

# 2013 Water Quality

## Consumer Confidence Report

ISSUED MAY 2014



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Water Resources Department

## Providing Quality Water For Over A Century

For over 100 years, the City of Mesa has been committed to providing its customers with water that meets more than 100 state and federal drinking water standards. Our number one goal is to provide you and your family with a safe and dependable supply of drinking water. We are happy to report that in 2013, your tap water met all drinking water health standards. The City of Mesa vigilantly safeguards its water supplies, and we are proud to provide this summary report detailing our monitoring efforts.

## Why You Should Read This Report

This report contains important information about the water you drink and use everyday. You will find details about where your water comes from, the testing that was performed, and what was found in the water we deliver to you. To ensure tap water is safe to drink the U.S. Environmental Protection Agency (EPA) established regulations that limit the amount of contaminants in water provided by public water systems. This report is a snapshot of the most recent water quality monitoring conducted by the City of Mesa and how your water measures up to those limits.

Please take a few minutes to read this report. Questions about drinking water are important and answers to many common questions can be found in this report. Additional questions or comments can be directed to the City, State, or Federal contacts listed at the end of this report.

Este informe contiene información importante acerca de su agua potable. Este informe está disponible en Español. Llame a Lucy López al **480-644-3683** para obtener el folleto en Español, o hable con alguien que lo entienda.

## Drinking Water Contaminants

Drinking water sources (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 human activity. The sources of Mesa's drinking water are further discussed on page 6.

## Contaminant Information

Both tap water and bottled water may realistically 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 to you and your family. The EPA prescribes enforceable regulations that limit the amount of certain contaminants allowed in water provided by public water systems. Bottled water is regulated by the U.S. Food and Drug Administration (FDA) as a food product, and is required to meet standards equivalent to those the EPA sets for tap water. More information about contaminants and potential health effects can be obtained by calling EPA's Safe Drinking Water Hotline (1-800-426-4791) or visiting <http://water.epa.gov/drink/hotline/>.



## Contaminants That May Be Present In Source Water Include:

- **Microbial contaminants**, such as viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations, recreational activities 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 that 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.

## Facts About Coliform Bacteria

Coliform bacteria are common microbes used as indicators of drinking water quality. Coliform bacteria are generally not harmful and are naturally present in the environment. They serve as an indicator of the sanitary quality of your drinking water. Samples are collected weekly throughout Mesa's water system to confirm these bacteria are not present in your water. Results from our 2013 coliform monitoring are found in the table on page 8.

## Additional Information About Nitrate, Lead, Radon, And Arsenic

- **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 ask for advice from your healthcare provider. Nitrates are monitored annually in both groundwater and finished surface water sources. None of Mesa's water sources exceed the EPA's limit for nitrate (measured as nitrogen) set at 10 ppm.
- **Lead and Copper** - 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 Mesa is responsible for providing high quality drinking water, but cannot control the variety of materials used by homeowners 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 two 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://water.epa.gov/drink/hotline/>.

Mesa monitored for lead and copper in 2012 at 54 homes throughout the community. The action levels established by EPA are 1300 parts per billion (ppb) for copper and 15 ppb for lead. Compliance with this requirement is based on 90% of the samples being below the action levels. From the samples taken, the 90th percentile value for copper was 96 ppb and for lead 5.0 ppb.

- **Radon** – Radon is a radioactive gas that you cannot see, taste, or smell. It is found throughout the U.S. Radon can move up through the ground and into a home through cracks and holes in the foundation. Radon can build up to high levels in all types of homes. Radon can also get into indoor air when released from tap water from showering, washing dishes, and other household activities. Compared to radon entering the home through soil, radon entering the home through tap water will, in most cases, be a small source of radon in indoor air. Radon is a known human carcinogen. Breathing air containing radon can lead to lung cancer. Drinking water containing radon may also cause increased risk of stomach cancer. If you are concerned about radon in your home, test the air in your home. Testing is inexpensive and easy. You should pursue radon removal for your home if the level of radon in your air is four picocuries per liter of air (pCi/L) or higher. There are simple ways to fix a radon problem that are not costly. For additional information, call your state radon program or call EPA's Radon Hotline at **800-SOS-RADON**.
- **Arsenic** – Mesa's drinking water contains low levels of arsenic, a naturally occurring mineral. Beginning in January 2006, allowable arsenic levels were reduced from 50 ppb to 10 ppb. The EPA determined this standard by balancing the current understanding of arsenic's possible health effects against the costs of removing it from drinking water. The EPA continues to research the health effects of low-level exposure to arsenic. Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.

