

Agawam's Aqua Almanac

2013

Health Information

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 (1-800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. People whose immune systems may be compromised because of chemotherapy, organ transplants, or HIV/Aids or other immune disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

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 Agawam 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 water 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>

In accordance with the Long Term 2 Enhanced Surface Water Treatment Rule, the Springfield Water and Sewer Commission began monitoring for Cryptosporidium in 2006. The results indicate that no further treatment is required, other than the treatment already provided, which includes filtration

<u>Test Dates</u>	<u>Results</u>
07/10/07	0.1 oocysts/liter
08/14/07	0.1 oocysts/liter

"Cryptosporidium is a microbial parasite found in surface water throughout the U.S. Although filtration removes Cryptosporidium, the most commonly used filtration methods cannot guarantee 100% removal. Our monitoring indicates the presence of these organisms in our reservoir water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing health problems. Most healthy individuals are able to overcome health problems associated with Cryptosporidium within a few weeks. However, immuno-compromised people have more difficulty and are at greater risk of developing severe, life-threatening illness. Immuno-compromised individuals are encouraged to consult their doctor regarding appropriate precautions to prevent infection. Cryptosporidium must be ingested for it to cause health problems, and may be passed through other means than drinking water. Symptoms of infection include nausea, diarrhea and abdominal cramps."

Water Quality

The 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 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 can result from urban storm 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 storm water runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and which can also come from gas stations, urban storm water runoff, and septic systems.
- Radioactive contaminants, which can be naturally occurring or the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health. Agawam is required to collect a minimum of 30 water samples each month from locations throughout Town and tests these samples for coliform bacteria.

Sanitary Survey

In October, 2012 the MassDEP conducted a sanitary survey of our public water system. A sanitary survey is an on-site review of the water sources, facilities, equipment, operation and maintenance of a public water system for the purpose of evaluating the system's ability to produce and distribute safe drinking water. The 2012 sanitary survey identified no corrective measures.

Does my Drinking Water Meet the Current Health Standards?

We are committed to providing you with the best water quality available. However some contaminants that were tested last year did not meet all applicable health standards regulated by the state and federal government. Due to contaminant violations for five Haloacetic acids (HAA5), which are disinfection byproducts, during the period April 1, 2012 - March 31, 2013 at the entry point to the distribution system at Provin Mountain. It is important to note that, as the water travels through the water distribution system, the HAA5s dissipate and the concentrations decrease significantly with time.

Our system took the following corrective actions: We mailed a public notification and also provided distributed notices to several public building in town; we also published an ad in the newspaper. We continue to work with The Springfield Water and Sewer Commission to enhance the treatment of the source water to limit the formation of HAA5.

This was not an emergency. If it had been an emergency, you would have been notified within 24 hours. Our water system and MassDEP monitor and record the effectiveness of actions taken in response to contaminant violations. The health effect statement for this contaminant is listed below.

"HAA5 is a group of five haloacetic acid compounds which form when disinfectants react with natural organic matter in the water. Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer."

Source Water Assessment

The Massachusetts Department of Environmental Protection (DEP) has conducted a Source Water Assessment for drinking water produced by the Springfield Water and Sewer Commission and has assigned a **system susceptibility ranking of Moderate**. The complete assessment and protection report is available at the Agawam Department of Public Works at 1000 Suffield Street and online at <http://www.mass.gov/dep/water/drinking/swapreps.htm> For more information, call Deputy DPW Superintendent, John Decker at (413) 821-0600.

The drinking water originates from a surface water supply, the Cobble Mountain Reservoir, located in Western Massachusetts. The Borden Brook Reservoir, a smaller surface water supply that feeds into Cobble Mountain Reservoir, contributes to the system's combined water supply capacity of 25 billion gallons. There is no commercial industry within the watershed boundaries and population density is low. Only limited farming and grazing are practiced in the area. Boating, swimming, hunting, and fishing are forbidden in and around the reservoir areas to further protect the water supply. From the reservoirs, the water flows to a treatment plant in Westfield where it is filtered, treated to prevent corrosion of plumbing, and disinfected; no fluoride is added. The water then flows to storage tanks on Provin Mountain and then through large transmission mains in Agawam, and into Springfield.

