



2012 Annual

Water Quality Report

Larkfield

PWS ID: 4910023



CALIFORNIA
AMERICAN WATER

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

Mahalaga ang impormasyong ito. Mangyaring ipasalin ito.

A Message from California American Water President Rob MacLean

To Our Valued Customer:

California American Water is proud to be your local water service provider and I am pleased to share good news with you about the quality of the water we deliver to your home. Each year, we provide you with our Annual Water Quality Report – and like so many years prior – we continue to supply water that meets or surpasses all state and federal water quality regulations. This means the water we provide to your home, for about a penny a gallon, is high quality and an exceptional value.

This is no small task. Getting water from the source, to treatment and to your home is more complicated than many people imagine. It includes the miles of pipeline hidden below the ground, the facilities that draw water from the source and the treatment and testing of the water.

Our treatment plant operators, water quality experts, engineers, and maintenance crews work around the clock to make sure that water is always there when you need it. Delivering high-quality, reliable water service to your tap also requires significant investment in our water infrastructure to upgrade aging facilities. In 2012 alone, we invested more than \$46 million in water system improvements statewide. These investments are made directly into infrastructure in your community, to upgrade local facilities.

We do this because we believe we're delivering more than just water service. We deliver a key resource for public health, fire protection, the economy and overall quality of life. Our job is to ensure that quality water keeps flowing not only today, but well into the future. It's part of our commitment to you and the communities we serve.

We hope you agree, it's worth every penny and worth learning more about. Please, take the time to review this report. It provides details about the sources and quality of your drinking water using the data from water quality testing conducted in your water system through December 2012. For an electronic copy of this report, visit us on line at: www.amwater.com/caaw/. Thanks for allowing us to serve you.

Sincerely,

Rob G. MacLean
President, California American Water

Continuing our Commitment

Once again, we proudly present our Annual Water Quality Report. This document covers compliance testing completed through December 2012. We are pleased to tell you that our compliance with state and federal drinking water regulations remains exemplary. As in the past, we are committed to delivering the best quality drinking water. To that end, we remain vigilant in meeting the challenges of source water protection, water conservation, and community education while continuing to serve the needs of all our water users.

California American Water, a wholly owned subsidiary of American Water (NYSE: AWK), provides high-quality and reliable water and/or wastewater services to approximately 600,000 people. California American Water, with the support of American Water, has the technical support of a global network and the local knowledge to provide the highest quality water with personal service.

Founded in 1886, American Water is the largest publicly traded U.S. water and wastewater utility company. With headquarters in Voorhees, N.J., the company employs approximately 6,700 dedicated professionals who provide drinking water, wastewater and other related services to an estimated 14 million people in more than 30 states, and



American Water Works Company, Inc., together with its subsidiaries, is referred to as American Water. "California American Water" and the star logo are the registered trademarks of American Water Works Company, Inc. All rights reserved.

WE CARE ABOUT WATER. IT'S WHAT WE DO.®

parts of Canada. More information can be found by visiting www.amwater.com.

What is a Water Quality Report?

To comply with state and U.S. Environmental Protection Agency (USEPA) regulations, California American Water issues a report annually describing the quality of your drinking water. The purpose of this report is to raise your understanding of drinking water and awareness of the need to protect your drinking water sources. In 2012, we conducted tests for over 250 contaminants at numerous sampling points in your water system, all of which were below state and federal maximum allowable levels. This report provides an overview of last year's (2012) water quality. It includes details about where your water comes from and what it contains. The data presented in this report is a combination of data from our nationally recognized main water quality lab and commercial laboratories, all certified in drinking water testing by the California Department of Public Health.

If you have any questions about this report or your drinking water, please call our Customer Service Center toll free at (888) 237-1333.

About Your Water

Water in the Larkfield system is produced from wells that pump water from the Glen Ellen formation. We also purchase water from the Sonoma County Water Agency (SCWA). Purchased SCWA water originates from Ranney Collectors and wells along the Russian River in the Santa Rosa Plain. Drinking water treatment technologies used in your water system include: arsenic, iron, and manganese removal and disinfection (to ensure that it meets bacteriological quality standards). The water supply is distributed for residential and commercial use.

