

City of San Clemente

Utilities Division


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2001 Water Quality Report

City of
San Clemente
Water Division

The 2001 Water Quality Report

Drinking Water Quality

Since 1991, California water utilities have been providing an annual Water Quality Report to their customers. This year's report covers calendar year 2000 water quality testing, and has been prepared in compliance with new regulations called for in the 1996 reauthorization of the Safe Drinking Water Act. The reauthorization charged the United States Environmental Protection Agency (EPA) with updating and strengthening the tap water regulatory program and changed the report's due date to July 1.

EPA and the California Department of Health Services (DHS) are the agencies responsible for establishing drinking water quality standards. To ensure that your tap water is safe to drink, EPA and DHS prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. DHS 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.



If you have questions, please contact us for answers...

For information about this report, or your water quality in general, please contact John Bressan, Utilities Manager, at (949) 361-6150. The San Clemente City Council meets at 7:00 p.m. on the first and third Wednesdays of each month in the City Council Chambers, located at 100 Ave. Presidio in the City of San Clemente. 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 Environmental Protection Agency hotline at (800) 426-4791.

The City of San Clemente 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, your local utility goes beyond what is required to monitor for additional contaminants that have known health risks.

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

**This information is important.
Have someone translate it for you.**

これは重要な情報ですので、翻訳を依頼してください。

Esta información es importante. Por favor pídale a alguien que se la traduzca.

此乃重要資料・必須請人替您翻譯。

این اطلاعیه مهم می باشد. از کسی بخواهید که این را به شما ترجمه کند.

이 자료는 매우 중요한 것입니다. 그러므로 영어를 할 수 있는 사람한테 번역해 줄 것을 부탁드립니다.

Bản báo cáo này có những tin tức quan trọng về nước uống của quý vị.
Hãy dịch ra hoặc nói chuyện với những ai thông hiểu.

What You Need to Know, And How it May Affect You

Sources of Supply

Your drinking water is a blend of surface water imported by the Metropolitan Water District of Southern California and ground water extracted from City wells located in the southern part of the City of San Clemente. The ground water represents 5 to 8 percent of the total water source. Metropolitan's imported water sources are the Colorado River and the State Water Project, which draws water from the Sacramento-San Joaquin Delta.

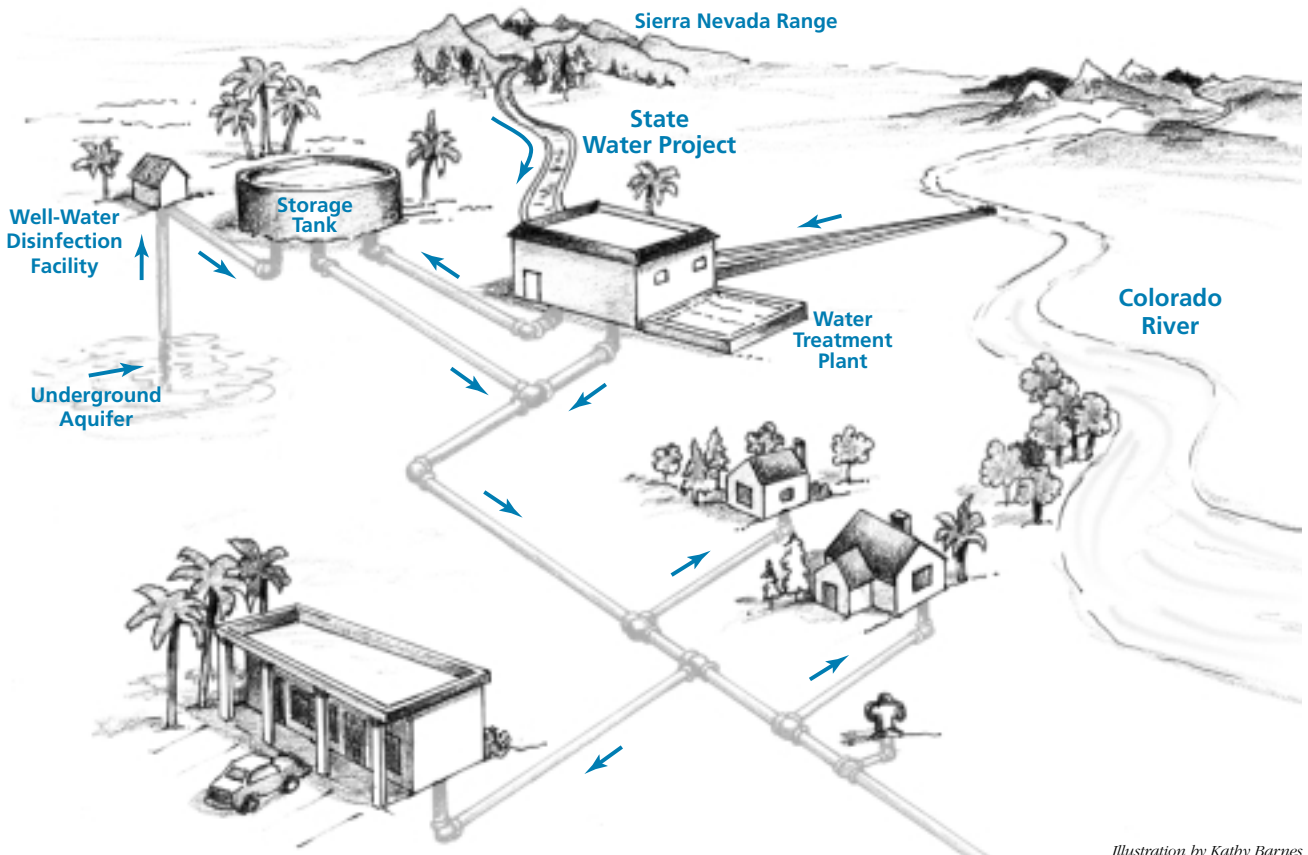
Government Regulations of Potential Contaminants

