2018 Water Quality Report ***Ledbetter Water District*** **KY0700243**

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Meetings: 1483 US 60 West, Ledbetter, Kentucky Third Tuesday / 5:30 pm

Ledbetter Water District's water sources are A) groundwater that we treat, from wells near the treatment plant at 1483 US 60 West, Ledbetter; and B) surface water from the Cumberland River at Pickneyville, Ky., purchased from Crittenden-Livingston Water District. Source (A) supplies Ledbetter, from Ferren Road to the Tennessee River bridge. Source (B) helps supply all of the water district. An analysis of our water supplies indicates that their susceptibility to contamination is high. Source (A), Ledbetter's wells, is susceptible to contamination from agricultural land use, underground storage tanks, agribusiness, and highway 60. Source (B), the Cumberland River, is susceptible to contamination from bridges, large capacity septic tanks, underground storage tanks, coast guard stations, landfills, chemical storage facilities, rock quarries and mines, auto repair facilities, wastewater treatment plants, barge traffic, asphalt plants, and highways. This is a summary. The complete water source assessment reports are available for review at the Ledbetter Water District Office.

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).

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.

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 indicator of the effectiveness of the filtration system.

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.

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. ***A= Ledbetter Water Distric, B = Crittenden-Livingston Water District***

	Allowable Levels	Source	Highest Single Measurement	Lowest Monthly %	Violation	Likely Source of Turbidity
Turbidity (NTU) TT	No more than 1 NTU*	A=	0.28	100	No	
* Representative samples	Less than 0.3 NTU in	B=	0.2	100	No	Soil runoff
of filtered water	95% monthly samples					

Regulated Contaminant Test Results

Contaminant [code] (units)	MCL	MCLG	Source	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Radioactive Contaminants								
Beta photon emitters (pCi/L)	50	0	B=	9.4	9.4 to 9.4	Feb-17	No	Decay of natural and man-made deposits
Alpha emitters [4000] (pCi/L)	15	0	B=	10.7	10.7 to 10.7	Feb-17	No	Erosion of natural deposits
Combined radium (pCi/L)	5	0	A=	1.6	1.6 to 1.6	July-17	No	Erosion of natural deposits
			B=	0.42	0.42 to 0.42	July-17	No	
Inorganic Contaminants								
Barium [1010] (ppm)	2	2	A=	0.043	0.043 to 0.043	Feb-17	No	Drilling wastes; metal refineries; erosion of natural deposits
			B=	0.025	0.025 to 0.025	Feb-17	No	
Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	A=	0.220 (90^{th} percentile)	0 to 0.55	Aug-16	No	Corrosion of household plumbing systems
Fluoride [1025] (ppm)	4	4	A=	0.78	0.78 to 0.78	Feb-17	No	Water additive which promotes strong teeth
			B=	0.72	0.72 to 0.72	Feb-17	No	
Lead [1030] (ppb) sites exceeding action level 0	AL = 15	0	A=	3.5 (90^{th} percentile)	0 to 8.6	Aug-16	No	Corrosion of household plumbing systems
Nitrate [1040] (ppm)	10	10	B=	0.17	0.17 to 0.17	Sept-18	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits
Disinfectants/Disinfection Byproducts and Precursors								
Total Organic Carbon (ppm) (report level=lowest avg. range of monthly ratios)	TT*	N/A	B=	1.27	1.00 to 2.54	2018	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	A=	1.18 (highest average)	0.47 to 1.84	2018	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	A=	46 (average)	20 to 56 (range of individual sites)	2018	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	A=	67 (average)	25 to 100 (range of individual sites)	2018	No	Byproduct of drinking water disinfection.

Other Contaminants

Cryptosporidium [oocysts/L]	0	TT (99% removal)	B=	2 (positive samples)	12 (no. of samples)	2018	See Note Below	Human and animal fecal waste

Cryptosporidium is a microbial pathogen found in surface water. Cryptosporidium was detected in 2 sample of 12 collected from the raw water source for our water system. It was not detected in the finished water. Current test methods do not enable us to determine if the organisms are dead or if they are capable of causing disease. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Cryptosporidium must be ingested to cause disease and it may be spread through means other than drinking water.

Cryptosporidium. We are required to monitor the source of your drinking water for Cryptosporidium in order to determine whether treatment at the water treatment plant is sufficient to adequately remove Cryptosporidium from your drinking water.

