

## 2017 Annual Drinking Water Quality Report

<b>PWS ID Number: TX2510001</b>	<b>PWS Name: CITY OF DENVER CITY</b>
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For the period of January 1, 2017 to December 31, 2017

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. A public participation opportunity concerning this report will be held June 18, 2018 at 7:00 PM in City Hall, 102 W. 3<sup>rd</sup> St., Denver City, TX. City Council meetings are regularly held on the first and third Mondays of each month at 7:00 PM at City Hall, 102 W. 3<sup>rd</sup> St., Denver City, TX.

For more information regarding this report contact:  
 Name: Stan David, City Manager, City of Denver City  
 Phone: 806-592-5426  
 Este reporte incluye información importante sobre el agua para tomar.  
 Para asistencia en español, favor de llamar al telefono (806)592-5426.

### Definitions and Abbreviations

Definitions and abbreviations:	The following tables contain scientific terms and measures, some of which may require explanation.
Action Level:	The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
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.
Avg:	Regulatory compliance with some MCLs are based on running annual average of monthly samples.
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 our water system.
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 our water system on multiple occasions.
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.
MFL:	million fibers per liter (a measure of asbestos)
mrem:	millirems per year (a measure of radiation absorbed by the body)
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.
ppq:	parts per quadrillion, or picograms per liter (pg/L)
ppt:	parts per trillion, or nanograms per liter (ng/L)
Treatment Technique or TT:	A required process intended to reduce the level of a contaminant in drinking water.

## Information about your Drinking Water

The source of drinking water used by the CITY OF DENVER CITY is Ground Water from the Ogallala Aquifer located in Yoakum County.

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 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 <http://www.epa.gov/safewater/lead>.

## Information about Source Water

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 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 Stan David, City Manager, City of Denver City, at 806-592-5426.

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>

Source Water Name – From Ogallala Aquifer	Type of Water	Status	Well Location	Source Water Name – From Ogallala Aquifer	Type of Water	Status	Well Location
Well #6 – 500' SW OF HIGH SCHOOL	Ground Water	Active	32° 58'19.6" N 102° 50'17.2" W	Well #18 – 7 MI W OF CITY (N OF 17)	Ground Water	Active	32° 59'47.6" N 102° 56'20.85" W
Well #7 - 1 MI W OF CITY/5TH ST (W OF HIGH SCHOOL)	Ground Water	Active	32° 58'18.75" N 102° 50'25.9" W	Well #21 - 7 MI W OF CITY (0.3 MI W OF 16)	Ground Water	Active	32° 59'27.65" N 102° 57'20.75" W
Well #8 - 0.25 MI W OF 7	Ground Water	Active	32° 58'20.15" N 102° 50'39.15" W	Well #22 - 7 MI W & 3 MI N OF CITY	Ground Water	Active	33° 02'10.5" N 102° 56'07.25" W
Well #9 - 0.25 MI W OF 8	Ground Water	Active	32° 58'13.7" N 102° 50'53.55" W	Well #23 - 7 MI W & 3 MI N OF CITY	Ground Water	Active	33° 02'10.5" N 102° 56'19.0" W
Well #10 - 0.25 MI W OF 9	Ground Water	Active	32° 58'08.25" N 102° 51'06.6" W	Well #24 - 7 MI W & 3 MI N OF CITY	Ground Water	Active	33° 02'00.5" N 102° 56'19.0" W
Well #12 - 7 MI W OF CITY	Ground Water	Active	32° 58'57.65" N 102° 56'38.25" W	Well #25 - 7 MI W & 3 MI N OF CITY	Ground Water	Active	33° 01'50.45" N 102° 56'19.1" W
Well #13 - 7 MI W OF CITY (CR 195 (RD P-37))	Ground Water	Active	32° 59'24.35" N 102° 56'33.5" W	Well #26 - 8 MI W & 5 MI N OF CITY	Ground Water	Active	33° 03'10.1" N 102° 57'21.0" W
Well #14 - 7 MI W OF CITY (0.5 MI W OF 12)	Ground Water	Active	32° 58'55.9" N 102° 57'11.55" W	Well #27 - 8 MI W & 5 MI N OF CITY	Ground Water	Active	33° 03'10.1" N 102° 56'51.7" W
Well #15 - 7 MI W OF CITY (0.5 MI W OF 12)	Ground Water	Active	32° 58'46.25" N 102° 57'05.3" W	Well #28 - 8 MI W & 5 MI N OF CITY	Ground Water	Active	33° 03'29.6" N 102° 57'20.85" W
Well #16 – 7 MI W OF CITY (CR 350 (RD P-38))	Ground Water	Active	32° 59'29.25" N 102° 57'01.55" W	Well #29 – 8 MI W & 5 MI N OF CITY	Ground Water	Active	33° 03'43.3" N 102° 57'20.9" W
Well #17 - 7 MI W OF CITY (CR 195/ CR 350)	Ground Water	Inactive	32° 59'39.75" N 102° 56'20.85" W				

