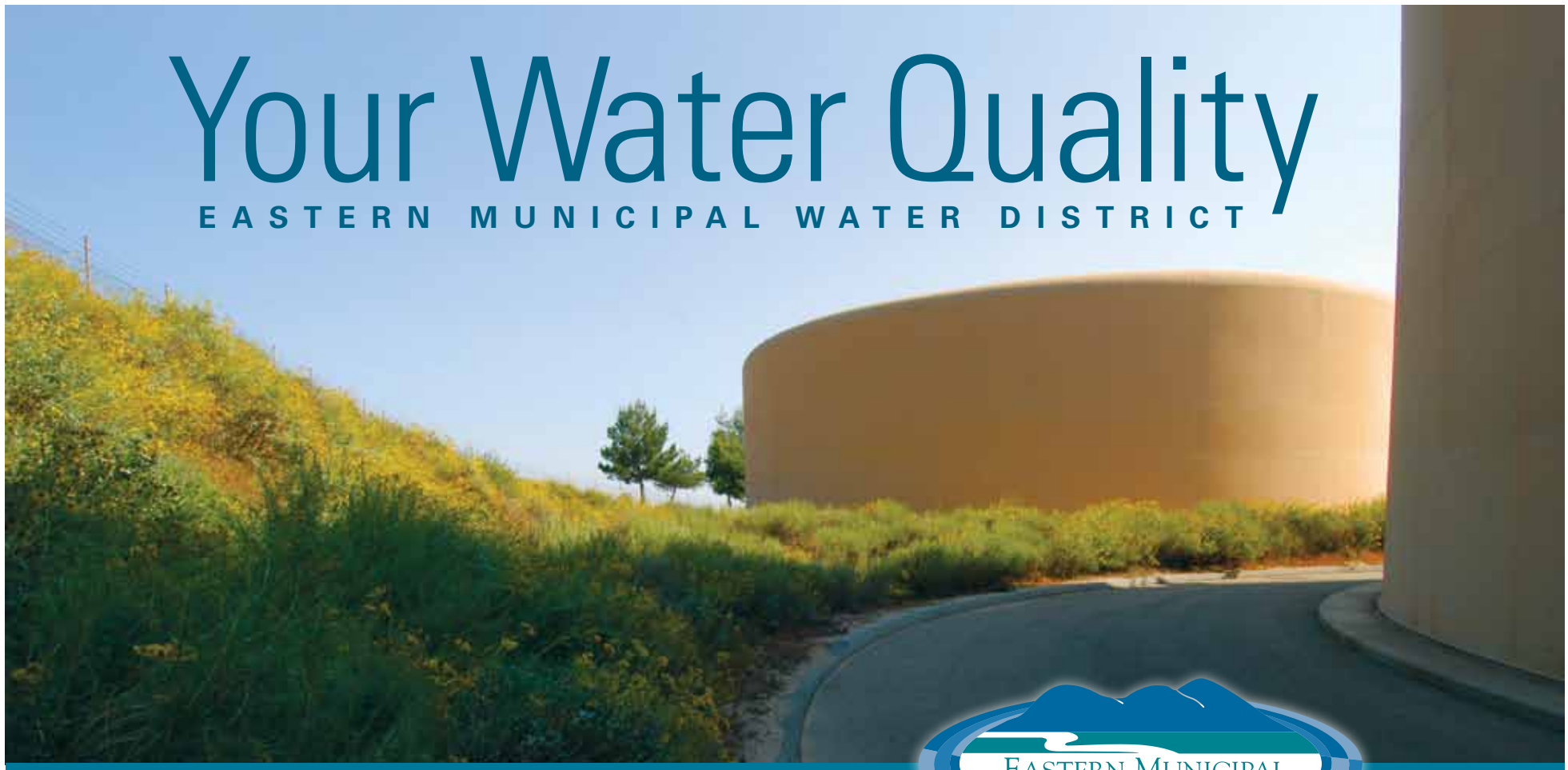
Your Water Quality

EASTERN MUNICIPAL WATER DISTRICT



EASTERN MUNICIPAL WATER DISTRICT
SINCE 1950

2011 Consumer Confidence Report

ISSUED JULY 2012 | www.emwd.org

Eastern Municipal Water District (EMWD) wants you, our valued customer, to be confident the drinking water EMWD serves is safe. This annual water quality report provides important information about where your water comes from and the test results used to ensure your tap water is safe and healthy to drink.

Why You Should Read This Report!

Written in easy-to-understand language, 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
- Highlights actions EMWD is taking to find and develop new water supply sources
- Explains why your tap water is the best deal around

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

INSIDE THIS REPORT

Our Mission

The mission of Eastern Municipal Water District is to provide safe and reliable water and wastewater management services to our community in an economical, efficient, and responsible manner, now and in the future.

Our Vision

To provide essential services to our community at a level that exceeds the performance of any other public or private agency.

This report contains important information about the quality of your water. If you would like to obtain this information in Spanish, visit us at **www.emwd.org** and select "EMWD en Español" or call (951) 928-3777 ext. 4221 for a Spanish copy by mail.

