

2018 WATER QUALITY REPORT

WATER TESTING PERFORMED IN 2017

WARREN COUNTY WATER DISTRICT

warrenwater.com

PWSID KY 1140487



Warren County
Water District

WHERE DOES MY WATER COME FROM?

Warren County Water District purchases the water delivered to its customers from Bowling Green Municipal Utilities (BGMU). BGMU uses the Big Barren River, a surface water source, as its source of raw water. The Big Barren River flows out of Barren River Reservoir, a flood control lake designed to help prevent flooding in the populated areas west of Allen and Barren Counties. Drakes Creek joins Big Barren River approximately three miles above BGMU's raw water intake. Drakes Creek is fed by Trammel Creek and flows north out of Simpson County, Kentucky. These three surface water bodies are the sources of water that are treated by BGMU.

The Safe Drinking Water Act, amended in 1996, requires Community Public Water Systems to prepare a source water assessment report. This report includes a Source Water Assessment Plan (SWAP) that summarizes our susceptibility to contamination. An analysis indicates that BGMU's system susceptibility to contamination is generally moderate. Areas of concern include potential contaminant sources such as bridges, underground storage tanks, an inactive landfill, oil and gas wells, a KPDES permitted discharger, and agricultural chemical use in the areas near and surrounding the raw water intake.

The final source water assessment plan with complete information on BGMU's system susceptibility to potential sources of contamination is available for review at our office or the Barren River Area Development District Office located at 177 Graham Avenue in Bowling Green, Kentucky.

Our goal is to provide the best water and customer service to Warren County residents. Our customers are our top priority and an important part of our everyday efforts. We continually look for ways to stay involved in our community and to develop ways to educate customers on water quality. Our website, warrenwater.com, provides customers access to water quality information and facts about their water utility. Also, general brochures, Consumer Confidence Reports (CCRs), and various other Warren Water publications are available for customer service and educational purposes.

WATER QUALITY

Delivering Quality and Commitment in Every Drop!

Warren Water continually performs numerous tests to ensure your drinking water is safe. Warren Water tests the purity of the water over 1,560,000 times a year to ensure the safety of your drinking water. In 2017, the water was tested for over 100 regulated contaminants, and met or exceeded all state and federal quality standards.

WHY ARE THERE CONTAMINANTS IN MY WATER?

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 at 800-426-4791.

The sources of drinking water, both tap 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. 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.

WHAT ARE THESE CONTAMINANTS?

MICROBIAL CONTAMINANTS

Viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

INORGANIC CONTAMINANTS

Salts and metals, that may be naturally occurring or result from urban stormwater runoff, industrial or domestic waste water discharges, oil and gas production, mining, or farming.

PESTICIDES AND HERBICIDES

May come from a variety of sources such as agricultural, urban stormwater runoff, and residential uses.

ORGANIC CHEMICAL CONTAMINANTS

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

May be naturally-occurring or be the result of oil and gas production and mining activities.

SPECIAL HEALTH INFORMATION

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. Warren Water 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 people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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.



2017 TEST RESULTS

The data presented in this report are from the most recent testing done in accordance with Administrative Regulation 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. Unless otherwise noted, the report level is the highest level detected.

	Allowable Levels		Source	Highest Single Measurement	Lowest Monthly %	Violation	Likely Source	
Turbidity (NTU) (Continuously)	Never more than 1 NTU. Less than 0.3 NTU's 95% of monthly samples		BGMU	0.095	100	No	Soil Runoff	
Regulated Contaminant Test Results								
Contaminant (Units)	MCL	MCLG	Source	Report Level	Range of Detection	Date of Sample	Violation	Likely Source
Inorganic Contaminants								
Copper (ppm) (Level found is 90th percentile. No sites exceeded the AL)	AL = 1.3	1.3	WCWD	0.029	0.001 to 0.054	Aug-15	No	Corrosion of household plumbing systems
Lead (ppb) (Level found is 90th percentile. No sites exceeded the AL)	AL = 15	0	WCWD	1.3	0 to 8	Aug-15	No	Corrosion of household plumbing systems, erosion of natural deposits
Fluoride (ppm)	4	4	BGMU	<2.0	<2.0	2017	No	Erosion of natural deposits. Water Additive which promotes strong teeth.
Nitrate (ppm)	10	10	BGMU	2.6	2.6	2017	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Radiological Contaminants								
Alpha Emitters (pCi/l)	15	0	BGMU	< 1.61	NA	2016	No	Erosion of natural deposits
Combined Radim (pCi/l)	5	0	BGMU	< 0.875	NA	2016	No	Erosion of natural deposits
Disinfectants/Disinfection Byproducts and Precursors								
Total Organic Carbon (ppm) (measured as ppm but reported as a ratio)	TT*	N/A	BGMU	1.34 Lowest Average	1.00 to 2.99 Monthly Ratios	2017	No	Naturally present in the environment
Chlorine (ppm)	MRDL 4	MRDLG 4	WCWD	1.02 Highest Average	0.5 to 1.7	2017	No	Water additive used to control microbes
HAA's [haloacetic acids] (ppb) (reported as highest locational running average)	60	N/A	WCWD	50	16 to 81	2017	No	By-product of drinking water chlorination
TTHM [total trihalomethanes] (ppb) (reported as highest locational running average)	80	N/A	WCWD	51	17 to 81	2017	No	By-product of drinking water chlorination

*Ratio is the monthly % TOC removal achieved to the % TOC removal required. Annual average of the monthly ratios must be 1.00 or greater for compliance.

