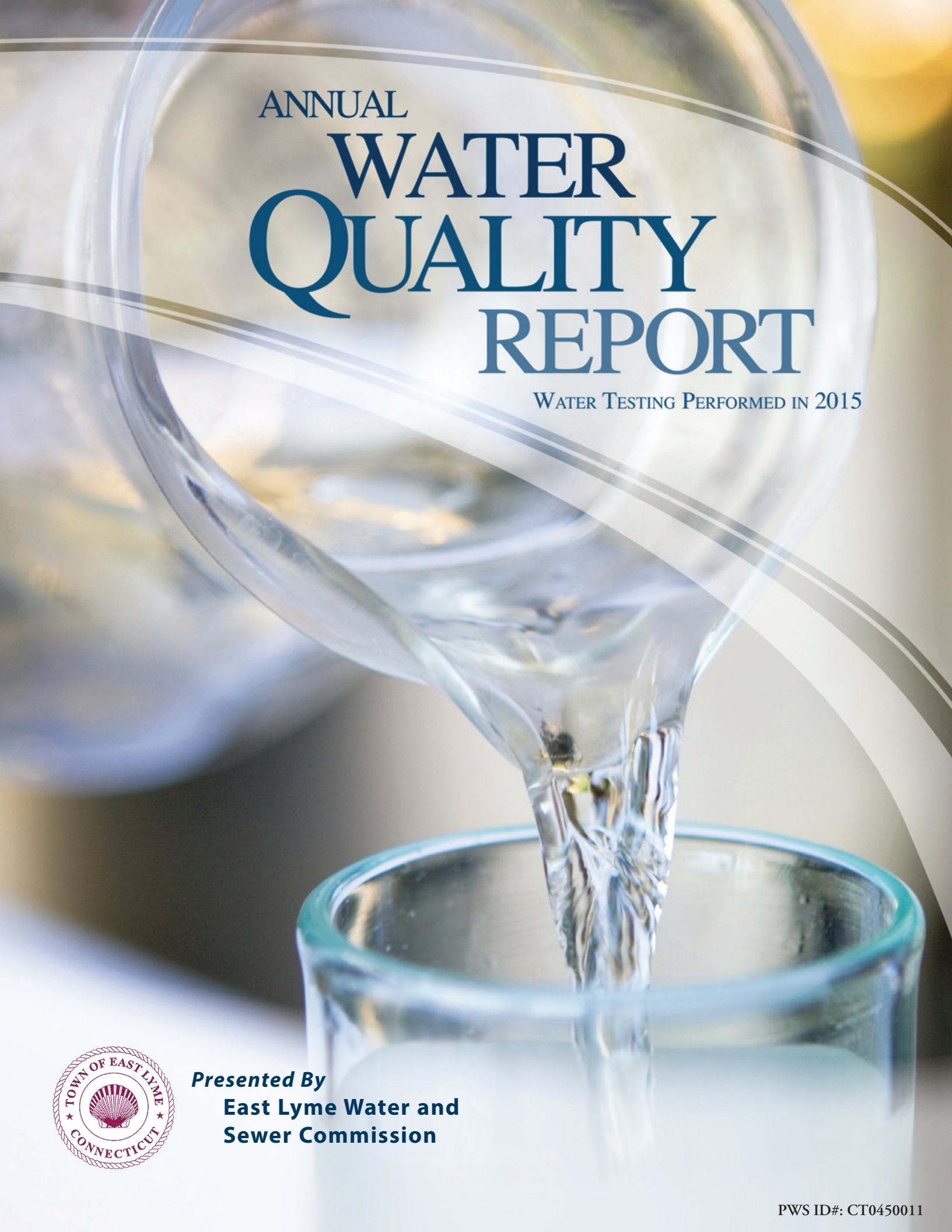


ANNUAL WATER QUALITY REPORT

WATER TESTING PERFORMED IN 2015

Presented By

East Lyme Water and Sewer Commission

PWS ID#: CT0450011

Meeting the Challenge

Once again we present our annual drinking water report, covering all drinking water testing performed between January 1 and December 31, 2015. With the many challenges that exist, we have dedicated ourselves to producing drinking water that meets all state and federal standards. We continually strive to adopt new methods for delivering the best quality drinking water to your homes and businesses.

