



# 2010 CITY OF EL MIRAGE



# WATER QUALITY REPORT

PUBLIC WATER SYSTEM: AZ04-07-091

***The City of El Mirage is again pleased to present its Annual Water Quality Report for calendar year 2010. This report explains how drinking water provided by City of El Mirage is of the highest quality. Included is a listing of results from required water quality tests as well as an explanation of where our water comes from, how to interpret the data and useful conservation tips.***

Our staff is proud to inform you that our compliance with all state and federal drinking water regulations meets or exceeds established water quality standards. In addition to the required testing that we perform, the results of which are provided in this report; and our system operators routinely monitor for additional substances and microscopic organisms to ensure our water is safe. We are committed to providing, clean, quality, drinking water to serve the needs of all our water customers and continually strive to adopt new and innovative improvement methods for delivering the highest quality drinking water to your tap.

#### **Information about Drinking Water**

In order to ensure that tap water is safe to drink, the United States Environmental Protection Agency (EPA) prescribes regulations that 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. More information about contaminants in tap water and potential health effects can be obtained by



calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791). Information on bottled water can be obtained from the Food and Drug Administration. 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 that may be present in source water include the following:

- (A) Microbial contaminants, such as viruses and bacteria that may be from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife.
- (B) Inorganic contaminants, such as salts and metals, that can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- (C) Pesticides and herbicides that may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- (D) Organic chemical contaminants, including synthetic and volatile organics that are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff and septic systems.
- (E) Radioactive contaminants that can be naturally-occurring or can be the result of oil and gas production and mining activities.

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#### ***Interesting Fact:***

***Did you know in 2010, the City of El Mirage distributed approx. 1.6 billion gallons of ground water to serve its El Mirage and Surprise customers?***

## El Mirage Drinking Water Quality

The following tables show regulated substances that were required to be tested and were detected in El Mirage drinking water in 2010. The tables contain the name of each substance, the highest level allowed by regulation, the ideal goals for public health, the amount detected, and the usual sources of such contamination. Certain contaminants are required to be monitored less than one time per year because concentrations of these contaminants are not expected to vary significantly from year to year. .

### Definitions and Acronyms

*To help you understand the terms and abbreviations used in this report tables, we have provided the following definitions.*

**(AL) Action Level:** The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a community water system shall follow.

**(CFU) Colony Forming Units:** A measure of microbial quantity.

**(MCL) Maximum Contaminant Level:** 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.

**(MCLG) Maximum Contaminant Level Goal:** 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.

**(MRDL) Maximum Residual Disinfectant Level:** 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.

**(MRDLG) Maximum Residual Disinfectant Level Goal:** 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.

**(MPL) State Assigned Maximum Permissible Level**

**(NA) Not applicable**

**(ND) Non-Detect:** Not detected in sample.

**(PPM) Parts per million** or milligrams per liter (mg/l)

**(PPB) Parts per billion** or micrograms per liter (ug/l)

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

**(RAA) Running Annual Average** of 12 consecutive months

**(TT) Treatment Technique:** A required process intended to reduce the level of a contaminant in drinking water.

For your information, the compiled list in the tables below show what substances were detected in our drinking water during 2010

**All results were below the maximum contamination level (MCL), Action Level (AL) or Non-Detect (ND)**

<u>Contaminants</u>	<u>MCLG or MRDLG</u>	<u>MCL, TT, or MRDL</u>	<u>Your Water</u>	<u>Range</u>		<u>Sample Date</u>	<u>Violation</u>	<u>Typical Source</u>
				<u>Low</u>	<u>High</u>			
<b>Inorganic Contaminants</b>								
Arsenic (ppb)*	0	10	7.7	6.3	9.4	2010	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)*	2	2	0.04	ND	0.04	2010	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chromium (ppb)*	100	100	10	5	16	2010	No	Discharge from steel and pulp mills; Erosion of natural deposits
Fluoride (ppm)*	4	4	0.63	0.021	1.4	2010	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate [measured as Nitrogen] (ppm)	10	10	2.84	0.88	5.4	2010	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Selenium (ppb)*	50	50	2.3	2	3	2010	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines

Sodium (optional) (ppm)		MPL	45	27	66	2010	No	Erosion of natural deposits; Leaching
<b><u>Contaminants</u></b>	<b><u>MCLG or MRDLG</u></b>	<b><u>MCL, TT, or MRDL</u></b>	<b><u>Your Water</u></b>	<b><u>Range Low High</u></b>		<b><u>Sample Date</u></b>	<b><u>Violation</u></b>	<b><u>Typical Source</u></b>
<b>Microbiological Contaminants</b>								
Total Coliform (% positive samples/month)	0	5	2.5	NA		2010	No	Naturally present in the environment
<b>Synthetic organic contaminants including pesticides and herbicides</b>								
Dibromochloropropane (DBCP) (ppt)*	0	200	30	ND	30	2010	No	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards
Di (2-ethylhexyl) phthalate (ppb)*	0	6	0.9	ND	3.4	2010	No	Discharge from rubber and chemical factories
<b>Volatile Organic Contaminants</b>								
Xylenes (ppm)*	10	10	0.00026	ND	0.0015	2010	No	Discharge from petroleum factories; Discharge from chemical factories
<b><u>Contaminants</u></b>	<b><u>MCLG</u></b>	<b><u>AL</u></b>	<b><u>Your Water</u></b>	<b><u>Sample Date</u></b>	<b><u># Samples Exceeding AL</u></b>	<b><u>Exceeds AL</u></b>	<b><u>Typical Source</u></b>	
<b>Inorganic Contaminants</b>								
Lead - action level at consumer taps (ppb)	0	15	0	2010	0	No	Corrosion of household plumbing systems; Erosion of natural deposits	
Copper - action level at consumer taps (ppm)	1.3	1.3	0.162	2010	0	No	Corrosion of household plumbing systems; Erosion of natural deposits	
<b>Disinfection By- product</b>								
Total Trihalomethanes (TTHM) (ppm)	NA	0.080	0.0042	2010	0	No	By-product of drinking water disinfection	
Haloacetic Acids (HAA5) (ppm)	NA	.060	ND	2010	0	No	By-product of drinking water disinfection	

