2019
Water Quality Report

BAKERSFIELD DISTRICT

Bakersfield System

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

Quality. Service. Value.®

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Welcome

Since our inception more than 90 years ago, California Water Service (Cal Water) has been committed to enhancing the quality of life for our customers and communities. One of the most important ways we do this is by providing a reliable supply of safe, high-quality water any time you turn on the tap. And, while standards continue to become more stringent, our commitment to you never wavers.

In this system in 2019, we conducted 37,938 tests on 6,639 water samples for 200 constituents. **We are pleased to confirm that we met every primary and secondary state and federal water quality standard last year.**

Fulfilling our promise to provide quality, service, and value means more than treatment and testing, however. It also means maintaining and upgrading the infrastructure needed to transport water from the source to your tap through a network of pumps, tanks, and pipes. It means having expert professionals available to help you with both routine service needs and emergencies. It also means that, although the costs to obtain, treat, test, store, and deliver the water continue to increase across the country, we do everything we can to operate as efficiently as possible to keep your water affordable – less than a penny per gallon in most of our service areas, in fact.

I encourage you to review this annual water quality report, also called your Consumer Confidence Report, as it details any constituents detected in your water supply in 2019 and shows how your water compares to federal and state standards. It also provides information on current water quality issues and steps we are taking to protect your health and safety.

If you have any questions, we are here to assist you. You can reach us by phone, online at www.calwater.com, or in person at our local Customer Center. You can also get water service news on our web site, via our Facebook, Twitter, and Instagram pages, and in your monthly bill. And, please be sure your contact information with Cal Water is up to date by visiting ccu.calwater.com, to ensure we can reach you with important emergency and other information.

Sincerely,
Tammy Kelly, Interim District Manager, Bakersfield District

[Bakersfield District 3725 South H Street Bakersfield, CA 93304 (661) 837-7200]

Your Water System

Cal Water has provided high-quality water utility services in the Bakersfield area since 1927. To meet our Bakersfield customers' needs, we use a combination of local groundwater produced by 68 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.

Our company-wide water quality assurance program includes vigilant monitoring throughout our systems and testing at our state-of-the-art laboratory. Additionally, we proactively maintain and upgrade 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 at (661) 837-7200 or through the Contact Us link at www.calwater.com.

WATER RESOURCE SUSTAINABILITY

Cal Water helps our customers conserve water by offering programs and incentives to reduce indoor and outdoor water use, develop more efficient habits, and educate the next generation about the importance of managing water resources sustainably. We also continue to invest diligently in our infrastructure to reduce the amount of water lost to pipeline leaks and are updating our assessment of the impacts of climate change on water supply and demand. As we await more information on the long-term water-use regulations from the State of California, it's important that we make water-use efficiency a way of life. Using water wisely will ensure that we have enough water in dry years and for generations to come.

Visit **www.calwater.com/conservation** for details.

Water Quality

THE WATER QUALITY LAB

Water professionals collect samples from throughout the water system for testing at our state-of-the-art water quality laboratory, which is certified each year through the stringent Environmental Laboratory Accreditation Program (ELAP). Scientists, chemists, and microbiologists test the water for 326 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 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.

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 connections, and enforce and manage the installation of new commercial and residential assemblies.

Backflow can occur when certain pressure conditions exist either in our distribution system or within the customer's plumbing, so our customers are our first line of defense. A minor home improvement project — without the proper protections — can create a potentially hazardous situation, so careful adherence to plumbing codes and standards will ensure the community's water supply remains safe. Please be sure to utilize the advice or services of a qualified plumbing professional.