## Source Water Assessment

A source water assessment identifies potential sources of contaminants to the water we use for drinking. Arizona Department of Environmental Quality (ADEQ) reviewed adjacent land uses and ranked them as to their potential to affect Mesa's water sources. These risks include, but are not limited to, gas stations, landfills,



dry cleaners, agricultural fields, wastewater treatment plants, and mining operations. In 2004, the ADEQ completed a source water assessment of Mesa's wells and one surface water treatment plant. The result of Mesa's assessment was high risk due to some industries located in the city. However, this does not mean the drinking water is compromised, only that at least one high-risk activity was identified.

The complete assessment can be reviewed at **ADEQ, 1110 W. Washington, Phoenix, Arizona 85007**, between 8 a.m. and 5 p.m. You can request an electronic copy via e-mail at [dml@azdeq.gov](mailto:dml@azdeq.gov). For more information visit ADEQ's Source Water Assessment and Protection Unit web site at <http://www.azdeq.gov/environ/water/assessment/index.html>.

## Taking Special Precautions - Customers With Special Health Concerns

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised people such as persons undergoing chemotherapy, people who have undergone organ transplants, people 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 healthcare providers. EPA and Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or at <http://water.epa.gov/drink/hotline/>.

## Unregulated Contaminant Monitoring Rule 3

Unregulated contaminant monitoring helps the EPA determine if specific contaminants occur in the nation's drinking water, and whether those contaminants need to be regulated. The Unregulated Contaminant Monitoring Rule 3 (UCMR3) specifies 29 contaminants of emerging concern (CECs), and requires every water system in the United States to sample for them. Mesa conducted UCMR3 monitoring in 2013 at all of the source water "Entry Points to the Distribution System" and at corresponding "Distribution System Maximum Residence Time" locations within the water system. Mesa detected nine of the 29 CECs either in the source water or in the distribution system. The Unregulated Contaminant Monitoring table summarizing results from the UCMR3 monitoring is provided in this report on page 10.

## Table Abbreviations And Definitions

Throughout this report you may find unfamiliar terms and abbreviations. To help you better understand these terms we have provided the following definitions:

- **ADEQ (Arizona Department of Environmental Quality)**
- **AL (Action Level)** - *The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a community water system shall follow.*



- **gpg (Grains Per Gallon)** - Unit of water hardness used for setting water softeners. One gpg equals 17.1 ppm or mg/L of hardness.
- **L/mg-m (Liters Per Milligram-Meter)** - Unit of measure used to report SUVA values.
- **LRAA (Locational Running Annual Average)** - The running annual average of sample data collected at one location.
- **MCL (Maximum Contaminant Level)** - The highest level of a contaminant 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 are set by the U.S. Environmental Protection Agency (EPA).
- **MCESD (Maricopa County Environmental Services Department)**
- **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)** - No federal standards are established or samples are not required.
- **ND (Non Detect)** - Samples were taken but the substance was not detected by laboratory analysis. Therefore, there is no reportable result.
- **NE (None Established)** - Regulatory limit has not been established by the EPA.
- **NTU (Nephelometric Turbidity Units)** - Unit of measure for turbidity. Turbidity is a measure of water clarity.
- **pCi/L (PicoCuries Per Liter)** - Unit of measurement for some radionuclides in water.
- **ppb (Part Per Billion)** - One ppb corresponds to one second in 31.7 years. One ppb is equivalent to one microgram per liter ( $\mu\text{g/L}$ ).
- **ppm (Part Per Million)** - One ppm corresponds to one second in 11.5 days. One ppm is equivalent to one milligram per liter ( $\text{mg/L}$ ).
- **ppt (Part Per Trillion)** - One part per trillion corresponds to one second in 31,700 years. One ppt is equivalent to one nanogram per liter ( $\text{ng/L}$ ).
- **RAA (Running Annual Average)** - Moving average based upon the previous twelve months (or four quarters) of monitoring data.



