2017 Water Quality Report

Campbellsville Water and Sewer System

KY1090060

Manager: Tony Young

Contact: Darrell Pierce

Phone: 270-789-3133

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110 South Columbia Ave., Ste. A

Campbellsville, KY 42718

Meetings: Civic Center - 205 N. Columbia Avenue

First Monday (Tuesday if Holiday) of each month

Our source water comes from the Green River Reservoir located in Southern Taylor County. Our intake is located on Smith Ridge at the end of West Martin Road. When necessary we are also 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. This is a summary of the system's susceptibility to contamination: which is a part of the completed Source Water Plan (SWAP). The completed plan is available for inspection at our office located at 110 South Columbia Avenue. An analysis of the overall susceptibility to contamination of the water supply indicated that this susceptibility is generally low. Within the critical protection area of the Green River Reservoir intake there are four potential sources of contamination that are ranked high, one ranked medium and none ranked low. Areas of concern include row cropping, roads and a variety of forestland, hay fields and pasture land that may represent a long-term threat to pollution susceptibility of this drinking water source. Within the critical protection area of the City Reservoir intake there are fifteen potential sources of contamination that are ranked high, ten ranked medium and none ranked low. Areas of concern include bridges and culverts, row crops, underground storage tanks, KPDES permitted discharges and waste generators or transporters. The location of Green River Reservoir water intake and remote area of the watershed make the routine non-point contaminant sources of low concern. The City Reservoir intake is more susceptible to short term hazards due to limited water flow and numerous contaminant sources. However, water system impact is limited due to the secondary withdrawal nature of this location.

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 (1-800-426-4791) 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, (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.

