



Town of Wellesley

Department of Public Works

Drinking Water Consumer Confidence Report For the Year 2019 Wellesley Massachusetts

MASSDEP Public Water Supplier ID #3317000

The Wellesley Department of Public Works (DPW) is pleased to provide this consumer confidence report on the quality of your drinking water. It contains important information on chemicals measured in your drinking water. This report is a requirement of the Federal Safe Drinking Water Act (SDWA) that requires all community water utilities to provide their customers an annual report on water quality and tap water related issues. This report covers the calendar year 2019, but also includes relevant data from other years. The analytical results provided in this report are conducted by independent certified laboratories. This annual report will enable the Wellesley DPW to inform consumers about the sources and quality of their drinking water, and about the decision-making process that affects their drinking water. Public participation opportunities are available at the monthly Board of Public Works meetings. For further information, contact Water Superintendent, William Shaughnessy P.E., at 781-235-7600 x 3350 and located at 20 Municipal Way.

WELLESLEY'S WATER SOURCES

Wellesley's local water supplies consist of ten wells located within the Town. Four wells tap into the Waban Brook alluvial aquifer and six wells tap into the Rosemary Brook alluvial aquifer. The water pumped from the ten wells is treated at our three corrosion control and iron/manganese removal facilities. The groundwater wells are as follows:

- 3317000-04G Rosemary GP Well
- 3317000-05G Longfellow GP Well
- 3317000-08G T.F. Coughlin SW1 Supplemental Well
- 3317000-09G T.F. Coughlin SW3 Supplemental Well
- 3317000-02G Wellesley Ave. Dug Well
- 3317000-06G T.F. Coughlin GP Well
- 3317000-10G Morses Pond GP Well #1
- 3317000-11G Morses Pond GP Well #2
- 3317000-12G Morses Pond GP Well #3
- 3317000-13G Morses Pond GP Well #4

The MWRA is a regional utility that uses surface water supplies in central Massachusetts at the Quabbin and Wachusett Reservoirs and the Ware River. **The MWRA water quality report is the final page of this document and is available on their website.** The year 2019 results of all detected contaminants in MWRA water are included in this herein. When reviewing the water quality data, it is important to keep in mind that a blending of the MWRA and our local waters will cause the differences in the two waters to moderate.

The diversity of our water supply sources provides for flexibility so that a reliable supply of water is available to serve your needs.

In addition to these active supply sources, the Wellesley water distribution system is also interconnected with four other public water suppliers for mutual emergency preparedness. These four other water suppliers are Natick, Needham, Weston, and Wellesley College.

In 2019, sixty-two percent (62%) of our water came from our local well supplies and thirty-eight percent (38%) came from the Massachusetts Water Resources Authority (MWRA). A very small portion, less than half a percent, of our total water use is received from Natick to supply the area on the western shore of Morses Pond. The availability of both local and regional water supply sources provides diversity and reliability.

WATER SOURCE ISSUES

The Massachusetts Department of Environmental Protection completed its Source Water Assessment Program (SWAP) Report for all of Wellesley's local water supply sources. Copies of this report are now available upon request by emailing dpw@wellesleyma.gov. The report is intended to be used as a planning tool to support local and state efforts to improve water supply protection. The assessment helps focus protection efforts on appropriate best management practices and drinking water source protection measures.

WHAT YOU CAN DO TO PROTECT AND CONSERVE WATER

Excessive lawn irrigation can deplete wetland environments and increase the potential of drawing contaminants to drinking water wells. Watering lawns less frequently and near dawn will contribute to both conservation and to a healthier lawn by encouraging deeper root growth and reducing fungal damage. A general rule of thumb is that a mature lawn needs less than one-inch of water per week, including rain. When constructing a new lawn, please consider the following:

- Provide 12 inches or more of organic soil to encourage deep rooting.
- Choose drought tolerant grass (high percentage of fine fescues) and plantings.
- Position the sprinkler heads to perform the most efficient watering.
- Consider drip irrigation where appropriate.
- Consider installation of a rain or soil moisture shut-off device that will automatically reduce unnecessary lawn watering.
- Be sure that your sprinkler system is equipped with the appropriate backflow prevention device. A pressure vacuum breaker is generally sufficient; however it must be located at least one foot above the highest sprinkler head.
- Be sure that the sprinkler system is designed for winterization without compressed air blowback into the house plumbing. (Many systems require an air compressor to dewater the system. A water shutoff valve should be located between the house plumbing and the backflow prevention device and an air-venting valve should be located strategically beyond the backflow prevention device).

