

Easthampton Water Department
PWS ID # MA1087000
109 Hendrick Street
Easthampton, MA 01027
Phone (413) 529-1422

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Water Craftsmen

Dan Raymond Foreman
Matt Wintle Mike O'Connor Jeff Dion

Primary Water Source:

Barnes Aquifer 100% Groundwater

Approved Daily Pumping Volume

6.295 Million Gallons

Gallons Pumped 2022

471 Million Gallons

Daily Average Pumped

1.28 Million Gallons

Population Served : 16,211

Number of Services: 5882

WATER RESOURCES

CONTACTS

Easthampton Water Works	1(413) 529-1422
Easthampton City Planner	1(413) 529-1406
Mass DEP Western Office	1(413) 784-1100

PUBLIC PARTICIPATION

Easthampton Aquifer Protection Committee:
Call the City Clerk @ 529-1460 for meeting times
Easthampton Board of Public Works:
Call the DPW office @ 529-1410 for meeting times.

SWAP Report: <https://www.mass.gov/doc/western-region-source-water-assessment-protection-swap-program-reports/download>

WEBSITES

City of Easthampton—www.easthamptonma.gov
American Water Works Association - www.awwa.org
Barnes Aquifer - www.pvpc.org/bapac/index.html
Mass DEP - www.mass.gov/depl/
Groundwater Foundation - www.groundwater.org
U.S. Environmental Protection Agency - www.epa.gov/dwreginfo
National Environmental Services Center - www.nesc.wvu.edu/home

EASTHAMPTON WATER WORKS

Water Quality Report

2022

No. 25

Spring 2023

“Water is the best of all things.”

Pindar (Ancient Greek lyric poet) Olympian Odes

Welcome to the Easthampton Water Works 2022 Water Quality Report. We have prepared it for you to provide information on the source and contents of our water and related health risks associated with any detected contaminants. This report covers testing completed from January 1 through December 31, 2022.

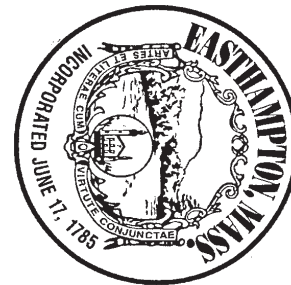
The Easthampton Water Works is committed to providing our customers with high quality, safe drinking water that meets all federal and state drinking water standards. Our staff of licensed water professionals remains hard at work maintaining and making improvements to the supply and distribution infrastructure. Regular water quality testing, a hydrant flushing program, daily inspection of our wells, storage tanks and vulnerable areas of the aquifer, and customer education help ensure that your drinking is and will remain safe.

The system is also routinely inspected by the Massachusetts Department of Environmental Protection (MassDEP). Mass DEP inspects our system for its technical, financial, and managerial capacity to provide safe drinking water to you.

We encourage you, the customer, to learn about your water supply and the ways you can help preserve it and protect it. By becoming an active partner with us, you can help assure an abundant and safe water supply for many years to come. Please read this report and call, write, or email us with questions comments. We'd love to hear from you.



**The Hendrick Street Water Treatment Facility
Assembling the Aeration Tower 1996**



Easthampton Waterworks
109 Hendrick Street
Easthampton, MA 01027

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EASTHAMPTON'S WATER QUALITY

The water quality information presented in the tables is from the most recent round of testing done in accordance with the regulations. All results shown here were from samples collected during the last calendar year unless otherwise noted in the tables. **Only the detected contaminants are shown.** The state allows us to monitor for some contaminants less than once per year because concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old. For contaminants marked with an asterisk sampling was not required or a monitoring waiver was granted for 2022, therefore the most recent detection of the contaminant was included in the chart. Last year your tap water met all EPA and state drinking water health standards for the detected contaminants listed below.

