

The 2008 Water Quality Report

Drinking Water Quality

Since 1990, California water utilities have been providing an annual Water Quality Report to their customers. This year's report covers calendar year 2007 water quality testing, and has been prepared in compliance with regulations called for in the 1996 reauthorization of the Safe Drinking Water Act. The reauthorization charged the United States Environmental Protection Agency (USEPA) with updating and strengthening the tap water regulatory program.

USEPA and the California Department of Public Health (CDPH) are the agencies responsible for establishing drinking water quality standards. To ensure that your tap water is safe to drink, USEPA and CDPH prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. CDPH regulations also establish limits for contaminants in bottled water that must provide the same protection for public health. The federal Food and Drug Administration (FDA) also sets regulations for bottled water.

The El Toro Water District vigilantly safeguards its water supply and, as in years past, the water delivered to your home meets the standards required by the state and federal regulatory agencies. In some cases, El Toro Water District goes beyond what is required to monitor for additional contaminants that have known health risks.

Unregulated contaminant monitoring helps USEPA determine where certain contaminants occur and whether it needs to establish regulations for those contaminants.



This report contains important information about your drinking water. Translate it, or speak with someone who understands it.

بخطوات
هامية عن نوعية مياه الشرب في
منطقتك. يرجى ترجمته، أو البحث
التفصيلي مع صديقك عن هذه
المعلومات جيداً.

Arabic

这份报告中有些重要的信息，
讲到关于您所在社区的饮用水的品
质。请您找人翻译一下，或者
请能看懂这份报告的朋友给
您解释一下。

Chinese

Ce rapport contient des
informations importantes sur
votre eau potable. Traduisez-le
ou parlez-en avec quelqu'un
qui le comprend bien.

French

Der Bericht enthält wichtige
Informationen über die Wasser-
qualität in Ihrer Umgebung. Der
Bericht sollte entweder offiziell
übersetzt werden, oder
sprechen Sie mit Freunden
oder Bekannten, die gute
Englischkenntnisse besitzen

German

Questo rapporto contiene
informazioni importanti che
riguardano la vostra acqua
potabile. Traducetelo, o parlate
con una persona qualificata in
grado di spiegarvelo.

Italian

この資料には、あなたの飲料水
についての大切な情報が書かれ
ています。内容をよく理解する
ために、日本語に翻訳して読む
か説明を受けてください。

Japanese

이 보고서에는 귀하가 거주하는
지역의 수질에 관한 중요한 정보
가 들어 있습니다. 이것을 번역
하거나, 충분히 이해하시는 친구
와 상의하십시오.

Korean

Este informe contiene información
muy importante sobre su agua
potable. Para más información ó
traducción, favor de contactar a
Customer Service Representative.
Telefono: (949) 837-0660.

Spanish

Bản báo cáo có ghi những chi
tiết quan trọng về phẩm chất
nước trong công đồng quý vị.
Hãy nhờ người thông thạo dịch, hoặc
hỏi một người bạn biết rõ về vấn
đề này.

Vietnamese



El Toro Water District
24251 Los Alisos Boulevard
Lake Forest, California 92630

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2008 Water Quality Report

El Toro Water District



What You Need to Know About Your Water, and How it May Affect You

Sources of Supply

Your drinking water is surface water imported by the Metropolitan Water District of Southern California. Metropolitan's imported water sources are the Colorado River and the State Water Project, which draws water from the San Francisco-San Joaquin Bay Delta.

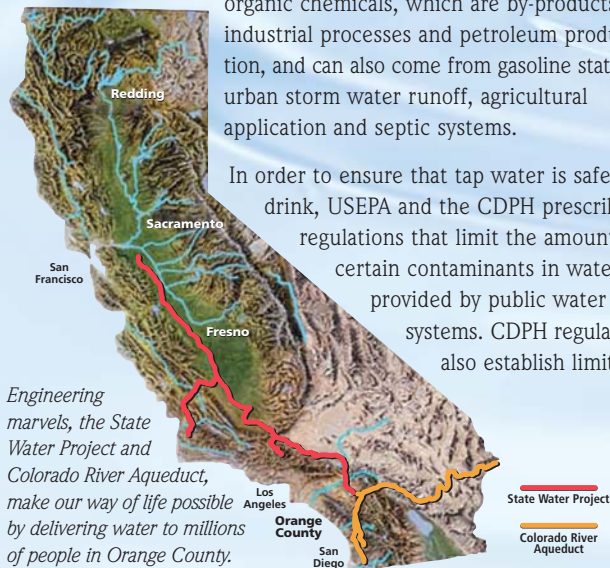
Basic Information About Drinking Water Contaminants

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

Contaminants that may be present in source water include:

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

In order to ensure that tap water is safe to drink, USEPA and the CDPH prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. CDPH regulations also establish limits for



contaminants in bottled water that must provide the same protection for public health. 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 (800) 426-4791.

