

# 2011 WATER QUALITY REPORT



**Fort Bliss**

**WATER SERVICES COMPANY**

A Subsidiary of American States Utility Services, Inc.

*An Ongoing Commitment to the Communities We Serve*



**Fort Bliss**  
WATER SERVICES COMPANY  
A Subsidiary of American States Utility Services, Inc.

## Protecting and Preserving Your Drinking Water

We are pleased to present the following 2011 Water Quality Report, which contains information about testing completed in your water system through December 2010.

Fort Bliss Water Services (FBWS) takes seriously its job as the guardian of drinking water quality for its customers. FBWS is regulated by the state and federal government, and we are proud to say the quality of your water regularly meets all drinking water standards.

Each week, FBWS' industry professionals take water samples to monitor quality at approved sites throughout the distribution system. If there is an exceedance of a drinking water standard, we are required to notify you quickly and take action to restore normal service.

We pride ourselves on our strong customer service culture that comes from industry knowledge and relationships built in the water industry. Our representatives are available around the clock to answer questions and address any water concerns day or night.

On behalf of all of us at Fort Bliss Water Services, thank you for providing us the opportunity to serve you. If you have any questions about this report, please call our Customer Service Center at 915-569-5359

Sincerely,



Robert Sprows  
President and Chief Executive Officer  
Fort Bliss Water Services



Randy Koehn  
Utility Manager  
Fort Bliss Water Services

## About the Company

American States Water Company is an investor-owned utility publicly traded on the New York Stock Exchange under the trading symbol AWR and is the parent company of American States Utility Services (ASUS). ASUS is one of the leaders in privatization of utilities on military installations across the nation. Through its subsidiary, Fort Bliss Water Services Company (FBWS), the important responsibility of managing the water systems at Fort Bliss is accomplished.

AWR and its family of companies provide water to communities throughout the United States. For over 80 years, we've been installing and maintaining complex structures consisting of thousands of miles of pipelines, wells, pumping stations and reservoirs. With AWR companies, you can count on reliable water services, quality drinking water, and unsurpassed response to your questions.

You can find our companies in California, Texas, Maryland, North Carolina, South Carolina, New Mexico, and Virginia. Our trained personnel have thousands of years of combined experience and are certified to work the various aspects of water systems. Our water testing procedures allow us to meet the water quality regulations set in place by the USEPA and the Texas Commission on Environmental Quality (TCEQ) to deliver quality, wholesome water to you – our customers.

Managing the daily operations for FBWS is Randy Koehn, Utility Manager. Randy is a seasoned professional with 20+ years of experience in the water industry. He has worked in all phases of water treatment and distribution.

All the men and women at FBWS are committed to meeting the needs of Fort Bliss. The water system at Fort Bliss undergoes comprehensive infrastructure analysis to determine what areas need repair, replacement or new facilities.

We're here to give you peace of mind – water when you need it and unsurpassed service. For questions about your water service, please contact Randy Koehn at (915) 569-5359.

## Safekeeping of Water Supplies and Facilities

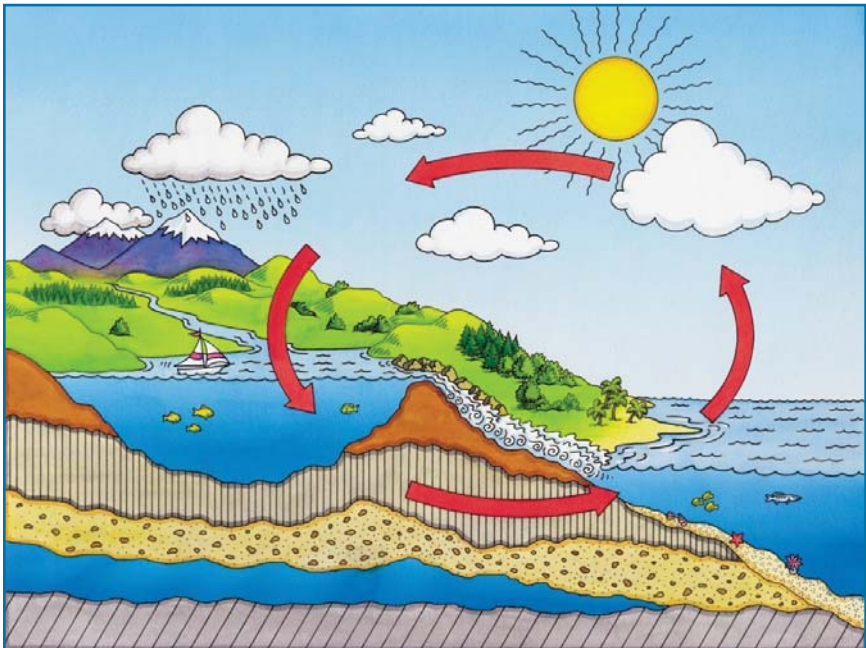
To reduce the risk of terrorism affecting local water supplies and distribution systems, Fort Bliss Water Services Company is following recommendations from the Federal Bureau of Investigation, the United States Environment Protection Agency and the American Water Works Association. While water systems have a low relative likelihood of experiencing terrorist acts, these agencies advise that water systems should guard against unplanned physical intrusion, review emergency response plans, and increase vigilance. Fort Bliss Water Services Company has taken all these steps and is continuing to look for additional safety improvements.