- **SUVA (Specific Ultraviolet Absorbance)** - Specific ultraviolet absorption at 254 nanometers (nm), an indicator of the humic content of water. It is a calculated parameter obtained by dividing a sample's ultraviolet absorption at a wavelength of 254 nm by its concentration of dissolved organic carbon.
- **TT (Treatment Technique)** - A required process to reduce the level of a contaminant in drinking water.
- **WTP (Water Treatment Plant)**

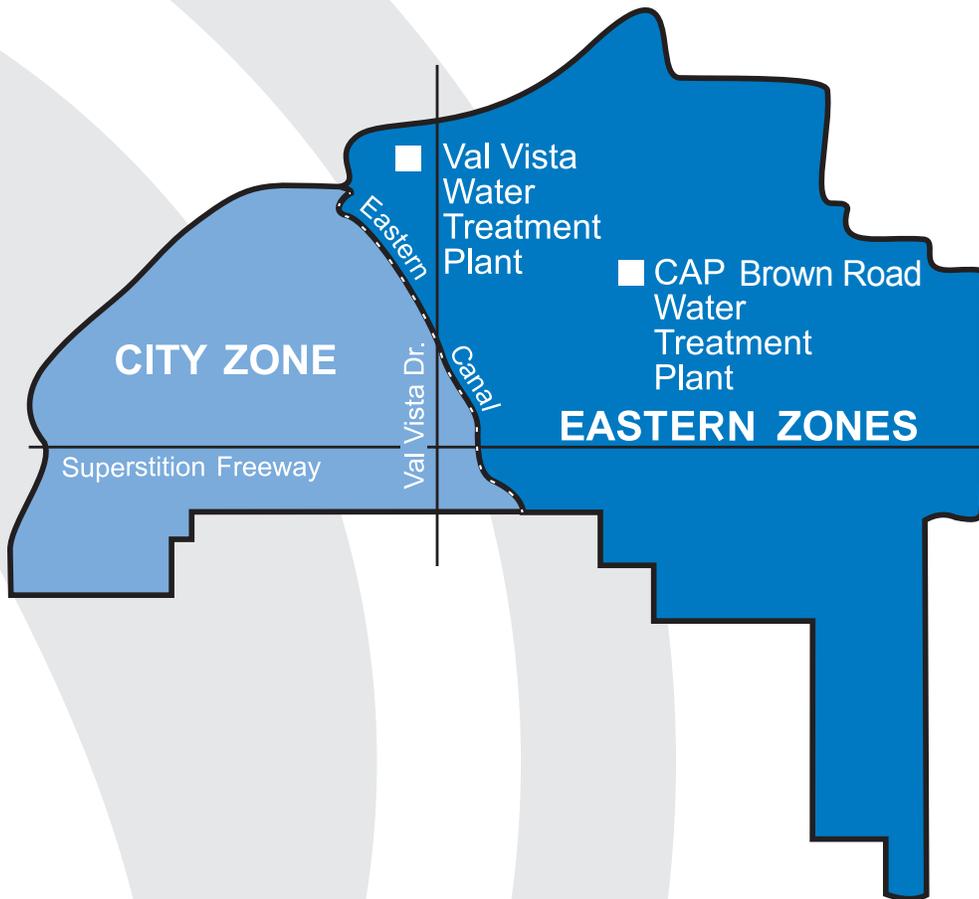
## Mesa's Water Sources

Mesa relies on two sources for its drinking water: surface water and groundwater wells. Water from these two sources can vary in hardness and other characteristics. The city is divided into two zones - the "City Zone" and the "Eastern Zone" - with the Eastern Canal serving as the dividing line between the two zones. (See map on page 7). The canal runs diagonally southeast from Gilbert and McDowell Roads to Greenfield and Baseline Roads. The zone you live in determines whether the water you receive originated from surface water, a groundwater well, or a mixture of both.

