

Summary of Raw Water Quality*
Miramar Water Treatment Plant Influent 2006-2010

Parameters	Units	DLR**/MDL	Drinking Water Standards ¹		No. of Samples	Raw Water Quality				
			MCL	SMCL		Min	Max	Avg	Median	
General Physical										
Calcium Hardness (CaCO3)	mg/L	20			66	106	194	146	148	
Color	Color	1	15		388	nd	37	5.61	5	
Conductivity	µmho/cm		1600		384	224	1050	810	809	
Corrosivity ²	--				56	-0.57	1.28	0.425	0.42	
Threshold odor number	Odor	1	3		1360	nd	18	nd	nd	
Total Alkalinity	mg/L	20			70	85.3	127	108	109	
Total Dissolved Solids	mg/L	10	1000		58	399	648	532	545	
Total Hardness (CaCO3)	mg/L	20			70	178	328	232	228	
Total Suspended Solids (TSS)	mg/L	1			59	1	14	2.71	2	
Turbidity ³	ntu	0.07	0.5		1874	0.084	13.3	0.658	0.58	
pH	pH			6.5-8.5	1342	6.04	9.09	7.97	8	
Pathogens and Indicator Organisms										
E. Coli	/100 mL				60	1	50	5.43	3.05	
Fecal Coliform	/100 mL				1744	2	130	5.55	2	
Heterotrophic Bacteria (HPC)	cfu/mL				246	1	3800	259	120	
Total Coliform	/100 mL		(4)		1804	1	16000	136	17	
Total Crypto Oocyst Count	/ L				60	nd	4.5	nd	nd	
Total Giardia Cyst Count	/ L				60	nd	5.3	nd	nd	
Metals										
Aluminum	µg/L	50	1000	200	51	nd	327	20.3	15.1	
Antimony	µg/L	6	6		19	nd	nd	nd	nd	
Arsenic	µg/L	2	10		19	nd	2.43	nd	nd	
Barium	µg/L	100	1000		19	nd	132	105	103	
Beryllium	µg/L	1	4		19	nd	nd	nd	nd	
Boron	µg/L	100			19	nd	152	125	127	
Cadmium	µg/L	1	5		21	nd	nd	nd	nd	
Chromium	µg/L	10	50		20	nd	1.41	nd	nd	
Copper	µg/L	50	1300 ⁷	1000	51	nd	49.9	4.29	3.56	
Iron	µg/L	100		300	51	nd	313	nd	nd	
Lead	µg/L	5	15 ⁷		51	nd	nd	nd	nd	
Magnesium	mg/L				59	4.5	32.6	20.8	21.1	
Manganese	µg/L	20		50	52	nd	62.6	nd	nd	
Mercury	µg/L	1	2		15	nd	nd	nd	nd	
Nickel	µg/L	10	100		21	nd	nd	nd	nd	
Selenium	µg/L	5	50		19	nd	nd	nd	nd	
Silver	µg/L	10		100	19	nd	nd	nd	nd	
Sodium	mg/L	20			52	60.8	94.9	80.3	80.6	
Thallium	µg/L	1	2		18	nd	nd	nd	nd	
Vanadium	µg/L	3			19	nd	nd	nd	nd	
Zinc	µg/L	50		5000	53	nd	168	nd	nd	
Radiological										
Gross Alpha	pCi/L	3	15		1	nd	nd	nd	nd	
Gross Beta	pCi/L	4	50		1	4.45	4.45	4.45	4.45	
Combined Radium-226 & Radium-228	pCi/L		5		1	nd	nd	nd	nd	
Strontium 90	pCi/L	2	8		1	nd	nd	nd	nd	
Tritium	pCi/L	1000	20000		1	nd	nd	nd	nd	
Uranium	pCi/L	1	20		1	2.36	2.36	2.36	2.36	
Inorganic Constituents										
Ammonia-N	mg/L	0.031			241	nd	0.101	nd	nd	
Bicarbonate	mg/L				59	104	152	131	132	
