

**TOWN OF HARWICH
2011 REPORT OF THE HARWICH WATER DEPARTMENT
FOR TOWN REPORT**

From the Harwich Board of Water Commissioners and the Superintendent, we respectfully submit our Annual Report to the Honorable Board of Selectmen and to the citizens of the Town of Harwich for the year ending 2011.

BRUCE CAHOON WATER TREATMENT FACILITY

Under the Supervision of the Board of Water Commissioners and Superintendent, the Harwich Water Department constructed a 6.5 MGD Greensand and Manganese removal plant. Public sealed bids were opened in March of 2010; the low bid was then awarded to Weston & Sampson Inc. for \$3.25 million dollars. This plant will be used to remove approximately 80% of the iron and manganese which occurs naturally in the type of soil formation on Cape Cod. These types of plants can be found in all of our surrounding Towns. Harwich has now joined the surrounding Towns in treating for iron and manganese. For the last 10 years the Harwich Water Department was able to blend water with little to no iron and manganese with the water that had higher levels of iron and manganese which kept iron and manganese to a minimal level. However, with the demand growing during our summer months, we were unable to continue the blending process.

There was an open public ceremony which took place on November 16, 2011 at the new Bruce Cahoon Treatment Facility where Bruce Cahoon's family was in attendance. The Bruce Cahoon Treatment Facility came on line November 20, 2011.

ROUTE 39 WATER STORAGE TANK

The Route 39 water storage tank underwent extensive structural repairs this year. The last time this tank was painted was 14 years ago. The Route 39 tank is a spider leg tank design. The Harwich Water Department has two of these tanks; Route 39 and Lothrop Avenue. The Route 39 tank had severe metal loss around the area where the bowl and legs come together, around the catwalk as well as the sway bars on the tank. Another costly item was that the tank had to be completely shrouded because of lead paint issues and air quality.

The project engineers on this project were Haley & Ward Inc. out of Waltham MA. Inspection services were conducted by Merithew Inc. out of Raynham Center, MA. Structural repairs and painting were done by Amstar of Western New York, Buffalo, NY.

This project went out to bid according to Chapter 30 Laws. Publicly sealed bids were then opened on February 2010. The award went to the low bidder, Amstar of Western New York at a price of \$2,050,000. The final cost of this project was \$2,050,000. It was completed within the allotted time schedule and within budget.

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The Town presently maintains three water storage tanks that have capacities ranging from 1 million gallons to 1.5 million gallons. We plan to make the same type of repairs to the tank located on Lothrop Avenue in FY14.

The Harwich Water Department is almost a year in to Verizon Wireless and T-Mobile cell tower leases for Pleasant Lake Avenue and Route 39 water tanks. This new revenue source will help to offset the very expensive cost of water tank rehabilitation, maintenance and painting. We plan to seek bids for the Lothrop Avenue tank.

REORGANIZATION

The Harwich Board of Water Commissioners is seeking Town approval to restructure the current Water Department to a new Water and Sewer District. The Commissioners feel that under this type of Utility structure the Board can expand to a well-rounded Board seeking individuals that have served on previous Boards or Committees with water and wastewater experience. The Town Administrator feels that the Water Department should be expanded to a Water and Sewer Department under the leadership of a DPW Director. The present Highway Director has no water or wastewater experience. Water and Sewer Departments are very technical departments which need to be directed by someone experienced in water and wastewater.

To go forward with a DPW structure would mean several large rate increases over several years to pay for salaries for the DPW Director, the Town Engineer and the new Building Maintenance Administrator. Several other layers of management will also be needed to complete a DPW organization.

The Water Commissioners feel that the rate payer and the tax payer will see a large increase in taxes and rates over the next several years under a DPW organization. Therefore, the Commissioners feel that a Water & Sewer District would benefit the rate payer and the tax payer financially.

WATER DEPARTMENT AND TOWN DEPARTMENT COORDINATION

The Water Department continues to work with other Town Departments. Our Water Tracker mapping web-based application is used by the Planning and Fire Departments. Behind the scenes we fund the ArcGIS license for the town as the parcel layers are shared. Our Voice Broadcast system has also been a useful tool not only for our internal department use but for Town-wide use. We have administered broadcast message for the Town and Emergency Management Department. Also, several of our field staff and trucks are used for snow plowing in coordination with the Highway Department. We look forward to continued cooperation with town departments.