Regulated Substances (units)	Date	MCL ¹ [MDR] ⁹	MCLG ² [MDRG] ¹⁰	Highest Level	Range	Violation	Typical Sources
Atrazine (ppb)*	3/12/2021	3	3	0.11	ND ⁶ -0.11	No	Runoff from herbicide used on row crops
Perchlorate* (ppb) ⁴	8/10/2021	2	N/A	0.274	0.166-0.274	No	Rocket propellants, fireworks, munitions, flares, blasting agents
Nitrates (ppm) ³	5/10/2022	10	10	3.3	1.7-3.3	No	Runoff from fertilizer use; Leaching from septic tanks; sewage; Erosion of natural deposits.
Barium * (ppm)	5/28/2020	2	2	0.42	0.200-0.420	No	Discharge of drilling wastes. Discharge from metal refineries Erosion of Natural Deposits
Chromium * (ppb)	5/28/2020	100	100	2.4	1.2-2.4	No	Discharge from steel and pulp mills. Erosion of natural deposits.
Cyanide * (ppb)	5/28/2020	200	200	24	ND-24	No	Discharge from metal factories; Discharge from plastic and fertilizer factories
Trichloroethylene (TCE) (ppb)	Quarterly 2022	5	0	0.19	ND-0.19	No	Discharge from metal degreasing sites and other factories.
Gross Alpha* (pCi/L) ⁵	9/08/2015	15	0	2.4	0.72-2.4	No	Erosion of natural deposits
Radium 226 & 228* (combined) (pCi/L)	9/08/2015	5	0	1.36	0.66-1.36	No	Erosion of natural deposits
Chlorine (ppm) {Monthly Average}	Monthly 2022	[4]	[0]	{0.06}	ND-0.31	No	Water additive used to control microbes

Lead & Copper (units)	Date	Action Level ⁷	MCLG	90th Percentile ⁸	# of Sites found above the action level / # Sites Sampled	Typical Sources
Lead (ppb) ⁴	September 2020	15	0	5.6	2 / 30	Corrosion of household plumbing systems; Erosion of natural deposits
Copper (ppm)		1.3	1.3	0.100	0 / 30	

Secondary Contaminants and Unregulated Substances ¹³ (units)	Date	SMCL ¹¹ [ORSG] ¹²	Highest Level	Range	Typical Sources
Acetone (ppm)	Quarterly 2022	6.3	0.097	ND– 0.097	Industrial use, in automobile exhaust, from landfills and natural sources
Chloride (ppm)	9/29/2022	250	46	35-4	Runoff and leaching from natural deposits
Copper (ppm)	9/29/2022	1	0.021	0.0024 - 0.021	Internal corrosion of household plumbing; erosion of natural deposits
Sodium * (ppm)	5/28/2020	[20]	19	15 - 19	Naturally Occurring
Sulfate (ppm)	9/29/2022	250	18	15-18	Naturally Occurring
Zinc (ppm)	9/29/2022	5	0.048	0.0031 - 0.048	Corrosion of household plumbing systems; erosion of natural deposits
Sodium (ppm) One time sample @WTP	3/23/2022	[20]	12	NA	Naturally Occurring

Total Coliform Bacteria

Coliform 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. In 2022 we had one occasion when we found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct an assessment to identify problems and to correct any problems that were found during this assessment.

During the past year, we were required to conduct one Level 1 Assessment. One Level 1 Assessment was completed. No sanitary defects were found and no corrective actions were required.

Information on UCMR4

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 the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. In 2019 the Easthampton Water Department participated in the fourth round of the Unregulated Contaminant Monitoring Rule (UCMR 4).

For a full copy of the results please call or email Mike Czerwiec at (413) 529-1422 or mczerwiec@easthamptonma.gov

UCMR4 (units)	Year	Highest Level	Range
Manganese (ppb)	2019	0.47	<0.40-0.47

Vulnerability

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/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)

*This report was designed by
Mike Czerwiec of the Easthampton Water Works*

DEFINITIONS:

1. 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.