If you have any questions about your water, please contact us for answers...

For information about this report, or your water quality in general, please contact Mike King, Customer Service Manager, at (949) 837-7050, ext. 203. You may also contact us at our Customer Service Office, El Toro Water District, 24251 Los Alisos Blvd., Lake Forest, California 92630, at (949) 837-0660.

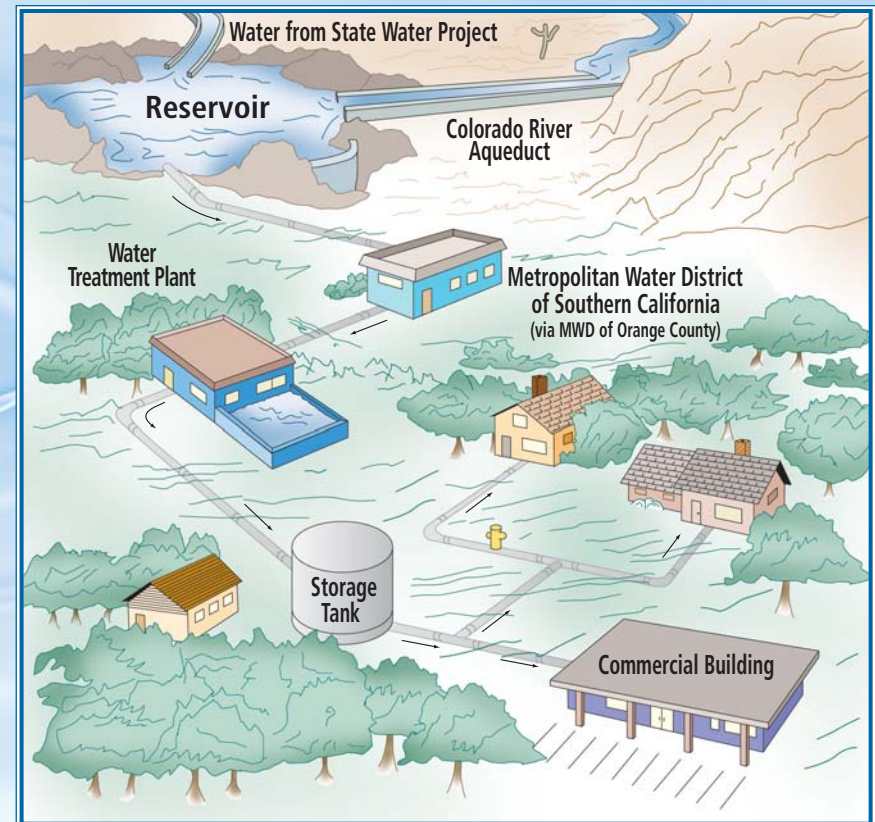
The El Toro Water District Board of Directors meets regularly at 7:30 a.m. on the fourth Thursday of each month. *Location:* 24251 Los Alisos Boulevard, Lake Forest, California 92630. The public meetings are held at the Customer Service Office location referenced above. The public is welcome and encouraged to participate.

For more information about the health effects of the listed contaminants in the following tables, call the U.S. Environmental Protection Agency hotline at (800) 426-4791.

Cryptosporidium

Cryptosporidium is a microscopic organism that, when ingested, can cause diarrhea, fever, and other gastrointestinal symptoms. The organism comes from animal and/or human wastes and may be in surface water. The Metropolitan Water District of Southern California tested their source water and treated surface water for *Cryptosporidium* in 2007 but did not detect it. If it ever is detected, *Cryptosporidium* is eliminated by an effective treatment combination including sedimentation, filtration and disinfection.

The USEPA and the federal Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from USEPA's Safe Drinking Water hotline at (800) 426-4791 between 9 a.m. and 5 p.m. Eastern Time (6 a.m. to 2 p.m. in California).



