

**ANNUAL REPORT & NEWSLETTER HIGHLIGHTS:**

**2007 PUBLIC WATER SYSTEM AWARD FOR EXCELLENCE**

Harwich Water Department was placed in the top 5% of public water systems in the Commonwealth. MADEP

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- **Service Tight Protection Plan**
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- **Updated forms and offerings on our website at [www.harwichwater.com](http://www.harwichwater.com)**
- **DEP and EPA have established new permit regulations and guidelines related to water withdrawals and usage that could have severe consequences to the HWD.**
- **Greensand filtration treatment facility planning**
- **Backflow device inspections and billing**
- **Channel 18—Tune in to “Liquid Assets” and Emergency Management information and updates**

**LEARN MORE BY VISITING:**  
[www.harwichwater.com](http://www.harwichwater.com)  
**And Other Useful Links:**  
[www.town.harwich.ma.us](http://www.town.harwich.ma.us)  
[www.capecodcommission.org](http://www.capecodcommission.org)  
[www.barnstablecountyhealth.org/index.htm](http://www.barnstablecountyhealth.org/index.htm)  
[www.epa.gov/OW](http://www.epa.gov/OW)  
[www.mass.gov/dep/water/drinking.htm](http://www.mass.gov/dep/water/drinking.htm)  
<http://water.usgs.gov/>  
[www.digsafe.com](http://www.digsafe.com)  
[www.bcwua.org](http://www.bcwua.org)  
[www.newwa.org](http://www.newwa.org)  
[www.awwa.org](http://www.awwa.org)  
**Check beach water sampling results (in season) at:**  
[www.barnstablecountyhealth.org/bsharwich.htm](http://www.barnstablecountyhealth.org/bsharwich.htm)

Harwich Water Department  
 196 Chatham Road  
 Harwich MA 02645  
 508-432-0304  
 Fax: 888-774-3557



Issue 12  
 2008 Report  
 PPWS ID #4126000

**2007 PUBLIC WATER SYSTEM AWARD FOR EXCELLENCE**

**OFFICE HOURS & CONTACTS**  
 Hours: 8:00 a.m.-4:30 p.m. (M-F)  
 Office: 508-432-0304  
 Fax: 888-774-3557  
 Email: [customerservice@harwichwater.com](mailto:customerservice@harwichwater.com)

**EMERGENCIES**  
 Evenings, Weekends & Holidays  
 Contact Harwich Police  
 508-430-7541

**BOARD OF WATER COMMISSIONERS**  
 Donald Bates, *Chairman*  
 George Cavanaugh, *Vice Chairman*  
 Danette Gonsalves, *Clerk*  
 Meetings: 8:15 am, 2nd and 3rd Tuesday of each month, unless otherwise posted.  
 Contact: [commissioners@harwichwater.com](mailto:commissioners@harwichwater.com)  
 Meeting Minutes: [http://www.harwichwater.com/about/meeting\\_minutes.html](http://www.harwichwater.com/about/meeting_minutes.html)  
**Public participation in our community's decisions affecting drinking water is always welcome.**

**DEPARTMENT CONTACTS**  
 Craig Wiegand, *Superintendent*  
 Neil Salzillo, *Treatment Foreman*  
 Steve Hicks, *Distribution Foreman*  
 Sandy Cummings, *Comptroller*  
 Wellesley Marsh, *Sr. Billing Admin.*  
 Kelly Springer, *Customer Svc. Mgr*

**FOR QUESTIONS OR ADDITIONAL INFORMATION REQUESTS, please contact**  
 Craig Wiegand, *Superintendent*  
 at 508-432-0304

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**2008 Annual Water Quality Report**

The Harwich Water Department (HWD) is pleased to present our 2008 annual Water Quality Report. This report provides our customers with water source information, monitoring and test results and much more!

It continues to be our goal to provide our 9,800+ water customers we serve with a safe and dependable supply of water. So much so that HWD often exceeds state and federal drinking water standards and in fact has won several awards, most recently “Public Water System Award for Excellence” in 2007.

