
2018 Annual Water Quality Report

Black Mountain Utility District Serving the Communities of:

Coxton – KY0480265
Dayhoit – KY0480277
Green Hills – KY0480341
Kenvir – KY0480603
Louellen – KY0480498
Rosspoint – KY0480650
Sukey Ridge – KY0480461
Wallins – KY0480572

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

Table of Contents

Source Water & Public Health Information	3
Water Quality Data	
Coxton and Dayhoit Customers	4
Rosspoint, Sukey Ridge and Wallins Customers	5
Kenvir and Louellen Customers	6
Green Hills Customers	7

Black Mountain Utility District
2018 Water Quality Report

Manager: Ray Metcalfe

CCR Contact: Rick Hall

Phone: 606-573-1277

Address: 609 Fourmile Road Baxter, KY 40806

Fax: 606-573-1276

Meetings: Utility District Office / Second Tuesday each month at 4:00 pm

Email: blkmt@harlanonline.net

Black Mountain Utility District (BMUD) operates eight public drinking water systems which directly serves a population of 9,000; that is approximately 34% of Harlan County. There is quite a lot 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 3,354 households. 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 where your drinking water is treated. Those living in the Coxton, Dayhoit, Rosspoint, Sukey Ridge and Wallins areas are supplied by Harlan; those in the Kenvir and Louellen areas by Evarts and Green Hills is 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 wells, a mine and two streams in the area. Raw water is pumped from these sources to their respective treatment plants where sediment and contaminants are removed. The water is then filtered after which disinfectants are added to further protect public health. A source water assessment report has been compiled for each source. The assessment includes a susceptibility analysis of all three sources that indicates a moderate risk of contamination. This relative risk is determined by land use activities / contaminant type, their proximity to the water withdrawal points and the likelihood of release. 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 makes the source water susceptible to contamination from bacteria, metals and organic chemicals. 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 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.

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.

COXTON, DAYHOIT, ROSSPOINT, SUKEY RIDGE AND WALLINS CUSTOMERS

HARLAN MUNICIPAL WATER WORKS **PWSID# 0480178**

	Allowable Levels	Highest Single Measurement	Lowest Monthly %	Violation	Likely Source of Turbidity
Turbidity (NTU) TT * Representative samples of filtered water	No more than 1 NTU* Less than 0.3 NTU in 95% of monthly samples	0.28	100	No	Soil runoff

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	0.058	0.058 to 0.058	Aug-18	No	Drilling wastes; metal refineries; erosion of natural deposits
Fluoride [1025] (ppm)	4	4	0.50	0.5 to 0.5	Aug-18	No	Water additive which promotes strong teeth
Nitrate [1040] (ppm)	10	10	0.386	0.386 to 0.386	Oct-18	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits

Disinfectant Byproduct Precursor

Total Organic Carbon (ppm) (measured as ppm, but reported as a ratio)	TT*	N/A	1.15 (lowest average)	1.00 to 4.21 (monthly ratios)	2018	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 Contaminants

Cryptosporidium [oocysts/L]	0	TT (99% removal)	1 (positive samples)	12 (no. of samples)	2018	See note below	Human and animal fecal waste
-----------------------------	---	------------------	----------------------	---------------------	------	----------------	------------------------------

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.

Cryptosporidium is a microbial pathogen found in surface water. Cryptosporidium was detected in 1 sample of 12 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.

BLACK MOUNTAIN UTILITY DISTRICT - COXTON **PWSID# KY0480265**

Disinfectant(s) & Disinfection Byproducts

Chlorine (ppm)	MRDL = 4	MRDLG = 4	0.88 (highest average)	0.71 to 1.26	2018	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	38 (high site average)	19 to 51 (range of individual sites)	2018	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	59 (high site average)	35 to 68 (range of individual sites)	2018	No	Byproduct of drinking water disinfection.

