2015 Water Quality Report

Bear Gulch District

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

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Welcome

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

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

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

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

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

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

Sincerely,
Dawn Smithson, District Manager, Bear Gulch District

BEAR GULCH DISTRICT 3525 ALAMEDA DE LAS PULGAS #A MENLO PARK, CA 94025-6558 (650) 561-9709

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Your Water System

Cal Water has provided high-quality water utility services in the communities of Portola Valley, Woodside, Atherton, and portions of Menlo Park, Redwood City, and San Mateo County since 1936. To meet our customers' needs, we use a combination of local surface water and surface water purchased from the City and County of San Francisco (SFPUC). The local surface water, about 11% of our total supply, comes from our 1,200-acre watershed in the Santa Cruz mountains in Woodside; it is collected and treated at our reservoir and treatment plant in Atherton. The remaining 89% of our supply is purchased from the SFPUC.

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

USING WATER WISELY

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

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

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

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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 constituents with equipment so sensitive it can detect levels as low as one part per trillion. In order to maintain the ELAP certification, all of our scientists must pass blind-study proficiency tests each year for every water quality test performed.

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

DIVISION OF DRINKING WATER

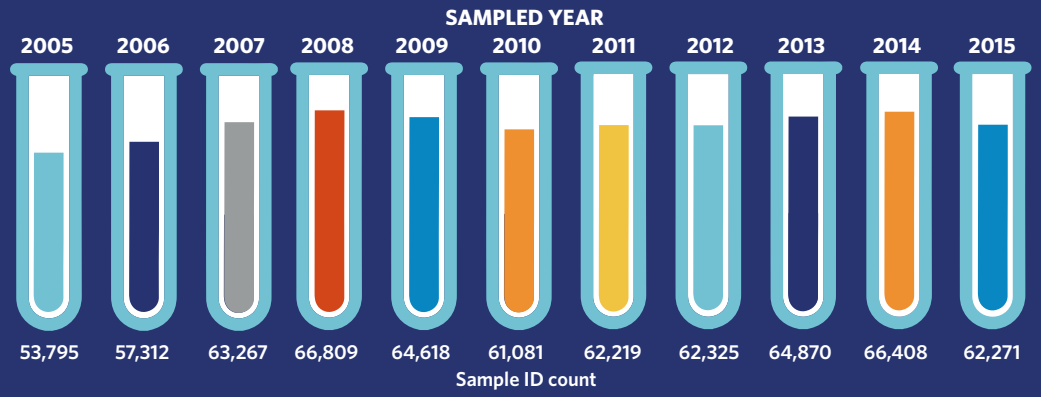
On July 1, 2014, Gov. Jerry Brown transferred the State's Drinking Water Program from the California Department of Public Health to the State Water Resources Control Board's Division of Drinking Water (DDW). The transition was created to consolidate all major water quality programs within a single department.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

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

CROSS-CONNECTION CONTROL

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

Number of samples collected



Protecting Our Watersheds

The SFPUC's annual Hetch Hetchy Watershed Sanitary Survey evaluates the sanitary conditions, water quality, potential contamination sources, and the results of watershed management activities with partner agencies including the National Park Service and U.S. Forest Service.

The SFPUC also conducts sanitary surveys every five years to detect and track sanitary concerns for the local watersheds and the approved standby water sources in Early Intake Watershed, which includes Cherry Lake and Lake Eleanor. The latest five-year surveys were completed in 2011 for the period of 2006–2010. These surveys identified wildlife, stock, and human activities as potential contamination sources. The reports are available for review by calling the San Francisco District office of SWRCB at (510) 620-3474.

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

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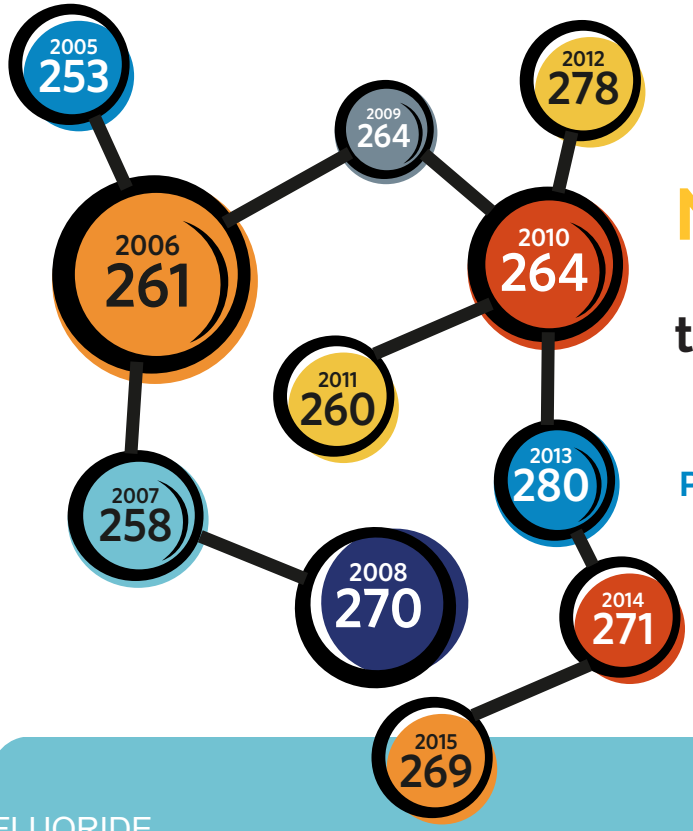

