

# Town of East Longmeadow

## Department of Public Works

### 2012 Water Quality Report

Dear Customer: We are pleased to present a summary of the quality of the water provided to you during the past year. The Safe Drinking Water Act (SDWA) requires that utilities issue an annual "Consumer Confidence" report to customers in addition to other notices that may be required by law. This report details where our water comes from, what it contains, and the risks our water testing is designed to prevent. East Longmeadow is committed to providing you with the safest and most reliable water supply. Informed customers are our best allies in maintaining safe drinking water.

Please call Sean Kelley at 525-5400 for information about the next opportunity for public participation in decisions about our drinking water. The Board of Public Works serves as water commissioners. Their meeting schedules are posted at Town Hall.

#### Water Source

In 2012, the Department supplied a total of 737 million gallons of water. The Town purchases its water from the Springfield Water and Sewer Commission. Drinking water produced by the Springfield Water and Sewer Commission originates from a surface water supply, the Cobble Mountain Reservoir, located in western Massachusetts. The Borden Brook Reservoir, a smaller surface water supply that feeds into Cobble Mountain Reservoir, contributes to the system's combined water supply capacity of 25 billion gallons.

The reservoirs and the land surrounding the reservoirs are collectively called the watershed. Watershed protection is the Commission's first defense in maintaining a pure water source. The Commission within the Cobble Mountain watershed area owns approximately 13,000 acres of reservoir and land. Inside the watershed boundaries there is no commercial industry, the population density is low, and only limited farming and grazing is practiced. To further protect the water supply, boating, swimming, hunting and fishing is forbidden in and around the reservoir areas and watershed lands.

The reservoir water flows to the West Parish Filters Treatment Plant, located in Westfield, Massachusetts, where it is filtered through slow and rapid sand filtration, treated to inhibit corrosion of home plumbing, adjusted for pH, and disinfected before it flows to the 60 million gallon underground storage tanks at Provin Mountain Reservoir located in Agawam, Massachusetts. Clean drinking water is supplied, at an annual average of 35 million gallons per day, to Springfield and the surrounding communities, Agawam, East Longmeadow, Longmeadow and Ludlow, through the 617 mile piping network of large sized transmission mains and smaller sized distribution mains.

The Town has four connections to the Springfield water supply system: Elm Street, Harkness Avenue, North Main Street and Dwight Road. The northwest quadrant of Town is serviced directly by these four connections.

The southern and eastern sides of the Town are serviced by what is referred to as a high-pressure system. Water delivered from the City of Springfield is pumped at the Chestnut Street Pump Station into the high-pressure system. This water can go into our water storage tanks on Prospect Street or this water can go directly to a home or business for consumption. Since this water may be stored in the tanks for an undetermined amount of time, the Town of East Longmeadow Department of Public Works adds chlorine and ammonia at the Chestnut Street Pump Station as it pumps the water. This booster chloramination, as it is commonly referred to, helps to ensure that there are no bacteria in the system.

#### How to Read the Water Quality Table

This report is based upon tests conducted in the year 2012 by the Department. The following table shows what substances were detected in our drinking water during 2012. Although all of these that are listed are under the Maximum Contaminant Level (MCL) set by U.S. EPA, and therefore not expected to cause any health risks, we feel it is important that you know exactly what was detected and how much of the substance was present in the water. Terms used in the *Water Quality Table* and in other parts of this report are defined here.

**Maximum Contaminant Level or 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.

**Maximum Contaminant Level Goal or 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.

**Maximum Residual Disinfectant Level or 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 or MRDLG:** The level of drinking water disinfectant below which there is no known expected risk to health. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.

**Treatment Technique:** A required process intended to reduce the level of a contaminant in drinking water.

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

**IDSE:** Initial Distribution System Evaluation. A study conducted by water systems to monitor trihalomethanes (THMs) and haloacetic acids (HAA5s). Water systems will use results from the IDSE to select compliance monitoring locations for the Stage 2 Disinfection By-Products Rule.

**Lead & Copper 90<sup>th</sup> Percentile:** Nine out of every 10 homes sampled were at or below this level.

**Massachusetts Office of Research and Standards Guideline or 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, with a margin of safety. If exceeded, it serves as an indicator of the potential need for further action.

**Secondary Maximum Contaminant Level or SMCL:** These standards are developed to protect the aesthetic qualities of drinking water and are not health based.

#### Key To Table

AL = Action Level

MCL = Maximum Contaminant Level

MCLG = Maximum Contaminant Level Goal

MRDL = Maximum Residual Disinfectant Level

MRDLG = Maximum Residual Disinfectant Level Goal

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

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

TT = Treatment Technique

NTU = Nephelometric Turbidity Units

## Water Quality Table

Substance (Volatile Organic)	Unit	MCL	MCLG	Highest Quarterly Running Annual Average	Range	Major Sources in Drinking Water	Violation
TTHMs [Total Trihalomethanes]	ppb	80	N/A	74	52 - 83	By-product of drinking water chlorination	NO
IDSE - TTHMs	ppb	N/A	N/A	N/A	52 - 74	By-product of drinking water chlorination	NO
HAA5s [Total Haloacetic Acids]	ppb	60	N/A	23	0 - 56	By-product of drinking water chlorination	NO
IDSE - HAA5s	ppb	N/A	N/A	N/A	5 - 48	By-product of drinking water chlorination	NO

Substance*	Unit	MCL	ORSG	Highest Single Measurement Detected	Major Sources in Drinking Water	Violation
Sodium	ppm	None	20	12	Natural deposits	NO
Napthalene	ppb	None	140	1.8	Discharge from use in mothballs and other domestic products	NO

Substance*	Unit	MCL	SMCL	Highest Single Measurement Detected	Major Sources in Drinking Water	Violation
Sulfate	ppm	None	250	5	Natural deposits	NO
Aluminum	ppb	None	200	24	Byproduct of treatment process	NO

\* Sodium, Napthalene, Sulfate and Aluminum are unregulated contaminants. Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA with determining their occurrence in drinking water and whether future regulation is warranted.