We have made water system improvements in recent years to keep pace with a growing community, increased demand, and an aging infrastructure. Most recently, the regional interconnection with New London was completed, which allows East Lyme to supplement its supply with water from New London primarily during the summer months when East Lyme's demand is the highest. It also provides year-round system redundancy, providing East Lyme with an alternate source of water in the event of a water supply emergency. In addition, systemwide disinfection has been implemented to ensure safe drinking water, and water supply well upgrades have been made to provide a more reliable supply.

A study is currently under way to evaluate filtration alternatives for Wells 1A and 2A to remove naturally occurring iron and manganese and improve water quality. The study should be completed by the end of June 2016. We are currently working with the Connecticut Department of Public Health to obtain funding through the Drinking Water State Revolving Fund to advance the project into the design and construction phase. We continue to investigate the implementation of a radio-based meter reading system that would provide more efficient meter reading capability and better customer service.

Please remember that we are always available to assist you, should you ever have any questions or concerns about your water.

Community Participation

You are invited to participate in our public forum and voice your concerns about your drinking water. We meet the fourth Tuesday of each month beginning at 7:00 p.m. at the East Lyme Town Hall, 108 Pennsylvania Avenue, Niantic, Connecticut.

Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

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, in some cases, radioactive material, and substances resulting from the presence of animals or from human activity. Substances 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, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban stormwater 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, 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 may also come from gas stations, urban stormwater runoff, and septic systems;

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

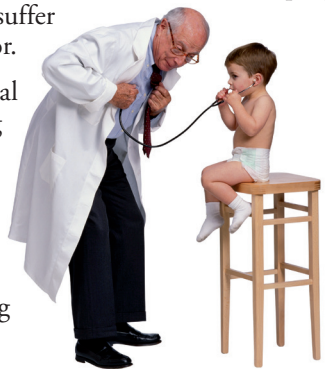
Lead in Home Plumbing

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. We are 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 www.epa.gov/lead.

Important Health Information

Sources of lead in drinking water includes corrosion of household plumbing system and erosion of natural deposits. Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

Sources of copper in drinking water includes corrosion of household plumbing system, erosion of natural deposits, and leaching from wood preservatives. 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.



Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers 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 at (800) 426-4791.

Where Does My Water Come From?

The Town of East Lyme customers depend on a water supply that comes from seven ground water sources. Wells are at various locations throughout the town in two separate aquifers, which include the Pattagansett and Bride Brook aquifers. The water from five of the wells is filtered to remove iron and manganese, and then treated for pH adjustment, chlorine disinfection, and fluoridation. Two of the wells, Wells 1A and 2A, are similarly treated but are not currently filtered. A sequestering agent is also added to the finished water of Wells 1A and 2A. The finished water is then delivered through an extensive distribution system, including two water storage tanks and 10 booster stations. During the summer months, East Lyme's supply is supplemented with water from the City of New London through a distribution network including more than three miles of water main, an elevated water storage tank, and two pumping stations. New London's water comes from lakes and reservoirs in a protected watershed located in Waterford, Montville, and Salem. The principal reservoir is Lake Konomoc. The water is processed using coagulation, flocculation, sedimentation, and carbon filtration, and then treated for pH adjustment, chlorine disinfection, fluoridation, and corrosion control. To learn more about the watersheds on the Internet, go to the U.S. EPA's Surf Your Watershed Web site at www.epa.gov/surf.

Source Water Assessment

The State of Connecticut Department of Public Health (DPH) in cooperation with the Department of Environmental Protection (DEP) completed source water assessments for all of the East Lyme Water Department's public water supply sources and the New London Lake Konomoc Reservoir System. The sources were rated based on their environmental sensitivity, potential risk factors, and source protection needs. The rating does not necessarily imply poor water quality but indicates susceptibility to potential sources of contamination.

