



City of  
West University  
Place

## 2019 Annual Water Quality Report



# Annual Water Quality Report

for the period of January 1 to December 31, 2019

The City of West University Place is 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](http://www.westutx.gov/waterquality).

The City of West U continually monitors your drinking water for contaminants, and ensures that 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 him at [bcooper@westutx.gov](mailto:bcooper@westutx.gov).

## Public Notice

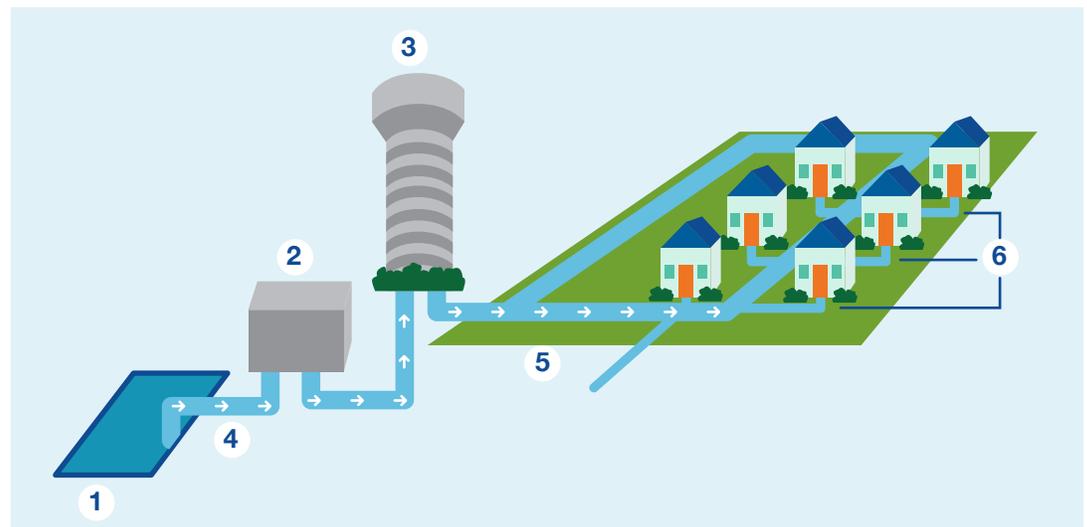
On July 15, 2020, the City of West University Place will be changing the disinfectant used to treat groundwater from chlorine to chloramines. Surface water purchased from the City of Houston is already treated with chloramines. Please note that the City is required to notify users that chloramines can cause problems to persons dependent on dialysis machines. A condition known as hemolytic anemia can occur if the disinfectant is not completely removed from the water that is used for the dialysate. Consequently, the pretreatment scheme used for the dialysis units must include some means, such as a charcoal filter, for removing the chloramine prior to this date. Medical facilities should also determine if additional precautions are required for other medical equipment. In addition, chlorinated water may be toxic to fish. If you have a fish tank, please make sure that the chemicals or filters that you are using are designed for use in water that has been treated with chloramines.

## Public Notification Rule

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., an emergency that necessitates the boiling of water).

## Water Supply Infrastructure

1. Water Resources
2. Treatment Center
3. Storage Tank
4. Main Incoming Pipe
5. Distribution System
6. Service Lines



Additional guidelines on appropriate means to lessen the risk of infection by cryptosporidium can be learned by calling the EPA's Safe Drinking Water Information Hotline at 1 (800) 426-4791.

## Where does my water come from?

In 2019, 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 2019.

## 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 2019, 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 hazards 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 (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?

Our 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 that your water is safe to drink, the EPA regulates drinking water on a federal level, while the TCEQ regulates drinking water on a state level in Texas.

Information the possible presence of lead in drinking water, along with testing methods, and steps you can take to minimize exposure is available from the EPA at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

## 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](http://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 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, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife
- 💧 Inorganic contaminants, such as salts and metals, that 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 that 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) that may also come from gas stations, urban stormwater runoff, and septic systems

## 2019 TABLE OF CONTAMINANTS DETECTED – DEFINITIONS

DEFINITIONS	THE FOLLOWING TABLES CONTAIN SCIENTIFIC TERMS AND MEASURES, SOME OF WHICH MAY REQUIRE EXPLANATION.
Average (Avg)	Refers to averages of monthly samples; regulatory compliance with some maximum contaminant levels (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 MCL goals 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)
NTUs	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
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 mandated treatment response from the drinking water system, system 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

## 2019 WATER SAMPLE RESULTS

Maximum Contaminant Level Goal	Total Coliform Maximum Contaminant Level	Highest Number of Positive Samples	Fecal Coliform or E. Coli Maximum Contaminant Level	Total Number of Positive E. Coli or Fecal Coliform Samples	Violation	Likely Source of Contamination
0	0 Positive Monthly Samples	0	0	0	None	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 (AL):** The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.

