

# TOWN OF SHARON

## WATER QUALITY REPORT FOR 2009

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

### To Our Customers

I am pleased to present you with this year's Annual Water Quality Report, providing you with information on where your water comes from, what we are doing to modernize our system, what is found in the water, what we do to ensure high-quality water for now and in the future, and tips on efficient use of water.

Providing high-quality drinking water for public health is the single most important aspect of our work. However, we, as your water supplier, continue to be called upon to identify and reduce excessive water use. The Town of Sharon Water Department has long been an advocate of wise water use and has provided outreach and incentives to assist you in becoming more water-efficient. A continued grant has allowed us to coordinate our efforts with the Neponset River Watershed Association in order to further our education outreach with Sharon schools and other public groups.

The present mandatory summertime outdoor water use restrictions in place to comply with State residential water use restrictions, aggressive leak detection and repair and the appliance rebate program have together reduced residential consumption significantly over the past few years. For those of you making wise water choices a priority, we thank you for your efforts, and for those of you not yet practicing water conservation, now is a great time to start.

As many of you know, the Water Department has completed the ambitious meter replacement project which allows the Department to streamline the meter reading and billing process and identify leaks more efficiently.

I hope you take the opportunity to read through the information on the following pages. As always, we appreciate your feedback and input, so please contact us if you have any questions or comments regarding this Report of our water system.

Respectfully,

Eric R. Hooper, P.E.  
Superintendent of Public Works  
Town of Sharon

### 2009 PROJECT HIGHLIGHTS

The water meter replacement project was completed allowing for a first ever total town read during the first weeks of January. In the months following that read, the Water Department has been able to read all the meters in the entire Town monthly in an effort to better understand residential use patterns to plan for the future.

The remaining section of the Norwood Street water main was installed, completing the distribution network to the north-western part of Town.

For the second year in a row the Sharon Water Department was recognized by the State for outstanding performance and achievement in water conservation, one of only 20 public water suppliers recognized during 2009 for overall achievement and the only public water supplier recognized two years in a row.

## SHARON'S WATER SYSTEM

Our water system includes six groundwater supply wells and pumping stations, four water storage tanks, and approximately 115 miles of water main. Our groundwater sources are of good quality and require minimal treatment. Our water is disinfected and treated for corrosion control to reduce the amounts of lead and copper in our water. Fluoride is added to our water to promote strong teeth and prevent tooth decay/cavities.

## POTENTIAL SOURCES OF CONTAMINATION

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. Contaminants that may be present in source water include:

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

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

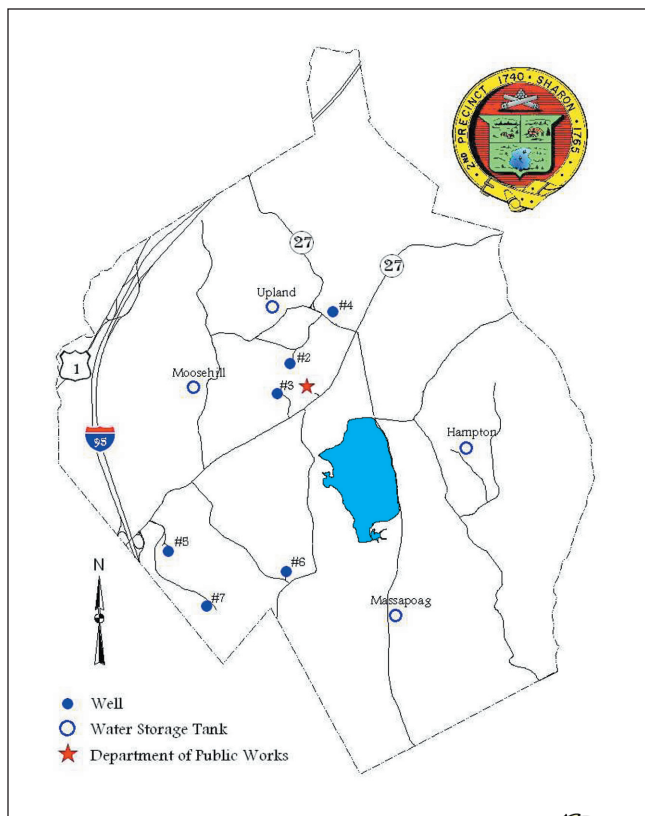
**Pesticides and herbicides** may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.

