

City of Bremen

2020 Annual Water Quality Report

System I. D. # GA 1430000

The City of Bremen is pleased to present you this year's Annual Quality Water Report (CCR). This report is designed to inform you about the quality water and services we deliver to you every day. This report provides detail accounts of all monitoring and testing results gathered from water quality testing during the previous year. Our employees are committed to provide you safe, dependable tap water on a year round basis. We want you to understand the efforts we make to improve the water treatment process and protect our water resources. Our goal is to ensure the quality of your water. We are proud to announce, as in years past, that our system did not violate any maximum contaminate levels or any other water quality standards as prescribed by the Georgia E.P.D or the United States E.P.A.

Our raw water source comes from surface water reservoirs located on the Beech Creek and Bush Creek basins. The Beech Creek surface reservoir is located at our Water Treatment Plant on Waterworks Road and the Bush Creek surface reservoir is located off the Asa Cash Rd. The City also purchases treated, potable water from the Haralson County Water Authority, at a minimum of 400,000 gallons daily, which receives its water from the Tallapoosa River, Sims Wells and the City of Anniston.

Your water is treated by a series of applied sequences that includes coagulation, flocculation, sedimentation, filtration and disinfection. Coagulation removes particles suspended in the source water by adding coagulants (Alum) to form tiny sticky particles called "floc," which attract the particles. Flocculation (the formation of larger particles from smaller particles) is achieved using gentle, constant mixing. The heavy particles settle out of the water in the sedimentation basin. The clear water then moves to the filtration process where the water passes through filters consisting of Anthracite coal, sand and gravel that remove even smaller particles. A small amount of chlorine is used to kill bacteria and other microorganisms that may be present in the water. The Drinking water is then stored and distributed the residences and businesses in the City.

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. The water can pick up substances resulting from the presence of animals or from human activity. Substances that may be present in water include the following:

- Microbial substances, such as viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- Inorganic substances, such as salts and metals, which can be naturally occurring or result from urban storm runoff, industrial or domestic discharges, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm runoff and residential uses.

- Organic chemical substances, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm runoff and septic systems.
- Radioactive substances, which can be naturally occurring or be the result of oil and gas production and mining activities.

All drinking water, including bottled water, can be expected to contain at least small amounts of contaminants. The presence of contaminants does not necessarily indicate the water poses a health risk. In order to ensure that tap water is safe to drink, The Environmental Protection Agency (EPA) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) regulates established limits for contaminants in bottled water which must provide protection for public health. More information about contaminants and potential health effects can be obtained on the EPA web site or by calling their Safe Drinking Water Hotline (800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV+/AIDS or other immune systems disorders, some elderly and infants can be particularly at risks from infections. These people should seek advice about drinking water from their health care providers. EPA and/or Centers for Diseases Control and Prevention (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from their respective web sites or from the Safe Drinking Water Hotline (800-426-4791).

A Source Water Assessment Plan Report contains the categories of potential pollution sources. This report will reveal sources such as animal feed lots, NPDES storm water and mining, hazardous wastes facilities, Las permit holders and roads that cross over streams. This report may be viewed at the same locations as above.

We have and will continue to search for cross connections. Cross connections occur when customers tap into wells or some other unauthorized system that may contaminate the drinking water supply. Although we have not located any cross connections please notify us at once if you suspect that one exists. All water meters are equipped with back flow prevention to prevent contamination into the system.

Lead and/or copper can be present in your inside plumbing. 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 residential plumbing. The City of Bremen 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 drinking 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>. The City of Bremen pulls twenty random water samples as directed by the Georgia E.P.D. and submits these samples to the E.P.D. lab to test for lead and copper. We are

pleased to announce that all twenty samples were below the E.P.D. set guideline criteria.

Cryptosporidium is a microbial pathogen found in surface water throughout Georgia and the United States. 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 determine if the organisms are dead or if they are capable of causing disease. Ingestion of cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immune-compromised people are a greater risk of developing life-threatening illness. We encourage immune-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease and it may be spread through means other than drinking water. Our water system submits water samples for testing to the Georgia E.P.D. Lab each month.

