2023 Water Quality Report
For
Westminster Department of Public Works
Westminster, Massachusetts

MASSDEP PUBLIC WATER SUPPLY (PWS) ID No.: 2332000

In 2023 the Westminster Department of Public Works (DPW) pumped a total of 135.258 million gallons of water for the residents and businesses of Westminster. This report provides a snapshot of your drinking water quality over the past year. 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. The report also describes our system's operations and how you can get involved.

This year the 1 million gallon Shady Avenue water storage tank built in 1970 was rehabilitated.

Shady Avenue Water Storage Tank on Goodridge Drive – Photo courtesy of David Monty

Public Water System Information

Address: 2 Oakmont Avenue, Westminster, MA 01473

Contact Person: Joshua Hall, Director of Public Works

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E-mail Address: jhall@westminster-ma.gov
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The Westminster 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 Licensed Drinking Water Operators who oversee the routine operations of the system.

Public Participation

Our office hours are Monday through Friday, 7am to 3:30pm. For emergencies after hours, please call the Public Safety Dispatcher at 978-874-2933. If you would like to participate in discussions regarding your service or water quality issues, the Public Works Commission meets at 2 Oakmont Avenue on the second and fourth Monday of the month at 6:00 pm, unless otherwise posted. If you need to request a meeting with the Commission about a particular issue, please submit your request in writing to Joshua Hall, Director of Public Works, to have your topic added to the agenda. For additional information or questions about this report, please contact Joshua Hall, Director of Public Works, at 978-874-5572.

Your Drinking Water Source

Where Does My Drinking Water Come From? The Town of Westminster Water Department customers receive water from the City of Fitchburg (MASSDEP PWS ID # 2097000). The Regional Treatment Facility located on Hager Park Road-Route 140 can draw water from 3 reservoirs located in Westminster, Princeton, and Hubbardston. These reservoirs are Meetinghouse Pond, Mare Meadow Reservoir, and Bickford Pond. After the water leaves the reservoirs, the treatment facility treats the water to remove contaminants and adds disinfectant to protect our customer's against microbial contaminants. Once water is treated, it is pumped from our booster pump station, located just south of the Treatment Facility, into the distribution system to Westminster water customers. The distribution system consists of one pumping station, the Shady Avenue water storage tank (capacity 1 million gallons), the Ellis Road water storage tank (capacity 370,000 gallons), four (4) pressure reducing chambers and 40 miles of water mains ranging in size from 2-inch to 16-inches in diameter.

Your water is provided by the sources listed below:

Source Name	MASSDEP Source ID#	Source Type	Location of Source
Meetinghouse Pond	2097000-01S	Surface water	Westminster
Mare Meadow Reservoir	2097000-06S	Surface water	Westminster & Hubbardston
Bickford Pond	2097000-09S	Surface water	Hubbardston & Princeton

How Are These Sources Protected? MASSDEP has prepared a Source Water Assessment Program (SWAP) Report for the water supply sources serving our water system. The SWAP Report assesses the susceptibility of public water supplies.

What is My System's Ranking? A susceptibility ranking of **high** was assigned to this system using the information collected during the assessment by the MASSDEP.

Where Can I See The SWAP Report? The complete SWAP report is available at the Westminster Water Department and online at https://www.mass.gov/lists/source-water-assessment-and-protection-swap-program-documents#swap-reports-for-massachusetts-water-supplies-. For more information please contact the Fitchburg Water Division at 978-345-9616.

What are the Key Issues for Our Water Supply? The overall ranking of susceptibility to contamination for the system is **high**, based on possible microbial contaminants from aquatic wildlife. Also noted is a Medium Threat from septic systems, heating fuel oil storage at residences and the use of pesticides for lawn care/gardening in the watershed.

Substances Found In Tap Water

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 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 byproducts 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, U.S. Environmental Protection Agency (EPA) and 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. 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 about drinking water from their health care providers. EPA/ Centers for Disease Control (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).

Water Quality Testing Results

The water quality information presented in the following 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 table.

