Bath County WaterDistrict
Water Quality Report 2023

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Mailing Address: P.O. Box 369 Salt Lick, KY 40371
Meeting Location and Time: District Office - 21 Church St. Salt Lick; 4th Monday each month at 7:00 PM

Source Information:
Bath County Water District provides purchased water from three suppliers, all of which treat surface water. The suppliers and their sources include: Morehead Utility Plant Board (Licking River); Mt. Sterling Water (Slate Creek and Greenbriar Reservoir); Cave Run Water Commission (Cave Run Lake). Each of these suppliers has conducted an analysis of susceptibility to contamination and the overall susceptibility is generally moderate. Areas of high concern include transportation corridors, underground storage tanks, agricultural land use, residential land use, auto repair facilities, and waste generators. More specific and complete listings of potential sources of contamination are available. The respective Source Water Assessment Plans are available for review at each of the water producers. Contact information for our suppliers can be obtained by calling our office at 606-683- 6363. For information regarding the areas of the District's system served by the different sources of water, please contact the District's 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).

Information About Lead:
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 water system is responsible for providing high quality drinking water and removing lead pipes, but cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute accredited certifier to reduce lead in drinking water. If you are concerned about lead in your water and wish to have your water tested, contact your local water system. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available 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.

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.

Regulated Contaminant Test Results - Mt. Sterling Water and Sewer							
Contaminant [code] (units)	**MCL**	**MCLG**	**Report Level**	**Range of Detection**	**Date of Sample**	**Violation**	**Likely Source of Contamination**
Inorganic Contaminants							
Barium [1010] (ppm)	2	2	0.018	0.018 to 0.018	2023	No	Drilling wastes; metal refineries; erosion of natural deposits
Fluoride [1025] (ppm)	4	4	0.59	0.59 to 0.59	2023	No	Water additive which promotes strong teeth
Nickel (ppb) (US EPA remanded MCL in February 1995.)	N/A	N/A	3	3 to 3	2023	No	N/A
Disinfectants/Disinfection Byproducts and Precursors							
Total Organic Carbon (ppm) (measured as ppm, but reported as a ratio)	TT*	N/A	1.32 (lowest average)	0.88 to 1.83 (monthly ratios)	2023	No	Naturally present in environment.
*Monthly ratio is the % TOC removal achieved to the % TOC removal required. Annual average must be 1.00 or greater for compliance.							
Other Constituents							
Turbidity (NTU) TT * Representative samples	**Allowable Levels**		**Highest Single Measurement**	**Lowest Monthly %**	**Violation**	**Likely Source of Turbidity**	
Turbidity is a measure of the clarity of the water and not a contaminant.	No more than 1 NTU* Less than 0.3 NTU in 95% of monthly samples		0.3	100	No	Soil runoff	

Regulated Contaminant Test Results Morehead Utility Plant Board							
Contaminant [code] (units)	**MCL**	**MCLG**	**Report Level**	**Range of Detection**	**Date of Sample**	**Violation**	**Likely Source of Contamination**
Radioactive Contaminants							
Combined radium (pCi/L)	5	0	1.02	1.02 to 1.02	May-20	No	Erosion of natural deposits
Inorganic Contaminants							
Barium [1010] (ppm)	2	2	0.019	0.019 to 0.019	Mar-23	No	Drilling wastes; metal refineries; erosion of natural deposits
Fluoride [1025] (ppm)	4	4	0.88	0.88 to 0.88	Mar-23	No	Water additive which promotes strong teeth
Nitrate [1040] (ppm)	10	10	0.217	0 to 0.217	May-23	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits
Disinfectants/Disinfection Byproducts and Precursors							
Total Organic Carbon (ppm) (measured as ppm, but reported as a ratio)	TT*	N/A	1.13 (lowest average)	1.00 to 1.71 (monthly ratios)	2023	No	Naturally present in environment.
*Monthly ratio is the % TOC removal achieved to the % TOC removal required. Annual average must be 1.00 or greater for compliance.							
Other Constituents							
Turbidity (NTU) TT * Representative samples	**Allowable Levels**		**Highest Single Measurement**	**Lowest Monthly %**	**Violation**	**Likely Source of Turbidity**	
Turbidity is a measure of the clarity of the water and not a contaminant.	No more than 1 NTU* Less than 0.3 NTU in 95% of monthly samples		0.293	100	No	Soil runoff	

