

City of Jeffersonville

Water Quality Report 2019

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Meeting location and time:
Jeffersonville Community Center
Last Monday monthly at 7:00 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 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.

We purchase water from the City of Mt. Sterling. Their raw water source is surface water from Slate Creek and Greenbriar Reservoir. An analysis of the susceptibility of Mt. Sterling's raw water supply to contamination indicates that the susceptibility potential is considered high. The potential contaminants of greatest concern include several major roadways and bridges that extend along streams that drain into the water source, numerous car repair facilities and salvage yards in the area, and three superfund sites. A superfund site is defined as any land in the United States that has been contaminated by hazardous waste and identified by the EPA as a candidate for cleanup because it poses a risk to human health and/or the environment. Also of concern are the presence of underground storage tanks, Tier II chemical use, waste generators or transporters and KPDES permitted wastewater treatment facilities within the source water protection area. We also purchase water from the Cave Run Water Commission. Cave Run Lake is a surface water source. An analysis of the susceptibility of Cave Run's raw water supply to contamination indicates that the susceptibility potential is considered generally moderate. A source water assessment for both systems can be viewed at the Gateway Area Development District office in Morehead, 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, ($\mu\text{g/L}$). 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.

Variations & Exemptions (V&E) - State or EPA permission not to meet a 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. 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.

Regulated Contaminant Testing Results for Mt. Sterling Water

Regulated Contaminant Test Results								Mt. Sterling Water	
Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination		
Inorganic Contaminants									
Barium [1010] (ppm)	2	2	0.018	0.018 to 0.018	Feb-19	No	Drilling wastes; metal refineries; erosion of natural deposits		
Fluoride [1025] (ppm)	4	4	0.7	0.7 to 0.7	Feb-19	No	Water additive which promotes strong teeth		
Nickel (ppb) (US EPA remanded MCL in February 1995.)	N/A	N/A	2.8	2.8 to 2.8	Feb-19	No	N/A		
Nitrate [1040] (ppm)	10	10	0.621	0.621 to 0.621	Nov-19	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	1.32 (lowest average)	0.25 to 1.96 (monthly ratios)	2019	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		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		0.312	100	No	Soil runoff			

Regulated Contaminant Testing Results for Cave Run Regional Water Commission

Regulated Contaminant Test Results								Cave Run Regional Water Commission	
Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination		
Inorganic Contaminants									
Barium [1010] (ppm)	2	2	0.021	0.021 to 0.021	Apr-19	No	Drilling wastes; metal refineries; erosion of natural deposits		
Fluoride [1025] (ppm)	4	4	0.61	0.61 to 0.61	Apr-19	No	Water additive which promotes strong teeth		
Nitrate [1040] (ppm)	10	10	0.28	0.28 to 0.28	Mar-19	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits		
Selenium [1045] (ppb)	50	50	1	1 to 1	Apr-19	No	Discharge from petroleum and metal refineries or mines; 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 1.63 (monthly ratios)	2019	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		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		0.19	100	No	Soil runoff			

Regulated Contaminant Testing Results for Jeffersonville Water

Regulated Contaminant Test Results Jeffersonville Water System							
Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Chlorine (ppm)	MRDL = 4	MRDLG = 4	1.00 (highest average)	0.53 to 1.63	2019	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	49 (high site average)	21 to 54 (range of individual sites)	2019	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	68 (high site average)	26 to 110 (range of individual sites)	2019	No	Byproduct of drinking water disinfection.
Household Plumbing Contaminants							
Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	0 (90th percentile)	0 to 0.049	Sep-17	No	Corrosion of household plumbing systems
Lead [1030] (ppb) sites exceeding action level 0	AL = 15	0	0 (90th percentile)	0 to 2.5	Sep-17	No	Corrosion of household plumbing systems

Unregulated Contaminant Testing Results for Mt. Sterling Water

Unregulated Contaminants (UCMR 4)	average	range (ppb)	date
Manganese	0.148	0 to 0.59	Sep-19
HAA5	45.875	16 to 81	Dec-19
HAA6Br	6.013	3.4 to 9.6	Dec-19
HAA9	51.75	20 to 89	Dec-19

Your drinking water from Mt. Sterling Water has been sampled for a series of unregulated contaminants. Unregulated contaminants are those for which 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.

Violations

Violation Number	Compliance Period	Explanation
2019-9950862	January 2019	Failed to submit the Monthly Operating Report on time
2019-9950863	April 2019	Failed to submit the Monthly Operating Report on time
2019-9950864	June 2019	Failed to submit the Monthly Operating Report on time
2019-9950865	June 2019	Failed to submit the Daily Chlorine Residuals on time
2019-9950866	July 2019	Failed to submit the Monthly Operating Report on time
2019-9950867	July 2019	Failed to submit the Daily Chlorine Residuals on time
2020-9950868	August 2019	Failed to submit the Monthly Operating Report on time
2020-9950869	August 2019	Failed to submit the Daily Chlorine Residuals on time
2020-9950870	September 2019	Failed to submit the Monthly Operating Report on time
2020-9950871	September 2019	Failed to submit the Daily Chlorine Residuals on time
2020-9950872	October 2019	Failed to submit the Monthly Operating Report on time
2020-9950873	October 2019	Failed to submit the Daily Chlorine Residuals on time
2020-9950874	November 2019	Failed to submit the Monthly Operating Report on time
2020-9950875	December 2019	Failed to submit the Monthly Operating Report on time
2020-9950876	December 2019	Failed to submit the Daily Chlorine Residuals on time
2020-9950879	November 2019	Failed to submit the Daily Chlorine Residuals on time

We failed to submit our Monthly Operating Report (MOR) on time multiple times in 2019. This report contains important information regarding daily operations from our utility and is due to the Division of Water by the 10th of the month. Each late submittal resulted in a violation for not submitting the MOR. Several of these late submittals also resulted in a violation for failure to submit the daily distribution system chlorine residuals, which is a component of the MOR. All reports have now been submitted to the state. We have taken steps to ensure that we are reporting on time in the future.

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