Bromate	µg/L	5	10		39	nd	nd	nd	nd	
Bromide	mg/L	0.1			105	nd	0.36	nd	nd	
Calcium	mg/L				59	42.8	77.6	59.8	60.2	
Carbonate	mg/L				59	nd	6.48	nd	nd	
Chloride	mg/L	0.5		500	67	61.3	101	84.5	87.2	
Cyanide, Total	mg/L	0.1	0.15		8	nd	nd	nd	nd	
Fluoride	mg/L	0.1	2		62	0.152	0.37	0.234	0.23	
MBAS (Detergents)	mg/L	0.05		0.5	5	nd	0.06	nd	nd	
Nitrate (as NO3)	mg/L	2	45		302	nd	2.24	nd	nd	
Nitrite (as NO2)	mg/L	1.31	3.29		244	nd	0.106	nd	nd	
Perchlorate	µg/L	4	6		2	nd	nd	nd	nd	
Phosphate, Ortho (as PO4)	mg/L	0.2			65	nd	nd	nd	nd	
Phosphorus	mg/L	0.078			59	nd	0.17	nd	nd	
Potassium	mg/L	0.5			52	3.13	5	4.1	4.04	
Silica	mg/L	0.5			58	6.53	10.9	8.47	8.46	
Sulfate	mg/L	0.5		500	66	119	244	180	175	
Total Nitrogen	mg/L	0.156			58	nd	1.87	0.412	0.362	
UV254 Filtered	ABS	0.003			2	0.024	0.027	0.026	0.026	
Organic Constituents Regulated										
1,1,1-Trichloroethane (1,1,1-TCA)	µg/L	0.5	200		19	nd	nd	nd	nd	
1,1,2,2-Tetrachloroethane	µg/L	0.5	1		19	nd	nd	nd	nd	
1,1,2-Trichloroethane (1,1,2-TCA)	µg/L	0.5	5		19	nd	nd	nd	nd	
1,1-Dichloroethane (1,1-DCA)	µg/L	0.5	5		19	nd	nd	nd	nd	
1,1-Dichloroethylene (1,1-DCE)	µg/L	0.5	6		19	nd	nd	nd	nd	
1,2,4-Trichlorobenzene	µg/L	0.5	5		19	nd	nd	nd	nd	
1,2-Dichlorobenzene (o-DCB)	µg/L	0.5	600		19	nd	nd	nd	nd	
1,2-Dichloroethane (1,2-DCA)	µg/L	0.5	0.5		19	nd	nd	nd	nd	
1,2-Dichloropropane	µg/L	0.5	5		19	nd	nd	nd	nd	
1,4-Dichlorobenzene (p-DCB)	µg/L	0.5	5		19	nd	nd	nd	nd	

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			MCL	SMCL		Min	Max	Avg	Median	
2,4,5-TP (SILVEX)	µg/L	1	50		17	nd	nd	nd	nd	
2,4-D	µg/L	10	70		17	nd	nd	nd	nd	
Alachlor (ALANEX)	µg/L	1	2		17	nd	nd	nd	nd	
Atrazine (AATREX)	µg/L	0.5	1		17	nd	nd	nd	nd	
Bentazon (BASAGRAN)	µg/L	2	18		17	nd	nd	nd	nd	
Benzene	µg/L	0.5	1		19	nd	nd	nd	nd	
Benzo(a)pyrene	µg/L	0.1	0.2		19	nd	nd	nd	nd	
Bromodichloromethane	µg/L	1			251	nd	24	6.83	7.46	
Bromoform	µg/L	1			252	nd	19.9	3.75	4.21	
Carbofuran (FURADAN)	µg/L	5	18		17	nd	nd	nd	nd	
Carbon Tetrachloride	µg/L	0.5	0.5		19	nd	nd	nd	nd	
Chlordane	µg/L	0.1	0.1		8	nd	nd	nd	nd	
Chloroform (Trichloromethane)	µg/L	1			252	nd	24.6	4.35	3.36	
cis-1,2-Dichloroethylene (c-1,2-DCE)	µg/L	0.5	6		19	nd	nd	nd	nd	
Dalapon	µg/L	10	200		54	nd	nd	nd	nd	
Di(2-ethylhexyl) Adipate	µg/L	5	400		18	nd	nd	nd	nd	
Dibromoacetic Acid (DBAA)	µg/L	1			54	nd	2.53	nd	nd	
