FOOTHILL MUNICIPAL WATER DIST.

2011 Water Quality Report to MWD Member Agencies--The Metropolitan Water District of Southern California

Parameter	Units	State or Federal MCL [MRDL]	PHG (MCLG) [MRDLG]	State DLR	Range Average	Treatment Plant Effluent: Wey-mouth Plant	Diemer Plant	Jensen Plant	Skinner Plant	Mills Plant	Major Sources in Drinking Water
Percent State					Range	24 - 100	0 - 100	100	30 - 83	100	
Project Water	%	NA	NA	NA	**Average**	55	42	100	56	100	
PRIMARY STANDARDS--Mandatory Health-Related Standards											
CLARITY											
Combined Filter	NTU	0.3			Highest	0.07	0.08	0.05	0.09	0.13	
Effluent Turbidity	%	95 (a)	NA	NA	% < 0.3	100	100	100	100	100	**Soil runoff**
MICROBIOLOGICAL											
Total Coliform					Range	Distribution System-wide:			ND - 0.1		
Bacteria (b)	%	5.0	(0)	NA	**Average**	**Distribution System-wide:**			**ND**		**Naturally present in the environment**
E. coli	(c)	(c)	(0)	NA		**Distribution System-wide:**			**ND**		**Human and animal fecal waste**
Heterotrophic Plate Count					Range	Distribution System-wide:			TT		
(HPC) (d)	CFU/mL	TT	NA	NA	**Average**	**Distribution System-wide:**			**TT**		**Naturally present in the environment**
	Oocysts/				Range	ND	ND	ND	ND	ND	
Cryptosporidium	200 L	TT	(0)	NA	**Average**	**ND**	**ND**	**ND**	**ND**	**ND**	**Human and animal fecal waste**
	Cysts/				Range	ND	ND	ND	ND	ND	
Giardia	200 L	TT	(0)	NA	**Average**	**ND**	**ND**	**ND**	**ND**	**ND**	**Human and animal fecal waste**
ORGANIC CHEMICALS											
***Pesticides/PCBs* (e)**											
					Range	ND	ND	ND	ND	ND	
Alachlor	ppb	2	4	1	**Average**	**ND**	**ND**	**ND**	**ND**	**ND**	**Runoff from herbicide used on row crops**
					Range	ND	ND	ND	ND	ND	Runoff from herbicide used on row crops
Atrazine	ppb	1	0.15	0.5	**Average**	**ND**	**ND**	**ND**	**ND**	**ND**	**and along highways**
					Range	ND	ND	ND	ND	ND	Runoff/leaching from herbicide used on rice,
Bentazon	ppb	18	200	2	**Average**	**ND**	**ND**	**ND**	**ND**	**ND**	**alfalfa, and grapes**
					Range	ND	ND	ND	ND	ND	Leaching of soil fumigant used on rice, alfalfa,
Carbofuran	ppb	18	1.7	5	**Average**	**ND**	**ND**	**ND**	**ND**	**ND**	**and grapes**
					Range	ND	ND	ND	ND	ND	
Chlordane	ppt	100	30	100	**Average**	**ND**	**ND**	**ND**	**ND**	**ND**	**Residue of banned insecticide**
					Range	ND	ND	ND	ND	ND	Runoff from herbicide used on row crops,
2,4-D	ppb	70	20	10	**Average**	**ND**	**ND**	**ND**	**ND**	**ND**	**range land, lawns**
					Range	ND	ND	ND	ND	ND	Runoff from herbicide used on rights-of-way,
Dalapon	ppb	200	790	10	**Average**	**ND**	**ND**	**ND**	**ND**	**ND**	**crops, and landscapes**
Dibromochloropropane					Range	ND	ND	ND	ND	ND	Banned nematocide that may still be present
(DBCP)	ppt	200	1.7	10	**Average**	**ND**	**ND**	**ND**	**ND**	**ND**	**in soils**
					Range	ND	ND	ND	ND	ND	Runoff from herbicide used on soybeans,
Dinoseb	ppb	7	14	2	**Average**	**ND**	**ND**	**ND**	**ND**	**ND**	**vegetables, and fruits**
					Range	ND	ND	ND	ND	ND	Runoff from herbicide used for terrestrial
Diquat	ppb	20	15	4	**Average**	**ND**	**ND**	**ND**	**ND**	**ND**	**and aquatic weeds**
					Range	ND	ND	ND	ND	ND	Runoff from herbicide used for terrestrial
Endothall	ppb	100	580	45	**Average**	**ND**	**ND**	**ND**	**ND**	**ND**	**and aquatic weeds**
					Range	ND	ND	ND	ND	ND	
Endrin	ppb	2	1.8	0.1	**Average**	**ND**	**ND**	**ND**	**ND**	**ND**	**Residue of banned insecticide and rodenticide**
Ethylene Dibromide					Range	ND	ND	ND	ND	ND	Petroleum refinery discharges; underground
(EDB)	ppt	50	10	20	**Average**	**ND**	**ND**	**ND**	**ND**	**ND**	**gas tank leaks**
					Range	ND	ND	ND	ND	ND	
Glyphosate	ppb	700	900	25	**Average**	**ND**	**ND**	**ND**	**ND**	**ND**	**Runoff from herbicide use**
					Range	ND	ND	ND	ND	ND	
Heptachlor	ppt	10	8	10	**Average**	**ND**	**ND**	**ND**	**ND**	**ND**	**Residue of banned insecticide**
					Range	ND	ND	ND	ND	ND	
Heptachlor Epoxide	ppt	10	6	10	**Average**	**ND**	**ND**	**ND**	**ND**	**ND**	**Breakdown product of heptachlor**
					Range	ND	ND	ND	ND	ND	Runoff/leaching from insecticide used on cattle,
Lindane	ppt	200	32	200	**Average**	**ND**	**ND**	**ND**	**ND**	**ND**	**lumber, and gardens**
					Range	ND	ND	ND	ND	ND	
Methoxychlor	ppb	30	0.09	10	**Average**	**ND**	**ND**	**ND**	**ND**	**ND**	**Runoff/leaching from insecticide uses**
					Range	ND	ND	ND	ND	ND	
Molinate (Ordram)	ppb	20	1	2	**Average**	**ND**	**ND**	**ND**	**ND**	**ND**	**Runoff/leaching from herbicide used on rice**
					Range	ND	ND	ND	ND	ND	

