Town of Whitman, Massachusetts

2020 Annual Water Quality Report

The Whitman Water and Sewer Department is proud to provide you with the Year 2020 Annual Water Quality Report. Our objective is to help keep you abreast of ongoing and upcoming water system projects; local, state and federal drinking water regulations; and Whitman's annual water quality results. We are dedicated to supplying safe drinking water to all of our residents. The identification number for the Whitman Water System is 4338000.

The Whitman Water System is overseen by the Water and Sewer Department within the Department of Public Works (DPW). Please call the DPW at **781-447-7630** with any questions, concerns, or problems regarding water meters, leaks, water main breaks, fire hydrants, billing, or water quality. Our staff is there to assist you:

Board of Commissioners
Kevin Cleary – Chairman
Wayne Carroll – Vice Chairman
David Cook - Secretary
Kenneth Lailer - Member
Mark Poirier - Member

Superintendent of the Water/Sewer Department
Dennis Smith

In addition, the Board of Public Works (Water Commissioners) typically meets at 100 Essex Street on the second Tuesday of each month. Please contact the Department of Public Works regarding the meeting schedule. Supplemental information about drinking water quality and potential health effects can be obtained by calling the Environmental Protection Agency's **Safe Drinking Water Hotline: 1-800-426-4791.** Useful information can also be found on MassDEP's website (http://www.mass.gov/dep/) or the Town's website (http://www.whitman-ma.gov).

Water System Information

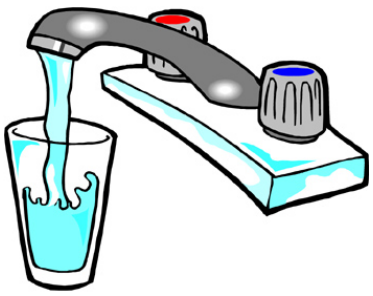
The Department of Public Works, Water and Sewer Department, supplies the Town of Whitman with drinking water from the City of Brockton's water system (PWS ID 4044000). The City of Brockton treats surface water from Silver Lake at the Silver Lake Water Treatment Plant (WTP). Silver Lake is located in the Town of Pembroke approximately 10 miles southeast from the center of Whitman. The Silver Lake WTP employs activated carbon filtration with coagulation, flocculation and sedimentation to remove particles and organic matter. Chlorine is used to disinfect the water prior to entering the distribution system.

The Silver Lake reservoir (4044000-01S) can be supplemented with water from Furnace Pond in Pembroke and Monponsett Pond in Halifax. Pine Brook is an emergency source and can be temporarily diverted to Silver Lake with approval from the Massachusetts Department of Environmental Protection (MassDEP) under a Declaration of Water Emergency. The Pine Brook diversion has only been used once since 1986. The safe yield of the Silver Lake reservoir system is 9.5 million gallons per day (MGD). The City of Brockton water system also treats surface water from the Brockton Reservoir (4044000-02S), which has a safe yield of 0.9 MGD, and purchases desalinated water from the Aquaria Water Treatment Plant in Dighton, MA.

Treated water from the Silver Lake WTP is transmitted through two (2) 24-inch diameter mains to the Brown's Crossing Pumping Station, which pumps water through one (1) 36-inch diameter and two (2) 24-inch diameter transmission mains to the Brockton and Whitman water systems. The connections to the Whitman Water System are located on Temple Street at the Brockton line (12" connection) and on Bedford Street at Peaceful Meadows (16-inch connection).

In the year 2020, Whitman Water and Sewer Department purchased a net total of 323.4 million gallons of water from the Brockton Water Department.

