

2019 ABILENE WATER UTILITIES DEPARTMENT

SAVE ABILENE WATER

ANNUAL & WATER QUALITY REPORTS



MESSAGE FROM THE DIRECTOR OF WATER UTILITIES

The City of Abilene Water Utilities Department consists of about 150 great employees that are committed to providing our citizen customers with a high level of service. I am truly proud to be a part of this team of employees who choose to work in service to their fellow citizens.

The City also has a large percentage of aging infrastructure that is in need of maintenance, rehabilitation, or replacement. Fortunately, our City Council and our citizens are supportive of not only daily activities by our staff but also projects designed to upgrade the City's infrastructure. Water Utilities has recently initiated or completed the following projects to address its aging infrastructure.

The Meter Replacement Project began in late 2019. At this time over 15,000 old water meters have been replaced with state of the art smart water meters. The meter communication system has been installed and is being tested at this time.

The East Lake Road 16 inch Water Line and Fiber Optic Line project is complete. It greatly improves the water reliability serving the east side of Lake Fort Phantom Hill and the two TDCJ prison units in northeast Abilene.

The Hamby Water Reclamation Facility Expansion Phase I is complete which added much needed treatment capacity to the facility. Phase II improvements are currently under design.

The Buck Creek Screw Pump Station Rehabilitation project and the related phase II improvements are nearing completion. The screw pump station plays a critical role in lifting sewage from large, deep mains into pretreatment and pumping facilities at that site.

The Buffalo Gap Elevated Storage Tank Rehabilitation is complete. Elevated storage tanks are essential for meeting peak customer demand and fire flow demands on the distribution system. It is important that we maintain these tanks to prolong the life cycle of the facility and to maintain water quality in the distribution system.

Another long overdue project is the Lake Kirby Dam, Lake Fort Phantom Hill Dam, and Lake Abilene Dam Miscellaneous Repairs. That project is nearing completion. Abilene must maintain its dams and related water works in compliance with state regulations.

The 2019 Sewer Main and Manhole Rehabilitation project is complete and resulted in the rehabilitation and/or replacement of several problematic sections of sewer main throughout the City.

The Wastewater Interceptor Line Cleaning and Inspection project improved sewer flow in a long section of the Buttonwillow Sewer Main and provided inspection data on the condition of this old pipe.

The Water Utilities Department will continue to provide a high level of customer service to its citizen customers. New improvement projects are already in the works in order to assure that we responsibly address Abilene's aging infrastructure for which we all depend on for quality of life of both present and future generations.

Type of Contaminant	Year or Range	Contaminant (unit of measure)	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Violation	Source of Contaminant
Inorganic Contaminants	2019	Arsenic (ppb)	< 1.0	< 1.0	10	0	N	Erosion of natural deposits
	2019	Barium (ppm)	0.150	0.11 - 0.15	2	2	N	Discharge from plastic and fertilizer factories; Discharge from steel/metal factories.
	2019	Cyanide (ppb)	98	43.5 - 97.6	200	200	N	Discharge from plastic and fertilizer factories; Discharge from steel/metal factories.
	2019	Fluoride (ppm)	0.9	0.702 - 0.878	4	4.0	N	Erosion of natural deposits; water additive for strong teeth; discharge from fertilizer and aluminum factories
	2019	Nitrate (ppm)	1	0.146 - 1.03	10.00	10	N	Erosion of natural deposits; runoff from fertilizer use; leaching from septic tanks or sewage
	2019	Selenium (ppb)	< 5.0	< 5.0	50.0	50	N	Erosion from natural deposits; discharge from petroleum refineries
Radioactive Contaminants	2014	Beta/proton Emitters (pCi/L)	11.5	11.5 - 11.5	0	50	N	Erosion of natural deposits Decay of natural and man made deposits.
	2017	Gross Alpha	2	0 - 2	0	15	N	Erosion of natural deposits Decay of natural and man made deposits.
	2017	Gross Beta	8.8	6.2 - 8.8	N/A	N/A	N	Erosion of natural deposits Decay of natural and man made deposits.
	2017	Radium 228 (pCi/L)	< 1.0	< 1.0	0	5	N	Erosion of natural deposits Decay of natural and man made deposits.
	2017	Uranium (ug/L)	2.3	0 - 2.3	0	30	N	Erosion of natural deposits Decay of natural and man made deposits.
Disinfection Byproducts	2019	Total Haloacetic Acids (ppb)	38.4	14.8 - 38.4	No goal for the total	60	N	Byproduct of drinking water disinfection
	2019	Total Trihalomethanes (ppb)	88.3	16.8 - 88.3	No goal for the total	80	N	Byproduct of drinking water disinfection
	2019	Chlorite (ppm)	0.59	< 0.01 - 0.59	0.8	1	N	Byproduct of drinking water disinfection
Unregulated Contaminants	2019	Chloroform (ppb)	2.35	1.47 - 2.35	N/A	N/A	N/A	Byproduct of drinking water disinfection
	2019	Bromoform (ppb)	23.5	5.52 - 23.5	N/A	N/A	N/A	Byproduct of drinking water disinfection
	2019	Bromodichloromethane (ppb)	9.62	3.69 - 9.62	N/A	N/A	N/A	Byproduct of drinking water disinfection
	2019	Dibromochloromethane (ppb)	21.9	5.50 - 21.9	N/A	N/A	N/A	Byproduct of drinking water disinfection
	2019	Trichloroacetic Acid (ppb)	1.3	< 1.0 - 1.30	N/A	N/A	N/A	Byproduct of drinking water disinfection