WATER DISTRIBUTION SYSTEM

There are about 150 miles of street mains that distribute our water throughout the town to ensure the efficient and reliable delivery of potable water to our customers and the sufficient supply of water for fire protection. This distribution system also includes two large storage facilities that have a capacity of nearly six million gallons. Due to the configuration of the distribution mains and the storage facilities, water from any given supply source has the capability of reaching any point within the town.

WATER TREATMENT SYSTEM

Wellesley operates three water treatment facilities. The primary purpose of these facilities is to provide the regulatory approved treatment technique (TT) for corrosion control under the Safe Drinking Water Act's Lead and Copper Rule. These facilities provide the same treatment processes to all of our wells. Figure #1 illustrates the treatment processes at these facilities. The well water is oxidized and its pH is adjusted prior to filtration. The filter process removes the naturally occurring iron and manganese minerals in the raw water. The filtration units consist of anthracite, green sand and garnet sand. After filtration, the water cascades through a tray aerator, which removes naturally occurring carbon dioxide

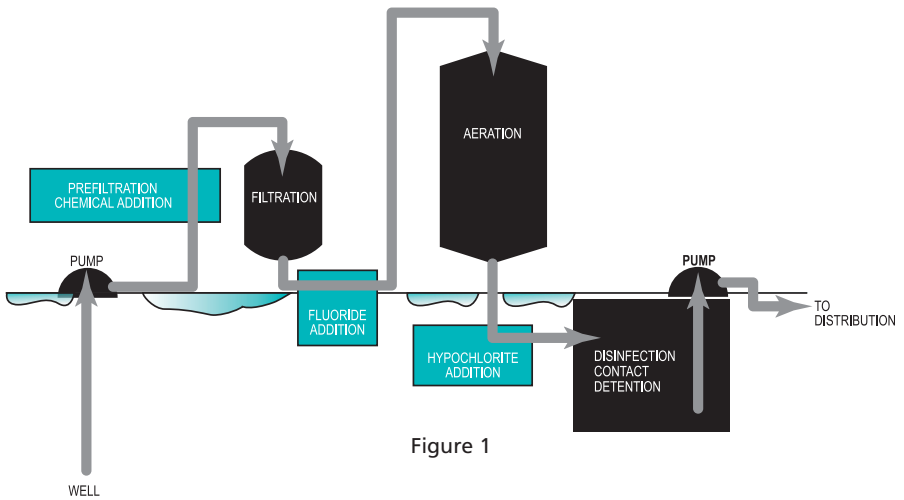


Figure 1

from the water. This aeration process removes the acidity from the water. The water is fluoridated and finally the water is disinfected with hypochlorite and detained in large holding tanks prior to being pumped into the distribution system.

SYSTEM IMPROVEMENTS

Our water system is routinely inspected by the Massachusetts Department of Environmental Protection (MassDEP). MassDEP inspects our system for its technical, financial, and managerial capacity to provide safe drinking water to you. The DEP conducted a sanitary survey of the Wellesley Water System in 2019. Their report listed no violations or deficiencies to be corrected. To ensure that we provide the highest quality of water available, your water system is operated by Massachusetts certified operators who oversee the routine operations of our system. As part of our ongoing commitment to you, in 2019 we made the following improvements to our system:

- The Morses Pond Wells 1R, 2R, 3R and 4 were cleaned and rehabilitated and four pumps and motors were installed.
- A new well pump, motor, and accessories were installed at the Rosemary well. The SW1 and SW3 well pumps at Wellesley Avenue were removed, cleaned and reinstalled.
- The Wellesley Avenue WTP finish water pump #2 and the Morses Pond WTP finish water pump #1 were inspected, repaired, and reinstalled.
- The master finish water meters at the Water Treatment Plants were tested and calibrated.
- The mechanical seals on MWRA Hegarty Water booster pump #1 were repaired.
- The advanced metering infrastructure (AMI) water meter change out project and the installation of the radio modules began.
- The light fixtures in the water treatment plants were changed out to LED fixtures with a grant from the Green Communities Act with assistance from the Sustainable Energy Committee.

