

EASTERN MUNICIPAL WATER DISTRICT

# Your 2012 Water Quality

**Consumer Confidence Report**  
Issued July 2013 [www.emwd.org](http://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 the source(s) of your water and the tests 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
- Explains how customers can choose to receive future water quality reports electronically



## 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

## Paper or Electronic?

EMWD is gearing up to offer customers options for receiving future Water Quality Reports electronically. Tell us your preference for a chance to win a \$25 gift card. **See page 3 for details!**

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## Our Mission

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

## 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](http://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](http://www.emwd.org) y seleccione "EMWD en Español" o llame (951) 928-3777, ext. 4221 para solicitar una copia por correo.

# Your Water Quality 2012 Consumer Confidence Report

Dear Valued Customer:

It is my pleasure to present Eastern Municipal Water District's (EMWD) annual water quality report. I am pleased to report that throughout 2012 EMWD provided consistently high quality drinking water, and met or surpassed all 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 tap 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 were collected from EMWD's 33 drinking water sources and tested for contaminants such as nitrates, *E. coli*, and disinfection by-products. In 2012, EMWD laboratory personnel collected over 6,350 water samples and performed nearly 46,000 water quality tests on these samples. While it is true groundwater or surface waters can have measurable contaminants, EMWD protects customers' health and 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.

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 sources and quality of the water served in your community.

In our continuing effort to improve operational efficiency, EMWD is gearing up to offer customers a way to receive future water quality reports electronically (please see page 3 for more information). By doing so, we offer customers a more contemporary method of reading the report, and we reduce the costs associated with printing and mailing the report to nearly 140,000 customers.

I strongly encourage you to read this report and if you have any questions, please feel free to contact Amy Mora, Senior 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).

## Paper or Electronic? The Choice is YOURS!

EMWD must distribute a water quality report to its customers by July 1 every year. Until recently, the only method for distributing the report was sending paper copies through the mail.

Recently however, guidelines were published to allow distributing the report, also known as the Consumer Confidence Report (CCR), electronically. EMWD is offering its customers a choice - continue receiving a paper copy or opt for the electronic version.

The guidelines require that customer delivery preferences be collected and recorded before we can actually 'go electronic.' Therefore, EMWD is gearing up now in order to offer an electronic version of next year's report - **AND WE NEED YOUR HELP!**

We have made it easy and convenient for you to tell us how you want to receive future water quality reports. Simply use one of the options below.

**1. Submit your preference on-line at [www.emwd.org/ccr](http://www.emwd.org/ccr)**

**2. Complete and return a postage-paid card you will soon receive in the mail**

**PROVIDE YOUR DELIVERY PREFERENCE TODAY** for a chance to win a \$25 gift card. Offer is good only while supplies last.

# 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. Department regulations also establish limits for contaminants in bottled water that provide the same protection for 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 in drinking water at levels above 45 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 45 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 ask advice from your health care provider.

## 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 from their health care provider about drinking water. USEPA and 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.

## UNREGULATED CONTAMINANTS

Unregulated contaminant monitoring helps EPA and CDPH 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 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

