What Is The Source of My Drinking Water?

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and groundwater 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. It can also pick up substances resulting from the presence of animals or from human activity.

The City of Branson has Two Surface Water Treatment Plants and Six Ground Water Wells. In 2020; 98% of the treated water that serves the City of Branson came from the treatment plants which pump water from Lake Taneycomo. The City treated 920.16 Million Gallons of water in 2020. An average of 3.358 million gallons per day is treated during peak summer months and 1.913 million gallons per day in the winter months.

Source Water Assessment

The Department of Natural Resources conducted a source water assessment to determine the susceptibility of our water source to potential contaminants. This process involved the establishment of source water area delineations for each well or surface water intake and then a contaminant inventory was performed within those delineated areas to assess potential threats to each source. Assessment maps and summary information sheets are available on the internet at http://drinkingwater.missouri.edu/swip/swipmaps/pwssid.htm. To access the maps for your water system you will need the State-assigned identification code, which is MO5010096. The Source Water Inventory Project maps and information sheets provide a foundation upon which a more comprehensive source water protection plan can be developed.

WATER QUALITY RESULTS FOR 2020

VIOLATIONS AND HEALTH EFFECTS INFORMATION

During the 2020 calendar year, we had the below noted violation(s) of drinking water regulations.

COMPLIANCE PERIOD	ANALYTE	TYPE

No Violations Occurred in the Calendar Year of 2020

Regulated Contaminants	Collection Date	Highest Test Results	Range of Sampled Result(s) (low - high)	Unit	MCL	MCLG	Typical Source
BARIUM	3/24/2020	0.0298	0.0154 - 0.0298	ppm	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
FLUORIDE	3/24/2020	1.22	0 - 1.22	ppm	4	4	Natural deposits; Water additive which promotes strong teeth
NITRATE- NITRITE	3/24/2020	0.862	0.012 - 0.862	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

Disinfection Byproducts	Sample Point	Monitoring Period	Highest LRAA	Range of Sampled Results(s) (low - high)	UNIT	MCL	MCLG	Typical Source
(HAA5)	DBPDUAL-01	2020	54	10.6 - 60	ppb	60	0	Byproduct of drinking water disinfection
(HAA5)	DBPDUAL-02	2020	38	5.6 - 44.1	ppb	60	0	Byproduct of drinking water disinfection
(HAA5)	DBPDUAL-03	2020	42	0 - 41.6	ppb	60	0	Byproduct of drinking water disinfection
(HAA5)	DBPDUAL-04	2020	57	21.6 - 59.3	ppb	60	0	Byproduct of drinking water disinfection
TTHM	DBPDUAL-01	2020	46	16 - 46.6	ppb	80	0	Byproduct of drinking water disinfection
TTHM	DBPDUAL-02	2020	37	8.7 - 41.7	ppb	80	0	Byproduct of drinking water disinfection
TTHM	DBPDUAL-03	2020	38	0 - 38	ppb	80	0	Byproduct of drinking water disinfection
TTHM	DBPDUAL-04	2020	48	28.1 - 50.5	ppb	80	0	Byproduct of drinking water disinfection

Total Organic Carbon	Collection Date	Highest Value	Range of Sampled Result(s) (low - high)	Unit	TT	Typical Source
CARBON, TOTAL	4/15/2020	1.63	1.12 - 1.63	MG/L	0	Naturally present in the environment

Lead and Copper	Date	90th Percentile	Range of Sampled Result(s) (low - high)	Unit	AL	Sites Over AL	Typical Source
COPPER	2016 - 2018	0.162	0.0103 - 0.384	ppm	1.3	0	Corrosion of household plumbing systems
LEAD	2016 - 2018	6.34	0.0 - 29.9	ppb	15	2	Corrosion of household plumbing systems

Radionuclides	Collection Date	Highest Value	Range of Sampled Results(s) (low - high)	UNIT	MCL	MCLG	Typical Source
COMBINED RADIUM (-226 & -228)	8/21/2018	1.3	1.2 - 1.3	pCi/l	5	0	Erosion of natural deposits
GROSS ALPHA PARTICLE ACTIVITY	8/21/2018	10.4	8 - 10.4	pCi/l			Erosion of natural deposits
RADIUM-226	8/21/2018	1.3	1.2 - 1.3	pCi/l	5	0	

TURBIDITY

Turbidity is a measure of cloudiness of water. We monitor turbidity because it is a good indicator of the effectiveness of our filtration system.

% of Samples in compliance with Standard	Months Occurred	Monitoring Violation	Highest Single Measurement	Month Occurred	Sources	In Compliance
100	11	NO	0.295	NOV	SOIL RUNOFF	YES
100	12	NO	0.128	OCT	SOIL RUNOFF	YES

Unregulated Contaminant Monitoring Rule (UCMR)	Collection Date of H	Highest Value (HV)	Range of Sampled Results(s)	Unit
2-propen-1-ol	3/18/2019	1.5	1.5	pbb
Bromide	3/18/2019	22	22	pbb
HAA5	9/30/2019	49.7	22.09-49.7	pbb
HAA6Br	6/17/2019	11.65	5.29-11.65	pbb
HAA9	6/17/2019	56.55	27.64-56.55	pbb
Manganese	9/30/2019	0.77	.45-.77	pbb
Total Organic Carbon	3/18/2019	2880	1900-2880	pbb

***Special Note Regarding HAA5 Results**

The Department of Natural Resources voided our system's HAA5 sample results for one or more monitoring periods from July 2019 through June 2020. While our system submitted samples to the Department for analysis, due to laboratory procedural errors, the Department determined the results for the monitoring periods left blank in the table below to be invalid. As a result, our system does not have a valid monitoring result for those monitoring periods.