Number of constituents tested annually since 2005

SAMPLED YEAR
PARAMETER COUNT

FLUORIDE

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

In this area, local water is blended with purchased water that has fluoride in it. Show the table in this report to your dentist to see if he or she recommends giving your children fluoride supplements.

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

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Water Hardness

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

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

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

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 United States Environmental Protection Agency (EPA) Safe Drinking Water Hotline at (800) 426-4791.

The sources of drinking water (both tap and bottled) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or human activity.

CONTAMINANTS THAT MAY BE PRESENT IN SOURCE WATER INCLUDE:

Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.

Radioactive contaminants, which can be naturally occurring or the result of oil and gas production and mining activities.

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

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

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About Lead

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

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

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

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

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

If you are concerned about lead in your water, you may wish to have your water tested by a lab. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at www.epa.gov/safewater/lead.

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Key Definitions

Maximum Contaminant Level (MCL)

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

Exceeded Standard

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

Regulatory Action Level (AL)

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

Maximum Contaminant Level Goal (MCLG)

The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the EPA.

Maximum Residual Disinfectant Level (MRDL)

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

Maximum Residual Disinfectant Level Goal (MRDLG)

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

Notification Level (NL)

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

Primary Drinking Water Standard (PDWS)

MCLs and MRDLs for contaminants that affect health, along with their monitoring, reporting, and water treatment requirements.

Public Health Goal (PHG)

The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency's Office of Environmental Health Hazard Assessment without regard to cost or available detection and treatment technologies.

Treatment Technique (TT)

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

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Table Introduction

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

In the table, water quality test results are divided into 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

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2015 Water Quality Table

Primary Drinking Water Standards						Bear Gulch		SFPUC Supply[1]		
Inorganic Chemicals	Year Tested	Unit	MCL (SMCL)	PHG (MCLG)	Exceeded Standard?	Range	Average or Value	Range	Average	Source of Substance
Fluoride	2015	ppm	2	1	**No**	n/a	n/a	ND–0.8	0.3	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
	Year Tested	Unit	MCL (SMCL)	PHG (MCLG)	Exceeded Standard?	Highest Level	Lowest Monthly Percent	Highest Level	Lowest Monthly Percent	Source of Substance
Turbidity (surface water not requiring filtration)[2]	2015	NTU	5	n/a	**No**	n/a	n/a	3	100	Soil runoff
Turbidity (surface water requiring filtration)[3]	2015	NTU	TT	n/a	**No**	0.18	98.4	1	97	Soil runoff
Disinfectant and DBP Precursor	Year Tested	Unit	MRDL	MRDLG	Exceeded Standard?	Range	Average	Range	Average	Source of Substance
Total organic carbon[4]	2015	ppm	TT	n/a	**No**	2.5–5.4	4.0	1.4–5.2	2.1	Various natural and manmade sources

[1] A portion of the water that Cal Water uses to serve our customers in the Bear Gulch District comes from the San Francisco Public Utilities Commission (SFPUC).

[2] The turbidity standard for unfiltered supplies is 5 NTU. Turbidity is a measure of the cloudiness of water. We monitor it because it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.

[3] For surface water systems, the treatment technique dictates that the turbidity level of the filtered water be less than or equal to 0.2 NTU in 95% of the measurements taken each month and 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] 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 over many years.

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2015 Water Quality Table

(Continued)

Disinfection Byproducts	Year Tested	Unit	MCL (SMCL)	PHG (MCLG)	Exceeded Standard?	Distribution system Range	Distribution system Highest Annual Average	Source of Substance
Total haloacetic acids	2015	ppb	60	n/a	**No**	24–50	34	Byproduct of drinking water chlorination
Total trihalomethanes	2015	ppb	80	n/a	**No**	25–63	40	Byproduct of drinking water chlorination
Disinfectant and DBP Precursor	**Year Tested**	**Unit**	**MRDL**	**MRDLG**	**Exceeded Standard?**	**Range**	**Average**	**Source of Substance**
Chloramine	2015	ppm	4	4	**No**	2.8–3.4	3.2	Drinking water disinfectant added for treatment
Microbiological	**Year Tested**	**Unit**	**MCL (SMCL)**	**PHG (MCLG)**	**Exceeded Standard?**	**Highest Monthly**	**Highest Monthly**	**Source of Substance**
Total coliform (systems with >40 samples/month) (Total Coliform Rule)	2015	positive samples	5%	(0)	**No**	ND	1%	Naturally present in the environment

