

City of El Mirage

Public Water System: AZ04-07-0911



2014 Water Quality Consumer Confidence Report



The City of El Mirage is pleased to present to you the Annual Water Quality Report for calendar year 2014. This report explains how safe, clean drinking water of the highest quality is provided by the City of El Mirage. Included is a summary of test results, how to interpret the data, and of where El Mirage drinking water comes from.

DRINKING WATER SOURCE

All of the water supplied by the City of El Mirage Water System comes from nine wells that pump groundwater from the West Valley Salt River Sub-basin.

SOURCE WATER ASSESMENT SUMMARY

In 2004, the Arizona Department of Environmental Quality (ADEQ) evaluated the hydrology and surveyed the types of land uses occurring near the source water (groundwater) for El Mirage.

The El Mirage wells and source water were rated with a low risk designation that signifies the groundwater and wells are protected and there is no threat of contamination to El Mirage drinking water. You can be confident that the groundwater pumped from the City wells for drinking water is safe and secure.

Source Water Assessments are on file with ADEQ and are available for public review, copies are available by contacting the Source Water Protection Coordinator at (602) 771-4341.

SUBSTANCES EXPECTED TO BE IN DRINKING WATER

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

These sources travel over the surface of the land or through the ground, and may acquire naturally-occurring minerals and chemicals along with substances from human and animal activity.

Substances that may be found are:

Microbial contaminants, such as viruses and bacteria which may come from sewage treatment plants, septic systems, agricultural livestock operations, or 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 that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

Organic chemical contaminants, including synthetic and volatile organics, which are by-products of industrial processes and petroleum production. they can also come from gas station, urban stormwater runoff, and septic systems.

Radioactive contaminants that can be naturally-occurring or can be the result of oil and gas production and mining activities.

SPECIAL HEALTH INFORMATION

Drinking water and bottled water, may reasonably be expected to contain small amounts of contaminants that do not necessarily pose a health risk. Some people may be more vulnerable to contaminants in the water than the general population.

Immune-compromised persons such as 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. For more information about contaminants and potential health effects, or to receive a copy of the U.S. Environmental Protection Agency (EPA) and U.S. Center for disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants call the *Safe Drinking Water Hotline* at 1-800-426-4791 or visit <http://water.epa.gov/drink/hotline/index.cfm>.

Arsenic

El Mirage drinking water meets EPA's standard for arsenic, however it does contain low levels of arsenic. EPA's standard considers 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.

Nitrate

Nitrate in drinking water at levels above 10 ppm is a health risk for infants of 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, you should seek advice about drinking water from your health care provider.

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 lines and home plumbing. The city of El Mirage is responsible for providing high quality drinking water, but cannot control the variety of materials used in your home's plumbing components. When 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 1-800-426-4791 or at www.epa.gov/safewater/lead.

EL MIRAGE WATER QUALITY

The data table in this report presents analytical testing results from a contracted commercial laboratory certified in drinking water testing by the state of Arizona Department of Health Services. For your information, there is a compiled list showing substances detected in El Mirage drinking water during 2014 or the last sampling cycle.

The City of El Mirage conducts extensive monitoring to guard against contaminants in the drinking water according to federal and state laws. The state of Arizona requires monitoring for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. All detected contaminants were below the maximum contaminant level in the drinking water. There were no violations. This ensures that the quality of the drinking water for El Mirage is safe and poses no health risks.



Brisas Well Site

HELPFUL DEFINITIONS

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

• **ALG (Action Level Goal):** The concentration of a contaminant in drinking water below which there is no known expected risk to health.

• **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.

• **NA (Not Applicable):** Sampling was not completed by regulation or was not required.

• **ND:** None detected.

• **pCi/L (Picocuries per liter):** Measurement of the natural rate of disintegration.

• **ppm (parts per million):** One part substance per million parts water [or milligrams per liter (mg/L)].

• **ppb (parts per billion):** One part substance per billion parts water [or micrograms per liter (µg/L)].

• **ppt (parts per trillion):** One part substance per trillion parts water [or nanograms per liter (ng/L)].

• **ppq (parts per quadrillion):** One part substance per quadrillion parts water [(or picograms per liter) pg/L].

• **RRA: (Running Annual Average):** A average of 12 consecutive months.

