

# Annual Drinking Water Quality Report

TX0200005

CITY OF FREEPORT

Annual Water Quality Report for the period of January 1 to December 31, 2015

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.

For more information regarding this report contact:

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CITY OF FREEPORT is Purchased Surface Water

Este reporte incluye información importante sobre el agua para tomar. Para asistencia en español, favor de llamar al telefono (979) 233-3526.

## Sources of Drinking Water

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 the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pickup substances resulting from the presence of animals or from human activity.

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 EPAs Safe Drinking Water Hotline at (800) 426-4791.

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 storm water 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 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 be the result of oil and gas production and mining activities.

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. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

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.

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; persons 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 providers. Additional guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* 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. We are responsible for providing high quality drinking water, but we 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>.

## Information about Source Water Assessments

A Source Water Susceptibility Assessment for your drinking water source(s) is currently being updated by the Texas Commission on Environmental Quality. This information describes the susceptibility and types of constituents that may come into contact with your drinking water source based on human activities and natural conditions. The information contained in the assessment allows us to focus source water protection strategies.

For more information about your sources of water, please refer to the Source Water Assessment Viewer available at the following URL: <http://gis3.tceq.state.tx.us/swav/Controller/index.jsp?wtrsrc=>

Further details about sources and source-water assessments are available in Drinking Water Watch at the following URL: <http://dww.tceq.texas.gov/DWW>

Source Water Name	Type of Water	Report Status	Location
11 - CALDWELL	GW	__A__	_Chicot Aquifer, Brazoria County_____
6 - 8TH / MESQUITE	8TH / MESQUITE GW	__A__	_Chicot Aquifer, Brazoria County_____
SW FROM BRAZOSPORT WA	CC FROM TX0200497 SW	__A__	_Chicot Aquifer, Brazoria County_____
SW FROM BRAZOSPORT WA	CC FROM TX0200497 SW	__A__	_Chicot Aquifer, Brazoria County_____

**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**

Definitions:

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.

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
<b>Copper</b>	08/23/2013	1.3	1.3	0.134	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
<b>Lead</b>	08/23/2013	0	15	1.03	0	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

**Water Quality Test Results**

- Definitions: The following tables contain scientific terms and measures, some of which may require explanation.
- Avg: Regulatory compliance with some MCLs are based on running annual average of monthly samples.
- Maximum Contaminant Level or MCL: 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.
- Maximum Contaminant Level Goal or MCLG: 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.
- Maximum residual disinfectant level or 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.

## Water Quality Test Results

Maximum residual disinfectant level goal or 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.
MFL	million fibers per liter (a measure of asbestos)
na:	not applicable.
NTU	nephelometric turbidity units (a measure of turbidity)
pCi/L	picocuries per liter (a measure of radioactivity)
ppb:	micrograms per liter or parts per billion - or one ounce in 7,350,000 gallons of water.
ppm:	milligrams per liter or parts per million - or one ounce in 7,350 gallons of water.
ppt	parts per trillion, or nanograms per liter (ng/L)
ppq	parts per quadrillion, or picograms per liter (pg/L)

**Regulated Contaminants**

<b>Disinfectants and Disinfection By-Products</b>	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
<b>Haloacetic Acids (HAA5)*</b>	2015	16	3.6 - 29.9	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
<b>Total Trihalomethanes (TTHM)</b>	2015	29	8.7 - 26.7	No goal for the total	80	ppb	N	By-product of drinking water disinfection.
<b>Inorganic Contaminants</b>	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
<b>Arsenic</b>	04/26/2011	2.8	2.2 - 2.8	0	10	ppb	N	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
<b>Barium</b>	04/26/2011	0.15	0.146 - 0.15	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
<b>Fluoride</b>	04/26/2011	0.53	0.48 - 0.53	4	4.0	ppm	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
<b>Nitrate [measured as Nitrogen]</b>	2015	1	0.25 - 1.3	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
<b>Nitrite [measured as Nitrogen]</b>	2015	0.3	0 - 0.3	1	1	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
<b>Radioactive Contaminants</b>	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
<b>Beta/photon emitters</b>	04/26/2011	5.7	5.3 - 5.7	0	50	pCi/L*	N	Decay of natural and man-made deposits.
<b>Combined Radium 226/228</b>	04/26/2011	1	1 - 1	0	5	pCi/L	N	Erosion of natural deposits.
<b>Synthetic organic contaminants including pesticides and herbicides</b>	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination

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

<b>Atrazine</b>	04/26/2011	0.32	0.18 - 0.32	3	3	ppb	N	Runoff from herbicide used on row crops.
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Chemical Used	Average Level of Quarterly Data	Lowest Result of a Single Sample	Highest Result of a Single Sample	MRDL	MRDLG	Units	Violation	Source of Chemical
<b>Chlorine</b>	1.21	0.36	2.70	4.0	<4.0	Mg/L	N	Disinfectant used to control microbes.

### Violations Table

<b>Public Notification Rule</b>			
The Public Notification Rule helps to ensure that consumers will always know if there is a problem with their drinking water. These notices immediately alert consumers if there is a serious problem with their drinking water (e.g., a boil water emergency).			
Violation Type	Violation Begin	Violation End	Violation Explanation
PUBLIC NOTICE RULE LINKED TO VIOLATION	02/12/2014	2015	We failed to adequately notify you, our drinking water consumers, about a violation of the drinking water regulations.

### Regulated Contaminants for Brazosport Water Authority (PWS 0200497)

Disinfectants and Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
<b>Haloacetic Acids (HAA5)*</b>	2015	31	31.3-31.3	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
<b>Total Trihalomethanes (TTHM)</b>	2015	19	18.6-18.6	No goal for the total	80	ppb	N	By-product of drinking water disinfection.
<b>Chlorite</b>	2015	0.88	0.25-0.88	No goal for the total	80	ppb	N	By-product of drinking water disinfection.
Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
<b>Cyanide</b>	2015	90	0-90	200	200	ppb	N	Discharge from plastic and fertilizer factories; Discharge from steel/metal factories.
<b>Barium</b>	2015	0.08	0.08-0.08	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
<b>Fluoride</b>	2015	<0.1	<0.1-<0.1	4	4.0	ppm	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
<b>Nitrate [measured as Nitrogen]</b>	2015	0.66	0.66-0.66	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Beta/photom emitters	01/21/2015	4.6	4.6-4.6	0	50	pCi/L*	N	Decay of natural and man-made deposits.

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

Gross alpha excluding radon and uranium	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
	01/21/2015	<3	<3-<3	0	15	pCi/L	N	Erosion of natural deposits.
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	2015	<0.1	<0.1-<0.1	3	3	ppb	N	Runoff from herbicide used on row crops.
Di (2-ethylhexyl) phthalate	2015	0	0-0	0	6	Ppb	N	Discharge from rubber and chemical factories.

### Turbidity

	Limit (Treatment Technique)	Level Detected	Violation	Likely Source of Contamination
Highest single measurement	1 NTU	0.35 NTU	N	Soil runoff
Lowest monthly % meeting limit	0.3 NTU	100%	N	Soil runoff

Information Statement: Turbidity is a measurement of the cloudiness of the water caused by suspended particles. We monitor it because it is a good indicator of water quality and the effectiveness of our filtration.

The TCEQ has completed a Source Water Assessment for all drinking water systems that own their sources. The report describes the susceptibility and types of constituents that may come into contact with your drinking water source based on human activities and natural conditions. The system(s) from which we purchase our water received the assessment report. For more information on source water assessments and protection efforts at our system, contact Jerry Meeks at 979-233-4281.



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