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<br>Levels    |                    | Highest Single<br>Measurement |                             |              | Lowest                                 | Violation      | Likely Source of Turbidity           |  |  |
|-------------------------|------------------------|--------------------|-------------------------------|-----------------------------|--------------|--|----------------|--------------------------------------|--|--|
|                         |                        |                    |                               |                             |              | Monthly %                              |                |                                      |  |  |
| Turbidity (NTU          | No more than           | o more than 1 NTU* |                               |                             |              |  |                |                                      |  |  |
| * Representative s      | Less than 0.3 NTU in   |                    | 0.73                          |                             | 99           | No                                     | Soil runoff    |                                      |  |  |
| of filtered water       | 95% of monthly samples |                    |                               |                             |              |  |                |                                      |  |  |
| Regulated Co            | ntaminant '            | Test Results       |                               |                             |              |  |                |                                      |  |  |
| Contaminant             |                        |                    | Report                        |                             | Range        |  | Date of        | Violation                            | Likely Source of   |  |
| [code] (units)          | MCL                    | MCLG               | Level                         |                             | of Detecti   | on                                     | Sample         |                                      | Contamination  |  |
| Microbiologic           | al Contami             | nants              |                               |                             |              |  |                |                                      |  |  |
| Total Coliform Ba       | TT                     | N/A                | 2                             | 2 N/A                       |              | 2017                                   | No             | Naturally present in the environment |  |  |
| # or % positive samples |                        |                    |                               |                             |              | 140 Transacty prosent in the chynolini |                |                                      |  |  |
| Inorganic Cor           | ntaminants             |                    |                               |                             |              |  |                |                                      |  |  |
| Barium                  |                        |                    |                               |                             |              |  |                |                                      | Drilling westers matel refineries: arosio                      |  |
| [1010] (ppm)            | 2                      | 2                  | 0.01                          | 0.01                        | to           | 10.0                                   | Mar-17         | No                                   | Drilling wastes; metal refineries; erosion of natural deposits |  |
| Copper [1022] (pp       | AL=                    |                    | 0.11                          |                             |              |  |                |                                      | Compiler Characteristics                                       |  |
| sites exceeding ac      | 1.3                    | 1.3                | (90 <sup>in</sup>             | 0                           | to           | 1.46                                   | 8-9/2017       | No                                   | Corrosion of household plumbing                                |  |
| I                       |                        | ·                  | percentile)                   |                             |              |  |                |                                      | systems  |  |
| Fluoride                |                        |                    |                               |                             |              |  |                |                                      | Water additive which promotes strong                           |  |
| [1025] (ppm)            | 4                      | 4                  | 0.80                          | 0.8                         | to           | 0.8                                    | Mar-17         | No                                   | teeth  |  |
| Lead [1030] (ppb)       | AL=                    |                    | 4                             |                             |              |  |                |                                      | Commercian of household alumbing                               |  |
| sites exceeding ac      | 15                     | 0                  | (90 <sup>u</sup>              | 0                           | to           | 64                                     | 8-9/2017       | No                                   | Corrosion of household plumbing systems                        |  |
| 2                       |                        |                    | percentile)                   |                             |              |  |                |                                      | isystems   |  |
| Nitrate                 |                        |                    |                               |                             |              |  |                |                                      | Fertilizer runoff; leaching from septic                        |  |
| [1040] (ppm)            | 10                     | 10                 | 0.7                           | 0.7                         | to           | 0.7                                    | May-17         | No                                   | tanks, sewage; erosion of natural deposits                     |  |
| Disinfectants/          |                        | ı Byproduct        | s and Precu                   | rsors                       |              |  |                |                                      |  |  |
| Total Organic Car       |                        |                    | 1.14                          |                             |              |  |                |                                      |  |  |
| (measured as ppm        | TT*                    | N/A                | (lowest                       | 0.68                        | to           | 1.59                                   | 2017           | No                                   | Naturally present in environment.                              |  |
| reported as a ratio     |                        |                    | average)                      |                             | (monthly ra  |  |                |                                      |  |  |
| *Monthly ratio is       | the % TOC ren          | noval achieved     | o the % TOC re                | moval requir                | ed. Annual   | average must be                        | 1.00 or greate | r for complian                       | ce.  |  |
| Chlorine                | MRDL                   | MRDLG              | 1.62                          |                             |              |  |                |                                      |  |  |
| (ppm)                   | = 4                    | = 4                | (highest                      | 0.43                        | to           | 2.2                                    | 2017           | No                                   | Water additive used to control microbes                        |  |
|                         |                        |                    | average)                      |                             |              |  |                |                                      |  |  |
| Chlorite                | l                      | 0.8                | 0.00                          | 0                           | to           | 0                                      |                |                                      | Byproduct of drinking water                                    |  |
| (ppm)                   |                        |                    | (average)                     |                             |              |  |                |                                      | disinfection.  |  |
| HAA (ppb) (Sta          |                        |                    | 56                            |                             |              |  |                |                                      |  |  |
| [Haloacetic acids]      | 60                     | N/A                | (high site                    | 23                          | to           | 63                                     | 2017           | No                                   | Byproduct of drinking water disinfection                       |  |
|                         |                        |                    | average)                      | (rang                       | e of individ | lual sites)                            |                |                                      |  |  |
| TTHM (ppb) (Stage 2)    |                        | 59                 |                               |                             |              |  |                | Daniel de la Calcialia               |  |  |
| [total trihalometha     | 80                     | N/A                | (high site                    | 18                          | to           | 56.4                                   | 2017           | No                                   | Byproduct of drinking water disinfection.                      |  |
| ·                       |                        |                    | average)                      | (range of individual sites) |              |  |                | distinction.                         |  |  |
| Othor Conta             | ninanta                |                    |                               |                             |              |  |                |                                      |  |  |
| Other Contan            | umants                 | T TT               |                               |                             |              |  | 2015           | <del></del>                          |  |  |

| Other Contaminants |   |               |                    |                  |      |          |                              |  |  |
|--------------------|---|---------------|--------------------|------------------|------|----------|------------------------------|--|--|
| Cryptosporidium    | 0 | TT            | 1                  | 12               | 2017 | See note | 1                            |  |  |
| [oocysts/L]        |   | (99% removal) | (positive samples) | (no. of samples) |      | below    | Human and animal fecal waste |  |  |

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.

|                                       | Average | Range of Detection |    |     |  |
|---------------------------------------|---------|--------------------|----|-----|--|
| Fluoride (added for dental health)    | 0.9     | 0.8                | to | 1.1 |  |
| Sodium (EPA guidance level = 20 mg/L) | 7.5     | 7                  | to | 8   |  |

## Information on 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

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 action 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 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.\*