The Water We Drink

The U.S. Congress has directed public water systems to report annually on the quality of the drinking water they serve. Eastern Municipal Water District (EMWD) methodically supports this requirement and has provided consumer confidence reports and other water quality data to all of its customers for many years.

Eastern Municipal Water District is committed to providing a reliable supply of high-quality drinking water. Drinking water supplied by EMWD meets health standards established by state and federal agencies. During 2003, EMWD staff collected 3,233 drinking water samples. EMWD’s lab staff and contract laboratories performed 32,683 tests on those samples.

The operations budget for EMWD’s laboratory is about $1.1 million for the 2003-04 fiscal year. Highly trained microbiologists, chemists and water analysts work hard to make sure EMWD customers can depend on high-quality water.

Results of freshwater monitoring during 2003 are found in the tables of this report.

Knowledge of the Source of Your Tapwater

The sources of drinking water (both tapwater and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As an EMWD customer, your tapwater comes from one of three service areas: the Mills Service area in the northwest portion of the District, the Skinner Service area in the southern portion of the District, and the East Valley Service area in the northeast portion of the District. To find your service area, see the map on the back cover.

In the Mills and Skinner service areas, the water is primarily imported surface water treated at regional treatment plants or is supplied from EMWD’s own groundwater resources. Menifee and Sun City typically receive their tapwater from either the Skinner or Mills plants, or from EMWD’s new Menifee Desalination Plant. This additional new supply draws on groundwater that is high in salts—specifically Total Dissolved Solids. Through reverse osmosis, any contaminants that exceed their maximum contaminant levels are removed.

The water product from desalination is similar in quality to distilled water. That water is blended with imported water supplies and delivered to its customers through the areas listed below.

Mills Service Area

Mills Filtration Plant (Water supplied solely from northern California through the State Water Project): Serves Moreno Valley, Menifee, Perris, Sun City, Good Hope, Menard Valley, Lakeview, N. Ureoro, Romoland, N. Canyon Lake and Quail Valley.

Perris Water Filtration Plant and Well 55 (Eastern Perris area, blended Colorado River water with Mills water): Serves Perris, Romoland, Lakeview and Nuevo. Colorado River water is filtered through membranes to remove particulate contaminants and blended with Well 55 on site.

Well 44 and Well 49 (Eastern Perris area, blended Colorado River water with Mills water): Service is limited to the immediate surrounding neighborhood.

Mills Water Distribution System

- Copper ppm AL=1.3 0.17 0.05 NA 90th percentile of 50 samples: 0.23 ppm
- Lead ppm AL=15 2 5 NA 90th percentile of 50 samples: 0.17 ppm

See page 4 for Footnotes and page 10 for Definitions.

Notes

- The Distribution System samples represent samples that were taken weekly (Microbiological, Physical and Disinfectant Residuals), quarterly (Disinfection By-Products) or every three months (HAA5) in our distribution system. The other tables in this report are of samples taken either at the source or just after treatment and before it enters the distribution system. We sample the distribution system to look for any changes in the water quality that may indicate excessive water age, contamination, or excessive corrosivity of the water.

Abbreviations

- AL: Action level
- CFU/mL: Colony Forming Units per milliliter
- DLR: Detection Limits for purposes of Reporting
- HAA5: Haloacetic Acid(s) (five)
- MCL: Maximum Contaminant Level
- MCLG: Maximum Contaminant Level Goal
- MRDL: Maximum Residual Disinfectant Level
- MRDLG: Maximum Residual Disinfectant Level Goal
- N: Nitrogen
- NA: Not Applicable
- ND: None Detected
- T: Treatment Technique
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(a) Total coliform MCLs are no more than 5.0% of the monthly samples may be total coliform-positive. Compliance is based on the combined distribution system sampling from all service areas. In 2003, 2,460 samples were analyzed. The MCL was not violated.

(b) Fecal coliform in Mill and Skinner filtration plant effluents were taken from weekly samples for TTHM and monthly samples for HAA5. Distribution system-wide average and range were taken from 28 samples collected quarterly.

