BELCHERTOWN WATER DISTRICT
EST. 1922
WATER QUALITY REPORT FOR JANUARY–DECEMBER 2024

Business Hours:
Monday - Friday 7AM-3:30PM
Board of Commissioners meets on the 3rd Tuesday of each month at 206 Jabish Street.
Meetings are open to all and times are posted at town buildings.
Questions - Concerns
Kevin Williams (413) 323-6987 or Admin@belchertownwaterdistrict.org
Website www.Belchertownwaterdistrict.org

Belchertown Water District Facts:

PWS ID#1024000 Jabish Wells 01G – 04G Daigle Well 05G Water Storage: 2 tanks Capacity: 750,000 Gallons 1391 Service Connections on 28 Miles of Water Mains Average daily consumption 250,000 Gallons Highest daily consumption 514,000 Gallons	Ground water sources: 206 Jabish Street- 4 gravel packed wells 763 Federal Street- One gravel packed well Emergency generator enables uninterrupted water service. The Water District has three full-time employees and three part-time clerical employees. The District is governed by a three-member Board of Commissioners.

The Belchertown Water District is routinely inspected by the Massachusetts Department of Environmental Protection (MassDEP) /Drinking Water program for our technical, financial, and managerial capacity to provide safe drinking water to you. To ensure that we provide the highest quality of water available, Massachusetts-certified operators oversee the routine operation of our system.

In August 1999 water treatment was initiated to reduce the levels of lead and copper from household plumbing by raising the pH of the water to an average pH of 7.1 with the use of sodium carbonate.

In August 2005 permanent chlorination units were installed at both pump stations as required by Mass DEP. Chlorine levels are monitored daily at sources and throughout the system. The District's goal is to maintain a safe level for the system with minimal taste issues. The average residual is 0.40 mg/l, with highs and lows depending on system usage. The highest reading taken was 1.10 mg/l at the Jabish Well House on March 12th 2024. Some portions of the system had no detectable residuals at times.

Source Water Assessment and Protection Program (SWAP) The complete SWAP report is available at the District office or online at https://www.mass.gov/files/documents/2016/08/ua/1024000.pdf .This report concludes that the District has a high susceptibility of source contamination from road salt, hazardous material spills via trucks, trains etc.

The Belchertown Water District has completed the service line inventory as required by Mass DEP. The purpose of this inventory is to identify and make public any lead service lines. The District has previously reported NO lead service lines installed. The Belchertown Water District service line specifications never included the use of lead Service lines or pipes. Our Public Water System has NO Lead, Galvanized Requiring Replacement (GRR) or Unknown Service Lines

On October 16th 2024 MassDEP approved Belchertown Water District's request for approval to release a statement that our system has no service lines of Lead, Galvanized Requiring Replacement (GRR) or unknown materials. This statement is based on the results of a service line inventory that was developed using the following verification method(s): Field Inspection by PWS, Records Review, and Customer Self-Identification.
For information on all service lines in the Belchertown Water District Please call the District 's main office at 413-323-6987or e-mail Admin@belchertownwaterdistrict.org .
The District's full Service Line Inventory is available for viewing at the main office at 206 Jabish Street during normal business hours or online at https://drive.google.com/file/d/18-gVrnc42cEolm_5Y9HDRhUNZecMlvRg/view

SUBSTANCES EXPECTED TO BE IN DRINKING WATER

In order to ensure that tap water is safe to drink, MassDEP and U.S. Environmental Protection Agency (EPA) prescribe regulations that limit the amount of certain contaminants in water provided by the public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

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 mineral and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity, which could 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.

Organic Chemical Contaminates, 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.

Radioactive Contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

All 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 call the **EPA 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 some infants can be particularly at risk for infections. These people should seek advice about drinking water from their heath care providers. EPA/Center for Disease Control and Prevention (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**

DEFINITIONS

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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 (chlorine, chloramines, chlorine dioxide) allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG) -- The level of a drinking water disinfectant (chlorine, chloramines, chlorine dioxide) below which there is no known of expected risk to health.
MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.

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

90th percentile: Out of 10 homes sampled, 9 were below this level**.**

Secondary Maximum Containment level (SMCL)- Standards developed to protect the aesthetic qualities of drinking water and are not health based.

Unregulated Contaminants- Unregulated contaminants are those for which EPA has not established drinking water standards. The Purpose of unregulated monitoring is to assist EPA on determining their occurrence in drinking water and 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

ND – None Detected

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

ppm = parts per million, or milligrams per liter (mg/l)

ppb = parts per billion, or micrograms per liter (ug/l)

ppt = parts per trillion, or or nanograms per liter (ng/l)

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

mfl= Million fibers per liter(a measure of asbestos)

TEST RESULTS

Belchertown Water District collected all necessary samples in 2024 to comply with MassDEP regulations. All other samples were non-detected.

