2022 Annual Water Quality Report

Black Mountain Utility District

Serving the Communities of:

Coxton – Dayhoit – Green Hills – Kenvir –
Louellen – Rosspoint – Sukey Ridge – Wallins

609 Four Mile Road
Baxter, KY 40806
(606) 573-1277 (phone) • (606) 573-1276 (fax)

www.tapwaterinfo.com/bmud.pdf

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Black Mountain Utility District

2022 Water Quality Report

Manager: Grant Cooper CCR Contact: Grant Cooper Phone: 606-573-1277
Address: 609 Four Mile Road Baxter, KY 40806 Fax: 606-573-1276
Meetings: Utility District Office / Second Tuesday each month at 6:00 pm Email: blkmt@harlanonline.net

The purpose of this report is to inform our customers about the quality of water and services provided daily. Our commitment is to deliver safe, clean, and reliable supply of drinking water to your tap. Black Mountain Utility District (BMUD) operates eight public drinking water systems which directly serves a population of over 9,300; that is approximately 34% of Harlan County. There is a great deal of energy, ingenuity and teamwork involved in providing water service to our customers. The dedicated staff of BMUD operates and maintains over 140 miles of water lines, 12 storage tanks and 10 pump stations to deliver safe and affordable drinking water to 3,176 customers. We are proud to be able to supply water for about a penny per gallon—an exceptional value.

Source Water Information

We purchase treated drinking water from Harlan Municipal Water Works, Evarts Municipal Water Works and Pineville Utility Commission. Where you live in the county determines the source of your drinking water. Customers living in the Coxton, Dayhoit, Rosspoint, Sukey Ridge and Wallins areas are supplied by Harlan; customers in the Kenvir and Louellen areas by Evarts, and Green Hills customers are supplied by both Harlan and Pineville. The raw water source for our suppliers is a combination of surface water and groundwater. Harlan withdraws water from the Poor Fork of the Cumberland River and Pineville from Cannon Creek Lake; however, Evarts withdraws water from an abandoned coal mine and three water wells in the area. Raw water is pumped from these sources to their respective treatment plants where particulate matter suspended in the raw water is settled and oxidized to remove contaminants after which the water is filtered and disinfected with chlorine to further protect public health. As part of a multi barrier approach to safeguard the public, land use within the watershed have been assessed to better understand their potential impact to water quality and to assign a susceptibility rating. A susceptibility analysis uses a weighted rating system which evaluates the toxicity, distance and likelihood contaminants being released which could adversely affect water quality. The analysis rates all three sources at a moderate risk to contamination however, there are a few areas of concern. Surface run-off and erosion from logging and mining activities serve as potential threats in addition to wastewater discharges and fuel & chemical spills through road / rail transportation corridors that transect the watershed. These land uses make the source water susceptible to contamination from bacteria, metals organic chemicals and siltation. Land use within the watersheds can pose potential risks to your drinking water. Under certain circumstances contaminants could be released that would pose challenges to water treatment or even get into your drinking water. These activities and how they are conducted, are of interest to our customers because they potentially affect your health and the cost of treating your water. The complete source water assessments can be reviewed at Cumberland Valley Area Development District in London, KY.

Public Health Information

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.

COXTON, DAYHOIT, ROSSPOINT, SUKEY RIDGE AND WALLINS CUSTOMERS

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 Results — **HARLAN MUNICIPAL WATER WORKS (PWSID# KY0480178)**

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	0.033	0.033 to 0.033	Aug-22	No	Drilling wastes; metal refineries; erosion of natural deposits
Fluoride [1025] (ppm)	4	4	0.62	0.62 to 0.62	Aug-22	No	Water additive which promotes strong teeth
Disinfection Byproduct Precursor							
Total Organic Carbon (ppm) (measured as ppm, but reported as a ratio)	TT*	N/A	1.09 (lowest average)	1 to 1.73 (monthly ratios)	2022	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	0.27	100	No	Soil runoff

