



YOUR 2022 WATER QUALITY



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Careers: emwd.org/joinemwd

Conservation Hotline: ext. 3322

Water Quality: ext. 3327

Systems Outages, Trouble Calls:
 ext. 6265 or 800.698.0400

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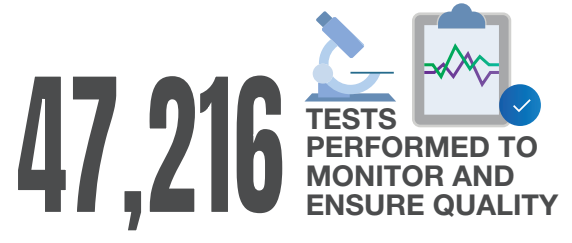
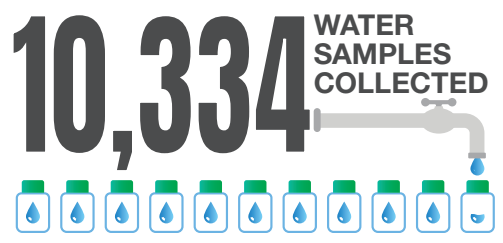
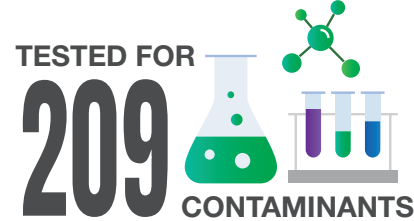
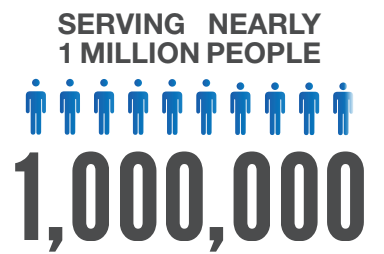
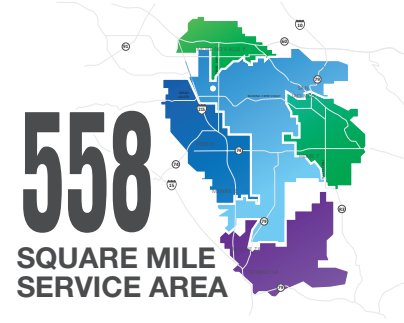
EMWD publications are designed to keep EMWD's customers and the public informed of matters affecting them.



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www.emwd.org

2022 SERVICE BY THE NUMBERS

QUALITY YOU CAN COUNT ON 24/7/365



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OUR MISSION

To deliver value to our diverse customers and the communities we serve by providing safe, reliable, economical and environmentally sustainable water, wastewater and recycled water services.

OUR VISION

To provide an exceptional level of customer and community service, exceeding the performance of any other public or private entity.

EMWD wants you, our valued customer, to be confident that your drinking water is safe.

OUR CONTINUING COMMITMENT TO YOU

EMWD and its trained, certified water quality professionals are committed to...

- Providing high quality, safe drinking water at the lowest price possible.
- Monitoring and testing the water we serve to optimize quality and ensure it is always safe to drink.
- Finding and developing new water supply sources to ensure continued reliability for our customers.
- Providing educated staff to answer any questions from our customers.

Dear Valued EMWD Customer,

The availability of safe, clean and reliable tap water is critical to the well-being of residents and businesses in our communities.

On behalf of Eastern Municipal Water District's (EMWD) Board of Directors and staff, I am pleased to present our annual water quality report. Once again, we provided you with consistently high-quality drinking water throughout 2022. This annual water quality report shows how EMWD continues to meet or exceed all drinking water quality standards established by the United States Environmental Protection Agency (USEPA) and the State Water Resources Control Board (State Water Board).

EMWD is committed to providing a safe, high-quality, and reliable water supply while protecting public health. We use state-of-the-art water treatment processes, which remove and destroy viruses, such as COVID-19. By efficiently maintaining and operating our facilities along with conducting rigorous monitoring and testing, EMWD is able to consistently achieve high-quality tap water service. Water samples are collected throughout the year from EMWD's 34 drinking water sources to carefully test for 209 contaminants. In 2022, EMWD's laboratory personnel collected 10,334 water samples and performed 47,216 tests to monitor and ensure quality.

EMWD supports science-based standards that provide health benefits to the public in an economically balanced manner. While groundwater or surface waters can have trace contaminants, EMWD protects your health and safety by treating the water we deliver—ensuring your water meets or surpasses all regulated drinking water standards.

The State Water Board requires that EMWD customers receive an annual copy of this report, which summarizes the results of water quality tests and provides specific details about sources and quality of the water served in your community. The guidelines for distributing this report allow for electronic delivery, instead of a paper copy in the mail. By delivering this report electronically, we reduce costs and eliminate paper waste associated with printing and mailing the report to our nearly 163,000 accounts. We will be happy to provide you with a paper copy of this report upon request through our web site at emwd.org/CCR or by calling us at 951-928-3777, extension 3430. Please note that you may change your delivery preference at any time.

We strongly encourage you to read this report and if you have any water quality questions, please feel free to contact Michelle Karras, Principal Environmental Analyst, or any of our Water Quality staff at 951-928-3777, extension 3327. We also encourage you to get the latest news and information from EMWD through our website at emwd.org/newsroom.

Thank you for being part of the EMWD family—we are proud to serve you.



