

Summary of Raw Water Quality
San Diego River System Streams¹ 2006-2010**

Parameters	Units	DLR*/MDL	Drinking Water Standards ²		No. of Samples	Raw Water Quality				
			MCL	SMCL		Min	Max	Mean	Median	
General Physical										
Conductivity	µS/cm			1600	267	0.404	2830	1100	999	
pH				6.5-8.5	267	6.66	8.86	7.88	7.94	
Total Dissolved Solids	mg/L	10		1000	242	183	1760	704	643	
Total Suspended Solids	mg/L	1			243	1	2620	16.5	2	
Microbiological										
E. Coli	/100 mL				218	10	5700	249	100	
Enterococcus	/100 mL				218	1	2400	137	39	
Total Coliform	/100 mL				218	62	240000	7760	2900	
Metals										
Aluminum	µg/L	50	1000	200	14	nd	19800	4490	50.2	
Aluminum, Dissolved	µg/L				14	nd	116	28.2	15.4	
Antimony	µg/L	6	6		15	nd	nd	nd	nd	
Antimony, Dissolved	µg/L				15	nd	nd	nd	nd	
Arsenic	µg/L	2	10		15	nd	2.58	nd	nd	
Arsenic, Dissolved	µg/L				15	nd	2.36	nd	nd	
Barium	µg/L	100	1000		15	53.3	240	120	106	
Barium, Dissolved	µg/L				15	31.6	112	77.3	77.4	
Beryllium	µg/L	1	4		14	nd	nd	nd	nd	
Beryllium, Dissolved	µg/L				14	nd	nd	nd	nd	
Boron	µg/L	100			13	nd	152	nd	nd	
Boron, Dissolved	µg/L				14	38.6	146	90.7	84	
Cadmium	µg/L	1	5		15	nd	nd	nd	nd	
Cadmium, Dissolved	µg/L				15	nd	nd	nd	nd	
Chromium	µg/L	10	50		14	nd	14.7	nd	nd	
Chromium, Dissolved	µg/L				14	nd	1.06	nd	nd	
Copper	µg/L	50	1300 ⁴	1000	15	nd	nd	nd	nd	
Copper, Dissolved	µg/L				15	nd	1320	134	30.5	
Lead	µg/L	5	15 ⁴		15	nd	22.8	nd	nd	
Lead, Dissolved	µg/L				15	nd	9.06	1.66	nd	
Manganese	µg/L	20		50	14	8.6	2250	309	99.4	
Manganese, Dissolved	µg/L				14	7.77	2040	197	38.9	
Nickel	µg/L	10	100		13	nd	nd	nd	nd	
Nickel, Dissolved	µg/L				14	nd	8.34	2.65	2.84	
Selenium	µg/L	5	50		15	nd	nd	nd	nd	
Selenium, Dissolved	µg/L				15	nd	4.19	nd	nd	
Silver	µg/L	10		100	15	nd	nd	nd	nd	
Silver, Dissolved	µg/L				9	nd	nd	nd	nd	
Thallium	µg/L	1	2		15	nd	nd	nd	nd	
Thallium, Dissolved	µg/L				15	nd	nd	nd	nd	
Vanadium	µg/L	3			14	nd	65.8	26.9	23.3	
Vanadium, Dissolved	µg/L				14	nd	30.6	12.8	13.3	
Zinc	µg/L	50		5000	15	nd	69.4	nd	nd	
Zinc, Dissolved	µg/L				15	nd	213	25.2	13.3	
Inorganic Constituents³										
Ammonia-N	mg/L	0.031			220	nd	8.87	0.066	nd	
Bromide	µg/L	0.1			4	nd	0.52	0.241	0.223	
Chloride	mg/L	0.5			3	>25	>25	>25	>25	
Nitrate	mg/L	2	45		234	nd	18	3.01	0.5	
Nitrite (NO ₂)	mg/L	1.31	3.29		234	nd	nd	nd	nd	
Phosphate, Ortho (as PO ₄)	mg/L	0.2			225	nd	0.87	nd	nd	
Phosphorus	mg/L	0.078			229	nd	0.36	0.084	0.089	
Sulfate	mg/L	0.5		500	1	>25	>25	>25	>25	
Total Nitrogen	mg/L	0.156			231	nd	8.31	1.12	0.578	
Organic Constituents Regulated										
1,1,1-Trichloroethane (1,1,1-TCA)	µg/L	0.5	200		15	nd	nd	nd	nd	
1,1,2,2-Tetrachloroethane	µg/L	0.5	1		15	nd	nd	nd	nd	
1,1,2-Trichloroethane (1,1,2-TCA)	µg/L	0.5	5		15	nd	nd	nd	nd	
1,1-Dichloroethane (1,1-DCA)	µg/L	0.5	5		15	nd	nd	nd	nd	
1,1-Dichloroethene (1,1-DCE)	µg/L	0.5	6		15	nd	nd	nd	nd	
1,2,4-Trichlorobenzene	µg/L	0.5	5		15	nd	nd	nd	nd	
1,2-Dichlorobenzene (o-DCB)	µg/L	0.5	600		15	nd	nd	nd	nd	
1,2-Dichloroethane (1,2-DCA)	µg/L	0.5	0.5		15	nd	nd	nd	nd	
1,2-Dichloropropane	µg/L	0.5	5		15	nd	nd	nd	nd	
1,4-Dichlorobenzene (p-DCB)	µg/L	0.5	5		15	nd	nd	nd	nd	
Alachlor (ALANEX)	µg/L	1	2		11	nd	nd	nd	nd	
Atrazine (AATREX)	µg/L	0.5	1		11	nd	nd	nd	nd	
Benzene	µg/L	0.5	1		15	nd	nd	nd	nd	
Benzo(a)pyrene	µg/L	0.1	0.2		12	nd	nd	nd	nd	
Bromodichloromethane	µg/L	1			15	nd	nd	nd	nd	
Bromoform	µg/L	1			15	nd	nd	nd	nd	
Carbofuran (FURADAN)	µg/L	5	18		10	nd	nd	nd	nd	
Carbon Tetrachloride	µg/L	0.5	0.5		15	nd	nd	nd	nd	