BLACK MOUNTAIN UTILITY DISTRICT - COXTON — PWSID# KY0480265

Regulated Contaminant Test Results

Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Disinfectants/Disinfection Byproducts and Precursors							
Chlorine (ppm)	MRDL = 4	MRDLG = 4	1.11 (highest average)	0.49 to 2.2	2022	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	28 (high site average)	9 to 27 (range of individual sites)	2022	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	55 (high site average)	16 to 109 (range of individual sites)	2022	No	Byproduct of drinking water disinfection.
Household Plumbing Contaminants							
Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	0.009 (90^{th} percentile)	0.007 to 0.009	2022	No	Corrosion of household plumbing systems

BLACK MOUNTAIN UTILITY DISTRICT - DAYHOIT — PWSID# KY0480277

Regulated Contaminant Test Results

Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Disinfectants/Disinfection Byproducts and Precursors							
Chlorine (ppm)	MRDL = 4	MRDLG = 4	1.15 (highest average)	0.76 to 1.52	2022	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	25 (high site average)	10 to 40 (range of individual sites)	2022	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	47 (high site average)	19 to 67 (range of individual sites)	2022	No	Byproduct of drinking water disinfection.
Household Plumbing Contaminants							
Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	0.016 (90^{th} percentile)	0 to 0.267	Aug-21	No	Corrosion of household plumbing systems
Lead [1030] (ppb) sites exceeding action level 0	AL = 15	0	0 (90^{th} percentile)	0 to 3	Aug-21	No	Corrosion of household plumbing systems

BLACK MOUNTAIN UTILITY DISTRICT - ROSSPOINT							PWSID# KY0480650
Regulated Contaminant Test Results							
Contaminant [code] (units)	**MCL**	**MCLG**	**Report Level**	**Range of Detection**	**Date of Sample**	**Violation**	**Likely Source of Contamination**
Disinfectants/Disinfection Byproducts and Precursors							
Chlorine (ppm)	MRDL = 4	MRDLG = 4	1.25 (highest average)	0.71 to 2	2022	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	25 (high site average)	11 to 36 (range of individual sites)	2022	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	41 (high site average)	16 to 64 (range of individual sites)	2022	No	Byproduct of drinking water disinfection.

BLACK MOUNTAIN UTILITY DISTRICT - SUKEY RIDGE							PWSID# KY0480461
Regulated Contaminant Test Results							
Contaminant [code] (units)	**MCL**	**MCLG**	**Report Level**	**Range of Detection**	**Date of Sample**	**Violation**	**Likely Source of Contamination**
Disinfectants/Disinfection Byproducts and Precursors							
Chlorine (ppm)	MRDL = 4	MRDLG = 4	1.06 (highest average)	0.55 to 1.6	2022	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	27 (high site average)	10 to 39 (range of individual sites)	2022	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	51 (high site average)	15 to 90 (range of individual sites)	2022	No	Byproduct of drinking water disinfection.

BLACK MOUNTAIN UTILITY DISTRICT - WALLINS							PWSID# KY0480572
Regulated Contaminant Test Results							
Contaminant [code] (units)	**MCL**	**MCLG**	**Report Level**	**Range of Detection**	**Date of Sample**	**Violation**	**Likely Source of Contamination**
Disinfectants/Disinfection Byproducts and Precursors							
Chlorine (ppm)	MRDL = 4	MRDLG = 4	1.18 (highest average)	0.51 to 1.83	2022	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	26 (high site average)	12 to 38 (range of individual sites)	2022	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	55 (high site average)	19 to 86 (range of individual sites)	2022	No	Byproduct of drinking water disinfection.
Household Plumbing Contaminants							
Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	0.011 (90^{th} percentile)	0 to 0.027	Aug-21	No	Corrosion of household plumbing systems