Este informe contiene información importante con sobre la calidad de su agua. Si usted desea obtener información en español, visitenos en **www.emwd.org** y seleccione "EMWD en Español" o llame (951) 928-3777, ext. 4221 para solicitar una copia por correo.

Your Water Quality 2011 Consumer Confidence Report

Dear EMWD Customer,

It is my pleasure to present Eastern Municipal Water District's (EMWD) annual water quality report. I am pleased to inform you that throughout 2011 EMWD provided consistently high quality drinking water, and met or surpassed all health-based drinking water standards as dictated by U.S. Environmental Protection Agency (USEPA) and enforced by the California Department of Public Health (CDPH).

EMWD achieves such high quality water by protecting our water sources, using state-of-the-art water treatment processes, prudently maintaining and operating our facilities, and vigilantly monitoring and testing the water we serve.

Throughout the year, water samples are collected from EMWD's 35 drinking water sources and tested for contaminants such as nitrates, *E. coli*, and disinfection by-products. In 2011, EMWD laboratory personnel collected over 6,500 water samples and performed more than 47,000 water quality tests on these samples.

It is not uncommon for groundwater or surface waters to have measurable contaminants. For this reason, it is important for EMWD and other water agencies to protect customers' safety by treating or blending the water before distribution. 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.

The CDPH requires that EMWD customers receive a copy of this report which summarizes the results of water quality tests and provides, among other important information, specific details about the quality of water served in your community.

I strongly encourage you to read this report and if you have any questions, please feel free to contact Amy Mora, Environmental Analyst, at (951) 928-3777, extension 6337.

Sincerely,

Paul D. Jones, II P.E.
GENERAL MANAGER
EASTERN MUNICIPAL WATER DISTRICT

This report contains important and useful information about the sources, quality, and safety of your drinking water and describes how EMWD meets all drinking water standards as set by the U.S. Environmental Protection Agency (EPA) and enforced by the California Department of Public Health (CDPH).

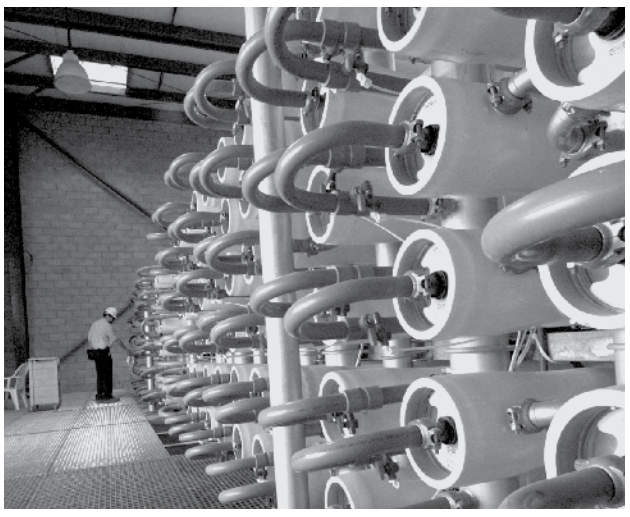
REMOVING SALT FROM GROUNDWATER

EMWD'S DESALINATION PROGRAM produces drinking water from otherwise unusable brackish groundwater through two desalter plants in Menifee. These units provide drinking water for up to 10,000 families annually. A third desalter plant has been designed and will be located in Perris.

Brackish water refers to water supplies that are more salty than freshwater, but much less salty than seawater. About 97% of the water on earth is too salty to consume and can only be made drinkable through desalination technology. Desalination is the process of separating salt from water.

EMWD uses reverse osmosis to treat the brackish water collected from desalter system wells. This process essentially reverses the natural flow of water across a semipermeable membrane to remove impurities—such as excess salt—from water. Desalinated water is blended with other water sources to replenish the beneficial balance of minerals before it is delivered to customers.

Reverse osmosis cartridges at Menifee Desalter.



About Regulations

To ensure tap water is safe to drink, the U.S. EPA and the CDPH established regulations that limit the amount of certain contaminants in water provided by public water systems. CDPH regulations also establish limits for contaminants in bottled water that provide the same protection of public health.

CONTAMINANTS – WHAT ARE THEY AND HOW DO THEY GET IN THE WATER?

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.

ABOUT NITRATES

Nitrate levels reported as NO3 in drinking water above 45 parts per million (ppm) are a health risk for infants under six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in a serious illness. Symptoms include shortness of breath and blueness of the skin.

Nitrate levels above 45 ppm may also affect the ability of 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 LEAD AND COPPER

Lead and copper are rarely found in source waters, however both of these metals can get into 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 EPA has developed a rule to minimize the levels of these metals in drinking water.

The Lead and Copper Rule was developed to protect public health by establishing an action level of 15 ppb (parts per billion) for lead and 1300 ppb for copper at the kitchen tap.

