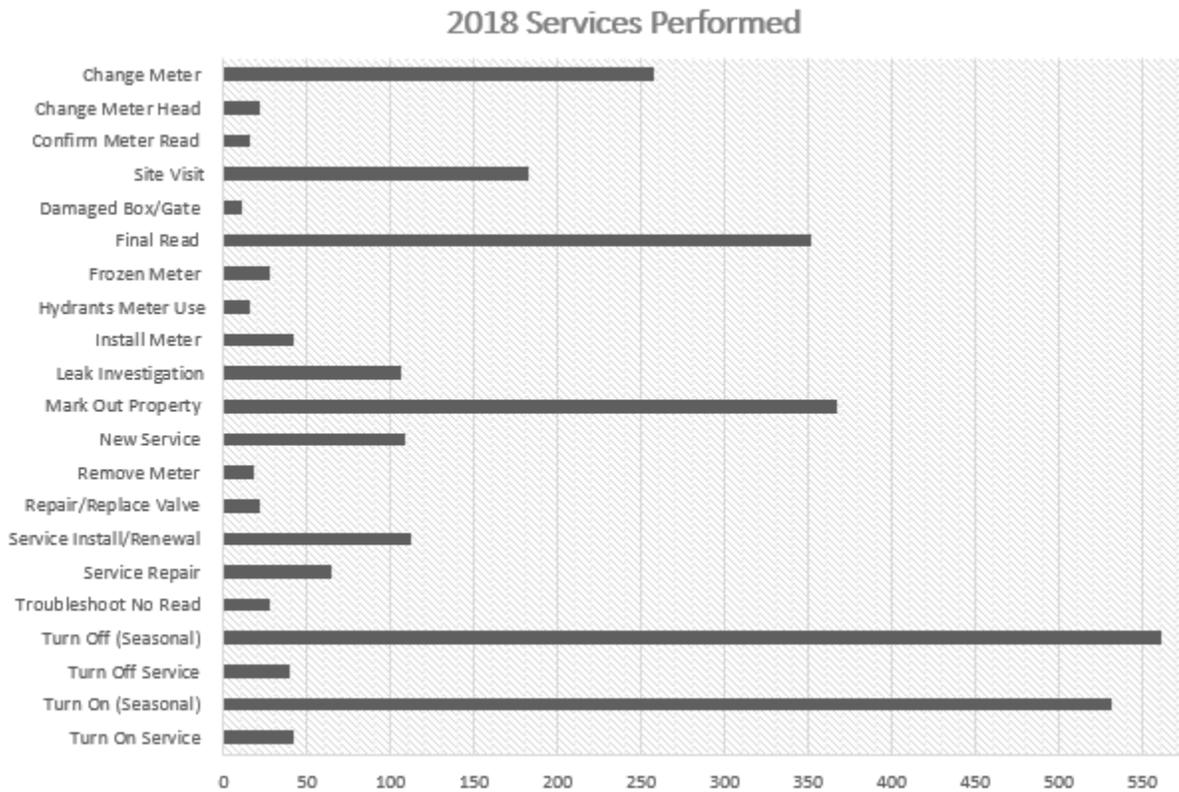
The Harwich Board of Water Commissioners and Water Department respectfully submit our Annual Report to the Honorable Board of Selectmen and to the citizens of the Town of Harwich for the year of 2018.

2018 Public Water Systems Awards

The Harwich Water Department was recognized by the Senate, House of Representatives, and Massachusetts Department of Environmental Protection for having won the Public Water Suppliers award for three consecutive years!

Operations

The Water Department offers a wide variety of services from seasonal water turn on/off, new and renewal water service installation, utility mark outs, final readings for property transfers, backflow inspection and much more. Below is a summary of services performed in 2018:



Projects & Accomplishments

2018 was an eventful year for the Harwich Water Department. Please find some of the more notable projects & accomplishments below:

- Water Main Upgrade Project on Lower County Road
 - Increased the diameter of the pipe under the Allen Harbor Bridge from 12” to 16”
 - Moved 76 water services from the 8” water main to the 16” water main

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- Connected all abutting street to the 16” water main
- Installed six 16” line gates
- Installed 9 fire hydrants
- Abandoned 8” water main
- Completed 20-year Water Management Act permit application
- Continued large meter replacement program
- Implemented quarterly billing
- Installed new well level transducers at all wells
- Revised the Department capital plan & conducted a rate study
- Continued facility upgrades, including but not limited to, remove/replace insulation and ceilings in wells 8 & 9, replace electrical service to Well 2, replace wooden trim with PVC board Stations 1, 2, 4, 8, & 9, re-seal the base of the Oak St. tank, replace lighting throughout department properties fixtures with LEDs

Water Rates and Financial Overview

With the implementation of quarterly billing in 2018 the water rates were restructured, but not increased. The Department is currently analyzing current water rates to determine what impacts funding future capital projects may have in the years to come.