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Oxamyl (Vydate)	ppb	50	26	20	Average	ND	ND	ND	ND	ND	Runoff/leaching from insecticide uses
					Range	ND	ND	ND	ND	ND	Discharge from wood preserving factories
Pentachlorophenol	ppb	1	0.3	0.2	Average	ND	ND	ND	ND	ND	other insecticidal and herbicidal uses
					Range	ND	ND	ND	ND	ND	
Picloram	ppb	500	500	1	Average	ND	ND	ND	ND	ND	Herbicide runoff

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Polychlorinated Biphenyls (PCBs)	ppt	500	90	500	Range	ND	ND	ND	ND	ND	Runoff from landfills; discharge of waste chemicals
					Average	ND	ND	ND	ND	ND	
Simazine	ppb	4	4	1	Range	ND	ND	ND	ND	ND	Herbicide runoff
					Average	ND	ND	ND	ND	ND	
Thiobencarb (f)	ppb	70	70	1	Range	ND	ND	ND	ND	ND	Runoff leaching from rice herbicide
					Average	ND	ND	ND	ND	ND	
2,4,5-TP (Silvex)	ppb	50	25	1	Range	ND	ND	ND	ND	ND	Residue of banned herbicide
					Average	ND	ND	ND	ND	ND	
Toxaphene	ppb	3	0.03	1	Range	ND	ND	ND	ND	ND	Runoff/leaching from insecticide used on cotton and cattle
					Average	ND	ND	ND	ND	ND	
***Semi-Volatile Organic Compounds* (e)**											
Acrylamide	NA	TT	(0)	NA	Range	TT	TT	TT	TT	TT	Water treatment chemical impurities
					Average	TT	TT	TT	TT	TT	
Benzo(a)pyrene	ppt	200	7	100	Range	ND	ND	ND	ND	ND	Leaching from water storage tank linings and distribution lines
					Average	ND	ND	ND	ND	ND	
Di(2-ethylhexyl)adipate	ppb	400	200	5	Range	ND	ND	ND	ND	ND	Discharge from chemical factories
					Average	ND	ND	ND	ND	ND	
Di(2-ethylhexyl)phthalate	ppb	4	12	3	Range	ND	ND	ND	ND	ND	Chemical factory discharge; inert ingredient in pesticides
					Average	ND	ND	ND	ND	ND	
Epichlorohydrin	NA	TT	(0)	NA	Range	TT	TT	TT	TT	TT	Water treatment chemical impurities
					Average	TT	TT	TT	TT	TT	
Hexachlorobenzene	ppb	1	0.03	0.5	Range	ND	ND	ND	ND	ND	Discharge from metal refineries & agrichemicals factories; wastewater chlorination reaction by-product
					Average	ND	ND	ND	ND	ND	
Hexachlorocyclopentadiene	ppb	50	50	1	Range	ND	ND	ND	ND	ND	Discharge from chemical factories
					Average	ND	ND	ND	ND	ND	
2,3,7,8-TCDD (Dioxin)	ppq	30	0.05	5	Range	ND	ND	ND	ND	ND	Waste incineration emissions; chemical factory discharge
					Average	ND	ND	ND	ND	ND	
Volatile Organic Compounds											
Benzene	ppb	1	0.15	0.5	Range	ND	ND	ND	ND	ND	Plastics factory discharge; gas tanks and landfill leaching
					Average	ND	ND	ND	ND	ND	
Carbon Tetrachloride	ppt	500	100	500	Range	ND	ND	ND	ND	ND	Discharge from chemical plants and other industrial waste
					Average	ND	ND	ND	ND	ND	
1,2-Dichlorobenzene	ppb	600	600	0.5	Range	ND	ND	ND	ND	ND	Discharge from industrial chemical factories
					Average	ND	ND	ND	ND	ND	
1,4-Dichlorobenzene	ppb	5	6	0.5	Range	ND	ND	ND	ND	ND	Discharge from industrial chemical factories
					Average	ND	ND	ND	ND	ND	
1,1-Dichloroethane	ppb	5	3	0.5	Range	ND	ND	ND	ND	ND	Extraction and degreasing solvent; fumigant
					Average	ND	ND	ND	ND	ND	
1,2-Dichloroethane	ppt	500	400	500	Range	ND	ND	ND	ND	ND	Discharge from industrial chemical factories
					Average	ND	ND	ND	ND	ND	
1,1-Dichloroethylene	ppb	6	10	0.5	Range	ND	ND	ND	ND	ND	Discharge from industrial chemical factories
					Average	ND	ND	ND	ND	ND	
cis-1,2-Dichloroethylene	ppb	6	100	0.5	Range	ND	ND	ND	ND	ND	Industrial chemical factory discharge; by-product of TCE and PCE biodegradation
					Average	ND	ND	ND	ND	ND	
trans-1,2-Dichloroethylene	ppb	10	60	0.5	Range	ND	ND	ND	ND	ND	Industrial chemical factory discharge; by-product of TCE and PCE biodegradation
					Average	ND	ND	ND	ND	ND	
Dichloromethane (Methylene Chloride)	ppb	5	4	0.5	Range	ND	ND	ND	ND	ND	Discharge from pharmaceutical and chemical factories
					Average	ND	ND	ND	ND	ND	
1,2-Dichloropropane	ppb	5	0.5	0.5	Range	ND	ND	ND	ND	ND	Industrial chemical factory discharge; primary component of some fumigants
					Average	ND	ND	ND	ND	ND	
1,3-Dichloropropene	ppt	500	200	500	Range	ND	ND	ND	ND	ND	Runoff/leaching from nematocide used on croplands
					Average	ND	ND	ND	ND	ND	
Ethylbenzene	ppb	300	300	0.5	Range	ND	ND	ND	ND	ND	Petroleum refinery discharge; industrial chemical factories
					Average	ND	ND	ND	ND	ND	
Methyl-*tert*-butyl ether (MTBE) (f,g)	ppb	13	13	3	Range	ND	ND	ND	ND	ND	Gasoline discharge from watercraft engines
					Average	ND	ND	ND	ND	ND	
Monochlorobenzene	ppb	70	200	0.5	Range	ND	ND	ND	ND	ND	Discharge from industrial, agricultural, and chemical factories, and dry cleaners
					Average	ND	ND	ND	ND	ND	