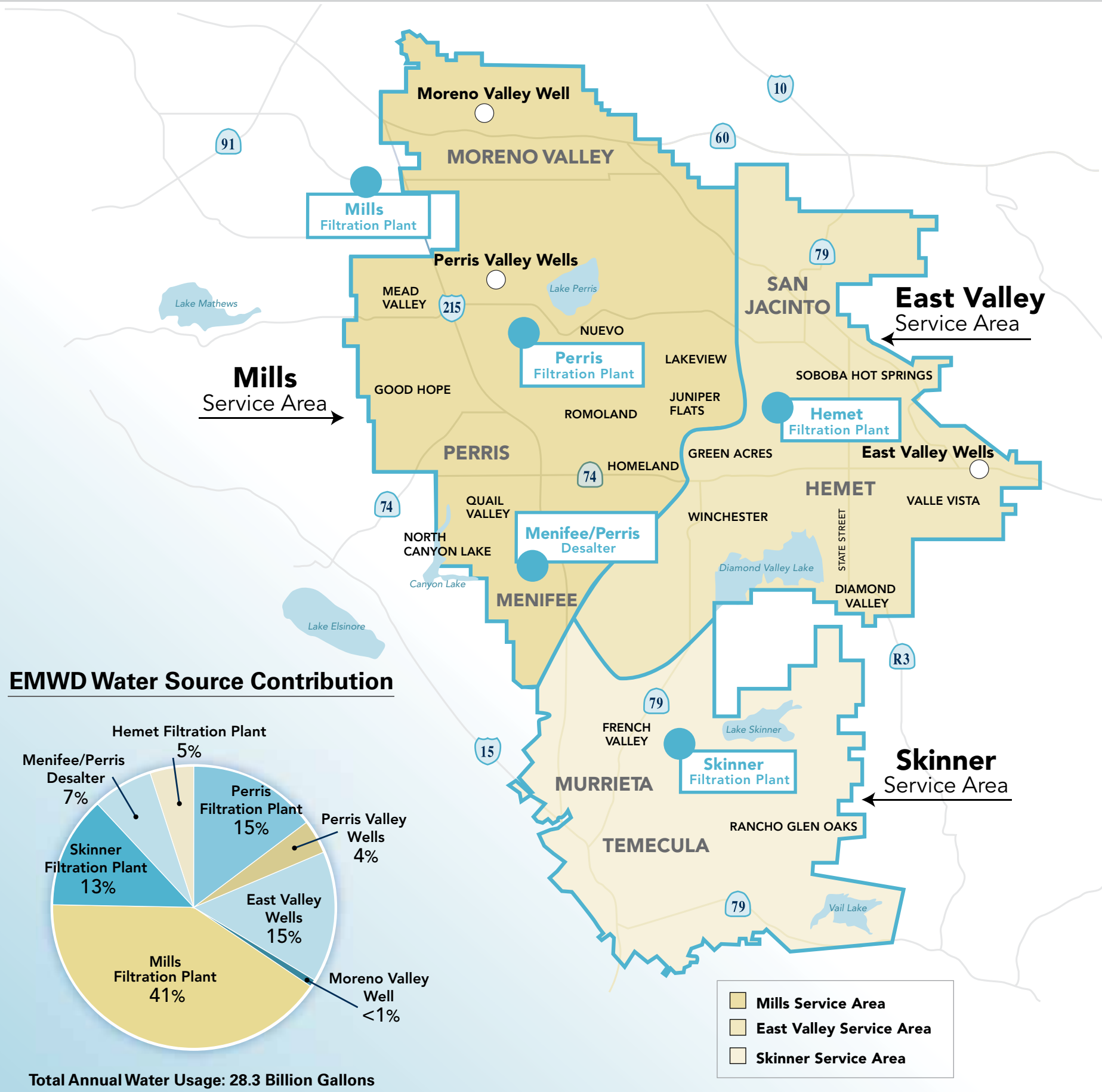
If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. EMWD is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. If your water has been sitting in your household 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 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 1(800) 426-4791 or at www.epa.gov/safewater/lead.

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, those who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at 1(800) 426-4791.

THE SOURCE 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: 28.3 Billion Gallons

The Communities We Serve…

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

COMMUNITIES SERVED:

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

- The Henry J. Mills Filtration Plant* treats imported surface water supplied solely from northern California through the State Water Project (SWP).

Water from the Mills Filtration Plant is blended with several other EMWD water sources:

- Three Perris Valley Wells serve a limited area of Perris – along Perris Boulevard south of the Ramona Expressway.
- One Moreno Valley Well serves one small portion of Moreno Valley near the intersection of Heacock and Ironwood.
- The Perris Water Filtration Plant treats a blend of Colorado River and State Water Project waters. This plant uses the latest ultrafiltration technology to remove particulate contaminants to produce quality, potable water. This plant serves Lakeview, Nuevo, Romoland, Homeland, and Juniper Flats.
- The Menifee/Perris Desalters converts 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.

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

COMMUNITIES SERVED:

Diamond Valley
Green Acres
Hemet
San Jacinto
Winchester***

West of State Street:

- The Hemet Water Filtration Plant treats water from the State Water Project. This plant uses the latest ultrafiltration technology to remove particulate contaminants and produce quality, drinking water. Local groundwater also supplies this area.

