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 rish 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, ug/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 trillion corresponds to one minute in 2,000,000 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 micormeters.

- 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.

GCWD
BOARD OF DIRECTORS

A five-member Board of Commissioners appointed by the County Judge Executive to serve four year terms, directs the business of the Water District. If you have questions or comments for the Commissioners, they would be glad to hear from you. You are also invited to attend the regular board meetings conducted on the fourth Monday of each month at 10:00 am (CST) at 21 Shull White Rd, Leitchfield, KY 42754.

JOHN TOMES - Chairman
1119 Ready-Windyville Rd.
Caneyville, KY 42721
(270) 879-8330

KIRBY JOHNSON - Vice-Chairman
590 Pine Ridge Rd.
Leitchfield, KY 42754
(270) 879-8591

KENNETH SHARP - Secretary
2438 Wax Rd.
Clarkson, KY 42726
(270) 242-9318

NANCY CAIN - Treasurer
3580 Millerstown Rd.
Clarkson, KY 42726
(270) 242-7802

MIKE KIPPER - Commissioner
347 Freedom School Rd
Leitchfield, KY 42754
(270) 287-0196

Kevin Shaw
Water District Manager
(270) 259-2917

Grayson County Water District

2019 Water Quality Report

21 Shull White Rd
Leitchfield, KY 42754
(270) 259-2917
PWS ID: KY0430616

Grayson County Water District received notice of the following violations in 2018. The issues that caused the violations have been corrected. Some of the violations are as much as 4 years old and the Water District was not informed of them by the Division of Water until 2018.

Violation #	Compliance Period	Tier	Contaminant	Description
2017-9950940	1/1/2015 - 12/31/2015	3	Atrazine	We collected the sample in the incorrect quarter and failed to list the violation in the CCR.
2017-9950939	1/1/2015 - 12/31/2015	3	Simazine	We collected the sample in the incorrect quarter and failed to list the violation in the CCR.
2017-9950938	1/1/2016 - 12/31/2016	3	Simazine	We collected the sample in the incorrect quarter and failed to list the violation in the CCR.
2017-9950943	5/19/2017	NA	Consumer Confidence Rule	The 90th percentile Copper result we listed on the CCR for CY 2015 was incorrect. We failed to list the violation in the CCR.
2018-9950944	7/1/2017 - 9/30/2017	2	HAA5	We exceeded the LRAA MCL for HAA5. The MCL is 0.060 mg/L; our results were 0.062 mg/L. We failed to list the violation for exceeding the MCL for HAA5 in the CCR.
2018-9950945	10/1/2017 - 12/31/2017	2	HAA5	We exceeded the LRAA MCL for HAA5. The MCL is 0.060 mg/L; our results were 0.064 mg/L. We failed to list the violation for exceeding the MCL for HAA5 in the CCR.
2018-9950949	1/1/2018 - 3/31/2018	2	HAA5	We exceeded the LRAA MCL for HAA5. The MCL is 0.060 mg/L; our results were 0.064 mg/L. We failed to list the violation for exceeding the MCL for HAA5 in the CCR.
2018-9950950	6/6/2018	NA	Public Notification	For Violation # 2018-9950944, We did not notify the public within 30 days of receiving the violation.
2018-9950951	6/6/2018	NA	Public Notification	For Violation # 2018-9950945, We did not notify the public within 30 days of receiving the violation.
2018-9950952	10/29/2018	NA	Public Notification	For Violation # 2018-9950949, We did not notify the public within 30 days of receiving the violation.
2018-9950953	11/16/2018	NA	Consumer Confidence Rule	For the CY 2017 CCR, the bill insert we distributed to the public had an incorrect web address for the CCR. The correct link is: http://www.graysonwater.com/CCR/CCR-CY2017.pdf

Health Effects

Atrazine: Some people who drink water containing atrazine well in excess of the MCL over many years could experience problems with their cardiovascular system or reproductive difficulties.

Simazine: Some people who drink water containing simazine in excess of the MCL over many years could experience problems with their blood.

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.

The data in this table represents water purchased in 2018 from System A: Leitchfield Municipal Utilities and water produced in 2018 by System B: Grayson County Water District

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.

	Allowable Levels	Highest Single Measurement	Lowest Monthly %	Violation Y/N	Likely Source
Turbidity (NTU) TT	Never more than 1 NTU Less than 0.3 NTU 95% of samples each month.	A: 0.25 NTU B: 0.28 NTU	100% 100%	NO NO	Soil runoff

Regulated Contaminants

These substances are regulated by the EPA. That means we test for them and they cannot be above a certain level, referred to as the MCL (maximum contaminant level). For additional information on these contaminants, please visit the Environmental Protection Agency's web page at www.epa.gov.

