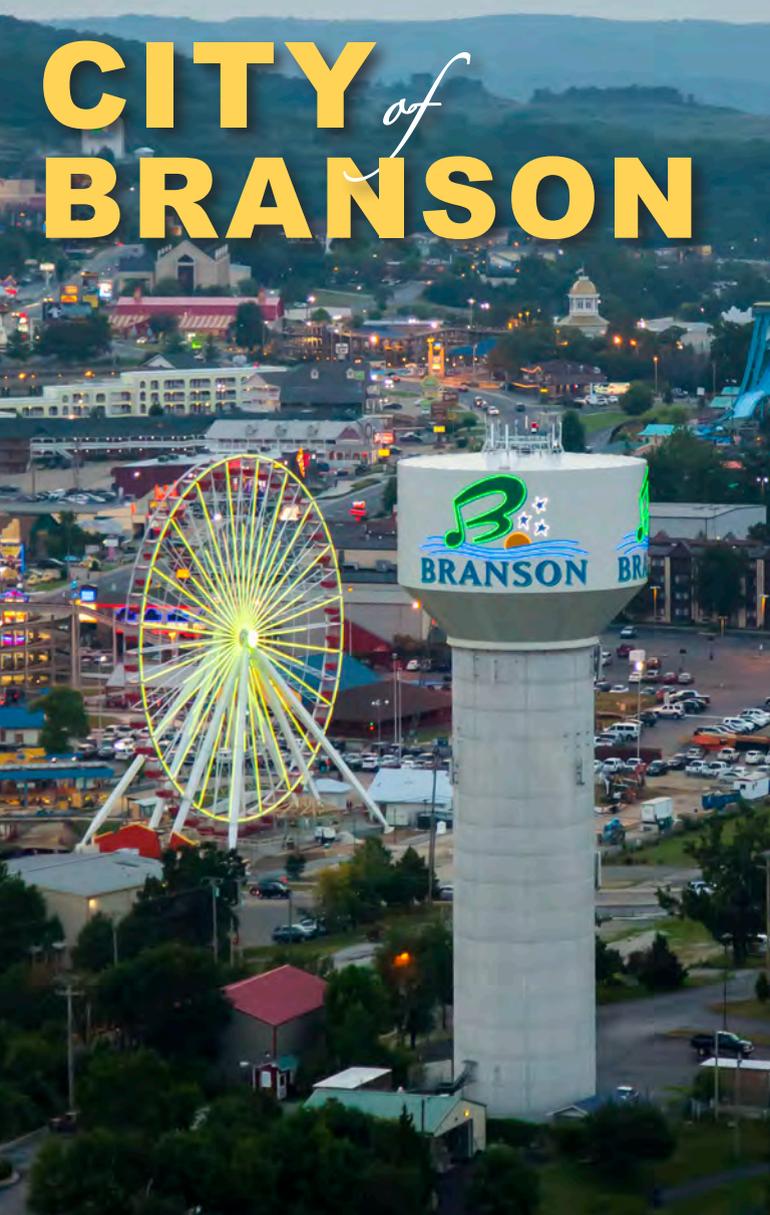


# CITY of BRANSON



# WATER Quality Report 2015

## 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 welcomed. The City Council meets every 2nd and 4th Tuesday of the month at 7:00 p.m. in the Council Chambers at City Hall, located at 110 W. Maddux Street #210. Please feel free to participate in these meetings.

### Errol Cordell

Water Treatment Operations Supervisor

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## 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.

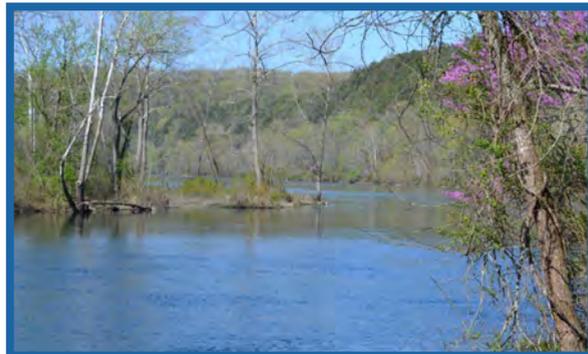
## Do I need to take any special precautions?

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).

## 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 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>.

## 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, and can 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 the year 2015, 91% of the treated water that serves the City of Branson came from the treatment plants which pump water from Lake Taneycomo. The City treated 1.225 billion gallons of water in the year 2015. During peak summer months the average water treated per day is 4.343 million gallons and in the winter months it is 2.318 million gallons.

## 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://maproom.missouri.edu/swipmaps/pwssid.htm>.

To access the maps for your water system you will need the State-assigned identification code, **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 2015

