



# 2012 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 2012. This report explains how drinking water provided by the 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.

## Drinking Water Sources

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells



**The City of El Mirage Water System source water is supplied solely by groundwater. There are eight wells that recover water from the Agua Fria Aquifer.**

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 Contaminants

- (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.

## Special Information for Immune-compromised People

Some people may be more vulnerable to contaminants in drinking water than 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).

### 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**. Low risk indicates that source water protection measures are implemented. Source Water Assessments are on file with the ADEQ are available for public review. Source Water Assessment are available, you may obtain a copy of it by contacting the Arizona Source Water Coordinator at (602) 771-4641.

### 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 2012 and past years. 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

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*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)

**(PPT) Parts per trillion** Nanograms per liter

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

**(EPDS) Entry Point to Distribution System:** The point where the water from the well enters the distribution system

<b>Microbiological</b>	<b>Violation Y or N</b>	<b>Number of Samples Present</b>	<b>Absent (A) or Present (P)</b>	<b>MCL</b>	<b>MCLG</b>	<b>Sample Month &amp; Year</b>	<b>Likely Source of Contamination</b>
Total Coliform Bacteria 40 Monthly Samples	N	0	A	0	0	01/2012 Through 12/2012	Naturally Present in Environment
<b>Disinfectants</b>	<b>Violation Y or N</b>	<b>Running Annual Average (RAA)</b>	<b>Range of All Samples (L-H)</b>	<b>MRDL</b>	<b>MRDLG</b>	<b>Sample Month &amp; Year</b>	<b>Likely Source of Contamination</b>
Chlorine (ppm)	N	0.84	0.76 – 0.93	4	4	01/2012 Through 12/2012	Water additive used to control microbes
<b>Disinfection By-Products</b>	<b>Violation Y or N</b>	<b>Level Detected</b>	<b>Range of All Samples (L-H)</b>	<b>MCL</b>	<b>MCLG</b>	<b>Sample Month &amp; Year</b>	<b>Likely Source of Contamination</b>
Haloacetic Acids (ppb) (HAA5)	N	ND	ND	60	N/A	07/2012	Byproduct of drinking water disinfection
Total Trihalomethanes (ppb) (TTHM)	N	6.6	3.7 – 6.6	80	N/A	06/2012	Byproduct of drinking water disinfection
<b>Lead &amp; Copper</b>	<b>Violation Y or N</b>	<b>90<sup>th</sup> Percentile</b>	<b>Range of All Samples (L-H)</b>	<b>AL</b>	<b>ALG</b>	<b>Sample Month &amp; Year</b>	<b>Likely Source of Contamination</b>
Copper (ppm) 32 samples	N	0.1623	0.0107 - 0.233	AL = 1.3	ALG = 1.3	07/2010	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb) 32 samples	N	ND	ND	AL = 15	0	07/2010	Corrosion of household plumbing systems; erosion of natural deposits
<b>Inorganic Chemicals (IOC)</b>	<b>Violation Y or N</b>	<b>Highest Level Detected</b>	<b>Range of All Samples (L-H)</b>	<b>MCL</b>	<b>MCLG</b>	<b>Sample Month &amp; Year</b>	<b>Likely Source of Contamination</b>
Arsenic (ppb) <b>EPDS # 006</b>	N	8.6	6.9 – 8.6	10	0	Once per quarter 2012	Erosion of natural deposits, runoff from orchards, runoff from glass and electronics production wastes
Nitrate (ppm)	N	5.32	1.02 – 5.32	10	10	2/21/2012	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
<b>Synthetic Organic Chemicals (SOC)</b>	<b>Violation Y or N</b>	<b>Highest Level Detected</b>	<b>Range of All Samples (L-H)</b>	<b>MCL</b>	<b>MCLG</b>	<b>Sample Month &amp; Year</b>	<b>Likely Source of Contamination</b>
Di (2-ethylhexyl) phthalate (ppb) <b>EPDS # 001</b>	N	3.4	ND 3.4	6	0	07/23/2012 07/22/2010	Discharge from rubber and chemical factories
Dibromochloropropane (ppt) <b>EPDS # 001</b>	N	30	30 30	200	0	07/23/2012 07/12/2011	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards
Diquat (ppb) <b>EPDS # 002</b>	N	0.4	ND 0.4	20	20	10/15/2012 11/02/2010	Runoff from herbicide use
<b>Volatile Organic Chemicals (VOC)</b>	<b>Violation Y or N</b>	<b>Highest Level Detected</b>	<b>Range of All Samples (L-H)</b>	<b>MCL</b>	<b>MCLG</b>	<b>Sample Month &amp; Year</b>	<b>Likely Source of Contamination</b>
Xylenes (ppm) <b>EPDS # 009</b>	N	0.0015	ND 0.0015	10	10	02/21/2012 11/12/2010	Discharge from petroleum or chemical factories

## 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 above 5 ppm, you should ask for advice from your healthcare provider.

## FREQUENTLY ASKED QUESTIONS

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### **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 level between 0.3-1.34 ppm (parts per million) of naturally occurring fluoride in the City's local source water. The EPA has set a maximum allowable limit for fluoride in drinking water at 4.0 ppm.*

### **Why is my drinking water cloudy?**

*Drinking water delivered through the municipal system can sometimes look "milky" or "cloudy." This cloudiness often occurs when air becomes trapped in the water. While this may impact the water's appearance, it does not affect the water's safety and will not harm household plumbing systems. Air can be introduced in many ways, including the groundwater pumping process, water pipeline maintenance, or the process of bringing cold groundwater to the warmer surface. Because water pipelines are pressurized, air remains trapped in the water until you open the faucet and release the pressure.*



**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)**

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