CITY OF LAKE JACKSON
2016 Drinking Water Quality Report

Public Water System Name: City of Lake Jackson
Year this report covers: 2016
Public Water System ID Number: TX0200006

PUBLIC PARTICIPATION OPPORTUNITIES

Please contact **Dan McGraw**, Superintendent of Utilities, at **(979) 415-2680** with any questions regarding this water quality report.

EN ESPAñOL

Este reporte incluye información importante sobre el agua para tomar. Para asistencia en español, favor de llamar al teléfono (**979) 415-2680**.

OUR DRINKING WATER MEETS ALL FEDERAL (EPA) DRINKING WATER REQUIREMENTS

This report is intended to provide you with important information about your drinking water and the efforts made by the water system to provide safe drinking water. The analysis was made by using the data from the most recent U.S. Environmental Protection Agency (EPA) required tests and is presented in the attached pages. We hope this information helps you become more knowledgeable about what's in your drinking water.

HEALTH INFORMATION

You may be more vulnerable than the general population to certain microbial contaminants, such as Cryptosporidium, in drinking water. Infants, some elderly or immunocompromised persons such as those undergoing chemotherapy for cancer; those who have undergone organ transplants; those who are undergoing treatment with steroids; and people with HIV/AIDS or other immune system disorders can be particularly at risk from infections. You should seek advice about drinking water from your physician or health care provider. Additional guidelines or appropriate means to lessen the risk of infection by Cryptosporidium are available from the **Safe Drinking Water Hotline at (800) 426-4791**.

WATER SOURCE/WATER ASSESSMENT

City of Lake Jackson serves about 26,849 people. The water supply comes from 12 groundwater wells and surface water purchased from Brazosport Water Authority (BWA). Our drinking water is withdrawn from the **Gulf Coast/Chicot Aquifer** and the surface water is obtained from the **Brazos Water Authority (Harris Reservoir)**. TCEQ completed an assessment of our source water and results indicate that some of our sources are susceptible to certain contaminants. The sampling requirements for our water system are based on this susceptibility and previous sample data. Any detection of these contaminants may be found in this Consumer Confident Report. For more information on source water assessments and protection efforts at our system, contact **Dan McGraw** with the City of Lake Jackson **(979) 415-2680**.

Source Water Name	Type of water	Location	Report Status
Well # 4	Ground Water	101 Oyster Creek Drive	Active
Well # 5	Ground Water	6 Oak Drive	Active
Well # 7	Ground Water	103 Beechwood	Active
Well # 8	Ground Water	302 Magnolia	Active
Well # 9	Ground Water	334 Circle Way	Active
Well # 10	Ground Water	709 Yaupon	Active
Well # 11	Ground Water	711 Yaupon	Active
Well # 12	Ground Water	705 Yaupon	Active
Well # 14	Ground Water	101 Cottonwood	Active
Well # 15	Ground Water	319 Balsam	Active
Well # 16	Ground Water	102 Yaupon	Active
Well # 17	Ground Water	889 FM 2004 Hwy	Active
SW From Brazosport Water Authority	Surface Water	103 Beechwood	Active
SW From Brazosport Water Authority	Surface Water	6 Oak Drive	Active

For more information about your sources of water, please refer to the Source Water Assessment Viewer available at the following URL: http://dww2.tceq.texas.gov/DWW/

ALL DRINKING WATER MAY CONTAIN CONTAMINANTS

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 may be found in drinking water that may cause taste, color, or odor problems. These types of problems are not necessarily causes for health concerns. For more information on taste, odor, or color of drinking water, please contact the system's business office.

In order to ensure that tap water is safe to drink, the EPA prescribes regulations that 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 that must provide the same protection for public health.

ALL DRINKING WATER MAY CONTAIN CONTAMINANTS

The sources of drinking water (both tap water and bottle water) include rivers, lakes, streams, ponds, reservoirs, springs, and 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.

Contaminants that may be present in source water (water before treatment) include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic system, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, which might have a variety of sources such as agriculture, urban storm water 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 storm water runoff, and septic systems.
- Radioactive contaminants, which can be naturally occurring or the result of oil and gas production and mining activities.