Joe Mouawad, P.E.
GENERAL MANAGER
EASTERN MUNICIPAL WATER DISTRICT

This annual water quality report contains important and useful information about the source and the tests used to ensure the quality and safety of your drinking water. It also describes how EMWD meets all drinking water standards as set by the United States Environmental Protection Agency (USEPA) and enforced by the State Water Resources Control Board (State Water Board).

About Regulations

In order to ensure that tap water is safe to drink, the United States Environmental Protection Agency (USEPA) and the State Water Resources Control Board (State Water Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The United States Food and Drug Administration regulations and California law also establish limits for contaminants in bottled water that provide the same protection for public health.

CONTAMINANTS THAT MAY BE PRESENT IN SOURCE WATER INCLUDE:

- **MICROBIAL CONTAMINANTS**, such as viruses and bacteria, may come from sewage treatment plants, septic systems, agricultural livestock, and wildlife.
- **INORGANIC CONTAMINANTS**, such as salts and metals, can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- **ORGANIC CHEMICAL CONTAMINANTS**, including synthetic and volatile organic chemicals may be by-products of industrial processes or petroleum production, and can also come from gas stations, urban storm water runoff, agricultural application, and septic systems.
- **PESTICIDES AND HERBICIDES** may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- **RADIOACTIVE CONTAMINANTS** can be naturally-occurring or be the result of oil and gas production and mining activities.



SENSITIVE POPULATIONS

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised individuals such as those 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 their drinking water from their health care providers. USEPA and Centers for Disease Control and Prevention (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 at (800) 426-4791.

ABOUT NITRATE

Nitrate in drinking water at levels above 10 parts per million (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 10 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 seek advice from your health care provider.

ABOUT ARSENIC

While your drinking water meets the federal and state standard for arsenic, some of our sources do contain low levels of arsenic. The arsenic standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. The USEPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

UNREGULATED CONTAMINANTS

Unregulated contaminant monitoring helps USEPA and the State Water Board determine where certain contaminants occur and whether the contaminants need to be regulated.

ABOUT LEAD AND COPPER

Lead and copper are rarely found in source waters; however, both of these metals can enter drinking water by leaching from household plumbing and fixtures. Water that sits in your pipes for long periods of time may dissolve tiny amounts of lead and/or copper (parts per billion levels) into household water. The USEPA has developed the Lead and Copper Rule to protect public health by establishing an action level of 15 parts per billion (ppb) for lead and 1300 ppb for copper.

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. EMWD is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. If your water has been sitting in your household plumbing 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. *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 by a qualified contractor. 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) 426-4791 or at www.epa.gov/lead.

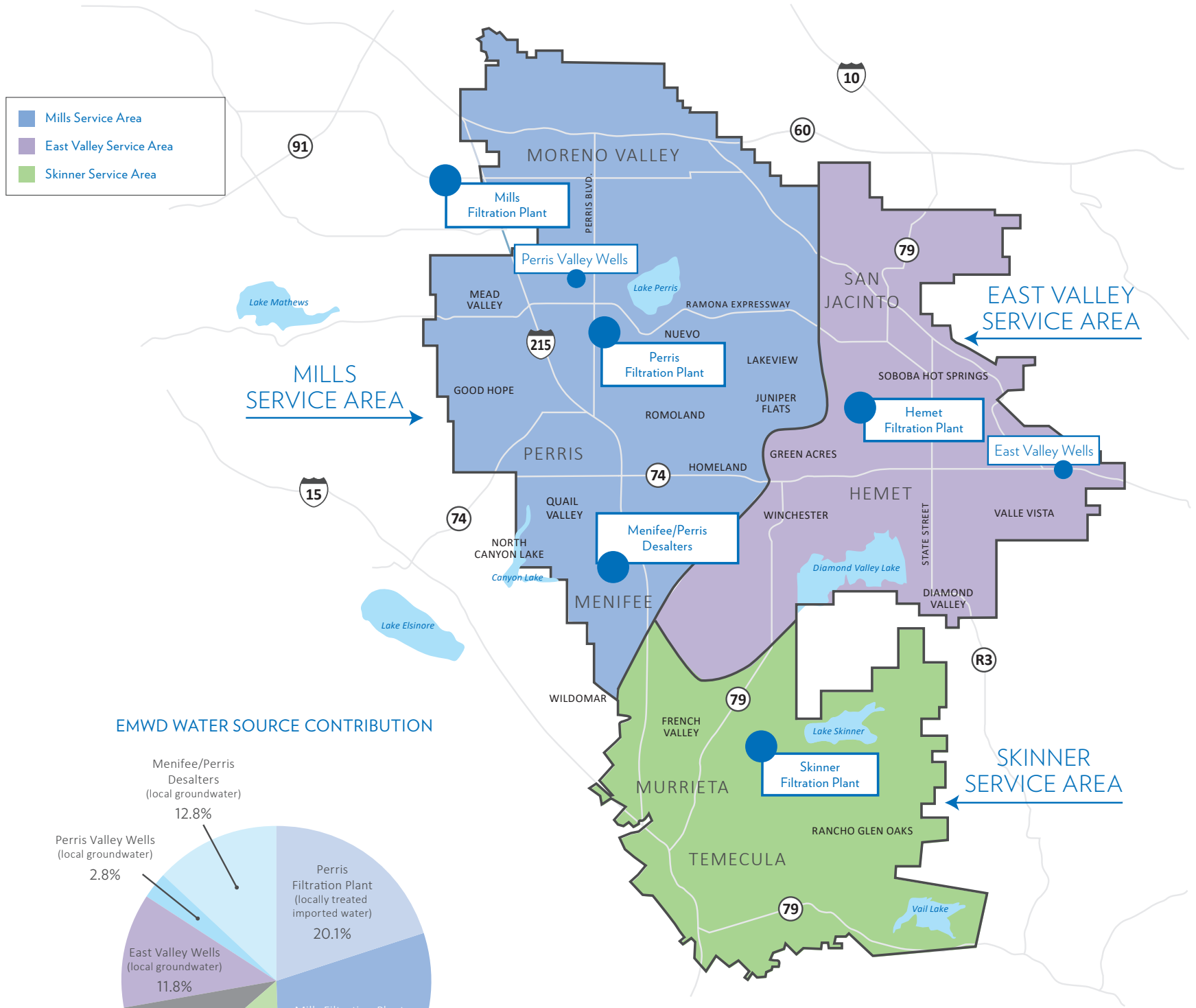
PFAS (PER- AND POLYFLUOROALKYL SUBSTANCES)

Perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS) are chemicals that are resistant to heat, water and oil and have been used for decades in hundreds of consumer products and industrial applications. As a result, these chemicals are often found in the environment.

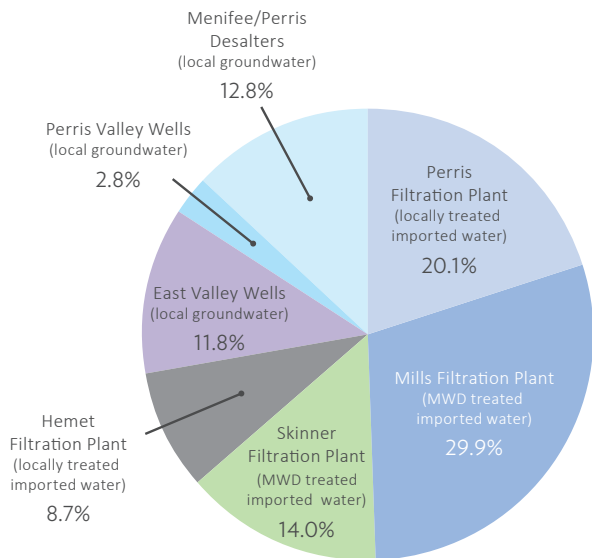
Although PFOA and PFOS are no longer manufactured in the United States, many products that contain the chemicals still exist, such as cosmetics, food packaging, clothing and furniture fabrics. In addition, other countries still make products containing these chemicals, which may be imported into the United States. PFOA and PFOS have been monitored by water agencies and reported based on past United States Environmental Protection Agency (USEPA) regulations. Information on PFAS in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at (800) 426-4791 or at www.epa.gov/pfas.

THE SOURCES OF YOUR TAP WATER...

To help you find specific details about your tap water, we have organized this report according to the communities we serve.



EMWD WATER SOURCE CONTRIBUTION



Total Annual Water Usage: 27.6 billion gallons

THE COMMUNITIES WE SERVE...

PROTECTING YOUR 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 that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline at (800) 426-4791 or online at www.epa.gov/ground-water-and-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. The land that the water comes into contact with is called the watershed; everything that happens to or in the watershed can affect the quality of your drinking water supply.

EMWD uses several sources of water to serve its customers, including surface water from the Colorado River and the State Water Project (SWP), as well as local groundwater.

An initial assessment of all the watersheds, both surface water and groundwater, was completed. The Colorado River, a surface water source, was reassessed in 2010 and found to be most vulnerable to recreational activities, urban and storm water runoff, increasing urbanization in the watershed, and wastewater.

Water from the SWP, also a surface water source, was reassessed in 2011 and found to be most vulnerable to urban and storm water runoff, wildlife, agriculture, recreational activities, and wastewater.

An assessment of all EMWD wells was completed in 2013. Two sources were considered vulnerable to airports and airplane maintenance associated with a contaminant detected in the water supply. In addition, other EMWD wells were considered most vulnerable to the following due to proximity (not associated with any contaminants): commercial and industrial activities, residential activities, agriculture, and other activities such as recreation and transportation.

You can view vulnerability assessments on line at www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/DWSAP.html. You can also call 951-928-3777, ext. 3327 for a copy of EMWD's vulnerability assessments.

Protecting the sources of drinking water helps protect our health. It's everyone's responsibility, and here are a few ways you can help:

- **Eliminate excess use of lawn and garden fertilizers and pesticides – they contain hazardous chemicals that can reach your drinking water source.**
- **Pick up after your pets.**
- **Dispose of chemicals properly; take used motor oil to a recycling center.**

COMMUNITIES SERVED

Good Hope
 Homeland
 Juniper Flats
 Lakeview
 Mead Valley
 Menifee**
 Moreno Valley
 North Canyon Lake
 Nuevo
 Perris
 Quail Valley
 Romoland
 Wildomar

MILLS SERVICE AREA | Water for this service area comes from a combination of sources:

- The Henry J. Mills Filtration Plant* treats imported surface water supplied solely from northern California through the State Water Project (SWP). The Mills Filtration Plant adjusts the fluoride levels in the water to an optimal level recommended by the Centers for Disease Control and Prevention (CDC) for oral health, and uses chloramine for final disinfection.

