

2008 Drinking Water Report



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EL PASO **WATER** UTILITIES
PUBLIC **SERVICES** BOARD

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Dear Customer:

The U.S. Environmental Protection Agency requires all utilities to prepare and distribute this report on an annual basis. It is part of the provisions of the Safe Drinking Water Act. The information is also submitted to the Texas Commission On Environmental Quality, the state agency that monitors our compliance with the regulatory standards and testing requirements necessary to assure safe drinking water.

El Paso's drinking water has no water quality violations and our water meets or exceeds all applicable standards for drinking water as established by the U.S. Environmental Protection Agency and the Texas Commission On Environmental Quality.

We also want to report to you that our strategic planning adopted 20 years ago on water supply has really paid off. We now practice TOTAL WATER MANAGEMENT. We diversified our water programs by moving away from strictly groundwater pumping which was seeing the fresh water table drop from 1 to 1.5 feet per year to a situation now where the aquifer has stabilized. We have a strong conservation program, use treated water from the river, reclaimed water for non-potable uses, groundwater from two sources and since 2007, desalinated water. We are very well prepared for the future and climate change.

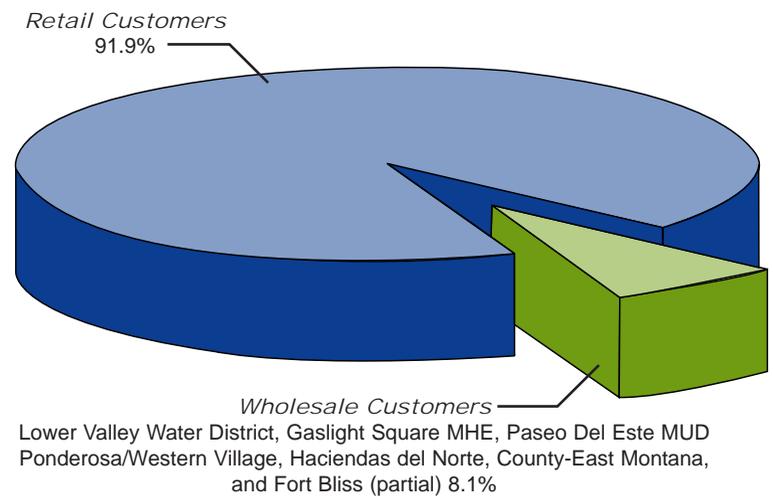
Sincerely,

Edmund G. Archuleta, P.E., President / Chief Executive Officer

Who Drinks Our Water?

El Paso Water Utilities serves customers inside and outside the city limits. We provide retail water service to customers in the City of El Paso, Westway, Canutillo, and Homestead. We also provide wholesale service to several communities in El Paso County.

2008 EPWU Water Demand



Source Water Assessment

A source water assessment was conducted for El Paso Water Utilities in 2003 by the Texas Commission on Environmental Quality. Due to the complicated nature of El Paso's groundwater supplies, some susceptibilities exist, but the depth of the groundwater is a mitigating factor. Since the surface water supply comes from upstream states and since a variety of agricultural and municipal dischargers use the Rio Grande, the surface water supply is uniquely susceptible. However, El Paso's surface water treatment plants are designed to minimize the effects of those susceptibilities. A copy of the Source Water Assessment document is available for public review by calling 594-5730.

Note to wholesale customers: Water consumers in the Lower Valley Water District, Paseo Del Este MUD, Ponderosa/Western Village, and Gaslight Square MHE receive water from the EPWU distribution system. As such, their water quality is the same as described in this report. Fort Bliss, County-East Montana, and Haciendas del Norte water consumers may receive some or all of their water from the EPWU distribution system, but may receive water from other sources that may not be represented in this report. Please contact your water retailer for further information.

For More Information

El Paso Water Utilities is governed by the Public Service Board. The Board meets at 8:30 a.m. on the 2nd and 4th Wednesday of each month at El Paso Water Utilities' main office, 1154 Hawkins Boulevard. The meetings are open to the public. Please call 594-5680 to confirm the meeting date and time.

Questions about public participation and policy decisions can be directed to our Public Affairs Department at 594-5692.

Other useful numbers are:

Water Quality Laboratory 594-5733

Safe Drinking Water Hotline 1-800-426-4791

Visit our web site: www.epwu.org

Notice: This Water Quality Report is being provided in addition to other notices that may be required by law.



What is in Our Water?

All drinking water contains some naturally-occurring contaminants. The sources of 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 can pick up substances resulting from the presence of animals or from human activity.