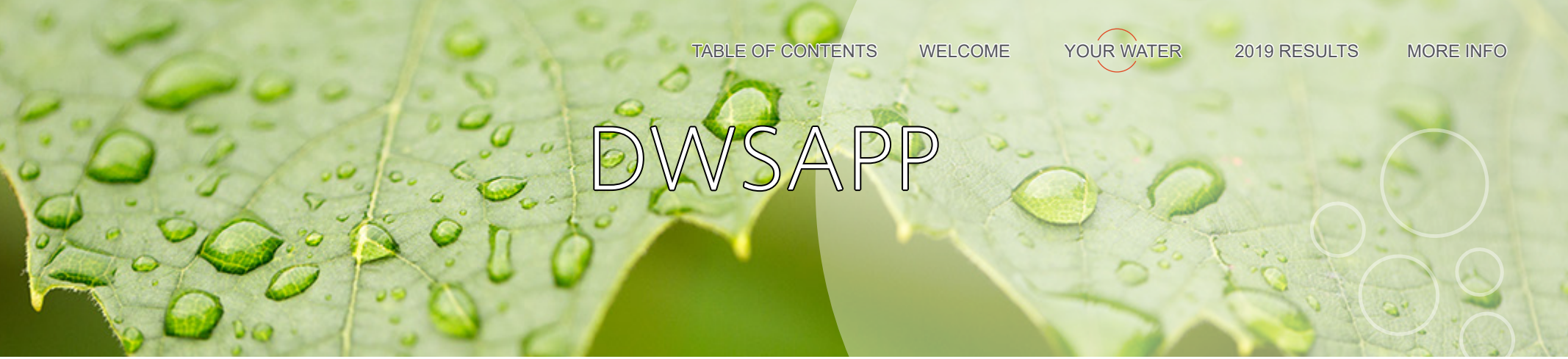
Many water use activities involve substances that, if allowed to enter the distribution system, would be aesthetically displeasing or could even present health concerns. Some common cross-connections are:

- Garden hoses connected to a hose bib without a simple hose-type vacuum breaker (available at a home improvement store)
- Improperly installed toilet tank fill valves that do not have the required air gap between the valve or refill tube
- Landscape irrigation systems that do not have the proper backflow prevention assembly installed on the supply line

The list of materials that could potentially contaminate the water system is vast. According to the EPA, a wide variety of substances have contaminated drinking water systems throughout the country as a result of poor cross-connection control. Examples include:

- Antifreeze from a heating system
- Lawn chemicals from a garden hose or sprinkler head
- Blue water from a toilet tank
- Carbonated water from a soda dispenser

Customers must ensure that all plumbing is in conformance with local plumbing codes. Additionally, state law requires certain types of facilities to install and maintain backflow prevention assemblies at the water meter. Cal Water's cross-connection control staff will determine whether you need to install a backflow prevention assembly based on water uses at your location.



DWSAPP

Cal Water has submitted to the Division of Drinking Water (DDW) a Drinking Water Source Assessment and Protection Program (DWSAPP) report for each water source that is used 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:

- Wastewater
- Stormwater
- Wastewater and drinking water treatment plants
- Water supply wells
- Surface water
- Above- and underground storage tanks
- Known contaminant plumes
- Existing and historic gas stations
- Car washes
- Automobile body/repair shops
- Motor pools
- Parking lots
- Transportation terminals and corridors
- Airports
- Historic waste dumps/landfills
- Junk yards
- Dredging
- Agriculture
- Farm machine repairs
- Farm chemical distribution
- Pesticide/fertilizer/petroleum storage
- Chemical/petroleum processing
- Parks
- Golf courses
- Utility stations
- High-density housing
- Hotels/motels
- Construction/demolition sites
- Large equipment storage yards
- Dry cleaners
- Appliance repair
- Furniture repair/manufacturing
- Lumber industries
- Hardware stores
- Photo processing
- Electrical/electronic manufacturing
- Machine shops

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

2019 Results

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, and 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.html**. For general information on water fluoridation, visit us online at** www.calwater.com**.**

WATER HARDNESS

Hardness is a measure of the magnesium, calcium, and carbonate minerals in the water. Water is considered **soft** if its hardness is less than 75 parts per million (ppm), **moderately hard** at 75 to 150 ppm, **hard** between 150 and 300 ppm, and **very hard** at 300 ppm or higher.

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. Additionally, people on low-sodium diets should be aware that some water softeners increase the sodium content of the water.