WATER FROM THE MILLS FILTRATION PLANT IS BLENDED WITH SEVERAL OTHER EMWD WATER SOURCES:

- Two Perris Valley Wells serve a limited area of Perris – along Perris Boulevard north and south of the Ramona Expressway.
- The Perris Water Filtration Plant (PWFP) treats both Colorado River and SWP waters. This plant uses the latest ultrafiltration technology to remove particulate contaminants to produce quality, potable water. The PWFP serves Lakeview, Nuevo, Romoland, Homeland, and Juniper Flats. This plant uses chloramine for final disinfection.
- The Desalination Complex (Menifee, Perris I, and Perris II Desalters) convert salty groundwater into potable water using a reverse osmosis process. Menifee, North Canyon Lake, and Quail Valley are the only communities within the Mills Service Area to receive blended water from this desalination plant. The Menifee and Perris Desalters use chloramine for final disinfection.

WEST COMMUNITIES SERVED

Diamond Valley
 Green Acres
 Hemet
 San Jacinto
 Winchester***

EAST COMMUNITIES SERVED

Hemet
 San Jacinto
 Soboba Hot Springs
 Valle Vista

EAST VALLEY SERVICE AREA | This service area is split into two regions:

WEST OF STATE STREET:

- The Hemet Water Filtration Plant (HWFP) treats both Colorado River and SWP waters. This plant uses the latest ultrafiltration technology to remove particulate contaminants and produce quality, drinking water. This treatment plant uses chloramine for final disinfection. Local groundwater also supplies this area.

EAST OF STATE STREET:

- A system of deep groundwater wells serves these communities. These wells are treated by adding free chlorine for final disinfection.

COMMUNITIES SERVED

French Valley
 Menifee**
 Murrieta
 Rancho Glen Oaks****
 Temecula
 Winchester***

SKINNER SERVICE AREA | Water for this service area comes from:

- The Robert A. Skinner Filtration Plant* treats water from the Colorado River and from the SWP. The Skinner Plant adjusts the fluoride levels in the water to an optimal level recommended by the CDC for oral health, and uses chloramine for final disinfection.

* The Mills and Skinner Filtration Plants are owned and operated by The Metropolitan Water District of Southern California. ** Typically served by the Mills Filtration Plant and occasionally served by the Skinner Filtration Plant. *** Typically served by the Hemet Water Filtration Plant and occasionally served by the Skinner Filtration Plant. **** This area is served water produced by Rancho California Water District (RCWD). You may view RCWD's Consumer Confidence Report on their website at www.ranchowater.com.

Facts about Total Coliform Bacteria

Water agencies test for the presence of coliform bacteria as an indicator of drinking water quality.

Coliform bacteria are naturally present in the environment and are generally not harmful. Coliform bacteria may occur in soil, vegetation, animal waste, sewage, and surface waters.

All water systems are required to comply with the state Total Coliform Rule. All water systems are also required to comply with the federal Revised Total Coliform Rule. The federal rule maintains the purpose to protect public health by ensuring the integrity of the drinking water distribution system and monitoring for the presence of microbials (i.e. total coliform and *E. coli* bacteria). The USEPA anticipates greater public health protection as the rule requires water systems that are vulnerable to microbial contamination to identify and fix problems. Water systems that exceed a specified frequency of total coliform occurrences are required to conduct an assessment to determine if any sanitary defects exist. If found, these must be corrected by the water system.

Eastern Municipal Water District routinely tests for the presence of coliform bacteria as an indicator of the sanitary quality of drinking water. EMWD analyzed 3,132 coliform samples in 2022, two of which were total coliform positive. The maximum allowed by USEPA for coliforms is no more than 5 percent in any month. The highest monthly coliform result in 2022 was 0.4 percent, which complies with this standard. EMWD also tests for *E. coli* bacteria, which indicate fecal or sewage contamination. Zero samples tested positive for *E. coli* in 2022.

A positive coliform test result does not necessarily mean a maximum contaminant level (MCL) has been exceeded, or that there is a problem in the water system.

More information and general guidelines on ways to lessen the risk of infection by microbes are available from the USEPA's Safe Drinking Water Hotline at **(800) 426-4791** or at [epa.gov/ground-water-and-drinking-water](https://www.epa.gov/ground-water-and-drinking-water).

ABBREVIATIONS

AL	Action Level	NA	Not Applicable: no State or Federal standards are established	RL	Reporting Limit
CCRDL	Consumer Confidence Report Detection Levels	ND	Non-Detected: sample was taken and chemical was not detected	TON	Threshold Odor Number
CFU/mL	Colony-Forming Units per milliliter	NL	Notification Level	TT	Treatment Technique
DLR	Detection Limits for purposes of Reporting	NR	No Range: all result(s) were the same value	µS/cm	microSiemens per centimeter; or micromhos per centimeter (µmho/cm)
grains/gallon	grains per gallon	NTU	Nephelometric Turbidity Units	—	Samples not required
HPC	Heterotrophic Plate Count	pCi/L	picoCuries per Liter	=	Equal
LRAA	Locational Running Annual Average	PHG	Public Health Goal	>	Greater than
MCL	Maximum Contaminant Level	ppb	parts per billion or micrograms per liter (µg/L)	<	Less than
MCLG	Maximum Contaminant Level Goal	ppm	parts per million or milligrams per liter (mg/L)	≤	Less than or equal to
MRDL	Maximum Residual Disinfectant Level	ppt	parts per trillion or nanograms per liter (ng/L)	#	Number
MRDLG	Maximum Residual Disinfectant Level Goal	RAA	Running Annual Average	%	Percent
MRL	Minimum Reporting Level: set by EPA for unregulated contaminant monitoring				

DEFINITIONS

90th Percentile: The value in a data set in which 90 percent of the set is less than or equal to this value.

