

TOWN OF HARWICH
2009 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 2009.

WATER DEPARTMENT NEWS

Harwich Water Department Mourned the Loss of Assistant Superintendent Bruce Cahoon. Bruce S. Cahoon passed away on April 15, 2009. Bruce dedicated 53 years of service to the Town of Harwich Water Department. With such a small Department (14+) you can't help but become a family. After all, we spend as much time, if not more, at work. We all cared about Bruce, he was part of our work-family, he was our friend, and he was our knowledge base. His presence will remain with us all as most of the memories we shared will continue in our work environment. He taught many of us the waterworks industry and we admired his experience and dedication to the Water Department and the Town of Harwich as a whole. He will be missed and not forgotten.

WATER SYSTEM IMPROVEMENTS

New Water Supply Development: The Water Department continued their program of developing a new water supply at the well field located in the northwest corner of the Town, known as Site 10. This site has been selected by the Water Department as the preferred location for a new water supply source that will serve as a redundant source to the Town's existing well fields. The Water Department's goal is to receive approval to withdraw a minimum of 2 Million Gallons per Day (MGD) from the site, which includes the existing well that is already permitted to withdraw up to 0.97 MGD.

During 2007 the first of several DEP permitting steps, the *Request for Site Examination and Aquifer Performance Test Scope of Work* was approved by DEP. During 2008 our engineers, Environmental Partners Group, began the next phase of DEP's new water supply permitting program by conducting hydrologic testing that will provide an initial estimate of what the potential overall yield may be from additional water supply wells at the site and to determine the number of production wells that are likely needed to achieve that yield. These activities also include using the regional groundwater flow model developed by the United States Geological Service to assess whether increased withdrawals from this well field will affect ponds and rivers in the area. By the end of this project the Water Department will have developed a comprehensive implementation program and estimated budget for bringing the new water supply at Site 10 online.

NEW WATER TREATMENT PLANT AT THE DEPOT RD. WELL FIELD:

For the last six years we have experienced a progressive increase in the amount of iron and manganese in the water from our main well field on Chatham Road which supplies about 60% of our water. Although these compounds are not harmful to drink, they do affect the aesthetics of the water by discoloring it. Iron appears as a red color in the water, and manganese turns the

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water black. This condition can be overcome to a certain extent by blending the water with well water from our other wellfields, however the concentrations have increased to the point where this is no longer effective.

The Water Department is therefore making plans to construct a water treatment facility using a process known as Green Sand filtration that will remove the iron and manganese from the raw water and has a flow capacity of 6.5 Million Gallons per Day. The overall cost of the facility is projected to be \$4 Million, and last year we are requested a sum of \$500,000 for the facility design and prepare it for bidding. We have achieved 100% design and presently preparing to send out RFP's for bid and be present to Town Meeting for approval

WATER STORAGE TANKS:

The Town presently maintains three water storage tanks that have capacities ranging from 1 million gallons to 1.5 million gallons. During the summer of 2010 we plan to take the tank located on Route 39 off line for approximately three weeks to make some structural repairs and to repaint the tank interior and exterior. The estimated cost for these repairs is \$1,350,000. Our tank maintenance program will continue during the summer of 2010, when we plan to make the same type of repairs to the tank located on Lothrop Avenue.

WATER MAIN IMPROVEMENTS:

During 2009 the Water Department continued our water main upgrade and replacement program by replacing or relining the older water mains in our system. As part of this effort, we are closely coordinating our water main replacement program with the Highway Department by scheduling our construction activities to occur in the same streets that the Highway Department is resurfacing. This coordinated approach to our construction activities therefore results in a large savings to our rate payers.

THE DEPARTMENTS WEBSITE

Websites – 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 very technically driven and as we move to the future we strive to 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 how-to instructions that you should find to be very helpful. At harwichgis.com we have a variety of maps and have recently added the Town Assessors maps and an emergency shelters map. You will also 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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HYDRANTS AND VALVES:

The Department has replaced or installed twenty (20) hydrants this year. We have indentified all hydrants that are in need of replacement. Every hydrant in Harwich has been inspected and exercised this year, and in 2009 we fire flow tested 75% of them and will complete the remained of testing in 2010.

The Water Department also has an ongoing program for maintaining our valves throughout the system, and during 2009 we added an additional six (6) valves to our infrastructure. This will allow us to isolate smaller areas of Town during water emergencies and to provide even more discrete controls on our flushing program.

