



COUNTY SERVICE AREA 70W-4

2016 CONSUMER CONFIDENCE REPORT

GENERAL DISTRICT INFORMATION

CSA 70 W-4

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 1st through December 31st, 2016.

Questions about this report or concerning the water system?

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Acting Deputy Director

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Monday through Friday
(Except Wednesday)
8:00 a.m. - 5:00 p.m.
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MUY IMPORTANTE !

Este informe contiene información muy importante sobre su agua beber. Tradúzcalo ó hable con alguien que lo entienda bien.

County Service Area 70 W-4 (CSA 70 W-4), a water district within the Special Districts Department (Department), Water and Sanitation Division, is a Board-governed district providing water service to approximately 389 customers in the community of Pioneertown.

The water system consists of five active wells and two water reservoirs with a combined capacity of 310,000 gallons. There are approximately three miles of water line and 120 metered water connections utilizing the radio read system.

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. 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 appreciates our customer's commitment to water conservation during the extended drought period. We continue to encourage our customer's to keep up with the water conservation strategies. Keep up the good work"



WATER SOURCES

- Well 0: Ground Water; located in the Ames Valley Basin
- Well 1: Ground Water; located in the Ames Valley Basin
- Well 2: Ground Water; located in the Ames Valley Basin
- Well 7: Ground Water; located in the Ames Valley Basin
- Well 8: Ground Water; located in the Ames Valley Basin

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).

➔ Secondary MCLs do not have PHGs or MCLGs because secondary MCLs are set to protect the aesthetics of water and PHGs and MCLGs are based on health concerns.

➔ 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.

* The Department does not add any fluoride to the water system. Results are from naturally occurring deposits.

➔ 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.

* Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.

* 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>.

* Infants below the age of six months who drink water containing nitrate in excess of the MCL may quickly become seriously ill and, if untreated, may die because high nitrate levels can interfere with the capacity of the infant’s blood to carry oxygen. Symptoms include shortness of breath and blueness of the skin. High nitrate levels may also affect the oxygen-carrying ability of the blood of pregnant women.

* Some people who drink water containing uranium in excess of the MCL over many years may have kidney problems or an increase risk of getting cancer.

- The Division has been able to acquire a grant to provide bottled drinking water to the residential customers in CSA 70 W4. We are providing bottled water in the interim due to the arsenic and fluoride levels until a treatment system can be installed. Bottled water is being provided at the rate of one half-gallon (.5) of water, per person, per day to all residential customers who desire to receive it.
- Compliance with the uranium MCL is based on the Running Annual Average (RAA). Even though the highest detection was above the MCL, the RAA, inclusive of the high detection, was still below the MCL and therefore in compliance.
- The iron exceedance of the MCL was an exceedance of a Secondary MCL, which is based on aesthetic concerns rather than health concerns.
- Construction drawings have been completed for the Pioneertown Interconnection pipeline and water transfer station. The project drawings have been forwarded to the Hi-Desert Water District (HDWD) for their review.

Primary Drinking Water Standards

County of San Bernardino — CSA 70 W-4

Microbiological Contaminants

Contaminants	MCL	MCLG	Highest No. of Detections	No. of Months in violation	Sample Period	Typical Source of Bacteria
Total Coliform (state Total Coliform Rule)	1 positive monthly sample	0	0	0	2016	Naturally present in the environment
Fecal Coliform or <i>E. coli</i> (state Total Coliform Rule)	A routine sample and a repeat sample are total coliform positive, and one of these is also fecal coliform or <i>E. coli</i> positive	0	0	0	2016	Human and animal fecal waste
<i>E. coli</i> (federal Revised Total Coliform Rule)	(a)	0	0	0	4/1/16-12/31/16	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*.

Contaminant	Primary MCL	PHG (MCLG)	Range of Detection	Average Level	MCL Violation	Sample Year	Likely Source of Contamination
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Radioactive Contaminants

Gross Alpha	15 pCi/L	0.00	0.1 - 15	4.34	NO	2016	Erosion of natural deposits
Uranium	20 pCi/L	.43	1.1 - 25	9	NO	2016	Erosion of natural deposits


Primary Inorganic Contaminants

Nitrate as N (NO ₃ -N)	10 ppm	10	0 - 3.3	1.69	NO	2016	Runoff and leaching from fertilizer use; erosion of natural deposits
 Fluoride (F)	2 ppm	1	0.94 - 11	3.06	YES	2016	Erosion of natural deposits; water additive that promotes strong teeth
 Arsenic (As)	10 ppb	0.004	22 - 140	68.6	YES	2016	Erosion of natural deposits; runoff from orchards; glass and electronic production wastes
Chromium (+6)	10 ppb	0.02	ND	ND	NO	2016	Some people who drink water containing hexavalent chromium in excess of the MCL over many years may have an increased risk of getting cancer.