Cryptosporidium. We constantly monitor the water supply for various contaminants. We have detected cryptosporidium in some of the samples tested. We believe it is important for you to know that cryptosporidium may cause serious illness in 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. These people should seek advice from their health care providers.

NOTICE OF VIOLATION / 2019 - 9626048 MOR FAILURE TO SUBMIT

Our system received a Notice of Violation (NOV) from our primacy agency, Kentucky Division of Water. **Description of Non Compliance**: MONTHLY OPERATING REPORT MOR The public water system failed to submit the MOR an in a timely manner. This was for the compliance period of 10/01/2018 - 10/31/2018. **Comments**: The MOR should be to our primacy agency by the 10th of the folowing month. **Remedial Measures:** Submit the MOR, to the Division of Water within (30) days of receipt of this Notice of Violation. Perform Public Notification and the required Certification. Detail this NOV in the 2018 Consumer Confidence Report. Our system submitted the MOR for the compliance period of 10/01/2018 - 10/31/2018. We now send the MOR by the the 5th of the following month and by certified mail. iThere were no health effects due to this NOV.

NOTICE OF VIOLATION / 2018 - 9626047 MOR FAILURE TO SUBMIT

Our system received a Notice of Violation (NOV) from our primacy agency, Kentucky Division of Water. Description of Non Compliance: MONTHLY OPERATING REPORT MOR The public water system failed to submit the MOR an in a timely manner. This was for the compliance period of 03/01/2018 - 03/31/2018. Comments: The MOR should be to our primacy agency by the 10th of the folowing month. Remedial Measures: Submit the MOR, to the Division of Water within (30) days of receipt of this Notice of Violation. Perform Public Notification and the required Certification. Detail this NOV in the 2018 Consumer Confidence Report. Our system submitted the MOR for the compliance period of 03/01/2018 - 03/31/2018. We now send the MOR by the the 5th of the following month and by certified mail. There were no health effects due to this NOV.

NOTICE OF VIOLATION / 2019 - 9626049 PH SECONDARY M/R

Our water system violated one or more drinking water standards over the past year. Even though these were not emergencies, as our customers, you have a right to know what happened and what we did to correct these situations.

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During 01/01/2018 - 12/31/2018 we did not complete all monitoring or testing for PH SECONDARY M/R and therefore cannot be sure of the quality of your drinking water during that time.

There is nothing you need to do at this time. You do not need to use an alternative (e.g., bottled) water supply.

What happened? Who is at risk? What is being done?

Our system received a Notice of Violation (NOV) from our primacy agency, Kentucky Division of Water. **Description of Non Compliance**: PH SECONDARY M/R The public water system failed to submit pH data (Secondary M/R) for the compliance period 01/01/2018 - 12/31/2018. **Comments**: The sample was taken but the lab did not submitted correctly. **Remedial Measures**: Submit the PH data, to the Division of Water within (30) days of receipt of this Notice of Violation. Perform Public Notification and the required Certification. Detail this NOV in the 2018 Consumer Confidence Report. Our system submitted the pH data for the compliance period of 01/01/2018 - 12/31/2018.. There were no health effects due to this NOV.

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.

NOTICE OF VIOLATION / 2018 - 9626046 COLIFORM RTCR

Our water system violated one or more drinking water standards over the past year. Even though these were not emergencies, as our customers, you have a right to know what happened and what we did to correct these situations.

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During 02/01/2018 - 02/28/2018 we did not complete all monitoring or testing for COLIFORM RTCR and therefore cannot be sure of the quality of your drinking water during that time.

There is nothing you need to do at this time. You do not need to use an alternative (e.g., bottled) water supply.

What happened? Who is at risk? What is being done?

Our system received a Notice of Violation (NOV) from our primacy agency, Kentucky Division of Water. **Description of Non Compliance:** COLIFORM RTCR The public water system failed to submit an adequate number of COLIFORM RTCR samplesfor the compliance period 02/01/2018 - 02/28/2018. **Comments**: Three sample were submitted. However,four are required every month. The sample was taken at a site that was not approved. **Remedial Measures**: Submit the COLIFORM data, to the Division of Water within (30) days of receipt of this Notice of Violation. Perform Public Notification and the required Certification. Detail this NOV in the 2018 Consumer Confidence Report. Our system submitted this sample site for approval. Our primacy has approved this sample site. There were no health effects due to this NOV.

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.