



# CALICO GHOST TOWN REGIONAL PARK

## 2016 CONSUMER CONFIDENCE REPORT

### GENERAL DISTRICT INFORMATION

#### Calico Ghost Town

Is routinely monitored for constituents in the District's drinking water according to Federal and State laws. The tables show the results of the District's monitoring for the period of January 1<sup>st</sup> through December 31<sup>st</sup>, 2016.

#### Questions about this report or concerning the water system?

Contact:  
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**Office Hours:**  
Monday through Friday  
(Except Wednesday)  
8:00 a.m. - 5:00 p.m.  
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8:30 a.m. - 5:00 p.m.  
Closed on Holidays

Calico Ghost Town water system is operated by the Special Districts Department (Department), Water and Sanitation Division. This regional park is located in the Calico Mountains of the Mojave region of San Bernardino County.

The water system consists of 3 wells, 2 of which are currently inactive, 2 water reservoirs with a capacity of 100,000 gallons and approximately 4 miles of water line. There are 25 water connections.

A diligent regimen of testing and analysis for bacteriological, chemical, and radiological contaminants, along with physical qualities of the water is conducted throughout the year to monitor water quality.

It is important to keep customers informed about the quality of water delivered over the past year. This year's annual water quality report also known as a Consumer Confidence Report (CCR), contains information about the contaminants detected in 2016 and previous years. The Department's responsibility is to provide a safe and dependable supply of drinking water.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (USEPA) and the State Water Resources Control Board, (State Board), prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration regulations and California law also establish limits for contaminants in bottled water that provide the same protection for public health. Additional information on bottled water is available on the California Department of Public Health website (<http://www.cdph.ca.gov/programs/Pages/fdbBVW.aspx>).

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. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline at 1-800-426-4791 or visit their website at <http://www.epa.gov/safewater>.

This document is not a substitute for regulations; nor is it a regulation itself. Thus, it does not impose legally-binding requirements on the State Board or the Department, and may not apply to a particular situation based upon any member of the public.

This CCR reflects changes in drinking water regulatory requirements during 2016. All water systems are required to comply with the state Total Coliform Rule. Beginning April 1, 2016, all water systems are also required to comply with the federal Revised Total Coliform Rule. The new federal rule maintains the purpose to protect public health by ensuring the integrity of the drinking water distribution system and monitoring for the presence of microbials (i.e., total coliform and E. coli bacteria). The U.S. EPA anticipates greater public health protection as the new rule requires water systems that are vulnerable to microbial contamination to identify and fix problems. Water systems that exceed a specified frequency of total coliform occurrences are required to conduct an assessment to determine if any sanitary defects exist. If found, these must be corrected by the water system.



**Jeff Rigney**  
Director of Special Districts

"Water quality and water availability are vital for the health and growth of our County. As the Director for the County Special Districts Department, it is my responsibility to ensure that providing both of these to our water customers remains our top priority."



**Steve Samaras**  
Acting Deputy Director

"The Division Staff are working on your behalf each and every day to ensure your community's water needs are met. It continues to be our pleasure to serve as your water purveyor."



## WATER SOURCES

- Well 1: Ground Water—Inactive
- Well 2: Ground Water—Inactive
- Well 3: Ground Water; located in the Baja Subarea

**The subsequent tables provide many terms and abbreviations that customers may not be familiar with. To understand these terms, the District has provided the following definitions:**

**Non-Detects (ND)** - laboratory analysis indicates that the constituent is not present or not tested.

**MG** - Million gallons

**Parts per million (ppm)** - one part per million corresponds to one minute in two years or a single penny in \$10,000.

**Parts per billion (ppb)** - one part per billion corresponds to one minute in 2,000 years.

**Parts per trillion (ppt)** - one part per trillion corresponds to one minute in 2,000,000 years.

**Parts per quadrillion (ppq)** - one part per quadrillion corresponds to one minute in 2,000,000,000 years.

**Picocuries per liter (pCi/L)** - Picocuries per liter is a measure of the radioactivity in water.

**Nephelometric Turbidity Unit (NTU)** - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

**Millirems per year (mrem/yr)** - measure of radiation absorbed by the body.

**Million Fibers per Liter (MFL)** - million fibers per liter is a measure of the presence of asbestos fibers that are longer than 10 micrometers.

