

Water Quality Table						Western Municipal Water District • 2004					
Primary Drinking Water Standards - Mandatory Health Related Standards		Units of Measure	State MCL [MRDL]	State PHG [MRDLG]	Mills Range	Mills Average	Major Source of Contaminant				
<i>Clarity</i>											
System Turbidity (a)*		NTU	0.5	NS	ND - 0.51	0.17	Soil runoff				
<i>Inorganic Chemicals</i>											
Copper (b)*		ppm	1.3 (AL)	0.17	ND - 0.25	0.18	Internal corrosion of household plumbing system				
Fluoride		ppm	2	1	ND - 0.12	ND	Erosion of natural deposits				
Lead (b)*		ppb	15 (AL)	2	ND - 340	9.8	Internal corrosion of household plumbing system				
Nitrate (as Nitrogen)		ppm	10	10	ND - 1.1	0.72	Runoff and leaching from fertilizer use				
<i>Radionuclides (c)</i>											
Gross Alpha		pCi/L	15	NS	ND - 3.07	1.81	Erosion of natural deposits				
Secondary Standards - Aesthetic Standards											
Chloride		ppm	500	NS	59 - 108	77	Runoff/leaching from natural deposits				
Color*		units	15	NS	ND - 5	ND	Naturally occurring; organic materials				
Corrosivity		SI	NC	NS	-0.08 - 0.18	0.06	Elemental balance on water; affected by temp, other factors				
Specific Conductance		(µmho/cm)	1600	NS	438 - 659	526	Substances that form ions when in water				
Sulfate		ppm	500	NS	49 - 78	61	Naturally occurring				
Total Dissolved Solids (TDS)		ppm	1000	NS	242 - 362	292	Runoff/leaching from natural deposits				
Disinfection By-products, Disinfectant Residuals & Disinfection By-product Precursors											
Haloacetic Acids (HAA)*		ppb	60	NS	8 - 25	17	By-product of drinking water disinfection				
Total Chlorine Residual (Chloramine)*		ppm	[4]	[4]	1.0 - 2.75	2.26	Drinking water disinfectant added for treatment				
Total Organic Carbon (TOC)		ppm	TT	[0.30] DLR	1.6 - 3.4	2.2	Various natural and man-made sources				
Trihalomethanes (TTHM)*		ppb	80	NS	21 - 57	43	By-product of drinking water chlorination				
Additional Monitoring/Other Parameters											
Boron		ppb	NS	1000 (NL)	110 - 170	150	Runoff/leaching from natural deposits; industrial wastes				
Hardness		ppm	N/A	N/A	88 - 117	103	Erosion of natural deposits				
Hardness		grains/gal	N/A	N/A	5.1 - 6.8	6.0	Unit of measure used in water softening				
Sodium		ppm	N/A	N/A	49 - 81	62	Erosion of natural deposits				
Vanadium		ppb	NS	50 (NL)	ND	ND - 5.3	Erosion of natural deposits				
NDMA (N – Nitrodimethylamine)		ppt	NS	10.0 (NL)	2.1 - 5.3	N/A	By-product of drinking water disinfection				

Source Water Assessment

A Source Water Assessment lists possible contaminants that might affect the quality of your water sources. In December 2002, the Metropolitan Water District completed a source water assessment of its State Water Project supply, your water source. State Water Project supplies are considered to be most vulnerable to urban/stormwater runoff, wildlife, agriculture, recreation and wastewater. Copies of complete assessments are available at Western Municipal Water District. Please contact Michele McKinney Underwood at 951.789.5039 or via email at munderwood@wmwd.com for further assistance.

Footnotes

AL	Regulatory Action Level
DLR	Detection Limits for purposes of Reporting
MCL	Maximum Contaminant Level
MRDL	Maximum Residual Disinfectant Level
MRDLG	Maximum Residual Disinfectant Level Goal
N/A	Not Applicable
NC	Non-corrosive
ND	Not Detected
NL	Notification Level
NS	No Standard
NT	Testing Not Required
NTU	Nephelometric Turbidity Units; a measure of the suspended material in water
PHG	Public Health Goal
ppm	parts per million
ppb	parts per billion
ppt	parts per trillion
pCi/L	picoCuries per liter
SI	Saturation Index
TT	Treatment Technique
µmho/cm	micromhos per centimeter
units	a measure of the relative color or odor in the water
[]	Brackets refer to MRDL or MRDLG

- (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) For lead/copper testing, the 90th percentile values are shown at left in the Average column. Forty-six homes and four commercial sites were tested; four exceeded the action level for lead (15 ppb) due to in-house plumbing. None exceeded the action level for copper (1.3 ppm). The last three year testing cycle was completed in June 2004.
- (c) Radionuclides testing was performed for Gross Alpha on April 19, 2002.
- (*) These constituents were sampled within Western's distribution system; all remaining constituents were sampled at the Metropolitan Water District's Henry J. Mills Water Filtration Plant.

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.

