

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	
<b>PRIMARY STANDARDS — Health Related Standards</b>									
Inorganic Chemicals:									
Arsenic	ppb	50	n/a	2003	4.0	ND - 7.0	ND	ND	Erosion of natural deposits.
Fluoride	ppm	2	1	2003	0.10	ND - 0.15	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.
<b>SECONDARY STANDARDS — Aesthetic Standards</b>									
Chloride	ppm	500	n/a	2003	67.8	50.0 - 92.0	200	200	Runoff- leaching from natural deposits; seawater influence.
Specific Conductance	µmhos/cm	1600	n/a	2003	577	491 - 641	740	740	Substances that form ions when in water; seawater influence.
Sulfate	ppm	500	n/a	2003	52.0	23.0 - 75.0	17.0	17.0	Naturally-occurring mineral.
Total Dissolved Solids	ppm	1000	n/a	2003	365	300 - 400	390	390	Naturally occurring minerals and metals
pH	Units	6.5 - 8.5	n/a	2003	8.25	8.10 - 8.50	8.00	8.00	Naturally-occurring minerals.
Color	Units	15	n/a	2003	3.50	3.00 - 5.00	3.00	3.00	Naturally-occurring organic materials.
Odor Threshold	TON	3	n/a	2003	1.25	1.00 - 2.00	4.00	4.00	Naturally-occurring materials
Turbidity	NTU	5	n/a	2003	0.19	0.10 - 0.25	0.60	0.60	Soil run-off.
<b>Other Contaminants — No Established Standards</b>									
Alkalinity	ppm	n/a	n/a	2003	132	114 - 148	62.0	62.0	Naturally-occurring minerals.
Calcium	ppm	n/a	n/a	2003	25.0	15.0 - 37.0	28.0	28.0	Naturally-occurring mineral.
Magnesium	ppm	n/a	n/a	2003	8.00	ND - 17.0	9.20	9.20	Naturally-occurring mineral.
Potassium	ppm	n/a	n/a	2003	3.03	2.20 - 4.00	4.50	4.50	Naturally-occurring mineral.
Sodium	ppm	n/a	n/a	2003	93.5	71.0 - 130	110	110	Naturally-occurring mineral.
Hardness (b)	ppm	n/a	n/a	2003	95.8	40.0 - 162	108	108	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.
<b>Unregulated Chemicals Monitoring Rule (UCMR) — No Established Standards</b>									
Boron	ppb	1000 (AL)	n/a	2003/2001	148	100 - 210	425	384 - 470	Erosion of natural deposits.
Chromium, total Cr									
- Cr VI Screen	ppb	n/a	n/a	2003/2002	1.0	ND - 4.0	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	20032001	5.0	ND - 8.10	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 = 95.8 ppm = 5.6 grains/gallon;  
Hardness, desalination product water = 108 ppm = 6.3 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 2003			Typical Source of Contaminant	
Total Coliform		1-positive per month		(0)	1-positive sample in October Total Samples Tested = 263			Naturally present in the environment.	
Lead & Copper Indoor Tap Water Samples			Year Tested		No. of Samples Collected	No. of Sites Exceeding AL	90th Percentile Detected		
	Units	AL	PHG					Typical Source of Contaminant	
	Copper	ppm	1.3	0.17	2001	30	0 of 30	0.15	Internal corrosion of household plumbing systems.
	Disinfectant/Disinfection By-products	Units	MCL [MRDL]	PHG (MCLG) [MRDLG]	Year Tested	Highest Running Annual Average	Range of Detection	Typical Source of Contaminant	
	Total Trihalomethanes (TTHM's)	ppb	80	n/a	2003	4.29	ND - 4.80	By-product of drinking water chlorination.	
Haloacetic Acids (HAA5)		ppb	60	n/a	2003	0.25	ND - 2.00	By-product of drinking water chlorination.	
Chlorine Residual Running Annual Average (MRDL as Cl <sub>2</sub> )		ppm	[4.0]	[4]	2003	0.63	0.01 - 1.57	Drinking water disinfectant added for treatment.	

