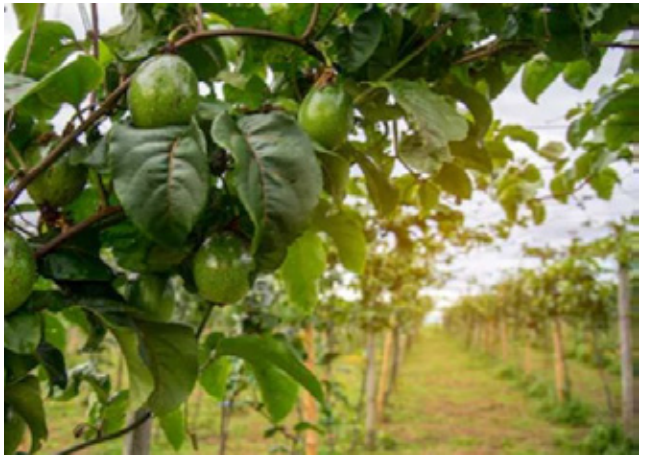
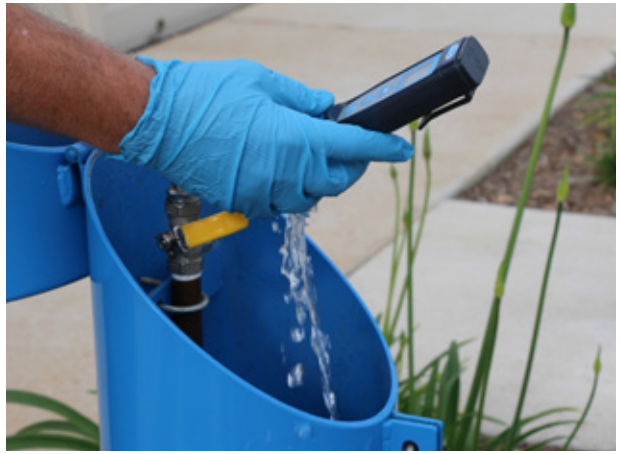
RAINBOW
MUNICIPAL WATER DISTRICT
Committed to Excellence





Annual Water Quality Information

2018 Consumer Confidence Report

Issued July 2019

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ADDITIONAL RESOURCES

MWD website: www.mwdh2o.com

EPA websites: www.epa.gov/safewater
www.epa.gov/safewater/lead

RMWD websites: www.rainbowmwd.com/water-is-life

www.rainbowmwd.com/water-use-efficiency-management

SWRCB website: www.waterboards.ca.gov/drinking_water

WATER QUALITY MONITORING

This brochure is to provide you water quality information that was compiled during 2018. Included are details about where your water comes from, what it contains, and how it compares to Federal and State standards. Rainbow Municipal Water District (RMWD) routinely monitors the distribution system for drinking water constituents of concern. Last year, in addition to dozens of other water quality tests, we conducted 264 tests for total coliform bacteria. The State Water Resources Control Board - Division of Drinking Water (SWRCB-DDW) requires that no more than 5% of the water samples collected per month may test positive for total coliform. RMWD was in compliance for the entire year.

CERTIFIED OPERATORS

The District's water system operators are certified in both water distribution and water treatment. Water system operator competency is critical for the protection of public health and the maintenance of safe, optimal, and reliable operations of water treatment and distribution facilities. SWRCB-DDW guidelines ensure that operators have the operational skills, knowledge, experience, education and training required to operate a public water system. Once water system operators are initially trained and certified, they are required to recertify every three years through continued education to ensure competency.

WHERE DOES MY WATER COME FROM?

RMWD purchases 100% of its treated water from the San Diego County Water Authority (SDCWA). SDCWA purchases most of its water from the Metropolitan Water District of Southern California (MWD). The District receives imported water from SDCWA and MWD using a complex system of aqueducts and pipes. The vast majority of RMWD water comes from the Skinner Treatment plant operated by MWD in Riverside County. SDCWA also treats water at the Twin Oaks Water Treatment Plant (TOWTP) which is located south of the RMWD service area. The TOWTP also receives a portion of its water from the Claude "Bud" Lewis Desal Plant. During unusual periods of low demand, blended water is distributed to the southern end of RMWD. Please refer to the Standards Table for more information.

The water contains a mixture of chlorine and ammonia, which creates a strong disinfectant known as chloramines. Chloramine residuals are constantly monitored, and when applicable, RMWD injects small amounts of chlorine into the water at facilities throughout RMWD. However, certain portions of the distribution system convert from chloramine to free chlorine based on specific operating conditions. Should a water quality problem occur, RMWD is prepared to take remedial action as set forth in an Operational Plan approved by the SWRCB-DDW.

