The 2005 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 2004 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 (USEPA) with updating and strengthening the tap water regulatory program and changed the report's due date to July 1.

USEPA and the California Department of Health Services (CDHS) are the agencies responsible for establishing drinking water quality standards. To ensure that your tap water is safe to drink, USEPA and CDHS prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. CDHS 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 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 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 Andrew J. Howard, Utilities Manager, at (949) 366-1553. The San Clemente City Council meets at 7:00 p.m. on the first and third Tuesdays 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 U.S. Environmental Protection Agency hotline at (800) 426-4791.

For further information about the City, please visit our website: http://ci.san-clemente.ca.us



Permit No.

San Clemente, California 92672

City of San Clemente

Utilities Division

380 Ave Pico

CRRT SORT

POSTAL CUSTOMER

importantes contient de ou parlez avec quelqu' in qui peut le comprer ncernant votrea eau table. Veuillez traduii <u>lo</u> table.

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います。内容をよく理解するためまするために、日本語に翻訳して読む **か説明を受けてください。**

> দি ध्रम

apanes

người thông dịch, một người bạn Ś, quan trç ic trong Bản báo nhồ

Juisior

Sa

informat 50 水 5 、 支 相 者 一下,或者 告的朋友给 要的信息

ł 到。能关请看 您解释-拫

ملومات

صديق لك

अनुवाद जानकारी ∕Ħ⁄ पानी'' इसका 悟 जरूरी किसी 冶 큠 रिपोर्ट -nt∼ कीजिये, 冶 विषय भ 븄

importante sobre su agua beber. Tradúzcalo ó hable Este informe contiene nformación

네에는 귀하가 거주하는 ^^실에 관한 중요한 정보 있습니다. 이것을 변역 등분히 이해하시는 친구

03 하거나 충분 와 상의하십

÷ ਨ 파기

con alguien que lo entienda bien.

hỏi một để này.

Spanish

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

ي **مذا التقرير ع** عن نوعيا . يرجى ĺ.

water.

Ĵ متم، أو ابم

What You Need to Know About Your Water, 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.

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 and septic systems.

San

Engineering marvels, the State Water Project and Colorado River Aqueduct, make our way of life possible Angeler by delivering water to millions of people in Orange County.

State Water Project L.A. Aqueduct Colorado River Aqueduct In order to ensure that tap water is safe to drink, USEPA and the CDHS prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. CDHS 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 1-800-426-4791.

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, which did not detect it in the water, tested your surface



water for *Cryptosporidium* in 2004. 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 contami-

nants 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).

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.



Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.



Imported water — from the Colorado River and northern California — travels hundreds of miles, across deserts and mountains, to meet the needs of Orange County. Water is also pumped from local groundwater basins, then treated and sent to homes and businesses.

The Continuing Quality of Your Water is Our Primary Concern

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,

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

The City of San Clemente Utilities Division completed an assessment of drinking water sources for its water supply in October 2001. The two sources are considered vulnerable to the following Possible Contamination Activities (PCAs) associated with some contaminants detected in the water supply: Maintenance yards, above-ground fuel tanks, an historic dump site, an electrical switching station, and a site for temporary deposition of street sweeper debris. Residences, parks, sewers, roads and storm drains represent additional PCAs. While PCAs exist within the source water assessment area, the water sources are protected from immediate contamination threats by the confining nature of the aquifer, and the significant depth of well perforations at each water source.

Copies of each water assessment are located at the City of San Clemente Utilities Division administration office, 380 Avenida Pico, Building N, San Clemente, California. You may inspect these water source assessments by contacting the Utilities Manager at (949) 366-1553.

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:

City of San Clemente http://ci.san-clemente.ca.us

Municipal Water District of Orange County www.mwdoc.com

Orange County Water District

www.ocwd.com

Metropolitan Water District of Southern California www.mwdh20.com

California Department of Health Services, Division of Drinking Water and Environmental Management www.dhs.cahwnet.gov/ps/ddwem U.S. Environmental Protection Agency www.epa.gov/safewater/

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 reduce allowable levels of DBPs in drinking water without compromising disinfection itself. This regulation is due to be finalized by USEPA in 2005.

Lead

Infants and young children are typically more vulnerable to lead in drinking water that 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 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (800-426-4791).

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER Monitoring Requirements Not Met for City of San Clemente

The City's water systems had two exceptions to the water quality monitoring plan during calendar year 2004. Our valued customers have a right to know what happened and what operations did to correct these exceptions.

The City is required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not the City's drinking water meets health standards. During the week of December 27, 2004 operations did not complete weekly monitoring or testing for chlorine residuals and bacteriological contaminants and therefore, cannot be sure of the quality of our drinking water during this weekly monitoring period. Subsequent samples were collected on the following week on Monday January 3, 2005 and again on Thursday January 6, 2005 and complied with health standards for drinking water.

