# 2013
# Water Quality Report

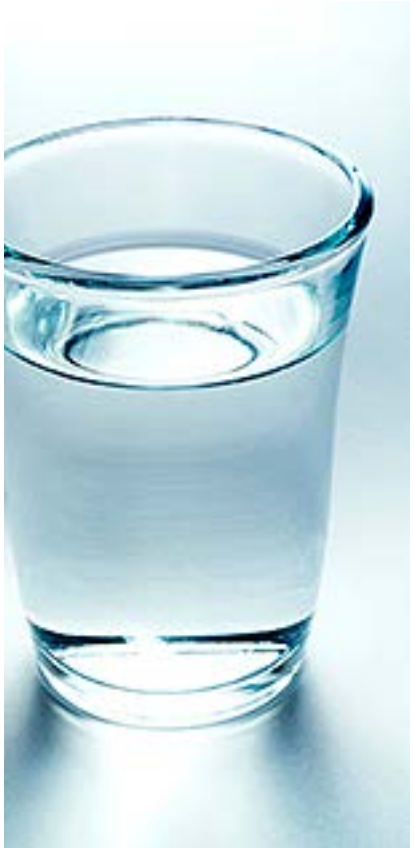
## Kern River Valley District
## South Lake and Squirrel Mountain

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

CALIFORNIA WATER SERVICE CO.

# 2013
# Water Quality Report

## Kern River Valley District
## South Lake and Squirrel Mountain



## Table Of Contents

**WELCOME**

From the Manager

**YOUR WATER SYSTEM**

About Your Water System

Using Water Wisely

**2013 TEST RESULTS**

Inside the Water Quality Laboratory

Unregulated Contaminants

Water Hardness

About Lead

Fluoride

DWSAPP

Possible Contaminants

Key Definitions

Water Quality Table

**MORE INFORMATION**

CALIFORNIA WATER SERVICE CO.

SOLA

# Welcome

At California Water Service Company (Cal Water), protecting the health and safety of our customers is our top priority. In everything we do, we are mindful of our responsibility to our customers and our communities.

We are committed to enhancing the quality of life for those we serve by delivering a reliable supply of high-quality water at affordable rates. We are there when you need us, for uninterrupted service, fire protection, and assistance with water conservation.

Although you probably don't give it a second thought, it takes a lot of effort to get a reliable, clean supply of water to your tap. In addition to maintaining and upgrading the wells, pumps, and pipes needed to get the water from the source to your home, we treat and test the water in our state-of-the-art water quality laboratory, which can now test for compounds as low as three parts per trillion. That's like finding three grains of salt in an Olympic-size swimming pool.

This annual water quality report shows any constituents that were detected in your water in 2013, and how your water compares to state and federal water quality standards. This report also provides additional information about the steps we take to protect your health and safety and answers questions you may have about your water quality.

Besides our focus on water quality and reliability, we conduct our business as environmentally responsibly as possible. As such, this year's report is being presented to you online to save paper; however, it is still easy for you to print out at home if you so choose. Or, if you prefer, you can call us to request a hard copy.

As always, if you have any questions or concerns, you can contact us by phone or email, through our web site, or in person at our Customer Center. For important announcements and other water-related news, please visit www.calwater.com or watch for information in your monthly bill. I also invite you to follow us on Facebook or Twitter, where we regularly post news and announcements and communicate with users.

Sincerely,
**CHRIS WHITLEY**
Local Manager
Kern River Valley District



SOLA

# Your Water System

Cal Water's Kern River Valley District provides high-quality water to customers throughout the Valley with a local supply pumped from rock fissures beneath the ground and water from the Kern River. This report provides results of water quality testing conducted in our South Lake and Squirrel Mountain system.

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

At Cal Water, we are committed to ensuring we have a reliable supply of water for you and your family for generations to come.

In addition to our long-term water supply planning, we offer a range of rebates on high-efficiency devices, conservation programs, and tips to help you save water. How can you help? Take a moment to learn more and take advantage of offerings that are available in your area at www.calwater.com/conservation.

# Inside the 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. Scientists, chemists, and microbiologists test the water for more than 140 contaminants with equipment so sensitive it can detect levels as low as three parts per trillion.

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

Cal Water's lab recently received a new addition called a gas chromatograph/mass spectrometer/mass spectrophotometer system. This device will allow our lab to test for more organic compounds and reduce outside laboratory fees by about $100,000 each year, savings that eventually get passed on to our customers.

