



# Columbia/Adair Utilities

## Water Quality Report for 2017

PO Box 567 109 Grant Lane

Columbia, Kentucky 42728

KY0011016

Manager: **Lennon Stone**

Phone: **270-384-2181**

Meetings: Columbia/Adair Utilities Office

CCR Contact: **Bradley Miller**

Meeting Dates and Time: Second Thursday each month

6:00 PM

Phone: **270-465-2200**

Water - Essential for Life

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 report is to inform you about the excellent water and services that we deliver each day. Our constant goal is to provide you with safe and dependable supply of drinking water. We are committed to ensuring the highest quality water at the lowest prices as we meet the needs of our community. The source for your drinking water are the Green River Lake Adair County, which is a surface water source. The intake for the Green River lake source is located south of Ramp 1. The area around the water shed is mostly agricultural with very little residential density. The final source water assessment plans are complete. Copies of the plan are available at our office. The plan indicates that the source water has a low susceptibility rating to some contaminants caused by agricultural activities in the area. Public meetings and literature are being developed to address this issue. In an effort to keep your water costs at a minimum, report any water leaks immediately. We also purchase water from Campbellsville Water and Sewer System and Jamestown Municipal Water Works. Campbellsville's source water comes from the Green River Reservoir located in Southern Taylor County. Intake is located on Smith Ridge at the end of West Martin Road. When necessary able to use water on a short term emergency basis from the City Lake located on Lebanon Avenue across from the water treatment plant. Both Green River Reservoir and City Lake are surface water sources. Jamestown Municipal Water Works treats surface water withdrawn from Greasy Creek Cove of nearby Lake Cumberland.

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:

### Information About Lead:

**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.

**Level 1 Assessment** - 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.

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>.

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Kentucky Rural Water Association

**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.

**C/A = Columbia/Adair Utilities      C = Campbellsville Water and Sewer System      J = Jamestown Municipal Water Works**

	Allowable Levels	Source	Highest Single Measurement	Lowest Monthly %	Violation	Likely Source of Turbidity
Turbidity (NTU) TT	No more than 1 NTU*	C/A =	0.1	100%	No	Soil runoff
*Representative samples of filtered water	Less than 0.3 NTU in 95% monthly samples	C =	0.73	99%	No	
		J =	0.03	100%	No	

#### Regulated Contaminant Test Results

Contaminant [code] (units)	MCL	MCLG	Source	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
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#### Microbiological Contaminants

Total Coliform Bacteria # or % positive samples	TT	N/A	C =	2	N/A	2017	No	Naturally present in the environment
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#### Radioactive Contaminants

Alpha emitters [400] (pCi/L)	15	0	J =	-0.62	-0.62 to -0.62	Apr-13	No	Erosion of natural deposits
Combined radium (pCi/L)	5	0	J =	0.82	0.82 to 0.82	Apr-13	No	Erosion of natural deposits
Uranium (µg/L)	30	0	J =	0.012	0.012 to 0.012	Apr-13	No	Erosion of natural deposits

#### Inorganic Contaminants

Barium [1010] (ppm)	2	2	C/A = C = J =	0.02 0.01 0.021	0.02 to 0.02 0.01 to 0.01 0.021 to 0.021	Feb-17 Mar-17 Jan-17	No No No	Drilling wastes; metal refineries; erosion of natural deposits
Copper [1022] (ppm) sites exceeding action level = 0	AL = 1.3	1.3	C/A =	0.05 (90 <sup>th</sup> percentile)	0 to 0.23	Jun-17	No	Corrosion of household plumbing systems
Fluoride [1025] (ppm)	4	4	C/A = C = J =	0.70 0.08 0.98	0.7 to 0.7 0.8 to 0.8 0.98 to 0.98	Mar-17 Mar-17 Jan-17	No No No	Water additive which promotes strong teeth
Lead [1030] (ppb) sites exceeding action level = 0	AL = 15	0	C/A =	2 (90 <sup>th</sup> percentile)	0 to 3	Jun-17	No	Corrosion of household plumbing systems
Nitrate [1040] (ppm)	10	10	C/A = C = J =	1.3 0.7 0.38	1.3 to 1.3 0.7 to 0.7 0.38 to 0.38	Feb-17 May-17 Jan-17	No No No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

#### Disinfectants/Disinfection Byproducts and Precursors

Total Organic Carbon (ppm) (report level=lowest avg. range of monthly ratios)	TT*	N/A	C/A =	1.33 (lowest average)	1.05 to 1.72 (monthly ratios)	2017	No	Naturally present in environment.
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\*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.

Chlorine (ppm)	MRDL = 4	MRDLG = 4	C/A =	2.20 (highest average)	0.88 to 180	2017	No	Water additive used to control microbes.
HAA (ppb) (all sites) [Haloacetic acids]	60	N/A	C/A =	37 (system average)	14 to 42 (range of system sites)	2017	No	Byproduct of drinking water disinfection
HAA (ppb) [Haloacetic acids] (Individual Sites)	60	N/A	C/A =	44 (high site average)	14 to 42 (range of individual sites)	2017	No	Byproduct of drinking water disinfection
TTHM (ppb) (all sites) [total trihalomethanes]	80	N/A	C/A =	39 (system average)	11 to 77 (range of system sites)	2017	No	Byproduct of drinking water disinfection
TTHM (ppb) [total trihalomethanes] (Individual Sites)	80	N/A	C/A =	47.825 (high site average)	11 to 77 (range of individual sites)	2016	No	Byproduct of drinking water disinfection.