	Year Tested	Unit	MCL (SMCL)	PHG (MCLG)	Exceeded Standard?	Range	Average	Range	Average	Source of Substance
Giardia lamblia[5]	2015	cyst/L	TT	0	**No**	n/a	n/a	ND–0.08	0.01	Naturally present in the environment

[5]Giardia lamblia samples were collected from pre-treated water. Giardia lamblia is inactivated through treatment technique.

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2015 Water Quality Table

(Continued)

Other Regulated Substances

Distribution System

Metals	Year Tested	Unit	AL	PHG (MCLG)	Exceeded Standard?	90th Percentile	Samples > AL	Source of Substance
Copper (Bear Gulch)	2015	ppm	1.3	0.3	**No**	ND	0 of 40	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (Bear Gulch)	2015	ppb	15	0.2	**No**	ND	0 of 40	Internal corrosion of household plumbing systems; discharge from industrial manufacturers; erosion of natural deposits
Copper (Woodside)	2015	ppm	1.3	0.3	**No**	0.17	0 of 26	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (Woodside)[6]	2015	ppb	15	0.2	**Yes**	20	5 of 26	Internal corrosion of household plumbing systems; discharge from industrial manufacturers; erosion of natural deposits

[6]Infants and children who drink water containing lead in excess of the action level may experience delays in their physical or mental development. Children may show slight deficits in attention span and learning abilities. Adults who drink this water over many years may develop kidney problems or high blood pressure. A corrosion control system has been installed to reduce lead and corrosion issues.

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2015 Water Quality Table

(Continued)

Secondary Drinking Water Standards and Unregulated Compounds

Inorganic Chemicals	Year Tested	Unit	SMCL	PHG (MCLG)	Exceeded Standard?	Bear Gulch Range	Bear Gulch Average	SFPUC Supply Range	SFPUC Supply Average	Source of Substance
Boron	2015	ppm	NL=1	n/a	**No**	ND		0.1		Erosion of natural deposits
Calcium	2015	ppm	n/a	n/a	**No**	55		3–18	11	Erosion of natural deposits
Chloride	2015	ppm	500	n/a	**No**	24		ND–16	8	Erosion of natural deposits; seawater influence
Color	2015	Units	15	n/a	**No**	15		ND–5	ND	Naturally occurring organic matter
Hardness	2015	ppm	n/a	n/a	**No**	190		13–65	42	Erosion of natural deposits
Magnesium	2015	ppm	n/a	n/a	**No**	13		0.2–5.6	3.7	Erosion of natural deposits
Odor	2015	TON	3	n/a	**No**	2		ND–1	ND	Naturally occurring organic matter
pH	2015	Units	n/a	n/a	**No**	6–10	9	6.9–10.2	9.3	Inherent characteristic of water
Sodium	2015	ppm	n/a	n/a	**No**	30		2.9–19	13	Erosion of natural deposits; seawater influence
Specific conductance	2015	µS/cm	1600	n/a	**No**	480		34–213	144	Erosion of natural deposits; seawater influence
Sulfate	2015	ppm	500	n/a	**No**	58		1.2–30	15	Runoff/leaching from natural deposits; industrial wastes
Total dissolved solids	2015	ppm	1000	n/a	**No**	300		ND–93	54	Runoff/leaching from natural deposits

SFPUC Surface Water Treatment Citation Notice

Cal Water serves treated water from the San Francisco Public Utilities Commission (SFPUC) to our customers in the Bear Gulch District. Due to an operational error in the San Francisco Regional Water System, the SFPUC failed to filter your drinking water for a brief period on March 3, 2015. The untreated water was blended with fully treated water before reaching any customers, providing some disinfection treatment. DDW issued Cal Water and other water providers that served the untreated water a violation of the Surface Water Treatment Rule's multi-barrier treatment, as filtration and disinfection was not provided to a portion of the surface water.

Inadequately treated water may contain organisms including bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and headaches. As a result of this event, extensive field chlorine sampling and special bacteriological samples were taken, analyzed, and reported to DDW. All tests were negative for the presence of bacteria and indicated that the water quality returned to normal immediately after this water passed through the system. Additionally, all routine coliform monitoring in Bear Gulch were absent for total coliform and E. coli during the month of March 2015.

Cal Water notified affected customers of this incident pursuant to DDW guidelines on April 1, 2015.

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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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