# AGAWAM'S AQUA ALMANAC

2016

## 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

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present.

*E. coli* are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely-compromised immune systems.

## 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.

## About Your Water

The drinking water provided by the Agawam Water Department is produced by the Springfield Water and Sewer Commission, the water originates from the Cobble Mountain Reservoir (Source ID 1281000-02S) and the Borden Brook Reservoir (Source ID 1281000-04S). These surface water supplies are located in Blandford and Granville, MA. The water is filtered through slow or rapid sand filtration to remove small particles and organisms such as sediment, algae, and bacteria. The water is treated to inhibit corrosion of home plumbing, adjusted for pH, and disinfected with chlorine before it is distributed to your home or business.

## Sanitary Survey

In October 2015, 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 2015 sanitary survey identified no corrective measures.

## 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 drinking water produced by the Springfield Water and Sewer Commission originates from a surface water supply located in Blandford and Granville, Massachusetts. Two water bodies make up the water supply: Cobble Mountain Reservoir (Source Water ID #1281000-02S), and Borden Brook Reservoir (Source Water ID #1281000-04S). A source water assessment has been completed by the Massachusetts Department of Environmental Protection and is available at <http://www.mass.gov/eea/docs/dep/water/drinking/swap/wero/1281000.pdf>.

## 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 24", and 11,180 service accounts. Residential water use accounted for 55% of total usage and overall annual consumption was about 5.8 percent higher than 2015 at **1,396,322,536** gallons of water in 2016.

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, an inclining block rate structure was adopted on July 1, 2009, and revised in 2104. Residential usage above 4,000 CF and all other water use including lawn irrigation would be charged at a rate of $2.38 per 100 CF (all use read after September 1, 2014). This rate structure has been assisting in meeting the required reduction in residential and non-essential outdoor water use.

## Cross-Connection Control and Backflow Prevention Program

Protection of the Public Water Supply is very important and a vital component is proper backflow prevention and cross-connection control. Cross-connections are potential sources of backflow and is something that we need to prevent because of the potential negative effects to public health and safety. If water backflows into the public water system, the system could become contaminated. Therefore, we urge you to implement proper cross-connection controls.

The Agawam Water Department is required by Massachusetts Regulations (310 CMR 22.22) to have a cross-connection control program to prevent backflow. As part of this program, members of the Department survey properties (largely non-residential ) to look for potential cross-connections and require proper backflow prevention devices when a need is determined. Backflow prevention devices (BPD) are tested by the Department at a minimum of an annual basis or greater depending on the BPD and hazard to which the BPD protects.

The Agawam Water Department requires notification of the installation, repair, replacement, relocation, and removal of backflow prevention devices and approval needs to be granted **before work can proceed**. Please contact the Dept. Superintendent Water/Sewer, John Decker at (413) 821-0600x8627 or the Plumbing Inspector, Michael Day at (413) 821-0600x8636. Work on backflow prevention devices may require a plumbing permit, please contact the Plumbing Inspector to verify the need.

**Cross-connection:** means any actual or potential physical connection or arrangement between a pipe conveying potable water from a public water system and any non-potable water supply, piping arrangement or equipment including, but not limited to, waste pipe, soil pipe, sewer, drain, other unapproved sources.

Cross-connections can be found at heating and ventilation equipment, fire suppression systems, factory or plant equipment, irrigation systems, hose spigots, utility sinks, chemical processing facilities, etc…. Cross-connections hazards such as these can be prevented though the installation of a backflow prevention devices.

**Backflow:** means the flow of water or other liquids, mixtures or substances into the distribution pipes of a potable water supply from any source other than the intended source; either by **Backsiphonage** or **Backpressure.**

**Backsiphonage:** can happen when there is a decrease in the water distribution system pressure, for example a water main break, firefighting (use of fire hydrants) or other high demand uses. When this happens, water from your building's plumbing may backflow into the public system.

**Backpressure:** is when the water pressure in a building's plumbing is increased above the pressure in the public water system, say by a pump in a factory; if this happens, the water in the building's plumbing can be forced back into the public water system.

**Simple steps to take around your home and yard to avoid cross-connections and backflow:**

- Install hose bib vacuum breakers on all exterior spigots. These are available at hardware stores and plumbing supply houses
- Toilets need to be equipped with a ballcock with an integral anti-siphon valve. **
- Boilers need be equipped with approved backflow preventers and expansion tank(s) to prevent backflow of boiler water (which may be treated with chemicals).**
- Install and maintain an approved (by Agawam Water Dept.) backflow device on your irrigation system. Please resister the device with the Agawam Water Dept.. **
- All sinks, tubs and tanks need to have a proper air gap to prevent backsiponage. Typically 1-inch or more (as required by plumbing code) between bottom of the faucet/spout and rim or edge. **

** Work may be required to be done by a MA Licensed Plumber and a Plumbing Permit may need to be issued, contact the Plumbing Inspector for more information.

Informational Links:

◊ Agawam Water Department Cross Connection Control and Backflow Prevention: http://www.agawam.ma.us/backflow
◊ MassDEP Cross Connection Control Program Regulations: http://www.mass.gov/dep/water/ccdefreg.pdf
◊ Foundation for Cross-Connection Control and Hydraulic Research: http://fccchr.usc.edu/introduction.html
◊ USC Cross-Connections Study: http://www.watts.com/pages/learnAbout/usc_study.asp?catId=1160

# 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 in the table on this page represents finished water in the distribution system during calendar year 2016.

