CITY OF BOSSIER CITY

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

May 05, 2017

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 2016

We are pleased to present to you the Annual Water Quality Report for the year 2016. 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 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 Board of Health, during the 2016 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 2016 monitoring cycle.

Our water source is the Red River. We are fortunate that the Red River has an adequate supply of water for the needs of our community. We continually monitor the treatment process and water quality tests are conducted every hour to insure the best water quality for our customers. Fluoride is added to your water supply to assist in the prevention of dental decay.

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 individuals undergoing chemotherapy, organ transplants, people with HIV/AIDS or 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, 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.

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) 741-8371.

Sincerely,

Lorenz J. Walker

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

Attachments (2)
Definitions
Table 1

DEFINITIONS

The following definitions are provided to help you better understand the terms and abbreviations in the attached tables.

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.
Treatment Technique (TT) – an enforceable procedure or level of technological performance which public water systems must follow to ensure control of a contaminant.
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.*

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.

TABLE 1

The Louisiana Department of Health and Hospitals - Office of Public Health routinely monitors for constituents in your drinking water according to Federal and State laws. The attached tables also show the results of our monitoring during the period of January 1st to December 31st, 2016.

During the period covered by this report we had the below noted violations of drinking water regulations.

Compliance Period	Analyte	Type
No Violations Occurred in the Calendar Year of 2016		

Our water system tested a minimum of 70 samples per month on a monthly basis, in accordance with the Total Coliform Rule for microbiological contaminants. During the monitoring period covered by this report, we had the following noted detections for microbiological contaminants:

Microbial	Result	MCL	MCLG	Typical Source
[1]COLOIFORM (TCR)	In the month of September, 6.58% of samples returned as positive	MCL: Systems that Collect 40 or More Samples per Month - No more than 5% positive monthly samples	0	Naturally present in the environment

In the tables below, we have shown the regulated contaminants that were detected. All levels are BELOW their maximum contaminant level. 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. This table displays the results of the highest levels of compounds detected during the monitoring period from January 1st to December 31st 2016 or the latest historical chemical sampling data available.

Regulated Contaminants	Collection Date	Highest Value	Range	Unit	MCL	MCGL	Typical Sources
ARSENIC	4/12/2016	0.6	0.6	ppb	10	0	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
BARIUM	4/12/2016	0.087	0.087	ppm	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
FLUORIDE	4/12/2016	0.62	0.62	ppm	4	4	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
NITRATE-NITRITE	4/12/2016	0.22	0.22	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks; Erosion of natural deposits.
GROSS BETA PARTICLE ACTIVITY	4/12/2016	3.08	3.08	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 Over (AL)	Typical Source
LEAD, FREE	2014 - 2016	0.4	0.1-0.8	ppm	1.3	0	Corrosion of household pipe; Erosion of natural deposits. Leaching from wood preservatives.
LEAD	2014 - 2016	1	1 - 3	ppb	15	0	Corrosion of household pipe; Erosion of natural deposits.

Regulated Contaminants	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
[2] TURBIDITY	4/11/2016	0.11	0.03 - 0.11	NTU	0.3	0.3	Soil runoff

**No turbidity levels exceeded the maximum contaminate level during the year 2016. 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. The major sources of turbidity include soil runoff.*

Regulated Contaminants	Collection Date	Lowest % Value	Range	Unit	MCL	MCLG	Typical Source
TURBIDITY	N/A	100	N/A	NTU	0.3	0.3	Soil runoff

Month	Highest Finished/Combined Effluent Turbidity Data For The Month
January	.06
February	.06
March	.07
April	.11
May	.08
June	.07
July	.06
August	.06
September	.05
October	.04
November	.04
December	.04

Month	Total # of Samples	Turbidity Limit	# of Samples Above Turbidity	Monthly % of Samples Meeting the Turbidity Limit
January	186	0.3	0	100%
February	168	0.3	0	100%
March	186	0.3	0	100%
April	180	0.3	0	100%
May	186	0.3	0	100%
June	180	0.3	0	100%
July	186	0.3	0	100%
August	186	0.3	0	100%
September	180	0.3	0	100%
October	186	0.3	0	100%
November	180	0.3	0	100%
December	186	0.3	0	100%

