2018 Water Quality Report Manager: Phillip Hardison

Drakesboro Water Works

Contact: Phillip Hardison Drakesboro, KY 42337

Address: P.O. 129 Dra Meetings: City Hall, 212 Mose Rager Blvd., Drakesboro, KY

Public Meetings The third Monday of each month 6:00 P

Our water is purchased from Muhlenberg County Water District. Muhlenberg County Water District purchases their water exclusively from Central City. Central City utilizes surface water from the Green River. The final source water assessment has been completed and is contained in the Muhlenberg County Water Supply Plan, prepared by the Pennyrile Area Development District. The drainage area upstream contains residental, agricultural, and mining activities. The source water assessment identified 246 potential sources of contamination with 208 of those sites identified as a moderate risk. However, several sites were identified as high risk. These are twenty-five oil/gas wells and ten landfills which present the possibility of contamination from leaching, siltation and illegal dumping. Other potential areas for concern include: ten underground/aboveground storage tanks, three auto repair facilities, roads, bridges, and highways. Copies of the source water assessment are available for review at our water office during regular business hours.

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.

The data presented in this report approved by EPA, the State has contaminants are not expected	is reduced mo	onitoring requ	iremer	nts for certair	n contamii	nants to	o less often th	an once per y	ear because t	
this report are available upon r	equest by cor	ntacting our o	ffice d	luring busine	ss hours.	Α	= Central	City (pur	rchased fr	om Muhlenberg County
Water District), B= Dr	akesboro	Water Wo	orks							
To understand the possible hea	alth effects de	escribed for m	iany re	gulated cont	aminants,	a pers	on would hav	e to drink 2 li	ters of water	every day at the MCL level for a
lifetime to have a one-in-a-mil	lion chance of	of having the		oed health eff	fect.				-	
	Alle	Allowable		Highest Single Measurement 0.08			Lowest Monthly % 100	Violation		
	T.								Likely Source of Turbidity	
Turbidity (NTU) TT	Levels No more than 1 NTU* Less than 0.3 NTU in 95% monthly samples		Source =			r			Soil runoff	
* Representative samples										
of filtered water Regulated Contaminan			<u> </u>							
	t Test Kes		۵	D (D			X 7' 1 4'	
Contaminant		1	Source	Report		Range		Date of	Violation	Likely Source of
[code] (units)	MCL MCLG		So	Level	of Detection		Sample		Contamination	
Inorganic Contaminan	ts								1	
Barium [1010] (ppm)	2	2	A=	0.026	0.026	to	0.026	Oct-18	No	Drilling wastes; metal refineries; erosion of natural deposits
			—							
Copper [1022] (ppm)	AL =	1		0.015						Corrosion of household plumbing
sites exceeding action level	1.3	1.3	B=	(90 th	BDL	to	0.019	July-16	No	systems
0	_	 	—	percentile)						
Fluoride			A=	0.7	0.7	to	0.7	Oct-18	No	Water additive which promotes
[1025] (ppm)	4	4								strong teeth
Lead [1030] (ppb)	AL =		\Box	2						Corrosion of household plumbing
sites exceeding action level	15	0	B=	(90 th	BDL	to	5	July-16	No	systems
0				percentile)						systems
Nitrate			A=	1.2	1.2	to	1.2	Jan-18	No	Fertilizer runoff; leaching from
[1040] (ppm)	10	10								septic tanks, sewage; erosion of natural deposits
Disinfectants/Disinfecti	ion Bypro	ducts and	Prec	ursors		_				
Total Organic Carbon (ppm)			A=	1.73	1.76	to	2.3	2018	No	
(report level=lowest avg.	TT*	N/A								Naturally present in environment.
range of monthly ratios)										
*Monthly ratio is the % TOC 1	emoval achie	eved to the %	TOC	removal requ	ired. Ann	ial ave	erage must be	1.00 or greate	er for complia	ance.
Chlorine	MRDL	MRDLG	Τ	1.75						
(ppm)	= 4	= 4	B=	(highest	0.19	to	2.10	2018	No	Water additive used to control microbes.
				average)						microbes.
HAA (ppb) (Stage 2)			1						1	
[Haloacetic acids]	60	N/A	B=	71	32	to	70	2018	YES	Byproduct of drinking water
r				(average)	(range of indivi					disinfection
TTHM (ppb) (Stage 2)	+ +		+	(average)	(range o	i indi v	fictual sites)			
[total trihalomethanes]	80	N/A	B=	69	27	to	110	2018	No	Byproduct of drinking water
Local a matomotioneoj	50	1.011	5-	(average)	(range of individual sites)		2010	110	disinfection.	
		L	<u> </u>	(average)	(range 0	n murv	iduai sites)		1	L

Other Contaminants											
Cryptosporidium	0	TT	A=	2	8	2018	See note				
[oocysts/L]							Below	Human and animal fecal waste			
		(99% removal)		(positive samples)	(no. of samples)						

Cryptosporidium is a microbial pathogen found in surface water. Cryptosporidium was detected in 2 sample of 8 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.

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.

Violation 2018 - 9659618 We exceeded the MCL for Haloacetic acids, or HAA for the compliance period of 07/01/18-09/30/18. The MCL forTTHM is 80 ppb, our result was 65 ppb for the period in question. Remedial actions included performing public notification & the required certification, and detailing this NOV in the 2018 Consumer Confifence Report. Our system has also flushed lines on a regular basis to help solve this issue. Haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

Violation 2018 - 9659617 We exceeded the MCL for Haloacetic acids, or HAA for the compliance period of 04/01/18-06/30/18. The MCL forTTHM is 80 ppb, our result was 66 ppb for the period in question. Remedial actions included performing public notification & the required certification, and detailing this NOV in the 2018 Consumer Confifence Report. Our system has also flushed lines on a regular basis to help solve this issue. Haloacetic acids, or HAA. Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

Violation 2018 - 9659616 We exceeded the MCL for Haloacetic acids, or HAA for the compliance period of 01/01/18-03/31/18. The MCL forTTHM is 80 ppb, our result was 61 ppb for the period in question. Remedial actions included performing public notification & the required certification, and detailing this NOV in the 2018 Consumer Confifence Report. Our system has also flushed lines on a regular basis to help solve this issue. Haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

Notice of Violation 2019 - 809 / Monitoring (DBP) TTHM THAA

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 10/01/18 - 12/31/18 we did not complete all monitoring or testing for TTHM & THAA (DBP) 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?

Our system received a notice of violation from our primacy agency, Kentucky Division of Water. **Description of Noncompliance:** Our system did not submit sample results for TTHM & THHA within the prescribed time. This would be for the compliance period of 10/01/18 - 12/31/18. **Comments:** System pulled DBP's in wrong month. **Remedial Measures:** Submit any overdue lab results for the compliance period 10/01/18 - 12/31/18. Perform public notification and required certification. Detail this violation in the 2018 Consumer Conference Report. We now use sample schedules to assure that samples are taken in a timely manner.

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.

This report will not be sent to individual customers. It will be available at City Hall.