



## **Consumer Confidence Report**

**Calendar Year: January 1, 2016 to December 31, 2016**  
**Public Water System (PWS): City of Cottonwood**

*PWS #: 13-106 (Verde Village 6, 7, 8 & Quail Canyon)*

*“ La información contendía en este informe tiene información importante con respecto a la calidad del agua proporcionada por la utilidad municipal del agua de la ciudad de Cottonwood. Si usted quisiera recibir una copia de este informe en español, por favor llame 928-634-0186 para solicitar una copia ”*

We are pleased to present to you this year's water quality report. Our constant goal is to provide you with a safe and dependable supply of drinking water. The language contained in this report is mandated by Arizona Department of Environmental Quality.

### **General Information About Drinking Water**

All 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 the 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 of 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.

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 dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. 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, 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 that** may come from a variety of sources, such as agriculture, urban stormwater runoff, and residential uses.
- **Organic chemical contaminants**, including synthetic volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and also may come from gas stations, urban storm water runoff, and septic systems.
- **Radioactive contaminants**, that can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the Arizona Department of Environmental Quality prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

### **Where Does My Water Come From?**

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 315,000 gallons). The City pumps all of its water from deep groundwater wells and uses chlorination for disinfection.

Well Site 7-1 ( EPDS003), Well Site 7-2 (EPDS004), Well Site 8-2 ( EPDS006), Well Site 6-2 ( EPDS002), Well Site QC1- ( EPDS007), Well Site QC2- (EPDS008).

**Source Water Assessments** on file with the Arizona Department of Environmental Quality are available for public review. If a Source Water Assessment is available, you may obtain a copy of it by contacting the Arizona Source Water Coordinator at (602) 771-4641.

#### Source Water Assessment (**Low Risk**)

Based on the information currently available on the hydrogeologic settings and the adjacent land uses that are in the specified proximity of the drinking water source (s) of this public water system, the Arizona Department of Environmental Quality (ADEQ) 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.

Please contact Mike Traynor –Utilities Operations Manager at (928) 634-0186 ext. 3306 to learn more about what you can do to help protect your drinking water sources, any questions about the annual drinking water quality report, to learn more about our system, or to attend scheduled public meetings. We want you, our valued customers, to be informed about the services we provide and the quality water we deliver to you every day.

#### **Terms and Abbreviations:**

To help you understand the terms and abbreviations used in this report, we have provided the following definitions:

AL = Action Level - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements.

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

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.

MCL = Maximum Contaminant Level - The “Maximum Allowed” is the highest level of a contaminant that is allowed in drinking water.

MCLG = Maximum Contaminant Level Goal - The “Goal” is the level of a contaminant in drinking water below which there is no known or expected risk to health..

MRDL = Maximum Residual Disinfectant Level.

MRDLG = Maximum Residual Disinfectant Level Goal.

ND= Non-Detected contaminant

PCi/L = Picocuries per liter - picocuries per liter is a 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.

PPQ = Parts per quadrillion or Picograms per liter.

RAA= Running Annual Average, an average of monitoring results for the previous 12 calendar months.

ppm x 1000 = ppb
ppb x 1000 = ppt
ppt x 1000 = ppq

### **Water Quality Data**

We routinely monitor for contaminants in your drinking water according to Federal and State laws. The State of Arizona requires us to monitor for certain contaminants less than once per year because 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 our data, though representative, may be more than one year old.

We did not include the results for Total Coliform Bacteria, E.Coli, Synthetic Organic Chemicals (SOC) including Pesticides, Volatile Organic Chemicals (VOC), Haloacetic Acids (HAA5), Cadmium, Mercury, Selenium, Nitrite, Antimony, Beryllium, Cyanide, Nickel, Thallium and Aroclor (PCB Screening test) in this report, as the results were **non-detect** (ND). If you have questions on a particular contaminant, please contact Mike Traynor –Utilities Operations Manager at (928) 634-0186 ext. 3306

These tables show the results for System 13-106, for the monitoring period of January 1 to December 31, 2016 unless otherwise noted.

<b>Disinfectants</b>	<b>Violation Y or N</b>	<b>Highest Level Detected</b>	<b>Range of All Samples (L-H)</b>	<b>MCL</b>	<b>MCLG</b>	<b>Sample Month &amp; Year</b>	<b>Likely Source of Contamination</b>
<i>Chlorine (ppm)</i>	<i>N</i>	<i>0.49</i>	<i>0.37-0.49</i>	<i>MRDL = 4</i>	<i>MRDLG = 4</i>	<i>Quarterly 2016</i>	<i>Water additive used to control microbes</i>
<b>Disinfection By-Products</b>	<b>Violation Y or N</b>	<b>Highest Level Detected</b>	<b>Range of All Samples (L-H)</b>	<b>MCL</b>	<b>MCLG</b>	<b>Sample Month &amp; Year</b>	<b>Likely Source of Contamination</b>