Share This Report

Landlords, businesses, schools, hospitals and other groups are encouraged to share this important water quality information with water users at their location who are not billed customers of California American Water and therefore do not receive this report directly.

Notice of Source Water Assessment

An assessment of the drinking water sources in the Larkfield system was completed in October 2001. Although not associated with any detected contaminants the sources are considered most vulnerable to the following activities: agricultural drainage, sewer collection systems, golf courses, high-density housing, parks, storm drain discharge points, drinking water treatment plants, gas stations, utility stations – maintenance areas, agricultural and irrigation wells, parking lots, and dry cleaners.

A copy of the completed assessment may be viewed at: California Department of Public Health, Sonoma District Office; 50 D Street, Suite 200; Santa Rosa, CA 95404.

How to Contact Us

If you have any questions about this report, your drinking water, or service, please call California American Water Customer Service toll free: (888) 237-1333.

Water Information Sources

California American Water

<http://www.amwater.com/caaw/>

California Department of Public Health

<http://www.cdph.ca.gov/programs/pages/dwp.aspx>

United States Environmental Protection Agency (USEPA)

<http://water.epa.gov/drink/index.cfm>

Safe Drinking Water Hotline: (800) 426-4791

Centers for Disease Control and Prevention

<http://www.cdc.gov/>

American Water Works Association

<http://www.awwa.org/>

Water Quality Association

<http://www.wqa.org/>

National Library of Medicine/National Institute of Health

<http://www.nlm.nih.gov/medlineplus/drinkingwater.html>

Source Water Protection Tips for Consumers

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water sources in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides- they contain hazardous chemicals that can reach your drinking water sources
- Pick up after your pets
- Dispose of chemicals properly; take used motor oil and antifreeze to a recycling center (http://www.recyclenow.org/toxics/house_tox_facility.asp)
- Do not dispose of unused medications down the drain
- Use environmentally friendly soaps and detergents when washing your vehicles

What are the Sources of Contaminants?

The sources of drinking water (both tap water and bottled water) 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.



In order to ensure that tap water is safe to drink, USEPA and the California Department of Public Health (Department) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Department regulations also establish limits for contaminants in bottled water that must provide the same protection for public health.

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, can be naturally-occurring, or may 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 that are by-products 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 may be the result of oil and gas production and mining activities.

Educational Information – Special Health Information

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. You can obtain more information about contaminants and potential health effects by calling the USEPA's Safe Drinking Water Hotline (800) 426-4791.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA and the 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 USEPA's Safe Drinking Water Hotline (800) 426-4791.

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. California American Water is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been idle 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. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (800) 426-4791 or at <http://www.epa.gov/safewater/lead>.

Radon

Radon is a radioactive gas that you cannot see, taste, or smell. It is found throughout the United States. Radon can move up through the ground and into a home through cracks and holes in the foundation. Radon can build up to high levels in all types of homes. Radon can also get into indoor air when released from tap water when showering, washing dishes, or doing other household activities with water. Compared to radon entering the home through soil, radon entering the home through tap water in most cases will be a minor source of radon in indoor air. Radon is a known human carcinogen. Breathing air containing radon can lead to lung cancer. Drinking water containing radon may also cause increased risk of stomach cancer. If you are concerned about radon in your home, test the air inside. Testing is inexpensive and easy. You should pursue radon removal for your home if the level of radon in your air is 4 picocuries per liter of air (pCi/L) or higher. There are simple ways to fix a radon problem that are not too costly. For additional information, call your state radon program (800) 745-7236, the USEPA Safe Drinking Water Hotline (800) 426-4791, or the National Safety Council's Radon Hotline (800) SOS-RADON.

How to Read This Table

California American Water conducts extensive monitoring to ensure that your water meets water quality standards. The results of our monitoring are reported in the adjacent tables. While most of the monitoring was conducted in 2012, certain substances are monitored less than once per year because the levels do not change frequently. For help with interpreting this table, see the "Definition of Terms" section.

