

## Annual Water Quality Report

This is our 17<sup>th</sup> annual water report. We are pleased to be reporting the results of our 2014 water quality report. It is our goal to produce the highest quality water for our consumers. We had no water quality violations last year.

If you have any questions about the water system please feel free to contact Michael Towler at the Lee Water Department at 413-243-5526.

## Meeting Schedule:

Place: Lee Department of Public Works office

Day: 2<sup>nd</sup> & 4<sup>th</sup> Tuesday

Time: 4:30 p.m.

## Where Does Our Water Come From?

The water sources used regularly are the Leahey Reservoir, located on the upper reach of the Coddling Brook Watershed and the Schoolhouse Reservoir located in the Washington Mountain Brook Watershed. The Town also has the availability of the Vanetti Reservoir located in the Commons Brook and Coddling Brook Watersheds. The Town of Lee Water Works System serving approximately 5,200 people. The current average water consumption is approximately 600,000 gallons per day. The Leahey Reservoir has a drainage area of about 0.75 square miles with a safe daily yield of .75 million gallons a day. Schoolhouse Lake Reservoir has a safe daily yield of 1.57 million gallons a day and Vanetti reservoir has a safe daily yield of 100,000 gallons a day. The Town of Lee is well positioned to treat up to 2 million gallons a day and it's water supply is abundant. Even with the recent rains, and full reservoirs, water conservation is of the utmost importance.

**Each year The Town of Lee** conducts water quality testing according to requirements set by the Massachusetts Department of Environmental Protection (DEP) and the U.S. Environmental Protection agency (EPA).

In order to ensure that tap water is safe to drink, the EPA prescribes regulations that limit the amount of certain contaminants in water provided by the public water systems. The Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water. These tests confirm that your tap water meets all state and federal drinking water quality standards and that your water is safe to drink.

**The Lee Water Department** recommends the installation of backflow prevention devices, such as **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 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 your water system's cross connection program, please contact **Michael Towler Lee Water Department (413) 243-5526**

## **Source Water Assessment and Protection**

In 2003 a Source Water Assessment and Protection (SWAP) Report was completed by the Massachusetts Department of Environmental Protection for the Lee reservoirs. The reservoirs were ranked moderate for susceptibility for contamination. The complete SWAP report is available at the Lee DPW office at 45 Railroad Street.

## **Contaminants that may be present in water includes:**

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 water runoff, industrial, or domestic wastewater discharge, oil and gas production, mining or farming.

Pesticides and herbicides-which may come from a variety of sources such as agricultural, urban storm water runoff.

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

Disinfectant By-Products-are organic compounds produced when chlorine, a disinfectant used to kill bacteria in the water supply, reacts with naturally occurring organic matter.

**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. Some people may be more vulnerable to contaminants in drinking water than the general populations. 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 from infections. These people should seek advice about drinking water from their health care providers.**

**For more information about contaminants and potential health effects you may contact the "EPA/Center for Disease Control and Prevention Guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other Microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791)."**

## **What is a Cross Connection and What Can I do About it?**

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 the 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 your hose called a back-flow-prevention device can prevent this problem.

**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.

Contaminant (Units)	Sites Sampled	AL	90 <sup>th</sup> Percentile	Sample Date	Exceeding AL	Violation	Possible Source of Contamination
<b>Lead and Copper</b>							
Lead	20	15 PPB	13 PPB	Sept. 2012	0	No	Corrosion of household plumbing system
Copper	20	1.3 PPM	0.077 PPM	Sept. 2012	0	No	Corrosion of household plumbing system

Contaminant (Units)	Level Detected	MCL	MCLG	Sample Date	Violation	Possible Source of Contamination
<b>Inorganic Contaminants</b>						
Nitrate	0.065 PPM	10 PPM	10 PPM	2014	No	Run off from fertilizer use leaching from septic tanks Sewage
Barium	0.0064 PPM	2.0 PPM	2.0 PPM	2014	No	Erosion of natural deposits
<b>Unregulated contaminants</b>						
Sodium	8.5 PPM	None	None	2014	No	By-product of corrosion control, naturally occurring.
<b>Disinfection By-Products</b>						
Total Trihalomethane	56 Avg. Range 31.0-83.0 PPB	80 PPB	None	2014	No	By-product of drinking water chlorination
Total Haloacetic Acid	29.0 Avg. Range 15.0-50.0 PPB	60 PPB	None	2014	No	By-product of drinking water chlorination
<b>Microbial Contaminants</b>						
Turbidity	0.145 NTU	TT=0.3 NTU	None	2014	No	Soil runoff
<b>Secondary Contaminant</b>						
Iron	ND	0.3	None	2014	No	Naturally occurring
Manganese	0.011	0.05	None	2014	No	Naturally occurring

#### Definitions:

**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.

**Maximum Contaminant Level Goal (MCLG):** the level of a contaminant in drinking water below which there is not known or expected risk to health. MCLGs allow for a margin of safety.

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

**Treatment Technique (TT):** is a required process intended to reduce the level of a contaminant in drinking water. 0.5 NTU must be met 95% of the time. The TT was met 100% of the time.

**90<sup>th</sup> Percentile Level:** out of 10 sites sampled, 9 out of 10 were at or below this level.

**Parts per million / (PPM) Parts per billion (PPB)**

**N.D. non-detect**

#### Lead and Copper:

The last round of samplings was done in 2012. Following the passage of the Federal Lead and Copper Rule and initial copper and lead sampling in 1991, the Lee Water Dept. failed to meet the regulated action levels. Notification, bill stuffers, etc. were distributed to comply with regulations until a water treatment facility could be constructed. In 1998, the Lee Water Dept. completed construction of a new water filtration plant. Controlled adjustment in pH and the addition of Zinc Orthophosphate stabilizes the water throughout the distribution system, reducing the aggressive/corrosive action of the water and therefore reducing copper and lead concentrations. I am pleased to report that the Town of Lee is now out of the demonstration phase. Our water is under the action level for lead and copper. Potential adverse health effects for copper and lead are listed as follows:

**Copper:** Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water-containing copper in excess of the action level over many

years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.

**Lead:** 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 Lee Water Department is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water is 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>.