### Coliform Bacteria

Maximim Contaminant Level Goal	Total Coliform Maximim Contaminant Level	Highest No. of Positive	Fecal Coliform or E. Coli Maximim Contaminant Level	Total No. of Positive E. Coli or Fecal Coliform Samples	Violation	Likely source of Contamination
0	1 positive monthly sample.	1		0	N	Naturally present in the environment.

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	2017	1.3	1.3	0.259	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	2017	0	15	0	0	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

## 2017 Water Quality Test Results

### Regulated Contaminants

Disinfection and Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Haloacetic Acids (HAA5)*	2017	1	1.1 – 1.1	No goal for the total	60	ppb	N	By-product of drinking water disinfection.

\*The value in the Highest Level or Average Detected column is the highest average of all HAA5 sample results collected at a location over a year'

Total Trihalomethanes (TTHM)*	2017	5	4.73 – 4.73	No goal for the total	80	ppb	N	By-product of drinking water disinfection.
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\*The value in the Highest Level or Average Detected column is the highest average of all TTHM sample results collected at a location over a year'

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Arsenic	2017	9	7.77 – 9.06	0	10	ppb	N	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.

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.

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Barium	2017	0.048	0.048 - 0.048	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Chromium	2017	3.7	3.7 – 3.7	100	100	ppb	N	Discharge from steel and pulp mills; Erosion of natural deposits.
Flouride	2017	1.88	1.88 – 1.88	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	2	1.9 – 1.9	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Selenium	2017	8.4	8.4 – 8.4	50	50	ppb	N	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.
Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Beta/photon emitters	05/28/2015	7.3	7.3 - 7.3	0	50	pCi/L*	N	Decay of natural and man-made deposits.
*EPA considers 50 pCi/L to be the level of concern for beta particles.								
Gross Alpha excluding radon and uranium	05/28/2015	6.1	3 - 6.1	0	15	pCi/L	N	Erosion of natural deposits.
Uranium	05/28/2015	5.2	5.2 - 5.2	0	30	ug/l	N	Erosion of natural deposits.

### Disinfectants used by City of Denver City in 2017

Disinfectant	Lowest Daily Level Detected	Highest Daily Level Detected	Average Monthly Level Detected	MRDL	MRDLG	Units	Violation	Source of Disinfectant
Chlorine	0.60	2.09	1.29	4.00	0.20 -4.00	ppm	N	Chlorine gas

### Violations Table

<b>E. coli</b>			
Fecal coliforms and E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, and people with severely compromised immune systems.			
Violation Type	Violation Begin	Violation End	Violation Explanation
MONITOR GWR TRIGGERED/ADDITIONAL, MINOR	05/01/2017	05/31/2017	We failed to collect all the required follow-up samples within 24 hours of learning of the total coliform-positive sample. These needed to be tested for fecal indicators from all sources that were being used at the time the positive sample was collected.
MONITOR GWR TRIGGERED/ADDITIONAL, MINOR	06/01/2017	06/30/2017	We failed to collect all the required follow-up samples within 24 hours of learning of the total coliform-positive sample. These needed to be tested for fecal indicators from all sources that were being used at the time the positive sample was collected.
<b>Lead and Copper Rule</b>			
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
LEAD CONSUMER NOTICE (LCR)	12/30/2017	10/20/2018	We failed to provide the results of lead tap water monitoring to the consumers at the location water was tested. These were supposed to be provided no later than 30 days after learning the results.

In the water loss audit submitted to the Texas Water Development Board for the time period of Jan-Dec 2017, our system lost an estimated 7,113,659 gallons of water. If you have any questions about the water loss audit please call PWS phone number.