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					Range	ND	ND	ND	ND	ND	Rubber and plastics factories discharge;
Styrene	ppb	100	0.5	0.5	Average	ND	ND	ND	ND	ND	landfill leaching
					Range	ND	ND	ND	ND	ND	Discharge from industrial, agricultural, and chemical
1,1,2,2-Tetrachloroethane	ppb	1	0.1	0.5	Average	ND	ND	ND	ND	ND	factories; solvent uses
Tetrachloroethylene					Range	ND	ND	ND	ND	ND	Discharge from factories, dry cleaners,
(PCE)	ppb	5	0.06	0.5	Average	ND	ND	ND	ND	ND	and auto shops

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					Range	ND	ND	ND	ND	ND	
Toluene	ppb	150	150	0.5	Average	ND	ND	ND	ND	ND	Discharge from petroleum and chemical refineries
					Range	ND	ND	ND	ND	ND	
1,2,4-Trichlorobenzene	ppb	5	5	0.5	Average	ND	ND	ND	ND	ND	Discharge from textile-finishing factories
					Range	ND	ND	ND	ND	ND	Metal degreasing site discharge; manufacture
1,1,1-Trichloroethane	ppb	200	1,000	0.5	Average	ND	ND	ND	ND	ND	of food wrappings
					Range	ND	ND	ND	ND	ND	
1,1,2-Trichloroethane	ppb	5	0.3	0.5	Average	ND	ND	ND	ND	ND	Discharge from industrial chemical factories
Trichloroethylene					Range	ND	ND	ND	ND	ND	Discharge from metal degreasing sites and
(TCE)	ppb	5	1.7	0.5	Average	ND	ND	ND	ND	ND	other factories
Trichlorofluoromethane					Range	ND	ND	ND	ND	ND	Industrial factory discharge; degreasing solvent;
(Freon-11)	ppb	150	700	5	Average	ND	ND	ND	ND	ND	propellant
1,1,2-Trichloro-1,2,2-					Range	ND	ND	ND	ND	ND	Discharge from metal degreasing sites and other
trifluoroethane (Freon-113)	ppm	1.2	4	0.01	Average	ND	ND	ND	ND	ND	factories; dry cleaning solvent; refrigerant
					Range	ND	ND	ND	ND	ND	Leaching from PVC piping; plastic factory
Vinyl Chloride	ppl	500	50	500	Average	ND	ND	ND	ND	ND	discharge; by-product of TCE and PCE biodegradation
					Range	ND	ND	ND	ND	ND	Discharge from petroleum and chemical refineries;
Xylenes	ppm	1.750	1.8	0.0005	Average	ND	ND	ND	ND	ND	fuel solvent
INORGANIC CHEMICALS											
					Range	ND - 220	ND - 240	61 - 99	ND	ND - 100	Residue from water treatment process;
Aluminum (f)	ppb	1,000	600	50	Highest RAA	110	140	86	ND	84	natural deposits erosion
					Range	ND	ND	ND	ND	ND	Petroleum refinery discharges; fire retardants;
Antimony	ppb	6	20	6	Average	ND	ND	ND	ND	ND	solder; electronics
					Range	ND	ND	2.3	ND	ND	Natural deposits erosion, glass and electronics
Arsenic	ppb	10	0.004	2	Average	ND	ND	2.3	ND	ND	production wastes
					Range	ND	ND	ND	ND	ND	Asbestos cement pipes internal corrosion;
Asbestos	MFL	7	7	0.2	Average	ND	ND	ND	ND	ND	natural deposits erosion
					Range	ND	ND	ND	ND	ND	Oil and metal refineries discharge;
