**2018 Water Quality Report** **Green River Valley Water District** **KY0500166**

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Meetings: 1180 East Main St. Horse Cave, KY 42749 3rd Thursday each month at 2:00pm

We treat surface water from the Green River and Rio Springs, GRVWD also purchases treated water from Glasgow Water Company. Glasgow utilizes surface water from Barren River Reservoir and Beaver Creek. The following is the Summary for the Green River Valley Water District: The source of raw water for the Green River Valley Water District is the Green River and Rio Springs in Hart County. An analysis of the overall susceptibility to contamination of the Green River Valley Water District's water supply indicated that this this susceptibility is high. Sources of high potential impact include: Highway 31E and Route 569, underground storage tanks, agricultural land use, domestic water wells, and septic systems. This source assessment for GRVWD raw water supply is available through Barren River Development District P.O. Box 9005, Bowling Green Ky., 42102, (270)781-2381 or through David Paige (270)786-2136

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. A= Green River VAlley Water District, B=(Glasgow) Barren River Lake C= (Glasgow) Beaver Creek

| | Allowable Levels | Source | Highest Single Measurement | Lowest Monthly % | Violation | Likely Source of Turbidity |
|---|---|---|---|---|---|---|
| Turbidity (NTU) TT | No more than 1 NTU* | A= | 0.423 | 99 | No | Soil runoff |
| * Representative samples | Less than 0.3 NTU in | B= | 0.093 | 100 | No | |
| of filtered water | 95% monthly samples | C= | 0.097 | !00 | No | |

## Regulated Contaminant Test Results

| Contaminant [code] (units) | MCL | MCLG | Source | Report Level | Range of Detection | Date of Sample | Violation | Likely Source of Contamination |
|---|---|---|---|---|---|---|---|---|
| **Radioactive Contaminants** | | | | | | | | |
| Combined radium (pCi/L) | 5 | 0 | A= | 1 | 1 to 1 | Feb-14 | No | Erosion of natural deposits |
| **Inorganic Contaminants** | | | | | | | | |
| Barium [1010] (ppm) | 2 | 2 | A= | 0.031 | 0.031 to 0.031 | Feb-18 | No | Drilling wastes; metal refineries; erosion of natural deposits |
| | | | B= | 0.024 | 0.024 to 0.024 | Feb-18 | No | |
| | | | C= | 0.027 | 0.027 to 0.027 | Feb-18 | No | |
| Copper [1022] (ppm) sites exceeding action level 0 | AL = 1.3 | 1.3 | A= | 0.068 ($90^{th}$ percentile) | 0 to 0.38 | July-16 | No | Corrosion of household plumbing systems |
| Fluoride [1025] (ppm) | 4 | 4 | A= | 0.6 | 0.6 to 0.6 | Feb-18 | No | Water additive which promotes strong teeth |
| | | | B= | 0.7 | 0.7 to 0.7 | Feb-18 | No | |
| | | | C= | 0.7 | 0.7 to 0.7 | Feb-18 | No | |
| Lead [1030] (ppb) sites exceeding action level 0 | AL = 15 | 0 | A= | 2 ($90^{th}$ percentile) | 0 to 3 | July-16 | No | Corrosion of household plumbing systems |
| Nitrate [1040] (ppm) | 10 | 10 | B= | 2.2 | 1.7 to 2.2 | Feb-17 | No | Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits |
| | | | C= | 2.3 | 1.7 to 2.3 | Feb-17 | No | |
| **Disinfectants/Disinfection Byproducts and Precursors** | | | | | | | | |
| Total Organic Carbon (ppm) (report level=lowest avg. range of monthly ratios) | TT* | N/A | A= | 1.39 | 1.00 to 3.00 | 2018 | No | Naturally present in environment. |
| | | | B= | 1.85 | 1.6 to 2.78 | 2018 | No | |
| | | | C= | 2.47 | 1.48 to 3.87 | 2018 | No | |
| *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 | A= | 2.02 (highest average) | 1.13 to 2.85 | 2018 | No | Water additive used to control microbes. |
| HAA (ppb) (Stage 2) [Haloacetic acids] | 60 | N/A | A= | 35 (average) | 5 to 42 (range of individual sites) | 2018 | No | Byproduct of drinking water disinfection |
| TTHM (ppb) (Stage 2) [total trihalomethanes] | 80 | N/A | A= | 35 (average) | 7 to 49 (range of individual sites) | 2018 | No | Byproduct of drinking water disinfection. |

| Unregulated Contaminants (UCMR 4) | | average | range (ppb) | | | date |
|---|---|---|---|---|---|---|
| HAA5 | B/C | 27.648 | 8.57 | to | 46.2 | OCT-18 |
| HAA6Br | B/C | 5.303 | 2.37 | to | 9.44 | OCT-18 |
| HAA9 | B/C | 32.719 | 11.4 | to | 49 | OCT-18 |

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.

## Notice of Violation: 2017 - 9549522 / 7500 PUBLIC NOTICE

**Description of Non Compliance**: 401KAR 8:070 PUBLIC NOTICE Public water system failed to perform public notification in accordance with 401 KAR 8:070. **Comments**: Public notice for a violation 2016-9549519, that was completed in the calendar year 2015 CCR, did not meet all 10 required elements of a public notice and will need to be redone. This violation statements detail each violation received for the calendar year and public notices notify public of what caused a specific violation, with proper language. This did not meet the public notice requirements and was more similar to a violation statement. Remedial Actions: Redo the public notice for a violation 2016-9549519 and detailed this violation in the violation statement of the 2018 CCR. In addition, NOV must be discussed detailing nature of violation. There were no health effects due to this administrative oversight.

## Notice of Violation: 2016 - 9549519 / 0300 IESWTR

Our water system violated one or more drinking water standards over the past year. Even though these were not emergencies, as our customers, you have a right to know what happened and what we did to correct these situations.

*We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During 10/01/2015-10/30/15 we did not complete all monitoring or testing for 0300 IESWTR and therefore cannot be sure of the quality of your drinking water during that time.*

There is nothing you need to do at this time. You do not need to use an alternative (e.g., bottled) water supply.

What happened? Who is at risk? What is being done?

**Description of Noncompliance**: 401KAR8:150,Sec 3 IESWTR The public water system submitted fewer than 90 percent of the required Number of analytical results forturbidity or failed to submit results by the 10th of the following month for the compliance. 10/01/2015-10/31/2015. **Comments**: Turbidity: Failed to monitor IFE. Water system did not submit Plant summary form that had individual Filter Effluent turbidity information for Compliance. Remedial Measures: Submit any overdue or unreported sampling analytical results, if available, for the compliance. 10/01/2015-10/31/2015. Perform public notification in accordance with the 401KAR8:07 though. Detail this NOV In the 2018 CCR. There were no health effects due to this administrative oversight.

*Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.*

**This report will not be sent to individual customers. It will be available at Green River Valley Water District office.**