ABBREVIATIONS & DEFINITIONS

The following abbreviations may be useful in reading this report:

ppm = parts per million

ppb = parts per billion (A ppm is 1,000 ppb.)

pCi/L = picoCuries per Liter (A pCi/L is a measure of radioactivity.)

NRS = No Regulatory Standard

ND = Not Detected

In reading this report, it is important to distinguish between ppm and ppb.

Due to the characteristics of the various chemicals, their concentrations have been reported in the more appropriate unit of measure.

The following definitions may be useful in understanding the data presented in this report:

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

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

Department of Environmental Protection (DEP): The Massachusetts State regulatory agency responsible for the implementation of the SDWA.

Environmental Protection Agency (EPA): The Federal agency responsible for the development of SDWA regulations.

Massachusetts Office of Research and Standards Guidelines (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.

Maximum Contaminant Level (MCL): The highest allowable level or concentration of a contaminant 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 Disinfection Level

(MRDL): The highest level of disinfectant (Chlorine, Chloramine, and Chlorine Dioxide) allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfection Level Goal

(MRDLG): The level of a drinking water disinfectant (Chlorine, Chloramine, Chlorine Dioxide) below which there is no expected risk to health. MDRLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Running Annual Average (RAA): The average of four consecutive quarters of data.

Safe Drinking Water Act (SDWA): The Federal Law that governs the regulation of public water suppliers and ensures that tap water meets public health standards.

Secondary Maximum Contaminant Level

(SMCL): These standards are developed to protect the aesthetic qualities of drinking water and are not health based.

Treatment Technique (TT): A required treatment process intended to reduce the level of a contaminant in drinking water.

Unregulated Contaminants: Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated monitoring is to assist EPA in determining their occurrence in drinking water and whether future regulation is warranted.

WELLESLEY WATER QUALITY

There were over 1,300 chemical analyses performed by independent laboratories on our water during the year 2019. In addition, our own staff performed more than 7,000 chemical analyses to ensure the proper operation of our treatment facilities. The categories of contaminants analyzed are: Microbiological, Lead and Copper, Inorganics, Volatile Organics, Disinfection By-Products, Radionuclides, Synthetic Organics, and Unregulated Contaminants.

The water quality information presented is from the most recent round of testing done in accordance with the regulations. All water quality parameters that were detected are for the last calendar year unless otherwise noted.

SAFE DRINKING WATER ACT MONITORING DETECTIONS

Disinfectant Residuals Monitoring: No Violations

It is important to maintain a disinfection residual content throughout the distribution system. Wellesley uses sodium hypochlorite (chlorine) as its disinfectant. The MWRA uses chloramine as its disinfectant. We monitor for the disinfectants as Total Chlorine at the same sampling points as our bacteriological monitoring. Total Chlorine is a measure of both free chlorine and combined chlorine and thereby is a measure of both chlorination and chloramination.

The monitoring results for the year 2019 are as follows:

Disinfectant	Highest Level Detected	Range of Results	Highest Level Allowed (MRDL)	Ideal Goal (MRDLG)
Total Chlorine (ppm)	3.3	0.02 to 3.3	4.0	4.0

The results of this monitoring were in compliance with regulations as the Maximum Residual Disinfectant Level was not exceeded throughout the year.

Total Coliform Bacteria Monitoring: No Assessments

Total Coliform Bacteria are groupings of various bacteria that serve as a monitoring indicator of a potential health concern of microbial contamination. Coliform are bacteria that are naturally present in the environment and are used as an indicator that other potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. The Revised Total Coliform Rule (RTCRR) includes a treatment technique trigger based on more than 5% positive sample measurements in the distribution system for any given month. The RTCRR requires water systems to conduct an assessment to “find and fix” any sanitary defects whenever a treatment technique trigger occurs.

The monitoring results for 2019 on our designated sampling points within the distribution system were as follows:

# of Samples Analyzed in 2019	=	521
# of Positive TC Samples in 2019	=	1
# of Positive E. Coli Samples in 2019	=	0
Highest # of Positives per Month	=	1
Highest Monthly % Positives in 2019	=	2.1%

The water samples were taken at designated distribution system sampling points (i.e., nine locations widely distributed throughout the Town that are monitored approximately four times per month). When there is a total coliform positive sample result, repeat samples must be collected and analyzed for total coliform and E. coli. E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. There were no positive E. Coli samples and one distribution system positive TC sample.