Barium	ppb	1,000	2,000	100	Average	ND	ND	ND	ND	ND	natural deposits erosion
					Range	ND	ND	ND	ND	ND	Discharge from metal refineries, aerospace,
Beryllium	ppb	4	1	1	Average	ND	ND	ND	ND	ND	and defense industries
					Range	ND	ND	ND	ND	ND	Internal corrosion of galvanized pipes;
Cadmium	ppb	5	0.04	1	Average	ND	ND	ND	ND	ND	natural deposits erosion
					Range	ND	ND	ND	ND	ND	Discharge from steel and pulp mills;
Chromium	ppb	50	(100)	10	Average	ND	ND	ND	ND	ND	natural deposits erosion
					Range	ND	ND	ND	ND	ND	Internal corrosion of household pipes;
Copper (f,h)	ppm	AL = 1.3	0.3	0.05	Average	ND	ND	ND	ND	ND	natural deposits erosion
					Range	ND	ND	ND	ND	ND	Discharge from steel/metal, plastic, and
Cyanide	ppb	150	150	100	Average	ND	ND	ND	ND	ND	fertilizer factories
					Control Range	0.7 - 1.3	0.7 - 1.3	0.7 - 1.3	0.7 - 1.3	0.6 - 1.2	
					Optimal Fluoride Level	0.8	0.8	0.8	0.8	0.7	
Fluoride (l)					Range	0.7 - 1.0	0.5 - 1.0	0.7 - 0.9	0.7 - 0.9	0.2 - 0.8	Water additive for dental health
Treatment-related	ppm	2.0	1	0.1	Average	0.8	0.8	0.8	0.8	0.7	
					Range	Distribution System-wide:			0.2 - 1.0		
					Range	ND	ND	ND	ND	ND	House pipes internal corrosion;
Lead (h)	ppb	AL = 15	0.2	5	Average	ND	ND	ND	ND	ND	erosion of natural deposits
					Range	ND	ND	ND	ND	ND	Erosion of natural deposits; factory discharge;
Mercury	ppb	2	1.2	1	Average	ND	ND	ND	ND	ND	landfill runoff
					Range	ND	ND	ND	ND	ND	Erosion of natural deposits; discharge from
Nickel	ppb	100	12	10	Average	ND	ND	ND	ND	ND	metal factories
					Range	ND - 0.4	ND - 0.4	0.4 - 0.5	ND	ND - 0.7	Runoff and leaching from fertilizer use; septic tank
Nitrate (as N) (j)	ppm	10	10	0.4	Average	ND	ND	0.4	ND	0.5	and sewage; natural deposits erosion
					Range	ND	ND	ND	ND	ND	Runoff and leaching from fertilizer use, septic tank
Nitrite (as N)	ppm	1	1	0.4	Average	ND	ND	ND	ND	ND	and sewage; natural deposits erosion
					Range	ND	ND	ND	ND	ND	
Perchlorate (k)	ppb	6	6	4	Average	ND	ND	ND	ND	ND	Industrial waste discharge
					Range	ND	ND	ND	ND	ND	Refineries, mines, and chemical
Selenium	ppb	50	30	5	Average	ND	ND	ND	ND	ND	waste discharge; runoff from livestock lots
					Range	ND	ND	ND	ND	ND	Leaching from ore processing; electronics

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Thallium	ppb	2	0.1	1	Average	ND	ND	ND	ND	ND	factory discharge
RADIOLOGICALS (I)											
Gross Alpha					Range	ND - 3	ND - 3	ND	ND - 3	ND	
Particle Activity	pCi/L	15	(0)	3	Average	ND	3	ND	ND	ND	Erosion of natural deposits
Gross Beta					Range	ND - 6	ND - 4	ND - 4	ND - 5	ND	
Particle Activity (m)	pCi/L	50	(0)	4	Average	4	ND	ND	ND	ND	Decay of natural and man-made deposits