Imported water — from the Colorado River and northern California — travels hundreds of miles through a vast network of pipes and aqueducts, over mountains and across deserts, to meet the needs of Orange County's growing population.

The Continuing Quality of Your Water is Our Primary Concern

Immuno-Compromised People

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised people, such as those with cancer who are undergoing chemotherapy, persons who have had organ transplants, people with HIV/AIDS or other immune system disorders, some elderly persons and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers.

Drinking Water Fluoridation

Fluoride has been added to U.S. drinking water supplies since 1945. Of the 50 largest cities in the U.S., 43 fluoridate their drinking water. In November 2007, the Metropolitan Water District of Southern California joined a majority of the nation's public water suppliers in adding fluoride to drinking water in order to prevent tooth decay.

In line with recommendations from the CDPH, as well as the U.S. Centers for Disease Control and Prevention, Metropolitan adjusted the natural fluoride level in imported treated water from the Colorado River and State Project water to the optimal range for dental health of 0.7 to 1.3 parts per million. Fluoride levels in drinking water are limited under California state regulations at a maximum dosage of 2 parts per million.

There are many places to go for additional information about the fluoridation of drinking water.



U.S. Centers for Disease Control and Prevention
1-800-232-4636
www.cdc.gov/Oralhealth/publications/factsheets/

American Dental Association
www.ada.org/public/topics/fluoride/index.asp

American Water Works Association
www.awwa.org

For more information about Metropolitan's fluoridation program, please contact Edgar G. Dymally at (213) 217-5709 or at edymally@mwdh2o.com.

Want Additional Information?

There's a wealth of information on the internet about Drinking Water Quality and water issues in general. Some good sites — both local and national — to begin your own research are:

El Toro Water District
www.etwd.com

Municipal Water District of Orange County
www.mwdoc.com

Orange County Water District
www.ocwd.com

Metropolitan Water District of Southern California
www.mwdh2o.com

California Department of Public Health, Division of Drinking Water and Environmental Management
www.cdph.ca.gov/certlic/drinkingwater

U.S. Environmental Protection Agency
www.epa.gov/safewater/

Disinfection and Disinfection Byproducts

Disinfection of drinking water was one of the major public health advances in the 20th century. Disinfection was a major factor in reducing waterborne disease epidemics caused by pathogenic bacteria and viruses, and it remains an essential part of drinking water treatment today.

Chlorine disinfection has almost completely eliminated from our lives the risks of microbial waterborne diseases. Chlorine is added to your drinking water at the source of supply (groundwater well or surface water treatment plant). Enough chlorine is added so that it does not completely dissipate through the distribution system pipes. This "residual" chlorine helps to prevent the growth of bacteria in the pipes that carry drinking water from the source into your home.

However, chlorine can react with naturally-occurring materials in the water to form unintended chemical byproducts, called disinfection byproducts (DBPs), which may pose health risks. A major challenge is how to balance the risks from microbial pathogens and DBPs. It is important to provide protection from these microbial pathogens while simultaneously ensuring decreasing health risks from disinfection byproducts. The Safe Drinking Water Act requires the USEPA to develop rules to achieve these goals.

Trihalomethanes (THMs) and Haloacetic Acids (HAAs) are the most common and most studied DBPs found in drinking water treated with chlorine. In 1979, the USEPA set the maximum amount of total THMs allowed in drinking water at 100 parts per billion as an annual running average. Effective in January 2002, the Stage 1 Disinfectants / Disinfection Byproducts Rule lowered the total THM



maximum annual average level to 80 parts per billion and added HAAs to the list of regulated chemicals in drinking water. Your drinking water complies with the Stage 1 Disinfectants / Disinfection Byproducts Rule. In 2003, the USEPA proposed a Stage 2 regulation that will further control allowable levels of DBPs in drinking water without compromising disinfection itself. This regulation was finalized by USEPA in January 2006.

Lead

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; you could also flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the USEPA Safe Drinking Water Hotline (800) 426-4791.

Source Water Assessment

Imported (Metropolitan) Water Assessment

In December 2002, Metropolitan Water District of Southern California completed its source water assessment of its Colorado River and State Water Project supplies. Colorado River supplies are considered to be most vulnerable to recreation, urban/storm water runoff, increasing urbanization in the watershed and wastewater. State Water Project supplies are considered to be most vulnerable to urban/storm water runoff, wildlife, agriculture, recreation and wastewater. A copy of the assessment can be obtained by contacting Metropolitan by phone at (213) 217-6850.