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 the possibility of having lead and copper in your home's water system, but you may contact the City of West University Place Public Works Department to discuss, with the Plant Supervisor, the potential of lead or copper being in your water.

Contaminants	Year Sampled	MCLG	Action Level (AL)	90th Percentile	No. of Sites Over AL	Units	Violation	Likely Source of Contamination
Lead	2017	0	15	0.002	0	ppb	None	Corrosion of household plumbing systems; erosion of natural deposits
Copper	2018	0	1.3	0.497	1	ppm	None	Corrosion of household plumbing systems; erosion of natural deposits

Disinfection Byproduct	Year Sampled	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
Five Haloacetic Acids (HAA5)	2019	21	7.5 to 32.55	No goal for this total	60	ppb	None	Byproduct of drinking water disinfectant
Total Trihalomethanes	2019	22	10.9 to 33.3	No goal for this total	80	ppb	None	Byproduct of drinking water disinfectant

Disinfection Residual	Year Sampled	Average Level	Range of Levels Detected	MRDL	MRDLG	Units	Violation	Source in Drinking Water
Chlorine	2019	1.66	0.50 to 3.87	4	4	ppb	None	Water additive used to control microbes

## 2019 WATER SAMPLE RESULTS

Provider data: TCEQ requires the City Of West University Place to provide the following information from our water supplier.

Contaminants	Collection Year	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
<b>Inorganic Contaminants</b>								
Arsenic	2019	2.5	0 to 2.5	0	10	ppb	None	Erosion of natural deposits runoff from orchards, and runoff from glass and electronics production waste
Barium	2019	0.133	0.039 to 0.133	2	2	ppm	None	Discharge of drilling waste, discharge from metal refineries, and erosion of natural deposits
Cyanide	2017	50	40 to 50	200	200	ppb	None	Discharge from plastic and fertilizer factories, and discharge from steel/metal factories
Fluoride	2019	0.28	0.10 to 0.28	4	4	ppm	None	Fluoride additive to water supply; erosion of natural deposits, and discharge from fertilizer and aluminum factories
Nitrate / Nitrogen	2019	1	0.41 to 0.66	10	10	ppm	None	Runoff from fertilizer use, leaching from septic tank sewage, and erosion of natural deposits
Nitrite / Nitrogen	2015	0.01	0.01 to 0.01	1	1	ppm	None	Runoff from fertilizer use, leaching from septic tank sewage, and erosion of natural deposits
Hexavalent Chromium	2019	7.3	0.0012 to 7.3	N/A	N/A	Ug/l	None	Discharge from steel mills, and erosion of natural deposits
Turbidity Data (City of Houston)	2019	Lowest monthly percentage ≤ NTU: 97% highest single measurement: 0.47 NTU		(TT) 95% of monthly samples ≤ 0.3 NTU		NTU	None	Soil runoff
<b>Radioactive Contaminants</b>								
Gross Alpha, Excluding Radon and Uranium	2017	5	0 to 5	0	15	pCi/L	None	Erosion of natural deposits
Uranium	2017	1.9	0 to 0.19	0	30	Ug/l	None	Erosion of natural deposits
<b>Synthetic Organic Contaminants</b>								
Atrazine	2019	0.13	0 to 0.13	3	3	ppb	None	Runoff from herbicides used on row crops.
Simazine	2019	0.1	0.1 to 0.15	4	4	ppb	None	Runoff from herbicides

Violation Type	Violation Start	Violation End	Violation Explanation
Public Notice Rule Linked to Violation	09/13/2019	01/06/2020	<p>The City of West University Place failed to adequately notify the West U community regarding the following violation issued in accordance with the drinking water regulations.</p> <p>On August 28, 2019, the City of West University Place failed to provide a copy of the new (and current) plumbing ordinance at the time of of the TCEQ inspection.</p> <p>This alleged violation was resolved on October 29, 2019, based on documentation (submitted by email to TCEQ's Houston Region office) that indicated the system has a service agreement.</p>

For more information on water quality, you can click on the EPA's water information site at [www.epa.gov/safewater/](http://www.epa.gov/safewater/). You may also call the EPA's Safe Drinking Water Information Hotline at 1 (800) 426-4791.

When requesting information from the EPA regarding the water system for the City of West University Place, please use our EPA-assigned Water System ID #1010027.

Water quality information for the state of Texas may be accessed via the Texas Commission on Environmental Quality at [www.tceq.texas.gov](http://www.tceq.texas.gov).