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Radium-226	pCi/L	NA	0.05	1	Range	ND	ND	ND	ND	ND	Erosion of natural deposits
					Average	ND	ND	ND	ND	ND	
Radium-228	pCi/L	NA	0.019	1	Range	ND	ND	ND	ND	ND	Erosion of natural deposits
					Average	ND	ND	ND	ND	ND	
Combined Radium-226 + 228 (n)	pCi/L	5	(0)	NA	Range	ND	ND	ND	ND	ND	Erosion of natural deposits
					Average	ND	ND	ND	ND	ND	
Strontium-90	pCi/L	8	0.35	2	Range	ND	ND	ND	ND	ND	Decay of natural and man-made deposits
					Average	ND	ND	ND	ND	ND	
Tritium	pCi/L	20,000	400	1,000	Range	ND	ND	ND	ND	ND	Decay of natural and man-made deposits
					Average	ND	ND	ND	ND	ND	
Uranium	pCi/L	20	0.43	1	Range	1 - 2	2	ND - 2	ND - 2	ND - 1	Erosion of natural deposits
					Average	2	2	1	1	1	
DISINFECTION BY-PRODUCTS, DISINFECTANT RESIDUALS, AND DISINFECTION BY-PRODUCTS PRECURSORS (o)											
Total Trihalomethanes (TTHM) (p)	ppb	80	NA	1	Range	48 - 68	37 - 55	23 - 47	11 - 35	9.3 - 30	By-product of drinking water chlorination
					Average	57	48	28	22	19	
Total Trihalomethanes (TTHM) (p)	ppb	80	NA	1	Range	Distribution System-wide:			8.5 - 77		By-product of drinking water chlorination
					Highest RAA	Distribution System-wide:			43		
Haloacetic Acids (five) (HAA5) (q)	ppb	60	NA	1	Range	17 - 33	15 - 25	1.8 - 3.4	1.0 - 11	1.4 - 6.2	By-product of drinking water chlorination
					Average	26	20	2.4	5.9	4.5	
Haloacetic Acids (five) (HAA5) (q)	ppb	60	NA	1	Range	Distribution System-wide:			ND - 54		By-product of drinking water chlorination
					Highest RAA	Distribution System-wide:			18		
Total Chlorine Residual	ppm	[4.0]	[4.0]	NA	Range	Distribution System-wide:			1.3 - 2.8		Drinking water disinfectant added for treatment
					Highest RAA	Distribution System-wide:			2.3		
Bromate (r)	ppb	10	0.1	5.0	Range	NA	NA	ND - 8.8	ND - 12	ND - 7.6	By-product of drinking water ozonation
					Highest RAA	NA	NA	5.9	5.2	4.5	
DBP Precursors Control (TOC)	ppm	TT	NA	0.30	Range	TT	TT	TT	TT	TT	Various natural and man-made sources
					Average	TT	TT	TT	TT	TT	
SECONDARY STANDARDS--Aesthetic Standards											
Aluminum (f)	ppb	200	600	50	Range	ND - 220	ND - 240	61 - 99	ND	ND - 100	Residue from water treatment process; natural deposits erosion
					Highest RAA	110	140	86	ND	84	
Chloride	ppm	500	NA	NA	Range	63 - 76	70 - 75	59 - 69	62 - 83	27 - 38	Runoff/leaching from natural deposits; seawater influence
					Average	70	72	64	72	32	
Color	Units	15	NA	NA	Range	1 - 2	1	1	1	1	Naturally-occurring organic materials
					Average	2	1	1	1	1	
Copper (f,h)	ppm	1.0	0.3	0.05	Range	ND	ND	ND	ND	ND	Internal corrosion of household pipes; natural deposits erosion; wood preservatives leaching
					Average	ND	ND	ND	ND	ND	
Foaming Agents (MBAS)	ppb	500	NA	NA	Range	ND	ND	ND	ND	ND	Municipal and industrial waste discharges
					Average	ND	ND	ND	ND	ND	
Iron	ppb	300	NA	100	Range	ND	ND	ND	ND	ND	Leaching from natural deposits; industrial wastes
					Average	ND	ND	ND	ND	ND	
Manganese	ppb	50	NL = 500	20	Range	ND	ND	ND	ND	ND	Leaching from natural deposits
					Average	ND	ND	ND	ND	ND	
MTBE (f,g)	ppb	5	13	3	Range	ND	ND	ND	ND	ND	Gasoline discharge from watercraft engines
					Average	ND	ND	ND	ND	ND	
Odor Threshold (s)	TON	3	NA	1	Range	2	2	2	3 - 24	3	Naturally-occurring organic materials
					Average	2	2	2	9	3	
Silver	ppb	100	NA	10	Range	ND	ND	ND	ND	ND	Industrial discharges
					Average	ND	ND	ND	ND	ND	
Specific Conductance	µS/cm	1,600	NA	NA	Range	320 - 870	320 - 960	420 - 530	390 - 840	230 - 480	Substances that form ions in water; seawater influence
					Average	630	690	500	630	300	
Sulfate	ppm	500	NA	0.5	Range	120 - 170	150 - 170	54 - 58	78 - 150	22 - 42	Runoff/leaching from natural deposits; industrial wastes
					Average	150	160	56	110	32	
Thiobencarb (f)	ppb	1	70	1	Range	ND	ND	ND	ND	ND	Runoff/leaching from rice herbicide
					Average	ND	ND	ND	ND	ND	
Total Dissolved Solids (TDS)	ppm	1,000	NA	NA	Range	390 - 480	440 - 490	280 - 290	300 - 460	150 - 190	Runoff/leaching from natural deposits; seawater influence
					Average	440	470	280	380	170	
Turbidity (a)	NTU	5	NA	NA	Range	0.02 - 0.07	0.03 - 0.25	0.03 - 0.09	0.04 - 0.08	0.04 - 0.07	Soil runoff
					Average	0.05	0.05	0.03	0.05	0.05	

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					Range	ND	ND	ND	ND	ND	Runoff/leaching from natural deposits;
Zinc	ppm	5.0	NA	0.05	Average	ND	ND	ND	ND	ND	industrial wastes
FEDERAL UNREGULATED CONTAMINANTS MONITORING RULE (UCMR2)(1)											
List 1 - Assessment Monitoring											
					Range	ND	ND	ND	ND	ND	Runoff from insecticide used on crops
Dimethoate	ppb	NA	NA	0.7	Average	ND	ND	ND	ND	ND	and residential uses