COMMUNITIES SERVED:

Hemet
San Jacinto
Soboba Hot Springs
Valle Vista

East of State Street:

- A system of deep groundwater wells serves these communities.

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

COMMUNITIES SERVED:

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

- The Robert A. Skinner Filtration Plant* treats water from the Colorado River and from the State Water Project.

*The Mills and Skinner Filtration Plants are owned and operated by the Metropolitan Water District of Southern California (MWD)

**Typically served by Mills Filtration Plant and occasionally served by the Skinner Filtration Plant

***Typically served by Hemet Water Filtration Plant and occasionally served by Skinner Filtration Plant

****This area is served water produced by Rancho California Water District

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 1(800) 426-4791.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. EMWD uses several sources of water to serve its customers, including surface water from the Colorado River and the California State Water Project (SWP), as well as local groundwater. As water travels over the surface of the land, or soaks down through the ground, it dissolves naturally-occurring substances, such as minerals and radioactive material; surface water can also pick up substances from the presence of animals and/or humans. 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.

An initial assessment of all EMWD's watersheds, both surface water and groundwater, was completed in 2002. 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 2006 and found to be most vulnerable to urban and storm water runoff, wildlife, agriculture, recreational activities, and wastewater.

The assessments of the groundwater within the District were determined to be most vulnerable to urban land uses such as gas stations and repair shops, transportation corridors, furniture repair and manufacturing, sewer collection systems, and sand and gravel mining operations. Groundwater wells were also considered vulnerable to agricultural uses including irrigated crops and use of pesticides and herbicides. New assessments of groundwater sources will be completed by 2013.

Protecting the sources of drinking water helps protect our health. You can view vulnerability assessments on line at www.cdph.ca.gov/certlic/drinkingwater/Pages/DWSAP.aspx and then clicking on "Summary of Assessments." You can also call (951) 928-3777, ext. 6337 for a copy of EMWD's vulnerability assessments.

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.

Eastern Municipal Water District routinely tests for the presence of coliform bacteria as an indicator of the sanitary quality of drinking water. EMWD analyzed 3,021 coliform samples in 2011, one of which was coliform positive. The maximum allowed by EPA for coliforms is no more than 5% in any month. The highest monthly coliform result was 0.4%, which complies with this standard.

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 Environmental Protection Agency's Safe Drinking Water Hotline at 1 (800) 426-4791 or at http://water.epa.gov/drink/info/ .

ABBREVIATIONS & DEFINITIONS

ABBREVIATIONS

AL Action Level

CFU/mL Colony-Forming Units per milliliter

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

grains/gallon Grains per gallon: a measure of water hardness. One gr/gal equals 17.1 ppm or mg/L.

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

LRAA Locational Running Annual Average: the yearly average which is calculated every 3 months using the previous 12 months' data at one sample location

MCL Maximum Contaminant Level

MCLG Maximum Contaminant Level Goal

MRDL Maximum Residual Disinfectant Level

MRDLG Maximum Residual Disinfectant Level Goal

NA Not Applicable: no State or Federal standards are established

ND None Detected: sample was taken and chemical was not detected.

NL Notification Level

NR No Range: all result(s) were the same value

NTU Nephelometric Turbidity Units

pCi/L picoCuries per Liter

PHG Public Health Goal

ppb parts per billion or micrograms per liter (µg/L)

ppm parts per million or milligrams per liter (mg/L)

ppt parts per trillion or nanograms per liter (ng/L)

RAA The yearly average which is calculated every 3 months using the previous 12 months' data.

TON Threshold Odor Number

TT Treatment Technique

µS/cm microSiemen per centimeter; or micromho per centimeter (µmho/cm)

"—" Samples not required

">" Greater than

"<" Less than

DEFINITIONS

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

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

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

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

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 CDPH for chemicals in drinking water that lack maximum contaminant levels (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 process intended to reduce the level of a contaminant in drinking water.

