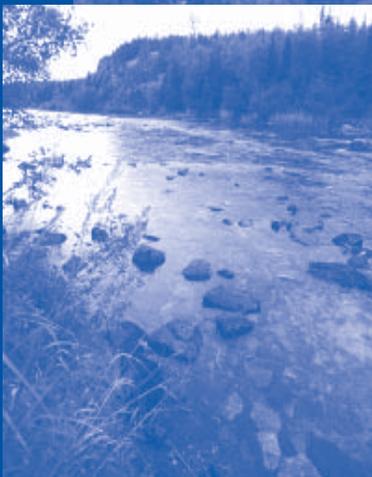


# *Redlands*

**Municipal Utilities Department**



*2004 Consumer Confidence Report*

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

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

We welcome your comments regarding water issues in Redlands at our City Council Meetings held in the Council Chambers at 35 Cajon Street in Redlands the first and third Tuesdays of each month.



**P.O. Box 3005  
35 Cajon Street - Suite 15-A  
Redlands, CA 92373 (909) 798-7698**

[www.redlandswater.org](http://www.redlandswater.org)

## Protecting our Water Resources

The City of Redlands Municipal Utilities Department is committed to protecting its water sources from contamination. In 2002, the City completed source water assessments 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 facilitate and provide the basic information necessary for the Redlands Municipal Utilities Department to develop a program 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, and underground storage tanks at automobile gas stations.

Copies of the complete report are available by contacting Pat McKasy, Regulatory Compliance Officer-Water at (909) 798-7698.

As a resident of the City of Redlands you too can do your part to protect our precious water resources by properly disposing of household and commercial hazardous wastes.

To find out how to properly dispose of these wastes so they do not contaminate the groundwater, please phone our Solid Waste Division at (909) 798-7529.

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For additional information on water quality in the City of Redlands you may contact any of the following people at (909) 798-7698.

Gary Phelps, Municipal Utilities Director

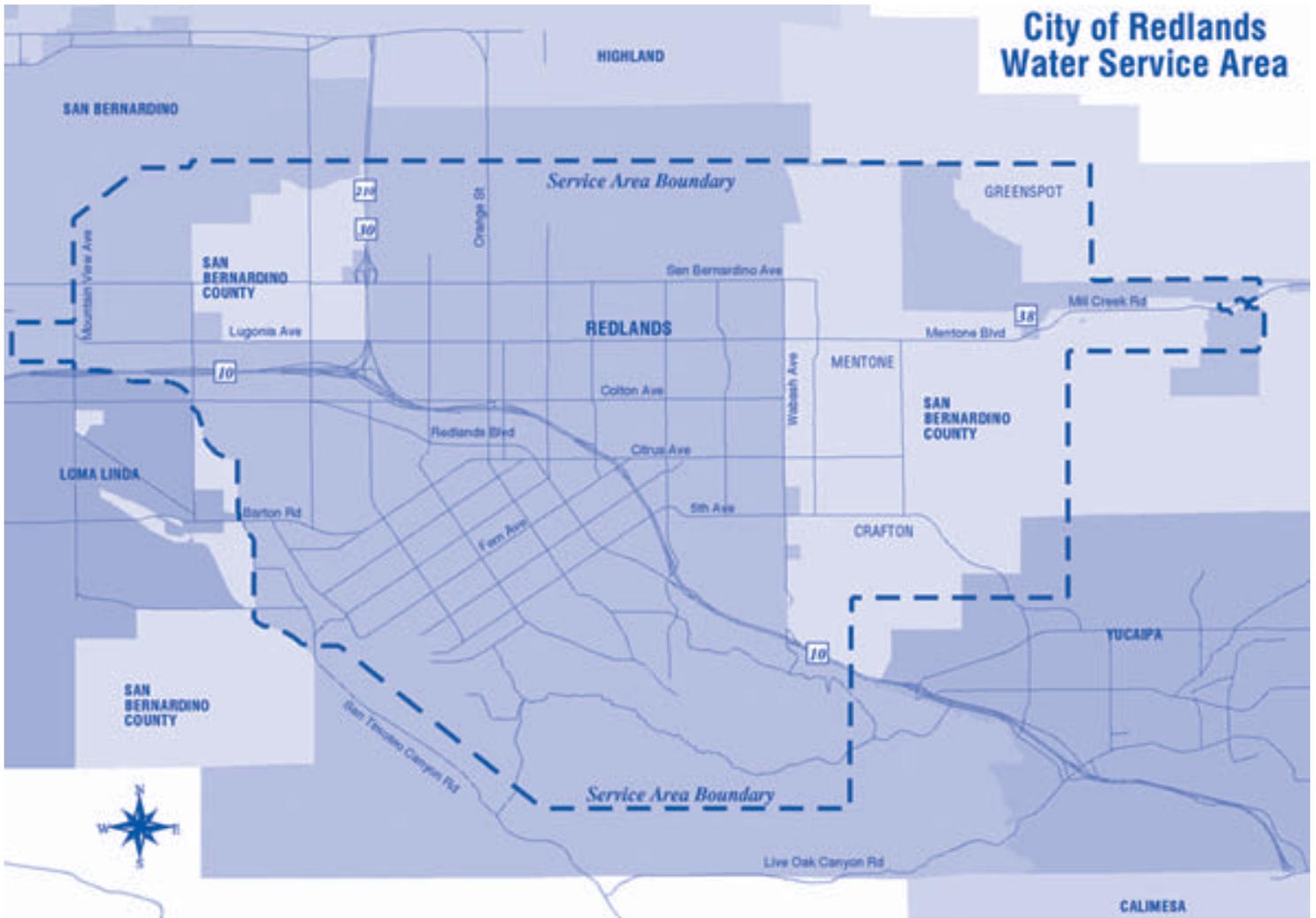
Douglas Headrick, Chief of Water Resources

