



BLUEGRASS WATER

Utility Operating Company

A CSWR Managed Utility

Center Ridge Water System (KY0180549) Calloway County 2020 Consumer Confidence Report

This report is designed to inform the public about the quality of water and services provided on a daily basis and contains information from January 1st – December 31st, 2020.

Our commitment is to provide a safe, clean, and reliable supply of drinking water. We want to assure you, our customer, that we will continue to monitor, improve, and protect the water system and deliver a high-quality product.

For more information regarding this report, contact Bluegrass Water Utility Operating Company, Inc. (Bluegrass Water) Customer Experience by phone at 1-866-752-8982, by email at support@bluegrasswateruoc.com, or by mail at 1650 Des Peres Road, Suite 303, St. Louis, MO 63131.

For additional information about your water service, including public meetings, please visit our website at <https://www.centralstateswaterresources.com/bluegrass-water/>.

Este reporte incluye información muy importante sobre el agua para tomar. Tradúscalo ó hable con alguien que lo entienda bien.

I. Drinking Water Sources

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 (1-800-426-4791).

The sources of drinking water (both tap 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 can 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).
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:	Either naturally occurring or from oil and gas production or mining activities.

In order to ensure that tap water is safe to drink, the EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must 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, persons with HIV/AIDS or other immune system disorders, some elderly and/or 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 at 1-800-426-4791.

II. Source Water Information

Water Source Type:

One (1) groundwater well - Whisper Drive Well #1

Source Water Assessment:

Center Ridge Water System is located in eastern Calloway County in the Mississippi Embayment area of western Kentucky. The geology of the area includes formations of the Mississippian, Upper Cretaceous, Pliocene, Pleistocene, and Tertiary Series. There are several faults of unknown depth in the area of Center Ridge Water System which may impact the well by acting as a conduit for groundwater movement.

The Center Ridge Water System withdraws water from the Mississippi Embayment (Jackson Purchase) region of Kentucky. According to the Kentucky Division of Water's Guide for Wellhead protection, the hydrologic sensitivity value for the aquifer rates as a two on a scale of one to three (three being the highest).

There are a total of twenty-seven potential sources of contamination within the Center Ridge Water System's wellhead protection area. All of these potential sources have been identified as septic systems and are ranked as having a medium risk to contamination of the aquifer.

Since all twenty-seven of the potential contamination sources have a medium ranking, the aquifer has been determined to have a medium risk ranking. This ranking is influenced by the nature of the aquifer that has a medium sensitivity value, the nature of the potential contaminant sources, and historical water quality results.

III. Health Effects Language

Arsenic (As):	While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.
Lead (Pb):	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 .
Nitrate (N):	in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant you should ask advice from your health care provider.

IV. Definitions and Abbreviations

Level 1 Assessment (L1A):	A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.
Level 2 Assessment (L2A):	A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.
Action Level (AL):	The concentration of contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Below Detection Levels (BDL):	Laboratory analysis indicates that the contaminant is not present.
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 the addition of a disinfectant is necessary for control of microbial contaminants.
Maximum Residual Disinfectant Level Goal (MRDLG):	The level of 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.
Microgram per Liter (ug/L):	A measure of the radioactivity in water.
Million Fibers per Liter (MFL):	A measure of the presence of asbestos fibers that are longer than 10 micrometers.
Millirems per year (mrem/yr):	A measure of radiation absorbed by the body.
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.
Not Applicable (N/A):	Does not apply.
Picocuries per Liter (pCi/L):	A measure of the radioactivity in water.
Parts per million (ppm):	One part per million corresponds to one minute in two years or a single penny in \$10,000.
Parts per billion (ppb):	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.
Treatment Techniques (TT):	A required process intended to reduce the level of a contaminate in drinking water
Variances and Exemptions:	State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

V. Water Quality Data – Regulated Contaminate Test Results

The data presented in this report is from the most recent testing done in accordance with the State of Kentucky’s 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.