1. **City Zone** - Salt and Verde River water from the Salt River Project (SRP) supplies water delivered in the City Zone. This water is treated at the Val Vista Water Treatment Plant by using conventional filtration, fluoridation, and disinfection using chlorine dioxide and chlorine before entering into Mesa's water distribution system. Approximately 38% of the water served to Mesa's customers in 2013 came from this source.
2. **Eastern Zones** - Colorado River water delivered through the Central Arizona Project (CAP) provides water delivered in the Eastern Zones. This water is treated at the CAP Brown Road Water Treatment Plant by using conventional filtration, fluoridation, and disinfection using chlorine dioxide and chlorine before entering into Mesa's water distribution system. Approximately 50% of the water served to Mesa's customers in 2013 came from this source.
3. **City Wells** - 15 deep aquifer wells located throughout the City Zone. After chlorination, water from these wells is typically blended with surface water from the Val Vista Water Treatment Plant. However, during certain times throughout the year, some customers may receive only groundwater from one or more of these wells. Approximately 6% of the water served to Mesa's customers came from this source in 2013.
4. **Eastern Wells** - 18 deep aquifer wells supply water throughout a wide area in Mesa's Eastern Zones. After chlorination, water from these wells is blended with surface water treated at the CAP Brown Road Water Treatment Plant. Approximately 6% of the water served to Mesa's customers came from this source in 2013.



# Water Service Area



## 2013 Water Quality Data

The following tables list drinking water contaminants detected in calendar year 2013 and data from the most recent testing done in accordance with the Safe Drinking Water Act. The State allows water systems to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data, though representative, are more than one year old. The presence of contaminants does not indicate that the water poses a health threat, only that they were detected during routine compliance monitoring. Not listed are many other regulated contaminants that were tested for but not detected.



## 2013 Distribution System Data - All Results Met Regulatory Standards

| Parameter   | Units         | MCL  | MCLG       | Range (Average)                       | Mesa's Entire Distribution System | City Zone (Val Vista WTP)              | Eastern Zone (CAP Brown Rd WTP) | Sources of Contamination in Drinking Water                           |
|---|---------------|--|------------|---------------------------------------|-----------------------------------|--|---------------------------------|--|
| <b>MICROBIOLOGICAL</b>  |               |  |            |                                       |                                   |  |                                 |  |
| Total Coliform Bacteria   | # Pos in 2013 | < 5% Monthly [A]                             | 0          | # Pos in 2013 (Highest Monthly %)     | 4 (0.9%)                          | 1 (NA)                                 | 3 (NA)                          | Naturally present in the environment                                 |
| <b>DISINFECTION BY-PRODUCTS AND DISINFECTANT RESIDUALS</b>        |               |  |            |                                       |                                   |  |                                 |  |
| Chlorite [B]  | ppm           | 1  | 0.8        | Range (Average)                       | NA                                | 0.05 - 0.53 (0.26)                     | 0.22 - 0.49 (0.31)              | By product of drinking water disinfection                            |
| Total Trihalomethanes (TTHMs) [C]                                 | ppb           | LRAA= 80                                     | NA         | Range (Highest LRAA)                  | NA                                | 3.1 - 79 (43)                          | ND - 75 (36)                    | By product of drinking water disinfection                            |
| Halooacetic Acids (HAA5s) [C]                                     | ppb           | LRAA= 60                                     | NA         | Range (Highest LRAA)                  | NA                                | ND - 21 (12)                           | ND - 26 (16)                    | By product of drinking water disinfection                            |
| Free Chlorine Residual  | ppm           | MRDL= 4                                      | MRDLG= 4   | Range (Average)                       | NA                                | 0.0 - 1.7 (0.84)                       | 0.0 - 1.8 (0.92)                | Water additive used to control microbes                              |
| Chlorine Dioxide [D]  | ppm           | MRDL= 0.8                                    | MRDLG= 0.8 | Range (Average)                       | NA                                | ND - 0.35 (0.01)                       | ND - 0.14 (0.02)                | Water additive used to control microbes                              |
| <b>METALS AS A BY-PRODUCT OF CORROSION IN CONSUMER'S PLUMBING</b> |               |  |            |                                       |                                   |  |                                 |  |
| Lead [E]  | ppb           | AL= 15                                       | 15         | Range (90th percentile of 54 samples) | ND - 29 (5.0)                     | NA                                     | NA                              | Corrosion of household plumbing systems; erosion of natural deposits |
| Copper [E]  | ppb           | AL= 1300                                     | 1300       | Range (90th percentile of 54 samples) | 8.0 - 290 (96)                    | NA                                     | NA                              | Corrosion of household plumbing systems; erosion of natural deposits |
| <b>FLUORIDATED DRINKING WATER</b>                                 |               |  |            |                                       |                                   |  |                                 |  |
| Fluoride (treated water) [F]                                      | ppm           | 4  | 4          | Range (Average)                       | NA                                | 0.31 - 0.78 (0.55)                     | 0.33 - 0.80 (0.68)              | Water additive to promote strong teeth                               |
| <b>TREATMENT PRECURSOR REMOVAL</b>                                |               |  |            |                                       |                                   |  |                                 |  |
|   |               |  |            |                                       |                                   | <b>City Zone (Val Vista WTP)</b>       |                                 |  |
|   |               |  |            |                                       |                                   | Monthly Range of Values                | Lowest Quarterly RAA Ratio      |  |
| Total Organic Carbon Removal                                      | Ratio         | TT=the quarterly RAA ratio must=1 or greater | NA         |                                       | NA                                | 1.40 - 3.20                            | 2.1                             | Naturally present in the environment                                 |
|   |               |  |            |                                       |                                   | <b>Eastern Zone (CAP Brown Rd WTP)</b> |                                 |  |
|   |               |  |            |                                       |                                   | Monthly Range of Values                | Highest Quarterly RAA SUVA      |  |
| Treated Water Specific Ultraviolet Absorbance (SUVA)              | L/mg-m        | TT=the quarterly RAA SUVA must be ≤ 2.00     | NA         |                                       | NA                                | 1.13 - 1.49                            | 1.29                            | Naturally present in the environment                                 |