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

SUBSTANCES MONITORED AT WELLS

| Substance | Year Sampled | MCGL | MCL | Highest Amount Detected | Range of Detection | Compliance Achieved | Typical Source |
|---|--------------|------|-----|-------------------------|--------------------|---------------------|--|
| Arsenic (ppb) ¹ | 2014 | 0 | 10 | 9.3 | 7.4 - 9.3 | YES | Erosion of natural deposits |
| Arsenic (ppb) | 2013 | 0 | 10 | 7.2 | 6.4 - 7.2 | YES | Erosion of natural deposits |
| Barium (ppm) | 2013 | 2 | 2 | 0.04 | ND - 0.04 | YES | Erosion of natural deposits |
| Chromium (ppb) | 2013 | 100 | 100 | 17 | 8.0 - 17 | YES | Erosion of natural deposits |
| Fluoride (ppm) ² | 2013 | 4 | 4 | 1.25 | ND - 1.25 | YES | Erosion of natural deposits |
| Nitrate (ppm) | 2014 | 10 | 10 | 5.72 | 1.40 - .72 | YES | Run off from fertilizer; leaching from septic tanks; erosion of natural deposits |
| Alpha Emitters (pCi/L) ³ | 2014 | 0 | 15 | 1.1 | 1.1 | YES | Erosion of natural deposits |
| Combined Uranium (µg/L) ³ | 2014 | 0 | 30 | 1.8 | 1.8 | YES | Erosion of natural deposits |
| Alpha Emitters (pCi/L) | 2013 | 0 | 15 | 1.1 | ND -1.1 | YES | Erosion of natural deposits |
| Combined Uranium (µg/L) | 2013 | 0 | 30 | 4.4 | 1.0 - 4.4 | YES | Erosion of natural deposits |
| Combined Radium (µg/L) | 2013 | 0 | 5 | 0.5 | ND - 0.5 | YES | Erosion of natural deposits |
| 2,4-D (ppb) | 2013 | 70 | 70 | 0.3 | ND - 0.3 | YES | Runoff from herbicide used on row crops |
| Dibromochloropropane (ppt) ⁴ | 2014 | 0 | 200 | 0.3 | 0.3 | YES | Runoff /leaching from soil fumigant used on soybeans, cotton, and orchards |

SUBSTANCES MONITORED IN THE DISTRIBUTION SYSTEM

| Substance | Year Sampled | MCLG MRDLG | MCL MRDL | RRA | Range of Detection | Compliance Achieved | Typical Source |
|-------------------------|--------------|------------|----------|------|--------------------|---------------------|--|
| TTHM (ppb) | 2014 | NA | 80 | 3.45 | 3.3 -3.6 | YES | Byproduct of drinking water disinfection |
| Chlorine residual (ppm) | 2014 | 4 | 4 | 1.08 | 0.50 - .20 | YES | Water additive used to control microbes |

TAP WATER SAMPLES: LEAD AND COPPER FROM 32 EL MIRAGE RESIDENTIAL HOMES

| Substance | Year Sampled | ALG | AL | 90TH Percentile | Number of Samples above Action Level | Compliance Achieved | Typical Source |
|--------------|--------------|-----|-----|-----------------|--------------------------------------|---------------------|--|
| Copper (ppm) | 2013 | 1.3 | 1.3 | 0.29 | 0 | YES | Corrosion of household plumbing systems; erosion of natural deposits |
| Lead (ppb) | 2013 | 0 | 15 | 1.4 | 0 | YES | Corrosion of household plumbing systems; erosion of natural deposits |

¹ One City well has a arsenic treatment facility in place and is required to monitor for arsenic 4 times per year; the facility meets all federal standards for drinking water.

² The fluoride that is detected in the city drinking water is naturally occurring; El Mirage does not dose any addition fluoride to your water.

³ The City added a new well April of 2013; all new wells are required to monitor radionuclides four consecutive quarters; all wells will be monitored in 2016.

⁴ If any synthetic organic chemical is detected during a required monitor year the source has to be monitored at least once per year; one well is being monitored once per year; this does not mean the water is not safe; the water still meets federal standards for safe drinking water.