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Chlordane	µg/L	0.1	0.1		4	nd	nd	nd	nd	
Chloroform (Trichloromethane)	µg/L	1			15	nd	nd	nd	nd	
cis-1,2-Dichloroethylene (c-1,2-DCE)	µg/L	0.5	6		15	nd	nd	nd	nd	
Di(2-ethylhexyl) Adipate	µg/L	5	400		12	nd	nd	nd	nd	
Dibromochloromethane	µg/L	1			15	nd	nd	nd	nd	
Dibromochloropropane (DBCP)	µg/L	0.01	0.2		19	nd	nd	nd	nd	
Dichloromethane (Methylene Chloride)	µg/L	0.5	5		15	nd	nd	nd	nd	
Diethylhexylphthalate (DEHP)	µg/L	3	4		12	nd	nd	nd	nd	
Endrin	µg/L	0.1	2		16	nd	nd	nd	nd	
Ethyl Benzene	µg/L	0.5	300		15	nd	nd	nd	nd	
Ethylene Dibromide (EDB)	µg/L	0.02	0.05		20	nd	nd	nd	nd	
Heptachlor	µg/L	0.01	0.01		5	nd	nd	nd	nd	
Heptachlor epoxide	µg/L	0.01	0.01		5	nd	nd	nd	nd	
Hexachlorobenzene	µg/L	0.5	1		16	nd	nd	nd	nd	
Hexachlorocyclopentadiene	µg/L	1	50		16	nd	nd	nd	nd	
Lindane (gamma-BHC)	µg/L	0.2	0.2		5	nd	nd	nd	nd	
m,p-Xylene	µg/L	0.5			15	nd	nd	nd	nd	
Methoxychlor	µg/L	10	30		17	nd	nd	nd	nd	
Methyl-tert-butyl ether (MTBE)	µg/L	3	13	5	15	nd	nd	nd	nd	
Molinate (ORDRAM)	µg/L	2	20		11	nd	nd	nd	nd	
Monochlorobenzene (Chlorobenzene)	µg/L	0.5	70		15	nd	nd	nd	nd	
Oxamyl (Vydate)	µg/L	20	50		10	nd	nd	nd	nd	
o-Xylene	µg/L	0.5			15	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		11	nd	nd	nd	nd	
Styrene	µg/L	0.5	100		15	nd	nd	nd	nd	
Tetrachloroethylene (PCE)	µg/L	0.5	5		15	nd	nd	nd	nd	
Thiobencarb (BOLERO)	µg/L	1	70		11	nd	nd	nd	nd	
Toluene	µg/L	0.5	150		15	nd	nd	nd	nd	
Total Organic Carbon (TOC)	mg/L	0.3			246	1.56	11.2	4.65	4.44	
Total Xylenes (m,p, & o)	µg/L		1750		15	nd	nd	nd	nd	
Toxaphene	µg/L	1	3		4	nd	nd	nd	nd	
trans-1,2-Dichloroethylene (t-1,2-DCE)	µg/L	0.5	10		15	nd	nd	nd	nd	
Trichloroethylene (TCE)	µg/L	0.5	5		15	nd	nd	nd	nd	
Trichlorofluoromethane (FREON 11)	µg/L	5	150		15	nd	nd	nd	nd	
Trichlorotrifluoroethane (FREON 113)	µg/L	10	1200		15	nd	nd	nd	nd	