Dibromochloromethane	µg/L	1			251	nd	24.1	8.94	10.3	
Dibromochloropropane (DBCP)	µg/L	0.01	0.2		26	nd	nd	nd	nd	
Dichloroacetic Acid (DCAA)	µg/L	1			53	nd	5.45	1.24	nd	
Dichloromethane (Methylene Chloride)	µg/L	0.5	5		19	nd	nd	nd	nd	
Diethylhexylphthalate (DEHP)	µg/L	3	4		17	nd	nd	nd	nd	
Dinoseb (DNBP)	µg/L	2	7		17	nd	nd	nd	nd	
Diquat	µg/L	4	20		17	nd	nd	nd	nd	
Endothall	µg/L	45	100		21	nd	nd	nd	nd	
Endrin	µg/L	0.1	2		27	nd	nd	nd	nd	
Ethyl Benzene	µg/L	0.5	300		19	nd	nd	nd	nd	
Ethylene Dibromide (EDB)	µg/L	0.02	0.05		26	nd	nd	nd	nd	
Glyphosate	µg/L	25	700		16	nd	nd	nd	nd	
Haloacetic Acids (five) (HAA5) ⁵	µg/L	1	60		51	nd	10.3	3.43	3.34	
Heptachlor	µg/L	0.01	0.01		8	nd	nd	nd	nd	
Heptachlor Epoxide	µg/L	0.01	0.01		8	nd	nd	nd	nd	
Hexachlorobenzene	µg/L	0.5	1		25	nd	nd	nd	nd	
Hexachlorocyclopentadiene	µg/L	1	50		22	nd	nd	nd	nd	
Lindane (gamma-BHC)	µg/L	0.2	0.2		8	nd	nd	nd	nd	
m,p-Xylene	ug/L	0.5			38	nd	nd	nd	nd	
Methoxychlor	µg/L	10	30		27	nd	nd	nd	nd	
Methyl-tert-butyl ether (MTBE)	µg/L	3	13	5	19	nd	nd	nd	nd	
Molinate (ORDRAM)	µg/L	2	20		15	nd	nd	nd	nd	
Monobromoacetic Acid (MBAA)	µg/L	1			52	nd	1.1	nd	nd	
Monochloroacetic Acid (MCAA)	µg/L	2			54	nd	nd	nd	nd	
Monochlorobenzene (Chlorobenzene)	µg/L	0.5	70		19	nd	nd	nd	nd	
Oxamyl (Vydate)	µg/L	20	50		17	nd	nd	nd	nd	
o-Xylene	ug/L	0.5			38	nd	nd	nd	nd	
Pentachlorophenol (PCP)	µg/L	0.2	1		17	nd	nd	nd	nd	
Picloram	µg/L	1	500		17	nd	nd	nd	nd	
Polychlorinated Biphenyls, Total, as DCB	µg/L	0.5	0.5		5	nd	nd	nd	nd	
Simazine (PRINCEP)	µg/L	1	4		16	nd	nd	nd	nd	
Styrene	µg/L	0.5	100		19	nd	nd	nd	nd	
Tetrachloroethylene (PCE)	µg/L	0.5	5		19	nd	nd	nd	nd	
Thiobencarb (BOLERO)	µg/L	1	70	1	18	nd	nd	nd	nd	
Toluene	µg/L	0.5	150		19	nd	nd	nd	nd	
Total Organic Carbon (TOC)	mg/L	0.3			375	2.12	3.61	2.56	2.54	
Total Trihalomethanes (TTHMs) ⁵	µg/L	1	80		242	nd	73.2	24.2	28.5	
Total Xylenes (m,p, & o)	µg/L	0.5	1750		38	nd	nd	nd	nd	
Toxaphene	µg/L	1	3		7	nd	nd	nd	nd	
trans-1,2-Dichloroethylene (t-1,2-DCE)	µg/L	0.5	10		19	nd	nd	nd	nd	
Trichloroacetic Acid (TCAA)	µg/L	1			54	nd	3.47	1.35	1.39	
Trichloroethylene (TCE)	µg/L	0.5	5		19	nd	nd	nd	nd	
Trichlorofluoromethane (FREON 11)	µg/L	5	150		19	nd	nd	nd	nd	
Trichlorotrifluoroethane (FREON 113)	µg/L	10	1200		19	nd	nd	nd	nd	
Vinyl Chloride (VC)	µg/L	0.5	0.5		19	nd	nd	nd	nd	
Organic Constituents Unregulated										
