



## Consumer Confidence Report for Calendar Year 2020

Este informe contiene información muy importante sobre el agua usted bebe.  
Tradúscalo ó hable con alguien que lo entienda bien.

Verde Village 6,7,8 & Quail Canyon

Public Water System ID Number	Public Water System Name	
AZ04-13106	Cottonwood Municipal Water VV6	
Contact Name and Title	Phone Number	E-mail Address
Mike Traynor Water Operations Manager	928-634-0186 ext. 3306	<a href="mailto:mtraynor@cottonwoodaz.gov">mtraynor@cottonwoodaz.gov</a>

In an effort to ensure our valued customers are informed about the quality of their water, you are being provided a copy of this annual drinking water report for your information. If you have any questions about the annual drinking water report, or if you would like to learn more about your drinking water system and what you can do to protect the source of your drinking water, please contact us at 928-634-0186 or visit: [www.cottonwoodaz.gov/utilities](http://www.cottonwoodaz.gov/utilities)

### Drinking Water Sources

The sources of drinking water (both tap 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 pickup substances resulting from the presence of animals or from 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.

<b>Our water source(s):</b>	The City of Cottonwood's water service area for System 13-106 includes all areas in Verde Village 6, 7 and 8 as well as Quail Canyon Units 1 & 2. Within this service area boundary, there are 6 wells and 4 storage tanks (combined total of 320,000 gallons). The City pumps all of its water from the deep regional groundwater aquifer and uses chlorination for disinfection. The eight well sites in this system and their associated Entry Point to the Distribution System (EPDS) identification number are Well Site 7-1 (EPDS003), Well Site 7-2 (EPDS004), Well Site 8-2 (EPDS006), Well Site6-2 (EPDS002), Well Site Quail Canyon 1- (EPDS007) and Well Site Quail Canyon 2(EPDS008).
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### Drinking Water Contaminants

**Microbial Contaminants:** Such as viruses and bacteria occur naturally in the environment and may also occur from the discharge of wastes from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife

**Inorganic Contaminants:** Such as salts and metals occur naturally in the environment and may also result from urban stormwater runoff, industrial and domestic waste and wastewater discharges, oil and gas production, mining, and farming

**Pesticides and Herbicides:** Occur as the result of their use in residential, commercial, industrial and agriculture, urban storm water runoff, and residential uses that may come from a variety of sources

**Organic Chemical Contaminants:** Such as plastics, dyes, polishes, solvents, oil, insecticides, varnishes, paints, gasoline byproducts, pharmaceuticals, degreasers, etc., may enter the environment from improper waste disposal urban stormwater runoff and septic systems.

**Radioactive Contaminants:** Occur naturally in the environment and may also occur as a result of improper industrial waste disposal, oil and gas production and mining activities.

## Vulnerable Population

Drinking water, including bottled water, may reasonably 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. 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 from infections. These people should seek advice about drinking water from their health care providers.

For more information about contaminants and potential health effects, or to receive a copy of the U.S. Environmental Protection Agency (EPA) and the U.S. Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and microbiological contaminants call the EPA Safe Drinking Water Hotline at 1-800-426-4791.

## Source Water Assessment

- **LOW RISK:** Based on the currently available information related to the hydrogeology of the well sites within this public water system and the land use practices adjacent to or within a specified distance of the drinking water source(s), the Department has given a low risk designation for the degree to which this public water system drinking water source(s) are protected. A low risk designation indicates that most source water protection measures are either already implemented, or the hydrogeology is such that the source water protection measures will have little impact on protection.
- Additional source water assessment documentation can be obtained by contacting ADEQ.

## Definitions

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

**Level 1 Assessment:** A study of the water system to identify potential problems and determine (if possible) why total coliform bacteria was present

**Level 2 Assessment:** A very detailed study of the water system to identify potential problems and determine (if possible) why an *E. coli* MCL violation has occurred and/or why total coliform bacteria was present

**Action Level (AL):** The concentration of a contaminant which, if exceeded, triggers treatment, or other requirements

**Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water

**Maximum Contaminant Level Goal MCLG:** The level of a contaminant in drinking water below which there is no known or expected risk to health

**Maximum Residual Disinfectant Level (MRDL):** The level of disinfectant added for water treatment that may not be exceeded at the consumer's tap

**Maximum Residual Disinfectant Level Goal (MRDLG):** The level of disinfectant added for treatment at which no known or anticipated adverse effect on health of persons would occur

**EPDS:** Entry Point Into Distribution System- the point at which water is discharged into the distribution system from a well, storage tank, pressure tank or water treatment plant.

**DSMRT:** Distribution Maximum Residence Time- A location that provides water to customers, where the water has been in the system longest relative to the EPDS.

**RAA:** Running Annual Average- an average of monitoring results for the previous 12 calendar months or previous 4 quarters.

