2018 Water Quality Report

Burnside Water System

KY1000050

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Burnside. KY 42519

Meetings: Burnside City Hall

First Monday each month at 7:00 PM

The City of Burnside produces water from its water treatment facility located on East Lakeshore Drive. Burnside also purchases water from Southeastern Water Association for its Highway 90 residents. The water purchased from Southeastern Water Association is produced by Somerset. Both producers utilize surface water from Lake Cumberland. An analysis of the susceptibility of the raw water source indicates that there are several areas of concern. Near the source water withdrawal locations can be found residential, commercial and industrial areas, a Superfund site, a closed landfill, roadways, bridges/culverts, and railroads. Agricultural activities and urban development also have a potential to affect water quality. The overall potential of these contaminant sources to adversely impact the water quality at each water system's withdrawal site is low. The complete Source Water Assessment Plans are available for review at the respective utilities and also at the Lake Cumberland Area Development District

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

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		Highest Single			Lowest	Violation			
]	Levels	Measurement			Monthly %	Likely Source of Turbio		ource of Turbidity	
Turbidity (NTU) TT	No more th	an 1 NTU*								
* Representative samples	Less than 0.3 NTU in		0.11			100	No	Soil runoff		
of filtered water	95% of mor	nthly samples								
Regulated Contamina	nt Test R	esults	Burnside V	Vater Sy	ystei	m				
Contaminant			Report	Report Range		Date of	Violation	Likely Source of		
[code] (units)	MCL	MCLG	Level	of Detection		Sample		Contamination		
Barium									D '''	
[1010] (ppm)	2	2	0.018	0.018	to	0.018	Aug-18	No	Drilling wastes; metal refineries; erosion of natural deposits	
Copper [1022] (ppm)	AL=		0.188						Corrosion of household plumbing	
sites exceeding action level	1.3	1.3	(90 th	0.0095	to	0.248	Jul-17	No	systems	
0			percentile)							
Fluoride									Water additive which promotes	
[1025] (ppm)	4	4	0.70	0.7	to	0.7	Aug-18	No	strong teeth	
Nitrate									Fertilizer runoff; leaching from	
[1040] (ppm)	10	10	0.373	0.373	to	0.373	Aug-18	No	septic tanks, sewage; erosion of natural deposits	
Chlorobenzene									Discharge from chemical and agricultural chemical factories	
[2989] (ppb)	100	100	2	2	to	2	Aug-18	No		
Total Organic Carbon (ppm)			1.24							
(measured as ppm, but	TT*	N/A	(lowest	1.00	to	2.50	2018	No	Naturally present in environment.	
reported as a ratio)			average)	(mo	onthly	ratios)				
*Monthly ratio is the % TOC removal achieved to the % TOC			C removal requi	red. Annu	al ave	erage must be	1.00 or greater	for complian	ice.	
Chlorine	MRDL	MRDLG	1.72						Water additive used to control	
(ppm)	= 4	= 4	(highest	0.54	to	2.25	2018	No	microbes.	
			average)							
HAA (ppb) (Stage 2)			58						Dryman dry et of dain bin e vyeten	
[Haloacetic acids]	60	N/A	(high site	36	to	52	2018	No	Byproduct of drinking water disinfection	
			average)	(range o	findi	vidual sites)				
TTHM (ppb) (Stage 2)			58						Dryman day of a fide later a second	
[total trihalomethanes]	80	N/A	(high site	32	to	74	2018	No	Byproduct of drinking water disinfection.	
			average) (range of individual sites)						S.S. M. T. S. T. G. T. G	
Source Water Contam	inants (u	ntreated wa	ter)							
Cryptosporidium	0	TT	1			5 2018		See note	Human and animal fecal waste	
[oocysts/L]		(99% removal)	(positive sa	mples)	(no	o. of samples)		below	Transan and annial iccal waste	

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 1 sample of 5 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	0.62 to 1.26			
Sodium (EPA guidance level = 20 mg/L)	14.3	14.3 to 14.3			

Violation 2018-9813528

Based upon our population we are required to collect and submit two total coliform bacteria samples each month. However, we had previously submitted a document indicating that we wished to collect three samples each month. During January 2018 we submitted two samples but did not request in advance permission from the Division of Water to reduce the number of samples. This caused a monitoring violation. We will collect the required number of samples until allowed to reduce the number. A pubic notice was distributed for this violation.

Somerset Test Results

MCLG 2	Report Level 0.02	0.02	Rang of Detec		Date of Sample Mar-18	Violation No	Likely Source of Contamination Drilling wastes; metal refineries;
						No	
2	0.02	0.02	to	0.02	Mar-18	No	Drilling wastes; metal refineries;
							erosion of natural deposits
4	0.80	0.8	to	0.8	Mar-18	No	Water additive which promotes strong teeth
10	0.3	0.3	to	0.3	Mar-18	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits
N/A	1.2 (lowest average)	1.00 (m	to onthly:	1.69 ratios)	2018	No	Naturally present in environment.
	N/A	1.2 N/A (lowest average)	1.2 N/A (lowest 1.00 average) (m	N/A (lowest 1.00 to average) (monthly s	1.2 N/A (lowest 1.00 to 1.69 average) (monthly ratios)	1.2 N/A (lowest 1.00 to 1.69 2018 average) (monthly ratios)	1.2 N/A (lowest 1.00 to 1.69 2018 No

	Allowable Levels	Highest Single Measurement	Lowest Monthly %	Violation	Likely Source of Turbidity
Turbidity (NTU) TT	No more than 1 NTU*		·		,
* Representative samples	Less than 0.3 NTU in	0.064	100	No	Soil runoff
of filtered water	95% of monthly samples				

	Average Range of Detection			
Fluoride (added for dental health)	0.7	0.6	to	0.8
Sodium (EPA guidance level = 20 mg/L)	10.0	10	to	10

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

Secondary Contaminant		Report		Ran	Date of	
Secondar y Contaminant	Maximum Allowable Level	Level	of Detection			Sample
Chloride	250 mg/l	6.42	6.42	to	6.42	Mar-18
Corrosivity	Noncorrosive	-1.77	-1.77	to	-1.77	Mar-18
Fluoride	2.0 mg/l	0.76	0.76	to	0.76	Mar-18
Foaming Agents	0.5 mg/l	0.05	0.05	to	0.05	Mar-18
Iron	0.3 mg/l	0.01	0.01	to	0.01	Mar-18
pH	6.5 to 8.5	7.04	7.04	to	7.04	Mar-18
Sulfate	250 mg/l	61.7	61.7	to	61.7	Mar-18
Total Dissolved Solids	500 mg/l	136	136	to	136	Mar-18