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

**Maximum Residual Disinfectant Level Goal (MRDLG)** - The level of a disinfectant added for water treatment below which there is no known or expected health risk. MRDLGs are set by the U.S. Environmental Protection Agency.

**Maximum Contaminant Level (MCL)** - The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of 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. MCLGs are set by the U. S. Environmental Protection Agency.

**Public Health Goal (PHG)** - The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

**Primary Drinking Water Standard (PDWS)** - MCLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

**Regulatory Action Level (AL)** - The concentrations of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

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, that 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 and volatile organic chemicals, that are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.

**Radioactive contaminants**, that can be naturally-occurring or be the result of oil and gas production and mining activities.

## SHOULD CUSTOMERS BE CONCERNED?

MCL's are set at very stringent levels. To understand the risk of possible health effects described for regulated contaminants, customers should know that a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

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. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbiological contaminants are available from the Safe drinking water hotline (1-800-426-4791).

\*If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Special Districts Department, Water and Sanitation Division 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. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Water Hotline or at <http://www.epa.gov/safewater/lead>.

Some people who drink water containing arsenic in excess of the MCL over many years may experience skin damage or circulatory system problems, and may have an increased risk of getting cancer.

Some people who drink water containing fluoride in excess of the federal MCL of 4mg/L over many years may get bone disease, including pain and tenderness of the bones. Children who drink water containing fluoride in excess of the State MCL of 2 mg/L may get mottled teeth.

**Secondary Standards:** There are no PHGs, MCLGs, or mandatory standard health effects language for these constituents because secondary MCLs are set on the basis of aesthetics.

\*The water system is currently designing a Reverse Osmosis (RO) system to reduce the amount of arsenic and fluoride in the water. It is in the process of determining the characteristics of the waste water produced by the RO system. This is being done so that the disposal of the waste water can be permitted.

\*\*The babies of some pregnant women who drink water containing boron in excess of the notification level may have an increased risk of developmental effects, based on studies in laboratory animals.

## SOURCE WATER PROTECTION TIPS

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides—they contain hazardous chemicals that can reach your drinking water source.
- Pick up after your pets.
- If you have your own septic system, properly maintain your system to reduce leaching to water sources.
- Dispose of chemicals properly; take used motor oil to a recycling center.

## WATER CONSERVATION TIPS

Did you know that the average U.S. household uses approximately 400 gallons of water per day or 100 gallons per person per day? Luckily, there are many low-cost and no-cost ways to conserve water. Small changes can make a big difference—try one today and soon it will become second nature.

- Take short showers - a 5 minute shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath.
- Shut off water while brushing your teeth, washing your hair and shaving and save up to 500 gallons a month.
- Use a water-efficient showerhead. They are inexpensive, easy to install, and can save you up to 740 gallons a month.
- Fix leaking toilets and faucets.
- Teach your kids about water conservation to ensure a future generation that uses water wisely.

### Detection of Lead and Copper

Lead and Copper (CCR Units)	No. of Samples Collected	90th Percentile Level Detected	No. Sites Exceeding AL	AL	PHG	Sample Date	Typical Source
Lead (ppb)	5	0	0	15	0.2	2014	Internal corrosion of household
Copper (ppm)	5	0.1225	0	1.3	0.3	2014	Internal corrosion of household

## Primary Drinking Water Standards

### County of San Bernardino — Calico Ghost Town Regional Park

#### Microbiological Contaminants

Contaminants	Sample Period	Highest No. of Detections	No. of Months in Violation	MCL	MCLG	Typical Source of Bacteria
Total Coliform Bacteria (state Total Coliform Rule)	2016	0	0	More than 1 sample in a month with a detection	0	Naturally present in the environment
Fecal Coliform or <i>E. coli</i> (state Total Coliform Rule)	2016	0	0	A routine sample and a repeat sample detect total coliform and either sample also detects fecal coliform or <i>E. coli</i>		Human and animal fecal waste
<i>E. coli</i> (federal Revised Total Coliform Rule)	4/1/16-12/31/16	0	0	(a)	0	Human and animal fecal waste

(a) Routine and repeat samples are total coliform-positive and either is *E. coli*-positive or system fails to take repeat samples following *E. coli*-positive routine sample or system fails to analyze total coliform-positive repeat sample for *E. coli*.

