

Annual Drinking Water Quality Report for 2017  
 For  
 Whitinsville Water Company & Northbridge Water Department  
 Whitinsville, Massachusetts  
 MASSDEP PWSID # 2216000 & 2216006

This report is a snapshot of drinking water quality that we provided last year. Included are details about where your water comes from, what it contains, and how it compares to state and federal standards.

**I. PUBLIC WATER SYSTEM INFORMATION**

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**Water 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. To ensure that we provide the highest quality of water available, your water system is operated by a Massachusetts certified operator who oversees the routine operations of our system. As part of our ongoing commitment to maintain and improve our infrastructure, last year we made the following improvements to our system: In 2017, we installed 3,000 feet of new water main on Church Street. We also installed about a dozen new valves in the system to provide better system operations. We purchased two new fuel efficient fleet vehicles to replace old vehicles. We installed a new high efficiency motor for our well station to improve electrical efficiencies. In 2018, we plan to install another 3,000 feet of new water mains on East, Johnston, Willow, Brook, and Briggs Streets. Additionally, we plan to install more valves in the system to continue to improve our distribution system. We also plan to install more efficient motors at some facilities to continue to improve our energy efficiency. And we are developing a cybersecurity program to protect our facilities from these threats. And lastly, we plan to migrate to monthly billing this year for all water customers. We continue to invest in our system to make our water system strong and reliable for future generations.

**2. YOUR DRINKING WATER SOURCE**

**Where Does My Drinking Water Come From?**

*Your water is provided by the following sources listed below:*

Source Name	MassDEP Source ID#	Source Type	Location of Source
Whitin Wellfield	2216000-01G	Groundwater	Carr St., Northbridge
Sutton Wellfield	2216000-02G	Groundwater	Mendon Rd., Sutton

**Is My Water Treated?**

Our water system makes every effort to provide you with safe and pure drinking water. To improve the quality of the water delivered to you, we provide the following treatment:

- *We add a disinfectant to protect you against microbial contaminants.*
- *We filter the water to remove small particles and organisms such as sediment, algae and bacteria.*
- *We chemically treat the water to reduce corrosiveness and reduce lead and copper concentrations.*

Our water system makes every effort to provide you with safe and pure drinking water. The water quality of our system is constantly monitored by us and MassDEP to determine the effectiveness of existing water treatment and to determine if any additional treatment is required. We continually meet numerous water quality standards set by the MassDEP. Results of some of these tests are noted below.

### How Are These Sources Protected?

Whitinsville Water Company has unique water sources in that the company owns a series of reservoirs that are used to recharge the groundwater from where the wells withdraw the water from the ground. These reservoirs are extremely well protected as the company owns over a thousand acres of land dedicated to watershed protection. MassDEP has prepared a Source Water Assessment Program (SWAP) Report for the water supply source(s) serving this water system. The SWAP Report assesses the susceptibility of public water supplies. A copy of the report can be found at <http://www.mass.gov/eea/docs/dep/water/drinking/swap/cero/swap-cero.pdf>.

## 3. GENERAL SUBSTANCES FOUND IN TAP WATER AND TESTED

Sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals, and in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

**Microbial contaminants** -such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

**Inorganic contaminants** -such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial, or domestic wastewater discharges, oil and gas production, mining, and farming.

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

**Organic chemical contaminants** -including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

**Radioactive contaminants** -which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the Department of Environmental Protection (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. All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and some infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/Centers for Disease Control and Prevention (CDC) guidelines on lowering the risk of infection by cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

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. Whitinsville Water Company 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. Whitinsville Water Company regularly tests for lead in drinking water and testing has met state and federal standards. 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>.

#### 4. IMPORTANT DEFINITIONS

**Maximum Contaminant Level (MCL)** – The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

**Maximum Contaminant Level Goal (MCLG)** –The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

**Maximum Residual Disinfectant Level (MRDL)** -- The highest level of a disinfectant (chlorine, chloramines, chlorine dioxide) allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

**Maximum Residual Disinfectant Level Goal (MRDLG)** -- The level of a drinking water disinfectant (chlorine, chloramines, chlorine dioxide) below which there is no known or expected risk to health. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.

