



# 2019 WATER QUALITY REPORT

(Consumer Confidence Report for Calendar Year 2018)

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Public Water System (PWS) AZ04-07-015

Carefree Water Company is pleased to present our 2019 Annual Water Quality Report. This report includes data through calendar year 2018 along with information that will help you understand our water deliveries to you, our customers.

As in previous years, **our water quality meets or surpasses all federal and state drinking water standards.** This reflects a commitment on the part of the Water Company staff to provide safe and dependable drinking water at an affordable price. Compliance with our water quality requirements reflects close cooperation among the Water Company, the Maricopa County Environmental Services Department (MCESD), the Arizona Department of Environmental Quality (ADEQ), and the U.S. Environmental Protection Agency (EPA).

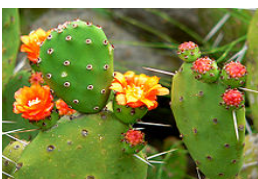
As a valued customer, we want you to be informed about your water quality. Please take a few moments to review this report. Landlords, businesses, schools, hospitals, and other groups are encouraged to share this important water quality information with other people who drink our water, especially those who may not receive this notice directly.

If you have any questions, or if you would like to learn more about public participation or attending any of our scheduled Board of Directors meetings, you can contact me at 480-488-9100. You can also visit our website at [www.carefreewaterco.com](http://www.carefreewaterco.com) for information on meeting dates and times.

It was a pleasure serving you in 2018, and we look forward to our continued service in 2019 and beyond.

*Greg Crossman*  
General Manager

Español: Este informe contiene información importante acerca de su agua potable. Haga que alguien lo traduzca para usted, o hable con alguien que lo entienda.



## **CAREFREE'S DRINKING WATER**

Carefree's drinking water includes both surface water (water from rivers, lakes, and reservoirs) and groundwater (water from wells).

Our surface water comes from the Central Arizona

Project (CAP) canal, which originates on the Colorado River at Lake Havasu. CAP water is treated and transported to us by our neighboring communities of Scottsdale and Cave Creek. Our groundwater comes from wells that are located within the Carefree/Cave Creek groundwater basin.

Generally, the water we deliver to you is a blend of both our surface water and groundwater sources. The exact blend of surface and groundwater depends on many variables, including the time of year and where you are located in our distribution system. On average, the water we deliver to our customers is two-thirds (2/3) CAP water and one-third (1/3) groundwater, with 75% of the CAP water being delivered to us by Scottsdale, and 25% by Cave Creek. An exception to this is the far eastern portion of our service area which receives 100% Scottsdale water year-round. This area is within the Rolling Hills and Velvet Shadows subdivisions, generally east of Twilight Trail to the Town limits and between Cave Creek Road and Stagecoach Pass. Customers within this area should also review Scottsdale's 2019 Water Quality Report at the web address shown on page 2.

## **WATER QUALITY MESSAGES FROM THE EPA**

The EPA, in conjunction with state and local regulatory agencies, has established water quality regulations to ensure your tap water is safe to drink. All drinking water, including bottled water, may reasonably be expected to contain small amounts of some contaminants. The presence of these impurities does not necessarily indicate a health risk.

As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals, and in some cases, radioactive material. It can also pick up substances as a result of animal or human activity.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must



provide the same protection for public health. Possible water contaminants may include:

- Microbial, such as viruses and bacteria. These contaminants may come from septic systems, wastewater treatment plants, livestock, and wildlife.
- Inorganic, such as salts and metals. These contaminants can be naturally-occurring or may be a result of urban runoff, wastewater discharges, oil and gas production, mining, or farming.
- Organic, including synthetic and volatile organic chemicals. These contaminants are byproducts of industrial and petroleum production, and may also come from gas stations, urban runoff, and septic systems.
- Pesticides and Herbicides, which come from a variety of sources, such as agriculture, urban runoff, and residential uses.
- Radioactive, which can be naturally occurring or the result of oil and gas production and mining activities.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised 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 can be particularly at risk of infections. These people should seek advice about drinking water from their healthcare providers.

For more information about contaminants and their potential health effects, or to receive a copy of the EPA and Center for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection and potential health effects, call EPA's *Safe Drinking Water Hotline* at 1-800-426-4791.



### **2019 WATER QUALITY RESULTS**

The Carefree Water Company is required to test for over 100 substances in our drinking water. Testing is done at two Entry Points

to the Distribution System (EPDS). Water samples taken at these EPDS test our treated source water before it enters our distribution system. We also perform monthly tests at 4 locations within the distribution system to ensure that water entering your home or business remains safe to drink.

Because a large portion of our water comes from our neighboring water providers of Scottsdale and Cave Creek, the results from their source water sampling efforts are included in the accompanying water quality table. Only those substances that were detected in the

three communities' source waters are listed in the table. Even though certain substances were detected, **all three communities' water deliveries in 2018 met or surpassed federal and state drinking water standards**, meaning that the amounts detected were below the applicable standard.

