

## Where Does Your Water Come From?

Western's customers receive their water from two sources. You'll see these two sources identified on the Water Quality Table on the previous page as "Mills" and "Mockingbird".

### Mills

The majority of the water Western supplies comes from Northern California via the California Aqueduct. It begins as snow melt in the Northern Sierra Nevada mountains. Before reaching the Aqueduct, it travels through the Sacramento-San Joaquin Delta, then through 444 miles of the Aqueduct to the Metropolitan Water District's Henry J. Mills Treatment Plant in Riverside, where it is treated before delivery by Western to our customers.

### Mockingbird

A small amount of Western's water supplies is provided from wells owned by the city of Riverside. This water comes from rain and snow melt runoff from the San Bernardino Mountains. It is naturally filtered through the sand and gravel of the Bunker Hill Basin in San Bernardino and the Riverside Basin (North Orange Well Field) in Riverside.

Your 2001 Water Quality Report



Western Municipal Water District  
 PO Box 5286  
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# Water Quality Report 2001




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# The Quality of the water you drink

Western Municipal Water District



As your drinking water provider, Western Municipal Water District believes it's important that our customers are informed consumers. Western vigilantly safeguards its water supplies, and once again we are proud to report that our system has never violated a maximum contaminant level or any other water quality standard, and meets all state drinking water health standards. This report is a snapshot of last year's water quality. Included are details about where your water comes from, what it contains and how it compares to state standards.

## Continuous Testing Ensures Continuous Quality

Western's water quality staff works with the Metropolitan Water District of Southern California, the California State Department of Health Services, and independent certified testing laboratories to continuously monitor the quality of the water supplies. Metropolitan, the supplier of most of the water Western serves, has one of the most sophisticated water quality monitoring and treatment programs in the world. It performs continuous daily monitoring and several hundred additional samplings each month. Once the water enters Western's retail delivery system, we perform even more testing, with 100 bacteriological samplings and 20 physical samplings taken from 40 different locations each month.

## Committed to the Safety of Western's Water

The safety of our water supply is one of Western's primary concerns. Western has heightened the security of our water operations systems and continues to be proactive in our efforts for delivery of a safe and secure water supply.

These samples are compared to more than 175 state and federal standards, providing Western's water quality staff with data on the condition of the water supply's purity and aesthetics.

## Sources of Water

The sources of drinking water (both tap and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include:

- *Microbial contaminants*, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural, livestock operations, and wildlife.
- *Inorganic contaminants*, such as salts and metals, that can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- *Pesticides and herbicides*, which 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 also come from gas stations, urban stormwater runoff, and septic systems.
- *Radioactive contaminants*, which can be naturally occurring or be the result of oil and gas production, and mining activities.



In order to ensure that tap water is safe to drink, the United States Environmental Protection Agency (USEPA) and the California Department of Health Services (Department) prescribe 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 must provide the same protection for public health.



**A Word About Water Treatment**  
In many parts of the world today, people are suffering from cholera, dysentery, and typhoid — diseases that have been essentially eliminated in this country, thanks to progress in water treatment. A key step in the treatment process is disinfection. Without disinfection, water would not be safe to drink.

The water delivered to your tap by Western has been through a complex filtering process and then disinfected with chloramines. Chloramines are a combination of chlorine and ammonia. While the addition of chloramines to the water supply ensures its safety against water-borne disease, it can contribute to "disinfection by-products" in the water. Disinfection by-products are formed when disinfectants react with naturally occurring organic matter in the source water. To help reduce these disinfection by-products, the Metropolitan Water District is adding ozone as the primary disinfectant in its treatment plants.

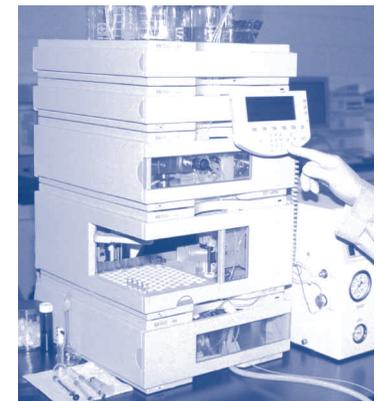
## Special Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons, such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants, can be particularly at risk from infections. These people should seek advice about 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 USEPA's Safe Drinking Water Hotline 800.426.4791.