WATER SERVICES AND LOCK BOXES :

As of July 1, 2009, our department became the sole installer of new and renewal water services. Previously this work was done by authorized contractors. With qualified staff capable of performing the necessary work this was a successful transition. The other change that came in July 2009 is that we no longer are the holder of keys to seasonal properties that request turn on and turn offs. In an effort to assist our customers and their plumbers, we offered a free lockbox, installation and relocation of their key to the lockbox.

VOICE BROADCAST SYSTEM:

The Voice Broadcast system has become a useful tool in communicating water emergencies to our customers as well as other broadcasts to the general public. Please contact our office at 508-432-0304 x.0 to be sure you are signed up.

WATER METER UPGRADE PROGRAM:

Water Meter upgrades continue on schedule. This is an ongoing program, in 2009, 366 water meters replaced, of which 41 were new installation of meters for new and/or remodeled homes.

RADIO READ INSTALLATION PROGRAM

We continue to install radio reads throughout our customer base. In 2009 we installed 1,476 radio reads. To date, 31% of our customers now have radio reads installed leaving 69% to be done in the next few years. The radio read devices accompany the meter and encode, receive, and transmit the data by radio signal. Alleviating staff needed to manually read meters will allow more time for installing and renewing water services as well complete routine maintenance to the distribution system.

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CONSERVATION PROGRAMS:

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

Household Tips

Americans have access to an abundance of water much of the time, so the importance of clean water is often overlooked. For most of us, water use is a habit. We are accustomed to having water available at the twist of a faucet and usually do not think about how much water we use.

Average Daily Water Usage

Awareness is the first step in conservation, please be aware of how much water you use. 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 per year round.

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.

SERVICE TIGHT PROGRAM:

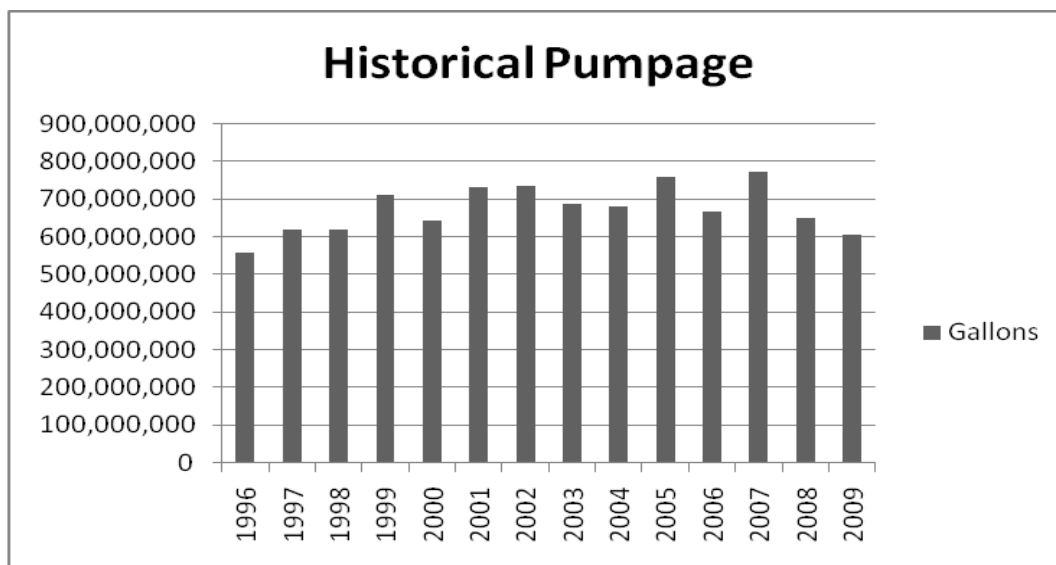
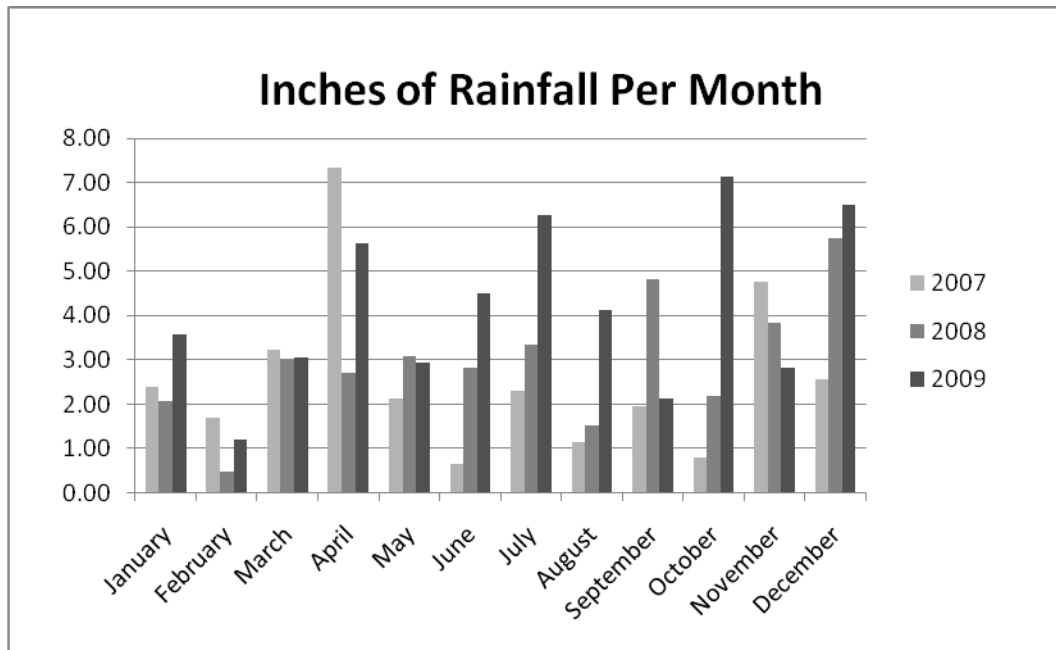
The *Service Tight Protection Plan*; is a water service insurance plan for homeowners and businesses. This plan is designed to protect participants from costly repair or replacement costs in the event of a water service break at their property. In order to notify Town residents and business owners of this new service, the department devised several marketing strategies including; detailed pamphlets, Channel 18 notices, newspapers advertisements, notices on water bills.