For more information on water hardness, visit **www.calwater.com/video/hardness**.

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 DDW prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. FDA regulations 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 and 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.

About Lead

As the issue of lead in water continues to be top of mind for many Americans, Cal Water wants to assure you about the quality of your water. We are compliant with health and safety codes mandating use of lead-free materials in water system replacements, repairs, and new installations. We have no known lead service lines in our systems. We test and treat (if necessary) water sources to ensure that the water delivered to customer meters meets all water quality standards and is not corrosive toward plumbing materials.

The water we deliver to your home meets lead standards. However, 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 (for example, lead solder used to join copper plumbing, and brass and other lead-containing fixtures).

Cal Water is responsible for providing high-quality drinking water to our customers' meters, 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 by a certified lab. More information about lead in drinking water can be found on 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 below the action level for the presence of lead.

Testing for Lead in Schools

The State of California required that all public schools built before 2010 test for lead in their drinking water by July 1, 2019. We are committed to supporting our school districts' efforts to protect students and ensure that the drinking water at their school sites are below lead limits. We worked with all school districts in our service area that serve kindergarten through 12th grade to develop sampling plans, test samples, and conduct follow-up monitoring, if needed, for corrective actions. We have published the total number of schools requesting testing from last year in this year's Water Quality report.

For more information, please see our Testing for Lead in Schools web page. For specific information regarding local school data, see the state web portal.

Lead and Copper Rule

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 to determine the presence of lead and copper or any action level exceedance (AL). An action level is the concentration of a contaminant which, when exceeded, triggers corrective actions before it becomes a health concern. If action levels are exceeded, either at a customer's home or system-wide, we work with the customer to investigate the issue and/or implement corrosion control treatment to reduce lead levels.

Lead Service Line Inventory (LSLI)

Protecting our customers' health and safety is our highest priority. As part of this commitment, we have been working to identify and replace any old customer water service lines and fittings that may contain lead. California Senate Bill (SB) 1398 requires all water utilities in California to develop an inventory of all distribution service line materials, and submit a list of known service lines to the state by 2018. A list of unknown service lines that may contain lead, along with a plan for replacement, is due to the state by July 1, 2020. Known lines are replaced as soon as possible.

More information regarding LSLI and specific data for each water system can be found on the state web site.

PFOA and PFOS

PFOS and PFOA are manmade compounds used prevalently in firefighting foams and to make carpets, clothing, fabrics for furniture, paper packaging for food, cookware, and other items resistant to water, grease, fire, or stains. They are also used in a number of industrial processes. They are part of a larger group of chemicals referred to as per- and poly-fluoroalkyl substances (PFAS).

In early 2020, DDW announced lower response levels for PFOA and PFOS (10 ppt for PFOA, and 40 ppt for PFOS) from the previous level of 70 ppt combined. The notification levels (5.1 ppt for PFOA, and 6.5 ppt for PFOS) were not changed.

Knowing that these are constituents of emerging concern, Cal Water had identified and tested water sources in 2019 and earlier that would be more likely to have these compounds present. With the updated response levels, we are working through our plan to conduct additional testing for these constituents in all of our water systems.

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 infants; cancer; or liver, immunity, thyroid, and other effects. Potential health impacts related to PFAS compounds are still being studied, and research is still evolving on this issue.

Although there is no Maximum Contaminant Level (MCL) set for these substances, we have proactively monitored sources and will continue to do so. Even though it is not required by the state, we believe it is the right thing to do. When an MCL is established by DDW for these compounds, we will continue to ensure our water sources are in compliance with any set standard.

While we are doing our part to treat the water and meet the standards the public health experts have set, it's important that our population as a whole focuses on being good stewards of the environment and takes steps to prevent impacting the water supply. Additionally, Cal Water has filed a lawsuit against a group of companies that manufactured and sold firefighting foam products that released the PFOS and PFOA into the environment, to ensure the responsible parties bear the costs of treating for these chemicals, not our customers.

More information on PFOS and PFOA is available **on the DDW web site**.

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 (SMCLs) relate to the odor, taste, and appearance of drinking water.

