

Water Quality/ Consumer Confidence Report
(for calendar year 2019)

Georgetown Water Department
Georgetown, Massachusetts
MASSDEP PWSID # 3105000

This report is a snapshot of the drinking water quality that we provided during the calendar year **2019**. Included are details about where your water comes from, what it contains, and how it compares to state and federal standards. We are committed to providing you with this information because informed customers are our best allies.

Mission statement

The Georgetown Water Department (GWD) strives to operate and maintain the municipal water system cost-effectively; while providing a safe, abundant water supply to residents and businesses for their daily needs and fire protection. Rates are established and reviewed regularly to ensure that anticipated operating costs, emergency system repairs, and necessary capital improvements can be funded with a fiscally-responsible approach.

Water System

The town of Georgetown is a ground water system comprised of three wells which are blended together and treated at the West Street Treatment Plant (WTP). Georgetown Water Department (GWD) utilizes a pressure filtration process at the WTP to remove iron and manganese. This process is enhanced by raising the pH level of the source water at each of our three wells using Potassium Hydroxide feed systems. The three wells are piped together before they enter the WTP. Two oxidants, Sodium Hypochlorite and Potassium Permanganate, are added to promote iron and manganese precipitation so their particulate form can be captured through pressure filtration. The finished water is chlorinated a second time, for disinfection, and pH adjusted for pipe corrosion control prior to entering the distribution system. The elevated pH helps to control corrosion not only in the ductile iron and cast-iron water mains, but also in the copper water lines and plumbing systems in your homes. Pressure filters are backwashed every 1 -2 days to restore their filtering capacity. Filtered particulate iron and manganese are discharged in concentrated water to lagoons/drying beds. Yearly these lagoons are cleaned and their dried residuals are properly disposed of in accordance with DEP regulations.

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 treat it to remove several contaminants.

- We chemically treat and filter the water to reduce levels of iron and manganese.
- 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 pH balance to reduce possible lead and copper leaching from household plumbing.

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.

To improve the quality of the water further, our system is working on a pilot test to incorporate a new non chemical, natural biological method of filtering source water iron and manganese which hopes to enhance the effectiveness of our aging filter plant. Watch for updates in the coming months on our website.

Water System Improvements

Our water system is routinely inspected by the Massachusetts Department of Environmental Protection (MassDEP) 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 Massachusetts certified operators who oversee and maintain our system. As part of our ongoing commitment to you, last year we made the following improvements to our system: We removed an aged, failing, concrete water storage tank from 1963 and built a new steel elevated tank replacing the original elevated tank from 1936. A new Marshall well has been installed (to replace an under producing well of its same name) and hopes to deliver water for many years to come. And lastly a Sanitary Survey which is an on-site review of the entire water system including its sources, facilities, equipment, operations and maintenance as well as business operations of the water supply was completed July 2019 with no violations noted.

Opportunities for Public Participation

If you would like to participate in discussions regarding your water quality, you may attend the monthly Board of Water Commissioners' meeting. Agenda postings with meeting information may be found on the Water Dept. and Town websites or at postings at each office.

Source water protection

Georgetown has a source water head protection program in place to ensure the preservation of our groundwater. Mapping of various zoning laws can be viewed @ <https://www.georgetownma.gov/> by way of the Planning Depts MIMAPS - DEP well head 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. The complete SWAP report is available online at <https://www.mass.gov/service-details/the-source-water-assessment-protection-swap-program>.

For more information, call the *Water dept office @ 978-352-5750*

A susceptibility ranking of *high* was assigned to this system using the information collected during the assessment by MassDEP. But Georgetown has purchased over 200 acres of undeveloped land in order to maintain control of activities around its water shed.

Georgetown Residents can also protect our sources by:

- o Not throwing hazardous materials into toilets or sinks
- o Pumping out your septic system on a regular basis (annually)
- o Picking up animal waste and disposing of it properly
- o Taking hazardous household chemicals to hazardous materials collection days
- o Limiting pesticide and fertilizer
- o Returning used motor oil to stores that sell the product (call ahead for store participation)

DEP-Required Educational Information

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. The Georgetown Water Department 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>.

Water Quality Results

The water quality information presented in the table 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.