Water System and Location Information					Updated HAA Sample Results (mg/L)				Updated LRAA Compliance Calculation			
PWSID	PWS NAME	Analyte	Location ID	Location	3Q2019	4Q2019	1Q2020	2Q2020	3Q2019	4Q2019	1Q2020	2Q2020
MO5010096	BRANSON	HAA5	DBPDUAL-01	SITE G-810 CLIFF DR	0.0455	0.0485			0.034	0.04	0.042	0.047
MO5010096	BRANSON	HAA5	DBPDUAL-02	SITE 2- 530 PARNELL	0.0291	0.0313			0.029	0.029	0.03	0.03
MO5010096	BRANSON	HAA5	DBPDUAL-03	SITE B-306 JUDY ST	0.0359	0.0428			0.036	0.038	0.038	0.039
MO5010096	BRANSON	HAA5	DBPDUAL-04	SITE 4-104 WOODRIDGE DR	0.038	0.0549			0.036	0.043	0.043	0.046

Terms & Abbreviations

Population: 11,416. This is the equivalent residential population served including non-bill paying customers.
90th Percentile: For Lead and Copper testing. 10% of test results are above this level and 90% are below this level.
AL: Action Level, or the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.
HAA5: Haloacetic Acids (mono-, di- and tri-chloracetic acid, and mono- and di- bromoacetic acid) as a group.
LRAA: Locational Running Annual Average, or the locational average of sample analytical results for samples taken during the previous four calendar quarters.
MCLG: Maximum Contaminant Level Goal, or 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: Maximum Contaminant Level, or 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.
n/a: not applicable.
ND: not detectable at testing limits.
NTU: Nephelometric Turbidity Unit, used to measure cloudiness in drinking water.
ppb: parts per billion or micrograms per liter.
ppm: parts per million or milligrams per liter.
RAA: Running Annual Average, or the average of sample analytical results for samples taken during the previous four calendar quarters.
Range of Results: Shows the lowest and highest levels found during a testing period, if only one sample was taken, then this number equals the Highest Test Result or Highest Value..
TT: Treatment technique, or a required process intended to reduce the level of a contaminant in drinking water.
TTHM: Total Trihalomethanes (chloroform, bromodichloromethane, dibromochloromethane, and bromoform) as a group.

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. Records with sample year more than one year old are still considered representative.

Optional Monitoring (not required by EPA)

Secondary Contaminants	Collection Date	Water System Highest Sampled Result	Range of Sampled Results(s) (low-high)
ALKALINITY, CACO3 STABILITY	3/24/2020	334 MG/L	110-334 MG/L
ALKALINITY, TOTAL	10/28/2020	110 MG/L	100-110 MG/L
HARDNESS, CARBONATE	3/24/2020	353 MG/L	88.4-353 MG/L
IRON	3/24/2020	0.0988 MG/L	0-0.0988 MG/L
MANGANESE	3/24/2020	0.00152 MG/L	0-0.00152 MG/L
PH	3/24/2020	7.635 PH	7.39-7.65 PH

This report is intended to provide you with important information about your drinking water and the efforts made to provide safe drinking water. Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.

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 can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426- 4791).

Contaminants that may be present in source water include:

A. Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
B. Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial, or domestic wastewater discharges, oil and gas production, mining, or farming.
C. Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
D. Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
E. Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the Department of Natural Resources prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Department of Health regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Is our water system meeting other rules that govern our operations?

The Missouri Department of Natural Resources regulates our water system and requires us to test our water on a regular basis to ensure its safety. Our system has been assigned the identification number **MO5010096** for the purposes of tracking our test results. Last year, we tested for a variety of contaminants. The detectable results of these tests are on the following pages of this report. Any violations of state requirements or standards will be further explained later in this report.

How might I become actively involved?

If you would like to observe the decision-making process that affects drinking water quality or if you have any further questions about your drinking water report, please call us at 417-243-2714 to inquire about scheduled meetings or contact persons.

Do I need to take any special precautions?

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).

Additional Health Effects:

Infants and children are typically more vulnerable to lead in drinking water than the general populations. It is possible that lead levels at you home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (800-426-4791).

Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.

Special Lead and Copper Notice:

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. BRANSON PWS 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 (800-426-4791) or at http://water.epa.gov/drink/info/lead/index.cfm.

Utilities Mission Statement

The Utilities Department is committed in providing professional customer service to those visiting the area and those who make this community home. We will consistently provide safe public drinking water for our visitors and citizens. Our wastewater collection and treatment systems will be operated to produce the highest quality effluent possible in order to protect our lakes and streams for the enjoyment of future generations.

Community Participation

Your input on water quality is always welcome. City Council meets every 2nd and 4th Tuesday of the month at 6:00 p.m. in the Council Chambers at City Hall, located at 110 W. Maddux Street #210. Please feel free to participate in those meetings.

Errol Cordell

Water Division Manager
Phone: 417-243-2714
Fax: 417-337-5303
E-Mail: ECordell@BransonMo.gov
www.BransonMo.gov

City of Branson MISSOURI

WATER QUALITY REPORT

2020