Microbiological	MCL	MCLG	Reporting Level	Concentration Detected	Date of Sample	Violation	Likely Source of Contamination
Total Coliform Bacteria (detection)	0	0	0	N/A	01/22/20 07/15/20 02/19/20 08/12/20 03/25/20 09/09/20 04/29/20 10/07/20 05/20/20 11/04/20 06/30/20 12/02/20	No	Naturally Present in the Environment.
Fecal coliform & E. coli (detection)	0	0	0	N/A	01/22/20 07/15/20 02/19/20 08/12/20 03/25/20 09/09/20 04/29/20 10/07/20 05/20/20 11/04/20 06/30/20 12/02/20	No	Human & animal fecal waste.

Disinfectants/Disinfection Byproducts & Precursors	MCL	MCLG	Reporting Level	Concentration Detected	Date of Sample	Violation	Likely Source of Contamination
¹ Chlorine (ppm)	MRDL = 4	MRDLG = 4	0	0.31 - 1.80	2020	No	Water additive used to control microbes.
Haloacetic Acids (HAA5) (ppb)	60	N/A	2	0	09/25/20	No	Byproduct of drinking water disinfection.
Total Trihalomethanes (TTHM) (ppb)	80	N/A	1	0	09/25/20	No	Byproduct of drinking water disinfection.

¹Chlorine residuals based upon data since Bluegrass Water UOC purchased the facility on 05/29/20.

Lead and Copper Contaminants	Action Level	A.L. Goal	90 th Percentile	Concentration Detected	Date of Samples	Violation	Likely Source of Contamination
Copper (ppm) Sites exceeding action level = 0	1.3	1.3	0	0	09/26/19	No	Corrosion of household plumbing systems; erosion of natural deposits.
Lead (ppb) Sites exceeding action level = 0	15	0	0	0	09/26/19	No	Corrosion of household plumbing systems; erosion of natural deposits.

Radioactive Contaminates	MCL	MCLG	Reporting Level	Concentration Detected	Date of Sample	Violation	Likely Source of Contamination
Alpha emitters (pCi/L)	15	0	0	2.8	12/12/17	No	Erosion of natural deposits.
Combined Radium 226 & 228 (pCi/L)	5	0	0	0.36	12/12/17	No	Erosion of natural deposits.
Uranium (ug/L)	30	0	0	0	12/12/17	No	Erosion of natural deposits.

Inorganic Contaminants	MCL	MCLG	Reporting Level	Concentration Detected	Date of Sample	Violation	Likely Source of Contamination
Antimony (ppb)	6	6	1	0	12/28/20	No	Discharge from petroleum refineries, fire retardants, ceramics, electronics & solder.
Arsenic (ppb)	10	0	1	0	12/28/20	No	Erosion of natural deposits, runoff from orchards, runoff from glass & electronics production wastes.
Asbestos (MFL)	7	7	0.102	0	09/21/11	No	Erosion of natural deposits; Decay of asbestos cement water mains.
Barium (ppm)	2	2	20	0	12/28/20	No	Erosion of natural deposits; discharge of drilling wastes & metal refineries.
Beryllium (ppb)	4	4	0.3	0	12/28/20	No	Discharge from metal refineries, coal-burning factories, and from electrical, aerospace, & defense industries.
Cadmium (ppb)	5	5	0	1	12/28/20	No	Erosion of natural deposits; corrosion of galvanized pipes, metal refineries; and runoff from waste batteries & paints.
Chromium (ppb)	100	100	6	0	12/28/20	No	Erosion of natural deposits; discharge from steel/pulp mills.
Cyanide (ppb)	200	200	10	0	12/28/20	No	Discharge from fertilizer, metal/steel, & plastic factories.
Fluoride (ppm)	4	4	500	0	12/28/20	No	Erosion of natural deposits; discharge from fertilizer/aluminum factories; water additive which promotes strong teeth
Mercury (ppb)	2	2	0.2	0	12/28/20	No	Erosion of natural deposits; discharge from refineries & factories; runoff from landfills & cropland.
Nitrate (ppm)	10	10	0	0.39	12/28/20	No	Erosion from natural deposits; runoff from fertilizer use; leaching from septic tanks/sewage.
Nitrite (ppm)	1	1	0	0	12/28/20	No	Erosion of natural deposits; runoff from fertilizer use; leaching from septic tanks/sewage.
Selenium (ppb)	50	50	5	0	12/28/20	No	Erosion of natural deposits; discharge from metal & petroleum refineries and mines.
Thallium (ppb)	2	0.5	0.7	0	12/28/20	No	Leaching from ore-processing sites; discharge from electronics, glass, & drug factories.