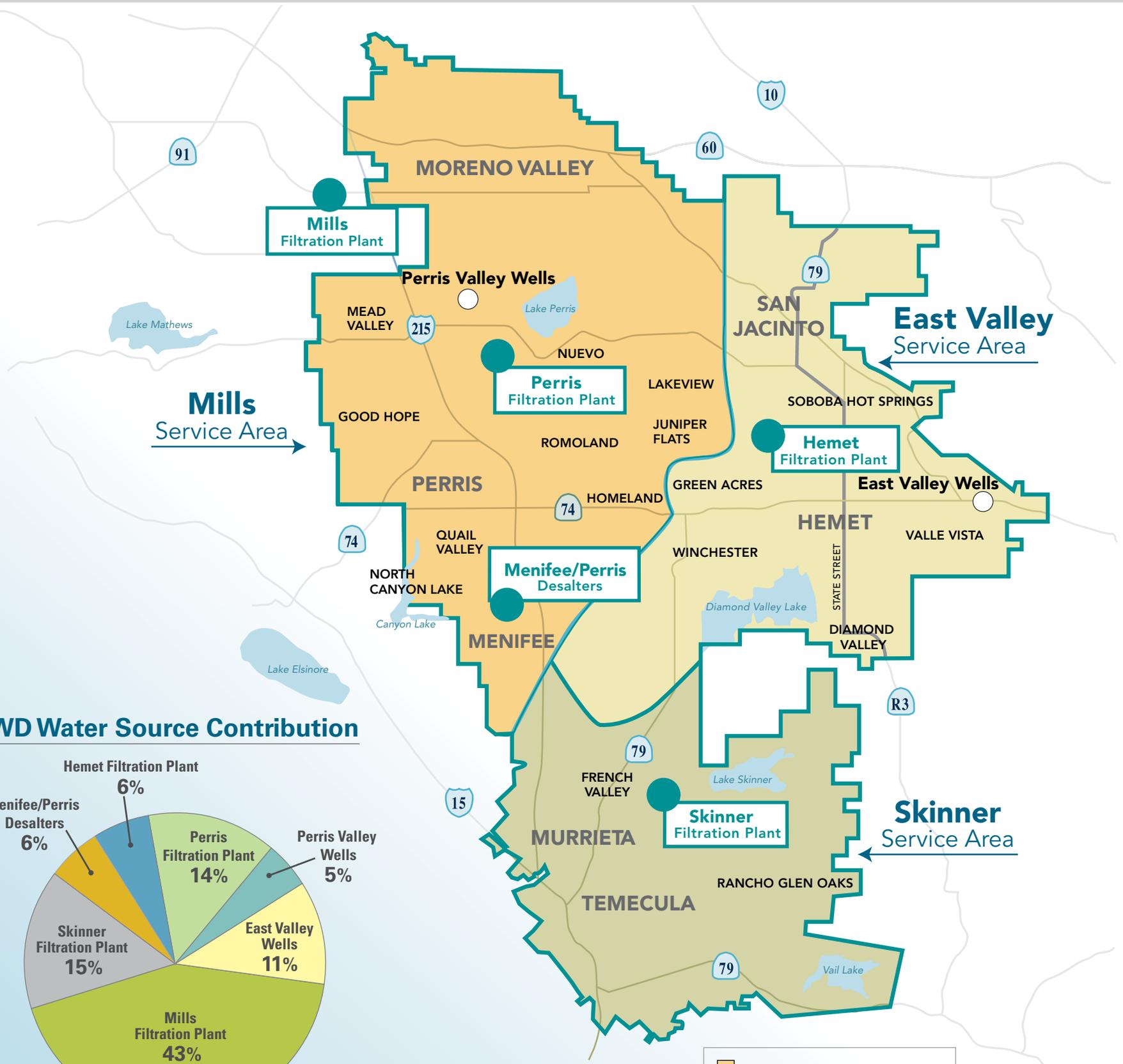
by establishing an action level of 15 ppb (parts per billion) for lead and 1300 ppb for copper at the tap.

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

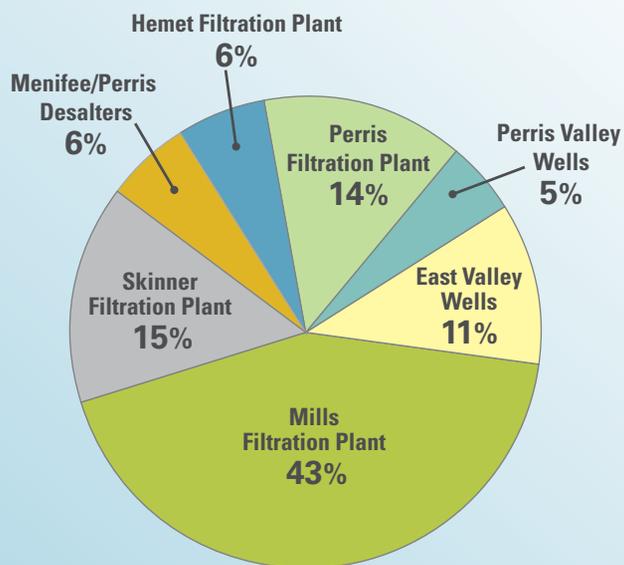
lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at 1(800) 426-4791 or at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

# 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: 30.9 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). Mills Plant uses chloramine for final disinfection.