2. MAXIMUM CONTAMINANT 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.

3. PARTS PER MILLION (PPM): ONE PART PER MILLION (OR MILLIGRAMS PER LITER) CORRESPONDS TO ONE PENNY IN \$10,000.

4. PARTS PER BILLION (PPB): ONE PART PER BILLION (OR MICROGRAMS PER LITER) CORRESPONDS TO ONE PENNY IN \$10,000,000.

5. PCIL=PICOCURIES PER LITER (A MEASURE OF RADIOACTIVITY)

6. ND: NOT DETECTED.

7. ACTION LEVEL (AL): THE CONCENTRATION OF A CONTAMINANT WHICH, IF EXCEEDED, TRIGGERS TREATMENT OR OTHER REQUIREMENTS WHICH A WATER SYSTEM MUST FOLLOW.

8. 90TH PERCENTILE: A STATISTICAL MEASURE USED IN THE LEAD AND COPPER RULE. A TEST RESULT AT THE 90TH PERCENTILE LEVEL MEANS THAT 90 PERCENT OF ALL THE TEST RESULTS FALL BELOW THAT LEVEL.

9. 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 OF MICROBIAL CONTAMINANTS.

10. 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.

11. SMCL - SECONDARY MAXIMUM CONTAMINANT LEVEL: THESE STANDARDS ARE DEVELOPED TO PROTECT AESTHETIC QUALITIES OF DRINKING WATER AND ARE NOT HEALTH BASED.

12. ORSG - 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.

13. 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.

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.

A Level 2 Assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

Want More Information? Call U.S.EPA's Safe Drinking Water Hotline at 1-800-426-4791 OR VISIT THEM ON THE WORLD WIDE WEB @ www.epa.gov

Did you know...

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 at (1-800-426-4791).

Substances Expected to Be In Drinking 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 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.

In order to ensure that tap water is safe to drink, the MassDEP and EPA prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) and the Massachusetts Department of Public Health (DPH) regulations establish limits for contaminants in bottled water that must provide the same protection for public health..

About Lead in Drinking Water

"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 Easthampton Water Works 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>."

The Story of Easthampton Water

THE SOURCE

Easthampton is one of many communities across the state that relies on groundwater for its source of drinking water. Our drinking water comes from the Barnes Aquifer system, a complex of several productive aquifers extending about twelve miles beneath portions of four communities: Westfield, Holyoke, Southampton, and Easthampton. Over 60,000 area people depend on this aquifer for their drinking water. In acknowledgement of the importance of this source, the EPA designated the Barnes Aquifer in Easthampton, a sole source aquifer on May 12, 1995. To earn this designation, an aquifer must supply more than 50% of the drinking water for the service area, and the communities must have no viable economical source alternative. (To read more about the formation of the Barnes Aquifer please visit the Barnes Aquifer page at bapac.pvpc.org/html/more-aquifer.html)

WELLS

Currently, there are five active wells that draw water from the aquifer in Easthampton; these are: 1087000-08G (Nonotuck Park), 1087000-09G (Brook Street), 1087000-04G (Hendrick) 1087000-05G (Pines), and 1087000-07G (Maloney). The Nonotuck Park well and Brook Street wells, both located in Nonotuck Park, are high quality sources that are pure enough to enter the distribution system without any treatment or chemical additions. These sources account for about 50% of the total daily supply. In the early 1980's the Hendrick Street wellfield and the Pines well, located off Hendrick St. by the Water Treatment Plant, were found to contain the volatile organic compound, Trichloroethylene, or TCE, in amounts that exceeded the maximum contaminant level (MCL) set by the USEPA, therefore that water must undergo treatment. The Maloney well, located off Lovefield Street is used primarily as a back-up source during times of high demand.