**Footnotes:**

- [A] - Total coliform MCLs: No more than 5.0% of the monthly samples may be total coliform-positive (# Pos). Compliance is based on weekly distribution system samples. Mesa analyzed 2,649 coliform samples in 2013. The highest monthly coliform percentage for positive sample results reported to MCESD was 0.9%. The MCL was not violated in 2013.
- [B] - Chlorite is a byproduct of chlorine dioxide disinfection and is monitored on a quarterly basis throughout the distribution system.
- [C] - Compliance for this rule is based upon the locational running annual average (LRAA) from samples collected quarterly at 12 locations throughout the distribution system. The LRAA must not exceed 80 ppb for TTHMs or 60 ppb for HAA5s at any location upon averaging 4 consecutive quarters. The MCL was not violated in 2013.
- [D] - Chlorine dioxide is used as the primary disinfectant of water entering the water treatment plants. Chlorine dioxide is measured daily in the finished water leaving the plant.
- [E] - Lead and copper are regulated as a Treatment Technique (TT) under the Lead and Copper Rule, which requires systems to take samples at consumers' taps every 3 years. Results are from 2012 monitoring. Neither lead nor copper are typically found in source waters but can get into water by way of internal corrosion of household plumbing. The 90th percentile number reported in the table is below the action level for each parameter. Mesa's 2012 data for lead and copper monitoring met the standard for the Lead and Copper Rule.
- [F] - Mesa began fluoridation of drinking water in 1999 as a result of 1998 voter approval by the majority of Mesa residents.

