

Jackson County Water Association

2017 Quality Water Report

PWSID # KY 0550209

This report is to inform you about the excellent water and services that we deliver each day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We are committed to ensuring that the quality of your water remains at the highest level and the price at the lowest level as we meet the needs of our community.

Our source is Beulah Lake, a surface water source located just off US 421, on Beulah Lake Road at Tyner, Kentucky.

The Jackson County Water Association routinely monitors for contaminants in your drinking water according to federal and state regulations. The table enclosed within this report shows the results of our monitoring for the period of January 1, 2017, through December 31, 2017.

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 can pick up substances resulting from the presence of animals or human activity. Contaminants that may be present in source water include. Microbial contaminants, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife. Inorganic contaminants, such as salts and metals, that may be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharge, oil and gas production, mining, or farming. Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses. Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and may also come from gas stations, urban stormwater runoff, and septic systems. Radioactive contaminants, which may be naturally-occurring or be the result of oil and gas production and mining activities. To ensure that tap water is safe to drink, U.S. EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. U.S. FDA regulations establish limits for contaminants in bottled water that shall provide the same protection for public health.

The final Source Water Assessment for this system has been completed and is contained in the Jackson County water supply plan. A summary of the

system's susceptibility to potential sources of contamination is:

Activities and land uses upstream of Jackson County Water Association's source of water can pose potential risks to your drinking water. Under certain circumstances contaminants could be released that would pose challenges to water treatment or even get into 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. An analysis of the susceptibility of the Jackson County Water Association water supply to contamination indicates that this susceptibility is high. The predominant land cover is forest; this land cover could be subject to logging which may result in soil erosion if Best Management Practices (BMPs) are not carefully applied. The Management Recommendations for land coverage are: (1) Monitor to ensure compliance with Forestry Conservation Act; and (2) Require BMP (Best Management Practices) implementation per the Forest Landowners Handbook. Agriculture: (1) Monitor annually to ensure compliance with Agriculture Water Quality Act (AWQA); (2) Encourage implementation of voluntary Best Management Practices (BMPs) above the minimum required by the AWQA. BMP manuals for specific types of operations are available; (3) Monitor annually to ensure implementation of Nutrient Management Plans (NMPs); (4) Encourage development and implementation of Resource Management Systems (RMS) on agricultural operations per USDS-Natural Resource Conservation Service (NRCS) specifications; and (5) No storage or use of pesticides.

The plan is available for inspection at the Jackson County Water Association office located in Tyner, Kentucky and at the Cumberland Valley Area Development District located in London, Kentucky.

If you have questions about our water system you can contact John Powell at 606-287-7000. You are also invited to attend the regular board meetings held the second Monday of every month, beginning at 7:00 P.M., at the Jackson County Water Association Office, at Tyner, Kentucky.

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). Drinking water, including bottled water, may be reasonably 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 can be obtained by calling the EPA Safe Drinking Water Hotline (800-426-4791).

DEFINITIONS:

This report may contain many terms and abbreviations you might not be familiar with. To help you better understand these terms, we are providing the following definitions:

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.

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 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.

Not Applicable (N/A) – does not apply.

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 which a water system must follow.

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. Jackson County Water Association 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 Safe Drinking water Hotline or at <http://www.epa.gov/safewater/lead>.

Below Detection Levels (BDL) – laboratory analysis indicates that the contaminant is not present.

Treatment Technique (TT) – a required process intended to reduce the level of a contaminant in drinking water.

Nephelometric Turbidity Unit (NTU) – a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

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

Picocuries per liter (pCi/L) a measure of 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 micrometer.

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.

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

Regulated Contaminant Test Results

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

Arsenic [1005] (ppb)	10	N/A	0.2	0.2 to 0.2	Feb-17	No	Natural erosion; runoff from orchards or glass and electronics production wastes
Barium [1010] (ppm)	2	2	0.01	0.01 to 0.01	Feb-17	No	Drilling wastes; metal refineries; erosion of natural deposits
Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	0.0677 (90 th percentile)	0.001 to 0.135	Jul-15	No	Corrosion of household plumbing systems
Fluoride [1025] (ppm)	4	4	0.50	0.5 to 0.5	Feb-17	No	Water additive which promotes strong teeth
Lead [1030] (ppb) sites exceeding action level 0	AL = 15	0	0 (90 th percentile)	0 to 8	Jul-15	No	Corrosion of household plumbing systems
Nitrate [1040] (ppm)	10	10	0.9	0 to 0.9	Feb-17	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits
Thallium [1085] (ppb)	2	0.5	0.5	0.5 to 0.5	Feb-17	No	Leaching from ore-processing sites; discharge from glass, electronics, and drug factories

Disinfectants/Disinfection Byproducts and Precursors

Total Organic Carbon (ppm) (measured as ppm, but reported as a ratio)	TT*	N/A	1.44 (lowest average)	1.00 to 2.19 (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 must be 1.00 or greater for compliance.

Chlorine (ppm)	MRDL = 4	MRDLG = 4	1.49 (highest average)	1.02 to 1.99	2017	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	43 (high site average)	18 to 49 (range of individual sites)	2017	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	59 (high site average)	23 to 62 (range of individual sites)	2017	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: Consumer Confidence Rule (2017-9951919)

We received a violation for failing to comply with the e-delivery requirements when distributing the 2015 Consumer Confidence Report (CCR). The CCR was posted on our website; however the web link we provided was not "one click." This means that the web link should take the customer directly to the CCR; ours required extra steps. Additionally, the CCR was missing notification language which should have stated that a hard copy of the report could be obtained upon request. We have reviewed the e-delivery guidance and made correction in this years CCR. There are no public health concerns due to this violation.

This report will not be mailed unless requested. Copies are available at our office. Please contact our office if you would like to receive a copy by mail.