Campbellsville Water and Sewer System 2016 Water Quality Report KY1090060

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Meetings: Civic Center - 205 N. Columbia Avenue, Campbells First Monday (Tuesday if Holiday) of each month

Our source water comes from the Green River Reservoir located in Southern Taylor County. Our intake is located on Smith Ridge at the end of West Martin Road. When necessary we are also able to use water on a short term emergency basis from the City Lake located on Lebanon Avenue across from the water treatment plant. Both Green River Reservoir and City Lake are surface water sources. This is a summary of the system's susceptibility to contamination; which is a part of the completed Source Water Plan (SWAP). The completed plan is available for inspection at our office located at 110 South Columbia Avenue. The sources of raw water for Campbellsville Municipal Water System are Green River Reservoir and City Reservoir in Taylor County. An analysis of the overall susceptibility to contamination of the water supply indicated that this susceptibility is generally low. Within the critical protection area of the Green River Reservoir intake there are four potential sources of contamination that are ranked high, one ranked medium and none ranked low. Areas of concern include row cropping, roads and a variety of forestland, hay fields and pasture land that may represent a long-term threat to pollution susceptibility of this drinking water source. Within the critical protection area of the City Reservoir intake there are fifteen potential sources of contamination that are ranked high, ten ranked medium and none ranked low. Areas of concern include bridges and culverts, row crops, underground storage tanks, KPDES permitted discharges and waste generators or transporters. The location of Green River Reservoir water intake and remote area of the watershed make the routine non-point contaminant sources of low concern. The City Reservoir intake is more susceptible to short term hazards due to limited water flow and numerous contaminant sources. However, water system impact is limited due to the secondary withdrawal nature of this location.

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.

Lowest

Highest Single

Allowable

	Allov	vable	Highest Single		Lowest	Violation				
	Levels		Measurement			Monthly %		Likely Source		
Turbidity (NTU) TT	No more than 1	NTU*								
* Representative samples	Less than 0.3 N	NTU in	0.28			100	No	Soil runoff		
of filtered water	95% of monthl	y samples								
Regulated Contaminar	nt Test Result	S								
Contaminant			Report	Range		,	Date of	Violation	Likely Source of	
[code] (units)	MCL	MCLG	Level		of Detect	ion	Sample		Contamination	
Microbiological Conta	minants									
Total Coliform Bacteria	TT	N/A	3		N/A		2016	No	Naturally present in the	
# or % positive samples								110	environment	
Radioactive Contamin	ants	-	•	-			•	•	-	
Alpha emitters	15	0	0.4	0.2	to	0.7	May-09	No	Erosion of natural deposits	
[4000] (pCi/L)									Erosion of natural deposits	
Combined radium	5	0	0.1	0	to	0.2	Nov-09	No	Fi	
(pCi/L)									Erosion of natural deposits	
Uranium	30	0	0.625	0.1	to	0.9	Feb-09	No	Erosion of natural deposits	
(μg/L)									Erosion of natural deposits	
Inorganic Contaminan	ts									
Barium									Drilling wastes; metal	
[1010] (ppm)	2	2	0.02	0.02	to	0.02	Apr-16	No	refineries; erosion of natura deposits	
Copper [1022] (ppm)	AL =		0.09						Corrosion of household	
sites exceeding action level 0	1.3	1.3	(90 th percentile)	0	to	0.28	Aug-14	No	plumbing systems	
Lead [1030] (ppb)	AL =		10						Corrosion of household	
sites exceeding action level	15	0	(90 th percentile)	0	to	26	Aug-14	No	plumbing systems	
Nitrate									Fertilizer runoff; leaching	
[1040] (ppm)	10	10	0.6	0.6	to	0.6	May-16	No	from septic tanks, sewage; erosion of natural deposits	
Synthetic Organic Con	taminants in	cluding Pest	ticides and F	Ierbicides	S					
Atrazine									Runoff from herbicide used	
[2050] (ppb)	3	3	0.16	0	to	0.16	Oct-17	No	on row crops	
Disinfectants/Disinfect	ion Byproduc	ets and Prec	ursors							
Total Organic Carbon (ppm)			1.14						N. 11	
(measured as ppm, but	TT*	N/A	(lowest	1.11	to	1.48	2016	No	Naturally present in environment.	
reported as a ratio)			average)	((monthly ra	atios)				
*Monthly ratio is the % TOC	removal achieved	to the % TOC	removal require	d. Annual av	erage must	t be 1.00 or grea	ter for complia	nce.	•	
Chlorine	MRDL	MRDLG	1.61							
(ppm)	= 4	= 4	(highest	0.46	to	2.2	2016	No	Water additive used to control microbes.	
			average)							
HAA (ppb) (Stage 2)			60							
[Haloacetic acids]	60	N/A	(high site	11	to	54	2016	No	Byproduct of drinking water disinfection	
			average)	(rang	e of individ	dual sites)			distinction	
TTHM (ppb) (Stage 2)			52			•				
[total trihalomethanes]	80	N/A	(high site	15	to	84.8	2016	No	Byproduct of drinking water disinfection.	
			average)	(rang	e of individ	dual sites)			distinction.	

Other Contaminants

	Average	Range of Detection			
Fluoride (added for dental health)	0.9	0.5	to	1	
Sodium (EPA guidance level = 20 mg/L)	4.5	2	to	7	

Information concerning total coliform positive samples:

Level 1 Assessment: A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

Level 2 Assessment: A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.

During the past year we were required to conduct Two Level 1 assessment(s). Two Level 1 assessment(s) were completed. In addition, we were required to take Two corrective actions and we completed Two of these actions.

During the past year One Level 2 assessment was required to be completed for our water system. One Level 2 assessment was completed. In addition, we were required to take Two corrective actions and we completed Two of these actions.