Drinking water, including bottled water, may be reasonably expected to contain at least small amounts of some contaminants. As water travels over the surface of the 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 human or animal activity. For most people, the presence of contaminants does not necessarily mean water may be a health risk.

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.



City of San Clemente Distribution System Water Quality

	Primary MCL	Average Amount	Range of Detections	MCL Violation?	Typical Source of Contaminant
Total Trihalomethanes (ppb)	100	49	5.2 - 83	No	Byproducts of chlorine disinfection
Color (color units)	15*	1	1	No	Naturally present in groundwater
Turbidity (ntu)	5*	0.19	0.04 - 1.26	No	Naturally present in groundwater
Odor (threshold odor number)	3*	1	1	No	Naturally present in groundwater

Twelve locations in the distribution system are tested quarterly for total trihalomethanes; twenty locations are tested monthly for color, odor and turbidity.

*Contaminant is regulated by a secondary standard to maintain aesthetic qualities (taste, odor, color); ntu = nephelometric turbidity units

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	5.4	0 / 30	No	Corrosion of household plumbing
Copper (ppm)	1.3	0.17	0.05	0 / 30	No	Corrosion of household plumbing

Every three years, 30 residences are tested for lead and copper at-the-tap. The most recent set of samples was collected in 1998. Lead was detected in five samples. Copper was detected in fourteen samples. None of the samples exceeded the regulatory action level (AL). A regulatory action level is the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

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
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Radiologicals – Tested in 1999

Alpha Radiation (pCi/L)	15	n/a	3.6	1.2 - 6.0	No	Erosion of natural deposits
Beta Radiation (pCi/L)	50	n/a	6.2	5.2 - 7.8	No	Decay of man-made or natural deposits
Combined Radium	5	n/a	<1	ND - 1.9	No	Erosion of natural deposits
Uranium (pCi/L)	20	n/a	2.6	ND - 3.8	No	Erosion of natural deposits

Inorganic Chemicals – Tested in 2000

Aluminum (ppm)	1 / 0.2*	n/a	0.123	ND - 0.169	No	Residue from water treatment process
Arsenic (ppb)	50	n/a	2.3	ND - 3.1	No	Erosion of natural deposits
Fluoride (ppm)	2	1	0.2	0.17 - 0.26	No	Erosion of natural deposits
Nitrate as N (ppm)	10	10	<0.45	ND - 0.95	No	Agriculture runoff and sewage

Secondary Standards* – Tested in 2000

Chloride (ppm)	500*	n/a	69	60 - 80	No	Runoff or leaching from natural deposits
Specific Conductance (µmho/cm)	1,600*	n/a	732	645 - 831	No	Substances that form ions in water
Sulfate (ppm)	500*	n/a	149	111 - 173	No	Runoff or leaching of natural deposits
Total Dissolved Solids (ppm)	1,000*	n/a	432	373 - 491	No	Runoff or leaching of natural deposits

