2011 Water Quality Report

Bakersfield District
North Garden

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At California Water Service Company (Cal Water), we are committed to providing a reliable, high-quality water supply to you and your family at the lowest price possible.

In this report, you'll see how your water compares to state and federal standards. **We are pleased to confirm that your water met or surpassed all primary and secondary water quality standards in this reporting period.**

We have also included information about how you can use water more efficiently. Although tap water costs a fraction of the price of bottled water, water rates throughout the country are increasing, due in part to increasingly strict water quality and environmental standards, infrastructure replacement needs, and higher costs for everything from electricity to labor. So using water as efficiently as possible is critical not only to ensure that we have enough water to meet your needs and reduce per capita water use by 20% by 2020 as required by state law, but also to help you control your water bill.

If you have any questions, suggestions, or concerns, please contact your local Customer Center, either by phone or through our web site. Also, please watch for bill inserts (which are also available online for customers using paperless billing), where you will find announcements about any water-related public meetings and important information about your water. Additional information and time-sensitive announcements can be found at www.calwater.com.

Tim Treloar

District Manager
Bakersfield District

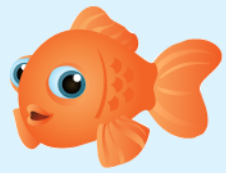
About Your Water System

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 water purchased from the Kern County Water Agency.

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

Use Water Wisely. It's Essential.

You're busy. So why should you add water conservation to your mile-long to-do list? Simply put, water's got things to do, too – it keeps us clean and healthy, protects us from fire, and is used to grow our food and make the products we use every day. And there's no way to increase the earth's finite water supply. That's why we're here to help you use water wisely – because it's essential.



By the Numbers…

Our water quality team conducts more than 300,000 tests per year in our state-certified water quality laboratory. 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 billion – that's like one pinch of salt in a 400-ton bag of potato chips, one sheet in a roll of toilet paper stretched three times around the equator, or three seconds in a century.

Under the Microscope…

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 (USEPA) 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 USEPA and the California Department of Public Health (CDPH) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. CDPH 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, 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. USEPA/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.

Lead in Water

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, 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.

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.

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Inside the Bill…

You've reduced your water use, but your water bill keeps going up – so what gives? The fact is, water rates throughout the country are rising because the costs of providing water utility services are rising.

Cal Water's rates are set by the California Public Utilities Commission and are based upon the actual costs of providing water. That means when new water quality standards are set that require additional testing and treatment, water costs go up. When aging water infrastructure needs to be replaced, water costs go up. When costs for electricity, fuel, and labor rise, water costs go up.

And the issue of conservation isn't as simple as it may seem, because many of the costs associated with providing water remain the same, whether you use a drop of water or not.

The good news is that when you conserve water, you will control your bill, because in most areas we have increasing block rates that reward conservation. And in the long term, if we can avoid constructing a new well or buying more wholesale water, that will help keep water costs down. Considering all it takes to get a reliable, clean water supply to your tap, it is still a good value.

Do you know where you use the most water at home? This diagram shows a number of household items and their typical percentage of indoor water use. *Percentages from the 2011 California Department of Water Resources' "California Single Family Water Use Efficiency Study."*

Faucets
19% Do your faucets have aerators? They reduce water use without sacrificing performance. (K)

Dishwasher Tip
Save water by only running full dishwasher loads and using eco-mode if you have it.

Clothes Washer
18% A high-efficiency model uses less water and energy than a standard model. (R)

Loss from Leaks
18% Learn how to check for leaks. A constantly running toilet can waste 200+ gallons every day. (K)

Toilet
20% Look for the WaterSense label to ensure water-efficiency and performance. (R)

Shower
20% Install a high-efficiency showerhead to save water with every shower. (K)

Landscaping Tip
Use mulch around shrubs and garden plants to reduce water loss through evaporation.