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Contaminants may be found in drinking water that may cause taste, color or odor problems. These types of problems are not necessarily causes for health concerns. For more information on taste, odor or color of drinking water, please contact **Dan McGraw** with the City of Lake Jackson **(979) 415-2680**.

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ABOUT THE FOLLOWING PAGES

The pages that follow list all the federally regulated or monitored constituents which have been found in your drinking water. U.S. EPA requires water systems to test up to 97 constituents.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing.

The City of Lake Jackson 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, and exposure is available from the Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead.

DEFINITIONS/ ABBREVATIONS

Maximum Contaminant Level (MCL) - The highest permissible level of a contaminant in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG) - The level of a contaminant in drinking water below which there is no known or expected health risk. MCLGs allow for a margin of safety.

Maximum Residual Disinfectant Level (MRDL) - The highest level of 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 contamination.

Average (Avg) - Regulatory compliance with some MCLs are based on running annual average of monthly samples.

Action Level Goal (ALG) - The level of a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety.

Action Level - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

mrem / year: millirems per year (a measure of radiation absorbed by the body)
na: not applicable

NTU - Nephelometric Turbidity Units

MFL - million fibers per liter (a measure of asbestos)

pCi/L - picocuries per liter (a measure of radioactivity)

ppm - parts per million, or milligrams per liter (mg/l)

ppb - parts per billion, or micrograms per liter (ug/1)

ppt - parts per trillion, or nanograms per liter

ppq - parts per quadrillion, or picograms per liter

Groundwater

Coliform Bacteria

Maximum Contaminant Level Goal	Total Coliform Maximum Contaminant Level	Highest No. of Positive	Fecal Coliform or E. Coli Maximum Contaminant Level	Total No. of Positive E. Coli or Fecal Coliform Samples	Violation	Likely Source of Contamination
0	1 positive monthly sample	1		0	N	Naturally present in the environment

Lead and Copper

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	2016	1.3	1.3	1.1	3	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	2016	0	15	2	0	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

Regulated Contaminants

Disinfectants and Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Haloacetic Acids (HAA5)*	2016	9	1.2-20.5	No goal for the total	60	ppb	N	By-product of drinking water chlorination.
Total Trihalomethanes (TTHM)*	2016	12	0-20.4	No goal for the total	80	ppb	N	By-product of drinking water chlorination.

*Not all sample results may have been used for calculating the Highest Level Detected because some results may be part of an evaluation to determine where compliance sampling should occur in the future.

Inorganic Contaminants

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Arsenic	01/21/2015	2.2	2.2-2.2	0	10	ppb	N	Erosion of natural deposits; Runoff from orchards; runoff from glass and electronics production wastes.
Barium	01/21/2015	0.28	0.28-0.28	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; erosion of natural deposits.
Cyanide	02/13/2014	70	0-70	200	200	ppb	N	Discharge from plastic and fertilizer factories; Discharge from steel/metal factories.
Fluoride	01/21/2015	0.53	0.53-0.53	4	4.0	ppm	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate** (measured as Nitrogen)	2016	0.3	0-0.3	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Nitrite (measured as Nitrogen)	01/21/2015	0.03	0-0.03	1	1	ppm	N	Runoff from fertilizer use; leaching from septic tanks; sewage; Erosion from natural deposits.

<u>Nitrate Advisory</u>** – Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask advice from your heath care provider.

Radioactive Contaminants

Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Combined Radium 226-228	05/01/12	1.9	1.9-1.9	0	5	pCi/L	N	Erosion of natural deposits.
Gross alpha excluding radon and uranium	02/13/2014	2.8	2.8-2.8	0	15	pCi/L	N	Erosion of natural deposits.

Yearly Disinfectant Level

Average of all chlorine Residuals for the year 2016	Lowest of all chlorine Residuals for the year 2016	Highest of all chlorine Residuals for the year 2016
mg/L	mg/L	mg/L
1.76	0.37	3.48

Type of Disinfectant Used in Distribution System: Chloramines (Total Chlorine)

Secondary and Other Not Regulated Constituents (No associated adverse health effects)

Violations Table

Violation Type	Violation Begin	Violation End	Violation Explanation
LEAD CONSUMER NOTICE (LCR)	03/31/2016	05/19/2016	We failed to provide the results of lead tap water monitoring to the consumers at the location water was tested. These were supposed to be provided no later than 30 days after learning the results. The Lead and Copper Rule protects public health by minimizing lead and copper levels in drinking water, primarily by reducing water corrosivity. Lead and copper enter drinking water mainly from corrosion of lead and copper containing plumbing materials.
The City of Lake Jackson has a corrosion control program treating our water with zinc orthophosphate to prevent copper action level (AL) exceedances.			