Radon is a radioactive gas that you cannot see, taste or smell. It is found in Georgia and throughout the United States. Radon can move up through the ground and into a home through cracks and holes in the foundation. Radon can build up to high levels in all types of homes. Radon can also get into indoor air when released from tap water from showering, washing dishes and other household activities. Compared to radon entering the home through soil, radon entering the home through tap water will, in most cases, be a small source of radon in indoor air. Radon is a known human carcinogen. Breathing air containing radon can lead to lung cancer. Drinking water containing radon may also cause increased risk of stomach cancer. If you are concerned about radon in your home, test the air in your home. Testing is inexpensive and easy. Fix your home if the level of radon in your air is 4 Pico curies per liter of air (pCi/L) or higher. There are simple ways to fix a radon problem that aren't too costly. For additional information, call your state program or call E.P.A.'s Radon Hotline (800-SOS-RADON).

Nitrates in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in water can cause baby blue syndrome. High nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.

Arsenic in your drinking water meets E.P.A. standards. E.P.A. standard balances the current understanding of Arsenic's possible effects against the cost of removing Arsenic from drinking water. E.P.A. continues to research the health effects of low levels of Arsenic, which is a mineral known to cause cancer in humans in high concentrations and is linked to other effects such as skin damage and circulatory problems.

Protection of drinking water is everyone's responsibility. You can help by notifying the City if you see anything that may cause pollutants to enter the raw water stream or reservoir. You can volunteer to within your community to form groups to pick up litter, debris, or other pollutants around storm drains, drainage ditches or bodies of water.

We encourage and welcome questions/comments on your water. If you have any questions regarding this report or concerns regarding your water, please contact Water Supervisor Justin Smith (E-mail address; Jsmith@bremenga.gov) at the Water Treatment Plant (770-537-5782) or Operations Manager Mike Thompson, (E-mail address, mthompson@bremenga.gov) at City Hall (678-821-1234). Our mailing address is 232 Tallapoosa St. Bremen, GA 30110. Our fax number is 770-537-5136. This report is available to be viewed on the City of Bremen web site, www.bremenga.gov, the Bremen City Hall or the Warren Sewell Memorial Library. Copies can be obtained at the Bremen City Hall. City Council meets the third Monday of each month in the Courtroom beside the Police Dept. The Haralson County Water Authority meets the second Tuesday of each month at 9:00 am in the Haralson County Water Authority conference room in Buchanan.

Water Sampling Quality Data Table

The table below lists all of the drinking water substances that we detected during the calendar year of this report. The presence of substances in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of this report. We are required to test and monitor for these substances per E.P.A. and E.P.D. guidelines. The E.P.A or the E.P.D. requires us to monitor for certain substances less than once per year because the concentrations of these substances do not change frequently. Although the substances listed here are under the Maximum Contaminate Level (MCL), we feel that as consumers, you know exactly what was detected and how much of the substances were present.

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Bremen Water System	Range		Sample Date	Violation	Typical Source
				Low	High			
Disinfectants & Disinfectant By-Products								
(There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants)								
Haloacetic Acids (HAA5) (ppb)	NA	60	42	28	49	2020	No	By-product of drinking water chlorination
Chlorine (as Cl ₂) (ppm)	4	4	1.44	0.63	2.16	2020	No	Water additive used to control microbes
Total Organic Carbon	NA	TT	1.26	0.97	1.9	2020	No	Naturally present in the environment
TTHMs [Total Trihalomethanes] (ppb)	NA	80	38	25	57	2020	No	By-product of drinking water disinfection
Inorganic Contaminants								
Barium (ppm)	2	2	ND	NA	NA	2020	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Arsenic (ppb)	0	10	ND	NA	NA	2020	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Fluoride (ppm)	4	4	0.81	0.70	1.01	2020	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate [measured as Nitrogen] (ppm)	10	10	0.46	NA	NA	2020	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Chromium (ppb)	100	100	ND	NA	NA	2020	No	Discharge from steel and pulp mills; Erosion of natural deposits
Sodium (optional) (ppm)		MPL	11	NA	NA	2020	No	Erosion of natural deposits; Leaching

Microbiological Contaminants								
Turbidity (NTU)	NA	TT<=0.3	0.04	0.02	0.25	2020	No	Soil runoff
100% of the samples were below the TT value of 0.3. A value less than 95% constitutes a TT violation. The highest single measurement was 0.25. Any measurement in excess of 1 is a violation unless otherwise approved by the state.								
Total Coliform (positive samples/month)	0	1	0	NA	NA	2020	No	Naturally present in the environment
Volatile Organic Contaminants								
cis-1,2-Dichloroethylene (ppb)	70	70	ND	NA	NA	2020	No	Discharge from industrial chemical factories
Trichloroethylene (ppb)	0	5	ND	NA	NA	2020	No	Discharge from metal degreasing sites and other factories
<u>Contaminants</u>	<u>MCLG</u>	<u>AL</u>	<u>Your Water</u>	<u>Sample Date</u>	<u># Samples Exceeding AL</u>	<u>Exceeds AL</u>	<u>Typical Source</u>	
Inorganic Contaminants								
Copper - action level at consumer taps (ppm)	1.3	1.3	0.062	2019	0	No	Corrosion of household plumbing systems; Erosion of natural deposits	
Lead - action level at consumer taps (ppb)	0	15	1.5	2019	0	No	Corrosion of household plumbing systems; Erosion of natural deposits	

Table of Definitions:

PPM (parts per million) One part substance per million parts water (or milligrams per liter, mg/L).

