2021 WATER QUALITY

SAN CLEMENTE REPORT

PUBLISHED BY THE CITY OF SAN CLEMENTE UTILITIES DEPARTMENT

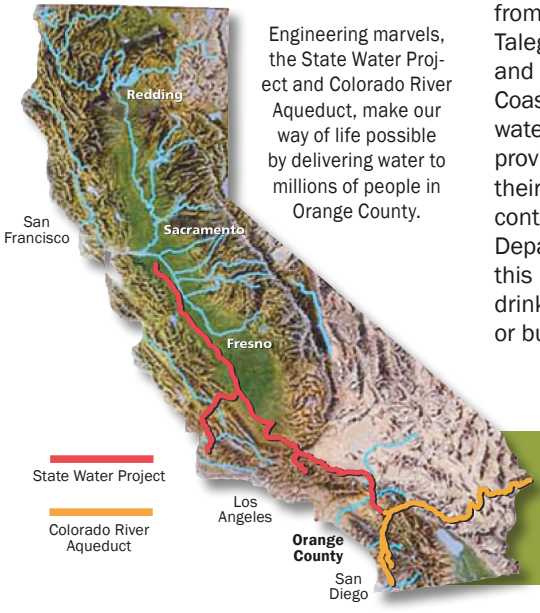
What You Need to Know About Your Water, and How it May Affect You

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 2020 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.

Some contaminants are not required to be monitored annually because the concentrations of these contaminants do not frequently change. Therefore, some of the data, though representative, is more than one year old.

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



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

SOURCES OF SUPPLY

Your drinking water is a blend of surface water imported by the Metropolitan Water District of Southern California (MWDSC) and local groundwater. MWDSC imported water sources are the State Water Project which draws water from the Sacramento-San Joaquin Delta, and the Colorado River.

Beginning in 2017, the City began to receive water from the Irvine Ranch Water District (IRWD) processed through the Baker Water Treatment Plant as an additional source of water to further ensure a constant water supply to its customers.

There are some areas in the City of San Clemente that receive their drinking water from an outside water agency, including Talega (Santa Margarita Water District) and portions of north San Clemente (South Coast Water District). Please check your water bill to confirm which water agency provides your drinking water and refer to their water quality report. You may also contact the City of San Clemente Utilities Department for clarification on whether this water quality report pertains to the drinking water being provided to your home or business.

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 water 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

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

Este informe contiene información muy importante sobre su agua potable. Para mas información ó traducción, favor de contactar a Kevin Lussier, [949] 366-1553.

chemicals, which are by-products of industrial processes and petroleum production, and can also come from gasoline stations, urban storm water runoff, agricultural applications and septic systems.

On April 1, 2016, all water systems were required to comply with the federal Revised Total Coliform Rule in addition to the state Total Coliform Rule. The federal Revised Total Coliform Rule further protects public health by ensuring the integrity of the drinking water distribution system and monitoring for the presence of microbials (i.e. total coliform and E. coli bacteria). The USEPA anticipates greater public health protection as the new rule requires water systems that are vulnerable to microbial contamination to identify and fix problems. Water systems that exceed a specified frequency of total coliform occurrences are required to conduct an assessment to determine if any sanitary defects exist. If found, these must be corrected by the water system.

In order to ensure that tap water is safe to drink, USEPA and the State Water Resources Control Board, Division of Drinking Water (DDW) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration regulations and California law 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.

WHAT YOU SHOULD KNOW ABOUT PER-AND POLYFLUOROALKYL SUBSTANCES (PFAS)

PFAS are widely used in a variety of industrial and consumer products. PFAS are a group of man-made chemicals that are resistant to heat, water, oils, and stains. PFAS can be found in nonstick cookware, cosmetics, firefighting foams, furniture, food packaging and clothing. The City of San Clemente is taking action to ensure safe drinking water by monitoring the quality of our water. The City of San Clemente conducted four rounds of PFAS water quality monitoring in 2019 and there were no detections of PFAS in the water supply. Additional information on PFAS can be found at www.waterboards.ca.gov/pfas.

For information about this report, or your water quality in general, please contact Assistant Utilities Manager Kevin Lussier, at [949] 366-1553.

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.

