



2013 Annual Water Quality Report

Upton DPW Water/Wastewater Division

PWS ID No. 2303000

We are pleased to present this year's Annual Water Quality Report for the Town of Upton. This report is designed to inform you about the municipal water system and to provide results of the water quality tests conducted during calendar year 2013 for detected contaminants. This information is provided as required by the 1996 Safe Drinking Water Act Amendments and to help you make personal decisions about your water consumption. Please contact Ron San Souci, Water Supervisor, at (508) 529-3993 for additional information or with any questions about this report.

Water Sources - The Upton water system includes a total of three (3) pump stations and eight (8) wells. The Glen Avenue Pump Station was renovated in 2013; it dates back to the early 1900's and now includes energy efficient variable frequency drive (VFD) pumps and three (3) wells installed to a maximum depth of 56-feet. The West River Pump Station was built in 1976; it includes a pump and one (1) gravel-packed well installed to a depth of 90-feet. Municipal Wellfield No. 3 was constructed in 2013; it includes energy efficient VFD pumps and four (4) wells installed to a maximum depth of 30-feet. Approximately 37 miles of main distribute water throughout the system. Two water storage tanks are used in the system including: the 500,000-gallon Pratt Hill tank and the 1,000,000-gallon Pearl Street tank. Treatment of water is performed at all three pump stations. Our well water is considered to be ground water.

Upton's ground water is naturally corrosive and can dissolve copper from pipes in the plumbing of customers' homes and/or businesses. In an effort to reduce corrosivity, the pH of the water is raised to a level of approximately pH 7.0 to pH 7.5 by adding potassium hydroxide at our pumping stations. We also chlorinate the water to protect it from bacteria.

INFORMATION FROM EPA ABOUT DRINKING WATER

To ensure that tap water is safe to drink, the Massachusetts Department of Environmental Protection (MassDEP) and 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 regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

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 infants can be particularly at risk from infection. These people should seek advice about drinking water from their health care providers. The Environmental Protection Agency/Center for Disease Control guidelines on appropriate means to lessen the health risk of infection by cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at 1-800-426-4791.

The 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. Contaminants that may be present in any source water include biological contaminants, such as viruses and bacteria; inorganic contaminants, such as metals and salts; pesticides and herbicides; organic chemicals from industrial or petroleum use; and radioactive materials.

Substances 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 may 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 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 may also come from gas stations, urban stormwater runoff and septic systems;

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 800-426-4791.

FINISHED WATER TEST RESULTS

Inorganic Contaminants	Date Collected	Highest Level Detected or Highest RAA*	Range	MCL	MCLG	Violation (Y/N)	Possible Sources
Nitrate (ppm)	5/14/13	0.94	0.91 - 0.94	10	10	N	Runoff from fertilizer use; leaching from septic tanks; erosion of natural deposits
Barium (ppm)	4/2/12	0.018	0.014 - 0.018	2	2	N	Erosion of natural deposits
Haloacetic Acids (HAA5s) (ppb)	8/17/11	3*	2 - 3	60		N	Product of drinking water chlorination
Total Trihalomethanes (TTHMs) (ppb)	8/17/11	24*	20 - 28	80		N	Product of drinking water chlorination
Chlorine	6 Samples Month	0.13	0 - 0.54	4	4	N	Water additive used to control microbes

* Highest RAA= highest running annual average of four consecutive quarters

Lead and Copper	Date(s) Collected	90 th Percentile	Action Level	MCLG	# of sites sampled	# of sites above AL	Exceeds AL (Y/N)	Possible Sources
Lead (ppb)	8/16 -8/17/11	4	15	0	22	0	N	Corrosion of household plumbing
Copper (ppm)	8/16 -8/17/11	0.34	1.3	1.3	22	0	N	Corrosion of household plumbing

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. 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 Upton DPW Water/Wastewater Division is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When 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. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (800) 426-4791 or at <http://www.epa.gov/safewater/lead>.

Bacteria	Highest # Positive Samples in a Month	MCL	MCLG	Violation (Y/N)	Possible Sources
Total Coliform*	1	1	0	N	Naturally present in the environment

*Coliform are bacteria that are naturally present in the environment and are used as an indicator that potentially harmful bacteria may be present.

Unregulated and Secondary Contaminants	Date Collected	Range Detected	Average	SMCL	ORSG	Possible Sources
Sulfate (ppm)	5/14/13	10 - 14	12	250	--	Natural sources
Sodium (ppm)	4/12/12 & 11/4/13	8.7 - 31	13	--	20*	Natural sources; runoff from road salt
Manganese (ppb)	5/14/13	0 - 140	70	50	300**	Naturally occurring

* Sodium-sensitive individuals, such as those experiencing hypertension, kidney failure or congestive heart failure should be aware of the levels of sodium in their drinking water where exposures are being carefully controlled.

** US EPA and MassDEP have established health advisory levels for manganese to protect against concerns of potential neurologic effects.

Definitions

MCL = Maximum Contaminant Level. 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.

MCLG = Maximum Contaminant Level Goal. 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.

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

ppm = parts per million, or milligrams per liter (mg/l)

ppb = parts per billion, or micrograms per liter (µg/l)

pCi/l = picocuries per liter (a measure of radioactivity)

Unregulated Contaminants = Unregulated contaminants are substances without MCLs for which EPA requires monitoring. For some of these substances, the Massachusetts Office of Research and Standards (ORS) have developed state guidelines or secondary MCLs.

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

ORSG = Office of Research and Standards Guideline. 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.