PPB (parts per billion) One part substance per billion parts water (or micrograms per liter ug/L).

An example is that PPD (parts per billion) is one part per billion is equivalent to one minute in 2,000 years or one penny in 10 million years.

MNR: monitoring not required

NTU (Nephelometric Turbidity Units): The measurement of the clarity, or turbidity of water. Turbidity in excess of 5 NTU is just noticeable to the average person. We monitor it because it is a good indicator of the effectiveness of our filtration system.

N/A: Not applicable

ND: Not detected

NR: Monitoring not required but recommended

MPL: State Assigned Maximum Permissible Level

AL (action level): The concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.

MCL (maximum containment level): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to MCLGs as feasible using the best available treatment technology.

MCLG (maximum containment level goal): The level of a contaminant in drinking water below which there is no known risk to health. MCLGs allow for a margin of safety.

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 to control of microbiological 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 disinfectants to control microbial contaminants.

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 which a water system must follow.

Haralson County Water Quality Table

The table below list all the drinking water substances detected by the Haralson County Water Authority during the calendar year for this report. Since we purchase over half of our water from the County Water Authority, we are required to show their water quality table as well as ours. The presence of these substances in your water does not necessarily indicate the water poses a health risk, unless otherwise noted. The EPA or State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently.

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Your Water	Range		Sample Date	Violation	Typical Source
				Low	High			
Disinfectants & Disinfectant By-Products								
(There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants)								
Haloacetic Acids (HAA5) (ppb)	NA	60	46	43	51	2020	No	By-product of drinking water chlorination
Chlorine (as Cl ₂) (ppm)	4	4	1.44	0.70	2.16	2020	No	Water additive used to control microbes
Total Organic Carbon	NA	TT	1.9	NA	NA	2020	No	Naturally present in the environment
TTHMs [Total Trihalomethanes] (ppb)	NA	80	58	49	66	2020	No	By-product of drinking water disinfection
Inorganic Contaminants								
Barium (ppm)	2	2	.008	NA	.026	2020	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride (ppm)	4	4	0.75	0.64	0.94	2020	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate [measured as Nitrogen] (ppm)	10	10	1.7	0	9.0	2020	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Microbiological Contaminants								
Turbidity (NTU) % of Measurements less than 0.3.	NA	0.3	100%	NA	NA	2020	No	Soil runoff
100% of the samples were below the TT value of 0.3. A value less than 95% constitutes a TT violation.								
Total Coliform (positive samples/month)	NA	TT	NA	NA	NA	2020	No	Naturally present in the environment
Volatile Organic Contaminants								
Not Detected								

<u>Contaminants</u>	<u>MCLG</u>	<u>AL</u>	<u>Your Water</u>	<u>Sample Date</u>	<u># Samples Exceeding AL</u>	<u>Exceeds AL</u>	<u>Typical Source</u>
Inorganic Contaminants							
Copper - action level at consumer taps (ppm)	1.3	1.3	0.11	2018	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead - action level at consumer taps (ppb)	0	15	1.3	2018	0	No	Corrosion of household plumbing systems; Erosion of natural deposits

Unit Descriptions	
Term	Definition
ppm	ppm: parts per million, or milligrams per liter (mg/L)
ppb	ppb: parts per billion, or micrograms per liter (µg/L)
NTU	NTU: Nephelometric Turbidity Units. Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.
positive samples/month	positive samples/month: Number of samples taken monthly that were found to be positive
NA	NA: not applicable
ND	ND: Not detected
NR	NR: Monitoring not required, but recommended.

Important Drinking Water Definitions	
Term	Definition
MCLG	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.
MCL	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.
TT	TT: Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
AL	AL: Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Variances and Exemptions	Variances and Exemptions: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
MRDLG	MRDLG: Maximum residual disinfection 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.
MRDL	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.
MNR	MNR: Monitored Not Regulated
MPL	MPL: State Assigned Maximum Permissible Level

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