## If You Have Questions – Contact Us

For information about your water quality or to find out about upcoming opportunities to participate in public meetings, please contact Randy Koehn, Utility Manager, at (915) 569-5359.

For more information about health effects of the listed constituents in the following tables, call the EPA hotline at 1-800-426-4791.

Este informe contiene informacion muy importante sobre su agua beber. Traduzcalo o hable con alguien que lo entienda bien.



### **The Water Cycle:**

*A continuous process by which water circulates throughout the earth and atmosphere.*

## Where Does Our Water Come From?

Our drinking water is obtained from groundwater sources. It comes from the Hueco-Mesilla Bolson Aquifer. A Source Water Susceptibility Assessment for your drinking water sources is currently being updated by the Texas Commission on Environmental Quality. This information 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 information contained in the assessment allows us to focus our source water protection strategies. Some of this source water assessment information is available on Texas Drinking Water Watch at <http://dww.tceq.state.tx.us/DWW/>. For more information on source water assessments and protection efforts at our system, please contact us.

## ALL Drinking Water May Contain Contaminants

When drinking water meets federal standards, there may not be any health 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 (1-800-426-4791).

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.

### Contaminants in Drinking Water Sources May 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 and 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 People with Sensitive Immune Systems...

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 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 provider. 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.

## Fort Bliss - Biggs Army Airfield - Source Water Quality

Primary Standards - Health Based (units)	PRIMARY MCL	MCLG	Average Level	Minimum Level	Maximum Level	Most Recent Sampling Year	Typical Source of Constituent
<b>Inorganic Constituents</b>							
Arsenic (ug/L)	10	0	7	7	7	2008	Erosion of natural deposits; runoff from orchards, glass and electronics production wastes
Barium (mg/L)	2	2	0.054	0.054	0.054	2008	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
Chromium, Total (ug/L)	100	100	2.6	2.6	2.6	2008	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Fluoride (mg/L)	4.0	4	0.84	0.84	0.84	2008	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate [as NO <sub>3</sub> ] (mg/L)	10	10	1.88	1.88	1.88	2010	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
<b>Radioactive Constituents</b>							
Gross Alpha Activity (pCi/L)	15	0	3.3	3.3	3.3	2010	Erosion of natural deposits
Gross Beta Activity (pCi/L)	50(a)	0	8.4	8.4	8.4	2010	Decay of natural and manmade deposits
Secondary Standards - Aesthetic (units)	SECONDARY MCL	MCLG	Average Level	Minimum Level	Maximum Level	Most Recent Sampling Year	Typical Source of Constituent
Aluminum (mg/L)	0.2	n/a	0.044	0.044	0.044	2008	Erosion of natural deposits; residue from some surface water treatment processes
Chloride (mg/L)	300	n/a	47.7	47.7	47.7	2008	Abundant naturally occurring element; used in water purification; byproduct of oil field activity
Copper (mg/L)	1.0	n/a	0.002	0.002	0.002	2008	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Manganese (mg/L)	0.5	n/a	0.0014	0.0014	0.0014	2008	Abundant naturally occurring element
Sulfate (mg/L)	300	n/a	55	55	55	2008	Naturally occurring; common industrial byproduct; byproduct of oil field activity
Total Dissolved Solids (mg/L)	1000	n/a	335	335	335	2008	Total dissolved mineral constituents in water
Zinc (mg/L)	5.0	n/a	0.005	0.005	0.005	2008	Moderately abundant naturally occurring element; used in the metal industry
Other Parameters (units)	Notification Level	MCLG	Average Level	Minimum Level	Maximum Level	Most Recent Sampling Year	
Alkalinity (mg/L)	n/a	n/a	120	120	120	2008	Naturally occurring soluble mineral salts
Bicarbonate (mg/L)	n/a	n/a	120	120	120	2008	Corrosion of carbonate rocks such as limestone
Calcium (mg/L)	n/a	n/a	17.2	17.2	17.2	2008	Abundant naturally occurring element
Magnesium (mg/L)	n/a	n/a	5.4	5.4	5.4	2008	Moderately abundant naturally occurring element; used in the metal industry
Sodium (mg/L)	n/a	n/a	81	81	81	2008	Erosion of natural deposits; byproduct of oil field activity
Hardness [Ca/Mg] (mg/L)	n/a	n/a	65	65	65	2008	The sum of polyvalent cations present in the water, generally magnesium and calcium. The cations are usually naturally-occurring.
pH (pH units)	n/a	n/a	8	8	8	2008	Measure of corrosivity of water