EASTERN MUNICIPAL WATER DISTRICT DISTRIBUTION SYSTEM DATA FOR 2011

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	Service Area: East Valley	Service Area: Skinner
MICROBIOLOGICAL									
Total Coliform Bacteria	# positive coliforms	(A)	MCLG = 0	NA	# positives in 2011 **Highest monthly %**	1 0.4	0 ---	1 ---	0 ---
Fecal Coliform Bacteria (*E.coli*)	# positive *E.coli*	(B)	MCLG = 0	NA	# positives in 2011	0	0	0	0
Heterotrophic Plate Count (HPC)	# HPCs > 500 CFU/mL	TT (C)	NA	1	# HPC>500 in 2011 **Lowest monthly %**	12 98.3	9 ---	0 ---	2 ---
DISINFECTION BY-PRODUCTS AND DISINFECTANT RESIDUALS									
Total Trihalomethanes (TTHMs) (D)	ppb	80	NA	1	Range **Highest LRAA**	2.9 - 86 59	6.1 - 86 57	2.9 - 86 59	10 - 35 44 (E)
Haloacetic Acids (5) (HAA5s) (F)	ppb	60	NA	(F)	Range **Highest LRAA**	<1.0 - 42 24	<1.0 - 42 24	<1.0 - 39 22	3.9 - 17 15
Bromate (Mills & Skinner plants only) (G)	ppb	10	0.1	5	Range **Highest RAA**	--- ---	ND - 7.6 4.5	--- ---	ND - 12 (G) 5.2
Total Chlorine Residual (H)	ppm	MRDL = 4	MRDLG = 4	NA	Range **Average**	<0.2 - 4.9 (H) 1.4	<0.2 - 4.9 (H) 1.4	<0.2 - 3.0 1.5	<0.2 - 3.2 1.6
PHYSICAL PARAMETERS									
Color	Units	15	NA	NA	Range **Average**	<2.5 - 18 <2.5	<2.5 - 7.5 <2.5	<2.5 - 18 (I) 2.8	<2.5 - 7.5 <2.5
Turbidity	NTU	5	NA	NA	Range **Average**	<0.1 - 1.7 0.1	<0.1 - 1.6 0.1	<0.1 - 1.7 0.2	<0.1 - 1.1 0.1
Odor Threshold	TON	3	NA	1	Range **Average**	1 - 2 1	1 - 2 1	NR 1	1 - 1.4 1
pH	Units	6.5 - 8.5 (J)	NA	NA	Range **Average**	7.0 - 8.8 8.1	7.0 - 8.8 (J) 8.1	7.8 - 8.7 (J) 8.1	7.4 - 8.4 8.0
UNREGULATED CONTAMINANT MONITORING									
N-Nitrosodimethylamine (NDMA) (K)	ppt	NA	3	2	Range **Average**	ND - 12 ND	ND - 12 2	ND - 4 ND	ND - 8 2
METALS AS A BY-PRODUCT OF CORROSION OF CONSUMER'S PLUMBING									
Copper (L)	ppb	AL = 1300	300	50	NA	90th percentile of 50 samples: 230 ppb One sample exceeded the Action Level			
Lead (L)	ppb	AL = 15	0.2	5	NA	90th percentile of 50 samples: <5 ppb Two samples exceeded the Action Level			

The State allows EMWD to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of EMWD's data, though representative, are more than one year old.

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 3,021 coliform samples in 2011, one of which was total coliform positive. The highest monthly coliform result was 0.4%. The MCL was not violated in 2011.

(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 no detected fecal coliforms. The MCL was not violated in 2011.

(C) HPCs were tested only in the distribution system samples which had no detectable chlorine residual. HPC TT: 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 98.3% in any month in 2011.

(D) Total Trihalomethanes are the sum of the following analytes: bromodichloromethane, bromoform, chloroform, and dibromochloromethane. Locational running annual averages and ranges were taken from 12 samples collected quarterly throughout the distribution system.

(E) The **Highest LRAA** for Skinner occurred in Quarter 1 of 2011. This value uses data from 2010.

(F) DLR = 1.0 ppb for each 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 were taken from 12 samples collected quarterly throughout the distribution system. HAA5s and TTHMs are a by-product of drinking water chlorination.

(G) Bromate is a disinfection by-product resulting from the use of ozone. Currently, Mills and Skinner Filtration plants use ozone. The MCL is based on the Running Annual Average (RAA), so values above the MCL are acceptable, so long as the RAA complies with the MCL.

(H) The Maximum Residual Disinfectant Level (MRDL) is computed as the average chlorine residual. Values above the MRDL are acceptable, so long as the average complies with the MRDL. Two samples out of 3,021 were over the MRDL of 4 ppm.

(I) High color (18) represents one sample site in the East Valley service area. EMWD responded to this high value by flushing the area and resampling, and the resample complied with state standards.

(J) The recommended Federal secondary MCL for pH is a range of 6.5 to 8.5. California DPH does not regulate pH in drinking water. In 2011, pH was adjusted above 8.5 at the Mills Filtration plant to control the aggressiveness of the water. One hundred samples in the Mills service area of 573 total samples taken were slightly over the 8.5 limit. Four of 128 samples in the East Valley service area were slightly over the 8.5 limit.

(K) NDMA is a disinfection by-product. Samples are from chlorinated distribution samples taken in 2008.

(L) Lead and copper are regulated as a Treatment Technique under the Lead and Copper Rule, which requires systems to take water samples at the consumers' tap every three years. Results are from 2010. Neither lead nor copper are found in the source waters but can get into water by way of internal corrosion of household plumbing.

