# 2014 Water Quality Report

Bakersfield District
North Garden

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

# Table of Contents


| | |
|---|---|
| Welcome | From the Manager |
| Your Water System | Your Water System |
| | Inside the Water Quality Laboratory |
| | DWSAPP |
| 2014 Test Results | Fluoride |
| | Water Hardness |
| | Possible Contaminants |
| | About Lead |
| | Key Definitions |
| | Water Quality Table |
| More Information | Resources |


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# Welcome

At California Water Service (Cal Water), protecting our customers' health and safety is our highest priority. But as your local water provider, we deliver more than just safe drinking water—we deliver quality, service, and value.

**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 all health standards, and **we are pleased to announce that, in 2014, we met every primary state and federal standard**. In California, we test 68,000 water samples per year to ensure we are in compliance with strict state and federal standards.

**Service.** Beyond providing a clean, reliable water supply whenever you need it, we also work diligently to ensure that supplies are adequate to meet demand, even as we endure the worst drought in California history. To help customers meet new, state-mandated water-use reduction targets, we offer a wide variety of conservation programs and rebates. Our dedicated team of professionals are here to assist you with both routine business and after-hours emergencies.

**Value.** The costs of providing water and treatment continue 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 2014, 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,
Rudy A. Valles, Jr., District Manager, Bakersfield District

BAKERSFIELD DISTRICT 3725 SOUTH H STREET BAKERSFIELD, CA 93304 (661) 837-7200

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# Your Water System

Cal Water has provided high-quality water utility services in the Bakersfield area since 1927. To meet our North Garden customers' needs, we use a combination of local groundwater produced by 12 active wells (treated where necessary to improve taste and odor), surface water from the Kern River (treated with highly advanced membrane filtration), and treated water purchased from the Kern County Water Agency.

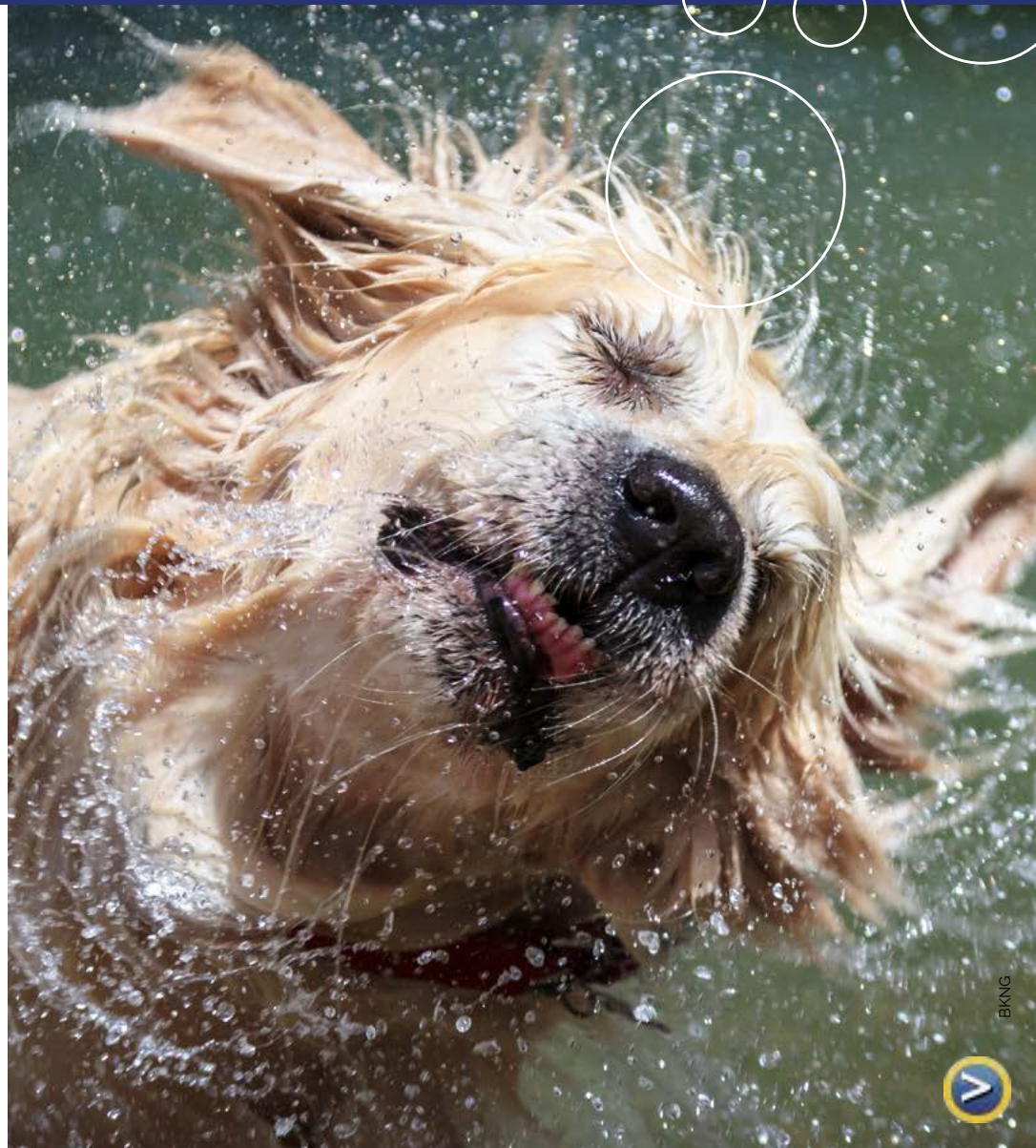
Cal Water proactively maintains and upgrades our facilities to ensure a reliable, high-quality supply.

