

# Vallecitos Water District

## 1998 Water Quality Report

PARAMETER	MCL State	Federal	PHG State	MCLG Federal	Imported Water from MWD (a) Range	Average
-----------	--------------	---------	--------------	-----------------	--------------------------------------	---------

### Data provided by Metropolitan Water District of Southern California (MWD):

Percent State Project Water	NS	NS	NS	NS	0 - 46%	22%
Percent Colorado River Water	NS	NS	NS	NS	54 - 100%	78%

### PRIMARY STANDARDS--Mandatory Health-Related Standards

<b>CLARITY</b>						
Combined Filter Effluent Turbidity (NTU)	0.5 (b)	0.5 (b)	NS	NS	0.07-0.10	0.08
<b>MICROBIOLOGICAL (c)</b>						
Total Coliform	5.00%	5.00%	NS	0	0 - 0.28%	0.08%
Fecal Coliform/E. coli	(c)	(c)	NS	0	No Acute Violations	No Acute Violations
<b>ORGANIC CHEMICALS (mg/L)</b>						
Pesticides/PCBs					27 chemicals were tested and none were detected.	
Semi-Volatile Organic Compounds					6 chemicals were tested and none were detected.	
Volatile Organic Compounds					26 chemicals were tested and two were detected:	
Disinfection By-products Haloacetic Acids	NS	0.06*	NS	NS	0.015 - 0.037	0.023
Total Trihalomethanes (d)	0.1	0.1	NS	NS	0.030 - 0.056	0.04
<b>INORGANIC CHEMICALS (mg/L)</b>						
Aluminum	1(#0.2)	#(0.05-0.2)	NS	NS	0.120 - 0.300	0.186
Antimony	0.006	0.006	0.02	0	ND	ND
Arsenic	0.05	0.05	NS	NS	0.0018 - 0.0029	0.0022
Asbestos (e)	7	7	NS	7	ND	ND
Barium	1	2	NS	2	0.074 - 0.082	0.077
Beryllium	0.004	0.004	NS	0.004	ND	ND
Cadmium	0.005	0.005	NS	0.005	ND	ND
Chromium	0.05	0.1	NS	0.1	ND	ND
Copper	(f) (#1.0)	(f) (#1.0)	0.17	1.3	ND - 0.012	ND
Cyanide	0.2	0.2	0.15	0.02	ND	ND
Fluoride (g)	1.4-2.4	4.0(#2.0)	1	NS	0.22 - 0.34	0.26
Lead	(f)	(f)	0.002	0	ND	ND
Mercury	0.002	0.002	NS	0.002	ND	ND
Nickel	0.1	NS	NS	NS	ND - 0.002	ND
Nitrate (as N)	10 (h)	10	10	10	0.05 - 0.17	0.09
Nitrite (as N)	1	1	1	1	ND	ND
Nitrate plus Nitrite (as N)	10	10	10	10	0.05 - 0.17	0.09
Selenium	0.05	0.05	NS	0.05	ND	ND
Thallium	0.002	0.002	NS	0.0005	ND	ND
<b>RADIONUCLIDES (i) (pCi/L) (analyzed every four years, for four consecutive quarters - sampled from 8/94 - 4/95)</b>						
Gross Alpha	15	15	NS	NS	ND - 9.4	4.9
Gross Beta	50	4 mrem/yr	NS	NS	2.6 - 17.8	7.7
Radium-226 (j)	5	5	NS	NS	ND - 1.2	ND
Radium-228 (j)	5	5	NS	NS	ND	ND
Radon-222	NS	NS	NS	NS	ND - 83	ND
Strontium-90	8	8	NS	NS	ND - 2.3	ND
Tritium	20,000	20,000	NS	NS	ND	ND
Uranium	20	NS	NS	NS	ND - 4.9	3.4