EASTERN MUNICIPAL WATER DISTRICT 2011 WATER QUALITY TABLE

Parameter	Units	State or Federal Maximum Contaminant Level (MCL)	California Public Health Goal (PHG)	State Detection Limit for Reporting (DLR)	Moreno Valley, Perris, Menifee & North Canyon Lake					
					Mills Filtration Plant		(M) Perris Valley Wells		(M) Moreno Valley Well	
Percent of total water delivered by EMWD	%				41%		4%		<1%	
					Range	**Average**	Range	**Average**	Range	**Average**
PRIMARY STANDARDS–Mandatory Health-Related Standards										
CLARITY					Highest NTU	**% ≤ 0.3**				
Combined Filter Effluent Turbidity	NTU and %	TT (N)	NA	NA	0.13	**100**	---	**---**	**---**	**---**
ORGANIC CHEMICALS										
Dibromochloropropane (DBCP)	ppt	200	1.7	10	NR	**ND**	NR	**ND**	NR	**40**
Tetrachloroethylene (PCE)	ppb	5	0.06	0.5	NR	**ND**	NR	**ND**	NR	**2**
Trichloroethylene (TCE)	ppb	5	1.7	0.5	NR	**ND**	ND - 1.0	**0.5**	NR	**ND**
INORGANIC CHEMICALS										
Aluminum	ppb	1000 (O) 200	600	50	ND - 100	**84**	NR	**ND**	No Data	**No Data**
Arsenic	ppb	10	0.004	2	NR	**ND**	ND - 2.2	**ND**	No Data	**No Data**
Barium	ppm	1	2	0.1	NR	**ND**	0.2 - 0.3	**0.3**	No Data	**No Data**
Fluoride (Naturally-occurring)	ppm	2.0	1	0.1	---	**----**	0.3 - 0.4	**0.4**	No Data	**No Data**
Fluoride (Treatment related) (Q)	ppm	2.0	1	0.1	0.2 - 0.8	**0.7**	---	**----**	**----**	**----**
Nitrate (as NO_3)	ppm	45	45	2	ND - 3.1	**2.2**	21 - 34	**26**	20 - 33	**24**
Selenium	ppb	50	30	5	NR	**ND**	ND - 6	**ND**	No Data	**No Data**
RADIOLOGICALS										
Gross Alpha Particle Activity	pCi/L	15	MCLG = 0	3	NR	**ND**	ND - 9.1	**5.0**	No Data	**No Data**
Gross Beta Particle Activity	pCi/L	50 (R)	MCLG = 0	4	NR	**ND**	7.3 - 10	**8.7** (M)	No Data	**No Data**
Uranium	pCi/L	20	0.43	1	ND - 1	**1**	1.3 - 9.2	**4.6**	No Data	**No Data**

2010 values **2010 and 2011 values** ND - NONE DETECTED NR - NO RANGE

FOOTNOTES

(M) Values are from blended Well 57 and raw well values from other wells in area. Well 57 is blended on site with Mills water to improve Total Dissolved Solids. Gross Beta results are from unblended Well 57 data only.

The Moreno Valley Well is blended with Mills water to reduce Nitrate, DBCP, and PCE levels to comply with State MCLs. Perchlorate is also detected in this well, but not detected after blending. Reported results above are after blending. The well was taken out of service after May 2011.

(N) 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 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 and is an indicator of treatment performance.

(O) Aluminum has both primary (1,000 ppb) and secondary (200 ppb) standards.

EASTERN MUNICIPAL WATER DISTRICT 2011 WATER QUALITY TABLE

	Moreno Valley, Perris, Menifee & North Canyon Lake				Murrieta		Hemet & San Jacinto				
Parameter	Perris Filtration Plant		Menifee & Perris Desalters		Skinner Filtration Plant		East Valley Wells		Hemet Filtration Plant		Major Sources in Drinking Water
Percent of total water delivered by EMWD	15%		7%		13%		15%		5%		
	Range	Average	Range	Average	Range	Average	Range	Average	Range	Average	
PRIMARY STANDARDS–Mandatory Health-Related Standards											
CLARITY	Highest NTU	% ≤ 0.1			Highest NTU	% ≤ 0.3			Highest NTU	% ≤ 0.1	
Combined Filter Effluent Turbidity	0.09	**100**	---	**---**	0.09	**100**	---	**---**	0.10	**100**	Soil runoff
ORGANIC CHEMICALS											
Dibromochloropropane (DBCP)	NR	**ND**	NR	**ND**	NR	**ND**	NR	**ND**	NR	**ND**	Banned nematocide (pesticide) that may still be present in soils
Tetrachloroethylene (PCE)	NR	**ND**	NR	**ND**	NR	**ND**	NR	**ND**	NR	**ND**	Discharge from factories, dry cleaners, and auto shops
Trichloroethylene (TCE)	NR	**ND**	NR	**ND**	NR	**ND**	NR	**ND**	NR	**ND**	Discharge from metal degreasing sites and other factories
INORGANIC CHEMICALS											
Aluminum	ND - 62	**ND**	NR	**ND**	NR	**ND**	NR	**ND**	ND - 180	**ND**	Residue from water treatment process; natural deposits erosion
Arsenic	NR	**ND**	NR	**ND**	NR	**ND**	ND - 8.1 (P)	**ND**	NR	**ND**	Natural deposits erosion; runoff from orchards; glass and electronics production wastes
Barium	NR	**ND**	NR	**ND**	NR	**ND**	ND - 0.1	**ND**	NR	**ND**	Oil and metal refineries discharge; natural deposits erosion
Fluoride (Naturally-occurring)	ND - 0.3	**ND**	NR	**ND**	---	**---**	0.1 - 0.5	**0.3**	ND - 0.2	**ND**	Erosion of natural deposits; discharge from fertilizer and aluminum factories; water additive to promote strong teeth
Fluoride (Treatment related) (Q)	---	**----**	---	**----**	0.7 - 0.9	**0.8**	---	**----**	---	**----**	
Nitrate (as NO_3)	ND - 4.4	**ND**	10 - 12	**11**	NR	**ND**	ND - 19	**3.8**	ND - 3.6	**ND**	Runoff and leaching from fertilizer use; septic tank and sewage; natural deposits erosion
Selenium	NR	**ND**	NR	**ND**	NR	**ND**	ND - 13	**ND**	NR	**ND**	Runoff/leaching from livestock lots; erosion of natural deposits
RADIOLOGICALS											
Gross Alpha Particle Activity	NR	**ND**	NR	**ND**	ND - 3	**ND**	ND - 3.6	**ND**	NR	**ND**	Erosion of natural deposits
Gross Beta Particle Activity	NR	**7.1**	NR	**5.1**	ND - 5	**ND**	ND - 16	**ND**	NR	**ND**	Decay of natural and man-made deposits
Uranium	NR	**ND**	NR	**1.3**	ND - 2	**1**	ND - 3	**18**	NR	**ND**	Erosion of natural deposits

