2019 Water Quality Report

City of Salem

KY0700380

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Meetings: 111 Court Street 3rd Tuesday of each month @ 6:00 PM

We purchase our water exclusively from Crittenden-Livingston County Water District. The source of water for Crittenden-Livingston County Water District is surface water from the lower Cumberland River. Their treatment plant is located in Pinckneyville. An analysis of the susceptibility of the Crittenden-Livingston County Water District water supply to contamination sources indicates that the susceptibility is generally high. A susceptibility analysis evaluates the potential for contaminants to enter the water supply. There are twenty types of potential contaminants in the protection area for the Crittenden Livingston County Water District water supply. These types include 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 plant and highways. The degree of hazard ranges from moderate to high due to the potential for chemical spills. This is a summary of the source water protection plan. The complete report is available for review at the Crittenden Livingston County 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.

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.

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.

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Regulated Contaminan	t Test Re	sults		ity of Sal	em=B,	Cr	ittenden-	Livingston	= A		
Contaminant			Source	Report	rt Range			Date of	Violation	Likely Source of	
[code] (units)	MCL	MCLG	, no	Level	of Detection		Sample		Contamination		
Microbiological Contaminants											
Radioactive Contamina											
Combined radium	5	0	A=	0.42	0.42	to	0.42	July-17	No		
(pCi/L)										Erosion of natural deposits	
Inorganic Contaminant	ts	!						!		-	
Barium			A=	0.023	0.023	to	0.023	Oct-19	No	Drilling wastes; metal refineries;	
[1010] (ppm)	2	2								erosion of natural deposits	
Fluoride			A=	0.7	0.7	to	0.7	Oct-19	No	Water additive which promotes	
[1025] (ppm)	4	4								strong teeth	
Nitrate			A=	0.18	0.18	to	0.18	July-19	No	Fertilizer runoff; leaching from	
[1040] (ppm)	10	10						-		septic tanks, sewage; erosion of	
										natural deposits	
Synthetic Organic Contaminants including Pesticides and Herbicides											
Atrazine			A=	BDL	BDL	to	0.4	June-19	No	Runoff from herbicide used on	
[2050] (ppb)	3	3								row crops	
Disinfectants/Disinfection	on Bypro	ducts and	Prec	ursors							
Total Organic Carbon (ppm)			A=	1.31	1.00	to	1.89	2019	No		
(report level=lowest avg.	TT*	N/A								Naturally present in environment.	
range of monthly ratios)											
*Monthly ratio is the % TOC re	moval achie	eved to the %	ГОС г	emoval requi	red. Annu	al aver	age must be	1.00 or greater	r for complia	nce.	
Chlorine	MRDL	MRDLG		1.59						Water additive used to control	
(ppm)	= 4	= 4	B=	(highest	0.61	to	2.11	2019	No	microbes.	
				average)							
HAA (ppb) (Stage 2)										Byproduct of drinking water	
[Haloacetic acids]	60	N/A	B=	27	27	to	27	2019	No	disinfection	
				(average)	(range o	of indiv	ridual sites)				
TTHM (ppb) (Stage 2)										Byproduct of drinking water	
[total trihalomethanes]	80	N/A	B=	62	62	to	62	2019	No	disinfection.	
				(average)	(range o	of indiv	ridual sites)				
Household Plumbing C		ints	1					1		T	
Copper [1022] (ppm)	AL =			0.060						Corrosion of household plumbing	
sites exceeding action level	1.3	1.3	B=	(90 th	0	to	0.15	Aug-18	No	systems	
0	-			percentile)							
Lead [1030] (ppb)	AL =			4.5						Corrosion of household plumbing	
sites exceeding action level	15	0	B=	(90 th	0	to	6.8	Aug-19	No	systems	
0	L	<u> </u>		percentile)							
Source Water Contanin				_		1		2010	NI.		
Cryptosporidium	0	TT	A=	3	3		12	2019	No		
[oocysts/L]									Human and animal fecal waste		
		(000)	ļ	,							
Cryptosporidium is a microbia		(99% removal		(positive :			of samples)	nles of 12 col	lected from t	he raw water source for our water	

Cryptosporidium is a microbial pathogen found in surface water. Cryptosporidium was detected in 3 samples 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 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.

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Other Constituents

Turbidity (NTU) TT	Allowable	ırce	Highest Single	Lowest	Violation	
* Representative samples	Levels	Soı	Measurement	Monthly %		Likely Source of Turbidity
Turbidity is a measure of the	No more than 1 NTU*	A=	0.16	100	No	
clarity of the water and not a	Less than 0.3 NTU in					Soil runoff
contaminant.	95% monthly samples					

Unregulated Contaminants (UCMR 4)		average	ra	date		
Manganese	A=	0.627	0.627	to	0.627	Sept-19
HAA5	A=	48.25	43.2	to	53.3	Dec-19
HAA6Br	A=	8.205	6.41	to	10	Dec-19
HAA9	A=	55.95	49.3	to	62.6	Dec-19

Your drinking water has been sampled for a series of unregulated contaminants. Unregulated contaminants are those that EPA has not established drinking water standards. There are no MCLs and therefore no violations if found. The purpose of monitoring for these contaminants is to help EPA determine where the contaminants occur and whether they 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.