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 in a historic drought, and the State Water Resources Control Board and California Public Utilities Commission have adopted regulations to achieve mandatory water use reductions in each service area in California. For more on the drought and water use restrictions, visit www.calwater.com/drought.

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.



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## 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 contaminants 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

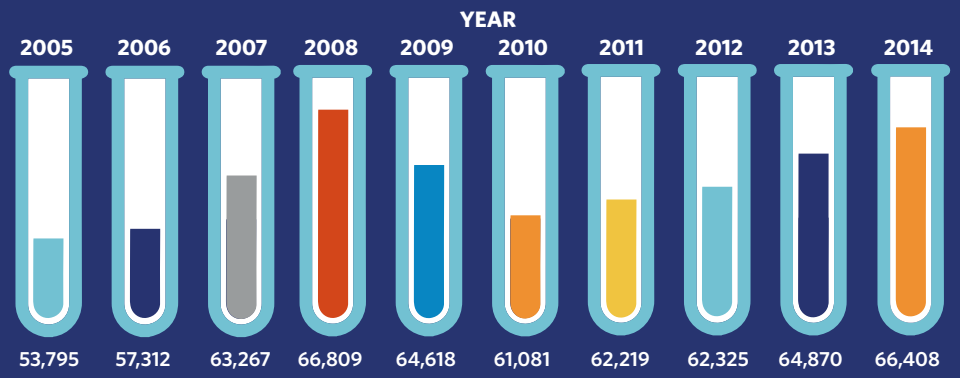
On July 1, 2014, Gov. Jerry Brown transferred the State's Drinking Water Program from the California Department of Public Health to the State Water Resources Control Board's Division of Drinking Water. The transition was created to consolidate all major water quality programs within a single department. According to the Governor's office, this consolidation will allow 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 to 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 2,381 new assemblies and testing of 21,547 backflow prevention assemblies company-wide

# Number of samples collected

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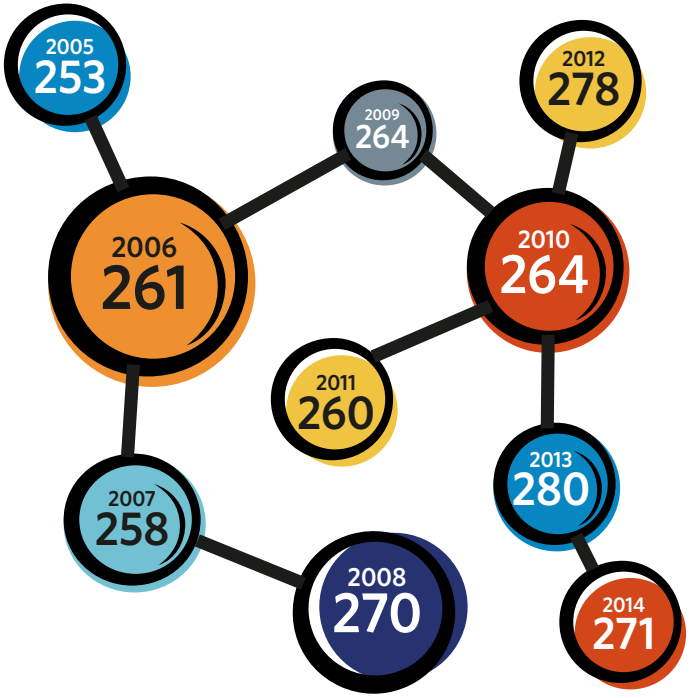
# DWSAPP