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 live-stock operations, and wildlife.
- *Inorganic contaminants*, such as salts and metals, which can be naturally-occurring or result from urban stormwater 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 stormwater 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 stormwater 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 (United States Environmental Protection Agency) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration

regulations establish limits for contaminants in bottled water. 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. In fact, a few of the naturally occurring substances may have nutritional values at low levels. 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 call 594-5733.

More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (1-800-426-4791).

Required Additional Health Information

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 (1-800-426-4791).

Where Our Water Comes From

The water we supply to our customers comes from three sources—one surface water source and two groundwater sources. The surface water source is the Rio Grande. The groundwater sources are the Mesilla Bolson and the Hueco Bolson aquifers.

Although some customers receive water from only one source, most customers receive water from two sources, depending on the time of year. While water from the Rio Grande is highly treated before delivery to our customers, our high-quality groundwater needs only to be chlorinated prior to delivery.

Our treatment plants are designed and operated to treat water to a level of safety far exceeding that required by EPA regulation. El Paso Water Utilities consistently treats surface water to 0.1 NTUs measured immediately after the water has passed through each filter. This is significantly better than the 0.3 NTUs required by EPA regulation.



Frequently Asked Questions



What causes the musty taste and odor I sometimes find in my water?

Sometimes microscopic plants called algae multiply rapidly in the New Mexico reservoirs during the hot summer months. This causes a distinctly different taste and odor to develop in El Paso's water derived from the Rio Grande. This problem is normally very short lived. Activated carbon is used at the water treatment plants to adsorb these algae-related tastes and odors. Even if the musty smell and taste are apparent, the water is safe to drink.

Does El Paso have hard water? Should I install a water softener? Water hardness is defined by the amount of calcium and magnesium present. When the levels are comparatively low, water is described as soft. When the levels are comparatively high, water is described as hard.

Water in El Paso is described as moderately hard to hard. Harder water does not lather as easily and does not form as many suds when using soap or detergent. However, there is increasing evidence that the presence of calcium and magnesium found in hard water is desirable for good cardio-vascular health. We do not recommend the installation of water softeners for drinking water.

Is lithium present in El Paso's water? Does it have an effect on people's moods? A small amount of lithium occurs naturally in El Paso's water. The amount is considerably less than a medical dosage. Lithium is sometimes used by doctors to treat mental disorders. To get the same amount of lithium as in one standard capsule, you would have to drink about 600 glasses of water.

Would a home water purification device make my water safer? If you are an El Paso Water Utilities customer, these devices are not necessary to make your water safe. Your water is safe as it comes from the tap. If not properly maintained, these devices may actually cause problems with your water, including uncontrolled growth of disease-causing bacteria. Home treatment devices are not tested or regulated by the state or federal government. Some, however, are tested by independent laboratories.

Sometimes my water seems cloudy. Is the cloudy water safe? Water that appears milky is usually the result of harmless air bubbles trapped in the water. After a glass of this water sits for a few minutes, the water will become clear as the air bubbles float to the top. Although the air trapped in the water does not affect the safety of the water, please report this problem to El Paso Water Utilities at 594-5733.

Is the chlorine used to disinfect water dangerous?

El Paso uses chlorine to disinfect our drinking water. Chlorine has been used in municipal water in the United States since 1908 and it is the most effective way to ensure that water stays disinfected as it travels through water delivery systems. Chlorine prevents water-borne epidemics such as cholera, typhoid, and hepatitis.

The maximum amount of chlorine in El Paso's water is usually 2 parts per million (ppm). Chlorine in this quantity poses no adverse health risks.

There has been publicity that chlorine in drinking water causes cancer. That is not correct. Chlorine does not cause cancer; however, chlorine may react with organic matter to form substances which can cause cancer if they are present in sufficient quantities. The groundwater used in El Paso is naturally free of most organic matter that will react with chlorine to form cancer-causing substances, and water drawn from the Rio Grande is highly treated before chlorination to minimize the concentration of compounds which can react with chlorine. The maximum level of these cancer-causing substances is regulated by the EPA.

What causes water to sometimes appear discolored or rusty? Rusting in galvanized pipes in plumbing systems is the typical cause of discolored water. In some cases, rusty or dirty water may come from the distribution system as a result of a main break or fire hydrant use. Iron causes the discoloration, but it is not a health risk. Usually, rusty water will clear after running for a few minutes.

Although rusty or dirty water does not create a health risk, we do not recommend that you drink water that is not clear. If the water does not clear after running or if clothing is stained in the wash, please call El Paso Water Utilities for assistance at 594-5733.

What happened to the cold water? The temperature of drinking water in El Paso can vary depending on the time of year and the location where the measurement is taken. The outside temperature affects the water temperature as it flows through our water system and through your plumbing.

