

Table 1 - Marina Source Wells & Desalination Plant Monitoring

Detected Contaminants	Units	MCL	PHG (MCLG)	Year Tested	Source Well		Desalination Plant		Typical Source of Contaminant
					Nos. 9, 10, 11, 12 Average	Range	Product Water Average	Range	
PRIMARY STANDARDS — Health Related Standards									
Inorganic Chemicals:									
Arsenic	ppb	50	n/a	2002	3.8	ND - 7.0	ND	ND	Erosion of natural deposits.
Fluoride	ppm	2	1	2002	0.20	ND - 0.41	ND	ND	Erosion of natural deposits.
Nitrate (NO ₃)	ppm	45	45	2002	ND	ND - 1.81	ND	ND	Erosion of natural deposits.
Radioactivity (a)									
Gross Alpha Activity	pCi/L	15	n/a	2001	2.54	ND - 6.70	(a)	(a)	Erosion of natural deposits.
SECONDARY STANDARDS — Aesthetic Standards									
Chloride	ppm	500	n/a	2002	69.3	42.7 - 127	108	89.0 - 170	Runoff- leaching from natural deposits; seawater influence.
Specific Conductance	µmhos/cm	1600	n/a	2002	603	426 - 847	497	365 - 756	Substances that form ions when in water; seawater influence.
Sulfate	ppm	500	n/a	2002	48.1	17.4 - 74.0	8.87	7.39 - 13.6	Naturally-occurring mineral.
Total Dissolved Solids	ppm	1000	n/a	2002	340	260 - 410	244	207 - 336	Naturally occurring minerals and metals
pH	Units	6.5 - 8.5	n/a	2002	8.11	6.68 - 8.76	8.39	7.50 - 8.96	Naturally-occurring minerals.
Color	Units	15	n/a	2002	0.239	ND - 5.0	3.67	3.0 - 5.0	Naturally-occurring organic materials.
Odor Threshold	TON	3	n/a	2002	1.75	ND - 12.0	2.33	1.0 - 4.0	Naturally-occurring materials
Turbidity	NTU	5	n/a	2002	0.312	0.05 - 2.59	0.94	0.05 - 3.89	Soil run-off.
Other Contaminants — No Established Standards									
Alkalinity	ppm	n/a	n/a	2002	104	78 - 149	50.0	47 - 53	Naturally-occurring minerals.
Calcium	ppm	n/a	n/a	2002	20.4	4.4 - 38.0	22.0	21 - 23	Naturally-occurring mineral.
Magnesium	ppm	n/a	n/a	2002	4.8	ND - 16.0	4.7	4.0 - 5.3	Naturally-occurring mineral.
Sodium	ppm	n/a	n/a	2002	86.0	73.0 - 107	62.3	56 - 67	Naturally-occurring mineral.
Potassium	ppm	n/a	n/a	2002	2.6	1.80 - 3.30	2.47	2.1 - 2.7	Naturally-occurring mineral.
Hardness (b)	ppm	n/a	n/a	2002	71.8	12.0 - 161	74.3	74 - 75	Naturally-occurring mineral.
Radon 222	pCi/L	n/a	n/a	2000	701	208 - 1408	(c)	(c)	Naturally-occurring gas also found in soil, outdoor air, indoor air.
Unregulated Chemicals Monitoring Rule (UCMR) — No Established Standards									
Boron	ppb	1000 (AL)	n/a	2001	108	84.0 - 180	425	384 - 470	Erosion of natural deposits.
Total Chromium Cr VI Screen	ppb	n/a	n/a	2002	1.0	ND - 5.0	ND	ND	Erosion of natural deposits.
Hexavalent Chromium, Cr VI	ppb	n/a	n/a	2002	1.1	ND - 4.6	ND	ND	Erosion of natural deposits.
Vanadium	ppb	50 (AL)	n/a	2001	4.51	ND - 9.20	ND	ND	Erosion of natural deposits.

Footnotes:

- (a) Average Gross Alpha Activity, desalination plant seawater intake well, tested in 2001 = 2.49 pCi/L and is below the MCL. It ranges from 1.15 to 4.91 pCi/L.
- (b) Hardness, groundwater sources = 71.8 ppm = 4.2 grains/gallon;
Hardness, desalination product water = 74.3 ppm = 4.3 grains/gallon
- (c) No Data

Water quality is thoroughly monitored by the Marina Coast Water District. Water testing revealed that only a few of the more than 100 constituents tested were found. Those that were detected were well below State and Federal standards.

