



WESTFIELD DEPARTMENT OF PUBLIC WORKS WATER DIVISION

January 1, 2018 through December 31, 2018

WATER QUALITY REPORT

PWS ID# 1329000

Department of Public Works – Water Division

28 Sackett Street
Westfield, MA 01085
(413) 572-6243

Board of Water Commissioners

Meets the 1st Tuesday of each month at 7:00 p.m. in City Hall, Room 201. These meetings are open to the public. Everyone is encouraged to attend and participate.

The Westfield Department of Public Works- Water Division (DPW-Water) is committed to supplying safe drinking water that meets or exceeds all state and federal standards. In order to ensure that your tap water is safe to drink, the Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (DEP) prescribe regulations that limit the amounts of certain contaminants in water provided by public drinking water systems. We treat and test all of our water in accordance with these EPA and DEP regulations. Food and Drug Administration regulations and Massachusetts Department of Public Health establish limits for contaminants in bottled water that must provide the same level of protection for public health. This water quality report is intended to share with you how well we are doing in meeting our commitment.

EDUCATIONAL INFORMATION

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contamination. The presence of contaminants does not necessarily indicate that water poses a health risk. 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.

SOURCE WATER PROTECTION

The DEP has completed a Source Water Assessment for all Westfield Municipal drinking water sources. This report identifies land uses within water supply protection areas that may be potential sources of contamination. City groundwater sources were determined to be highly vulnerable to contamination due to the absence of hydrogeologic barriers that can prevent the contaminant migration from activities on the land surface. The overall ranking of susceptibility to contamination for Westfield's drinking water sources is high due to the presence of such high threat land uses as auto repair/body shops, airport, railroads, machine shops, transportation corridors and illegal dumping. Copies of this report are available at the DPW-Water office located at 28 Sackett Street.

DRINKING WATER VIOLATIONS

DEP requires us to sample according to a set schedule. In the second quarter of 2018, we were required to, and did, sample for iron and manganese, however these results were not received by DEP at that time, therefore we were out of compliance with our sampling schedule. Once we became aware of the issue we had the lab resubmit the results and came back into compliance. Additionally, we were required to sample for Disinfection By-Products in the third week in August. While we did sample for these compounds on August 29th, this was late and therefore we were in violation of our schedule. To return to compliance we have verified our dates more closely and will continue to sample in accordance with our schedule. And finally, on November 19, 2018, the DPW-Water surface water treatment plant in Southwick experienced a system malfunction which led to sand in the clearwell, increased turbidity in the finished water and the need to shut the plant down in order to protect the distribution system and water users. We notified DEP, and while the plant was shut down, we isolated the nearby Sackett Tank, cleaned the clearwell, and sampled for bacteria. Once the bacterial results came back, all negative, the turbidities returned to normal, and in compliance with DEP requirements, the plant was brought back online and a full report was submitted. We are working hard to constantly adjust to the changing conditions in our water and will strive to continue to improve.

WATER QUALITY DATA

The following table lists all the drinking water contaminants that were detected during the 2018 calendar year. *The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk.* Unless otherwise noted, the data presented in this table is from finished water testing done January 1 to December 31, 2018. The state requires us to monitor certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Because of this, some of the data, though representative of the water quality, is more than one year old.