In addition, you will also find a variety of Department news and helpful information for our customers. We hope that you will find this report useful and interesting. Please read this report carefully and share the information with those who may not have received this notice directly (for example, at your property for tenants and/or all businesses at your location. If you need extra copies, please contact us at 508-432-0304. You will also find this and past reports on our website at [www.harwichwater.com](http://www.harwichwater.com).

**DEPT. OF ENVIRONMENTAL PROTECTION PROPOSED REGULATORY AMENDMENTS**

The Massachusetts DEP and the Environmental Protection Agency (EPA) have established new permit regulations and guidelines related to water withdrawals and usage that could have severe consequences to the HWD, our business community and the citizens of Harwich.

DEP’s proposed revisions to their Water Management Act regulations, is to implement a statewide guideline that would eventually limit residential usage to 65 gallons per day (gpd) per capita, from current 85 gpd for Cape communities, but this would be gradually reduced over time. The consequence of this restriction is that the Town may need to restrict certain types of water usage, such as outside watering and washing your vehicles.

Recently, the United States Geological Service completed a study of our aquifer, the Monomoy Lens, and concluded that we are using only 4% of the available water for our water supply, and that the overwhelming majority of water in the aquifer is discharged to ponds, streams and the ocean. HWD is one of the tightest run systems on the Cape. It is for these reasons that HWD feels strongly that these types of restrictions are unwarranted.

It has been a very difficult challenge to debate these issues with DEP, and time is running short before these proposed regulations will be promulgated. We have contacted our legislators for additional support, however, because of the urgency of this issue we are asking for your help as well. We would like you to also contact our legislators (Sen. Robert O’Leary and Rep. Sarah Peake) for their assistance in this important matter.

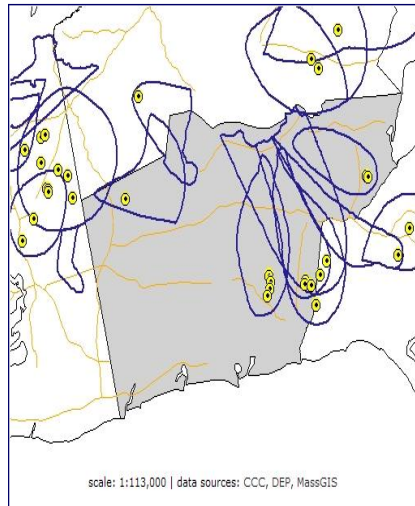


**Harwich Water Department**  
**196 Chatham Road**  
**Harwich MA 02645**  
 Phone: 508-432-0304  
 Fax: 888-774-3557  
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**harwichwater.com**



Mailing Address Line 1  
 Mailing Address Line 2  
 Mailing Address Line 3  
 Mailing Address Line 4  
 Mailing Address Line 5

**2008 Annual Water Quality Report & Newsletter**



## HARWICH WATER SYSTEM & SOURCE

The Town of Harwich's drinking water supply comes from 14 gravel packed wells. Our wellfields are located in South, East and North Harwich, which all draw water from the Monomoy Lens Aquifer (water-saturated soil is known as the aquifer). These wells pumped 649,958,341 million gallons in 2008. The sand and gravel act as a huge underground reservoir, which is continually replenished by rainfall and snowmelt.

After the water is pumped from the ground, it is treated with the chemicals Potassium Hydroxide (KOH) and Sodium Hypochlorite (Chlorine). KOH is added at very low concentrations to increase the pH of the water and reduce its natural corrosivity. High pH can stain plumbing fixtures and even degrade the drinking water quality by leaching copper and lead out of private service lines.

## MONOMOY LENS AQUIFER

The Monomoy Lens is the 2nd largest of the six mounds or cells of elevated groundwater that comprise the Cape Cod Aquifer. These lenses are approximately 300 feet thick and account for 200 million gallons of water flow per day (EOEA, 2004). All Cape towns but one, rely on the Cape Cod Aquifer for their drinking water supply.