### 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.
- 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. Perris Plant uses chloramine for final disinfection.
- 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. The Menifee/Perris Desalters use chloramine for final disinfection.

## 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. This treatment plant uses chloramine for final disinfection. 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. These wells are treated by adding free chlorine for final disinfection.

## 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 Skinner Plant uses chloramine for final disinfection.

\*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 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.

An initial assessment of all the 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.

EMWD's wells were assessed and determined to be most vulnerable to urban land uses such as gas stations, auto and boat repair shops, transportation corridors, sewer and septic systems, wastewater treatment plants, sand and gravel mining operations, salvage yards, chemical and petroleum storage and underground storage tanks. Groundwater wells were also considered vulnerable to agricultural uses including irrigated crops, agricultural drainage, private wells, and use of fertilizer, pesticides and herbicides. New assessments of groundwater sources are in progress and will be completed in 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](http://www.cdph.ca.gov/certlic/drinkingwater/Pages/DWSAP.aspx) and then click 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 3,037 coliform samples in 2012, three of which were coliform positive. The maximum allowed by USEPA for coliforms is no more than 5 percent in any month. The highest monthly coliform result 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 2012.

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

<b>AL</b>	Action Level	<b>LRAA</b>	Locational Running Annual Average	<b>NL</b>	Notification Level	<b>RAA</b>	Running Annual Average
<b>CFU/mL</b>	Colony-Forming Units per milliliter	<b>MCL</b>	Maximum Contaminant Level	<b>NR</b>	No Range: all result(s) were the same value	<b>TON</b>	Threshold Odor Number
<b>DLR</b>	Detection Limits for purposes of Reporting: State-determined level that a test can detect the chemical	<b>MCLG</b>	Maximum Contaminant Level Goal	<b>NTU</b>	Nephelometric Turbidity Units	<b>TT</b>	Treatment Technique
<b>grains/gallon</b>	Grains per gallon: a measure of water hardness. One gr/gal equals 17.1 ppm or mg/L	<b>MRDL</b>	Maximum Residual Disinfectant Level	<b>pCi/L</b>	picoCuries per Liter	<b>µS/cm</b>	microSiemen per centimeter; or micromho per centimeter (µmho/cm)
<b>HPC</b>	Heterotrophic Plate Count: a bacteriological test that counts the number of bacteria per milliliter of sample	<b>MRDLG</b>	Maximum Residual Disinfectant Level Goal	<b>PHG</b>	Public Health Goal	"—"	Samples not required
		<b>NA</b>	Not Applicable: no State or Federal standards are established	<b>ppb</b>	parts per billion or micrograms per liter (µg/L)	">"	Greater than
		<b>ND</b>	None Detected: sample was taken and chemical was not detected	<b>ppm</b>	parts per million or milligrams per liter (mg/L)	"<"	Less than
				<b>ppt</b>	parts per trillion or nanograms per liter (ng/L)		

### DEFINITIONS

**90th Percentile:** The value in a data set in which 90 percent 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 ozone, chlorine or chloramine. Bromate, Total Trihalomethanes, Haloacetic Acids and NDMA are disinfection by-products.

**Locational Running Annual Average (LRAA):** The 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 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 treatment process intended to reduce the level of a contaminant in drinking water.

