

# 2014 ANNUAL WATER QUALITY REPORT

## CAVE CREEK WATER SYSTEM

PWS ID: 04-07-016



### Our Mission: To Serve Your Water Needs

The Town of Cave Creek is dedicated to protecting the environment while bringing you quality water at a fair price.

Our staff works hard to bring you refreshing water every time you pour a glass.

We start with a natural fresh water source. We regularly sample and analyze water before it enters our system. We conduct quality control checks as water leaves our plant.

Finally, we routinely check water quality at selected locations around our system to make sure everything is safe until the water arrives at your home.

### Our Mark of Excellence

We are once again proud to present to you our annual water quality report. We have dedicated ourselves to producing drinking water that meets or exceeds all state and federal drinking water standards. We continually strive to adopt new and better methods of delivering the best quality drinking water to you. As regulations and drinking water standards change, it is our commitment to you to incorporate these changes system-wide in an expeditious and cost-effective manner.

As new challenges to drinking water safety emerge, we will be vigilant in maintaining our objective of providing quality drinking water at an affordable price. If you have any health concerns relating to the information in this report, we encourage you to contact your health care provider.

We hope you find this report informative and useful. It is our pleasure to serve you.

### What's Inside

This report outlines the processes involved in delivering to you the highest quality drinking water available.

In it, we will answer these important questions:

*Where does my water come from?*

*What is in my drinking water?*

We will also provide information on other available resources that will answer questions about water quality and health effects.

### Where Does My Water Come From?

The Town of Cave Creek treats surface water delivered by the Central Arizona Project Canal. This water is principally Colorado

River water delivered from Lake Havasu via the CAP Canal. Cave Creek water is removed from the CAP Canal downstream of Lake Pleasant and therefore the actual water delivered can be a mix of Colorado River water and Lake Pleasant water. The water is delivered to Cave Creek Water Treatment Plant via a thirteen-mile-long pipeline from the CAP Canal. The Cave Creek Water Treatment Plant is a coagulation/direct filtration plant.

### Notice of Source Water Assessment

In 2004 the Arizona Department of Environmental Quality completed a source water assessment for the eight wells and one surface water source used by the Town of Cave Creek. The groundwater wells are no longer used as a drinking water supply, and are used solely for irrigation of the local golf course. The surface water intake had one adjacent land use that posed a high risk to the source.

The sources are currently protected by well construction and system operations and management. Residents can help protect the source by taking hazardous household chemicals to hazardous material collection days, and limiting pesticide and fertilizer use.

For more information, call our Customer Service Center at 480-488-6600 or visit the ADEQ's Source Water Assessment and Protection Unit website at [www.azdeq.gov/environment/water/dw/swap.html](http://www.azdeq.gov/environment/water/dw/swap.html).

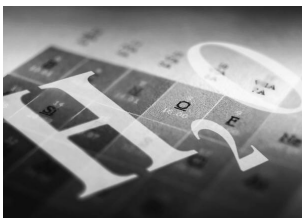


## Special Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

## Share This Report

Landlords, businesses, schools, hospitals and other groups are encouraged to share this important water quality information with water users at their location who are not billed customers of the Town of Cave Creek and therefore do not receive this report directly.



## Substances Expected to be in Drinking Water

To ensure that tap water is safe to drink, U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

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 can acquire naturally occurring minerals, in some cases, radioactive material; and substances resulting from the presence of animals or from human activity.

## Substances That May be in Source Water

- **M**icrobial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife.
- **I**norganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- **P**esticides and Herbicides, which may come from a variety of sources, such as agriculture, urban stormwater runoff, and residential uses.
- **O**rganic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and may also, come from gas stations,

urban stormwater runoff, and septic systems.

- **R**adioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at 1-800-426-4791.

## What's in My Water?

For your information, we have compiled a list in the table below showing what substances were detected in our drinking water during 2014. Although all of the substances listed below were under the Maximum Contaminant Level (MCL) set by USEPA, we feel it is important that you know exactly what was detected and how much of the substance was present in the water.

## How to Read This Table

Extensive monitoring is conducted to ensure that your water meets all water quality standards. The results of our monitoring are reported in the adjacent tables. For help with interpreting this table, see the "Table Definitions" section.