## 2013 Regulated Contaminants - All Results Met Regulatory Standards

| Parameter                                     | Units     | MCL   | MCLG | Range (Avg) | City Zone (Val Vista WTP)                                      | City Zone Wells                | Eastern Zone (CAP Brown Rd WTP)                                 | Eastern Zone Wells                         | Sources of Contamination in Drinking Water   |  |
|---|-----------|---|------|-------------|--|--------------------------------|---|--|--|--|
| % of total water production delivered by Mesa |           |   |      |             | 38%  | 6%                             | 50%   | 6%   |  |  |
| <b>INORGANIC CHEMICALS</b>                    |           |   |      |             |  |                                |   |  |  |  |
| Arsenic [G]                                   | ppb       | 10  | 0    | Range (Avg) | ND   | 3 - 12 (9) [H]                 | 1   | 2 - 8 (4)                                  | Erosion of natural deposits; runoff from orchards, runoff from glass and electronics production wastes                         |  |
| Barium  | ppb       | 2000  | 2000 | Range (Avg) | 32   | 17 - 85 (29)                   | 103   | 2.0 - 42 (12)                              | Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits                                     |  |
| Chromium, Total                               | ppb       | 100   | 100  | Range (Avg) | ND   | 2.0 - 12 (5.6)                 | ND  | 3.0 - 18 (11)                              | Discharge from steel and pulp mills; erosion of natural deposits   |  |
| Fluoride (Naturally Occuring)                 | ppm       | 4.0   | 4.0  | Range (Avg) | NA   | 0.12 - 0.47 (0.25)             | NA  | 0.32 - 1.1 (0.60)                          | Erosion of natural deposits; discharge from fertilizer and aluminum factories  |  |
| Nitrate [I] (Measured as Nitrogen)            | ppm       | 10  | 10   | Range (Avg) | ND   | 0.3 - 7.4 (2.3) [I]            | 0.26  | 0.8 - 3.0 (1.7)                            | Runoff from fertilizer use; leaking from septic tanks, sewage; erosion of natural deposits                                     |  |
| Nickel [J]                                    | ppb       | NE  | NA   | Range (Avg) | 2.1  | 2.0 - 9.0 (2.0)                | 2.0   | ND - 2.0 (ND)                              | Erosion of natural deposits; runoff from orchards, runoff from power plants, metal factories and waste incinerators            |  |
| Selenium                                      | ppb       | 50  | 50   | Range (Avg) | ND   | ND - 1 (ND)                    | 2   | ND - 1 (ND)                                | Discharge from petroleum refineries; erosion of natural deposits; discharge from mines   |  |
| <b>ORGANIC CHEMICALS</b>                      |           |   |      |             |  |                                |   |  |  |  |
| Dibromochloropropane (DBCP)                   | ppt       | 200   | 0    | Range (Avg) | ND   | ND - 37 (ND)                   | ND  | ND   | Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards  |  |
| Trichloroethylene (TCE)                       | ppb       | 5   | 0    | Range (Avg) | ND   | ND - 0.5 (ND)                  | ND  | ND   | Discharge from metal degreasing sites and other factories  |  |
| Tetrachloroethylene (PCE)                     | ppb       | 5   | 0    | Range (Avg) | ND   | ND - 1.3 (ND)                  | ND  | ND   | Discharge from factories and dry cleaners  |  |
| <b>RADIONUCLIDES</b>                          |           |   |      |             |  |                                |   |  |  |  |
| Alpha Particles                               | piC/L     | 15  | 0    | Range (Avg) | ND   | ND - 5.7 (3.4)                 | 3.6   | ND - 4.4 (1.9)                             | Erosion of natural deposits of certain minerals that are radioactive and may emit a form of radiation known as alpha radiation |  |
| Radium 226/228 Combined                       | piC/L     | 5   | 0    | Range (Avg) | ND   | ND - 0.6 (ND)                  | ND  | ND   | Erosion of natural deposits  |  |
| Uranium                                       | ppb       | 30  | 0    | Range (Avg) | 2.9  | NA                             | NA  | NA   | Erosion of natural deposits  |  |
| Radon [K]                                     | ppb       | 4000  | 0    | Range (Avg) | NA   | 227 - 615 (322)                | ND  | ND - 980 (460)                             | Erosion of natural deposits  |  |
| <b>TURBIDITY - WATER CLARITY</b>              |           |   |      |             |  |                                |   |  |  |  |
| Combined Filter Effluent Turbidity [L]        | NTU and % | TT: No value can exceed 1 NTU and at least 95% of monthly samples must be less than or equal to 0.3 NTU |      |             | City Zone (Val Vista WTP)                                      | East Zone (CAP Brown Road WTP) |   | Sources of Contamination in Drinking Water |  |  |
|   |           |   |      |             | 98% of monthly measurements were less than or equal to 0.3 NTU |                                | 100% of monthly measurements were less than or equal to 0.3 NTU |  |  |  |
|   |           |   |      |             | Highest monthly measurement = 0.5 NTU                          |                                | Highest monthly measurement = 0.12 NTU                          |  |  |  |
| Soil Runoff                                   |           |   |      |             |  |                                |   |  |  |  |

