



# 2016 Drinking Water Quality Report

Representing Reporting of 2015

**Consumer Confidence Report**

## Annual Water Quality Report

**January 1 – 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.

**CITY OF LEAGUE CITY is  
Purchased Surface Water**

For more information regarding  
this report contact:

Jody Hooks,  
Public Works Manager  
(281) 554-1320

## We Welcome Your Comments!

There are many opportunities available to learn more about the League City Water Production Department and water quality.

- For questions or concerns about water quality, call (281) 554-1041.
- For inquiries about public participation and policy decisions, call (281) 554-1033.

**The Water Production Department is  
part of the city government.**

The City Council meets the second  
and fourth Tuesdays of each month.

Call (281) 554-1030 for meeting  
times and locations.

## 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 pick up 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 EPA's 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 [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

## Information about Source Water Assessments

The TCEQ completed an assessment of your source water and results indicate that some of your sources are susceptible to certain contaminants. The sampling requirements for your water system are based on this susceptibility and previous sample data. Any detections of these contaminants may be found in this Consumer Confidence Report. For more information on source water assessments and protection efforts at our system, contact (Jody Hooks Public Works Manager) 281-554-1320.

For more information about your sources of water, please refer to the Source Water Assessment Viewer available at the following URL: [www.tceq.texas.gov/gis/swaview](http://www.tceq.texas.gov/gis/swaview)

Further details about sources and source-water assessments are available in Drinking Water Watch at the following URL: <http://dww2.tceq.texas.gov/DWW/>

**Water Sources:** Major Aquifer – Gulf Coast Aquifer | River – Trinity River, Brazos River

Source Water Name		Type of Water	Report Status	Location
1. Walker Street	Walker Street	GW	Y	700 W. Walker St.
2. 3rd Street at Park	3rd Street at Park	GW	Y	516 3rd St.
3. Country Side	Country Side	GW	Y	5929 FM 518 West
4. Grissom Rd / Northside	Northside	GW	Y	4200 Grissom Rd.
SW From City of Houston	CC From TX1010013 City of Houston	SW	Y	PLANT - 2690 Calder Rd.
SW From City of Houston	CC From TX1010013 City of Houston	SW	Y	Meadowbend Plant 2819 Wood Hollow Dr.
SW From City of Houston	CC From TX1010013 City of Houston	SW	Y	South Shore Harbor Plant 2600 FM 518
SW From City of Houston	CC From TX1010013 City of Houston	SW	Y	Bayridge Plant 307 Windward Dr.
SW From City of Houston	CC From TX1010013 City of Houston	SW	Y	Webster PS-18530 Hwy 3
SW From City of Houston SE Plant	CC From TX1010013 City of Houston	SW	Y	PLANT - 700 W. Walker St.
SW From GCWA TX City	CC From TX0840153 Gulf Coast WA	SW	Y	PLANT - 2690 Calder Rd.

**Gulf Coast Water Authority** – Thomas Mackey Water Treatment Plant – For Regulated, Unregulated, and Secondary Contaminants - please call (409) 948-6415.

**City of Houston Southeast Water Purification Plant** – For Regulated, Unregulated, and Secondary Contaminants - please call (713) 837-0311.

## Who is Captain H<sub>2</sub>O?

**Captain H<sub>2</sub>O** was created in 2011 to assist with public outreach and education about the importance of water conservation. He appears, along with our Water Conservation Team, at various public venues and in 2015, at several CCISD schools where our water conservation program was presented to enthusiastic students. We hope to continue these school visits throughout the district in the 2016/2017 school year.

In 2015, we held our annual Water Conservation Poster Contest and first annual Essay Contest with CCISD schools, hosted a Pre-school Story Time that featured Christy Galyean with the League City Police Department, and attended AWWA's Texas Water Convention held in Fort Worth.

For more information about water conservation or inquiries about the Water Conservation Team and Captain H<sub>2</sub>O presenting a water conservation program, please call (281)554-1041, visit [www.leaguecity.com](http://www.leaguecity.com) or [click here](#) to view our Water Conservation page.



## About the Following Tables...

The pages that follow list all of the federally regulated or monitored contaminants which have been found in your drinking water.

The US EPA requires water systems to test for up to 97 contaminants.

# Definitions

## Avg:

Regulatory compliance with some MCLs is based on running annual average of monthly samples.

## Maximum Contaminant Level (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 (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 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 contamination.