Although the stance of the Board of Water Commissioners with support of the Department is to keep rates fair and equitable, water rate increases become necessary when revenues are unable to keep up with inflation, increases to operational and maintenance expenses and/or when a new capital project must be funded. To see whats on the horizon for capital projects for the next seven (7) years, please refer to the Capital Improvements section in our report.

In addition to water rates and services, the Department continues to look for other revenue sources as well as ways to run more efficiently and economically.

FY18 Financial Summary

Expenses

Salary and Wages	1,178,350
Supplies, Services & Maintenance/Repair	1,289,663
OPEB Contribution	50,000
Debt	767,712
Indirect Expenses; Insurance & Employee Benefits	<u>650,178</u>
Total Expenses	3,935,903

Revenues

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Water Rates & Recurring Services	3,562,136
Service Repairs & Technical Services	77,479
Service Tight Protection Plan	63,316
Solar Revenue	138,000
Backflow Inspection	20,333
Water Service Installation and Renewals	148,662
Late Fees, Interest, Lien Collection & Penalties	85,303
Wireless Communications Lease	<u>157,154</u>
Total Revenues	4,252,382

Articles (ATM17 for FY18)

ATM17 #10 Town Radio Project-Water Portion	33,930
ATM17 #23 Vehicle Replacement	107,856

Water Enterprise Fund Balance Summary

FY18 Fund Balance	1,116,662
FY18 Abatements & Adjustments	19,907

Capital Planning

In 2018, the Board of Water Commissioners and Department staff evaluated the aging infrastructure, water consumption forecasts, revenue projections, and the current debt schedule to identify and plan for the future capital needs of the Department. The Department also worked with Tighe & Bond to review the financial impacts of the proposed capital plan and how it will affect water rates.

- Fiscal Year 2020
 - Lothrop Ave – Water main repair
 - Pleasant Lake Tank - Increase diameter of fill pipe
 - Main facility generator replacement
 - Mini excavator replacement
 - (1) Fleet/Truck replacement
- Fiscal Year 2021
 - New source exploration
- Fiscal Year 2022
 - Route 28 Water main replacement design
 - Station 8 Generator replacement
- Fiscal Year 2023
 - Route 28 Water main construction
 - New Well Construction
 - (2) Fleet/Truck replacement

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- Fiscal Year 2024
 - Pavement Management - Well access roads
- Fiscal Year 2025
 - Paint Pleasant Lake Tank
 - (1) Fleet/Truck replacement
- Fiscal Year 2026
 - Water main Upgrades - Pipe Discontinuity

System Maintenance

The Department experienced a number of larger water main breaks in 2018, most of which occurred on Route 28 (installed in the late 1930s and early 1940s). Regular distribution maintenance helps minimized the impact to residents and businesses during repairs. For this reason, the Department continues its standard maintenance/monitoring programs, which include:

- **Hydrant Maintenance-** Evaluate hydrant coatings & re-paint where necessary to prevent corrosion & remove and lubricate hydrant cups to maintain ease of access in the event the hydrant needs to be utilized for fire suppression
- **Valve Maintenance-** Vacuum valve boxes to guarantee access to the valves operating nut & exercise the valve by opening and closing to verify it is working order
- **Well & Pumps-** Take manual drawdown readings to check the wells specific capacity, which is used to check the wells current capacity to historical data. This information is used to determine if the well is in need of cleaning & redevelopment, or to verify the pump is functioning in the capacity it was designed
- **Water Storage Tanks-** In addition to the daily site visits, monthly tank inspection reports are completed to document a more thorough evaluation of tank conditions. These monthly reports combined with our contracted annual inspection are used to predict future maintenance needs
- **Water Meter Replacement-** The Department upgrades & replaces all customer meters 15 years or older