Maximum Residual Disinfectant Level (MRDL): The level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap.

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. MRDLs are set by the U.S. Environmental Protection Agency.

Primary Drinking Water Standards (PDWS): 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 health risk. 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 which a water system must follow.

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

A Footnote of Note

What exactly does "parts per million" mean...? In the Water Quality Table, you'll note that detectable substances are measured in various units. Here are some ways to visualize these amounts mentioned in your water quality report:

- Parts per million (ppm) can be thought of as one penny in \$10,000; one minute in two years; or even one automobile in bumper-to-bumper traffic from Cleveland to San Francisco.
- Parts per billion (ppb) can be better understood as one penny in \$10,000,000; one minute in 2,000 years; or how about one 4-inch hamburger in a chain of hamburgers circling the Earth at the equator.

2004 Water Quality Report



A report on the monitoring results of your drinking water supply in 2004



The United States Environmental Protection Agency and the California Department of Health Services are the agencies responsible for establishing drinking water quality standards, including prescribing the regulations that limit the amount of certain contaminants in water provided by public water systems.

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 due to these activities include:



2004 Water Quality Report

The Quality of the Water You Drink

Each year, Western Municipal Water District sends you, our drinking water customers, a water quality report. This report, provided in compliance with state and federal law, gives you an in-depth report on the results of the most recent calendar year's water quality testing data.

As you read the 2004 report, you'll learn about where your water comes from, what it contains and how its quality compares to state and federal measurement standards.

You'll see that the water delivered to your home or business meets all drinking water quality standards.

Sophisticated Water Quality Monitoring

Western's water quality staff works with our water supplier, the Metropolitan Water District of Southern California, plus the California Department of Health Services and independent certified testing laboratories to continuously monitor the quality of the water supplies. Metropolitan 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 delivery system, we perform even more testing, with more than 65 routine bacteriological samplings and 25 physical samplings taken from 40 different locations each month as well as additional special sampling. These test results are then 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.

- **Microbial contaminants**, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agriculture, 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 and the California Department of Health Services prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. California Department of Health Services regulations also establish limits for contaminants in bottled water that must provide the same protection for public health.

The Source of Your Water Supply

In 2004, Western's customers received their water supply from Northern California via the California Aqueduct. The

water supply begins as snowmelt 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 Filtration Plant in Riverside. The imported water is treated before delivery by Western to our customers. (See map on Page 5)

How Your Water Is Treated

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.

In order to disinfect the water delivered to your tap by Western from the Mills Filtration Plant, it has been through a complex filtering process. It's 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 reduce these disinfection by-products, the Metropolitan Water District uses ozone as the primary disinfectant at its Mills Filtration Plant.

For Kidney Dialysis Patients

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.



For Fish Aquarium Owners

If you own an aquarium or have a fishpond, 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.

Special Health Information

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants doesn't necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the United States Environmental Protection Agency Safe Drinking Water Hotline at 800.426.4791.

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. United States Environmental Protection Agency/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *cryptosporidium* and other microbial contaminants are also available from the United States Environmental Protection Agency Safe Drinking Water Hotline.

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.

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. Our monitoring indicates no *cryptosporidium* organisms in our water.

Where Your Water Comes From



For More Information

If you have questions, suggestions or comments about the information contained in this 2004 Water Quality Report, or for additional copies, please contact Michele McKinney Underwood at 951.789.5039 or via email at munderwood@wmwd.com. 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 informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien. Si desea más información, por favor contacte a Michele McKinney Underwood en Western Municipal Water District, 951.789.5039 or en munderwood@wmwd.com.

Western – Its History, Its Programs

Western Municipal Water District was formed by public vote in 1954 to bring supplemental water to western Riverside County. The District is responsible for not only providing you drinking water that meets all health standards, but for managing water resources, encouraging wise water use, and creating and implementing drought-proofing projects within a 510-square mile area of western Riverside County.

Conserving This Valued Resource

Because our water resources are imported, we must use them wisely. Western can help you conserve water in and around your home. You'll save water, and money, too.

Rebates... rebates are offered on water saving fixtures and appliances for your home – weather-based irrigation controllers, ultra low flow model toilets and high efficiency clothes washers. Applications can be found at www.wmwd.com or give us a call at 951.789.5086, and we'll send one to you.

Water-wise landscapes... *Landscapes Southern California StyleSM* is Western's preeminent outdoor water conservation education center. It's an excellent place to pick up water-wise landscaping plans and tips. The center is open daily from 10 a.m. to 4 p.m. with free admittance and resource materials.

Education... Western supports a comprehensive water education program that engages teachers, students and their families with informative classroom presentations, tours and the water-wise tools necessary to not only teach, but also raise the water awareness of youngsters.

More information on our services and programs can be found on our web site – www.wmwd.com.

Become 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 a.m. at 450 Alessandro Boulevard in Riverside to consider issues related to the District. You are encouraged to attend. Agendas and minutes of previous meetings are available at www.wmwd.com.