2021
Annual Water Quality Report
Western Municipal Water District

Issued in July 2022

WESTERN MUNICIPAL WATER DISTRICT

A LETTER FROM THE GENERAL MANAGER

Dear valued Western customer,

Western Municipal Water District (Western) is presenting to you its annual water quality report for 2021. This annual report, also known as the Consumer Confidence Report, shows how Western continued to provide safe, reliable drinking water throughout 2021.

This report is required by the California State Water Resources Control Board (State Water Board) and summarizes the results of our water quality tests, providing specific details about the sources and quality of the water served to our community.

AS IN PAST YEARS, THIS REPORT SHOWS THAT WESTERN CONTINUES TO MEET OR EXCEED ALL STRINGENT DRINKING WATER QUALITY STANDARDS SET BY THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (EPA) AND THE STATE WATER BOARD, DIVISION OF DRINKING WATER (DDW).

Western's 2022-2025 Strategic Plan, adopted by the Board of Directors in 2021, outlines four key strategic priorities for our agency, including effective Resource Management, sustainable Financial Stewardship, fostering an Elite Workforce, and providing Superior Service. These key priorities become even more critical during ongoing drought conditions. In partnership with strong conservation efforts, Western's diverse water portfolio and resource management help bridge the gap during dry years.

We also spend a lot of time thinking about long-term water supply challenges and water conditions. While most of Western's water supply flows through hundreds of miles of aqueducts and pipelines from Northern California, Western is dedicated to local partnerships to secure less expensive and more reliable local water supply sources. We have succeeded in this effort, entering into and continuing supply agreements this past year. Our groundwater wells in the Murrieta service area and desalination facilities also support our growing portfolio of local water supplies.

Conservation as a way of life for all Californians will continue to be an essential element, but we must also pursue various solutions to solve our long-term water crisis. Western is partnering with water agencies throughout the state to educate legislators about the ongoing water crisis through the Solve the Water Crisis Coalition. We encourage you to visit the website, **SolveTheWaterCrisis.com**, and learn more about how we can build a more sustainable water system.

Western is here for you every day, guaranteeing service 24 hours a day, 7 days a week, 365 days a year. Conducting rigorous monitoring and testing of the water we serve is a top priority. When you turn on your tap, rest assured Western has sampled from more than 110 locations within its distribution system, performing nearly 30,000 tests to monitor for contaminants and impurities to ensure the safety and quality of the drinking water delivered to your homes, businesses, and schools in Western's service area.

Customers are encouraged to read this report and reach out to our water quality team with any questions. Contact Albert Magallon, Operations Field Manager for Water Quality, at **951.789.5119** or via email to **amagallon@wmwd.com.**

Craig Miller
GENERAL MANAGER

Guidelines set by the State Water Board for distributing this report allow for electronic delivery of the report instead of a paper copy delivered through the United States Postal Service. By providing these reports electronically, Western can reduce costs and eliminate paper waste associated with printing and mailing the full report to our more than 25,000 accounts.

Please note that you may change your delivery preference at any time. Western is happy to mail you a paper copy of this report upon request.

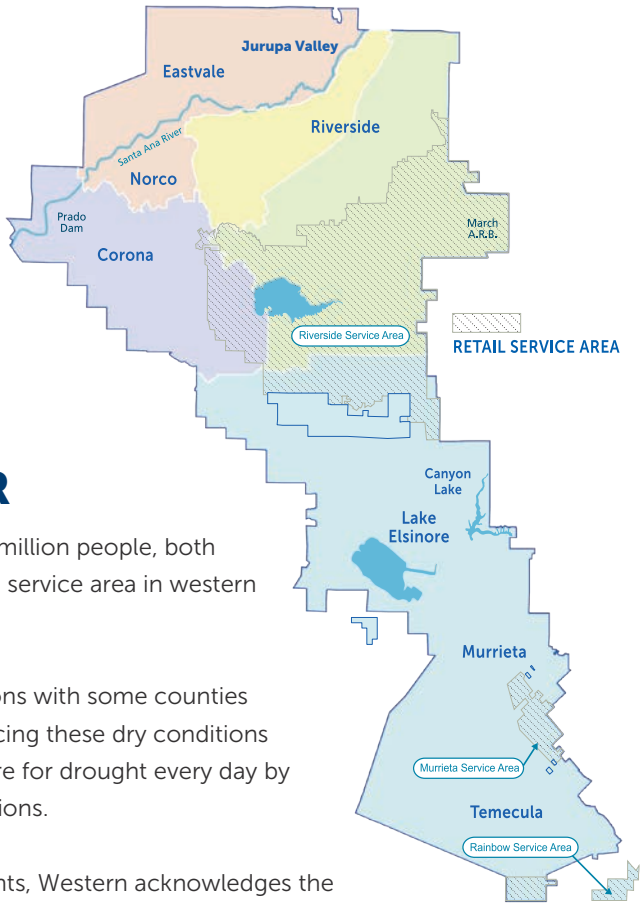
To request a paper copy of this report you can do so by calling us at 951.571.7119 or via email to outreach@wmwd.com.

