



# 2011 Water Quality Report

## Stockton District

1550 West Fremont Street, Suite 100, Stockton, CA 95203  
(209) 547-7900 infoSTK@calwater.com  
www.calwater.com

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 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](http://www.calwater.com).

Ross M. Moilan

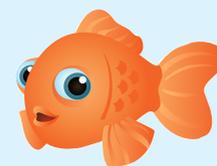
District Manager  
Stockton District

## About Your Water System

Cal Water has provided high-quality water utility services in Stockton since 1926. To meet the needs of our customers, we use a combination of local groundwater and water purchased from the Stockton East Water District, which is imported from the New Melones and New Hogan Reservoirs. The Stockton system includes 23 active wells, three wells being prepared to go online, 17 booster pumps, and 12 storage tanks.

## 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.



## 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](http://www.epa.gov/safewater/lead).

### 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.



# 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 district are considered most vulnerable to the following activities associated with contaminants detected in the water supply: sewer collection systems, agricultural drainage, irrigated crops, fertilizer/pesticide/herbicide application, pesticide/fertilizer/petroleum storage and transfer areas, appliance/electronic repair, junk/scrap/salvage yards, machine shops, metal plating/finishing/fabricating, golf courses, septic tanks,

chemical/petroleum processing or storage, farm chemical distributor/application service, farm machinery repair, automobile body and repair shops, fleet/truck/bus terminals, car washes, road right-of-ways, wells (water supply), parks, RV parks, historic railroad right-of-ways, medical/dental offices/clinics, hospitals, lumber processing/manufacturing, electrical/electronic manufacturing, and hardware/lumber/parts stores.

The water sources are considered most vulnerable to the following activities, for which no associated contaminant has been detected: gas stations, underground storage tanks (confirmed leaking tanks), dry cleaners, railroad yards/maintenance/fueling areas, recreational areas (surface water source), wells (agricultural), photo processing/printing, and storm drain discharge points.

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.

**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.

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

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

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

**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.

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

Visit [www.calwater.com/conservation](http://www.calwater.com/conservation) for information on conservation programs such as:  
 Rebates on qualified appliances  
 Free conservation kits with devices to help you save water at home  
 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](http://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.

$\mu S/cm$  = measure of specific conductance

$n/a$  = not applicable

$ND$  = not detected

$NTU$  = nephelometric turbidity unit

$pCi/L$  = picroCuries 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						Groundwater		Surface water		
	Year Tested	Unit	MCL	PHG (MCLG)	Exceeded Standard?	Range	Average	Result	Source of Substance	
Radiological										
Gross alpha particle activity	2002-2011	pCi/L	15	(0)	No	ND-6	1	ND	Erosion of natural deposits	
Radium 228	2002-2011	pCi/L	5	0.019 (0)	No	ND-1	0.01	ND	Erosion of natural deposits	
Uranium	2002-2011	pCi/L	20	0.43	No	ND-5	2	ND	Erosion of natural deposits	
Inorganic Chemicals										
Aluminum	2009-2011	ppm	1 (0.2)	0.6	No	ND	ND	0.02	Erosion of natural deposits; residue from some surface water treatment processes	
Arsenic <sup>1</sup>	2009-2011	ppb	10	0.004	No	0.1-7	3	ND	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes	
Barium	2009-2011	ppm	1	2	No	ND-0.2	0.1	0.02	Discharges of oil-drilling waste and from metal refineries; erosion of natural deposits	
Chromium	2009-2011	ppb	50	(100)	No	ND-20	3	ND	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits	
Fluoride	2009-2011	ppm	2	1	No	ND-0.2	0.1	ND	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories	
Nitrate (as nitrate) <sup>2</sup>	2011	ppm	45	45	No	ND-30	4	ND	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits	
Selenium	2009-2011	ppb	50	(50)	No	ND-6	0.4	ND	Discharge from petroleum, glass, and metal refineries; erosion of natural deposits; discharge from mines and chemical manufacturers; runoff from livestock lots (feed additive)	
Turbidity (surface water requiring filtration) <sup>3</sup>	2011	NTU	TT	n/a	No	n/a	n/a	0.25	100	Soil runoff
Organic Chemicals										
Carbon tetrachloride <sup>4</sup>	2009-2011	ppt	500	100	No	ND	ND	ND-550	12	Discharge from chemical plants and other industrial activities
Disinfection Byproducts										
Total haloacetic acids	2011	ppb	60	n/a	No	ND-30	20	9-16	10	Byproduct of drinking water chlorination
Total trihalomethanes	2011	ppb	80	n/a	No	ND-70	30	20-40	30	Byproduct of drinking water chlorination
Disinfectant and DBP Precursor										
Chlorine	2011	ppm	4	4	No	0.04-1.5	0.5	0.04-1.5	0.5	Drinking water disinfectant added for treatment
Total organic carbon <sup>5</sup>	2011	ppm	TT	n/a	No	n/a	n/a	ND-2.3	1.0	Various natural and man-made sources
Microbiological										
Total coliform (systems with >40 samples/month) (Total Coliform Rule)	2011	positive samples	5%	(0)	No		0.68%		0.68%	Naturally present in the environment
<b>Other Regulated Substances</b>										
Metals										
Copper	2010	ppm	1.3	0.3	No	0.05	0 of 50	0.05	0 of 50	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
<b>Secondary Drinking Water Standards and Unregulated Compounds</b>										
Inorganic Chemicals										
Calcium	2009-2011	ppm	n/a	n/a	No	10-70	30	6		Erosion of natural deposits
Chloride	2009-2011	ppm	500	n/a	No	6-120	20	3		Erosion of natural deposits; seawater influence
Chromium 6+	2009-2011	ppb	n/a	n/a	No	ND-7	2	n/a		Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Color <sup>6</sup>	2009-2011	Units	15	n/a	No	ND-20	1	6		Naturally occurring organic matter
Hardness	2009-2011	ppm	n/a	n/a	No	40-300	140	20		Erosion of natural deposits
Iron	2009-2011	ppb	300	n/a	No	ND-260	3	ND		Leaching from natural deposits; industrial wastes
Magnesium	2009-2011	ppm	n/a	n/a	No	5-30	15	2		Erosion of natural deposits
Manganese <sup>7</sup>	2009-2011	ppb	50	n/a	Yes	ND-850	20	20		Leaching from natural deposits
Odor	2009-2011	Units	3	n/a	No	ND-1	0.2	ND		Naturally occurring organic matter
pH	2009-2011	Units	n/a	n/a	No	6.5-10	7.3	8.2		Inherent characteristic of water
Sodium	2009-2011	ppm	n/a	n/a	No	20-50	30	6		Erosion of natural deposits; seawater influence
Specific conductance	2009-2011	µS/cm	1600	n/a	No	240-700	400	80		Erosion of natural deposits; seawater influence
Sulfate	2009-2011	ppm	500	n/a	No	3-30	20	8		Runoff/leaching from natural deposits; industrial wastes
Total dissolved solids	2009-2011	ppm	1000	n/a	No	160-430	260	50		Runoff/leaching from natural deposits
Turbidity (groundwater)	2009-2011	NTU	5	n/a	No	ND-0.4	0.1	n/a		Soil runoff
Vanadium	2009-2011	ppb	NL=50	n/a	No	ND-30	20	ND		Erosion of natural deposits; manufacturing of alloys and steel
Organic Chemicals										
Dichlorodifluoromethane (Freon 12)	2009-2011	ppb	NL=1000	n/a	n/a	ND-0.5	0.01	n/a		Refrigerant
1,2,3-Trichloropropane (TCPA) <sup>8</sup>	2009-2011	ppt	NL=5	n/a	n/a	ND-30	0.1	n/a		Pesticide that may still be present in soils due to runoff/leaching; various industrial uses