2012 Data
2013 Data
2012/2013 data
 ND = Non Detect; NA = Not Applicable

A single value displayed in the table denotes only one test performed.

Footnotes:

[G] - To learn more about arsenic in drinking water please refer to page 3.

[H] - Compliance with the arsenic MCL standard was met at all times in 2013. The MCL is based upon the running annual average (RAA) of four quarters at each source and is set at 10 ppb. Individual arsenic test results are shown in the range of results obtained in 2012-2013. One City well produced arsenic above 10 ppb in 2013. However, this well is blended with Val Vista WTP water prior to delivery into the distribution system. The reported four-quarter RAA for this well was 9 ppb before further blending with Val Vista water.

(Footnotes continued at end of page 10)



## 2013 Unregulated Contaminant Monitoring (UCMR3)

| Parameter                      | Units | MCL | MCLG | Range (Avg) | Entry Point to the Distribution System | Distribution System Maximum Residence Time | Sources of Contamination in Drinking Water   |
|--------------------------------|-------|-----|------|-------------|--|--|--|
| Chlorate                       | ppb   | NA  | NA   | Range (Avg) | ND - 300 (34)                          | ND - 440 (148)                             | Unregulated chemicals requiring monitoring between 2013-2015. Unregulated contaminants monitoring helps EPA to determine where certain contaminants occur and whether the agency should consider regulating those contaminants in the future |
| Chromium, Hexavalent Dissolved | ppb   | NA  | NA   | Range (Avg) | 0.031 - 24 (8.2)                       | ND - 13 (3.9)                              |  |
| Chromium, Total                | ppb   | 100 | 100  | Range (Avg) | ND - 22 (3.2)                          | ND - 15 (1.8)                              |  |
| Molybdenum                     | ppb   | NA  | NA   | Range (Avg) | ND - 5.1 (0.46)                        | ND - 5.6 (0.99)                            |  |
| Strontium                      | ppb   | NA  | NA   | Range (Avg) | ND - 1100 (241)                        | ND - 1100 (315)                            |  |
| Cobalt                         | ppb   | NA  | NA   | Range (Avg) | ND - 1.1 (0.009)                       | ND   |  |
| Vanadium                       | ppb   | NA  | NA   | Range (Avg) | ND - 32 (4.7)                          | ND - 18 (2.8)                              |  |
| 1,4-Dioxane                    | ppt   | NA  | NA   | Range (Avg) | ND - 535 (9.4)                         | ND   |  |
| Chlorodifluoromethane          | ppt   | NA  | NA   | Range (Avg) | ND - 160 (4.4)                         | ND   |  |

2013 Data

## 2013 Other Non-Regulated Chemicals

| Parameter    | Units | MCL       | MCLG | Range (Avg) | City Zone (Val Vista WTP) | City Zone Wells   | Eastern Zone (CAP Brown Rd WTP) | Eastern Zone Wells | Hardness is characterized by the following scale (gpg):<br><br><b>0 - 4.4 = soft</b><br><br><b>4.4 - 8.8 = moderately hard</b><br><br><b>8.8 - 17.5 = hard</b><br><br><b>&gt; 17.5 = very hard water</b> |
|--------------|-------|-----------|------|-------------|---------------------------|-------------------|---------------------------------|--------------------|--|
| pH           | units | 6.5 - 8.5 | NA   | Range (Avg) | 7.7 - 7.9                 | 7.0 - 7.6         | 7.1 - 7.6                       | 7.1 - 8.2          |  |
| Calcium      | ppm   | NA        | NA   | Range (Avg) | 42 - 78 (52)              | NA                | 72                              | NA                 |  |
| Magnesium    | ppm   | NA        | NA   | Range (Avg) | 12 - 30 (20)              | NA                | 24                              | NA                 |  |
| Potassium    | ppm   | NA        | NA   | Range (Avg) | 3.2 - 5.4 (4.4)           | NA                | 4.0                             | NA                 |  |
| Hardness [M] | gpg   | NA        | NA   | Range (Avg) | 10.5 - 17.4 (12.6)        | 8.7 - 22.6 (14.6) | 16.1                            | 1 - 12 (4)         |  |
| Sodium       | ppm   | NA        | NA   | Range (Avg) | 194                       | 117 - 233 (165)   | 83                              | 53 - 213 (90)      |  |