WATER QUALITY DATA

PARAMETER	AS SET BY EPA		WESTFIELD WATER				YEAR SAMPLED	MAJOR SOURCES
	HIGHEST LEVEL ALLOWED (MCL)	IDEAL GOAL (MCLG)	HIGHEST LEVEL DETECTED		RANGE OF DETECTION			
			AVERAGE		MIN	MAX		
Disinfection By-products								
Total Trihalomethanes (PPB)	80 (Running Annual Average calculate quarterly)	N/A	46.41 (Running Annual Avg)	46.41	0.91	96	2018	By-product of water chlorination
Total Haloacetic Acids (PPB)	60 (Running Annual Average calculate quarterly)	N/A	16.25 (Running Annual Avg)	16.25	0.63	55.2	2018	By-product of water chlorination
Inorganic Contaminants								
Barium (PPM)	2	2	0.0091	0.0091	0.0091	0.0091	2018	Discharge of drilling wastes; Erosion of natural deposits
Nitrate (PPM)	10	10	1.66	0.55	0.06	1.66	2018	Run-off from fertilizer use, leaching from septic tanks, sewage, natural deposit erosion
Secondary Contaminants								
Aluminum (PPB)	N/A	N/A	16	6.7	11	16	2018	Erosion of natural deposits, residue from water treatment
Chloride (PPM)	N/A	N/A	62.8	23.3	6.6	62.8	2018	Runoff and leaching from natural deposits
Copper (PPM)	N/A	N/A	0.051	0.014	0.01	0.051	2018	Erosion of natural deposits
Iron (PPB)	N/A	N/A	100	28.5	13	100	2018	Naturally occurring, corrosion of cast iron pipes
Manganese (PPB)*	N/A	N/A	9	2	1	9	2018	Erosion of natural deposits
pH	N/A	N/A	8.83	7.82	7.16	8.83	2018	Runoff and leaching from natural deposits
Sulfate (PPM)	N/A	N/A	14.1	7.12	3.8	14.1	2018	Runoff and leaching from natural deposits
Zinc (PPM)	N/A	N/A	0.35	0.28	0.20	0.35	2018	Household plumbing corrosion, erosion of natural deposits
Unregulated Contaminants**								
Sodium (PPM)	N/A	N/A	9.58	9.58	9.58	9.58	2018	Erosion of natural deposits, road salt
Total Dissolved Solids (PPM)	N/A	N/A	240	123	64	240	2018	Runoff and leaching from natural deposits
PFOA Perfluorooctanic Acid (PPT)	N/A	N/A	6.9	3.96	2	6.9	2018	Perfluorinated aliphatic carboxylic acid; used for its emulsifier and surfactant properties in or as fluoropolymers (such as Teflon), fire-fighting foams, cleaners, cosmetics, greases and lubricants, paints, polishes, adhesives and photographic films
PFOS Perfluorooctane Sulfonate Acid (PPT)	N/A	N/A	22	9.81	1.1	22	2018	Surfactant or emulsifier; used in fire-fighting foam, circuit board etching acids, alkaline cleaners, floor polish, and as a pesticide active ingredient for insect bait traps; U.S. manufacture of PFOS phased out in 2002; however, PFOS still generated incidentally
PFBS Perfluorobutanesulfonic Acid (PPT)	N/A	N/A	5.9	2.69	2.6	5.9	2018	Manmade chemicals; used in products to make them stain, grease, heat and water resistant
PFHxS Perfluorohexan Sulfonic Acid(PPT)	N/A	N/A	31	14.4	1.8	31	2018	
PFHxA Perfluorohexanoic Acid (PPT)	N/A	N/A	8.8	3.84	3.8	8.8	2018	
PFHpA Perfluoroheptanoic Acid (PPT)	N/A	N/A	2.8	0.93	1.5	2.5	2018	
Radium 226 and 228 combined pCi/l	5	0	0.25	0.19	0	0.25	2015	

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

*EPA has established a lifetime health advisory (HA) of 300 ppb for manganese to protect against concerns of potential neurological effects, and a one-day and 10-day HA of 1000 ppb for acute exposure.

Turbidity	TT	Lowest Monthly % of Samples in Compliance	Highest Detected Daily Value	Violation (Y/N)	Possible Source of Contamination
Daily Compliance (NTU)	5	----	2.5	Y	Soil runoff
Monthly Compliance [^]	At least 95%	97.36%	----	N	

Turbidity is a measure of the cloudiness of the water. We monitored this because it is a good indicator of the effectiveness of our filtration system. Please see Violations section for description of November event during which the Highest Detected Daily Value was found.