(c) DLR = 1.0 ppb for each HAA5 analyte (dichloroacetic acid, trichloroacetic acid, monobromonacetic acid, and dichloroacetic acid) except for monochloroacetic acid which has a DLR=2.0 ppb.

(d) Data for Copper and Lead distribution system samples are from 2001.

(e) The turbidity of the filtered water shall be less than or equal to 0.3 NTU in 95% of the measurements taken each month and shall not exceed 1.0 NTU at any time. Turbidity is a measure of the cloudiness of the water and is a good indicator of water quality and filtration performance.

(f) Aluminum and MTBE have both primary and secondary standards. The TTHM for aluminum is 200 ppb, and for MTBE is 5 ppb.

(g) MTBE reporting level is 5.5 ppb.

(h) State MCL is 45 mg/L as nitrate, which equals 10 mg/L as N.


(j) Standard is for Radon-222 and -220 combined.

(k) Bromate compliance monitoring began in October 2003. The Action Level listed in the Distribution System table. The corrosivity control is compliance with the Lead and Copper Action Levels, listed in the Distribution System table. The corrosivity control agents are used in East Valley to hold iron and manganese in solution.

(l) Manganese and MTBE have both primary and secondary standards. The TTHM for manganese is 20 ppb, and for MTBE is 5 ppb.

(m) A sequaturing agent is added to the wells in East Valley to control the corrosivity of the water. All other wells listed as "corrosoive" are blended with the "non-corrosive" waters either from Mills or Skinner Filtration Plants. Evidence of corrosion control is compliance with the Lead and Copper Action Levels, listed in the Distribution System table. The sequaturing agents are also used in East Valley to hold iron and manganese in solution.

(n) Manganese has a DLR=2.0 ppb.

(o) The transition metals and Skinner filtration plants were taken at the filter effluents.

(p) Samples taken for perchlorate at Wells 55 were analyzed.

(q) HPC values were based on the monthly averages of the Mills and Skinner plant effluent samples.

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(r) HPC values were based on the monthly averages of the Mills and Skinner plant effluent samples.
**Important Health Information**

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 (1-800-426-4791).

Some people may be more sensitive to contaminants in drinking water than the general population, including people with certain underlying medical conditions, people with suppressed immune systems, and people with certain genetic vulnerabilities. For example, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA's Center 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. (1-800-426-4791).

**Radon** in drinking water at levels above 45 parts per million is an oxygen-rich salt known in high concentrations. It is a radioactive gas that you can breathe in your air is 4 picocuries per liter of air (pCi/L) or higher, there is an increased risk of stomach cancer.

**Carcinogen.** Breathing air containing radon can lead to lung cancer and certain specific enzyme deficiencies. If you are caring for an infant or a young child, you should ask the advice of your health care provider. Untreated well water from Wells 44 and 49 located in Moreno Valley exceeded the nitrate MCL of 45 ppm. Under strict state guidelines, EMWD blends low nitrate water from the Mills system with this supply to meet the MCL (see table on opposite page).

**Perchlorate** is an oxygen-rich salt found in high concentrations. It is a radioactive gas that you can breathe in your air is 4 picocuries per liter of air (pCi/L) or higher, there is an increased risk of stomach cancer. Breathing air containing radon can lead to lung cancer and certain specific enzyme deficiencies. If you are caring for an infant or a young child, you should ask the advice of your health care provider. Untreated well water from Wells 44 and 49 located in Moreno Valley exceeded the nitrate MCL of 45 ppm. Under strict state guidelines, EMWD blends low nitrate water from the Mills system with this supply to meet the MCL (see table on opposite page).

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EASTERN MUNICIPAL WATER DISTRICT

WHAT ELSE SHOULD I KNOW ABOUT CONTAMINANTS & REGULATIONS?

As water travels over the surface of the land or soaks down through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up particles resulting from the presence of animals or from human activity. Contaminants that may be present in source water include:

- Inorganic contaminants, such as salts and metals, that may be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- Pesticides and herbicides that may come from a variety of sources such as agriculture, urban stormwater runoff and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals that are by-products of industrial processes and petroleum production, and can come from a variety of sources such as industrial waste discharges, landfills, wastewater treatment facilities, and oceanic discharges.
- Radioactive contaminants, that can be naturally occurring or be the result of oil and gas production and mining activities.
- Microbial contaminants, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.

