

CSA 42

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, 2022.

Questions about this report or concerning the water system?

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David Doublet
Assistant Director

"Our objective is to deliver clean, safe, and affordable water to the County residents and businesses and to work cooperatively with local and regional water purveyors to conserve and protect one of our greatest natural resources."



Steve Samaras
Division Manager

"Water quality and water availability are vital for the health, growth and the fire suppression needs of our CSA's and County clients. It is my teams responsibility to ensure that these are always our top priority."

¡MUY IMPORTANTE!

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

County Service Area 42 (CSA 42) was established by the County of San Bernardino Board of Supervisors on December 27, 1965, and is a Board-governed water district within the Department of Public Works, Special Districts Water and Sanitation Division (Department), that provides water services to a community of approximately 529 customers in Oro Grande.

The water system consists of four ground water wells—three of which are active, one 246,000 gallon water tank, and approximately four miles of water line. There are 143 metered water connections utilizing the cellular read system.

Management and staff of CSA 42 work as a team to ensure that the highest quality water is provided to our customers. 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 ensure the highest water quality.

It is important to keep customers informed about the quality of water delivered over the past year. This year's annual Consumer Confidence Report (CCR), contains information about the contaminants detected in 2022 and previous years. The Department's responsibility is to provide a safe and dependable supply of drinking water.

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, 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.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (U.S. EPA) and the State Water Resources Control Board (State Water Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. State Water Board regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

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 <https://www.epa.gov/dwstandardsregulations/drinking-water-contaminant-human-health-effects-information>.

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 2022. 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 USEPA 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.

WATER SOURCES

Wells 1, 2 and 3: Ground Water; located in the Alto Subarea

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 leach into your drinking water source.
- Prevent septic system leaching to source water.
- 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 10 to 25 gallons of water compared to up to 50 gallons for a bath.
- Shut off water while brushing your teeth, washing your hair and shaving to 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.

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 and general information:

1, 2, 3-trichloropropane (1,2,3-TCP) had a notification level (NL) of 5 ppt until December 14, 2017, when the MCL of 5 ppt became effective.

Hexavalent Chromium there is currently no MCL for hexavalent chromium. The previous MCL of 0.010 mg/L was withdrawn on September 11, 2017.

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.

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.

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.

MG Million gallons

Microbial contaminants, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

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

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

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.

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

Organic chemical contaminants, including synthetic and volatile organic chemicals, that are byproduct of industrial processes and petroleum production, and can also come from gas stations, urban stormwater run-off, agricultural application, and septic systems.

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

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

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

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

Pesticides and herbicides, that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

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

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

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.

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

Regulatory Action Level (AL)

The concentrations of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

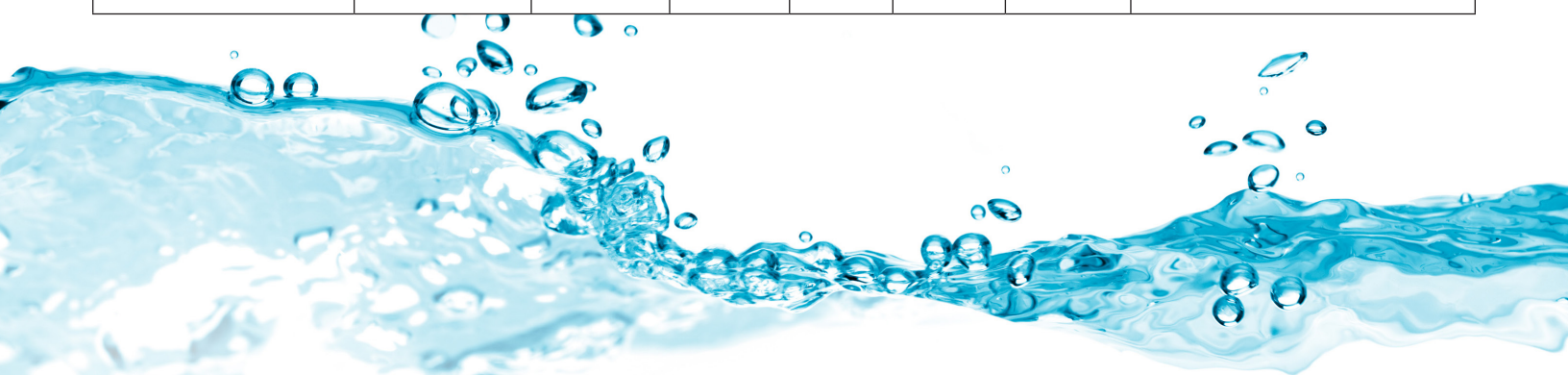
UCMR4 Statement Additional Unregulated Pollutants were added to the UCMR4 monitoring list.

