



# Water Quality Report 2008

## An important message about drinking water sources from the USEPA

*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 land or through the ground, it dissolves naturally occurring minerals, and in some cases radioactive materials, 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, 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 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 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 be the result of oil and gas production and mining activities.

**Regulations:** In order to ensure that tap water is safe to drink, U.S. Environmental Protection Agency and the California Department of Public Health (CDPH) 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.

**Important Health Information:** Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 people, and infants, can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hot Line. 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 USEPA's Safe Drinking Water Hot line at 1(800) 426-4791.

**Water Sources:** Riverside's water is groundwater from wells in the Bunker Hill Basin and Riverside Basin. RPU and other water agencies completed a source-water assessment study for Bunker Hill Basin in San Bernardino in October 2002 and the Riverside Basin in 2000. The source water assessment reports were submitted to the CDPH. Copies are available at Riverside Public Utilities, Water Resources.

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

### SPANISH

Este reporte contiene información muy importante sobre su agua potable. Tradúzcalo a hablar con alguien que lo entienda bien. Para más información por favor llame (951) 782-0330.

### CHINESE

此份有关你的食水报告, 内有重要资料和讯息, 请找他人为你翻译及解释清楚。

### JAPANESE

この情報は重要です。  
翻訳を依頼してください。

### TAGALOG

Mahalaga ang impormasyong ito.  
Mangyaring ipasalin ito.

### VIETNAMESE

Chi tiết này thật quan trọng.  
Xin nhờ người dịch cho quý vị.

### KOREAN

이 안내는 매우 중요합니다.  
본인을 위해 번역인을 사용하십시오.

# SECONDARY STANDARDS

## AESTHETIC STANDARDS

	STATE MCL	RIVERSIDE PUBLIC UTILITIES AVERAGE	RIVERSIDE PUBLIC UTILITIES RANGE	SOURCES IN DRINKING WATER
Odor Threshold	3	1	1 - 2	Naturally present in environment
Chloride	500 ppm	27 ppm	20 - 30 ppm	Naturally present in environment
Sulfate	500 ppm	73 ppm	68 - 76 ppm	Naturally present in environment
Total Dissolved Solids "TDS"	1,000 ppm	371 ppm	320 - 426 ppm	Naturally present in environment
Specific Conductance	1,600 µmho	589	542 - 652	Substances form ions in water
Corrosivity	Noncorrosive	0.5	0.1 - 0.5	Natural or industrially influenced balance of hydrogen, carbon, and oxygen in the water; affected by temperature and other factors
pH Units	NS	7.8	7.5 - 8.2	Naturally present in environment
Hardness (CaCO <sub>3</sub> )	NS	206 ppm (12 gpg)	160 - 243 ppm	Naturally present in environment
Alkalinity (CaCO <sub>3</sub> )	NS	165 ppm	129 - 202 ppm	Naturally present in environment
Sodium	NS	38 ppm	34 - 40 ppm	Naturally present in environment
Calcium	NS	67 ppm	52 - 76 ppm	Naturally present in environment
Potassium	NS	3 ppm	3 - 4 ppm	Naturally present in environment
Magnesium	NS	11 ppm	7 - 13 ppm	Naturally present in environment

## Monitoring Report 2008

Riverside Public Utilities tests for more than 200 possible contaminants in our water system. This report provides data from sampling conducted in calendar year 2008. Only those contaminants detected in our water system are listed here. For a listing of additional chemical tests, please contact Environmental Services Coordinator Adam Ly at (951) 351-6331.

## Water Resources

Riverside met 99.9% of its water needs from groundwater resources, while receiving only 0.1% from Western Municipal Water District (WMWD). Water quality information for imported water is available on request from WMWD.

## Water Compliance & Monitoring Program

In 2008, we collected more than 16,200 water samples to test for a variety of potential contaminants. Samples were collected at water sources, along transmission pipelines, throughout the distribution system, including reservoirs and booster stations, and treatment plants to ensure water quality from its source to your meter.

The Utility uses state certified independent laboratories to perform water tests. This ensures that an independent set of experts test your water from the source to your meter. Last year, we spent more than \$700,000 on compliance laboratory costs.

## Riverside Public Utilities 2008 Water Sampling Data

7,609 - Samples collected to test for bacteria.

3,551 - Samples collected for source and system compliance and monitoring.

5,054 - Samples collected for treatment plant compliance and monitoring.

16,214 - Total samples collected.

We are pleased to report that our water met or surpassed all state and federal drinking water quality standards in 2008. We welcome you to attend our Board of Public Utilities meetings at 3901 Orange Street, in Riverside, held at 8:30 a.m. on the first and third Fridays of each month. You can also visit our website at [RiversidePublicUtilities.com](http://RiversidePublicUtilities.com) for more information.

