

Grayson Utilities Commission

KY-0220164

Water Quality Report for year 2007

Water - Essential for Life

671 South State Highway 7, Grayson, Kentucky 41143
Meeting location: William J. Lewis Utility Maintenance Building
Meeting Dates the Last Thursday of the Month 6:30 PM
and Time:

Manager: **Gerald W. Haney**
Phone: **(606) 474-7569**
CCR Contact: **Gerald W. Haney**
Phone: **(606) 474-7569**

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 indispensable 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 river mile 39.03 of 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 this watershed is negligible and, therefore, the use of pesticides and herbicides and the danger of runoff contaminated thereby is 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.

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).

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, ($\mu\text{g/L}$). 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.

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>.

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. Unless otherwise noted, the report level is the highest level detected.

	Allowable Levels	Highest Single Measurement	Lowest Monthly %	Violation	Likely Source
Turbidity (NTU) TT * Representative samples of filtered water	No more than 1 NTU* Less than 0.3 NTU in 95% of monthly samples	0.38	97	No	Soil runoff

Regulated Contaminant Test Results

Contaminant			Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
[code] (units)	MCL	MCLG					
Inorganic Contaminants							
Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	0.18 (90 th percentile)	0.02 to 0.26	Sep-06	No	Corrosion of household plumbing systems
Fluoride [1025] (ppm)	4	4	1.04	0.8 to 1.3	Apr-07	No	Water additive which promotes strong teeth
Lead [1030] (ppb) sites exceeding action level 0	AL = 15	0	4 (90 th percentile)	1 to 8	Sep-06	No	Corrosion of household plumbing systems
Nitrate [1040] (ppm)	10	10	0.35	0.35 to 0.35	Mar-07	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite [1041] (ppm)	1	1	0.05	0.05 to 0.05	Mar-07	No	Runoff from fertilizer use; 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	1.07 (lowest average)	1.00 to 1.51 (monthly ratios)	N/A	No	Naturally present in environment.
<i>*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.</i>							
Chlorine (ppm)	MRDL = 4	MRDLG = 4	1.48 (highest average)	0.4 to 2.7	N/A	No	Water additive used to control microbes.
HAA (ppb) (all sites) [Haloacetic acids]	60	N/A	49 (system average)	1 to 63 (range of system sites)	N/A	No	Byproduct of drinking water disinfection
TTHM (ppb) (all sites) [total trihalomethanes]	80	N/A	39 (system average)	1 to 95 (range of system sites)	N/A	No	Byproduct of drinking water disinfection.

EPA has not established drinking water standards for unregulated contaminants. There are no MCL's and therefore no violations if found.

The Grayson Utilities Commission's Water Treatment Plant received 2 drinking water violations in 2007. The first occurred in January when we did not complete all monitoring or testing for Total Carbon and therefore could not be sure of the quality of our drinking water at that time. Any sample we collect must be sent and analyzed by a certified laboratory within a specified amount of time. The sample was collected on January 15th, but did not get our sample to the laboratory within the allowed time. On February 5, 2007 a new sample was collected of our finished water in order to have it analyzed for Total Carbon. We sent the sample to the certified lab via courier to ensure that the sample arrived within the allowed holding time. The sample was analyzed and Total Carbon was not found at detectable levels. Total Organic Carbon 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 second violation occurred in July. We routinely monitor for drinking water contaminants. We took 19 samples to test for the presence of Bacteria during July. 3 of our samples showed the presence of total coliform bacteria. The standard is that no more than 1 sample per month may do so. Coliform bacteria are generally not harmful themselves. Coliforms are bacteria which are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems. We have increased sampling for coliform bacteria to catch the problem early if it happens again. We did not find any of these bacteria in our subsequent testing and the problem has been resolved.