



Water - Essential for Life

# Breathitt County Water District Water Quality Report for year 2015

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Jackson, KY 41339

KY0131012

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Meetings: 1137 Main Street, Suite 305, Old Court House Building

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Meeting Dates and Time: 3rd Wednesday each month 10:00 AM

Phone: 606-666-3800 X250

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 Jackson Municipal Water Works and Campton Water System both of which treats surface water from the North Fork of the Kentucky River and Campton Lake. An analysis of the susceptibility to contamination of each source is rated as moderate. Potential sources and pathways of contamination come from transportation corridors, chemical & fuel storage, wastewater discharges mining and erosion. Under certain circumstances these activities could release contaminants and thereby pose potential risks to your drinking water. These activities, and how they are conducted, are of interest to the entire community because they potentially affect your health and the cost of treating your water. Activities immediately upstream of your water supply intake are of special concern because they provide little response time to the water system operators. The complete source water assessment is available for review at the KY River and Big Sandy Area Development District's located in Hazard and Prestonsburg, respectively.

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.

**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.

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>.

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.

A= Jackson Municipal Water Works B= Campton Water System						
	Allowable Levels	Source	Highest Single Measurement	Lowest Monthly %	Violation	Likely Source of Turbidity
Turbidity (NTU) TT	No more than 1 NTU*	A=	0.09	100	No	Soil runoff
* Representative samples of filtered water	Less than 0.3 NTU in 95% monthly samples	B=	0.04	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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**Radioactive Contaminants**

Beta photon emitters (pCi/L)	50	0	A=	5.6	0 to 5.6	2010	No	Decay of natural and man-made deposits
Alpha emitters [4000] (pCi/L)	15	0	A=	0.18	0 to 0.18	2010	No	Erosion of natural deposits
Combined radium (pCi/L)	5	0	A=	0.2	0 to 0.2	2010	No	Erosion of natural deposits
Uranium (µg/L)	30	0	A=	0.35	0 to 0.35	2010	No	Erosion of natural deposits

**Inorganic Contaminants**

Barium [1010] (ppm)	2	2	A=	0.03	0.03 to 0.03	2015	No	Drilling wastes; metal refineries; erosion of natural deposits
			B=	0.014	0.014 to 0.014			
Fluoride [1025] (ppm)	4	4	A=	0.9	0.9 to 0.9	2015	No	Water additive which promotes strong teeth
			B=	0.57	0.57 to 0.57			
Nitrate [1040] (ppm)	10	10	A=	0.22	0.22 to 0.22	2015	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits
			B=	0.16	0.16 to 0.16			

**Disinfection Byproduct Precursor**

Total Organic Carbon (ppm) (report level=lowest avg. range of monthly ratios)	TT*	N/A	A=	1.00	1 to 1	2015	No	Naturally present in environment.
			B=	2.17	0.28 to 6.2			

\*Monthly ratio is the % TOC removal achieved to the % TOC removal required. Annual average must be 1.00 or greater for compliance.

**Breathitt County Water District Sample Results**

**Inorganic Contaminants**

Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3		0.034 (90 <sup>th</sup> percentile)	0.005 to 0.55	2014	No	Corrosion of household plumbing systems
Lead [1030] (ppb) sites exceeding action level 0	AL = 15	0		5 (90 <sup>th</sup> percentile)	1 to 11	2014	No	Corrosion of household plumbing systems

**Disinfectants/Disinfection Byproducts**

Chlorine (ppm)	MRDL = 4	MRDLG = 4		1.44 (highest average)	0.7 to 1.97	2015	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A		48 (high site average)	2.2 to 69 (range of individual sites)	2015	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A		56 (high site average)	6.8 to 104.8 (range of individual sites)	2015	No	Byproduct of drinking water disinfection.

Maximum Contaminant Levels (MCL's) are set at very stringent levels. 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.

**Violation: Public Notification Rule**

We received a violation for failing to perform public notification in accordance with 401 KAR 8:070. We included a public notice for violation 2015-615 Disinfection ByProducts 3rd QTR 2014 as part of the 2014 Consumer Confidence Report which was published in the newspaper. The newspaper in this case does not count as direct delivery unless the newspaper is free and delivered to all customers. We have reviewed the regulations and understand that direct deliver is by mail or hand delivery. There are no public health effects associated with this violation.

**THIS WATER QUALITY REPORT WILL NOT BE MAILED UNLESS REQUESTED. ADDITIONAL COPIES ARE AVAILABLE AT THE WATER DISTRICT OFFICE.**