**Organic chemical contaminants** include synthetic and volatile organic chemicals that are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.

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

## QUALITY CONTROL

To ensure that tap water is safe to drink, the Department and Environmental Protection Agency (EPA) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contamination. The presence of contaminants does not necessarily indicate that water poses a health risk. Food and Drug Administration (FDA) and the Massachusetts Department of Public Health regulations establish limits for contaminants in bottled water that must provide the same protection for public health. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (1-800-426-4791.)



## HELP TO PROTECT OUR WATER SUPPLY!



The Department of Environmental Protection (DEP) has prepared a Source Water Assessment Program (SWAP) Report for our water supply sources.

The SWAP report assesses the susceptibility of public water supplies. A copy of the SWAP report is available at the Department of Public Works office. Our SWAP report has indicated that our groundwater is highly susceptible to contamination from residential activities adjacent to the wells; residential land uses; accidental spills from local roadways, Route 95 and the railroad; hazardous materials storage; existing contamination sites; and agricultural activities.

As a consumer, you have an impact on the quality of our water supply sources, and therefore, the quality of the water you drink. The land around our groundwater wells is mainly forested and residential with lesser amounts zoned as commercial. When rain falls or snow melts, the seemingly small amounts of chemicals and other pollutants around your property may be transferred by groundwater or overland flows to the wells.

## DRINKING WATER AND PEOPLE WITH WEAKENED IMMUNE SYSTEMS

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-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 people, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/Center for Disease Control and Prevention (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the EPA's Safe Drinking Water Hotline at 1-800-426-4791.

## CROSS CONNECTIONS

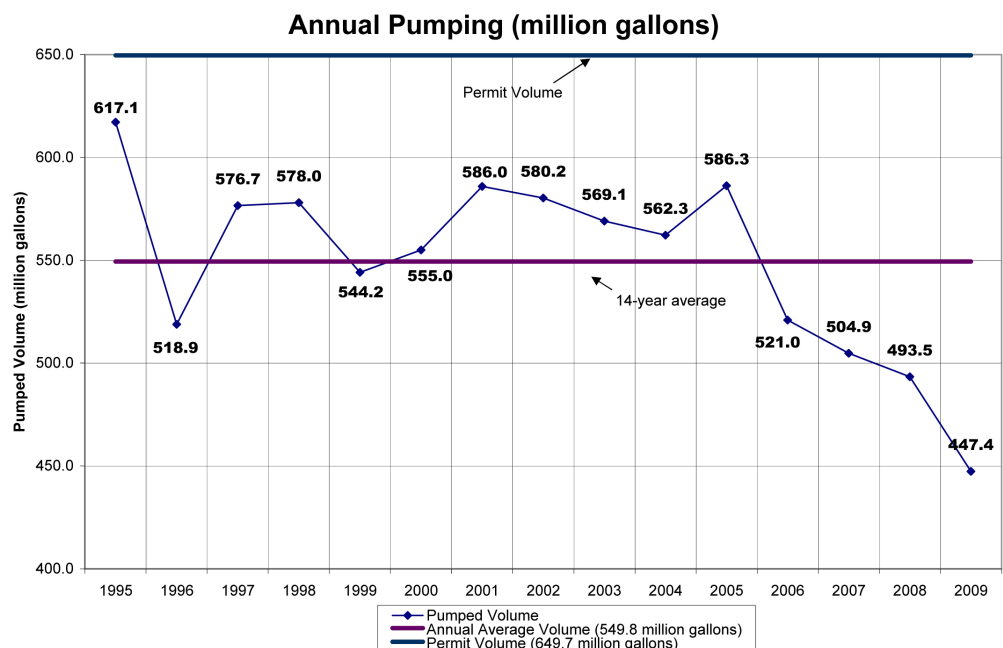
A cross connection is a connection between a drinking water pipe and a polluted source. The pollution can come from your own home. For instance, you're going to spray fertilizer on your lawn. You hook up your hose to the sprayer that contains the fertilizer. If the water pressure drops (say because of fire hydrant use in the town) when the hose is connected to the fertilizer, the fertilizer may be sucked back into the drinking water pipes through the hose. Using an attachment on your hose called a backflow prevention device can prevent this problem. The Sharon Water Department

recommends the installation of backflow prevention devices, such as a low cost hose bib vacuum breaker, for all inside and outside hose connections. You can purchase this at a hardware store or plumbing supply store. This is a great way for you to help protect the water in your home as well as the drinking water system in your town. For additional information on cross connections and on the status of your water system's cross connection program, please contact Eric Hooper at the Sharon Department of Public Works at 781-784-1525.