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					Range	ND	ND	ND	ND	ND	Runoff/leaching from breakdown product of terbufos
Terbufos sulfone	ppb	NA	NA	0.4	Average	ND	ND	ND	ND	ND	used as soil fumigant and nematocide
					Range	ND	ND	ND	ND	ND	Discharge from industrial chemical factories;
2,2',4,4'-tetrabromodiphenyl ether	ppb	NA	NA	0.3	Average	ND	ND	ND	ND	ND	use of flame retardant additives
					Range	ND	ND	ND	ND	ND	Discharge from industrial chemical factories;
2,2',4,4',5-pentabromodiphenyl ether	ppb	NA	NA	0.9	Average	ND	ND	ND	ND	ND	use of flame retardant additives
					Range	ND	ND	ND	ND	ND	Discharge from industrial chemical factories;
2,2',4,4',5,5'-hexabromodiphenyl ether	ppb	NA	NA	0.8	Average	ND	ND	ND	ND	ND	use of flame retardant additives
					Range	ND	ND	ND	ND	ND	Discharge from industrial chemical factories;
2,2',4,4,6'-pentabromodiphenyl ether	ppb	NA	NA	0.5	Average	ND	ND	ND	ND	ND	use of flame retardant additives
					Range	ND	ND	ND	ND	ND	Discharge from industrial chemical factories;
2,2',4,4',5,5'-hexabromobiphenyl	ppb	NA	NA	0.7	Average	ND	ND	ND	ND	ND	use of flame retardant additives
2,4,6-trinitrotoluene					Range	ND	ND	ND	ND	ND	Runoff/residue from explosives, dyes, and chemical
(TNT)	ppb	NA	NA	0.8	Average	ND	ND	ND	ND	ND	manufacturing and applications
					Range	ND	ND	ND	ND	ND	Runoff/residue from explosives, dyes, and chemical
1,3-dinitrobenzene	ppb	NA	NA	0.8	Average	ND	ND	ND	ND	ND	manufacturing and applications; TNT by-product
Hexahydro-1,3,5-trinitro-1,3,5-triazine					Range	ND	ND	ND	ND	ND	Runoff/residue from explosives industrial applications;
(RDX)	ppb	NA	NA	1	Average	ND	ND	ND	ND	ND	also used as a rodenticide
List 2 - Screening Survey											
					Range	ND	ND	ND	ND	ND	
Acetochlor	ppb	NA	NA	2	Average	ND	ND	ND	ND	ND	Herbicide runoff
					Range	ND	ND	ND	ND	ND	
Alachlor	ppb	NA	NA	2	Average	ND	ND	ND	ND	ND	Herbicide runoff
					Range	ND	ND	ND	ND	ND	
Metolachlor	ppb	NA	NA	1	Average	ND	ND	ND	ND	ND	Herbicide runoff
Acetochlor					Range	ND	ND	ND	ND	ND	
ethane sulfonic acid	ppb	NA	NA	1	Average	ND	ND	ND	ND	ND	Breakdown product of acetochlor
Acetochlor					Range	ND	ND	ND	ND	ND	
oxanilic acid	ppb	NA	NA	2	Average	ND	ND	ND	ND	ND	Breakdown product of acetochlor
Alachlor					Range	ND	ND	ND	ND	ND	
ethane sulfonic acid	ppb	NA	NA	1	Average	ND	ND	ND	ND	ND	Breakdown product of alachlor
Alachlor					Range	ND	ND	ND	ND	ND	
oxanilic acid	ppb	NA	NA	2	Average	ND	ND	ND	ND	ND	Breakdown product of alachlor
Metolachlor					Range	ND	ND	ND	ND	ND	
ethane sulfonic acid	ppb	NA	NA	1	Average	ND	ND	ND	ND	ND	Breakdown product of metolachlor
Metolachlor					Range	ND	ND	ND	ND	ND	
oxanilic acid	ppb	NA	NA	2	Average	ND	ND	ND	ND	ND	Breakdown product of metolachlor
N-Nitrosodiethylamine					Range	ND	ND	ND	ND	ND	By-product of drinking water chloramination;
(NDEA)	ppb	NA	NA	0.005	Average	ND	ND	ND	ND	ND	industrial processes
N-Nitrosodimethylamine					Range	ND - 0.003	ND	ND - 0.005	ND - 0.004	ND - 0.01	By-product of drinking water chloramination;
(NDMA)	ppb	NA	NA	0.002	Average	ND	ND	0.003	ND	0.004	industrial processes
N-Nitroso-di-n-butylamine					Range	ND	ND	ND	ND	ND	By-product of drinking water chloramination;
(NDBA)	ppb	NA	NA	0.004	Average	ND	ND	ND	ND	ND	industrial processes
N-Nitroso-di-n-propylamine					Range	ND	ND	ND	ND	ND	By-product of drinking water chloramination;
(NDPA)	ppb	NA	NA	0.007	Average	ND	ND	ND	ND	ND	industrial processes
N-Nitrosomethylethylamine					Range	ND	ND	ND	ND	ND	By-product of drinking water chloramination;
(NMEA)	ppb	NA	NA	0.003	Average	ND	ND	ND	ND	ND	industrial processes
N-Nitrosopyrrolidine					Range	ND	ND	ND	ND	ND	By-product of drinking water chloramination;
(NPYR)	ppb	NA	NA	0.002	Average	ND	ND	ND	ND	ND	industrial processes
OTHER PARAMETERS											
MICROBIOLOGICAL											
					Range	ND - 1	ND - 1	ND - 1	ND - 1	ND	
HPC (d)	CFU/mL	TT	NA	NA	Median	ND	ND	ND	ND	ND	Naturally present in the environment
CHEMICAL											
					Range	43 - 110	48 - 120	76 - 93	71 - 110	24 - 79	
Alkalinity	ppm	NA	NA	NA	Average	82	90	85	89	55	
					Range	130	130	190	130	130	Runoff/leaching from natural deposits;
Boron	ppb	NL = 1,000	NA	100	Average	130	130	190	130	130	Industrial wastes