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

**90<sup>th</sup> Percentile** – Out of every 10 homes sampled, 9 were at or below this level.

- ppm = parts per million, or milligrams per liter (mg/l)
- ppb = parts per billion, or micrograms per liter (ug/l)
- ppt = parts per trillion, or nanograms per liter
- pCi/l = picocuries per liter (a measure of radioactivity)
- NTU = Nephelometric Turbidity Units
- ND = Not Detected
- N/A = Not Applicable
- mrem/year = milliremms per year (a measure of radiation absorbed by the body)

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

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

#### 5. WATER QUALITY TESTING RESULTS

**What Does This Data Represent?**

The water quality information presented in the table(s) is from the most recent round of testing done in accordance with the regulations. All data shown was collected during the last calendar year unless otherwise noted in the table(s).

	Date(s) Collected	90 <sup>TH</sup> percentile	Action Level	MCLG	# of sites sampled	# of sites above Action Level	Possible Source of Contamination
Lead (ppb)	2015	1.9	15	0	60	0	Corrosion of household plumbing systems; Erosion of natural deposits
Copper (ppm)	2015	0.36	1.3	1.3	60	0	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives

Regulated Contaminant	Date(s) Collected	Highest Result or Highest Running Average Detected	Range Detected	MCL or MRDL	MCLG or MRDLG	Violation (Y/N)	Possible Source(s) of Contamination
<b>Inorganic Contaminants</b>							
Barium (ppm)	May 2014	0.02	0-0.02	2	2	N	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Nitrate (ppm)	May 2017	0.47	0.1-0.47	10	10	N	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits
<b>Disinfectants and Disinfection By-Products</b>							
Total Trihalomethanes (TTHMs) (ppb)	<i>Quarterly</i>	14.9	5.46-14.9	80	-----	N	Byproduct of drinking water chlorination
Haloacetic Acids (HAA5) (ppb)	<i>Quarterly</i>	10	3.17-10	60	-----	N	Byproduct of drinking water disinfection
Chlorine (ppm) (free)	<i>Monthly</i>	0.764 (ave)	0.03-1.51	4	4	N	Water additive used to control microbes
<b>Radioactive Contaminants</b>							
Radium 226 & 228 (pCi/L) (combined values)	April 2016	0.5	0.5	5	0	N	Erosion of natural deposits
Gross Alpha (pCi/L)	April 2016	1.6	0.04-1.6	15	0	N	Erosion of natural deposits

Unregulated contaminants are those for which there are no established drinking water standards. Secondary Contaminants are non-health based standards.

Unregulated and Secondary Contaminants	Date(s) Collected	Result or Range Detected	Average Detected	SMCL	ORSG	Possible Source
<b>Inorganic Contaminants</b>						
Sodium (ppm)	May 2017	6.8	6.8	----	20	Natural sources; runoff from use as salt on roadways; by-product of treatment process
<b>Secondary Contaminants</b>						
Iron (ppm)	<i>2017</i>	0 - 0.065	0.0065	0.3	---	Naturally occurring, corrosion of cast iron pipes
Manganese (ppm)	<i>2017</i>	0 - 0.009	0.008	0.05	---	Erosion of natural deposits
Total Hardness (ppm)	<i>April 2015</i>	8.1 - 40	24.05	----	---	Erosion of natural deposits
Potassium (ppm)	<i>April 2015</i>	7.7 - 21	14.35	----	---	Naturally present in the environment

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

## 6. COMPLIANCE WITH DRINKING WATER REGS

### Does My Drinking Water Meet Current Health Standards?

We are committed to providing you with the best water quality available. Every year we conduct hundreds of water quality tests at the sources and in the system. We are pleased to report that there was not a single violation of state health standards for all the tests performed.

