



City of West University Place

2018 Annual Water Quality Report



Annual Water Quality Report

for the period of January 1 to December 31, 2018.

We are pleased to provide you with this year's Annual Water Quality Report. Our goal is to provide a safe and dependable supply of drinking water. Drinking water quality information is available on the City's website at www.westutx.gov/waterquality.

The City of West University Place monitors for contaminants in your drinking water and ensures it meets federal and state requirements. Our water continues to be rated "Superior" (the highest designation possible) by the Texas Commission on Environmental Quality (TCEQ). The City of West University Place has received this designation continuously since 1943. If you have any questions about this report or concerns about your water quality, please contact Barron Cooper, Plant Supervisor at (713) 662-5873 or email a bcooper@westutx.gov.

Additional guidelines on appropriate means to lessen the risk of infection by cryptosporidium are available at the Safe Drinking Water Hotline at 1 (800) 426-4791

Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the EPA at www.epa.gov/safewater/lead.

Where does my water come from?

In 2018, your water was a blend of groundwater and surface water; the City of West University Place targets a mixture of 50% of each.

The groundwater comes from two water wells owned and operated by the City of West University Place. The wells pump water from 560 feet below the surface, drawing from the Gulf Coast Aquifer.

The surface water is purchased from the City of Houston's East Water Purification Plant #3. This plant treats surface water drawn from Lake Houston, which is located on the west fork of the San Jacinto River, approximately 15 miles northeast of downtown Houston.

Because the City of Houston draws the water from surface sources (such as lakes or reservoirs), it tests regularly for cryptosporidium, a pathogen that causes a diarrheal illness. No cryptosporidium was found in the City of Houston's drinking water in 2018.

How often is the water tested?

The City of West University Place tests your water daily, weekly, monthly, quarterly, yearly, and at greater intervals for as many as 97 contaminants. In 2018, we performed 4,500 individual tests on your water. State and federal regulatory agencies determine minimum testing intervals based on the occurrence of contaminants in the environment and the levels of hazard to human health. The purpose of testing is to ensure that your water quality remains within safe levels as determined by the U.S. Environmental Protection Agency (U.S. EPA).

Who tests the water?

Technicians who are licensed by the TCEQ collect water samples from wells, storage facilities, points in the distribution system, and residents' homes. Much of this testing is done in the field, although some samples are sent to a state-licensed laboratory for analysis.

What is the water tested for?

Water is tested for the following types of substances:

- Biological (such as viruses and bacteria)
- Inorganic (such as salts and metals)
- Organic (such as chemicals from industrial or petroleum use)
- Radioactive substances

These substances can occur naturally or result from oil/gas production, mining activities, and pesticide/herbicide uses. The inorganic ions include nitrate, nitrite, fluoride, phosphate, sulfate, chloride, and bromide. While these substances are safe for human consumption in small quantities, in larger quantities, they can cause unpleasant taste, odor, or even illness.

How do these substances enter the water?

As water, such as rain and water from other sources, travels over land and filters through the ground into aquifers, the water dissolves certain naturally occurring minerals, and breaks down naturally occurring radioactive materials. This water may also pick up dissolved substances resulting from the presence of plants, animals, or human activity.

Who sets water quality regulations?

To ensure your water is safe to drink, the U.S. EPA regulates drinking water on a federal level, while the TCEQ regulates drinking water on a state level in Texas.



Is lead in our drinking water?

Elevated levels of lead in drinking water can cause serious health problems, especially for pregnant women and young children. Lead occurs in drinking water primarily from materials and components associated with service lines and home plumbing. The West University Place Public Works Department is responsible for providing high-quality drinking water, but it 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, please contact the West University Place Public Works Department and request to have your water tested. You can also obtain information on lead in drinking water, along with testing methods and steps you can take to minimize your exposure to lead, by calling the EPA's Safe Drinking Water Information Hotline at 1 (800) 426-4791, or by going to www.epa.gov/safewater/lead.

Does all drinking water 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 the water poses a health risk. However, to ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amounts of certain contaminants in water provided by public water systems. To provide protection for public health, the U.S. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water.