DEFINITIONS AND ABBREVIATIONS:

Action Level (AL) - The concentration of a substance, which, if exceeded, triggers treatment or other requirements which a water system must follow

J - Analyte detected below the quantitation limit but above the decimal limit

Maximum Contaminant Level (MCL) - The highest level of a substance that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using best available treatment technology.

Maximum Contaminant Level Goal (MCLG) - The level of a substance in drinking water below which there is no known or expected health risk. MCLGs allow for a margin of safety.

Maximum Residual Disinfectant Level (MRDL) - The highest level of 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.

MFL - Million fibers per liter (a measure of asbestos)

N/A - Not applicable

ND - Analyte not detected in a sample

NTU - Nephelometric turbidity units. Unit of measure of the turbidity (cloudiness) of the water

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Treatment Technique (TT) - A required process intended to reduce the level of a substance in drinking water.

Type of Treatment	Year or Range	Disinfectant Used	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Source of Chemical
MRDL	2019	Chloramines (ppm)	3	1	5.1	4.0	4.0	Disinfectant used to control microbes
Type of Contaminant	Year or Range	MCGL	The 90th Percentile	Number of sites Exceeding Action Level	Action Level	Source of Contaminant		No Violations for Lead or Copper
Lead (ppb)	2017	0	0.5	0	15	Corrosion of household plumbing systems; erosion of natural deposits.		
Copper (ppm)	2017	1.3	0.335	0	1.3	Corrosion of household plumbing systems; erosion of natural deposits.		
Type of Contaminant	Year or Range	Highest Single Level Detected	Lowest Monthly % of Samples Meeting Limits	Limit (Treatment Technique)	Lowest Monthly % meeting limit	Violation	Source of Contaminant	
Turbidity (NTU)	2019	0.29	100.00%	1	0.3	N	Soil runoff.	
Type of Contaminant	Year or Range	Contaminant Source	Average Level	Minimum Level	Maximum Level	Unit of Measure	Source of Contaminant	
Total Organic Carbon	2019	Source Water	6.3	4.90	10.90	ppm	Naturally present in environment.	
	2019	Drinking Water	3.80	2.70	6.40	ppm	Naturally present in environment.	
Type of contaminant	Year or Range	Contaminant	Average Level	Minimum Level	Maximum Level	MFL	Construction Materials	
Asbestos	2012	Asbestos	ND	ND	ND	7		
Type of contaminant	Year or Range	Contaminant	Highest Monthly % of Positive Samples	MCL	Unit of Measure	Source of Contaminant		
Total Coliform	2019	Total Coliform Bacteria	0.9	*	Presence	No Monitoring Violation	Naturally present in environment.	

* Presence of Coliform bacteria in 5% or more of the monthly samples.