2020 CITY OF SAN CLEMENTE DISTRIBUTION SYSTEM WATER QUALITY

Chemical	MCL (MRDL/ MRDLG)	Average Amount	Range of Detections	MCL Violation?	Typical Source of Chemical
DISINFECTION BYPRODUCTS & DISINFECTANT RESIDUAL					
Total Trihalomethanes (ppb)	80	49	26-57	No	Byproducts of Chlorine Disinfection
Haloacetic Acids (ppb)	60	15	3-16	No	Byproducts of Chlorine Disinfection
Chlorine Residual (ppm)	(4/4)	1.62	0.2-2.8	No	Disinfectant Added for Treatment
AESTHETIC QUALITY					
Color (color units)	15*	1	1	No	Erosion of Natural Deposits
Odor (threshold odor number)	3*	1	1	No	Erosion of Natural Deposits
Turbidity (NTU)	5*	0.2	0.04-0.54	No	Erosion of Natural Deposits
OTHERS					
Fluoride (ppm)	2	0.76	0.25-1.12	No	Erosion of Natural Deposits; Water Additive for Dental Health
pH (pH units)	NR	7.86	6.62-8.73	No	Hydrogen Ion Concentration

Four 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; *Chemical is regulated by a secondary standard to maintain aesthetic qualities (taste, odor, color).

LEAD & COPPER ACTION LEVELS AT RESIDENTIAL TAPS

Chemical	Action Level (AL)	Public Health Goal	90th Percentile Value	Sites Exceeding AL/ Number of Sites	AL Violation?	Typical Source of Chemical
Lead (ppb)	15	0.2	ND	0/30	No	Corrosion of Household Plumbing
Copper (ppm)	1.3	0.3	0.13	0/30	No	Corrosion of Household Plumbing

In 2019, 30 residences were tested for lead and copper at-the-tap. Lead was not detected in any of 30 samples. Copper was detected in 13 of 30 samples. None of the samples exceeded the regulatory Action Level (AL). A regulatory action level is the concentration of a chemical which, if exceeded, triggers treatment or other requirements that a water system must follow. DLR = Detection Limit for Purposes of Reporting. In 2020, no school submitted a request to be sampled for lead.

UNREGULATED CHEMICALS REQUIRING MONITORING IN THE DISTRIBUTION SYSTEM

Chemical	Notification Level	Public Health Goal	Average Amount	Range of Detections	Most Recent Sampling Date
Haloacetic acids (HAA5) (ppb)	n/a	n/a	9.9	4.3-14	2020
Haloacetic acids(HAA6Br)(ppb)	n/a	n/a	9	6.2-12	2020
Haloacetic acids (HAA9) (ppb)	n/a	n/a	17	11-24	2020

COVID-19

The Coronavirus (COVID-19) does not present a threat to our drinking water supplies. We continually monitor and test the quality of your drinking water, and we are committed to ensuring its continued safety. Additional information on COVID-19 can be found at www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/covid-19.html.

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 MWDSC and IRWD tested their source water and treated surface water for Cryptosporidium in 2020 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 4 p.m. Eastern Time (6 a.m. to 1 p.m. in California).

The City of San Clemente City Council meets at 6:00 p.m. on the first and third Tuesdays of each month and public participation is welcomed. Visit www.san-clemente.org for information about the location and specific dates for City Council meetings.

IMMUNO-COMPROMISED

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, have had organ transplants, people with HIV/AIDS or other immune system disorders, some elderly persons and infants can be particularly at risk. These people should seek advice about drinking water from their health care providers.

LEAD IN TAP WATER

If present, elevated levels of lead can cause serious problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of San Clemente is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing

components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water. If you are concerned about lead in your water, you may wish to have your water tested. Information on testing methods and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water.

DRINKING WATER FLUORIDATION

Fluoride has been added to U.S. drinking water supplies since 1945. Of the 50 largest cities in the U.S., 44 fluoridate their drinking water. In December 2007, the MWDSC 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 DDW, and the U.S. Centers for Disease Control and Prevention, MWDSC adjusted the natural fluoride level in imported treated water from the Colorado River and State Water Project to comply with all provisions of the State's fluoridation system requirements. 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
cdc.gov/Oralhealthdata/overview

American Dental Association
www.ada.org/~/media/ADA/Files/Fluoridation_Facts.pdf?la=en

American Water Works Association
www.awwa.org
MWDSC fluoridation program,
Edgar G. Dymally [213] 217-5709 or
edymally@mwdh2o.com

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 the risks of microbial waterborne diseases. Chlorine is added to 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 U.S. Environmental Protection Agency (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.