Unregulated Contaminants Requiring Monitoring – Tested in 2000

Bromodichloromethane (ppb)	Not Regulated	n/a	18	14 - 22	n/a	Byproduct of chlorine disinfection
Bromoform (ppb)	Not Regulated	n/a	3.1	0.6 - 5.7	n/a	Byproduct of chlorine disinfection
Chlorodibromomethane (ppb)	Not Regulated	n/a	15	8.1 - 18	n/a	Byproduct of chlorine disinfection
Chloroform (ppb)	Not Regulated	n/a	16	10 - 20	n/a	Byproduct of chlorine disinfection
Perchlorate (ppb)	Not Regulated	n/a	<5	ND - 5	n/a	Rocket fuel discharged to the Colorado River
Sodium (ppm)	Not Regulated	n/a	65	56 - 76	n/a	Runoff or leaching from natural deposits
Hardness (ppm)	Not Regulated	n/a	207	170 - 233	n/a	Runoff or leaching of natural deposits
Hardness (grains/gal)	Not Regulated	n/a	12	9.9 - 14	n/a	Runoff or leaching of natural deposits

ppb = parts-per-billion; ppm = parts-per-million; pCi/L = pico curies per liter; ntu = nephelometric turbidity units; ND = not detected; < = less than

MCL = Maximum Contaminant Level; (MCLG) = federal MCL Goal; PHG = California Public Health Goal; n/a = not applicable

*Contaminant is regulated by a secondary standard to maintain aesthetic qualities (taste, odor, color)

Turbidity - combined filter effluent	Treatment Technique	Turbidity Measurements	TT Violation?	Typical Source of Contaminant
1) Highest single turbidity measurement	0.5 NTU	0.07	No	Soil run-off
2) Percentage of samples less than 0.5 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.

Information Collection Rule Disinfection By-Products in Metropolitan Water District Finished Water Data Collected August 1997 - December 1998

Chemical	Average Amount (ppb)	Range of Detections (ppb)	Typical Source of Contaminant
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Disinfection By-Products

Haloacetic Acids	17	9.5 - 24	Formed by the reaction with chlorine disinfectant
Haloacetonitriles	7.6	5.1 - 11	Formed by the reaction with chlorine disinfectant
Halo ketones	1.7	0.7 - 2.7	Formed by the reaction with chlorine disinfectant
Chloral Hydrate	3.8	1.5 - 6.1	Formed by the reaction with chlorine disinfectant
Total Organic Halogen	113	78 - 155	Formed by the reaction with chlorine disinfectant
Cyanogen Chloride	1.7	0.5 - 2.3	Formed by the reaction with chlorine disinfectant
Total Chlorine Residual *	2.6 ppm	2.3 - 2.8 ppm	Disinfectant residual

The Information Collection Rule (ICR) is a multi-year national monitoring program administered by the U.S. Environmental Protection Agency. The primary purpose of the ICR is to gather nationwide occurrence data on chemicals which may be formed during drinking water disinfection. The results of the ICR will assist the EPA in regulating many of these disinfection by-products over the next 5 years.

ppb = parts-per-billion, ppm = parts-per-million, ND = not detected

City of San Clemente Groundwater Quality

Chemical	MCL	PHG (MCLG)	Average Amount	Range of Detections	MCL Violation?	Most Recent Sampling Date	Typical Source
Radiologicals							
Alpha Radiation (pCi/L)	15	n/a	1.2	0.5 - 1.9	No	1999	Erosion of Natural Deposits
Uranium (pCi/L)	20	n/a	4.5	4.5	No	1999	Erosion of Natural Deposits
Inorganic Chemicals							
Barium (ppb)	1000	n/a	43	43	No	2000	
Fluoride (ppm)	2	1	0.37	0.25 - 0.46	No	2000	Erosion of Natural Deposits
Secondary Standards*							
Chloride (ppm)	500*	n/a	149	145 - 156	No	2000	Erosion of Natural Deposits
Iron (ppb)	300*	n/a	30	ND - 60	No	2000	Erosion of Natural Deposits
Manganese (ppb)	50*	n/a	18	5 - 50	No	2000	Erosion of Natural Deposits
Specific Conductance (µmho/cm)	1,600*	n/a	1000	1000	No	2000	Erosion of Natural Deposits
Sulfate (ppm)	500*	n/a	140	140	No	2000	Erosion of Natural Deposits
Total Dissolved Solids (ppm)	1,000*	n/a	596	568 - 616	No	2000	Erosion of Natural Deposits
Zinc (ppb)	5,000*	n/a	6.2	6.2	No	2000	Erosion of Natural Deposits
Unregulated Contaminants Requiring Monitoring							
Alkalinity as CaCO ₃	Not Regulated	n/a	160	160	n/a	2000	Erosion of Natural Deposits
Calcium (ppm)	Not Regulated	n/a	74	74	n/a	2000	Erosion of Natural Deposits
Magnesium (ppm)	Not Regulated	n/a	32	32	n/a	2000	Erosion of Natural Deposits
Sodium (ppm)	Not Regulated	n/a	80	74 - 86	n/a	2000	Erosion of Natural Deposits
Hardness (ppm)	Not Regulated	n/a	316	280 - 340	n/a	2000	Erosion of Natural Deposits
Hardness (grains/gal.)	Not Regulated	n/a	19	16 - 20	n/a	2000	Erosion of Natural Deposits

