

TERMS USED IN THIS REPORT

Level 1 Assessment: A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

Level 2 Assessment: A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

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).

Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that the 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.

N/A: Not applicable

ND: Not detectable at testing limit.

NS: No standards

NT: Not tested

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

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, reporting and water treatment requirements.

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

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

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

Nephelometric Turbidity Unit (NTU): Nephelometric Turbidity Unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

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

Units of Measure: Parts per million (ppm) or milligrams per liter (mg/L). Parts per billion (ppb) or Micrograms per liter (µg/L). Parts per Trillion (ppt) or nanograms per liter (ng/L). Picocuries per liter (pCi/L); Picocuries per liter is a measurement of the radioactivity in water. Unions/cm: A measure of conductivity in water.

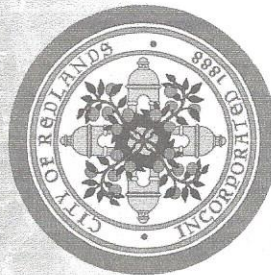
Units	Equivalence
mg/L – milligrams per liter	ppm – parts per million
µg/L – micrograms per liter	ppb – parts per billion
ng/L – nanograms per liter	ppt – parts per trillion
pg/L – picograms per liter	ppq – parts per quadrillion
	1 second in 11.5 days
	1 second in nearly 32 years
	1 second in nearly 32,000 years
	1 second in nearly 32,000,000 years

Contact Us:

CITY OF REDLANDS, MUNICIPAL UTILITIES & ENGINEERING DEPARTMENT
P.O. BOX 3005 • 35 CAJON STREET • SUITE 15A • REDLANDS, CA 92373

(909)798-7698

CITYOFREDLANDS.ORG/MUED



CITY OF REDLANDS

CONSUMER CONFIDENCE REPORT

2019

WATER SOURCES

The water system consists of over 450 miles of underground pipelines with approximately 23,000 service connections. The City owns and operates 22 potable wells and 12 non-potable wells located throughout the Bunker Hill, Mill Creek, and Yucaipa groundwater basins. The water is stored throughout a system of 18 reservoirs. Wells provide nearly 40% of the City's water supply. The remainder of its water supply is produced from two surface water treatment plants. The Hinckley Water Treatment Plant utilizes water from the Santa Ana River and the Tate Water Treatment Plant utilizes water from the Mill Creek watershed. Imported water from the State Water Project, purchased from the San Bernardino Valley Municipal Water District, is periodically used to meet peak demand through the Hinckley and Tate Water Treatment Plants. In 2018, the City delivered over 22,461 acre feet of water to its customers with a peak day delivery of over 35 million gallons.

WATER SOURCE PROTECTION

The City of Redlands is committed to protecting our water sources from possible contamination. Source water assessments were completed in 2002 for all of our drinking water supplies. You can view the source water assessments at our office (location listed on back page). The assessments help to identify the vulnerability of drinking water supplies. These assessments are intended to provide 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 should contact:

Kevin Watson, Utilities Operations Manager
(909) 798-7588 ext. 1

You can do your part to protect our water sources by properly disposing of household hazardous waste. To find out how to properly dispose of hazardous waste, so it does not contaminate groundwater, please call or visit:

City of Redlands-Customer Service
(909) 798-7529
cityofredlands.org/qol/recycling

IMPORTANT FACTS FROM THE US EPA ABOUT DRINKING WATER

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 stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, that 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 byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.
- Radioactive contaminants, that can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (U.S. EPA) and the State Water Resources Control Board (State Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. State Board regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

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 U.S. 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. U.S. 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).

PUBLIC PARTICIPATION OPPORTUNITIES

City Council meetings are held on the first and third Tuesdays of every month and the Municipal Utilities / Public Works Commission (MUPWC) meetings are held the first Monday of even numbered months. All items that are heard by the City Council or the MUPWC are placed on the required agendas and posted at City Hall located at 35 Cajon Street, Redlands, California.