Violation for Morehead Utility Plant Board (MUPB)

In October 2023, MUPB was in violation of state regulations regarding manganese levels in our finished water. Manganese levels exceeded the state's Secondary Maximum Contaminant Level (0.05mg/L) and we failed to report this to the Division of Water within 48 hours. The highest recorded level of manganese between 10/18/2023-10/22/2023 was 0.212mg/L. As a result, brown water was distributed in our system at that time. We have since taken remedial measures to ensure that we can respond more quickly to an event like this in the future and we are in compliance with all required remedial measures that the Division of Water has asked us to make.

Regulated Contaminant Test Results	Cave Run Regional Water Commission						
Contaminant [code] (units)	**MCL**	**MCLG**	**Report Level**	**Range of Detection**	**Date of Sample**	**Violation**	**Likely Source of Contamination**
Inorganic Contaminants							
Fluoride [1025] (ppm)	4	4	0.89	0.89 to 0.89	May-23	No	Water additive which promotes strong teeth
Disinfectants/Disinfection Byproducts and Precursors							
Total Organic Carbon (ppm) (measured as ppm, but reported as a ratio)	TT*	N/A	1.2 (lowest average)	1.00 to 1.83 (monthly ratios)	2023	No	Naturally present in environment.
*Monthly ratio is the % TOC removal achieved to the % TOC removal required. Annual average must be 1.00 or greater for compliance.							
Other Constituents							
Turbidity (NTU) TT * Representative samples	**Allowable Levels**		**Highest Single Measurement**	**Lowest Monthly %**	**Violation**	**Likely Source of Turbidity**	
Turbidity is a measure of the clarity of the water and not a contaminant.	No more than 1 NTU* Less than 0.3 NTU in 95% of monthly samples		0.14	100	No	Soil runoff	

Regulated Contaminant Test Results	Bath County Water District						
Contaminant [code] (units)	**MCL**	**MCLG**	**Report Level**	**Range of Detection**	**Date of Sample**	**Violation**	**Likely Source of Contamination**
Chlorine (ppm)	MRDL = 4	MRDLG = 4	1.32 (highest average)	0.23 to 2.36	2023	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	68 (high site average)	37 to 81 (range of individual sites)	2023	YES	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	65 (high site average)	25.6 to 86.1 (range of individual sites)	2023	No	Byproduct of drinking water disinfection.
Household Plumbing Contaminants							
Copper [1022] (ppm) Roun sites exceeding action level 0	AL = 1.3	1.3	0.163 (90^{th} percentile)	0 to 0.174	Sep-22	No	Corrosion of household plumbing systems
Lead [1030] (ppb) Round 1 sites exceeding action level 0	AL = 15	0	2 (90^{th} percentile)	0 to 5	Sep-22	No	Corrosion of household plumbing systems

HAA(ppb) Individual Site	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Violation
072	51.75	63.75	60.25	52.75	Yes
075	63.88	67.63	60.13	51.25	Yes

Violations 2023-414; 2023-415

Testing results showed that our system at Bath County Water District exceeded the standard, or maximum contaminant level (MCL), for haloacetic acids. The standard for haloacetic acids is 0.060 mg/L. It is determined by averaging all samples at each sampling location for the last 12 months.

Haloacetic acids averaged at one of our system's locations for:
1/1/2023 through 3/31/2023 was 0.064 mg/L
4/1/2023 through 6/30/2023 was 0.068 mg/L

Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

We are working with our supplier to minimize the formation of haloacetic acids while ensuring we maintain an adequate level of disinfectant. We have taken additional steps to increase flushing of water lines to determine if our efforts have been effective. We are also monitoring water storage tank levels and water flow patterns within the distribution system. Public notices were issued for each quarter we were out of compliance. We have since returned to compliance.

Spanish (Español) Este informe contiene información muy importante sobre la calidad de su agua beber. Tradúzcalo o hable con alguien que lo entienda bien.

Copies of this report will not be mailed. If you would like a copy mailed to you, please contact our office.