Irrigation Tip
Adjust your irrigation schedule based on the weather with a smart irrigation controller. (R)

Sprinklers
High-efficiency sprinkler nozzles can cut irrigation water use by up to 30%. (S)

Visit www.calwater.com/conservation for information on conservation programs such as:
- (R) Rebates on qualified appliances
- (K) Free conservation kits with devices to help you save water at home
- (S) Free high-efficiency sprinkler nozzles for more water-efficient landscaping

How to Read This Table

Cal Water tests your water for more than 140 regulated contaminants and dozens of unregulated contaminants. A list of regulated contaminants can be found in the Water Quality section of calwater.com. **This table lists only those contaminants that were detected.**

In the table, water quality test results are divided into two main 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 could affect the water's taste, odor, or appearance. Selected unregulated substances (hardness and sodium, for example) are listed for your information.

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)

ppb = parts per billion (micrograms per liter)

ppm = parts per million (milligrams per liter)

ppt = parts per trillion (nanograms per liter)

SMCL = secondary maximum contaminant level

Key Definitions

Exceeded Standard: Over a primary MCL, a secondary MCL, or an action level, as determined by the California Department of Public Health. For some compounds, compliance is determined by averaging the results for one source for a year.
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.
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 (USEPA).
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 the California Department of Public Health 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.
Regulatory Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other required action by the water provider.
Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

Your Water Quality Report

Primary Drinking Water Standards								
Radiological	Year Tested	Unit	MCL	PHG (MCLG)	Exceeded Standard?	Range	Average	Source of Substance
Gross alpha particle activity	2002–2011	pCi/L	15	(0)	No	ND–9.8	3.7	Erosion of natural deposits
Radium 228	2002–2011	pCi/L	5	0.019 (0)	No	ND–1.4	0.1	Erosion of natural deposits
Uranium	2002–2011	pCi/L	20	0.43	No	ND–7.5	3.4	Erosion of natural deposits
Inorganic Chemicals	Year Tested	Unit	MCL (SMCL)	PHG	Exceeded Standard?	Range	Average	Source of Substance
Aluminum	2009–2011	ppm	1 (0.2)	0.6	No	ND–0.07	0.01	Erosion of natural deposits; residue from some surface water treatment processes
Barium	2009–2011	ppm	1	2	No	ND–.01	0.00	Discharges of oil-drilling waste and from metal refineries; erosion of natural deposits
Fluoride	2009–2011	ppm	2	1	No	ND–0.32	0.01	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (as nitrate)[1]	2011	ppm	45	45	No	ND–31	18	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
	Year Tested	Unit	MCL	PHG (MCLG)	Exceeded Standard?	Highest Level	Lowest Monthly Percent	Source of Substance
Turbidity (surface water requiring filtration)[2]	2011	NTU	TT=0.1	n/a	No	0.05	100%	Soil runoff
Turbidity (purchased surface water)[2]	2011	NTU	TT=0.3	n/a	No	0.10	100%	Soil runoff
Disinfection Byproducts	Year Tested	Unit	MCL	PHG (MCLG)	Exceeded Standard?	Range	Highest Annual Average	Source of Substance
Total haloacetic acids[3]	2011	ppb	60	n/a	No	ND–76	28	Byproduct of drinking water chlorination
Total trihalomethanes	2011	ppb	80	n/a	No	ND–68	31	Byproduct of drinking water chlorination
Disinfectant and DBP Precursor	Year Tested	Unit	MRDL	MRDLG	Exceeded Standard?	Range	Average	Source of Substance
Chlorine	2011	ppm	4	4	No	0.6–2.0	1.3	Drinking water disinfectant added for treatment
Total organic carbon[4]	2011	ppm	n/a	n/a	n/a	1.1–3.2	1.8	Various natural and man-made sources
Other Regulated Substances								
Metals	Year Tested	Unit	AL	PHG	Exceeded Standard?	90th Percentile	Samples > AL	Source of Substance
Copper	2010	ppm	1.3	0.3	No	0.05	0 of 30	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Secondary Drinking Water Standards and Unregulated Compounds								
Inorganic Chemicals	Year Tested	Unit	SMCL	PHG (MCLG)	Exceeded Standard?	Range	Average	Source of Substance
Calcium	2009–2011	ppm	n/a	n/a	No	15–100	35	Erosion of natural deposits
Chloride	2009–2011	ppm	500	n/a	No	6–120	55	Erosion of natural deposits; seawater influence
Color	2009–2011	Units	15	n/a	No	ND–5	0.01	Naturally occurring organic matter
Foaming agents [MBAS]	2009–2011	ppb	500	n/a	No	ND–120	10	Municipal and industrial waste discharges
Hardness (total) as CaCO3	2009–2011	ppm	n/a	n/a	No	35–260	115	Erosion of natural deposits
Magnesium	2009–2011	ppm	n/a	n/a	No	ND–6	1.0	Erosion of natural deposits
Odor	2009–2011	Units	3	n/a	No	ND–2	0.01	Naturally occurring organic matter
pH	2009–2011	Units	n/a	n/a	No	6.2–9.0	7.8	Inherent characteristic of water
Sodium	2009–2011	ppm	n/a	n/a	No	13–82	85	Erosion of natural deposits; seawater influence
Specific conductance	2009–2011	µS/cm	1600	n/a	No	160–840	400	Erosion of natural deposits; seawater influence
Sulfate	2009–2011	ppm	500	n/a	No	ND–180	85	Runoff/leaching from natural deposits; industrial wastes
Total dissolved solids	2009–2011	ppm	1000	n/a	No	100–520	285	Runoff/leaching from natural deposits
Turbidity (groundwater)	2009–2011	NTU	5	n/a	No	ND–2	0.3	Soil runoff
Disinfection Byproducts	Year Tested	Unit	MCL	PHG (MCLG)	Exceeded Standard?	Range	Average	Source of Substance
Chlorate	2011	ppb	NL=800	n/a	n/a	ND–208	50	Byproduct of drinking water chlorination
Organic Chemicals	Year Tested	Unit	SMCL	PHG (MCLG)	Exceeded Standard?	Range	Average	Source of Substance
Dichlorodifluoromethane (Freon12)	2009–2011	ppb	NL=1000	n/a	No	ND–42	1	Refrigerant
1,2,3-Trichloropropane (TCP)	2009–2011	ppt	NL=5	0.7	No	ND–260	30	Pesticide that may still be present in soils due to runoff/leaching; various industrial uses