**Minimum Reporting Limit (MRL):** The smallest measured concentration of a substance that can be reliably measured by a given analytical method

**Millirems per year (MREM):** A measure of radiation absorbed by the body

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

**Not Detected (ND or <):** Not detectable at reporting limit

**Nephelometric Turbidity Units (NTU):** A measure of water clarity

**Million fibers per liter (MFL)**

**Picocuries per liter (pCi/L):** Measure of the radioactivity in water

**ppm:** Parts per million or Milligrams per liter (mg/L)

**ppb:** Parts per billion or Micrograms per liter (μg/L)

**ppt:** Parts per trillion or Nanograms per liter (ng/L)

$ppm \times 1000 = ppb$

**ppq:** Parts per quadrillion or Picograms per liter (pg/L)

$ppb \times 1000 = ppt$

$ppt \times 1000 = ppq$

## Lead Informational Statement:

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. **Cottonwood Municipal Water** 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 or at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

## Water Quality Data – Regulated Contaminants- System AZ0413-106

The City routinely monitors for contaminants in your drinking water in accordance with Federal and State laws. The State of Arizona requires the city to monitor for certain contaminants less than once per year because either the concentrations of these contaminants are not expected to vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. Some of the City's data, although representative, may be more than one year old. The test results for Total Coliform Bacteria, E.Coli, Synthetic Organic Chemicals (SOC) including Pesticides, Volatile Organic Chemicals (VOC) except xylenes, Radionuclides (combined Radium, Radium-226 and Radium-228), Haloacetic Acids (HAA5), Cadmium, Mercury, Selenium, Nitrite, Antimony, Beryllium, Cyanide, Nickel, Lead, Thallium, Chromium and Aroclor (PCB Screening test) were all "Non-Detect (ND) and therefore were not included in this report. If you have questions pertaining to this report or on a particular contaminant, please contact Mike Traynor –Water Operations Manager at (928) 634-0186 ext. 3306

**These tables show the results of our monitoring for the period of January 1 to December 31, 2020 unless otherwise noted.**

Disinfectants	MCL Violation Y or N	Highest Level Detected	Range of All Samples (Low-High)	MRDL	MRDLG	Sample Month & Year	Likely Source of Contamination
Chlorine (ppm)	N	0.70	0.66 - 0.70	4	0	Qtrly 2020	Water additive used to control microbes
Disinfection By-Products	MCL Violation Y or N	Running Annual Average (RAA) OR Highest Level Detected	Range of All Samples (Low-High)	MCL	MCLG	Sample Month & Year	Likely Source of Contamination
Total Trihalomethanes (TTHM) (ppb)	N	1.3	0 – 1.3	80	No goal for the total	Aug. 2020	By-product of drinking water disinfection
Lead & Copper	MCL Violation Y or N	90 <sup>th</sup> Percentile	Number of Samples Exceeds AL	AL	ALG	Sample Month & Year	Likely Source of Contamination
Copper (ppm)	N	0.20	0	1.3	1.3	Sept. 2020	Corrosion of household plumbing systems; erosion of natural deposits
Radionuclides	MCL Violation Y or N	Running Annual Average (RAA) OR Highest Level Detected	Range of All Samples (Low-High)	MCL	MCLG	Sample Month & Year	Likely Source of Contamination
Alpha Emitters (pCi/L)	N	5.7	0.0- 5.7 (EPDS003)	15	0	Feb. 2019	Erosion of natural deposits
Inorganic Chemicals (IOC)	MCL Violation Y or N	Running Annual Average (RAA) OR Highest Level Detected	Range of All Samples (Low-High)	MCL	MCLG	Sample Month & Year	Likely Source of Contamination
Arsenic <sup>1</sup> (ppb)	Y <sup>3</sup>	22	0 - 22	10	0	Qtrly 2020	Erosion of natural deposits, runoff from orchards, runoff from glass and electronics production wastes
Barium (ppm)	N	0.61	0.46 -0.61	2	2	Feb. 2019	Discharge of drilling wastes; discharge from metal refineries; Erosion

							of natural deposits
Fluoride (ppm)	N	0.31	0.30 – 0.31	4	4	Feb. 2019	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate <sup>2</sup> (ppm)	N	0.87	0.12 – 0.87	10	10	Feb. 2020	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm)	N	130	11 (EPDS004) 14 (EPDS002) 63 (EPDS006)	N/A	N/A	Feb. 2019	Erosion of natural deposits
Volatile Organic Chemicals (VOC)	MCL Violation Y or N	Running Annual Average (RAA) <u>OR</u> Highest Level Detected	Range of All Samples (Low- High)	MCL	MCLG	Sample Month & Year	Likely Source of Contamination
Xylenes	N	0.0009	0.0 -0.0009	10	10	Feb. 2019	Discharge from petroleum factories: Discharge from chemical factories

<sup>1</sup> Arsenic is a mineral known to cause cancer in humans at high concentration 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 standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water, and continues to research the health effects of low levels of arsenic.

<sup>2</sup> 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, and detected nitrate levels are above 5 ppm, you should ask advice from your health care provider.