SOURCE WATER ASSESSMENT

In 2011, MWD completed its source water assessment of its Colorado River and State Water Project supplies. Colorado River supplies are considered to be most vulnerable to recreation, urban/storm runoff, increasing urbanization in the watershed and wastewater. The 242-mile aqueduct delivers water from the Colorado River at Lake Havasu west of the California/Arizona border. About 30 percent of Southern California's water comes from the State Water Project, the largest state-built water and power system in the nation. State Water Project supplies are considered to be most vulnerable to urban/storm water runoff, wildlife, agriculture, recreation and wastewater. Source water protection is not only important for the environment, but also for California residents by ensuring safe drinking water. A copy of the assessment can be obtained on the MWD website at: www.mwdh2o.com, or by calling: (800) 225-5693.

WHY ARE THERE CONTAMINANTS IN MY DRINKING WATER?

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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the United States Environmental Protection Agency's (USEPA) Safe Drinking Water Hotline at: (800) 426-4791 or look for it on the EPA's website at: www.epa.gov/safewater.com.

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, radio-active material. It can also 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 which 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 runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- **Coliform bacteria** are a commonly used indicator of sanitary quality of foods and water.
- **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 byproducts 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 occur- ring or be the result of oil and gas production and mining activities.

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WATER QUALITY

In order to ensure that tap water is safe to drink, USEPA and SWRCB-DDW prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

RMWD routinely monitors for contaminants in your drinking water according to federal and state laws. The tables in this brochure show the results of our monitoring for the period of January 1, 2018 to December 31, 2018. (see pages 5 & 6)

WHAT ABOUT LEAD IN MY DRINKING WATER?

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. RMWD is responsible for providing high-quality drinking water, but cannot control the variety of materials used in privately owned 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.

As part of the USEPA Lead & Copper Rule, every three (3) years RMWD is required to collect samples based on population and service connections within the distribution system. 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 at (800) 225-5693 or at: www.epa.gov/safewater/lead. California Assembly Bill 746 requires community water systems to test lead levels by July 1, 2019 in drinking water at all California public, K-12 school sites constructed before January 1, 2010.

DO I NEED TO TAKE SPECIAL PRECAUTIONS?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as those with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, as well as some elderly and infants can be particularly at risk from infections.

These people should seek advice about drinking water from their health care providers. USEPA and Center for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline at: (800) 426-4791.

When ingested by humans, they may result in a variety of gastrointestinal symptoms including diarrhea, nausea and fever. MWD has tested for crypto in its treated water supplies for years. Since 1997, this organism has not been detected in either MWD's source water or treated water.

STORAGE FACILITY INSPECTIONS

RMWD's water storage and distribution system includes approximately 331 miles of pipeline, 12 closed steel tanks, one concrete tank as well as three covered reservoirs. RMWD completed weekly tank and reservoir inspections as part of its routine preventative maintenance plan. Every two years tanks are taken offline to inspect, clean and perform repairs as needed.

WATER USE EFFICEINCY

Water is our most precious natural resource and with some water efficient practices, we will have it when we need it. Check your water meter to see if it is spinning when all your water is turned off. If the dial is still moving, you probably have an undetected leak somewhere on the property. With the right landscape, irrigation maintenance and new high-efficiency irrigation parts, outdoor water use efficiency is easy. For more information on rebates, water use efficiency programs, classes incentives and more go to www.rainbowmwd.com/water-use-efficiency-management.

PRIMARY STANDARDS – MANDATORY HEALTH-RELATED STANDARDS

Microbiological Contaminants	Highest No. of Detections	No. of Months in Violation	MCL	MCLG	Typical Source of Bacteria
MICROBIOLOGICAL					
Total Coliform Bacteria (b)	1 in the year	0	No more than 2 positive monthly samples	0	Naturally present in the environment
Fecal Coliform or E. coli	0 in the year	0	A routine sample and a repeat sample detect total coliform and either sample also detects fecal coliform or E.coli	0	Human and animal fecal waste

INORGANIC COMPOUNDS – SAMPLED IN HOME TAPS IN 2015 (sampled every 3 years)						
Lead and Copper (to be completed only if there was a detection of lead or copper in the last sample set)	**No. of Samples Collected**	**90th Percentile Level Detected**	**No. of Sites Exceeding AL**	**AL**	**PHG**	**Typical Source of Contaminant**
Copper (d) (ppm)	30	.44	0	1.3	0.3	Internal corrosion of household plumbing systems; erosion of natural deposits
Lead (d) (ppb)	30	<0.005	0	15	0.2	Internal corrosion of household water plumbing systems; Discharges from industrial manufacturers, erosion of natural deposits