Contaminant (units)	MCL	MCLG	Report Level	Range	Date of Sample	Violation Y/N	Likely Source of Contamination
Disinfectants/Disinfection Byproducts and Precursors							
Total Organic Carbon (ppm) measured as ppm, but reported as a ratio.*	TT*	N/A	(lowest annual average) A=1.97 B=2.15	(monthly ratios) A=1.43 – 2.68 B=1.66 – 3.40	2018 2018	NO NO	Naturally present in environment.
*Monthly ratio is the % TOC removal achieved to the % TOC removal required. Annual average of the monthly ratios must be 1.00 or greater for compliance.							
Chlorine (ppm)	MRDL: 4	MRDLG: 4	(annual average) A=1.13 B=1.14	A=0.20 - 1.60 B=0.30 - 1.93	2018 2018	NO NO	Water additive used to control microbes.
HAA or Haloacetic acids (ppb) [individual sites]	MCL: 60	MCLG: N/A	(high site average) A=40 B=64	A=19.0 - 56.0 B=12.8 - 61.0	2018 2018	NO YES	By-product of drinking water disinfection.
TTHM or Total Trihalomethanes (ppb) [individual sites]	MCL: 80	MCLG: N/A	(high site average) A=43 B=67	A=12.8 - 45.2 B=14.2 - 51.0	2018 2018	NO NO	By-product of drinking water disinfection.
Synthetic Organic Contaminants							
Atrazine (ppb)	3	3	A=0.2	A=0 - 0.2	August 2018	NO	Runoff from herbicide used on row crops
Inorganic Contaminants							
Cyanide (ppb)	200	200	A=10	A=10	March - 2018	NO	Discharge from steel/metal factories; plastic and fertilizer factories
Barium (ppm)	2	2	A=0.02 B=0.025	A=0.02 B=0.025 - 0.025	March-2018 June-2018	NO NO	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Nitrate (ppm)	10	10	A=0.3 B=0.10	A=0.3 B=0.10	May-2017 June-2018	NO NO	Runoff from herbicide use; leaching from septic tanks; sewage; erosion of natural deposits
Fluoride (ppm)	4	4	A=0.60 B=0.60	A=0.60 B=0 .6 - 0.6	March-2018 June-2018	NO NO	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Radioactive Contaminants							
Alpha Emitters [4000] (pCi/L	15	0	B=1.3	B=1.3 - 1.3	July-2017	NO	Erosion of natural deposits
Combined Radium (pCi/L	5	0	B=1.011	B= 1.011 - 1.011	July-2017	NO	Erosion of natural deposits

Lead & Copper

Contaminant (units)	Action Level	MCLG	90th percentile results	Range of Detection	Date of Sample	Violation Y/N	Likely Source of Contamination
Lead (ppb) 0 sites exceeded action level	AL = 15	0	A=0 B=0.0	A=0 - 2 B=0 - 3.2	July 2016 Aug 2018	NO NO	Corrosion of household plumbing systems; erosion of natural deposits
Copper (ppm) 0 sites exceeded action level	AL = 1.3	1.3	A=0.25 B=0.084	A=0 - 0.39 B=0.0059 - 0.30	July 2016 Aug 2018	NO NO	Corrosion of household plumbing systems; erosion of natural deposits

Unregulated Contaminants (UCMR4)

Contaminant	Average	Range (ppb)	Date
HAA5	26.485	6.256 - 68.68	Feb-2019
HAA6Br	2.905	1.906 - 5.07	Feb-2019
HAA9	29.390	8.62 - 73.75	Feb-2019

Sodium and Dental Health Fluoride

	Average	Range (ppb)
Fluoride (added for dental health	0.70	0.60 - 0.90
Sodium (EPA guidance level = 20mg/L)	7.20	6.5 - 7.8

Source Water

Results of a Source Water Assessment show that activities and land uses upstream of the Grayson Co. Water Districts water source can pose potential risks to your drinking water. Under certain conditions, contaminants could be released that could get into your drinking water. These activities are of interest to the entire community because they potentially affect your health and the cost of treating your water. Activities upstream of your water supply intake are of special concern because they provide little response time to the water system operators. The Grayson County Water District treats water from Rough River Lake which is a surface water source and purchases a portion of its water from Leitchfield Utilities which also draws from Rough River Lake. Areas of high concern consist of Row Crops. These high areas of concern themselves do not represent a danger to the environment. It is the potential for run-off of herbicides, pesticides, and other chemicals accidentally spilling into the water source from these sites that gives them the Susceptibility Ranking of High. The overall Susceptibility Ranking for this water source is Moderate. This complete report is available at the Grayson County Water Treatment Plant, 517 Waterside Dr, Falls of Rough, KY 40119. 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 Hot line (800-426-4791).

The sources of drinking water (both tap water and bottled water) 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 storm water runoff, wastewater discharges, oil and gas production, mining, or farming). Pesticides and herbicides, (storm water 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, storm water 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. You may contact James Hale at (270) 879-8632 for more information about this Consumer Confidence Report or the Source Water Assessment.

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).

Unregulated Contaminants (UCMR4)

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.

Information about Lead

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. Grayson County Water District 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 Hot line or at: http://www.epa.gov/safewater/lead .

Este informe contiene información importante sobre su agua potable. Pida que alguien traducir para usted, o hablar con alguien que lo entiende.