Lead and Copper Monitoring: No Violations

The purpose of our corrosion control treatment facilities is to remove acidity from our water and thereby reduce its corrosiveness. The Treatment Technique (TT) used in our water treatment facilities primarily includes the aeration of water to release the naturally derived carbonic acid in the well water. Lead and copper can become present in your drinking water when the water corrodes those elements from the household plumbing. The measurement of lead and copper in the daily “first draw” of tap water from selected households is used to monitor the effectiveness of our corrosion control treatment.

In the year 2019, Wellesley conducted lead and copper monitoring in Schofield and Upham schools, with first draw samples at a hydration station and a sink in each school. No results exceeded the AL for either lead or copper.

School Lead & Copper Monitoring in 2019

	Highest Concentration, ppm	Range of Detection, ppm	Action Level, ppm
Total Lead	0.002	ND - 0.002	0.015
Total Copper	0.09	0.06 - 0.09	1.3

In the year 2018, Wellesley conducted a monitoring of 32 DEP designated homes for “first draw” analyses of lead and copper as an evaluation of its corrosion control treatment. The monitoring was conducted in July and August according to EPA protocol. The EPA Action Level (AL) is based on the 90th percentile of each sample period. The results of this monitoring were as follows:

Compound	Date(s) Collected	90 th percentile	Action Level	MCLG	# of sites sampled	# of sites above Action Level	Possible Source of Contamination
Lead (ppb)	July and August 2018	4	15	0	32	0	Corrosion of household plumbing systems; Erosion of natural deposits
Copper (ppm)	July and August 2018	0.7	1.3	1.3	32	0	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives

The results of this monitoring are in compliance with the regulations.

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 Wellesley DPW is responsible for providing high quality 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>.

Additional information is available from the Safe Drinking Water Hotline 1-800-426-4791 or the Wellesley DPW 781-235-7600 x3350.

Volatile Organic Contaminant Monitoring: No Violations

Volatile Organic Contaminants (VOCs) are a group of chemicals that contain carbon and readily evaporate. Many of them are used as solvents (e.g., Trichloroethylene) and/or fuel additives (e.g., Benzene, toluene and MtBE). A total of fifty-six (56) volatile organic compounds are monitored quarterly as water is pumped from each of the three treatment facilities.

Our quarterly monitoring at each of our three water treatment facilities during 2019 measured no volatile organic compounds except for trihalomethanes, which are discussed in the next section of this report.

Disinfection By-Product Monitoring: No Violations

Total Trihalomethanes (TTHMs) and Total Haloacetic Acids (THAAs) are disinfection by-products that are formed by the chlorination of drinking water. The chemical compounds that make up TTHMs are chloroform, bromoform, dichlorobromomethane, and dibromochloromethane. The chemical compounds that make up THAAs are monochloroacetic acid, dichloroacetic acid, trichloroacetic acid, monobromoacetic acid, and dibromoacetic acid. The regulation of TTHMs and THAAs is based on the average concentration of four consecutive quarterly samples at each individual monitoring location. Wellesley has four DEP designated DBPR monitoring locations. The results of our quarterly monitoring of these disinfection by-products during 2019 were as follows:

Contaminants (units)	Highest* Running Annual Average	Range of Measurement	Highest Level Allowed (MCL)	Ideal Goal (MCLG)
TTHMs (ppb)	45.3	18.4 to 49.7	80	0
THAAs (ppb)	10.9	4.4 to 11.7	60	0

The above listings for TTHMs and THAAs follow the regulatory format, namely, the MCL applies to the highest running average of four consecutive quarters at the highest individual site. The Range of Measurement represents the lowest and highest individual measurements during the year 2019. The Highest Level Allowed is regulated based on the Running Annual Average.