1,1,1,2-Tetrachloroethane	µg/L	0.5			19	nd	nd	nd	nd	
1,1-Dichloropropene	µg/L	0.5			19	nd	nd	nd	nd	
1,2,3-Trichlorobenzene	µg/L	0.5			19	nd	nd	nd	nd	
1,2,3-Trichloropropane	ng/L	5			17	nd	nd	nd	nd	
1,2,4-Trimethylbenzene	µg/L	0.4			19	nd	nd	nd	nd	
1,3,5-Trimethylbenzene	µg/L	0.5			19	nd	nd	nd	nd	
1,3-Dichlorobenzene (m-DCB)	µg/L	0.5			19	nd	nd	nd	nd	
1,3-Dichloropropane	µg/L	0.5			19	nd	nd	nd	nd	
2,2-Dichloropropane	µg/L	0.5			19	nd	nd	nd	nd	
2,4,5-T	µg/L	3			17	nd	nd	nd	nd	
2,4-DB	µg/L	3			17	nd	nd	nd	nd	
2-Chlorotoluene	µg/L	0.5			19	nd	nd	nd	nd	
2-Methylisoborneol (MIB)	ng/L	5			230	nd	28.8	nd	nd	
3,5-Dichlorobenzoic Acid	µg/L	3			17	nd	nd	nd	nd	
3-Hydroxycarbofuran	µg/L	3			17	nd	nd	nd	nd	
4-Chlorotoluene	µg/L	0.5			19	nd	nd	nd	nd	
Acenaphthylene	µg/L	5			13	nd	nd	nd	nd	
Acifluorfen	µg/L	3			17	nd	nd	nd	nd	
Aldicarb (TEMIK)	µg/L	3			17	nd	nd	nd	nd	
Aldicarb sulfone	µg/L	4			17	nd	nd	nd	nd	
Aldicarb sulfoxide	µg/L	3			17	nd	nd	nd	nd	

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Aldrin	µg/L	0.075			7	nd	nd	nd	nd
Anthracene	µg/L	5			16	nd	nd	nd	nd
Baygon	µg/L	0.4			17	nd	nd	nd	nd
Benzo (a) Anthracene	µg/L	10			19	nd	nd	nd	nd
Benzo (b) Fluoranthene	µg/L	10			19	nd	nd	nd	nd
Benzo (g,h,i) Perylene	µg/L	10			19	nd	nd	nd	nd
Benzo (k) Fluoranthene	µg/L	10			19	nd	nd	nd	nd
Benzyl Butyl Phthalate	µg/L	10			18	nd	nd	nd	nd
Bromobenzene	µg/L	0.5			19	nd	nd	nd	nd
Bromochloromethane	µg/L	0.5			19	nd	nd	nd	nd
Bromomethane (Methyl Bromide)	µg/L	0.5			19	nd	nd	nd	nd
Carbaryl (Sevin)	µg/L	5			17	nd	nd	nd	nd
Chloramben	µg/L	3			17	nd	nd	nd	nd
Chloroethane	µg/L	0.5			19	nd	nd	nd	nd
Chloromethane (Methyl Chloride)	µg/L	0.5			19	nd	nd	nd	nd
Chrysene	µg/L	5			19	nd	nd	nd	nd
cis -1,3-Dichloropropene	µg/L	0.5			19	nd	nd	nd	nd
Dibenzo (a,h) anthracene	µg/L	5			19	nd	nd	nd	nd
Dibromomethane	µg/L	0.5			19	nd	nd	nd	nd
Dicamba (BANVEL)	µg/L	1.5			17	nd	nd	nd	nd
Dichlorodifluoromethane (Freon 12)	µg/L	0.5			19	nd	nd	nd	nd
Dichloroprop	µg/L	3			17	nd	nd	nd	nd
Dieldrin	µg/L	0.02			8	nd	nd	nd	nd
Diethylphthalate	µg/L	5			17	nd	nd	nd	nd
Diisopropyl Ether (DIPE)	µg/L	3			19	nd	nd	nd	nd
Dimethyl phthalate	µg/L	5			15	nd	nd	nd	nd
di-n-Butylphthalate	µg/L	5			17	nd	nd	nd	nd
Dissolved Organic Carbon (DOC)	mg/L	0.3			2	2.29	2.29	2.29	2.29
Ethyl-tert-butyl ether (ETBE)	µg/L	3			19	nd	nd	nd	nd