# Unregulated Contaminants

Cal Water regularly tests the water for certain constituents that are not currently regulated by the U.S. Environmental Protection Agency (EPA) but are being considered for possible future regulation. In 2012, the EPA revised its Unregulated Contaminant Monitoring Rule, named UCMR 3, to establish a new set of 30 unregulated contaminants to be tested. The monitoring enables the EPA to use scientific data in assessing occurrence and potential effects of these lesser-known constituents. If any of these constituents were detected in your system's water, they are listed in the water quality table of this report.

At Cal Water, we are committed to UCMR 3 monitoring, because protecting our customers' health and safety is our highest priority. More information about UCMR 3 and the list of contaminants being monitored, visit water.epa.gov/lawsregs/rulesregs/sdwa/ucmr/ucmr3.

SOLA

# Water Hardness

Water's "hardness" is a measure of the amount of minerals (generally calcium and magnesium) 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.

The current water quality table for your service area shows an average hardness of 268 ppm. 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.

# About Lead

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.

## Fluoride

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

More information about fluoridation, oral health, and related issues can be found on the California Department of Public Health (CDPH) web site at www.cdph.ca.gov/certlic/drinkingwater/Pages/Fluoridation.aspx. For general information on water fluoridation, visit us online at www.calwater.com.

## DWSAPP

By the end of 2002, Cal Water had submitted to the CDPH a Drinking Water Source Assessment and Protection Program (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 source in your system is considered most vulnerable to septic systems, pesticide/fertilizer/petroleum storage, grazing, agricultural drainage, irrigated crops, fertilizer/pesticide/herbicide application, and stormwater drainage.

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

SOLA

# 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 EPA's 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 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, 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.

# 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 California Department of Public Health (CDPH). 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 United States Environmental Protection Agency (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 the CDPH 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.

# 2013 Water Quality Table

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.

## Primary Drinking Water Standards

| Radiological | Year Tested | Unit | MCL (SMCL) | PHG (MCLG) | Exceeded Standard? | Range | Average | Source of Substance |
|---|---|---|---|---|---|---|---|---|
| Gross alpha particle activity | 2006–2012 | pCi/L | 15 | 0 | **No** | ND–24 | 8.8 | Erosion of natural deposits |
| Radium 226 | 2007–2012 | pCi/L | 5 | 0.05 | **No** | ND–1 | 0.2 | Erosion of natural deposits |
| Radium 228 | 2006–2007 | pCi/L | 5 | 0.019 | **No** | ND–1 | 0.1 | Erosion of natural deposits |
| Uranium | 2007–2013 | pCi/L | 20 | 0.43 | **No** | 5–13.8 | 9.2 | Erosion of natural deposits |
| **Inorganic Chemicals** | **Year Tested** | **Unit** | **MCL (SMCL)** | **PHG (MCLG)** | **Exceeded Standard?** | **Range** | **Average** | **Source of Substance** |
| Arsenic | 2011–2013 | ppb | 10 | 0.004 | **No** | ND–5.4 | 4 | Erosion of natural deposits; runoff from orchards; glass and electronics production wastes |
| Barium | 2011–2013 | ppm | 1 | 2 | **No** | ND–0.1 | 0.03 | Discharges of oil-drilling waste and from metal refineries; erosion of natural deposits |
| Fluoride | 2011–2013 | ppm | 2 | 1 | **No** | 0.2–0.4 | 0.3 | Erosion of natural deposits |
| Nitrate[1] | 2013 | ppm | 45 | 45 | **No** | 24–28 | 26 | Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits |

[1]The average nitrate level was 26 ppm, with a maximum level of 28 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.