Synthetic Organic Contaminants (including Pesticides & Herbicides)	MCL	MCLG	Reporting Level	Concentration Detected	Date of Sample	Violation	Likely Source of Contamination
2,4-D (ppb)	70	70	0.1	0	12/12/17	No	Runoff from herbicide used on row crops.
2,4,5-TP (a.k.a. Silvex) (ppb)	50	50	0.1	0	12/12/17	No	Residue of banned herbicide.
Alachlor (a.k.a. LASSO) (ppb)	2	0	0.1	0	12/12/17	No	Runoff from herbicide used on row crops.
Aldicarb (ppb)	3	0	0.5	0	12/12/17		
Aldicarb sulfone (ppb)	2	0	0.7	0	12/12/17		
Aldicarb sulfoxide (ppb)	4	0	0.5	0	12/12/17		
Atrazine (ppb)	3	3	0.1	0	12/12/17	No	Runoff from herbicide used on row crops.
Benzo (a) pyrene (PAH) (ppt)	200	0	20000	0	12/12/17	No	Leaching from linings of water storage tanks & distribution lines.
Carbofuran (ppb)	40	40	0.9	0	12/12/17	No	Leaching of soil fumigant used on rice & alfalfa.
Chlordane (ppb)	2	0	0.1	0	12/12/17	No	Residue of banned termiticide.
Dalapon (ppb)	200	200	1	0	12/12/17	No	Runoff from herbicide used on rights of way.
Di (2-ethylhexyl) adipate (ppb)	400	400	0.6	0	12/12/17	No	Discharge from chemical factories.
Di (2-ethylhexyl) phthalate (ppb)	6	0	0.6	0	12/12/17	No	Discharge from rubber & chemical factories.
Dibromochloropropane (ppt)	200	0	10000	0	12/12/17	No	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, & orchards.
Dinoseb (ppb)	7	7	0.1	0	12/12/17	No	Runoff from herbicide used on soybeans & vegetables.
Diquat (ppb)	20	20	0.4	0	12/12/17	No	Runoff from herbicide use.
Endothall (ppb)	100	100	9	0	12/12/17	No	Runoff from herbicide use.
Endrin (ppb)	2	2	0.01	0	12/12/17	No	Residue of banned insecticide.
Ethylene dibromide (ppt)	50	0	10000	0	12/12/17	No	Discharge from petroleum refineries.
Glyphosate (ppb)	700	700	6	0	12/12/17	No	Runoff from herbicide use.
Heptachlor (ppt)	400	0	40000	0	12/12/17	No	Residue of banned termiticide.
Heptachlor epoxide (ppt)	200	0	20000	0	12/12/17	No	Breakdown of heptachlor.
Hexachlorobenzene (ppb)	1	0	0.1	0	12/12/17	No	Discharge from metal refineries & agricultural chemical factories.
Hexachlorocyclopentadiene (ppb)	50	50	0.1	0	12/12/17	No	Discharge from chemical factories.
Lindane (ppt)	200	200	20000	0	12/12/17	No	Runoff/leaching from insecticide use on cattle, lumber, & gardens.
Methoxychlor (ppb)	40	40	0.1	0	12/12/17	No	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, & livestock.
Oxamyl (a.k.a. Vydate) (ppb)	200	200	1	0	12/12/17	No	Runoff/leaching from insecticide used on apples, potatoes, & tomatoes.
PCBs [Polychlorinated biphenyls] (ppt)	500	0	220000	0	12/12/17	No	Runoff from landfills; discharge of waste chemicals.
Pentachlorophenol (ppb)	1	0	0.04	0	12/12/17	No	Discharge from wood preserving factories.
Picloram (ppb)	500	500	0.1	0	12/12/17	No	Herbicide runoff.
Simazine (ppb)	4	4	0.07	0	12/12/17	No	Herbicide runoff.
Toxaphene (ppb)	3	0	1	0	12/12/17	No	Runoff/leaching from insecticide used on cotton & cattle.