OUR MISSION

Western provides water supply, wastewater disposal and water resource management to the public in a safe, reliable, environmentally sensitive and financially responsible manner.

OUR VISION

To enhance Western's leadership role by integrating the best-in-business processes and business systems while developing a leading-edge workforce that continuously creates greater efficiency and value for our customers.



WE GUARANTEE THE QUALITY AND RELIABILITY OF YOUR DRINKING WATER

Western is committed to providing reliable and safe drinking water to nearly one million people, both retail and wholesale customers who live, work, and play across a 527-square mile service area in western Riverside County.

Despite rain in 2021, California is once again experiencing prolonged dry conditions with some counties facing governor-declared droughts. The Inland Empire region has been experiencing these dry conditions for nearly 20 years. Western works on behalf of our customers to plan and prepare for drought every day by securing and responsibly managing water resources, regardless of climate conditions.

While Southern California supplies are stable, thanks to many proactive investments, Western acknowledges the current dry climate and is aware of the importance of water efficiency to secure and maintain reliable, high-quality water supplies today, and for future generations. With projects like the Victoria Recharge Basin, Arlington Desalter, Sterling Reservoir and Pump Station and La Sierra Pipeline, Western is prepared to support efficient water use by our customers 24 hours a day, 7 days a week, 365 days a year.

The drinking water that Western provides to homes, businesses, and schools meets and exceeds all state and federal water quality standards. The State Water Board, DDW, and the EPA are the agencies responsible for establishing and enforcing drinking water quality standards.

In addition to performing nearly 30,000 tests for more than 170 contaminants, impurities, and water quality parameters, Western also tests for unregulated chemicals that may have health risks, but do not have drinking water standards. Unregulated chemical monitoring helps the EPA and DDW determine where certain chemicals occur and whether new standards need to be established for those chemicals.

Western is a member of the Santa Ana Watershed Project Authority's (SAWPA) Emerging Constituents Task Force. The Task Force was organized by SAWPA in 2008 to work with the Regional Water Quality Control Board to help improve water quality along the Santa Ana River Watershed. The Task Force identifies emerging constituents of concern, which can include, chemicals of emerging concern, microconstituents, micropollutants, trace organics and other elements. The voluntary testing conducted by the Task Force investigates pharmaceuticals, pesticides, food additives and chemicals that may not yet have established water quality standards. By testing for emerging constituents, the Task Force is able to evaluate water quality in the Santa Ana River Watershed, in imported water, as well as in recycled water.

Arlington Desalter

The Arlington Desalter extracts local groundwater and purifies it through a process called reverse osmosis, which forces water across a membrane at high pressure. The membrane (pictured above) traps salt and other impurities from the water. The water is then disinfected to create fresh, potable water.

SOURCE WATER ASSESSMENT

A source water assessment lists possible contaminants that might affect the quality of your water sources. Assessments were completed in 2002 for both of the surface water sources, the State Water Project and Colorado River, that supply water to Metropolitan Water District's Henry J. Mills Water Filtration Plant and Robert F. Skinner Water Filtration Plant. In 2016, the State Water Project was reassessed, and in 2015, the Colorado River. Both were found to be most vulnerable to stormwater runoff, recreational activities, wastewater discharges, wildlife, fires, and other watershed-related factors that could affect water quality.

Orangecrest Reservoir

A drinking water source assessment for the Murrieta service area was completed in June 2020 for one of the groundwater wells. The source is considered most vulnerable to the following activities associated with contaminants detected in the water supply: historic gas station, pest control storage, underground storage tanks, and sewer collection systems.