IN COMPLIANCE
Does not exceed any applicable MCL, SMCL, or action level, as determined by DDW. For some compounds, compliance is determined by averaging the results for one source over a one-year period.

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 are set by the EPA and do not reflect the benefits of the use of disinfectants to control microbial contaminants.

NON-DETECT (ND)
The constituent was not detected.

NOTIFICATION LEVEL (NL) AND RESPONSE LEVEL (RL)
Health-based advisory levels for unregulated contaminants in drinking water. They are 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.

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 four major sections: “Primary Drinking Water Standards,” “Secondary Drinking Water Standards,” “State-Regulated Contaminants with Notification Levels,” 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. The State allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

SUBSTANCE SOURCES

BN	Banned nematocide that may still be present in soils due to runoff/leaching from former use on soybeans, cotton, vineyards, tomatoes, and tree fruit
CF	Discharge from industrial chemical factories
DI	Byproduct of drinking water disinfection
DS	Drinking water disinfectant added for treatment
EN	Naturally present in the environment
ER	Erosion of natural deposits
FD	Discharge from factories, dry cleaners, and auto shops (metal degreaser)
FE	Human and animal waste
FL	Water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
FM	Primary component of some fumigants
FR	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage
IA	Discharge from industrial and agricultural chemical factories; leaching from hazardous waste sites; used as cleaning and maintenance solvent, paint and varnish remover, and cleaning and degreasing agent; byproduct of production of other compounds and pesticides
IC	Internal corrosion of household plumbing systems
IM	Discharge from industrial manufacturers
IO	Substances that form ions when in water
IW	Industrial waste
MD	Discharge from metal-degreasing sites and other factories
MF	Discharge from metal factories
OC	Runoff from orchards; glass and electronics production waste
OD	Discharges of oil-drilling waste and from metal refineries
OM	Naturally occurring organic materials
PC	Discharge from petroleum and chemical factories
PH	Inherent characteristic of water
RU	Runoff/leaching from natural deposits
RP	Discharge from rubber and plastic factories; leaching from landfills
RS	Residue from some surface water treatment processes
SO	Soil runoff
SW	Seawater influence
UN	Underground gas tank leaks
VA	Various natural and manmade sources
WD	Leaching from wood preservatives

Our testing equipment is so sensitive, it can detect mineral traces as small as 1 part per trillion. That is equivalent to 1 second in nearly 32,000 years.

2019 Water Quality

Primary Drinking Water Standards

Microbiological	Year Tested	Unit	MCL	PHG (MCLG)	In Compliance	Distribution System-Wide Highest Monthly	Source
Total coliform (systems with >40 samples/month) (Total Coliform Rule)	2019	Positive samples	5%	(0)	**Yes**	0.56%	EN
Fecal coliform and E. coli	2019	Positive samples	1[1]	(0)	**Yes**	0	FE

Radiological	Year Tested	Unit	MCL	PHG (MCLG)	In Compliance	Groundwater		Surface Water		Kern County Water Agency (KCWA)		Source
						Range	Average	Range	Average	Range	Average	
Gross alpha particle activity	2011–2019	pCi/L	15	(0)	**Yes**	ND–5.3	ND	ND	ND	n/a	n/a	ER
Radium 228	2012–2019	pCi/L	n/a	0.019	**Yes**	ND–0.15	ND	n/a	n/a	n/a	n/a	ER
Uranium	2012–2019	pCi/L	20	0.43 (0)	**Yes**	ND–4.5	ND	n/a	n/a	n/a	n/a	ER