Previous years' water quality reports for the City of West University Place are available at [www.westutx.gov/waterquality](http://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 (713) 662-5839 para hablar con una persona bilingüe en español.

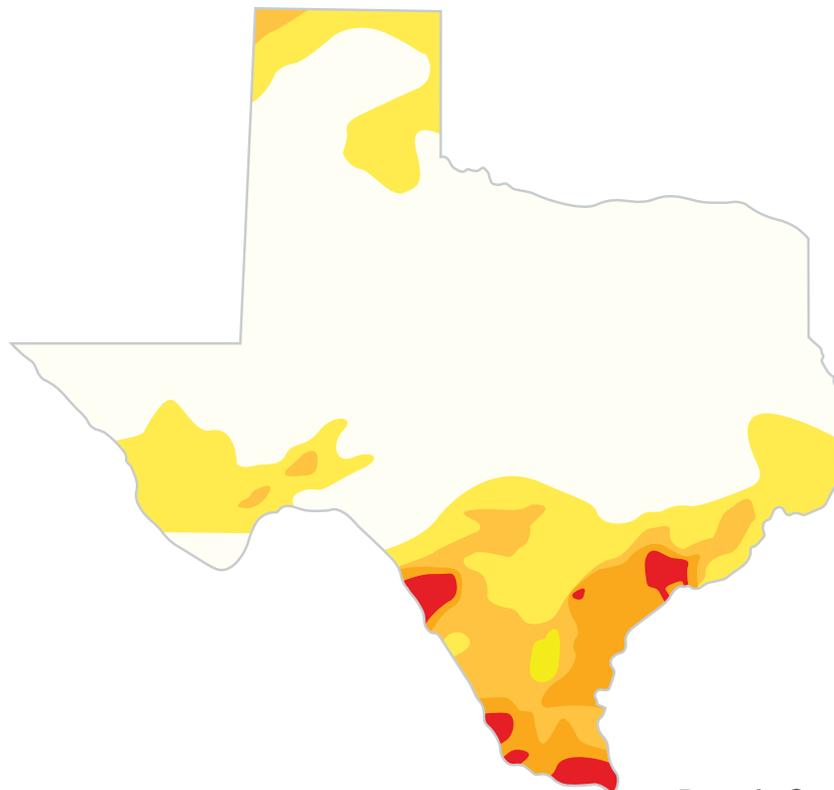
#### SOURCE WATER ASSESSMENT

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 for 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

### Conserving Water

Severe drought conditions and the necessary water restrictions remind us of 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. For more information on the City's Water Conservation and Drought Contingency Plan, please visit [www.westutx.gov/conservewater](http://www.westutx.gov/conservewater) for more details.

# How the City Will Handle *a Water Shortage*

In the event that drought conditions cause water shortages, West U citizens should be prepared to conserve water. Several years ago, the City implemented a four-step Drought Contingency Plan that remains in place today. While we annually follow the first step, which is to remind our community to conserve water each summer, 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 set their water irrigation timers to operate earlier in the day, and to also check faucets for leaks, readjust sprinkler heads, and run washing machines and dishwashers only when full. This is good water stewardship, and it represents an important step toward avoiding water shortages during the hot summer months.

## **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 a.m. and 10 p.m.

## **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 a.m. and 7 p.m. 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. Watering in parks and green zones will be restricted to between 10 p.m. and 5 a.m. 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](http://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 ban, and 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.

## Water and COVID-19 *FAQs*

### Can the virus that causes the COVID-19 disease be spread to people through drinking water?

The virus that causes COVID-19 has not been detected in drinking water. Conventional water treatment methods that use filtration and disinfection, such as those in most municipal drinking water systems, should remove or inactivate the virus that causes COVID-19.

### Can the virus that causes COVID-19 be spread to people through pools, hot tubs, spas, and water play areas?

There is no evidence that the virus that causes COVID-19 can be spread to people through the water in pools, hot tubs, spas, or water play areas. Proper operation and maintenance (including disinfection with chlorine and bromine) of these facilities should inactivate the virus in the water.

While there is ongoing community spread of the virus that causes COVID-19, it is important for individuals, and for owners and operators of these facilities, to take the recommended steps to ensure everyone's health and safety. Follow local and state guidance that may determine when and how recreational water facilities may operate.

Individuals should continue to protect themselves and others at recreational water venues, both in and out of the water, by practicing social distancing and good hand hygiene, among other recommendations.

In addition to ensuring water safety and quality, owners and operators of community pools, hot tubs, spas, and water play areas should follow the interim guidance for businesses and employers for cleaning and disinfecting their community facilities. For more information, please click on: <https://www.cdc.gov/coronavirus/2019-ncov/php/water.html>