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 California Department of Health Services prescribes regulations, which limit the amount of certain contaminants in water provided by public water systems. Marina’s water is treated according to Department of Health Services regulations, which establish limits for contaminants in bottled water (the same protection for public health).

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. Water traveling over the land surface or through the ground dissolves naturally occurring minerals and, in some cases, radioactive material. It can also pick-up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- Inorganic contaminants such as salts and metals, that can be naturally-occurring or result from urban stormwater runoff, industrial or 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 (also gas stations), urban stormwater runoff, agricultural application and septic systems.

(continued under Table 3)

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		
<b>Microbiological Quality in Distribution System</b> (d) Fecal Coliform was Not Detected in all of 263 samples Tested in 2003.	<b>Lead in Indoor Tapwater Samples</b> Lead was Not Detected in 30 Indoor Tap Water Samples Tested in 2001	
	<b>Organic Chemicals Not Detected in Marina Source Well Nos. 9, 10, 11, 12 &amp; Desalination Plant Product Water</b>	
<b>Volatile Organic Chemicals (VOC's)</b> (Tested in 2003)		<b>Synthetic Organic Chemicals (SOC's)</b> (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)
<b>Inorganic Chemicals Not Detected in Marina Source Well Nos. 9, 10, 11, 12 &amp; Desalination Plant Product Water</b> (Tested in 2003)		
Aluminum		Cyanide
Antimony		Lead
Asbestos (e)		Mercury
Barium		Nickel
Beryllium		Nitrite (as Nitrogen) and Nitrate (as NO <sub>3</sub> )
Cadmium		Selenium
Chromium (Total)		Thallium
<b>SECONDARY STANDARDS - Aesthetic Standard</b> (Tested in 2003)		
Copper		MBAS, Foaming Agents
Iron		Silver
Manganese		Zinc
<b>Unregulated Chemicals Monitoring Rule (UCMR) Not Detected in Marina Source Well Nos. 9, 10, 11, 12 &amp; Desalination Plant Product Water</b> (Tested in 2001 & 2002)		
Perchlorate (ClO <sub>4</sub> )		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 (Ethyl dipropylthiocarbamate)
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

Footnotes:

- (d) Microbiological tests were also conducted monthly for the desalination plant intake well and weekly for the product water in 2003. 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.

EDUCATIONAL INFORMATION  
(continued from under Table 2)

- Radioactive contaminants, that can be naturally occurring or be the result of oil and gas production and mining activities.

A Note to the Immuno-compromised

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly and infants can be particularly at risk from 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.



Water Quality Chemist Thomas Burkhnst monitors water quality.

Definitions

<b>Definitions of some terms used in this report:</b>	
<b>Public Health Goal (PHG)</b> = 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.	
<b>Maximum Contaminant Level Goal (MCLG)</b> = 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.	
<b>Maximum Contaminant Level (MCL)</b> = 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.	
<b>Regulatory Action Level (AL)</b> = The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water supplier must follow.	
<b>Maximum Residual Disinfectant Level (MRDL)</b> = The level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap.	
<b>Primary Drinking Water Standards (PDWS)</b> = MCL's for contaminants that affect health along with their monitoring and reporting requirement, and water treatment requirement.	
<b>UCMR</b> = Unregulated Chemicals Monitoring Rule	
<b>n/a</b> = Not applicable	
<b>ND</b> = Not detectable at testing limit	
<b>NTU</b> = Nephelometric Turbidity Units	
<b>MFL</b> = million fibers per liter	
<b>pCi/L</b> = picocuries per liter (a measure of radioactivity)	
<b>ppm</b> = parts per million, or milligrams per liter	
<b>ppb</b> = parts per billion, or micrograms per liter	