Dave Commons, Water Operations Manager

John Morales, Water Quality Control Officer

Pat McKasy, Regulatory Compliance Officer-Water

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



## Serving the Redlands Community with High Quality Drinking Water

For more than 90 years, the City of Redlands has been in charge of providing high quality drinking water to its service areas in the Redlands and Mentone communities.

Today, a system consisting of 17 potable wells, 39 booster pumps, 38 water transfer stations, two water filtration plants, and 15 reservoirs with 51 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 20,000 metered accounts in our nearly 46 square mile service territory.

More than 75,000 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.

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.

During 2004, the City delivered just over 9 billion gallons of water to our customers, which met or surpassed all state and federal drinking water quality standards.

From January 1, 2004 to December 31, 2004, the City of Redlands conducted over 26,000 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 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
<b><u>Inorganic Contaminants</u></b>					
Aluminum (ppm)	1	0.6	0.04	ND - 0.3	Erosion of natural deposits
Fluoride (ppm)	2	1	0.60	0.18 - 1.5	Erosion of natural deposits
Nitrate as NO3 (ppm)	45	45	8.0	2.3 - 39	Runoff and leaching from fertilizer use; leaching from septic tanks and sewers
Nitrate as Nitrogen (ppm)	10	10	1.7	0.54 - 5.9	
<b><u>Synthetic Organic Contaminants</u></b>					
Dibromochloropropane DBCP (ppt)	200	1.7	1.0	ND - 24.6	Banned nematocide in soils due to leaching from former use on citrus trees
<b><u>Disinfection By-products, Disinfectant Residuals, Disinfection By-product Precursors</u></b>					
Total Trihalomethanes TTHMs (ppb)	80	N/A	36	ND - 112	By-product of drinking water chlorination
Halocetic Acids (ppb)	60	N/A	12	ND - 32	By-product of drinking water disinfection
Chlorine (ppm)	[4]	[4]	0.41	0.01 - 1.19	Drinking water disinfectant added for treatment
<b><u>Radioactive Contaminants</u></b>					
Gross Alpha Activity (pCi/L)	15	N/A	2	ND - 12	Erosion of natural deposits
Gross Beta Activity (pCi/L)	50	N/A	0.04	ND - 4.8	Erosion of natural deposits
Total Tritium (pCi/L)	20,000	N/A	6	ND - 682	Decay of natural and man-made deposits
Combined Radium (pCi/L)	5	N/A	0.002	ND - 0.053	Erosion of natural deposits
Uranium (pCi/L)	20	0.5	6.8	ND - 14.6	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 for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

