Laurel County Water District #2
Water Quality Report for year 2015

Water - Essential for Life

3910 South Laurel Road
London, Ky 40744

Meetings: Water District Office
Meeting Dates and Time: 2nd Tuesday each Month 2:00 PM

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KY0630238

This report is designed to inform the public about the quality of water and services provided on a daily basis. Our commitment is to provide our customers with a safe, clean, and reliable supply of drinking water. We want to assure that we will continue to monitor, improve, and protect the water system and deliver a high quality product. Water is the most indispensable product in every home and we ask everyone to be conservative and help us in our efforts to protect the water source and the water system.

Our source of water is surface water. Water was withdrawn from Laurel River Lake and processed at our treatment facility by professional water treatment operators then distributed to over 17,000 people daily. Activities and land uses upstream of our drinking water intake on Laurel River Lake can pose potential risk to your drinking water. These activities and how they are conducted, are of interest to the entire community because they potentially affect your health and the cost of treating your water. A source water assessment has been prepared to evaluate the susceptibility of our water source to contamination. Sources of potential contamination for the Laurel River Lake include; transportation routes (rail and road), pesticide application, untreated sewage typically from failing septic systems or straight pipes, mining activities, and chemical and fuel storage, forested land coverage, and agriculture. These activities increase the susceptibility of the water source to contaminants such as siltation, excess nutrients, and pesticides. Your help is needed as well in being mindful when disposing of waste and reporting any suspicious activity occurring within the Laurel River and Laurel River Lake watershed. The source water assessments can be reviewed at our office or at the Cumberland Valley Area Development District.

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 may be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

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 may 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, (sewage plants, septic systems, livestock operations, or wildlife). Inorganic contaminants, such as salts and metals, (naturally occurring or from stormwater runoff, wastewater discharges, oil and gas production, mining, or farming). Pesticides and herbicides, (stormwater runoff, agriculture or residential uses). Organic chemical contaminants, including synthetic and volatile organic chemicals, (by-products of industrial processes and petroleum production, or from gas stations, stormwater runoff, or septic systems). Radioactive contaminants, (naturally occurring or from oil and gas production or 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 to provide the same protection for public health.

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).

Some or all of these definitions may be found in this report:

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 no known or expected risk to health. MCLGs 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.

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.

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

Not Applicable (N/A) - does not apply.

Parts per million (ppm) - or milligrams per liter, (mg/l). One part per million corresponds to one minute in two years or a single penny in $10,000.

Parts per billion (ppb) - or micrograms per liter, (µg/L). One part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.

Parts per trillion (ppt) - one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in $10,000,000,000.

Parts per quadrillion (ppq) - one part per quadrillion corresponds to one minute in 2,000,000,000 years or one penny in $10,000,000,000,000.

Picocuries per liter (pCi/L) - a measure of the radioactivity in water.

Millirems per year (mrem/yr) - measure of radiation absorbed by the body.

Million Fibers per Liter (MFL) - a measure of the presence of asbestos fibers that are longer than 10 micrometers.

Nephelometric Turbidity Unit (NTU) - a measure of the clarity of water. Turbidity has no health effects. However, turbidity can provide a medium for microbial growth. Turbidity is monitored because it is a good

Variances & Exemptions (V&E) - State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

Action Level (AL) - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system shall follow.

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

Information About 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. Your local public water system 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.

Spanish (Español) Este informe contiene información muy importante sobre la calidad de su agua beber. Tradúzcalo o hable con alguien que lo entienda bien.

The data presented in this report are from the most recent testing done in accordance with administrative regulations in 401 KAR Chapter 8. As authorized and approved by EPA, the State has reduced monitoring requirements for certain contaminants to less often than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data in this table, though representative, may be more than one year old.

	Allowable Levels	Highest Single Measurement	Lowest Monthly %	Violation	Likely Source
Turbidity (NTU) TT * Representative samples of filtered water	No more than 1 NTU* Less than 0.3 NTU in 95% of monthly samples	0.093	100	No	Soil runoff

Regulated Contaminant Test Results

Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Microbiological Contaminants							
Total Coliform Bacteria # or % positive samples	1	0	2	N/A	2015	**Yes**	Naturally present in the environment
Radioactive Contaminants							
Alpha emitters [4000] (pCi/L)	15	0	3	3 to 3	May-14	No	Erosion of natural deposits
Combined radium (pCi/L)	5	0	1	1 to 1	May-14	No	Erosion of natural deposits
Inorganic Contaminants							
Barium [1010] (ppm)	2	2	0.016	0.016 to 0.016	Apr-15	No	Drilling wastes; metal refineries; erosion of natural deposits
Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	0.307 (90^{th} percentile)	0.004 to 0.907	Jun-15	No	Corrosion of household plumbing systems
Fluoride [1025] (ppm)	4	4	0.8	0.8 to 0.8	Apr-15	No	Water additive which promotes strong teeth
Lead [1030] (ppb) sites exceeding action level 0	AL = 15	0	1.3 (90^{th} percentile)	0 to 7.7	Jun-15	No	Corrosion of household plumbing systems
Nickel (ppm) (US EPA remanded MCL in February 1995.)	N/A	N/A	2	2 to 2	Apr-15	No	N/A
Nitrate [1040] (ppm)	10	10	0.28	0.28 to 0.28	Jul-15	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits
Disinfectants/Disinfection Byproducts and Precursors							
Total Organic Carbon (ppm) (measured as ppm, but reported as a ratio)	TT*	N/A	1.17 (lowest average)	1.01 to 1.60 (monthly ratios)	2015	No	Naturally present in environment.
*Monthly ratio is the % TOC removal achieved to the % TOC removal required. Annual average must be 1.00 or greater for compliance.							
Chlorine (ppm)	MRDL = 4	MRDLG = 4	0.87 (highest average)	0.25 to 1.63	2015	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	41 (high site average)	14.6 to 54.3 (range of individual sites)	2015	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	39 (high site average)	11 to 63 (range of individual sites)	2015	No	Byproduct of drinking water disinfection.

Unregulated Contaminants (UCMR 3)	average	range (ppb)	date
strontium	65.5	64 to 67	Mar-15

EPA has not established drinking water standards for unregulated contaminants. There are no MCL's and therefore no violations if found.

Our water system has sampled for a series of unregulated contaminants. Unregulated contaminants are those that don't yet have a drinking water standard set by EPA. The purpose of monitoring for these contaminants is to help EPA decide whether the contaminants should have a standard. As our customers, you have a right to know that these data are available. If you are interested in examining the results, please contact our office during normal business hours.

Maximum Contaminant Levels (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 every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

Message to Our Customers

We at Laurel Co. Water District #2 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 ensuing boil water advisories during the calendar year 2015. 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.

Violation:

We received a violation November 16, 2015 for exceeding the MCL for coliform bacteria during the 8/1/2015 - 8/31/2015 compliance period. The MCL is exceeded when if more than one sample tests positive for total coliform bacteria. The total number of Routine and Repeat samples was 26. Two samples tested positive. District operators collected repeat samples immediately after being notified by our laboratory. Subsequent testing shows that the problem has been resolved.

Health Effects:

Total Coliform. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.