How can I prevent a rotten egg odor in my hot water?

The smell of rotten egg may be hydrogen sulfide produced by harmless bacteria in your water heater. Odor causing bacteria can live in warm water in your water heater.

In order to eliminate the odor, you may need to raise your water heater temperature above 140 degrees Fahrenheit for several hours. You should then flush out your water heater. If you are not sure about operating your water heater consult a dealer or plumber for service.

Is fluoride added to El Paso's water?

Fluoride is a substance which is known to retard the formation of cavities in teeth. In some communities, fluoride is added to drinking water. The American Dental Association recommends a concentration of 1 part per million. However, fluoride occurs naturally in El Paso's water at the optimal level. Bottled water usually does not contain fluoride and, therefore, is not recommended for children. Because too much fluoride can be detrimental, the maximum level set by EPA standards is 4 parts per million.

El Paso's Water is Safe to Drink

In the desert when we talk water, we talk quantity and quality. We want water, and we want it safe to drink. When you take a sip of water, you have an expectation that it is safe and healthful, but how do you know? What does it mean when we say water is safe to drink?

Our water comes from various deep wells that deliver fresh groundwater requiring only chlorination, deep groundwater wells that deliver brackish or saline water that requires desalination and chlorination, and water from the Rio Grande that requires extensive treatment methods. All three produce very high-quality drinking water.

Naturally, water contains minerals. As that drop of rain percolates through rocks, some of the calcium, magnesium and other materials from that rock dissolve into the water. It makes the water taste good, and quite frankly, our bodies were designed to function by getting these minerals from the water.

For example, calcium is a good thing, but too much calcium can make the water chalky and funny tasting. Of course, there are some things we don't necessarily want in the water at all. So, we don't only need to know what is in the water, we need to know how much of a particular substance is in the water. Both of these questions are answered in the laboratory.

The U.S. Environmental Protection Agency regulates water quality. Typically, when a substance is found in water, EPA conducts research to determine whether or not that substance can adversely affect health.

They want to know if the substance can cause disease - either now or only after a lifetime of exposure. They want to know whether some types of individuals, like babies and children, are more sensitive than others, like adults.

Sometimes answers are very clear, and EPA sets a standard for that substance. Sometimes information changes and the standard changes. Often, the answers are not clear and standards are set only after years of deliberation and testing.

Sometimes an absolute standard is set, and sometimes the standard is set as a goal or requiring a specific type

of treatment technique. However, once the standard is set and adopted by the state, public water systems must meet that standard.

Like most public water systems, El Paso Water Utilities wants to not only meet those standards, but to exceed water quality standards and goals. We closely follow the work EPA is doing. We are also active members of the American Water Works Association Research Foundation and actively participate in national drinking water research.

We know well in advance what new parameters are being examined. We know what new standards EPA is preparing to set. Then, we monitor, both to comply with existing standards and to determine the impact of future standards.

Sometimes in the early stages of their regulatory process, EPA releases preliminary information. Recently, newspapers reported about pharmaceutical substances and drugs being found at very low levels in various water sources throughout the United States.

At this time, EPA has not determined that these substances have any health effects in the very low levels at which they have been found. Nevertheless, our plants use ozone and granular activated carbon treatment systems to treat Rio Grande water. EPA has determined that these are the best available technologies for removing those substances.

El Paso Water Utilities takes water quality very seriously and invested \$7.5 million in a state of the art environmental laboratory. We have 28 employees dedicated to water quality testing using instrumentation that can detect substances to the parts-per-trillion level.

We can test for 28 different types of metals, 10 microbiological components, 48 general water quality compounds and over 100 organic substances. We tested about 40,000 samples and performed 250,000 analyses in 2008.

El Paso Water Utilities. We've tested the water, and it's good and safe to drink.



Other Monitoring Performed

In 2008, El Paso's water was tested for 25 unregulated contaminants as part of the Unregulated Contaminant Monitoring Rule 2 (UCMR2). The UCMR2 applies to public water systems nationwide serving more than 10,000 people. The U.S. Environmental Protection Agency is collecting data between 2008 and 2010 to estimate national occurrence of 25 unregulated contaminants. None of the following 25 contaminants were detected in samples collected in 2008 from El Paso's water supply: **1 Insecticide, 1 Insecticide Degradate, 5 Flame Retardants, 3 Explosives, 3 Acetanilide Parent Herbicides, 6 Acetanilide Herbicide Degradates, 6 Nitrosamines.**

Although EPWU monitors your water for more than 200 regulated and nonregulated parameters, some parameters, such as magnesium and calcium are routinely detected, but are not required to be reported in this document. You may request a list of these types of parameters by calling 594-5733. Many other contaminants, such as pesticides, herbicides, volatile and synthetic organic chemicals, metals and inorganics are routinely monitored and have not been detected in El Paso's water supply.

