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Second Thursday, Monthly/7:30 p.m.

The City of Livermore received water from Calhoun Water Treatment Facility (KY0750055) from 01/01/2018 until 03/22/18. At that time, a new Water Treatment Plant (KY073505) was put on line. The City of Livermore purchases water exclusively from McLean County Regional Water Commission (KY073505). Brief Source Water Assessment Summary indicates overall susceptibility is generally moderate. Potential contamination sources of concern include: 2 bridges, 1 hazardous chemical user, 8 underground injection sites, 1 area sewer line, 1 waste generator or transporter, and 1 statewide coverage of row crops, 1 water plant, 6 major roads, 14 oil and gas wells, statewide coverage of forest and woodlands, statewide coverage of pasture and hay, statewide coverage of power lines, and statewide coverage of residential land, 11 bridges, 1 port, 1 railroad, 3 sewer collection systems, 1 superfund site, 8 hazard chemical sites, 4 underground storage tank facilities, 1 landfill, 2 waste transfer stations, 10 major roads, 38 oil and gas wells and 2 oil and natural gas facilities. The source water assessment can be reviewed by contacting Keith Long (270-278-2410), at the water office located in Livermore, Kentucky.

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.

Variations & 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. Copies of this report are available upon request by contacting our office during business hours.

**A= Mc Lean County Regional Water Commission, B= Calhoun Water Works / Water Treatment Plant , C=Livermore Water Works / Distribution System**

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.

	Allowable Levels	Source	Highest Single Measurement	Lowest Monthly %	Violation	Likely Source of Turbidity
Turbidity (NTU) TT	No more than 1 NTU*	A=	0.26	100	No	Soil runoff
* Representative samples of filtered water	Less than 0.3 NTU in 95% monthly samples	B=	0.262	100	No	

**Regulated Contaminant Test Results**

Contaminant [code] (units)	MCL	MCLG	Source	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
<b>Inorganic Contaminants</b>								
Barium [1010] (ppm)	2	2	A=	0.026	0.026 to 0.026	2018	No	Drilling wastes; metal refineries; erosion of natural deposits
			B=	0.025	0.025 to 0.025	2018	No	
Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	C=	0.193 (90 <sup>th</sup> percentile)	0.0051 to 0.195	July-16	No	Corrosion of household plumbing systems
Fluoride [1025] (ppm)	4	4	A=	0.7	0.7 to 0.7	Mar-18	No	Water additive which promotes strong teeth
			B=	?	? to ?			
Lead [1030] (ppb) sites exceeding action level 0	AL = 15	0	C=	5 (90 <sup>th</sup> percentile)	0 to 7	July-16	No	Corrosion of household plumbing systems
Nitrate [1040] (ppm)	10	10	A=	1.48	0.911 to 1.48	Mar-18	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits
			B=	1.3	1.3 to 1.3	Feb-18	No	

**Disinfectants/Disinfection Byproducts and Precursors**

Total Organic Carbon (ppm) (report level=lowest avg. range of monthly ratios)	TT*	N/A	A=	1.71	1.33 to 2.89	2018	No	Naturally present in environment.
			B=	1.59	1.87 to 1.87	2018	N/A**	

\*Monthly ratio is the % TOC removal achieved to the % TOC removal required. Annual average must be 1.00 or greater for compliance.

\*\*Our total organic carbon data only included 2018 results. For this reason, compliance numbers could not be determined.

Chlorine (ppm)	MRDL = 4	MRDLG = 4	C=	0.92 (highest average)	0.45 to 1.52	2018	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	C=	37 (average)	19.6 to 46 (range of individual sites)	2018	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	C=	50 (average)	29.5 to 66.4 (range of individual sites)	2018	No	Byproduct of drinking water disinfection.

**Other Contaminants**

Cryptosporidium [oocysts/L]	0	TT	A=	1	4	2018	No	Human and animal fecal waste
		(99% removal)		(positive samples)	(no. of samples)			

**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.

**Cryptosporidium** is a microbial pathogen found in surface water. Cryptosporidium was detected in 1 samples of 4 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.

**NOTICE OF VIOLATION 2018 - 9947372 / MOR FAILURE TO SUBMIT**

**Description of Noncompliance:** MOR FAILURE TO SUBMIT Our public water system failed to submit the Monthly Operational Report (MOR) to the Department for Environmental Protection in a timely manner. The MOR is due to be received by our primacy agency by the 10th of the following month.

**Comments:** Failure to submit MOR by 10th of following month. Our primacy agency received this MOR on 7/13/18. **Remedial Measures:** This NOV will be detailed in the 2018 CCR. Our system will calendar up the MOR to ensure timely delivery. There were no health effects due to this administrative oversight.

**This notice of violation was received by McLean County Regional Water Commission. Notice of violation 2018 - 1 / MONITORING, routine (IESWTR/LT1), Major.**

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 05/01/2018 - 05/31/2018 we did not complete all monitoring or testing for 0300 IESWTR 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?

**Description of Non Compliance:** 401 KAR 8:150, Sec 3 IESWTR The public water system submitted fewer than 90% of the required analytical results for turbidity or failed to submit the results by the 10th of the following month for the compliance period 05/01/2018-05/31/2018.

**Comments:** Due to a missing summary sheet in the May 2018 MOR the following data was not submitted to the department: TURB: Water system did not submit individual filter effluent turbidity (I FE) report or the combined filter effluent turbidity (CFE) summary information. EPRD: Water system did not submit the entry point residual disinfection concentration (EPRD) summary information.

**Remedial Measures:** Submit any overdue or unreported sampling analytical results, if available, for the compliance. 05/01/2018-05/31/2018. Perform public notification and the required certification. The missing sections of the MOR were sent to our primacy agency. We now send the MOR certified mail and it is reviewed to ensure accuracy and completeness. There were no health effects due to this administrative oversight.

*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.*