Water Consumption and Rates

Agawam obtains its water from the Springfield Water and Sewer Commission but operates our own system for the distribution of water within the community. This system, comprised of one pump station and approximately 150 miles of pipe ranging in diameter from 4" to 16", and 10,043 service accounts. Residential water use accounted for 60% of total usage and overall annual consumption was about even with 2012 at **1,277,407,472** gallons of water in 2013.

The Mass Dept. of Environmental Protection is requiring that all water systems take steps to reach 65 residential gallons per capita per day standard. This residential usage includes water used for lawn irrigation. In Agawam the average residence has 2.5 people which, at the 65 gallon rate translates to 4,000 cubic feet (CF) in a 6-month billing cycle. To encourage the necessary reduction in water consumption the rate structure that was adopted on July 1, 2009 will remain in effect until a rate study recommends otherwise. Residential usage above 4,000 CF and all other water use including lawn irrigation would be charged at a rate of \$1.90 per 100 CF. This rate structure has been assisting in meeting the required reduction in residential and non-essential outdoor water use. We have concern, however, that the current rate structure will fall short of providing funds for essential water system improvements, such as meter reading equipment and water main replacements.

Analysis of Agawam's Water

Water samples are analyzed daily by state-certified laboratories to ensure that the water supplied is potable and meets all government standards. The water is monitored at the reservoir, the filter plant, the storage tanks and throughout the distribution system. The data on the next page represents finished water in the distribution system during calendar year 2013.

We wish to remind residents that pollution of their drinking water can come from their own home. Typically this may occur when a hose end is connected to a chemical sprayer or submerged in a container and there is a drop in water pressure due to a fire or main break and the substance is siphoned back through the hose into the water pipes. We recommend the installation of a low cost hose bib vacuum breaker for all hose connections. This item can be purchased at a hardware or plumbing supply store.

Contaminant	Major Sources in Drinking Water	Violation	Ideal Goal (MCLG)	Maximum Contaminant Level (MCL)	Locational Running Annual Average (LRAA)	Range Detected at Individual Sampling Sites
Organics						
TTHMs (ppb) (Total Trihalomethanes)	By-product of drinking water chlorination	No	N/A	80 (ARA)	70.8	25.0 - 92.0
HAA5s (ppb) (Total Haloacetic Acids)	By-product of drinking water chlorination	Yes	N/A	60 (ARA)	61.4	0.0 - 74.0
Inorganics						
	Major Sources in Drinking Water		MCLG	MCL	90th Percentile	Sampling Sites Exceeding the Action Level
Copper (ppm)	Corrosion of household plumbing systems	No	1.3	AL = 1.3	0.073	0 out of 30
Lead (ppb)	Corrosion of household plumbing systems	No	0	AL = 15.0	1	1 out of 30
Nitrate (ppm)	Natural Deposits, Stormwater, fertilizer run-off	No	10	10	0.14 (HDL)	N/A
Barium (ppm)	Common, natural mineral	No	2	2	0.008 (HDL)	N/A
Asbestos (MFL)	Decay of asbestos cement water mains; erosion of natural deposits	No	7	7	None Detected (HDL)	N/A
Microbiological						
	Possible Source of Contamination		MCLG	MCL	Highest % Positive in a Month	Total # Positive
Total Coliform	Naturally present in the environment	No	0	>5%	3.92%	2
Fecal Coliform or E.coli	Human and animal fecal waste	No	0	See Key*	0%	0
Microbiological						
	Major Sources in Drinking Water		MCLG	MCL	Highest Single Measurement Detected	Lowest Monthly Percent
Turbidity (NTU) Rapid Sand Filtration**	Soil run-off	No	N/A	TT	0.47	99.7%
Turbidity (NTU) Slow Sand Filtration***	Soil run-off	No	N/A	TT	0.15	100%
Unregulated****						
	Major Sources in Drinking Water		ORSG/ SMCL	MCL	Highest Single Measurement Detected	
Sodium (ppm)	Natural deposits	No	20 (ORSG)	None	13	N/A
Sulfate (ppm)	Natural Deposits	No	250 (SMCL)	None	6	N/A
Aluminum (ppb)	Byproduct of treatment process	No	200 (SMCL)	None	31	N/A
UCMR3****						
	Major Sources in Drinking Water				Annual Running Average	
Vanadium (ppb)	Erosion of natural deposits	No	N/A	None	0.41	N/A
Strontium (ppb)	Erosion of natural deposits	No	N/A	None	15	N/A
Hexavalent Chromium (ppb)	Natural sources, industrial by-product	No	N/A	None	0.038	N/A

KEY TO TABLE

Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system.