## 7. NOTIFICATION OF MISSED WATER TEST

As noted above, we collect many different samples which are required to be collected on my different schedules. One of which are called Total Trihalomethanes and Haloacetic Acids. These are collected quarterly at state approved locations in the distribution system. We collect three samples each quarter for these contaminants. These contaminants are a product of disinfecting the water and the levels must be within allowable standards. Are test results have always been far below the allowable levels, so there is no concern from a health standpoint (see results in table above). However, because we missed one of the four quarters of testing (4<sup>th</sup> Qtr 10/1-12/31) in 2017, we are required to post this information in our annual report. You do not have to do anything, this is simply notifying you of the missed test. We are continuing to monitor quarterly for these parameters in 2018 and results remain well below allowable levels. State regulations require that specific language be in this notification as follows: *We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During 10/1/18 to 12/31/18 we did not monitor or test for Total Trihalomethanes and Haloacetic Acids and therefore cannot be sure of the quality of our drinking water during that time. Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.*

## 8. WATER RESTRICTIONS

In accordance with the requirements of the Water Management Act Permit issued by the Massachusetts Department of Environmental Protection the Whitinsville Water Company has enacted Mandatory Water Use Restrictions from May 1<sup>st</sup> until September 30<sup>th</sup> between the hours of 9AM and 5PM. The restriction prohibits all non-essential outdoor water use during this timeframe.

Examples of "Nonessential" outdoor water uses include:

- \* irrigation of lawns via sprinklers or automatic irrigation systems;
- \* washing of vehicles, except in a commercial car wash or as necessary for operator safety; and
- \* washing of exterior building surfaces, parking lots, driveways or sidewalks, except as necessary to apply surface treatments such as paint, preservatives, stucco, pavement or cement.

Examples of water uses that may be allowed:

- \* irrigation to establish a new lawn and new plantings during the months of May and September;
- \* irrigation of public parks and recreational fields by means of automatic sprinklers outside the hours of 9 a.m. to 5 p.m.; and
- \* irrigation of lawns, gardens, flowers and ornamental plants by means of a hand-held hose.

Examples of water uses NOT subject to mandatory restrictions:

- \* for health and safety reasons;
- \* by regulation;
- \* for the production of food and fiber;
- \* for the maintenance of livestock; or
- \* to meet the core functions of a business (for example, irrigation by golf courses as necessary to maintain tees, greens, and limited fairway watering, or irrigation by plant nurseries as necessary to maintain stock).

Violators of the water restrictions will be subject to enforcement, which may include termination of water service.

## 9. CROSS CONNECTION

One of the many activities water suppliers concern themselves with is preventing non potable materials from entering the water supply once the water is in the distribution system. Under certain conditions, it is possible for water to flow from inside a building back into the distribution system and contaminate the water supply. In an

effort to prevent such an event from occurring, certain devices are installed as part of the plumbing system which only allows water to flow into a building. These devices are known as “back flow preventers.” They are commonly referred to as “check valves.”

The WWC installs check valves on all new houses immediately after the meter. Homes constructed prior to the early 1980’s do not have check valves. Most commercial buildings, schools, fire sprinkler lines and offices have been surveyed and specific backflow devices have been installed where required. The more advanced back flow prevention devices are required to be tested by the WWC at least once per year to ensure proper operation.

Homeowners should be aware of the potential dangers associated with backflow occurrences for the safety of the occupants of the house as well as the neighbors. The following are actions which can be taken to reduce the possibility of contaminated water entering the water system:

- Install “hose bib” type backflow preventers on all outside faucets. They are inexpensive, easy to install and available at all plumbing stores.
- Do not leave a hose submerged in a pool or bucket of water.
- Never use mechanical equipment to add pressure to the water unless the proper back flow prevention devices are installed.
- All irrigation systems are required to have an Atmospheric Backflow Preventer.

