

## The Water We Drink

NATCHITOCHEs WATER SYSTEM  
Public Water Supply ID: LA1069007

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. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water.

Our water source(s) are listed below:

Source Name	Source Water Type	Source Water Body Name
SIBLEY LAKE INTAKE	SURFACE WATER	SIBLEY LAKE

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.

A Source Water Assessment Plan (SWAP) is now available from our office. This plan is an assessment of a delineated area around our listed sources through which contaminants, if present, could migrate and reach our source water. It also includes an inventory of potential sources of contamination within the delineated area, and a determination of the water supply's susceptibility to contamination by the identified potential sources. According to the Source Water Assessment Plan, our water system had a susceptibility rating of 'HIGH'. If you would like to review the Source Water Assessment Plan, please feel free to contact our office.

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. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health. 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 LEE POSEY at 318-357-3850.

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. NATCHITOCHEs 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 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 tables that follow show the results of our monitoring during the period of January 1st to December 31st, 2016. 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.

In the tables below, you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms, we've provided the following definitions:

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 (pCiL) – 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.

Action level(AL) – the concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.

Maximum contaminant 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. MCLGs allow for a margin of safety.

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.

Maximum residual disinfectant level goal (MRDLG) – 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.

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.

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		

Secondary Contaminants	Collection Date	Your Highest Value	Range	Unit	SMCL
ALUMINUM	3/9/2015	0.2	0.2	MG/L	0.05
CHLORIDE	4/12/2016	10.2	10.2	ML/L	250
MANGANESE	4/12/2016	0.062	0.062	MG/L	0.05
PH	4/12/2016	6.6	6.6	SU	8.5
SULFATE	4/12/2016	37.5	37.5	MG/L	250
ZINC	4/12/2016	0.078	0.078	MG/L	5

\*\*\*\*\*Environmental Protection Agency Required Health Effects Language\*\*\*\*\*

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).

Additional Required Health Effects Language:

Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

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.

There are no additional required health effects violation notices.

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(s) to identify problems and to correct any problems that were found during these assessments.

During the past year we were required to conduct one Level 1 assessment(s). One Level 1 assessment(s) were completed.

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DISINFECTATION: The City of Natchitoches uses Chloramines as a disinfectant. We monitor 45 sites throughout the system.

Chloramines were used to control microbes.

Average Chlorine residuals in our distribution system:

January	February	March	April	May	June
<b>2.8 mg/l</b>	<b>3.1 mg/l</b>	<b>2.9 mg/l</b>	<b>2.3 mg/l</b>	<b>2.7 mg/l</b>	<b>2.0 mg/l</b>
July	August	September	October	November	December
<b>2.8 mg/l</b>	<b>2.7 mg/l</b>	<b>2.6 mg/l</b>	<b>2.8 mg/l</b>	<b>3.2 mg/l</b>	<b>2.5 mg/l</b>

Quarterly average Chloramines residual:

1 <sup>st</sup> Quarter	2 <sup>nd</sup> Quarter	3 <sup>rd</sup> Quarter	4 <sup>th</sup> Quarter	Quarterly RRA
<b>2.9 mg/l</b>	<b>2.3 mg/l</b>	<b>2.7 mg/l</b>	<b>2.8 mg/l</b>	<b>2.67 mg/l</b>

Our water system tested a minimum of 30 samples per month 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:

Microbiological	Result	MCL	MCLG	Typical Source
COLIFORM (TCR)	In the month of September, 2 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

In the tables below, we have shown the regulated contaminants that were detected. Chemical Sampling of our drinking water may not be required on an annual basis; therefore, information provided in this table refers back to the latest year of chemical sampling results.