2007 El Toro Water District Distribution System Water Quality

Disinfection Byproducts	MCL (MRDL/MRDLG)	Average Amount	Range of Detections	MCL Violation?	Typical Source of Contaminant
Total Trihalomethanes (ppb)	80	59	19 – 105	No	Byproducts of chlorine disinfection
Haloacetic Acids (ppb)	60	27	6.0 – 46	No	Byproducts of chlorine disinfection
Chlorine Residual (ppm)	(4 / 4)	1.7	0.1 – 2.6	No	Disinfectant added for treatment
Aesthetic Quality					
Turbidity (ntu)	5*	0.07	ND – 0.13	No	Erosion of natural deposits

Eight locations in the distribution system are tested quarterly for total trihalomethanes and haloacetic acids; twenty locations are tested monthly for color, odor and turbidity. Color and odor were not detected in 2007. MRDL = Maximum Residual Disinfectant Level; MRDLG = Maximum Residual Disinfectant Level Goal; ntu = nephelometric turbidity units; ND = not detected. *Contaminant is regulated by a secondary standard to maintain aesthetic qualities (taste, odor, color).

Lead and Copper Action Levels at Residential Taps

	Action Level (AL)	Health Goal	90th Percentile Value	Sites Exceeding AL / Number of Sites	AL Violation?	Typical Source of Contaminant
Lead (ppb)	15	2	ND<5	0 / 38	No	Corrosion of household plumbing
Copper (ppm)	1.3	0.17	0.18	0 / 38	No	Corrosion of household plumbing

Every three years, a minimum of 33 residences are tested for lead and copper at-the-tap. The most recent set of samples was collected in 2005. Lead was detected in only five samples and copper was detected in all thirty-eight samples. The detectable levels were determined to be below Regulatory Action levels. The water system is therefore in compliance with the Lead and Copper Regulations. A regulatory action level is the concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

2007 Metropolitan Water District of Southern California Treated Surface Water

Chemical	MCL	PHG, or (MCLG)	Average Amount	Range of Detections	MCL Violation?	Typical Source of Contaminant
Radiologicals – Tested in 2006						
Alpha Radiation (pCi/L)	15	(0)	<3	ND – 7.2	No	Erosion of natural deposits
Beta Radiation (pCi/L)	50	(0)	<4	ND – 6.4	No	Decay of man-made or natural deposits
Inorganic Chemicals – Tested in 2007						
Aluminum (ppm)	1 / 0.2*	0.6	0.08	ND – 0.1	No	Treatment process residue, natural deposits
Arsenic (ppb)	10	0.004	<2	ND – 2.8	No	Erosion of natural deposits
Barium (ppm)	1	2	<0.1	ND – 0.1	No	Erosion of natural deposits
Fluoride (ppm) naturally-occurring	2	1	0.2	0.1 – 0.2	No	Erosion of natural deposits
Fluoride (ppm) treatment-related	Optimal Range 0.7 – 1.3		0.6 – 0.9		No	Water additive for dental health
Nitrate as N (ppm)	10	10	0.5	ND – 0.7	No	Agriculture runoff and sewage
Perchlorate (ppb)	6	6	<4	ND – 4.1 (1)	No	Industrial waste discharge

Secondary Standards* – Tested in 2007

Chloride (ppm)	500*	n/a	88	75 – 101	No	Runoff or leaching from natural deposits
Color (color units)	15*	n/a	2	1 – 2	No	Runoff or leaching from natural deposits
Odor (odor units)	3*	n/a	2	2	No	Naturally-occurring organic materials
Specific Conductance (µmho/cm)	1,600*	n/a	801	674 – 893	No	Substances that form ions in water
Sulfate (ppm)	500*	n/a	158	122 – 179	No	Runoff or leaching of natural deposits
Total Dissolved Solids (ppm)	1,000*	n/a	469	394 – 519	No	Runoff or leaching of natural deposits
Turbidity (NTU)	5*	n/a	0.04	0.03 – 0.05	No	Runoff or leaching of natural deposits