## 10. WATER CONSERVATION

- ✓ Many lawns are over-watered. Over watering floods the air pores in the soil, depriving the roots of oxygen and leading to root rot. Over-watering also leads to shallow-rooted plants and the spread of fungal growth on the grass. Horticulturists recommend that lawns should get no more than 1 inch of water per week, including rainfall.
- ✓ DO NOT water in the middle of the day – more than fifty percent of irrigation water can be lost to evaporation in the heat of the day. Water your lawn in the early morning when more of the water will be absorbed by the roots, and the grass blades will dry more quickly. Watering is not allowed from 9am to 5pm.
- ✓ When re-seeding or establishing lawns, use grass seed that is drought and disease-resistant. It may cost a bit more, but will save you lots of time and money in the long run. Check with your local nursery for appropriate mixes.
- ✓ Minimize the size of your lawn – there are numerous water conserving landscaping alternatives.
- ✓ Mow your lawn no shorter than 2.5 inches to promote its vigor and to discourage weeds.
- ✓ Leave the cuttings on the lawn, they help retain moisture and provide valuable nutrients.
- ✓ Remember that lawns that go brown in the heat of summer are not dead, they are just dormant and will green up as soon as moister weather returns.
- ✓ Follow the Whitinsville Water Company’s lawn watering restrictions. This will reduce peak demand and help prevent a total watering ban.
- ✓ For more information regarding water conservation, please visit our website at <http://www.whitinsvillewater.com/conservation>.

## 11. WATER FACTS

If you look at your water bill and calculate it out, your tap water costs about 1 or 2 pennies per gallon. This is an incredibly low cost to have potable water delivered right to your home. The National Resource Defense Council conducted a four year study on bottled water and tap water and concluded that “*there is no assurance that just because water comes out of a bottle it is any cleaner or safer than water from the tap*”. The full report can be found here: <https://www.nrdc.org/sites/default/files/bottled-water-pure-drink-or-pure-hype-report.pdf>.

# NEW INFORMATION FOR 2018 ABOUT YOUR DRINKING WATER

## Whitinsville Water Company Did Not Meet Treatment Requirements

Our water system recently violated a drinking water standard. Although this situation does not require that you take immediate action, as our customers, you have a right to know what happened, what you should do, and what we are doing to correct this situation.

In order to ensure proper disinfection, water in the treatment plant must be in contact with chlorine or a similar disinfectant for a minimum amount of time. On June 7<sup>th</sup> and 9<sup>th</sup> 2018, this did not occur.

Although chlorine quickly kills most bacteria, it is less effective against organisms such as viruses and parasites. For this reason, water needs to mix with chlorine for a longer time period to kill such organisms. The amount of time necessary, or the “contact time,” depends on the amount of disinfectant in the water and the temperature of the water. Additionally, on June 9<sup>th</sup> 2018, disinfectant levels dropped below 0.2 milligrams per liter for eight hours. The standard is that levels may not drop below 0.2 for more than four hours.

### What should I do?

- **You do not need to boil your water or take other corrective actions.** However, if you have specific health concerns, consult your doctor.
- People with severely compromised immune systems, infants, and some elderly may be at increased risk. These people should seek advice about drinking water from their health care providers. General guidelines on ways to lessen the risk of infection by microbes are available from EPA’s Safe Drinking Water Hotline at 1 (800) 426-4791.

### What does this mean?

This situation does not require that you take immediate action. If it had been, you would have been notified immediately. Tests taken during this same time period did not indicate the presence of bacteria in the water.

*Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.*

These symptoms, however, are not caused only by organisms in drinking water, but also by other factors. If you experience any of these symptoms and they persist, you may want to seek medical advice.

### What happened? What is being done?

There was a chlorine pump failure at our Sutton treatment facility in conjunction with a faulty analyzer that did not notify our operator. This caused a period where the chlorine levels leaving this treatment plant were below required standards. We still maintained proper levels in the distribution system as the other facility was producing properly chlorinated water.

We have repaired the chlorine pump and contacted our instrumentation vendor to repair the chlorine analyzer.

For more information, please contact Randy Swigor at 508-234-7358 or [info@whitinsvillewater.com](mailto:info@whitinsvillewater.com).

*Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.*

This notice is being sent to you by Whitinsville Water Company. PWS ID#: 2216000  
Date distributed: Week of 6/11/18