If you would like additional information on Scottsdale's or Cave Creek's water, their individual Water Quality Reports can be accessed online at the following website addresses, or you can call our offices at 480-488-9100 to obtain a copy:

**Scottsdale Water Quality Report (PWS AZ04-07-098):**  
<http://www.scottsdaleaz.gov/water/drinking-water>

**Cave Creek Water Quality Report (PWS AZ04-07-016):**  
<http://www.cavecreek.org/index.aspx?NID=369>

### **ADDITIONAL INFORMATION ON WATER QUALITY, SURFACE WATER MONITORING, AND VIOLATIONS**



The following is additional information on water quality data, surface water monitoring, and violations:

- **Arsenic.** Arsenic 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. If arsenic is less than or equal to the MCL, your drinking water meets EPA's standards. EPA's arsenic standard balances the current understanding of possible health effects against the cost of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic.
- **Coliforms.** Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. If coliform is found, then the system is responsible to look for potential problems in water treatment or distribution. When this occurs, the water system is required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.
  - ◀ During the past year, we were required to conduct one Level 1 Assessment. A Level 1 Assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria were present. The assessment found no problems with our water treatment or distribution system. Sampling protocols at one site were revised to correct the situation.

- Lead.** Lead, in drinking water, is primarily from materials and components associated with service lines and home plumbing. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Carefree Water Company is responsible for providing high quality drinking water, but cannot control the variety of materials used 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 2 minutes before using water for drinking or cooking. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at 1-800-426-4791 or at [www.epa.gov/safewater/lead](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 advice from your health care provider.
- Total Organic Carbon (TOC).** TOC has no health effects. However, total organic carbon provides a medium for the formation of disinfection byproducts. The byproducts include trihalomethanes (THM) and haloacetic acids (HAA). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.

One of our providers of treated surface water, the Town of Cave Creek, exceeded a requirement for removal efficiency for TOC during the 12 month period from January through December 2018. Notification of this was provided by Cave Creek to its customers in February 2018. Cave Creek provides approximately 15% of Carefree Water Company’s water supply. A follow-up notification of this was provided to our customers in April 2019 which may be viewed online at <http://carefreewaterco.com/reportsdocuments/consumentconfidencewaterqualitydata.html> or can be obtained by contacting our office. Both notifications were clear that this presented no health or safety risk to either system’s customers.

**SOURCE WATER ASSESSMENT PROGRAM**



In 2005, Carefree Water Company worked with ADEQ to finalize an assessment of the wells we use to provide you drinking water. This assessment looks at the potential risks to our water sources, including their proximity to gas stations, landfills, dry cleaners, agricultural fields, and wastewater treatment plants. Based on the information available, including the hydrogeologic setting of our wells and their adjacent land uses, ADEQ’s assessment concludes that all of our wells have a low risk. A low risk designation indicates that most source water protection measures are either already implemented or that the hydrogeologic setting is such that additional source water protection measures will have little impact on protection. The complete assessment is available for review by contacting Carefree Water Company’s office at 480-488-9100. Additional information on Source Water Assessments and Protection can be obtained from ADEQ at [www.azdeq.gov/environ/water/dw/swap.html](http://www.azdeq.gov/environ/water/dw/swap.html).



**Conservation... Home Water Audit**

Saving water is easy when you think about it. Take a moment to see how water-wise you are around your home. Check which time interval best describes your water use habits. After review your results, consider what adjustments you can make. It might surprise you just how easy it is to save water *and money* around your home.

PERSONAL HABITS:	Often (1pt)	Sometimes (2pts)	Never (3pts)
Keep showers to under 5 minutes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turn off the water while brushing your teeth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Put water in the sink when washing dishes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Run the dishwasher/washer only when full	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check your irrigation system for breaks/leaks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Change irrigation schedule considering seasonal demands	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Review your water bill as changes in usage may indicate a water leak	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7-10pts = You’re a Water Conservation “Rock Star”    11-14pts = You’re doing great at conserving water  
15-21pts = Please consider ways to improve your conservation efforts    *(adapted from wateruseitwisely.com)*