Sources of drinking water (both tap 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 natural minerals and radioactive materials, as well as substances resulting from the presence of animals or 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 may 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 that are byproducts of industrial processes and petroleum production, which may also come from gas stations, urban stormwater runoff, and septic systems.

2018 TABLE OF CONTAMINANTS DETECTED – DEFINITIONS

DEFINITIONS	THE FOLLOWING TABLES CONTAIN SCIENTIFIC TERMS AND MEASURES, SOME OF WHICH MAY REQUIRE EXPLANATION.
Average (Avg)	Regulatory compliance with some MCLs are based on running annual averages 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 feasibly possible, using the best available treatment technology
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 the water system
Maximum Contaminant Level Goal (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
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 the water system on multiple occasions
Maximum Residual Disinfectant Level (MRDL)	The highest level of a disinfectant allowed in drinking water (there is convincing evidence that the 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
MFL	Million fibers per liter (a measure of asbestos)
N/A	Not applicable
mrem	Millirems (a measure of radiation absorbed by the body)
NTU	Nephelometric turbidity units (a measure of turbidity)
pCi/L	Picrouries 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
Treatment Technique (TT)	A required process intended to reduce the level of a contaminant in drinking water
ppt	Parts per trillion, or nanograms per liter (ng/L)
ppq	Parts per quadrillion, or picograms per liter (pg/L)
Action Level (AL)	The concentration level of a contaminant, which, if exceeded, triggers a treatment response from the drinking water system, which is mandated to reduce the contaminant level.
Action Level Goal ALG	The level of a contaminant in drinking water below which there is no known or expected risk to health

2018 WATER SAMPLE RESULTS

Contaminants	Year	Our Minimum Level	Our Maximum Level	Quality Standard	MCL	MCLG	Units	Likely Source
Fluoride	2018	0.34	0.34	Meet	4	4	ppm	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Atrazine	2018	0.19	0.19	Meet	3	3	ppb	Runoff from herbicidal use in agriculture
Nitrate	2018	0.42	0.45	Meet	10	10	ppm	Erosion of natural deposits, runoff from fertilizer or sewer, byproduct of drinking water disinfection
Simazine	2018	0.09	0.09	Meet	4	4	ppb	Runoff from herbicidal use
Bromacil	2018	0.49	0.49	Meet	N/A	N/A	ppb	Non-crop herbicide use runoff
Dibromochloro-methane	2018	<1.0	1.9	N/A	N/A	60	ppb	Byproduct of drinking water disinfection
Chloroform	2018	7.1	18.1	N/A	N/A	70	ppb	Byproduct of drinking water disinfection
Dichloroacetic Acid	2018	2.9	19.4	N/A	N/A	0	ppb	Byproduct of drinking water disinfection
Trichloroacetic Acid	2018	1.4	7.8	N/A	N/A	20	ppb	Byproduct of drinking water disinfection
Dibromoacetic Acid	2018	<1.0	1.2	N/A	N/A	N/A	ppb	Byproduct of drinking water disinfection
Bromochloroacetic Acid	2018	1.4	6.5	N/A	N/A	N/A	ppb	Byproduct of drinking water disinfection
Bromodichloro-methane	2018	4.8	7.3	N/A	N/A	0	ppb	Byproduct of drinking water disinfection
Total HAA5	2018	4.5	28.2	Meet	60	N/A	ppb	Byproduct of drinking water disinfection
Total Trihalomethanes	2018	13.7	25.3	Meet	80	N/A	ppb	Byproduct of drinking water disinfection
Hexavalent Chromium	2018	<1.0	5.2	Meet	N/A	N/A	ppb	Discharge from steel mills, erosion of natural deposits
Turbidity, City of Houston	2018	0.1	0.28	Meet	1.0	1.0	NTU	Soil runoff

1. Hexavalent chromium is not regulated individually; it is regulated as a portion of total chromium, which has an MCL of 100 with an MCLG of 100.
2. Total trihalomethanes and total HAA5 (haloacetic acid – five variants) do not have an MCLG; some of the components do have individual MCLGs.
3. This compound is a component of the regulated total trihalomethanes; there is not an MCL for the individual components.
4. This compound is a component of the regulated total HAA5; there is not an MCL for the individual components.