Starting with a **Substance**, read across. **Year Sampled** is usually 2012 or the most recent data from a prior year. **MCL** shows the highest level of the substance (contaminant) allowed. **PHG** (or **MCLG**) is the goal level for that substance (this may be lower than what is allowed). **Average Amount Detected** represents the (calculated) average level of that substance from the drinking water sources that California American Water used in 2012. **Range** tells the highest and lowest amounts measured. A "No" under **Violation** indicates regulatory requirements



were met. **Major Sources in Drinking Water** tells where the substance usually originates.

Definition of Terms

AL (Action Level): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

MCL (Maximum Contaminant Level): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible.

MCLG (Maximum Contaminant Level Goal): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the USEPA.

MRDL (Maximum Residual Disinfectant Level): 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.

MRDLG (Maximum Residual Disinfectant Level Goal): 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 using disinfectants to control microbial contaminants.

NA: Not applicable

ND: Not detected

NR: Not reported

Notification Level: The concentration of a contaminant which, if exceeded, requires notification to the California Department of Public Health and the consumer. Not an enforceable standard.

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity of the water.

pCi/L (picocuries per liter): Measurement of the natural rate of disintegration of radioactive contaminants in water (also beta particles).

PDWS (Primary Drinking Water Standard): MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

pH: A measurement of acidity, 7.0 being neutral.

PHG (Public Health Goal): 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.

ppb (parts per billion): One part substance per billion parts water, or micrograms per liter.

ppm (parts per million): One part substance per million parts water, or milligrams per liter.

SMCL (Secondary Maximum Contaminant Level): SMCLs are set to protect the aesthetic properties of drinking water (odor, taste and appearance).

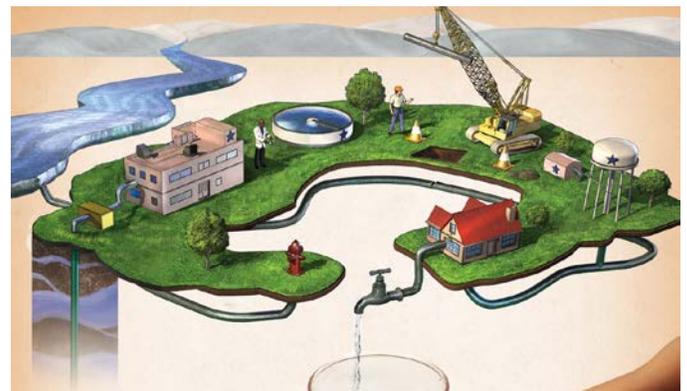
TON: Threshold Odor Number.

Total Dissolved Solids: An overall indicator of the amount of minerals in water.

µmhos/cm (micromhos per centimeter): A measure of electrical conductance.

Water Quality Statement

Last year, as in years past, your tap water met USEPA and state drinking water standards. California American Water vigilantly safeguards its water supplies, and once again we are proud to report that our system did not violate any state or federal water quality standards.



There's a lot more to your water bill than just water.

When you turn on the tap, it's easy to see what your water bill buys. What's not as easy to see is what it takes to bring that water to your home. The miles of pipeline hidden below the ground. The facilities that draw water from the source. The plant where it's treated and tested. The scientists, engineers, and maintenance crews working around the clock to make sure that water is always there when you need it. Your water payments are helping to build a better tomorrow by supporting needed improvements that will keep water flowing for all of us—today and well into the future. All for about a penny a gallon.

 **WE CARE ABOUT WATER. IT'S WHAT WE DO. FIND OUT WHY YOU SHOULD, TOO, at amwater.com.**

© 2012 American Water. "American Water" and the star logo are the registered trademarks of American Water Works Company, Inc. All rights reserved.



Water Quality Results

Regulated Substances

Substance (units)	Year Sampled	MCL	PHG (MCLG)	Larkfield		SCWA		Violation	Major Sources in Drinking Water
				Average Amount Detected	Range Low-High	Average Amount Detected	Range Low-High		
Arsenic (ppb)	2012	10	0.004	4.5	4 - 5	ND	ND	No	Erosion of natural deposits; Runoff from orchards; Glass, and electronics production wastes
Barium (ppm)	2012	1	2	0.1	ND - 0.1	ND	ND	No	Discharges of oil drilling wastes and from metal refineries; Erosion of natural deposits
Fluoride (ppm)	2012	2.0	1	0.16	0.14 - 0.17	0.15	0.11 - 0.20	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Distribution System Monitoring									
Chlorine (ppm)	2012	MRDL = 4.0	MRDLG = 4.0	0.62	0.46 - 0.78	NA	NA	No	Treatment chemical used to disinfect drinking water
Haloacetic Acids (ppb)	2012	60	NA	5.0 ¹	5.0	NA	NA	No	By-product of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb)	2012	80	NA	13.1 ¹	13.1	NA	NA	No	By-product of drinking water disinfection

