

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, (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 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.

- **Variations & 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
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KENNETH SHARP - Secretary
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Grayson County Water District 2020 Water Quality Report



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As I prepare a few words for the CCR from the office of the Water District, we too like most of the rest of the Country are working with a stay at home order as our new work rules. While there has been much conversation about who is an essential employee and who is not what I found with the employees of your Water District was, it wasn't even a question!

My hat goes off to all of the guys and gals for stepping up and making sure that the flow of water and service went uninterrupted. They changed their work schedules, their work techniques, and even time with their families. Because that's what we do. You have entrusted us to be your supplier of water and they make sure to do just that.

We have a team of dedicated employees that understand their vital role as operators and staff in providing water services. Our employees care, taking on additional duties and extending further measures to fulfill our mission daily. My appreciation of our team of water professionals is even greater during this difficult time as they do their part and work hard to defeat the spread of COVID-19.

Kevin Shaw
District Manager

Grayson County Water District received notice of the following violations in 2019. The issues that caused the violations have been corrected.

Violation #	Compliance Period	Tier	Contaminant	Description
2019-9950954	06/01/2019 - 06/30/2019	3	Total Organic Carbon	We failed to submit results for Total Organic Carbon by the deadline of 7/10/2019. The samples were collected in the correct time-frame and the results were below the MCL but we did not report the results until August 2019. There is nothing you need to do, this was not an emergency. If this had been an emergency you would have been notified within 24 hrs. The results were reported in August 2019 and monthly Total Organic Carbon sampling and reporting has continued since with no issues.

Total organic carbon. Total organic carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection byproducts. These byproducts include trihalomethanes, or THMs, and haloacetic acids, or HAAs. Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.

The data in this table represents water purchased in 2019 from **System A: Leitchfield Municipal Utilities** and water produced in 2019 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: 0.10 NTU B: 0.29NTU	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=1.84 B=2.04	(monthly ratios) A=1.40 - 2.30 B=1.36 - 2.51	2019 2019	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=1.04 B=1.13	A=0.40 - 1.80 B=0.42 - 1.90	2019 2019	NO NO	Water additive used to control microbes.
HAA or Haloacetic acids (ppb) [individual sites]	MCL: 60	MCLG: N/A	(high site average) A=44 B=43	A=2.0 - 52.0 B=14.5 - 45.5	2019 2019	NO NO	By-product of drinking water disinfection.
TTHM or Total Trihalomethanes (ppb) [individual sites]	MCL: 80	MCLG: N/A	(high site average) A=33 B=38	A=13.0 - 40.0 B=17.5 - 52.5	2019 2019	NO NO	By-product of drinking water disinfection.

Synthetic Organic Contaminants

Atrazine (ppb)	3	3	A=0.1 B=BDL	A=0.0 - 0.1 B=BDL to 0.26	August 2019 November 2019	NO NO	Runoff from herbicide used on row crops
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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	A=0.02	March-2019	NO	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Nitrate (ppm)	10	10	A=0.3	A=0.3	May-2019	NO	Runoff from herbicide use; leaching from septic tanks; sewage; erosion of natural deposits
Fluoride (ppm)	4	4	A=0.60 B=0.70	A=0.60 B=0.7 - 0.7	March 2019 June-2019	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=2 B=0.0	A=0 - 5 B=0 - 3.2	July 2019 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=0.22 B=0.084	A=0 - 0.83 B=0.0059 - 0.30	July 2019 Aug 2018	NO NO	Corrosion of household plumbing systems; erosion of natural deposits

Unregulated Contaminants (UCMR4)

Contaminant	Average	Range (ppb)	Date
HAA5	14.895	6.256 - 26.60	Feb-2019
HAA6Br	3.068	2.76 - 3.619	Feb-2019
HAA9	17.770	8.62 - 29.69	Feb-2019
Manganese	0.778	0.778 - 0.778	Feb-2019

Sodium and Dental Health Fluoride

	Average	Range (ppb)
Fluoride (added for dental health)	0.60	0.50 - 0.80
Sodium (EPA guidance level = 20mg/L)	6.8	6 - 7.6

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.