## Fort Bliss - Biggs Army Airfield - Distribution Water Quality

Microbiological Constituents (units)	PRIMARY MCL	MCLG	Highest monthly number of positive samples		Violation?	Most Recent Sampling Year	Typical Source of Constituent
Total Coliform Bacteria <40 Samples/Month (Present / Absent)	No more than one positive monthly sample	0	1		No	2010	Naturally present in the environment
Maximum Residual Disinfection Level	PRIMARY MCL (MRDL)	MRDLG	Average Level	Minimum Level	Maximum Level	Most Recent Sampling Year	Typical Source of Constituent
Chlorine [as Cl <sub>2</sub> ] (mg/L)	(4.0)	4	1.34	0.75	2.19	2010	Drinking water disinfectant added for treatment
Disinfection Byproducts (units)	PRIMARY MCL (MRDL)	MCLG	Average Level	Minimum Level	Maximum Level	Most Recent Sampling Year	Typical Source of Constituent
HAAs [Total of Five Haloacetic Acids] (ug/L)	60	n/a	6	6	6	2010	Byproduct of drinking water disinfection
TTHMs [Total of Four Trihalomethanes] (ug/L)	80	n/a	<4	<4	<4	2010	Byproduct of drinking water chlorination
Inorganic Constituents (units)	ACTION LEVEL	MCLG	Sample Data	90th % Level	Violation?	Most Recent Sampling Year	Typical Source of Constituent
Copper (mg/L)	1.3	1.3	0 of the 20 samples collected exceeded the action level.	0.07	No	2009	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ug/L)	15	0	0 of the 20 samples collected exceeded the action level.	0.46	No	2009	Internal corrosion of household plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

(a) Effective 6/11/06, the gross beta particle activity MCL is 4 millirem/yr annual dose equivalent to the total body or any internal organ. 50 pCi/L is used as a screening level.