Substance (Inorganic)	MRDL	MRDLG	Highest Quarterly Running Annual Average	Range Detected at Individual Sampling Sites	Major Sources in Drinking Water	Violation
Residual Chlorine (ppm)	4.0	4.0	0.14	0.01 – 0.50	Water additive used to control microbes	NO

Chloramination - Once water has been filtered or disinfected, steps must be taken to guard against harmful organisms that may be present in the pipes that distribute water to local homes and businesses. For this reason, ammonia is added to the water as it enters the distribution system.

Ammonia reacts with previously added chlorine to create a long-lasting disinfectant known as chloramine. This prevents bacterial growth in distribution pipes. It also minimizes the formation of trihalomethanes, which have been found to cause cancer in laboratory animals and are formed when chlorine reacts with organics that occur naturally in water.

The East Longmeadow Department of Public Works adds ammonia to its water. This, in conjunction with chlorine, has been effective at preventing bacterial regrowth throughout the entire distribution system.

Substance (Inorganic)	90 <sup>th</sup> Percentile	# of Sites Exceeded	# of Sites Sampled	Action Level	MCLG	Major Sources in Drinking Water	Violation
Copper (ppm)	0.081	0	30	1.3	1.3	Corrosion of household plumbing systems	NO
Lead (ppb)	7.2	3	30	15.0	0	Corrosion of household plumbing systems	NO

Substance (Inorganic)	Unit	MCL	MCLG	Highest Level Detected	Major Sources in Drinking Water	Violation
Nitrate	ppm	10	10	0.14	Natural deposits, stormwater, fertilizer run-off	NO
Barium	ppm	2	2	0.007	Common mineral in nature	NO

Substance (Microbiological)	MCL	MCLG	Highest Single Measurement Detected	Lowest Monthly Percent	Major Sources In Drinking Water	Violation
Turbidity (NTU) Rapid Sand Filtration <sup>1</sup>	TT	N/A	0.24	100%	Soil run-off	NO
Turbidity (NTU) Slow Sand Filtration <sup>2</sup>	TT	N/A	0.23	100%	Soil run-off	NO

-Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

<sup>1</sup>Rapid Sand Filtration: The turbidity level of the filtered water shall be less than or equal to 0.3 NTU in 95% of the measurements taken each month and shall not exceed a maximum of 1.0 NTU in any single measurement.

<sup>2</sup>Slow Sand Filtration: The turbidity level of the filtered water shall be less than or equal to 1.0 NTU in 95% of the measurements taken each month and shall not exceed a maximum of 5.0 NTU in any single measurement.

### Cryptosporidium Information

In accordance with the Long Term 2 Enhanced Surface Water Treatment Rule the Springfield Water & Sewer Commission began monitoring for Cryptosporidium in 2006. The results indicate that no further treatment is required, other than the treatment already provided, which includes filtration.

Test Date: 07/10/2007 Result: 0.1 oocysts/liter

Test Date: 08/14/2007 Result: 0.1 oocysts/liter

Cryptosporidium is a microbial parasite found in surface water throughout the U.S. Although filtration removes Cryptosporidium, the most commonly used filtration methods cannot guarantee 100% removal. Our monitoring indicates the

presence of these organisms in our reservoir water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing health problems.

Most healthy individuals are able to overcome health problems associated with *Cryptosporidium* within a few weeks. However, immuno-compromised people have more difficulty and are at greater risk of developing severe, life-threatening illness. Immuno-compromised individuals are encouraged to consult their doctor regarding appropriate precautions to prevent infection. *Cryptosporidium* must be ingested for it to cause health problems and may be passed through other means than drinking water. Symptoms of infection include nausea, diarrhea and abdominal cramps.

### **Additional Health Information**

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 throughout the ground, it dissolves naturally occurring minerals and 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 storm 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, stormwater runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organics, 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 U.S. Environmental Protection Agency (EPA) prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) 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. More information about contaminants and potential health effects can be obtained by calling the EPA Safe Drinking Water Hotline at (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 East Longmeadow Department of Public 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>.

Some people may be more vulnerable to contaminants in drinking water than is 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 guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* are available from the Safe Drinking Water Hotline (800-426-4791).

### **Cross Connection Information**

A cross connection is a connection between a drinking water pipe and a polluted source. The pollution can come from your own home. For instance, you're going to spray fertilizer on your lawn. You hook up your hose to the sprayer that contains the fertilizer. If the water pressure drops (say because of fire hydrant use in town) when the hose is connected to the fertilizer, the fertilizer may be sucked back into the drinking water pipes through the hose. Using an attachment on your hose called a backflow prevention device can prevent this problem. The East Longmeadow DPW Water Division recommends the installation of backflow prevention devices, such as a low cost hose bib vacuum breaker, for all inside and outside hose connections. You can purchase this at a hardware store or plumbing supply store. This is a great way for you to help protect the water in your home as well as the drinking water system in your town. For additional information on cross connections and the status of our water systems cross connection program, please contact Mark Langone, Cross Connection Control Inspector, at 525-5400.

We'll be happy to answer any questions about the Water Division [PWS ID# 1085000] and our water quality. Please call David J. Gromaski, P.E., Superintendent, at 525-5400.