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

Detection Limits for purposes of Reporting (DLR): State-determined level that a test can detect the chemical.

Disinfection By-Product: Compounds which are formed from mixing of organic or mineral precursors in the water with ozone, chlorine or chloramine. Bromate, Total Trihalomethanes, and Haloacetic Acids are disinfection by-products.

Grains per Gallon (grains/gallons): A measure of water hardness. One grain/gallon equals 17.1 ppm or mg/L.

Heterotrophic Plate Count (HPC): a bacteriological test that counts the number of bacteria per milliliter of sample.

Locational Running Annual Average (LRAA): The Running Annual Average (RAA) at one sample location.

Maximum Contaminant Level (MCL): The highest level of

a contaminant that is allowed in drinking water. Primary MCLs are set as close to the Public Health Goals (PHGs) or Maximum Contaminant Level Goals (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 USEPA.

Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

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. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

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

Primary Drinking Water Standard (Primary Standard): MCLs and MRDLs 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 which there is no known or expected risk to health. 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.

Running Annual Average (RAA): The yearly average which is calculated every 3 months using the previous 12 months' data.

Secondary Drinking Water Standard (Secondary Standard): MCLs for contaminants that do not affect health but are used to monitor the aesthetics of the water.

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

EASTERN MUNICIPAL WATER DISTRICT DISTRIBUTION SYSTEM DATA FOR 2022

Parameter	Units	State or Federal Maximum Contaminant Level (MCL)	California Public Health Goal (PHG)	State Detection Limit for Reporting (DLR)	Range / Average	EMWD's Entire Distribution System	SERVICE AREA		
							Mills	East Valley	Skinner
PRIMARY STANDARDS – MANDATORY HEALTH-RELATED STANDARDS									
MICROBIOLOGICAL									
Total Coliform Bacteria	# Positive coliforms	A	MCLG = 0	NA	# positives in 2022 Highest monthly %	2 0.4	1 ---	1 ---	0 ---
Fecal Coliform Bacteria (<i>E. coli</i>)	# positive <i>E. coli</i>	B	MCLG = 0	NA	# positives in 2022	0	0	0	0
Heterotrophic Plate Count (HPC)	# HPCs > 500 CFU/mL	C	NA	NA	# HPC>500 in 2022 Lowest monthly %	15 97.7	12 ---	1 ---	2 ---
DISINFECTION BY-PRODUCTS AND DISINFECTANT RESIDUALS									
Bromate (Mills & Skinner plants only)	D	ppb	RAA = 10	0.1	1	Range Highest RAA	--- 5.5	--- ---	ND - 5.5 1.2
Haloacetic Acids (5) (HAA5s)	E	ppb	LRAA = 60	NA	E	Range Highest LRAA	ND - 11 8.1	ND - 11 8.1	ND - 6.0 4.8
Total Trihalomethanes (TTHMs)	F	ppb	LRAA = 80	NA	1	Range Highest LRAA	2.2 - 59 32	4.7 - 59 32	2.2 - 32 23
Total Chlorine Residual Chlorine and Chloramines		ppm	MRDL = 4.0 as Cl ₂	MRDLG = 4.0 as Cl ₂	NA	Range Average	ND - 4.4 1.7	ND - 3.8 1.5	ND - 3.5 1.9
METALS AS A BY-PRODUCT OF CORROSION OF CONSUMERS' PLUMBING G									
Copper	ppb	AL = 1300	300	50	NA	90th percentile of 50 samples: 134 ppb Zero samples exceeded the Action Level			
Lead	ppb	AL = 15	0.2	5	NA	90th percentile of 50 samples: 2 ppb Zero samples exceeded the Action Level			
SECONDARY STANDARDS – AESTHETIC STANDARDS									
PHYSICAL PARAMETERS H									
Color	Units	15	NA	NA	Range Average	ND - 59 ND	ND - 59 I ND	NR ND	NR ND
Odor Threshold	TON	3	NA	1	Range Average	NR 1	NR 1	NR 1	NR 1
pH	pH unit	6.5 - 8.5	NA	NA	Range Average	6.9 - 8.6 8.0	6.9 - 8.5 8.0	7.6 - 8.6 8.1	7.4 - 8.3 7.9
Turbidity	NTU	5	NA	0.1	Range Average	ND - 2.2 ND	ND - 2.2 ND	ND - 0.5 ND	ND - 0.4 ND
UNREGULATED CONTAMINANT MONITORING J									
Haloacetic Acids (HAA5)	K	ppb	NA	NA	NA	Range Average	ND - 17 5.4	ND - 17 4.9	1.2 - 11 5.4
Haloacetic Acids (HAA6Br)	L	ppb	NA	NA	NA	Range Average	ND - 32 8.5	ND - 32 8.2	2.4 - 23 10
Haloacetic Acids (HAA9)	M	ppb	NA	NA	NA	Range Average	ND - 41 11	ND - 41 11	1.7 - 25 13

The State allows EMWD to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Data presented is from sampling completed in 2022, unless otherwise indicated.

Some of EMWD's data, though representative, are more than one year old. EMWD supports science-based standards that provide health benefits to the public in an economically balanced manner. Should more stringent standards be set,

EMWD will meet them. EMWD's water has met and will continue to meet all regulations.



