2018 Water Quality Report

Fredonia Water Department

KY0170146

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Meetings: City Hall 312 W. Cassidy Avenue Third Monday at 7:00 pm

We purchase our water exclusively from Eddyville Water Department. The Eddyville Water Department treats surface water from Lake Barkley. A source water assessment plan has been developed for our water system by the Pennyrile Area Development District. An analysis of the overall susceptibility to contamination of Eddyville's water supply indicates that potential impacts range from low to high. Sources of high to medium potential impact include bridges and culverts within the critical zone, because of the potential for chemical spill in the case of an accident. Another concern is the potential for chemical spills and petroleum discharges from heavy barge traffic. Sources of low to medium potential impact include the potential for runoff contamination due to the use of pesticides and herbicides for agricultural activity and the wastewater discharges within the watershed. This is a summary of the susceptibility analysis. The complete source water assessment plan is located at Pennyrile Area Development District, Hopkinsville, KY. (270) 886-9484.

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.

City of Eddyville = A,

Fredonia Water System = B

		Allowable		Highest Single Measurement							
	Levels		Source			N	Monthly %		Likely Source of Turbidity		
Turbidity (NTU) TT	No more th	an 1 NTU*	A=	0.29			100	No			
* Representative samples	Less than 0	.3 NTU in							Soil runoff		
of filtered water	95% month	ly samples									
Regulated Contaminant	Test Re	sults							•		
Contaminant	MCL	MCLG	Source	Report	Range		ge	Date of Sample	Violation	Likely Source of Contamination	
[code] (units)				Level of		Dete	ction				
Inorganic Contaminant	s									1	
Barium [1010] (ppm)	2	2	A=	0.017	0.017	to	0.017	Feb-18	No	Drilling wastes; metal refineries; erosion of natural deposits	
Copper [1022] (ppm)	AL =			0.150						G : (1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
sites exceeding action level	1.3	1.3	B=	(90th	0.0029	to	0.173	June-18	No	Corrosion of household plumbin systems	
0				percentile)						systems	
Fluoride			A=	0.5	0.5	to	0.5	Feb-18	No	W/	
[1025] (ppm)	4	4								Water additive which promotes strong teeth	
Lead [1030] (ppb)	AL =			0						Corrosion of household plumb systems	
sites exceeding action level	15	0	B=	(90 th	0	to	2	June-18	No		
0 Nitrate			A=	percentile) 0.618	0.619		0.610	Oct-18	No	F .: C 1 1: C	
[1040] (ppm)	10	10	A=	0.018	0.618	to	0.618	Oct-18	NO	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits	
Volatile Organic Conta	minants	J		<u> </u>	U		U				
Tetrachloroethylene [2987] (ppb)	5	0	A=	0.225	0	to	0.9	May-18	No	Leaching from PVC pipes; discharge from factories and dry cleaners	
Disinfectants/Disinfection	on Bypro	ducts and	Prec	ursors							
Total Organic Carbon (ppm)			A=	2.13	1.00	to	5.07	2018	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 %	TOC 1	emoval requ	ired. Annu	al ave	rage must be	1.00 or greater	r for complia	nce.	
Chlorine	MRDL	MRDLG		1.71						Water additive used to control	
(ppm)	= 4	= 4	В=	(highest average)	1.01	to	2.02	2018	No	microbes.	
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	В=	45	10	to	39	2018	No	Byproduct of drinking water disinfection	
				(average)	(range of	findiv	idual sites)				
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	B=	57	30	to	77	2018	No	Byproduct of drinking water disinfection.	

Unregulated Contaminants (UCMR 4)		average	range (ppb)			date	
Manganese	Α	2.200	1	to	3.6	July-18	
HAA5	A	20.743	8.2	to	39.474	Oct-18	
HAA6Br	A	16.818	8.8	to	24.6	Oct-18	
HAA9	Α	34.750	15.9	to	55.617	Oct-18	

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.

Violation 2018 - 9441507 0999 CHLORINE

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 01/01/18-01/31/2018 we did not complete all monitoring or testing for 0999 CHLORINE 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 Non Compliance: 401 KAR 8:150, Sec 3 CHLORINE The public water system submitted fewer than 100% but more than 90% of the required number of analytical results for CHLORINE during the compliance period 01/01/2018-01/31/2018. Comments: SDRD: Insufficient number of chlorine samples collected on day 25 Monthly Operational Report (MOR page 7). Remedial Measures: Submit the MOR, if available, to the Division of Water within 30 days of reciept of this Notice of Violation. We now have two operators who proof this MOR to insure accuracy and compliance.

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.