*Compliance with fecal coliform/E.coli MCL is determined upon additional repeat testing.

**Rapid Sand Filtration: The turbidity level of the filtered water shall be less than or equal to 0.3 NTU in 95% of the measurements taken each month and shall not exceed a maximum of 1.0 NTU in any single measurement.

***Slow Sand Filtration: The turbidity level of the filtered water shall be less than or equal to 1.0 NTU in 95% of the measurements taken each month and shall not exceed a maximum of 5.0 NTU in any single measurement.

****Unregulated contaminants are those for which EPA has not published drinking water standards. The purpose of regulation is necessary. Unregulated Contaminant Monitoring Rule 3 (UCMR 3) is a list of 30 contaminants that the EPA required community drinking water systems to monitor in 2013. A new list is issued every 5 years.

► **AL** = Action Level. The concentration of a contaminant which, if exceeded, triggers a treatment or other requirement which a water system must follow. ► **ARA** = Annual Running Average. ► **HDL** = Highest Detected Level. ► **IDSE** = Initial Distribution System Evaluation. ► **MCL** = Maximum Contaminant Level. The highest level of a contaminant in drinking water. MCLs are set as close to 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. ► **MFL** = million fibers per liter. ► **MRDL** = Maximum Residual Disinfectant Level. The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants (ex. Chlorine, chloramines, chlorine dioxide). ► **MRDLG** = Maximum Residual Disinfectant Level Goal. The level of a 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. ► **N/A** = not applicable ► **NTU** = Nephelometric Turbidity Units. A numerical value indicating the cloudiness of water. ► **ORSG** = Mass. Office of Research and Standards Guideline. 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. ► **ppb** = parts per billion ► **ppm** = parts per million ► **90th Percentile**: Out of every 10 homes, 9 were at or below this level. ► **TT** = Treatment Technique. A treatment technique is a required process intended to reduce the level of a contaminant in drinking water. ► **SMCL** = Secondary Maximum Contaminant Level.

IMPORTANT INFORMATION
ABOUT YOUR DRINKING WATER

Agawam Department of Public Works
1000 Suffield Street
Agawam, MA 01001



Department of Public Works

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Monday—Friday 8:30am—4:30pm

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John G. Decker
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Water Department

Dear Water Consumers,

The Agawam Department of Public Works (DPW) is pleased to provide you with this Water Quality Report (Consumer Confidence Report) for 2013. This is Agawam's fifteenth annual report, advising the public of the quality of Agawam's tap water and related health issues as well as water system improvements and future plans.

Landlords: Please make this report available to your tenants.

Businesses: Please post this report where your employees and customers may read it.

Public Building and School Officials: Please post this report where people who may drink water may read it.

The Agawam DPW is responsible for the operation of the public water system. Our goal is to provide you with a continuous supply of quality water. We welcome comments and suggestions you may have to help us reach and maintain that goal. The DPW can be contacted at 413-821-0600 during normal business hours or at dpwsupt@agawam.ma.us to answer your water-related questions or comments. As an additional resource, the Mayor's office may be contacted at 413-786-0400 ext.8200. In addition, the Town Council holds regular meetings on the 1st and 3rd Mondays of each month at the Agawam Middle School, and conducts a "citizen speak time" before each meeting, when citizens can voice concerns regarding water quality or operations. Citizens should inform the council clerk at 786-0400 ext. 8716 during weekday mornings in advance of any intention to speak. Emergency water problems at all other times can be reported to the police dispatcher at 413-786-4767, who will contact appropriate water service personnel.

Yours truly,

Christopher J. Golba, DPW Superintendent