The MassDEP has prepared a Source Water Assessment Program (SWAP) Report for Brockton's water supply sources described above. The SWAP report indicated a high susceptibility to contamination for Silver Lake because of current land uses, which include residential fuel oil storage, landscaping practices and septic systems and a high susceptibility to contamination from aquatic wildlife, transportation corridors, and transmission lines. Residents can help protect sources by taking hazardous household chemicals to hazardous materials collection days, and by limiting the use of pesticides and fertilizer. The complete SWAP report is available for your review at the Water and Sewer Department and the Board of Health. Alternately, it can be obtained online from Massachusetts DEP website: http://www.mass.gov/eea/docs/dep/water/drinking/swap/sero/4044000.pdf.



Water Quality Summary

The Whitman Department of Public Works is committed to providing our customers with high quality drinking water that meets or surpasses state and federal drinking water standards for quality and safety. Each year the Whitman Water and Sewer Department and the City of Brockton conduct thousands of water quality tests, examining them for more than 125 potential drinking water contaminants. A summary of contaminants detected in 2020 are provided below. The state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old. For contaminants that are not required to be sampled annually, the results from the most recent sampling within the past 5 years are given. In 2011, Silver Lake was tested for presence of *Cryptosporidium,* and it was not detected. Not listed are contaminants that were tested for but not detected.

Substance (Contaminant)	Range Detected	MCL	MCLG	Violation	Common and Likely Source(s) of Contaminant
Regulated at Silver Lake WTP					
Barium (ppm)[Brockton]	0.013	2	2	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Nitrate (ppm)[Brockton]	0.126	10	10	No	Runoff from fertilizer; leaching from septic tanks; sewage; erosion of natural deposits.
Perchlorate (ppb)[Brockton]	0.09	2.0	NA	No	Rocket propellants, fireworks, munitions, flares, blasting agents
Turbidity (NTU) (Nephelometric Turbidity Units)[Brockton]	0.03 – 0.12	TT = 5 NTU	NA	No	Soil Runoff. Turbidity is a measure of the cloudiness in water. We monitor it because it is a good indicator of the effectiveness of our filtration system.
	100%	TT = >95% <0.3 NTU	NA	No	
Total Organic Carbon (TOC)[Brockton]	1.31 – 1.79 RAA = 1.50	TT	NA	No	Naturally present in the environment.
Chloroform (ppb)[Brockton]	3.6	Unregulated	70 (ORSG)	No	By-product of drinking water chlorination.
Bromodichloromethane (ppb) [Brockton]	4.0	NA	NA	No	By-product of drinking water chlorination.
Chlorodibromomethane (ppb)[Brockton]	1.2	NA	NA	No	By-product of drinking water chlorination.
Regulated in the Town's Distribution System					
Chlorine (ppm)	0.21 – 1.79 RAA = 1.16	MRDL = 4	MRDLG = 4	No	Water additive used to control microbes.
Tetrachloroethylene (PCE) (ppb)	0.7 – 1.2	5	0	No	Discharge from factories, dry cleaners and asbestos cement lined pipes.
Total HAA5s (ppb) (Haloacetic Acids)	16 – 30 LRAA = 27.5	LRAA <60	0	No	By-product of drinking water disinfection.
Total THMs (ppb) (Trihalomethanes)	25 – 73 LRAA = 57.0	LRAA < 80	0	No	By-product of drinking water disinfection.
Total Coliform	0 positive samples	< 5% are positive	0	No	Naturally present in the environment.
Sodium (ppm)	37.0 – 41.9	Unregulated	20 (ORSG)	No	Sources of Sodium include the discharge from the use and improper storage of sodium-containing de-icing compounds or in water softening agents. Some people who drink water containing sodium at high concentrations for many years could experience an increase in blood pressure.

Substance (Contaminant)	Range Detected	90th %tile	AL	MCL	# Sites Sampled	# Sites above AL	Violation	Common and Likely Source(s) of Contaminant
Copper (ppm)(2018)	ND - 6.19	0.22	1.3	1.3	46	1	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.
Lead (ppb)(2018)	ND – 263	4	15	0	46	0	No	Corrosion of household plumbing; erosion of natural deposits.