The State allows EMWD to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. 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.

(P) 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 U.S. Environmental Protection Agency 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.

(Q) MWD began fluoride treatment of water at Mills and Skinner Filtration plants in 2007. Fluoride is not added to the water in the East Valley Area.

(R) The Gross Beta particle activity MCL is 4 millirems per year annual dose equivalent to the total body or any internal organ. 50 pCi/L is used as a screening level. (A 4 millirem dosage is equivalent to the amount of radiation received in a cross country flight or about half the dosage in a chest x-ray.)

EASTERN MUNICIPAL WATER DISTRICT 2011 WATER QUALITY TABLE

Parameter	Units	State or Federal Maximum Contaminant Level (MCL)	California Public Health Goal (PHG)	State Detection Limit for Reporting (DLR)	Moreno Valley, Perris, Menifee & North Canyon Lake			
					Mills Filtration Plant		Ⓜ Perris Valley Wells	
					Range	**Average**	Range	**Average**
SECONDARY STANDARDS–Aesthetic Standards								
Chloride	ppm	500	NA	NA	27 - 38	**32**	220 - 420	**320**
Color	Units	15	NA	NA	NR	**1**	5 - 7.5	**5.8**
Manganese	ppb	50	NL = 500	20	NR	**ND**	NR	**ND**
Odor Threshold	TON	3	NA	1	NR	**3**	NR	**1**
Specific Conductance	µS/cm	1600	NA	NA	230 - 480	**300**	950 - 1590	**1270**
Sulfate	ppm	500	NA	0.5	22 - 42	**32**	48 - 55	**52**
Total Dissolved Solids (TDS)	ppm	1000	NA	NA	150 - 190	**170**	620 - 840	**700** Ⓜ
Turbidity Ⓣ	NTU	5	NA	NA	0.04 - 0.07	**0.05**	0.5 - 2.2	**1.1**
UNREGULATED CHEMICALS REQUIRING MONITORING								
1,2,3-Trichloropropane (TCP) Ⓤ	ppt	NL = 5	0.7	5	No Data	**No Data**	NR	**ND**
Boron	ppm	NL = 1	NA	0.1	NR	**0.1**	0.3 - 0.5	**0.4**
Vanadium	ppb	NL = 50	NA	3	NR	**ND**	14 - 18	**16**
OTHER PARAMETERS								
Hardness Ⓥ	grains/gallon	NA	NA	NA	2.8 - 5.7	**3.8**	17 - 32	**24**
Iron	ppb	300	NA	100	NR	**ND**	NR	**ND**
Sodium	ppm	NA	NA	NA	28 - 37	**32**	90 - 140	**110**

The State allows EMWD to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. 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

Ⓜ Values are from blended Well 57 and raw well values from other wells in area. Well 57 is blended on site with Mills water to improve Total Dissolved Solids. Gross Beta results are from unblended Well 57 data only.

Ⓢ Odor data for Skinner is based on the State-required quarterly monitoring following an MCL exceedance. The quarterly samples reported to the State were 24 TON in January, 6 TON in April, and 3 TON in July and October. MWD utilizes a flavor-profile analysis method that can detect odor occurrences more accurately and found those samples from this location acceptable. No taste and odor event was observed and no complaints were received during the period. For more information, call MWD at (213) 217-6850.

Ⓣ Turbidity is a measure of the cloudiness of the water and is an indicator of treatment performance. Secondary standards were based on the treatment plant effluent or raw well water.