## WATER USAGE

The Annual Pumping graph shows the total volume of water pumped from the Town's six groundwater supply wells for each year from 1995 through 2009. The six wells are used to supply drinking water to meet the demands of the Town's water customers. The Town is permitted by the State to pump no more than 650 million gallons of water each year. During the fourteen year period, the annual average volume of water pumped was 550 million gallons, approximately 100 million gallons below the permitted volume. From 1995 through 2000, the pumped volume fluctuated above and below the fourteen year average. However, since 2001, due to vigilant efforts by the Water Department and our customers, the pumped volume has steadily declined from 586 million gallons to 447 million gallons in 2009. The only exception to the consistent decline occurred in 2005 due to a water main leak that was discovered in a culvert.

Efficient water use helps to conserve our water supplies. Find out about your own water usage. Divide the number of gallons you consumed on your water bill by the number of days since your prior bill. Then divide by the number of people living in your home. Your gallons per capita daily (gpcd) water use should not exceed 65 gpcd. Lower use means lower water bills.





**WATER QUALITY SUMMARY** Listed below are 15 contaminants detected in Sharon's drinking water in 2009. Not listed are over 100 other contaminants for which we tested but did not detect. The complete list of contaminants that we test for is available at the Department of Public Works office and at the Sharon Public Library.

### SAMPLES COLLECTED FROM OUR WATER SUPPLY

Substance (Contaminant)	Units	Highest Level Detected	Range of Detection	Highest Level Allowed (EPA's MCLs)	Ideal Goals (EPA's MCLGs)	Sources of Contaminant
PRIMARY CHEMICALS						
Fluoride	ppm	1.02	0.75 - 1.02	4	4	Water additive which promotes strong teeth; Erosion of natural deposits
Nitrate	ppm	4.95	0.66 - 4.95	10	10	Runoff from fertilizer use; Leaching from Septic Tanks
Perchlorate <sup>1,2</sup>	ppb	0.34	0.06 - 0.34	2.0	N/A	Oxygen additive in solid fuel propellant for rockets, missiles, and fireworks
SECONDARY CHEMICALS						
Sulfate <sup>1,3</sup>	ppm	15.4	ND - 15.4	NR	NR	Naturally present in the environment
UNREGULATED CHEMICALS						
Bromodichloromethane <sup>4</sup>	ppb	1.9	ND - 1.9	NR	NR	By-product of drinking water chlorination
Bromoform <sup>4</sup>	ppb	1.3	ND - 1.3	NR	NR	By-product of drinking water chlorination
Chloroform <sup>4</sup>	ppb	0.8	ND - 0.8	NR	NR	By-product of drinking water chlorination
Chlorodibromomethane <sup>4</sup>	ppb	3.0	ND - 3.0	NR	NR	By-product of drinking water chlorination
Sodium <sup>4,5</sup>	ppm	65.8	14.2 - 65.8	NR	NR	Naturally present in the environment
Turbidity <sup>1,4,6</sup>	NTU	1.0	ND - 1.0	NR	NR	Soil runoff; suspended material in water