Lenses can be thought of as mounds of groundwater bordered by marine water at the edge, bedrock on the bottom, and separated from each other by tidal rivers, such as Bass River, that cut across the Cape peninsula. Groundwater refers to subsurface water located beneath the water table, in soils and geologic formations that are fully saturated. Recharge to the Cape Cod Aquifer comes from precipitation and snow fall.

The Monomoy Lens boasts over 200 freshwater lakes and ponds, 20 streams and 150 miles of coastal shoreline. The inland surface water bodies are windows on the aquifer that reflect the intersection of low areas in the ground surface with the water table.

Groundwater typically discharges into a pond on one side and then pond water recharges the lens on the other side. Streams and rivers act as drains that skim groundwater off the surface of the water table. The large Monomoy ponds (Long, Seymour and Hinkleys) receive groundwater discharge from the lens, which in turn feed the Herring River so that groundwater ultimately discharges as the stream flows into Nantucket Sound. Where there is only coastal shoreline, groundwater discharges directly into marine water as fresh water seepage. Because of this interconnection, all uses of water, whether for drinking, swimming, boating, clamming, cranberry farming, or wetland habitat, are dependent upon maintaining the quality of the lens.

The Monomoy Lens supplies generally excellent drinking water from its porous sand and gravel deposits. The water is considered "soft" due to the lack of calcium and magnesium. The pH of the water is naturally low, which can cause blue staining on plumbing fixtures from copper piping. Municipal water supplies are treated to neutralize the pH. Naturally occurring iron and manganese can cause staining, odor and taste problems. Sodium chloride can be elevated in coastal areas due to salt spray or saltwater intrusion.

*"Harwich draws water from the Monomoy Lens, one of the six areas of elevated groundwater, each of which are named for their location; Sagamore, Monomoy, Nauset, Chequesset, Pamet and Pilgrim."*

Source Name	Source ID	Location of Source
Wells 1 thru 3	4126000-01G	Off Chatham Road
Well 2	4126000-02G	Off Chatham Road
Well 3	4126000-03G	Off Chatham Road
Main Station	4126000-04G	Off Chatham Road
Well 4 (offline)	4126000-05G	Off Chatham Road
Well 5	4126000-06G	Off Depot Road
Well 6	4126000-07G	Off Depot Road
Well 7	4126000-08G	Off Depot Road
Well 8	4126000-09G	Off Bay Road
Well 9	4126000-10G	Off Bay Road
Well 10	4126000-11G	Off North Westgate Rd
Well 11	4126000-12G	Off Pleasant Bay Road

**"Groundwater can stay polluted for several thousand years."**

### WHAT YOU CAN DO TO HELP?

- ◆ Eliminate the use of drain cleaners and septic tank cleaners.
- ◆ Use moderate amounts of low phosphate cleaners and detergents.
- ◆ Dispose of hazardous materials safely. Visit [www.town.brewster.ma.us/content/view/197/34/](http://www.town.brewster.ma.us/content/view/197/34/) for collection dates for Harwich residents.
- ◆ Report water violations.

For further drinking water protection tips, please visit our website at [www.harwichwater.com](http://www.harwichwater.com) and/or [www.mass.gov/dep/public/publications/consum01.htm](http://www.mass.gov/dep/public/publications/consum01.htm).

## Service Tight Protection Plan is now available

The Harwich Water Department will provide complete coverage for the repair and/or replacement of your leaking water service connection from the property line to your shut off valve in the basement for as little as \$68 per year.

As the owner of property, you are responsible for the repair and maintenance of your water service from the street into your home. Until a problem occurs, you may not realize that you could incur more than \$2,000 in repairs.

Most homeowner's insurance policies do not cover the cost of repairing or replacing water service lines and, even if it did, there's typically a large deductible that must be paid first. Now there is a simple way to avoid costly repairs in your water service line. The Harwich Water Department offers a Service-Tight Protection Plan which would cover the costs of repairs to your water line in the event of a sudden leak.

