

**Breathitt County Water District  
2019 Water Quality Report**

Manager: Estill McIntosh

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Meetings: 1137 Main Street, Suite 305 Jackson, Ky / 3rd Wednesday, Monthly at 10:00 AM

PWSID: KY0131012

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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).

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, ( $\mu\text{g/L}$ ). 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.

Picouries 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.

Spanish (Español) Este informe contiene información muy importante sobre la calidad de su agua beber. Tradúzcalo o hable con alguien que lo entienda bien.

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.

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.

**Jackson Municipal Water Works = J ; Campton Water = C**

**Regulated Contaminant Test Results**

| Contaminant [code] (units)                          | MCL | MCLG | Source   | Report Level  | Range of Detection             | Date of Sample   | Violation | Likely Source of Contamination   |
|---|-----|------|----------|---------------|--------------------------------|------------------|-----------|--|
| Barium [1010] (ppm)                                 | 2   | 2    | J-<br>C- | 0.04<br>0.013 | 0.04 to 0.04<br>0.013 to 0.013 | Aug-19<br>Apr-19 | No<br>No  | Drilling wastes, metal refineries, erosion of natural deposits                     |
| Fluoride [1025] (ppm)                               | 4   | 4    | J-<br>C- | 0.58<br>1.01  | 0.58 to 0.58<br>1.01 to 1.01   | Aug-19<br>Apr-19 | No<br>No  | Water additive which promotes strong teeth   |
| Nickel (ppb) (US EPA remanded MCL in February 1995) | N/A | N/A  | C-       | 1             | 1 to 1                         | Apr-19           | No        | N/A  |
| Nitrate [1040] (ppm)                                | 10  | 10   | C-       | 0.023         | 0.023 to 0.023                 | Mar-19           | No        | Fertilizer runoff, leaching from septic tanks, sewage, erosion of natural deposits |

**Disinfection Byproducts Precursor**

|  |     |     |          |              |                          |              |          |                                  |
|--|-----|-----|----------|--------------|--------------------------|--------------|----------|----------------------------------|
| Total Organic Carbon (ppm) (report level - lowest avg range of monthly ratios) | TT* | N/A | J-<br>C- | 1.15<br>3.71 | 1.00 to 4.30<br>1 to 8.2 | 2019<br>2019 | No<br>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

**Source Water Contaminants (untreated water)**

|                              |   |               |    |                    |                  |      |                |                              |
|------------------------------|---|---------------|----|--------------------|------------------|------|----------------|------------------------------|
| Cryptosporidium [ooocysts/L] | 0 | TT            | C- | 2                  | 9                | 2019 | See Note Below | Human and animal fecal waste |
|                              |   | (99% removal) |    | (positive samples) | (no. of samples) |      |                |                              |

Cryptosporidium is a microbial pathogen found in surface water. Cryptosporidium was detected in 2 samples of 9 collected from the raw water source for our water system. It was not detected in the finished water. Current test methods do not enable us to determine if the organisms are dead or if they are capable of causing disease. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Cryptosporidium must be ingested to cause disease and it may be spread through means other than drinking water.

**Other Constituents**

| Turbidity (NTU) TT  | Allowable Levels  | Source   | Highest Single Measurement | Lowest Monthly % | Violation | Likely Source of Turbidity |
|---|---|----------|----------------------------|------------------|-----------|----------------------------|
| * Representative samples  |   |          |                            |                  |           |                            |
| Turbidity is a measure of the clarity of the water and not a contaminant. | No more than 1 NTU*<br>Less than 0.3 NTU in 95% monthly samples | J-<br>C- | 0.09<br>0.052              | 100<br>100       | No<br>No  | Soil runoff                |

**Breathitt County Water District = B**

**Regulated Contaminant Test Results**

**Disinfectants/Disinfection Byproducts**

|  |          |           |    |                        |  |      |    |  |
|--|----------|-----------|----|------------------------|--|------|----|--|
| Chlorine (ppm)                               | MRDL = 4 | MRDLG = 4 | B- | 1.56 (highest average) | 0.7 to 2.14                            | 2019 | No | Water additive used to control microbes  |
| HAA (ppb) (Stage 2) [Haloacetic acids]       | 60       | N/A       | B- | 48 (average)           | 11 to 82 (range of individual sites)   | 2019 | No | Byproduct of drinking water disinfection |
| TTHM (ppb) (Stage 2) [total trihalomethanes] | 80       | N/A       | B- | 48 (average)           | 2.3 to 120 (range of individual sites) | 2019 | No | Byproduct of drinking water disinfection |

**Household Plumbing Contaminants**

|  |        |     |   |                                     |          |        |    |   |
|--|--------|-----|---|-------------------------------------|----------|--------|----|---|
| Copper [1022] (ppm) sites exceeding action level 0 | AL 1.3 | 1.3 | B | 0.072 (90 <sup>th</sup> percentile) | 0 to 0.2 | Jul-17 | No | Corrosion of household plumbing systems |
|--|--------|-----|---|-------------------------------------|----------|--------|----|---|

| Violation #: | Contaminant                                | Compliance Period       | Explanation  |
|--------------|--|-------------------------|--|
| 2020-521     | LEVEL 1 ASSESS, TC<br>POS RT NO RPT (RTCR) | 09/23/2019 - 11/21/2019 | Failure to conduct and submit a Level 1 assessment within 30 days. We failed to take the 3 required repeat samples after a positive routine Bac-T sample on 9/23/2019. This triggered the Level 1 assessment. We were unaware of the Level 1 assessment requirement and have since correct the mistake. Repeat samples were taken and indicated no contamination in your drinking water. |
| 2020-520     | LEVEL 1 ASSESS, TC<br>POS RT NO RPT (RTCR) | 08/25/2019 - 11/13/2019 | Failure to conduct and submit a Level 1 assessment within 30 days. We failed to take the 3 required repeat samples after a positive routine Bac-T sample on 8/25/2019. This triggered the Level 1 assessment. We were unaware of the Level 1 assessment requirement and have since correct the mistake. Repeat samples were taken and indicated no contamination in your drinking water. |

This report will not be mailed to individual customers. If you would like to receive a copy or have any questions regarding this report, please contact Estill McIntosh at (606) - 666-3800 or at our office located at 1137 Main Street, Suite 305, Jackson, Ky 41339.

**Notice By: Breathitt County Water District – System ID #: KY0131012**

*Violation #: 2020 – 519*

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 9/01/2019 – 9/30/2019, we did not complete all monitoring or testing for E. coli and therefore cannot be sure of the quality of your drinking water during that time.\**

Upon a positive routine Total Coliform sample, it is required for a lab to test for E. coli. This speciation test was not performed. We believe this was an oversight on the lab's behalf. However, we did not code our samples properly as required when a positive Total Coliform sample is received. We assumed the samples were to be coded as "replacement" samples when, in fact, they were to be coded as "Repeat" samples. This confusion is what ultimately led to the Breathitt County Water District to be out of compliance and receive this monitoring and reporting violation.

**What should I do?**

There is nothing you need to do at this time. If a situation arises where the water is no longer safe to drink, you will be notified within 24 hours.

**What is being done?**

The samples were eventually tested and coded properly and we have since been returned to compliance. Now that we understand the proper protocol for these types of situations, we can assure you that these types of mistakes will not become an issue in the future.

For more information, please contact Estill Macintosh at (606) 666-3800, extension 250 or 1137 Main Street, Suite 305, Jackson, Kentucky 41339

*\*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*