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 Safe Drinking Water Hotline or visiting [www.epa.gov/safewater/hfacts.html](http://www.epa.gov/safewater/hfacts.html) or at [www.dhs.ca.gov/ps/ddwem/index.htm](http://www.dhs.ca.gov/ps/ddwem/index.htm).

While your drinking water meets the current standard for *arsenic*, it may occasionally contain low levels of arsenic. The standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. The California Department of Health

(Continued inside)



2001 Water Quality Table

Western Municipal Water District

Primary Drinking Water Standards - Mandatory Health Related Standards	Units of Measure	State MCL	State PHG	Western's Levels				Source of Contaminant
				Mills Range	Mills Average	Mockingbird Range	Mockingbird Average	
<i>Clarity</i> System Turbidity (a)*	NTU	0.5	NS	0.05 - 0.56	0.13	0.05 - 0.56	0.13	Soil runoff
<i>Organic Chemicals</i> Dibromochloropropane (DBCP)	ppt	200	1.7	ND	ND	ND - 60	25	Runoff and leaching from (a banned) soil fumigant
<i>Volatile Organic Compounds</i> Trichloroethylene (TCE)	ppb	5	0.8	ND	ND	ND - 0.6	ND	Discharge from metal degreasing sites
Toluene	ppb	150	150	ND - 0.6	ND	ND	ND	Discharge from petroleum and chemical refineries
Methyl-tert-butyl-ether (MTBE) (b)	ppb	13	13	ND - 3.8	1.3	ND	ND	Gasoline additive, combustion by-product, boat spillage
<i>Inorganic Chemicals</i> Arsenic (c)	ppb	50	NS	ND	ND	<2 - 6.8	<2	Erosion of natural deposits
Copper (d)*	ppm	1.3	0.17 (AL)	0.02 - 0.33	0.20	0.02 - 0.33	0.20	Corrosion of household plumbing system
Fluoride	ppm	2	1	ND - 0.21	0.10	0.4 - 0.7	0.6	Erosion of natural deposits
Lead (d)*	ppb	15	2 (AL)	<5 - 73	<5	<5 - 73	<5	Corrosion of household plumbing system
Nitrate (as Nitrogen) (e)	ppm	10	10	ND - 1.04	0.68	3 - 6	5	Runoff and leaching from fertilizer use
Sodium	ppm	NS	NS	59 - 80	66	28 - 41	37	Erosion of natural deposits
Hardness	ppm	NS	NS	102 - 126	111	170 - 250	208	Erosion of natural deposits
Hardness	grains/gal	-	-	-	6	-	12	Unit of measure used in water softening
<i>Radionuclides (f)</i> Gross Alpha	pCi/L	15	NS	ND - 2.12	ND	6 - 13	9	Erosion of natural deposits
Gross Beta	pCi/L	50	NS	ND - 4.25	ND	ND	ND	Decay of natural and man-made deposits
Radium	pCi/L	5	NS	ND - 2.08	1.24	ND	ND	Decay of natural deposits
Radon-222 (c)	pCi/L	NS	NS	ND	ND	130 - 620	434	Erosion of natural deposits
Uranium	pCi/L	20	0.5	ND	ND	4 - 13	8	Erosion of natural deposits
<b>Secondary Standards - Aesthetic Standards</b> <i>Chemical Parameters</i> Chloride	ppm	500	NS	87 - 128	100	20 - 47	22	Runoff and leaching from natural deposits
Color*	units	15	NS	<3	<3	<3	<3	Naturally occurring; old water pipes
Odor Threshold*	units	3	NS	<1 - 1	<1	<1	<1	Naturally occurring organic material
Specific Conductance	(µmho/cm)	1600	NS	514 - 660	573	470 - 610	544	Substances that form ions in water
Sulfate	ppm	500	NS	34 - 51	41	51 - 81	61	Runoff and leaching from natural deposits
Total Dissolved Solids	ppm	1000	NS	278 - 352	307	280 - 380	325	Runoff and leaching from natural deposits
Corrosivity	SI	NC	NS	-0.03 - 0.10	0.05	-0.65 - 0.19	0.2	Elemental balance in water

Information Collection Rule Results (g)								
Haloacetonitriles	ppb	NS	NS	6.2 - 13	8.7	NT	NT	Disinfection by-product
Halo ketones	ppb	NS	NS	0.6 - 2.9	1.5	NT	NT	Disinfection by-product
Chloropicrin	ppb	NS	NS	ND - 1.1	ND	NT	NT	Disinfection by-product
Trihalomethanes (TTHM)*	ppb	100	NS	0.25 - 96	49	0.25 - 96	49	Disinfection by-product
Haloacetic acids (HAA)	ppb	NS	NS	22 - 64	35	0 - 10.9	3.1	Disinfection by-product
Chloral hydrate	ppb	NS	NS	2.4 - 8.2	4.4	NT	NT	Disinfection by-product
Cyanogen chloride	ppb	NS	NS	2.7 - 7.2	4.4	NT	NT	Disinfection by-product
Total organic halides	ppb	NS	NS	166 - 250	194	NT	NT	Disinfection by-product
Total chlorine residual (Chloramine)*	ppm	NS	NS	0.05 - 2.76	1.98	0.05 - 2.76	1.98	Disinfectant
<b>Additional Monitoring</b> Perchlorate (PAL) (h)	ppb	NS	18 (AL)	ND - 4	ND	<4 - 12	6.4	Solid rocket fuel; commercial fertilizer
Tert-Butyl-alcohol (TBA)	ppb	NS	12 (AL)	3.6 - 8.7	5.8	ND	ND	Gasoline additive
Chromium VI	ppb	NS	NS	ND	ND	2.4	2.4	Industrial processes; leaching from stainless steel
Vanadium	ppb	NS	50 (AL)	ND	ND	6 - 12	9.8	Erosion of natural deposits
Boron	ppb	NS	1000 (AL)	150 - 170	160	ND	ND	Erosion of natural deposits

- Footnotes**
- AL Action Level
  - NC Non-corrosive
  - ND None Detected
  - NS No Standard
  - NT Testing Not Required
  - NTU Nephelometric Turbidity Units; a measure of the suspended material in water
  - ppm parts per million
  - ppb parts per billion
  - ppt parts per trillion
  - pCi/L picoCuries per liter
  - SI Saturation Index
  - µmho/cm micromhos per centimeter
  - units a measure of the relative color or odor in the water less than
  - < less than
  - (a) Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of water quality. Data shown is from distribution system sampling.
  - (b) MTBE also has a Secondary Standard with a state MCL of 5 ppb.
  - (c) See "Special Health Information" section.
  - (d) For lead/copper testing, the 90th percentile values are shown at left in the Average column. Forty-three homes were tested, one exceeded the action level for lead (15 ppb) due to in-house plumbing. None exceeded action level for copper (1.3 ppm). The last three year testing cycle was completed in June 2001.
  - (e) Nitrate (NO3) is reported either as NO3 or as nitrogen (N). To convert data from N to NO3, multiply by 4.43. See "Special Health Information" section.
  - (f) Radionuclides at Mills Plant results for the 1998/99 fourth-quarter radiological monitoring program. See "Special Health Information" section.
  - (g) Mills Plant Information Collection rule data from August 1997 to December 1998 except for TTHM and Total Chlorine Residual.
  - (h) In January 2002, the State Action Level was reduced to 4 ppb. Riverside and Metropolitan Water District are aggressively pursuing treatment options with the responsible parties.
  - (\*) Sampled within the distribution system. Remaining are treatment plant sampling. Tested at treatment plant for Mills water or at Riverside Linden distribution reservoir for Mockingbird water.