2012 Data

2013 Data

- [I] - To learn more about nitrates in drinking water please refer to page 2. While nitrates were detected in some of Mesa's sources, the MCL was not exceeded.
- [J] - While many water suppliers continue to monitor the nickel levels in their water, there is currently no EPA legal limit on the amount of nickel in drinking water. EPA is reconsidering the limit on nickel.
- [K] - The EPA is working on a radon rule that will establish a MCL. Because radon is primarily an airborne contaminant, the proposed MCL is 300 pCi/L for communities with no air quality program, and 4,000 pCi/L if there is a radon reduction program in place. To learn more about radon in drinking water please refer to page 3.
- [L] - The turbidity level of the combined filter effluent at the Val Vista and CAP Brown Water Treatment Plants shall be less than or equal to 0.3% NTU in 95% of the measurements taken each month and shall not exceed 1 NTU at any time. This standard was met at both plants in 2013. Turbidity is a measure of the cloudiness of the water and is an indicator of the effectiveness of our treatment systems.
- [M] - Water hardness, measured in grains per gallon (gpg) as calcium carbonate.



## Keep Our Waterways Clean

When it rains, our yards and driveways can become channels to our waterways. A storm can wash fertilizers, herbicides, pesticides, oil and other chemicals from yards into the streets and eventually into our waterways. For helpful tips visit <http://www.azstorm.org>.

## Be Water-Wise

Water conservation goes hand-in-hand with water pollution prevention. Using less water reduces the risk of contamination to our water supplies. Mesa works to inspire conservation efforts by our community members through educational materials, easy water-saving tips, rebate programs, water-efficient landscaping ideas and more. Visit <http://www.mesaaz.gov/conservation>.

## Protecting Your Drinking Water

Mesa's highly trained water quality inspectors, analysts, chemists, microbiologists, and water treatment specialists are responsible for assuring high quality water is consistently delivered to your home. Nearly 20,000 analyses are conducted on approximately 3,900 samples collected throughout the year. Samples are collected to meet regulatory and process requirements and tested daily, weekly, and monthly at Mesa's own State certified laboratory and by outside laboratories. These tests are overseen by various federal, state, and local regulatory agencies.

## How You Can Get Involved

If you wish to provide input on water-related issues, the Mesa City Council meets at 5:45 p.m. the first and third Monday of each month in Council Chambers, located at **57 E. 1st St.**, unless otherwise noted. For a complete meeting schedule, visit <http://apps.mesaaz.gov/eventcalendar/>.

## For More Information

Online Consumer Confidence Report -  
<http://www.mesaaz.gov/water/pdf/2014ccr.pdf>

City of Mesa Water Quality Services, Ken Marshall (480) 644-6461

- E-mail address - [water.quality@mesaaz.gov](mailto:water.quality@mesaaz.gov)
- City of Mesa home page - <http://www.mesaaz.gov>

Maricopa County Environmental Services Department - (602) 506-6666

Arizona Department of Environmental Quality (ADEQ) -  
(602) 771-2300

Environmental Protection Agency (EPA) - (800) 426-4791

If you would like a copy of this report emailed or mailed to you, please contact the City of Mesa Water Quality Services at (480) 644-6461 or [water.quality@mesaaz.gov](mailto:water.quality@mesaaz.gov).

## En Español

Si gusta recibir esta información en Español, por favor de llamar a Lucy López al **480-644-3683**. Proporcionele su nombre y domicilio para enviarle este folleto en Español.