DRINKING WATER ANALYSIS

Substance (Units)	Sample Year ⁽⁷⁾	Average Level	Minimum Level	Maximum Level	MCL	MCLG	Possible Source
Turbidity							
Turbidity (NTU)	2008	N/A	100% ⁽¹⁾	0.31	Treatment Technique	N/A	Soil runoff
Inorganics							
Arsenic (ppb)	2008	4.70	4.70	4.70	10	N/A	Erosion of natural deposits
Barium (ppm)	2008	0.026	0.026	0.026	2	2	Erosion of natural deposits
Chromium (ppb)	2008	4.10	4.10	4.10	100	100	Erosion of natural deposits
Fluoride (ppm)	2008	0.78	0.58	1.1	4	4	Erosion of natural deposits
Nitrate as Nitrogen (ppm)	2008	1.24	0	1.8	10	10	Runoff from fertilizer use
Gross Alpha (pCi/L)	2005	4.25	0	7	15	0	Erosion of natural deposits
Gross Beta (pCi/L)	2005	9.35	0	18.1	50	0	Decay of natural and man-made deposits
Radium Total (pCi/L)	2005	0.10	0	0.2	5	0	Erosion of natural deposits
Lead and Copper							
Copper (ppm)	2006	0.67 ⁽²⁾	0.008	0.98	Action Level = 1.3	1.3	Corrosion of household plumbing systems
Lead (ppb)	2006	3.5 ⁽²⁾	0.3	4.4	Action Level = 15	0	Corrosion of household plumbing systems
Coliform Bacteria							
Total Coliform Bacteria	2008	N/A	0.0%	0.4%	5%	0	Naturally present in the environment
Disinfection Residual							
Chlorine (ppm)	2008	N/A ⁽⁶⁾	N/A ⁽⁶⁾	2.6	4 ⁽⁶⁾	4 ⁽⁹⁾	Water additive used to control microbes
Chlorine Dioxide (ppb)	2008	N/A ⁽⁶⁾	N/A ⁽⁶⁾	38	800 ⁽⁸⁾	800 ⁽⁹⁾	Water additive used to control microbes
Disinfection Byproducts							
Total Trihalomethanes (TTHM) (ppb)	2008	49.0 ⁽³⁾	0	99.5 ⁽³⁾	80	N/A	By-product of drinking water disinfection
Total Haloacetic Acids (THAA) (ppb)	2008	12.1	0	34	60	N/A	By-product of drinking water disinfection
Bromate (ppb)	2008	N/A ⁽⁶⁾	N/A ⁽⁶⁾	5.0	10	0	By-product of drinking water disinfection
Chlorite (ppm)	2008	N/A ⁽⁶⁾	N/A ⁽⁶⁾	0.59	1	0.8	By-product of drinking water disinfection
Total Organic Carbon							
Removal Ratio	2008	N/A	1.33	1.76	Treatment Technique ⁽⁴⁾	N/A	Naturally present in the environment
Unregulated Contaminants⁽⁵⁾							
Chloroform (ppb)	2008	10.6	0	35.3	N/A	N/A	By-product of drinking water disinfection
Bromoform (ppb)	2008	6.4	1.1	14.9	N/A	N/A	By-product of drinking water disinfection
Bromodichloromethane (ppb)	2008	14.5	1.4	35.7	N/A	N/A	By-product of drinking water disinfection
Dibromochloromethane (ppb)	2008	17.8	4.1	35.4	N/A	N/A	By-product of drinking water disinfection

⁽¹⁾The lowest monthly percentage 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; No sites exceeded action levels.

⁽³⁾The system average of 49.0 meets the MCL of 80ppb. Two individual locations at 99.5 and 81.9 ppb TTHM.

⁽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 2008 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.

HEALTH EFFECTS LANGUAGE

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

Arsenic (ppb) - While your drinking water meets EPA's standard 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.

DEFINITIONS

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

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

Maximum Contaminant Level Goal (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.

N/A - not applicable

Nephelometric Turbidity Unit (NTU) - A measure of turbidity (*cloudiness*).

Parts per Billion (ppb) - or micrograms per liter. An example of one part per billion is one packet of artificial sweetener sprinkled into an Olympic-sized swimming pool full of water.

Parts per Million (ppm) - or milligrams per liter. An example of one part per million is one packet of artificial sweetener sprinkled into 250 gallons of water.

Picocuries per liter (pCi/L) - A measure of radioactivity

Treatment Technique - A required process intended to reduce the level of a contaminant in drinking water.



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