Vinyl Chloride (VC)	µg/L	0.5	0.5		15	nd	nd	nd	nd	
Organic Constituents Unregulated										
1,1,1,2-Tetrachloroethane	µg/L	0.5			15	nd	nd	nd	nd	
1,1-Dichloropropene	µg/L	0.5			15	nd	nd	nd	nd	
1,2,3-Trichlorobenzene	µg/L	0.5			15	nd	nd	nd	nd	
1,2,4-Trimethylbenzene	µg/L	0.4			15	nd	nd	nd	nd	
1,3,5-Trimethylbenzene	µg/L	0.5			15	nd	nd	nd	nd	
1,3-Dichlorobenzene (m-DCB)	µg/L	0.5			15	nd	nd	nd	nd	
1,3-Dichloropropane	µg/L	0.5			15	nd	nd	nd	nd	
2,2-Dichloropropane	µg/L	0.5			15	nd	nd	nd	nd	
2-Chlorotoluene	µg/L	0.5			15	nd	nd	nd	nd	
3-Hydroxycarbofuran	µg/L	3			10	nd	nd	nd	nd	
4-Chlorotoluene	µg/L	0.5			15	nd	nd	nd	nd	
Acenaphthylene	µg/L	5			10	nd	nd	nd	nd	
Aldicarb	µg/L	3			10	nd	nd	nd	nd	
Aldicarb sulfone	µg/L	4			10	nd	nd	nd	nd	
Aldicarb sulfoxide	µg/L	3			10	nd	nd	nd	nd	
Aldrin	µg/L	0.075			5	nd	nd	nd	nd	
Anthracene	µg/L	5			11	nd	nd	nd	nd	
Baygon	µg/L	0.4			10	nd	nd	nd	nd	
Benzo (a) Anthracene	µg/L	10			12	nd	nd	nd	nd	
Benzo (b) Fluoranthene	µg/L	10			12	nd	nd	nd	nd	
Benzo (g,h,i) Perylene	µg/L	10			11	nd	nd	nd	nd	
Benzo (k) Fluoranthene	µg/L	10			12	nd	nd	nd	nd	
Benzyl Butyl Phthalate	µg/L	10			12	nd	nd	nd	nd	
Bromobenzene	µg/L	0.5			15	nd	nd	nd	nd	
Bromochloromethane	µg/L	0.5			15	nd	nd	nd	nd	
Bromomethane (Methyl Bromide)	µg/L	0.5			15	nd	nd	nd	nd	
Carbaryl (Sevin)	µg/L	5			10	nd	nd	nd	nd	
Chloroethane	µg/L	0.5			15	nd	nd	nd	nd	
Chloromethane (Methyl Chloride)	µg/L	0.5			15	nd	nd	nd	nd	
Chrysene	µg/L	5			12	nd	nd	nd	nd	
cis-1,3-Dichloropropene	µg/L	0.5			15	nd	nd	nd	nd	
Dibenzo (a,h) anthracene	µg/L	5			12	nd	nd	nd	nd	
Dibromomethane	µg/L	0.5			15	nd	nd	nd	nd	
Dichlorodifluoromethane (Freon 12)	µg/L	0.5			15	nd	nd	nd	nd	
Dieldrin	µg/L	0.02			5	nd	nd	nd	nd	
Diethylphthalate	µg/L	5			11	nd	nd	nd	nd	
Diisopropyl Ether (DIPE)	µg/L	3			15	nd	nd	nd	nd	

