CITY OF BOSSIER CITY

P. O. BOX 5337
BOSSIER CITY, LOUISIANA 71171-5337

May 01, 2019

To: Citizens of Bossier City

Subject: The Water We Drink: Bossier City Water Treatment Plant
Public Water Supply ID. 1015004

Annual Water Quality Report – Year 2018

We are pleased to present to you the Annual Water Quality Report for the year 2018. Thank you for allowing us to continue providing your family with clean, quality water this year. In order to maintain a safe and dependable water supply, we sometimes need to make improvements that will benefit all of our customers. We work around the clock to provide top quality drinking water to every tap. We also ask that all of our customers help us protect and conserve our water sources, which are the heart of our community, our way of life, and our children's future. This report is designed to inform you about the quality of your water and services we deliver to you every day (Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien). Our water sources(s) are listed in the table below:

Source Name	Source Water Type	Source Water Body Name
Red River Surface Water Intake	Surface Water	Red River
Raw Water Storage Reservoir	Surface Water	

Our constant goal is to provide you with a safe and dependable supply of drinking water, improve the water treatment process and protect our natural water resources. The U.S. Environmental Protection Agency (USEPA) has determined that water samples taken by the State Department of Health, during the 2018 calendar year, indicate that we meet or exceed all Federal and State Regulations for drinking water standards. Our drinking water is safe. **There were no contaminants detected above maximum action levels and Bossier City had no water quality violations during the 2018 monitoring cycle.**

Please note that all 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 the water poses a health risk. 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).

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. The City of Bossier City 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 or at http://www.epa.gov/safewater/lead.

The Maximum Contamination Level (MCL), as shown in the enclosed tables, is set at very stringent levels. To understand the possible health effects described, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect. In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. In addition, the Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Although all haloacetic acid (HAA5) levels detected within our water system were well below the established MCL for this disinfection byproduct, some people who drink water containing HAA5s in excess of the MCL over many years may have an increased risk of getting cancer. Additionally, even though all trihalomethanes (THM) levels within our water system were also well below the established MCL for this constituent, certain people who drink water containing THMs in excess of the associated MCL over many years may experience problems within their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

We have developed a source water protection plan to eliminate or reduce potential sources of contamination. We ask that all our citizens help us protect our water resources to ensure that we continue to have an adequate, reliable and safe water supply in years to come. We want our valued customers to be informed about their water utility. If you have any questions about this report, want to attend any scheduled meetings, or simply want to learn more about your drinking water, please contact the Bossier Water Treatment Plant Superintendent, Jeremiah Williams at (318) 741-8370.

As a reminder, after hours emergency water or waste water repairs can be reported to (318) 741-8466.

Sincerely,

Lorenz J. Walker

Hon. Lorenz "Lo" Walker
Mayor, City of Bossier City

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DEFINITIONS FOR TABLES

Action Level (AL) - Detection of a constituent in drinking water which concentration equals or exceeds 50% of the HA, MCL, or SMCL and indicates need for further action such as increased monitoring.
Parts per million (ppm) or Milligrams per liter (mg/L) – One part per million corresponds to one minute in two years or a single penny in $10,000.
Parts per billion (ppb) or Micrograms per liter (ug/L) – One part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.
Picocuries per liter *(pCi/L)* –Picocuries per liter is a measure of the radioactivity in water.
Nephelometric Turbidity Unit (NTU) – Nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person. It is a good indicator of the effectiveness of drinking water filtration systems. Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth.
Treatment Technique (TT) – An enforceable procedure or level of technological performance which public water systems must follow to ensure control of a contaminant.
Coliform - Bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present.
Chloramines - Disinfectants used to treat drinking water. They are most commonly formed when ammonia is added to chlorine to treat drinking water. Chloramines provide longer-lasting disinfection as the as the water moves through pipes to consumers. The Centers for Disease Control and Prevention denote that current studies indicate that using or drinking water with small amounts of chloramine does not cause harmful health effects and provides protection against waterborne disease outbreaks. These studies reported no observed health effects from drinking water with chloramine levels of less than 50 ppm in drinking water.
Fecal Coliform and E Coli- Bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some elderly and people with severely compromised immune systems.
Maximum residual disinfectant level (MRDL) – 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.
Action Level (AL) – The concentration of a contaminant that, if exceeded, triggers treatment process or other requirements that a water system must follow.
Maximum contamination level (MCL) – The "Maximum Allowed" MCL is the highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available treatment technology.
Maximum contaminant level goal (MCLG) – The "Goal" is the level of a contaminant in drinking water below which there is no known or expected risk to human health. MCLG's allow for a margin of safety.
Level 1 assessment – A study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.
Level 2 Assessment – A very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.
Standard Unit (SU) & pH – pH is measured on logarithmic scale, ranging from 0 to 14 SU, with 7 SU being a neutral pH.
Fluoride – A compound containing fluorine and another element or radical. It is typically added in drinking water supplies to promote healthy teeth.

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 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. Contaminants that may be present in source water include:

Microbial Contaminants - such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
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.
Pesticides and Herbicides - which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

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

The Louisiana Department of Health - Office of Public Health routinely monitors for constituents in your drinking water according to Federal and State laws. The attached tables show the results of our monitoring during the period of January 1st to December 31st, 2018.

Compliance Period	Analyte	Type
NO VIOLATIONS OCCURRED DURING THE CALENDER YEAR OF 2018		

Our water system tested a minimum of 70 samples per month in accordance with the Total Coliform Rule for microbiological contaminants. With the microbiological samples collected, our water system also collects disinfectant residuals to ensure control of microbial growth. All contaminants were **BELOW** their associated maximum contaminant levels. Samples were collected from our raw water source, the treatment plant and the distribution system. As such, some results could be lower at the consumer tap. In the tables below, we have shown the regulated contaminants that were detected during the monitoring period from January 1st to December 31st 2018 or from the latest historical chemical sampling data available.