Volatile Organic Chemicals	MCL	MCLG	Reporting Level	Concentration Detected	Date of Sample	Violation	Likely Source of Contamination
Benzene (ppb)	5	0	0.5	0	12/12/17	No	Discharge from factories; leaching from gas storage tanks & landfills.
Carbon tetrachloride (ppb)	5	0	0.5	0	12/12/17	No	Discharge from chemical plants & other industrial activities.
Chlorobenzene (ppb)	100	100	0.5	0	12/12/17	No	Discharge from chemical & agricultural chemical factories.
o-Dichlorobenzene (ppb)	600	600	0.5	0	12/12/17	No	Discharge from industrial chemical factories.
p-Dichlorobenzene (ppb)	75	75	0.5	0	12/12/17	No	Discharge from industrial chemical factories.
1,2-Dichloroethane (ppb)	5	0	0.5	0	12/12/17	No	Discharge from industrial chemical factories.
1,1-Dichloroethylene (ppb)	7	7	0.5	0	12/12/17	No	Discharge from industrial chemical factories.
cis-1,2-Dichloroethylene (ppb)	70	70	0.5	0	12/12/17	No	Discharge from industrial chemical factories.
trans-1,2-Dichloroethylene (ppb)	100	100	0.5	0	12/12/17	No	Discharge from industrial chemical factories.
Dichloromethane (ppb)	5	0	0.5	0	12/12/17	No	Discharge from industrial chemical factories.
1,2-Dichloropropane (ppb)	5	0	0.5	0	12/12/17	No	Discharge from industrial chemical factories.
Ethylbenzene (ppb)	700	700	0.5	0	12/12/17	No	Discharge from petroleum refineries.
Styrene (ppb)	100	100	0.5	0	12/12/17	No	Discharge from rubber & plastic factories; leaching from landfills.
Tetrachloroethylene (ppb)	5	0	0.5	0	12/12/17	No	Discharge from factories & dry cleaners.
1,2,4-Trichlorobenzene (ppb)	70	70	0.5	0	12/12/17	No	Discharge from textile-finishing factories.
1,1,1-Trichloroethane (ppb)	200	200	0.5	0	12/12/17	No	Discharge from metal degreasing sites & other factories.
1,1,2-Trichloroethane (ppb)	5	3	0.5	0	12/12/17	No	Discharge from industrial chemical factories.
Trichloroethylene (ppb)	5	0	0.5	0	12/12/17	No	Discharge from metal degreasing sites & other factories.
Toluene (ppm)	1	1	0.005	0	12/12/17	No	Discharge from petroleum factories.
Vinyl Chloride (ppb)	2	0	0.5	0	12/12/17	No	Leaching from PVC piping; discharge from chemical factories.
Xylenes (ppm)	10	10	0.005	0	12/12/17	No	Discharge from petroleum or chemical factories.

Secondary Contaminants – do not have a direct impact on the health of consumers and are not required in the CCR. They are being included to provide additional information about the quality of the water.

Contaminant	Maximum Allowable Level	Report Level	Range of Detection	Date of Sample
Aluminum (ppm)	0.05 - 0.2	0 0.03	0 0	09/23/20 09/30/20
Chloride (ppm)	250	0 0	1.5 3	09/23/20 09/30/20
Color (color units [CU])	15 color units	5 0	0 5	09/23/20 09/30/20
Copper (ppm)	1.0	0.009 0.009	0 0	09/23/20 09/30/20
Corrosivity (LANG)	Noncorrosive	0 0	-3.51 -3.26	09/23/20 09/30/20
Fluoride (ppm)	2.0	0.5 0.5	0 0	09/23/20 09/30/20
Foaming Agents (ppm)	0.5	0.5 0.5	0 0	09/23/20 09/30/20
Iron (ppm)	0.3	0.3 0.3	0 0	09/23/20 09/30/20
Manganese (ppm)	0.05	0.03 0.03	0 0	09/23/20 09/30/20
Odor (threshold odor number [TON])	Threshold odor number	0 1.0	1 0	09/23/20 09/30/20
pH	6.5 - 8.5	0 0	6.01 6.01	09/23/20 09/30/20
Silver (ppm)	0.1	0.06 0.06	0 0	09/23/20 09/30/20
Sulfate (ppm)	250	0 0	1.1 1.3	09/23/20 09/30/20
Total Dissolved Solids (ppm)	500	0 10	38 0	09/23/20 09/30/20
Zinc (ppm)	5	0	0.0085 0.011	09/23/20 09/30/20