KENVIR AND LOUELLEN CUSTOMERS

EVARTS MUNICIPAL WATER WORKS — PWSID# 0480125

Regulated Contaminant Test Results

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	0.476	0.476 to 0.476	Aug-22	No	Drilling wastes; metal refineries; erosion of natural deposits
Fluoride [1025] (ppm)	4	4	0.80	0.8 to 0.8	Aug-22	No	Water additive which promotes strong teeth
Nickel (ppb) (US EPA remanded MCL in February 1995.)	N/A	N/A	1	1 to 1	Aug-22	No	N/A
Disinfection Byproduct Precursor							
Total Organic Carbon (ppm) (measured as ppm, but reported as a ratio)	TT*	N/A	1 (lowest average)	1.00 to 1.48 (monthly ratios)	2022	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	0.29	100	No	Soil runoff

BLACK MOUNTAIN UTILITY DISTRICT - KENVIR — PWSID# KY0480603

Regulated Contaminant Test Results

Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Disinfectants/Disinfection Byproducts and Precursors							
Chlorine (ppm)	MRDL = 4	MRDLG = 4	1.74 (highest average)	0.65 to 2.2	2022	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	24 (high site average)	4 to 20 (range of individual sites)	2022	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	42 (high site average)	6 to 38 (range of individual sites)	2022	No	Byproduct of drinking water disinfection.
Household Plumbing Contaminants							
Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	0.011 (90^{th} percentile)	0 to 0.012	Sep-21	No	Corrosion of household plumbing systems

BLACK MOUNTAIN UTILITY DISTRICT - LOUELLEN — PWSID# KY0480498

Regulated Contaminant Test Results

Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Disinfectants/Disinfection Byproducts and Precursors							
Chlorine (ppm)	MRDL = 4	MRDLG = 4	1.67 (highest average)	0.65 to 2.2	2022	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids] (Annual Sample)	60	N/A	12 (high site)	12 to 12 (range of individual sites)	2022	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes] (Annual Sample)	80	N/A	15 (high site)	15 to 15 (range of individual sites)	2022	No	Byproduct of drinking water disinfection.

GREEN HILLS CUSTOMERS

P - PINEVILLE WATER SYSTEM (PWSID# KY0070353) **H - HARLAN WATER WORKS (PWSID# KY0480178)**

Regulated Contaminant Test Results

Contaminant [code] (units)	MCL	MCLG	Source	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Inorganic Contaminants								
Barium [1010] (ppm)	2	2	P= H=	0.008 0.046	0.008 to 0.008 0.046 to 0.046	Apr-22 Aug-22	No No	Drilling wastes; metal refineries; erosion of natural deposits
Fluoride [1025] (ppm)	4	4	P= H=	0.71 0.73	0.71 to 0.71 0.73 to 0.73	Apr-22 Aug-22	No No	Water additive which promotes strong teeth
Disinfection Byproducts Precursor								
Total Organic Carbon (ppm) (report level=lowest avg. range of monthly ratios)	TT*	N/A	P= H=	1.02 1.09	1.00 to 4.13 1.00 to 1.73	2022 2022	No 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	Source	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% monthly samples	P= H=	0.09 0.27	100 100	No No	Soil runoff

BLACK MOUNTAIN UTILITY DISTRICT - GREEN HILLS **PWSID# KY0480341**

Regulated Contaminant Test Results

Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Disinfectants/Disinfection Byproducts							
Chlorine (ppm)	MRDL = 4	MRDLG = 4	1.23 (highest average)	0.51 to 2.01	2022	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	29 (high site average)	14 to 40 (range of individual sites)	2022	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	50 (high site average)	18 to 96 (range of individual sites)	2022	No	Byproduct of drinking water disinfection.
Household Plumbing Contaminants							
Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	0.0960 (90^{th} percentile)	0 to 0.13	Jun-22	No	Corrosion of household plumbing systems
Lead [1030] (ppb) sites exceeding action level 0	AL = 15	0	4 (90^{th} percentile)	0 to 6	Jun-22	No	Corrosion of household plumbing systems

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