Inorganic	Year Tested	Unit	MCL	PHG (MCLG)	In Compliance	Groundwater		Surface Water		KCWA		Source
						Range	Average	Range	Average	Range	Average	
Aluminum	2011–2019	ppm	1	0.6	**Yes**	ND–0.21	ND	ND	ND	ND–0.057	0.014	ER, RS
Arsenic[2]	2011–2019	ppb	10	0.004 (0)	**Yes**	ND–8.1	ND	ND	ND	n/a	n/a	ER, OC
Barium	2011–2019	ppm	1	2 (2)	**Yes**	ND–0.15	ND	ND	ND	n/a	n/a	ER, OD
Fluoride	2011–2019	ppm	2	1 (4.0)	**Yes**	ND–0.19	ND	0.23	0.23	ND–0.14	0.06	ER, FL
Nickel	2011–2019	ppb	100	12	**Yes**	ND–21	ND	ND	ND	n/a	n/a	ER, MF
Nitrate as N[3]	2015–2019	ppm	10	10 (10)	**Yes**	ND–7.5	1.6	ND	ND	ND–0.65	0.16	ER, FR

1 The MCL for fecal coliform and E. coli is exceeded when a routine sample and a repeat sample are total coliform positive, and one of these is also E. coli positive.

2 While your drinking water meets the federal and state standards for arsenic, it does contain low levels of arsenic. The arsenic standards balance the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. The EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects, such as skin damage and circulatory problems.

3 The average nitrate level was 1.6 ppm, with a maximum level of 7.5 ppm. We are closely monitoring the 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.

2019 Water Quality

(Continued)

Lead and Copper	Year Tested	Unit	AL	PHG (MCLG)	In Compliance	Distribution System-Wide		Source
						90th Percentile	Samples > AL	
Copper	2018	ppm	1.3	0.3	**Yes**	0.18	0 of 55	IC, ER, WD
Lead	2018	ppb	15	0.2	**Yes**	ND	0 of 55	IC, IM, ER
Schools that requested lead sampling in 2019: 8								

Synthetic Organic Contaminants	Year Tested	Unit	MCL	PHG (MCLG)	In Compliance	Groundwater		Surface Water		KCWA		Source
						Range	Average	Range	Average	Range	Average	
1,2,3-Trichloropropane[1]	2018–2019	ppb	0.005	0.0007	**Yes**	ND–0.01	ND	ND	ND	n/a	n/a	IA
Dibromochloropropane	2011–2019	ppt	200	1.7 (0)	**Yes**	ND–18	ND	ND	ND	n/a	n/a	BN

Volatile Organic Contaminants	Year Tested	Unit	MCL	PHG (MCLG)	In Compliance	Groundwater		Surface Water		KCWA		Source
						Range	Average	Range	Average	Range	Average	
1,2-Dichloropropane	2016–2019	ppb	5	0.5 (0)	**Yes**	ND–0.59	ND	ND	ND	n/a	n/a	CF, FM
Tetrachloroethylene (PCE)	2016–2019	ppb	5	0.06 (0)	**Yes**	ND–4.3	0.21	ND	ND	n/a	n/a	FD
Styrene	2016–2019	ppb	100	0.5 (100)	**Yes**	ND–0.13	ND	ND	ND	n/a	n/a	RP
Trichloroethylene (TCE)	2016–2019	ppb	5	1.7 (0)	**Yes**	ND–0.73	0.01	ND	ND	n/a	n/a	MD
Toluene	2016–2019	ppb	150	150 (1000)	**Yes**	ND–0.07	ND	ND	ND	n/a	n/a	PC, UN

Disinfection Byproducts	Year Tested	Unit	MCL	PHG (MCLG)	In Compliance	Distribution System-Wide		Source
						Range	Highest Annual Average	
Haloacetic acids[2]	2019	ppb	60	n/a	**Yes**	ND–69	46	DI
Total trihalomethanes[3]	2019	ppb	80	n/a	**Yes**	ND–78	62	DI

1 In one sample in the Bakersfield system, 1,2,3-TCP was over the MCL; however, compliance is based on a four-quarter average, and the system is therefore in compliance. Some people who drink water containing TCP in excess of the MCL over many years may have an increased risk of getting cancer.

