

Water Info and Saving Guide

Be Water Wise!

Fresh, clean drinking water is yours to use whenever you need to. While our groundwater and surface water resources are renewable, depending on weather conditions, wise water use helps to ensure that we'll have an adequate supply of high quality water. Remember to be "Water Wise" whenever and wherever you can.

Did You Know?

- There is about the same amount of water on Earth now as there was millions of years ago.
- Nearly 97 percent of all the world's water is salty or otherwise undrinkable. Another 2 percent is locked in ice caps and glaciers. That leaves 1 percent for all our needs.
- Water regulates the Earth's temperature. It also regulates the temperature of the human body.
- The average total home water use for each person in the Redlands is about 90 gallons a day.
- More water is used in the bathroom than any other place in the home.
- A dripping faucet can waste up to 2,000 gallons of water a year.

You Can Help Conserve Our Water Resources

- Turn off the faucet in your bathroom while you brush your teeth.
- Take shorter showers. (Get a timer and time yourself.)
- Don't let the water run constantly while you're washing or rinsing dishes.
- Fill a pitcher with tap water and put it in the fridge, rather than running the water every time you want a cold drink.
- Clean sidewalks and driveways with a broom—not the water hose.
- Water your lawn in the early morning to avoid evaporation.
- Repair dripping faucets.
- Place a layer of mulch around trees and plants to retain water.

Water Audits

Log on to redlandswater.org to schedule a water audit of your residence or business, free of charge. Learn about ways to eliminate water waste and save money.



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2007 Consumer Confidence Report

From **January 1, 2006** to **December 31, 2006**, the city of Redlands conducted over 14,000 water quality tests from samples taken at various locations throughout the water system in accordance with state and federal laws. The following tables list only those contaminants that were detected. It is important to note, that the presence of these contaminants, as detected in the water, does not necessarily indicate that the water poses a health risk.

Primary Drinking Water Standards

Chemical / Constituent	MCL, (AL), or [MRDL]	PHG, {MCLG}, (AL), [MRDLG]	Redlands Water	Range of Detection	Typical Source Of Contaminant
Microbiological Contaminants					
Heterotrophic Plate Count	TT	N/A	78	1 - 800	Naturally in environment
Inorganic Contaminants					
Aluminum (ppm)*	1	0.6	0.06	ND - 0.14	Erosion of natural deposits
Fluoride (ppm)*	2	1	0.68	0.3 - 0.95	Erosion of natural deposits
Nitrate as NO3 (ppm)	45	45	5.2	0.87- 23	Runoff and leaching from fertilizer use; leaching from septic tanks and sewers
Nitrate + Nitrite [as N] (ppm)*	10	10	3.25	2.3 - 4.5	
Nitrate as Nitrogen (ppm)	10	10	1.2	0.2 - 5.2	
Chromium (ppm)*	5	4	1	ND - 6.4	Erosion of natural deposits
Synthetic Organic Contaminants					
Dibromochloropropane DBCP (ppt)*	200	1.7	1.0	ND - 16	Banned nematocide in soils due to leaching from former use on citrus trees
Disinfection By-products, Disinfectant Residuals, Disinfection By-product Precursors					
Total Trihalomethanes (ppb)	80	N/A	20.6	ND - 39.5	By-product of drinking water chlorination
Halocetic Acids (ppb)	60	N/A	13.3	ND - 27.7	By-product of drinking water disinfection
Chlorine (ppm)	[4]	[4]	0.43	ND - 0.98	Drinking water disinfectant added for treatment
Total Organic Carbon (ppm)	TT	N/A	1.1	0.5 - 2.6	Various natural and man made sources
Radioactive Contaminants					
Gross Alpha Activity (pCi/L)	15	N/A	4.7	3.2 - 8.5	Erosion of natural deposits
Gross Beta Activity (pCi/L)	50	N/A	4	3 - 5	Erosion of natural deposits
Total Tritium (pCi/L)	20,000	N/A	214	190 - 277	Decay of natural and man made deposits
Radium 226 + 228 (pCi/L)	5	N/A	0.93	0.8 - 1.11	Erosion of natural deposits
Strontium 90 (pCi/L)	8	8	1.4	0.8 - 2.7	Erosion of natural deposits
Uranium (pCi/L)	30	0.5	5	ND - 12	Erosion of natural deposits

Terms Used in This Report

Maximum Contaminant Level (MCL): 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. Secondary MCLs are set to protect 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 US Environmental Protection Agency (US EPA).

