Grayson Utility Commission
Water Quality Report 2017

Water System ID: KY0220164 Manager: Gerald W. Haney 606-474-7569	CCR Contact: Gerald W. Haney 606-474-7569	Mailing Address: 671 South State Highway 7 Grayson, KY 41143	Meeting location and time: William J. Lewis Maintenance Bldg Last Friday monthly at 12:00 PM

This report is designed to inform the public about the quality of water and services provided on a daily basis. Our commitment is to provide our customers with a safe, clean, and reliable supply of drinking water. We want to assure that we will continue to monitor, improve, and protect the water system and deliver a high quality product. Water is the most indispensible product in every home and we ask everyone to be conservative and help us in our efforts to protect the water source and the water system.

The Grayson Utility Commission withdraws raw water from the Little Sandy River which is a surface water source located in Carter County. An analysis of the susceptibility of the Commission's water supply to contamination indicates that this susceptibility is generally moderate. Areas of high concern within the first protection zone of the intake consist of bridges and culverts. In and of themselves, bridges do not represent a danger to the environment. It is the potential for chemical spill resulting from accidents that earn them a high susceptibility ranking. Agricultural activity in the watershed is negligible and, therefore, the use of pesticides and herbicides and the danger of contaminated runoff is thereby greatly reduced. The threat posed by major roadways in the protection area in the event of accidental release of contaminants, though it exists, is moderate. The overall Susceptibility Ranking for this water source is moderate. Our full Source Water Assessment Plan can be viewed during normal business hours at our office at 671 South State Highway 7 in Grayson, Kentucky.

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).

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. 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.

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	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	0.3	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
Barium [1010] (ppm)	2	2	0.027	0.027 to 0.027	Apr-17	No	Drilling wastes; metal refineries; erosion of natural deposits
Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	0.067 (90^{th} percentile)	0.001 to 0.094	Sep-15	No	Corrosion of household plumbing systems
Fluoride [1025] (ppm)	4	4	0.85	0.85 to 0.85	Apr-17	No	Water additive which promotes strong teeth
Lead [1030] (ppb) sites exceeding action level 0	AL = 15	0	1.5 (90^{th} percentile)	0.1 to 2.6	Sep-15	No	Corrosion of household plumbing systems
Nitrate [1040] (ppm)	10	10	0.31	0.31 to 0.31	Mar-17	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits
Total Organic Carbon (ppm) (measured as ppm, but reported as a ratio)	TT*	N/A	1.1 (lowest average)	0.99 to 1.56 (monthly ratios)	2017	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	1.38 (highest average)	0.43 to 2.2	2017	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	52 (high site average)	17.5 to 86.7 (range of individual sites)	2017	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	53 (high site average)	12.9 to 63.5 (range of individual sites)	2017	No	Byproduct of drinking water disinfection.

Other Contaminants

Cryptosporidium [oocysts/L]	0	TT (99% removal)	1 (positive samples)	12 (no. of samples)	2017	See note below	Human and animal fecal waste

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.

Violation 2017-9951141

Our water system recently failed to comply with a required testing procedure. Even though this was not an emergency, as our customers, you have a right to know what happened and what we did to correct the situation.

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 April 2017, we did not complete all monitoring or testing for Total Coliforms, and therefore cannot be sure of the quality of your drinking water during that time.

We are required to submit 10 samples per month for analysis of Total Coliforms. One of our samples was rejected by our contract laboratory as not having sufficient volume for analysis. Our laboratory failed to notify us so we did not collect an additional sample that month. We collected a sufficient number of samples the following month and continue to do so.

There is nothing you need to do at this time. You may continue to drink the water. If a situation arises where the water is no longer safe to drink, you will be notified within 24 hours.

Violation 2018-9951142 Linked to Violation 2016-9951140

We failed to perform a Public Notification within one-year of receiving Violation 2016-9951140. This notification is below:

Our water system violated drinking water requirements over the past year by failing to timely report our LT2 (Cryptosporidium) Sampling Plan to the Kentucky Division of Water (KDOW). Even though this is not an emergency, as our customers, you have a right to know what happened and what we did to correct this situation.

