

EASTHAMPTON WATER WORKS

Water Quality Report

2019

No. 22

Spring 2020

“Water is one of the most basic of all needs - we cannot live for more than a few days without it. And yet, most people take water for granted. We waste water needlessly and don't realize that clean water is a very limited resource. More than 1 billion people around the world have no access to safe, clean drinking water, and over 2.5 billion do not have adequate sanitation service. Over 2 million people die each year because of unsafe water - and most of them are children!”

Robert Alan Aurthur—American Screenwriter

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

WEBSITES

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

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 (1-800-426-4791).

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

IMPORTANT INFORMATION ON:

Cross Connection Control and Backflow Prevention

The Easthampton Water Works makes every effort to ensure that the water delivered to your tap is clean, safe and free of contamination. When the water reaches your home or business there is still the need to protect it from contamination caused by a cross-connection.

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.

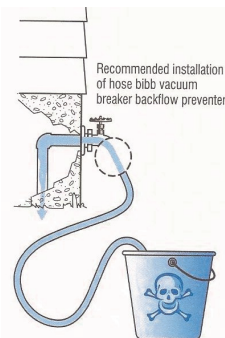
What is a backflow?

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. The installation can be as easy as attaching a garden hose to 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 a backflow preventer
- Buy and install backflow prevention devices or assemblies for all high and moderate hazard connections.



**CLEANING THE INTERIOR OF THE OLD MOUNT
TOM STORAGE TANK (CIRCA 1990)**

Easthampton Water Works

109 Hendrick Street
Easthampton, MA 01027

Phone (413) 529-1422

Fax (413) 529-1431

PWS ID # MA1087000

Primary Water Source

Barnes Aquifer

100% Groundwater

Approved Daily Pumping Volume

6.295 Million Gallons

Gallons Pumped 2019

480 Million Gallons

Daily Average Pumped

1.31 Million Gallons

Population Served

16,053

Number of Services

5882

Supervisor

Greg Nuttelman

GNuttelman@easthamptonma.gov

Foreman

Clayton Weglarz

CWeglarz@easthamptonma.gov

Craftsmen

Dan Raymond

Matt Wintle

Water Quality Programs

Mike Czerwiec

MCzerwiec@easthamptonma.gov

Customer Billing

Lori Reynolds

LReynolds@easthamptonma.gov

Phone (413) 529-1414



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. pCi/L=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.

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)**

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 Mass-DEP 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>.”

EASTHAMPTON'S WATER QUALITY

Below is a summary of the contaminants detected in your drinking water during 2019. For contaminants marked with an asterisk sampling was not required or a monitoring waiver was granted for 2019, therefore the most recent detection of the contaminant was included in the chart.

Regulated Substances (units)	Date	MCL ¹ [MDR] ⁹	MCLG ² [MDRG] ₁₀	Highest Level	Range	Violation	Typical Sources
Perchlorate (ppb) ⁴	8/23/17	2	N/A	0.252	0.155-0.252	No	Rocket propellants, fireworks, munitions, flares, blasting agents
Nitrates (ppm) ³	Quarterly	10	10	3.7	1.6-3.7	No	Runoff from fertilizer use; Leaching from septic tanks; sewage; Erosion of natural deposits.
Barium* (ppm)	5/23/11	2	2	0.39	0.222-0.390	No	Discharge of drilling wastes. Discharge from metal refineries Erosion of Natural Deposits
Chromium* (ppb)	5/23/11	100	100	0.92	0.53-0.92	No	Discharge from steel and pulp mills. Erosion of natural deposits.
Trichloroethylene (TCE) (ppb)	8/21/19	5	0	0.89	ND ⁶ -0.89	No	Discharge from metal degreasing sites and other factories.
Gross Alpha* (pCi/L) ⁵	9/08/15	15	0	2.4	0.72-2.4	No	Erosion of natural deposits
Radium 226 & 228* (combined) (pCi/L)	9/08/15	5	0	1.36	0.66-1.36	No	Erosion of natural deposits
Chlorine (ppm) {Monthly Average}	Monthly	[4]	[0]	{0.05}	ND-0.24	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 2017	15	0	7.8	1 / 30	Corrosion of household plumbing systems; Erosion of natural deposits
Copper (ppm)		1.3	1.3	0.070	0 / 30	

Secondary Contaminants and Unregulated Substances ¹³ (units)	Date	SMCL ¹¹ [ORSG] ¹²	Highest Level	Range	Typical Sources
Chloride (ppm)	8/21/2019	250	41	32-41	Runoff and leaching from natural deposits
Copper (ppm)	8/21/2019	1	0.029	0.0029 - 0.230	Internal corrosion of household plumbing; erosion of natural deposits
Sulfate (ppm)	8/21/2019	250	19	15-19	Naturally Occurring
Zinc (ppm)	8/21/2019	5	0.110	ND - 0.110	Corrosion of household plumbing systems; erosion of natural deposits
Sodium (ppm)	5/17/2017	[20]	16	13 - 16	Naturally Occurring
Acetone (ppm)	Quarterly	[6.3]	0.120	ND-0.120	In automobile exhaust, from landfills and natural sources
Bromomethane (ppb)	Quarterly	[10]	10	ND-10	Run-off from use as a fumigant

Total Coliform

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 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.*