By the end of 2002, Cal Water had submitted to the California Department of Public Health, now the Division of Drinking Water, 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 your system are considered most vulnerable to stormwater, wastewater, surface water (streams, lakes, rivers), chemical/petroleum industries, agriculture, wells (water supply, agricultural, irrigation, oil, gas, geothermal), construction/demolition activities, existing and historic gas stations, automobile body and repair shops, electrical/electronic manufacturing, transportation terminals, home manufacturing, junk/scrap/salvage yards, machine shops, known contaminant plumes, above- and underground storage tanks, drinking water treatment plants, high-density housing, parks, metal plating/fabrication, photo processing, and high-density septic systems.

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




# Number of constituents tested annually since 2005

Sampled year
number of
constituents

## 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 State Water Resources Control Board's Division of Drinking Water (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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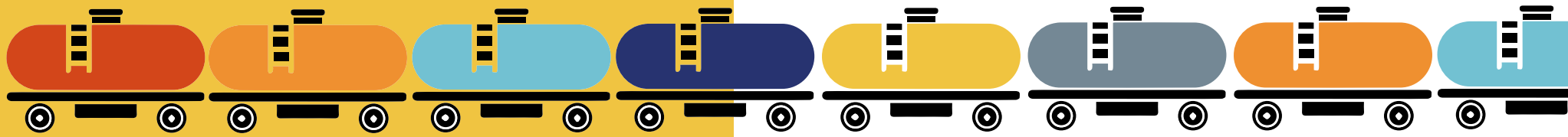
# Water Hardness

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



**[That's equivalent to 1 drop of soap in enough dishwater to fill a string of railroad tank cars 10 miles long!]**

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 89 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.

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# 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 EPA's 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 Division of Drinking Water (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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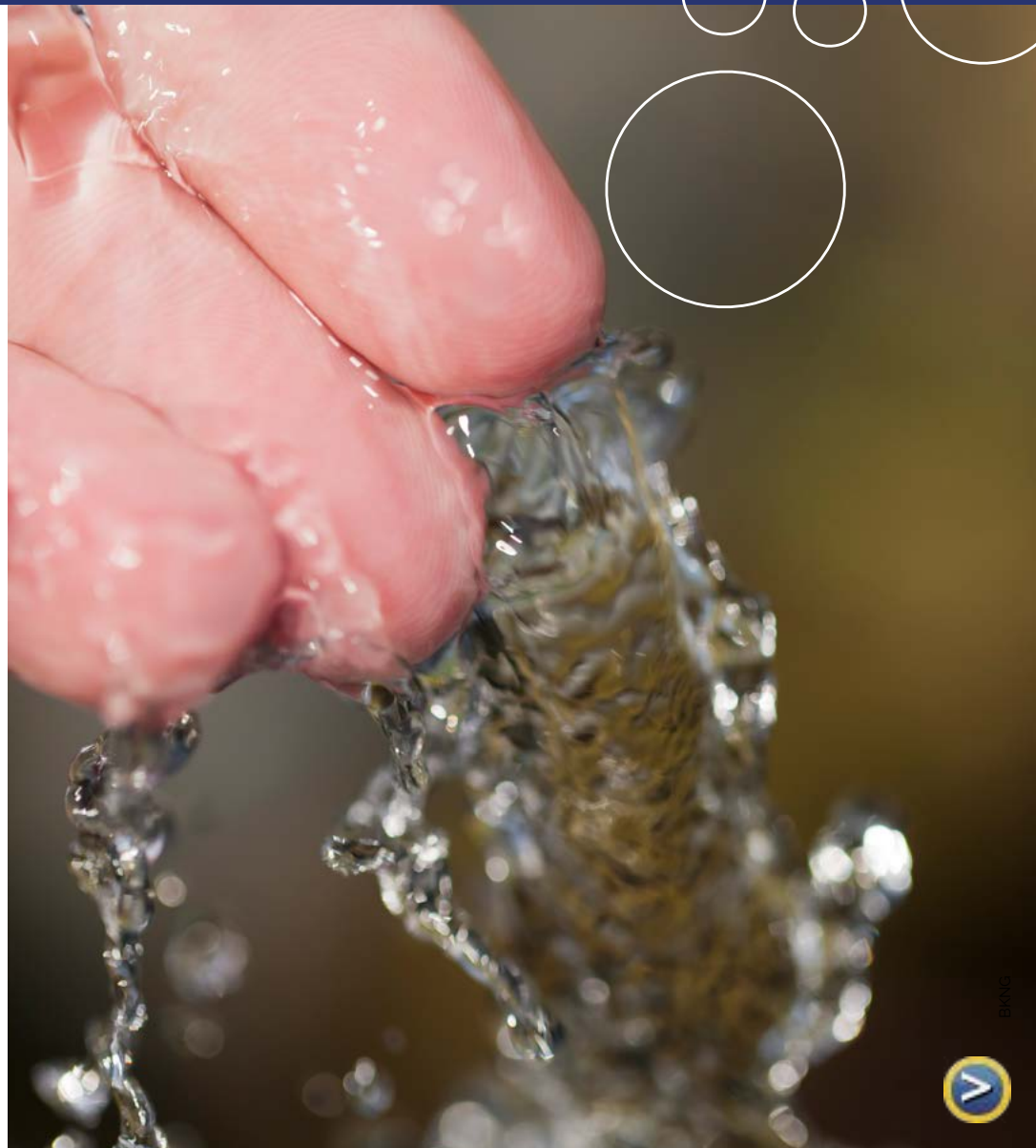
# About Lead