## Fort Bliss - Main Post Area - Source Water Quality

Primary Standards - Health Based (units)	PRIMARY MCL	MCLG	Average Level	Minimum Level	Maximum Level	Most Recent Sampling Year	Typical Source of Constituent
<b>Inorganic Constituents</b>							
Arsenic (ug/L)	10	0	3.69	2.63	4.74	2008	Erosion of natural deposits; runoff from orchards, glass and electronics production wastes
Barium (mg/L)	2	2	0.077	0.054	0.1	2008	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
Chromium, Total (ug/L)	100	100	3.64	1.61	5.67	2008	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Fluoride (mg/L)	4.0	4	0.91	0.8	1.02	2008	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate [as NO <sub>3</sub> ] (mg/L)	10	10	2.45	2.12	2.79	2010	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
<b>Radioactive Constituents</b>							
Gross Alpha Activity (pCi/L)	15	0	3.1	2.9	3.4	2005	Erosion of natural deposits
Gross Beta Activity (pCi/L)	50(a)	0	10.5	9.3	11.6	2005	Decay of natural and manmade deposits
Secondary Standards - Aesthetic (units)	SECONDARY MCL	MCLG	Average Level	Minimum Level	Maximum Level	Most Recent Sampling Year	Typical Source of Constituent
Aluminum (mg/L)	0.2	n/a	0.013	0.011	0.014	2008	Erosion of natural deposits; residue from some surface water treatment processes
Chloride (mg/L)	300	n/a	89	70	109	2008	Abundant naturally occurring element; used in water purification; byproduct of oil field activity
Sulfate (mg/L)	300	n/a	76	60	93	2008	Naturally occurring; common industrial byproduct; byproduct of oil field activity
Total Dissolved Solids (mg/L)	1000	n/a	454	377	531	2008	Total dissolved mineral constituents in water
Zinc (mg/L)	5.0	n/a	0.006	0.005	0.006	2008	Moderately abundant naturally occurring element; used in the metal industry
Other Parameters (units)	Notification Level	MCLG	Average Level	Minimum Level	Maximum Level	Most Recent Sampling Year	
Alkalinity (mg/L)	n/a	n/a	143	126	160	2008	Naturally occurring soluble mineral salts
Bicarbonate (mg/L)	n/a	n/a	143	126	160	2008	Corrosion of carbonate rocks such as limestone
Calcium (mg/L)	n/a	n/a	42.2	22.7	61.7	2008	Abundant naturally occurring element
Magnesium (ppm)	n/a	n/a	15.5	7.39	23.6	2008	Moderately abundant naturally occurring element; used in the metal industry
Nickel (ppm)	n/a	n/a	0.001	0	0.002	2008	Erosion of natural deposits; discharge from metal factories
Sodium (ppm)	n/a	n/a	80.3	72.1	88.4	2008	Erosion of natural deposits; byproduct of oil field activity
Hardness [Ca/Mg] (mg/L)	n/a	n/a	169	87	251	2008	The sum of polyvalent cations present in the water, generally magnesium and calcium. The cations are usually naturally-occurring.
Hardness [as CaCO <sub>3</sub> ] (mg/l)	n/a	n/a	161	99	223	2008	Naturally occurring calcium
pH (pH units)	n/a	n/a	8	8	8	2008	Measure of corrosivity of water



## Fort Bliss - Main Post Area - Distribution Water Quality

Microbiological Constituents (units)	PRIMARY MCL	MCLG	Highest monthly number of positive samples		Violation?	Most Recent Sampling Year	Typical Source of Constituent
Total Coliform Bacteria <40 Samples/Month (Present / Absent)	No more than one positive monthly sample	0	1		No	2010	Naturally present in the environment
Maximum Residual Disinfection Level	PRIMARY MCL (MRDL)	MRDLG	Average Level	Minimum Level	Maximum Level	Most Recent Sampling Year	Typical Source of Constituent
Chlorine [as Cl <sub>2</sub> ] (mg/L)	(4.0)	4	1.1	0.94	2.16	2010	Drinking water disinfectant added for treatment
Disinfection Byproducts	PRIMARY MCL (MRDL)	MRDLG	Average Level	Minimum Level	Maximum Level	Most Recent Sampling Year	Typical Source of Constituent
HAA5 [Total of Five Haloacetic Acids] (ug/L)	60	n/a	6	6	6	2010	Byproduct of drinking water disinfection
TTHMs [Total of Four Trihalomethanes] (ug/L)	80	n/a	<4	<4	<4	2010	Byproduct of drinking water chlorination
Inorganic Constituents (units)	ACTION LEVEL	MCLG	Sample Data	90th % Level	Violation?	Most Recent Sampling Year	Typical Source of Constituent
Copper (mg/L)	1.3	1.3	0 of the 20 samples collected exceeded the action level.	0.07	No	2009	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ug/L)	15	0	0 of the 20 samples collected exceeded the action level.	0.46	No	2009	Internal corrosion of household plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

(a) Effective 6/11/06, the gross beta particle activity MCL is 4 millirem/yr annual dose equivalent to the total body or any internal organ. 50 pCi/L is used as a screening level.