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.

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

N/A: Not Applicable

Maximum Residual Disinfectant Level (MRDL): The level of disinfectant added for water treatment that may not be exceeded at the customer's tap.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a disinfectant added for water treatment below which there is no known or expected health risk. MRDLGs are set by the US EPA.

Units of Measure:

Parts per million (ppm) or milligrams per liter (mg/L).

Parts per billion (ppb) or micrograms per liter (ug/L).

ppt: Parts per trillion, or nanograms per liter (ng/L).

pCi/L: Picocuries per liter (a measure of radiation).

Micromhos: A measure of conductivity in water.

Redlands Water: Water source site weighted average for water supplied to customers.

Range of Detection: The range (lowest to highest) of detected contaminants.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

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

Secondary Drinking Water Standards (Aesthetic Standards)

Chemical / Constituent	MCL	Redlands Water	Range of Detection	Typical Source Of Contaminant
Aluminum (ppb)*	200	64	ND - 140	Erosion of natural deposits
Foaming Agents MBAS (ppb)*	500	10	ND - 50	Municipal and industrial waste discharges
Iron (ppb)*	300	9	ND - 300	Leaching from natural deposits; industrial wastes
Odor -Threshold (units)	3	1	ND - 3	Naturally occurring organic materials
Total Dissolved Solids TDS - (ppm)*	1,000	237	110 - 370	Runoff / leaching of natural deposits
Specific Conductance (micromhos)*	1,600	373	200 - 580	Substances that form ions in water
Chloride (ppm)*	500	11	ND - 34	Runoff / leaching of natural deposits
Sulfate (ppm)*	500	26	12 - 51	Runoff / leaching of natural deposits
Manganese (ppb)*	50	3	ND - 41	Leaching from natural deposits
Color (units)	15	0.39	ND - 3	

Sampling Results for Sodium and Hardness

Chemical / Constituent	MCL	PHG	Redlands Water	Range of Detection	Typical Source Of Contaminant
Sodium (ppm)*	N/A	N/A	19	7 - 72	Generally found in ground and surface water
Hardness (ppm)*	N/A	N/A	144	65 - 230	Generally found in ground and surface water

Additional Monitoring (State Regulated & Unregulated Contaminants with no MCLs)

Chemical / Constituent	Action Level, [Notification Level]	Redlands Water	Range of Detection
Trichlorotrifluoroethane (ppb)	N/A	3.2	3.1 - 3.4
Bromide (ppb)*	N/A	20	ND - 120
Perchlorate (ppb)	[6]	2.7	ND - 4.4
Vanadium (ppb)*	50	2	ND - 12
Radon (pCi/L)	N/A	725	127 - 1,942
Calcium (ppm)	N/A	46	46-46
Magnesium (ppm)*	N/A	9.4	3.9 - 13
Potassium (ppm)*	N/A	2.9	1.6 - 3.8
Bicarbonate (ppm)	N/A	105	51 - 160
Alkalinity (ppm)	N/A	87	42 - 130
pH (units)	N/A	7.7	7.7 - 7.7
Silica (ppm)*	N/A	17	15 - 23
Hexavalent Chromium (ppb)	N/A	0.4	ND - 6.9
Langelier Index at 25C	N/A	0.1	0.1 - 0.1



* Data reported are from 2005. The State allows monitoring for some contaminants less than once per year because these contaminants do not change frequently. Some of the data, though representative, is more than one year old.

Important Facts From the US EPA About Drinking Water

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 from human activity.

Contaminants that may be present in source water include:

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

Inorganic contaminants, such as salts and metals, that can be naturally occurring or result from urban storm water 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 storm water 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 storm water 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 water is safe to drink, the United States Environmental Protection Agency (US EPA) and the California Department of Health Services (DHS) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems.

DHS regulations also establish limits for contaminants in bottled water to provide the same protection for public health.



