Summary of Raw Water Quality*
Otay Cottonwood System Streams[1] 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	228	147	14100	3920	1640
pH				6.5-8.5	228	6.47	8.65	7.76	7.77
Total Dissolved Solids	mg/L	10		1000	206	193	8820	2430	841
Total Suspended Solids	mg/L	1			208	1	237	7.56	2.7
Microbiological									
E. Coli	/100 mL				185	10	4100	317	100
Enterococcus	/100 mL				185	1	2400	468	140
Total Coliform	/100 mL				185	8	240000	24500	11000
Metals[3]									
Aluminum	µg/L	50	1000	200	20	nd	255	55.1	nd
Aluminum, Dissolved	µg/L				20	nd	94.2	13.7	4.16
Antimony	µg/L	6	6		22	nd	nd	nd	nd
Antimony, Dissolved	µg/L				22	nd	1.75	nd	nd
Arsenic	µg/L	2	10		22	nd	33.1	13	14.8
Arsenic, Dissolved	µg/L				22	nd	31.2	12.7	15.5
Barium	µg/L	100	1000		19	nd	508	186	179
Barium, Dissolved	µg/L				20	39.1	675	197	159
Beryllium	µg/L	1	4		19	nd	nd	nd	nd
Beryllium, Dissolved	µg/L				20	nd	nd	nd	nd
Boron	µg/L	100			18	nd	944	327	187
Boron, Dissolved	µg/L				20	53.5	843	345	289
Cadmium	µg/L	1	5		21	nd	nd	nd	nd
Cadmium, Dissolved	µg/L				22	nd	nd	nd	nd
Chromium	µg/L	10	50		19	nd	nd	nd	nd
Chromium, Dissolved	µg/L				20	nd	1.99	nd	nd
Copper	µg/L	50	1300[4]	1000	22	nd	66.3	nd	nd
Copper, Dissolved	µg/L				22	nd	514	62.4	13.7
Lead	µg/L	5	15[4]		21	nd	nd	nd	nd
Lead, Dissolved	µg/L				22	nd	12.5	1.25	nd
Manganese	µg/L	20		50	19	nd	1140	151	48.4
Manganese, Dissolved	µg/L				20	3.72	318	58	45.9
Nickel	µg/L	10	100		20	nd	20.8	nd	nd
Nickel, Dissolved	µg/L				20	nd	24.5	7.81	7.02
Selenium	µg/L	5	50		22	nd	36.4	17.2	17.7
Selenium, Dissolved	µg/L				22	nd	37.2	16.8	17.2
Silver	µg/L	10		100	22	nd	nd	nd	nd
Silver, Dissolved	µg/L				13	nd	nd	nd	nd
Thallium	µg/L	1	2		21	nd	nd	nd	nd
Thallium, Dissolved	µg/L				22	nd	nd	nd	nd
Vanadium	µg/L	3			20	nd	103	32.9	16.7
Vanadium, Dissolved	µg/L				20	nd	97.2	30.4	17.4
Zinc	µg/L	50		5000	21	nd	nd	nd	nd
Zinc, Dissolved	µg/L				22	nd	37.1	8.03	nd
Inorganic Constituents									
Ammonia-N	mg/L	0.031			188	nd	1.76	0.03	nd
Nitrate (NO3)	mg/L	2	45		192	nd	103	22.7	4.66
Nitrite (NO2)	mg/L	1.31	3.29		193	nd	nd	nd	nd
Phosphate, Ortho (as PO4)	mg/L	0.2			185	nd	1.02	nd	nd
Phosphorus	mg/L	0.078			185	nd	0.474	nd	nd
Total Nitrogen	mg/L	0.156			184	nd	29.4	5.47	1.48
Organic Constituents Regulated									
1,1,1-Trichloroethane (1,1,1-TCA)	µg/L	0.5	200		17	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	µg/L	0.5	1		17	nd	nd	nd	nd
1,1,2-Trichloroethane (1,1,2-TCA)	µg/L	0.5	5		17	nd	nd	nd	nd
1,1-Dichloroethane (1,1-DCA)	µg/L	0.5	5		17	nd	nd	nd	nd
1,1-Dichloroethylene (1,1-DCE)	µg/L	0.5	6		17	nd	nd	nd	nd
1,2,4-Trichlorobenzene	µg/L	0.5	5		17	nd	nd	nd	nd
1,2-Dichlorobenzene (*o* -DCB)	µg/L	0.5	600		17	nd	nd	nd	nd
1,2-Dichloroethane (1,2-DCA)	µg/L	0.5	0.5		17	nd	nd	nd	nd