# EASTERN MUNICIPAL WATER DISTRICT DISTRIBUTION SYSTEM DATA FOR 2012

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
<b>MICROBIOLOGICAL</b>									
<b>Total Coliform Bacteria</b>	# positive coliforms	<b>A</b>	MCLG = 0	NA	# positives in 2012 <b>Highest monthly %</b>	3 0.4	3 ---	0 ---	0 ---
<b>Fecal Coliform Bacteria (<i>E. coli</i>)</b>	# positive <i>E. coli</i>	<b>B</b>	MCLG = 0	NA	# positives in 2012	0	0	0	0
<b>Heterotrophic Plate Count (HPC)</b>	# HPCs > 500 CFU/mL	TT <b>C</b>	NA	NA	# HPC>500 in 2012 <b>Lowest monthly %</b>	6 98.7	5 ---	1 ---	0 ---
<b>DISINFECTION BY-PRODUCTS AND DISINFECTANT RESIDUALS</b>									
<b>Bromate (Mills &amp; Skinner plants only)</b>	ppb	RAA = 10	0.1	1	Range <b>Highest RAA</b>	--- ---	ND - 11 3.4 <b>D</b>	--- ---	1.2 - 11 6.5 <b>D</b>
<b>Haloacetic Acids (5) (HAA5s) <b>E</b></b>	ppb	LRAA = 60	NA	<b>E</b>	Range <b>Highest LRAA</b>	<1.0 - 28 17	<1.0 - 28 17	<1.0 - 20 16	<1.0 - 17 10
<b>Total Trihalomethanes (TTHMs) <b>F</b></b>	ppb	LRAA = 80	NA	1	Range <b>Highest LRAA</b>	2.8 - 97 62	17 - 97 62 <b>F</b>	2.8 - 50 42	9.8 - 40 26
<b>Total Chlorine Residual chlorine and chloramines</b>	ppm	MRDL = 4	MRDLG = 4	NA	Range <b>Average</b>	<0.2 - 4.3 1.4	<0.2 - 3.2 1.3	<0.2 - 4.3 1.5 <b>G</b>	<0.2 - 2.9 1.8
<b>PHYSICAL PARAMETERS</b>									
<b>Color</b>	Units	15	NA	NA	Range <b>Average</b>	<2.5 - 25 <2.5	<2.5 - 25 <2.5 <b>H</b>	<2.5 - 5 <2.5	<2.5 - 2.5 <2.5
<b>Odor Threshold</b>	TON	3	NA	1	Range <b>Average</b>	1 - 2 1	NR 1	NR 1	1 - 2 1
<b>pH</b>	Units	6.5 - 8.5	NA	NA	Range <b>Average</b>	7.0 - 8.6 8.0	7.0 - 8.5 8.0	7.6 - 8.6 8.0 <b>I</b>	7.4 - 8.5 8.2
<b>Turbidity</b>	NTU	5	NA	NA	Range <b>Average</b>	0.1 - 1.2 0.1	0.1 - 1.2 0.1	0.1 - 1.2 0.2	0.1 - 0.6 0.1
<b>UNREGULATED CONTAMINANT MONITORING</b>									
<b>N-Nitrosodimethylamine (NDMA) <b>J</b></b>	ppt	NL = 10	3	2	Range <b>Average</b>	ND - 12 ND	ND - 12 2	ND - 4 ND	ND - 8 2
<b>METALS AS A BY-PRODUCT OF CORROSION OF CONSUMER'S PLUMBING</b>									
<b>Copper <b>K</b></b>	ppb	AL = 1300	300	50	NA	90th percentile of 50 samples: 230 ppb One sample exceeded the Action Level			
<b>Lead <b>K</b></b>	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 3,037 coliform samples in 2012, three of which were total coliform positive. The highest monthly coliform result was 0.4%. The MCL was not violated in 2012.
- 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 2012.
- 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 98.7% in any month in 2012.
- D** 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.
- E** 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 sites collected quarterly throughout the distribution system. HAA5s are a by-product of drinking water chlorination.
- F** Total Trihalomethanes are the sum of the following analytes: bromodichloromethane, bromoform, chloroform, and dibromochloromethane. Locational running annual averages and ranges taken from 12 samples sites collected quarterly throughout the distribution system. Since the MCL is based on the Locational Running Annual Average (LRAA), values above the MCL are acceptable, so long as the LRAA complies with the MCL. TTHMs are a by-product of drinking water chlorination.
- G** 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. One sample out of 3,037 was over the MRDL of 4 ppm.
- H** High color (25) represents one sample site in the Moreno Valley service area. EMWD responded to this high value by flushing the area and resampling, and the resample complied with state standards.
- I** 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 2012, one sample in the East Valley service area out of 119 total samples was slightly over the 8.5 limit.
- J** NDMA is a disinfection by-product. Samples are from chlorinated distribution samples taken in 2008.
- K** 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 typically found in the source waters but can get into water by way of internal corrosion of household plumbing.