Water System

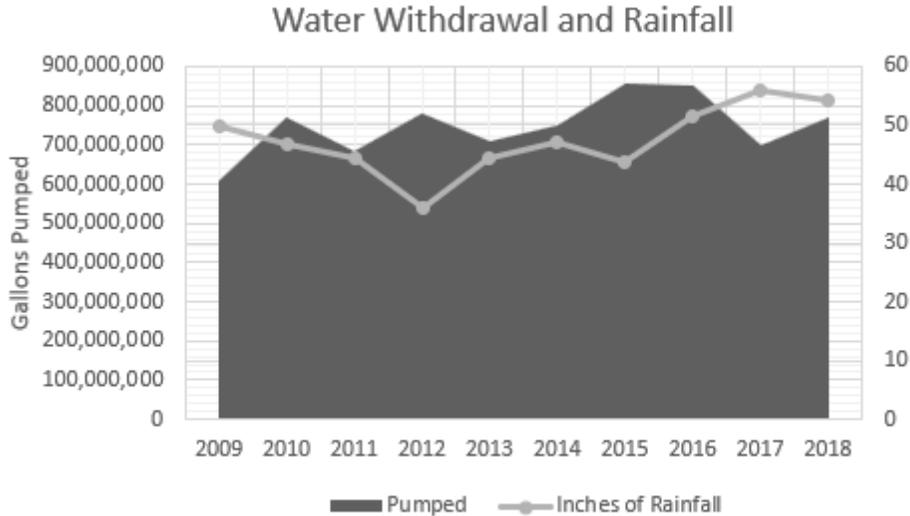
The original water system was established in 1936. Major expansion projects were undertaken in the 1950s, late 1960s and again in the late 1970s, these expansions made the water distribution system what it is today.

The Water Department operation consists of 14 pump stations, approximately 400 acres of well fields/watershed protection areas, 5 corrosion control facilities, 2 elevated and 1 ground-level water storage tanks and 2 new Greensand Water Treatment facilities which provide service to 9,989 metered accounts, 126 fire sprinkler accounts and 1,360 fire hydrants for fire protection.

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Water Withdrawal

The Water Department pumped 772,591,156 million gallons of water from our wellfields during 2018. Most of the water pumped was withdrawn from Chatham Road and Depot Road wells.



Water Quality

The Harwich Water Department is constantly striving to provide its consumers with the best water possible. The water provided to the residents of Harwich is tested numerous times a month for a variety of contaminants. Harwich Water Department continues to provide water that meets or exceeds State and Federal standards. The results of this testing are located within the Annual Water Quality Report on the Department website. Iron and Manganese levels in the untreated source water have, in the past, caused unfavorable aesthetic qualities in the water. Sources containing these impurities were infrequently pumped. Since the addition of the Bruce Cahoon Greensand Water Treatment Facility and North Westgate Treatment Facility, these minerals are no longer affecting the water quality.

Nitrogen and Phosphorus in fertilizer are the greatest concern to water quality. Generally speaking, lawns need less fertilizer than advertised and there are multitudes of fertilizing alternatives available today. While water quality in Harwich is excellent, let's do our best to keep it that way and protect our precious resource.

Service Tight Protection Plan

As property owner, you are responsible for the repair and maintenance of your water service, and until a problem occurs, you could incur thousands of dollars in repair costs. Harwich Water offers a Service Tight Protection Plan which covers the costs of repairs to your service in the event of a sudden leak. The cost is \$17 per quarter for an annual fee of \$68. You can enroll and learn more by visiting harwichwater.com or by calling the department for a brochure.

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Drought Management and Conservation

The Water Department has drought management signs throughout the Harwich Community. During peak season please refer to the signs around town as well as notices on our website for drought notification. We continue to encourage our customers to be diligent in conserving water even if the supply is abundant.

It is important to keep in mind that the average person uses 80-100 gallons of water per day on the following activities:

Bathing & Hygiene	15 gallons per day	Kitchen	7 gallons per day
Housekeeping	1 gallon per day	Laundry	8 gallons per day
Irrigation/Watering	70 gallons per day	Toilet	19 gallons per day

To review your metered water bill, divide your water usage by the number of days in the billing period (approximately 90 days) and by the number of residents of your household to determine your average.

High Consumption and Irrigation Systems

The majority of our high consumption calls come in after the October bill is received. In general, when we receive these calls, the irrigation system has been shut down for the season and the seasonal home is vacant. We can't stress enough the importance of becoming familiar with your irrigation systems to anticipate this expense. You may need the help of your irrigation company to determine the number of zones, number of heads in each zone, frequency of zones running, and how much water is used for a full cycle and/or each day, each week, each month, etc. Consumption should be monitored on a regular basis by checking your water meter reading so if an issue exists it can be corrected immediately. All water that passes through the meter is the responsibility of the homeowner, and who wants to pay for water that is lost?

We would also like to remind our customers who do have an irrigation system that a testable backflow device must be installed on the line that feeds your irrigation system. This device is put in place to protect containments from being pulled back into the public water supply. More importantly, it is a waste of our precious water resource.

Conclusion

As we begin 2019, the Board of Water Commissioners would like welcome Judith Underwood to the commission who has taken the place of long-time commissioner Danette Gonsalves. We would also like thank the dedicated staff and further extend our appreciation to all Town Departments, Town Committees, Boards and Residents for the continued support.

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Sincerely,

Board of Water Commissioners

Allin Thompson, Chairman

Gary Carreiro, Vice Chairman

Judith Underwood, Clerk