VIOLATIONS AND HEALTH EFFECTS INFORMATION									
During the 2015 calendar year, we had the below noted violation(s) of drinking water regulations.									
COMPLIANCE PERIOD			ANALYTE				TYPE		
<b>No Violations Occurred in the Calendar Year of 2015</b>									
REGULATED CONTAMINANTS	COLLECTION DATE	HIGHEST VALUE	RANGE OF SAMPLED RESULT(S) (LOW-HIGH)	UNIT	MCL	MCLG	TYPICAL SOURCE		
BARIUM	3/26/2015	0.0324	0.0321 - 0.0324	ppm	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits		
FLUORIDE	3/26/2015	0.8	0.65 - 0.8	ppm	4	4	Natural deposits; Water additive which promotes strong teeth		
NITRATE-NITRITE	3/24/2015	0.71	0.012 - 0.71	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits		
XYLENES, TOTAL	3/26/2015	0.00069	0 - 0.00069	ppm	10	10	Discharge from petroleum factories; Discharge from chemical factories		
DISINFECTION BYPRODUCTS	SAMPLE POINT	MONITORING PERIOD	HIGHEST LRAA	RANGE OF SAMPLED RESULT(S) (LOW-HIGH)	UNIT	MCL	MCLG	TYPICAL SOURCE	
(HAA5)	DBPDUAL-01	2015	26	21.1 - 30.5	ppb	60	0	Byproduct of drinking water disinfection	
(HAA5)	DBPDUAL-02	2015	28	17.4 - 49.6	ppb	60	0	Byproduct of drinking water disinfection	
TTHM	DBPDUAL-01	2015	49	29.8 - 63.7	ppb	80	0	Byproduct of drinking water disinfection	
TTHM	DBPDUAL-02	2015	46	22.2 - 92.9	ppb	80	0	Byproduct of drinking water disinfection	
TOTAL ORGANIC CARBON	COLLECTION DATE	HIGHEST VALUE	RANGE OF SAMPLED RESULTS	UNIT	TT	TYPICAL SOURCE			
CARBON, TOTAL	9/28/2015	1.78	0.96 - 1.78	MG/L	0	Naturally present in the environment			
LEAD AND COPPER	DATE	90TH PERCENTILE	RANGE OF SAMPLED RESULTS (LOW-HIGH)	UNIT	AL	Sites Over AL	TYPICAL SOURCE		
COPPER	2013 - 2015	0.203	0.022 - 1.98	ppm	1.3	1	Corrosion of household plumbing systems		
LEAD	2013 - 2015	5.21	1.07 - 33.6	ppb	15	1	Corrosion of household plumbing systems		
RADIONUCLIDES	COLLECTION DATE	HIGHEST VALUE	RANGE OF SAMPLED RESULTS	UNIT	MCL	MCLG	TYPICAL SOURCE		
COMBINED RADIUM (-226 & -228)	1/14/2013	1.4	1.4	pCi/l	5		Erosion of natural deposits		
GROSS ALPHA PARTICLE ACTIVITY	10/20/2015	9.5	0 - 9.5	pCi/l			Erosion of natural deposits		
RADIUM-226	1/14/2013	1.4	1.4	pCi/l	5	0			
RADIUM-228	10/20/2015	1.8	0 - 1.8	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.									
PERCENTAGE OF SAMPLES IN COMPLIANCE WITH STD		MONTHS OCCURRED		VIOLATION		HIGHEST SINGLE MEASUREMENT		MONTH	SOURCES
100		12		NO		0.29		11	SOIL RUNOFF
MICROBIOLOGICAL	RESULT		MCL		MCLG		TYPICAL SOURCE		
COLIFORM (TCR)	In the month of June, 1 sample(s) returned as positive		MCL: Systems that collect less than 40 samples per month - No more than 1 positive monthly sample		0		Naturally present in the environment		

### Definitions & Abbreviations

**Population:** 11,880. This is the equivalent residential population served including non-bill paying customers.

**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.

**AL:** Action Level, or the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.

**TT:** Treatment Technique, or a required process intended to reduce the level of a contaminant in drinking water.

**90th percentile:** For Lead and Copper testing. 10% of test results are above this level and 90% are below this level.

**Level Found:** Is the average of all test results for a particular contaminant.

**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 Value.

**RAA:** Running Annual Average, or the average of sample analytical results for samples taken during the previous four calendar quarters.

**TTHM:** Total Trihalomethanes (chloroform, bromodichloromethane, dibromochloromethane, and bromoform) as a group.

**HAA5:** Haloacetic Acids (mono-, di- and tri-chloroacetic acid, and mono- and di-bromoacetic acid) as a group.

**ppb:** parts per billion or micrograms per liter.

**ppm:** parts per million or milligrams per liter.

**pCi/l:** Picocuries per liter. Unit of measure for radioactive concentrations.

**NTU:** Nephelometric Turbidity Unit, used to measure cloudiness in drinking water.

**ND:** not detectable at testing limits.

*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 a sample year more than one year old are still considered representative.*

*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.*

# SCIENCE FACTS!



1. Water is made up of two elements, hydrogen and oxygen. Its chemical formula is H<sub>2</sub>O.
2. Water has three different states, liquid, solid, and gas. The word water usually refers to water in its liquid state. The solid state of water is known as ice while the gas state of water is known as steam or water vapor.
3. Water covers around 70% of the Earth's surface.
4. The three largest oceans on Earth are the Pacific Ocean (largest), the Atlantic Ocean (second largest) and the Indian Ocean (third largest).
5. Ocean tides are caused by the rotation of the Earth and the gravitational pull of the Moon and Sun acting on ocean water.
6. The longest river in the world is the Nile River. It reaches 6,650 kilometers in length (4,132 miles).
7. The longest river in the USA is the Missouri River. At around 2,340 miles (3,770 km) in length it is slightly longer than the Mississippi River (2,320 miles). The two combine to form the longest river system in North America.
8. Water makes a good solvent with many sugars, salts and acids easily dissolving in it. On the other hand oils and fats don't mix well with water.
9. The water cycle involves water evaporating (turning into a gas), rising to the sky, cooling and condensing into tiny drops of water or ice crystals that we see as clouds, falling back to Earth as rain, snow, or hail before evaporating again and continuing the cycle.
10. The water industry helps deliver water to homes in various cities and countries around the world. This can involve services such as purification, sewage treatment, filtering, distillation and plumbing.

Water Information Courtesy Of ScienceKids.Co.Nz