<i>Total Trihalomethanes (ppb) (TTHM)</i>	<i>N</i>	<i>0.50</i>	<i>0.50-0.50</i>	<i>80</i>	<i>n/a</i>	<i>Sept. 2016</i>	<i>Byproduct of drinking water disinfection</i>
<b>Lead &amp; Copper</b>	<b>Violation Y or N</b>	<b>90<sup>th</sup> Percentile <u>AND</u> Number of Samples Over the AL</b>	<b>Range of All Samples (L-H)</b>	<b>AL</b>	<b>ALG</b>	<b>Sample Month &amp; Year</b>	<b>Likely Source of Contamination</b>
<i>Copper (ppm)</i>	<i>N</i>	<i>90<sup>th</sup> Percentile = 0.265 and 0</i>	<i>ND-0.371</i>	<i>AL = 1.3</i>	<i>ALG = 1.3</i>	<i>Aug. 2016</i>	<i>Corrosion of household plumbing systems; erosion of natural deposits</i>
<i>Lead (ppb)</i>	<i>N</i>	<i>90<sup>th</sup> Percentile = 5.1 and 0</i>	<i>ND – 6.2</i>	<i>AL = 15</i>	<i>0</i>	<i>Aug. 2016</i>	<i>Corrosion of household plumbing systems; erosion of natural deposits</i>

<b>Radionuclides</b>	<b>Violation Y or N</b>	<b>Highest Level Detected</b>	<b>Range of All Samples (L-H)</b>	<b>MCL</b>	<b>MCLG</b>	<b>Sample Month &amp; Year</b>	<b>Likely Source of Contamination</b>
<i>Gross Alpha excluding Radon and Uranium (pCi/L)</i>	<i>N</i>	<i>2.3</i>	<i>1.6-2.3</i>	<i>15</i>	<i>0</i>	<i>March 2016</i>	<i>Erosion of natural deposits</i>
<i>Combined Radium 226/228 (pCi/L)</i>	<i>N</i>	<i>0.4</i>	<i>ND-0.4</i>	<i>5</i>	<i>0</i>	<i>March 2016</i>	<i>Erosion of natural deposits</i>
<b>Inorganic Chemicals (IOC)</b>	<b>Violation Y or N</b>	<b>Highest Level Detected</b>	<b>Range of All Samples (L-H)</b>	<b>MCL</b>	<b>MCLG</b>	<b>Sample Year</b>	<b>Likely Source of Contamination</b>
<i>Arsenic (ppb)</i>	<i>N</i>	<i>6.7</i>	<i>ND-6.7</i>	<i>10</i>	<i>0</i>	<i>Qtrly 2016</i>	<i>Erosion of natural deposits, runoff from orchards, runoff from glass and electronics production wastes</i>
<i>Barium (ppm)</i>	<i>N</i>	<i>0.51</i>	<i>0.30-0.51</i>	<i>2</i>	<i>2</i>	<i>March 2016</i>	<i>Discharge of drilling wastes; discharge from metal refineries; Erosion of natural deposits</i>
<i>Chromium (ppb)</i>	<i>N</i>	<i>1.7</i>	<i>1.5-1.7</i>	<i>100</i>	<i>100</i>	<i>March 2016</i>	<i>Discharge from steel and pulp mills; Erosion of natural deposits</i>
<i>Fluoride (ppm)</i>	<i>N</i>	<i>0.33</i>	<i>0.31-0.33</i>	<i>4</i>	<i>4</i>	<i>March 2016</i>	<i>Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories</i>
<i>Nitrate (ppm)</i>	<i>N</i>	<i>0.65</i>	<i>0.16-0.65</i>	<i>10</i>	<i>10</i>	<i>March 2016</i>	<i>Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits</i>

<b>Unregulated Secondary Contaminants*</b>	<b>Violation Y or N</b>	<b>Highest Level Detected</b>	<b>Range of All Samples (L-H)</b>	<b>MCL</b>	<b>MCLG</b>	<b>Sample Month &amp; Year</b>	<b>Likely Source of Contamination</b>
<i>Sodium (ppm)</i>	<i>N/A</i>	<i>15</i>	<i>10-15</i>	<i>N/A</i>	<i>N/A</i>	<i>March 2016</i>	<i>Erosion of natural deposits</i>

\*Secondary standards are non-enforceable guidelines for contaminants that may cause cosmetic or aesthetic effects in drinking water. EPA recommends these standards but does not require water systems to comply.

### **Health Effects Information About the Above Tables**

If **arsenic** is less than 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. 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.

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, you may wish to have your water tested. Flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the EPA *Safe Drinking Water Hotline* at 1-800-426-4791

**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 infant, and detected nitrate levels are above 5 ppm, you should ask advice from your health care providers.

### **Violations:**

Type/Description	Compliance Period	Corrective Actions taken by the City of Cottonwood
Report Sample Results/Fail Monitor RTCR	12/1/2016 -12/31/2016	The microbiological samples were taken during the month of December 2016 and all samples were negative. However, the reports were sent to the regulatory agency outside of the required compliance period.
Monitoring , Routine Major Arsenic EPDS 002, EPDS 004 and EPDS 006	07/1/2016 -09/30/2016	The arsenic samples for system 13-106 were taken within the 3 <sup>rd</sup> Qtr. monitoring period. However, the incorrect quarter results were sent to the regulatory agency. As of November 4, 2016, the correct quarterly reports were sent in and compliance was achieved.