FOOTNOTES

- A** Total coliform MCLs: No more than 5.0% of the monthly samples may be total coliform-positive. Compliance is based on distribution system samples. EMWD analyzed 3,132 coliform samples in 2022, two of which were total coliform positive. The highest monthly coliform result was 0.4%. The MCL was not violated in 2022.
- B** Fecal coliform/*E. coli* MCLs: An MCL violation is the occurrence of two (2) consecutive total coliform-positive samples, one of which contains fecal coliform or *E. coli*. There were zero detected fecal coliforms. The MCL was not violated in 2022.
- C** HPCs were tested only in distribution system samples which had no detectable chlorine residual. No less than 95% of all distribution system samples in one month may have no detectable chlorine residual and an HPC greater than 500 colony forming units per mL. The HPC results were no less than 97.7% in any month in 2022.
- D** Bromate is a disinfection by-product resulting from the use of ozone. Currently, the Mills and Skinner Filtration plants use ozone.
- E** DLR = 1.0 ppb for each Haloacetic Acid 5 (HAA5) analyte (dichloroacetic acid, trichloroacetic acid, monobromoacetic acid, and dibromoacetic acid) except for monochloroacetic acid which has a DLR = 2.0 ppb. Locational running annual averages and ranges are calculated from 12 samples sites collected quarterly throughout the distribution system. HAA5s are a by-product of drinking water chlorination.
- F** Total Trihalomethanes (TTHMs) are the sum of the following analytes: bromodichloromethane, bromoform, chloroform, and dibromochloromethane. Locational Running Annual Averages (LRAA) and ranges are calculated from 12 sample sites collected quarterly throughout the distribution system. TTHMs are a by-product of drinking water chlorination.
- G** Lead and Copper are regulated as a Treatment Technique under the Lead and Copper Rule, which requires systems to take 50 water samples at the consumers' tap every three years. Results are from 2022. Neither lead nor copper are typically found in the source waters but can get into water by way of internal corrosion of household plumbing.
- H** Compliance for physical parameters is determined by the average, however all samples are reviewed and any values outside the compliance range are noted and corrected if possible. Values above the MCL may be acceptable so long as the average complies with the MCL.
- I** Elevated color and turbidity due to mainline break; resamples were collected.
- J** Unregulated contaminant monitoring spanned throughout 2019; the last sampling event occurred in first quarter of 2020 for the East Valley wells.
- K** HAA5 - sum of dichloroacetic acid (DCAA), monochloroacetic acid (MCAA), trichloroacetic acid (TCAA), monobromoacetic acid (MBAA), dibromoacetic acid (DBAA).
- L** HAA6Br - sum of MBAA, DBAA, bromochloroacetic acid (BCAA), bromodichloroacetic acid (BDCAA), chlorodibromoacetic acid (CDBAA), tribromoacetic acid (TBAA).
- M** HAA9 - sum of DCAA, MCAA, TCAA, MBAA, DBAA, BCAA, BDCAA, CDBAA, and TBAA.

EASTERN MUNICIPAL WATER DISTRICT 2022 WATER QUALITY TABLE

WE ARE REQUIRED TO MONITOR YOUR DRINKING WATER FOR SPECIFIC CONTAMINANTS ON A REGULAR BASIS.

Parameter	Units	State or Federal Maximum Contaminant Level (MCL)	California Public Health Goal (PHG)	State Detection Limit for Reporting (DLR)
Percent of total water delivered by EMWD	%	---	---	---
PRIMARY DRINKING WATER STANDARDS – MANDATORY HEALTH-RELATED STANDARDS				
CLARITY				
Combined Filter Effluent Turbidity	NTU and %	P	NA	P
INORGANIC CHEMICALS				
Aluminum	ppb	1000 Q 200	600	50
Arsenic R	ppb	10	0.004	2
Barium	ppb	1000	2000	100
Fluoride S	ppm	2	1	0.1
Nitrate (as N)	ppm	10	10	0.4
RADIOLOGICALS				
Gross Alpha	pCi/L	15	MCLG = 0	3
Gross Beta	pCi/L	50	MCLG = 0	4
Uranium	pCi/L	20	0.43	1
SECONDARY DRINKING WATER STANDARDS – AESTHETIC STANDARDS				
Chloride	ppm	500	NA	NA
EC - Specific Conductance	uS/cm	1600	NA	NA
Sulfate	ppm	500	NA	0.5
Total Dissolved Solids (TDS)	ppm	1000	NA	NA
Turbidity, Laboratory T	NTU	5	NA	0.1

MENIFEE, MORENO VALLEY, NORTH CANYON LAKE, PERRIS					
Mills Filtration Plant		Perris Valley Wells N		Perris Filtration Plant	
29.9%		2.8%		20.1%	
Range	Average	Range	Average	Range	Average
Highest NTU	% ≤ 0.3			Highest NTU	% ≤ 0.1
0.06	100	---	---	0.15	99.9
ND - 150	60	NR	ND	NR	ND
NR	ND	NR	2.3	NR	2.8
NR	ND	NR	186	NR	107
0.6 - 0.8	0.7	NR	0.4	ND - 0.3	0.24
NR	ND	4.9 - 6.1	5.4	ND - 3.6	0.54
ND - 4	ND	3.1 - 9.1	6.1	NR	ND
ND - 6	4	ND - 5.1	ND	NR	ND
ND - 2	ND	1.4 - 9.2	5.3	NR	2.6
76 - 77	76	NR	219	77 - 113	101
522 - 546	534	1060 - 1380	1220	525 - 1080	928
56 - 57	56	NR	50	45 - 228	190
289 - 304	296	824 - 892	857	312 - 706	604
NR	ND	NR	0.3	NR	ND