SURFACE WATER TREATMENT PERFORMANCE									
Contaminant	Violation	Year	MCL [TT]	PHG (MCLG)	Level Found	Range	Source	Number of Samples Taken in 2018: 10,605	
Turbidity 1	No	2018	TT = 1 NTU	N/A	0.13 NTU	.02 - .13	Soil runoff	<i>Note: Sample results listed below are from the most recent sampling year. The State allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.</i>	
			TT = 95% of samples < 0.3 NTU		100%	N/A			
PRIMARY DRINKING WATER STANDARDS									
MICROBIOLOGICAL CONSTITUENTS									
Contaminant	Violation	Year	MCL (Level I/II) [TT]	PHG (MCLG)	Distribution System	Treated Surface Water Supply	Source	Health Effects	
Total Coliform	No	2018	5%	0%	2%	0%	Naturally present in the environment	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.	
Revised Total Coliform Rule	No	2018	[TT]	N/A	2%	0%			
INORGANIC CONSTITUENTS									
Contaminant	Violation	Year	MCL	PHG (MCLG)	Groundwater Supply Average	Groundwater Supply Range	Year	Source Surface Water Supply Average	Source Surface Water Supply Range
Aluminum mg/L	No	2017	1	0.6	ND	ND	2018	0.25	ND -.67
Asbestos (MFL)	No	NT	7	7	NT	NT	2016	0.07	ND -.20
Chromium [Total] µg/L	No	2017	50	-100	0.9	ND- 14	2018	ND	ND
Fluoride mg/L	No	2017	2	1	0.7	.31 -.96	2018	0.44	ND -.82
Nitrate (as N) mg/L**	No	2018	10	10	1.3	ND - 5.8	2018	0.38	ND -.63
Perchlorate µg/L	No	2018	6	1	1.3	ND - 3.9	2018	ND	ND
									Perchlorate is an inorganic chemical used in solid rocket propellant, fireworks, explosives, flares, matches, and a variety of industries. It usually gets into drinking water as a result of environmental contamination from historic aerospace or other industrial operations that used or use, store, or dispose of perchlorate and its salts.
									Perchlorate has been shown to interfere with uptake of iodide by the thyroid gland, and to thereby reduce the production of thyroid hormones, leading to adverse effects associated with inadequate hormone levels. Thyroid hormones are needed for normal prenatal growth and development of the fetus, as well as for normal growth and development in the infant and child. In adults, thyroid hormones are needed for normal metabolism and mental function.

LEAD AND COPPER RULE						
Contaminant	Violation	Year	MCL	PHG	90th percentile	No. of sites
Copper mg/L	No	2017	AL=1.3	0.3	0.15	33 Sites
Lead ug/L *	No	2017	AL=15	0.2	N/D	33 Sites
Number of Schools Requesting Lead Sampling 2018						
Source						
Health Effects						

SYNTHETIC ORGANIC CONTAMINANTS INCLUDING PESTICIDES AND HERBICIDES						
Contaminant	Violation	Year	MCL	PHG	Groundwater Supply Average	Groundwater Supply Range
1,2,3-Trichloropropane [TCP] (ug/L)	No	2018	0.005	0.0007	ND	ND
Treated Surface Water Supply Average						
Treated Surface Water Supply Range						
Source						
Health Effects						

DISINFECTION BY-PRODUCTS, DISINFECTION RESIDUALS, DISINFECTION BY-PRODUCT PRECURSORS						
Contaminant	Violation	Year	MCL (MRDL) [TT]	PHG (MRDLG)	Distribution System Average	Distribution System Range
Total Trihalomethanes ug/L	No	2018	80	N/A	18	ND - 53
Halocetic Acids ug/L	No	2018	60	N/A	11	ND - 32
Chlorine as Cl2 mg/L	No	2018	4	4	0.6	.2 - 1.5
Total Organic Carbon mg/L	No	2018	[TT]	N/A	1	.5 - 2.1
Source						
Health Effects						

*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. The City of Redlands 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 2 minutes before using water for drinking or cooking. [Optional: If you do so, you may wish to collect the flushed water and reuse it for another beneficial purpose, such as watering plants.] 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 or at <http://www.epa.gov/lead>.

**Nitrate in drinking water at levels above 10 mg/L 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 10 mg/L 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 from your health care provider.

INFORMATION ABOUT RADON

Radon is a naturally occurring gas formed from the normal radioactive decay of uranium. In 2007 testing, radon was detected in our finished water supply. There are no regulatory limits prescribed for radon levels in drinking water – the pathway to radon exposure occurs primarily through its presence in the air. Exposure over a long period of time to air containing radon may cause adverse health effects.