The Bride Lake well field includes Wells 2A, 3A, and 3B and received a low overall susceptibility rating. The remaining well fields, which include the Gorton Pond well field (Wells 1A and 6), the Dodge Pond well field (Well 4A), and Well 5 received moderate overall susceptibility ratings. New London's Lake Konomoc reservoir received a low susceptibility rating. The source water assessments are available on the CTDPH's Web site at www.ct.gov/dph/publicdrinkingwater. Once on the Web site, go to Source Water Protection and then to Connecticut's SWAP Assessment Reports and Findings.

QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call Bradford C. Kargl, Municipal Utility Engineer, at (860) 739-6931.

Water Main Flushing

Distribution mains (pipes) convey water to homes, businesses, and hydrants in your neighborhood. The water entering distribution mains is of very high quality; however, water quality can deteriorate in areas of the distribution mains over time. Water main flushing is the process of cleaning the interior of water distribution mains by sending a rapid flow of water through the mains.

Flushing maintains water quality in several ways. For example, flushing removes sediments like iron and manganese. Although iron and manganese do not pose health concerns, they can affect the taste, clarity, and color of the water. Additionally, sediments can shield microorganisms from the disinfecting power of chlorine, contributing to the growth of microorganisms within distribution mains. Flushing helps remove stale water and ensures the presence of fresh water with sufficient dissolved oxygen, disinfectant levels, and an acceptable taste and smell.

During flushing operations in your neighborhood, some short-term deterioration of water quality, though uncommon, is possible. You should avoid tap water for household uses at that time. If you do use the tap, allow your cold water to run for a few minutes at full velocity before use and avoid using hot water, to prevent sediment accumulation in your hot water tank.

Please contact us if you have any questions or if you would like more information on our water main flushing schedule.

Benefits of Chlorination

Disinfection, a chemical process used to control disease-causing microorganisms by killing or inactivating them, is unquestionably the most important step in drinking water treatment. By far, the most common method of disinfection in North America is chlorination.

Before communities began routinely treating drinking water with chlorine (starting with Chicago and Jersey City in 1908), cholera, typhoid fever, dysentery, and hepatitis A killed thousands of U.S. residents annually. Drinking water chlorination and filtration have helped to virtually eliminate these diseases in the U.S. Significant strides in public health are directly linked to the adoption of drinking water chlorination. In fact, the filtration of drinking water plus the use of chlorine is probably the most significant public health advancement in human history.

How chlorination works:

Potent Germicide Reduction in the level of many disease-causing microorganisms in drinking water to almost immeasurable levels.

Taste and Odor Reduction of many disagreeable tastes and odors like foul-smelling algae secretions, sulfides, and odors from decaying vegetation.

Biological Growth Elimination of slime bacteria, molds, and algae that commonly grow in water supply reservoirs, on the walls of water mains, and in storage tanks.

Chemical Removal of hydrogen sulfide (which has a rotten egg odor), ammonia, and other nitrogenous compounds that have unpleasant tastes and hinder disinfection. It also helps to remove iron and manganese from raw water.

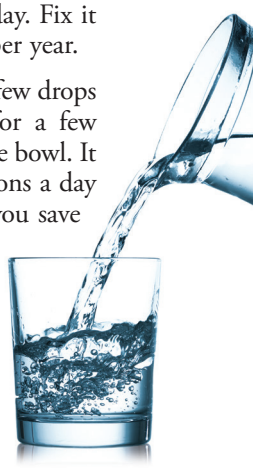
Source Water Protection

Level A aquifer mapping has been completed for all of our water supply sources and has been approved by the state regulatory agencies. The mapping more accurately identifies the zone of influence for our water supply wells and is used to regulate land use activities that may affect water quality.

Water Conservation

You can play a role in conserving water and saving yourself money in the process by becoming conscious of the amount of water your household is using and by looking for ways to use less whenever you can. It is not hard to conserve water. Here are a few tips:

- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- Check your toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from an invisible toilet leak. Fix it and you save more than 30,000 gallons a year.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water using appliances. Then check the meter after 15 minutes. If it moved, you have a leak.



