

West Warren Water District

2024 Water Quality Report

PO Box 528, West Warren, Massachusetts 01092 (413) 436-5692
PWS ID# 1311001



We are pleased to present to you the 2024 Water Quality Report. This report is designed to inform you about the quality of water and the services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water that meets all state and federal drinking water standards. We are committed to ensuring the quality of your water.

If you have any questions about this report or concerning your water utility, please contact Andy Lalashius, Superintendent, at (413) 436-5692. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. They are held on a monthly basis; dates are posted at the West Warren Senior Center, the Shephard Municipal Building, the West Warren Post Office, and now online at westwarrenwater.com.

Water Source

Our water source is groundwater from two 12" gravel packed wells (1311001-01G and 1311001-02G) which are located south of Comins Pond, east of Route 19.

Water Treatment

Many drinking water sources in New England are naturally corrosive (i.e. they have a pH of less than 7.0). So, the water they supply has a tendency to corrode and dissolve the metal piping it flows through. This not only damages pipes but can also add harmful metals, such as lead and copper, to the water. For this reason it is beneficial to add chemicals that make the water neutral or slightly alkaline. The West Warren Water District adds Sodium Carbonate to its water. This adjusts the water to a non-corrosive pH. Testing throughout the water system has shown that this treatment has been effective at reducing lead and copper concentrations.

All reservoirs and some ground water sources contain numerous microorganisms some of which can cause people to be sick. To eliminate disease carrying organisms it is necessary to disinfect the water. Disinfection does not sterilize the water, but it does destroy harmful organisms. Sterilization kills all microorganisms, even though most are not harmful, and is too costly to use on a routine basis. The West Warren Water District uses Sodium Hypochlorite as its primary disinfectant. Chlorine destroys organisms by penetrating cell walls and reacting with its enzymes. Disinfection with chlorine has been proven effective at ensuring that water is free of harmful organisms and safe to drink.

Water Quality Monitoring

The West Warren Water District routinely monitors for contaminants in your drinking water according to Federal and State laws. The following tables show the results of our monitoring. The water quality information presented in these tables are 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 tables.

As water travels over the land or underground, it can pick up substances or contaminants such as microbes, inorganic and organic chemicals, and radioactive substances. Drinking water, including bottled water, may be reasonably 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 Environmental Protection Agency (EPA)'s Safe Drinking Water Hotline (1-800-426-4791).



In order to ensure that tap water is safe to drink, EPA and the Massachusetts Department of Environmental Protection (MassDEP) 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.

Water Quality Terms

In the following testing results table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

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

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

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's 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. MCLG's allow for a margin of safety.

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

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.

Non-Detects (ND) – Laboratory analysis indicates that the constituent is not present.

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.

ppb (parts per billion) or Micrograms per liter (ug/L) – one ppb corresponds to a single penny in \$10,000,000.

ppm (parts per million) or Milligrams per liter (mg/L) – one ppm corresponds to a single penny in \$10,000.

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

Running Annual Average (RAA): The average of four consecutive quarters of data.

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

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

Unregulated Contaminants: Unregulated contaminants are those for which the Environmental Protection Agency (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.

Water Quality Test Results

Inorganic Contaminants							
Regulated Contaminants	Date(s) Collected	Highest Result or Average Detected	Range Detected	MCL	MCLG	Violation (Y/N)	Major Sources in Drinking Water
Nitrate (ppm)	04/23/2024	0.611	0.604-0.617	10	10	N	Erosion of natural deposits
Perchlorate (ppb)	7/23/2024	0.099		2	N/A	N	Rocket Propellants, fireworks, munitions, flares, blasting agents
PFAS6 (ppt)	4/23/2024	ND		20	N/A	N	Discharges and emissions from industrial and manufacturing sources associated with the production or use of these PFAS, including production of moisture and oil resistant coatings on fabrics and other materials. Additional sources include the use and disposal of products containing these PFAS, such as fire-fighting foams.

Inorganic Contaminants						
Unregulated and Secondary Contaminants	Date(s) Collected	Result or Range Detected	Average Detected	SMCL	ORSG	Major Sources in Drinking Water
Sodium (ppm)**	04/05/23	32.2-32.6	32.4	----	20	Natural sources; runoff from use as salt on roadways

**Health Effects of Sodium: Some people who drink water containing sodium at high concentrations for many years could experience an increase in blood pressure.