Inorganic Contaminant Monitoring: No Violations

We were not required to monitor for inorganics in the year 2019, but were required to monitor for Perchlorate in 2019. The inorganic contaminants monitored in drinking water are the cations and anions of minerals, which are dissolved in the water. Many of the inorganic chemicals are metals and they also include cyanide. The following chemicals were monitored in the year 2017 as part of the SDWA Inorganic Chemical Monitoring Program and not detected: Antimony, Arsenic, Beryllium, Cadmium, Chromium, Cyanide, Mercury, Nickel, Selenium, and Thallium.

The inorganic chemicals detected in 2017 and their measurements were as follows:

Contaminants (units)	Highest Level Detected	Range of Detection	Highest Level Allowed (MCL)	Ideal Goal (MCLG)
Barium (ppm)	0.078	0.046 to 0.078	2.0	2.0
Sodium (ppm)	124	88 to 124	NRS	NRS
Fluoride (ppm)	0.8	0.6 to 0.8	4.0	4.0
Perchlorate* (ppb)	0.22	ND to 0.22	2.0	NRS

*Perchlorate is a naturally occurring and man-made anion and is also a breakdown product of hypochlorite. Wellesley uses hypochlorite (chlorine) as its water disinfectant.

Barium is from the erosion of natural deposits or could be from the discharge of drilling wastes or from metal refineries.

Sodium is a leachate of road deicing salts, water treatment chemicals, and natural deposits. No regulatory standard (NRS) has been established for sodium. **A guideline for people with hypertension is to avoid consuming water with levels above 20 ppm. Therefore it should be noted that our water is in excess of this guideline.**

Fluoride is added to our water supply for the purpose of preventing tooth decay. Fluoride is a naturally occurring element in our water supplies in trace amounts. In our system the fluoride level is adjusted to an optimal level averaging 0.7 parts per million (ppm or mg/l) to improve oral health in children. At this level, it is safe, odorless, colorless, and tasteless.

Radionuclide Monitoring: No Violations

Radionuclides are radioactive particles present in the water supply at the points of entry into the distribution system from our three water treatment facilities. Radionuclide monitoring includes Gross Alpha, Radium 226 and 228, and combined Radium. Radium 226 and 228 are naturally occurring radioactive minerals. We were not required to monitor for radionuclides in the year 2019. The results from 2014 are as follows:

Contaminants (units)	Highest Level Detected	Range of Detection	Highest Level Allowed (MCL)	Ideal Goal (MCLG)
Gross Alpha (pCi/L)	3.35	2.32 to 3.35	15.0	0.0
Radium-226 (pCi/L)	0.09	0.02 to 0.09	5.0	0.0
Radium-228 (pCi/L)	0.92	0.17 to 0.92	5.0	0.0
Combined Radium (pCi/L)	0.99	0.26 to 0.99	5.0	0.0

There is presently no regulatory standard (NRS) for radon in drinking water. Radon is a radioactive gas that occurs naturally in some ground waters. It has an ORSG of 10,000 pCi/L. Other sources of radon gas are from soils at the foundation of homes, and radon inhaled directly while smoking cigarettes. It poses a lung cancer risk when elevated levels of radon gas are released from water into the air (as occurs during showering, bathing, or washing dishes and clothes) and a stomach cancer risk when you drink water containing elevated levels of radon. Radon gas released from drinking water is a relatively small part of the total radon in air.

A proposed MCL for radon in drinking water of 300 pCi/L is under consideration by the EPA. For more information on radon you may call the EPA's SDWA Hotline at 1-800-426-4791.

Synthetic Organic Contaminant Monitoring: No Violations

We were not required to monitor for inorganics in the year 2019. Synthetic Organic Contaminants (SOCs) generally represent pesticides, herbicides and polychlorinated biphenols (PCBs). There are a total of thirty-two (32) regulated chemicals and thirteen (13) unregulated chemicals included in the monitoring of Synthetic Organic Chemicals. In 2018, Wellesley monitored for SOC's during the first and third annual quarters. None of the SOC's were detected during these two monitoring rounds. Due to Wellesley's long term compliance with the Safe Drinking Water Act's Synthetic Organic Contaminants requirements, we are not required to monitor every year.