# EASTERN MUNICIPAL WATER DISTRICT

We are required to monitor your drinking water for specific contaminants on a regular basis. Results are an indicator of whether or not your drinking water meets health standards. During September 14 through September 20, 2012, (due to instrument failure) we did not monitor for turbidity at the combined effluent sample point at the Perris Water Filtration Plant. Although this required

					Moreno Valley, Perris, Menifee					
Parameter	Units	State or Federal Maximum Contaminant Level (MCL)	California Public Health Goal (PHG)	State Detection Limit for Reporting (DLR)	Mills Filtration Plant		Perris Valley Wells <sup>L</sup>		Perris Filtration Plant	
					Range	Average	Range	Average	Range	Average
Percent of total water delivered by EMWD	%				43%		5%		14%	
<b>PRIMARY STANDARDS—Mandatory Health-Related Standards</b>										
<b>CLARITY</b>					Highest NTU	% ≤ 0.3			Highest NTU	% ≤ 0.1
Combined Filter Effluent Turbidity	NTU and %	<sup>M</sup>	NA	NA	0.07	100	---	---	0.75	99.81
<b>ORGANIC CHEMICALS</b>										
Trichloroethylene (TCE)	ppb	5	1.7	0.5	NR	ND	ND - 1.3	0.8	NR	ND
<b>INORGANIC CHEMICALS</b>										
Aluminum	ppb	1000 <sup>N</sup> 200	600	50	65 - 160	120	NR	ND	ND - 55	ND
Arsenic	ppb	10	0.004	2	NR	ND	NR	ND	NR	ND
Barium	ppm	1	2	0.1	NR	ND	0.2 - 0.4	0.3	NR	ND
Fluoride (Naturally-occurring)	ppm	2.0	1	0.1	---	----	0.3 - 0.5	0.4	0.1 - 0.4	0.2
Fluoride (Treatment related) <sup>P</sup>	ppm	NA	1	0.1	0.3 - 0.9	0.7	---	---	---	---
Lead	ppb	AL = 15	0.2	5	NR	ND	NR	ND	ND - 15	5
Nitrate (as NO <sub>3</sub> )	ppm	45	45	2	NR	3.0	15 - 33	23	ND - 5.0	2.0
Selenium	ppb	50	30	5	NR	ND	NR	ND	NR	ND
<b>RADIOLOGICALS</b>										
Gross Alpha Particle Activity	pCi/L	15	MCLG = 0	3	NR	ND	ND - 9.1	5.0	NR	ND
Gross Beta Particle Activity	pCi/L	50	MCLG = 0	4	NR	ND	7.3 - 10	8.7 <sup>L</sup>	NR	7.1
Uranium	pCi/L	20	0.43	1	ND - 1	1	1.3 - 9.2	4.6	NR	ND

2010 values      2011 values      2010 and 2011 values

ND - NONE DETECTED      NR - NO RANGE

## FOOTNOTES

<sup>L</sup> 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.

<sup>M</sup> 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.

<sup>N</sup> Aluminum has both primary (1,000 ppb) and secondary (200 ppb) standards.

# 2012 WATER QUALITY TABLE

sample was not taken at the combined effluent point, each individual sample stream that contributes to the combined effluent was measured and there was no indication of any turbidity problem. Your water quality was not compromised in any way during this period of time. EMWD has implemented an automatic system to alert staff immediately of instrument failure.