2 While your drinking water contains varying levels of haloacetic acids, it meets the standard. Compliance with the haloacetic acids MCL is based on calculated running annual averages. The running annual average for haloacetic acids is less than the MCL; therefore, it meets the standard. We are continuously monitoring the levels to ensure we do not exceed the MCL. Some people who drink water containing halocetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

3 While your drinking water contains varying levels of trihalomethanes, it meets the standard. Compliance with the trihalomethanes MCL is based on calculated running annual averages. We are continuously monitoring the levels to ensure we do not exceed the MCL. Some people who drink water containing trihalomethanes 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.

2019 Water Quality

(Continued)

Disinfectants	Year Tested	Unit	MRDL	MRDLG	In Compliance	Distribution System-Wide		Source
						Range	Average	
Chlorine	2019	ppm	4	4	**Yes**	0.26–2.1	1.2	DS

Surface Water — Turbidity and TOC	Year Tested	Unit	MCL	PHG (MCLG)	In Compliance	Surface Water			Source
							Highest Level	Lowest Monthly Percent	
Turbidity[1]	2019	NTU	TT	n/a	**Yes**		0.056	99.3	SO
Total organic carbon (TOC)[2]	2019	ppm	TT	n/a	**Yes**		3.1	32.3	VA

1 Turbidity has no health effects; however, high levels of turbidity can interfere with disinfection and provide a medium for microbial growth.

2 TOC has no health effects; however, TOC provides a medium for the formation of disinfection byproducts. These byproducts include trihalomethanes and haloacetic acids. 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 getting cancer.

2019 Water Quality

(Continued)

Secondary Drinking Water Standards

Contaminants	Year Tested	Unit	SMCL	PHG (MCLG)	In Compliance	Groundwater		Surface Water		KCWA		Source
						Range	Average	Range	Average	Range	Average	
Aluminum[1]	2011–2019	ppb	200	600	**Yes**	ND–210	3.1	ND	ND	n/a	n/a	ER, RS
Chloride	2011–2019	ppm	500	n/a	**Yes**	5.4–90	20	10	10	5.04–69.4	21.9	RU, SW
Color	2011–2019	UNITS	15	n/a	**Yes**	ND–3.0	1.2	ND–2.0	1.2	n/a	n/a	OM
Specific conductance	2011–2019	US	1600	n/a	**Yes**	100–1180	317	206	206	97.6–476	220	SW, IO
Iron[2]	2011–2019	ppb	300	n/a	**Yes**	ND–1300	ND	ND	ND	n/a	n/a	RU, IW
Manganese[3]	2011–2019	ppb	50	n/a	**Yes**	ND–58	ND	ND	ND	n/a	n/a	RU
Odor	2011–2019	T.O.N.	3	n/a	**Yes**	ND–2.0	ND	ND–2.0	1.3	1.4–3	2	OM
Sulfate	2011–2019	ppm	500	n/a	**Yes**	12–400	33	15	15	10.8–51.2	24.8	RU, IW
Total dissolved solids	2011–2019	ppm	1000	n/a	**Yes**	100–900	228	130	130	n/a	n/a	RU
Turbidity (groundwater)[4]	2011–2019	NTU	5	n/a	**Yes**	ND–5.8	0.18	ND–0.17	ND	0.05–0.07	0.06	SO
Zinc	2011–2019	ppm	5	n/a	**Yes**	ND–0.19	ND	0.25	0.25	0.050–0.069	0.06	RU, IW

1 In one sample collected in the Bakersfield water system, aluminum levels exceeded the MCL; however, compliance is based on the running annual average (RAA). We are monitoring the levels to ensure we do not exceed the MCL. Some people who drink water containing aluminum in excess of the MCL over many years may experience short-term gastrointestinal tract effects.

2 In three wells in the Bakersfield water system, iron exceeded the SMCL; however, compliance is based on the RAA. The RAA for iron is less than the SMCL and is, therefore, in compliance. The iron SMCL was set to protect you against unpleasant aesthetic effects, such as color, taste, odor, and the staining of plumbing fixtures and clothing when washed. Exceeding this SMCL does not pose a health risk.