Nitrate Monitoring: No Violations

Nitrate was monitored in 2019 and Nitrite was monitored in 2017. Nitrate and Nitrite are formed from the breakdown of fertilizers, septic tank leachate, and natural decomposition. Sulfate was also monitored in 2019. All were done under the SDWA and detections were as follows:

Contaminants (units)	Highest Level Detected	Range of Detection	Highest Level Allowed (MCL)	Ideal Goal (MCLG)
Nitrate (ppm)	1.4	0.5 to 1.4	10.0	10.0
Nitrite (ppm)	ND	ND	1.0	1.0
Sulfate (ppm)	14.6	11.0 to 14.6	NRS	NRS

Sulfate is a product of natural decomposition. No regulatory standard (NRS) has been established for sulfate. One is currently under consideration by the EPA. The SMCL for sulfate is 250 ppm.

Samples for nitrate taken in 2019 show our water met drinking water standards.

MONITORING OUTSIDE OF SAFE DRINKING WATER ACT

GENERAL WATER CHARACTERISTICS

The following characteristics describe Wellesley's 2019 local water supplies. They are not considered to have health impacts, but rather describe characteristics of the water, which may impact water-use appliances and soap lathering capabilities. It is important to note that the MWRA's water supplies are significantly softer than Wellesley's water and therefore have different characteristics.

Characteristic	Concentration Range (units)
pH	7.3 to 7.5
Total Dissolved Solids	420 to 480 (ppm)
Alkalinity	69 to 94 (ppm)
Calcium	30 to 35 (ppm)
Chloride	170 to 212 (ppm)
Hardness	108 to 121 (ppm)
Hardness	6.3 to 7.1 grains per gallon
Iron	ND (ppm)
Magnesium	8.1 to 8.3 (ppm)
Manganese	ND
Potassium	16.1 to 39.1 (ppm)

The above characteristics are for Wellesley's supplies only. For comparison purposes, the pH of MWRA water is typically above 8 units; the MWRA's total dissolved solids are about a quarter of Wellesley's; its alkalinity is about half of Wellesley's; and its hardness is about an eighth of Wellesley's.

UNREGULATED CONTAMINANT MONITORING RULE 3 (UCMR 3)

The UCMR program was developed in coordination with the Contaminant Candidate List (CCL). The CCL is a list of contaminants that are not regulated by the National Primary Drinking Water Regulations, are known or anticipated to occur at public water systems and may warrant regulation under the Safe Drinking Water Act.

The UCMR benefits the environment and public health by providing EPA and other interested parties with scientifically valid data on the occurrence of these contaminants in drinking water, permitting assessment of the population being exposed and the levels of exposure. This data set is one of the primary sources of occurrence and exposure information the Agency uses to develop regulatory decisions for emerging contaminants. The 21 contaminants monitored do not have a drinking water standard set by US Environmental Protection Agency.

We were not required to monitor for the UCMR program in the year 2019. The unregulated contaminants detected in 2014 and their measurements were as follows:

Contaminants (units)	Avg. Level Detected	Range of Detection	Typical Source
Chromium (total) (ppb)	0.21	ND to 0.35	Erosion of natural deposits
Strontium (ppb)	180	35 to 229	Erosion of natural deposits
Chromium-6 (ppb)	0.08	ND to 0.12	Erosion of natural deposits
Chlorate (ppb)	86	34 to 158	Byproduct of drinking water disinfection

For more information you may refer to the UCMR3 Data Summary at <http://water.epa.gov/lawsregs/rulesregs/sdwa/ucmr/data.cfm>.

REGULATORY STATEMENT ON IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Availability of Monitoring Data for Unregulated Contaminants for Wellesley Department of Public Works

As required by US Environmental Protection Agency (EPA), our water system has sampled for a series of unregulated contaminants. Unregulated contaminants are those that don't yet have a drinking water standard set by EPA. The purpose of monitoring for these contaminants is to help EPA decide whether the contaminants should have a public health protection standard.

What should I do? You do not have to do anything but as our customers you have a right to know that these data are available.

You may share this information with other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, food establishments, medical facilities and businesses).

For more information: For information on the Unregulated Contaminant Monitoring Program, visit the MassDEP website (<http://www.mass.gov/eea/agencies/massdep/water/drinking/water-systems-ops.html>) and navigate to Unregulated Contaminant Monitoring Program.

If you want to speak with someone at the water department about the results, please contact the Wellesley DPW at 781-235-7600 x3350.

Cross-Connection Control and Backflow Prevention

What Is a Cross Connection? What Can I Do about It?

