



# TOWN OF LENOX

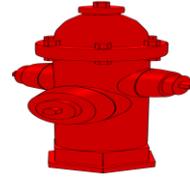
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DEPARTMENT OF PUBLIC WORKS - WATER DEPARTMENT



PWS ID #1152000

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## 2017 DRINKING WATER QUALITY REPORT

The Town of Lenox DPW – Water Department is proud to issue our annual Drinking Water Quality Report. Each year over 1,000 tests are conducted to ensure safe, high quality water for the residents of Lenox. For any questions regarding this report please contact the Town of Lenox Water Superintendent, Robert Horn, at (413) 637-5525, [bhorn@townoflenox.com](mailto:bhorn@townoflenox.com)

### SOURCES

The sources for the Lenox Water system are the Upper Root and Lower Root Reservoirs located on Reservoir Road. These surface water reservoirs are surrounded by town owned land with restricted use which protects these sources from contaminants. Water enters our Root Water Treatment Plant for filtering and chlorine is added for disinfection. In 2017 Lenox produced 197,521,600 gallons of water. No water was purchased from Pittsfield in 2017.

### MEETINGS

To discuss water quality issues please contact the Lenox DPW at (413)637-5525.

### SUBSTANCES FOUND IN WATER

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 – viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

Inorganic contaminants – 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 – may come from a variety of sources such as agricultural, 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 – can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure tap water is safe to drink, the U.S. Environmental Protection Agency (EPA) and Massachusetts Department of Environmental Protection (MASS DEP) 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 regulations establish limits for contaminants in bottled water that must provide the same protection for public health. 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. **Information about Lenox water is in the attached table. For more information about contaminants and potential health effects call the EPA Safe Drinking Water Hotline at 1-800-426-4791.**

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as those 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 from their health care providers about drinking water. EPA/Centers for Disease Control list guidelines on appropriate means to lessen the risk of infection by cryptosporidium and are also available from the Safe Drinking Water Hotline at 1-800-426-4791.

*“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 Town of Lenox DPW 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>.”*

#### **CROSS CONNECTION INFO**

A cross connection occurs whenever a drinking water line is linked to non-potable (not safe to drink) water. A garden hose connected to a weed killer spray bottle is an example of a cross connection. Faucets feeding hoses must have vacuum breakers to prevent back siphoning. Vacuum breakers are available at hardware stores. Surveys are done at commercial properties to assess needs for other types of backflow devices.



#### **WATERSHED PROTECTION**

Watershed protection is in everyone’s interest. A safe water supply depends on thoughtful use of the land. Public access is prohibited within 400 feet of the reservoirs and feeder brooks. Motorized vehicles are prohibited from the watershed. Be aware of your impact and protect your water. Please contact the Lenox Water Department at (413)637-5525 if you witness any suspicious activity.



## IMPORTANT DEFINITIONS:

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

**Level 1 Assessment:** 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

**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 of microbial contaminants (ex: chlorine, chloramines, chlorine dioxide).

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

**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.

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

**Second 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:** Contaminants 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.

**90<sup>th</sup> 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.

ND – Not detected

NTU – Nephelometric Turbidity Units

pCi/L – Picocuries per liter (a measure of radioactivity)

ppm – parts per million, or milligrams per liter (mg/L)

ppb – parts per billion, or micrograms per liter (µg/L)



Massachusetts Department of  
Environmental Protection

## SYSTEM INFORMATION:

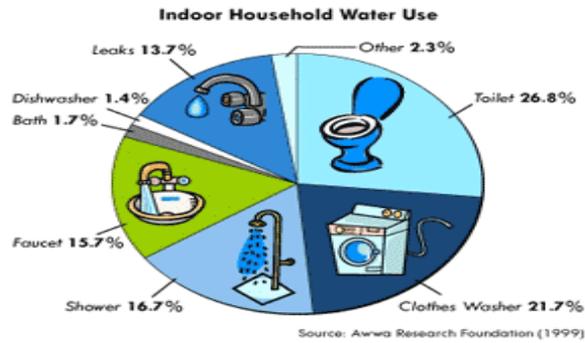
Hardness of water: 4.4 grains per gallon.

