



2016 WATER QUALITY REPORT

Carefree Water Company

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As your water provider, Carefree Water Company is again pleased to present this annual water quality report. The report includes data through calendar year 2015 along with information that will help you understand our water deliveries.

As in previous years, **our water 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).

Please take a few moments to review this report and let us know if you have any questions. It was a pleasure serving you in 2015, and we look forward to our continued service in 2016 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 50% CAP water, 50% groundwater, with half of the CAP water being delivered to us by Scottsdale, and half 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 2016 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, contains 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 that result from the presence of animals or human activity. 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 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.



2015 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 5 locations within the distribution system to ensure that water entering your home or business remains safe to drink.

Because approximately 50% 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 2015 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:

<http://www.scottsdaleaz.gov/water/drinking-water>

Cave Creek Water Quality Report:

<http://www.cavecreek.org/index.aspx?NID=369>

ADDITIONAL WATER QUALITY INFORMATION

The following is additional information on nitrate, arsenic, and lead in drinking water.



- **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.
- **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.
- **Lead.** Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, flushing your tap for 30 seconds to 2 minutes before using tap water may reduce your exposure to lead from your home's plumbing. You may also wish to have your water tested. Additional information is available from the EPA Safe Drinking Water Hotline at 1-800-426-4791.

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 calling the Carefree Water Company at 480-488-9100. Additional information

on Source Water Assessments and Protection can be obtained from Arizona Department of Environmental Quality at www.azdeq.gov/environ/water/dw/swap.html.



Where There's Water, There's a Way to Save

- 1. Start with your water bill.**
Surges may mean you have an undetected outdoor leak.
- 2. Look before you leak.**
Regular maintenance of outdoor sprinklers, drip systems and plumbing can prevent costly undetected leaks.
- 3. Learn from your mistakes.**
If you're spending all your free time maintaining lawn and exotic plants, consider renovating your landscape using low maintenance Arizona-native or low-water-use plants.
- 4. Stop at sunrise.**
To reduce evaporation, time sprinklers so you stop watering before the sun comes up.
- 5. Water by the weather.**
Avoid watering during rain and high-wind conditions. Plan to reprogram your sprinkler controller monthly or at the minimum in May, July, October and November.
- 6. Follow your footprints.**
Walk across your grass - if the blades spring back without evidence of footprints, don't water.
- 7. Keep a screwdriver handy.**
If you can effortlessly probe your ground to a depth of ten inches, your lawn watering is deep and sufficient. (Be careful to avoid underground lines.)
- 8. Dig first.**
Use a hand-trowel to carefully dig down around plants; if the ground is soggy you're overwatering. (Be careful to avoid underground lines.)
- 9. Respond to yellow.**
Just like a road sign, "yellow" means "caution." Many people think that a yellow plant needs more water. Instead, yellow leaves on plants are often evidence of overwatering. (Consult a professional if you are unsure.)
- 10. Use your eyes.**
"Seeing is believing." Mushroom growth, mold or algae mean you're overwatering.

Source: www.phoenix.gov

THE FACTS ON LEAKS

10
percent of homes have leaks that waste 90 gallons or more per day

A leaky faucet dripping at the rate of one drip per second can waste more than
3,000 gallons
per year

Did you know?
Minor water leaks account for more than
1
trillion gallons
of wasted water each year and is equal to annual household water use in

A shower leaking at
10 Drips
per minute wastes more than
500
gallons per year

REPAIR
leaks by checking faucet washers and gaskets for wear and replacing them if necessary

11
million homes

Replace old toilets with WaterSense labeled models & save
13,000
gallons of water savings for the average family

Homeowners can save
10 percent on their water bills

Look for
WaterSense
Meets EPA Criteria

EPA epa.gov/watersense



Go Paperless!

Help the Water Company protect the environment and keep our costs down by using paperless e-bill. It's the fastest way to get your monthly water bill because it goes straight to your e-mail inbox, electronically.

Yes, I would like to go paperless. My account information is:

Account #: _____ Name on Account: _____ E-mail: _____

Please return with your water bill or mail to: Carefree Water Company, P.O. Box 702, Carefree, AZ 85377

CAREFREE WATER COMPANY - 2016 WATER QUALITY REPORT

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	6.4	3.4	2013/14/15	No	Leaching of natural deposits
Barium	ppb	2,000	2,000	ND	136	50	2013/14/15	No	Leaching of natural deposits
Chromium	ppb	100	100	ND	46	12	2013/14/15	No	Leaching of natural deposits
Fluoride	ppm	4	4	0.2	1.1	0.5	2013/14/15	No	Leaching of natural deposits
Nitrate	ppm	10	10	ND	6.7	1.8	2015	No	Leaching of natural deposits and septic systems; Runoff from fertilizer use
Nickel	ppb	NA	NA	ND	2.7	0.7	2013/14/15	No	Leaching of natural deposits.
Selenium	ppb	50	50	ND	2.7	1.2	2013/14/15	No	Leaching of natural deposits; Discharge from petroleum refineries and mining
Alpha Emitters	pCi/L	15	0	ND	7.9	1.8	2012/13/14/15	No	Leaching of natural deposits
Uranium	ppb	30	0	ND	5.2	2.6	2014/15	No	Leaching of natural deposits
Radium, Combined	pCi/L	5	0	ND	0.7	0.1	2013/14/15	No	Leaching of natural deposits
Total Organic Carbon	ppm	TT	NA	0.9	1.7	1.4	2015	No	Naturally present in the environment

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 0.5 NTU	0.105	100% less than 0.5 NTU	2015	No	Soil Runoff	
Turbidity - Scottsdale	NTU	1	95% less than 0.3 NTU	0.09	100% less than 0.3 NTU	2015	No	Soil Runoff	

Results - Carefree Distribution System									
Substance	Unit	MCL	MCLG	Lowest Amount Detected	Highest Amount Detected	Average	Sampling Year	Violation	Likely Source in Drinking Water
Total Coliform	Positive Sample	1 positive (monthly)	0	0	0	0	2015	No	Naturally present in the environment
Chlorine	ppm	4 (MRDL)	4 (MRDLG)	0	2	0.7	2015	No	Water additive used to control microbial growth
Substance	Unit	MCL ¹	MCLG	Lowest Amount Detected	Highest Amount Detected	Highest LRR ¹	Sampling Year	Violation	Likely Source in Drinking Water
Total Trihalomethanes (TTHMs) ¹	ppb	80	NA	2.7	55	41	2015	No	Byproduct of drinking water disinfection
Haloacetic Acids (HAAs) ¹	ppb	60	NA	ND	12	9.2	2015	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 ²	ppb	15	0	4	0 out of 10	2015	No	Corrosion of household plumbing	
Copper ²	ppb	1,300	1,300	294	0 out of 10	2015	No	Corrosion of household plumbing	

¹: Compliance is based on the Locational Running Annual Average (LRAA) at 2 sites.

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

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 highest level of a disinfectant allowed in drinking water.
- **MRDLG (Maximum Residual Disinfectant Level Goal):** The level of drinking water disinfectant below which there is no known or expected risk to health.
- **NA (Not Applicable)**
- **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 (Part 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 (Part 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.