Additionally, the State Water Resources Control Board Division of Drinking Water (State Water Board) completed sanitary surveys for the:

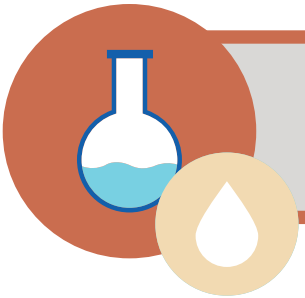
- Riverside service area in 2018
- Murrieta service area in 2022; and
- Rainbow service area in 2021.

A sanitary survey is an on-site review of a public water system for the purpose of evaluating the adequacy of the water source, facilities, equipment, operation, and maintenance for producing and distributing safe drinking water. No significant deficiencies were identified during the surveys.

A copy of the complete assessment is available at Western. You may request a summary of the assessment be sent to you by contacting **951.571.7104.**

YOUR DRINKING WATER IS CONSTANTLY MONITORED AND REGULATED, FROM SOURCE TO TAP.

- Serving 527-square miles
- Conducting nearly 30,000 tests
- 110 sampling locations



Nitrate levels in all of Western's service areas are below the state and federal standard of 10 mg/L.

SPECIAL HEALTH INFORMATION

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

Water quality monitoring indicates no Cryptosporidium organisms in the Mills or Skinner sources and finished water. Cryptosporidium is a microbial pathogen found in surface water throughout the United States. Although filtration removes Cryptosporidium, the most commonly used filtration methods cannot guarantee 100 percent removal. Ingestion of Cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised individuals are at greater risk of developing a life-threatening illness. Western encourages immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may spread through means other than drinking water.

Individuals with special health concerns should seek advice about drinking water from their healthcare provider. Both the EPA and the Centers for Disease Control and Prevention have guidelines on ways to reduce the risk of infection from Cryptosporidium and other microbial contaminants and are available from the Safe Drinking Water Hotline, **800.426.4791** or online at **epa.gov/safewater.**

Nitrate in drinking water at levels above 10 mg/L is a health risk for infants less than 6 months old. 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 can include shortness of breath and blueness of 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.

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 EPA and the State Water Board prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. State Water 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 EPA Safe Drinking Water Hotline (1-800-426-4791).

JUST THE FACTS ON PFAS

PFAS, short for per- and polyfluoroalkyl substances, are a group of more than 4,700 synthetic chemicals created to repel water, oil, grease and stains. The chemicals, dating to the 1940s, have been found to be nearly indestructible over time. These chemicals appear in a range of industrial and everyday consumer products, including makeup, food wrappers, nonstick cookware, carpets, stain repellents, and firefighting foams.

Because PFAS have been so widely used, most Americans have been exposed to them through sources other than their drinking water. People ingest PFAS by eating, drinking, or breathing the chemicals when they are present in food, water, fire retardants, and consumer and industrial products. Based on research cited by the DDW, most people are exposed to PFAS through food—via food packaging, farming processes, or bioaccumulation (gradual chemical buildup).

Testing has confirmed that Western's drinking water, most of which is imported from Northern California snowmelt, is safe and does not contain PFAS above state mandated notification levels. Learn more about these forever chemicals at wmwd.com/PFAS.

Over time, PFAS also have accumulated in land near airports, industrial sites, military bases, and landfills. Once PFAS leach into the land, the chemicals can, in some cases, seep into the local groundwater.

Western continues to adhere to DDW's guidelines for the monitoring of PFAS. The State Water Board has established reporting levels for PFAS. Learn more about these forever chemicals at **wmwd.com/PFAS.**

LEAD AND COPPER RULE

The Lead and Copper Rule (LCR) was developed to protect public health by minimizing lead and copper levels in drinking water. The most common source of lead and copper in drinking water is corrosion of plumbing materials. Plumbing materials that can be made with lead and copper include pipes, solder, fixtures and faucets. The LCR established an action level of 15 ppb (parts per billion) for lead and 1.3 ppm (parts per million) for copper based on the 90th percentile level of tap water samples. If more than 10 percent of the samples are above either action level, further actions are required. Lead and copper are sampled on a state mandated 3-year testing cycle with sampling conducted at selected customer taps.