UNREGULATED CONTAMINATE MONITORING (UCMR3)

| Substance | Year Sampled | Highest Level | Range |
|------------------|--------------|---------------|-----------|
| Chromium (ppb) | 2014 | 16 | 2.8 - 16 |
| Molybdenum (ppb) | 2014 | 6.1 | 1.1 - 6.1 |
| Strontium (ppb) | 2014 | 560 | 200 - 560 |
| Vanadium (ppb) | 2014 | 18 | ND - 18 |
| Chrom-6 (ppb) | 2014 | 15 | ND - 15 |
| Chlorate (ppb) | 2014 | 140 | 24 - 140 |

Unregulated Contaminate Monitoring is the assessment for contaminants suspected to be present in drinking water but do not have health-based standards set under the Safe Drinking water Act. The EPA identifies a list of potential contaminants every five years to be analyzed by thousands of public water systems in search of contaminants that may be a potential health risks for future water regulation. The City of El Mirage was scheduled for monitoring for 21 contaminates during April of 2014 at all the wells and the nine sampling station in the distribution system. There will be one more cycle of Monitoring in 2015. The Unregulated Contaminate Monitoring is the process the federal government puts into place to protect your health and welfare from.

FOR YOUR INFORMATION

Frequently Asked Questions

Why is my water cloudy or milky?

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.

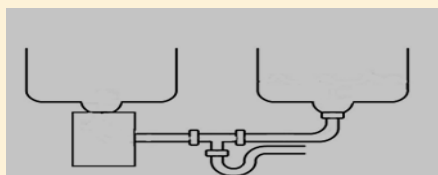


Why does my water smell like rotten eggs or sewer?

These odors are often caused by gases forming in the household drain. These gases are formed by bacteria which live on food, soap, hair and other organic matter in the drain trap. These gases are heavier than air and remain in the drain until the water is turned on. As the water runs down the drain, the gases are expelled into the atmosphere around the sink. It is natural to associate these odors with the water because they are observed only when the water is turned on. In this case, the odor is not in the water, it is simply the water pushing the gas out of the drain. This can be verified by taking a glass of water from the tap and walking away to another area to smell the glass of water.

Run the cold water for about 15 seconds into the drain that is to be disinfected, then turn the water off. Pour approximately one to two cups of liquid chlorine bleach (laundry bleach) down the drain (or drains) where the odor is present. Pour the bleach slowly around the edges of the drain so that it runs down the sides of the drain. If the odor is coming from a sink with a garbage disposal, turn the disposal on for a few seconds while the bleach is being poured. This will disperse the bleach around the inside of the disposal. Allow the bleach to remain undisturbed in the drain for about 10 minutes. After 10 minutes, run the hot water into the drain for a minute or two to flush out the bleach. If a garbage disposal was disinfected, thoroughly flush it as well.

Caution: bleach may cause eye damage, skin irritation, and may damage clothing - take care to avoid splashing.



disposal

trap

What is the hardness of my water?

Hardness varies at each well. The range is 4 to 9 grains with an average of 7 grains. 7.5 grains is recommended for water softeners.

Why is my water discolored?

Discoloration can range from a light straw yellow color to dark brown. It can be caused by :

Disturbance of mains deposits: This may happen when a water leak has been repaired or a fire hydrant has been flushed in the area. Sediment is disturbed in the water mains resulting in the brown, rust color in tap water. This colored water is not a health concern and can be eliminated by letting the water run for a few minutes until the water is clear.

Internal plumbing issues: Water treatment devices such as filters, reverse osmosis systems, etc., are intended to make water cleaner. However, without proper care and maintenance, a water treatment device can actually do the opposite: it can degrade the quality of your water. Unmaintained treatment devices have been found to create odor, taste, color and even bacteriological problems in household water systems.

Did you know?

Draining a swimming pool, spa or water feature from your property into a street, wash or neighbor's property is a violation of city code. All pools, spas and water features must be drained into the sewer cleanout at your residence.

Water that is discharged from these features may carry chemicals and bacteria that are harmful to the environment. Discharging unclean and chemically treated water in the street creates a nuisance by transporting debris and sediment to storm drains causing a blockage in the storm sewers system which will produce over flows and flooding during a major rain event.

Storm water drains into rivers, streams, lakes and ponds and polluted storm water runoff is the nation's greatest threats to clean water.

El Mirage is a proud member of STORM. Go to www.azstorm.org for more information on keeping the nations water ways clean.

STORM
Only rain in the stormdrain



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 email jmccullough@cityofelmirage.org

Hard copies of this report will be available June 30, 2015 at City Hall and the Customer Service Facility

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