**Enrollment:** Enrolling in the Service-Tight plan is easy. The plan costs \$68 per year for water lines that are up to 2" in diameter. Please call for a price quote for any line over 2". Please call us at 508-432-0304 to setup your inspection so that we can begin the process of enrollment.

Once your water service is accepted after inspection, and you become a member of Service Tight plan, the annual fee will be prorated to the nearest billing period within two weeks of the inspection of the water service, and then the full \$68 will be added to the Spring/Fall water bill (whichever is closest to inspection/acceptance date) and will be billed annually thereafter.

**Coverage:** The plan covers all parts, materials, customer shut off (cellar) valve and labor to repair, or replace, the water service line in the event of an emergency. For those customers who have outside meter pits, coverage includes the meter pit, meter pit cover and meter pit valves. The Harwich Water Department (here after referred to as "Harwich Water") at its sole discretion, shall make the determination between repairing or replacing any covered part found to be damaged or defective. Any covered parts replaced under the plan will become the sole property of Harwich Water.



*Guaranteed peace of mind for as little as \$68 per year!*

Coverage includes excavation, as required, in the area of repair or replacement, and also includes the cost of water service shut off/ turn on by Harwich Water and repaving of paved area and restoration (including filling, loaming and seeding) of non-paved area disturbed by excavation. Such restoration does not include replacement of plantings, shrubs or trees placed in areas requiring restoration, nor is Harwich

Water responsible for the cost of replacing such plantings, shrubs or trees.

**Exclusions:** The Service-Tight plan does not include any parts not specifically identified as covered. Items such as pressure reducing valves, booster pumps, lawn and/or fire sprinkler systems, etc. are not included in the coverage. The Service-Tight plan does not cover repairs of any leaks inside the premises beyond the customer shut off (cellar or basement) valve.

You may view our full brochure of this plan by visiting our website at [http://www.harwichwater.com/forms/documents/ServiceTightPlanBrochure\\_000.pdf](http://www.harwichwater.com/forms/documents/ServiceTightPlanBrochure_000.pdf).

## Harwich Water Department will be the contractor for new and renewal water service installations

In the past, the Water Department has provided residents with a list of contractors approved by the Department for new or renewal water installation. We are proud to announce that as of July 1, 2009, our Department will be providing the full service.

## Backflow Device Inspections and Inspection Billing

Under the provisions of the Commonwealth of Massachusetts Drinking Water Regulations 310 CMR 22.22 S 12F, backflow devices must be inspected once or twice per year depending on the device type at the property. Devices will now be tested by technicians from our acting representative Sarian Company, Inc. You will be contacted by Sarian for a scheduled date and time. Customers with backflow devices have been notified of this change as well as the implementation of our billing for these inspections, effective May 15, 2009. The backflow test fee is \$65.00 per device, per inspection. If you have any questions, please contact our office.

*A backflow prevention device is used to protect water supplies from contamination or pollution. Many types of backflow prevention devices also have test cocks so that they can be tested examined to ensure that they are functioning properly.*

# Harwich Water News

## Harwich Water Department Mourns the Loss of Assistant Superintendent Bruce Cahoon

Bruce S. Cahoon passed away on April 15, 2009. The Board of Water Commissioners, Water Department staff and the Town of Harwich express their condolences to his family and friends.

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.



**Bruce Cahoon**  
1937—2009

Many of your common questions can be answered any time of day by visiting our website at [www.harwichwater.com](http://www.harwichwater.com).



## “Liquid Assets” on Channel 18

Watch for “Liquid Assets” on the Community Channel 18. This wonderful 90-minute documentary tells the story of essential infrastructure systems; water, wastewater and stormwater, history, engineering challenges and political and economic realities.