The LCR requires Western to sample at locations that may be particularly susceptible to high lead or copper concentrations. With a tiered system for prioritizing sampling sites, federal regulations prioritize sampling for single-family structures with copper pipes that have lead solder installed after 1982. Western's sample locations remain the same for each sampling event unless voluntary participation from its customers is not sufficient to meet the minimum required samples per the LCR.

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.** Western is responsible for providing high-quality drinking water but cannot control the variety of materials used in plumbing components beyond the meter. 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 minimize exposure is available from the Safe Drinking Water Hotline **800.426.4791** or at **epa.gov/safewater/lead.**

LEAD SAMPLING IN SINGLE-FAMILY STRUCTURES

Thirty-six homes were tested in the Riverside service area within the last 3-year testing cycle, completed in July 2019. Thirty-three homes were tested in the Murrieta service area within the last 3-year testing cycle, completed in June 2019. Six homes were tested in the Rainbow service area within the last 3-year testing cycle completed in July 2021.

Lead and Copper Testing Regulated at Customer's Tap	Lead (ppb)	Copper (ppm)
Action Level @ 90th Percentile	15	1.3
California Public Health Goal (PHG)	0.2	0.3
Detection Limits for Purposes of Reporting (DLR)	5	0.05
Riverside, 2019 Monitoring		
90th percentile value	ND	0.24
# of homes over action level	1 of 36	0 of 36
Murrieta, 2019 Monitoring		
90th percentile value	ND	0.18
# of homes over action level	0 of 33	0 of 33
Rainbow, 2021 Monitoring		
90th percentile value	ND	0.07
# of homes over action level	0 of 6	0 of 6

LEAD SAMPLING IN SCHOOLS

No schools requested sampling for lead in 2021. To schedule lead testing for your school, contact Western's Water Quality team at **951.789.5119.**

