

# 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. The federal Food and Drug Administration (FDA) also sets regulations for bottled water.



The City of Garden Grove 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, the City goes beyond what is required by testing for unregulated contaminants that may have known health risks.

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

### 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 Zachary Barrett, Water Quality Supervisor, or Cel Pasillas, Larry Jones, or Millie Castellanos-Rodriguez, Water Quality Technicians, at (714) 741-5395.

Public City Council meetings are held on the second and fourth Tuesdays of each month at 6:45 p.m. in the Council Chambers at the Community Meeting Center, 11300 Stanford Avenue, Garden Grove, California. You may also contact our City Clerk's Office, Garden Grove City Hall, 11222 Acacia Parkway, Garden Grove, CA 92840 or call (714) 741-5040 for information about Garden Grove City Council meetings. Please feel free to participate in these meetings.

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.

This report contains important information about your drinking water. Translate it, or speak with someone who understands it. For more information call Water Services at (714) 741-5395.

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien. *Spanish*

이 보고서는 귀하가 거주하는 지역의 수질에 관한 중요한 정보가 들어 있습니다. 이 것을 번역하거나 충분히 이해하지는 친구와 상의하십시오. *Korean*

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



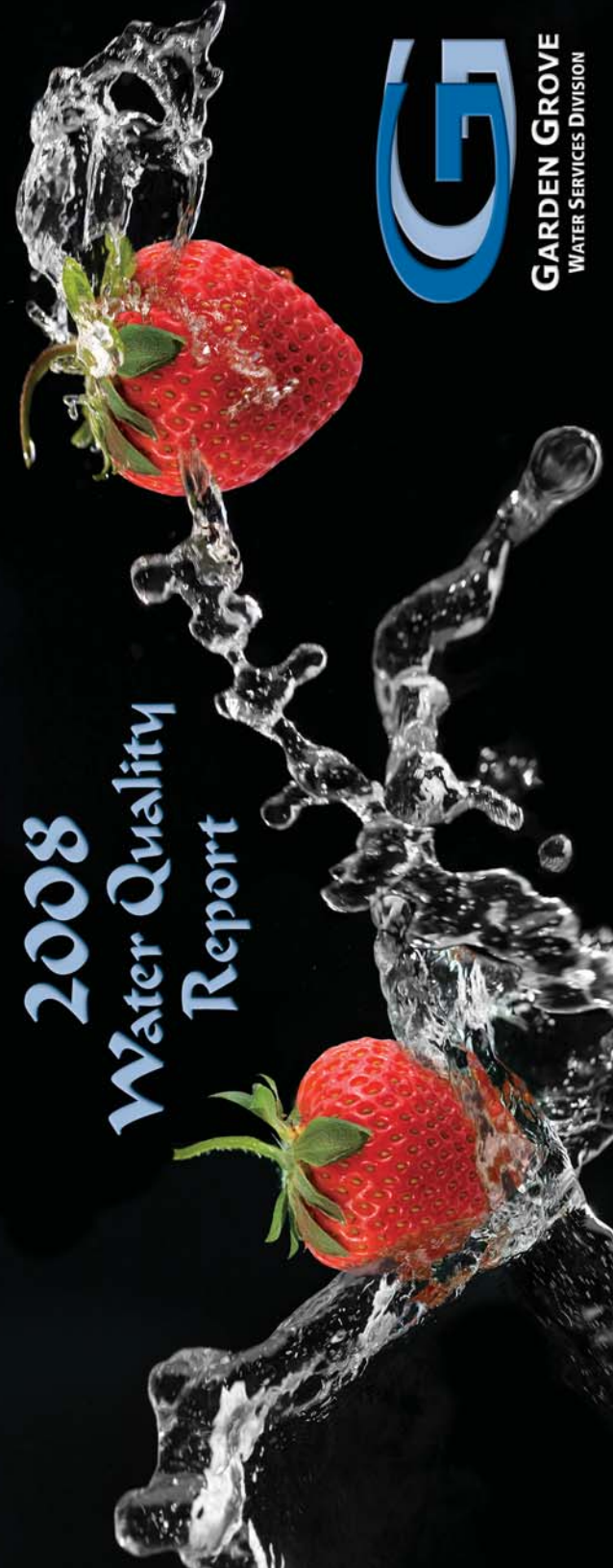
City of Garden Grove  
Public Works Department  
Water Service Division  
13802 Newhope Street  
Garden Grove, California 92843

PRESORT STD  
U.S. Postage  
PAID  
Garden Grove, CA  
Permit No. 3

CRRT SORT

POSTAL CUSTOMER

# 2008 Water Quality Report



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

## Sources of Supply

Your drinking water is a blend of mostly groundwater from 12 wells in the Orange County groundwater basin and also surface water imported by Metropolitan Water District of Southern California. Metropolitan's imported water sources are a blend of State Water project water from northern California and water from the Colorado River Aqueduct. Your groundwater comes from a natural underground reservoir managed by the Orange County Water District that stretches from the Prado Dam and fans across the northwestern portion of Orange County, excluding the communities of Brea and La Habra, and stretching as far south as the El Toro 'Y'.