BLACK MOUNTAIN UTILITY DISTRICT - DAYHOIT **PWSID# KY0480277**

Inorganic Contaminants

Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	0.0418 (90 th percentile)	0 to 0.0801	Aug-18	No	Corrosion of household plumbing systems
Lead [1030] (ppb) sites exceeding action level 0	AL = 15	0	0 (90 th percentile)	0 to 2	Aug-18	No	Corrosion of household plumbing systems

Disinfectant(s) & Disinfection Byproducts

Chlorine (ppm)	MRDL = 4	MRDLG = 4	1.12 (highest average)	0.94 to 1.31	2018	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	33 (high site average)	19 to 42 (range of individual sites)	2018	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	54 (high site average)	34 to 66 (range of individual sites)	2018	No	Byproduct of drinking water disinfection.

Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
BLACK MOUNTAIN UTILITY DISTRICT - ROSSPOINT							PWSID# KY0480650
Inorganic Contaminants							
Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	0.0114 (90 th percentile)	0 to 0.0186	Jul-18	No	Corrosion of household plumbing systems
Disinfectant(s) & Disinfection Byproducts							
Chlorine (ppm)	MRDL = 4	MRDLG = 4	1.12 (highest average)	1.01 to 1.29	2018	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	31 (high site average)	20 to 44 (range of individual sites)	2018	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	54 (high site average)	34 to 72 (range of individual sites)	2018	No	Byproduct of drinking water disinfection.
BLACK MOUNTAIN UTILITY DISTRICT - SUKEY RIDGE							PWSID# KY0480461
Disinfectant(s) & Disinfection Byproducts							
Chlorine (ppm)	MRDL = 4	MRDLG = 4	1.20 (highest average)	0.99 to 1.36	2018	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	31 (high site average)	19 to 44 (range of individual sites)	2018	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	57 (high site average)	34 to 77 (range of individual sites)	2018	No	Byproduct of drinking water disinfection.
BLACK MOUNTAIN UTILITY DISTRICT - WALLINS							PWSID# KY0480572
Inorganic Contaminants							
Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	0.0158 (90 th percentile)	0 to 0.0165	Aug-18	No	Corrosion of household plumbing systems
Disinfectant(s) & Disinfection Byproducts							
Chlorine (ppm)	MRDL = 4	MRDLG = 4	1.02 (highest average)	0.89 to 1.21	2018	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	33 (high site average)	29 to 36 (range of individual sites)	2018	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	60 (high site average)	38 to 93 (range of individual sites)	2018	No	Byproduct of drinking water disinfection.

This report will not be mailed unless requested. Please contact our office if you would like to receive a copy.

KENVIR AND LOUELLEN CUSTOMERS

EVARTS MUNICIPAL WATER WORKS **PWSID# KY0480125**

	Allowable Levels	Highest Single Measurement	Lowest Monthly %	Violation	Likely Source of Turbidity
Turbidity (NTU) TT * Representative samples of filtered water	No more than 1 NTU* Less than 0.3 NTU in 95% of monthly samples	0.29	100	No	Soil runoff

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	0.34	0.34 to 0.34	Aug-18	No	Drilling wastes; metal refineries; erosion of natural deposits
Fluoride [1025] (ppm)	4	4	0.70	0.7 to 0.7	Aug-18	No	Water additive which promotes strong teeth
Nitrate [1040] (ppm)	10	10	0.1	0.1 to 0.1	Aug-18	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits
Selenium [1045] (ppb)	50	50	1.1	1.1 to 1.1	Aug-18	No	Discharge from petroleum and metal refineries or mines; erosion of natural deposits

Disinfection Byproducts Precursor

Total Organic Carbon (ppm) (measured as ppm, but reported as a ratio)	TT*	N/A	1 (lowest average)	1.00 to 1.00 (monthly ratios)	2018	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.