2021 WATER QUALITY TABLE

	Units of Measure	MCL [MRDL]	PHG (MCLG) [MRDLG]	DLR (RL)	Riverside Service Area[a]				Murrieta[b] / Rainbow Service Area[c]				Primary Sources
					Local Groundwater		Mills Filtration Plant		Local Groundwater		Skinner Filtration Plant		
					Average	Range	Average	Range	Average	Range	Average	Range	
Primary Drinking Water Standards — Mandatory Health Related Standards													
Clarity					Highest		Highest	% ≤ 0.3			Highest	% ≤ 0.3	
Turbidity	NTU and %	TT[d]	NA	NA	0.05	NA	0.06	100	NA	NA	0.09	100	Soil runoff
Inorganic Chemicals													
Aluminum	µg/L	1000	600	50	ND	NR	ND	ND - 85	ND	NR	119	ND - 200	Erosion of natural deposits; residue from some surface water treatment processes
Arsenic	µg/L	10	0.004	2	ND	ND - 3.7	ND	NR	3.4	ND - 4.7	ND	NR	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Fluoride	mg/L	2	1	0.1	0.5	ND - 0.6	0.8	0.5 - 0.9	0.2	NR	0.7	0.6 - 0.9	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (N)	mg/L	10	10	0.4	5.3	3.9 - 6.5	ND	NR	ND	NR	ND	NR	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Perchlorate	µg/L	6	1	2	ND	ND - 2.4	ND	NR	ND	NR	ND	NR	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.
Selenium	µg/L	50	30	5	ND	ND - 5.1	ND	NR	ND	NR	ND	NR	Discharge from petroleum, glass, and metal refineries; erosion of natural deposits; discharge from mines and chemical manufacturers; runoff from livestock lots (feed additive).
Organic Chemicals													
Synthetic Organic Compounds													
Dibromochloro-propane (DBCP)	ng/L	200	3	10	ND	ND - 12	ND	NR	ND	NR	ND	NR	Banned nematocide that may still be present in soils due to runoff/leaching from former use on soybeans, cotton, vineyards, tomatoes, and tree fruit
Radiological													
Gross Alpha	pCi/L	15	(0)	3	ND	NR	ND	ND - 4	3	NR	ND	ND - 3	Erosion of natural deposits
Gross Beta	pCi/L	50	(0)	4	No Data	No Data	ND	ND - 6	No Data	No Data	4	ND - 7	Decay of natural and man-made deposits
Radium 228	pCi/L	NA	0.019	1	ND[e]	NR[e]	ND	NR	No Data	No Data	ND	ND - 1	Erosion of natural deposits
Uranium	pCi/L	20	0.43	1	5.8	ND - 8.3	ND	ND - 2	ND[f]	NR[f]	2	ND - 2	Erosion of natural deposits
Secondary Standards - Aesthetic Standards													
Aluminum	µg/L	200	600	50	ND	NR	ND	ND - 85	ND	NR	119	ND - 200	Erosion of natural deposits; residual from some surface water treatment processes
Chloride	mg/L	500	NA	NA	36	12 - 74	84	75 - 93	113	91 - 140	94	92 - 97	Runoff/leaching from natural deposits; seawater influence
Sulfate	mg/L	500	NA	0.5	67	8.0 - 74	60	52 - 67	67	61 - 72	209	197 - 221	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (TDS)	mg/L	1000	NA	NA	353	220 - 400	313	292 - 334	429	280 - 540	580	557 - 604	Runoff/leaching from natural deposits
Manganese	µg/L	50	NL = 500	0.4	ND	NR	ND	NR	13	ND - 35	ND	NR	Leaching from natural deposits
Foaming Agents (MBAS)	µg/L	500	NA	(30)	ND	NR	ND	NR	ND	ND - 90	ND	NR	Municipal and industrial waste discharges
Specific Conductance	µS/cm	1600	NA	NA	557	370 - 580	574	535 - 612	733	570 - 900	937	918 - 956	Substances that form ions in water; seawater influence
Unregulated Contaminant Monitoring													
Chlorate	µg/L	NL = 800	NA	20	ND	No Data	39	NR	No Data	No Data	49	NR	Byproduct of drinking water chlorination; industrial processes
Chlorodibromoacetic Acid	µg/L	NA	NA	NA	0.08	ND - 0.33	No Data	No Data	No Data	No Data	No Data	No Data	Byproduct of drinking water disinfection
Chromium, Hexavalent	µg/L	NA	0.02	1	ND	ND - 3.9	ND	NR	ND	NR	ND	NR	Runoff/leaching from natural deposits; discharge from industrial wastes
N-Nitrosodimethylamine (NDMA)	ng/L	NL = 10	3	NA	ND	No Data	4.6	NR	No Data	No Data	ND	NR	Byproduct of drinking water chlorination; industrial processes
Germanium	µg/L	NA	NA	0.3	0.3	ND - 0.4	No Data	No Data	ND[g]	NR[g]	No Data	No Data	Naturally-occurring element; byproduct of zinc ore processing; used in solar, electronics and optic systems

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	Units of Measure	MCL [MRDL]	PHG (MCLG) [MRDLG]	DLR (RL)	Riverside Service Area[a]				Murrieta[b] / Rainbow Service Area[c]				Primary Sources
					Local Groundwater		Mills Filtration Plant		Local Groundwater		Skinner Filtration Plant		
Unregulated Contaminant Monitoring (cont.)													
Perfluorooctanoic Acid (PFOA)	ng/L	NL = 5.1	NA	NA	3.5	ND - 4.7	ND	NR	ND[h]	NR[h]	ND	NR	Industrial chemical factory discharges; runoff/leaching from landfills; used in fire-retarding foams and various industrial processes
Perfluorooctanesulfonic Acid (PFOS)	ng/L	NL = 6.5	NA	NA	4.0	ND - 5.9	ND	NR	ND[h]	NR[h]	ND	NR	
Perfluorobutanesulfonic Acid (PFBS)	ng/L	NL = 500	NA	NA	2.0	ND - 2.9	ND	NR	ND[h]	NR[h]	ND	NR	
Perfluorohexanesulfonic Acid (PFHxS)	ng/L	NA	NA	NA	2.9	ND - 4.2	ND	NR	ND[h]	NR[h]	ND	NR	
Perfluorohexanoic Acid (PFHxA)	ng/L	NA	NA	NA	4.3	3.7 - 5.1	2.3	NR	ND[h]	NR[h]	ND	NR	
Vanadium	µg/L	NL = 50	NA	3	ND	ND - 6	3	NR	No Data	No Data	ND	NR	Naturally occurring; industrial waste discharge
Other Parameters Tested													
Alkalinity	mg/L	NA	NA	NA	156	79 - 160	85	79 - 91	142	75 - 210	122	121 - 123	Runoff/leaching of natural deposits
Boron	µg/L	NL = 1000	NA	100	No Data	No Data	190	NR	No Data	No Data	140	NR	Runoff/leaching from natural deposits; industrial wastes
Calcium	mg/L	NA	NA	NA	63	27 - 70	25	24 - 26	43	19 - 69	63	62 - 64	Runoff/leaching from natural deposits
Hardness	mg/L	NA	NA	NA	196	110 - 210	115	111 - 119	138	49 - 230	268	264 - 273	
Magnesium	mg/L	NA	NA	NA	8.9	5.6 - 14	12	NR	7	ND - 15	24	23 - 25	
Potassium	mg/L	NA	NA	NA	3.0	1.0 - 3.5	3.2	3.0 - 3.4	1.4	ND - 1.9	4.5	4.3 - 4.7	Salt present in the water; naturally-occurring
Sodium	mg/L	NA	NA	NA	44	23 - 49	68	60 - 76	99	95 - 100	94	92 - 95	