**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. MRDLs are set by the US EPA.

**Secondary Drinking Water Standards (SDWS):** MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SDWSs do not affect health at the MCL levels.

**ND:** Not detectable at testing limit.

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

**ppb:** Parts per billion 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 system weighted average for water supplied to customers.

**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 which 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	45	ND - 290	Erosion of natural deposits
Foaming Agents MBAS (ppb)	500	3	ND - 20	Municipal and industrial waste discharges
Iron (ppb)	300	10	ND - 240	Leaching from natural deposits; industrial wastes
Odor -Threshold (units)	3	0.9	ND - 1.0	Naturally occurring organic materials
Turbidity - NTU (units)	5	0.1	0.1 - 0.4	Soil runoff
Total Dissolved Solids TDS - (ppm)	1,000	210	170 - 350	Runoff / leaching of natural deposits
Specific Conductance (micromhos)	1,600	332	260 - 650	Substances that form ions in water
Chloride (ppm)	500	16.9	7.9 - 52	Runoff / leaching of natural deposits
Sulfate (ppm)	500	29	20 - 58	Runoff / leaching of natural deposits

## 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	23	7.5 - 86	Generally found in ground and surface water
Hardness (ppm)	N/A	N/A	127	96 - 220	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	
Boron (ppb)	1,000	10	ND - 110	
Perchlorate (ppb)	[6]	0.6	ND - 5.8 *	<i>* For more information on perchlorate issues in Redlands please see page 6.</i>
Vanadium (ppb)	50	3	ND - 13	
Radon (pCi/L)	N/A	410	ND - 1,900	
Calcium (ppm)	N/A	42	31 - 71	
Magnesium (ppm)	N/A	8.9	5.7 - 14	
Potassium (ppm)	N/A	2.6	1.6 - 4.6	
Bicarbonate (ppm)	N/A	147	88 - 220	
Alkalinity (ppm)	N/A	119	72 - 180	
PH (units)	N/A	7.4	7.1 - 8.0	
Silica (ppm)	N/A	19	ND - 34	

## Important Facts About Drinking Water From the US EPA

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 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, 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 United States Environmental Protection Agency (US EPA) and the California Department of Health Services (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.



### 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 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 can be particularly at risk from infections. These people should seek advice 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

Treatment Technique is a required process intended to reduce the level of a contaminant in drinking water.\* Turbidity (measured in NTU) is a measurement of the cloudiness of water and is a good indicator of water quality and filtration performance. Turbidity results which meet performance standards are considered to be in compliance with filtration requirements. \*\*

Treatment Technique*	Conventional Filtration	Turbidity Performance Standards** (TPS): 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 2004	0.4	
Number of Violations to Any Surface Water Treatment Regulations	None	

## Lead and Copper Analysis Results

The Municipal Utilities Department performs a lead and copper water analysis of residential homes in Redlands every three years. We will conduct testing again in 2005. While lead and copper have not been detected in our water sources, when water comes in contact with plumbing lead and copper can become detectable. Of the 32 samples tested in 2002, none exceeded the water quality AL for lead or copper. The 90th percentile for lead and copper were non-detectable.

## 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 body metabolism in adults.

### ***What is the regulatory status of perchlorate in drinking water?***

Currently, there is no maximum contaminant level (MCL) for perchlorate. The United States Environmental Protection Agency (EPA) is at this time undertaking efforts to determine if regulation of perchlorate in drinking water would represent a meaningful opportunity for reducing risks to human health. They are reviewing a variety of scientific data to make their decision.