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water comes primarily from materials and components associated with service lines and home plumbing.

The water delivered by Cal Water to your meter meets all water quality standards for lead, but your home plumbing can affect water quality. 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 two minutes before using water for drinking or cooking. Be sure to capture the flushed water in a bucket instead of letting it go down your drain to prevent water waste. You can use the water in your garden, to water house plants, or to clean your car or outdoor furniture.

**If you are concerned about lead in your water, you may wish to have your water tested by a private 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.**



# 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 Division of Drinking Water (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 United States Environmental Protection Agency (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 two major sections: “Primary Drinking Water Standards” and “Secondary Drinking Water Standards and Unregulated Compounds.” 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.

| 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 |

# 2014 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 | 2006–2014 | pCi/L | 15 | (0) | **No** | ND–9 | ND | Erosion of natural deposits |
| Radium 228 | 2006–2014 | pCi/L | 5 | 0.019 (0) | **No** | ND–1 | ND | Erosion of natural deposits |
| Uranium | 2006–2014 | pCi/L | 20 | 0.43 | **No** | ND–4 | 1 | Erosion of natural deposits |
| **Inorganic Chemicals** | **Year Tested** | **Unit** | **MCL (SMCL)** | **PHG (MCLG)** | **Exceeded Standard?** | **Range** | **Average** | **Source of Substance** |
| Arsenic | 2012–2014 | ppb | 10 | 0.004 | **No** | ND–2 | ND | Erosion of natural deposits; runoff from orchards; glass and electronics production wastes |
| Hexavalent chromium | 2012–2014 | ppb | 10 | 0.02 | **No** | ND–0.4 | 0.1 | Discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities; erosion of natural deposits |
| Chromium | 2012–2014 | ppb | 50 | (100) | **No** | ND–0.3 | ND | Discharge from steel and pulp mills and chrome plating; erosion of natural deposits |
| Fluoride | 2012–2014 | ppm | 2 | 1 | **No** | ND–0.4 | 0.1 | Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories |
| Nitrate (as nitrate)[1] | 2014 | ppm | 45 | 45 | **No** | ND–29 | 14 | Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits |

[1]While your drinking water meets the standard for nitrate, it does contain varying levels of nitrate. We are closely monitoring the nitrate levels. Nitrate in drinking water at levels above 45 ppm is a health risk for infants of less than six months of age. If you are caring for an infant or you are pregnant and concerned about the current nitrate levels, you should seek advice from your health care provider.