Fluorene	µg/L	5			17	nd	nd	nd	nd
Geosmin	ng/L	5			228	nd	13.2	nd	nd
Hexachlorobutadiene	µg/L	0.5			19	nd	nd	nd	nd
Indeno (1,2,3-cd) Pyrene	µg/L	10			19	nd	nd	nd	nd
Isopropylbenzene (Cumene)	µg/L	0.5			19	nd	nd	nd	nd
MCPA	µg/L	3			17	nd	nd	nd	nd
MCPP	µg/L	3			17	nd	nd	nd	nd
Methiocarb	µg/L	0.4			17	nd	nd	nd	nd
Methomyl	µg/L	2			17	nd	nd	nd	nd
Naphthalene	µg/L	0.5			34	nd	nd	nd	nd
n-Butylbenzene	µg/L	0.5			19	nd	nd	nd	nd
n-Propylbenzene	µg/L	0.5			19	nd	nd	nd	nd
Paraquat	µg/L	4			17	nd	nd	nd	nd
PCB 1016 / 1242	µg/L	0.5			4	nd	nd	nd	nd
PCB-1016 (as DCB)	µg/L	0.5			1	nd	nd	nd	nd
PCB-1221 (as DCB)	µg/L	0.5			5	nd	nd	nd	nd
PCB-1232 (as DCB)	µg/L	0.5			5	nd	nd	nd	nd
PCB-1242 (as DCB)	µg/L	0.5			1	nd	nd	nd	nd
PCB-1248 (as DCB)	µg/L	0.5			5	nd	nd	nd	nd
PCB-1254 (as DCB)	µg/L	0.5			5	nd	nd	nd	nd
PCB-1260 (as DCB)	µg/L	0.5			5	nd	nd	nd	nd
Phenanthrene	µg/L	5			17	nd	nd	nd	nd
p-Isopropyltoluene	µg/L	0.2			19	nd	nd	nd	nd
Propachlor	µg/L	0.5			25	nd	nd	nd	nd
Pyrene	µg/L	0.5			17	nd	nd	nd	nd
sec-Butylbenzene	µg/L	0.5			19	nd	nd	nd	nd
tert-Amyl Methyl Ether (TAME)	µg/L	3			19	nd	nd	nd	nd
tert-Butyl Alcohol (TBA)	µg/L	2			19	nd	nd	nd	nd
tert-Butylbenzene	µg/L	0.5			19	nd	nd	nd	nd
trans-1,3-Dichloropropene	µg/L	0.5			19	nd	nd	nd	nd
Trifluralin	µg/L	0.5			17	nd	nd	nd	nd

NOTES:

*The acceptance criteria in this table apply to finished, potable water, and are for reference only.

** The State of California DLR values are used when available. Parameters without DLR values were reported at MDL levels.

- (1) State MCL and MCLG values may be more stringent than federal standards for treated water.
- (2) Based on the Langelier Index. A positive value indicates non-corrosive tendencies. A negative value indicates corrosive tendencies.
- (3) Turbidity of treated water is not to exceed 0.3 NTU 95% of the time.
- (4) No more than 5% of distribution system samples can be total coliform positive
- (5) Haloacetic acids (five) is the sum of the concentrations of mon-, di-, and trichloroacetic acids and mono- and dibromoacetic acids. MCL based on Annual Average
- (6) Total trihalomethanes is the sum of the concentrations of chloroform, bromodichloromethane, dibromochloromethane, and bromoform. MCL based on Annual Average
- (7) Lead Copper Rule Action Level
a: absent
nd: non-detected at State DLR or MDL if DLR not available