### SAMPLES COLLECTED FROM YOUR FAUCETS

Substance (Contaminant)	Units	Highest Running Annual Average	Range of Detection	Highest Level Allowed (EPA's MCLs)	Ideal Goals (EPA's MCLGs)	Sources of Contaminant
PRIMARY CHEMICALS						
Total Trihalomethanes	ppb	7.8	ND - 13.0	80	N/A	By-product of drinking water chlorination
Haloacetic Acids	ppb	1.6	ND - 5.2	60	N/A	By-product of drinking water chlorination
Chlorine	ppm	0.19	ND - 0.60	4 (MRDL)	4 (MRDLG)	Water additive used to control microbes
	Units	90th Percentile	Range of Detection	Action Level (EPA's MCLs)	Ideal Goals (EPA's MCLGs)	
Copper <sup>1,7</sup> (2 samples exceeded the action level)	ppm	0.90	0.03 - 1.88	1.3	1.3	Corrosion of household plumbing systems
Lead <sup>1,7</sup> (0 samples exceeded the action level)	ppb	7.0	ND - 12	15	0	Corrosion of household plumbing systems

## DEFINITIONS

**Maximum contaminant level goal (MCLG)** – The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

**Maximum contaminant level (MCL)** – The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

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

**Maximum Residual Disinfection Level Goal (MRDLG)** – The level of drinking water disinfectant below which there is no known expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

**Action Level** – The concentration of a contaminant, which, if exceeded, triggers a treatment or other requirements that a water system must follow. The action level for lead and copper is the 90<sup>th</sup> percentile of all samples taken at one time.

**ppm** – One part per million; one part per million is equivalent to \$1 in \$1,000,000.

**ppb** – One part per billion; one part per billion is equivalent to \$1 in \$1,000,000,000.

**ND** – Substance not detected in the sample.

**NR** – Not regulated.

**pCi/L** – Picocuries per liter is a measure of the radioactivity in water.

**NTU** – Nephelometric turbidity units.

**mfl** – Million fibers per liter.

### Notes:

<sup>1</sup> The state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old. Samples for lead and copper were collected in September 2008. Samples for perchlorate were collected in 2008. Samples for sulfate and turbidity were collected in December 2008.

<sup>2</sup> Massachusetts has set a maximum contaminant level of 2.0 ppb for perchlorate.

<sup>3</sup> Massachusetts has set a secondary maximum contaminant level of 250 ppm for sulfate. This level was established to protect the aesthetic quality of drinking water and is not health based.

<sup>4</sup> Unregulated contaminants are those for which the EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining their occurrence in drinking water and whether future regulations are warranted.

<sup>5</sup> The Massachusetts Office of Research and Standards has set a guideline concentration of 20 ppm for sodium.

<sup>6</sup> Turbidity is a measure of cloudiness of the water. We monitor it because it is a good indicator of water quality.

<sup>7</sup> Lead and copper compliance is based on the 90th percentile value, which is the highest level found in 9 out of every 10 homes sampled. This number is compared to the action level for each contaminant. The 90th percentile for lead and copper did not exceed the action level.

## LEAD

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The Sharon Department of Public Works is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

## SHARON WATER CONSERVATION PROGRAM

The Water Department continues to partner with the Neponset River Watershed Association (NepRWA) and the EPA WaterSense Program to run a Water Conservation Program in Sharon.

Through educational programs in the schools, rebates, giveaways, and town events, the program has inspired many to become more water efficient. This saves money and energy, improves our ecosystem, and maintains our water independence.



### WATER EFFICIENT APPLIANCES

Water efficient shower heads, faucet aerators, and leak detection tablets are available to Sharon residents - free of charge. Call the Water Department for more info.  
**781-784-1525**



### RAIN BARRELS



In May, the Water Department, in conjunction with SkyJuice New England, sold sixty rain barrels to Sharon residents.

Collecting water in a rain barrel is an excellent way to **conserve water** and reduce the amount of energy required to pump and treat water from town wells.

A rain barrel **collects rain water**

**run-off** from a roof and stores it for use during dry weather. Harvested rainwater can be used to water plants or to wash lawn furniture, garden tools, cars, and toys.

A one-inch rainfall on a 1,000 square foot roof yields **562 gallons** of water. Runoff from a **1/4 inch** of rain fall will easily fill a 60 gallon barrel.

### SAVE THE DATE!

**SATURDAY, SEPTEMBER 25, 2010  
SHARON ENERGY/WATER FAIR**

**Sharon High School**

Water efficient appliances, irrigation specialists, alternative energy, home efficiency experts, hybrid vehicles, lectures, activities for kids...