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# 2014 Water Quality Table

(Continued)

| | Year Tested | Unit | MCL (SMCL) | PHG (MCLG) | Exceeded Standard? | Highest Level | Lowest Monthly Percent | Source of Substance |
|---|---|---|---|---|---|---|---|---|
| Turbidity (treated surface water)[2] | 2014 | NTU | TT | n/a | **No** | 0.050 | 100% | Soil runoff |
| **Organic Chemicals** | **Year Tested** | **Unit** | **MCL (SMCL)** | **PHG (MCLG)** | **Exceeded Standard?** | **Range** | **Average** | **Source of Substance** |
| Dibromochloropropane (DBCP) | 2012–2014 | ppt | 200 | (0) | **No** | ND–21 | 1 | Banned nematocide that may still be present in soils due to runoff/leaching from former use on soybeans, cotton, vineyards, tomatoes, and tree fruit |
| Tetrachloroethylene (PCE) | 2012–2014 | ppb | 5 | 0.06 | **No** | ND–0.8 | 0.2 | Discharge from factories, dry cleaners, and auto shops (metal degreaser) |
| Trichloroethylene (TCE) | 2014 | ppb | 5 | 1.7 | **No** | 2 | 2 | Discharge from metal-degreasing sites and other factories |
| **Disinfection Byproducts** | **Year Tested** | **Unit** | **MCL (SMCL)** | **PHG (MCLG)** | **Exceeded Standard?** | **Range** | **Highest Annual Average** | **Source of Substance** |
| Total haloacetic acids | 2014 | ppb | 60 | n/a | **No** | ND–21 | 13 | Byproduct of drinking water chlorination |
| Total trihalomethanes | 2014 | ppb | 80 | n/a | **No** | 2–50 | 30 | Byproduct of drinking water chlorination |
| **Disinfectant and DBP Precursor** | **Year Tested** | **Unit** | **MRDL** | **MRDLG** | **Exceeded Standard?** | **Range** | **Average** | **Source of Substance** |
| Chlorine | 2014 | ppm | 4 | 4 | **No** | 0.32–2.2 | 1.28 | Drinking water disinfectant added for treatment |
| Total organic carbon[3] | 2014 | ppm | TT | n/a | **No** | 1.0–2 | 1.5 | Various natural and manmade sources |

[2]For surface water systems, the treatment technique dictates that the turbidity level of the filtered water meets certain criteria in 95% of the measurements taken and shall not exceed 1 NTU at any time. Cal Water's surface water supply is treated through membranes, where the treatment technique requires the filtered water be less than or equal to 0.1 NTU in 95% of measurements taken. The Kern County Water Agency's surface water is treated through conventional filtration, where the treatment technique requires the filtered water be less than or equal to 0.3 NTU in 95% of measurements taken. Turbidity is a measurement of the cloudiness of water. We monitor it because it is an indicator of the effectiveness of the treatment system.

[3]Total organic carbon (TOC) has no health effects; however, TOC provides a medium for the formation of disinfection byproducts. These byproducts include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects such as liver, kidney, or nervous system problems, and may lead to an increased risk of cancer. Concerns regarding disinfection byproducts are based upon exposure over many years.

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# 2014 Water Quality Table

(Continued)

| Microbiological | Year Tested | Unit | MCL (SMCL) | PHG (MCLG) | Exceeded Standard? | Highest Monthly | Source of Substance |
|---|---|---|---|---|---|---|---|
| Total coliform (systems with <40 samples/month) (Total Coliform Rule) | 2014 | positive samples | 1 | (0) | **No** | 0 | Naturally present in the environment |

## Other Regulated Substances

| Metals | Year Tested | Unit | AL | PHG (MCLG) | Exceeded Standard? | 90th Percentile | Samples > AL | Source of Substance |
|---|---|---|---|---|---|---|---|---|
| Copper | 2013 | ppm | 1.3 | 0.3 | **No** | ND | 0 | Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives |
| Lead | 2013 | ppb | 15 | 0.2 | **No** | ND | 0 | Internal corrosion of household plumbing systems; discharge from industrial manufacturers; erosion of natural deposits |