# RIVERSIDE PUBLIC UTILITIES 2008 WATER QUALITY REPORT

## PRIMARY STANDARDS: MANDATORY HEALTH-RELATED STANDARDS

CONTAMINANT	STATE MCL	STATE PHG	RIVERSIDE PUBLIC UTILITIES AVERAGE	RIVERSIDE RANGE	SOURCES IN DRINKING WATER
<b>MICROBIOLOGICAL</b> Total Coliform (P/A) (a)	5%	0%	0%	0 - 0.5%	Naturally present in environment
<b>CLARITY</b> Turbidity	0.5 NTU	NS	0.1 NTU	0.1 - 0.3 NTU	Naturally present in environment
<b>REGULATED ORGANIC</b> Total Trihalomethanes "TTHMs"	80 ppb	NS	4 ppb	ND - 9.2 ppb	By-product of drinking water chlorination
Halocetic Acids "HAA5"	60 ppb	NS	ND	ND - 1.6 ppb	By-product of drinking water chlorination
Chlorine	4 ppm	4 ppm	0.5 ppm	0.1 - 1.2 ppm	Drinking water disinfectant added for treatment
Control of DBP precursors Total Organic Carbon "TOC"	Treatment Requirement	NS	0.3 ppm	ND - 0.8 ppm	Various natural and man-made sources
Dibromochloropropane "DBCP"	200 ppt	1.7 ppt	ND	ND - 20 ppt	Banned nemotacide still present due to past agricultural activities
<b>REGULATED INORGANIC</b> Arsenic	10 ppb	4 ppt	2 ppb	<2 - 3 ppb	Erosion of natural deposits
Chromium (total)	50 ppb	NS	ND	ND - 12 ppb	Discharge from steel and pulp mills, chrome plating, and erosion of natural deposits.
Fluoride	2 ppm	1.0 ppm	0.6 ppm	0.5 - 0.7 ppm	Naturally present in environment
Nitrate (NO <sub>3</sub> )	45 ppm	45 ppm	24 ppm	19 - 31 ppm	Naturally present in environment
Perchlorate	6 ppb	6 ppb	ND	ND	Inorganic chemical used in variety of industrial operations.
<b>RADIOLOGICAL</b> Gross Alpha	15 pCi/L	NS	7 pCi/L	<3-14 pCi/L	Erosion of natural deposits
Uranium	20 pCi/L	0.5 pCi/L	11 pCi/L	8 - 15 pCi/L	Erosion of natural deposits
<b>LEAD/COPPER (AL)</b> (90% Household Tap)					
Copper (b)	1,300 ppb	170 ppb	380 ppb	<50 - 750 ppb	Internal corrosion of home plumbing
<b>ADDITIONAL MONITORING</b> Radon	NS	NS	254 pCi/L	181 - 311 pCi/L	Naturally present in environment
<b>REGULATED CONTAMINANTS WITH NO MCLS</b>	<b>NOTIFICATION LEVEL</b>	<b>STATE PHG OR MCLG</b>	<b>AVERAGE</b>	<b>RIVERSIDE RANGE</b>	
Chromium VI	NS	NS	2.3 ppb	2.1 - 2.8 ppb	
Vanadium	NL 50 ppb	NS	7 ppb	6 - 10 ppb	
Boron	NL 1000 ppb	NS	122 ppb	110 - 130 ppb	

# Definitions

**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 (EPA).

**Public Health Goal (PHG)** The level of a contaminant in drinking water below which there is no known or expected health risk. PHGs are set by the California EPA.

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

**Primary Drinking Water Standard (PDWS)** MCLs and MRDLs 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 consumer'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 risk to health. MRDLs are set by the US EPA.

**Parts Per Million (ppm)** One part per million corresponds to one minute in two years or one penny in \$10,000.

**Parts Per Billion (ppb)** One part per billion corresponds to one minute in 2,000 years or one penny in \$10,000,000.

**Parts Per Trillion (ppt)** One part per trillion corresponds to one minute in two million years or one penny in \$10,000,000,000.

**Picocuries Per Liter (pCi/L)** A measure of the radioactivity in water.

**Nephelometric Turbidity Units (NTU)** A measure of suspended material in water.

**Micromhos (µMHOS)** A measure of conductivity (electric current) in water.

**NL** Notification level.

**ND** Not detected at the detection limit for reporting.

**NS** No standard.

**GPG** Grains per gallon of hardness (1 gpg = 17.1 ppm).

**<** Less than the detectable levels.

**(a)** Results of all samples collected from the distribution system during any month shall be free of total coliforms in 95 percent or more of the monthly samples.

**(b)** The Lead and Copper Rule requires that 90 percent of samples taken from drinking water taps in program homes must be below the action levels. In 2007, 59 homes participated in the monitoring program. No lead was detected in the samples collected.

# Additional Regulatory Information

**Fluoride** - The California Department of Public Health (CDPH) has established an "optimal" fluoride level for water at 1 ppm. Riverside has naturally occurring fluoride levels at 0.6 ppm and is not planning to add fluoride to its water by artificial means.

**Lead** - 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. Riverside Public Utilities is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. 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. Information on lead in drinking water, testing methods, and steps you can take to take minimize exposure is available from the Safe Drinking Water Hotline or at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

**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 an 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 ask advice about nitrate levels from your health care provider.

Riverside provides drinking water that on average is at 24 ppm and has a range from 19 ppm to 31 ppm during the year. CDPH has set the MCL for nitrate at 45 ppm. Riverside has 56 wells that are blended to comply with drinking water standards. The city conducts extensive monitoring of the blend operations. Seasonal variation in demand and flow, in addition to system maintenance and repair, impact the nitrate levels during the year.

**Perchlorate** - Perchlorate is a regulated drinking water contaminant in California. The maximum contaminant level for perchlorate is 6 parts per billion. Perchlorate salts were used in solid rocket propellants and other industrial applications.

**Radon** - Radon is a naturally occurring gas formed from the normal radioactive decay of uranium. It is a colorless, odorless, tasteless, chemically inert, and radioactive gas found virtually everywhere on earth. The USEPA recommends that homeowners take remedial action if the indoor air radon level in their home exceeds 4.0 picocuries. The radon in indoor air attributable to water is minor compared to contributions from the soil, or even the outdoor air. For information on radon, call the EPA's radon hotline at 1-800-SOS-RADON.

## Monitoring Unregulated Contaminants

This monitoring helps USEPA to determine where certain contaminants occur and whether the contaminants need to be regulated. Data is available at [www.epa.gov/ogwdw](http://www.epa.gov/ogwdw).