2007 Annual Drinking Water Quality Report
For
Town of Holden Water Department
Holden, Massachusetts
DEP PWSID # 2134000

This report is a snapshot of drinking water quality that we provided last year in 2007. Included are details about where your water comes from, what it contains, and how it compares to state and federal standards. We are committed to providing you with information because informed customers are our best allies.

I. PUBLIC WATER SYSTEM INFORMATION

Address: Town Hall 1196 Main Street

Contact Person: Randy Swigor, Superintendent

Telephone #: 508-829-0248 Fax #: 508-829-0252

Internet Address: http://www.townofholden.net/Pages/HoldenMA_DPW/watersewerindex

Opportunities for Public Participation
If you would like to participate in discussions regarding your water quality, you may attend a quarterly Water/Sewer Advisory Board meeting. If you wish to attend a meeting, please check the Town bulletin board or local access television channel for dates. Or you may call the Superintendent directly at 508-829-0248.

II. YOUR DRINKING WATER SOURCE

Where Does My Drinking Water Come From?

The Town's water supply comes from five wells and two interconnections with the City of Worcester. Each source is listed below in the table:

Source Name	DEP Source ID#	Source Type	Location of Source
Quinapoxet Wells	2134000-02G	Gravel Packed Wells	Off Wachusett Street
Mill Street Well Field	2134000-03G	Tubular Well Field	Off Mill Street
Mason Road Well Field	2134000-04G	Tubular Well Field	Off Mason Road
Spring Street Well	2134000-05G	Gravel Packed Well	Off Spring Street
Brattle Street Interconnection	2134000-01P	Interconnection with Worcester	Brattle Street
Salisbury Street Interconnection	2134000-02P	Interconnection with Worcester	Salisbury Street

Is My Water Treated?

Water from our Town wells is treated with Potassium Hydroxide for pH adjustment and Sodium Fluoride for Fluoridation. The groundwater in Holden has a naturally low pH which means it is somewhat acidic and therefore corrosive. The Potassium Hydroxide raises the pH to just above neutral (7.0) so that it is not acidic and corrosive. The Sodium Fluoride is added to provide cavity protection for infants and children. The water which we buy from Worcester is treated at Worcester's Water Filtration Plant. We keep copies of Worcester's Water Quality Report at Town Hall if you would like to learn more about their water sources and treatment processes. The one notable difference in Worcester's water is that they chlorinate the water. So if you live in the southern end of Town you may occasionally receive chlorinated water. Worcester does not Fluoridate, so we do add Sodium Fluoride at both of the interconnections. The water quality of

our system is constantly monitored by us and the DEP to determine the effectiveness of existing water treatment and to determine if any additional treatment is required.

How Are These Sources Protected?

The Department of Environmental Protection (DEP) has prepared a Source Water Assessment Program (SWAP) Report for the Town's water supply sources. The SWAP Report assesses the susceptibility of the supplies to contamination. The complete SWAP report is available at Town Hall or online at http://www.mass.gov/dep/water/drinking/ceroreps.htm.

III. SUBSTANCES FOUND IN 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.

Contaminants that may be present in source water include:

Microbial contaminants -such as viruses and bacteria, which may come from sewage treatment plants, 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, and farming.

Pesticides and herbicides -which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

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.

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 that must provide the same protection for public health. 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).

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, and some infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/Centers for Disease Control and Prevention (CDC) guidelines on lowering the risk of infection by cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

IV. IMPORTANT DEFINITIONS

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 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 Residual Disinfectant Level (MRDL) -- 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.

Maximum Residual Disinfectant Level Goal (MRDLG) -- The level of a 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.

Action Level (AL) – The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

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

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
N/A = Not Applicable

Secondary Maximum Contaminant Level (SMCL) – These standards are developed to protect the aesthetic qualities of drinking water and are not health based.

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

V. WATER QUALITY TESTING RESULTS

What Does This Data Represent?
There are over 100 regulated and unregulated contaminants that we test for. The water quality information presented in the tables below are from the most recent round of testing done in accordance with the regulations. The tables list *anything* that was detected during testing. It is important to note that no contaminants were detected above the maximum allowable level.

The Massachusetts Department of Environmental Protection has reduced the monitoring requirements for inorganic contaminants because our sources are not at risk of contamination. The last sample collected for these contaminants was taken in 2002 and was found to meet all applicable EPA and DEP standards.

	Date(s) Collected	90TH percentile	Action Level	MCLG	# of sites sampled	# of sites above Action Level	Possible Source of Contamination
Lead (ppb)	9/13-15/05	2	15	0	30	0	Corrosion of household plumbing systems; Erosion of natural deposits
Copper (ppm)	9/13-15/05	0.69	1.3	1.3	30	0	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives

Regulated Contaminant	Date(s) Collected	Max Detect	Range Detected	High Ave.	MCL or MRDL	MCLG or MRDLG	Violation (Y/N)	Possible Source(s) of Contamination
Inorganic Contaminants								
Barium (ppm)	6/02	0.047	0.006 - 0.047	NA	2	2	N	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits

Regulated Contaminant	Date(s) Collected	Max Detect	Range Detected	High Ave.	MCL or MRDL	MCLG or MRDLG	Violation (Y/N)	Possible Source(s) of Contamination
Fluoride (ppm)	6/02	1.35	1.14 -1.35	NA	4	4	N	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (ppm)	6/07	2.1	ND-2.1	NA	10	10	N	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits
Selenium (ppb)	6/02	0.002	0 – 0.002	NA	50	50	N	Discharge from metal refineries; erosion of natural deposits; discharge from mines
Organic Contaminants								
Trichloroethylene (ppb)	Qrtly 07	1.9	ND-1.9	NA	5	0	N	Discharge from metal degreasing sites and other factories
1,1,1-Trichloroethane (ppb)	Qrtly 07	1.7	ND-1.7	NA	200	200	N	Discharge from use in septic system cleaners
CIS-1,2-Dichloroethylene (ppb)	Qrtly 07	0.8	ND-0.8	NA	70	70	N	Breakdown product of trichloroethylene and tetrachloroethylene
Radioactive Contaminants								
Gross Alpha (pCi/l) (minus uranium)	Qrtly 2006	1.7	ND-1.7	NA	15	0	N	Erosion of natural deposits
Radon	6/2/06	820	820	NA	10,000	NA	N	Erosion of natural deposits
Disinfection By-Products								
Total Trihalomethanes (TTHMs) (ppb)	Qrtly 07	61.6	ND-61.6	27.5	80	-----	N	Byproduct of drinking water chlorination
Haloacetic Acids (HAA5) (ppb)	Qrtly 07	52.8	ND-52.8	20.6	60	-----	N	Byproduct of drinking water disinfection
Chlorine (ppm)	Monthly 07	2.2	ND-2.2	0.71	4	4	N	Water additive used to control microbes

Unregulated contaminants are those for which there are no established drinking water standards. The purpose of unregulated contaminant monitoring is to assist regulatory agencies in determining their occurrence in drinking water and whether future regulation is warranted.

Unregulated Contaminant	Date(s) Collected	Range Detected	Average Detected	SMCL	ORSG	Possible Source
Inorganic Contaminants						
Sodium (ppm)	5/05	17-27	19.5	----	20	Natural sources; runoff from use as salt on roadways; by-product of treatment process
Sulfate (ppm)	Qrtly 07	3.6-13	8.3	250	----	Natural sources
Organic Contaminants						
Chloromethane (ppb)	Qrtly 07	ND-0.5	ND	----	----	

Secondary Contaminant	Date(s) Collected	Range Detected	Average Detected	SMCL	Possible Source
Iron (ppm)	Qrtly 07	ND-0.18	0.05	0.3	Naturally occurring, corrosion of cast iron pipes
Manganese (ppm)	Qrtly 07	0.03-0.28	0.14	0.05*	Erosion of natural deposits
Alkalinity (ppm)	Qrtly 07	51-67	60	none	Buffering capacity of water
Aluminum (ppm)	Qrtly 07	ND-0.05	ND	0.2	Byproduct of treatment process, naturally occurring
Chloride (ppm)	Qrtly 07	24-33	27.8	250	Runoff from road de-icing, use of inorganic fertilizers, landfill leachates, septic tank effluents, animal feeds, industrial effluents, irrigation drainage
Magnesium (ppm)	Qrtly 07	1.1-1.6	1.4	none	Naturally occurring mineral
Hardness (ppm)	Qrtly 07	22-30	26	none	Naturally occurring mineral
Potassium (ppm)	Qrtly 07	32-68	45	none	Naturally occurring mineral
Calcium (ppm)	Qrtly 07	7.0-9.4	8.2	none	Naturally occurring mineral
Total Dissolved Solids (TDS) (ppm)	Qrtly 07	133-187	155	500	Erosion of natural deposits.

* The EPA has established a lifetime health advisory (HA) value of 0.3 mg/L for manganese to protect against concerns of potential neurological effects, and a One-day and 10-day HA of 1 mg/L for acute exposure.

VI. COMPLIANCE WITH DRINKING WATER REGULATIONS

Does My Drinking Water Meet Current Health Standards?

We are committed to providing you with the best water quality available. Every year we conduct as many and usually more water quality tests than most bottled water suppliers. We are proud to report that last year all test results met all applicable health standards regulated by the state and federal government. We do all of this for less than a penny per gallon!

VII. WATER CONSERVATION

We ask that all customers try to conserve water as this saves the customer money and saves our natural resources. If you have an irrigation system and you notice that it operates on rainy days, you may be wasting money. A simple rain sensor connected to the system would not allow the system to operate if there has been recent precipitation. These devices are inexpensive and relatively easy to install. The Town also purchases low flow water fixtures from time to time such as shower heads, aerators, and lawn hose nozzles. These are provided for free to customers. We do currently have some left in stock, so if you are interested please stop by Town Hall.

VIII. PERCHLORATE MONITORING – FAILURE TO MONITOR

The State recently adopted new regulations which required testing for Perchlorate at all sources. In general, State regulations require monitoring for contaminants on a particular schedule such as monthly, quarterly, annual, etc. For this new Perchlorate regulation the State required the monitoring to be done twice in 2007, once in April and once in September. Two samples rounds were collected by the Town and results showed that no Perchlorate was detected at any level in any of the sources. However, since one of the samples was not collected during the required month of April 2007, we are required by regulation to report this fact to our customers. There is no action required by the customer, samples were collected and all results showed no detections. Samples were just not collected within the specific timeframes of the new regulation. If you have any questions about this information or any information in this report, please contact the Superintendent at 508-829-0248.