2018 WATER SAMPLE RESULTS

Disinfectant Residual	Year	Average Level	Range of Levels Detected	MRDL	MRDLG	Unit of Measure	Violation (Y/N)	Source in Drinking Water
Chloramines	2018	1.4	0.5–3.90	4	4	ppm	No	Water additive used to control microbes

Total Coliform MCLG	Total Coliform MCL	Highest No. of Measured Coliform	Fecal Coliform or E. Coli Maximum Contaminant Level	Total No. of Positive	Violation (Y/N)	Likely Source of Contamination
E. Coli or Fecal Coliform Samples	1 Positive Montly Sample	5	0	5	No	Naturally Present in the Environment

Coliform, a bacteria naturally present in the environment, is used as an indicator that other potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. On April 17, 2018, we tested positive for Total Coliform, repeated the test, and no coliform bacteria were found. We are required to notify you of this event. Finding Total Coliform triggered the need to look for potential problems in water treatment or distribution. When this occurred, we conducted a Level 1 assessment to identify problems. We found no problems and determined that there was an operator error in sample collection. The City collects 150% of the required coliform samples every month and provides additional monthly testing on the water wells and on the incoming City of West University Place surface water.

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Highest level detected	Likely Source of Contamination
Lead	2018	0	15	0.002	0	ppb	0.002	Corrosion of household plumbing systems; Erosion of natural deposits.
Copper	2018	1.3	1.3	0.497	0	ppb	1.23	Corrosion of household plumbing system; Erosion of natural deposits.

Lead and copper are not present in the source water but may be present in certain older pipes and fixtures. If you have concerns regarding lead and copper in your home water, you are urged to contact the City of West University Place Public Works Department and discuss the potential of lead or copper in your water with the Plant Supervisor.

Conserving Water

Severe drought conditions and the resulting necessary water restrictions remind us just how precious water is and how much we tend to take it for granted. With less than 1% of the earth's fresh water sources available, we need to learn to use water wisely. On April 22, 2019 the City Council for West University Place adopted a revised Water Conservation and Drought Contingency Plan. The new plan is available on the City's website at www.westutx.gov/conserwater.

When requesting information about the City of West University Place's water system, use our number, TX1010027, which is the number assigned to our system by the U.S. EPA.

Visit the U.S. EPA's water information site at www.epa.gov/safewater/. You may also call the EPA's Safe Drinking Water Information Hotline at 1 (800) 426-4791.

Water quality information for the state of Texas may be accessed via the Texas Commission on Environmental Quality at www.tceq.texas.gov.

Previous years' water quality reports for the City of West University Place are available at www.westutx.gov/waterquality.

En Español

Este reporte incluye información importante sobre el agua para tomar. Si tiene preguntas o discusiones sobre este reporte, favor de llamar al tel. (713) 662-5839 para hablar con una persona bilingüe en español.