#### Primary Inorganic Contaminants

Contaminant	Primary MCL	PHG (MCLG)	Range of Detection	Average Level	MCL Violation	Sample Year	Likely Source of Contamination
Nitrate as N (NO3-N)	10 ppm	10	4.2 - 4.4	4.3	NO	2016	Runoff and leaching from fertilizer use; erosion of natural deposits
Fluoride (F)	2 ppm	1	2.5 - 2.6	2.575	YES	2016	Erosion of natural deposits; water additive that promotes strong teeth
Arsenic (As)	10 ppb	0.004	21 - 24	22	YES	2016	Erosion of natural deposits; runoff from orchards; glass and electronic production wastes
Hexavalent Chromium	10 ppb	0.02	5.6	5.6	NO	2014	Discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities; erosion of natural deposits

#### Disinfectant Byproducts and Chemical Disinfectant

Cl Res Total (Field)	MRDL= 4.0 ppm	MRDLG=4	0.05 - 0.55	0.23	NO	2016	Drinking water disinfectant added for treatment
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Contaminant	MCL	PHG (MCLG)	Range of Detection	Average Level	MCL Violation	Sample Year	Likely Source of Contamination
<b>Secondary Standards</b>							
Odor Threshold	3 TON	N/A	1	1	NO	2016	Naturally occurring organic materials
Turbidity	5 NTU	N/A	ND	ND	NO	2016	Soil runoff
Chloride (Cl)	500 ppm	N/A	220	220	NO	2016	Runoff/leaching from natural deposits; seawater influence
Specific Conductance (E.C.)	1600 umhos/cm	N/A	2900	2900	YES	2016	Substances that form ions when in water; seawater influence
Total Dissolved Solids/TDS	1000 ppm	N/A	2100 - 2200	2133	YES	2016	Runoff/leaching from natural deposits
Sulfate (SO4)	500 ppm	N/A	1300 - 7600	4450	YES	2016	Runoff/leaching from natural deposits; industrial wastes

#### Additional Constituents

Aggressive Index	N/A	N/A	12.26	12.26	N/A	2012	N/A
pH (Lab)	N/A	N/A	7.6	7.6	N/A	2016	N/A
Alkalinity, Total (as CaCO3)	N/A	N/A	130	130	N/A	2016	N/A
Bicarbonate (HCO3)	N/A	N/A	0 - 160	80	N/A	2016	N/A
Hardness, Total (as CaCO3)	N/A	N/A	540	540	N/A	2016	N/A
Total Anions	N/A	N/A	37	37	N/A	2016	N/A
Calcium (Ca)	N/A	N/A	64 - 120	92	N/A	2016	N/A
Magnesium (Mg)	N/A	N/A	55 - 340	197.5	N/A	2016	N/A
Potassium (K)	N/A	N/A	14 - 120	67	N/A	2016	N/A
Sodium (Na)	N/A	N/A	480 - 4300	2390	N/A	2016	N/A
Iron (Fe)	300 ppb	N/A	ND	ND	NO	2016	N/A
Silica (SiO2)	N/A	N/A	16	16	N/A	2016	N/A

#### Unregulated Constituents

Chemical or Constituent	Notification Level	Range of Detection	Average Level	MCL Violation	Sample Year
Boron (B)	1 ppm	6.7**	6.7	N/A	2016
Vanadium (V)	50 ppb	10 - 11	10.50	N/A	2014