Lead and Copper

Next required sampling scheduled June 2025

	Date	90TH percentile	Action Level	MCLG	# of sites sampled	# of sites above Action Level	Possible Source of Contamination
Lead (ppb)	6/8/2022	2.80	15	0	20	0	Corrosion of household plumbing systems; Erosion of natural deposits
Copper (ppm)	6/8/2022	0.52	1.3	1.3	20	0	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives

Raw water samples collected from sources 6/14/16, Lead <0.5ppb, Copper 0.00148-0.00309ppm from natural deposits.

Lead Levels: If present, lead can cause serious health effects in people of all ages, especially pregnant people, infants (both formula-fed and breastfed), and young children. Lead in drinking water is primarily from materials and parts used in service lines and home plumbing. Belchertown Water District is responsible for providing high quality drinking water and removing lead pipes but cannot control the variety of materials used in the plumbing in your home. Because lead levels may vary over time, lead exposure is possible even when your tap sampling results do not detect lead at one point in time. You can help protect yourself and your family by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Using a filter, certified by an American National Standards Institute accredited certifier to reduce lead, is effective in reducing lead exposures. Follow the instructions provided with the filter to ensure the filter is used properly. Use only cold water for drinking, cooking, and making baby formula. Boiling water does not remove lead from water. Before using tap water for drinking, cooking, or making baby formula, flush your pipes for several minutes. You can do this by running your tap, taking a shower, doing laundry or a load of dishes. If you have a lead service line or galvanized requiring replacement service line, you may need to flush your pipes for a longer period. If you are concerned about lead in your water, and wish to have your water tested, contact the Belchertown Water District at 413-323-6987. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at http://www.epa.gov/safewater/lead

Disinfection By-Products
Trihalomethanes

Contaminant	Date Collected	Total Result	Range Detected	MCL/ MRDL	Violation	Possible source of Contamination
Total Trihalomethanes (TTHMs) (ppb)	8/8/2023	15.63	0.83-5.6	80	No	byproduct of drinking water chlorination
Haloacetic Acids (HAA5) (ppb)	8/8/2023	1.2	Nd-1.2	60	No	byproduct of drinking water disinfection

"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. They may have a greater risk of getting cancer."

Unregulated Volatile Organic Contaminants – VOC 7/3/2024

No violations for unregulated byproducts of drinking water chlorination.

Unregulated Chemical Contaminants	Range Detected	OSRG	Possible source of Contamination
Chlorodibromomethane (ppb)	ND-0.56	None	byproduct of drinking water chlorination

PFAS
Per-and Polyfluoroalkly Substances

Contaminant	Date Collected	Total Result	Range Detected	MCL/ MRDL	Violation	Possible source of Contamination
PFAS-6 (ppt)						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.
Daigle Well	**4/9/2024**	**ND**				
Daigle Well	**10/8/2024**	**ND**	**ND-2.26**	**20**	**No**	
Jabish Wells	**7/2/2024**	**2.56**				

Some People who drink water containing these PFAS in excess of the MCL may experience certain adverse effects. These could include effects on the liver, blood, immune system, thyroid, and fetal development. These PFAS may also elevate the risk of certain cancers.

Early PFAS testing was initiated in 2020 out of an abundance of caution as part of a Mass DEP grant program. Sample results from 2022 resulted in reduced sampling in 2023. For more information on PFAS visit **https://www.mass.gov/doc/massdep-fact-sheet-pfas-in-drinking-water-questions-and-answers-for-consumers/download**

Secondary Contaminants

Unregulated Contaminant	Date Collected	Result or range Detected	Average Detected	SMCL	ORSG or Health Advisory	Possible Source of Contamination
Iron (ppb)	1/8/2024	990-1030				
	4/9/2024	872-872	709	300		Corrosion of cast Iron Pipes, Erosion of natural deposits
	7/2/2024	808-818				
	10/8/2024	83-773				
*Manganese (ppb)	1/8/2024	68-77				
	4/9/2024	68-81	64	50	300	Erosion of natural deposits
	7/2/2024	74-86				
	10/8/2024	12-87				

***US EPA and MassDEP have established public health advisory levels for manganese to protect against concerns of potential neurological effects and a one-day and 10-day HA of 1000ppb for acute exposure.**

Manganese: Manganese is a naturally occurring mineral found in rocks, soil and 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 (micrograms 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 µg/L, the water may be discolored and taste bad. Over a lifetime, the EPA recommends that people drink water with manganese levels less than 300 µg/L and over the short term, EPA recommends that people limit their consumption of water with levels over 1000 ug/L, primarily due to concerns about possible neurological effects. Children up to 1 year of age should not be given water with manganese concentrations over 300 ug/L, nor should formula for infants be made with that water for longer than 10 days.*** *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 6 months of age to children up to 1 year of age to address concerns about children's susceptibility to manganese toxicity.* See: EPA Drinking Water Health Advisory for Manganese https://www.epa.gov/sites/production/files/2014-/documents/support_cc1_magnese_dwreport_0.pdf and MassDEP Office of Research and Standards Guideline (ORSG) for Manganese http://www.mass.gov/eea/docs/dep/water/drinking/alpha/i-thru-z/mangorsg.pdf.