Important Definitions

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.
SMCL (Secondary Maximum Contaminant Level): These standards are developed to protect the aesthetic qualities of drinking water and are not health based.
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 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.
ND (Not Detected): Indicates that the substance was not found by laboratory analysis.
NA: Not Applicable.
ORSG (Massachusetts 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.
AL (Action Level): 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. This number is compared to the action level to determine lead and copper compliance.
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.
TT (Treatment Technique): A required process intended to reduce the level of a contaminant in drinking water.
RAA (Running Annual Average): The average of four consecutive quarters of data.
ppm (parts per million or mg/L): 1 drop in 10 gallons, 1 inch in 16 miles or one penny in $10,000.
ppb (parts per billion or ug/L): 1 drop in 10,000 gallons, 1 inch in 16,000 miles, one penny in $10,000,000.
ppt (parts per trillion or ng/L) : 1 drop in 10,000,000 gallons, 1 inch in 16,000,000 miles, one penny in $10,000,000,000.
pCi/L (picocuries per liter): A measure of radioactivity.
NTU (Nephelometric Turbidity Units): A unit used to measure the presence of suspended particles in water.
T.O.N. (Threshold Odor Numbers): Whole numbers that indicate how many dilutions it takes to produce odor-free water.
A Level 1 Assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

REGULATED SUBSTANCES

Inorganic Contaminants	Date(s) Collected	Highest Result or Average	Range Detected	MCL or MRDL	MCLG or MRDLG	Violation (Y/N)	Possible Sources
Barium (ppm) (sampled at Regional)	4/25/2023	0.012	NA	2	2	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride (ppm) ① (sampled at Regional)	Daily in 2023	0.79	0.31-0.79	4	4	No	Water additive which promotes strong teeth
PFAS6 (ppt) (sampled at Regional)	4/11/2023 10/25/2023	2.22-6.2	6.2	20	NA	No	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
Nitrate (ppm) (sampled at Regional)	4/25/2023	0.12	N/A	10	10	No	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits
Perchlorate (ppb) (sampled at Regional)	8/2/2023	0.10	N/A	2	N/A	No	Rocket propellants, fireworks, munitions, flares, blasting agents

① Fluoride has a secondary maximum contaminant level (SMCL) of 2.0 ppm.

Fluoride is a naturally occurring element in many water supplies in trace amounts. In our system the fluoride level is adjusted to an optimal level averaging one part per million (ppm or mg/L) to improve oral health in children. At this level, it is safe, odorless, colorless, and tasteless. Our water system has been providing this treatment since 1968. There are over 3.9 million people in 140 Massachusetts water systems and 184 million people in the United States who receive the health and economic benefits of fluoridation.

Volatile Organic Contaminants	Date(s) Collected	Highest Result or Average	Range Detected	MCL or MRDL	MCLG or MRDLG	Violation (Y/N)	Possible Sources
Tetrachloroethylene (PCE) (ppb)	5/9/2023	2.6	ND-2.6	5	0	No	Discharge from factories and dry cleaners and asbestos cement lined pipes

Radioactive Contaminants	Date(s) Collected	Highest Result or Average	Range Detected	MCL or MRDL	MCLG or MRDLG	Violation (Y/N)	Possible Sources
Radium 226 & 228 (pCi/L) (combined values) (sampled at Regional)	4/23/2018 ②	0.86	NA	5	0	No	Decay of natural and manmade deposits

② 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.

Turbidity ③	TT	Lowest Monthly % of Samples	Highest Detected Daily Value	Violation (Y/N)	Possible Source of Contamination
Daily Compliance (NTU) (sampled at Regional)	5	--	0.27	No	Soil runoff
Monthly Compliance ④	At least 95%	100	--	No	

③ Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of water quality.

④ 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 RESULTS

Lead and Copper	Date Collected	90th Percentile	Action Level (AL)	MCLG	# of Sites Sampled	# of Sites above AL	Exceeds AL (Y/N)	Possible Sources
Lead ⑤ (ppb)	2021 ⑦	2	15	0	20	0	No	Corrosion of household plumbing; erosion of natural deposits
Copper ⑥ (ppm)	2021 ⑦	0.211	1.3	1.3	20	0	No	Corrosion of household plumbing; erosion of natural deposits; leaching from wood preservatives

⑤ 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 abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

⑥ 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.

⑦ 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.

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 Westminster 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.