Regulated Substance	Collection Date / Period	Highest Value	Range	Unit	MCL	MCLG	Typical Sources
Arsenic	1/23/2018	0.56	0.56	ppb	10	0	Ordinary erosion of natural deposits; Natural runoff from orchards; Natural runoff from glass, as well as electronics production wastes, etc.
Barium	1/23/2018	0.13	0.13	ppm	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Fluoride	1/23/2018	0..55	0.55	ppm	4	4	Ordinary erosion of natural deposits and discharge from fertilizer and aluminum factories.
Nitrate-Nitrite	1/23/2018	0.32	0.32	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks; Erosion of natural deposits.
Selenium	1/23/2018	0.99	0.99	ppb	50	50	Discharge from petroleum and metal refineries. Erosion of natural deposits; Discharge from mines.
Turbidity	2018	0.13	100%	NTU	0.3	N/A	Soil Runoff.

**No turbidity levels exceeded the maximum contaminate level during 2018*

Radionuclides	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Sources
Gross Beta Particle Activity	1/23/2018	3.91	3.91	pCi/L	50	0	Decay of natural and man-made deposits. Note: The gross beta particle activity MCL is 4 millirems/year annual dose equivalent to the total body or any internal organ.50 pCi/L is used as a screening level.

Lead and Copper	Date	90th Percentile	Range	Unit	AL	Sites > AL	Typical Source

Copper, Free	2014-2016	0.4	0.1 - 0.8	ppm	1.3	0	Corrosion of household piping; Erosion of natural deposits. Leaching from wood preservatives.
Lead	2014-2016	1	1 - 3	ppb	15	0	Corrosion of household piping; Erosion of natural deposits.

Disinfection Byproducts	Sample Point	Period	Highest LRAA	Range	Unit	MCL	MCLG	Typical Source
Total Haloacetic Acids (HAA5)	1401 Hamilton	2018	30.1	10.9 – 67.9	ppb	60	0	By-product of drinking water disinfection.
Total Haloacetic Acids (HAA5)	2007 Wakefield	2018	16.8	11.7 – 29.3	ppb	60	0	By-product of drinking water disinfection.
Total Haloacetic Acids (HAA5)	2200 Landau	2018	36.8	3.1 – 65.5	ppb	60	0	By-product of drinking water disinfection.
Total Haloacetic Acids (HAA5)	2223 Kirby Smith	2018	21.3	9.0 – 41.8	ppb	60	0	By-product of drinking water disinfection.
Total Haloacetic Acids (HAA5)	3009 Donald	2018	12.6	4.5 – 24.0	ppb	60	0	By-product of drinking water disinfection.
Total Haloacetic Acids (HAA5)	Barksdale @ RR WWTP	2018	15.3	3.6 – 27.7	ppb	60	0	By-product of drinking water disinfection.
Total Haloacetic Acids (HAA5)	Hwy 80 @ SWEPCO Pole #79	2018	19.7	12.8 – 37.5	ppb	60	0	By-product of drinking water disinfection.
Total Haloacetic Acids (HAA5)	N Willow @ Airline	2018	16.7	12.3 – 27.2	ppb	60	0	By-product of drinking water disinfection.
TTHM	1401 Hamilton	2018	52.2	10.1 – 138.2	ppb	80	0	By-product of drinking water chlorination.
TTHM	2007 Wakefield	2018	53.9	18.7 - 112.4	ppb	80	0	By-product of drinking water chlorination.
TTHM	2200 Landau	2018	41.2	14.6 – 115.9	ppb	80	0	By-product of drinking water chlorination.
TTHM	2223 Kirby Smith	2018	33.7	13.2 - 83.8	ppb	80	0	By-product of drinking water chlorination.
TTHM	3009 Donald	2018	25.1	12.8 – 57.6	ppb	80	0	By-product of drinking water chlorination.
TTHM	Barksdale @ RR WWTP	2018	24.2	0.0 – 68.0	ppb	80	0	By-product of drinking water chlorination.
TTHM	Hwy 80 @ SWEPCO Pole #79	2018	32.9	13.0 – 82.4	ppb	80	0	By-product of drinking water chlorination.
TTHM	N Willow @ Airline	2018	29.1	9.7 - 72.1	ppb	80	0	By-product of drinking water chlorination.

**The values in the "Highest LRRA" column represent the highest locational running annual average*

Regulated Substance	Period	Result	Unit	Range	MRDL or MCL	MRDLG or MCLG	Typical Source
Chloramines	2018	2.5	ppm	0.7 - 4.0	4.0	4.0	Disinfectant used to help control microbes.
Bromate	2018	<2.5	ppb	<2.5 - 3.6	10	10	By-product of drinking water disinfection.

**The values in the "Result" column represents the highest running annual arithmetic average, computed quarterly, of monthly samples. Some people who drink water containing bromate in excess of the MCL over many years may have an increased risk of getting cancer.*

Secondary Contaminants	Collection Date	Highest Value	Range	Unit	SMCL
Chloride	4/12/2016	48.9	48.9	MG/L	250
Manganese	1/23/2018	0.013	0.013	MG/L	0.05
pH	4/12/2016	7.4	7.4	SU	8.5
Sulfate	4/12/2016	36.2	36.2	MG/L	250
Zinc	1/23/2018	0.21	0.21	MG/L	5

The Bossier City Water System also conducted monthly source water monitoring for Cryptosporidium from January 2017 through September 2017. Cryptosporidium was not detected in any of the samples.