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Dimethyl phthalate	µg/L	5			11	nd	nd	nd	nd
Di- <i>n</i> -Butylphthalate	µg/L	5			11	nd	nd	nd	nd
Ethyl- <i>tert</i> -butyl ether (ETBE)	µg/L	3			15	nd	nd	nd	nd
Fluorene	µg/L	5			11	nd	nd	nd	nd
Hexachlorobutadiene	µg/L	0.5			15	nd	nd	nd	nd
Indeno (1,2,3- <i>cd</i>) Pyrene	µg/L	10			8	nd	nd	nd	nd
Isopropylbenzene (Cumene)	µg/L	0.5			15	nd	nd	nd	nd
Methiocarb	µg/L	0.4			10	nd	nd	nd	nd
Methomyl	µg/L	2			10	nd	nd	nd	nd
Naphthalene	µg/L	0.5			26	nd	nd	nd	nd
<i>n</i> -Butylbenzene	µg/L	0.5			15	nd	nd	nd	nd
<i>n</i> -Propylbenzene	µg/L	0.5			15	nd	nd	nd	nd
Phenanthrene	µg/L	5			11	nd	nd	nd	nd
<i>p</i> -Isopropyltoluene	µg/L	0.2			15	nd	nd	nd	nd
Propachlor	µg/L	0.5			16	nd	nd	nd	nd
Pyrene	µg/L	0.5			11	nd	nd	nd	nd
<i>sec</i> -Butylbenzene	µg/L	0.5			15	nd	nd	nd	nd
<i>tert</i> -Amyl Methyl Ether (TAME)	µg/L	3			15	nd	nd	nd	nd
<i>tert</i> -Butyl Alcohol (TBA)	µg/L	2			15	nd	nd	nd	nd
<i>tert</i> -Butylbenzene	µg/L	0.5			15	nd	nd	nd	nd
<i>trans</i> -1,3-Dichloropropene	µg/L	0.5			15	nd	nd	nd	nd
Trifluralin	µg/L	0.5			11	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) The sampling points summarized are: BD3, CED3, CHC3, CON3, PZC3, SDR2b, SDR3, BAR4, KIM4, SNC4, SNC5, BMD1, WCH1.

(2) State MCL and MCLG values may be more stringent than federal standards for treated water.

(3) Trace metals samples were filtered before analysis. The results reflect dissolved trace metals.

(4) Lead and Copper Rule Action Level.

nd: non-detect at State DLR or MDL if DLR not available