

**Brandenburg Water Works**  
**2024 Water Quality Report**  
**January 1st - December 31st**  
**Manager: TJ Hughes**

**Water System ID:** KY0820041

**Phone:** (270) 422-4981

**Contact:** TJ Hughes

**Meeting Address:** Brandenburg City Hall

**Meeting Time:** 2nd Monday, Monthly at 7:00 PM

**Address:** PO Box 305 - 737 High St.  
Brandenburg, KY 40108

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). 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 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).

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 water system is responsible for providing high quality drinking water and removing lead pipes, but cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute accredited certifier to reduce lead in drinking water. If you are concerned about lead in your water and wish to have your water tested, contact your local water system. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at <http://www.epa.gov/safewater/lead>.

We are required to annually provide information about the health risks from lead in drinking water to schools and child care facilities. All elementary schools, secondary schools, and child care facilities are eligible to be sampled for lead by our water system. Contact our office for scheduling or to learn results of previous sampling.

**Service Line Inventory Information:**

To address lead in drinking water, EPA requires that all community water systems develop and maintain an inventory of service line materials. We have completed a service line inventory (SLI) and it is available for review at our office.

**Lead Sample Results Availability Information:**

We are required to periodically sample water from customer taps to determine lead and copper levels. EPA sets the lead action level at 0.015 mg/L (15 ppb). For a water system to be in compliance, at least 90% of tap water samples must have lead levels below this limit. This report contains the 90th percentile and range of our most recent sampling. The individual results for each location sampled can be reviewed at our office.

**Source Information:**

The source of your drinking water is three wells near the Ohio River in Flippin Run Park. These wells are classified as ground water. The Kentucky Division of Water determined this status. Our well-head protection plan and source water assessment have been completed, and copies are available. There are a total of three potential sources of contamination within the well-head protection area, with the following susceptibility rankings: 2 high, 1 medium and 0 low. Sources of high potential impact include above ground storage tanks and agricultural land use. Sources of moderate potential impact include agricultural land use. This is a summary of the susceptibility analysis. The complete Susceptibility Analysis Report and the Source Water Protection Plan are available at: Lincoln Trail Development District 613 College Street, Elizabethtown, Kentucky 42701, (270) 769-2393, Kentucky Division of Water 300 Sower Boulevard, Frankfort Kentucky 40601, (502) 564-3410, or by contacting Brandenburg City Hall at (270) 422-4981.

We are only required to test for some contaminants periodically, so the results listed in this report may not be from the previous year. Only detected contaminants are included in this report. For a list of all contaminants we test for please contact us. Copies of this report are available upon request by contacting our office.

**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, (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.

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

| Regulated Contaminant Test Results                                 |             |              | Brandenburg Water Works                |                       |    |                                   |           |                                   |                                                                                    |
|--------------------------------------------------------------------|-------------|--------------|----------------------------------------|-----------------------|----|-----------------------------------|-----------|-----------------------------------|------------------------------------------------------------------------------------|
| Contaminant<br>[code] (units)                                      | MCL         | MCLG         | Report<br>Level                        | Range<br>of Detection |    | Date of<br>Sample                 | Violation | Likely Source of<br>Contamination |                                                                                    |
| Inorganic Contaminants                                             |             |              |                                        |                       |    |                                   |           |                                   |                                                                                    |
| Barium<br>[1010] (ppm)                                             | 2           | 2            | 0.028                                  | 0.028                 | to | 0.028                             | Apr-23    | No                                | Drilling wastes; metal refineries; erosion of natural deposits                     |
| Fluoride<br>[1025] (ppm)                                           | 4           | 4            | 1.03                                   | 1.03                  | to | 1.03                              | Apr-23    | No                                | Water additive which promotes strong teeth                                         |
| Nitrate<br>[1040] (ppm)                                            | 10          | 10           | 0.02                                   | 0.02                  | to | 0.02                              | Feb-24    | No                                | Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits |
| Disinfectants/Disinfection Byproducts and Precursors               |             |              |                                        |                       |    |                                   |           |                                   |                                                                                    |
| Chlorine<br>(ppm)                                                  | MRDL<br>= 4 | MRDLG<br>= 4 | 1.08<br>(highest average)              | 0.99                  | to | 1.16                              | 2024      | No                                | Water additive used to control microbes.                                           |
| TTHM (ppb) (Stage 2)<br>[total trihalomethanes]<br>(Annual Sample) | 80          | N/A          | 11<br>(high site)                      | 11                    | to | 11<br>(range of individual sites) | 2024      | No                                | Byproduct of drinking water disinfection.                                          |
| Household Plumbing Contaminants                                    |             |              |                                        |                       |    |                                   |           |                                   |                                                                                    |
| Copper (ppm) Round 1<br>sites exceeding action level<br>0          | AL =<br>1.3 | 1.3          | 0.531<br>(90 <sup>th</sup> percentile) | 0.028                 | to | 0.748                             | Sep-23    | No                                | Corrosion of household plumbing systems                                            |
| Lead (ppb) Round 1<br>sites exceeding action level<br>0            | AL =<br>15  | 0            | 4<br>(90 <sup>th</sup> percentile)     | 0                     | to | 5                                 | Sep-23    | No                                | Corrosion of household plumbing systems                                            |
|                                                                    |             |              | Average                                | Range of Detection    |    |                                   |           |                                   |                                                                                    |
| Fluoride (added for dental health)                                 |             |              | 0.9                                    | 0.7 to 1.19           |    |                                   |           |                                   |                                                                                    |
| Sodium (EPA guidance level = 20 mg/L)                              |             |              | 26.9                                   | 26.9 to 26.9          |    |                                   |           |                                   |                                                                                    |

Secondary contaminants do not have a direct impact on the health of consumers. They are being included to provide additional information about the quality of the water.

| Secondary Contaminant  | Maximum Allowable<br>Level | Report<br>Level | Range<br>of Detection |          | Date of<br>Sample |
|------------------------|----------------------------|-----------------|-----------------------|----------|-------------------|
| Chloride               | 250 mg/l                   | 31              | 31                    | to 31    | Feb-24            |
| Color                  | 15 color units             | 1               | 1                     | to 1     | Feb-24            |
| Copper                 | 1.0 mg/l                   | 0.061           | 0.061                 | to 0.061 | Feb-24            |
| Corrosivity            | Noncorrosive               | -0.1            | -0.1                  | to -0.1  | Feb-24            |
| Manganese              | 0.05 mg/l                  | 0.001           | 0.001                 | to 0.001 | Feb-24            |
| pH                     | 6.5 to 8.5                 | 7.47            | 7.47                  | to 7.47  | Feb-24            |
| Sulfate                | 250 mg/l                   | 29.7            | 29.7                  | to 29.7  | Feb-24            |
| Total Dissolved Solids | 500 mg/l                   | 247             | 247                   | to 247   | Feb-24            |

VIOLATION #: 2024-9948418 WATER WITHDRAWAL EXCEEDANCE

In 2023, the Brandenburg Water Works exceeded the permitted water withdrawal limits. As some of you may remember, this was the year Brandenburg experienced a major main line break that drained the entire system. This, in conjunction with an increase in customer demand, has led to an exceedance. As a remedial measure, we have been working on revising our withdrawal permit with the DOW to increase withdrawal limits.