Unregulated Chemicals – Tested in 2007

Alkalinity (ppm)	Not Regulated	n/a	93	82 – 103	n/a	Runoff or leaching from natural deposits
Boron (ppb)	Not Regulated	n/a	140	130 – 150	n/a	Runoff or leaching from natural deposits
Calcium (ppm)	Not Regulated	n/a	46	36 – 55	n/a	Runoff or leaching from natural deposits
Hardness, total (ppm)	Not Regulated	n/a	201	158 – 228	n/a	Runoff or leaching of natural deposits
Hardness, total (grains/gal)	Not Regulated	n/a	12	9.2 – 13	n/a	Runoff or leaching of natural deposits
Magnesium (ppm)	Not Regulated	n/a	21	16 – 23	n/a	Runoff or leaching from natural deposits
pH (pH units)	Not Regulated	n/a	8.2	8.1 – 8.3	n/a	Hydrogen ion concentration
Potassium (ppm)	Not Regulated	n/a	3.9	3.4 – 4.4	n/a	Runoff or leaching from natural deposits
Sodium (ppm)	Not Regulated	n/a	83	73 – 91	n/a	Runoff or leaching from natural deposits
Total Organic Carbon (ppm)	Not Regulated	TT	2.2	1.9 – 2.9	n/a	Various natural and man-made sources
Vanadium (ppb)	Not Regulated	n/a	3.3	ND – 3.7	n/a	Runoff or leaching from natural deposits

(1) Perchlorate detection is from a USEPA Unregulated Contaminant Monitoring Rule test in 2003. Perchlorate was not detected in treated water samples tested in 2007. Perchlorate became a regulated chemical in California drinking water in 2007.

ppb = parts-per-billion; ppm = parts-per-million; ppt = parts-per-trillion; pCi/L = picoCuries per liter; ntu = nephelometric turbidity units; µmho/cm = micromhos per centimeter; ND = not detected; < = average is less than the detection limit for reporting purposes; MCL = Maximum Contaminant Level; (MCLG) = federal MCL Goal; PHG = California Public Health Goal; n/a = not applicable; LSI = Langelier Saturation Index; *Contaminant is regulated by a secondary standard.

Turbidity – combined filter effluent	Treatment Technique	Turbidity Measurements	TT Violation?	Typical Source of Contaminant
1) Highest single turbidity measurement	0.3 NTU	0.05	No	Soil run-off
2) Percentage of samples less than 0.3 NTU	95%	100%	No	Soil run-off

Turbidity is a measure of the cloudiness of the water, an indication of particulate matter, some of which might include harmful microorganisms. Low turbidity in Metropolitan's treated water is a good indicator of effective filtration. Filtration is called a "treatment technique" (TT). A treatment technique is a required process intended to reduce the level of contaminants in drinking water that are difficult and sometimes impossible to measure directly.

What are Water Quality Standards?

Drinking water standards established by USEPA and CDPH set limits for substances that may affect consumer health or aesthetic qualities of drinking water. The chart in this report shows the following types of water quality standards:

- **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.
- **Maximum Residual Disinfectant Level (MRDL):** The level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap.
- **Secondary MCLs** are set to protect the odor, taste, and appearance of drinking water.
- **Primary Drinking Water Standard:** 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 that a water system must follow.

How are Contaminants Measured?

Water is sampled and tested throughout the year. Contaminants are measured in:

- parts per million (ppm) or milligrams per liter (mg/l)
- parts per billion (ppb) or micrograms per liter (µg/l)
- parts per trillion (ppt) or nanograms per liter (ng/l)

If this is difficult to imagine, think about these comparisons:

Parts per million (ppm or mg/L):	Parts per billion (ppb or µg/L):	Parts per trillion (ppt or ng/L):
• 3 drops in 42 gallons	• 3 drops in 14,000 gallons	• 10 drops in a Rose Bowl-sized pool
• 1 second in 12 days	• 1 second in 32 years	• 1 second in 32,000 years
• 1 inch in 16 miles	• 1 inch in 16,000 miles	• 1 inch in 16 million miles

What is a Water Quality Goal?

In addition to mandatory water quality standards, USEPA and CDPH have set voluntary water quality goals for some contaminants. Water quality goals are often set at such low levels that they are not achievable in practice and are not directly measurable. Nevertheless, these goals provide useful guideposts and direction for water management practices. The chart in this report includes three types of water quality goals:

- **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 USEPA.
- **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 are set by USEPA.
- **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.