What should I do?

There is nothing you need to do.

The table below lists the contaminant(s) operations did not properly test for during the calendar year 2004 and include frequency of sample collection, number of samples required to be collected, how many samples were actually collected, date samples should have been collected, and the date on which follow-up samples were taken.

Constituent to be monitored	Required number of samples to be collected	Date samples should have been collected	Date samples were collected
Coliform & 20 per Week Chlorine Residual		December 27, 2004	January 3, 2005 January 6, 2005

What happened? What is being done?

Regrettably, this exception was the result of a scheduling mishap that did not account for sampling during the City's observed Holiday Furlough. This has since been corrected and properly scheduled for subsequent Holiday Furlough's. A repeat of this exception should not occur.

A copy of the City's Water Quality Monitoring Plan is available for review.

2004 City of San Clemente Groundwater Ouality

	zoor city of sun clemente cround nater quality								
Chemical	MCL	PHG (MCLG)	Average Amount	Range of Detections	MCL Violation?	Most Recent Sampling Date	Typical Source of Contaminant		
Radiologicals									
Radium (pCi/L)	5	n/a	1.0	1.0	No	2004	Erosion of Natural Deposits		
Inorganic Chemicals									
Fluoride (ppm)	2	1	0.32	0.32	No	2003	Erosion of Natural Deposits		
Nitrate (ppm as N)	10	10	1.6	1.6	No	2004	Fertilizers, Septic Tanks		
Nitrate + Nitrite (ppm as N)	10	10	1.1	0.2 - 1.9	No	2003	Fertilizers, Septic Tanks		
Secondary Standards*									
Chloride (ppm)	500*	n/a	84	84	No	2003	Erosion of Natural Deposits		
Manganese (ppb)	50*	n/a	<20	2.0 - 21	No	2003	Erosion of Natural Deposits		
Specific Conductance (µmho/cm)	1,600*	n/a	710	710	No	2003	Erosion of Natural Deposits		
Sulfate (ppm)	500*	n/a	98	98	No	2003	Erosion of Natural Deposits		
Total Dissolved Solids (ppm)	1,000*	n/a	360	360	No	2003	Erosion of Natural Deposits		
Unregulated Contaminants R	equiring Monitor	ing							
Alkalinity (ppm as CaCO ₃)	Not Regulated	n/a	176	176	n/a	2003	Erosion of Natural Deposits		
Boron (ppm)	Not Regulated	n/a	0.24	0.24	n/a	2004	Erosion of Natural Deposits		
Calcium (ppm)	Not Regulated	n/a	41	41	n/a	2003	Erosion of Natural Deposits		
Magnesium (ppm)	Not Regulated	n/a	24	24	n/a	2003	Erosion of Natural Deposits		
Potassium (ppm)	Not Regulated	n/a	4.5	3.7 – 5.2	n/a	2002	Erosion of Natural Deposits		
Sodium (ppm)	Not Regulated	n/a	72	72	n/a	2003	Erosion of Natural Deposits		
Total Hardness (ppm as CaCO ₃)	Not Regulated	n/a	224	224	n/a	2003	Erosion of Natural Deposits		
Total Hardness (grains/gal.)	Not Regulated	n/a	13	13	n/a	2003	Erosion of Natural Deposits		

ppb = parts-per-billion; ppm = parts-per-million; pCi/L = picoCuries per liter; ntu = nephelometric turbidity units; µmho/cm = micromho per centimeter; 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; *Contaminant is regulated by a secondary standard to maintain aesthetic qualities (taste, odor, color).

City of San Clemente Distribution System Water Quality

	MCL (MRDL/MRDLG)	Average Amount	Range of Detections	MCL Violation?	Typical Source of Contaminant
Total Trihalomethanes (ppb)	80	58	24 – 81	No	Byproducts of chlorine disinfection
Haloacetic Acids (ppb)	60	25	1.0 – 75	No	Byproducts of chlorine disinfection
Chlorine Residual (ppm)	(4 / 4)	1.4	0.1 – 2.2	No	Disinfectant added for treatment
Color (color units)	15*	1	1	No	Erosion of Natural Deposits
Turbidity (ntu)	5*	0.14	0.05 - 0.52	No	Erosion of Natural Deposits
Odor (threshold odor number)	3*	1	1	No	Erosion of Natural Deposits

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

Bacterial Quality	MCL	MCLG	Highest Monthly Percent Positives	MCL Violation?	Typical Source of Contaminant			
otal Coliform Bacteria	5%	0	1.3%	No	Naturally present in the environment			

No more than 5% of the monthly samples may be positive for total coliform bacteria. The occurrence of 2 consecutive total coliform positive samples, one of which contains fecal coliform/E.coli, constitutes an acute MCL violation