Starting with a **Substance**, read across. **Year Sampled** is usually in 2014 or years prior. **MCLG** is the goal level for that substance (this may be lower than what is allowed). **MCL** shows the highest level of substance (contaminant) allowed. **Highest Amount Detected** represents the highest amount found. **Range of Detections** tells the highest and lowest amounts found. A **Yes** under **Compliance Achieved** means the amount of the substance is below government requirements. **Typical Source** tells where the substance usually originates.

Unregulated substances are measured, but maximum contaminant levels have not been established by the government.

**REGULATED SUBSTANCES MEASURED ON THE WATER LEAVING THE TREATMENT FACILITY**

| Substance (units)           | Year Sampled | MCL G | MCL  | Highest Amount Detected | Range of Detections | Compliance Achieved | Typical Source                          |
|-----------------------------|--------------|-------|------|-------------------------|---------------------|---------------------|---|
| Arsenic (ppb)               | 2012         | 10    | 10   | <1                      | 0.00                | YES                 | Erosion of natural deposits             |
| Barium (ppb)                | 2012         | 2000  | 2000 | 59                      | 0 - 59              | YES                 | Erosion of natural deposits             |
| Fluoride (ppm)              | 2012         | 4.0   | 4.0  | 3.1                     | 0 - 3.1             | YES                 | Erosion of natural deposits             |
| Nitrate (ppm)               | 2014         | 10    | 10   | 0.28                    | 0 - 0.28            | YES                 | Fertilizer runoff; septic tank leaching |
| Radionuclides Alpha (pCi/L) | 2012         | 0     | 15   | 4.0                     | 0 - 4.0             | YES                 | Erosion of natural deposits             |

**TAP WATER SAMPLES: LEAD AND COPPER RESULTS**

| Substance (units) | Year Sampled | Action Level | Number of Samples | 90 <sup>th</sup> Percentile | Number of Samples Above Action Level | Compliance Achieved | Typical Source                                  |
|-------------------|--------------|--------------|-------------------|-----------------------------|--------------------------------------|---------------------|---|
| Lead (ppb)        | 2014         | 0.015        | 20                | 0.002                       | 0                                    | YES                 | Household plumbing; erosion of natural deposits |
| Copper (ppm)      | 2014         | 1.3          | 20                | 0.56                        | 0                                    | YES                 | Household plumbing; erosion of natural deposits |

**REGULATED SUBSTANCES MEASURED IN THE DISTRIBUTION SYSTEM**

| Substance (units)       | Year Sampled | MCLG/ MRDLG | MCL/ MRDLG | Average Amount Detected | Range of Detections | Compliance Achieved | Typical Source                            |
|-------------------------|--------------|-------------|------------|-------------------------|---------------------|---------------------|---|
| TTHM (ppb)              | 2014         | NA1         | 80         | 50.2                    | 33–72               | YES                 | By-product of drinking water disinfection |
| HAA 5(ppb)              | 2014         | NA1         | 60         | 15.7                    | 0 – 24              | YES                 | By-product of drinking water disinfection |
| Chlorine residuals(ppm) | 2014         | 4.0         | 4.0        | 0.74                    | 0.56 - 1.14         | YES                 | Water additive used to control microbes   |

**OTHER COMPOUNDS MEASURED IN THE DISTRIBUTION SYSTEM (Option: Secondary Substances)**

| Substance (units) | Year Sampled | MCL | Range of Detections | Typical Source   |
|-------------------|--------------|-----|---------------------|--|
| pH (units)        | 2014         | N/A | 7.2 – 7.7           | pH is a measure of the acid/base properties                    |
| Sodium (ppm)      | 2012         | N/A | 61                  | Natural content  |
| Hardness(gr/g)    | 2014         | N/A | 12 - 15             | Natural content expressed in grain per gallon for softener use |

**TURBIDITY– A MEASURE OF THE CLARITY OF THE WATER AT THE TREATMENT FACILITY**

| Plant                            | Substance (Units) | Year Sampled | MC LG | MCL                                    | Highest Single Measurement | Compliance Achieved | Typical Source |
|----------------------------------|-------------------|--------------|-------|--|----------------------------|---------------------|----------------|
| Cave Creek Water Treatment Plant | NTU               | 2014         | 0     | TT = 5 NTU                             | 0.105 NTU                  | Y                   | Soil run-off   |
|                                  |                   |              |       | TT =at least 95 % of samples < 0.5 NTU | 100 %                      |                     |                |