## CAREFREE WATER COMPANY - 2018 WATER QUALITY RESULTS

Results - Treated Source Waters									
Combined Results from Carefree, Scottsdale, and Cave Creek Source Waters									
Substance	Unit	MCL	MCLG	Lowest Amount Detected	Highest Amount Detected	Average	Sampling Years	Violation	Likely Source in Drinking Water
Arsenic	ppb	10	0	ND	8.2	4.1	2013-18	No	Leaching of natural deposits
Barium	ppm	2	2	ND	0.1	0.06	2013-18	No	Leaching of natural deposits
Chromium	ppb	100	100	ND	46	11	2013-18	No	Leaching of natural deposits
Fluoride	ppm	4	4	ND	3.4	0.7	2013-18	No	Leaching of natural deposits
Nickel	ppb	NA	NA	ND	6.2	1.1	2013-18	No	Leaching of natural deposits
Nitrate	ppm	10	10	ND	6.4	1.7	2018	No	Leaching of natural deposits and septic systems; Runoff from fertilizer use
Selenium	ppb	50	50	ND	5.0	1.5	2013-18	No	Leaching of natural deposits; Discharge from petroleum refineries and mining
Alpha Emitters	pCi/L	15	0	ND	8.0	3.4	2012-18	No	Leaching of natural deposits
Uranium	ppb	30	0	1.4	9.5	3.3	2018	No	Leaching of natural deposits
Ethylbenzene	ppb	700	700	ND	0.55	0.03	2018	No	Discharge from petroleum refineries
Xylenes, Total	ppm	10	10	ND	0.003	0.0001	2018	No	Discharge from petroleum factories; Discharge from chemical factories
Results - Treated Source Waters									
Scottsdale and Cave Creek Surface Water									
Substance	Unit	MCL	TT Requirement	Highest Measurement	Treatment Technique Comparison		Sampling Year	Violation	Likely Source in Drinking Water
Turbidity - Cave Creek	NTU	1	95% less than 0.3 NTU	0.66	100% less than 1.0 NTU		2018	No	Soil Runoff
Turbidity - Scottsdale	NTU	1	95% less than 0.3 NTU	0.15	100% less than 0.3 NTU		2018	No	Soil Runoff
Total Organic Carbon - Cave Creek	ppm	TT	NA	(Highest Amt) 2.9	(Lowest Amt) 2.4	(Average) 2.6	2018	Yes <sup>3</sup>	Naturally present in the environment
Total Organic Carbon - Scottsdale	ppm	TT	NA	(Highest Amt) 2.7	(Lowest Amt) 1.9	(Average) 2.4	2018	No	Naturally present in the environment
Results - Carefree Distribution System									
Substance	Unit	MCL	MCLG	Lowest Amount Detected	Highest Amount Detected	Average	Sampling Year	Violation	Likely Source in Drinking Water
E. Coli/Fecal Indicators	Positive Sample	0	0	0	0	0	2018	No	Human and animal fecal waste
Chlorine	ppm	4 (MRDL)	4 (MRDLG)	0.14	3.8	0.88	2018	No	Water additive used to control microbial growth
Substance	Unit	MCL <sup>1</sup>	MCLG	Lowest Amount Detected	Highest Amount Detected	Average	Sampling Year	Violation	Likely Source in Drinking Water
Total Trihalomethanes (TTHMs) <sup>1</sup>	ppb	80	NA	24	44	34	2018	No	Byproduct of drinking water disinfection
Haloacetic Acids (HAAs) <sup>1</sup>	ppb	60	NA	4.6	7.4	6.0	2018	No	Byproduct of drinking water disinfection
Substance	Unit	AL	MCLG	90th Percentile Value	# Homes Greater than AL		Sampling Year	Violation	Likely Source in Drinking Water
Lead <sup>2</sup>	ppb	15	0	0	0 out of 10		2018	No	Corrosion of household plumbing; erosion of natural deposits
Copper <sup>2</sup>	ppm	1.3	1.3	0.24	0 out of 10		2018	No	Corrosion of household plumbing; erosion of natural deposits

<sup>1</sup> Compliance is based on Annual Monitoring (reduced) at 2 sites, reduced sampling effective April 2016.

<sup>2</sup> Lead and Copper Rule Standard: 90% of homes tested must have lead and copper levels below the alert level (AL).

<sup>3</sup> See page 3 for additional information under Total Organic Carbon (TOC).

### Definition of Terms Used On This Table and in This Report

- **AL (Action Level):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements.
- **MCL (Maximum Contaminant Level):** The highest level of a contaminant that is allowed in drinking water.
- **MCLG (Maximum Contaminant Level Goal):** The level of a contaminant in drinking water below which there are no known or expected risks to health.
- **MRDL (Maximum Residual Disinfectant Level):** The level of disinfectant added to for water treatment that may not be exceeded at the consumer's tap.
- **MRDLG (Maximum Residual Disinfectant Level Goal):** The level of disinfectant added for treatment at which no known or anticipated adverse effect on health of persons would occur.
- **NA (Not Applicable):** Sampling was not completed by regulation or was not required.
- **ND (Non-Detect):** The contaminant was not present in the sample, or the actual concentration in the sample was below the lowest concentration capable of being detected for this contaminant.
- **NTU (Nephelometric Turbidity Units):** A measure of the clarity of water.
- **pCi/L (Picocuries Per Liter):** A measure of radioactivity in water.
- **ppm (Parts Per Million):** A measurement of the concentration of a contaminant that is equivalent to milligrams per liter (mg/L). 1 ppm (or mg/L) is equivalent to about 4 drops in a 55 gallon drum.
- **ppb (Parts Per Billion):** A measurement of the concentration of a contaminant that is equivalent to micrograms per liter (ug/L). 1 ppb (or ug/L) is equivalent to about 1 drop in two hundred and fifty (250) 55 gallon drums.
- **TT (Treatment Technique):** A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.