Sampling Results

During the past year, we have taken hundreds of water samples to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water. The state requires us to monitor for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

We participated in the 3rd stage of the EPA's Unregulated Contaminant Monitoring Rule (UCMR3) program by performing additional tests on our drinking water. UCMR3 benefits the environment and public health by providing the EPA with data on the occurrence of contaminants suspected to be in drinking water, in order to determine if EPA needs to introduce new regulatory standards to improve drinking water quality. Contact us for more information on this program.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Alpha Emitters (pCi/L)	2014 and 2015	15	0	3.25	3.00–3.25	No	Erosion of natural deposits
Barium (ppm)	2014	2	2	0.058	0.008–0.058	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine[1] (ppm)	2015	[4]	[4]	0.89	0.10–0.89	No	Water additive used to control microbes
Chromium (ppb)	2014	100	100	4	2–4	No	Discharge from steel and pulp mills; Erosion of natural deposits
Combined Radium (pCi/L)	2015	5	0	1.13	ND–1.13	No	Erosion of natural deposits
Fluoride[2] (ppm)	2015	4	4	1.44	0.73–1.44	No	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAA] (ppb)	2015	60	NA	6	ND–6	No	By-product of drinking water disinfection
Nitrate (ppm)	2015	10	10	1.93	0.89–1.93	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [Total Trihalomethanes] (ppb)	2015	80	NA	8.8	1.1–35.5	No	By-product of drinking water disinfection
Turbidity[3] (NTU)	2015	5	NA	3.73	ND–3.73	No	Soil runoff

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2015	1.3	1.3	0.68	0/122	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2015	15	0	2.00	2/122	No	Corrosion of household plumbing systems; Erosion of natural deposits

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chloride (ppm)	2014	250	NA	55.9	32.2–55.9	No	Runoff/leaching from natural deposits
Sulfate (ppm)	2014	250	NA	18.2	9.6–18.2	No	Runoff/leaching from natural deposits; Industrial wastes

UNREGULATED AND OTHER SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
MTBE (Methyl-tert-Butyl Ether) (ppb)	2015	2.3	ND–2.3	Petroleum tanks above and below ground
Sodium[4] (ppm)	2015	40.4	9.8–40.4	Naturally occuring; road salt

Sodium Notice – Be advised that when the sodium concentration exceeds 28 ppm, people who have been placed on a sodium-restricted diet should inform their physicians.

UNREGULATED CONTAMINANT MONITORING RULE PART 3 (UCMR3)

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Chlorate (ppb)	2015	710	180–710	By-product of drinking water disinfection
Chromium (ppb)	2015	0.40	0.35–0.40	Erosion of natural deposits
Chromium, Hexavalent (ppb)	2015	0.25	0.07–0.25	Erosion of natural deposits
Strontium (ppb)	2015	131	63–131	Erosion of natural deposits

[1] The values reported under Amount Detected are the highest monthly averages for the 12-month period for the East Lyme treated water sources. When receiving water from New London during the summer months, approximately a three-month period, the highest monthly average is 1.52 ppm.
[2] The values reported under Amount Detected are the highest monthly averages for the 12-month period.
[3] Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of water quality and the effectiveness of disinfectants.
[4] The average sodium concentration of 144 samples taken was 24.8 ppm.

Definitions

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

LRAA (Locational Running Annual Average): The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters. Amount Detected values for TTHMs and HAAs are reported as LRAAs.

MCL (Maximum Contaminant Level): 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.

MCLG (Maximum Contaminant Level Goal): 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.

MRDL (Maximum Residual Disinfectant Level): 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.

MRDLG (Maximum Residual Disinfectant Level Goal): 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 contaminants.

NA: Not applicable

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

pCi/L (picocuries per liter): A measure of radioactivity.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

SMCL (Secondary Maximum Contaminant Level): SMCLs are established to regulate the aesthetics of drinking water like appearance, taste and odor.