Definitions

2018 Denotes the calendar year for the reported results from most recent sampling.

90th %tile Out of every 10 homes sampled, 9 were at or below this level. This number is compared to the action level to determine lead and copper compliance.

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

Brockton As reported by the City of Brockton 111167

LRAA Locational running annual average of quarterly sampling results.

MCL Maximum Contaminant Level: 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.

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.

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 which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

NA Not applicable.

NTU Nephelometric Turbidity Units.

ND Not detected. Refers to the detection limit of the chemical analysis instrument or procedure.

ORSG Office of Research and Standards Guideline: 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.

ppb One part per billion or micrograms per liter (µg/L).

ppm One part per million or milligrams per liter (mg/L).

RAA Running annual average: the average of four consecutive quarters of data.

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

Public 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. 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 infants can be particularly at risk from infections. These people should seek advice 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).

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, 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 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.

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. Whitman 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*.

In order to ensure that tap water is safe to drink, MassDEP and USEPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. FDA and the Massachusetts Department of Public Health regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

Con$ervation Tips

1. Change or clean your faucet aerator at least once a year.
2. Check your meter – the red triangle on the meter should not be moving if there is no water being used.
3. Check toilet(s) – put food coloring in the tank, but don't flush. After 30 minutes, if any coloring appears in the bowl, there is a leak.
4. Conduct any outside watering in the early morning or evening to limit evaporation and maximize infiltration.
5. Collect rainwater in containers to water plants.
6. Install water savers on all faucets, including showerheads.
7. Fix leaking faucets.
8. Fill sink rather than leaving tap running when shaving, washing hands or doing dishes.
9. Turn off the faucet while brushing teeth or shaving.
10. Only run washing machine or dish washers when full.
11. Take shorter showers.
12. Instead of running the hose while washing your car, use a bucket of water and a quick hose rinse at the end.
13. Use a broom instead of a hose to clean driveways and sidewalks.
14. Keep a bottle of drinking water in the refrigerator. This beats the wasteful habit of running tap water to cool it for drinking.
15. Rather than defrosting foods with running water, place them in the refrigerator overnight or defrost them in the microwave.
16. Fill the sink or a bowl with water to wash vegetables instead of running the faucet.
17. Use the garbage disposal less and the garbage or compost more.
18. Put a layer of mulch around trees and plants. Chunks of bark, peat moss or gravel slows down evaporation.
19. Set lawn mower blades one notch higher. Longer grass means less evaporation.
20. Saving water saves you money!

Unregulated Contaminants Monitoring Rule

Under the UCMR water systems are required by the USEPA to test for Unregulated Contaminants. Unregulated Contaminants are those for which USEPA has not established drinking water standards. The purpose of monitoring for Unregulated Contaminants is to assist USEPA in determining their occurrence in drinking water and whether future regulation is warranted. For more information about the UCMR, please visit the following USEPA website: https://www.epa.gov/dwucmr/fourth-unregulated-contaminant-monitoring-rule. Of the 30 Unregulated Contaminants monitored in 2019, only 9 were identified as noted below:

Substance (Contaminant)	Average	Range Detected	MCL
Bromochloroacetic acid	2.15 ug/L	0.678 – 3.04 ug/L	NR
Bromodichloroacetic acid	3.98 ug/L	3.03 – 5.76 ug/L	NR
Chlorodibromoacetic acid	0.62 ug/L	0.44 – 0.99 ug/L	NR
Dibromoacetic acid	0.36 ug/L	ND – 0.597 ug/L	NR
Dichloroacetic acid	7.39 ug/L	2.62 – 11.40 ug/L	NR
Monobromoacetic acid	0.32 ug/L	ND – 0.46 ug/L	NR
Trichloroacetic acid	12.27 ug/L	9.08 – 16.20 ug/L	NR
Manganese 200.8	32.57 ug/L	6.89 – 81.20 ug/L	NR
Quinoline	0.027 ug/L	ND – 0.034 ug/L	NR

Town of Whitman
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