Disinfectant Byproducts and Chemical Disinfectant

Cl Res Total (Field)	MRDL=4.0 ppm	MRDLG=4	0 - 0.63	0.14	NO	2016	Drinking water disinfectant added for treatment
Total Trihalomethanes (TTHM)	80 ppb	N/A	0 - 3.1	1.03	NO	2016	Byproduct of drinking water chlorination
Total Haloacetic Acids (HAA5)	60 ppb	N/A	ND	ND	NO	2016	Byproduct of drinking water disinfection

Secondary Standards

Odor Threshold	3 TON	N/A	1	1	NO	2016	Naturally occurring organic materials
Turbidity	5 NTU	N/A	0 - 6.6	0.8	NO	2016	Soil runoff
Chloride (Cl)	500 ppm	N/A	9.9 - 24	16.95	NO	2016	Runoff/leaching from natural deposits; seawater influence
Specific Conductance (E.C.)	1600 umhos/cm	N/A	310 - 510	410	NO	2016	Substances that form ions when in water; seawater influence
Apparent Color	15 Units	N/A	0 - 5	0.45	NO	2016	Naturally occurring organic materials
Total Filterable Residue/TDS	1000 ppm	N/A	210 - 380	295	NO	2016	Runoff/leaching from natural deposits
 Iron (Fe)	300 ppb	N/A	0 - 1200	600	YES	2016	Leaching from natural deposits; industrial wastes

Lead and Copper

Contaminant	Units	Action Level	PHG	90th Percentile	# Samples, # Exceeded AL	Sample Year	Likely Source of Contamination
* Lead (Pb)	ppb	15	0.2	0	7 samples, 0 exceeded AL	2016	Internal corrosion of household plumbing; erosion of natural deposits
* Copper (Cu)	ppm	1.3	0.3	0.115	7 samples, 0 exceeded AL	2016	Internal corrosion of household plumbing; erosion of natural deposits

Additional Constituents							
Contaminant	Primary MCL	PHG (MCLG)	Range of Detection	Average Level	MCL Violation	Sample Year	Likely Source of Contamination
Aggressive Index	N/A	N/A	11.4-11.5	11.45	N/A	2016	N/A
pH (Lab)	N/A	N/A	7.5 - 7.8	7.65	N/A	2016	N/A
Alkalinity, Total (as CaCO3)	N/A	N/A	100 - 180	140	N/A	2016	N/A
Bicarbonate (HCO3)	N/A	N/A	120 - 220	170	N/A	2016	N/A
Hardness, Total (as CaCO3)	N/A	N/A	56 - 58	57	N/A	2016	N/A
Total Anions	N/A	N/A	3.1 - 5.5	4.3	N/A	2016	N/A
Calcium (Ca)	N/A	N/A	18 - 19	18.5	N/A	2016	N/A
Magnesium (Mg)	N/A	N/A	2.3 - 2.8	2.55	N/A	2016	N/A
Potassium (K)	N/A	N/A	1.9 - 2.5	2.2	N/A	2016	N/A
Sodium (Na)	N/A	N/A	44 - 150	97	N/A	2016	N/A
Manganese (Mn)	50 ppb	N/A	0 - 36	18	NO	2016	N/A
Zinc (Zn)	5000 ppb	N/A	0 - 63	31.5	NO	2016	N/A
Sulfate (SO4)	500 ppm	N/A	25 - 46	35.5	NO	2016	N/A

Detection of Unregulated Constituents					
Chemical or Constituent (CCR Units)	Sample Date	Average Level	Range of Detections	Notification Level	Health Effects Language
Vanadium (V) (ppb)	2016	18	14 - 22	50	The babies of some pregnant women who drink water containing vanadium in excess of the notification level may have an increased risk of developmental effects, based on studies in laboratory animals.
Boron (B) (ppm)	2016	0.39	0.24 - 0.53	1	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.