Meanwhile, 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 non-regulatory, health-based levels established by the 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 undergone or completed the regulatory standard setting process.

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

YES! In fact, the average level of perchlorate detected in Redlands' water in 2004 was well 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 perchlorate from drinking water?***

YES! Since discovering perchlorate in some of its water wells eight years ago, the City of Redlands Municipal Utilities Department has been hard at work developing its water facilities to reduce and eliminate the need to deliver water with any detectable perchlorate.

Efforts in recent years have included shutting down highly contaminated wells, or treating the water from these wells to remove all detectable amounts of perchlorate. Water from less contaminated wells is also blended with uncontaminated sources to reduce perchlorate to below detectable levels.

In 2003 the City of Redlands drilled two new high volume, perchlorate-free water wells to replace water supply capacity lost due to perchlorate contamination, and increased production capacity from its surface water treatment facility to optimize the use of perchlorate-free water sources.

And, under a cooperative agreement with Lockheed-Martin Corporation in 2004, Lockheed installed a new state-of-the-art ion exchange water purification system to remove perchlorate from a City well. Additionally, the City of Redlands has been working closely with scientists from Penn State University who are looking to find alternative methods to treat water contaminated with perchlorate.

*Additional information on perchlorate and DHS notification levels are available online at: [www.dhs.ca.gov](http://www.dhs.ca.gov)*

## More Information on Redlands Water:

**Total Trihalomethanes (TTHMs)** are a by-product of drinking water chlorination. The MCL for TTHMs of 80 ppb is based upon a running average of water quality tests results taken throughout the entire year. While Redlands water had a range of concentration from non-detectable to 112 ppb, its running average for TTHMs in 2004 was 36 ppb, well below the MCL of 80 ppb and in full compliance with all state and federal water quality standards.

**Information about Radon** We constantly monitor the water supply for various contaminants including radon, which is a naturally occurring gas formed from the normal radioactive decay of uranium. We have detected radon in the finished water supply in 14 out of 16 samples tested. There is no federal regulation for radon levels in drinking water. Exposure over a long period of time to air transmitting radon may cause adverse health effects.

# BE WATER WISE

## LEARN HOW TO CONSERVE & SAVE!

Fresh, clean drinking water is yours to use whenever you want - but not to waste, it's too valuable! While storms over the past year have helped to replenish our groundwater and surface water resources, it is always a good idea to use water wisely and conserve it whenever, and wherever you can. Your water wise efforts will help to ensure that our water resources will remain abundant for this and future generations. Plus, the less water you use the more you can save on your bill! Below are just some of the ways you can use water wisely and conserve!

### ***In the Bathroom***

- Check toilets for leaks
- Install Ultra Low Flush Toilets (ULFTs)
- Turn off the water when shaving or brushing teeth
- Install water-saving shower heads and flow restrictors

### ***In the Laundry Room & Kitchen***

- Wash full loads of laundry and dishes
- Choose water-saving cycles on appliances
- Check pipes, faucets, and fittings for leaks
- Install water-saving aerators or low flow restrictors

### ***Outside***

- Plant drought-resistant trees and plants
- Water your lawn only when needed
- Water your lawn long enough to deeply soak the roots
- Water at the right time - Early morning is best
- Don't let the hose run while washing cars, animals, etc.
- Use a broom, rake, or leaf blower to clean driveways
- Check for leaks in pipes, sprinkler systems
- Adjust your sprinklers, avoid watering on windy days

For additional conservation tips and information on wise water use visit our web site at: [redlandswater.org](http://redlandswater.org)



## **Why are there air bubbles in my water?**

Tap water that appears cloudy could simply mean there is air in the water. Some well sources produce water with dissolved air that remains pressurized in the distribution pipelines until reaching the consumer. When the water flows from the faucet, the air is released and may form tiny air bubbles.

After filling a glass, these bubbles will slowly rise and disappear. If your water remains cloudy or particles are found, please give us a call at 798-7516.

City of  
**Redlands**  
Municipal Utilities Department  
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