

2018 Water Quality Report

Glasgow Water Company - Water Testing Performed in 2017

PWS ID# KY0050929

Water Quality Report

This report is designed to inform the public about the quality of water and services provided by the Glasgow Water Company (GWC). The GWC operates a State Certified Microbiology Laboratory staffed with eight Class IV Water Treatment Plant Operators and Lab Analysts. Our experienced and accredited personnel analyze tests on water samples 365 days a year to assure water safety and quality. These samples are taken from the treatment process as well as from various sites within the distribution system. We would like the public to be assured that we will continue to monitor, improve, and protect the water system and deliver a high quality product direct to the tap. Water is the most indispensable product in every home, and we ask everyone to help us in our efforts to protect the water source.

The GWC is the 14th largest water utility in the State of Kentucky among nearly 500 utilities. The GWC has a service area encompassing 444 square miles that serves the City of Glasgow, Barren County, and portions of Allen County and Edmonson County. The GWC maintains 884 miles of water mains serving 17,000 water customers and 144 miles of sewer mains serving 6,150 wastewater customers. The GWC also provides wholesale water service to four surrounding utilities including the City of Edmonton (Metcalf County), Allen County Water District, Fountain Run Water District, and Caveland Environmental Authority. On average GWC operations distribute over 2.8 billion gallons of water and treat over 835 million gallons of waste water annually.



Barren River Reservoir Water Treatment Plant, Lucas KY

Water Treatment Plant Operations Receives 12th AWOP Recognition

GWC's award winning performance earned U.S. Environmental Protection Agency (EPA) program recognition for achieving exceptional drinking water quality through optimized filtration plant performance. This is the 12th consecutive year the GWC has achieved the Area-Wide Optimization Program (AWOP) designation by surpassing state and federal water quality standards. Naturally, our staff is critical to our success. Our community is fortunate to have dedicated professionals working to ensure that water and wastewater services remain affordable and of extremely high quality. It is our people that make us an industry leader and an organization for which all of Glasgow and Barren County can be proud.



Customer Notifications

The GWC can provide customers with time-sensitive information in a variety of communication formats however you specify (such as text message, e-mail, and mobile, home or business phone). Sign up today and join the thousands of customers receiving important notifications. **The GWC respects your time and the system will only be used in situations such as Boil Water Advisories, emergencies and planned outages.**



Signing up is easy. Visit our website www.glasgowh2o.com and click on the Customer Notification link. If you do not have internet access or need assistance signing up contact us at 270-651-3727.

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WATER SOURCE INFORMATION

The GWC operates two water treatment plants, both treating surface water. They are the Barren River Reservoir Water Treatment Plant (A) located in Lucas, and the Beaver Creek Water Treatment Plant (B) located north of Glasgow. The Barren River Reservoir Water Treatment Plant's raw water source is Barren River Lake while the Beaver Creek Water Treatment Plant draws raw water from Beaver Creek.

A source water assessment has been completed. The Barren River Lake has one KPDES permitted discharger, an under-ground storage tank, agricultural chemical users and oil and gas wells that could be possible sources of contamination. The Beaver Creek Plant has two bridges, several oil and gas wells, one KPDES permitted discharger, an underground storage tank and agricultural chemical users upstream and in proximity of its intake. The final source water assessment with the system's susceptibility to potential sources of contamination is available for review at the Barren River Area Development District (BRADD) office located at 177 Graham Avenue, Bowling Green, Kentucky.

HOME PLUMBING AND 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. 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 www.epa.gov/safewater/lead.

Secondary Contaminants

Secondary Contaminants do not have a direct impact on the health of consumers and are not required in this Water Quality Report. They are being included to provide additional information about the quality of your drinking water. Secondary data contains highest report level value from both source plant A or B.

Secondary Contaminant	Maximum Allowable Level	Report Level
Aluminum	0.05 to 0.2 mg/L	0.03 mg/L
Copper	1.0 mg/L	0.0022 mg/L
Iron	0.3 mg/L	0.087 mg/L
Zinc	5 mg/L	0 mg/L
pH	6.5 to 8.5	7.96

Sodium

There is no MCL or MCLG for sodium. Monitoring is required to provide information to consumers concerned about sodium intake for dietary reasons. Sodium is a naturally occurring element found in water and soil as a result of erosion of natural deposits.

	Range of Detection
Sodium (EPA guidance level = 20 mg/L)	2.0 to 2.9 mg/L



Fluoride Regulation (added for dental health)

Kentucky statute (902 KAR 115:010) requires water treatment plants to dose fluoride within a range between 0.6 to 1.2 ppm. GWC's goal is to maintain a 0.8 ppm residual at all times to ensure compliance with Kentucky regulations while keeping an operating tolerance on the low range of the scale.

	Average	Range of Detection
Fluoride (added for dental health) (ppm)	0.8	0.62 to 0.96

Regulated Contaminants in the Water Supply

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.

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.

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 1-800-426-4791.

Contaminants that may be present in source water include:

Microbial Contaminants. Examples include viruses and bacteria that may come from wildlife, agricultural livestock operations, septic systems, and waste water treatment plants.

Inorganic Contaminants. Examples include salts and metals, that can be naturally occurring or result from storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.

Pesticides and Herbicides. These may come from a variety of sources such as agriculture, storm water runoff, and residential use.

Organic Chemical Contaminants. These include synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, storm water runoff, and septic systems.

Radioactive Contaminants. These can be naturally occurring or be the result of oil and gas production and mining activities.

