

# LONDON UTILITY COMMISSION

## PWS ID KY#0630255

### 2011 WATER QUALITY REPORT

This report is to inform you about the excellent water service that we deliver each day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect water resources. We are committed to ensuring the quality of your water will remain at the highest level and the price at the lowest level as we meet the needs of our community.

We are pleased to report that none of the parameters tested during 2011 exceeded the state drinking water standards. This brochure is a summary of the quality of water provided to our customers during 2011. It is a record reflecting the hard work by our employees to bring you water that is safe to drink.

Included in this report are details of where your water comes from, what it contains, and how it compares to standards set by regulatory agencies.

The London Utility Commission is committed to providing you with information about your water, because customers who are well informed are our best allies in supporting improvements necessary to maintain the highest drinking water standards.

The source of your drinking water is Laurel River Lake. The intake for the water system is located in Little Indian Camp Branch of Laurel River Lake. The surface water that is delivered to your tap begins its journey at our intake structure on Laurel Lake. It is pumped 10.5 miles from the intake to the water treatment plant.

#### Laurel River Lake



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 human activity. Contaminants that may be present in source water include *Microbial contaminants*, such as viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife. *Inorganic Contaminants*, such as salts and metals, that can be naturally-occurring or result from urban stormwater 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 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, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water that shall provide the same protection for public health.

Your water treatment plant utilizes the Actiflo treatment process. This is an innovative process that utilizes a micro sand technology along with Polymer and Liquid Alum to complete the

coagulation process. The coagulation process removes suspended matter (such as dirt particles) and certain other compounds from the water. After the coagulation process, the water is filtered to remove any particles that were not removed during the coagulation and sedimentation phase of treatment. During the treatment process chlorine is utilized for disinfection. Disinfection is necessary to kill bacteria and other harmful organisms that may be present in the water. Another phase of the treatment process involves the addition of Caustic Soda for pH adjustment. Fluoride is also added to enhance the dental health of the consumers. After treatment the water is stored in two clearwells with a combined capacity of approximately one million gallons. The treated water is pumped from the clearwells into the network of piping (distribution system) which delivers the water to your tap.

#### London Water Treatment Plant



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 U.S. Environmental Protection Agency's 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. London Utility Commission 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>.

If you would like to present your questions directly to the water system you can contact Dallas Cox, Jeff Fields, or Ray Osborne of the London Utility Commission Water Treatment Plant. The telephone number is (606) 864-7551. You are invited to attend the regular board meetings held the Fourth Tuesday night of each month at 5:30 p.m. at 801 North Main Street. Customer's views are welcome. Copies of the CCR's and other information can be found on our website at [www.londonutilitycommission.com](http://www.londonutilitycommission.com).

The final Source Water Assessment and Protection Plan (SWAPP) have been completed for the water supply for the City of London. An analysis of the susceptibility of the London Water supply to contamination indicates that this susceptibility is generally moderate. Potential areas of concern include forested land coverage and agriculture. These activities increase the susceptibility of the water source to contaminants such as siltation, excess nutrients, and pesticides. The assessment was prepared by the Cumberland Valley Area Development District (CVADD). A Copy of the plan is available for inspection at the CVADD office which is located at 342 Old Whitley Road, London, KY 40741

The London Utility Commission had fourteen (14) boil water advisories during 2011. A Boil Water Advisory is issued as a **precautionary measure** when there is a possibility of contamination, such as low pressure (less than 20 psi), low chlorine, line breaks, spills, floods, etc. The water might possibly cause adverse human health effects if consumed. The regulation calls for boiling the water for 3 minutes at a rolling boil [401 KAR 8:020, Section 2(10)].

#### Definitions

This report may contain many terms and abbreviations you might not be familiar with. To help you better understand these terms we are providing the following definitions:

**Below Detection Levels (BDL)** - laboratory analysis indicates that the contaminant is not present.

**Treatment Technique (TT)** - A required process intended to reduce the level of a contaminant in drinking water.

**Nephelometric Turbidity Unit (NTU)** - A measure of the turbidity in excess of 5 NTU is just noticeable to the average person.

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

**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 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. MCLGs allow for a margin of safety.

