



**DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 7TH BOMB WING (AFGSC)
DYESS AIR FORCE BASE TEXAS**

29 Jun 20

MEMORANDUM FOR ALL DYESS PERSONNEL

FROM: 7 BW/CC

SUBJECT: Dyess Air Force Base Drinking Water Consumer Confidence Report

1. Attached is the Dyess AFB Consumer Confidence Report for the 2019 calendar year which confirms that we have healthy drinking water on base. All of the data from the City of Abilene, as well as Dyess AFB, is provided in this report on the measured levels of wanted and unwanted substances in our drinking water. This report is our way of communicating with you about information on your source of water and the possible contaminants.

2. The highest quality of water is provided to Dyess AFB through the efforts of 7th Civil Engineer Squadron Water/Fuels Maintenance Element and 7th Operational Medical Readiness Squadron Bioenvironmental Engineering Flight. Our drinking water is continuously tested to ensure the proper amounts of chlorine and fluoride are present. A majority of constituents are tested annually, however, some constituents such as lead, copper, and asbestos are tested at varying frequencies due to long history of successful past sampling and the direction of the Texas Commission on Environmental Quality (TCEQ). The result is water that is free of harmful bacteria, within the TCEQ regulatory limits for all constituents tested, and promotes the development of strong and healthy teeth in our children. And of course, the routine quality assurance checks by these entities ensure our water is safe for consumption.

3. Dyess AFB was issued a Notice of Violation (NOV) by TCEQ during the fourth quarter of 2019. The Quarterly sampling was completed, showing no items of concern. The NOV was issued due to a billing error that delayed the reporting of results and was not due to a deficiency in the drinking water quality here at Dyess AFB. This billing discrepancy has since been resolved and all sample results have been reported to TCEQ. These results are accessible to the public and can be found at <https://dww2.tceq.texas.gov/DWW/> using water system number 2210013. I assure you that the water we drink at Dyess AFB meets the compliance requirements per TCEQ.

4. If you have any questions or concerns, my point of contact is Lt Brian Fugett of the Bioenvironmental Engineering Flight and he can be reached at (325) 696-2325.

**JOSE E. SUMANGIL, Colonel, USAF
Commander**

**Attachment:
2019 Dyess AFB Drinking Water Consumer Confidence Report**

DEATH FROM ABOVE

2019 Consumer Confidence Report for Public Water System DYESS AIR FORCE BASE

This is your water quality report for January 1 to December 31, 2019

For more information regarding this report contact:

DYESS AIR FORCE BASE (TX2210013) provides Purchased Surface Water from
City of Abilene treated and filtered surface water located in Taylor County.

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.

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 Level 1 assessment is 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 Level 2 assessment is 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)

Definitions and Abbreviations

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 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.

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

DYESS AIR FORCE BASE purchases water from CITY OF ABILENE. CITY OF ABILENE provides purchase surface water from WEST CENTRAL TEXAS MWD located in Stephens County.

TCEQ completed a Source Water Susceptibility for all drinking water systems that own their sources. This report describes the susceptibility and types of constituents that may come into contact with the 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 Beardsley, Acacia, K 325-696-2325.

2019 Water Quality Test Results

Coliform Bacteria

Maximum Contaminant Level Goal	Total Coliform Maximum Contaminant Level	Highest No. of Positive	Fecal Coliform or E. Coli Maximum Contaminant Level	Total No. of Positive E. Coli or Fecal Coliform Samples	Violation	Likely Source of Contamination
0	1 positive monthly sample.	2	0	0	N	Naturally present in the environment.

Lead and Copper

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper ²	2017	1.3	1.3	0.57	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead ²	2017	0	15	1	0	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

Disinfectant Residual

Disinfectant Residual	Year	Average Level	Range of Levels Detected	MRDL	MRDLG	Unit of Measure	Violation (Y/N)	Source in Drinking Water
Chloramine Residual ²	2019	3	1-5.1	4	4	ppm	N	Water additive used to control microbes.

¹City of Abilene Data

²Dyess AFB Data

Disinfectant By-Products

Disinfection By-Products	Collection Date	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chlorite ¹	2019	0.59	<0.01-0.95	0.8	1	ppm	N	By-product of drinking water disinfection.
Haloacetic Acids (HAA5) ²	2019	28	17.3 – 38.2	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM) ²	2019	51	34.6 – 55.6	No goal for the total	80	ppb	N	By-product of drinking water disinfection.

Inorganic Contaminants

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
Nitrate ²	2019	0.286	0.275 – 0.286	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Nitrite ²	2015	0.05	0.04 - 0.05	1	1	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Arsenic ¹	2019	<1.0	<1.0	10	0	ppb	N	Erosion of natural deposits.
Barium ¹	2019	0.150	0.11-0.15	2	2	ppm	N	Discharge from plastic and fertilizer factories; Discharge from steel/metal factories.
Cyanide ¹	2019	98	43.5-97.6	200	200	ppb	N	Discharge from plastic and fertilizer factories; Discharge from steel/metal factories.
Fluoride ²	2019	1.12	0.8 – 1.12	4	4	ppm	N	Erosion of natural deposits; runoff from fertilizer use; Leaching from septic tanks or sewage.
Selenium ¹	2019	<5.0	<5.0	50.0	50.0	ppb	N	Erosion from natural deposits; discharge from petroleum refineries.