1 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 USEPA 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.

2 The average nitrate level was 4 ppm, with a maximum level of 30 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.

3 For surface water systems, the treatment technique dictates that the turbidity level of the filtered water be less than or equal to 0.3 NTU in 95% of the measurements taken each month and shall not exceed 1 NTU at any time. 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.

4 Carbon tetrachloride was detected in one sample over the MCL, but compliance with the MCL is based on the average concentration, and your water met this standard.

5 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.

6 There was one sample that exceeded the color secondary maximum contaminant level (SMCL) of 15 units. Compliance is based on a running annual average. SMCLs were established to protect you from unpleasant aesthetic effects, such as color, taste, odor, and/or the staining of plumbing fixtures (e.g., tubs and sinks) and clothing when washed. Exceeding these SMCLs does not pose a health risk.

7 Manganese is present at levels that exceed the SMCL of 50 ppb. The manganese SMCL was set to protect you from unpleasant aesthetic effects, such as color, taste, odor, and the staining of plumbing fixtures and clothing when washed. Exceeding this MCL does not pose a health risk.

8 Currently, there is not an MCL for TCPA, but there is a notification level because it is a constituent of interest. Cal Water is working closely with DPH, conducting extensive monitoring, and investigating acceptable treatment methods. Some people who use water containing TCP in excess of the notification level over many years may have an increased risk of getting cancer, based on laboratory studies.



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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:** Thanks for being here. I understand you've come a long way.

**Water:** Yes, it took some doing to get here. I don't just magically appear at the tap.

**Interviewer:** I'm sorry to ask a sensitive question, but you look so good for someone your age. What's your secret?

**Water:** [Laughs.] That's okay, I'm flattered. Yes, I have been here ever since the earth was formed. I've even been in the presence of dinosaurs! What keeps me looking good? It's the people who take care not to pollute the places where I travel. And of course, going through a filtration plant doesn't hurt either!

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

**Water:** [Getting serious.] 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. Hard water does not pose any health concerns, but some people prefer to use water softeners.



**Interviewer:** Another serious question for you: 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:** 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 ensure good water quality.

**Interviewer:** My Aunt Betty's hot water smelled bad, but her cold water smelled fine – what's going on?

**Water:** Water heaters need to be maintained according to manufacturers' directions, or they can affect water quality.

**Interviewer:** And speaking of odor, 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.