2020 METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA TREATED SURFACE WATER

Chemical	MCL	PHG (MCLG)	Average Amount	Range of Detections	MCL Violation?	Typical Source of Chemical
RADIOLOGICALS - MOST RECENTLY SAMPLED IN 2020						
Alpha Radiation (pCi/L)	15	(0)	ND	ND - 3	No	Erosion of Natural Deposits
Beta Radiation (pCi/L)	50	(0)	ND	ND - 7	No	Decay of Natural and Man-made Deposits
Uranium (pCi/L)	20	0.43	2	1 - 3	No	Erosion of Natural Deposits
INORGANIC CHEMICALS - MOST RECENTLY SAMPLED IN 2020						
Aluminum (ppm)	1	0.6	0.137	ND - 0.260	No	Treatment Process Residue, Natural Deposits
Barium (ppm)	1	2	0.107	0.107	No	Byproduct of Drinking Water Ozonation
Bromate (ppb)	10	0.1	1.9	ND - 1.3	No	Byproduct of Drinking Water Ozonation
Fluoride (ppm)	2	1	0.7	0.5 - 0.9	No	Water Additive for Dental Health
SECONDARY STANDARDS* - MOST RECENTLY SAMPLED IN 2020						
Aluminum (ppb)	200*	600	137	ND - 260	No	Treatment Process Residue, Natural Deposits
Chloride (ppm)	500*	n/a	94	93 - 94	No	Runoff or Leaching from Natural Deposits
Color (color units)	15*	n/a	1	1	No	Naturally-occurring Organic Materials
Odor (threshold odor number)	3*	n/a	2	2	No	Naturally-occurring Organic Materials
Specific Conductance (µmho/cm)	1,600*	n/a	970	964 - 975	No	Substances that Form Ions in Water
Sulfate (ppm)	500*	n/a	216	215 - 217	No	Runoff or Leaching from Natural Deposits
Total Dissolved Solids (ppm)	1,000*	n/a	592	582 - 603	No	Runoff or Leaching from Natural Deposits
UNREGULATED CHEMICALS - MOST RECENTLY SAMPLED IN 2020						
Alkalinity, total as CaCO3 (ppm)	NR	n/a	118	117 - 120	n/a	Runoff or Leaching from Natural Deposits
Boron (ppm)	NL=1	n/a	0.13	0.13	n/a	Runoff or Leaching from Natural Deposits
Calcium (ppm)	NR	n/a	66	65 - 67	n/a	Runoff or Leaching from Natural Deposits
Hardness, total as CaCO3 (ppm)	NR	n/a	265	261 - 269	n/a	Runoff or Leaching from Natural Deposits
Hardness, total (grains/gallon)	NR	n/a	15	15 - 16	n/a	Runoff or Leaching from Natural Deposits
Magnesium (ppm)	NR	n/a	26	25 - 26	n/a	Runoff or Leaching from Natural Deposits
N-nitrosodimethylamine (ppt)	NL=10	n/a	3.1	3.1	n/a	Byproduct of Drinking Water Chloramination, Industrial Processes
pH (pH units)	NR	n/a	8.1	8.1	n/a	Hydrogen Ion Concentration
Potassium (ppm)	NR	n/a	4.6	4.5 - 4.7	n/a	Runoff or Leaching from Natural Deposits
Sodium (ppm)	NR	n/a	96	93 - 98	n/a	Runoff or Leaching from Natural Deposits
Total Organic Carbon (ppm)	TT	n/a	2.4	2.2 - 2.7	n/a	Various Natural and Man-made Sources

ppb = parts per billion; **ppm** = parts per million; **ppt** = parts per trillion; **pCi/L** = picoCuries per liter; **µmho/cm** = micromhos per centimeter; **ND** = not detected; **MCL** = Maximum Contaminant Level; **(MCLG)** = federal MCL Goal; **PHG** = California Public Health Goal **NL** = Notification Level; **n/a** = not applicable; **TT** = treatment technique * Chemical is regulated by a secondary standard.

Turbidity - combined filter effluent Metro. Water District Diemer Filtration Plant	Treatment Technique	Turbidity Measurements	TT Violation?	Typical Source of Chemical
1) Highest single turbidity measurement	0.3 NTU	0.04	No	Soil Runoff
2) Percentage of samples <0.3 NTU	95%	100%	No	Soil Runoff

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 MWDSC 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 chemicals in drinking water that are difficult and sometimes impossible to measure directly. **NTU** = nephelometric turbidity units.