## Fort Bliss - El Paso Water Utilities

Turbidity								
Year or Range	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	MCLG	Unit of Measure	Source of Contaminant
2010	Turbidity	N/A	100% (1)	0.23	TT	N/A	NTU	Soil Runoff
Inorganic Contaminants								
Year or Range	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	MCLG	Unit of Measure	Source of Contaminant
2010	Arsenic	8.8	5	18.1 (10)	10	N/A	ppb	Erosion of natural deposits
2009	Barium	0.029	0.006	0.072	2	2	ppb	Erosion of natural deposits
2010	Fluoride	0.59	0.56	0.61	4	4	ppm	Erosion of natural deposits
2010	Nitrate (as Nitrogen)	0.7	0	2.49	10	10	ppm	Runoff from fertilizer use
2009	Gross Alpha	3.8	3.8	3.8	15	0	pCi/L	Erosion of natural deposits
2009	Gross Beta	7.2	7.2	7.2	50	0	pCi/L	Decay of natural and man-made deposits
2005	Radium, Total	0.1	0	0.2	5	0	pCi/L	Erosion of natural deposits
2009	Selenium	1.4	0	10	50	50	ppb	Erosion of natural deposits
Maximum Residual Disinfectant Level								
Year or Range	Constituent	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Unit of Measure	Source of Contaminant
2010	Chlorine	N/A (6)	N/A (6)	2.0	4 (8)	4 (9)	ppm	Water Additive used to control microbes
2010	Chlorine Dioxide	N/A (6)	N/A (6)	690	800 (8)	800 (9)	ppb	Water Additive used to control microbes
Disinfection Byproducts								
Year or Range	Constituent	Average Level	Minimum Level	Maximum Level	MCL	MCLG	Unit of Measure	Source of Contaminant
2010	Total Trihalomethanes (TTHM)	18.2 (3)	0	54.0	80	N/A	ppb	By-product of drinking water disinfection
2010	Total Haloacetic Acids (THAA)	3.1	0	11.6	60	N/A	ppb	By-product of drinking water disinfection
2010	Bromate	N/A (6)	N/A (6)	0	10	0	ppb	By-product of drinking water disinfection
2010	Chlorite	N/A (6)	N/A (6)	0.67	1	0.8	ppm	By-product of drinking water disinfection
Lead and Copper								
Year or Range	Contaminant	Average Level	Minimum Level	Maximum Level	Action Level	MCLG	Unit of Measure	Source of Contaminant
2009	Copper	0.5 (2)	0.037	1.1	1.3	1.3	ppm	Corrosion of household plumbing systems; erosion of natural deposits
2009	Lead	5.4 (2)	0.27	38	15	0	ppb	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Total Coliforms								
Year or Range	Contaminant	Highest Monthly Number of Positive Samples		MCL	Unit of Measure	Source of Contaminant		
2010	Total Coliform Bacteria	0.4%		5%	Present	Naturally present in the environment		
Total Organic Carbon								
Year or Range	Constituent	Average Level	Minimum Level	Maximum Level	MCL	MRDLG	Unit of Measure	Source of Contaminant
2010	Total Organic Carbon (TOC)	N/A	1.7	1.9	TT (4)	N/A	Removal Ratio	Naturally present in the environment

## Fort Bliss - El Paso Water Utilities

### Unregulated Contaminants (5)

Year or Range	Constituent	Average Level	Minimum Level	Maximum Level	MCL	MCLG	Units of Measure	Source of Constituent
2010	Chloroform	2.1	0	13.6	N/A	N/A	ppb	By-product of drinking water disinfection
2010	Bromoform	4.8	0	14.8	N/A	N/A	ppb	By-product of drinking water disinfection
2010	Bromodichloromethane	3.7	0	17.8	N/A	N/A	ppb	By-product of drinking water disinfection
2010	Dibromochloromethane	5.7	0	18.1	N/A	N/A	ppb	By-product of drinking water disinfection
2010	Ethylbenzene	0.2	0	1.1	N/A	N/A	ppb	
2010	Trichloroethylene	0.3	0	1.5	N/A	N/A	ppb	Discharge from metal degreasing sites and other factories