### SECONDARY STANDARDS--Aesthetic Standards

<b>CHEMICAL PARAMETERS</b>						
Chloride (mg/L)	**250	250	NS	NS	68-84	75
Color (units)	15	15	NS	NS	04-Feb	3
Corrosivity	noncorrosive	noncorrosive	NS	NS	(k)	(k)
Foaming Agents-MBAS (mg/L)	0.5	0.5	NS	NS	ND	ND
Iron (mg/L)	0.3	0.3	NS	NS	ND	ND
Manganese (mg/L)	0.05	0.05	NS	NS	ND	ND
Methyl tert-butyl-ether (MTBE)	0.005	NS	NS	NS	ND	ND
Odor Threshold (units)	3	3	NS	NS	(l)	(l)
pH (units)	NS	6.5-8.5	NS	NS	8.02 - 8.09	8.06
Silver (mg/L)	0.1	0.1	NS	NS	ND	ND
Specific Conductance (µmho/cm)	**900	NS	NS	NS	729 - 976	830
Sulfate (mg/L)	**250	250	NS	NS	142 - 244	189
Total Dissolved Solids (mg/L)	**500	500	NS	NS	429 - 609	504
Turbidity (NTU)	5	NS	NS	NS	0.07 - 0.10	0.08
Zinc (mg/L)	5	5	NS	NS	ND	ND

PARAMETER	MCL	Federal	PHG	MCLG	Imported Water from MWD (a)	
	State		State	Federal	Range	Average

**ADDITIONAL PARAMETERS**

Alkalinity as CaCO3 (mg/L)	NS	NS	NS	NS	104 - 127	114
Calcium (mg/L)	NS	NS	NS	NS	47 - 74	59
Hardness as CaCO3 (mg/L)	NS	NS	NS	NS	198 - 298	242
Heterotrophic Plate Count (CFU/mL) (m)	NS	NS	NS	NS	<1 - 12	<1
Magnesium (mg/L)	NS	NS	NS	NS	19.5 - 27.5	23
Perchlorate (ug/L) (n)	NS	NS	NS	NS	ND - 8	4
Potassium (mg/L)	NS	NS	NS	NS	3.6 - 4.5	3.8
Sodium (mg/L)	NS	NS	NS	NS	66 - 88	76
Total Organic Carbon (mg/L)	NS	NS	NS	NS	2.24 - 3.04	2.73

**Data provided by the Vallecitos Water District:**

Summary of Water Quality Tests:	Coliform	halomethanes	Lead & Copper (f)	Physical (o)
Number of samples required	480	12	30	192
Number of samples taken	768	12	40	192
Number Total Coliform positive	0			
Number Fecal Coliform/E. coli positive	0			
Average (mg/L)		0.069		
Number exceeding MCLs	0	0	(f)	0

**KEY TO ABBREVIATIONS, DEFINITIONS, AND NOTES**

MCL = Maximum Contaminant Level (The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to PHGs and MCLGs as is economically or technologically feasible.)

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.)

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.)

Primary Drinking Water Standard = Primary MCLs, specific treatment techniques adopted in lieu of primary MCLs, and monitoring and reporting requirements for MCLs that are specified in regulations.

NS = No Standard

ND = None Detected (Detection limits available on request.)

NTU = Nephelometric Turbidity Units, a measure of the suspended material in water.

mg/L = milligrams per liter (parts per million)

ug/L = micrograms per liter (parts per billion)

pCi/L = picoCuries per liter

CFU/100 mL = colony-forming units per 100 milliliters

CFU/mL = colony-forming units per milliliter

µmho/cm = micromhos per centimeter

< = less than

\* = proposed primary standard

# = secondary standard

\*\* = recommended level

The Federal and State standards for acrylamide and epichlorohydrin are treatment techniques with which MWD complies.

(a) Data shown are annual averages and ranges.

(b) The turbidity level of the filtered water shall be less than or equal to 0.5 NTU in 95% of the measurements taken each month and shall not exceed 5.0 NTU at any time.

(c) Total coliform MCLs: No more than 5.0% of the monthly samples may be total coliform-positive. Fecal coliform/E. coli MCLs: The occurrence of 2 consecutive totalcoliform-positive samples, one of which contains fecal coliform/E. coli, constitutes an acute MCL violation. These MCLs were not violated in 1998. Standards and results are based on distribution system monthly sampling averages. Compliance is based on the combined distribution system sampling from all filtration plants (10,210 samples).