WCWD was found to be in violation of the Consumer Confidence Rule for failing to provide the state of Kentucky a certification letter prior to the deadline following the distribution of the calendar year 2015 CCR. Future certification letters will be provided in a timely manner. Cryptosporidium is a microbial pathogen found in surface water throughout the United States. BGMU performed testing for Cryptosporidium in source and finished water. No Cryptosporidium detections were found in the eight finished water samples collected in 2017. A Cryptosporidium detection was found in one of the eight source water samples collected in 2017. At the present time, there is no Maximum Contaminant Level (MCL) established for Cryptosporidium. Although filtration removes Cryptosporidium, the most commonly used filtration methods cannot guarantee 100% removal. BGMU monitoring indicates the presence of low levels of these organisms in source water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. The presence of these organisms does not cause concern because there have not been any detections in the finished water.

Terms to know when reading the water test results:

AL (ACTION LEVEL)

The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system shall follow.

BDL (BELOW DETECTION LEVEL)

Laboratory analysis indicates that the contaminant is not present

MCL (MAXIMUM CONTAMINANT LEVEL)

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.

MCLG (MAXIMUM CONTAMINANT LEVEL GOAL)

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.

MRDL (MAXIMUM RESIDUAL DISINFECTANT LEVEL)

The highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of disinfectant is necessary for control of microbial contaminants.

MRDLG (MAXIMUM RESIDUAL DISINFECTANT LEVEL GOAL)

The highest 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.

NTU (NEPHELOMETRIC TURBIDITY UNIT)

A measure of the clarity of water. Turbidity is monitored because it is a good indicator of the effectiveness of the filtration system.

N/A (NOT APPLICABLE)

Does not apply.

PPM (PARTS PER MILLION)

One part per million corresponds to one minute in two years, or a single penny in \$10,000.

PPB (PARTS PER BILLION)

One part per billion corresponds to one minute in 2,000 years or a single penny in \$10,000,000.

pCi/L (PICOCURIES PER LITER)

A measure of radioactivity in water.

TT (TREATMENT TECHNIQUE)

A required process intended to reduce the level of a contaminant in drinking water.

New Water Meter Reading Technology

Warren Water owns and maintains approximately 29,000 water meters. Each meter is an essential part of Warren Water's distribution system, responsible for measuring each customer's actual water use for billing purposes.

Warren Water reads each water meter once per month. The process is labor intensive and time consuming. The meter reader carefully removes the meter box lid, lifting the protective cap on the water meter to reveal the face of the meter, and manually enters the details into a handheld electronic data logger. Water consumption information from the device is then uploaded into our billing system and posted to each customer account.

While this method has served Warren Water well for many years, we will be modernizing by automating meter reads in Warren County. Warren Water has been researching and planning behind the scenes for several years to launch an Automated Meter Reading (AMR) technology which will improve service in both urban and rural areas of our system. The project will be phased in over five years beginning Fall 2018.

AMR meters will enable Warren Water meter readers to read meters remotely, safely, and accurately via wireless signals. The meters are safe, precise, and adept at capturing the same information collected from the manually read meters, yet in a faster and more efficient manner.

This system will provide more information to assist customers in identifying leaks. Advanced acoustical leak sensors will also be strategically placed to assist Warren Water in identifying leaks in main lines and services before they become major interruptions.

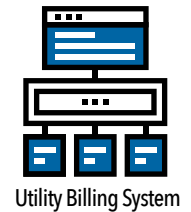
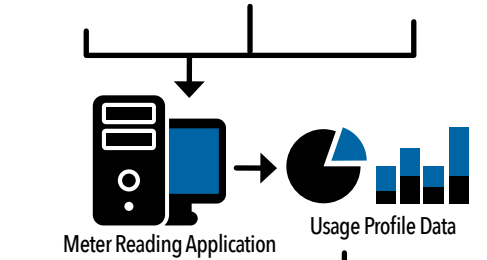
AMR technology offers multiple benefits to customers, Warren Water, and the environment, including:

- Eliminating manual, labor intensive meter reading.
- Providing more accurate data, useful for detecting water loss and leaks in the system which will result in water and cost savings for customers.
- Requires less maintenance.
- Ability to detect backflow (reverse flow) and continuous leaks in a customer's water service.
- Securely transmit data remotely to data collection units in the vehicle/office.
- Increases daily meter read ability of a reader.
- Reduce pollution from vehicles driven by meter readers.

There will be no additional cost to customers to install the new system. The project has been in the planning stages for several years and funds were already budgeted for this project. For questions or additional information regarding AMR, call 270-842-0052 or e-mail info@warrenwater.com.



Itron Equipped Meter



ADDITIONAL INFORMATION ON WATER QUALITY

Warren County Water District:
270-842-0052 warrenwater.com

Kentucky Rural Water Association:
270-843-2291 krwa.org

Kentucky Division of Water:
502-564-3410 water.ky.gov

U.S. EPA Safe Drinking Water Hotline:
800-426-4791 epa.gov/safewater/hfacts.html

GET INVOLVED

We welcome your comments and the opportunity to serve you. Warren Water Board Meetings are open to the public and are held at 4 PM on the fourth Tuesday of every month at the Warren Water office located at 523 US 31 W Bypass, Bowling Green, KY. Please call us at 270-842-0052.

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ATTENCION

Este informe contiene información muy importante sobre la calidad de su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.



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