Additional Information About Drinking Water

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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the US EPA's Safe Drinking Water Hotline (1-800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised people such as people with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly persons, and infants can be particularly at risk from infections. For these people, advice should be sought about drinking water, from their health care providers. US EPA/Centers for Disease Control (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 (1-800-426-4791).

Sampling Results Showing Treatment of Surface Water Sources

Turbidity is a measure of the cloudiness of water. We monitor it because it is a good indicator of the effectiveness of our filtration system. Turbidity results which meet performance standards are considered to be in compliance with filtration requirements.

Treatment Technique	Conventional Filtration	Turbidity Performance Standard No. 1 (TPS No. 1): The turbidity level of the combined filter effluent shall be less than or equal to 0.3 NTU in 95% of the measurements taken each month and shall not exceed 1.0 NTU for more than one hour. Additionally, the turbidity level of the combined filter effluent shall not exceed 1.0 NTU for more than eight consecutive hours while the plant is operating.
Lowest Monthly % of Samples Meeting TPS No. 1	100%	
Highest single turbidity measurement during 2006	1.2	
Number of Violations to Any Surface Water Treatment Regulations	None	

Lead and Copper Analysis Results

The Municipal Utilities Department performs an analysis of lead and copper in the water of residential homes in our service area every three years. The last test was conducted in 2005. While neither lead nor copper have been detected in our water sources, when water comes in contact with plumbing containing lead or copper, they can become a contaminant. Of 30 samples tested, none exceeded the Action Level (AL) for lead or copper. The 90th percentile value for lead in the testing was 5.3 ppb as compared to an AL of 15 ppb, while the 90th percentile value for copper testing was .61 ppm as compared to an AL of 1.3 ppm. The next round of voluntary residential testing will be in 2008. Our customers will be sent letters asking for volunteers to have their tap water tested, free of charge.

Investing In Our Future

Challenges facing Redlands Municipal Utilities are similar to those faced by other utilities in the area; water supply, aging infrastructure, and population growth. At some point over the past year you have probably driven past a construction zone or seen the city crews working on or operating facilities. This is because we have been aggressively working to keep the city's water supplies and infrastructure maintained and ready to meet all customer water service demands. To do this, 4.5 miles of 8, 10, 12, 16, and 24 inch new replacement pipeline has been installed in 2006 as part of the Capital Improvement Program.



In addition, 3 miles of 20 inch pipeline that was installed in 1960 that delivers treated water from the Tate Water Treatment Plant, is scheduled for replacement due to its age and condition. The new pipeline which will be upsized to a 24 inch pipeline, will cost nearly \$4.2 million and take nearly three years to complete.

The Supervisory Control and Data Acquisition (SCADA) system at the Hinckley Water Treatment Plant is being upgraded. The upgrades will allow the plant to operate more efficiently and allow water treatment staff to better monitor and control plant operations.

Two 200,000 gallon replacement storage reservoirs, which serve the 2600 and 2340 foot elevation pressure zones have been constructed at a cost of approximately \$1 million. Two well pumps and motors in the North Orange Well Field are being replaced at an estimated cost of approximately \$300,000.



Water Source Protection

Redlands Municipal Utilities is committed to protecting its water sources from possible contamination. Source water assessments have been completed for all of our drinking water sources.

The assessments help to identify the vulnerability of drinking water supplies to contamination from typical human activities.

These assessments are intended to provide the basic information necessary for us to develop programs to protect our drinking water supplies.

Possible contaminants can originate from: agricultural drainage, urban runoff, septic systems, sewer collection systems, junk/scrap/salvage operations, crop irrigation, underground storage tanks at automobile gas stations, and illegal dumping.

Anyone interested in receiving a copy of the source water assessment may contact Pat McKasy, Regulatory Compliance Officer-Water at (909) 798-7588 ext. 2.

You can do your part to protect our precious water sources by properly disposing of household hazardous wastes.

To find out how to properly dispose of hazardous wastes so they do not contaminate the groundwater, please phone our Customer Service Office at (909) 798-7529. Or visit redlandssolidwaste.org

Serving Redlands with High Quality Drinking Water For Over 95 Years

Each year the Consumer Confidence Report is published by Redlands Municipal Utilities to keep you, our customers, up-to-date about water quality issues related to your drinking water.