1 The average nitrate level was 18 ppm, with a maximum level of 31 ppm. 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. 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 45 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.

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 a good indicator of the effectiveness of our filtration system.

3 Source water sometimes contains high levels of total organic carbon, which reacts with chlorine used to treat filtered water to ensure that it is safe to drink, and produces disinfection byproducts. Normally, our treatment process effectively limits this formation; however, the exceptionally high levels of organic matter experienced during early 2011 allowed byproducts in one sample to form above the MCL value. Exceeding an MCL value does not result in exceeding the standard because compliance is determined by the average of samples collected. Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

4 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). The treatment technique dictates that a removal ratio of 1 or higher must be achieved. 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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Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

2011 Water Quality Report

About Your Water…

We're sitting down for an up close and personal interview with your water to find out what you want to know…

Interviewer: You look so clean and clear right now, but why do you sometimes contain sand or sediment?

Water: Sand or dirt can occur in groundwater, or get into water lines during repairs. The easiest thing to do is flush your faucets until the sediment disappears. That's why Cal Water occasionally flushes water from fire hydrants – to remove sediment and assure good water quality.

Interviewer: What do you say to people who say you're too hard?

Water: Well, that hurts. If I'm hard, it just means I have more minerals than my softer counterparts. 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. In this area, average hardness is 115 ppm. Hard water does not pose any health concerns, but some people prefer to use water softeners.

Interviewer: So what's the deal with fluoride?

Water: 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.

Interviewer: Why does water sometimes smell like chlorine?

Water: In many places water is treated to prevent the spread of germs that can cause serious illness. This can cause the water to smell like chlorine, but usually, it's fine if you refrigerate it before you drink it.

Interviewer: Water, I know you have a lot of important things to do, and I can't thank you enough for being here.

Drinking Water Source Assessment and Protection Program (DWSAPP)

By the end of 2002, Cal Water had submitted to the California Department of Public Health a 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-ground 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.