(d) Calculated from the average of quarterly filtration plant effluent samples. Compliance is based on a running annual average of more than 40 quarterly distribution system samples, which was 0.024 mg/L for 1998.

(e) Measured in million fibers per liter (longer than 10 microns).

(f) The federal and state standards for lead and copper are treatment techniques requiring agencies to optimize corrosion control treatment. Due to previous Vallecitos testing producing results consistently below MCLs, testing is not required again until 2001.

(g) State MCL is dependent upon air temperature.

(h) State MCL is 45 mg/L as Nitrate, which equals 10.16 mg/L as N.

(i) The 1998/99 four quarter radiological monitoring program is in progress. Results will be reported in the 1999 report.

(j) Standards are for Radium-226 and -228 combined.

(k) Corrosivity is measured by the Langlier Stability Index. A positive index, indicating non-corrosivity, was maintained at the plant effluents.

(l) MWD has developed a flavor-profile analysis method that can more accurately detect odor occurrences. For more information contact MWD.

(m) Pour plate technique, 48-hour incubation at 35°C, monthly averages.

(n) The California State action level is 18 ug/L.

(o) Physical samples are tested for turbidity, odor, and color.

The District's North Twin Oaks Reservoir has a capacity of 7.1 million gallons and is used to store treated water purchased from the San Diego County Water Authority (SDCWA). The open reservoir met the health standards in effect when it was constructed in 1962.

Current water works standards would require it to be covered to prevent contamination from birds, windblown materials, and vandalism.

In order to minimize the potential for these problems, the reservoir is surrounded by a chain link fence to control access and has drainage collection and diversion ditches to prevent local runoff water from entering. The water, which is purchased from SDCWA, is a Filtration Plant. This water, when delivered to the North Twin Oaks Reservoir, has a chloramine (mixture of chlorine and ammonia) disinfectant blend of fully treated Colorado River Water and State Project Water that receives complete conventional treatment at MWDs Skinner and the District adds a small amount of chlorine to the water flowing out of the reservoir. The reservoir is inspected at least twice a day, and every year it is emptied and cleaned. Should a water quality problem arise due to the open reservoir, the District is prepared to take remedial and maintenance action as set forth in its operational and monitoring plan on file with the Department of Health Services. The water delivered to you by the Vallecitos Water District meets or exceeds the state and federal water quality standards. If you have any questions please contact Jon Sherwood at 744-0460, ext. 236.

The many standards for water characteristics are measured in minute quantities using precise laboratory equipment. The laboratories are strictly monitored by the Department of Health Services. The report reflects amounts measured in parts per million and parts per billion. For some perspective on these, equivalent measurements would be: 1 part per million=1 cent in \$10,000, or 1 minute in 2 years, or 1 inch in 16 miles; and 1 part per billion=1 cent in \$10,000,000, or 1 minute in 2,000 years, or 1 inch in 16,000 miles.

The District's North Twin Oaks Reservoir has a capacity of 7.1 million gallons and is used to store treated water purchased from the San Diego County Water Authority (SDCWA). The open reservoir met the health standards in effect when it was constructed in 1962. Current water works standards would require it to be covered to prevent contamination from birds, windblown materials, and vandalism. In order to minimize the potential for these problems, the reservoir is surrounded by a chain link fence to control access and has drainage collection and diversion ditches to prevent local runoff water from entering. The water, which is purchased from SDCWA, is a blend of fully treated Colorado River Water and State Project Water that receives complete conventional treatment at MWD's Skinner Filtration Plant. This water, when delivered to the North Twin Oaks Reservoir, has a chloramine (mixture of chlorine and ammonia) disinfectant residual and the District adds a small amount of chlorine to the water flowing out of the reservoir. The reservoir is inspected at least twice a day, and every year it is emptied and cleaned. Should a water quality problem arise due to the open reservoir, the District is prepared to take remedial and maintenance action as set forth in its operational and monitoring plan on file with the Department of Health Services.