3 In one sample in the Bakersfield water system, manganese exceeded the SMCL; however, compliance is based on the RAA. The RAA for manganese is less than the SMCL and is, therefore, in compliance. We are monitoring the levels to ensure we do not exceed the SMCL. The SMCL was set to protect you against unpleasant aesthetic effects, such as color, taste, odor, and the staining of plumbing fixtures and clothing when washed. Exceeding the SMCL does not pose a health risk.

4 In one sample from one groundwater well in the Bakersfield water system, turbidity was over the SMCL; however, compliance is based on the RAA. The RAA for turbidity is less than the SMCL and is, therefore, in compliance. We are monitoring the levels to ensure we do not exceed the SMCL. The SMCL was set to protect you against unpleasant aesthetic effects, such as color, taste, odor, and the staining of plumbing fixtures and clothing when washed. Exceeding this SMCL does not pose a health risk.

2019 Water Quality

(Continued)

State-Regulated Contaminants with Notification Levels

Contaminants	Year Tested	Unit	NL	PHG (MCLG)	In Compliance	Groundwater		Surface Water		KCWA		Source
						Range	Average	Range	Average	Range	Average	
1,2,4-Trimethylbenzene	2011–2019	ppb	330	n/a	**Yes**	ND–1.6	ND	n/a	n/a	n/a	n/a	UR
Boron	2018	ppm	1	n/a	**Yes**	0.14–0.14	0.14	ND–0.13	ND	n/a	n/a	UR
Hexavalent chromium[1]	2011–2015	ppb	n/a	0.02	**Yes**	ND–3.3	ND	n/a	n/a	n/a	n/a	UR
Dichlorodifluoromethane (Freon 12)	2011–2019	ppb	1000	n/a	**Yes**	ND–0.65	ND	n/a	n/a	n/a	n/a	UR
Methyl isobutyl ketone	2011–2019	ppb	120	n/a	**Yes**	ND–97	ND	n/a	n/a	n/a	n/a	UR
n-Propylbenzene	2011–2019	ppb	260	n/a	**Yes**	ND–0.62	ND	n/a	n/a	n/a	n/a	UR
Vanadium	2017–2019	ppb	50	n/a	**Yes**	ND–15	7.3	n/a	n/a	n/a	n/a	UR

Unregulated Contaminant Monitoring Rule (UCMR)

Contaminants	Year Tested	Unit	MCL	PHG (MCLG)	In Compliance	Groundwater		Surface Water		KCWA		Source
						Range	Average	Range	Average	Range	Average	
Germanium	2019	ppb	n/a	n/a	**Yes**	ND–0.36	ND	ND	ND	n/a	n/a	UR
HAA5 (DBAA, DCAA, MBAA, MCAA, and TCAA)	2019	ppb	n/a	n/a	**Yes**	ND–11	2.8	0.82–1.5	ND	n/a	n/a	UR
HAA6Br (BCAA, BDCAA, DBAA, CDBAA, MBAA, and TBAA)	2019	ppb	n/a	n/a	**Yes**	ND–13	4.3	1.8–3.7	2.8	n/a	n/a	UR
HAA9 (BCAA, BDCAA, CDBAA, DBAA, DCAA, MBAA, MCAA, TBAA, and TCAA)	2019	ppb	n/a	n/a	**Yes**	ND–98	44	40–46	43	n/a	n/a	UR
Chlorodifluoromethane	2015–2016	ppb	n/a	n/a	**Yes**	ND–0.80	ND	ND	ND	n/a	n/a	UR
Molybdenum	2015–2016	ppb	n/a	n/a	**Yes**	ND–8.1	2.3	1.9–9.4	5.2	n/a	n/a	UR
Strontium	2015–2016	ppb	n/a	n/a	**Yes**	190–740	356	150–340	217	n/a	n/a	UR

1 The previous MCL of 0.010 mg/L (10 ppb) for hexavalent chromium was withdrawn on September 11, 2017, and there is currently no MCL in effect.