**The 2001 Water Quality Table**  
The Water Quality Table at the left provides you with data on the levels of specific constituents detected in the water supply and how these compare to state standards. In no instance does the water you receive exceed any of these regulatory standards.

**For More Information**  
If you have questions, suggestions, or comments about the information contained in this 2001 Water Quality Report, or for additional copies, please contact Steve Mains, geohydrologist, at 909.789.5066. If you are a landlord or manage a multi-unit dwelling, please contact us to order as many additional copies of the report as you need to ensure your tenants receive this important information.

Este documento contiene información importante con respecto a la calidad del agua que usted consume para beber. Si desea más información, por favor contacte a Steve Mains en Western Municipal Water District, 909.789.5066.

(Continued from front)  
Services 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.

*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. Our monitoring indicates the presence of these organisms in our source water, but was not detected in the finished water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of *Cryptosporidium* may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. *Cryptosporidium* must be ingested to cause disease, and it may spread through means other than drinking water.



**Chloramines** are used to disinfect the water to ensure its purity. However, individuals on kidney dialysis machines will need to take steps to remove chloramines from the water before it is used. For dialysis patients, the doctor or dialysis technician in charge can ensure that the dialysis equipment is adequate and proper tests are made prior to use. Also see "For Fish Aquarium Owners" section.

Infants and young children are typically more vulnerable to **lead** in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to two minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline at 800.426.4791. Water testing can be done through a private lab or self-test kit.

**Nitrate** in drinking water at levels of 10 mg/L (as Nitrogen) 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 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 10 mg/L (as Nitrogen) 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.



**Radon** is a radioactive gas that you cannot see, taste or smell. It is found throughout the U. S. Radon can move up through the ground and into a home through cracks and holes in the foundation. Radon can build up to high levels in all types of homes. Radon can also get into indoor air when released from tap water when showering, washing dishes, and other household activities. Compared to radon entering the home through soil, radon entering the home through tap water will, in most cases, be a small source of radon in indoor air. Radon is a known human carcinogen. Breathing air containing radon can lead to lung cancer. Drinking water containing radon may also cause increased risk of stomach cancer. If you are concerned about radon in your home, test the air in your home. Testing is inexpensive and easy. Fix your home if the level of radon in your air is 4 picoCuries per liter of air (pCi/L) or higher. There are simple ways to fix a radon problem that aren't too costly. For additional information, call your State radon program or the EPA's Radon Hotline (800-SOS-RADON).

**For Fish Aquarium Owners**  
If you own an aquarium or have a fish pond, check with the staff at your local tropical fish store for information on which special water treatment is best for your aquarium and your fish in order to remove **chloramines** from the water.

**Source Water Assessment**  
A Source Water Assessment lists possible contaminants that might affect the quality of your water sources. An assessment of the drinking water sources for the City of Riverside (Mockingbird) was completed in August 2000 for the North Orange Well Field. An assessment for the Bunker Hill Basin is scheduled for completion in 2003. For Mills supply, the assessment is currently being drafted. Copies of complete assessments will be available at Western Municipal Water District. To request a summary of the assessment, contact Steve Mains, Water Quality, at 909.789.5066.

**How You Can Be Involved**  
Western Municipal Water District is governed by a five-person, publicly elected Board of Directors. The Board meets the first and third Wednesdays of the month at 9:30 am at 450 Alessandro Boulevard in Riverside to consider issues related to the District. You are encouraged to attend.

**Terms & Abbreviations You Need to Know**

**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.

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

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

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

**About This Report**  
The California Department of Health Services (Department) requires this report be distributed to our customers each year. This report is based on requirements supplied by the Department, Division of Drinking Water and Environmental Management, as of January 28, 2002; data supplied by the Metropolitan Water District of Southern California dated February 19, 2002; and the City of Riverside dated March 27, 2002.

