



**WESTFIELD DEPARTMENT OF PUBLIC WORKS WATER DIVISION**  
January 1, 2021 through December 31, 2021  
**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 usually the 1st Tuesday of the month, 7:00 pm in  
City Hall, Room 201, or via teleconference. The meetings are  
open to the public. All are encouraged to attend & 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 the 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 at DPW-Water in meeting our commitment.

## **HOW DID WE DO?**

The Westfield Department of Public Works - Water division had several issues during 2021 and has taken a variety of steps to correct those issues. We had a turbidity spike in September that caused us to have to shut down the surface water treatment plant. In the past we have had difficulty bringing this plant back online, however we are happy to report that we have a new strategy and were able to successfully bring the plant back online in October without any issues or violations.

In December we received sampling results for Total Trihalomethanes (TTHMs) that brought our locational Running Annual Average (RAA) for our Loomis Street sampling location to approximately 85 parts per billion, over the Massachusetts Maximum Contaminant Level (MCL) RAA of 80ppb, which is a violation. In response to this violation, we sent out public notices and took action to reduce those levels such as water main and reservoir flushing, and hiring an engineering consultant to analyze our system and provide recommendations to prevent future violations. We are happy to report that our next sampling showed significant reductions in TTHM levels, and we will continue to improve our system with the goal of preventing future violations.

## **WESTFIELD'S DRINKING WATER SOURCES**

Drinking water for those connected to the Westfield water distribution system comes from a number of different sources that feed into one distribution system. The water at an individual tap comes from a combination of the storage tanks and active sources closest to that tap. The Granville Reservoir is a man-made surface water source located in the Town of Granville, MA. 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), Holyoke Road (Well 1 *offline*), Union Street (Well 2), Northwest Road (Wells 5&6) and Shaker Road (Wells 3&4). The water from all sources is treated to reduce its corrosivity. Well 1 was turned off in March 2019 and remains offline. All water from Wells 3 and 4 is treated to remove the fungicide Ethylene DiBromide (EDB). All water from Wells 2, 7, & 8 is filtered to remove Per and Poly Fluorinated Alkyl Substances (PFAS).

## **INTERCONNECTIONS TO OTHER WATER SYSTEMS**

The Westfield water system is interconnected to the City of Springfield water system in three locations: one at Southwick Road and two connections on Shaker Road. Water may be purchased from the City of Springfield system, however no connections were active and no water was purchased in 2021 or over the past decade. The Shaker Rd. interconnect is used to pump water directly from the Springfield system to Westfield's, while the other two are only activated on low pressure conditions in Westfield's system. This water comes from the Cobble Mountain Reservoir surface water source and is treated at their West Parish Filter facility in Westfield.

## **SOURCE WATER PROTECTION**

The DEP has completed a Source Water Assessment for all Westfield Municipal drinking water sources. This Source Water Assessment and Protection (SWAP) 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.

## EDUCATIONAL INFORMATION

Drinking water, including commercially 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.

Contaminants that may be present in source water before treatment 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, or farming.
- *Pesticides and herbicides:* which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- *Radioactive contaminants:* which may be naturally occurring or be the result of oil and gas production and mining activities.
- *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.

## WATER QUALITY DATA

The following table lists all the drinking water contaminants that were detected during the 2021 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, 2021. The state requires Westfield 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.

### Definitions

**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.

**Secondary Maximum Contaminant Level (SMCL):** these standards are developed to protect aesthetic qualities and are not health based.

**Action Level (AL):** The concentration of a compound which triggers treatment & requirements which a water system must follow when exceeded.

**90<sup>th</sup> Percentile:** Out of every 10 homes sampled, 9 were at or below this level. This # is compared to the AL to determine Pb & Cu compliance.

**Unregulated Contaminants:** 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 & whether future regulation is warranted.

**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 quarters of data.

**Non-Detect (ND):** Contaminant not detected above the level able to be confidently determined by the analytical method.

**PPM:** parts per million or milligrams per liter

**PPB:** parts per billion or micrograms per liter

**PPT:** parts per trillion or nanograms per liter

PARAMETER	AS SET BY EPA		WESTFIELD WATER				YEAR SAMPLED	MAJOR SOURCES
	HIGHEST LEVEL ALLOWED (MCL or MRDL)	IDEAL GOAL (MCLG)	HIGHEST LEVEL DETECTED	AVERAGE	RANGE OF DETECTION MIN- MAX			
<b>Disinfection By-products</b>								
Total Trihalomethanes (PPB)	80 (RAA calculate quarterly)	N/A	84.98 (RAA)	34.99(RAA)	0.56	101.5	2021	By-product of drinking water disinfection
Total Haloacetic Acids (PPB)	60 (RAA calculate quarterly)	N/A	25.81 (RAA)	6.93(RAA)	1	49.63	2021	By-product of drinking water disinfection
Total Chlorine (PPM)	4	N/A	2.27	--	0.11	2.27	2021	Water additive used to control microbes

<b>Inorganic Contaminants</b>								
Arsenic (PPB)	10	N/A	1.1		0.48	1.1	2021	Erosion of natural deposits; runoff from orchards and glass & electronics production wastes
Barium (PPM)	2	2	0.23	0.13	0.01	0.23	2020	Discharge of drilling wastes; Erosion of natural deposits
Chromium (PPB)	100	100	6	3.6	1.1	6	2020	Discharge from steel and pulp mills, natural deposit erosion
Nickel (PPB)	N/A	N/A	5.1	3.2	1.2	5.1	2020	Discharge from wastewater, landfills, mining, and smelting
Perchlorate (PPB)	2	N/A	0.29		0.07	0.29	2021	Rocket propellants, fireworks, munitions, flares, blast agents
PFAS6 (PPT)	20	N/A	10.1	6.4	2.8	10.1	2021	Manmade chemicals; used in products to make them stain, grease, heat & water resistant
Sodium (PPM)	N/A	N/A	10	9.5	9	10	2021	Erosion of natural deposits, road salt
Nitrate (PPM)	10	10	1.6	0.86	0.63	1.6	2021	Run-off from fertilizer, leaching from septic tanks, sewage, natural deposit erosion