EASTERN MUNICIPAL WATER DISTRICT 2011 WATER QUALITY TABLE

	Moreno Valley, Perris, Menifee & North Canyon Lake				Murrieta		Hemet & San Jacinto				
Parameter	Perris Filtration Plant		Menifee & Perris Desalters		Skinner Filtration Plant		East Valley Wells		Hemet Filtration Plant		Major Sources in Drinking Water
	Range	Average	Range	Average	Range	Average	Range	Average	Range	Average	
SECONDARY STANDARDS–Aesthetic Standards											
Chloride	38 - 110	**72**	190 - 220	**210**	62 - 83	**72**	11 - 86	**24**	29 - 110	**63**	Runoff/leaching from natural deposits; seawater influence
Color	<2.5 - 5	**<2.5**	NR	**2.5**	NR	**1**	<2.5 - 12	**4.5**	<2.5 - 2.5	**<2.5**	Naturally-occurring organic materials
Manganese	NR	**ND**	NR	**ND**	NR	**ND**	ND - 43	**ND**	NR	**ND**	Leaching from natural deposits
Odor Threshold	1 - 2	**1**	(S) NR	(S) **1**	3 - 24	**9**	1 - 2	**1**	1 - 3	**1**	Naturally-occurring organic materials
Specific Conductance	220 - 990	**490**	600 - 960	**860**	390 - 840	**630**	320 - 920	**450**	240 - 670	**420**	Substances that form ions in water; seawater influence
Sulfate	20 - 210	**47**	26 - 33	**30**	78 - 150	**110**	11 - 220	**58**	16 - 59	**36**	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (TDS)	140 - 580	**270**	370 - 630	**510**	300 - 460	**380**	170 - 580	**260**	130 - 350	**230**	Runoff/leaching from natural deposits
Turbidity (T)	0.1 - 0.2	**0.1**	NR	**0.1**	0.04 - 0.08	**0.05**	0.1 - 2	**0.3**	<0.1 - 0.1	**<0.1**	Soil runoff
UNREGULATED CHEMICALS REQUIRING MONITORING											
1,2,3-Trichloropropane (TCP) (U)	NR	**ND**	NR	**ND**	No Data	**No Data**	NR (U)	**ND**	NR	**6**	Discharge from degreasing sites and other factories
Boron	ND - 0.2	**0.1**	0.1 - 0.3	**0.2**	NR	**0.1**	ND - 0.2	**ND**	ND - 0.3	**0.1**	Runoff/leaching from natural deposits; industrial wastes
Vanadium	NR	**ND**	NR	**ND**	NR	**ND**	ND - 42	**11**	NR	**ND**	Naturally-occurring; industrial waste discharge
OTHER PARAMETERS											
Hardness (V)	4.3 - 16	**6.7**	8.2 - 14	**13**	5.8 - 13	**9.4**	5.1 - 16	**8.9**	3.4 - 7.9	**5.4**	Naturally-occurring; the sum of calcium and magnesium in the water
Iron	NR	**ND**	NR	**ND**	NR	**ND**	NR	**ND**	NR	**ND**	Leaching from natural deposits; industrial wastes
Sodium	30 - 90	**53**	63 - 85	**77**	54 - 74	**64**	24 - 90	**37**	25 - 74	**46**	Naturally-occurring mineral

2010 values **2010 and 2011 values** ND - NONE DETECTED NR - NO RANGE

(U) 1,2,3-Trichloropropane is an unregulated contaminant with a Notification Level and has not been required to be sampled since 2007. Since it has been detected in Hemet WFP water at 6 ppt, EMWD will continue sampling until an MCL has been set by the EPA, due in 2013. Once 1,2,3-TCP has an MCL, EMWD is committed to meeting this standard.

(V) Water hardness, measured in grains per gallon, 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.

One part per million (ppm) is like 1 second in 11.5 days.

One part per billion (ppb) is like 1 second in 31.7 years.

One part per trillion (ppt) is like 1 second in 31,710 years.

PUBLIC MEETINGS

EMWD's Board of Directors generally meet on the 1st and 3rd Wednesdays of each month beginning at 9:00 a.m.

If you wish to attend a meeting, please call the board secretary during normal business hours at (951) 928-3777, ext. 4235 to confirm meeting dates.

For more information on this report, contact: (951) 928-3777, ext. 6337
www.emwd.org

Your 2011 Water Quality

Consumer Confidence Report

Issued July 2012

EASTERN MUNICIPAL WATER DISTRICT
SINCE 1950

2270 Trumble Road
Post Office Box 8300
Perris, CA 92572-8300

The Value of Tap Water

Consider this - no one can live without water. So how much is having a safe, clean and reliable drinking water source worth to you? Just look at what you get for your money!

- Reliable service AND a quality product
- State-of-the-art water quality testing
- 24-hour response to incidents
- Environmental stewardship
- On-going maintenance/investment
- Highly trained employees/technical expertise
- Public safety/emergency communications
- Planning for future needs

Think about it - a gallon of EMWD water, delivered to your tap costs about a penny. What other goods or services that you use regularly costs so little and provides so much?

A GALLON OF

$16.00

A GALLON OF

$4.00

A GALLON OF

$2.49

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$ .01

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