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						Wey-mouth Plant	Diemer Plant	Jensen Plant	Skinner Plant	Mills Plant	
					Range	41 - 54	47 - 55	26 - 28	29 - 50	14 - 17	
Calcium	ppm	NA	NA	NA	Average	48	51	27	40	16	
					Range	42	48	26	50	70	By-product of drinking water chlorination;
Chlorate	ppb	NL = 800	NA	20	Range	Distribution System-wide:			ND - 58		Industrial processes
					Range	0.09	0.10	0.20	0.13	0.14	Industrial waste discharge; could be
Chromium VI (u)	ppb	NA	0.02	1	Average	0.09	0.10	0.20	0.13	0.14	naturally present as well

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Corrosivity (v)					Range	12.1	12.1	12.0	12.2	12.0	Elemental balance in water; affected
(as Aggressiveness Index)	AI	NA	NA	NA	Average	12.1	12.1	12.0	12.2	12.0	by temperature, other factors
Corrosivity (w)					Range	0.20 - 0.37	0.24 - 0.33	0.18 - 0.23	0.36 - 0.41	0.14 - 0.19	Elemental balance in water; affected
(as Saturation Index)	SI	NA	NA	NA	Average	0.28	0.28	0.20	0.38	0.16	by temperature, other factors
					Range	60 - 250	57 - 270	100 - 120	100 - 220	48 - 98	
Hardness	ppm	NA	NA	NA	Average	170	190	110	160	65	
					Range	16 - 21	19 - 21	12	13 - 20	7 - 8	
Magnesium	ppm	NA	NA	NA	Average	18	20	12	16	8	
	pH				Range	7.8 - 8.8	7.0 - 8.6	8.1 - 8.4	7.8 - 8.5	8.3 - 8.7	
pH	Units	NA	NA	NA	Average	8.1	8.0	8.2	8.2	8.6	
					Range	3.4 - 4.1	3.6 - 4.0	2.7	3.0 - 3.8	1.6 - 2.1	
Potassium	ppm	NA	NA	NA	Average	3.8	3.8	2.7	3.4	1.8	
					Range	ND	ND	ND	ND	ND	
Radon (l)	pCi/L	NA	NA	100	Average	ND	ND	ND	ND	ND	
					Range	62 - 76	67 - 77	52 - 57	54 - 74	28 - 37	
Sodium	ppm	NA	NA	NA	Average	69	72	54	64	32	
					Range	1.7 - 2.9	1.7 - 3.0	1.6 - 2.1	1.8 - 2.7	1.4 - 2.9	
TOC	ppm	TT	NA	0.30	Highest RAA	2.3	2.4	1.9	2.2	2.1	Various natural and man-made sources
					Range	ND	ND	3.4	ND	ND	
Vanadium	ppb	NL = 50	NA	3	Average	ND	ND	3.4	ND	ND	Naturally-occurring; Industrial waste discharge
N-Nitrosodimethylamine					Range	ND	ND	ND - 6	3 - 5	ND - 2	By-product of drinking water chloramination;
(NDMA) (x)	ppt	NL = 10	3	2	Range	Distribution System-wide:			ND - 8		Industrial processes
Dichlorodifluoromethane					Range	ND	ND	ND	ND	ND	
(Freon 12)	ppb	NL = 1,000	NA	0.5	Average	ND	ND	ND	ND	ND	Industrial waste discharge
Ethyl-*tert*-butyl ether					Range	ND	ND	ND	ND	ND	
(ETBE)	ppb	NA	NA	3	Average	ND	ND	ND	ND	ND	Used as gasoline additive
tert-Amyl-methyl ether					Range	ND	ND	ND	ND	ND	
(TAME)	ppb	NA	NA	3	Average	ND	ND	ND	ND	ND	Used as gasoline additive
tert-Butyl alcohol					Range	ND	ND	ND	ND	ND	MTBE breakdown product; used as gasoline
(TBA)	ppb	NL = 12	NA	2	Average	ND	ND	ND	ND	ND	additive

