

Russell Springs Water and Sewer Water Quality Report 2015

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This report discusses the quality of the water delivered to your tap by the Russell Spring Water and Sewer. Our water is purchased from Jamestown Municipal Water Works, which treats surface water withdrawn from Greasy Creek Cove of nearby Lake Cumberland. Lake Cumberland spans Pulaski, Russell, Wayne and Clinton counties and receives drainage from several more in both Kentucky and Tennessee. The lake receives surface water runoff (originally rainwater) from these areas. The drainage areas have some light industrial development but primary land use is agricultural. An analysis of the susceptibility of our raw water source to contamination indicates that susceptibility is low. Within the critical protection area there are four potential sources of contamination that are ranked high, two are ranked medium, and one is ranked low. Potential contaminant sources of such as underground storage tanks, hazardous waste sites, and the secondary non-point pollution sources are relatively few in numbers and pose few potential problems. The greatest concern to source water quality is roadways, bridges and culverts that lead directly into the Greasy Creek watershed. The release of contaminants through accidental spills due to transportation accidents could have an immediate effect on the source water quality. A full copy of the susceptibility assessment is available for review at the Lake Cumberland Area Development Office in Russell Springs.

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.

Regulated Contaminant Test Results for Jamestown

	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		0.02	100	No	Soil runoff	
Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Combined radium (pCi/L)	5	0	0.82	0.82 to 0.82	2013	No	Erosion of natural deposits
Uranium (µg/L)	30	0	0.012	0.012 to 0.012	2013	No	Erosion of natural deposits
Barium [1010] (ppm)	2	2	0.023	0.023 to 0.023	2015	No	Drilling wastes; metal refineries; erosion of natural deposits
Fluoride [1025] (ppm)	4	4	1.2	1.2 to 1.2	2015	No	Water additive which promotes strong teeth
Nitrate [1040] (ppm)	10	10	0.38	0.38 to 0.38	2015	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	1.01 (lowest average)	1.00 to 1.09 (monthly ratios)	2015	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.

Regulated Contaminant Test Results for Russell Springs

Chlorine (ppm)	MRDL = 4	MRDLG = 4	1.31 (highest average)	0.34 to 2.15	2015	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	96 (high site average)	11 to 174 (range of individual sites)	2015	YES	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	65 (high site average)	12 to 83 (range of individual sites)	2015	No	Byproduct of drinking water disinfection.
Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	0.040 (90 th percentile)	0.001 to 0.034	2013	No	Corrosion of household plumbing systems
Lead [1030] (ppb) sites exceeding action level 0	AL = 15	0	7 (90 th percentile)	0 to 12	2013	No	Corrosion of household plumbing systems

Haloacetic acids: During the third and fourth quarter of 2015 we exceeded the MCL for HAA. We are working with Jamestown Water Works to minimize the formation of haloacetic acids and trihalomethanes while ensuring we maintain an adequate level of disinfectant. Jamestown has taken additional steps to change the initial disinfectant feed point and remove natural organic matter. We are also monitoring water storage tank levels and water flow patterns within the distribution system and increased flushing of water lines to determine if our efforts have been effective. Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

2015 Violations

Our water system violated drinking water requirements over the past year. Even though these were not emergencies, as our customers, you have a right to know what happened and what we are doing (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 2/1//2014 – 2/28/2014 we did not complete all monitoring by failing to report or correctly report testing results for chlorine with the Monthly Operating Report. During 01/1/2014 – 03/31/2014 and 10/1/2014 – 12/31/2014 we did not complete all monitoring by failing to report or correctly report testing results for Haloacetic Acids and Trihalomethanes. During 7/1/2015 – 9/30/2015 and 10/1/2015 – 12/31/2015 we did not complete all monitoring by failing to report or correctly report testing results for Haloacetic Acids and Trihalomethanes (OEL Report). Therefore, we could not verify the quality of your drinking water to the primacy agency during that time.

The table below lists the violations we received during 2015 and the actions taken to rectify the violations.

Violation	Begin Date	End Date	Explanation
2016-9662337 (HAA)	10/1/2015	12/31/2015	Exceeded MCL. We are investigating solutions. Public notification issued.
2016-9662336 (PN linked to violation)	12/9/2015	N/A	Failed to perform public notice for 2015-611 DBPs third quarter 2014 within one year of receiving the original violation. The public notice is included in this CCR.
2015-611 (DBPs)	7/1/2014	9/30/2014	Failed to submit or report DBP results. Samples are taken on quarterly basis.
2016-9662335 (OEL for HAA)	7/1/2015	9/30/2015	Failed to submit OEL for the quarter.
2016-9662334 (HAA)	7/1/2015	9/30/2015	Exceeded MCL. We are investigating solutions. Public notification issued.
2016-9962333 (PN linked to violation)	10/9/2015	N/A	Failed to perform public notice for 2014-9662323 Chlorine February 2014 within one year of receiving the original violation and the mandatory distribution language was missing. The certification form was also not submitted. The public notice is included in this CCR.
2014-9662323 (Chlorine)	2/1/2014	2/28/2014	All required samples were taken but we failed to report one chlorine residual to the primacy agency on the Monthly Operating Report. The results have since been reported.
2015-9962332 (PN linked to violation)	10/9/2015	N/A	Failed to perform public notice for 2014-590 DBPs first quarter 2014 within one year of receiving the original violation. The public notice is included in this CCR.
2015-590 (DBPs)	1/1/2014	3/31/2014	Failed to submit or report DBP results. Samples are taken on quarterly basis.
NOV yet to be issued (OEL for HAA)	10/1/2015	12/31/2015	Failed to submit OEL for the quarter. OELs will be submitted as required.

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.