Disinfection By-Products	Sample Point	Period	Highest LRAA	Range	Unit	MCL	MCLG	Typical Source
Total Haloacetic Acids (HAA5)	2007 WAKEFIELD	2016	9	7.3 - 9.7	ppb	60	0	By-product of drinking water disinfection
Total Haloacetic Acids (HAA5)	2200 LANDAU	2016	11	7.1 - 12	ppb	60	0	By-product of drinking water disinfection
Total Haloacetic Acids (HAA5)	2223 KIRBY SMITH	2016	9	7.8 - 11.3	ppb	60	0	By-product of drinking water disinfection
Total Haloacetic Acids (HAA5)	3009 DONALD	2016	10	4.7 - 12.7	ppb	60	0	By-product of drinking water disinfection
Total Haloacetic Acids (HAA5)	BARKSDALE@ RR WWTP	2016	10	7.8 - 11.2	ppb	60	0	By-product of drinking water disinfection
Total Haloacetic Acids (HAA5)	HWY 80@SWEPCO POLE #79	2016	10	6.9 - 11.8	ppb	60	0	By-product of drinking water disinfection
Total Haloacetic Acids (HAA5)	N WILLOW AT AIRLINE	2016	10	7.9 - 11.7	ppb	60	0	By-product of drinking water disinfection
Total Haloacetic Acids (HAA5)	POE 1401 HAMILTON	2016	8	6.9 - 8.5	ppb	60	0	By-product of drinking water disinfection
TTHM	2007 WAKEFIELD	2016	11	7.5 - 18.3	ppb	80	0	By-product of drinking water chlorination
TTHM	2200 LANDAU	2016	12	7.6 - 20.1	ppb	80	0	By-product of drinking water chlorination
TTHM	2223 KIRBY SMITH	2016	11	8 - 17	ppb	80	0	By-product of drinking water chlorination
TTHM	3009 DONALD	2016	10	7.2 - 14.3	ppb	80	0	By-product of drinking water chlorination
TTHM	BARKSDALE@ RR WWTP	2016	11	7.4 - 15.8	ppb	80	0	By-product of drinking water chlorination
TTHM	HWY 80@SWEPCO POLE #79	2016	12	8.4 - 17.7	ppb	80	0	By-product of drinking water chlorination
TTHM	N WILLOW AT AIRLINE	2016	12	7.4 - 22.4	ppb	80	0	By-product of drinking water chlorination
TTHM	POE 1401 HAMILTON	2016	8	6.1 - 11.8	ppb	80	0	By-product of drinking water chlorination

Contaminant	Date	Result	Unit	Range	MRDL or MCL	MRDLG or MCLG	Typical Source
Chloramines	2016	2.7	Ppm	2.9 - 4.0	4.0	4.0	Water additive used to control microbes
Bromate	2016	<2.5	Ppb	<2.5 - 3.5	10	10	By-product of drinking water disinfection

**The values in the "Result" column represent the highest running annual arithmetic average, computed quarterly, of monthly samples*

Secondary Contaminants	Collection Date	Your Highest Value	Range	Unit	SMCL
ALUMINUM	3/9/2015	0.015	0.015	MG/L	0.05
CHLORIDE	4/12/2016	48.9	48.9	MG/L	250
MANGANESE	4/12/2016	0.016	0.016	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	4/12/2016	0.43	0.43	MG/L	5

The Bossier City Water System also conducted monthly source water monitoring for Cryptosporidium (Crypto) from January 2016 through December 2016. Crypto was not detected in any of the twelve samples.

Cryptosporidium is a microbial parasite found in surface water throughout the U.S. Although filtration removes Cryptosporidium, the most common filtration methods cannot guarantee 100 percent removal. Our monitoring indicates the presence of these organisms in our source water. Current test methods do not allow us to 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, immuno-compromised people, infants and small children, and the elderly are at greater risk of developing life-threatening illness. We encourage immuno-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.

[1] Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment to identify problems and to correct any problems that were found during these assessments. In 2016, we were required to conduct one Level 1 assessment and one Level 1 assessment was completed. Within the same year, one Level 2 assessment was also required to be completed for our water system and one Level 2 assessment was completed.

[2] 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. The major sources of turbidity include soil runoff.