In order to ensure that tapwater is safe to drink, the United States Environmental Protection Agency (USEPA) and the California Department of Health Services (CDHS) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems.

VULNERABILITY ASSESSMENTS

In December 2002, EMWD completed a source water assessment of its potable production well supplies. The assessment evaluated 8 groundwater wells within the District’s service area. Groundwater supplies are considered to be most vulnerable to various urban and agricultural land uses.

Urban land uses include automobile gas stations and repair shops, transportation corridors, furniture repair and manufacturing, sewer collection systems, and sand and gravel mining operations. Agricultural land uses include irrigated crops and application of pesticides and herbicides. A copy of the assessment may be obtained by contacting EMWD by phone at (951) 928-3777 extension 6337.

In December 2002, Metropolitan Water District of Southern California completed a source water assessment of its Colorado River and State Water Project supplies. Colorado River supplies are considered to be most vulnerable to recreation, urban stormwater runoff, increasing urbanization in the watershed and wastewater. State Water Project supplies are considered to be most vulnerable to urban/stormwater runoff, wildlife, agriculture, recreation and wastewater. A copy of the assessment may be obtained by contacting Metropolitan by phone at (213) 231-6860.

PARAMETERS

- Combined Filter Effluent Turbidity: 0.37 NTU
- Percent of total water delivered by EMWD: 7.5% (0 - 100)
- Percent of total water delivered by MWD: 92.5% (0 - 100)
- Primary Filtration Plant: San Jacinto Silverwood
- Secondary Filtration Plant: Perris Water Filtration Plant
- Mill Service Area: Mill Water Blended with Perris Water Filtration Plant
- Average Cost: $10.86 (0 - 100)
- Average Price: $9.35 (0 - 100)
- Major Source in Drinking Water: Natural Sources in Drinking Water

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**Microbial Water Quality and Disinfection**

Coliform bacteria are not generally considered harmful. They are used as indicators of potential problems because they are easily monitored and analyzed. It is not at all unusual for a water system to have an occasional positive sample for total coliform bacteria. And it is difficult—if not impossible—to assure that a water system will never get a positive sample. The Maximum Contaminant Level (MCL) for total coliform bacteria is based on a monthly percent of positive total coliform test results ranging from 0.0% to 1.1% (see EWMD Distribution Table). No samples in 2003 exceeded the MCL for total coliform bacteria. Disinfection is typically accomplished using chlorine at wells prior to delivery to customers. Chloramine, a chlorine compound, is used for surface water that is treated at Mills and Skinner treatment plants. Ozone, an alternative form of disinfection, is used in the treatment process at the Mills plant.

Cryptosporidium is a microbial pathogen found in surface water throughout the U.S. Although filtration removes cryptosporidium, the most commonly used filtration methods cannot guarantee 100 percent removal. Current test methods do not determine if the organisms are dead or if they are capable of causing disease. In 2003, a single Cryptosporidium oocyst was detected in one monthly sample of Mills plant influent that was equivalent to 10 oocysts/L. Cryptosporidiosis is a form of diarrhea that affects all along with their monitoring and reporting requirements, and water treatment requirements.

**Definitions**

- **Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water.
- **Primary MCLs:** Those levels below which there is no known or expected risk to health.
- **Secondary MCL:** Levels of contaminants in drinking water treatment.
Regular public meetings of the EMWD Board of Directors are generally held on the 1st and 3rd Wednesdays of each month. Work sessions begin at 9:00 a.m. and the board meetings start at 1:00 p.m. If you wish to attend a meeting, please call the board secretary during normal work hours at (951) 928-3777, ext. 4205 to be certain the meeting is being conducted on the normal date.

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

The area code within EMWD’s service area will change from 909 to 951 effective July 17, 2004.

**MISSION STATEMENT**

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.