#### Other Contaminants

Cryptosporidium [oocysts/L]	0	TT (99% removal)	C/A =	0 (positive samples)	12 (no. of samples)	2017	No	Human and animal fecal waste
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Cryptosporidium. We are required to monitor the source of your drinking water for Cryptosporidium in order to determine whether treatment at the water treatment plant is sufficient to adequately remove Cryptosporidium from your drinking water.

## Violations Received in 2017:

Our water system violated a drinking water requirement in 2015. Even though it was not an emergency, as our customers, you have a right to know what happened and what we did to correct the situation.

\*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 07/01/2015 - 09/30/2015 we did not complete all monitoring or testing for Atrazine and therefore cannot be sure of the quality of your drinking water during that time.\*

There is nothing you need to do at this time.

In the future, measures will be taken to ensure all sampling for drinking water monitoring and testing are being taken and submitted to meet the requirements.

For more information, please contact Lennon Stone at (270) 384-2181 or PO Box 567 Columbia, KY 42728

\*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.\*

## Campbellsville Water and Sewer System:

### Information concerning total coliform positive samples

Level 1 Assessment: 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: 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.

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.

During the past year we were required to conduct One Level 1 assessment. One Level 1 assessment was completed. In addition, we were required to take one corrective actions and we completed one of these actions.

During the past year One Level 2 assessment was required to be completed for our water system. One Level 2 assessment was completed. In addition, we were required to take Two corrective actions and we completed Two of these actions.

### 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 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 May 2017 we did not complete all monitoring or testing for distribution chlorine residuals and therefore cannot be sure of the quality of your drinking water during that time.\*

There is nothing you need to do at this time.

We are required to collect at least one(1) distribution chlorine per day. In May, 2017 the chlorine residuals were not reported to the Kentucky Division of Water as required. Operators have been reminded of the requirements and to make sure all data is reported on time.

This occurred during a time when a major leak drained our distribution system. Our attention was diverted to finding and repairing the leak. Our system has four automated chlorine analyzers in the system that had recorded data that morning before the system drained completely. Data from those were submitted at a later date to the Division of Water and our system returned to compliance.

\*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.\*

## Jamestown Municipal Water Works

### Violations

Violation Number	Begin Date	End Date	Explanation
2017-9951427 PN Rule Linked	2/27/2017		Mandatory language not included in a public notice.
2017-9951428 HAA MCL Exceeded	1/1/2017	3/31/2017	We exceeded the HAA MCL of 0.060mg/L. HAAs at one of our system's sites averaged 0.062mg/L.
2017-9951429 HAA MCL Exceeded	4/1/2017	6/30/2017	We exceeded the HAA MCL of 0.060mg/L. HAAs at one of our system's sites averaged 0.061mg/L.

We received violation 2017-9951427, linked to violation 2016-9951422, because the public notification language in our 2015 Consumer Confidence Report (CCR) did not contain the mandatory wording. Although the 2015 CCR contained language informing of the violation, and also mentioned our failure to submit the OEL, the mandatory statements were not included. Our 2016 CCR contained a corrected public notice that included mandatory language for violation 2016-9951422. Even though this violation explanation was included in our 2016 CCR the violation was determined in February 2017 and we did not receive the notice of violation until late March 2017, therefore, we are including it in our 2017 CCR as well. In the future, if public notices are required, we will include all mandatory language.

### Violation 2016-9951422

\*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 10/1/2015 -12/31/2015, we did not complete all monitoring by failing to report or correctly report testing for Haloacetic Acids and Trihalomethanes (OEL). Therefore, we could not verify the quality of your drinking water to the primacy agency during that time.\*

**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. For the Stage 2 DBPR requirements we monitor for trihalomethanes (THM) and haloacetic acids (HAA). The standard for THM is 0.080 mg/L and the standard for HAA is 0.060 mg/L.**

*A calculation of analytical results is part of an Operational Evaluation Level Report (OEL) to determine the potential of exceeding these standards. The operational evaluation requirements are intended as an indicator of operational performance and to allow systems to identify proactive steps to remain in compliance. Failure to submit an evaluation report to the State in the required time frame is a violation and requires a public notification. We failed to submit an OEL for the period 10/1/2015 – 12/31/2015. There is nothing you need to do. There are no health effects for failing to submit required reports.*

For more information, please contact Dale Anderson at 270-343-4135 or P.O. Box 587, Jamestown, KY 42629.

\*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.\*

During the first and second quarters of 2017 we exceeded the MCL for HAA. We made changes regarding our distribution system flushing program and have since come back into compliance with HAA MCLs. Public notices were issued for each quarter we were out of compliance.

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

*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.*