Chemical	Notification Level	PHG	Average Amount	Range of Detections	Most Recent Sampling Date
UNREGULATED CHEMICALS REQUIRING MONITORING					
Manganese** (ppb)	SMCL = 50	n/a	0.88	ND-2.4	2020

** Manganese is regulated with a secondary standard of 50 ppb but was not detected, based on the detection limit for purposes of reporting of 20 ppb. Manganese was included as part of the unregulated chemicals requiring monitoring. **SMCL**= secondary MCL.

2020 CITY OF SAN CLEMENTE GROUNDWATER QUALITY

Chemical	MCL	PHG (MCLG)	Average Amount	Range of Detections	MCL Violation?	Typical Source of Chemical
INORGANIC CHEMICALS • MOST RECENTLY SAMPLED IN 2020						
Fluoride (ppm)	2	1	0.55	0.31-0.83	No	Erosion of Natural Deposits
Nitrate (ppm as N)	10	10	1.6	1.6	No	Fertilizers, Septic Tanks
Nitrate+Nitrite (ppm as N)	10	10	1.6	1.6	No	Fertilizers, Septic Tanks
SECONDARY STANDARDS* • MOST RECENTLY SAMPLED IN 2020						
Chloride (ppm) - treated	500**	n/a	94	90 - 101	No	Erosion of Natural Deposits
Color (color units)	15**	n/a	2	2	No	Erosion of Natural Deposits
Manganese (ppb) - treated	50**	n/a	< 20	ND - 22	No	Erosion of Natural Deposits
Odor (threshold odor number)	3**	n/a	1	1	No	Erosion of Natural Deposits
Specific Conductance (µmho/cm)	1,600**	n/a	806	806	No	Erosion of Natural Deposits
Sulfate (ppm)	500**	n/a	131	131	No	Erosion of Natural Deposits
Total Dissolved Solids (ppm)	1,000**	n/a	509	505 - 510	No	Erosion of Natural Deposits
Turbidity (ntu) - treated	5**	n/a	0.22	0.14 - 0.30	No	Erosion of Natural Deposits
UNREGULATED CHEMICALS • MOST RECENTLY SAMPLED IN 2020						
Bicarbonate (ppm)	NR	n/a	178	178	No	Erosion of Natural Deposits
Calcium (ppm)	NR	n/a	44	44	No	Erosion of Natural Deposits
Aggressive Index	NR	n/a	11.5	11.5	No	Erosion of Natural Deposits
Magnesium (ppm)	NR	n/a	25	25	No	Erosion of Natural Deposits
pH (pH units) - treated	NR	n/a	7.3	7.2 - 7.4	No	Hydrogen Ion Concentration
Sodium (ppm)	NR	n/a	82	82	No	Erosion of Natural Deposits
Total Alkalinity (ppm as CaCO3)	NR	n/a	178	178	No	Erosion of Natural Deposits
Total Hardness (grains/gal)	NR	n/a	13	12 - 13	No	Erosion of Natural Deposits
Total Hardness (ppm as CaCO3)	NR	n/a	215	206 - 222	No	Erosion of Natural Deposits

ppb = parts-per-billion; **ppm** = parts-per-million; **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; *The State Water Resources Control Board considers 50 pCi/L to be the level of concern for beta particles. **Chemical is regulated by a secondary standard to maintain aesthetic qualities (taste, odor, color).

Stage 2 of the regulation was finalized by USEPA in 2006, which further controls allowable levels of DBPs in drinking water without compromising disinfection itself. A required distribution system evaluation was completed in 2008 and full Stage 2 compliance began in 2012.

SOURCE WATER ASSESSMENT

(IRWD) BAKER WATER TREATMENT PLANT WATER ASSESSMENT

The Baker Water Treatment Plant receives untreated surface water from MWDSC and untreated surface water from Santiago Reservoir. The surface water assessment of Santiago Reservoir is provided by Serrano Water District, which also uses source water from Santiago Reservoir. The most recent sanitary survey for Santiago Reservoir was updated in 2019. Water supplies from Santiago Reservoir are most vulnerable to septic systems and wildfires. The Source Water Assessment for Santiago Reservoir was completed in April 2001. The assessment was conducted for the Serrano Water District by Boyle Engineering Corporation with assistance from the Serrano Water District staff. A copy of the complete assessment may be viewed at the IRWD Water Quality Department, 3512 Michelson Drive, Irvine. You may request a summary of the assessment by writing to District Secretary, Irvine Ranch Water District, 15600 Sand Canyon Avenue, Irvine, California 92618.