& North Canyon Lake		Murrieta		Hemet & San Jacinto				Major Sources in Drinking Water
Menifee & Perris Desalters		Skinner Filtration Plant		East Valley Wells		Hemet Filtration Plant		
6%		15%		11%		6%		
Range	Average	Range	Average	Range	Average	Range	Average	
		Highest NTU	% ≤ 0.3			Highest NTU	% ≤ 0.1	
---	---	0.06	100	---	---	0.36	99.93	
NR	ND	NR	ND	NR	ND	NR	ND	Discharge from metal degreasing sites and other factories
NR	ND	NR	ND	NR	ND	ND - 58	ND	Residue from water treatment process; natural deposits erosion
NR	ND	NR	ND	ND - 5.9	ND	NR	ND	Natural deposits erosion; runoff from orchards; glass and electronics production wastes
NR	ND	NR	ND	ND - 0.1	ND	NR	ND	Oil and metal refineries discharge; natural deposits erosion
NR	ND	---	---	0.2 - 0.5	0.2	ND - 0.2	ND	Erosion of natural deposits
---	----	0.7 - 0.9	0.8	---	----	---	----	Water additive to promote strong teeth
NR	ND	NR	ND	NR	ND	NR	ND	House pipes internal corrosion; erosion of natural deposits
7.4 - 14	11	NR	ND	ND - 22	4.2	ND - 3.2	ND	Runoff and leaching from fertilizer use; septic tank and sewage; natural deposits erosion
NR	ND	NR	ND	ND - 13	ND	NR	ND	Runoff/leaching from livestock lots; erosion of natural deposits
NR	ND	ND - 3	ND	ND - 3.6	ND	NR	ND	Erosion of natural deposits
NR	5.1	ND - 5	ND	ND - 16	ND	NR	ND	Decay of natural and man-made deposits
NR	1.4	ND - 2	1	ND - 3	1.8	NR	ND	Erosion of natural deposits

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

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.

**O** 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.

**P** 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.

Moreno Valley, Perris, Menifee

Parameter	Units	State or Federal Maximum Contaminant Level (MCL)	California Public Health Goal (PHG)	State Detection Limit for Reporting (DLR)	Mills Filtration Plant		Perris Valley Wells		Perris Filtration Plant	
					Range	Average	Range	Average	Range	Average
<b>SECONDARY STANDARDS–Aesthetic Standards</b>										
Chloride	ppm	500	NA	NA	80 - 100	<b>92</b>	230 - 430	<b>330</b>	73 - 110	<b>87</b>
Color	Units	15	NA	NA	NR	<b>1</b>	5.0 - 7.5	<b>5.8</b>	<2.5 - 2.5	<b>&lt;2.5</b>
Iron	ppb	300	NA	100	NR	<b>ND</b>	NR	<b>ND</b>	NR	<b>ND</b>
Manganese	ppb	50	NL = 500	20	NR	<b>ND</b>	NR	<b>ND</b>	ND - 110 <b>Q</b>	<b>21</b>
Odor Threshold	TON	3	NA	1	NR	<b>2</b>	NR	<b>1</b>	NR	<b>1</b>
Specific Conductance	µS/cm	1600	NA	NA	380 - 600	<b>490</b>	1030 - 1460	<b>1200</b>	480 - 930	<b>610</b>
Sulfate	ppm	500	NA	0.5	27 - 44	<b>36</b>	51 - 58	<b>54</b>	26 - 200	<b>65</b>
Total Dissolved Solids (TDS)	ppm	1000	NA	NA	280 - 290	<b>290</b>	590 - 900	<b>730</b> <b>L</b>	230 - 590	<b>340</b>
Turbidity <b>R</b>	NTU	5	NA	NA	NR	<b>&lt;0.1</b>	0.5 - 2.2	<b>1.1</b>	0.1 - 0.6	<b>0.2</b>
<b>UNREGULATED CHEMICALS REQUIRING MONITORING</b>										
Boron	ppm	NL = 1	NA	0.1	NR	<b>0.15</b>	0.32 - 0.55	<b>0.43</b>	0.12 - 0.20	<b>0.15</b>
Vanadium	ppb	NL = 50	NA	3	NR	<b>ND</b>	14 - 18	<b>16</b>	NR	<b>ND</b>
<b>OTHER PARAMETERS</b>										
Alkalinity (Total)	ppm	NA	NA	NA	64 - 86	<b>75</b>	110 - 170	<b>130</b>	77 - 140	<b>92</b>
Calcium	ppm	NA	NA	NA	16 - 23	<b>20</b>	81 - 170	<b>120</b>	20 - 73	<b>34</b>
Hardness as Calcium Carbonate <b>S</b>	grains/gallon	NA	NA	NA	4.6 - 6.4	<b>5.8</b>	18 - 34	<b>25</b>	6.4 - 16	<b>8.3</b>
Magnesium	ppm	NA	NA	NA	12 - 13	<b>12</b>	23 - 39	<b>30</b>	11 - 26	<b>14</b>
Sodium	ppm	NA	NA	NA	60 - 67	<b>64</b>	91 - 140	<b>110</b>	51 - 90	<b>63</b>

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

## FOOTNOTES

**L** 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.

**Q** The MCL for Manganese is based on the annual average, so values above the MCL is acceptable so long as the average complies with the MCL.