ppb = parts-per-billion; ppm = parts-per-million; pCi/L = pico curies per liter; ntu = nephelometric turbidity units; ND = not detected; n/a = not applicable
MCL = Maximum Contaminant Level; (MCLG) = federal MCL Goal; PHG = California Public Health Goal
*Contaminant is regulated by a secondary standard to maintain aesthetic qualities (taste, odor, color).

Definitions

Public Health Goal (PHG)

The level of a contaminant in drinking water below which there is no known or expected risk to health. Public health goals are set by the California Environmental Protection Agency.

Maximum Contaminant Level Goal (MCLG)

The level of contaminant in drinking water below which there is no known or expected risk to health. Maximum contaminant level goals are set by the EPA.

Maximum Contaminant Level (MCL)

The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the public health goals and maximum contaminant level goals as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste and appearance of drinking water.

AL
Action Level

Primary Drinking Water Standard (PDWS)

MCL's for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

Treatment Technique

A required process intended to reduce the level of a contaminant in drinking water.

Regulatory Action Level

The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Variance

State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

Measurements

Water is sampled and tested throughout the year. Contaminants are measured in parts per million (ppm), parts per billion (ppb), parts per trillion (ppt), and even parts per quadrillion (ppq). If this is difficult to imagine, think about these comparisons:

Parts per million:

- S 3 drops in 42 gallons
- S 1 second in 12 days
- S 1 penny in \$10,000
- S 1 inch in 16 miles

Parts per billion:

- S 1 drop in 14,000 gallons
- S 1 second in 32 years
- S 1 penny in \$10 million
- S 1 inch in 16,000 miles

The State allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

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	Primary MCL	Average Amount	Range of Detections	MCL Violation?	Typical Source of Contaminant
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Odor (threshold odor number)	3*	1	1	No	Naturally present in groundwater

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Beta Radiation (pCi/L)	50	n/a	6.2	5.2 - 7.8	No	Decay of man-made or natural deposits
Combined Radium	5	n/a	<1	ND - 1.9	No	Erosion of natural deposits
Uranium (pCi/L)	20	n/a	2.6	ND - 3.8	No	Erosion of natural deposits

Inorganic Chemicals – Tested in 2000

Aluminum (ppm)	1 / 0.2*	n/a	0.123	ND - 0.169	No	Residue from water treatment process
Arsenic (ppb)	50	n/a	2.3	ND - 3.1	No	Erosion of natural deposits
Fluoride (ppm)	2	1	0.2	0.17 - 0.26	No	Erosion of natural deposits
Nitrate as N (ppm)	10	10	<0.45	ND - 0.95	No	Agriculture runoff and sewage

Secondary Standards* – Tested in 2000

Chloride (ppm)	500*	n/a	69	60 - 80	No	Runoff or leaching from natural deposits
Specific Conductance (µmho/cm)	1,600*	n/a	732	645 - 831	No	Substances that form ions in water
Sulfate (ppm)	500*	n/a	149	111 - 173	No	Runoff or leaching of natural deposits
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Bromoform (ppb)	Not Regulated	n/a	3.1	0.6 - 5.7	n/a	Byproduct of chlorine disinfection
Chlorodibromomethane (ppb)	Not Regulated	n/a	15	8.1 - 18	n/a	Byproduct of chlorine disinfection
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Hardness (grains/gal)	Not Regulated	n/a	12	9.9 - 14	n/a	Runoff or leaching of natural deposits

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