	Date(s) Collected	90 TH percentile	Action Level	MCLG	# of sites sampled	# of sites above Action Level	Possible Source of Contamination
Lead (ppb)	8/8/19-8/15/19	4	15	0	20	0	Corrosion of household plumbing systems; Erosion of natural deposits
Copper (ppm)	8/8/19-8/15/19	0.66	1.3	1.3	20	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
Inorganic Contaminants							
Nitrate (ppm)	5/10/19	0.2	N/A	10	10	N	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits

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
Nitrite (ppm)	5/10/19	N/A	N/A	1	1	N	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits
Perchlorate (ppb)	7/19/19	0.1	N/A	2	N/A	N	Rocket propellants, fireworks, munitions, flares, blasting agents
Disinfectants and Disinfection By-Products							
Total Trihalomethanes (TTHMs) (ppb)	Quarterly	45.3	31-54.2	80	N/A		Byproduct of drinking water chlorination
Haloacetic Acids (HAA5) (ppb)	Quarterly in (year)	32.5	7.84-35.9	60	N/A		Byproduct of drinking water disinfection
Chlorine (ppm) (free residual)	Monthly	0.40	0.14-0.40	4	4		Water additive used to control microbes

Unregulated contaminants are those for which there are no established drinking water standards. The purpose of unregulated contaminant monitoring is to assist regulatory agencies in determining their occurrence in drinking water and whether future regulation is warranted.

Unregulated Contaminants	Date(s) Collected	Result or Range Detected	Average Detected	SMCL	ORSG	Possible Source
Dibromodichloromethane (ppb)	Quarterly	0.62-2.57	1.37	N/A	N/A	Trihalomethane; by-product of drinking water chlorination
Bromodichloromethane (ppm)	Quarterly	5-9	7.84	none	N/A	Trihalomethane; by-product of drinking water chlorination
Chloroform (ppb)	Quarterly	25.4-46.2	36	N/A	70	By-product of drinking water chlorination (In non-chlorinated sources it may be naturally occurring)
Manganese (ppb)	11/17/19	1-5	1.7	none	300	Erosion of natural deposits
Sulfate (ppm)	11/7/19	27.1	N/A	250	N/A	Natural sources

Secondary Contaminants	Date(s) Collected	Result or Range Detected	Average Detected	SMCL	ORSG	Possible Source
Chloride (ppm)	11/7/19	39.3	N/A	250	250	Runoff and leaching from natural deposits; seawater influence
Color (C.U.)	11/7/19	2	N/A	15	N/A	Naturally occurring organic material
Copper (ppm)	11/11/19	0.167	N/A	1	N/A	Naturally occurring organic material
Iron (ppb)	11/11/19	0.045	N/A	300	N/A	Naturally occurring, corrosion of cast iron pipes
Manganese* (ppb)	11/11/19	0.017	N/A	50	Health Advisory of 300	Natural sources as well as discharges from industrial uses
* EPA has established a lifetime Health Advisory (HA) for manganese of 0.3 mg/L and an acute HA at 1.0 mg/L (Add health language listed below if detect is over 300 ppb)						
pH	Daily	7.5	7.4-7.7	6.5-8.5	N/A	Runoff and leaching from natural deposits; seawater influence
Sulfate (ppm)	11/7/19	27.1	N/A	250	N/A	Runoff and leaching from natural deposits; industrial wastes

Unregulated Contaminants	Date(s) Collected	Result or Range Detected	Average Detected	SMCL	ORSG	Possible Source
Total Dissolved Solids (TDS) (ppm)	11/11/19	250	N/A	500	N/A	Erosion of natural deposits.

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.

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

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

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

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.

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.

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

Running Annual Average (RAA) – The average of four consecutive quarter of data.

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 expected risk to health.

MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.

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

ND = Not Detected

N/A = Not Applicable

The Georgetown Water Department makes every effort to ensure that the water delivered to your home and business is clean, safe and free of contamination. Our staff works very hard to protect the quality of the water delivered to our customers from its wells throughout the entire treatment and distribution system.

Cross Connection Concerns

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 at the same time you turn on the hose, the fertilizer may be sucked back into the drinking water pipes through the hose. This problem can be prevented by using an attachment on your hose called a backflow-prevention device. In fact, over half of the country’s cross-connection incidents involve unprotected garden hoses. There are very simple steps that you as a drinking water user can take to prevent such hazards, including:

- NEVER submerge a hose in soapy water buckets, pet watering containers, pool, tubs, sinks, drains, or chemicals.
- NEVER attached a hose to a garden sprayer without the proper backflow preventer.
- Buy and install a hose bibb vacuum breaker in any threaded water fixture. The installation can be as easy as attaching a garden hose to a spigot. This inexpensive device is available at most hardware stores and home-improvement centers.
- Identify and be aware of potential cross-connections to your water line.
- Buy appliances and equipment with backflow preventers.
- Buy and install backflow prevention devices or assemblies for all high and moderate hazard connections.

The Georgetown Water Department 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! If you are the owner or manager of a property that is being used as a commercial, industrial, or institutional facility you must have your property's plumbing system surveyed for cross-connection by your water purveyor. For additional information on cross connections and on the status of your water system's cross connection program, please contact Water Dept @978-352-5750.

For more information visit our website at: <https://georgetownwater.org/>

We wish you a safe and happy year and thank you for taking the time to read about our accomplishments.

Marlene Ladderbush
Utility Director
mladderbush@georgetownma.gov