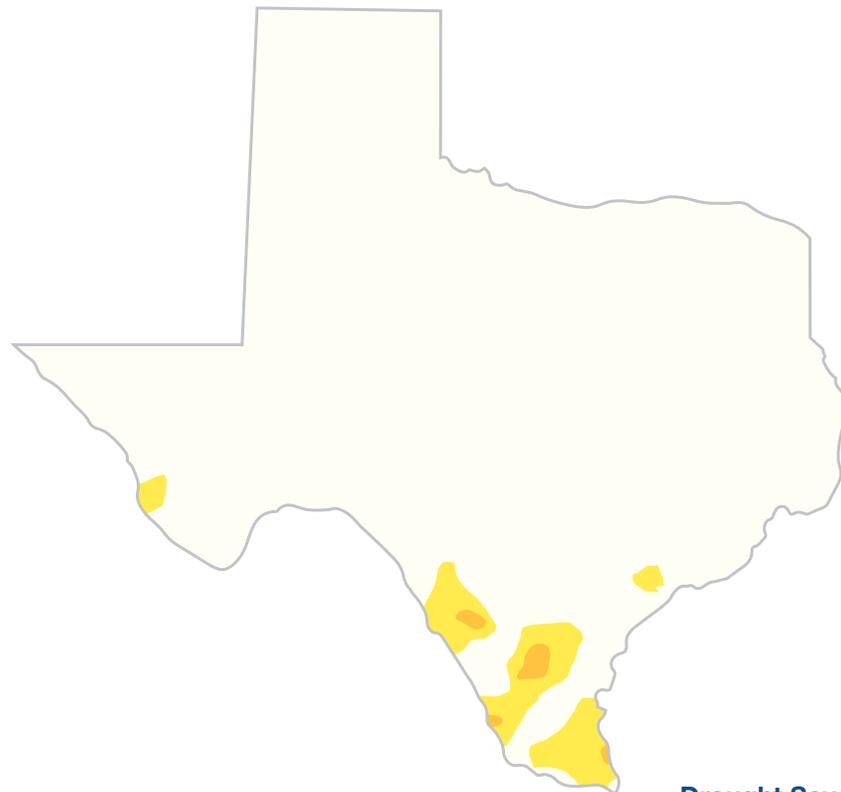
SOURCE WATER ASSESSMENT

TCEQ has completed a Source Water Susceptibility Assessment Report for all drinking water systems that own their sources, describing their susceptibility to types of contaminants that may come into contact with your drinking water source, based on human activities and natural conditions.

To obtain more information on source water assessments and protection efforts at our system, contact the West University Place Public Works Department at (713) 662-5839.

For additional information, please click on: <https://www.tceq.texas.gov/drinkingwater/SWAP>

Drought Impact On *Texas Surface Water*



Drought Severity Index

	No Drought
	D0 Abnormally Dry
	D1 Drought – Moderate
	D2 Drought – Severe
	D3 Drought – Extreme
	D4 Drought – Exceptional

Sources: NDMC, USDA, NOAA, TCEQ Office of Water **Online Drought Map:** TCEQ Website <https://www.tceq.texas.gov/response/drought>
Map issued June 11, 2019



How the City Will Handle *a Water Shortage*

Be prepared to conserve water should drought conditions create water shortages. Several years ago, the City implemented a four-step Drought Contingency Plan that remains in place today. We always follow the first step—reminding you to conserve water each summer—but you might want to familiarize yourself with all four steps:

Annual Conservation Reminder

Each spring, the City reminds water customers to conserve water. Users are urged to reset their water irrigation timers to water earlier in the day, check faucets for leaks, readjust sprinkler heads, and run washing machines and dishwashers only when full. This is good water stewardship—an important step toward avoiding water shortages during summer.

Voluntary Use Restrictions

If the demand for water rises to a certain threshold (65% of safe pumping capacity for three consecutive days), the City will ask users to voluntarily conserve more water—including not watering outside between the hours of 5 am and 10 pm.

Moderate Water Use Restrictions

When water supplies drop significantly or when demand reaches 70% of safe pumping capacity for three consecutive days, users will be banned from outside watering (such as watering lawns or washing cars) between 10 am and 7 pm. Pools will not be filled. Most fountains and ponds will not be filled. Hydrants will not be flushed, unless they are needed for public health, safety, and welfare. Parks and green zone watering will be restricted to between 10 pm and 5 am. Non-essential uses of water (including hosing down sidewalks or using water for dust control) will be prohibited. Full restrictions are listed in our current Water Conservation and Drought Contingency Plan, which can be found on the City's website at www.westutx.gov/conservewater. Restrictions will end when all triggering events have ceased to exist for 15 consecutive days.

Critical Water Use Restrictions

If water supplies and/or demand reach certain critical thresholds, or if water supplies become contaminated, then severe restrictions will occur, including a ban on all outdoor water use or irrigation, regardless of time of day. Police and other personnel will enforce the bans. This stage of the plan will end when all conditions listed as “triggering events” have ceased to exist for 15 consecutive days.



Mission Statement

We are entrusted by the people of West University Place to supply high-quality water for consumption and fire protection at a reasonable cost, while conserving and protecting our drinking water resources for present and future generations.