2019 Water Quality

(Continued)

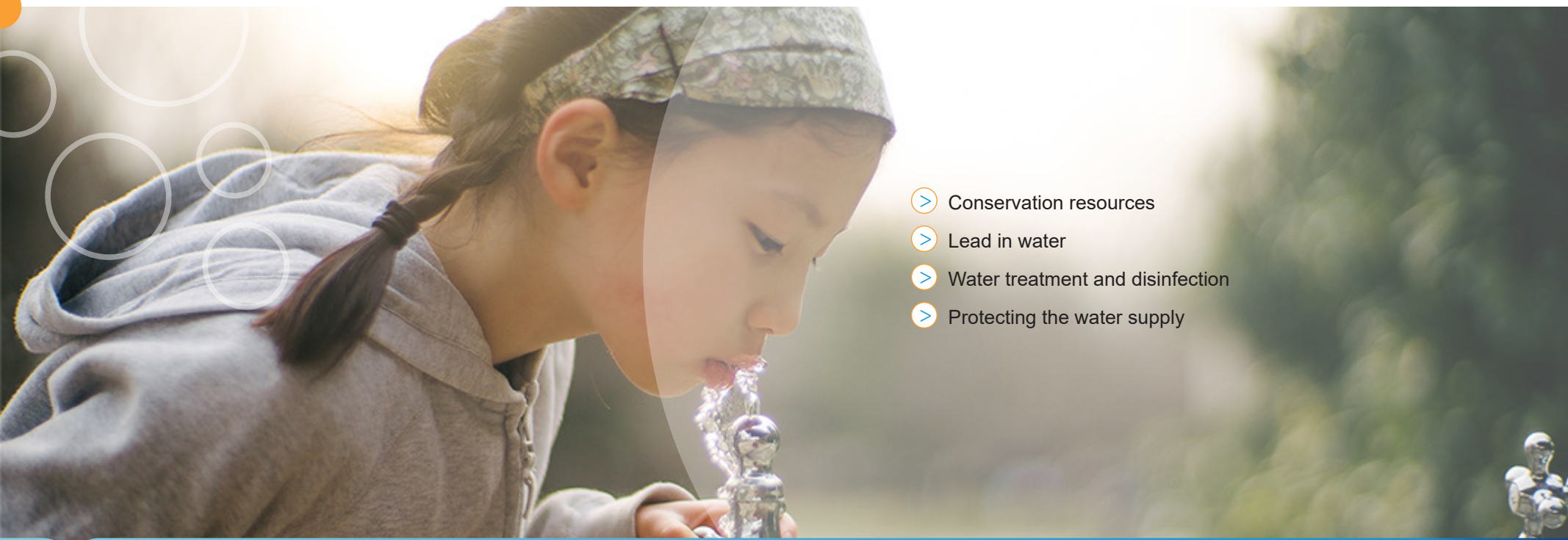
Unregulated Compounds

Contaminants	Year Tested	Unit	MCL	PHG (MCLG)	In Compliance	Groundwater		Surface Water		KCWA		Source
						Range	Average	Range	Average	Range	Average	
Alkalinity (total)	2011–2019	ppm	n/a	n/a	**Yes**	30–130	91	26–78	50	n/a	n/a	UR
Calcium	2011–2019	ppm	n/a	n/a	**Yes**	7.8–170	34	18	18	6.62–22.5	13.1	UR
Hardness (total)	2011–2019	ppm	n/a	n/a	**Yes**	40–440	111	61	61	16.5–90.3	45.5	UR
Potassium	2011–2019	ppm	n/a	n/a	**Yes**	ND–5.7	2.2	2.1	2.1	ND–2.73	1.50	UR
Magnesium	2011–2019	ppm	n/a	n/a	**Yes**	1.2–8.4	4.8	3.6	3.6	ND–8.26	3.09	UR
Sodium	2011–2019	ppm	n/a	n/a	**Yes**	15–89	25	17	17	9.54–44.7	19.7	UR
pH measured in the field	2015–2019	Units	n/a	n/a	**Yes**	6.0–9.9	7.5	7.2–8.0	7.6	7.03–7.38	7.17	PH

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.



- Conservation resources
- Lead in water
- Water treatment and disinfection
- Protecting the water supply