Last year, as in years past, your tap water met all USEPA and State drinking water health standards. The City of Garden Grove 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. This brochure 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 Federal and State standards.

## 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.
- ▶ Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production or mining activities.



- ▶ 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.
- ▶ 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.



## 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 December 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. Our local water is not supplemented with fluoride. 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

1-800-311-3435

[www.cdc.gov/fluoridation/index.htm](http://www.cdc.gov/fluoridation/index.htm)

American Dental Association

[www.ada.org/public/topics/fluoride/index.asp](http://www.ada.org/public/topics/fluoride/index.asp)

American Water Works Association

[www.awwa.org](http://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](mailto:edymally@mwdh2o.com).

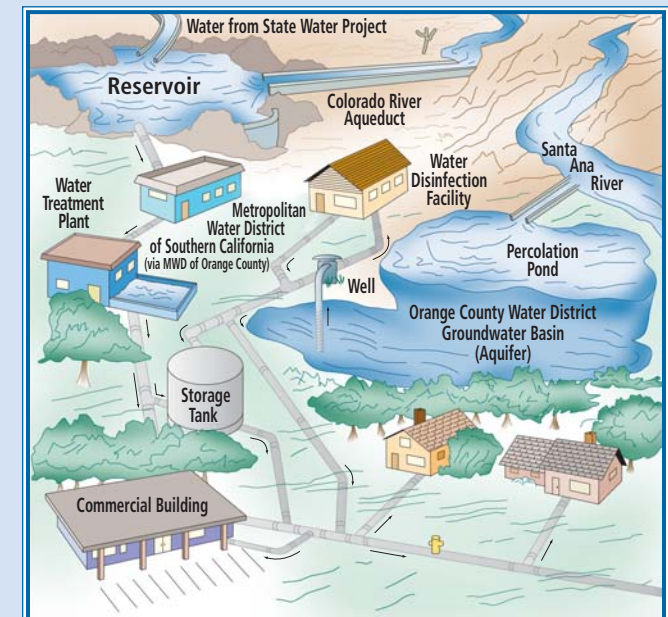
## For Your Information...

**Disinfection:** Water provided by the City of Garden Grove contains chlorine used for disinfection and chloramines used by Metropolitan Water District, also for disinfection purposes. Customers on kidney dialysis should consult their physicians.

**Fish or Amphibians:** If you have fish or amphibians, make sure to remove any chloramines and chlorine before changing or adding water to the tanks. Remember, allowing drinking water to stand will not remove chloramines. Consult your local aquarium store for products that will remove the disinfectants.

**Hot Water Heaters:** Many odor complaints may be traced to the home's hot water heater. Remember to follow manufacturers instructions and flush hot water heaters regularly. This will flush out any sediments that may have accumulated, provide good water turnover to maximize water quality, and help keep your unit in good working order.

**Point of Use or Home Water Filtration Units:** Be vigilant in changing or cleaning any filters or media on your home units. Always follow the manufacturers instructions. Remember, the water is only as clean as the filter allows. Improperly maintained filters can deliver very poor quality water.



Imported water — from the Colorado River and northern California — travels hundreds of miles to meet the needs of Orange County. Water is also pumped from the groundwater basin that spans 350 square miles under north and central Orange County.

# The Continuing Quality of Your Water is Our Primary Concern

## 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).

## 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 Assessments

### Import (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.

### Groundwater Assessment

An assessment of the drinking water sources for City of Garden Grove Water Services Division was completed in December 2002. The groundwater sources are considered most vulnerable to the following activities associated with contaminants detected in the water supply: Known contaminant plumes, historic agricultural activities and application of fertilizers, and parks. The groundwater sources are considered most vulnerable to the following activities not associated with detected contaminants: Confirmed leaking underground storage tanks, dry cleaners, gas stations, and photo processing/printing.

A copy of the complete assessment is available at Department of Public Health Office of Drinking Water, Santa Ana District, 28 Civic Center Plaza Room 325, Santa Ana, CA 92701. You may request a summary of the assessment by contacting the City of Garden Grove Water Services Division at (714) 741-5395.