SPECIAL LEAD & COPPER MONITORING DUE TO NEW SOURCE AS REQUIRED BY SWRCB							
Lead and Copper (to be completed only if there was a detection of lead or copper in the last sample set)	**No. of Samples Collected**	**90th Percentile Level Detected**		**No. of Sites Exceeding AL**	**AL**	**PHG**	
		06/2016	**09/2016**				
Copper (d) (ppm)	0	0	0	0	0	0	Internal corrosion of household plumbing systems; erosion of natural deposits
Lead (d) (ppb)	0	0	0	0	0	0	Internal corrosion of household water plumbing systems; Discharges from industrial manufacturers, erosion of natural deposits

INORGANIC COMPOUNDS – CONTINUED									
	SKINNER WTP		**TWIN OAKS WTP**		**CARLSBAD DESAL PLANT**				
	Average	**Range**	**Average**	**Range**	**Average**	**Range**	**MCL [MRDL]**	**(MCLG) [MRDLG]**	**Major Sources in Drinking Water.**
Aluminum (ppb)	51	ND-100	ND	ND	ND	ND	1000	600	Natural deposits erosion; residue from water treatment process
Arsenic (ppb)	ND	ND	3.0 (single sample)	N/A	ND	ND	10	0.004	Natural deposits erosion; glass and electronics production waste
Barium (ppb)	ND	ND	ND (single sample)	N/A	ND	ND	1000	2000	Oil and metal refineries discharge: natural deposits erosion
Fluoride (ppm)	0.7	0.6 – 0.9	0.7	0.5 – 1.1	0.72	0.6-0..83	2.0	1	Water additive that promotes strong teeth; erosion of natural deposits

CLARITY									
	% <0.3	**Highest**	**% <0.1**	**Highest**	**% <0.1**	**Highest**	**MCL [MRDL]**	**(MCLG) [MRDLG]**	**Major Sources in Drinking Water.**
Combined Filter (NTU)	N/A	0.08	.01-.02	0.01	N/A	.15	TT	N/A	Soil runoff
Effluent Turbidity (%)	100	.08	100	N/A	98.0	N/A	95 (e)	N/A	Soil runoff

PRIMARY STANDARDS – MANDATORY HEALTH-RELATED STANDARDS (Continued)

DETECTION OF CONTAMINENTS WITH A PRIMARY STANDARD					
Parameter (a)	**Average**	**Range**	**MCL [MRDL]**	**(MCLG) [MRDLG]**	**Major Sources in Drinking Water**
Haloacetic Acids(HAA5) (c)(ppb)	32	0-94	60	NA	By-product of drinking water chlorination
TTHM (c)(ppb) [Total trihalomethanes]	38	18-57	80	NA	By-product of drinking water chlorination
Total Chlorine Residual (ppm)	2.1	1.63-2.48	[4]	[4]	Drinking water disinfectant added for treatment

RADIONUCLIDE (pCi/L)									
	SKINNER WTP		**TWIN OAKS WTP**		**CARLSBAD DESAL PLANT**				
	Average	**Range**	**Average**	**Range**	**Average**	**Range**	**MCL [MRDL]**	**(MCLG) [MRDLG]**	**Major Sources in Drinking Water.**
Gross Alpha Particle Activity (pCi/L)	ND	ND-4	5	4 - 7	ND	ND	15	(0)	Erosion of natural deposits.
Gross Beta Particle Activity (pCi/L)	ND	ND-5	5	4 - 6	ND	ND	50	(0)	Decay of natural and man-made deposits
Uranium (pCi/L)	ND	ND-3	Single Sample0.2	NA	ND	ND	20	0.43	Erosion of natural deposits
SECONDARY STANDARDS - AESTHETICS STANDARDS									
Aluminum (ppb)	ND	ND-100	ND	ND	ND	ND	200	600	Natural deposits erosion; residue from water treatment process
Chloride (ppm)	92	90-93	NRA	90	73.7	–55.2-118	500	NA	Runoff/leaching from natural deposits; Seawater influence
Color (units)	ND	N D	ND	ND	ND	ND	15	NA	Naturally-occurring organic materials
Iron (ppm)	ND	ND	ND	ND	ND	ND	0.3	N/A	Leaching from natural deposits; industrial waste
Odor Threshold (TON)	3	3	ND	NA	ND	ND-1	3	N/A	Naturally-occurring organic materials
Specific Conductance (uS/cm)	846	841-851	NRA	810	418.4	304.00-599.79	1600	NA	Substances that form ions when in water; seawater influence
Sulfate (ppm)	172	168-175	NRA	160	12.2	8.5-17.2	500	NA	Runoff/leaching from natural deposits; Industrial wastes
Total Dissolved Solids (TDS) (ppm)	518	510-526	NRA	510	217	119-333	1000	NA	Runoff/leaching from natural deposits.
ADDITIONAL PARAMETERS									
Hardness (ppm)	228	210-238	NRA	220	54	4202-70.8	NA	NA	Leaching from natural deposits
Sodium (ppm)	88	85-92	NRA	82	54.2	16.2-78.4	NA	NA	Runoff/leaching from natural deposits; Seawater influence
Boron (ppb)	120	120	NRA	130	.606	.372-923	NA	NL=1	Leaching from natural deposits

Este informe contiene informacion muy importante sobre la calidad de su agua beber. Traduscalo o hable con alguien que lo entienda bien.