If you are concerned about radon in your home, testing is inexpensive and easy. For more information, call your State radon program (1-800-745-7236), the National Safe Council's Radon Hotline (1-800-SOS-RADON), or the EPA Safe Drinking Water Act Hotline (1-800-426-4791).

RADIOACTIVE CONSTITUENTS									
Contaminant	Violation	Year	MCL	PHG (MCLG)	Groundwater Supply Average	Groundwater Supply Range	Year	Treated Surface Water Supply Average	Treated Surface Water Supply Range
Gross Alpha pCi/L	No	2017	15	0	4.7	ND - 12.1	2018	ND	ND
Gross Beta pCi/L	No	2014	50	0	3.8	N/A	2018	N/A	N/A
Health Effects									
Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.									
Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta and photon emitters in excess of the MCL over many years may have an increased risk of getting cancer.									

SECONDARY DRINKING WATER STANDARDS									
Constituent	Violation	Year	Secondary MCL	Groundwater Supply Average	Groundwater Supply Range	Year	Typical Source of Contaminant		
Chloride mg/L	No	2017	500	47	4.5 - 50	2018	Naturally-occurring organic materials		
Color (units)	No	2018	15	0.01	ND - 5.0	2018	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives		
Foaming Agents [MBAS] µg/L	No	2017	500	60	ND - 80	2018	Leaching from natural deposits; industrial wastes		
Odor - Threshold TON	No	2018	3	0.1	ND - 1.5	2018	Industrial discharges		
Specific Conductance µS/cm	No	2018	1600	387	250 - 640	2018	Soil runoff		
Sulfate mg/L	No	2017	500	28	15 - 58	2018	Runoff/leaching from natural deposits; industrial wastes		
Total Dissolved Solids [TDS] mg/L	No	2018	1000	229	170 - 290	2018	Substances that form ions when in water; seawater influence		
Turbidity [NTU] ²	No	2018	5	0.05	.1 - 1.0	2018	Runoff/leaching from natural deposits; seawater influence		

1 Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

2 Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.

SAMPLING RESULTS FOR SODIUM AND HARDNESS						
Constituent	Year	MCL / PHG (MCLG)	Groundwater Supply Average	Groundwater Supply Range	Treated Surface Water Supply Average	Treated Surface Water Supply Range
Sodium mg/L	2018	N/A	23	6 - 84	36	7 - 53
Hardness mg/L	2018	N/A	149	91 - 222	119	90 - 160
ADDITIONAL MONITORING FOR UCMR 3						
Contaminant	Year	Notification Level	Groundwater Supply Average	Groundwater Supply Range	Treated Surface Water Supply Average	Treated Surface Water Supply Range
Chlorate µg/L	2014	800	89	58 - 120	109	48 - 120
Molybdenum µg/L	2014	N/A	2.6	ND - 5.6	2.4	ND - 7.5
Strontium mg/L	2014	N/A	98	ND - 210	131	ND - 360
Vanadium	2014	50	1.7	ND - 3.4	1.6	ND - 5.9
ADDITIONAL MONITORING FOR UCMR 4						
Contaminant	Year	Notification Level	Groundwater Supply Average	Groundwater Supply Range	Treated Surface Water Supply Average	Treated Surface Water Supply Range
Total Microcystins	2018	N/A	NT	NT	ND	ND
Anatoxin-A	2018	N/A	NT	NT	ND	ND
Cylindrospermopsin	2018	N/A	NT	NT	ND	ND
ADDITIONAL MONITORED CONSTITUENTS WITH NO MCLs						
Constituent	Year	Notification Level	Groundwater Supply Average	Groundwater Supply Range	Treated Surface Water Supply Average	Treated Surface Water Supply Range
Alkalinity mg/L	2017	N/A	136	97 - 170	108	67 - 149
Bicarbonate mg/L	2017	N/A	136	97 - 170	109	67 - 150
Calcium mg/L	2017	N/A	46	28 - 67	33	20 - 47
Langlier Index at 25 C	2017	N/A	N/A	N/A	0	-0.3 - 1
Magnesium mg/L	2017	N/A	9.0	6 - 13	9.0	7 - 11
pH	2018	N/A	8.0	7.4 - 8.3	8.1	7.8 - 8.4
Potassium mg/L	2017	N/A	2.8	ND - 5.1	1.8	1.4 - 2.1

This report contains important information about your drinking water. Please contact the City of Redlands at 35 Cajon Street, Suite 15A, Redlands CA 92373 or 909-798-7698 for assistance.