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WATER MAIN IMPROVEMENTS

Now that much needed capital projects were completed in 2011, the Water Department plans to continue our water main upgrade and replacement program by replacing or relining the older water mains in our system. As part of this effort, we will continue to closely coordinate our water main replacement program with the Highway Department by scheduling our construction activities to occur during the same time as street resurfacing by the Highway Department. This coordinated approach to our construction activities therefore results in a large savings to our rate payers.

HYDRANTS AND VALVES

Every hydrant in Harwich was inspected and exercised in 2011. The remaining fire flow tests were also completed in 2011. The Department replaced, installed or repaired seventy-one (71) hydrants. We have identified all hydrants that are in need of replacement. Hydrant re-graveling of 45 hydrants in the business district was completed in early 2011.

The Water Department also has an ongoing program for maintaining our valves throughout the system and we continue to add valves into our infrastructure. This allows us to isolate smaller areas of Town during water emergencies and to provide even more discrete controls on our flushing program.

WATER SERVICE INSTALLATION

Several years ago, the Water Department became the sole installer of new and renewal water services. This transition was successful and our staff has done a great job. In 2011 we installed 16 new water services and renewed 42, which were not on the service tight protection plan.

WATER METER UPGRADE PROGRAM

Water Meter upgrades continue on schedule. Meters age 30 years and older are part of our ongoing meter replacement program. In 2011, 419 meters were replaced and 30 new meters were installed for new water services.

RADIO READ INSTALLATION PROGRAM

We continue to install radio reads throughout our customer base. In 2011 we installed 1,544 radio reads for a total of 6,226 now installed, which is 63% of our customers. We will continue to work diligently on this program and anticipate achieving 100% radio read in 2012. Radio read devices compliment the meter and encode, receive, and transmit the data by radio signal. This technology will greatly reduce the number of technicians needed for meter reading and allow us

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to dedicate more staff to routine maintenance of the distribution system, service installations and seasonal services.

VOICE BROADCAST SYSTEM

The Voice Broadcast system has become a useful tool in communicating not only water emergencies to our residential and commercial customers but also town-wide emergencies to all residents. Be sure to enroll so you receive these messages. You can enroll on our website or feel free to contact our office at 508-432-0304 to sign up and/or update your phone number if it has changed.

SERVICE TIGHT PLAN

Did you know that as a homeowner you are responsible for the water service line that runs from the street to your home? In many cases those lines have been in place since your home was originally built. Many homeowners assume the lines are the water department's responsibility or any problems on the lines are covered under their homeowners' insurance policies. Unfortunately, these are false assumptions. Replacing a water service can cost \$2,000 or more.

Why not protect yourself and sign up for our *Service Tight Protection Plan* today! For as little as \$68 per year we can protect participants from costly repair or replacement costs in the event of a water service break at your property. You can learn more about this plan and enroll by visiting our website and/or feel free to contact our office and we'll mail you a brochure.

ONLINE BILL PRESENTMENT AND PAYMENT

The Harwich Water Department provides our customers a convenient way to view, print and pay your water bill online. We're sure you will find it more convenient and better for the environment. You will find this quick link on our website at www.harwichwater.com.

WWW.HARWICHWATER.COM AND WWW.HARWICHGIS.COM

If you haven't visited our Department website, we would like to invite you to do so. Our Department is technically driven. We will continue to enhance our services in this fashion. All of our Department forms and reports are available as well as up-to-date meeting minutes of the Board of Water Commissioners. In addition there are many informational facts and how-to instructions that you may find very helpful. At harwichgis.com we have a variety of maps. You may find our water system map and many of the Harwich maps; zoning, town owned property, flood area, conservation and recreation as well as road and street maps. Be sure to visit our electronic business front on the Web.

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POTENTIAL TO PAY MORE FOR LESS AND WATER USER SURVEY

The Department of Environmental Protection (DEP) is contemplating mandating water use restrictions to 65 gallons per day per capita which may restrict outside watering to 2 days per week from May-September each year regardless of pond levels or rainfall. DEP is using a UMASS Dartmouth study that only reached 9% of the water users as their basis. There is no scientific data justifying the implementation of this program which is what prompted our survey. If water use decreases, water rates will have to increase to meet fixed costs, therefore, a customer will pay more for less.