<b>Volatile Organic Contaminants</b>								
Bromodichloromethane (PPB)	N/A	N/A	7.5	2.84	1.1	7.5	2021	Trihalomethane; by-product of drinking water chlorination
Chloroform (PPB)*	N/A	N/A	94	38.21	0.56	94	2021	Trihalomethane; by-product of drinking water chlorination
Chlorodibromomethane (PPB)	N/A	N/A	1.5	0.198	0.57	1.5	2021	Trihalomethane; by-product of drinking water chlorination

\*Chloroform has an ORSG of 70PPB. Some people who drink water containing chloroform at high concentrations for many years could experience liver and kidney problems and may have an increased risk of cancer.

PARAMETER	GUIDELINE	WESTFIELD WATER			YEAR SAMPLED	MAJOR SOURCES
	SMCL or ORSG AS SET BY MassDEP or HA AS SET BY EPA	HIGHEST DETECTION	RANGE OF DETECTION			
			MIN	MAX		

<b>Secondary Contaminants</b>						
Aluminum (PPB)	200	20.1	16.5	20.1	2021	Erosion of natural deposits, residue from water treatment process
Chloride (PPM)	250	52.2	2.43	52.2	2021	Runoff and leaching from natural deposits, seawater influence
Copper (PPM)	1	0.034	0.011	0.034	2021	Internal corrosion of household plumbing, erosion of natural deposits
Iron (PPB)	300	328	237	328	2021	Natural and industrial sources, aging and corrosion of iron distribution system and household pipes
Hardness (PPM of CaCO <sub>3</sub> )	--	118	14.8	118	2021	Erosion of natural deposits
Manganese (PPB)~	SMCL 50 ORSG 300	93	86	93	2021	Natural sources as well as discharges from industrial uses
Total Dissolved Solids	500	214	47	214	2021	Runoff and leaching from natural deposits, seawater influence
Sulfate (PPM)	250	11.7	6.41	11.7	2021	Runoff and leaching from natural deposits, industrial wastes
Zinc (PPM)	5	0.374	0.006	0.374	2021	Household plumbing corrosion, erosion of natural deposits

<b>Unregulated Contaminants</b>						
		AVG DETECTION	MIN	MAX	YEAR	
Perfluorooctane Sulfonate Acid PFOS (PPT)	PFAS have a 20 PPT MCL for PFAS6 compounds and are otherwise unregulated contaminants with a US EPA HA for PFOS and PFOA of 70 individually or in combination	3.35	2.8	4.4	2021	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 is still generated incidentally
PerfluoroOctanoic Acid PFOA (PPT)		2.3	2.2	2.4	2021	Manmade chemicals; used in products to make them stain, grease, heat and water resistant
Perfluorohexan Sulfonic Acid PFHxS (PPT)		3.3	3.3	3.3	2021	

~US EPA & MassDEP have established a lifetime health advisory (HA) of 300 ppb for manganese to protect against concerns of potential neurological effects, & 1-day & 10-day HA of 1000 ppb for acute exposure

<b>Lead and Copper</b>
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	90 <sup>th</sup> Percentile	Action Level	MCLG	# of sites sampled	# of sites above the AL	Year Sampled	Possible source of contamination
Lead (PPB)	1.1	15	0	122	1	2021	Corrosion of household plumbing systems
Copper (PPM)	0.178	1.3	1.3	122	0	2021	Corrosion of household plumbing systems

  

Turbidity	TT	Lowest Monthly % of Samples in Compliance	Highest Detected Daily Value	Violation (Y/N)	Possible Source of Contamination
Daily Compliance (NTU)	5	----	0.49	N	Soil runoff
Monthly Compliance <sup>^</sup>	At least 95%	100	----	N	

Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of water quality.  
<sup>^</sup> 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.

## 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. The most recent round of sampling was called the Unregulated Contaminant Monitoring Rule 4 (UCMR4) and those results were reported on the Water Quality Report when they were taken in 2019 and 2020.

If you want to speak with someone in the Water Division about the results, please contact Systems Engineer Heather Stayton by email [h.stayton@cityofwestfield.org](mailto:h.stayton@cityofwestfield.org), phone 413-572-6226 or by mail 28 Sackett Street, Westfield, MA 01085.

## VULNERABILITY

Some people, who drink water containing trihalomethanes in excess of the MCL over many years, experience problems with their liver, kidneys, or central nervous systems, and may have increased risk of getting cancer. 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>.



### **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.

## WHAT CAN YOU DO TO HELP PROTECT YOUR DRINKING WATER?

Protect your drinking water quality:

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

Improper management of household hazardous waste, septic systems, lawn care and pet waste can all contribute to groundwater contamination!

**If you are interested** in knowing more about Water in Westfield and the Westfield Department of Public Works, Water Division, please call our office at 572-6226 or visit our web page at [www.cityofwestfield.org/657/Water](http://www.cityofwestfield.org/657/Water). Or plan to attend a meeting of the Board of Water Commissioners. Ronald J. Cole, John Niedzielski, and Joseph Popielarczyk make up the Water Commission. Meetings are typically the first Tuesday of each month at 7:00 p.m. in City Hall, Room 201 or via teleconference. These meetings are open to the public. Everyone is encouraged to attend and participate.