For more information: [www.sharonwater.com](http://www.sharonwater.com)



### IN THE SCHOOLS

Third graders across the school district were visited in the spring by Sharon Water Conservation Coordinator, Nancy Fyler and Elementary Science Curriculum Coordinator, Varla Smith. The team spent three days in each classroom discussing water resources, infrastructure, conservation, and pollution. The program culminated in a presentation to the School Committee of student work that included poetry, posters, murals, and animation.



Sharon High School art students participated in a water conservation "street sign" project, which included creating water conservation slogans and original artwork, and designing signs. Ten students took part in the project and their "street signs" can be seen posted around the streets of Sharon.



### CONSERVATION AWARD

The Sharon Water Department was one of thirty four water suppliers from across the state that was honored by the Commonwealth of Massachusetts Department of Environmental Protection for overall performance, exemplary water quality, and reporting.



Sharon was specifically singled out as one of three public water suppliers to receive an award for Outstanding Performance and Achievement in promoting Water Conservation. The Sharon Water Department has now won this award two years in a row.

## TOILET AND CLOTHES WASHER REBATES



### HIGH EFFICIENCY TOILET (HET) REBATE

A rebate equal to **half the cost** of the toilet, up to **\$200**, not including installation or inspection, is offered for the purchase of High Efficiency Toilets (toilets that use 1.28 gallons per flush or less).

For a list of High Efficiency Toilets, go to:

[http://www.epa.gov/watersense/pp/find\\_het.htm](http://www.epa.gov/watersense/pp/find_het.htm)

**PLEASE NOTE:** Only High Efficiency Toilets on the state approved list are eligible for a rebate. Go to: [http://license.reg.state.ma.us/pubLic/pl\\_products/pb\\_pre\\_form.asp](http://license.reg.state.ma.us/pubLic/pl_products/pb_pre_form.asp)

**To qualify for a rebate, a High Efficiency Toilet must:**

- use **1.28** gallons or less per flush
- be installed by a plumber licensed in Massachusetts
- be on the list of toilets approved by the state
- be inspected by the Sharon Plumbing Inspector following installation
- LIMIT: 2 HET rebates per house

**Please include all of the following information with your HET rebate application:**

- Name, address, phone number
- Copy of bill of sale
- Model number and brand name of the toilet
- Copy of the plumbing permit
- Proof of inspection by the Sharon Plumbing Inspector

All toilet rebate applications must be made within **90 days** of inspection. Toilet rebates are subject to availability of funds on a first come, first served basis. Rebates are issued in the form of a check. Please allow **4-5 weeks** for processing.

### CLOTHES WASHER REBATE

A rebate of **\$200** is offered for clothes washers of **3.0** cubic feet capacity or greater, or **\$150** for clothes washers of less than **3.0** cubic feet capacity.

**To qualify for a rebate, a clothes washer must have an EnergyStar Water Factor of 6.0 or less.**

For a list of EnergyStar clothes washers, go to:

[http://www.energystar.gov/index.cfm?c=clotheswash.pr\\_clothes\\_washers](http://www.energystar.gov/index.cfm?c=clotheswash.pr_clothes_washers)

**PLEASE NOTE:** Some of the clothes washers on the EnergyStar list have a water factor **greater than 6.0** and **do not qualify for a rebate**. Contact the Sharon Water Department in advance of purchase to confirm rebate eligibility.

**Please include all of the following information with your clothes washer application:**

- Name, address, phone number
- Copy of bill of sale
- Model number and brand name of the clothes washer
- Date the clothes washer was delivered

All clothes washer rebate applications must be made within **90 days** of purchase. Clothes washer rebates are subject to availability of funds on a first come, first served basis. Rebates are issued in the form of a check. Please allow **4-5 weeks** for processing.



### IMPORTANT - PLEASE NOTE:

*Rebates are intended to encourage replacement of less efficient toilets and clothes washers. Toilets or clothes washers installed in newly constructed buildings are not eligible for rebates.*

You may apply for a rebate in person at the DPW, or you may mail your rebate information to:

Sharon Water Department, Box 517, 217R South Main St., Sharon, MA, 02067

Rebates are issued in the form of a check. Allow **4-5 weeks** for processing. Call **781-784-1525** with questions.



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