All though the above contaminants were detected in your water they are well below the maximum contamination level (MCL) and deemed safe according to the [National Primary Drinking Water Regulations](#).

**\*Note:** The above Inorganic contaminates were only detected in three of the eight City wells. The Synthetic Organic contaminates were only detected in one of the eight City wells and the Volatile Organic contaminate was only detected in one of the eight City wells. All water pumped from the City wells is blended into the distribution system and serves all customers.

### **SOURCE WATER ASSESSMENT SUMMARY**

Based on a mandate set forth in the 1996 amendments to the Safe Drinking Water Act, Arizona Department of Environmental Quality (ADEQ) evaluated each water source used by public water systems in Arizona. The quality of ground water, in El Mirage, being drawn was assessed along with land use activities and hydrogeology and showed no risk of contamination from pollutants. ADEQ gave the City of El Mirage Water System wells a **low risk designation**. Source Water Assessments are on file with the Arizona Department of Environmental Quality are available for public review. If a Source Water Assessment is available, you may obtain a copy of it by contacting the Arizona Source Water Coordinator at (602) 771-4641

## FREQUENTLY ASKED QUESTIONS

### What is the hardness of my water?

The range for hardness was 60 ppm to 150 ppm with an average of 89 ppm or 5.2 grains per gallon.

### What is the Fluoride level of my water?

There is a between 0.3-1.34 ppm (parts per million) of naturally occurring fluoride in our local source water. The EPA has set a maximum allowable limit for fluoride in drinking water at 4.0 ppm.

### Why are my ice cubes cloudy?

Commercially made ice is stirred as it is being frozen and household ice is not. Without mixing, many more ice crystals form and air is trapped in the ice. Light rays are distorted by these crystals and this distortion gives home frozen ice a cloudy appearance. Dissolved minerals (calcium and magnesium) in the water also tend to settle out when the water freezes.



### Additional Health Information

**Arsenic** - While your drinking water meets EPA's standard for arsenic and is less than the MCL, 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.

**Lead** - If present, elevated levels of lead can cause health problems. Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's 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 elevated lead levels in

your home's 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 (800-426-4791) or at: <http://www.epa.gov/safewater/lead>.

**Nitrate** - Nitrate in drinking water at levels above 10 ppm is a health risk for infants less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, and detected nitrate levels are above 5 ppm, you should ask for advice from your healthcare provider.

### Special Information for Immune-compromised People

Some people may be more vulnerable to contaminants in drinking water than is the general population. Immune-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, persons with HIV, AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. To receive a copy off the U.S. Environmental Protection Agency (EPA) and the U.S. Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants call the EPA Safe Drinking Water Hotline at (800-426-4791).

### GET INVOLVED LOCALLY

You as a citizen of El Mirage can have a voice in the decisions made regarding the El Mirage drinking water system. You can attend and participate in City Council meetings. The City Council meets on the second Thursday of each month at the Municipal Court located at 14010 North El Mirage Road.

**IF OTHER PEOPLE, SUCH AS TENANTS, RESIDENTS, PATIENTS, STUDENTS, OR EMPLOYEES, RECEIVE WATER FROM YOU, IT IS IMPORTANT THAT YOU PROVIDE THIS WATER QUALITY REPORT TO THEM BY POSTING IT IN A CONSPICUOUS LOCATION OR BY DIRECT HAND OR MAIL DELIVER**

***Esta es información importante. Si no la pueden leer, necesitan que alguien se la traduzca***

To satisfy the requirement of a designated "Assured Water Supply" the City of El Mirage has a membership in the "Central Arizona Groundwater Replenishment District (CAGRDR)." The CAGRDR is an operating subdivision of the "Central Arizona Water Conservation District (CAWCD)."

The City of El Mirage has a replenishment obligation to the CAGRDR every year for a percentage of water withdrawn by the city wells. The City must pay a replenishment tax levied by the CAWCD or replenish the percentage. The City offsets this tax by recharging treated effluent from the Wastewater Treatment Plant in the form of recharge credits for the replenishment. This year the City recharged 636 million gallons of treated effluent

**For more information about this report, or any questions relating to your drinking water, please contact Jamie McCullough Environmental Compliance Coordinator, at 623-935-6405 or visit our website at [www.cityofelmirage.org](http://www.cityofelmirage.org)**

***"We want you, our valued customer, to be informed about the services we provide and the quality of water we deliver to you every day".***