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 the 7/2/2016-8/16/2016 compliance period, we did not complete all monitoring requirements by failing to correctly report our LT2 Sampling Plan on time. Therefore, a violation was issued because the KDOW could not verify our plan to adequately check the quality of your drinking water, before the sampling time. The LT2 Sampling Plan has since been submitted to KDOW, and it has been determined that the plan to check the water quality met all federal requirements for monitoring Cryptosporidium over the next two years.

There is nothing you need to do at this time. There are no potential adverse health effects related to the reporting violation, no population is at risk, and there is no need to use alternative water supplies.

After becoming aware of the omission we submitted our Sampling Plan. No further actions are required at this time.

Violation 2018-9951143

We incorrectly reported some data in our 2015 and 2016 Water Quality Reports. For our 2015 Water Quality Report, we reported:

Regulated Contaminant Test Results							
Contaminant [code] (units)	**MCL**	**MCLG**	**Report Level**	**Range of Detection**	**Date of Sample**	**Violation**	**Likely Source of Contamination**
Fluoride [1025] (ppm)	4	4	0.99	0.6 to 1.24	Oct-15	No	Water additive which promotes strong teeth
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	32 (system average)	8 to 180 (range of individual sites)	N/A	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	38 (system average)	6 to 90 (range of individual sites)	N/A	No	Byproduct of drinking water disinfection.

We should have reported the following values:

Fluoride [1025] (ppm)	4	4	1.04	1.04 to 1.04	Apr-15	No	Water additive which promotes strong teeth
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	40 (high site average)	12 to 64.8 (range of individual sites)	2015	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	53 (high site average)	10.3 to 90.4 (range of individual sites)	2015	No	Byproduct of drinking water disinfection.

For our 2016 Water Quality Report, we reported:

Regulated Contaminant Test Results							
Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Fluoride [1025] (ppm)	4	4	0.85	0.63 to 1.15	Oct-15	No	Water additive which promotes strong teeth
Nitrate [1040] (ppm)	10	10	0.23	0.23 to 0.23	Mar-15	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	24 (system average)	2 to 44 (range of individual sites)	N/A	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	37 (system average)	5 to 79 (range of individual sites)	N/A	No	Byproduct of drinking water disinfection.

We also failed to include up-to-date results for Barium and Nitrates in the 2016 report. We should have reported the following values:

Regulated Contaminant Test Results							
Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Barium [1010] (ppm)	2	2	0.016	0.016 to 0.016	Apr-16	No	Drilling wastes; metal refineries; erosion of natural deposits
Fluoride [1025] (ppm)	4	4	0.28	0.28 to 0.28	Apr-16	No	Water additive which promotes strong teeth
Nitrate [1040] (ppm)	10	10	0.23	0.23 to 0.23	Mar-16	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	39 (high site average)	4.9 to 43.8 (range of individual sites)	2016	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	53 (high site average)	7.6 to 79.2 (range of individual sites)	2016	No	Byproduct of drinking water disinfection.

In addition to the incorrect values being reported in the table, we also had problems with the font size of our report appearing very small on our website. We are working to correct that issue for this year's report. We have also included additional information in our Source Water information at the beginning of this report in order to notify you where you can find a full Source Water Assessment Plan for our water system.

Violation 2018-9951144

Our water system recently violated a drinking water standard. Although this incident was not an emergency, as our customers, you have a right to know what happened and what we did (are doing) to correct this situation.

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 December 2017, we did not complete all monitoring by failing to report or correctly report testing for Monthly Operation Report/IESWTR. Therefore, we could not verify the quality of your drinking water to the primacy agency during that time.

Each month we are required to complete a Monthly Operation Report (MOR) and submit it to the Kentucky Division of Water by the tenth of the following month. This report includes daily testing results, chemicals added, and total volumes treated. We inadvertently omitted a summary page which includes information about the individual and combined filter effluent turbidities (IESWTR).

There is nothing you need to do. We submitted the report to Division of Water and continue to do so monthly.

For more information regarding these violations, please contact Gerald W. Haney at 606-474-7569 or 671 South State Highway 7, Grayson, KY 41143.

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.

Spanish (Español) Este informe contiene información muy importante sobre la calidad de su agua beber. Tradúzcalo o hable con alguien que lo entienda bien.

This report will not be mailed unless requested. Copies are available at our office. If you desire a copy to be mailed to you please contact our office.