Bacteriological Contaminants					
	Highest # Positive in a month	MCL	MCLG	Violation (Y/N)	Major Sources in Drinking Water
Total Coliform	0	1	0	N	Naturally present in the environment

Disinfectants and Disinfection By-Products						
Contaminant	Date(s) Collected	Highest Result	MCL	MCLG	Violation (Y/N)	Major Sources in Drinking Water
Total Trihalomethanes (TTHMs)	8/29/2024	1.39	80 ppb	-	N	By-Product of drinking water chlorination
Haloacetic Acids (HAAs)	8/29/2024	ND	60 ppb	-	N	By-Product of drinking water chlorination
Chlorine	Monthly	0.47 ppm	4 ppm	4 ppm	N	Water Additive used to control microbes

Iron					
Secondary Contaminants	Date Collected	Result	SMCL	ORSG	Major Sources in Drinking Water
Well 01 Raw (ppm)	04/23/2024	ND	0.3	N/A	Natural sources
	08/27/2024	0.04			
	12/17/2024	0.039			
	04/15/2024	0.058			
Well 01 Post Treatment (ppm)	04/23/2024	0.587			
	08/27/2024	0.036			
	12/17/2024	0.026			
	04/15/2025	0.068			
Well 02 Raw (ppm)	04/23/2024	ND			
	08/27/2024	ND			
	12/17/2024	0.017			
	04/15/2025	ND			
Well 02 Post Treatment (ppm)	04/23/2024	ND			
	08/27/2024	ND			
	12/17/2024	0.017			
	04/15/2025	0.039			

Manganese					
Secondary Contaminants	Date Collected	Result	SMCL	ORSG	Major Sources in Drinking Water
Well 01 Raw (ppm)	04/23/2024	0.150	0.3	Health Advisory of 0.30	Natural sources
	08/27/2024	0.136			
	12/17/2024	0.167			
	04/15/2025	0.068			
Well 01 Post Treatment (ppm)	04/23/2024	1.10			
	08/27/2024	0.098			
	12/17/2024	0.081			
	04/15/2025	0.068			
Well 02 Raw (ppm)	04/23/2024	0.314			
	08/27/2024	0.009			
	12/17/2024	0.047			
	04/15/2025	0.023			
Well 02 Post Treatment (ppm)	04/23/2024	0.260			
	08/27/2024	0.028			
	12/17/2024	0.042			
	04/15/2025	0.021			

* EPA has established a lifetime Health Advisory (HA) for manganese of 0.3 mg/L and an acute HA at 1.0 mg/L

Manganese is a naturally occurring mineral found in rocks, soil, groundwater, and surface water. Manganese is necessary for proper nutrition and is part of a healthy diet, but can have undesirable effects on certain sensitive populations at elevated concentrations. The United States Environmental Protection Agency (EPA) and MassDEP have set an aesthetics-based Secondary Maximum Contaminant Level (SMCL) for manganese of 50 ug/L (microgram per liter), or 50 parts per billion. In addition, MassDEP’s Office of Research and Standards (ORS) has set a drinking water guideline for manganese (ORSG), which closely follows the EPA public health advisory for manganese.

Drinking water may naturally have manganese and, when concentrations are greater than 50 ppb, the water may be discolored and taste bad. Over a lifetime, the EPA recommends that people drink water with manganese levels less than 300 ppb and over the short term, EPA recommends that people limit their consumption of water with levels over 1000 ppb, primarily due to concerns about possible neurological effects. Children younger than one year old should not be given water with manganese concentrations over 300 ppb, nor should formula for infants be made with that water for more than a total of 10 days throughout the year. The ORSG differs from the EPA’s health advisory because it expands the age group to which a lower manganese concentration applies from children less than six months of age to children up to one year of age to address concerns about children’s susceptibility to manganese toxicity.

See EPA Drinking Water Health Advisory for manganese at:

https://www.epa.gov/sites/production/files/2014-09/documents/support_cc1_magnese_dwreport_0.pdf and MassDEP Office of Research and Standards (ORSG) for manganese https://www.mass.gov/doc/massdep-office-of-research-and-standards-guideline-orsg-for-manganese/download?_ga=2.224281821.778819075.1638290958-632873118.1621443750

LEAD AND COPPER							
	Date(s) Collected*	90TH percentile	Action Level	MCLG	# of sites sampled	# of sites above Action Level	Major Sources in Drinking Water
Lead (ppb)	9/17/2024-9/19/2024	0.0011 ppb	15 ppb	0	10	0	Corrosion of household plumbing systems; Erosion of natural deposits
Copper (ppm)	9/17/2024-9/19/2024	0.581 ppm	1.3 ppm	1.3	10	0	Corrosion of household plumbing systems; Erosion of natural deposits

Do I Need To Be Concerned About Lead and Copper Detected In My Water?