Secondary Substances

Substance (units)	Year Sampled	SMCL	Larkfield		SCWA		Violation	Typical Source
			Average Amount Detected	Range Low-High	Average Amount Detected	Range Low-High		
Chloride (ppm)	2012	500	13	11 - 15	9.8	5.4 - 26	No	Runoff/leaching from natural deposits; Seawater influence
Manganese (ppb)	2012	50	ND	ND - 31	10.2	ND - 92	No	Leaching from natural deposits
Odor (TON)	2012	3	ND	ND - 14	ND	ND - 7	No	Naturally occurring organic material
Specific Conductance (µmhos/cm)	2012	1,600	360	340 - 400	242	150 - 280	No	Substances that form ions when in water; Seawater influence
Sulfate (ppm)	2012	500	9	7 - 11	10	2 - 14	No	Runoff/leaching from natural deposits; Industrial wastes
Total Dissolved Solids (ppm)	2012	1,000	262	250 - 280	163	140 - 220	No	Runoff/leaching from natural deposits
Turbidity (NTU)	2012	5	ND	ND - 2.3	ND	ND - 2.0	No	Soil runoff

Lead and Copper (tap water samples)

Substance (units)	Year Sampled	Action Level	PHG (MCLG)	Number of Samples	Amount Detected (90 th Percentile)	Homes Above Action Level	Violation	Typical Source
Copper (ppm)	2010	1.3	0.3	20	0.340	0	No	Internal corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead (ppb)	2010	15	0.2	20	2.0	0	No	Internal corrosion of household plumbing systems; Erosion of natural deposits; Discharges from industrial manufacturers



Additional Water Quality Parameters of Interest

This table shows average levels of additional water quality parameters which are often of interest to consumers. The average levels shown here are calculated from the levels detected at each source used to supply water in 2012. Values may vary from day to day. There are no health-based limits for these substances in drinking water.

Additional Constituents

Substance (units)	Year Sampled	Larkfield		SCWA	
		Average Amount Detected	Range Low-High	Average Amount Detected	Range Low-High
Alkalinity as CaCO ₃ (ppm)	2012	160	140 - 190	104	99 - 110
Calcium (ppm)	2012	20	14 - 26	21	14 - 26
Magnesium (ppm)	2012	16	11 - 20	11	2 - 16
pH	2012	7.6	7.4 - 7.7	7.5	7.1 - 8.4
Radon (pCi/L)	2006 & 2012	321	267 - 401	189	103 - 232
Silica (ppm)	2012	75.6	71 - 82	NR	NR
Sodium (ppm)	2012	29	19 - 47	18	8 - 44
Total Hardness as CaCO ₃ (ppm)	2012	126	88 - 154	100	38 - 149
Hexavalent Chromium ² (ppb)	2012	ND	ND - 0.22	0.22	0.31 - 0.41

¹ Highest Running Annual Average

² In January 2011, the USEPA asked public water systems to conduct voluntary hexavalent chromium monitoring so that they may gain a better understanding of the nature and occurrence of the element. The data presented here is from California American Water's voluntary first round of monitoring. Additional monitoring will be conducted between 2013- 2015 during the UCMR3 monitoring period. Both the California Department of Public Health (CDPH) and the USEPA are working toward establishing a regulatory standard for hexavalent chromium in drinking water. For more information on what steps American Water is taking in regard to hexavalent chromium, please visit our website at <http://www.amwater.com/caaw/Ensuring-Water-Quality/Chromium-6>. For more information on the regulatory process, please follow the link to the CDPH's Hexavalent Chromium web page (www.cdph.ca.gov/certlic/drinkingwater/pages/chromium6.aspx)