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 are included on the following pages:



PRIMARY DRINKING WATER STANDARDS

San Bernardino County – CSA 42							
Microbiological Contaminants	Highest No. of Detections	No. of Months in Violation	MCL		MCLG	Sample Year	Typical Source of Bacteria
Total Coliform (State Total Coliform Rule)	0	0	1 positive monthly sample		0	2022	Naturally present in the environment
Fecal Coliform or E. Coli (State Total Coliform Rule)	0	0	A routine sample and a repeat sample are total coliform positive, and one of these is also fecal coliform or E. coli positive		–	2022	Human and animal fecal waste
E. Coli (Federal Revised Total Coliform Rule)	0	0	(a)		0	2022	Human and animal fecal waste
(a) Routine and repeat samples are total coliform-positive and either is <i>E. coli</i> -positive or system fails to take repeat samples following <i>E. coli</i> -positive routine sample or system fails to analyze total coliform-positive repeat sample for <i>E. coli</i> .							
Lead and Copper	Units	Action Level	PHG	90th Percentile	# Samples, # Exceeded AL	Sample Year	Likely Source of Contamination
Lead (Pb)	ppb	15	0.2	ND	5 samples, 0 exceeded AL	2022	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (Cu)	ppm	1.3	0.3	0.98	5 samples, 0 exceeded AL	2022	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Radioactive Contaminants							
Contaminant	Primary MCL	PHG (MCLG)	Range of Detections	Average Level	MCL Violation	Sample Year	Likely Source of Contamination
Gross Alpha	15 pCi/L	0.00	ND - 4.1	2.5	NO	2021	Erosion of natural deposits
Primary Inorganic Contaminants							
Contaminant	Primary MCL	PHG (MCLG)	Range of Detections	Average Level	MCL Violation	Sample Year	Likely Source of Contamination
Nitrate as N (NO₃-N)	10 ppm	10	ND-0.47	0.24	NO	2022	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Fluoride (F)	2.0 ppm	1	0.54-0.61	0.57	NO	2021	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Arsenic	10 ppb	0.004	2-2.4	2.13	NO	2021	Leaching from natural deposits Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Disinfectant Byproducts and Chemical Disinfectant							
Contaminant	Primary MCL	PHG (MCLG)	Range of Detections	Average Level	MCL Violation	Sample Year	Likely Source of Contamination
Cl Res Total (Field)	MRDL = 4.0 ppm	MRDLG = 4	0.28-1.05	0.67	NO	2022	Drinking water disinfectant added for treatment
Total Trihalomethanes* (TTHM)	80 ppb	0	45.20-107.7	79.13	YES	2022	Byproduct of drinking water chlorination
Total Haloacetic Acids (HAA5)	60 ppb	N/A	8.4-20.4	15.57	NO	2022	Byproduct of drinking water disinfection



SECONDARY STANDARDS

Contaminant	MCL	PHG (MCLG)	Range of Detections	Average Level	MCL Violation	Sample Year	Likely Source of Contamination
Odor Threshold	3 TON	N/A	1	1	NO	2022	Naturally occurring organic materials
Turbidity	5 NTU	N/A	ND-0.40	0.07	NO	2022	Soil runoff
Chloride (Cl)	500 mg/L	N/A	64-65	64.33	NO	2021	Runoff/leaching from natural deposits; seawater influence
Specific Conductance (E.C.)	1600 umhos/cm	N/A	720-740	730	NO	2021	Substances that form ions when in water; seawater influence
Total Dissolved Solids/TDS	1000 ppm	N/A	150-470	350	NO	2021	Runoff/leaching from natural deposits
Mangansese	50 ug/L	N/A	ND-28	18.33	NO	2021	Leaching from natural deposits
Iron*	300 ug/L	N/A	360-450	405	YES	2021	Leaching from natural deposits

*Iron results were taken from Well #3 and this well was taken out of service prior to 2022.