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 Wellesley Water and Sewer Division 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 systems cross connection program, please contact William Shaughnessy at 781-235-7600.

REGULATORY EDUCATIONAL STATEMENTS

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.

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 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 storm water 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 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 can also come from gas stations, urban storm water runoff, and septic systems.
- **Radioactive contaminants**, which can be naturally occurring or be the result of oil and gas production and mining activities.

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 1-800-426-4791.

In order to ensure that tap water is safe to drink, the Department of Environmental Protection (MassDEP) 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.

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. Wellesley DPW 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>.

ADDITIONAL INFORMATION

The Water Commission for the Town of Wellesley is the Board of Public Works, which is a three-member board elected by the voters of the Town. The Board meets at regularly scheduled and publicly posted meetings throughout the year. The public is welcome at these meetings.

For more information on the DEP Source Water Assessment Plan (SWAP) go to <http://www.mass.gov/eea/docs/dep/water/drinking/swap/nero/swap-nero.pdf>. For more information on your Wellesley tap water, its sources of supply and the water treatment and distribution systems call the Water Superintendent, William Shaughnessy, at (781) 235-7600 x 3350 and located at 20 Municipal Way. For more information on the MWRA water supply go to <http://www.mwra.com>.



Massachusetts Water Resources Authority

(617) 242-5323
www.mwra.com
 PWS ID# 6000000

100 First Avenue
 Boston, MA 02129

INFORMATION ABOUT MWRA WATER

In cooperation with the Wellesley Water Department, the Massachusetts Water Resources Authority is pleased to send you this annual update on your drinking water quality. This report includes test results for 2018 and other important information about your tap water. The Massachusetts Water Resources Authority (MWRA) supplies wholesale water to local water departments in 48 cities and towns of greater Boston and MetroWest, and three in Western Massachusetts. MWRA supplies about 32% of the water to Wellesley in 2018, with the remainder coming from local supplies described elsewhere in this report. MWRA water comes from Quabbin Reservoir, about 65 miles west of Boston, and Wachusett Reservoir, about 35 miles west of Boston. Water from the Ware River, located between these two reservoirs, can also add to the supply at times. The reservoirs provide about 200 million gallons of high quality water to consumers each day.

Water Test Results

What does this table tell me? What is the bottom line?

EPA requires that we test for over 120 contaminants. MWRA found only those listed here. All of these levels were below EPA's Maximum Contaminant Levels (MCL).

Compound	Units	(MCL) Highest Level Allowed	(We Found) Detected Level -Average	Range of Detections	(MCLG) Ideal Goal	Violation	How it Gets in the Water
Barium	ppm	2	0.010	0.01-0.011	2	No	Common mineral in nature
mono-Chloramine	ppm	4-MRD L	2.08	0-0.38	4-MRD LG	No	Water disinfectant
Fluoride	ppm	4	0.69	0.1-0.83	4	No	Additive for Dental Health
Nitrate^	ppm	10	0.145	0.04-0.145	10	No	Atmospheric deposition
Total Trihalomethanes	ppb	80	27.6	8.49-25.6	NS	No	Byproduct of water disinfection
Haloacetic Acids -5	ppb	60	18.6	4.9-19.8	NS	No	Byproduct of water disinfection
Total Coliform	%	5%	1.4% (Sept)	ND-1%	NS	No	Naturally present in environment

KEY: **MCL** = Maximum Contaminant Level - The highest level of a contaminant allowed in water. MCLs are set as close to the MCLGs as feasible using the best available technology. **MCLG** = Maximum Contaminant Level Goal - The level of contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety. **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. **MRDLG** = Maximum Residual Disinfectant Level Goal - The level of a drinking water disinfectant below which there is no known or expected health risk. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination. **ppb** = parts per billion, **ppm** = parts per million; **pCi/L** = picoCurie per liter, **nd** = no detect, **ns** = no standard
 ^ As required by DEP, maximum results are reported for nitrate and nitrite, not the average. *Result from 2014.

More Information

If you would like to learn more about the water that MWRA supplies, about other MWRA activities and projects, about MWRA meetings that are open to the public, or for information on lead in tap water, please visit our web-site at www.mwra.com. If you have any questions, please call 617-242-5323. Thanks for reading.