[^] Monthly turbidity compliance is related to a specific treatment technique (TT). Our system filters the water so at least 95% of our samples each month must be below the turbidity limits specified in the regulations.

Lead and Copper							
	90 th Percentile	Action Level	MCLG	# of sites sampled	# of sites above the AL	Year Sampled	Possible source of contamination
Lead (PPB)	6.41	15	0	30	1	2016	Corrosion of household plumbing systems
Copper (PPM)	0.323	1.3	1.3	30	0	2016	Corrosion of household plumbing systems

Terms & Abbreviations

Maximum Contamination 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 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.

Action Level (AL): the concentration of a contaminant which, when exceeded, triggers treatment and other requirements which a water system must follow.

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

N/A: not applicable or not detectable at testing limit

PPM: parts per million or milligrams per liter

PPB: parts per billion or micrograms per liter

PPT: parts per trillion or nanograms per liter

pCi/l: picocuries per liter (a measure of radioactivity)

AVAILABILITY OF MONITORING DATA FOR UNREGULATED CONTAMINANTS

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 up by the EPA. The purpose of monitoring for these contaminants is to help EPA decide whether the contaminants should have a public health protection standard.

If you want to speak with someone in the Water Division about the results, please contact Systems Engineer Heather Stayton at 413-572-6226 or by mail 28 Sackett St., Westfield, MA 01085.

WESTFIELD'S DRINKING WATER SOURCES

Drinking water for those connected to the Westfield water distribution system comes from a number of different sources. The Granville Reservoir, a surface water source located in the Town of Granville, MA, contributed approximately 69% of the City's drinking water in 2018. All water from this source is treated and filtered at our treatment facility in Southwick, MA. The City also has eight (8) groundwater wells which are located off East Mountain Road (Wells 7 & 8 *offline*), Holyoke Road (Well 1), Union Street (Well 2), Northwest Road (Wells 5 & 6) and Shaker Road (Wells 3 & 4). Wells 7 and 8 were offline in 2018 pending a new treatment system. The water from all sources is treated to reduce its corrosivity. All water from City Wells 3 and 4 is treated to remove the fungicide Ethylene DiBromide (EDB). Periodically water may be purchased from the City of Springfield water system. This water comes from their Cobble Mountain Reservoir surface water source and is treated at their West Parish Filter facility in Westfield.

INTERCONNECTIONS TO OTHER WATER SYSTEMS

The Westfield water system is interconnected to the City of Springfield water system at three (3) locations: one at Southwick Road and two (2) connections on Shaker Road. The connection on Shaker Road is used to pump water directly from the Springfield water system to Westfield's. The other two (2) connections are only activated on low pressure conditions in Westfield's system. None of these connections was activated in 2018.

VULNERABILITY

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as those 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 (**800-426-4791**).

Lead: 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 Westfield Department of Public Works, Water Division, is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been unused 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> .

PROTECT YOUR DRINKING WATER

Improperly managed household hazardous waste, septic systems, lawn care and pet waste can all contribute to groundwater contamination. You can help protect your drinking water quality by:

- **Having your septic tank pumped every two years,**
- **Never dumping hazardous substances down sewer or storm drains,**
- **Properly disposing of pet waste, and**
- **Applying pesticides and fertilizers minimally and according to manufacturer's instructions.**

Contaminants that may be present in source water before treatment include:

Microbial contaminants: such as viruses and bacteria, which may come from 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, or farming.

Pesticides and herbicides: which may come from a variety of sources such as agricultural and residential uses.

Radioactive contaminants: which may be naturally occurring.

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.

If you are interested in knowing more about the Westfield water supply system and the Westfield Department of Public Works, Water Division, please call our office at 572-6270 or visit our web page at www.cityofwestfield.org .



800-426-4791

Contact EPA's Safe Drinking Water Hotline for more information about contaminants and potential health effects and EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants.