2015 Water Quality Report

Chico District
Chico

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

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Welcome

At California Water Service (Cal Water), protecting our customers' health and safety is our highest priority. It's part of our commitment to deliver quality, service, and value to our customers.

Quality. We are dedicated to providing a high-quality water supply to our customers. We have rigorous safeguards in place to make sure that our water meets or surpasses increasingly stringent water quality standards, and **we are pleased to announce that, in 2015, we met every primary state and federal standard**. In California, we conduct tests on 68,000 water samples per year to ensure we are in compliance with both state and federal standards.

Service. In addition to providing a safe supply of water whenever you need it, we also work diligently to ensure that supplies — and the infrastructure needed to deliver water from the source to your tap — are adequate to meet demand. And, as we work to make conservation a way of life in California, while still being in the midst of a historic drought, we offer a wide variety of conservation programs and rebates to help our customers use water wisely. Our dedicated team of professionals is here to assist you with both routine business and after-hours emergencies.

Value. The costs to provide water service continues to increase, but we are working to ensure that our water stays affordable. We do this in part by investing in infrastructure that is built to last and only replacing equipment when it is nearing the end of its useful life. We also work to find cost-effective solutions for securing, testing, treating, storing, and delivering the water to you. We do all it takes to deliver a clean, reliable water supply right to your home, for less than a penny per gallon in nearly all of our service areas.

This annual water quality report shows any constituents that were detected in your water in 2015, and how your water compares to state and federal water quality standards. This report also provides information about the steps we take to protect your health and safety and answers questions you may have about your water quality.

If you have any questions or concerns, you can contact us by phone or email, through our web site, or in person at your local Customer Center. For important announcements and other water-related news, please visit calwater.com or watch for information in your monthly bill.

Sincerely,
Pete Bonacich, District Manager, Chico District

CHICO DISTRICT 2222 DR. MARTIN LUTHER KING JR. PARKWAY CHICO, CA 95928 (530) 893-6300

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Your Water System

Cal Water has provided high-quality water utility services in the Chico area since 1926. To meet the needs of our Chico customers, we use 63 wells to pump an average of 27 million gallons of groundwater per day, which is delivered to customers through 373 miles of pipeline, eight storage tanks, and nine booster pumps.

Cal Water proactively maintains and upgrades our facilities to ensure a reliable, high-quality supply.

If you have any questions, suggestions, or concerns, please contact our local Customer Center, either by phone or through the contact link at www.calwater.com.

USING WATER WISELY

California is still in a historic drought, and as we work to make conservation a way of life, like Governer Brown stated in his Executive Order in May, we remind our customers that we are here to help them use water wisely.

Cal Water has a robust water conservation program that includes rebates, kits, and other tools to help our customers save water. Visit www.calwater.com/conservation for details.

For more on the drought and water use restrictions, visit www.calwater.com/drought.

WATER QUALITY LABORATORY

Water professionals collect samples from throughout the water system for testing at our state-of-the-art water quality laboratory, which is certified through the stringent Environmental Laboratory Accreditation Program (ELAP). Scientists, chemists, and microbiologists test the water for more than 140 constituents with equipment so sensitive it can detect levels as low as one part per trillion. In order to maintain the ELAP certification, all of our scientists must pass blind-study proficiency tests each year for every water quality test performed.

Water quality test results are entered into our Laboratory Information Management System (LIMS), a sophisticated software program that enables us to react quickly to changes in water quality and analyze water quality trends in order to plan effectively for future needs.

DIVISION OF DRINKING WATER

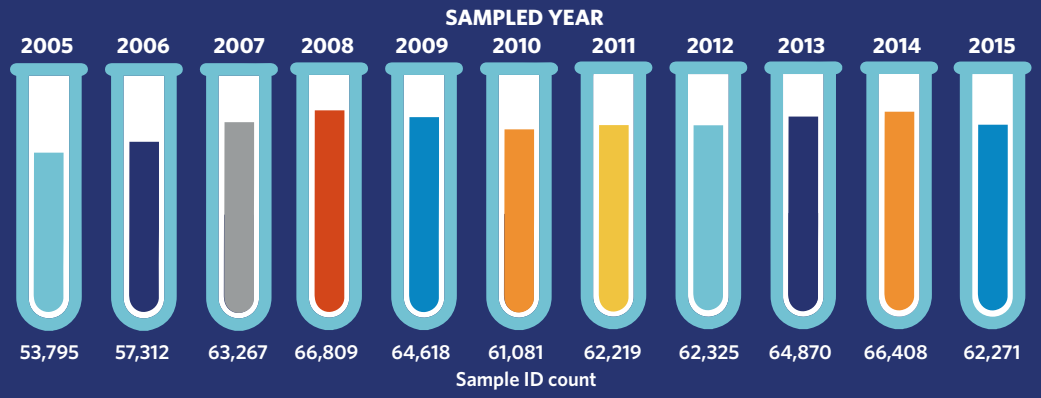
On July 1, 2014, Gov. Jerry Brown transferred the State's Drinking Water Program from the California Department of Public Health to the State Water Resources Control Board's Division of Drinking Water (DDW). The transition was created to consolidate all major water quality programs within a single department. According to the Governor's office, this consolidation allows the State to better manage and protect water resources and ensure safe drinking water for Californians.

Visit www.swrcb.ca.gov/drinking_water/programs for more information about water quality requirements or the Drinking Water Program.

CROSS-CONNECTION CONTROL

To ensure that the high-quality water we deliver is not compromised in the distribution system, Cal Water has a robust cross-connection control program in place. Cross-connection control is critical to ensuring that activities on customers' properties do not affect the public water supply. Our cross-connection control specialists ensure that all of the existing backflow prevention assemblies are tested annually, assess all non-residential connections, and enforce and manage the installation of new commercial and residential assemblies. Last year, our specialists oversaw installation of 1,645 new assemblies and testing of 25,175 backflow prevention assemblies company-wide.

Number of samples collected



DWSAPP

By the end of 2002, Cal Water had submitted to the DDW a Drinking Water Source Assessment and Protection Program (DWSAPP) report for each water source in the water system. The DWSAPP report identifies possible sources of contamination to aid in prioritizing cleanup and pollution prevention efforts. All reports are available for viewing or copying at our Customer Center.

The water sources in the Chico District are considered most vulnerable to the following activities associated with contaminants detected in the water supply: sewer collection systems, septic systems, parks, RV parks, agricultural drainage, fertilizer and pesticide application, automobile body and repair shops, utility stations (maintenance areas), railroad yards (maintenance/fueling areas), electrical/electronic manufacturing, chemical/petroleum processing or storage, machine shops, grazing, lumber processing/manufacturing, wood preserving/treating, fleet/truck/bus terminals, known contaminant plumes, and drinking water treatment plants.

The water sources are considered most vulnerable to the following activities, for which no associated contaminant has been detected: gas stations, metal plating (finishing/fabricating), junk/scrap/salvage yards, furniture repair/manufacturing, dry cleaners, home manufacturing, dredging, high-density housing, storm drain discharge, freeways, railroads, road right-of-ways, chemical/petroleum processing or storage, fleet/truck/bus terminals, machine shops, photo processing/printing, above-ground storage tanks, wells (water supply and agricultural), automobile body and repair shops, parks, grazing, sewer collection systems, lumber processing/manufacturing, wood/pulp/paper processing and mills, boat services/repair/refinishing, airports (maintenance/fueling areas), irrigated crops, hospitals, farm machinery repair, historic waste dumps/landfills, and food processing.

A copy of this assessment may be viewed at:
DDW Valley District Office
364 Knollcrest Drive
Redding, CA 96002

We encourage customers to join us in our efforts to prevent water pollution and protect our most precious natural resource.

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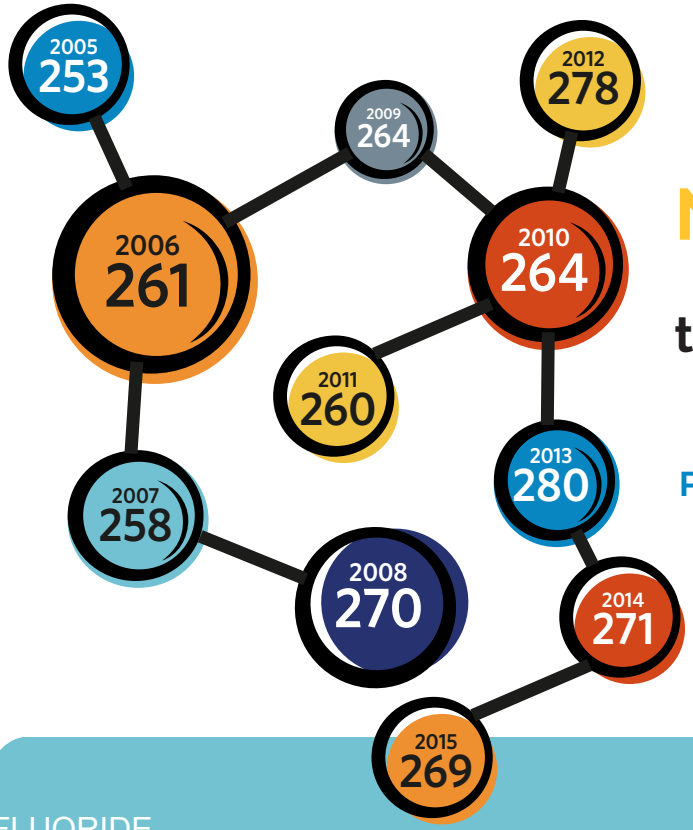

Number of constituents tested annually since 2005

SAMPLED YEAR
PARAMETER COUNT

FLUORIDE

State law requires Cal Water to add fluoride to drinking water if public funding is available to pay for it, and it is a practice endorsed by the American Medical Association and the American Dental Association to prevent tooth decay.

In this area, low levels of fluoride occur naturally, but Cal Water doesn't add any to the water supply. Show the table in this report to your dentist to see if he or she recommends giving your children fluoride supplements.

More information about fluoridation, oral health, and related issues can be found on the DDW web site at www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Fluoridation.shtml. For general information on water fluoridation, visit us online at www.calwater.com.

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Water Hardness

We use water testing equipment so sensitive it can detect levels as low as 1 part per trillion.

[That's equivalent to 2 golf ball rotations on a putting green as long as to the distance from Earth to the sun!]

Water's "hardness" is a measure of the amount of minerals (generally calcium, magnesium, and carbonate) it contains. Water is considered **soft** if its hardness is less than 75 parts per million (ppm), **moderately hard** at 75 to 150 ppm, hard at 150 to 300 ppm, and **very hard** at 300 ppm or higher.

The current water quality table for your service area shows an average hardness of 126 ppm.

Hard water is generally not a health concern, but it can have an impact on how well soap lathers and is significant for some industrial and manufacturing processes. Hard water may also lead to mineral buildup in pipes or water heaters.

Some people with hard water opt to buy a water softener for aesthetic reasons. However, some water softeners add salt to the water, which can cause problems at wastewater treatment plants. In addition, people on low-sodium diets should be aware that some water softeners increase the sodium content of the water.

Possible Contaminants

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 water poses a health risk.

More information about contaminants and potential health effects can be obtained by calling the United States Environmental Protection Agency (EPA) Safe Drinking Water Hotline at (800) 426-4791.

The sources of drinking water (both tap and bottled) 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 human activity.

CONTAMINANTS THAT MAY BE PRESENT IN SOURCE WATER INCLUDE:

Microbial contaminants, such as viruses and bacteria, which 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, which 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, which 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, which can be naturally occurring or the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the EPA and the DDW prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. DDW regulations also establish limits for contaminants in bottled water, which must provide the same protection for public health.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised people, such as those with cancer undergoing chemotherapy, those who have undergone organ transplants, and those with HIV/AIDS or other immune system disorders; some elderly people; and infants can be particularly at risk from infections. These people should seek advice from their health care providers about drinking water. EPA/Centers for Disease Control and Prevention (CDC) guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791.

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About Lead

You may have questions about lead in drinking water as a result of the water quality crisis in Flint, Michigan. Although public officials continue to investigate what went wrong in Flint, several factors contributed to the problem:

- The City has a high number of lead service lines in its water system.
- The City switched from a treated supply of water to an untreated and corrosive supply. The lack of required corrosion treatment caused lead from service lines to get into the water.
- The City was not completely following the Environmental Protection Agency's Lead and Copper Rule.
- The City did not respond quickly to water quality concerns.

None of these conditions exist at Cal Water. We have worked proactively to eliminate lead-bearing materials from our water systems, and we are compliant with health and safety codes mandating the installation of lead-free materials in public water systems. We test our water sources to ensure that the water we deliver to customers' meters meets water quality standards and is not corrosive toward plumbing materials. The water we deliver may meet lead standards, but what about your home plumbing? Because lead in drinking water comes primarily from materials and components associated with service lines and home plumbing, the Lead and Copper Rule is a critical part of our water quality monitoring program.

The Lead and Copper Rule requires us to test water *inside* a representative number of homes that have plumbing most likely to contain lead and/or lead solder. This test, with other water quality testing, tells us if the water is corrosive enough to cause lead from home plumbing to leach into the water. If the "Action Level" for lead is exceeded, we work with our customers to investigate the issue and, if necessary, implement corrosion control before the lead levels create a health issue.

As the crisis in Flint has made clear, if present, elevated levels of lead can cause serious health problems, especially for pregnant women and children. If your home's plumbing contains lead piping or pipe fittings, lead solder, or brass fixtures that may contain lead, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to two 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 by a lab. 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.

In your system, results from our lead monitoring program, conducted in accordance with the Lead and Copper Rule, were non-detectable for the presence of lead.

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Key Definitions

Maximum Contaminant Level (MCL)

The highest level of a contaminant that is allowed in drinking water. Primary MCLs protect public health and are set as close to the PHGs (or MCLGs) as are economically and technologically feasible. Secondary MCLs relate to the odor, taste, and appearance of drinking water.

Exceeded Standard

Out of compliance with a primary MCL, a secondary MCL, or an action level, as determined by the DDW. For some compounds, compliance is determined by averaging the results for one source over a year.

Regulatory Action Level (AL)

The concentration of a contaminant which, if exceeded, triggers treatment or other required action by the water provider.

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 EPA.

Maximum Residual Disinfectant Level (MRDL)

The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG)

The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Notification Level (NL)

A health-based advisory level for an unregulated contaminant in drinking water. It is used by DDW to provide guidance to drinking water systems.

Primary Drinking Water Standard (PDWS)

MCLs and MRDLs for contaminants that affect health, along with their monitoring, reporting, 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's Office of Environmental Health Hazard Assessment without regard to cost or available detection and treatment technologies.

Treatment Technique (TT)

A required process intended to reduce the level of a contaminant in drinking water.

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Table Introduction

Cal Water tests your water for more than 140 regulated contaminants and dozens of unregulated contaminants. This table lists only those contaminants that were detected.

In the table, water quality test results are divided into three major sections: “Primary Drinking Water Standards,” “Secondary Drinking Water Standards and Unregulated Compounds,” and “Unregulated Compounds Detected at Negligible Amounts.” Primary standards protect public health by limiting the levels of certain constituents in drinking water. Secondary standards are set for substances that don’t impact health but could affect the water’s taste, odor, or appearance. Some unregulated substances (hardness and sodium, for example) are included for your information. Compounds that were detected at amounts so low that they are considered insignificant are reported together.

TABLE KEY	
µS/cm	measure of specific conductance
n/a	not applicable
ND	not detected
NTU	nephelometric turbidity unit
pCi/L	picoCuries per liter (measure of radioactivity)
ppm	parts per million (milligrams per liter)
ppb	parts per billion (micrograms per liter)
ppt	parts per trillion (nanograms per liter)
SMCL	secondary maximum contaminant level

2015 Water Quality Table

Primary Drinking Water Standards

Radiological	Year Tested	Unit	MCL (SMCL)	PHG (MCLG)	Exceeded Standard?	Range	Average	Source of Substance
Gross alpha particle activity	2007–2015	pCi/L	15	(0)	**No**	ND–6.7	1.6	Erosion of natural deposits
Radium 228	2007–2015	pCi/L	5	0.019 (0)	**No**	ND–5	ND	Erosion of natural deposits
Inorganic Chemicals	**Year Tested**	**Unit**	**MCL (SMCL)**	**PHG (MCLG)**	**Exceeded Standard?**	**Range**	**Average**	**Source of Substance**
Hexavalent chromium	2013–2015	ppb	10	0.02	**No**	ND–8.1	2.5	Discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities; erosion of natural deposits
Chromium	2013–2015	ppb	50	(100)	**No**	ND–6.6	2.3	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Nitrate (as nitrogen)[1]	2015	ppm	10	10	**No**	ND–7.4	3.4	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Organic Chemicals	**Year Tested**	**Unit**	**MCL (SMCL)**	**PHG (MCLG)**	**Exceeded Standard?**	**Range**	**Average**	**Source of Substance**
cis-1,2-Dichloroethylene	2013–2015	ppb	6	(70)	**No**	ND–1.3	ND	Discharge from industrial chemical factories; major biodegradation product of TCE and PCE groundwater contamination
Tetrachloroethylene (PCE)	2013–2015	ppb	5	0.06	**No**	ND–1.7	ND	Discharge from factories, dry cleaners, and auto shops (metal degreaser)
Trichloroethylene (TCE)	2013–2015	ppb	5	1.7	**No**	ND–0.9	ND	Discharge from metal-degreasing sites and other factories

[1] The average nitrate level was 3.4 ppm, with a maximum level of 7.4 ppm. We are closely monitoring nitrate levels. Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in a serious illness; symptoms include shortness of breath and blueness of the skin. Nitrate levels above 10 ppm may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies. If you are caring for an infant or you are pregnant, you should seek advice from your health care provider.

2015 Water Quality Table

(Continued)

Disinfection Byproducts	Year Tested	Unit	MCL (SMCL)	PHG (MCLG)	Exceeded Standard?	Range	Highest Annual Average	Source of Substance
Total trihalomethanes	2015	ppb	80	n/a	**No**	ND–3.1	2.7	Byproduct of drinking water chlorination
Disinfectant	**Year Tested**	**Unit**	**MRDL**	**MRDLG**	**Exceeded Standard?**	**Range**	**Average**	**Source of Substance**
Chlorine	2015	ppm	4	4	**No**	0.2–1.2	0.5	Drinking water disinfectant added for treatment

Other Regulated Substances

Metals	Year Tested	Unit	AL	PHG (MCLG)	Exceeded Standard?	90th Percentile	Samples > AL	Source of Substance
Copper	2014	ppm	1.3	0.3	**No**	0.13	0 of 32	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead	2014	ppb	15	0.2	**No**	ND	0 of 32	Internal corrosion of household plumbing systems; discharge from industrial manufacturers; erosion of natural deposits

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2015 Water Quality Table

(Continued)

Secondary Drinking Water Standards and Unregulated Compounds

Inorganic Chemicals	Year Tested	Unit	SMCL	PHG (MCLG)	Exceeded Standard?	Range	Average	Source of Substance
Calcium	2013–2015	ppm	n/a	n/a	**No**	17–53	24.7	Erosion of natural deposits
Chloride	2013–2015	ppm	500	n/a	**No**	1.7–59	10.2	Erosion of natural deposits; seawater influence
Color	2013–2015	Units	15	n/a	**No**	ND–5	0.4	Naturally occurring organic matter
Hardness	2013–2015	ppm	n/a	n/a	**No**	83–270	126	Erosion of natural deposits
Iron	2013–2015	ppb	300	n/a	**No**	ND–48	1.8	Leaching from natural deposits; industrial wastes
Magnesium	2013–2015	ppm	n/a	n/a	**No**	10–34	15.5	Erosion of natural deposits
Odor	2013–2015	TON	3	n/a	**No**	ND–2	0.2	Naturally occurring organic matter
pH	2013–2015	Units	n/a	n/a	**No**	6.3–9.2	7.5	Inherent characteristic of water
Sodium	2013–2015	ppm	n/a	n/a	**No**	8.4–38	13.8	Erosion of natural deposits; seawater influence
Specific conductance	2013–2015	µS/cm	1600	n/a	**No**	200–600	302	Erosion of natural deposits; seawater influence
Strontium	2013–2015	ppb	n/a	n/a	**No**	100–2500	190	Erosion of natural deposits
Sulfate	2013–2015	ppm	500	n/a	**No**	ND–16	6.6	Runoff/leaching from natural deposits; industrial wastes
Total dissolved solids	2013–2015	ppm	1000	n/a	**No**	160–490	217	Runoff/leaching from natural deposits
Turbidity (groundwater)	2013–2015	NTU	5	n/a	**No**	ND–0.2	0.05	Soil runoff
Vanadium	2013–2015	ppb	NL=50	n/a	**No**	1.6–34	16.9	Erosion of natural deposits; manufacturing of alloys and steel

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2015 Water Quality Table

(Continued)

Disinfection Byproducts	Year Tested	Unit	MCL (SMCL)	PHG (MCLG)	Exceeded Standard?	Range	Highest Annual Average	Source of Substance
Chlorate	2015	ppb	NL=800	n/a	**No**	ND–460	70	Byproduct of drinking water chlorination
Organic Chemicals	**Year Tested**	**Unit**	**SMCL**	**PHG (MCLG)**	**Exceeded Standard?**	**Range**	**Average**	**Source of Substance**
Chlorodifluoromethane (freon 22)	2013–2015	ppt	n/a	n/a	**No**	ND–1300	40	Refrigerant
1,2,3-Trichloropropane (TCP)[2]	2013–2015	ppt	NL=5	0.7	**Yes**	ND–10	ND	Pesticide that may still be present in soils due to runoff/ leaching; various industrial uses
Perfluorooctanesulfonic acid[3]	2014–2015	ppb	HA=0.07	n/a	**No**	ND–0.14	ND	Manmade compound
Perfluorohexanesufonic acid	2014–2015	ppb	n/a	n/a	**No**	ND–0.08	ND	Manmade compound

[2]Currently, there is no MCL or SMCL for TCP, but there is a notification level because it is a constituent of interest. Cal Water is working closely with the DDW, conducting extensive monitoring, and investigating acceptable treatment methods. According to the Office of Environmental Health and Hazard Assessment, some people who consume water containing TCP in excess of the notification level over many years may have an increased risk of getting cancer, based on laboratory studies.

[3]Perfluorooctanesulfonic acid (PFOS), perfluoroheptanoic acid, and perfluorohexanesulfonic acid were detected in 1 of the 40 active wells during 2013–2015 Unregulated Contaminant Monitoring Rule (UCMR) testing. There is no MCL, SMCL, or NL for PFOS; however, the EPA has established a lifetime health advisory (HA) of 0.07 parts per billion (ppb). Lifetime HAs are not regulatory limits but reflect reasonable, health-based concentrations above which action should be taken to reduce exposure. Cal Water is working closely with the DDW and EPA to conduct extensive monitoring and identify the best available treatment technology. Studies indicate that long-term exposure to PFOS and PFOA over certain levels could have adverse health effects, including developmental effects to fetuses during pregnancy or breastfed infants; cancer; or liver, immunity, thyroid, and other effects. The HA limit is the level below which concentrations are not expected to result in adverse health effects over a lifetime of exposure; it has been set to reflect a margin of protection for even the most sensitive populations.

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Thank you.

Thanks for taking the time to learn more about your water quality! Even more information awaits you at www.calwater.com. Visit our web site to get information about your account, water use history, water rates, and water system.

You will also find water-saving tips and news about water conservation programs and rebates available in your area.

Drought news
Lead in water
Water treatment and disinfection
Protecting the water supply

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