Surveys were mailed to all 9,800 of our water customers. We are happy to report that we have received approximately 4,000 surveys. You can find the survey results within our Department News on our website.

CONSERVATION PROGRAMS

The Harwich Water Department is always looking at methods of how we can conserve water. We ask that you work with us to help conserve water. Even though there is an abundant water supply on Cape Cod, we should still conserve as much water as possible.

Awareness of how much water you use is the first step in conservation. The average person uses fifty (50) gallons of water per day on the following activities:

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

Total Winter Use = 50 Gallons

Total Summer Use = 120 Gallons

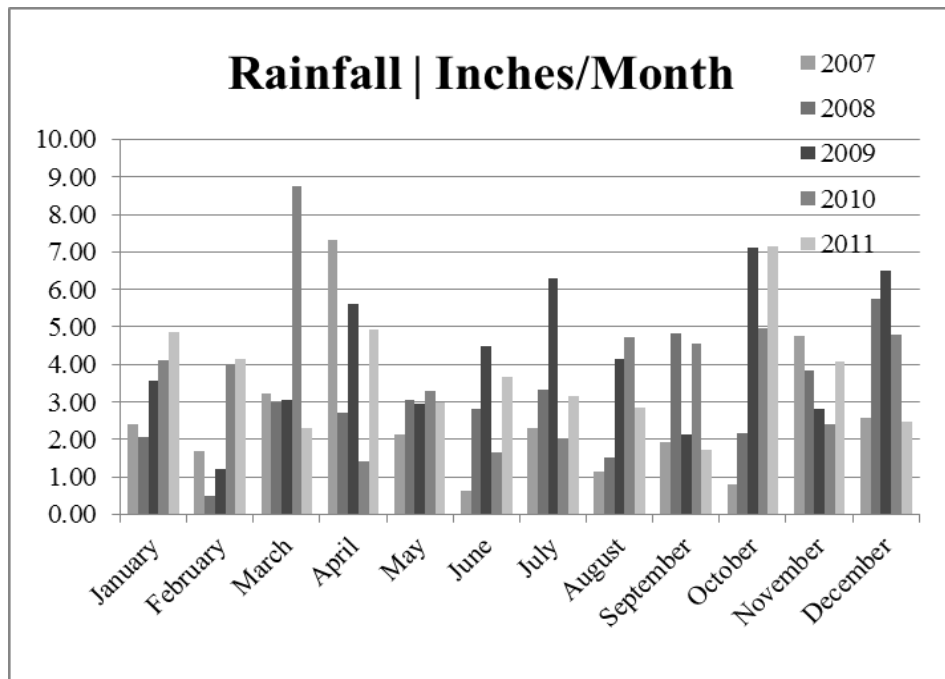
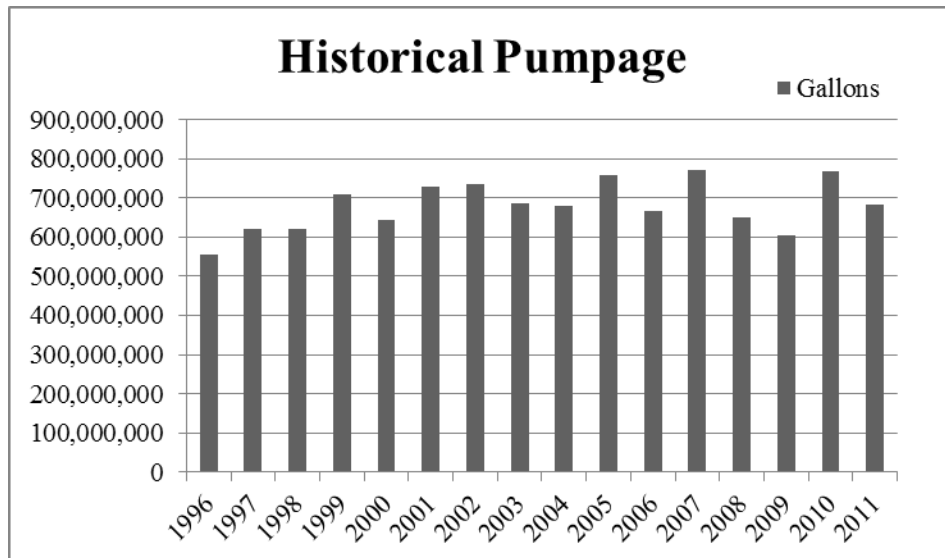
Because of the seasonal influx during the summer months, the Town of Harwich averages approximately 65 to 70 gallons per day per capita.