ADDITIONAL CONSTITUENTS

Contaminant	MCL	PHG (MCLG)	Range of Detections	Average Level	MCL Violation	Sample Year	Likely Source of Contamination
Aggressive Index	N/A	N/A	12.4-12.5	12.5	N/A	2021	N/A
pH (Lab)	N/A	N/A	7.7-7.8	7.7	N/A	2021	N/A
Alkalinity, Total (as CaCO₃) (mg/L)	N/A	N/A	260-280	270	N/A	2021	N/A
Bicarbonate (HCO₃) (mg/L)	N/A	N/A	320-340	330	N/A	2021	N/A
Hardness, Total (as CaCO₃)(mg/L)	N/A	N/A	230-240	233.3	N/A	2021	N/A
Total Anions (meq/L)	N/A	N/A	7.7-7.9	7.83	N/A	2021	N/A
Calcium (Ca) (mg/L)	N/A	N/A	71-75	72.7	N/A	2021	N/A
Magnesium (Mg) (mg/L)	N/A	N/A	13-14	13.3	N/A	2021	N/A
Potassium (K) (mg/L)	N/A	N/A	7-8.5	7.8	N/A	2021	N/A
Sodium (Na) (mg/L)	N/A	N/A	85-91	88.7	N/A	2021	N/A
Sulfate (SO₄) (mg/L)	500 ppm	N/A	23-32	26.7	NO	2021	N/A
Boron (B) (mg/L)	1 ppm	N/A	200-250	233.3	NO	2021	N/A
Zinc (Zn) (mg/L)	5 ppm	N/A	ND	ND	NO	2021	N/A



DETECTION OF UNREGULATED CONSTITUENTS

Chemical or Constituent (CCR Units)	Sample Date	Average Level	Range of Detections	Notification Level	Health Effects Language
Vanadium (ppb)	2021	3.3	ND-6.1	50	Vanadium exposures resulted in developmental and reproductive effects in rats.
Perfluorobutanesulfonic Acid (PFBS) - ng/L	2022	1.74	ND-3.5	500	Perfluorobutane sulfonic acid exposures resulted in decreased thyroid hormone in pregnant female mice.
Perfluoroheptanoic Acid (PFHpA) - ng/L	2022	0.41	ND-3	N/A	N/A
Perfluorohexanesulfonic Acid (PFHxS) - ng/L	2022	2.91	ND-5.5	3	Perfluorohexane sulfonic acid exposures resulted in decreased total thyroid hormone in male rats.
Perfluorohexanoic Acid (PFHxA) - ng/L	2022	0.73	ND-5.8	N/A	N/A
Perfluorooctanesulfonic Acid (PFOS) - ng/L	2022	6.84	ND-15	6.5	Perfluorooctanesulfonic acid exposures resulted in immune suppression and cancer in laboratory animals.
Perfluorooctanoic Acid (PFOA) - ng/L	2022	2.75	ND-9.1	5.1	Perfluorooctanoic acid exposures resulted in increased liver weight and cancer in laboratory animals.

SHOULD CUSTOMERS BE CONCERNED?

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 at 1-800-426-4791.

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.

*Total Trihalomethanes: In October through December 2022, CSA42 exceeded the MCL for Total Trihalomethanes (TTHM). TTHM compliance is based on the Running Annual Average (RAA) and CSA 42's RAA exceeded the MCL. The Department is consulting with County EHS to explore future alternatives in an effort to reduce the TTHM level in the system. TTHMs are a by-product of drinking water disinfection. Some people who drink water containing TTHMs in excess of the MCL over many years may experience liver, kidney or central nervous system problems, and 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. The Department 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 drinking water hotline or at <http://www.epa.gov/lead>.

Per- and Polyfluorinated Substances (PFAS) are a group of chemicals used to make fluoropolymer coating and products that resist heat, oil, stains, grease and water and has been used in a variety of consumer products. CSA 42 is consulting with County EHS on the detection and exceedance of PFAS in CSA 42 water system, including requirements for notification.