FOOTNOTES

- N** Values are from blended Well 57 and from Well 59 after granular activated carbon treatment. Well 57 is blended on site with Mills water to improve Total Dissolved Solids.
- O** Data is representative of Menifee and Perris I Desalters and Perris II Desalter, also known as the Desalination Complex.
- P** 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. For the Perris and Hemet Filtration plants, the turbidity level of the combined filter effluent shall be less than or equal to 0.1 NTU in 95% of the measurements taken each month and shall not exceed 1 NTU at any time. Turbidity is a measure of the cloudiness of the water, is regulated as a treatment technique (TT) and is an indicator of treatment performance.
- Q** Aluminum has both primary (1,000 ppb) and secondary (200 ppb) standards (MCLs).
- R** While your drinking water meets the federal and state standard for arsenic, some of our sources do contain low levels of arsenic. The arsenic standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. The EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.
- S** Metropolitan began fluoride treatment of water at Mills and Skinner Filtration plants in 2007.
- T** 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. Secondary standards were based either on the treatment plant effluent or raw well water.

The State allows EMWD to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Data presented is from sampling completed in 2022, unless otherwise indicated. Some of EMWD's data, though representative, are more than one year old.

EMWD supports science-based standards that provide health benefits to the public in an economically balanced manner. Should more stringent standards be set, EMWD will meet them. EMWD's water has met and will continue to meet all regulations.

RESULTS ARE AN INDICATOR OF WHETHER OR NOT YOUR DRINKING WATER MEETS HEALTH STANDARDS.

WILDOMAR & WILDOMAR		MURRIETA		HEMET & SAN JACINTO				Major Sources in Drinking Water
Desalination Complex		Skinner Filtration Plant		East Valley Wells		Hemet Filtration Plant		
12.8%		14.0%		11.8%		8.7%		---
Range	Average	Range	Average	Range	Average	Range	Average	---
---		Highest NTU % ≤ 0.3		---		Highest NTU % ≤ 0.1		
---		0.05	100	---		0.14	100	Soil runoff
NR	ND	ND - 230	113	NR	ND	NR	ND	Residue from water treatment process; natural deposits erosion
ND - 2.1	ND	NR	ND	ND - 4.1	ND	NR	2.9	Natural deposits erosion; runoff from orchards; glass and electronics production wastes
NR	ND	NR	ND	ND - 156	ND	NR	ND	Discharges of oil drilling wastes and from metal refineries; natural deposits erosion
NR	ND	0.6 - 0.8	0.7	0.10 - 0.38	0.25	NR	ND	Erosion of natural deposits; discharge from fertilizer and aluminum factories; water additive to promote strong teeth
1.3 - 2.1	1.7	NR	ND	ND - 4.2	0.91	NR	ND	Runoff/leaching from fertilizer use; septic tank and sewage; natural deposits erosion
NR	ND	ND - 3	ND	ND - 7.1	ND	NR	ND	Erosion of natural deposits
NR	ND	5 - 8	7	ND - 5.1	ND	NR	ND	Decay of natural and man-made deposits
NR	ND	ND - 2	2	1.1 - 5.8	2.4	NR	ND	Erosion of natural deposits
97 - 124	114	98 - 106	102	9.5 - 95	30	69 - 80	75	Runoff/leaching from natural deposits; seawater influence
458 - 587	526	944 - 1030	987	306 - 942	473	483 - 573	528	Substances that form ions in water; seawater influence
16 - 26	19	206 - 229	218	9.0 - 222	62	46 - 53	49	Runoff/leaching from natural deposits; industrial wastes
264 - 402	333	591 - 651	621	193 - 690	306	272 - 334	301	Runoff/leaching from natural deposits; seawater influence
NR	ND	NR	ND	ND - 0.3	ND	ND - 0.1	ND	Soil runoff



Represents 2020 Data Values Represents 2021 Data Values

EASTERN MUNICIPAL WATER DISTRICT 2022 WATER QUALITY TABLE

WE ARE REQUIRED TO MONITOR YOUR DRINKING WATER FOR SPECIFIC CONTAMINANTS ON A REGULAR BASIS.

Parameter	Units	State or Federal Maximum Contaminant Level (MCL)	California Public Health Goal (PHG)	State Detection Limit for Reporting (DLR)
OTHER PARAMETERS				
Alkalinity Total (CaCO ₃)	ppm	NA	NA	NA
Boron	ppb	NL = 1000	NA	100
Calcium	ppb	NA	NA	NA
Hardness as Calcium Carbonate ^U	grains/gallon	NA	NA	NA
Magnesium	ppm	NA	NA	NA
Potassium	ppm	NA	NA	NA
Sodium	ppm	NA	NA	NA
UNREGULATED CONTAMINANT MONITORING ^J				
Germanium	ppb	NA	NA	0.3
Manganese	ppb	MCL = 50 NL = 500	NA	0.4
Parameter	Units	State or Federal Maximum Contaminant Level (MCL)	California Public Health Goal (PHG)	Consumer Confidence Report Detection Level (CCRD)
PERFLUOROALKYL AND POLYFLUOROALKYL SUBSTANCES (PFAS) ^X				
Perfluorobutanesulfonic acid	ppt	NL = 500 RL = 5000	NA	4
Perfluorohexanoic acid	ppt	NA	NA	4
Perfluorooctanoic acid	ppt	NL = 5.1 RL = 10	NA	4