## Regulated Contaminants

Contaminants detected at this entry point that have an enforceable MCL.

## Unregulated Contaminants & Secondary Standards

Contaminants detected at this entry point that do not have an enforceable MCL, but may have an MCLG or SCL

**Secondary Contaminant Level (SCL)** represents reasonable goals for drinking water quality & provides a guideline for public water suppliers

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

**n/a** not applicable.

**NTU** Nephelometric Turbidity Units (a measure of turbidity)

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

**ppb** micrograms per liter (µg/L) or parts per billion - or one ounce in 7,350,000 gallons of water

**ppm** milligrams per liter (mg/L) 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)

**ND** Non detect, contaminant not detected

# Maximum Residual Disinfectant Level

Year	Disinfectant	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Unit of Measure	Likely Source of Contaminant
2015	Chloramines	1.89	0.50	3.80	4.0	4.0	ppm	Disinfectant used to control microbes.

# Regulated Contaminants

**EP002: City of Houston Southeast Water Purification Plant.** No averages, all data based on single result.

Contaminant	MCL	MCLG	SCL	Reading
Atrazine (µg/L)	3	3	n/a	0.19
Barium (mg/L)	2	2	n/a	0.0465
Fluoride (mg/L)	4	4	2	0.34
Nitrate (mg/L)	10	10	n/a	0.64

# Unregulated Contaminants AND Secondary Standards

**EP002: City of Houston Southeast Water Purification Plant.** No averages, all data based on single result.

Contaminant	MCLG	SCL	Reading
[VOC] Bromodichloromethane (µg/L)	n/a	0	10
Chloride (MG/L)	250	n/a	25
[VOC] Chloroform (µg/L)	n/a	0	36
Copper (mg/L)	1	n/a	0.114
[VOC] Dibromochloromethane (µg/L)	n/a	60	1.9
Manganese (mg/L)	0.05	n/a	0.0145
pH (SU)	6.5-8.5	n/a	7.7
Sulfate (mg/L)	250	n/a	42
Total Dissolved Solids (mg/L)	500	n/a	209
Bicarbonate (mg/L)	n/a	n/a	97
Calcium (mg/L)	n/a	n/a	45.6
Magnesium (mg/L)	n/a	n/a	3.44
Nickel (mg/L)	n/a	n/a	0.0029
Potassium (mg/L)	n/a	n/a	5.02
Sodium [Sodium] (mg/L)	n/a	n/a	15.5
Total alkalinity as CaCO3 (mg/L)	n/a	n/a	79
Total hardness as CaCO3 (mg/L)	n/a	n/a	128

# Lead and Copper

**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.

Contaminant	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Unit of Measure	Violation	Likely Source of Contamination
Copper	08/01/2014	1.3	1.3	0.5	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	08/01/2014	0	15	4.1	1	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

## Regulated Contaminants

Disinfectants and Disinfection By-Products	Collection Date	Highest Compliance Average Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contaminant
Haloacetic Acids (HAA5) *	2015	40	13.1 - 87.5	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2015	42	20.2 - 71.7	No goal for the total	80	ppb	N	By-product of drinking water disinfection.

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

## Inorganic Contaminants

Contaminant	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contaminant
Barium	12/15/2014	0.0521	0.0521 - 0.0521	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Fluoride	12/15/2014	0.38	0.38 - 0.38	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]	2015	1	0.03 - 1.06	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Nitrite [measured as Nitrogen]	2015	0.02	0 - 0.02	1	1	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

## Radioactive Contaminants

Contaminant	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contaminant
Beta/photon emitters	12/15/2014	6.5	6.5 - 6.5	0	50	pCi/L*	N	Decay of natural and man-made deposits.
Combined Radium 226/228	1/22/2013	1	1 - 1	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 INCLUDING Pesticides AND Herbicides

Contaminant	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contaminant
Atrazine	2015	0.23	0 - 0.23	3	3	ppb	N	Runoff from herbicide used on row crops.
Simazine	2015	0.08	0 - 0.08	4	4	ppb	N	Herbicide runoff.

## Volatile Organic Contaminants

Contaminant	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contaminant
Toluene	2015	0.0006	0 - 0.0006	1	1	ppm	N	Discharge from petroleum factories.
Xylenes	2015	0.0038	0 - 0.0038	10	10	ppm	N	Discharge from petroleum factories; Discharge from chemical factories.

## 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 Contaminant
0	5% of monthly samples are positive.	1		0	N	Naturally present in the environment.