The following Tables list all of the drinking water contaminants that were detected during the most recent sampling for the constituent. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. The California Department of Health Services requires the District to monitor some contaminants less than once per year because the concentrations of these contaminants are not expected to change from year to year. Some of the data, though representative of the water quality, are over one year.

Table 2 - Marina Distribution System Monitoring

PRIMARY STANDARDS — Health Related Standards

Microbiological Quality	MCL	(MCLG)	Number of Positive Samples in 2002		Typical Source of Contaminant			
Total Coliform	1-positive per month	(0)	1-positive out of 263 samples tested		Naturally present in the environment.			
Lead & Copper								
Indoor Tap Water Samples	Units	AL	PHG	Year Tested	No. of Samples Collected	No. of Sites Exceeding AL	90th Percentile Detected	Typical Source of Contaminant
Copper	ppm	1.3	0.17	2001	30	0 of 30	0.15	Internal corrosion of household plumbing systems.
Disinfection By-products								
Disinfection By-products	Units	MCL	PHG (MCLG)	Year Tested	Highest Running Annual Average	Range of Detection	Typical Source of Contaminant	
Total Trihalomethanes (TTHM's)	ppb	100	n/a	2002	4.08	ND - 10.0	By-product of drinking water chlorination.	

The U.S. Environmental Protection Agency (USEPA) and the California Department of Health Services require that all water suppliers provide their customers the following information about drinking water.

Educational Information

In order to ensure that tap water is safe to drink, the USEPA and California Department of Health Services (DHS) prescribes 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 provide the same protection for public health.

The sources of drinking water (both tap and bottled) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the land or through the ground, it dissolves naturally occurring minerals. Contaminants that can be picked up in the water flow include:

- Microbial contaminants (i.e. viruses and bacteria) from sewage treatment plants, septic systems, agricultural livestock and wildlife.
- Inorganic contaminants such as salts and metals that can be naturally occurring or result from urban stormwater runoff, industrial and domestic wastewater discharges, oil and gas production, mining or farming.
- Pesticides and herbicides that may come from a variety of sources such as agriculture, urban stormwater runoff and residential uses. Organic

chemical contaminants including synthetic and volatile organic chemicals that are by-products of industrial processes and petroleum production, as well as gas stations, urban stormwater runoff, agricultural application and septic systems.

- Radioactive contaminants that are naturally occurring or result from oil and gas production or mining activities.

A Note to the Immune-compromised

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-compromised persons (i.e. those undergoing chemotherapy or organ transplants, people with HIV/AIDS or other immune system disorders, some elderly and infants) can be particularly at risk of infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the USEPA Safe Drinking Water Hotline: 1-800-426-4791.

Please refer to the definitions on the opposite side of this report to better understand these tables.

Table 3 - Contaminants NOT Detected

PRIMARY STANDARDS - Health Related Standards

Microbiological Quality in Distribution System (d) Fecal Coliform Tested in 2002 Zero positive out of 263 samples	Lead & Copper in Distribution System Lead was Not Detected in 30 Indoor Tap Water Samples Tested in 2001
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Organic Chemicals Not Detected in Marina Source Well Nos. 9, 10, 11, 12 & Desalination Plant Product Water