BLACK MOUNTAIN UTILITY DISTRICT - KENVIR **PWSID# KY0480603**

Inorganic Contaminants

Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	0.0319 (90 th percentile)	0.0133 to 0.0324	Jul-18	No	Corrosion of household plumbing systems
--	----------	-----	--------------------------------------	------------------	--------	----	---

Disinfectant(s) & Disinfection Byproducts

Chlorine (ppm)	MRDL = 4	MRDLG = 4	2.08 (highest average)	1.86 to 2.2	2018	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	12 (high site average)	5 to 16 (range of individual sites)	2018	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	16 (high site average)	8 to 23 (range of individual sites)	2018	No	Byproduct of drinking water disinfection.

BLACK MOUNTAIN UTILITY DISTRICT - LOUELLEN **PWSID# KY0480498**

Inorganic Contaminants

Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	0.0197 (90 th percentile)	0.0172 to 0.0202	Aug-18	No	Corrosion of household plumbing systems
--	----------	-----	--------------------------------------	------------------	--------	----	---

Disinfectant(s) & Disinfection Byproducts

Chlorine (ppm)	MRDL = 4	MRDLG = 4	1.91 (highest average)	1.04 to 2.2	2018	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	21 (high site average)	11 to 31 (range of individual sites)	2018	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	34 (high site average)	18 to 50 (range of individual sites)	2018	No	Byproduct of drinking water disinfection.

GREEN HILLS CUSTOMERS										
H = HARLAN MUNICIPAL WATER WORKS (PWSID# KY0480178)					P = PINEVILLE WATER SYSTEM (PWSID# KY0070353)					
	Allowable Levels	Source	Highest Single Measurement	Lowest Monthly %	Violation	Likely Source of Turbidity				
Turbidity (NTU) TT * Representative samples of filtered water	No more than 1 NTU* Less than 0.3 NTU in 95% monthly samples	H= P=	0.28 0.063	100 100	No No	Soil runoff				
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	H= P=	0.058 0.006	0.058 to 0.006	Aug-18 Apr-18	No No	Drilling wastes; metal refineries; erosion of natural deposits		
Fluoride [1025] (ppm)	4	4	H= P=	0.50 0.6	0.5 to 0.6	Aug-18 Apr-18	No No	Water additive which promotes strong teeth		
Nitrate [1040] (ppm)	10	10	H=	0.386	0.386 to 0.386	Oct-18	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits		
Disinfection Byproducts Precursor										
Total Organic Carbon (ppm) (report level=lowest avg. range of monthly ratios)	TT*	N/A	H= P=	1.15 1	1.00 to 1.04	2018 2018	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 Contaminants										
Cryptosporidium [oocysts/L]	0 (99% removal)	TT	H=	1 (positive samples)	12 (no. of samples)	2018	See Note Below	Human and animal fecal waste		
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. Cryptosporidium is a microbial pathogen found in surface water. Cryptosporidium was detected in 1 sample of 12 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.										
BLACK MOUNTAIN UTILITY DISTRICT - GREEN HILLS					PWSID# KY0480341					
Inorganic Contaminants										
Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3		0.0082 (90 th percentile)	0 to 0.0147	Sep-16	No	Corrosion of household plumbing systems		
Lead [1030] (ppb) sites exceeding action level 0	AL = 15	0		0 (90 th percentile)	0 to 3	Sep-16	No	Corrosion of household plumbing systems		
Disinfectant(s) & Disinfection Byproducts										
Chlorine (ppm)	MRDL = 4	MRDLG = 4		1.20 (highest average)	0.03 to 1.77	2018	No	Water additive used to control microbes.		
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A		51 (high site average)	22 to 55 (range of individual sites)	2018	No	Byproduct of drinking water disinfection		
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A		49 (high site average)	22 to 59 (range of individual sites)	2018	No	Byproduct of drinking water disinfection.		
Unregulated Contaminants (UCMR4)			Source	Average	Range (ppb)		Date			
HAA5			P=	33.5	15.0	to	54.9	Dec-18		
HAA6Br			P=	2.998	0.5	to	5.1	Dec-18		
HAA9			P=	36.35	15.7	to	60	Dec-18		
UCMR4 PUBLIC NOTICE										
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.										