Cross Connections in the Home

Your lawn and garden hose may be hazardous to your health if water flows backwards into the water supply system. When this happens, it is called backsiphonage or backflow. When drinking water is accidentally mixed with hazardous chemicals or bacteria, it becomes dangerous. The danger comes when a hose is connected to a harmful substance or submerged in polluted or contaminated water and the pressure in the water main drops. The harmful substance or polluted water could be suctioned back into your pipes and your drinking water supply. Water pressure drops are not uncommon. They can happen when firefighters battle a nearby fire or before repairs can be made to a broken water main.

Some of the harmful substances you should be aware of are the chemicals used to fertilize your lawn, or weed killer used on your lawn. The cleanser used on your kitchen sink could be hazardous if swallowed, as could be the bacteria in the water from your swimming pool or waterbed.

Fortunately, keeping your water safe from these contaminants is easy. Take the following precautions to protect your drinking water:

1. **NEVER** submerge hoses in buckets, pools, tubs or sinks.
2. **ALWAYS** keep the end of the hose clear of possible contaminants.
3. **DO NOT** use spray attachments without a backflow prevention device. The chemicals used on your lawn are toxic and can be fatal if digested.
4. **DO** buy and install an inexpensive backflow prevention device for all threaded faucets around your home. They are available at most hardware stores.

Source Water Protection Information

What is SWAP?

The Source Water Assessment and Protection program assesses the susceptibility of public water supplies to contamination from land uses.

What is My System's Ranking?

A susceptibility ranking of *moderate* was assigned to this system using the information collected during the assessment by MassDEP.

What Can Be Done to Improve Protection?

The SWAP report recommends:

1. Purchase more land around the Zone I, which means the 250-foot circumference around the Glen Ave Well-field.
2. Use best management practices (BMPs) for storage, use, and disposal of hazardous materials such as water supply chemicals and maintenance chemicals.
3. Do not use or store pesticides, fertilizers or road salt within Zone I. Keep any new non water supply activities out of Zone I.
4. Work with planners to control new residential developments in the water supply protection areas.

Where can I see the SWAP report?

The SWAP report is available at the Upton DPW Water/Wastewater Facility located at 43 Maple Ave in Upton or online at the MassDEP website - <http://mass.gov/eea/docs/dep/water/drinking/swap/cero/2303000.pdf>

HELPFUL ADVICE REGARDING YOUR WATER

SERVICE LINE OWNERSHIP

Residents sometimes inquire who is responsible for the operation and maintenance of the service line, which allows water to enter a building. The following information should be helpful:

- The water provider is always responsible for the water main in the street and the portion of the service line that travels from the main to the “shut off” valve, which is accessed through a tubular device known as the curb box.
- The curb box, as well as the portion of the service line that travels from the shut off valve into the building is owned and maintained by the property owner. The water provider owns the meter itself. The property owner is responsible for all other plumbing.
- The master water valve should be marked with a tag or painted a bright color, as this is usually where water line enters the house.
- As such, the property owner is responsible for maintenance of the curb box in an accessible manner and is responsible for maintaining and repairing the service line from the shutoff valve into the building.

FIRE HYDRANTS

Please take a minute to clear snow away from any fire hydrants near your residence or business. The few minutes it takes could prove to be very beneficial to you and your neighbors in an emergency. The Upton Fire Department will be better able to serve the community if we each contribute the minor effort of clearing the snow away from the hydrants.

Water Rates- As of April, 2014

Quarterly water rates per 1,000 gallons:
 Customer Service Charge - \$16.95
 0 to 3,000 gal. - \$ 3.29
 3,001 to 7,500 gal. - \$ 4.41
 7,501 to 20,000 gal. - \$ 5.73
 Over 20,000 gal. - \$ 8.08

WATER CONSERVATION INDOORS

- Install low flow 2.2 gals/minute aerators on faucets.
- Faucets with just a slow small drip can waste 15 to 20 gallons/day.
- Toilet - put a bit of food coloring in toilet tank without flushing, watch for a few minutes to see if the color shows up in the bowl; if it does; you have a leak. An improperly seated flapper inside a toilet tank can waste up to 8,000 gallons/day!
- Do not use toilets for trash disposal.
- Use your dishwasher only when full.
- Run your washing machine with full loads.

WATER CONSERVATION OUTDOORS

- The current Town Water restrictions require residents to limit lawn irrigation to the evening hours between 7PM and 9PM on the “odd-even” system. If your address is an odd number, irrigation is permitted only on odd days of the month; conversely, even-numbered addresses are permitted to irrigate on even days of the month.

Backflow devices on lawn sprinkler systems that are on Town water are required to be tested once a year to ensure that they are operational.

PUBLIC PARTICIPATION

The Town of Upton invites public participation concerning water discussions and decisions at Board of Selectmen meetings which are held regularly on the 1st and 3rd Tuesdays of each month at 20 Church St, Upton MA. Agendas and minutes are available on the Town’s web site (www.uptonma.gov).

WATER STAFF:

- Ron San Souci, Water/Wastewater Supervisor
- Scott Hennessey, Operator/Working Foreman
- Dean Parker, Operator
- Todd Broberg, Operator
- Jason Fleury, Operator
- Carol Peterson, Department Specialist

ANY QUESTIONS?

Maintenance

For all general problems concerning leaks, meters, hydrants or mains, call the Water Division office at (508) 529-3993.
 Business hours: 7 AM to 3 PM

Billing & General Information

Call the DPW office at
 (508) 529-3067

Emergency

For emergency service after normal business hours, call the Upton Police Department at
 (508) 529-3200