Monitored in the Distribution System

	Units of Measure	MCL [MRDL]	PHG (MCLG) [MRDLG]	DLR (RL)	Riverside[a]		Murrieta[b]		Rainbow[c]		Primary Sources
					Average	Range	Average	Range	Average	Range	
Disinfection Byproducts					Highest LRAA or RAA		Highest LRAA or RAA		Highest LRAA or RAA		
Total Trihalomethanes (TTHMs)	µg/L	LRAA = 80	NA	1.0	22	2.3 - 38	17	3.1 - 29	34	10 - 27	Byproduct of drinking water disinfection
Haloacetic Acids (HAA5)	µg/L	LRAA = 60	NA	1.0	8.0	ND - 27	8.9	ND - 16	13	ND - 13	
Bromate	µg/L	RAA = 10	0.1	1.0	4.1	ND - 8.6	1.0	ND - 2.5	1.0	ND - 2.5	
Microbiological					Highest %	2021 Total	Highest #	2021 Total	Highest #	2021 Total	
Total Coliform[i]	Monthly Positive Samples	TT: 5% (>40 Samples) 1 (<40 Samples)	(0)	NA	0%	1	0	0	3[j]	3	Naturally present in the environment
Disinfectant											
Chloramines	mg/L	[4]	[4]	NA	1.27	ND - 3.38	1.50	0.03 - 3.12	1.77	0.49 - 2.60	Drinking water disinfectant added for treatment
Physical Parameters											
Color	Color Units	15	NA	(3)	ND	ND - 5	ND	ND - 5	ND	NR	Naturally-occurring organic materials
pH	pH Units	NA	NA	NA	8.1	7.7 - 8.5	8.2	7.8 - 8.7	8.1	8.0 - 8.3	NA
Turbidity[k]	NTU	5	NA	0.1	ND	ND - 0.7	ND	ND - 0.4	0.1	ND - 0.5	Soil runoff
Unregulated Contaminant Monitoring[g]											
Haleoacetic Acids (HAA5)	µg/L	NA	NA	NA	6.4	ND - 28	7.8	3.5 - 15	No Data	No Data	Byproduct of drinking water chlorination
Haleoacetic Acids (HAA5Br)	µg/L	NA	NA	NA	5.6	ND - 15	7.9	3.9 - 14	No Data	No Data	
Haeloacetic Acids (HAA9)	µg/L	NA	NA	NA	9.7	ND - 30	13	5.9 - 26	No Data	No Data	

KIDNEY DIALYSIS / AQUARIUMS

Western uses chloramines to disinfect its drinking water. Customers who have unique water quality needs or use specialized home treatments, such as kidney dialysis machines, should make the necessary adjustments to remove chloramines. Like chlorine, chloramines are toxic to dialysis water. Customers who have fish tanks in their homes or businesses should also take precautions to remove chloramines prior to adding water to tanks. Effective treatments include using granular activated carbon filters or chemicals specifically designed to remove chloramines.

MEASUREMENT TERMS

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.

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in safe 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. There are several secondary standards set by the state. The standards listed in our water quality table are the most conservative set by the state. Individual measurements above the secondary MCL listed in the table do not indicate an exceedance of the regulatory standard.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below for which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency.

Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. Adding a disinfectant is necessary to control microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below for which there is no known or expected risk to health. MRDLGs do not reflect the benefits of using disinfectants to control microbial contaminants.

Notification Level (NL): Notification levels are health-based advisory levels established by DDW for chemicals in drinking water that lack MCLs.

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

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

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

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

ABBREVIATIONS

AL	Action Level
DLR	Detection Limits for Purposes of Reporting
LRAA	Locational Running Annual Average
MCL	Maximum Contaminant Level
MCLG	Maximum Contaminant Level Goal
MRDL	Maximum Residual Disinfectant Level
MRDLG	Maximum Residual Disinfectant Level Goal
NA	Not Applicable
ND	Not Detected at or above DLR or RL
NL	Notification Level
No Data	No data for reporting year and/or previous 9 years.
NR	No Range
NTU	Nephelometric Turbidity Units
PHG	Public Health Goal
RAA	Running Annual Average
RL	Reporting Limit (Laboratory)
TT	Treatment Technique

ABBREVIATIONS CONTINUED

ppm	parts per million
ppb	parts per billion
ppt	parts per trillion
pCi/L	picocuries per liter (a measure of radioactivity)
µS/cm	microSiemens per centimeter
>	Greater than
<	Less than
≤	Less than or equal to
mg/L	milligrams per liter (equivalent to ppm)
µg/L	micrograms per liter (equivalent to ppb)
ng/L	nanograms per liter (equivalent to ppt)

FOOT NOTES

(a) The Riverside service area receives groundwater from the Arlington Basin (from Western's Arlington Desalter), Bunker Hill Basin (from the City of Riverside), and Chino Basin (from the Chino Desalter Authority) to supplement imported water from Metropolitan Water District's Henry J. Mills Water Filtration Plant. The reported averages for the Riverside Service Area groundwater reflect the flow-weighted average accounting for all sources of groundwater distributed during the reporting year within the Riverside Service Area. The reported ranges for the Riverside Service Area groundwater cover the range of all groundwater sample results for the Riverside Service Area.

(b) The Murrieta Service Area receives local groundwater and imported water from Metropolitan Water District's Robert F. Skinner Water Filtration Plant to supplement groundwater.

(c) The Rainbow Service Area only receives imported water from Metropolitan Water District's Robert F. Skinner Water Filtration Plant.

(d) The turbidity level of the combined filter effluent at the Mills and Skinner Filtration plants shall be less than or equal to 0.3 NTU in 95% of the measurements taken each month and shall not exceed 1 NTU at any time.

(e) Monitoring last completed in 2020.

(f) Monitoring last completed in 2014.

(g) This data was from the Fourth Unregulated Contaminant Monitoring Rule (UCMR4) program that was conducted in 2018 through 2019.

(h) Voluntary monitoring conducted in 2019.

(i) Total coliform compliance is determined based on the total number of monthly samples collected. For a water system collecting at least 40 samples per month (Riverside system), the treatment technique (TT) trigger is set at 5% of monthly samples being positive. For a water system collecting fewer than 40 samples per month (Murrieta and Rainbow systems), the treatment technique (TT) trigger is set at one positive monthly sample.

(j) A Level 1 Assessment was completed for the Rainbow service area in response to exceeding the total coliform treatment technique. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.
During the past year Western was required to conduct one Level 1 Assessment for the Rainbow service area. One Level 1 Assessment was completed. In addition, Western was required to take two corrective actions and Western completed both of these actions. The total coliform positive samples in the Rainbow service area occurred over a three-day period. The cause of the treatment technique exceedance was isolated to a water quality sampling station assembly and determined to be related to the assembly itself and not the water quality in the distribution system.

(k) Turbidity is a measure of the cloudiness of the water. High turbidity can hinder the effectiveness of disinfectants. We monitor it because it's a good indicator of water quality and the effectiveness of filtration systems, where used.

Sterling Pump Station

The Sterling Pump Station is an important part of Western's local water infrastructure. The pump station connects with the La Sierra Pipeline to move high-quality drinking water from both the Arlington and Chino desalters to customers throughout Western's service area.

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WESTERN MUNICIPAL WATER DISTRICT

Western Municipal Water District
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Riverside, CA 92518

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