**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 |

SOLA

# 2013 Water Quality Table (Continued)

| Disinfection Byproducts | Year Tested | Unit | MCL (SMCL) | PHG (MCLG) | Exceeded Standard? | Range | Result | Source of Substance |
|---|---|---|---|---|---|---|---|---|
| Total trihalomethanes | 2013 | ppb | 80 | n/a | No | 1.1–2.5 | 1.8 | Byproduct of drinking water chlorination |

| Disinfectant and DBP Precursor | Year Tested | Unit | MRDL | MRDLG | Exceeded Standard? | Range | Average | Source of Substance |
|---|---|---|---|---|---|---|---|---|
| Chlorine | 2013 | ppm | 4 | 4 | No | 0.2–2.1 | 1.1 | Drinking water disinfectant added for treatment |

## Other Regulated Substances

| Metals | Year Tested | Unit | AL | PHG (MCLG) | Exceeded Standard? | 90th Percentile | Samples > AL | Source of Substance |
|---|---|---|---|---|---|---|---|---|
| Copper[2] | 2013 | ppm | 1.3 | 0.3 | Yes | 1.49 | 6 of 41 | Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives |
| Lead[3] | 2013 | ppb | 15 | 0.2 | No | 2.34 | 1 of 41 | Internal corrosion of household plumbing systems; discharge from industrial manufacturers; erosion of natural deposits |

## Secondary Drinking Water Standards and Unregulated Compounds

| Inorganic Chemicals | Year Tested | Unit | SMCL | PHG (MCLG) | Exceeded Standard? | Range | Average | Source of Substance |
|---|---|---|---|---|---|---|---|---|
| Boron | 2012 | ppm | NL=1 | n/a | No | 0.4–0.6 | 0.5 | Erosion of natural deposits |
| Calcium | 2011–2013 | ppm | n/a | n/a | No | 68–97 | 81 | Erosion of natural deposits |
| Chloride | 2011–2013 | ppm | 500 | n/a | No | 26–52 | 35 | Erosion of natural deposits; seawater influence |
| Hexavalent chromium | 2011 | ppb | n/a | 0.02 | No | ND–1.2 | 1 | Discharge from steel and pulp mills and chrome plating; erosion of natural deposits |
| Hardness (total) as $CaCO_3$ | 2011–2013 | ppm | n/a | n/a | No | 220–320 | 268 | Erosion of natural deposits |
| Magnesium | 2011–2013 | ppm | n/a | n/a | No | 9.8–27 | 15 | Erosion of natural deposits |
| Odor threshold value @ 60 C | 2013 | Units | 3 | n/a | No | ND–2 | 1 | Naturally occurring organic matter |

[2]In the South Lake System, the 90th percentile copper level was 1.49 ppm, which exceeds the action level of 1.3 ppm. This means that 10% of the samples collected contained copper in excess of 1.3 ppm. Copper is an essential nutrient, but some people who drink water in excess of the action level over a relatively short amount of time may experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years may suffer liver or kidney damage. People with Wilson's disease should consult their personal doctor. We are making changes to the current treatment to prevent further copper corrosion.
[3]Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. You may wish to have your water tested and/or flush your tap for 30 seconds to two minutes before using tap water. Additional information is available from the USEPA Safe Drinking Water Hotline (1-800-426-4791).

**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 |

# 2013 Water Quality Table (Continued)

| Inorganic Chemicals | Year Tested | Unit | SMCL | PHG (MCLG) | Exceeded Standard? | Range | Average | Source of Substance |
|---|---|---|---|---|---|---|---|---|
| pH measured in the field | 2013 | STD U | n/a | n/a | **No** | 6.2–7.8 | 6.8 | Inherent characteristic of water |
| Phosphate (ortho) measured in the field | 2013 | ppm | n/a | n/a | **No** | 0.14–3.3 | 1.1 | Added for corrosion control |
| Sodium | 2011–2013 | ppm | n/a | n/a | **No** | 48–150 | 83 | Erosion of natural deposits; seawater influence |
| Specific conductance (E.C.) | 2013 | US | 1600 | n/a | **No** | 660–880 | 756 | Erosion of natural deposits; seawater influence |
| Sulfate | 2011–2013 | ppm | 500 | n/a | **No** | 55–130 | 94 | Runoff/leaching from natural deposits; industrial wastes |
| Total dissolved solids | 2013 | ppm | 1000 | n/a | **No** | 460–600 | 510 | Runoff/leaching from natural deposits |
| Turbidity measurement in laboratory | 2011–2013 | NTU | 5 | n/a | **No** | ND–1.1 | 0.3 | Soil runoff |

**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 |

# For More Information, Visit **www.calwater.com**

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.

## Other links to check out:

» Lead in water

» Water treatment and disinfection

» Protecting the water supply

» Pharmaceuticals in water

» Chromium-6

» Drought news

» Conservation tips, rebates, and programs

SOLA