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Radioactive Contaminants

Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
Beta/proton Emitters ¹	2014	11.5	11.5-11.5	0	50	pCi/L	N	Erosion of natural deposits; Decay of natural and man-made deposits.
Gross Alpha ¹	2017	2	0-2	na	na	cpm	N	Erosion of natural deposits; Decay of natural and man-made deposits.
Gross Beta ¹	2017	8.8	6.2-8.8	na	na	cpm	N	Erosion of natural deposits; Decay of natural and man-made deposits.
Radium 228 ¹	2017	<1.0	<1.0	0	5	pCi/L	N	Erosion of natural deposits; Decay of natural and man-made deposits.
Uranium ¹	2017	2.3	0-2.3	0	na	mg/L	N	Byproduct of drinking water disinfection.

Unregulated Contaminants

Unregulated Contaminants	Collection Date	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chloroform ²	2019	3.14	1.72 – 3.14	NA	NA	ppb	NA	Byproduct of drinking water disinfection.
Bromoform ²	2019	26.8	12.2 – 26.8	NA	NA	ppb	NA	Byproduct of drinking water disinfection.
Bromodichloromethane ²	2019	9.42	5.46 – 9.42	NA	NA	ppb	NA	Byproduct of drinking water disinfection.
Dibromochloromethane ²	2019	19.2	11.4 – 19.2	NA	NA	ppb	NA	Byproduct of drinking water disinfection.
4-methyl-2-pentanone ¹	2018	0.67	<0.5-0.67	NA	NA	ppb	NA	Byproduct of drinking water disinfection.
Trichloroacetic Acid ²	2019	1.1	<1.0-1.1	NA	NA	ppb	NA	Byproduct of drinking water disinfection..

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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

Unregulated Contaminants	Collection Date	Average Level	Minimum Level	Maximum Level	Secondary Limit	Units	Likely Source of Contamination
Aluminum ¹	2019	0.0316	0.029	0.033	0.05	ppm	Naturally present in environment.
Bicarbonate ¹	2019	128	111	162	NA	ppm	Corrosion of carbonate rocks such as limestone.
Calcium ¹	2019	65.6	48.5	97.3	NA	ppm	Naturally present in environment.
Chloride ¹	2019	134	104	178	300	ppm	Naturally present in environment.
Copper ¹	2019	0.0013	0.0012	0.0014	1.0	ppm	Corrosion of household plumbing, erosion from natural deposits; leaching from wood preservatives.
Magnesium ¹	2019	24.3	14.4	43.2	NA	ppm	Naturally present in the environment.
Manganese ¹	2019	0.0055	0.0024	0.0081	0.05	ppm	Naturally present in the environment.
Nickel ¹	2019	0.0026	0.0018	0.0034	NA	ppm	Erosion of natural deposits.
pH ²	2019	8.05	7.9	8.11	>7.7	units	Measure of corrosivity of water.
Sodium ¹	2019	83.9	66.9	117	NA	ppm	Erosion of natural deposits; byproduct of oil field activity.
Sulfate ¹	2019	128.3	69.1	239	300	ppm	Naturally occurring; common industrial byproduct; byproduct of oil-field activity.
Total Alkalinity as CaCO ₃ ¹	2019	128	111	162	NA	ppm	Naturally occurring soluble mineral salts.
Total Dissolved Solids ¹	2019	504	379	750	1000	ppm	Total dissolved mineral constituents in water.
Total Hardness as CaCO ₃ ¹	2019	264	184	421	NA	ppm	Naturally occurring calcium.
Conductivity ¹	2019	935	721	1360	NA	uhmos/cm	Naturally present in environment.
Potassium ¹	2019	6.9	5.72	7.72	NA	mg/L	Naturally present in environment.
Lead ¹	2019	<0.001	<0.001	<0.001	15	mg/L	Corrosion of household plumbing; erosion from natural deposits; leaching from wood preservatives.
Di(2-ethylhexyl)phthalate ¹	2018	0.6	<0.5	1.9	6	ppb	Discharge from plastic factories.

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Asbestos

Year	Contaminant	Average Level	Minimum Level	Maximum Level	MFL	Likely Source of Contamination
2012	Asbestos ¹	ND	ND	ND	7	Construction materials; Naturally present in environment.

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²Dyess AFB Data

Turbidity

Year	Highest Single Level Detected	Lowest Monthly % of Samples Meeting Limits	Limit (Treatment Technique)	Lowest Monthly % meeting limit	Violation	Source of Contamination
2019	0.29 ¹	100.00%	1	0.3	N	Soil runoff.

¹City of Abilene Data

²Dyess AFB Data

Total Organic Carbon

Year	Contaminant Source	Average Level	Minimum Level	Maximum Level	Unit of Measure	Source in Drinking Water
2019	Source Water	6.3	4.90	10.9	ppm	Naturally present in environment.
2019	Drinking Water	3.80	2.70	86.40	ppm	Naturally present in environment.

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Violations

Haloacetic Acids (HAA5)			
Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.			
Violation Type	Violation Begin	Violation End	Violation Explanation
MONITORING, ROUTINE (DBP), MAJOR	10/01/2019	12/31/2019	We failed to test our drinking water for the contaminant and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated. *Note* The drinking water for Dyess AFB was tested for HAA5 during this period. This violation was automated by TCEQ due to delayed reporting of sample results. Results have since been reported to TCEQ and the drinking water at Dyess AFB is in compliance and does not exceed the MCL for this contaminant.

Total Trihalomethanes (TTHM)

Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

Violation Type	Violation Begin	Violation End	Violation Explanation
MONITORING, ROUTINE (DBP), MAJOR	10/01/2019	12/31/2019	We failed to test our drinking water for the contaminant and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated. *Note* The drinking water for Dyess AFB was tested for TTHM during this period. This violation was automated by TCEQ due to delayed reporting of sample results. Results have since been reported to TCEQ and the drinking water at Dyess AFB is in compliance and does not exceed the MCL for this contaminant.