**New rates effective May 1, 2017: Water \$7.63 per 1,000 gallons, Sewer \$11.79 per 1,000 gallons.**

In 2002 a Source Water Assessment and Protection (SWAP) Report was completed by the MASS DEP for the Lenox reservoirs. The reservoirs were ranked moderate for susceptibility of contamination. The complete SWAP report is available at the Lenox DPW office, 275 Main Street, Lenox, MA 01240 or at:

<http://www.mass.gov/eea/docs/dep/water/drinking/swap/wero/1152000.pdf>

For more info, please call Robert Horn at (413)637-5525.



## CONSERVATION

Water consumption in Lenox will continue to increase as the town grows. Lenox needs to keep planning for additional sources of water. One source that Lenox has relied on for many years is the City of Pittsfield. Through an interconnection with the Pittsfield system Lenox can currently take a daily average of 82,000 gallons per day (gpd) and a peak of 430 gpd. That amount is about 35% of daily consumption in high use periods of the year. Lenox only uses Pittsfield water when demand exceeds our treatment plant's peak flow capacity of 1.1 million gallons per day or when we need to conserve our own supply in the Lenox reservoirs. Another important part of providing an adequate supply of water is conservation and the protection of our existing sources. Water is a limited resource and conservation needs to be a part of any municipalities' planning. Everyone needs to be aware of their water consumption and take steps to minimize it. Make sure your home or business is leak-free. Check your water meter when you are certain no water is being used. If the meter reading changes, you have a leak. Repair dripping faucets. One drip per second wastes 2,700 gallons of water per year. Take shorter showers. Operate dishwashers and clothes washers only when they are fully loaded or set the water level for the size of the load. Stay alert to possible uncontrolled refilling of toilet tanks caused by defective valves. Driveways and sidewalks should be cleaned by sweeping not washing. Consider using a commercial car wash that recycles water. If you wash your own car, park on the grass and use a hose with an automatic shut-off nozzle. Never pour water down the drain when there is another use for it. Use it to water your indoor plants or garden. Every little bit helps.

**Please contact the Lenox Water Department at (413)637-5525 if you notice melted snow, unusual wet spots in your yard, or noise on your water line when no water is being used. These may be signs of underground leakage that the Water Department will be happy to check.**

**Lenox Water Fact:** Tap water continues to be a great value compared to bottled water. In 2017, one thousand gallons of tap water in Lenox cost \$7.63, while one thousand gallons of bottled water bought at a store costs as much as \$1,000.

**Lenox Water Infrastructure Update:** During the summer of 2017 the Lenox Water Department had new 8 inch Ductile Iron Main installed on Route 20 from Plunkett Street to Bramble Lane. A new 8 inch water main was also installed on Rosebank Drive. The project also included the installation of 5 new Fire Hydrants.

**Other 2017 Projects included:** - 3 Fire Hydrant replacements - VFD Pump installation at the Treatment Plant

**If you have any questions about any of these projects please call (413)637-5525.**



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 were from samples collected during the last calendar year (2017) unless otherwise noted in the tables. Only the detected contaminants are shown.

## Water Quality Testing Results – Regulated Contaminants

### MICROBIOLOGICAL CONTAMINANT

Bacteria	Highest # Positive in a Month	MCL	MCLG	Violation	Possible Sources	Health Effects	Comment
Total Coliform Bacteria	1	1	0	NO	Naturally present in the environment	Coliform are bacteria that are naturally present in the environment and are used as an indicator that other potentially harmful bacteria may be present	See Coliform Assessment Information at the end of this report

### DISINFECTION CONTAMINANTS

Contaminant	Date Collected	Highest Result or Average	Range Detected	MCL or MRDL	MCLG or MRDLG	Violation	Possible Sources	Comment
Haloacetic Acids (PPB)	August 2017	15.2	15.2-15.2	60	60	NO	Byproduct of drinking water chlorination	
Trihalomethanes (PPB)	August 2017	30.8	30.8-30.8	80	80	NO	Byproduct of drinking water chlorination	
Chlorine (PPM)	continuous	0.77 (average)	0.26-2.13	4	4	NO	Added for disinfection at treatment plant	Continuously monitored at the filtration plant

