

# Annual Drinking Water Quality Report

TX2210013

DYESS AIR FORCE BASE

Annual Water Quality Report for the period of January 1 to December 31, 2015

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.

DYESS AIR FORCE BASE is Purchased Surface Water

## 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 EPA's 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.

For more information regarding this report contact:

**Bioenvironmental Engineering Flight**

**Phone: 325-696-2325**

Este reporte incluye información importante sobre el agua para tomar. Para asistencia en español, favor de llamar al telefono (325) 696-2325.

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 Assessments

The Texas Commission on Environmental Quality (TCEQ) has completed a Source Water Assessment for all drinking water systems that own their sources. The report describes the susceptibility and types of constituents that may come into contact with your drinking water source based on human activities and natural conditions. The system(s) from which we purchase our water received the assessment report. For more information on source water assessments and protection efforts at our system, contact Bioenvironmental Engineering at 325-696-2325.

Our drinking water is obtained from the following surface water sources: Lake O.H. Ivie, Lake Fort Phantom Hill, and Hubbard Creek Lake.

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

Source Water Name	Type of Water	Report Status	Location	
SW FROM CITY OF ABILENE	CC FROM TX2210001 CITY OF	SW	Active	Taylor County

## Water Quality Test Results

Definitions:	The following tables contain scientific terms and measures, some of which may require explanation.
Avg:	Regulatory compliance with some MCLs are based on running annual average of monthly samples.
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)
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.
ppt	parts per trillion, or nanograms per liter (ng/L)
ppq	parts per quadrillion, or picograms per liter (pg/L)

**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: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper <sup>2</sup>	2015	1.3	1.3	0.81	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead <sup>2</sup>	2015	0	15	0.0025	0	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

<sup>1</sup> City of Abilene Data<sup>2</sup> Dyess AFB Data**Bacteriological**

Type of Contaminant	Year of Range	Total # of Positive Samples	MCL	MCLG	Violation (Y/N)	Source of Contaminant
Total Coliform <sup>2</sup>	2015	0	1	0	N	Naturally present in environment. Animal or human waste.

<sup>1</sup> City of Abilene Data<sup>2</sup> Dyess AFB Data**Disinfectant Residual**

Disinfectant	Year of Range	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Unit of Measure	Violation (Y/N)	Source of Contaminant
Chloramine Residual <sup>2</sup>	2015	1.45	0.10	3.20	4	4	ppm	N	Water additive used to control microbes.

<sup>1</sup> City of Abilene Data<sup>2</sup> Dyess AFB Data

## Regulated Contaminants

Type of Contaminant	Year of Range	Contaminant (unit of measure)	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Violation	Source of Contaminant
<b>Inorganic Contaminants</b>	2015	Arsenic <sup>1</sup> (ppb)	3	0-3.3	10	0	N	Erosion of natural deposits
	2015	Barium <sup>1</sup> (ppm)	0.285	0.20-0.28	2	2	N	Discharge from plastic and fertilizer factories; Discharge from steel/metal factories.
	2015	Cyanide <sup>1</sup> (ppb)	160	130-160	200	200	N	Discharge from plastic and fertilizer factories; Discharge from steel/metal factories.
	2015	Fluoride <sup>2</sup> (ppm)	1.8	0.2-1.8	4	4.0	N	Erosion of natural deposits; water additive for strong teeth; discharge from fertilizer and aluminum factories.
	2015	Nitrate <sup>2</sup> (ppm)	.35	034-035	10.00	10	N	Erosion of natural deposits; runoff from fertilizer use; leaching from septic tanks or sewage.
	2015	Nitrite <sup>2</sup> (ppm)	.05	.04-.05	10.00	10	N	Erosion of natural deposits; runoff from fertilizer use; leaching from septic tanks or sewage.
	2015	Selenium <sup>1</sup> (ppb)	7.7	5.4-9.8	50.0	50	N	Erosion from natural deposits; discharge from petroleum refineries.
<b>Radioactive Contaminants</b>	2014	Beta/proton Emitters <sup>1</sup> (pCi/L)	11.5	11.5-11.5	0	50	N	Erosion of natural deposits; decay of natural and man-made deposits.
	2011	Combined Radium <sup>1</sup> 226/228	3.2	1-3.2	0	5	N	Naturally present in environment.
<b>Disinfection Byproducts</b>	2015	Total Haloacetic Acids <sup>2</sup> (ppb)	23.9	3.8-23.9	No goal for the total	60	N	Byproduct of drinking water disinfection.
	2015	Total Trihalomethanes <sup>1</sup> (ppb)	109	19.9-109	No goal for the total	80	N	Byproduct of drinking water disinfection.
	2015	Chlorite <sup>1</sup> (ppm)	0.58	0-0.58	0.8	1	N	Byproduct of drinking water disinfection.