<sup>3</sup> MCL Violation is for EPDS 006- Wellsite taken offline in March of 2020

## Water Supply Change

Well site 8-2 EPDS 006 was taken out of service in March 2020 and remained out of service for the remainder of 2020. Drinking water to the customers in this service area, during the time Well Site 8-2 was out of service, was supplied Water System AZ0413-025 Well Site 8/9 EPDS 008. Water quality data for System AZ0413-025 is included below:

## Water Quality Data – Regulated Contaminants for System AZ0413-025

The City routinely monitors for contaminants in your drinking water in accordance with Federal and State laws. The State of Arizona requires the City to monitor for certain contaminants less than once per year because either the concentrations of these contaminants are not expected to vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. Some of City's data, although representative, may be more than one-year old. The test results for Total Coliform Bacteria, E.Coli, Haloacetic Acids (HAA5), Synthetic Organic Chemicals (SOC) including Pesticides, Volatile Organic Chemicals (VOC), Radionuclides except Alpha Emitters, Cadmium, Mercury, Nitrite, Selenium, Antimony, Beryllium, Cyanide, Nickel, Thallium, Lead and Aroclor (PCB Screening test), were all "Non-Detect (ND)" and therefore were not included in this report. If you have questions pertaining to this report or on a particular contaminant, please contact Mike Traynor –Water Operations Manager at (928) 634-0186 ext. 3306.

**These tables show the results of our monitoring of System AZ0413-025 for the period of January 1 to December 31, 2020 unless otherwise noted.**

Disinfectants	MCL Violation Y or N	Running Annual Average (RAA)	Range of All Samples (Low-High)	MRDL	MRDLG	Sample Month & Year	Likely Source of Contamination
Chlorine/Chloramine (ppm)	N	0.60	0.47-0.73	4	0	Qtrly 2020	Water additive used to control microbes
Disinfection By-Products	MCL Violation	Running Annual Average	Range of All Samples	MCL	MCLG	Sample Month	Likely Source of Contamination

	Y or N	(RAA) OR Highest Level Detected	(Low-High)			& Year	
Total Trihalomethanes (TTHM) (ppb)	N	5	0-10.3	80	N/A	Aug. 2020	Byproduct of drinking water disinfection
Lead & Copper	MCL Violation Y or N	90 <sup>th</sup> Percentile	Number of Samples Exceeds AL	AL	ALG	Sample Month & Year	Likely Source of Contamination
Copper (ppm)	N	0.26	1	1.3	1.3	Aug. 2020	Corrosion of household plumbing systems; erosion of natural deposits
Radionuclides	MCL Violation Y or N	Running Annual Average (RAA) OR Highest Level Detected	Range of All Samples (Low-High)	MCL	MCLG	Sample Month & Year	Likely Source of Contamination
Alpha Emitters (pCi/L)	N	3 (EPDS005)	0-3	15	0	Nov. 2019	Erosion of natural deposits
Inorganic Chemicals (IOC)	MCL Violation Y or N	Running Annual Average (RAA) OR Highest Level Detected	Range of All Samples (Low-High)	MCL	MCLG	Sample Month & Year	Likely Source of Contamination
Arsenic <sup>1</sup> (ppb)	Y	11	1.2-16	10	0	Qtrly 2020	Erosion of natural deposits, runoff from orchards, runoff from glass and electronics production wastes
Barium (ppm)	N	0.048	0.048-0.048	2	2	Feb 2020	Discharge of drilling wastes; discharge from metal refineries; Erosion of natural deposits
Chromium (ppb)	N	6.2	6.2-6.2	100	100	Feb. 2020	Discharge from steel and pulp mills; Erosion of natural deposits
Fluoride (ppm) (EPDS011)	N	0.44	0.44-0.44	4	4	Feb. 2020	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate <sup>2</sup> (ppm) (EPDS011)	N	0.53	0-0.53	10	10	Feb. 2020	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm)	N	49 ( EPDS005) 33 (EPDS007) 49 ( EPDS008) 21 (EPDS010) 130 (EPDS011)	21-130	N/A	N/A	2018 2018 2018 2018 2020	Erosion of natural deposits

<sup>1</sup> Arsenic is a mineral known to cause cancer in humans at high concentration 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 standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water, and continues to research the health effects of low levels of arsenic.

<sup>2</sup> 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, and detected nitrate levels are above 5 ppm, you should ask advice from your health care provider.

**Violation Summary (for MCL, MRDL, AL, TT, or Monitoring & Reporting Requirement)**

<b>Violation Type-Arsenic</b>	<b>Explanation, Health Effects:</b>	<b>Time Period</b>	<b>Corrective Actions</b>
Monitoring, Routine Major	EPDS 006- The wellsite was taken out of service, which prevented the city from collecting and testing the required monitoring samples for arsenic. Some people who drink water containing arsenic in excess of the MCL over many years may experience skin damage or problems with their circulatory systems and may have an increased risk of cancer.	01/01/2020 to 3/31/2020- 1 <sup>st</sup> Qtr. 2020	In response to the violation for EPDS 006, staff took the well site out of service. Drinking water was being supplied by another well site from March 2020 to current date.
Monitoring, Routine Major	EPDS 006- The wellsite was taken out of service, which prevented the city from collecting and testing the required monitoring samples for arsenic.	04/01/2020 to 6/30/2020- 2nd Qtr. 2020	In response to the violation for EPDS 006, staff took the well site out of service. Drinking water was being supplied by another well site from March 2020 to current date.
Please share this information with other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.			