IMPORTED MWDSC WATER ASSESSMENT

Every five years, MWDSC is required by DDW to examine possible sources of drinking water contamination in its State Water Project and Colorado River source waters. The most recent watershed sanitary surveys for MWDSC's source waters are the Colorado River Watershed Sanitary Survey - 2016 Update, and the State Water Project Watershed Sanitary Survey - 2017 Update. Water from the Colorado River is considered to be most vulnerable to contamination from recreation, urban/stormwater runoff, increasing urbanization in the watershed and wastewater. Water supplies from Northern California's State Water Project are most vulnerable to contamination from urban/stormwater runoff, wildlife, agriculture, recreation and wastewater. USEPA also requires MWDSC to complete one Source Water Assessment (SWA) that utilizes information collected in the watershed sanitary surveys. MWDSC completed its SWA in December 2012. The SWA is used to evaluate the vulnerability of water sources to contamination and helps determine whether more protective measures are needed. A copy of the most recent summary of either Watershed Sanitary Survey or the SWA can be obtained by calling MWDSC at (213) 217-6000.

WANT ADDITIONAL INFORMATION?

City of San Clemente
www.san-clemente.org

Municipal Water District of OC
www.mwdoc.com

Orange County Water District
www.ocwd.com

Metropolitan Water District of Southern California
www.mwdh2o.com

State Water Resources Control Board, Division of Drinking Water
www.waterboards.ca.gov/drinking_water/programs

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

Please share this information with others who may not have received this notice directly (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.

GROUNDWATER ASSESSMENT

The City of San Clemente Utilities Department completed an assessment of drinking water sources for its water supply in October 2001 and again in 2008. The City's wells 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, a 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 Department administration office, 380 Avenida Pico, Building N, San Clemente, California. You may review these water source assessments by contacting the Assistant Utilities Manager at (949) 366-1553.

2020 IRVINE RANCH WATER DISTRICT BAKER WATER TREATMENT PLANT

Chemical	MCL	PHG (MCLG)	Average Amount	Range of Detections	MCL Violation?	Typical Source of Chemical
RADIOLOGICALS - MOST RECENTLY SAMPLED IN 2020						
Uranium (pCi/L)	20	0.43	1.1	1.1	No	Erosion of Natural Deposits
Beta Radiation (pCi/L)	50	(0)	6	4.8 - 7.7	No	Decay of Natural and Man-made Deposits
INORGANIC CHEMICALS - MOST RECENTLY SAMPLED IN 2020						
Arsenic (ppb)	10	0.004	2.23	2.23	No	Erosion of Natural Deposits
Chlorine Dioxide (ppb)	MRDL = 800	MRDLG = 800	<20	ND - 80	No	Drinking Water Disinfectant Added for Treatment
Chlorite (ppm)	1.0	0.05	0.16	ND - 0.57	No	Byproduct of Drinking Water Chlorination
Fluoride (ppm)	2.0	1	0.29	0.29	No	Erosion of Natural Deposits; Water Additive for Dental Health
SECONDARY STANDARDS* - MOST RECENTLY SAMPLED IN 2020						
Chloride (ppm)	500*	n/a	64.2	64.2	No	Runoff or Leaching from Natural Deposits
Manganese (ppb)	50*	n/a	<20	ND - 36.8	No	Leaching from Natural Deposits
Odor (threshold odor number)	3*	n/a	2	2	No	Naturally-occurring Organic Materials
Specific Conductance (µmho/cm)	1,600*	n/a	909	909	No	Substances that Form Ions in Water
Sulfate (ppm)	500*	n/a	200	200	No	Runoff or Leaching from Natural Deposits
Total Dissolved Solids (ppm)	1,000*	n/a	574	574	No	Runoff or Leaching from Natural Deposits
Turbidity (NTU)	5*	n/a	0.1	0.1	No	Soil Runoff
UNREGULATED CHEMICALS -MOST RECENTLY SAMPLED IN 2020						
Alkalinity, total as CaCO3 (ppm)	NR	n/a	172	172	n/a	Runoff or Leaching from Natural Deposits
Boron (ppm)	NL=1	n/a	0.127	0.127	n/a	Runoff or Leaching from Natural Deposits
Calcium (ppm)	NR	n/a	74.4	74.4	n/a	Runoff or Leaching from Natural Deposits
Hardness, total as CaCO3 (ppm)	NR	n/a	308	308	n/a	Runoff or Leaching from Natural Deposits
Hardness, total (grains/gallon)	NR	n/a	18	18	n/a	Runoff or Leaching from Natural Deposits
Magnesium (ppm)	NR	n/a	29.7	29.7	n/a	Runoff or Leaching from Natural Deposits
pH (pH units)	NR	n/a	7.7	7.7	n/a	Hydrogen Ion Concentration
Potassium (ppm)	NR	n/a	4.7	4.7	n/a	Runoff or Leaching from Natural Deposits
Sodium (ppm)	NR	n/a	71	71	n/a	Runoff or Leaching from Natural Deposits
Total Organic Carbon (ppm)	TT	n/a	3.1	3.1	n/a	Various Natural and Man-made Sources