Volatile Organic Chemicals (VOC's) (Tested in 2002)	Synthetic Organic Chemicals (SOC's) (Tested in 2001 & 2002)
Bromodichloromethane	Alachlor
Bromoform	Atrazine (AAtrex)
Chloroform	Bentazon (Basagran)
Dibromochloromethane	Benzo(a)pyrene
Total Trihalomethanes	Carbofuran (Furadan)
Benzene	Chlordane
Carbon Tetrachloride	2,4,-D
1,2-Dichlorobenzene	Dalapon
1,4-Dichlorobenzene (p-DCB)	Dibromochloropropane (DBCP)
1,1-Dichloroethane (1,1-DCA)	Di(2-ethylhexyl)adipate
1,2-Dichloroethane (1,2-DCA)	Diethylhexylphthalate (DEHP)
1,1-Dichloroethylene (1,1-DCE)	Dinoseb
cis-1,2-Dichloroethylene	Diquat
trans-1,2-Dichloroethylene	Endothall
Dichloromethane	Endrin
1,2-Dichloropropane	Ethylene Dibromide (EDB)
1,3-Dichloropropene	Glyphosate
Ethyl Benzene	Heptachlor
Methyl-Tertiary Butyl Ether (MTBE)	Heptachlor Epoxide
Monochlorobenzene	Hexachlorobenzene
Styrene	Hexachloropentadiene
1,1,2,2-Tetrachloroethane	Lindane (gamma-BHC)
Tetrachloroethylene (PCE)	Methoxychlor
Toluene	Molinate (Ordram)
1,2,4-Trichlorobenzene	Oxamyl
1,1,1,-Trichloroethane (1,1,1-TCA)	Pentachlorophenol
1,1,2-Trichloroethane (1,1,2-TCA)	Picloram
Trichloroethylene (TCE)	Polychlorinated Biphenyls
Trichlorofluoromethane (Freon 11)	Simazine (Princep)
Trichlorofluoroethane (Freon 113)	Thiobencarb (Bolero)
Vinyl Chloride (VC)	Toxaphene
Xylenes (Total)	2,4,5-TP (Silvex)

Inorganic Chemicals Not Detected in Marina Source Well Nos. 9, 10, 11, 12 & Desalination Plant Product Water (Tested in 2002)

Aluminum	Cyanide
Antimony	Lead
Asbestos (e)	Mercury
Barium	Nickel
Beryllium	Nitrite (as Nitrogen)
Cadmium	Selenium
Chromium (Total)	Thallium

SECONDARY STANDARDS - Aesthetic Standard (Tested in 2002)

Copper	MBAS, Foaming Agents
Iron	Silver
Manganese	Zinc

Unregulated Chemicals Monitoring Rule (UCMR) Not Detected in Marina Source Well Nos. 9, 10, 11, 12 & Desalination Plant Product Water (Tested in 2001 & 2002)

Perchlorate (ClO4-)	Acetochlor
Dichlorodifluoromethane (Freon 12)	Sum of DCPA mono- and di- acid degradate
Ethyl tertiary Butyl Ether (ETBE)	4,4'-DDE
tert-Amyl - Methyl Ether (TAME)	EPTC (Ethylidipropylthiocarbamate)
tert Butyl Alcohol (TBA)	Molinate
1,2,3-trichloropropane (1,2,3-TCP)	Methyl Tertiary Butyl Ether
2, 4-Dinitrotoluene (2,4-DNT)	Nitrobenzene
2,6-Dinitrotoluene (2,6-DNT)	Terbacil

Definitions

Definitions of some terms used in this report:

Public Health Goal (PHG) = The level of a contaminant in drinking water below which there is no known or expected risk to health. PHG's are set by the California Environmental Protection Agency.

Maximum Contaminant Level Goal (MCLG) = The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's are set by the U.S. Environmental Protection Agency.

Maximum Contaminant Level (MCL) = The highest level of a contaminant that is allowed in drinking water. Primary MCL's are set as close to the PHG's (or MCLG's) as is economically and technologically feasible. Secondary MCL's are set to protect the odor, taste, and appearance of drinking water.

Regulatory Action Level (AL) = The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water supplier must follow.

Primary Drinking Water Standards (PDWS) = MCL's for contaminants that affect health along with their monitoring and reporting requirement, and water treatment requirement.

UCMR = Unregulated Chemicals Monitoring Rule

n/a = Not applicable

ND = Not detectable at testing limit

NTU = Nephelometric Turbidity Units

MFL = million fibers per liter

pCi/L = picocuries per liter (a measure of radioactivity)

ppm = parts per million, or milligrams per liter

ppb = parts per billion, or micrograms per liter

ppt = parts per trillion, or nanograms per liter

ppq = parts per quadrillion, or picograms per liter

Footnotes:

- (d) Microbiological tests were also conducted monthly for the desalination plant intake well and weekly for the product water in 2001. Total and fecal coliforms were not detected in the product water.
- (e) The desalination plant seawater intake well was tested for asbestos and was not detected in 2002.



On April 12, the District sponsored an education workshop on local water issues for teachers within the District's service area at the Olson Elementary School. Judy Maben from the Water Education Foundation was the instructor for the session.