Regulated Contaminant Test Results

The data presented in this report is from the most recent testing performed 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. Source "A" = Barren River Reservoir WTP, Source "B" = Beaver Creek WTP.

Contaminant [code] (units)	Allowable Levels		Source	Highest Single Measurement	Lowest Monthly %	Violation	Likely Source of Contamination	
Turbidity (NTU) TT * Representative Samples of filtered water	No more than 1 NTU* Less than 0.3 NTU in 95% of monthly samples		A= B=	0.095 0.135	100 100	NO	Soil runoff	
Contaminant [code] (units)	MCL	MCLG	Source	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Microbiological Contaminants								
Total Coliform Bacteria % positive samples	TT	N/A		2	N/A	2017	NO	Naturally present in the environment
Inorganic Contaminants								
Barium [1010] (ppm)	2	2	A= B=	0.026 0.03	0.026 to 0.026 0.03 to 0.03	Feb-17	NO	Drilling wastes; metal refineries; erosion of natural deposits
Chromium [1010] (ppb)	100	100	B=	0.3	0.3 to 0.3	Feb-17	NO	Discharge from steel and pulp mills; erosion of natural deposits
Copper [1022] (ppm) Sites exceeding action level 0	AL = 1.3	1.3		0.127 (90th percentile)	0.0095 to 0.293	Aug-16	NO	Corrosion of household plumbing systems
Fluoride [1025] (ppm)	4	4	A= B=	0.4 0.4	0.4 to 0.4 0.4 to 0.4	Feb-17	NO	Water additive which promotes strong teeth
Lead [1030] (ppb) Sites exceeding action level 0	AL = 15	0		0 (90th percentile)	0 to 2	Aug-16	NO	Corrosion of household plumbing systems
Nitrate [1040] (ppm)	10	10	A= B=	2.2 2.3	2.2 to 2.2 2.3 to 2.3	Feb-17	NO	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits
Disinfectants/Disinfection Byproducts and Precursors								
Total Organic Carbon (ppm) (report level = lowest avg. range of monthly ratios)	TT*	N/A	A= B=	2.05 2.54	1.64 to 3.33 1.78 to 4.17	2017	NO	Naturally present in environment
*Monthly ratio is the % TOC removal achieved to the % TOC removal required. Annual average of the monthly ratios must be 1.00 or greater for compliance.								
Chlorine (ppm)	MRDL = 4	MRDLG = 4		1.29 (highest average)	0.29 to 2.10	2017	NO	Water additive used to control microbes
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A		47 (average)	20 to 60 (range of individual sites)	2017	NO	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [Total trihalomethanes]	80	N/A		60 (average)	28 to 81 (range of individual sites)	2017	NO	Byproduct of drinking water disinfection
Other Contaminants								
Contaminant [code] (units)	MCL	MCLG	Source	Positive Samples	Number of Samples	Date of Sample	Violation	Likely Source of Contamination
Cryptosporidium [oocysts/10L]	0	TT* (99% removal)	B=	1	9	2017	NO	Human and animal fecal waste

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. One cryptosporidium oocyst was detected from a 10 liter source water sample. This water had not been treated or filtered yet, therefore there is no violation. Cryptosporidium is a microbial parasite which is found in surface water throughout the U.S. Although filtration removes Cryptosporidium, the most commonly-used filtration methods cannot guarantee 100 percent removal. Our monitoring indicates the presence of these organisms in our source water and/or finished water. Current test methods do not allow 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. Most healthy individuals are able to overcome the disease within a few weeks. However, immuno-compromised people have more difficulty and are at greater risk of developing severe, life threatening illness. Immuno-compromised individuals are encouraged to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested for it to cause disease, and may be passed through means other than drinking water.

Water Quality Data

In the Water Quality Data Table, you may find terms or abbreviations that are unfamiliar. To help you better understand the results, the following definitions are provided. Some or all of these definitions may be found in this report:

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.

TT = Treatment Technique - A required process intended to reduce the level of a contaminant in drinking water.

AL = Action Level - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system shall follow.

Turbidity = 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.

NTU = Nephelometric Turbidity Unit - Measures cloudiness of water.

MRDL = Maximum Residual Disinfectant Level - 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.

MRDLG = Maximum Residual Disinfectant Level Goal - 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.

BDL = Below Detection Levels - Laboratory analysis indicates that the contaminant is not present.

ND = Not Detected - Indicates that the substance was not found by laboratory analysis.

Range of Detection = This is the lowest and highest levels of detection.

N/A = Not Applicable - Does not apply.

ppm = Parts per million - Milligrams per liter, (mg/L) - Corresponds to one penny in \$10,000.

ppb = Parts per billion - Micrograms per liter, (µg/L) - Corresponds to one penny in \$10,000,000.

pCi/L = Picocuries per liter - Measure of the radioactivity in water.

mrem/yr = Millirems per year - Measure of radiation absorbed by the body.

OOCYSTS/10 L = Oocysts per 10 liters - Count of organisms per 10 liters.

TOC = Total Organic Carbon - Measure of the total amount of organic matter in water.

NOTICE: IMPORTANT INFORMATION

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.

Another Source for information on water quality is the Kentucky Division of Water's website: www.water.ky.gov/dw/



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By Mail:

P.O. Box 819, Glasgow, KY 42142-0819

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OUR MISSION:

To provide the highest quality water and wastewater services at the lowest possible cost, while continuing our commitment to meet the needs of today's customers as well as future generations.



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