### 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 investigation are:

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/

### 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.

## 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.

### 2007 City of Garden Grove Groundwater Quality

Chemical	MCL	PHG (MCLG)	Average Amount	Range of Detections	MCL Violation?	Most Recent Sampling Date	Typical Source of Contaminant
<b>Radiologicals</b>							
Alpha Radiation (pCi/L)	15	(0)	8.7	5.5 – 11	No	2005	Erosion of Natural Deposits
Uranium (pCi/L)	20	0.43	9.4	5.8 – 12	No	2005	Erosion of Natural Deposits
<b>Organic Chemicals</b>							
1,1-Dichloroethylene (DCE) (ppb)	6	10	< 0.5	ND – 0.6	No	2006	Industrial Contaminant
<b>Inorganic Chemicals</b>							
Aluminum (ppm)	1 / 0.2*	0.6	< 0.05	ND – 0.06	No	2006	Erosion of Natural Deposits
Arsenic (ppb)	10	0.004	< 2	ND – 4.0	No	2006	Erosion of Natural Deposits
Barium (ppm)	1	2	< 0.1	ND – 0.13	No	2006	Erosion of Natural Deposits
Fluoride (ppm)	2	1	0.42	0.36 – 0.52	No	2006	Erosion of Natural Deposits
Nitrate (ppm as NO <sub>3</sub> )	45	45	13	ND – 21	No	2007	Fertilizers, Septic Tanks
Nitrate+Nitrite (ppm as N)	10	10	2.8	ND – 4.7	No	2007	Fertilizers, Septic Tanks
Perchlorate (ppb)	Not Regulated	6	< 4	ND – 4.9	n/a	2006	Industrial Waste Discharge
<b>Secondary Standards*</b>							
Chloride (ppm)	500*	n/a	65	16 – 91	No	2006	Erosion of Natural Deposits
Color (color units)	15*	n/a	< 3	ND – 3	No	2006	Erosion of Natural Deposits
Odor (odor units)	3*	n/a	< 1	ND – 1	No	2006	Naturally-occurring organics
Specific Conductance (µmho/cm)	1,600*	n/a	784	436 – 1,010	No	2006	Erosion of Natural Deposits
Sulfate (ppm)	500*	n/a	115	38 – 181	No	2006	Erosion of Natural Deposits
Total Dissolved Solids (ppm)	1,000*	n/a	490	276 – 618	No	2006	Erosion of Natural Deposits
Turbidity (ntu)	5*	n/a	0.22	0.1 – 0.3	No	2006	Erosion of Natural Deposits
<b>Unregulated Contaminants Requiring Monitoring</b>							
Bicarbonate (ppm as HCO <sub>3</sub> )	Not Regulated	n/a	219	199 – 233	n/a	2006	Erosion of Natural Deposits
Boron (ppm)	Not Regulated	n/a	< 0.1	ND – 0.17	n/a	2006	Erosion of Natural Deposits
Calcium (ppm)	Not Regulated	n/a	97	55 – 111	n/a	2006	Erosion of Natural Deposits
Hexavalent Chromium (ppb)	Not Regulated	n/a	1.1	ND – 2.0	n/a	2006	Erosion of Natural Deposits
Magnesium (ppm)	Not Regulated	n/a	17	9.1 – 21	n/a	2006	Erosion of Natural Deposits
pH (pH units)	Not Regulated	n/a	8.2	8.1 – 8.3	n/a	2006	Acidity, hydrogen ions
Potassium (ppm)	Not Regulated	n/a	3.6	2.7 – 4.5	n/a	2006	Erosion of Natural Deposits
Sodium (ppm)	Not Regulated	n/a	49	32 – 78	n/a	2006	Erosion of Natural Deposits
Total Alkalinity (ppm as CaCO <sub>3</sub> )	Not Regulated	n/a	181	163 – 195	n/a	2006	Erosion of Natural Deposits
Total Hardness (ppm as CaCO <sub>3</sub> )	Not Regulated	n/a	314	174 – 364	n/a	2006	Erosion of Natural Deposits
Total Hardness (grains per gallon)	Not Regulated	n/a	18	10 – 21	n/a	2006	Erosion of Natural Deposits
Vanadium (ppb)	Not Regulated	n/a	< 3	ND – 4.7	n/a	2006	Erosion of Natural Deposits

ppb = parts-per-billion; ppm = parts-per-million; pCi/L = picoCuries per liter; ntu = nephelometric turbidity units; ND = not detected; n/a = not applicable; < = average is less than the detection limit for reporting purposes; MCL = Maximum Contaminant Level; (MCLG) = federal MCL Goal; PHG = California Public Health Goal µmho/cm = micromho per centimeter; \*Contaminant is regulated by a secondary standard to maintain aesthetic qualities (taste, odor, color).

### 2007 City of Garden Grove Distribution System Water Quality

Disinfection Byproducts	MCL (MRDL/MRDLG)	Average Amount	Range of Detections	MCL Violation?	Typical Source of Contaminant
Total Trihalomethanes (ppb)	80	34	ND – 60	No	Byproducts of chlorine disinfection
Haloacetic Acids (ppb)	60	11	ND – 17	No	Byproducts of chlorine disinfection
Chlorine Residual (ppm)	(4 / 4)	1.5	0.1 – 2.8	No	Disinfectant added for treatment

Sixteen locations in the distribution system are tested quarterly for total trihalomethanes and haloacetic acids; thirty-three locations are tested each month for color, odor and turbidity. Color and odor were not detected. 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	0/50	No	Corrosion of household plumbing
Copper (ppm)	1.3	0.17	0.25	0/50	No	Corrosion of household plumbing

Every three years, 50 residences are tested for lead and copper at-the-tap. The most recent set of samples was collected in 2007.

Lead was detected in five homes. These positive samples did not exceed the lead action level. Copper was detected in fifty (50) samples, none of which exceeded the regulatory action level. 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
<b>Radiologicals – Tested in 2006</b>						
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
<b>Inorganic Chemicals – Tested in 2007</b>						
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
<b>Secondary Standards* – Tested in 2007</b>						
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
<b>Unregulated Chemicals – Tested in 2007</b>						
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.