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. For more information on cross-connection control and backflow prevention please see the detailed section in this mailing

| **Contaminant** *Inorganics* | **Major Sources in Drinking Water** | **Violation** | **Ideal Goal (MCLG)** | **Maximum Contaminant Level (MCL)** | **90th Percentile** | **Sampling Sites Exceeding the Action Level** |
|---|---|---|---|---|---|---|
| Copper (ppm) | Corrosion of household plumbing systems | No | 1.3 | AL = 1.3 | 0.061 | 0 out of 30 |
| Lead (ppb) | Corrosion of household plumbing systems | No | 0 | AL = 15.0 | 1.9 | 0 out of 30 |
| Nitrate (ppm) | Natural Deposits, Stormwater, fertilizer run-off | No | 10 | 10 | 0.071(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 |
| **Contaminant** *Microbiological (January - March 31,2016)* | **Possible Source of Contamination** | **Violation** | **Ideal Goal (MCLG)** | **Maximum Contaminant Level (MCL)** | **Highest % Positive in a Month** | **Total # Positive** |
| Total Coliform | Naturally present in the environment | No | 0 | >5% | 0% | 0 |
| Fecal Coliform or E.coli | Human and animal fecal waste | No | 0 | See Key* | 0% | 0 |
| **Contaminant** *Microbiological (April 1,2016 on)* | **Possible Source of Contamination** | **Violation** | **MCLG** | **MCL** | **Highest % Positive in a Month** | **Range Detected at Individual Sampling Sites** |
| E.coli | Human and animal fecal waste | No | 0 | See Key** | 3% | 1 |
| **Contaminant** *Microbiological* | **Major Sources in Drinking Water** | **Violation** | **MCLG** | **MCL** | **Highest Single Measurement** | **Lowest Monthly Percent** |
| Turbidity (NTU) Rapid Sand Filtration*** | Soil run-off | No | N/A | TT | 0.57 | 98.8% |
| Turbidity (NTU) Slow Sand Filtration**** | Soil run-off | No | N/A | TT | 0.31 | 100% |
| **Contaminant** *Organics* | **Major Sources in Drinking Water** | **Violation** | **Ideal Goal (MCLG)** | **Maximum Contaminant Level (MCL)** | **Locational Running Annual Average (LRAA)** | **Range Detected at Individual Sampling Sites** |
| TTHMs (ppb) (Total Trihalomethanes) | By-product of drinking water chlorination | No | N/A | 80 (ARA) | 62.8 | 35.0-68.0 |
| HAA5s (ppb) (Total Haloacetic Acids) | By-product of drinking water chlorination | No | N/A | 60 (ARA) | 56.3 | 1.1-54.0 |
| ***Disinfectants*** **Substance** | **Major Sources in Drinking Water** | **Violation** | **MRDLG** | **MRDL** | **Annual Average** | **Range Detected** |
| Residual Chlorine (ppm) | Water additive used to control microbes | No | 4.0 | 4.0 | 0.17 | 0.01-1.07 |
| ***Radionuclides*** **Substance (9/18/2015)** | **Major Sources in Drinking Water** | **Violation** | **MCLG** | **MCL** | **Highest Detected Level** | **Range Detected** |
| Gross Alpha (pCi/L) | Erosion of natural deposits | No | 0 | 15 | 0.262 | N/A |
| Radium-226 & Radium-228 Combined (pCi/L) | Erosion of natural deposits | No | 0 | 5 | 0.25 | N/A |
| ***Unregulated**** **Substance** | **Major Sources in Drinking Water** | **Violation** | **ORSG/ SMCL** | **MCL** | **Highest Single Measurement** | **Range Detected at Individual Sampling Sites** |
| Sodium (ppm) | Natural deposits; runoff from use as salt on road-ways; by-product of the treatment process | No | 20 (ORSG) | None | 14 | N/A |
| Manganese (ppb) | Erosion of natural deposits | No | 50 (SMCL) | None | 6.4 | N/A |
| Sulfate (ppm) | Natural Deposits | No | 250 (SMCL) | None | 2 | 1-2 |
| Aluminum (ppb) | Byproduct of treatment process | No | 200 (SMCL) | None | 35 | 10-35 |

**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. **Routine and repeat samples are total coliform-positive and either is *E. coli*-positive or system fails to take repeat samples following *E. coli*-positive routine sample or system fails to analyze total coliform-positive repeat sample for *E. coli*. Although we detected *E. coli* in 2016 in a single sample, repeat sampling did not have any additional detects; therefore the *E. coli* MCL was not violated. ***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.

►**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. ►**AWD** = Agawam Water Department ►**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. ►**pCi/L** = picocuries per liter: a measure of radioactivity. ►**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. ►**SWSC** = Springfield Water & Sewer Commission

IMPORTANT INFORMATION ABOUT YOUR
DRINKING WATER &
NEW RESIDENTIAL TRASH COLLECTION

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


**Department of Public Works - Agawam Water Department**
**1000 Suffield Street**
**Agawam, MA 01001**
**Tel: (413) 821-0600**
**Fax: (413) 821-0631**
**Monday—Friday 8:30am—4:30pm**

**Christopher J. Golba**
**DPW Superintendent**
**PWS ID# 10050000**

**John G. Decker**
**Deputy Superintendent**
**Water Department**


Dear Water Consumers,

The Agawam Water Department (AWD), a division of the Department of Public Works (DPW), is pleased to provide you with this Water Quality Report (Consumer Confidence Report) for 2016. This is Agawam's eighteenth 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. Please share this information with all the other people who drink this water, especially those who may not have received this report directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this report in a public place or distributing copies by hand or mail.

*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 Water Department 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 AWD can be contacted at 413-821-0600 during normal business hours or at water@agawam.ma.us to answer your water-related questions or comments. 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. 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.

Yours truly,

Christopher J. Golba, DPW Superintendent