DISINFECTANTS & DISINFECTION BY-PRODUCTS

Disinfectants & Disinfection By-products	Date(s) Collected	Highest Result or Average	Range Detected	MCL or MRDL	MCLG or MRDLG	Violation (Y/N)	Possible Sources
Haloacetic Acids (HAA5s) (ppb)	Quarterly	42 ⑧	20-50	60	--	No	By-product of drinking water disinfection
Total Trihalomethanes (TTHMs) (ppb)	Quarterly	68 ⑧	20-104	80	--	No	By-product of drinking water disinfection
Chlorine (ppm)	7 Times a Month	0.68	0.06-1.47	4 (MRDL)	4 (MRDLG)	No	Water additive used to control microbes

⑧ Result based on Highest Running Annual Average (RAA) of four consecutive quarters.

UNREGULATED AND SECONDARY SUBSTANCES

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. Secondary contaminant standards are developed to protect the aesthetic qualities of drinking water and are not health based.

Inorganic Contaminants	Date(s) Collected	Result or Range Detected	Highest or Average Detected	SMCL	ORSG	Possible Sources
Nickel (ppb) (sampled at Regional)	4/25/2023	72	--	--	100	Discharge from domestic wastewater, landfills, and mining and smelting operations
Sodium (ppm) ⑨	4/25/2023 9/5/2023	24-30.5	30.5	--	20	Discharge from the use and improper storage of sodium containing de-icing compounds or in water softening agents

⑨ Some people who drink water containing sodium at high concentrations for many years could experience an increase in blood pressure.

Organic Contaminants	Date(s) Collected	Result or Range Detected	Highest or Average Detected	SMCL	ORSG	Possible Sources
Bromodichloromethane (ppb) (sampled at Regional)	4/24/2023	3.9	--	--	--	By-product of drinking water chlorination
Chloroform (ppb) (sampled at Regional)	4/24/2023	8.4	--	--	70	By-product of drinking water chlorination
Chlorodibromomethane (ppb) (sampled at Regional)	4/24/2023	0.6	--	--	--	By-product of drinking water chlorination

Secondary Contaminants	Date(s) Collected	Result or Range Detected	Highest or Average Detected	SMCL	ORSG	Possible Sources
Aluminum (ppb)	9/5/2023 12/12/2023	14-21	21	--	200	Residue from water treatment process; erosion of natural deposits
Chloride (ppm)	9/5/2023 12/12/2023	30.6-33.9	33.9	--	250	Discharge from the use of or improper storage of sodium or calcium-containing deicing compounds. Runoff and leaching from natural deposits; seawater influence
Iron (ppb)	4/25/2023 5/10/2023 9/5/2023 12/12/2023	ND-4	8	300	NA	Natural and industrial sources as well as aging and corroding distribution systems and household pipes
Odor (T.O.N.)	9/5/2023 12/12/2023	ND-1	1	3	--	Naturally occurring organic materials that form ions when in water; seawater influence
Magnesium (ppm)	9/5/2023 12/12/2023	ND-0.69	0.69	--	--	Erosion of natural deposits
Manganese (ppb)	5/10/2023 6/22/2023 9/5/2023 12/12/2023	ND-10	10	50	Health ⑩ Advisory of 300	Erosion of natural deposits as well as discharges from industrial use
pH	9/5/2023 12/12/2023	6.77-7	7	6.5-8.5	--	Runoff and leaching from natural deposits; seawater influence
Sulfate (ppm)	9/5/2023 12/12/2023	3.43-4.1	4.1	250	--	Runoff and leaching from natural deposits; industrial wastes

Secondary Contaminants	Date(s) Collected	Result or Range Detected	Highest or Average Detected	SMCL	ORSG	Possible Sources
Total Dissolved Solids TDS (ppm)	9/5/2023 12/12/2023	72-82	82	500	--	Runoff and leaching from natural deposits; seawater influence

⑩ US EPA and MASSDEP have established public-health advisory levels for manganese to protect against concerns of potential neurological effects.

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessments to identify any problems that were found during these assessments.