Radioactive Contaminants

collected 7/2/2024

Contaminant	Average Detected	Range Detected	MCL/ MRDL	MCLG/ MRDLG	Violation	Possible source of Contamination
Gross Alpha (pCi/l) (minus uranium)	1.00	0.976-1.02	15	0	No	Erosion of natural deposits
Radium 226 & 228 (pCi/L) (combined values)	1.09	1.04-1.14	5	0	No	Erosion of natural deposits

IOC - Inorganic Contaminants

Contaminant	Range Detected	MCL	MCLG	Violation (Y/N)	Possible Source of Contamination
Barium 4/14/2020	0.085-0.176	2	2	No	Erosion of natural deposits
Fluoride * (ppm)	<0.001	4	4	No	Erosion of natural deposits
Nickel (ppb)	0.02-0.06	ORSG=1	N/A	No	Erosion of natural deposits
Nitrate (ppm) 4/9/2024	0.47-1.79	10.0	10.0	No	Runoff from fertilizer use, leaching from septic tanks, sewage, erosion of natural deposits
Sodium (ppm) 4/4/2023	31.9-88.6	ORSG = 20	N/A	No	pH adjustment with Sodium Carbonate

*Fluoride also has a secondary maximum containment level (SMCL) of 2ppm to better protect human health.

Belchertown Water District Sampling Waivers

MassDEP has reduced the monitoring requirements for the following contaminant groups because the source is not at risk of contamination. The last sample collected for these contaminants was found to meet all applicable US EPA and MassDEP standards.

Contaminant	Date Sampled	Result	MCL	MDL	Next sample date or waiver pending
*** Inorganic (IOC)**	4/14/2020	See (IOC)			Waiver approval pending
Synthetic Organic Compounds (SOC)	1/8/2024	ND			Waiver granted 1/31/2024
Lead and Copper	2022	See "lead and copper"			Reduced monitoring granted in 2014. Next required sample in 2025
Trihalomethanes ppb	8/8/2023	15.63	80		Waiver approval pending
Volatile Organic Contaminants (VOC)	7/2/2024	Unregulated detects only (See VOC)			ND none detected for new waiver period. Waiver pending approval
Haloacetic Acids HAA	8/8/2023	3.2			Waiver approval pending
Perchlorate ppb	7/3/2023	ND	2.0	0.3	Waiver granted 1/31/2024
Asbestos mf/l	4/4/2022	<0.17 MFL	7	0.17	Next sample required 2031
Arsenic (IOC) ppt	04/14/2020	ND <.05	1	.05	ND-Waiver pending approval

***Information on these contaminants and samples can be obtained at the Water District office.**

Important Information about Your Drinking Water

Availability of Monitoring Data for Unregulated Contaminants for Belchertown Water District

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

As required the Belchertown Water District collected the required samples in March and September 2023. All test results were reported less than the minimum reporting level (< MRL).

What should I do?
You do not have to do anything but as our customers you have a right to know that these data are available.

You may share this information with other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, food establishments, medical facilities and businesses).

For more information
For additional information on your water and the unregulated contaminants we sampled for, see your water department's Consumer Confidence Report (CCR), or called a water quality report, delivered by your water department by July 1 of each year. If you have any questions about your CCR, see the contact information below for your water department.

For information on the Unregulated Contaminant Monitoring Program, visit the MassDEP website (http://www.mass.gov/eea/agencies/massdep/water/drinking/water-systems-ops.html) and navigate to Unregulated Contaminant Monitoring Program.

If you want to speak with someone at the Belchertown Water District about the results, please contact Kevin Williams at 413-323-6987.

Cross Connection and You

A cross connection is a connection between a drinking water pipe and a contaminated source. The contamination can come from your own home. For instance, suppose you're going to spray fertilizer on your lawn. You hook up your hose to the sprayer that contains the fertilizer. If the pressure drops (because of fire hydrant use in the town) when the hose is connected to the fertilizer, the fertilizer may be sucked back into the drinking water pipes through the house. The same scenario may exist with a hose left in a bucket or swimming pool. Using an attachment on your hose called a backflow prevention device can prevent this problem.

The Belchertown Water District recommends the installation of backflow prevention devices, such as a low cost hose bib vacuum breaker, for all inside and outside hose connections. These can be purchased at a hardware store or plumbing supply store.

The District also requires proper devices on all lawn irrigation systems and recommends the annual testing each device requires. The District is required to have a licensed cross connection inspector on staff. Home inspections are free of charge and recommended if you have a lawn irrigation system.

This is a great way to help protect the water in your home as well as the drinking water system. For additional information on cross connections and on the status of the District's cross connection program please call the **Belchertown Water District at 413-323-6987.**

Cross-Connection Control and Backflow Prevention

The Belchertown Water District 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 District office to schedule a cross-connection survey.

Remember conservation and source protection are the key to a long lasting precious resource.
This report can be obtained at the Water District Office, 206 Jabish Street, Belchertown, MA