Terms & Abbreviations

In this table, you will find many terms and abbreviations you may not be familiar with. To help you better understand these terms we've provided the following definitions:

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

MCL – *Maximum Contaminant Level:* The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to public health goals (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

MCLG – *Maximum Contaminant Level Goal:* The maximum level of a contaminant where there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency.

mg/L or ppm – Milligrams per liter (mg/L) or Parts per million (ppm) *1 part per million = 1 drop in 10 gallons*.

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

MRDLG – *Maximum Residual Disinfectant Level Goal:* The level of disinfectant added for water treatment below which there is no known or expected risk to health. MRDLGs are set by the U.S. Environmental Protection Agency.

NA – *Not applicable*.

ND – *None Detected:* Laboratory analysis indicates that the constituent is not present.

NL – *Notification Level:* Notification levels are health based advisory levels established by CDPH.

NRA – *No running average.*

NTU – *Nephelometric Turbidity Units:* A measure of the cloudiness of the water.

pCi/L – *PicoCuries per liter:* A measure of radioactivity.

PHG – *Public Health Goal:* The level of contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Agency.

PDWS – *Primary Drinking Water Standard:* MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

TON – Threshold odor number.

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

Umho/cm – Micromhos per centimeter (a measure of a substance's ability to convey electricity).

uS/cm – MicroSeimen per centimeter.

ug/L or ppb – Micrograms per liter (ug/L) or Parts per billion (ppb). *1 part per billion is = 1 drop in 10,000 gallons.*

(a) Data shown are annual averages and ranges.

(b) Total coliform MCLs: For a water system collecting fewer than 40 samples per month, no more than one of the monthly samples may be total coliform positive.

(c) Calculated from the locational running annual average of quarterly samples.

(d) The Federal and State requirements for exceeding the action levels may include installing corrosion control treatment, collecting water quality parameter samples, or replacing lead service lines.

(e) The turbidity performance standards regulated by a treatment technique shall be less than or equal to 0.3 NTU in 95% of the measurements at Skinner WTP and less than or equal to 0.1 NTU in 95% of the measurements at the CDP and TOVWTP. Turbidity is the measure of the cloudiness of the water and is an indicator of treatment performance.

We have learned through our monitoring and testing that some contaminants have been detected. However, the EPA has determined that your water meets all drinking water health standards at these levels (c).

FREQUENTLY ASKED QUESTIONS

Does RMWD have hard or soft water?

During the past year, RMWD'S water hardness averaged 115 milligrams per liter (mg/L) (equal to 6.7 grains per gallon, 1 grain = 17.1 mg/L). This is considered "hard" water.

What about fluoride?

To obtain more information about fluoridation, please visit the State Board's Fluoridation website below: www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Fluoridation

Who regulates drinking water quality?

The USEPA establishes and enforces national drinking water standards. In California, enforcement of drinking water standards falls under the SWRCB-DDW. The Agency set MCL's for various compounds in water to provide safe drinking water supplies.

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Web Site: www.rainbowmwd.com/water-is-life

Annual Consumer Confidence Report

Remember the purpose of the Annual Report is to inform you about the quality of your drinking water and where it comes from as well as what it takes to deliver water to your home. RMWD is dedicated to protecting your drinking water sources and supplies.

Mailing Address Line 1
Mailing Address Line 2
Mailing Address Line 3
Mailing Address Line 4
Mailing Address Line 5

Board of Directors

Helene Brazier	Division 1
Hayden Hamilton	Division 2
Miguel Gasca	Division 3
Carl Rindfleisch	Division 4
Michael Mack	Division 5

How Do I Get Involved?

We want you, our valued customers, to be informed about your water utility. If you want to learn more, you are invited to attend a committee meeting or any of our regularly scheduled Board of Directors meetings. Board Meetings are held every fourth Tuesday of the month at RMWD located at 3707 Old Highway 395, Fallbrook, CA 92028. Check the website for times and dates at: www.rainbowmwd.com/meetings or contact Dawn Washburn at: 760-728-1178 Ext. 129

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