## Our Voice Broadcast System is up and running. Don't miss out, sign up today!

If you would like to receive voice broadcast notifications so you are notified in the event of local disruptions, such as water main breaks, disruption in water service, extreme weather conditions, etc., please provide us with the following information: **\*Required Information**

1. **\*Name**, first and last and/or business name
2. **\*Harwich Address** local resident/business address (including unit/apt)
3. **\*Voice Broadcast Phone** for receiving voice broadcast messages any time of year (if seasonal, a cell phone works best).
4. **Secondary Phone** for our records, this won't be used for broadcast messages at this time.
5. **Email Address**, please print clearly. We may email you announcements, updates, etc. We hope to offer Ebill in the future.

Please provide the above required information by:

### Web Link:

[http://www.harwichwater.com/forms/voice\\_broadcast\\_system.php](http://www.harwichwater.com/forms/voice_broadcast_system.php)

Phone: 508-432-0304

Fax: 888-774-3557

Email: [customerservice@harwichwater.com](mailto:customerservice@harwichwater.com)

## Green Sand Filtration Treatment Facility Planning

For the last six years the Water Department has 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 water black. This condition can be overcome to a certain extent by blending the water with well water from our other well fields, 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 4 Million Gallons per Day. The overall cost of the facility is projected to be \$6 Million, and this year we are requesting a sum of \$500,000 that will allow us to complete the facility design and prepare it for bidding. Should the project be approved by Town Meeting, the design would be initiated and we expect that the project will be constructed and operational before the end of summer 2011.



## REGULATIONS AND LIMITS—DEP, EPA, FDA, DPH

In order to ensure that tap water is safe to drink, the Department of Environmental Protection (DEP) and U.S. Environmental Protection Agency (EPA) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) and Massachusetts Department of Public Health (DPH) regulations establish limits for contaminants in bottled water. All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791) or by visiting their general website at <http://epa.gov>.

**SOME PEOPLE MAY BE MORE VULNERABLE TO CONTAMINANTS IN DRINKING WATER than the general population.** Immune-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and some infants can be particularly at risk for infections. These people should seek advice about drinking water from their health agents. EPA/Centers for Disease Control and Prevention (CDC) guidelines on lowering the risk of infection by microbial contaminants are also available from the Safe Drinking Water Hotline (800-426-4791).

## SOURCE WATER ASSESSMENT PROGRAM (SWAP)

The Department of Environmental Protection (DEP) has prepared a Source Water Assessment Program (SWAP) Report for the water supply sources serving the Harwich water system. The SWAP Report assesses the susceptibility of public water supplies. There exist a number of land uses and activities that are potential sources of contamination. The SWAP Report notes the following key issues for our sources; Inappropriate activities in Zone I areas, Residential land uses and activities within Zone IIs, Comprehensive wellhead protection planning for Zone IIs, Storm water pollution within Zone IIs, Transmission line right-of-way within Zone IIs, transportation corridor within Zone IIs. If you'd like to obtain a full copy of this report, please contact our office.

## DRINKING WATER CONTAMINANTS AND CONTAMINANT SOURCES

The quality of drinking water is a subject that is frequently discussed, but more often misunderstood. Just a few years ago we seldom questioned the water we drank. In the past few years technology has given us the ability to measure small amounts of contaminants. Along with technology comes public awareness and more Federal and State regulations. Even with today's technology some people still question the safety of their public water supply and turn to alternative sources which may have less stringent testing requirements for drinking water. Sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals, and in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

*“One drip a second can waste 2,000 gallons a year.”*

### LEAK DETECTION

**STEP 1:** Read the water meter in the evening after all water usage for that day is complete and then again first thing in the morning. If there is any change in the meter reading, this indicates a leak.

**STEP 2:** Check all toilets for leaks by putting food coloring into the back of each toilet tank last thing in the evening before going to sleep. If any coloring appears in the bowl the following morning, this may indicate a leak. Call your plumber for needed repairs. Smaller repairs may be made by the homeowner.

**STEP 3:** If your toilet doesn't indicate a leak, please check all faucets.

**STEP 4:** If you have underground water lines that run to outbuildings or distant hose bibs, shut them off and try to isolate those fixtures then follow STEP 1.