Copper: Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson’s Disease should consult their personal doctor.

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 West Warren Water District 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>.

Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning disabilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

What Does This All Mean?

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, and 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.

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/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).

Cross Connection Control Program

The West Warren Water District Cross Connection Program is designed to prevent backflow of contaminated water into the drinking water supply. The Water District program has included commercial/industrial customers for many years and is being updated to include residential customers. This update is occurring in response to State regulation 310 CMR 22.22 (<http://www.mass.gov/dep/water/ccdefreg.pdf>) in an effort to better protect our drinking water system from potential contamination.

A cross connection is a link between a possible source of pollution and a potable water supply. Backflow can cause a pollutant to enter the potable water system due to backpressure backflow (the pressure of the pollution source exceeds the pressure of the potable water source) or back-siphonage (the public water system has a negative pressure (a vacuum or partial vacuum) caused by a stoppage of water supply due to nearby fire fighting, a break in a water main, etc.

Examples of potential sources of pollution from a residential customer are garden hoses, sprinkler systems, swimming pools, decorative ponds, in-home water treatment systems, hot tubs, and boiler systems. Due to their frequency of use, garden hoses are the greatest concern for cross connections in the residential setting. This is because the hoses are sometimes left submerged in swimming pools, attached to chemical sprayers, or laying on the ground with exposure to cesspools, garden chemicals, and animal feces.

Also, according to 310 CMR 22.22(2)(j), cross connections between a public water system and a private well or individual water source serving residential dwellings used for potable or non-potable purposes are prohibited. Whenever two sources of water (a private well or a secondary water service line) enter a property, the potential exists for the pressure in one to be greater than the other. A private well operating at 100 psi could force contaminated water back into the public water system operating at 80 psi.

There are three easy ways you can prevent a cross connection at your home. **1) Never place the end of a hose where it can suck contaminants into your drinking water. 2) Leave at least a one-inch gap between the end of a hose and a source of contamination. 3) Use proper protection devices.** Each spigot at your home should have a hose-bib vacuum breaker installed. This is a simple, inexpensive device that can be purchased at any plumbing or hardware store. Installation is as easy as attaching your garden hose to a spigot.



WATER CONSERVATION

In an effort to conserve water and save money, here is a list of things you can do to help:

INDOOR WATER USE

Check for toilet leaks by adding food coloring to the tank. If the toilet is leaking, color will appear in the bowl within 15 minutes.

Repair dripping faucets and showerheads. A drip rate of one drop per second can waste more than 3000 gallons per year. Limit the length of your showers to 5 minutes or less.

Stop running the water while you are shaving or brushing your teeth.

Store drinking water in the refrigerator rather than letting the faucet run when you want a cold glass of water.

Don't use running water to thaw meat or other frozen foods.

Run the dishwasher only when it's fully loaded.

Run your washing machine with full loads whenever possible.

OUTDOOR WATER USE

Look for sprinklers that produce droplets, not mist, or use soaker hoses or trickle irrigation for trees and shrubs.

Water early in the morning or late at night.

Spread a layer of mulch around trees and plants.

Use a broom, not a hose, to clean driveways, decks, and sidewalks.

Don't leave the water running while washing your car.

Source Water Assessment and Protection (SWAP)

The Source Water Assessment and Protection (SWAP) program assesses the susceptibility of public water supply sources for contamination.

What Is My System's Ranking?

A susceptibility ranking of *moderate* was assigned to this system using the information collected during the assessment by the DEP.

Where Can I See The SWAP Report?

The complete SWAP report is available from the West Warren Water District and online at

<http://www.mass.gov/eea/docs/dep/water/drinking/swap/wero/2311001.pdf>. For more information, call at (413) 436-5692.

Maintaining A Safe Water Supply

Thank you for allowing us to continue providing you and your family with clean, quality water this year. In order to maintain a safe and dependable water supply we sometimes need to make improvements that will benefit all of our customers. These improvements are sometimes reflected as rate structure adjustments. Thank you for understanding.

Until Next Year

Please call our office if you have questions. The West Warren Water District works diligently to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life, and our children's future.