Water Loss

Water Loss in Million Gallons (MG)	Explanation of Water Loss
34 MG	Water loss in a water distribution system is due to a number a reasons, including; Fire Fighting, water system flushing, hydrant flushing, system and leaks including water main breaks.

SURFACEWATER

Regulated Contaminants

Disinfectants and Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chlorite	2016	0.84	0.09-0.84	0.8	1	ppm	N	By-product of drinking water disinfection.
Haloacetic Acids (HAA5)	2016	10	10-10	No goal for the total	60	ppb	N	By-product of drinking water chlorination.
Total Trihalomethanes (TTHM)	2016	16	15.9-15.9	No goal for the total	80	ppb	N	By-product of drinking water chlorination.

Inorganic Contaminants

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Barium	2016	0.0877	0.0877-0.0877	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; erosion of natural deposits.
Cyanide	2016	20	0-20	200	200	ppb	N	Discharge from plastic and fertilizer factories; Discharge from steel/metal factories.
Fluoride	2016	0.1	0.14-0.14	4	4.0	ppm	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate (measured as Nitrogen)	2016	1	0.77-0.77	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

Radioactive Contaminants

Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Beta/photon emitters	01/21/2015	4.6	4.6-4.6	0	50	pCi/L	N	Decay of natural and man-made deposits.
Combined Radium 226/228	01/21/2015	1.5	1.5-1.5	0	5	pCi/L	N	Erosion of natural deposits.

*EPA considers 50 pCi/L to be the level of concern for beta particles.

Synthetic Organic Contaminants

Synthetic Organic Contaminants including pesticides and herbicides	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Atrazine	2016	0.32	0.32-0.32	3	3	ppb	N	Runoff from herbicide used on row crops.

Turbidity

Turbidity	Limit (Treatment Technique)	Level Detected	Violation	Likely Source of Contamination
Highest single measurement	1 NTU	0.34	N	Soil runoff.
Lowest monthly % meeting limit	0.3 NTU	100%	N	Soil runoff.

Total Organic Carbon

The percentage of Total Organic Carbon (TOC) removal was measured each month and the system met all TOC removal requirements set, unless a TOC violation is noted in the violations section.

Water Conservation Tips

In the Bathroom:

1. Take a five-minute shower instead of a bath.
   Amount saved: 15 gallons per shower
2. Don't use toilets as a wastebasket, flush only when you need to.
   Amount saved: 12 or more gallons per day
3. When brushing teeth, use a glassful of water instead of running the tap.
   Amount saved: 3 or more gallons per brushing.
4. When taking a bath, don't run the water without closing the drain first. The warm water that comes after running the tap for a while will take care of that first cold burst of water.

In the Kitchen:

1. When washing dishes by hand, fill up the sink with soap and water instead of running the water the whole time. *Amount saved: 25 gallons per load*
2. Keep a pitcher of water in the refrigerator when you want a drink instead of running the tap until the water cools. *Amount saved: 2 gallons per drink*
3. Thaw frozen foods in the refrigerator, not under running tap water. Amount saved: 5 or more gallons per meal
4. Start a compost pile as an alternative to using a kitchen sink garbage disposal.

Outside around your home:

1. Water your lawn during the early morning hours when there are low temperatures and low winds. This reduces the amount of water you lose from evaporation.
2. Position your sprinklers to water only the lawn, not the sidewalk or street.
3. Don't waste water hosing down your driveway or sidewalk.
   Amount saved: 25 gallons every five minutes not using hose
4. Drive your car over your lawn when washing to save on watering it, or use a commercial car wash that recycles water.
5. Don't over water your lawn during the summer, as a general rule it only needs to be watered every 5-7 days during this time.

Check out our website at www.lakejacksontx.gov for more information