## 2019 Water Quality Report

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Third Thursday monthly at 6:00 PM

Jamestown Municipal Water Works treats surface water withdrawn from Greasy Creek Cove of nearby Lake Cumberland. Lake Cumberland spans Pulaski, Russell, Wayne and Clinton counties and receives drainage from several more in both Kentucky and Tennessee. The drainage areas have some light industrial development but primary land use is agricultural. An analysis of the susceptibility of our raw water source to contamination indicates that susceptibility is low. Within the critical protection area there are four potential sources of contamination that are ranked high, two are ranked medium, and one is ranked low. Potential contaminant sources of such as underground storage tanks, hazardous waste sites, and the secondary non-point pollution sources are relatively few in numbers and pose few potential problems. The greatest concern to source water quality is roadways, bridges and culverts that lead directly into the Greasy Creek watershed. The release of contaminants through accidental spills due to transportation accidents could have an immediate effect on the source water quality. A full copy of the susceptibility assessment is available for review at the Lake Cumberland Area Development Office in Russell Springs.

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.

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 request a paper copy call (270) 343-4594.

To understand the possib	la haalth	offacts descril	had for many	rogulated	contaminante	a narson u	ould have	to drink 2 liters of water	
every day at the MCL lev			•	0					
The data presented in this repo	ort are from t	he most recent te	esting done in ac	cordance wi	th administrative	regulations in	401 KAR Cl	hapter 8. As authorized and	
approved by EPA, the State ha		e 1							
this report are available upon					n this table, thou	gn representa	tive, may be	more than one year old. Copies of	
Regulated Contaminant Test Results Jamestown Municipal Water Works									
Contaminant			Report	Range Date of		Violation	Likely Source of		
[code] (units)	MCL	MCLG	Level	of Detection		Sample		Contamination	
Barium									
[1010] (ppm)	2	2	0.021	0.021	to 0.021	Jan-19	No	Drilling wastes; metal refineries; erosion of natural deposits	
Fluoride								W7 - 11-1	
[1025] (ppm)	4	4	0.88	0.88	to 0.88	Jan-19	No	Water additive which promotes strong teeth	
Nitrate								Fertilizer runoff; leaching from	
[1040] (ppm)	10	10	0.52	0.52	to 0.52	Jan-19	No	septic tanks, sewage; erosion of natural deposits	
Total Organic Carbon (ppm)			1.01						
(measured as ppm, but	TT*	N/A	(lowest	0.76	to 1.33	2019	No	Naturally present in environment.	
reported as a ratio)			average)	(mon	thly ratios)				
*Monthly ratio is the % TOC r	emoval achi	eved to the % TC	)C removal requi	red. Annual	average must be	1.00 or greate	r for complia	nce.	
Chlorine	MRDL	MRDLG	1.24					Water additive used to control microbes.	
(ppm)	= 4	=4	(highest average)	0.46	to 1.86	2019	No		
HAA (ppb) (Stage 2)			42						
[Haloacetic acids]	60	N/A	(high site	16	to 64	2019	No	Byproduct of drinking water	
		1011	average)	-	ndividual sites)	2015	110	disinfection	
TTHM (ppb) (Stage 2)			36		,				
[total trihalomethanes]	80	N/A	(high site	16	to 63	2019	No	Byproduct of drinking water	
			average)	(range of i	ndividual sites)			disinfection.	
Household Plumbing	Contami	nants			· · · · ·		•		
Copper [1022] (ppm)	AL=		0.14					~	
sites exceeding action level	1.3	1.3	(90 <sup>th</sup>	0.01	to 0.22	Jul-18	No	Corrosion of household plumbing systems	
0			percentile)					systems	
Lead [1030] (ppb)	AL=		6.7						
sites exceeding action level	15	0	(90 <sup>th</sup>	0	to 20	Jul-18	No	Corrosion of household plumbing systems	
1			percentile)					- ,	
Source Water Contam	inants (u	intreated wa	ter)						
Cryptosporidium	0	TT	3		7	2019	See note	Human and animal fecal waste	
[oocysts/L]		(99% removal)	(positive sa	mples)	(no. of samples)		below	inanian and annial iceal waste	
Other Constituents									
Turbidity (NTU) TT	Allowable		Highest Single		Lowest	Violation	Likely Source of Turbidity		
* Representative samples	Levels		Measurement		Monthly %				
Turbidity is a measure of the clarity of the water and not a contaminant.	No more than 1 NTU* Less than 0.3 NTU in		0.03		100	No		Soil runoff	
	95% of mo	nthly samples	l			L			

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 is a microbial pathogen found in surface water. Cryptosporidium was detected in 3 sample of 7 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.

	Average	Range of Detection			
Fluoride (added for dental health)	0.9	0.69	to	1	
Sodium (EPA guidance level = 20 mg/L)	5.0	5	to	5	

Secondary contaminants do not have a direct impact on the health of consumers. They are being included to provide additional information about the quality of the water.

Secondary Contaminant		Report	Range			Date of
Secondary Contaminant	Maximum Allowable Level	Level	of Detection			Sample
Chloride	250 mg/l	8	8	to	8	Jan-19
Corrosivity	Noncorrosive	-1.26	-1.26	to	-1.26	Jan-19
Fluoride	2.0 mg/l	0.86	0.86	to	0.86	Jan-19
Odor	3 threshold odor number	2	2	to	2	Jan-19
pН	6.5 to 8.5	7.08	7.08	to	7.08	Jan-19
Sulfate	250 mg/l	23	23	to	23	Jan-19
Total Dissolved Solids	500 mg/l	33	33	to	33	Jan-19