

City of BUNKER HILL VILLAGE

Annual Drinking Water Quality Report 2017



Where Does Our Drinking Water Come From? (Sources of Drinking Water)

The City owns four water wells in which we pump water from underground. We are also mandated to purchase surface water from the City of Houston to supplement our water supply as an effort to address ground subsidence in the Houston area. Approximately 50% of our drinking water is purchased from the City of Houston. All sources of water are blended and chlorine based sterilization is added to

insure that the water continues to be safe for consumption after the water leaves the production facilities. Information in this report represents the water we produce and water supplied by the City of Houston. It is intended to provide you with important information about your drinking water and the efforts made to keep your water safe. Information is for the calendar year 2017.

The following information is provided in terms mandated by the State of Texas.

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 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.

As your water service provider, The City of Bunker Hill Village is pleased to provide this Annual Drinking Water Quality Report for Calendar Year 2017 in accordance with the requirements of the Texas Commission on Environmental Quality.

"The very purpose of the City's being was and is to provide and perpetuate a quiet, tranquil, safe, and orderly community of single-family homes, with abundant greenery and open spaces, clean air and water, a safe environment, and other amenities conducive to the development and enjoyment of family life."

This statement came from the zoning ordinance which was part of establishing the City of Bunker Hill Village. City leaders and staff continually strive to provide you with safe, clean water to drink and ensure our environment is a place you want to call home. The information provided in this document details water quality and efforts underway to ensure our natural assets are preserved.

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 city'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

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 Steve Smith at 713-467-9762. For more information about your sources of water, please refer to the Source Water Assessment Viewer available at the following URL <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://dww.tceq.state.tx.us/DWW/>

Source Water Name		Type of Water	Report Status	Aquifer/Source
1 - 11700 TAYLORCREST RD	11700 TAYLORCREST RD	GroundWater	ACTIVE	EVANGELINE
2 - 11977 MEMORIAL DR	11977 MEMORIAL DR	GroundWater	ACTIVE	EVANGELINE
3 - 11900 MEMORIAL DR	11900 MEMORIAL DR	GroundWater	ACTIVE	EVANGELINE
4 - 11977 MEMORIAL DR	11977 MEMORIAL DR	GroundWater	ACTIVE	EVANGELINE
SW FROM CITY OF HOUSTON	POD - TAYLORCREST RD AND MEMORIAL DR	SurfaceWater	ACTIVE	LAKE HOUSTON

2016 Regulated Contaminants Detected

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
Copper	2016	1.3	1.3	0.3781	0	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.

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.
- 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.

Definitions: The following tables contain scientific terms and measures, some of which may require explanation.

- 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)



The water system for the City of Bunker Hill Village has been rated as a superior water system by the Texas Commission for Environmental Quality.

Disinfectants and Disinfection By-Products	Collection Date	Average Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Haloacetic Acids (HAA5)	2017	15.4	11.50-19.3	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2017	33.9	23.7-44.1	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
Arsenic- While your drinking water meets EPA standards for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.	2017	6.1	0-6.1	0	10	Ppb	N	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Barium	2017	0.153	0.0881-0.153	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Fluoride	2017	0.49	0.42-0.49	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]	2017	0.46	0.16-0.46	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
Gross alpha excluding radon and uranium	2015	1.2	1.1-1.2	0	15	pCi/L	N	Erosion of natural deposits.

2017 Violation Table

Lead and Copper Rule			
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.			
Violation Type	Violation Begin	Violation End	Violation Explanation
		2017	No violations in 2017

City of Houston Results for Regulated Contaminants

CONTAMINANT	MCL	MCLG	EWPP 3 READING	Katy Addicks READING	MIN	AVERAGE	MAX
Atrazine (mg/L)	3	3	0.11	ND -Not Detected	ND	0.6	0.11
Cyanide (mg/L)	0.2	0.2	0.05	0.09	0.05	0.07	0.09
Barium (mg/L)	2	2	0.0462	0.208	0.0462	0.13	0.208
Gross Alpha (pCi/L)	15	0	ND	4.0	ND	2.0	4.0
Radium-226 (pCi/L)	5	0	ND	1.61	ND	0.81	1.61
Fluoride (mg/L)	4	4	0.21	0.34	0.21	0.28	0.34
Nitrate (mg/L)	10	10	0.41	ND	ND	0.21	0.41
Arsenic (µg/L)	10	0	ND	4.2	ND	2.1	4.2

Disinfectant

Qtr of 2017	Chemical	Average Level of Quarterly Data	Lowest Result of a Single Sample	Highest Result of a Single Sample	Maximum Residual Disinfectant Level (MRDL)	Maximum Residual Disinfectant Level Goal (MRDLG)	Unit of Measurement	Source of the Chemical
1	Chloramines	1.5	0.70	2.90	4.00	4.00	mg/l	Disinfectant to control microbes
2	Chloramines	1.4	0.70	2.90	4.00	4.00	mg/l	Disinfectant to control microbes
3	Chloramines	1.4	0.70	3.50	4.00	4.00	mg/l	Disinfectant to control microbes
4	Chloramines	1.70	0.60	3.70	4.00	4.00	mg/l	Disinfectant to control microbes

Water Accountability

The City of Bunker Hill Village produced a total of 385,264,000 gallons of water for the year 2017. The city billed 333,190,000 gallons of water to the utility customers of the city. That represents a 86% water accountability ratio. The State of Texas considers any amount above 85% to be acceptable.

For more information or questions regarding this report or if you want a printed copy, please contact Steve Smith, Director of Public Works at 713-467-9762 or email at ssmith@bunkerhilltx.gov Web Site: www.bunkerhilltx.gov
 Este reporte incluye información importante sobre el agua para tomar. Para asistencia en español, favor de llamar al telefono 713-467-9762

The City Council meetings for the City of Bunker Hill Village are normally scheduled for the third Tuesday of each month at 5:00 p.m. at 11977 Memorial Drive, Houston, Texas 77024. Please confirm meeting schedule at www.bunkerhilltx.gov