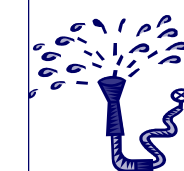
We will be glad to assist you, permitting that personnel are available. Contact our office for further information.

### SWAP REPORT

The complete SWAP report is available at the Water Department and online at <http://www.mass.gov/dep/water/drinking/seroreps.htm> or for more information, call the Harwich Water Department at 508-432-0304.

### WATER CONSERVATION

◆ Keep grass at least 2" high to shade roots and hold moisture.



◆ Aerate lawns regularly and use mulch around plants to reduce evaporation.

◆ Turf only needs 1" of water per week.

◆ Visit [www.epa.gov/safewater/publicoutreach/index.html](http://www.epa.gov/safewater/publicoutreach/index.html) for more water conservation tips.



# WATER QUALITY TEST RESULTS

## TYPES OF CONTAMINANTS FOUND IN DRINKING WATER

Sources of drinking water (both tap and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals, and in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminant sources that may be present in source water include:

**Microbial contaminants**—such as viruses and bacteria, which may come from sewage treatment facilities, septic systems, agricultural livestock operations, and wildlife.

**Inorganic contaminants**—such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial, or domestic wastewater discharges, oil and gas production, mining, or farming.

**Pesticides and herbicides**—which may come from a variety of sources such as agricultural, urban stormwater.

**Organic chemical contaminants**—including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

**Radioactive contaminants**—which can be naturally occurring or be the result of oil and gas production and mining activities.



**HARWICH HAZARDOUS PRODUCTS COLLECTION**  
Harwich Transfer Station  
209 Queen Anne Road  
**May 13, June 10, July 8, August 12, September 9 and October 14, 2009.**

### INORGANIC CONTAMINANTS

Regulated Contaminants	Date Tested	Unit	MCL	MCLG	Highest Detected Level	Range Lowest to Highest	Major Sources	Violation
Nitrate as N	1/15/08	ppm	10	10	2.5	ND – 2.30	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits	No
Sodium	9/9/08	ppm	No Standard	28 MCLG	21.167	10.000 – 28.00	Road Salt	No

### RADIOACTIVE CONTAMINANTS

Regulated Contaminants	Date Tested	Unit	MCL	MCLG	Highest Detected Level	Range Lowest to Highest	Major Sources	Violation
Gross Alpha Activity	03/2003	pCi/L	15	---	1.6	1.6 – 1.6	Erosion of natural deposits	No
Radium -226	04/2005 NEXT SAMPLE 2012	pCi/L	5	---	0.1	0.1 – 0.1	Erosion of natural deposits	No
Radium-228	04/2005 NEXT SAMPLE 2012	pCi/L	5	---	0.4	0.4 – 0.4	Erosion of natural deposits	No

### MICROBIOLOGICAL CONTAMINANTS

Regulated Contaminants	Date Tested	Unit	MCL	MCLG	Highest Detected Level	Range Lowest to Highest	Major Sources	Violation
Total Coliform Bacteria	10/14/2008	#/100 mL	5% or No.<40	---	.002	0 – 1	Naturally present in environment	No

### TABLE DEFINITIONS

**90th Percentile** - Out of every 10 homes sampled, 9 were at or below this level.

**AL = Action Level** - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

**MCL = Maximum Contaminant Level** - The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MGLGs as feasible using the best available treatment technology.

**MCLG = Maximum Contaminant Level Goal** - The level of contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

**MRDL = Maximum Residual Disinfectant Level** - The highest level of a disinfectant (chlorine, chloramines, chlorine dioxide) allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

**MRDLG = Maximum Residual Disinfectant Level Goal** - The level of drinking water disinfectant (chlorine, chloramines, chlorine dioxide) below which there is no known or expected risk to health. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.

