

# 2016 Annual Drinking Water Quality Report

## Consumer Confidence Report (CCR)

PWS ID Number: TX0310002  
PWS Name: Harlingen Waterworks System  
PWS Phone #: (956)430-6100

For more information regarding this report contact:  
Name: Harlingen Waterworks System Laboratory  
Phone: (956) 440-6565

Annual Water Quality Report for the period of January 1 to December 31, 2016

Este reporte incluye información importante sobre el agua para tomar.  
Para asistencia en español, favor de llamar al telefono (956) 440-6565.

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.

HARLINGEN WATERWORKS SYSTEM is Surface Water

**Public Participation Opportunitites:** A five-member board appointed by the Harlingen City Commission governs the Harlingen Waterworks System. All members of the community are invited to participate in our forum and to voice their concerns about their drinking water. The Harlingen Waterworks Board of Trustees meet once a month on the last Wednesday of every month in the second floor Board Room of the administrative offices located at 134 East Van Buren, Harlingen, Texas. For a copy of the meeting schedule or agenda, please call (956) 430-6157 or access the Harlingen Waterworks web page at <http://www.hwws.com>.

### 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 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 call (956) 440-6565.

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 at (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. The Harlingen Waterworks System is 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>.

In the water loss audit submitted to the TWDB for the time period Jan. – Dec. 2016, our system lost 971,678,630 gallons of water. If you have any questions about the water loss audit, please call (956) 440-6579.

### **Information about Source Water Assessments**

The TCEQ completed an assessment of your source water and results indicated 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 detection 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 (956) 440-6582.

The Harlingen Waterworks System obtains its supply of potable water from the Rio Grande River in Cameron County. The supply is considered surface water. At the Harlingen diversion point, the water travels through a series of canals and is deposited into our holding reservoirs located at each of the two water treatment plants. The water stays in these lakes until it is processed for drinking. The Downtown and Runnion drinking water plants are both active.

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://dww2.tceq.texas.gov/dww/>

### **Water Quality Test Results**

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

## Maximum Residual Disinfectant Level

Disinfectant	Year	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Unit of Measure	Violation	Likely Source of Contamination
Chloramine	2016	4.0	0.5	6.9	4.0	4.0	ppm	N	By-product of drinking water disinfection.

## Lead and Copper

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	09/16/2015	1.3	1.3	0.3709	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	09/16/2015	0	15	3.7	1	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

## Definitions and Abbreviations

**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 which, if exceeded, triggers treatment or other requirements which a water system must follow.

**Average (Avg):** Regulatory compliance with some MCLs are 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 risk to health. 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 contaminants.

**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.

**Treatment Technique:** A required process intended to reduce the level of a contaminant in drinking water.

**Regulated Contaminants**

<b>Disinfectants and Disinfection By-Products</b>	<b>Collection Date</b>	<b>Highest Level Detected</b>	<b>Range of Levels Detected</b>	<b>MCLG</b>	<b>MCL</b>	<b>Units</b>	<b>Violation</b>	<b>Likely Source of Contamination</b>
<b>Haloacetic Acids (HAA5)</b>	2016	19	2.7 - 30.9	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
<b>Total Trihalomethanes (TTHM)</b>	2016	53	13.0 - 85.1	No goal for the total	80	ppb	N	By-product of drinking water disinfection.
<b>Inorganic Contaminants</b>	<b>Collection Date</b>	<b>Highest Level Detected</b>	<b>Range of Levels Detected</b>	<b>MCLG</b>	<b>MCL</b>	<b>Units</b>	<b>Violation</b>	<b>Likely Source of Contamination</b>
<b>Arsenic</b>	2016	2.3	2.2 - 2.3	0	10	ppb	N	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
<b>Barium</b>	2016	0.107	0.0945 - 0.107	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
<b>Cyanide</b>	2016	120	0 - 120	200	200	ppb	N	Discharge from plastic and fertilizer factories; Discharge from steel/metal factories.
<b>Fluoride</b>	2016	0.61	0.51 - 0.61	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>	2016	0.23	0.08 - 0.23	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
<b>Selenium</b>	2016	4.5	3.3 - 4.5	50	50	ppb	N	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.
<b>Radioactive Contaminants</b>	<b>Collection Date</b>	<b>Highest Level Detected</b>	<b>Range of Levels Detected</b>	<b>MCLG</b>	<b>MCL</b>	<b>Units</b>	<b>Violation</b>	<b>Likely Source of Contamination</b>
<b>Beta/photon emitters</b>	01/25/2011	5.4	4.9 - 5.4	0	50	pCi/L*	N	Decay of natural and man-made deposits.
<b>Combined Radium 226/228</b>	01/25/2011	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.

## Turbidity

	Year	Limit (Treatment Technique)	Level Detected	Violation	Likely Source of Contamination
Highest single measurement	2016	1 NTU	0.48 NTU	N	Soil runoff.
Lowest monthly % meeting limit	2016	0.3 NTU	99%	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

## Secondary Constituents

Secondary Constituents	Collection Date	Highest Level Detected	Range of Levels Detected	Level	Units
pH	2016	7.1	6.9 – 7.1	> 7.0	SU
Sulfate	2016	387	331 - 387	300	mg/L
TDS	2016	1060	912 - 1060	1000	mg/L

**Total Organic Carbon (TOC):** No health effects. The disinfectant can combine with TOC to form disinfection byproducts. Disinfection is necessary to ensure that water does not have unacceptable levels of pathogens. Byproducts of disinfection include trihalomethanes (THMs) and haloacetic acids (HAA5) which are reported elsewhere in this report.

The percentage of Total Organic Carbon (TOC) removal was measured each month and the system met all TOC removal requirements set, unless a TOC violation is noted in the violations section.

Year	Contaminant	Average Level	Minimum Level	Maximum Level	Unit of Measure	Likely Source of Contamination
2016	Source Water	6.88	4.90	7.98	ppm	Naturally present in the environment.
2016	Drinking Water	4.11	3.69	4.74	ppm	Naturally present in the environment.
2016	Removal Ratio	1.23	0.99	1.47 %	% Removal*	NA

\* Removal ratio is the percent of TOC removed by the treatment process divided by the percent of TOC required by TCEQ to be removed.

**Total Coliform** – Reported monthly tests found no total coliform bacteria.

**Fecal Coliform** - Reported monthly tests found no fecal coliform bacteria.