Organic Contaminants - none detected

Fecal Coliform - not detected

Real Water Loss 8.95 %

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Type of Contaminant	Year or Range	Contaminant (unit of measure)	Average Level	Minimum Level	Maximum Level	Secondary Limit	Source of Containment
Secondary and other Constituents not Regulated	2019	Aluminum (ppm)	0.0316	0.029	0.033	0.05	Naturally present in environment.
	2019	Bicarbonate (ppm)	128	111	162	N/A	Corrosion of carbonate rocks such as limestone.
	2019	Calcium (ppm)	65.6	48.5	97.3	N/A	Naturally present in environment.
	2019	Chloride (ppm)	134	104	178	300	Naturally present in environment.
	2019	Copper (ppm)	0.0013	0.0012	0.0014	1.0	Corrosion of household plumbing, erosion from natural deposits; leaching from wood preservatives.
	2019	Magnesium (ppm)	24.3	14.4	43.2	N/A	Naturally present in environment.
	2019	Manganese (ppm)	0.0055	0.0024	0.0081	0.05	Naturally present in environment.
	2019	Nickel (ppm)	0.0026	0.0018	0.0034	N/A	Erosion of natural deposits.
	2019	Sodium (ppm)	83.9	66.9	117	N/A	Erosion of natural deposits; byproduct of oil field activity.
	2019	Sulfate (ppm)	128.3	69.1	239	300	Naturally occurring; common industrial byproduct; byproduct of oil field activity.
	2019	Total Alkalinity as CaCO ₃ (ppm)	128	111	162	N/A	Naturally occurring soluble mineral salts.
	2019	Total Dissolved Solids (ppm)	504	379	750	1000	Total dissolved mineral constituents in water.
	2019	Total Hardness as CaCO ₃ (ppm)	264	184	421	N/A	Naturally occurring calcium.
	2019	Conductivity (uhmos/cm)	935	721	1360	N/A	Naturally present in environment.
	2019	Potassium (mg/L)	6.9	5.72	7.72	N/A	Naturally present in environment.
	2019	Lead (mg/L)	< 0.001	< 0.001	< 0.001	15	Corrosion of household plumbing, erosion from natural deposits; leaching from wood preservatives.

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Unregulated Contaminants Monitoring Rule 4 (UCMR 4)

The UCMR program was developed in coordination with the Contaminant Candidate List (CCL). The CCL is a list of contaminants that are not regulated by the National Primary Drinking Water Regulations, are known or anticipated to occur at public water systems and may warrant regulation under the Safe Drinking Water Act. Data collected through UCMR are stored in the National Contaminant Occurrence Database (NCOD) to support analysis and review of contaminant occurrence, to guide the CCL selection process and to support the Administrator's determination of whether to regulate a contaminant in the interest of protecting public health.

Contaminant	Year of Range	Level			MCL	MCLG	Unit of Measure	Source of Contamination
		Average	Minimum	Maximum				
Manganese	2019	0.0188	0.0025	0.0381	N/A	N/A	mg/L	Naturally present in environment
Bromide	2019	0.596	0.396	0.813	N/A	N/A	mg/L	Naturally present in environment
Total Organic Carbon	2019	5.96	4.93	6.49	N/A	N/A	ug/L	Naturally present in environment
Bromochloro acetic acid	2019	7.02	5.72	8.64	N/A	N/A	ug/L	Byproduct of drinking water disinfection
Bromodichloroacetic acid	2019	0.99	0.742	1.74	N/A	N/A	ug/L	Byproduct of drinking water disinfection
Chlorodibromoacetic acid	2019	1.66	0.851	5.49	N/A	N/A	ug/L	Byproduct of drinking water disinfection
Dibromoacetic acid	2019	10.3	7.38	17.1	N/A	N/A	ug/L	Byproduct of drinking water disinfection
Dichloroacetic acid	2019	3.83	3.13	5.21	N/A	N/A	ug/L	Byproduct of drinking water disinfection
Monobromoacetic acid	2019	0.972	0.743	1.17	N/A	N/A	ug/L	Byproduct of drinking water disinfection
Monochloroacetic acid	2019	12.7	6.66	21.9	N/A	N/A	ug/L	Byproduct of drinking water disinfection
Tribromoacetic acid	2019	2.95	<2.0	19.6	N/A	N/A	ug/L	Byproduct of drinking water disinfection
Trichloroacetic acid	2019	0.769	<0.5	0.905	N/A	N/A	ug/L	Byproduct of drinking water disinfection
Cylindrospermopsin	2019	<0.09	<0.09	0.09	N/A	N/A	ug/L	Produced by freshwater cyanobacteria