### LEAD AND COPPER

Lead and Copper	Date Collected	90 <sup>th</sup> Percentile	Action Level	MCLG	# of sites sampled	# of sites above Action Level	Possible Sources of Contamination
Lead (PPB)	August 2017	2.2	15	0	20	0	Corrosion of plumbing systems
Copper (PPB)	August 2017	52.5	1,300	1,300	20	0	Corrosion of plumbing systems

### REGULATED CONTAMINANTS

Contaminant	Date Collected	Highest Detect Value	Range Detected	Average Detected	MCL or MRDL	MCLG or MRDLG	Violation	Comment
Turbidity (NTU)	Continuous	0.27	0.03-0.27	0.077	TT (1.00)	N/A (0.10)	NO	Source: Soil Runoff. Turbidity is a measure of the cloudiness of water. It is a good indicator of the effectiveness of our filtration system. Lowest monthly percentage of samples less than 1.00 ntu was 100% (all months met limits)
Nitrate (PPM)	August 2017	ND	ND	ND	10	10	NO	Source: Soil Runoff
Nitrite (PPM)	August 2017	ND	ND	ND	1	1	NO	Source: Soil Runoff

### VOLATILE ORGANIC COMPOUNDS

Compound	Date Collected	Highest Detect Value	Range Detected	Average Detected	MCL or MRDL	MCLG or MRDLG	Violation
Chloroform	December 2017	1.05	1.05	1.05	70	70	NO

#### **Comments**

Source: Trihalomethane; by-product of drinking water chlorination.

Health Effects: Some people who drink water containing chloroform at high concentrations for many years could experience liver and kidney problems and may have an increased risk of cancer.

## **SECONDDAY CONTAMINANTS**

<b>Contaminant</b>	<b>Date Collected</b>	<b>Highest Detect Value</b>	<b>Range Detected</b>	<b>Average Detect</b>	<b>SMCL</b>	<b>ORSG or Health Advisory</b>	<b>Violation</b>	<b>Comment</b>
Iron (PPB)	June 2017	ND	ND	ND	300	300	NO	Source: Used in drinking water pipes
Manganese (PPB)	June 2017	8.2	8.2	8.2	50	300*	NO	Source: Found naturally in the air, soil, and water.

\*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.

**UNREGULATED CONTAMINANTS** – 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.

<b>Unregulated Contaminant</b>	<b>Date Collected</b>	<b>Highest Detect Value</b>	<b>Range Detected</b>	<b>Average Detect</b>	<b>SMCL</b>	<b>ORSG or Health Advisory</b>	<b>Violation</b>	<b>Comment</b>
Sodium (PPM)	September 2017	2.70	2.70	2.70		20	NO	Source: Naturally occurring, also road deicing

## **RADIONUCLIDE CONTAMINANTS**

<b>Contaminant</b>	<b>Date Collected</b>	<b>Detect Value</b>	<b>Std. Dev. (+/-)</b>	<b>MCL</b>	<b>MCLG</b>	<b>Violation</b>	<b>Comment</b>
Gross Alpha (pCi/L)	August 2015	1.10	+/- 1.34	15	None	NO	Source: Occur naturally and in man-made nuclear materials
Combined Radium	August 2015	0.73	----	5	None	NO	Source: Occur naturally and in man-made nuclear materials

## **OTHER WATER QUALITY TESTING INFORMATION**

**Perchlorate** was not detected in samples taken in 2017.

**Volatile Organic Compounds (VOC)** were sampled for in 2017, none were detected, with the exception of Chloroform, which is listed in the above chart.

The MassDEP has reduced the monitoring requirements for Synthetic Organic Compounds (SOC) and Inorganic Compounds (IOC), because the source is not at risk of contamination. The last sample collected for these contaminants was taken on September 19, 2011 (for SOC) and July 18, 2011 (for IOC) and was found to meet all applicable EPA and MassDEP standards.

## **COLIFORM ASSESSMENT INFORMATION**

*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. In July of 2017 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 these assessments. During the past year we were required to conduct 1 Level 1 Assessment. This 1 Level 1 Assessment was conducted in July of 2017. In addition, we were required to take 2 corrective actions and we completed all 2 of these actions. We believe this event was caused by a water main break on New Lenox Road a few days before the bacteria sampling. The sampling location was very close to this water main break. In the future we will flush the line for a longer period of time after a main break and ensure chlorine residual levels are higher in this area of town.*