2018 Water Quality Report

BARKLEY LAKE REGIONAL WATER DISTRICT

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2nd Monday of each month at 1:00 pm

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The source of your drinking water is Lake Barkley, which is a surface water source. An analysis of Barkley Lake Regional Water District's water supply, indicates there are six types of potential contaminant sites with the possibility of contaminating the water supply located within the watershed. Areas of high concern located within the watershed are underground storage ranks and rock quarries. Other areas of concern are the water treatment plant of the District, roads, bridges, and highways that pose a risk of the possibility of hazardous materials entering the water supply from traffic accidents, spills, and illegal dumping, in addition to households which are not connected to the public waste system present a source of contamination due to the poissibility of failing septic systems. Farms located within the watershed present the possibility of silation, pathogens, pesticides and fertilizer entering the water supply. The complete plan is available for inspection at the Barkley Lake Regional Water District billing office at 1420 Canton Road, Cadiz, Ky.

Contact: John-Michael Herring

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.

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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 contempinants are not expected to very significantly from year to year. Some of the data in this table, though representative, may be more than one year old.

	Allowable Levels		Highest Single Measurement		L	owest	Violation			
					Me	onthly %		Likely Source of Turbidity		
Turbidity (NTU) TT	No more tha	n 1 NTU*			\top					
Representative samples	Less than 0.3 NTU in 95% of monthly samples		0.28			100	No	Soil runoff		
of filtered water										
Regulated Contaminant Test	Results									
Contaminant			Report Range		Date of	Violation Likely Source of				
code] (units)	MCL	MCLG	Level	Level of Detection		Sample		Contamination		
Microbiological Contaminan	its									
Total Coliform Bacteria	TT	N/A	3	N/A		2018	No	Naturally present in the		
or % positive samples									environment	
Radioactive Contaminants										
Alpha emitters	15	0	4.7	4.7	to	4.7	July-14	No	Erosion of natural deposits	
[4000] (pCi/L)										
Inorganic Contaminants										
Barium									Drilling wastes; metal refineries;	
[1010] (ppm)	2	2	0.016 .	0.016	to	0.016	Aug-18	No	erosion of natural deposits	
Copper [1022] (ppm)	AL=		0.415						Corrosion of household plumbin	
sites exceeding action level	1.3	1.3	(90 th	0.0148	to	0.76	July17	No	systems	
0			percentile)						•	
Fluoride									Water additive which promotes	
[1025] (ppm)	4	4	0.9	0.9	to	0.9	Aug-18	No	strong teeth	
Lead [1030] (ppb)	AL =		3						Corrosion of household plumbin	
sites exceeding action level	15	0	(90 th	0	to	9	July-17	No	systems	
0			percentile)							
Nitrate									Fertilizer runoff; leaching from	
[1040] (ppm)	10	10	0.56	0.359	to	0.56	Feb-18	No	septic tanks, sewage; erosion of	
									natural deposits	
Disinfectants/Disinfection B	yproducts an	d Precursors								
Total Organic Carbon (ppm)			1.45				1			
(measured as ppm, but	TT*	N/A	(lowest	0.17	to	2.39	2018	No	Naturally present in environment	
reported as a ratio)			average)							
*Monthly ratio is the % TOC	removal achie	eved to the % TO	OC removal re	quired. And	nual av	erage must	be 1.00 or gro	ater for com	pliance.	
Chlorine	MRDL	MRDLG	1.25						Water additive used to control	
(ppm)	-4	-4	(highest	0.60	to	1.90	2018	No	microbes.	
			average)							
HAA (ppb) (Stage 2)			38						Byproduct of drinking water	
[Haloacetic acids]	60	N/A	(high site	17	to	51	2018	No	disinfection	
			average)	(range o	findivi	idual sites)				
TTHM (ppb) (Stage 2)			46						Byproduct of drinking water	
[total trihalomethanes]	80	N/A	(high site	23	to	68	2018	No	disinfection.	
			average)	(range o	findiv	idual sites)				

Unregulated Contaminants (UCMR 4)	average	r	date Nov-18		
Manganese	0.623	0.461 to 0.784			
HAAS	39.2	23.3	to	59.6	Aug-18
HAA6Br	8.427	4.56	to	14.4	Aug-18
HAA9	47,433	27.9	to	73.3	Aug-18

Notice of Violation 2018 - 9951114 / 7000 CONSUMER CONFIDENCE RULE

Description of Noncompliance: 401 KAR 8:075, Section 1 CONSUMER CONFIDENCE RULE. The public water system failed to submit the Consumer Confidence Report (CCR) to the Department for Environmental Protection. The system was required to distribute the CCR to customers and submit a copy to the Kentucky Department for Environmental Protection. The system was required to distribute the CCR to customers and submit a copy to the Kentucky Department for Environmental Protection by July 1. Comments: Failure to distribute and submit the calendar year 2015 CCR. Submit a complete CCR package for the calendar year 2015 and detail this violation in next CCR;s violation statement list. Remedial Measures: This NOV will be detailed in the 2018 CCR. Our system will use checklists to proof our information to insure accuracy and completeion.

Notice of Violation 2018 - 9951115 / 0300 IESWTR

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 Noncompliance: 401KAR8:15, Sec. 3. IESWTR The public water system submitted fewer than 90% of required number of analytical results for turbidity or failed to submit results by the 10th of the following month for the compliance. 05/01/2018 - 05/31/2018.

Comments: Due to a missing summary sheet in the May 2018 MO war the following data was not submitted to the department: TURB: water system did not submit individual filter and fluid turbidity parentheses I FE parentheses report or the combined filter air fluid turbine today parentheses CFE parentheses summary information. EPRD: water system did not submit the entry point residual disinfection concentration parentheses EPRD parentheses summary information.

Remedial Measures: submit any overdue our unreported sampling results, if available, for the compliance. 005/01/2018-05/31 show/2018. Our system did submit all items mentioned in in Ovi. We send our MOR certified mail and inventory all components before mailing. 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.

During the past year we were required to conduct one Level 1 assessment. One Level 1 assessment was completed. In addition, we were required to take one corrective actions and we completed of these actions.

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.

Remedial Action: We were told by our primacy agency to utilized another site that is representative of the water quality.