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.

To request a paper copy call (270) 786-2134.

Green River Valley Water District

2023 Water Quality Report

Water System ID: KY0500166
Manager: Andrew Tucker
270-786-2134
CCR Contact: Michael Peterson
270-786-2134

Mailing address:
P.O. Box 460
Horse Cave, KY 42749

Meeting location and time:
1180 East Main Street
Horse Cave, KY
Third Thursday each month at 2:00 PM

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 the 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.

Most of the water for our system is treated by Green River Valley Water District which has a source from the Green River and Rio Springs. Some water is purchased from Glasgow to serve the Whitney Woods Road and Estes Road areas near Cave City. Glasgow treats water from Barren River Reservoir and Beaver Creek. Water purchased from Edmonson County Water District serves a few customers in the Bonnieville area and that water comes from Nolin Reservoir. All of these water sources come from surface water. Each water system has completed a Source Water Assessment Plan (SWAP) to determine the susceptibility to contamination. The analysis of the susceptibility for all sources indicates that the potential for contamination is generally low. However, each assessment had areas of high concern including row crops, roads, bridges and culverts, forestland, pastureland, and KPDES permitted discharges. The release of contaminants through accidental spills could have an immediate impact on source water quality. The complete Source Water Assessment Plans are available for review at the respective water systems during normal business hours and are also available at the Area Development District offices.

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).

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.

Regulated Contaminant Test Results			Green River Valley Water District				
Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Barium [1010] (ppm)	2	2	0.03	0.03 to 0.03	May-23	No	Drilling wastes; metal refineries; erosion of natural deposits
Fluoride [1025] (ppm)	4	4	0.69	0.69 to 0.69	May-23	No	Water additive which promotes strong teeth
Nitrate [1040] (ppm)	10	10	1.07	1.07 to 1.07	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	1.49 (lowest average)	1.00 to 3.19 (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.							
Chlorine (ppm)	MRDL = 4	MRDLG = 4	2.05 (highest average)	0.38 to 3.04	2023	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	49 (high site average)	17 to 51 (range of individual sites)	2023	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	45 (high site average)	16.5 to 60.9 (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	0.103 (90^{th} percentile)	0 to 0.188	Jul-22	No	Corrosion of household plumbing systems
Lead [1030] (ppb) Round 1 sites exceeding action level 0	AL = 15	0	4 (90^{th} percentile)	0 to 8	Jul-22	No	Corrosion of household plumbing systems
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		0.098	100	No	Soil runoff	

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.

Level 1 Assessment: A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.

During the past year we were required to conduct one Level 1 assessment. One Level 1 assessment was completed. In addition, we were required to take two corrective actions and we completed two of these actions.

Regulated Contaminant Test Results - Glasgow Plant A (A); Glasgow Plant B (B); Edmonson County Plant B (E)							
Contaminant [code] (units)	MCL	MCLG	Source	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Barium [1010] (ppm)	2	2	A B E	0.027 0.029 0.025	0.027 to 0.027 0.029 to 0.029 0.025 to 0.025	2023	No	Drilling wastes; metal refineries; erosion of natural deposits
Fluoride [1025] (ppm)	4	4	A B E	0.61 0.62 0.92	0.61 to 0.61 0.62 to 0.62 0.92 to 0.92	2023	No	Water additive which promotes strong teeth
Mercury [1035] (ppb)	2	2	A	0.5	0.5 to 0.5	2023	No	Erosion of natural deposits; refineries and factories; landfills; runoff from cropland
Nitrate [1040] (ppm)	10	10	A B E	1.69 2.23 2.9	1.69 to 1.69 2.23 to 2.23 2.9 to 2.9	2023	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits
Atrazine [2050] (ppb)	3	3	E	BDL	BDL to 0.4	2023	No	Runoff from herbicide used on row crops
Disinfectants/Disinfection Byproducts and Precursors								
Total Organic Carbon (ppm) (report level=lowest avg. range of monthly ratios)	TT*	N/A	A B E	1.76 2.11 1.32	1.6 to 2.33 1.21 to 2.56 1.00 to 2.44	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**		**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		A B E	0.18 0.114 1.5	100 100 99	No No YES	Soil runoff	

Due to a pump malfunction the treatment plant at Wax experienced higher turbidity levels than normal during a short period in August. The pump was replaced and the turbidity levels returned to normal levels. A public notice was distributed for this violation This issue has been resolved. Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

Best Tasting Water

Green River Valley District won first place at a “Best Tasting Water” contest in August 2023 at the 44th Annual Conference and Exhibition of the Kentucky Rural Water Association. This entitled them to enter the “National Best Tasting Water” contest, held by the National Rural Water Association, in Washington, D.C. in February 2024. Green River Valley Water District placed second in the nation. These victories are a testament to the unwavering commitment of Green River Valley Water District to delivering exceptional drinking water quality.