**Parts per million (ppm)** - one part per million corresponds to one minute in two years or a single penny in \$10,000.

**Parts per billion (ppb)** - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

**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.

**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 contaminants.

**N/A** - Not Applicable

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

The London Utility Commission Water Treatment System routinely monitors for contaminants in your drinking water according to Federal and State regulations. The table contained within this report shows the results of our monitoring for the period of January 1, 2011 through December 31, 2011, unless otherwise noted. This table only includes parameters with detects. Our business office can supply you with a listing of all parameters tested as well as testing schedules.

	Allowable Levels	Highest Single Measurement	Lowest Monthly %	Violation Y/N	Likely Source		
<i>Turbidity is a measure of the cloudiness of the water. We measure it because it is a good indicator of the effectiveness of our filtration system. High Turbidity can hinder the effectiveness of disinfectants.</i>							
Turbidity (NTU)	Less than 0.3 NTU 95% of samples each month. (TT) Never more than 1 NTU	0.12	100%	N	Soil runoff		
REGULATED CONTAMINANT TEST RESULTS							
Contaminant [code] (units)	MCL	MCLG	Highest Detection	Range	Date of Sample	Violation Y/N	Likely Source of Contamination
Chlorine (ppb)	MRDL = 4	MRDL G = 4	2.06	0.6 – 2.06	Numerous Dates in 2011	N	Water additive used to control microbes in water
Fluoride [1025] (ppm)	4	4	1.10	N/A	July 15, 2011	N	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Lead [1030] (ppb) 0 Sites Exceeded A L	AL=15	0	BDL – (90 % - ile)	BDL	August 10, 2010	N	Corrosion of household plumbing systems, erosion of natural deposits
Nitrate (as Nitrogen) [1040] (ppm)	10	10	0.2	N/A	February 3, 2011	N	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
TTHM [total trihalomethanes] (ppb)	80	N/A	53.7 (Quarterly Average)	BDL 27 - 83	Quarterly 2011	N	By-product of drinking water chlorination
Copper 0 Sites Exceeds AL	AL: 1.3	1.3	0.54 (90 % - ile)	BDL .082	August 10, 2010	N	Corrosion of household plumbing systems; erosion of natural deposits
HAA5 – (ppb)	60	N/A	31.5 (Quarterly Average)	16.1 - 51	Quarterly, 2011	N	By – product of water disinfectant
Total Organic Carbon (Reduction Ratio)	TT	Treatment Technique	Lowest Annual AVG 1.51	1.06 – 2.56	Monthly 2011	N	Naturally present in the environment
Treatment Technique (TT) for TOC's is based on the lowest running annual average of the monthly ratio's of the percent TOC removal achieved to the percent TOC removal required. A minimum ratio of 1.0 is required to meet the TT.							
Alpha Emitters (pC: / l)	15	0	0.3	0-0.3	Feb 6, 2008	N	Erosion of Natural Deposits

During 2011, the Kentucky Division of Water required London Utility Commission to monitor for 91 different contaminants. Of the parameters tested, we are pleased to report that none of the regulated contaminants exceeded applicable drinking water standards. Only those contaminants that were detected are included in the test results table. Additional tests are conducted daily during the treatment process to ensure the water quality remains high. During 2010 the cost of the required monitoring performed by a certified laboratory was \$13,058.16. This does not include the labor for collecting the samples and the labor cost for performing the daily processes control testing.

Fluoride has been added to the drinking water for dental health purposes. The water system monitors the fluoride on a daily basis and sends samples twice a month to an independent lab for analysis.

**Maximum Contaminant Levels (MCL):**

MCL's are set at very stringent levels. To understand the possible health effects described for many regulated contaminants, a person would have to drink 2 liters of water at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

*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 (800)-426-4791.*

We at the London Utility Commission work hard to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future. We continually strive to minimize the interruption of your service due to water main breaks and routine maintenance. We appreciate your patience during these events and apologize for any inconvenience you may have experienced due to a main break or the ensuring boil water advisories during the calendar year 2011. We request your help in protecting our water supply from vandals or potential terrorist activity. If you observe suspicious activities around any of the water facilities, please report this type of activity to our business office or local Law Enforcement Agencies. We must all work together to protect our communities from these types of activities.

## London Water Treatment Process Flow Diagram