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

# 2012 WATER QUALITY TABLE

& North Canyon Lake		Murrieta		Hemet & San Jacinto				Major Sources in Drinking Water
Menifee & Perris Desalters		Skinner Filtration Plant		East Valley Wells		Hemet Filtration Plant		
Range	Average	Range	Average	Range	Average	Range	Average	
160 - 200	<b>190</b>	75 - 77	<b>76</b>	11 - 60	<b>22</b>	54 - 100	<b>77</b>	Runoff/leaching from natural deposits; seawater influence
NR	<b>&lt;2.5</b>	NR	<b>1</b>	<2.5 - 12	<b>4.5</b>	NR	<b>&lt;2.5</b>	Naturally-occurring organic materials
NR	<b>ND</b>	NR	<b>ND</b>	ND - 150	<b>ND</b>	NR	<b>ND</b>	Leaching from natural deposits; industrial wastes
NR	<b>ND</b>	NR	<b>ND</b>	ND - 48	<b>ND</b>	NR	<b>ND</b>	Leaching from natural deposits
NR	<b>1</b>	1 - 2	<b>2</b>	1 - 2	<b>1</b>	NR	<b>1</b>	Naturally-occurring organic materials
550 - 1050	<b>800</b>	440 - 780	<b>640</b>	320 - 780	<b>460</b>	400 - 720	<b>510</b>	Substances that form ions in water; seawater influence
22 - 32	<b>28</b>	96 - 120	<b>110</b>	11 - 180	<b>54</b>	23 - 54	<b>40</b>	Runoff/leaching from natural deposits; industrial wastes
350 - 590	<b>480</b>	360 - 400	<b>380</b>	190 - 490	<b>280</b>	220 - 330	<b>270</b>	Runoff/leaching from natural deposits
NR	<b>0.1</b>	<0.1 - 0.1	<b>&lt;0.1</b>	0.1 - 2	<b>0.3</b>	0.1 - 0.2	<b>0.1</b>	Soil runoff
0.13 - 0.26	<b>0.18</b>	NR	<b>0.13</b>	NR	<b>ND</b>	0.11 - 0.22	<b>0.14</b>	Runoff/leaching from natural deposits; industrial wastes
NR	<b>6.5</b>	NR	<b>ND</b>	ND - 42	<b>11</b>	NR	<b>ND</b>	Naturally-occurring; industrial waste discharge
33 - 76	<b>59</b>	75 - 110	<b>93</b>	110 - 150	<b>130</b>	65 - 95	<b>82</b>	Naturally-occurring carbonates; measures water's ability to neutralize acid
34 - 72	<b>55</b>	34 - 41	<b>38</b>	32 - 71	<b>51</b>	18 - 27	<b>23</b>	Naturally-occurring mineral
6.4 - 15	<b>11</b>	7.0 - 13	<b>9.9</b>	5.3 - 12	<b>8.8</b>	5.4 - 7.0	<b>6.2</b>	Naturally-occurring; the sum of calcium and magnesium in the water
7.1 - 18	<b>13</b>	15 - 17	<b>16</b>	2.3 - 12	<b>5.4</b>	10 - 13	<b>12</b>	Naturally-occurring mineral
60 - 81	<b>74</b>	65 - 66	<b>66</b>	22 - 73	<b>33</b>	43 - 68	<b>55</b>	Naturally-occurring mineral

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

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.

**S** 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.



**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 1<sup>st</sup> and 3<sup>rd</sup> 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: Water Quality  
(951) 928-3777, ext. 6337  
[www.emwd.org](http://www.emwd.org)**



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**Consumer Confidence Report**  
Issued July 2013

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