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	2.5	0 / 30	No	Corrosion of household plumbing			
Copper (ppm)	1.3	0.17	0.21	0 / 30	No	Corrosion of household plumbing			
In 2004 30 residen	n 2004 30 residences were tested for lead and conner at the tan. Lead was detected in 5 of the samples. Conner was detected in all 30 samples								

Table Definitions

- AL (Action Level): The concentration of a contaminant, which if exceeded, triggers treatment or other requirements, which a water system must follow.
- MCL (Maximum Contaminant Level): 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 (2nd MCL) are set to protect the odor, taste, and appearance of drinking water.
- MCLG (Maximum Contaminant Level Goal): 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.
- PHG (Public Health Goal): 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.
- Primary Drinking Water Standard or PDWS: MCLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.
- TT (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.
- n/a: Not applicable.
- NS: No standard established.

NTU (nephlometric turbidity units): Measurement of the clarity, or turbidity, of water, pCi/L (picocuries per liter): A measure of the natural rate of radioactive disintegration. micromhos/cm (micromhos per centimeter): A measure of electrical conductance. 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 billion $(\mu g/L)$:

Parts per million (mg/L):

- 1 second in 12 days
- 1 penny in \$10,000 • 1 inch in 16 miles
- 1 penny in \$10 million • 1 inch in 16,000 miles

• 1 second in 32 years

It is important to note, however, that even a small concentration of certain contaminants can adversely affect a water supply.

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

In 2004 d for lead and copper at tap. Lead was detect 5 of the sam lopper was de None of the samples exceeded the regulatory action level. A regulatory action level is the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

2004 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 200	3						
Beta Radiation (pCi/L)	50	n/a	4.1	ND - 5.9	No	Decay of man-made or natural deposits	
Uranium (pCi/L)	20	0.5	<2	ND - 2.6	No	Erosion of natural deposits	
Inorganic Chemicals – Tested in 2004							
Fluoride (ppm)	2	1	0.18	0.14 - 0.20	No	Erosion of natural deposits	
Nitrate and Nitrite as N (ppm)	10	10	0.5	ND - 0.8	No	Agriculture runoff and sewage	
Nitrate as N (ppm)	10	10	0.5	ND - 0.8	No	Agriculture runoff and sewage	
Secondary Standards* – Test	ed in 2004						
Chloride (ppm)	500*	n/a	87	76 - 110	No	Runoff or leaching from natural deposits	
Color (color units)	15*	n/a	2	1 - 3	No	Runoff or leaching from natural deposits	
Corrosivity (LSI)	non-corrosive	n/a	0.18	0.03 - 0.29	No	Elemental balance in water	
Odor (odor units)	3*	n/a	1	1	No	Naturally occurring organic materials	
Specific Conductance (µmho/cm)	1,600*	n/a	749	644 - 877	No	Substances that form ions in water	
Sulfate (ppm)	500*	n/a	138	92 - 194	No	Runoff or leaching of natural deposits	
Total Dissolved Solids (ppm)	1,000*	n/a	435	370 - 521	No	Runoff or leaching of natural deposits	
Turbidity (NTU)	5*	n/a	0.05	0.04 - 0.08	No	Runoff or leaching of natural deposits	
Unregulated Chemicals - Test	ed in 2004						
Alkalinity (ppm)	Not Regulated	n/a	89	76 - 98	n/a	Runoff or leaching from natural deposits	
Boron (ppb)	Not Regulated	n/a	130	130 - 140	n/a	Runoff or leaching from natural deposits	
Calcium (ppm)	Not Regulated	n/a	40	31 - 48	n/a	Runoff or leaching from natural deposits	
Hardness, total (ppm)	Not Regulated	n/a	179	139 - 210	n/a	Runoff or leaching of natural deposits	
Hardness, total (grains/gal)	Not Regulated	n/a	10	8.1 - 12	n/a	Runoff or leaching of natural deposits	
Magnesium (ppm)	Not Regulated	n/a	19	15 - 22	n/a	Runoff or leaching from natural deposits	
pH (pH units)	Not Regulated	n/a	8.2	8.1 - 8.2	n/a	Hydrogen ion concentration	
Potassium (ppm)	Not Regulated	n/a	3.5	3.0 - 4.0	n/a	Runoff or leaching from natural deposits	
Sodium (ppm)	Not Regulated	n/a	80	74 - 94	n/a	Runoff or leaching from natural deposits	
and a substance billions are a substance willing	and a Cill and a Cooling and	المميد معني مميلهما م	والمعتمين ويعتله تطوريه متعهمون	under and interested as			

ppb = parts-per-billion; ppm = parts-per-million; 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	0.1	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. 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.