- (1) The lowest monthly % of samples meeting limits was 100%.
- (2) Lead and copper concentration shown are at the 90th percentile level at the customer's tap first draw sample.
- (3) The system average of 18.2 ppb meets the MCL of 80 ppb.
- (4) The system is in compliance with a yearly removal ratio of 1.00 or greater.
- (5) Unregulated contaminants are those for which 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 regulation is warranted.
- (6) The average and minimum disinfection residuals are dependent on treatment techniques.
- (7) Data presented prior to 2010 is from the most recent testing done in accordance with the regulations.
- (8) 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.
- (9) 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.
- (10) Wells exceeding the MCL are turned off to meet compliance with standards

## Sampling Results

Over the years we have taken thousands of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic or synthetic organic contaminants in your drinking water. The enclosed table shows only those contaminants that were detected in the water. Although all of the substances listed here are under the primary Maximum Contaminant Level (MCL), we feel it is important that you know exactly what was detected and how much of the substance is present.

Compliance (unless otherwise noted) is based on the average level of concentration being below the MCL. The state allows us to monitor for some contaminants less than once per year because the concentrations do not change frequently. Some of our data, though representative, are more than a year old.

## Turbidity

Turbidity has no health effects. However, turbidity is monitored because it can interfere with disinfection and provide a medium for microbial growth.

## 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 the EPA. These constituents are not causes for health concern. Therefore secondary constituents are not required to be reported in this document but they may greatly affect the appearance and taste of your water.

## Arsenic

While your drinking water meets EPA standards for arsenic, it does contain low levels of arsenic. The 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.

## Lead

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 line and home plumbing. FBWS 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 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>.

## Measurements

Water is sampled and tested throughout the year.

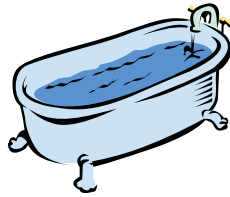
### Contaminants are measured in:

- Parts per million (ppm) or milligrams per liter (mg/L),
- Parts per billion (ppb) or micrograms per liter ( $\mu\text{g/L}$ ),
- Parts per trillion (ppt) or nanograms per liter (ng/L),
- Grains per gallon (grains/gal) – A measurement of water hardness often used for sizing household water softeners. One grain per gallon is equal to 17.1 mg/L of hardness.
- Nephelometric Turbidity Units (NTU) – A measurement of the clarity of water. Turbidity in excess of 5 NTU is noticeable to the average person.
- Picocuries per liter (pCi/L) – A measurement of radioactivity in water.

*If this is difficult to imagine, think about these comparisons:*

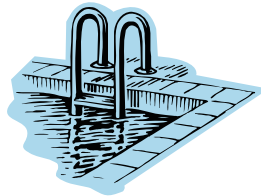
#### Parts per million:

3 drops in 42 gallons  
1 second in 12 days  
1 inch in 16 miles



#### Parts per billion:

1 drop in 14,000 gallons  
1 second in 32 years  
1 inch in 16,000 miles



#### Parts per trillion:

1 second in 32,000 years  
1 inch in 16 million miles  
10 drops in enough water  
to fill the Rose Bowl



## Definitions

### **Maximum Contaminant Level (MCL)**

The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the maximum contaminant level goals as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste and appearance of drinking water.

### **Maximum Contaminant Level Goal (MCLG)**

The level of contaminant in drinking water below which there is no known or expected risk to health. Maximum contaminant level goals are set by EPA. MCLGs allow for a margin of safety.

### **Maximum Residual Disinfectant Level (MRDL)**

The level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap. 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 disinfectant added for water treatment below which there is no known or expected health risk. MRDLGs are set by EPA. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.

### **Primary Drinking Water Standard (PDWS)**

MCLs for contaminants that affect health, along with their monitoring and reporting requirements, and water treatment requirements.

### **Action Level (AL)**

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

### **Not Applicable (N/A)**

Does not apply to the substance indicated.

# Our Subsidiaries



Serving Fort Bliss, Texas



Serving Fort Eustis, Fort Monroe,  
Fort Story, and Fort Lee, Virginia



Serving Fort Jackson, South Carolina



Serving Fort Bragg, Pope Air Force Base,  
and Camp MacKall, North Carolina



Serving Andrews Air Force, Maryland



**Fort Bliss**  
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A Subsidiary of American States Utility Services, Inc.

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