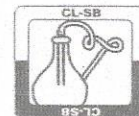
Este informe contiene información muy importante sobre su agua para beber. Favor de comunicarse City of Redlands a 909-798-7698 para asistirlo en español.

يحتوي هذا التقرير على معلومات مهمة حول مياه الشرب الخاصة بكم يرجى الاتصال بمدينة ريدلاندز على الرقم 7698-798-909 للحصول على المساعدة باللغة العربية.

Ang pag-uulat na ito ay naglalaman ng mahalagang impormasyon tungkol sa inyong inuming tubig. Mangyaring makipag-ugnayan sa City of Redlands, 35 Cajon Street, Suite 15A, Redlands CA 92373 o tumawag sa 909-798-7698 para matulungan sa wikang Tagalog.

这份报告含有关于您的饮用水的重要讯息。请用以下地址和电话联系 City of Redlands 以获得中文的帮助 City of Redlands, 35 Cajon Street, Suite 15A, Redlands CA 92373 909-798-7698

Clinical Laboratory of San Bernardino, Inc.



Rocky Comfort MWC
2440 Mill Creek Road
Mentone CA, 92359

Project: Routine
Sub Project: Lead & Copper
Project Manager: Water Quality Supervisor

Work Order: 19F0816
Received: 06/11/19 10:00
Reported: 06/19/19

Halstead, 210 Sliger Rd.

19F0816-01 (Water)

Sample Date: 06/11/19 8:30

Sampler: Customers

Analyte	Method	Result	Units	Rep. Limit	Prepared	Analyzed	Batch	Qualifier
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Metals

Copper (Cu)	EPA 200.8	ND	ug/L	50	06/17/19	06/17/19	1925006	
Lead (Pb)	EPA 200.8	ND	ug/L	5.0	06/17/19	06/17/19	1925006	

Oesterblad, 2440 Mill Creek

19F0816-02 (Water)

Sample Date: 06/11/19 4:58

Sampler: Customers

Analyte	Method	Result	Units	Rep. Limit	Prepared	Analyzed	Batch	Qualifier
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Metals

Copper (Cu)	EPA 200.8	50	ug/L	50	06/17/19	06/17/19	1925006	
Lead (Pb)	EPA 200.8	ND	ug/L	5.0	06/17/19	06/17/19	1925006	

Dos Santos, 1321 Mountain View

19F0816-03 (Water)

Sample Date: 06/11/19 9:00

Sampler: Customers

Analyte	Method	Result	Units	Rep. Limit	Prepared	Analyzed	Batch	Qualifier
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Metals

Copper (Cu)	EPA 200.8	50	ug/L	50	06/17/19	06/17/19	1925006	
Lead (Pb)	EPA 200.8	ND	ug/L	5.0	06/17/19	06/17/19	1925006	

Terry, 1330 Mountain View

19F0816-04 (Water)

Sample Date: 06/11/19 8:15

Sampler: Customers

Analyte	Method	Result	Units	Rep. Limit	Prepared	Analyzed	Batch	Qualifier
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Metals

Copper (Cu)	EPA 200.8	ND	ug/L	50	06/17/19	06/17/19	1925006	
Lead (Pb)	EPA 200.8	ND	ug/L	5.0	06/17/19	06/17/19	1925006	

Green Spot Jacinto, 2402 Mill Creek

19F0816-05 (Water)

Sample Date: 06/11/19 6:58

Sampler: Customers

Analyte	Method	Result	Units	Rep. Limit	Prepared	Analyzed	Batch	Qualifier
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Metals

Copper (Cu)	EPA 200.8	ND	ug/L	50	06/17/19	06/17/19	1925006	
Lead (Pb)	EPA 200.8	ND	ug/L	5.0	06/17/19	06/17/19	1925006	

ND Analyte NOT DETECTED at or above the reporting limit

Leticia Bernstein
Project Manager