**NTU = Nephelometric Turbidity Unit** - A measure of the clarity (or cloudiness) of water.

**ORSG = Massachusetts Office of Research and Standards Guidelines** - is the concentration of a chemical in drinking water, at or below which, adverse health effects are unlikely to occur after chronic (lifetime) exposure, with a margin of safety. If exceeded, it serves as an indicator of the potential need for further action.

**SMCL = Secondary Maximum Contaminant Level** - These standards are developed to protect the aesthetic qualities of drinking water and are not health based.

**TT = Treatment Technique** - a required process intended to reduce the level of a contaminant in drinking water.

**Iron and Manganese Test Results:** While some of our wells exceeded iron and manganese levels, the limits were established for aesthetic reasons and **not** for health concerns. Levels above the recommended limits are **not** harmful to drink, they have been known to cause discoloration, taste and odor problems.

**Lead and Copper Testing:** Because of our treatment success with lead and copper, our Department is required to test for these elements every three years.

### DISINFECTION CONTAMINANTS

Regulated Contaminants	Date Tested	Unit	MCL	MCLG	Highest Detected Level	Range Lowest to Highest	Major Sources	Violation
Haloacetic Acids [HAA5]		ppb	60	NA			By-product of drinking water chlorination	No
THHMs [Total Trihalomethanes]	8/13/08	ppb	80	NA	5.70	ND – 5.70	By-product of drinking water chlorination	No

### UNREGULATED CONTAMINANTS

Contaminant	Date Tested	Unit	SMLC	ORSG	Average Detected Level	Range Lowest to Highest	Sources	Violation
Chloride	10/7/08	ppm	250	250	19.400	10.000 – 30.00	Chlorides are leached from various rocks into soil and water by weathering.	No
Chloroform	1/24/08	ppb	---	---	1.4	.6 – 4.00	Trihalomethane; by-product of drinking water chlorination.	No
MTBE Methyl Tertiary Butyl Ether	1/14/08	ppb	20 – 40	70	0.88	ND – 1.00	Fuel additive; leads and spills from gasoline storage tanks.	No
Sulfate	10/6/08	ppm	250	250	7.280	5.000 – 8.70	Natural sources.	No

Contaminant	Date Tested	Unit	MRDL	MRDLG	Highest Detected Level	Range Lowest to Highest	Sources	Violation
Chlorine (Free)	06/24/08	ppm			0.51	0.010 – 0.30	Water additive used to control microbes	No

### SECONDARY CONTAMINANTS

Secondary Contaminant	Date Tested	Unit	SMLC	SMCLG	Highest Detected Level	Range Lowest to Highest	Major Sources	Violation
Iron (Total)	10/6/08	ppm	300 CCR MCL	0.3 MCLG	0.162	ND – 0.58	Naturally present in the environment	<b>Yes</b>
Manganese (Total)	10/6/08	ppm	50	0.05 MCLG	0.038	ND – 0.19	Naturally present in the environment	<b>Yes</b>

### LEAD AND COPPER

Contaminant	Date Tested	90th Percentile	# of Sites Exceeded Action Level	# of Sites Sampled	MCL (Action Level)	MCLG	Major Sources	Violation
Lead (ppb)	7/6, 7/13, 7/20 & 8/6/08	0.01	2	63	15	0	Corrosion of household plumbing; Erosion of natural deposits	No
Copper (ppm)	7/6, 7/13, 7/20 & 8/6/08	01.1	5	54	1.3	1.3	Corrosion of household plumbing; Erosion of natural deposits and leaching of wood preservatives	No

### TABLE MEASURES

**ppm** = parts per million, or milligrams per liter (mg/l)  
**ppb** = parts per billion, or micrograms per liter (ug/l)  
**pCi/l** = picocuries per liter (a measure of radioactivity)  
**ND** = Not Detected  
**---** = Not Applicable

Based upon successful adoption of land use controls and past sampling results the Harwich wd has successfully obtained a waiver for monitoring for Synthetic Organic Compounds (SOC's)

Data present in this report is from the most recent testing done in accordance with regulations. Monitoring of some contaminants is less than once per year. The last dates these contaminants were tested for are in the table.