Regulated Contaminants	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
BARIUM	4/12/2016	0.049	0.049	ppm	2	2	Discharge of drilling waste; Discharge from metal refineries; Erosion of natural deposits
FLUORIDE	4/12/2016	0.48	0.48	ppm	4	4	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
NITRATE-NITRITE	4/12/2016	0.11	0.11	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

Radionuclides	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
GROSS BETA PARTICLE ACTIVITY	4/12/2016	1.73	1.73	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	90 <sup>TH</sup> Percentile	Range	Unit	AL	Sites Over AL	Typical Source
COPPER, FREE	2012 - 2014	0.3	0.1 - 0.4	ppm	1.3	0	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
LEAD	2012- 2014	2	1 - 22	ppb	15	1	Corrosion of household plumbing systems; Erosion of natural deposits

Disinfection Byproducts	Sample Point	Period	Highest LRAA	Range	Unit	MCL	MCLG	Typical Source
TOTAL HALOACETIC ACIDS (HAAS)	109 MORGAN LANE	2016	55	15.7 - 54.3	ppb	60	0	By-product of drinking water disinfection
TOTAL HALOACETIC ACIDS (HAAS)	4383 HWY 1	2016	49	18.8 - 63.2	ppb	60	0	By-product of drinking water disinfection
TOTAL HALOACETIC ACIDS (HAAS)	COLLEGE AVE	2016	52	15.1 - 48.7	ppb	60	0	By-product of drinking water disinfection
TOTAL HALOACETIC ACIDS (HAAS)	WTP 24 EFFLUENT	2016	52	13.8 - 49.9	ppb	60	0	By-product of drinking water disinfection
TTHM	109 MORGAN LANE	2016	31	11.6 - 31.5	ppb	80	0	By-product of drinking water chlorination
TTHM	4383 HWY 1	2016	33	12.3 - 33.1	ppb	80	0	By-product of drinking water chlorination
TTHM	COLLEGE AVE	2016	31	12.4 - 30.5	ppb	80	0	By-product of drinking water chlorination
TTHM	WTP 24 EFFLUENT	2016	31	11.8 - 29.2	ppb	80	0	By-product of drinking water chlorination

Chloramine MRDL	Highest running annual arithmetic average, Computed quarterly, of monthly samples.	Some people who use water containing chloramines well in excess of the MRDL could experience irritating effects to their eyes and nose. Some could experience stomach discomfort or anemia.
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Contaminates	Date	Result	Unit	Range	MCL	MCLG	Typical Source
Chloramines	2016	2.7	Mg/l	.5 - 4.0	4	4	Water additive used to control microbes.

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 Contaminates	Collection Date	Highest Value	Range	Unit	MCL	Typical Source
<b>Turbidity</b>	<b>2016</b>	<b>.29</b>	<b>0.08 - 0.29</b>	<b>NTU</b>	<b>0.30</b>	<b>Soil Runoff</b>

Regulated Contaminates	Collection Date	Lowest Percentage Value	Range	Unit	MCL	Typical Source
<b>Turbidity</b>	<b>2016</b>	<b>100%</b>	<b>100%</b>	<b>NTU</b>	<b>0.3</b>	<b>Soil Runoff</b>

**NOTE:** Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that cause symptoms, such as nausea, cramps, diarrhea, and associated headaches.

Regulations on Turbidity Limits:

\*from 40 CFR, Part 141.73 and 141.173 – Turbidity requirements for Surface Water Systems that filter by:

**Conventional filtration treatment or direct filtration:** the turbidity level of representative samples of a system's filtered water must be less than or equal to a 0.3 NTU in at least 95 percent of the measurements taken. The turbidity level of representative samples of a system's filtered water must not exceed 1 NTU.

#### Cryptosporidium Data

City of Natchitoches water system conducted monthly source water monitoring Cryptosporidium (crypto) from October to December 2016. Crypto was NOT DETECTED.

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 no presence of these organisms in our source water.

Ingestion of the Cryptosporidium may cause an abdominal infection. Most healthy individuals can overcome the disease within a few weeks. However, immune compromised individuals, infants, small children and the elderly are at greater risk of developing life-threatening illness. Cryptosporidium must be ingested to cause disease and it may be spread through means other than drinking water.

We are still monitoring for Crypto at this time. There has been NO DETECTION in 2017.

Thank you for allowing us to continue to provide 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 at NATCHITOCHEs WATER SYSTEM work around the clock to provide top quality drinking water to every tap. We ask that all of our customers help us protect and conserve our water resources, which are the heart of our community, our way of life, and our children's future. Please call our office if you have any questions.