

Russell Water Company

Water Quality Report 2018

Water System ID: KY0450376
Water Plant Superintendent: Paul Smith
606-836-6644

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Meeting location and time:
Russell City Building
Fourth Thursday monthly at 6:00 PM

We get our water from the Ohio River at mile marker 327.5. The Ohio River is surface water that drains a large area of several states in the eastern US. The land in the drainage basin is a mix of agriculture, industrial, urban and commercial properties. The analysis of the systems susceptibility to contamination indicates that the susceptibility rating is moderately high. Within the Kentucky portion of the protection zone there are 536 identified potential contaminant sources. Of these, 302 have a susceptibility rating of High, 206 are rated Medium and 28 are rated Low. Not all contaminants with a High rating threaten the water supply equally. Although the intake for Russell Water is on the Ohio River, it is 15 feet below the surface of the water. Oil spills may float by the intake without noticeable effect. The intake may be shut down if other types of spills threaten. In all cases, the Ohio River Valley Sanitation Commission (ORSANCO) issues notices of spills, their location and speed of the river to all water systems with intakes on the Ohio River. This warning network is in addition to Russell's interconnection with Ashland Water for backup supply. The complete Source Water Assessment Plan is available for inspection at the FIVCO Area Development District office located in the Industrial Park at 32 FIVCO Court, Grayson, Kentucky 41134.

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.

Variations & 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. 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.

	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	0.29	100	No	Soil runoff

Regulated Contaminant Test Results Russell Water Company

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	0.016	0.016 to 0.016	Apr-18	No	Drilling wastes; metal refineries; erosion of natural deposits
Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	0.088 (90 th percentile)	0.001 to 0.464	Jul-18	No	Corrosion of household plumbing systems
Fluoride [1025] (ppm)	4	4	0.75	0.75 to 0.75	Apr-18	No	Water additive which promotes strong teeth
Lead [1030] (ppb) sites exceeding action level 1	AL = 15	0	1 (90 th percentile)	0 to 28	Jul-18	No	Corrosion of household plumbing systems
Nitrate [1040] (ppm)	10	10	0.6	0.6 to 0.6	Apr-18	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	1.31 (lowest average)	1.02 to 2.19 (monthly ratios)	2018	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	1.25 (highest average)	0.2 to 2.2	2018	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	61 (high site average)	38 to 81 (range of individual sites)	2018	YES	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	80 (high site average)	33 to 139 (range of individual sites)	2018	No	Byproduct of drinking water disinfection.

Secondary contaminants do not have a direct impact on the health of consumers and are not required in the Consumer Confidence Report. They are being included to provide additional information about the quality of the water.

Secondary Contaminant	Maximum Allowable Level	Report Level	Range of Detection	Date of Sample
Aluminum	0.05 to 0.2 mg/l	0.06	0.06 to 0.06	Mar-18
Chloride	250 mg/l	32.98	32.98 to 32.98	Mar-18
Copper	1.0 mg/l	0.08	0.08 to 0.08	Mar-18
Corrosivity	Noncorrosive	-1.18	-1.18 to -1.18	Mar-18
Fluoride	2.0 mg/l	0.65	0.65 to 0.65	Mar-18
Odor	3 threshold odor number	2	2 to 2	Mar-18
pH	6.5 to 8.5	7.48	7.48 to 7.48	Mar-18
Sulfate	250 mg/l	74.11	74.11 to 74.11	Mar-18
Total Dissolved Solids	500 mg/l	120	120 to 120	Mar-18

	Average	Range of Detection
Fluoride (added for dental health)	0.7	0.59 to 0.88
Sodium (EPA guidance level = 20 mg/L)	22.5	22.47 to 22.47

Last year we inadvertently misreported the concentration level for several contaminants. Our contract laboratory revised our analytical report but failed to inform us of the changes until after the CCR was published. Our contract laboratory is making efforts to ensure us that this does not happen again in the future. The following table includes the values we reported incorrectly and what we should have reported:

Contaminant:	Incorrectly Reported:	Should have Reported:
Barium	0.002ppm	0.010ppm
Nickel	2ppb	1ppb
Selenium	1ppb	3ppb

Violation 2019-9953343

Testing results showed that our system exceeded the standard, or maximum contaminant level (MCL), for haloacetic acids. The standard for haloacetic acids is 0.060 mg/L. It is determined by averaging all samples at each sampling location for the last 12 months. Haloacetics acids averaged at one of our system's locations for: 7/1/2018 through 9/30/2018 was 0.061 mg/L

Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

We have made changes in our chemical process in the water treatment plant. We returned to compliance the following quarter. A Public Notice was issued for the quarter we were out of compliance.

For more information on these violations, please contact Paul Smith at 606-836-6644 or P.O. Box 394 Russell, KY 41169.

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. Contact our office if you would like a copy mailed to you.