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ELECTRICAL OPERATIONS:

When our electrician has time we will hire him out to other departments in the Town. We are able to save other department's substantial savings. In most cases, our electrician can respond quicker than an outside contractor. Our electrician has worked for the Police Department, Fire Department, Schools, Golf Course, Library, Town Hall and Harbor Master.

The Town has so much electrical work that they should hire another electrician or allow us to hire another electrician. We could very easily keep two electricians busy throughout the year.



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WATER DEPARTMENT COMPARATIVE TABLE

Year	Rainfall Inches	Gallons Pumped	Maximum Day
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
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

ANNUAL STATISTICS OF SERVICES PERFORMED

1.	Frozen Water Meters	5
2.	Seasonal Turn On/Off's	1377
3.	Mark Outs	631
4.	Water Meter Change Outs	550
5.	Water Service Repairs	127
6.	Hydrant Repairs	6
7.	Hydrant Replacement	6
8.	Water Main Repairs	2
9.	Curb Stop Renewals	10
10.	Gooseneck Renewals	8

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11.	Property Transfers Requests	278	
12.	Water Meters Installed New/Replaced	456	
13.	ARB Repairs	35	
14.	Radio Reads Installed/Replaced	1476	
15.	New Water Service Installations	30	
16.	Renewal of Water Services	27	
17.	Hydrants Installed	22	
18.	Total Usage for Hydrant for Construction	40,692	Gallons
19.	Water Usage for Flushing	7,709,936	Gallons
20.	Installation of Yard Hydrants for Water Samples	8	
21.	Total Hydrants in System	1351	Hydrants

SUMMARY OF ACCOUNTS FOR FY09

Period Ending June 30, 2009

COMMITMENTS:

Water Rates	2,530,700	
Commercial Fire Sprinkler	18,590	
Commercial Fire Sprinkler Inspection	600	
Residential Fire Sprinkler	2,880	
TOTAL WATER RATES	2,552,770	\$2,552,770
Repair, Electrical & Misc Service Charges	22,920	
TOTAL SERVICES & MISC CHARGES		\$22,920
Seasonal Charges	67,960	
TOTAL SEASONAL CHARGES		\$67,960
Transfer Charges	23,760	
TOTAL TRANSFER CHARGES		\$23,760

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Service Tight Protection Plan	4,981	
TOTAL SERVICE TIGHT PLAN		\$4,981
New Services	17,751	
Renewal Services	3,730	
New Meter Charges	11,105	
TOTAL NEW/RENEWAL SERVICES		\$32,586
Late Fees	30,100	
Other Miscellaneous Fees	100	
TOTAL FEES		\$30,200
TOTAL COMMITMENTS		\$2,735,176
TOTAL ABATEMENTS/ADJUSTMENTS		\$27,595
TOTAL RECEIPTS		\$2,753,956

ANTICIPATED ACTIVITIES DURING 2010

- Repairs and repaint water storage tank
- Construction of the new water treatment plant
- 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

Danette Gonsalves, Vice-Chairman

George Cavanaugh, Clerk