## Secondary Drinking Water Standards and Unregulated Compounds

| Inorganic Chemicals | Year Tested | Unit | SMCL | PHG (MCLG) | Exceeded Standard? | Range | Average | Source of Substance |
|---|---|---|---|---|---|---|---|---|
| Calcium | 2012–2014 | ppm | n/a | n/a | **No** | 14–80 | 36 | Erosion of natural deposits |
| Chloride | 2012–2014 | ppm | 500 | n/a | **No** | 28–80 | 50 | Erosion of natural deposits; seawater influence |
| Hardness | 2012–2014 | ppm | n/a | n/a | **No** | 35 240 | 89 | Erosion of natural deposits |
| Iron | 2012–2014 | ppb | 300 | n/a | **No** | ND–4 | 0.3 | Leaching from natural deposits; industrial wastes |
| Magnesium | 2012–2014 | ppm | n/a | n/a | **No** | ND–2 | 0.6 | Erosion of natural deposits |
| Manganese | 2012–2014 | ppb | 50 | n/a | **No** | ND–10 | 0.8 | Leaching from natural deposits |
| Odor | 2012–2014 | Units | 3 | n/a | **No** | ND–1 | 0.4 | Naturally occurring organic matter |
| pH | 2012–2014 | Units | n/a | n/a | **No** | 6.5–9.1 | 7.9 | Inherent characteristic of water |
| Sodium | 2012–2014 | ppm | n/a | n/a | **No** | 35–83 | 58 | Erosion of natural deposits; seawater influence |
| Specific conductance | 2012–2015 | µS/cm | 1600 | n/a | **No** | 310–620 | 443 | Erosion of natural deposits; seawater influence |

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# 2014 Water Quality Table

(Continued)

| Inorganic Chemicals | Year Tested | Unit | SMCL | PHG (MCLG) | Exceeded Standard? | Range | Average | Source of Substance |
|---|---|---|---|---|---|---|---|---|
| Strontium | 2014 | ppb | n/a | n/a | **No** | 150–690 | 374 | Erosion of natural deposits |
| Sulfate | 2012–2014 | ppm | 500 | n/a | **No** | 45–120 | 81 | Runoff/leaching from natural deposits; industrial wastes |
| Total dissolved solids | 2012–2014 | ppm | 1000 | n/a | **No** | 180–540 | 291 | Runoff/leaching from natural deposits |
| Turbidity (groundwater) | 2012–2014 | NTU | 5 | n/a | **No** | ND–0.38 | 0.1 | Soil runoff |
| Vanadium | 2012–2014 | ppb | NL=50 | n/a | **No** | ND–6 | 2 | Erosion of natural deposits; manufacturing of alloys and steel |
| **Disinfection Byproducts** | **Year Tested** | **Unit** | **MCL (SMCL)** | **PHG (MCLG)** | **Exceeded Standard?** | **Range** | **Average** | **Source of Substance** |
| Chlorate | 2014 | ppb | NL=800 | n/a | **No** | ND–310 | 147 | Byproduct of drinking water chlorination |
| **Organic Chemicals** | **Year Tested** | **Unit** | **SMCL** | **PHG (MCLG)** | **Exceeded Standard?** | **Range** | **Average** | **Source of Substance** |
| 1,1-Dichloroethane (11DCA) | 2014 | ppb | n/a | 3 | **No** | ND–0.1 | 0.01 | Extraction and degreasing solvent used in manufacture of pharmaceuticals and stone, clay, and glass products |
| 1,2,3-Trichloropropane (123TCPA)[4] | 2014 | ppt | NL=5 | 0.7 | **Yes** | ND–1.2 | 0.3 | Pesticide that may still be present in soils due to runoff/leaching; various industrial uses |
| 1,4-Dioxane | 2014 | ppb | AL=1 | n/a | **No** | ND–0.3 | 0.1 | Industrial solvent or solvent stabilizer for chlorinated solvents or volatile organic compounds |
| Dibromochloromethane (DBCM) | 2014 | ppb | n/a | n/a | **No** | 0.67 | 0.7 | Trihalomethane used as flame retardant |
| Dichlorodifluoromethane (FREON 12) | 2013–2014 | ppb | AL=1000 | n/a | **No** | ND–43 | 4 | Refrigerant |
| Methane | 2012–2014 | ppm | n/a | n/a | **No** | ND–2 | 0.4 | Naturally present; dissolved in water as it migrates underground |

[4]Currently, there is no MCL or SMCL for TCP. There is a notification level because TCP is a constituent of interest. Cal Water is cooperating with the Division of Drinking Water, conducting extensive monitoring, and investigating acceptable treatment methods. Laboratory studies indicate that some people who use water containing TCP in excess of the notification level over many years may have an increased risk of cancer.

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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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