2022 Water Quality Report

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Monroe County Water District

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Meetings: Monroe County Water District Office 2nd Monday night of each month @ 7:00 pm

Monroe County Water District withdraws surface water from the Cumberland River for processing at our water treatment plant. As part of our multi barrier approach to safeguard the public we have assessed land use within the watershed to better understand potential impacts to water quality and to assign a susceptibility rating. There is potential for contamination however, the rating is low due to the limited access to the river coupled with primarily non-point source agricultural and residential land uses. Activities and land use within the watershed can pose potential risks to your drinking water. Under certain circumstances, contaminants could be released that would pose challenges to water treatment or contaminate your drinking water. These activities, and how they are conducted, are of interest to the entire community because they potentially affect your health and the cost of treating your water. The complete source water assessment is available at the Monroe County Water District office. If at any time our customers witness any activities of question or water leaks, please call the water office.

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, ($\mu g/L$). 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.

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.

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.

Regulated Contaminant	Test Res	sults	Monroe Co	unty Wat	ter I	District			
Contaminant			Report	Range		ge	Date of		Likely Source of
[code] (units)	MCL	MCLG	Level	of Detection		ction	Sample	Violation	Contamination
Microbiological Contan	ninants		•						•
E.coli Bacteria	0%	0	1	1	N/A		2022	YES	II 4
% positive samples									Human and animal fecal waste
Inorganic Contaminant	s		•						•
Barium									D :11:
[1010] (ppm)	2	2	0.018	0.018	to	0.018	May-22	No	Drilling wastes; metal refineries; erosion of natural deposits
Fluoride									W/ 11'2' 1'1
[1025] (ppm)	4	4	0.75	0.75	to	0.75	May-22	No	Water additive which promotes strong teeth
Nitrate									Fertilizer runoff; leaching from
[1040] (ppm)	10	10	0.481	0.2	to	0.481	Aug-22	No	septic tanks, sewage; erosion of natural deposits
Disinfectants/Disinfection	on Bypro	ducts and Pr	ecursors	!					
Total Organic Carbon (ppm)			1.5						
(measured as ppm, but	TT*	N/A	(lowest	1.20	to	2.37	2022	No	Naturally present in environment.
reported as a ratio)			average)	(mor	nthly	ratios)			
*Monthly ratio is the % TOC re	moval achie	eved to the % TO	C removal requi	red. Annual	aver	age must be 1	.00 or greater	for compliar	nce.
Chlorine	MRDL	MRDLG	1.22						W/ 11'' 14 1
(ppm)	= 4	= 4	(highest	0.8	to	1.63	2022	No	Water additive used to control microbes.
			average)						inicroses.
HAA (ppb) (Stage 2)			32						Demonstrate of deighing assets
[Haloacetic acids]	60	N/A	(high site	20	to	43	2022	No	Byproduct of drinking water disinfection
			average)	(range of	indiv	ridual sites)			districction
TTHM (ppb) (Stage 2)			29						D 1 4 C1:1:
[total trihalomethanes]	80	N/A	(high site	17	to	36	2022	No	Byproduct of drinking water disinfection.
			average)	(range of	indiv	ridual sites)			
			-						
Household Plumbing Co	ontamina	nts							
Copper [1022] (ppm) Round 1	AL =		0.093						Correcion of household physics
sites exceeding action level	1.3	1.3	(90 th	0.004	to	0.116	Jul-21	No	Corrosion of household plumbing systems
0			percentile)						systems
Lead [1030] (ppb) Round 1	AL =		2						Corrosion of household plumbing
sites exceeding action level	15	0	(90 th	0	to	5	Jul-21	No	systems
0			percentile)						
Other Constituents									
Turbidity (NTU) TT	Allowable		Highest Single			Lowest	Violation		
* Representative samples	Levels		Measurement		N	Monthly %	Likely Source of Turbidity		
Turbidity is a measure of the	No more th	an 1 NTU*	0.04			100	No	Soil runoff	
clarity of the water and not a	Less than 0	.3 NTU in							
contaminant.	95% of mor	nthly samples							

During the past year we were required to conduct one Level 1 assessment(s). 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. One Level 1 assessment was 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 assessments was required to be completed for our water system. 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. We had a total coliform-positive repeat sample following an e. Coli-positive routine sample. One Level 2 assessment was completed. In addition, we were required to take one corrective actions and we completed one of these actions.

E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems. We found E. coli bacteria, 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.

Violation #: 2022-9117310 E. COLI

We recently received a violation when one or more bacteriological samples that tested positive for total coliform also tested positive for E. Coli bacteria, which is a Tier 1 violation. The Monroe County Water District notified the isolated customers with a boil water advisory. Division of Water was contacted for assistance. Flushing and repeat samples were taken daily until they were in compliance.

Violation #: 2022-9117312 E. COLI

We recently received a violation for failure to notify the state within 24 hours about an E. Coli positive compliance sample result. The poitive E.Coli sample result was received on 6/11/2022. MCWD contacted the Division of Water on 6/13/2022. We have since returned to compliance.

Violation #: 2022-9117311 Public Notice

We recently received a violation for failing to deliver a Tier 1 PN for E.Coli positive sample within 24 hours of being notified by the lab (results received on 6/11/2022 and PN was sent on 6/13/2022) and (2) inadequate language texts were found in the PN to the Division of Water. The language was corrected in the PN and the system has since been returned to compliance.