Each day, Redlands Municipal Utilities employees are hard at work maintaining their commitments to provide you with reliable, high quality water that meets all state and federal standards for drinking water quality.

If you have a question about the quality of your drinking water, please contact the Water Quality Control Office or Customer Service at 798-7516.

You may also express comments on water quality issues to the Redlands City Council. Their regular meetings are held in the Council Chambers at 35 Cajon Street in Redlands the first and third Tuesdays of each month.

For more than 95 years, we have been responsible for providing high quality drinking water to its service areas in the Redlands and Mentone communities.

Today, a system consisting of 28 potable wells, 39 booster pumps, 38 water transfer stations, two water filtration plants, and 16 reservoirs with 53 million gallons of storage capacity, continue to meet our water service commitments. A series of pipelines extending over 400 miles provides service to 3,000 fire hydrants and more than 21,000 metered accounts in our nearly 46 square mile service area.

By supplying a blend of local groundwater, local surface water, and imported water from the State Water Project, we are able to meet the daily demands of our customers. Local groundwater is pumped from wells in Redlands, Mentone, Yucaipa, and Mill Creek, while surface water is diverted from Mill Creek and the Santa Ana River. Imported water is delivered from Northern California through State Water Project facilities owned by the San Bernardino Valley Municipal Water District.

More than 80,000 residents in Redlands, Mentone, the Crafton area, San Timoteo Canyon, and a small part of San Bernardino depend on the city of Redlands to provide water to their homes and businesses.

During 2006, all of the 10 billion gallons of water that was delivered to our customers met all state and federal drinking water quality standards.

***This report contains important information about your drinking water.
Translate it or speak with someone who understands it.***

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

Please contact us if you have questions regarding the information presented in this report.

**City of Redlands
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www.redlandswater.org

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Questions and Answers about Perchlorate

What is perchlorate?

Perchlorate is an inorganic chemical that is used in solid rocket propellants, fireworks, and a variety of industrial uses.

What is the concern about perchlorate in drinking water?

Perchlorate is known to interfere with the uptake of iodine in the thyroid gland. This can effect the production of thyroid hormones needed for healthy growth and development of unborn and newborn children, as well as normal metabolism in adults.

What is the regulatory status of perchlorate in drinking water?

Currently, there is no maximum contaminant level (MCL) for perchlorate. After extensive review of various scientific data, the United States Environmental Protection Agency (USEPA) set a reference dose level for perchlorate at 24.5 ppb.

The California Department of Health Services (DHS) set a notification level for perchlorate of 6 parts per billion (ppb) until an MCL is in place. Notification levels are health-based levels established by DHS for contaminants in drinking water for which MCLs have not been set. These are used as precautionary measures for contaminants that may be considered candidates for establishment of MCLs, but have not completed the regulatory standard setting process.

Does Redlands' drinking water comply with all regulatory standards for perchlorate?

Yes! The average level of perchlorate detected in Redlands' water in 2006 was below the DHS notification level of 6 parts per billion (ppb). *Note:* 6 ppb is about the equivalent of 3 drops of water in an Olympic size swimming pool.

Is the City of Redlands actively working to remove or reduce perchlorate from its drinking water?

Yes! Since discovering perchlorate in some of its water wells ten years ago, Municipal Utilities has been working hard to develop and construct water facilities to reduce or eliminate perchlorate in the drinking water it produces.

Efforts in recent years have included shutting down contaminated wells, or treating water from these wells to remove all detectable amounts of perchlorate.

In 2004, under a cooperative agreement with Lockheed-Martin Corporation, Lockheed installed a new state-of-the-art ion exchange water purification system to remove perchlorate from Rees Well.



Treatment facilities like this are being used to test perchlorate treatment methods.

Information about Radon: Radon is a naturally occurring gas formed from the normal radioactive decay of uranium. In our latest testing year, 2006, radon was detected in the finished water supply in 22 out of 24 samples tested. There are no federal regulatory limits prescribed for radon levels in drinking water. However, the pathway to exposure for radon occurs primarily due to its presence in the air. Exposure over a long period of time to air containing radon, may cause adverse health effects.