1,2-Dichloropropane	µg/L	0.5	5		17	nd	nd	nd	nd
1,4-Dichlorobenzene (*p* -DCB)	µg/L	0.5	5		17	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		17	nd	nd	nd	nd
Benzo(a)pyrene	µg/L	0.1	0.2		11	nd	nd	nd	nd
Bromodichloromethane	µg/L	1			17	nd	nd	nd	nd
Bromoform	µg/L	1			17	nd	nd	nd	nd
Carbofuran (FURADAN)	µg/L	5	18		14	nd	nd	nd	nd
Carbon Tetrachloride	µg/L	0.5	0.5		17	nd	nd	nd	nd
Chlordane	µg/L	0.1	0.1		7	nd	nd	nd	nd
Chloroform (Trichloromethane)	µg/L	1			17	nd	nd	nd	nd
cis -1,2-Dichloroethylene (*c* -1,2-DCE)	µg/L	0.5	6		17	nd	nd	nd	nd
Di(2-ethylhexyl) adipate	µg/L	5	400		11	nd	nd	nd	nd
Dibromochloromethane	µg/L	1			17	nd	nd	nd	nd
Dibromochloropropane (DBCP)	µg/L	0.01	0.2		24	nd	nd	nd	nd
Dichloromethane (Methylene Chloride)	µg/L	0.5	5		17	nd	nd	nd	nd
Diethylhexylphthalate (DEHP)	µg/L	3	4		11	nd	8.67	nd	nd
Endrin	µg/L	0.1	2		20	nd	nd	nd	nd
Ethyl Benzene	µg/L	0.5	300		17	nd	nd	nd	nd
Ethylene Dibromide (EDB)	µg/L	0.02	0.05		26	nd	nd	nd	nd
Heptachlor	µg/L	0.01	0.01		9	nd	nd	nd	nd
Heptachlor Epoxide	µg/L	0.01	0.01		9	nd	nd	nd	nd
Hexachlorobenzene	µg/L	0.5	1		20	nd	nd	nd	nd

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			MCL	SMCL		Min	Max	Mean	Median
Hexachlorocyclopentadiene	µg/L	1	50		17	nd	nd	nd	nd
Lindane (gamma-BHC)	µg/L	0.2	0.2		9	nd	nd	nd	nd
m,p- Xylene	µg/L	0.5			17	nd	nd	nd	nd
Methoxychlor	µg/L	10	30		20	nd	nd	nd	nd
Methyl-*tert*-butyl ether (MTBE)	µg/L	3	13	5	17	nd	nd	nd	nd
Molinate (ORDRAM)	µg/L	2	20		8	nd	nd	nd	nd
Monochlorobenzene (Chlorobenzene)	µg/L	0.5	70		17	nd	nd	nd	nd
Oxamyl (Vydate)	µg/L	20	50		14	nd	nd	nd	nd
o-Xylene	µg/L	0.5			17	nd	nd	nd	nd
Polychlorinated Biphenyls, Total, as DCB	µg/L	0.5	0.5		4	nd	nd	nd	nd
Simazine (PRINCEP)	µg/L	1	4		11	nd	nd	nd	nd
Styrene	µg/L	0.5	100		17	nd	nd	nd	nd
Tetrachloroethylene (PCE)	µg/L	0.5	5		17	nd	nd	nd	nd
Thiobencarb (BOLERO)	µg/L	1	70	1	11	nd	nd	nd	nd
Toluene	µg/L	0.5	150		17	nd	nd	nd	nd
Total Organic Carbon (TOC)	mg/L	0.3			207	1.1	23.2	6.49	6.58
Total Xylenes (*m* ,*p* , & *o*)	µg/L		1750		17	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		17	nd	nd	nd	nd
Trichloroethylene (TCE)	µg/L	0.5	5		17	nd	nd	nd	nd
Trichlorofluoromethane (FREON 11)	µg/L	5	150		17	nd	nd	nd	nd
Trichlorotrifluoroethane (FREON 113)	µg/L	10	1200		17	nd	nd	nd	nd
Vinyl Chloride (VC)	µg/L	0.5	0.5		17	nd	nd	nd	nd
Organic Constituents Unregulated									
1,1,1,2-Tetrachloroethane	µg/L	0.5			17	nd	nd	nd	nd
1,1-Dichloropropene	µg/L	0.5			17	nd	nd	nd	nd
1,2,3-Trichlorobenzene	µg/L	0.5			17	nd	nd	nd	nd
1,2,4-Trimethylbenzene	µg/L	0.4			17	nd	nd	nd	nd
1,3,5-Trimethylbenzene	µg/L	0.5			17	nd	nd	nd	nd
1,3-Dichlorobenzene (*m*-DCB)	µg/L	0.5			17	nd	nd	nd	nd
1,3-Dichloropropane	µg/L	0.5			17	nd	nd	nd	nd