ppb = parts per billion; **ppm** = parts per million; **pCi/L** = picoCuries per liter; **µmho/cm** = micromhos per centimeter; **ND** = not detected; **NTU** = nephelometric turbidity units **MCL** = Maximum Contaminant Level; **(MCLG)** = federal MCL Goal; **MRDL** = Maximum Residual Disinfectant Level; **MRDLG** = Maximum Residual Disinfectant Level Goal; **PHG** = California Public Health Goal **NL** = Notification Level; **n/a** = not applicable; **TT** = treatment technique * Chemical is regulated by a secondary standard.

Irvine Ranch Water District - Baker Water Treatment Plant	Technique	Measurements	TT Violation?	Typical Source of Chemical
1) Highest single turbidity measurement	0.1 NTU	0.064	No	Soil Runoff
2) Percentage of samples less than 0.3 NTU	95%	100%	No	Soil Runoff

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 the 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 chemicals in drinking water that are difficult and sometimes impossible to measure directly. **NTU** = nephelometric turbidity units.

WHAT ARE WATER QUALITY STANDARDS?

Drinking water standards established by USEPA and DDW set limits for substances that may affect consumer health or aesthetic qualities of drinking water. The charts 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. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.
- **Maximum Residual Disinfectant Level (MRDL):** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
- **Primary Drinking Water Standard (PDWS):** MCLs, MRDLs and treatment techniques (TTs) for contaminants that affect health, along with their monitoring and reporting requirements.
- **Treatment Technique (TT):** A required process intended to reduce the level of a contaminant in drinking water.
- **Regulatory Action Level (AL):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

WHAT IS A WATER QUALITY GOAL?

In addition to mandatory water quality standards, USEPA and DDW 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 direction for water management practices. The charts 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 drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
- **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.

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 and equivalencies:

Parts per million (ppm or mg/l):
- 3 drops of liquid in 42 gallons
- 1 second in 12 days
- 1 inch in 16 miles

Parts per billion (ppb or µg/l):
- 3 drops of liquid in 14,000 gallons
- 1 second in 32 days
- 1 inch in 16,000 miles

Parts per trillion (ppt or ng/l):
- 10 drops of liquid in a Rose Bowl sized pool
- 1 second in 32,000 days
- 1 inch in 16 million miles

CITY OF SAN CLEMENTE | UTILITIES DEPARTMENT
380 Avenida Pico, Bldg N, San Clemente, California 92672
www.san-clemente.org | [949] 366-1553

Where Does San Clemente's Water Come From?

IMPORTED WATER
82% Of the Total Water Supply

Imported drinking water (potable water) is purchased from the Metropolitan Water District of Southern California, and travels hundreds of miles to Southern California from two sources:

- Water from the Colorado River Basin at Lake Havasu is delivered through the **Colorado River Aqueduct (CRA).**
- Water from the **State Water Project (SWP)** is delivered from Northern California through the California Aqueduct.

Colorado River Aqueduct

Diamond Valley Lake

Local Well

LOCAL GROUNDWATER
2% Of the Total Water Supply

The City has two local wells that produce between 400 to 600 acre feet of groundwater a year to add to its potable water supplies. (An acre foot of water equals 325,900 gallons).

RECYCLED WATER
16% Of the Total Water Supply

The City's water reclamation plant treats wastewater while also producing recycled water for irrigation. It delivers approximately 1,400 acre feet of recycled water per year for irrigation to 53 sites in the City that might otherwise rely on potable water. These customers are primarily homeowner associations and business parks, city parks, schools and traffic medians. Recycled water provides a new source of supply and reduces the City's reliability on imported water from the Metropolitan Water District.

Water Reclamation Plant

City of San Clemente
Utilities Department
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San Clemente, CA 92672
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