Metered Water Calculation

To review your metered water bill, divide your water usage by the number of days in the billing period (approximately 180 days) and also by the number of residents of your household to determine your average.

PUMPAGE AND RAINFALL STATISTICS

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<u>Water Department Comparative Table</u>			
Year	Rainfall in Inches	Gallons Pumped	Maximum Daily
1996	63.33	555,982,400	4,344,600
1997	48.46	620,145,100	5,627,100
1998	49.93	619,321,800	4,740,800
1999	44.48	710,729,600	5,681,400

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2000	48.11	644,636,400	5,065,400
2001	36.76	730,249,000	5,879,600
2002	50.44	735,869,800	5,666,970
2003	53.75	687,473,053	5,701,605
2004	37.88	680,194,630	5,568,509
2005	61.42	759,802,792	5,728,926
2006	42.03	666,986,217	5,052,381
2007	30.89	772,525,325	5,659,678
2008	35.60	649,958,341	5,401,605
2009	49.89	605,297,549	4,386,341
2010	46.76	769,662,599	7,062,033
2011	44.28	683,643,620	5,237,726

2011 WATER MAIN INSTALLATIONS

<u>Street</u>	<u>Type</u>	<u>Size</u>	<u>Footage</u>	<u>Hydrants</u>
289 Queen Anne Road	Ductile Iron	8"	212'	1
85 Depot Road (T2 Treatment Plant)	Ductile Iron	16"	812'	0

2011 ANNUAL STATISTICS OF SERVICES PERFORMED

Curb Stop Repair/Renewals	25
Frozen Water Meters	15
Meter Reading Troubleshoot	376
Hydrant Repairs	20
Hydrant Replacement	50
Hydrants Installed	1
Installation of Yard Hydrants for Water Samples	0
Mark Outs/Emergency Mark Outs	398
New Water Service Installations	16
Property Transfers Requests	258
Radio Reads Installed/Replaced	1,544
Renewal of Water Services	42
Seasonal Turn On/Off	1,427
Total Hydrants in System	1,349 Hydrants
Total Usage for Hydrant for Construction	9,000 Gallons
Water Main Repairs	2
Meter Change Outs	144

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Meters Installed	30	
Water Service Repairs	640	
Water Usage for Flushing	4,222,150	Gallons

SUMMARY OF DEPARTMENT CHARGES FOR FY11

Period Ending June 30, 2011

COMMITMENTS:

Water Rates	3,325,801	
Commercial Fire Sprinkler	19,470	
Commercial Fire Sprinkler Inspection	0	
Residential Fire Sprinkler	3,120	
TOTAL WATER RATES	3,348,391	\$3,348,391

Service Repair Charges	45,634	
TOTAL SERVICE REPAIR CHARGES	45,634	\$45,634

Seasonal Services	68,805	
TOTAL SEASONAL CHARGES	68,805	\$68,805

Transfer Fee Charges	14,743	
TOTAL TRANSFER CHARGES	14,743	\$14,743

Backflow Inspections	13,030	
TOTAL BACKFLOW INSPECTION CHARGES	13,030	\$13,030

New Services	20,150	
Renewal Services	4,760	
New Meter Charges	38,716	
Service Installation Supply Charges	63,616	
TOTAL NEW/RENEWAL SERVICES	127,242	\$127,242

Late Fees	28,332	
Other Miscellaneous Fees	2,652	
TOTAL FEES	30,984	\$30,984

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TOTAL COMMITMENTS	\$3,668,548
TOTAL ABATEMENTS/ADJUSTMENTS	\$135,125
TOTAL RECEIPTS	\$3,533,423

ANTICIPATED ACTIVITIES DURING 2012

- Planning for Lothrop Avenue tank rehab in FY14
- Begin pump station maintenance and rehabilitation
- Green sand treatment plant for station 10
- Water main replacement and upgrades

CONCLUSION

As Department Superintendent, I would like to thank the Water Department employees for their teamwork and dedication and the Board of Water Commissioners for their continued support and service to the community and myself throughout the year.

Craig Wiegand, Water Superintendent

Board of Water Commissioners
Donald Bates, Chairman
Allin Thompson, Vice Chairman
Danette Gonsalves, Clerk