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ABBREVIATIONS AND FOOTNOTES											

Abbreviations

AI	Aggressiveness Index	MRDL	Maximum Residual Disinfectant Level	ppm	parts per million or milligrams per liter (mg/L)
AL	Action Level	MRDLG	Maximum Residual Disinfectant Level Goal	ppq	parts per quadrillion or picograms per liter (pg/L)
CDPH	California Department of Public Health	N	Nitrogen	ppt	parts per trillion or nanograms per liter (ng/L)
CFU	Colony-Forming Units	NA	Not Applicable	RAA	Running Annual Average; highest RAA is the highest of all Running Annual Averages calculated as average of all the samples collected within a twelve-month period
DBP	Disinfection By-Products	ND	Not Detected		
DLR	Detection Limits for purposes of Reporting	NL	Notification Level		
MBAS	Methylene Blue Active Substances	NTU	Nephelometric Turbidity Units	SI	Saturation Index (Langelier)
MCL	Maximum Contaminant Level	pCi/L	picoCuries per Liter	TOC	Total Organic Carbon
MCLG	Maximum Contaminant Level Goal	PHG	Public Health Goal	TON	Threshold Odor Number
MFL	Million Fibers per Liter	ppb	parts per billion or micrograms per liter (µg/L)	TT	Treatment Technique
				µS/cm	microSiemen per centimeter; or micromho per centimeter (µmho/cm)

Footnotes

(a) The turbidity level of the filtered water shall be less than or equal to 0.3 NTU in 95% of the measurements taken each month and shall not exceed 1 NTU at any time. Turbidity, a measure of the cloudiness of the water, is an indicator of treatment performance. The averages and ranges of turbidity shown in the Secondary Standards were based on the treatment plant effluent.

(b) Total coliform MCLs: No more than 5.0% of the monthly samples may be total coliform-positive. Compliance is based on the combined distribution system sampling from all the treatment plants. In 2011, 8,014 samples were analyzed and two samples were positive for total coliforms. The MCL was not violated.

(c) *E. coli* MCL: The occurrence of two consecutive total coliform-positive samples, one of which contains *E. coli*, constitutes an acute MCL violation. The MCL was not violated.

(d) All distribution system samples collected had detectable total chlorine residuals and no HPC was required. HPC reporting level is 1 CFU/mL. Values are based on monthly median instead of monthly averages per State guidelines and recommendations.

(e) Results are from 2010 annual monitoring. Metropolitan's required triennial (2011 - 2013) monitoring will be done in 2012.

(f) Aluminum, copper, MTBE, and thiobencarb have both primary and secondary standards.

(g) Metropolitan's MTBE reporting level is 0.5 ppb, which is lower than the State DLR of 3 ppb.

(h) Lead and copper are regulated as a Treatment Technique under the Lead and Copper Rule, which requires water samples to be collected at the consumers' tap. If action levels are exceeded in more than 10% of the consumer tap samples, water systems must take steps to reduce these contaminants.

(i) Metropolitan was in compliance with all provisions of the State's Fluoridation System Requirements.

(j) State MCL is 45 mg/L as nitrate, which is the equivalent of 10 mg/L as N.

(k) Metropolitan's perchlorate reporting level is 2 ppb, which is lower than the State DLR of 4 ppb.

(l) Data collected (triennially) from four consecutive quarters of monitoring in 2011.

(m) CDPH considers 50 pCi/L to be the level of concern for beta particles; the gross beta particle activity MCL is 4 millirem/year annual dose equivalent to the total body or any internal organ.

(n) State MCL is 5 pCi/L for combined radium-226 and -228.

(o) Metropolitan was in compliance with all provisions of the Stage 1 Disinfectants/ Disinfection By-Products (D/DBP) Rule. Compliance was based on the RAA.

(p) Metropolitan's reporting level is 0.5 ppb for each of the trihalomethanes (bromodichloromethane, bromoform, chloroform, and dibromochloromethane) which is lower than the State DLR of 1 ppb.

(q) State DLR is 1 ppb for each of the following: dichloroacetic acid, trichloroacetic acid, monobromoacetic acid, and dibromoacetic acid; and 2 ppb for monochloroacetic acid.

(r) Metropolitan's bromate reporting level is 3 ppb, which is lower than the State DLR of 5 ppb.

(s) Data for Skinner based on the State-required quarterly monitoring following MCL exceedance. The quarterly samples reported to the State were 24 TON in January, 6 TON in April, and 3 TON in July and October. Metropolitan utilizes a flavor-profile analysis (FPA) method that can detect odor occurrences more accurately and found the FPA samples from this location acceptable. No taste and odor event was observed and no complaints were received during this period.

(t) Data collected from February 2009 to August 2009. Minimum reporting levels are as stipulated in the Federal UCMR 2. List 1 - Assessment Monitoring consists of 10 chemical contaminants for which standard analytical methods were available. List 2 - Screening Survey consists of 15 contaminants for which new analytical methods were used. All analyses conducted by contract laboratories. Values listed in State DLR column are Federal minimum reporting levels.

(u) Metropolitan's chromium VI reporting level is 0.03 ppb, which is lower than the State DLR of 1 ppb.

(v) AI <10.0 = Highly aggressive and very corrosive water
AI ≥ 12.0 = Non-aggressive water
AI (10.0 - 11.9) = Moderately aggressive water

(w) Positive SI index = non-corrosive; tendency to precipitate and/or deposit scale on pipes
Negative SI index = corrosive; tendency to dissolve calcium carbonate

(x) Analysis conducted by Metropolitan's Water Quality Laboratory using Standard Methods 6450B (online edition).