**TAP WATER SAMPLES: MICROBIOLOGICAL SAMPLES**

| Substance (units)       | Year Sampled | MCLG       | Action Level     | Number of Samples | Number of Samples Above Action Level | Compliance Achieved | Typical Source                                  |
|-------------------------|--------------|------------|------------------|-------------------|--------------------------------------|---------------------|---|
| Total Coliform Bacteria | 2014         | 0 / absent | Present/positive | 120               | 0                                    | YES                 | Cross contamination or ineffective disinfection |

**1. TTHM/HAA5**

Although there is no collective MCLG for this contaminant group, there are individual MCLGs for some of the individual contaminants:

Trihalomethanes: bromodichloromethane (zero); bromoform (zero); dibromochloromethane (0.06 mg/L). Chloroform is regulated with this group but has no MCLG.

Haloacetic acids: dichloroacetic acid (zero); trichloroacetic acid (0.3 mg/L). Monochloroacetic acid, bromoacetic acid, and dibromoacetic acid are regulated with this group but have no MCLGs.

**ARSENIC**

While your drinking water meets EPA's current standard for arsenic (10 part per billion), it may 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 of Terms Used in This Report

- **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.
- **TT (Treatment Technique):** A required process intended to reduce the level of a contaminant in drinking water.
- **AL (Action Level):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- **ND:** None detected.
- **pCi/L (Picocuries per liter):** Measurement of the natural rate of disintegration.
- **ppb – (Parts per billion):** One part substance per billion parts water (or micrograms per liter).
- **ppm – (Parts per million):** One part substance per million parts water (or milligrams per liter).

- **grains/gallon:** A measure of concentration used to express total hardness by most water softening manufactures.
- **TTHM - (Total Trihalomethanes):** consist of Chloroform, Bromodichloromethane, Dibromochloromethane, and Bromoform.
- **HAA5- Five Haloacetic Acids:** consist of Monochloroacetic acid, Dichloroacetic acid, Trichloroacetic acid, Bromoacetic acid, and Dibromoacetic acid.

## Home Water Treatment Units

If you install a home treatment system such as a water softener or reverse osmosis system to improve taste or odor, remember to follow the manufacturer's instructions on operation and maintenance. Failure to perform maintenance can result in poor water quality. We recommend contacting the manufacturer of your treatment system for maintenance instructions or assistance. Additional information about home treatment systems is available from the Arizona Water Quality Association at 480-947-9850 or by writing to 6819 E. Diamond St., Scottsdale, AZ 85257.



Town of Cave Creek  
37622 N. Cave Creek Road  
Cave Creek, Arizona 85331



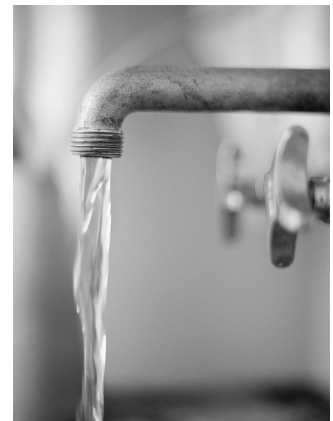
Water conservation measures are an important first step in protecting our water supply. Such measures not only save the supply of our source water, but can also save you money by reducing your water bill.

### **Conservation measures you can use inside your home include:**

- Fix leaking faucets, pipes, toilets, etc.
- Replace old fixtures; install water-saving devices in faucets, toilets and appliances.
- Wash only full loads of laundry.
- Do not use the toilet for trash disposal.
- Take shorter showers.
- Do not let the water run while shaving or brushing teeth.
- Soak dishes before washing.
- Run the dishwasher only when full.

### **You can conserve outdoors as well:**

- Water the lawn and garden in the early morning or evening.
- Use mulch around plants and shrubs.
- Repair leaks in faucets and hoses.
- Use water-saving nozzles.
- Use water from a bucket to wash your car, and save the hose for rinsing.



Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien. 480-488-6600

For more information about this report, or for any questions relating to your drinking water, please call customer service at 480-488-6600.