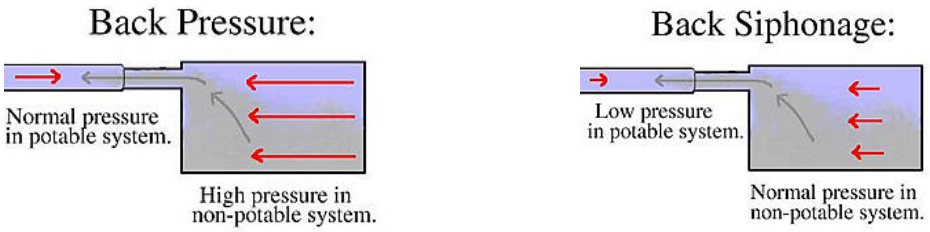
During the past year, we were required to conduct one (1) Level 1 Assessment. One (1) Level 1 Assessment was completed. In addition, we were required to take one (1) corrective action and we have completed this action.

Cross-Connection Control Program

The Westminster Department of Public Works 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 the time the water is extracted via deep wells from underground aquifers or withdrawal point from a surface water source, throughout the entire treatment and distribution system. But what happens when the water reaches your home or business? Is there still a need to protect the water quality from contamination caused by a cross-connection? If so, how?

What is a cross-connection?
A cross-connection occurs whenever the drinking water supply is or could be in contact with potential sources of pollution or contamination. Cross-connections exist in piping arrangements or equipment that allows the drinking water to come in contact with non-potable liquids, solids, or gases (hazardous to humans) in event of a backflow.

What is a backflow?
Backflow is the undesired reverse of the water flow in the drinking water distribution lines. This backward flow of water can occur when the pressure created by equipment or a system such as a boiler or air-conditioning is higher than the water pressure inside the water distribution line (back pressure), or when the pressure in the distribution line drops due to routine occurrences such as water main breaks or heavy water demand causing the water to flow backward inside the water distribution system (back siphonage). Backflow is a problem that many water consumers are unaware of, a problem that each and every water customer has a responsibility to help prevent.



What can I do to help prevent a cross-connection?
Without the proper protection something as simple as a garden hose has the potential to contaminate or pollute the drinking water lines in your house. 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, they are:

- 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.

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. If your property has NOT been surveyed for cross-connection, contact the Westminster Department of Public Works to schedule a cross-connection survey.

The Massachusetts Drinking Water Regulations, 310 CMR 22.00, requires all public water systems to have an approved and fully implemented Cross-Connection Control Program (CCCP). The Westminster Department of Public Works is working diligently to protect the public health of its drinking water customers from the hazards caused by unprotected cross-connections. We are doing this through the implementation of our cross-connection survey program, elimination or proper protection of all identified cross-connections, the registration of all cross- connections protected by reduced pressure backflow preventers (RPBPs) or double check valve assemblies (DCVAs), and the implementation of a testing program for all RPBPs and DCVAs.

Where can I get more information?
DPW: Peter Martineau Jr. 978-874-5572
MASSDEP: Otavio DePaula-Santos 617-556-1085

Water Conservation

Did you know that the average U.S. household uses approximately 400 gallons of water per day or 100 gallons per person per day? Luckily, there are many low-cost and no-cost ways to conserve water. Small changes can make a big difference – try one today and soon it will become second nature.

- Take short showers - a 5 minute shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath.
- Shut off water while brushing your teeth, washing your hair and shaving and save up to 500 gallons a month.
- Use a water-efficient showerhead. They're inexpensive, easy to install, and can save you up to 750 gallons a month.
- Run your clothes washer and dishwasher only when they are full. You can save up to 1,000 gallons a month.
- Water plants only when necessary.
- Fix leaky toilets and faucets. Faucet washers are inexpensive and take only a few minutes to replace. To check your toilet for a leak, place a few drops of food coloring in the tank and wait. If it seeps into the toilet bowl without flushing, you have a leak. Fixing it or replacing it with a new, more efficient model can save up to 1,000 gallons a month.
- Adjust sprinklers so only your lawn is watered. Apply water only as fast as the soil can absorb it and during the cooler parts of the day to reduce evaporation.
- Teach your kids about water conservation to ensure a future generation that uses water wisely. Make it a family effort to reduce next month's water bill!
- Visit https://www.epa.gov/watersense for more information.

Source Water Protection

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides – they contain hazardous chemicals that can reach your drinking water source.
- Pick up after your pets.
- If you have your own septic system, properly maintain your system to reduce leaching to water sources or consider connecting to a public water system.
- Dispose of chemicals properly; take used motor oil to a recycling center.