MENIFEE, MORENO VALLEY, NORTH CANYON LAKE, PERRIS					
Mills Filtration Plant		Perris Valley Wells ^N		Perris Filtration Plant	
Range	Average	Range	Average	Range	Average
83 - 89	86	NR	123	93 - 150	134
NR	160	NR	365	122 - 165	137
25 - 28	26	NR	81	28 - 76	68
6.7 - 7.0	6.9	NR	17	7.0 - 17	16
12 - 13	12	NR	24	12 - 27	25
3.6 - 3.8	3.7	NR	2.7	3.5 - 5.2	4.7
60 - 61	60	NR	92	60 - 112	97
NR	ND	0.34 - 0.37	0.36	NR	ND
2.0 - 12	5.5	0.48 - 2.9	1.7	ND - 15	4.3
Mills Filtration Plant		Perris Valley Wells ^V		Perris Filtration Plant	
NR	ND	ND - 35	8.1	NR	ND
NR	2.4	ND - 160	46	NR	ND
NR	ND	ND - 7.8 ^Y	ND	NR	ND



FOOTNOTES

- ^J Unregulated contaminant monitoring spanned throughout 2019; the last sampling event occurred in first quarter of 2020 for the East Valley Wells.
- ^N Values are from blended Well 57 and from Well 59 after granular activated carbon treatment. Well 57 is blended on site with Mills water to improve Total Dissolved Solids.
- ^O Data is representative of Menifee and Perris I Desalters and Perris II Desalter, also known as the Desalination Complex.
- ^U Water hardness, measured in grains per gallon as calcium carbonate, is characterized by the following scale: 0 - 4.4 is soft, 4.4 - 8.8 is moderately hard, 8.8 - 17.5 is hard and greater than 17.5 is very hard.
- ^V PFAS data from compliance points, after treatment.
- ^W PFAS data from 2019.
- ^X A total of 18 PFAS compounds were analyzed. Detected compounds are presented in the report; all other PFAS compounds were not detected.
- ^Y Elevated PFOA result triggered notification to governing board on April 20, 2022, and to member agency on April 26, 2022. Compliance samples were collected for the month of March 2022; the well was taken offline prior to receiving PFAS results.

RESULTS ARE AN INDICATOR OF WHETHER OR NOT YOUR DRINKING WATER MEETS HEALTH STANDARDS.

WILDOMAR		MURRIETA		HEMET & SAN JACINTO				Major Sources in Drinking Water
Desalination Complex		Skinner Filtration Plant		East Valley Wells		Hemet Filtration Plant		---
Range	Average	Range	Average	Range	Average	Range	Average	
34 - 74	46	119 - 128	124	111 - 174	137	80 - 112	96	Naturally-occurring carbonates; measures water's ability to neutralize acid
188 - 454	337	NR	130	ND - 243	ND	141 - 170	155	Runoff/leaching from natural deposits; industrial wastes
29 - 42	34	63 - 71	67	34 - 90	53	24 - 31	27	Naturally-occurring mineral
5.7 - 8.2	6.8	15.4 - 16.5	15.9	5.5 - 17	9.1	6.4 - 7.7	6.9	Naturally-occurring; the sum of calcium and magnesium in the water
6.0 - 8.8	7.4	24 - 26	25	2.4 - 17	5.4	12 - 13	13	Naturally-occurring mineral
1.1 - 1.7	1.3	4.4 - 4.8	4.6	2.4 - 7.7	4.0	3.4 - 4.1	3.7	Naturally-occurring mineral
42 - 66	54	96 - 103	94	27 - 97	41	57 - 66	62	Naturally-occurring mineral
NR	ND	NR	ND	NR	ND	NR	ND	Naturally-occurring element
NR	ND	1.5 - 6.9	3.8	ND - 81	12	NR	ND	Leaching from natural deposits
Desalination Complex		Skinner Filtration Plant		East Valley Wells		Hemet Filtration Plant		Major Sources in Drinking Water
NR	ND	NR	ND	NR	ND	NR	ND	Industrial chemical factory discharges; runoff or leaching from landfills; used in fire-retardant foams and various industrial processes
NR	ND	NR	ND	NR	ND	NR	ND	
NR	ND	NR	ND	NR	ND	NR	ND	

ONE PART PER MILLION (PPM) (mg/L) IS LIKE

- 1 second in 11.5 days
- 1 teaspoon in 1,302 gallons
- 1 drop in 13.6 gallons



The State allows EMWD to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Data presented is from sampling completed in 2022, unless otherwise indicated. Some of EMWD's data, though representative, are more than one year old.

ONE PART PER BILLION (PPB) (ug/L) IS LIKE

- 1 second in nearly 32 years
- 1 teaspoon in 1.3 million gallons
- 1 drop in 13,563 gallons



EMWD supports science-based standards that provide health benefits to the public in an economically balanced manner. Should more stringent standards be set, EMWD will meet them. EMWD's water has met and will continue to meet all regulations.

ONE PART PER TRILLION (PPT) (ng/L) IS LIKE

- 1 second in nearly 32,000 years
- 1 teaspoon in 1.3 billion gallons
- 1 drop in 13,563,368 gallons



Unregulated contaminant monitoring helps EPA and the State Water Board determine where certain contaminants occur and whether the contaminants need to be regulated.



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Your 2022 Water Quality

CONSUMER CONFIDENCE REPORT

Issued July 2023

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Why You Should Read This Report

THIS YEAR'S DRINKING WATER QUALITY REPORT...

- Examines how EMWD ensures your drinking water is safe, high quality, and reliable.
- Provides science-based data and facts about the sources, quality, and safety of your drinking water.
- Explains how customers can always choose how they wish to receive future water quality reports.

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