2,2-Dichloropropane	µg/L	0.5			17	nd	nd	nd	nd
2-Chlorotoluene	µg/L	0.5			17	nd	nd	nd	nd
3-Hydroxycarbofuran	µg/L	3			14	nd	nd	nd	nd
4-Chlorotoluene	µg/L	0.5			17	nd	nd	nd	nd
Acenaphthylene	µg/L	5			7	nd	nd	nd	nd
Aldicarb (TEMIK)	µg/L	3			14	nd	nd	nd	nd
Aldicarb sulfone	µg/L	4			14	nd	nd	nd	nd
Aldicarb sulfoxide	µg/L	3			14	nd	nd	nd	nd
Aldrin	µg/L	0.075			9	nd	nd	nd	nd
Anthracene	µg/L	5			11	nd	nd	nd	nd
Baygon	µg/L	0.4			14	nd	nd	nd	nd
Benzo (a) Anthracene	µg/L	10			11	nd	nd	nd	nd
Benzo (b) Fluoranthene	µg/L	10			11	nd	nd	nd	nd
Benzo (g,h,i) Perylene	µg/L	10			10	nd	nd	nd	nd
Benzo (k) Fluoranthene	µg/L	10			11	nd	nd	nd	nd
Benzyl Butyl Phthalate	µg/L	10			11	nd	nd	nd	nd
Bromobenzene	µg/L	0.5			17	nd	nd	nd	nd
Bromochloromethane	µg/L	0.5			17	nd	nd	nd	nd
Bromomethane (Methyl Bromide)	µg/L	0.5			17	nd	nd	nd	nd
Carbaryl (Sevin)	µg/L	5			14	nd	nd	nd	nd
Chloroethane	µg/L	0.5			17	nd	nd	nd	nd
Chloromethane (Methyl Chloride)	µg/L	0.5			17	nd	nd	nd	nd
Chrysene	µg/L	5			11	nd	nd	nd	nd
cis-1,3-Dichloropropene	µg/L	0.5			17	nd	nd	nd	nd
Dibenzo (a,h) anthracene	µg/L	5			11	nd	nd	nd	nd
Dibromomethane	µg/L	0.5			17	nd	nd	nd	nd
Dichlorodifluoromethane (Freon 12)	µg/L	0.5			17	nd	nd	nd	nd
Dieldrin	µg/L	0.02			9	nd	nd	nd	nd
Diethylphthalate	µg/L	5			11	nd	nd	nd	nd
Diisopropyl Ether (DIPE)	µg/L	3			17	nd	nd	nd	nd
Dimethylphthalate	µg/L	5			8	nd	nd	nd	nd
di-*n*-Butylphthalate	µg/L	5			11	nd	nd	nd	nd
Ethyl-*tert*-butyl ether (ETBE)	µg/L	3			17	nd	nd	nd	nd
Fluorene	µg/L	5			11	nd	nd	nd	nd
Hexachlorobutadiene	µg/L	0.5			17	nd	nd	nd	nd
Indeno (1,2,3-cd) Pyrene	µg/L	10			9	nd	nd	nd	nd
Isopropylbenzene (Cumene)	µg/L	0.5			17	nd	nd	nd	nd
Methiocarb	µg/L	0.4			15	nd	nd	nd	nd
Methomyl	µg/L	2			14	nd	nd	nd	nd
Naphthalene	µg/L	0.5			25	nd	nd	nd	nd
n-Butylbenzene	µg/L	0.5			17	nd	nd	nd	nd
n-Propylbenzene	µg/L	0.5			17	nd	nd	nd	nd
Phenanthrene	µg/L	5			11	nd	nd	nd	nd
p-Isopropyltoluene	µg/L	0.2			17	nd	nd	nd	nd
Propachlor	µg/L	0.5			20	nd	nd	nd	nd
Pyrene	µg/L	0.5			11	nd	nd	nd	nd
sec-Butylbenzene	µg/L	0.5			17	nd	nd	nd	nd
tert-Amyl Methyl Ether (TAME)	µg/L	3			17	nd	nd	nd	nd
tert-Butyl Alcohol (TBA)	µg/L	2			17	nd	nd	nd	nd
tert-Butylbenzene	µg/L	0.5			17	nd	nd	nd	nd
trans-1,3-Dichloropropene	µg/L	0.5			17	nd	nd	nd	nd
Trifluralin	µg/L	0.5			11	nd	nd	nd	nd

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Parameters	Units	DLR**/MDL	Drinking Water Standards[2]		No. of Samples	Raw Water Quality			
			MCL	SMCL		Min	Max	Mean	Median

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: JAM4, PVR2, RHR2, UOR1, PVC5, WLC4, LAP4, PVC1, CWD4b, KTC4, MOR3.
(2) State MCL and MCLG values may be more stringent then 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