<sup>1</sup> City of Abilene Data

<sup>2</sup> Dyess AFB Data

## Unregulated Contaminants

Type of Contaminant	Year of Range	Contaminant (unit of measure)	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Violation	Source of Contaminant
Unregulated Contaminants	2015	Chloroform <sup>2</sup> (ppb)	2.1	1.1-2.1	na	na	na	Byproduct of drinking water disinfection.
	2015	Bromoform <sup>2</sup> (ppb)	80.0	9.9-80.0	na	na	na	Byproduct of drinking water disinfection.
	2015	Bromodichloromethane <sup>2</sup> (ppb)	5.5	1.4-5.5	na	na	na	Byproduct of drinking water disinfection.
	2015	Dibromochloromethane <sup>2</sup> (ppb)	15.1	6.9-15.1	na	na	na	Byproduct of drinking water disinfection.
	2015	Bromochloroacetic Acid <sup>2</sup>	3.9	2.1-3.9	na	na	na	Byproduct of drinking water disinfection.
	2015	Dibromoacetic Acid <sup>2</sup>	21.6	1.2-21.6	na	na	na	Byproduct of drinking water disinfection.
	2015	Dichloroacetic Acid <sup>2</sup>	1.7	1.4-1.7	na	na	na	Byproduct of drinking water disinfection.
	2015	Bromodichloroacetic acid <sup>1</sup> (ppb)	10.9	1.4-10.9	na	na	na	Byproduct of drinking water disinfection.

<sup>1</sup> City of Abilene Data

<sup>2</sup> Dyess AFB Data

Note: Unregulated contaminants are those for which the EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulations are warranted.

## Secondary and Other Constituents Not Regulated

Type of Contaminant	Year of Range	Contaminant (unit of measure)	Average Level	Minimum Level	Maximum Level	Secondary Limit	Source of Contaminant
Secondary and Other Constituents Not Regulated	2015	Aluminum <sup>1</sup> (ppm)	<0.02	<0.02	0.026	0.05	Naturally present in environment.
	2015	Bicarbonate <sup>1</sup> (ppm)	147	123	178	na	Corrosion of carbonate rocks such as limestone.
	2015	Calcium <sup>1</sup> (ppm)	90.5	80.7	110	na	Naturally present in environment.
	2015	Chloride <sup>1</sup> (ppm)	323	217	380	300	Naturally present in environment.
	2015	Copper <sup>1</sup> (ppm)	0.0022	0.0021	0.0025	1.0	Corrosion of household plumbing, erosion from natural deposits; leaching from wood preservatives.
	2015	Magnesium <sup>1</sup> (ppm)	34.6	31	41.8	na	Naturally present in environment.

<sup>1</sup> City of Abilene Data

<sup>2</sup> Dyess AFB Data

**Secondary and Other Constituents Not Regulated cont'd**

Type of Contaminant	Year of Range	Contaminant (unit of measure)	Average Level	Minimum Level	Maximum Level	Secondary Limit	Source of Contaminant
Secondary and Other Constituents Not Regulated	2015	Manganese <sup>1</sup> (ppm)	0.0118	0.0019	0.0232	0.05	Naturally present in environment.
	2015	Nickel <sup>1</sup> (ppm)	0.0035	0.0032	0.0037	na	Erosion of natural deposits.
	2015	pH <sup>2</sup> (units)	7.5	6.5	7.9	>7.7	Measure of corrosivity of water. Influences disinfection process.
	2015	Sodium <sup>1</sup> (ppm)	158	112	181	na	Erosion of natural deposits; byproduct of oil field activity.
	2015	Sulfate <sup>1</sup> (ppm)	182	137	266	300	Naturally occurring; common industrial byproduct; byproduct of oil field activity.
	2015	Total Alkalinity as CaCO <sub>3</sub> <sup>1</sup> (ppm)	121	101	146	na	Naturally occurring soluble mineral salts.
	2015	Total Dissolved Solids <sup>1</sup> (ppm)	892	852	925	1000	Total dissolved mineral constituents in water. Naturally present in environment.
	2015	Total Hardness as CaCO <sub>3</sub> <sup>1</sup> (ppm)	369	329	447	na	Naturally occurring soluble mineral salts.
	2015	Conductivity <sup>1</sup> (uhmos/cm)	1750	1630	1810	na	Physical property of water.
	2015	Potassium <sup>1</sup> (mg/L)	11.9	7.24	14.3	na	Naturally present in environment.
	2015	Zinc <sup>1</sup> (mg/L)	<0.005	<0.005	0.005	na	Naturally present in environment.

<sup>1</sup> City of Abilene Data

<sup>2</sup> Dyess AFB Data

## Asbestos

Year	Contaminant	Average Level	Minimum Level	Maximum Level	MFL	Source of Contaminant
2012	Asbestos <sup>2</sup>	ND	ND	ND	7	Construction materials. Naturally present in environment.

<sup>1</sup> City of Abilene Data

<sup>2</sup> Dyess AFB Data

ND = not detected above laboratory analytical levels

## Turbidity

Year	Highest Single Level Detected	Lowest Monthly % of Samples Meeting Limits	Limit (Treatment Technique)	Lowest Monthly % meeting limit	Violation (Y/N)	Source of Contaminant
2015	0.29 <sup>1</sup>	100.00%	1	0.3	N	Soil runoff.

<sup>1</sup> City of Abilene Data

<sup>2</sup> Dyess AFB Data