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JANUARY-DECEMBER 2019 WATER QUALITY REPORT

Through vigilant oversight, the City of Abilene Water Utilities Department is dedicated to providing high-quality, safe water. It begins with the city's reservoirs, which provide good-quality raw water. Along the water's journey into customers' homes and businesses, trained, certified operators consistently work to meet stringent water quality standards. Water is analyzed in all stages of production - from the city's creeks and lakes, at treatment plants, and into the distribution system - ensuring that it is safe to drink. We are proud to report that our drinking water meets or exceeds all United States Environmental Protection Agency (EPA) and TCEQ drinking water requirements.

This report is a summary of the quality of the water we provide our customers. The analysis was made by using the data from the most recent EPA-required tests. We hope this information helps you become more knowledgeable about what is in your drinking water.

If you would like more information about Abilene's water quality, water assessments and protection efforts, please call the City of Abilene's Environmental Laboratory at (325) 676-6041.

En Español: Este informe incluye información importante sobre el agua potable. Si tiene preguntas o comentarios sobre éste informe en español, favor de llamar al tel. (325) 676-6381 - para hablar con una persona bilingüe en español.

A Source Water Susceptibility Assessment for your drinking water sources is currently being updated by the TCEQ. This information describes the susceptibility and types of constituents that may come into contact with your drinking water based on human activities and natural conditions. The information contained in the assessment will allow us to focus our source water protection strategies. Some of this source water assessment information will be available later this year on Texas Drinking Water Watch at <https://dww2.tceq.texas.gov/DWW/>

CONTAMINANTS AND CONSTITUENTS

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As the 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.

Contaminants that may be present in source water:

- **Microbial contaminants**, such as viruses and bacteria, which may come from sewage 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 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.

All drinking water may contain contaminants. When drinking water meets federal standards there may not be any health based benefits to purchasing bottled water or point of use devices. 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 (800) 426-4791.

CONTAMINANTS AND CONSTITUENTS (CONTINUED)

SECONDARY CONSTITUENTS

Many constituents (such as calcium, sodium, or iron) which are often found in drinking water can cause taste, color, and odor problems. The taste and odor constituents are called secondary constituents and are regulated by the State of Texas, not by the EPA. These constituents are not causes for health concern.

Lead can be harmful. 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. This water supply is responsible for providing high quality drinking water, but 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 two 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 testing, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (800) 426-4791 or at

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

SPECIAL NOTICE FOR ELDERLY, INFANTS, CANCER PATIENTS, PEOPLE WITH HIV/AIDS OR OTHER IMMUNE PROBLEMS:

You may be more vulnerable than the general population to certain microbial contaminants, such as *Cryptosporidium*, in drinking water. Infants, some elderly or Immuno-compromised persons such as those undergoing chemotherapy for cancer; those who have undergone organ transplants; those who are undergoing treatment with steroids; and people with other immune system disorders can be particularly at risk from infections. You should seek advice about drinking water from your physician or care provider.

Additional guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* are available from the **Safe Drinking Water Hotline (800) 426-4791**.

PUBLIC PARTICIPATION OPPORTUNITIES

The City of Abilene Water Utilities Department is governed by the Abilene City Council, which meets on the second and fourth Thursdays of each month at 8:30 a.m. in City Council Chambers, City Hall, 555 Walnut. You may also contact the Department Director at (325) 676-6416.

City of Abilene Water Utilities Department
555 Walnut St., P.O. Box 60
Abilene, TX 79604
325-676-6417

WHERE DOES OUR WATER COME FROM?

Abilene's water comes from surface water sources.

- **Lake Fort Phantom Hill in North Abilene**
- **Hubbard Creek Lake between Albany and Breckenridge**
- **Lake O.H. Ivie near Ballinger**
- **Lake Abilene** (reserve source of water)
- **Lake Kirby in South Abilene, reserved for landscape irrigation**

Visit our website to learn more about water conservation in Abilene, including the stage we are currently in and watering restrictions it requires.

WWW.SAVEABILENEWATER.COM