TREATMENT

Easthampton treats its water using packed tower aeration technology. Water from the Pines well and the Hendrick wellfield is pumped to the top of an 11-foot diameter, 36-foot high tower, which is filled with a specially designed packing material. As the water drops down the tower, air is blown in from the bottom. This process breaks the water into tiny particles and allows the air to strip away the volatile contaminants. TCE, which is detected in amounts up to 6 parts per billion in the raw water, is not detected in the treated water.

After aeration the treated water collects in a clearwell. This water requires disinfecting prior to entering the distribution system. This is done by the addition of chlorine gas as the water is being pumped into the system. Enough chlorine is added to maintain a residual of 200 ppb as the finished water enters the distribution system. The Easthampton Water Works does not add fluoride or any other chemicals, besides chlorine, to the finished water.

DISTRIBUTION

From the well or the treatment plant, depending on the source, the water enters the distribution system to be delivered to the customers tap. This system consists of three 75 horsepower high head pumps at the Hendrick Street plant, the Brook Street, Nonotuck Park, and Maloney

wells each have a 125 horsepower pumps. Depending on demand one or more of these pumps will be drawing water from the ground and into the mains. These pumps also provide system pressure. Approximately 130 miles of underground water main delivers water to all points around town. Over 700 hydrants provide fire protection and access for maintenance activities such as flushing. Service connections, to over 5,800 homes and businesses, bring the water to the tap.

STORAGE

Two storage tanks hold a combined 6 million gallons. These help maintain an adequate supply and system pressure when the pumps are off, demand exceeds pumping capacity, or in an emergency such as a large fire. A 4-million-gallon tank, built in 1989, is located in the Loudville section of Easthampton off Drury Lane. Our newest tank, built in 2000 is located off Burt Street on land donated by the Kuzejka family. This tank has a capacity of 2.0 million gallon



WATER CONSERVATION

Please work with us to conserve water! We need your help, especially in the summer when many people water their lawns and fill their swimming pools. Please use this valuable resource responsibly and be conscious of the amount of water your household uses.

- ◆ During the summer, it is suggested to limit lawn watering to two days per week and only water outside the hours of 9AM to 5PM.
- ◆ Check every faucet in your home for leaks. • Check your toilets for leaks by putting a few drops of food coloring in the tank or request a brochure containing dye tablets from the Water Department. If you see colored water show up in the bowl after a few minutes, your toilet is leaking. Water Conservation Tips can be found at:

https://www3.epa.gov/region1/eco/drinkwater/water_conservation_residents.html

IMPORTANT INFORMATION ON: Cross Connection Control and Backflow Prevention

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 Easthampton Water Works is working diligently to protect the public

health of its drinking water customers from the hazards caused by unprotected cross-connection through the implementation of its cross-connection survey program, elimination or proper protection of all identified cross-connections, the registration of all cross-connections protected by a reduced pressure backflow preventer (RPBPs) or a double check valve assemblies (DCVAs), and the implementation of a testing program for all RPBPs and DCVAs.

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-connections by your water purveyor. If your property has **NOT** been surveyed for cross-connections contact the water department to schedule a cross-connection survey. If you have any questions, please contact: Michael Czerwiec at 529-1422

What is a cross-connection?

A cross-connection is any actual or potential connection between the drinking water lines and a potential source of pollution or contamination such as a piping arrangement or equipment that allows the drinking water to come in contact with non-potable liquids, solids, or gases, hazardous to humans in the event of a backflow.

What is a backflow?

Backflow is the undesired reverse of the water flow in the drinking water distribution lines. This backwards flow can occur when the pressure created by an equipment or system such as a boiler or air-conditioning is higher than the water pressure inside the water distribution line (backpressure), or when the pressure in the distribution line drops due to routine occurrences such as water main breaks or heavy demand causing the water to flow backward inside the water distribution system (backsiphonage). 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 line 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 attach a hose to a garden sprayer without the proper backflow preventer.
- Buy and install a hose bib vacuum breaker in any threaded water fixture. 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 a backflow preventer
- Buy and install backflow prevention devices or assemblies for all high and moderate hazard connections.

