

Appendix 5.8 - Summary of Raw Water Quality Otay Cottonwood System Streams¹ 2011-2015

Parameters	Units	DLR*/MD L	Drinking Water Standards ²		No. of Samples	Raw Water Quality**			
			MCL	SMCL		Min	Max	Mean	Median
General Physical									
Conductivity	US/CM			1600	162	122	12100	5320	5820
pH	PH				147	6.58	9.05	7.71	7.75
Total Dissolved Solids	MG/L	50		1000	150	378	8270	3330	3450
Total Suspended Solids (TSS)	MG/L	10			151	1	136	8.84	4.3
Microbiological									
			MCL	SMCL		Min	Max	Mean	Median
Enterococcus	/100 ML				157	1	>2400	831	610
Escherichia Coli	/100 ML				157	<10	52000	1030	200
Total Coliform	/100 ML				157	740	>240000	44490	23000
Metals³									
			MCL	SMCL		Min	Max	Mean	Median
Aluminum (Al)	UG/L	50	1000	200	2	ND	ND	ND	ND
Antimony	UG/L	6	6		2	ND	ND	ND	ND
Arsenic	UG/L	2	10		2	18.6	28.6	23.6	23.6
Barium (Ba)	UG/L	100	1000		2	181	298	240	240
Beryllium	UG/L	1	4		2	ND	ND	ND	ND
Boron	UG/L	100			2	522	623	573	573
Cadmium (Cd)	UG/L	1	5		2	ND	ND	ND	ND
Chromium (Total Cr)	UG/L	10	50		2	ND	ND	ND	ND
Copper (Cu)	UG/L	50	1300	1000	2	ND	ND	ND	ND
Lead (Pb)	UG/L	5	15		2	ND	ND	ND	ND
Manganese (Mn)	UG/L	20		50	2	ND	ND	ND	ND
Nickel	UG/L	10	100		2	ND	13.7	11.5	11.5
Selenium (Se)	UG/L	5	50		2	23.7	33.7	28.7	28.7
Silver	UG/L	10		100	2	ND	ND	ND	ND
Thallium	UG/L	1	2		2	ND	ND	ND	ND
Vanadium	UG/L	3			2	24.5	79	51.8	51.8
Zinc (Zn)	UG/L	50		5000	2	ND	ND	ND	ND
Inorganic Constituents									
			MCL	SMCL		Min	Max	Mean	Median
Ammonia-N	MG/L	0.62			155	ND	2.3	ND	ND
Bromide	MG/L	0.1			49	ND	11.2	4.59	4.44
Chloride	MG/L	10		500	49	109	4910	1920	1750
Fluoride	MG/L	0.1	2		49	0.406	2.2	1.31	1.51
Nitrate (as NO3)	MG/L	4	45		154	ND	84.6	25.6	20.2
Nitrite (NO2)	MG/L	1.31	3.28		155	ND	ND	ND	ND
Phosphate, Ortho (as PO4)	MG/L	0.2			143	ND	0.533	ND	ND
Phosphorus	MG/L	0.39			145	ND	ND	ND	ND
Sulfate (SO4)	MG/L	0.5		500	50	39.9	378	250	312
Total Nitrogen	MG/L	0.78			150	ND	20.6	6.73	5.06
Organic Constituents, Regulated									
			MCL	SMCL		Min	Max	Mean	Median
1,1,1-Trichloroethane (1,1,1-TCA)	UG/L	0.5	200		4	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	UG/L	0.5	1		4	ND	ND	ND	ND
1,1,2-Trichloroethane (1,1,2-TCA)	UG/L	0.5	5		4	ND	ND	ND	ND
1,1-Dichloroethane (1,1-DCA)	UG/L	0.5	5		4	ND	ND	ND	ND
1,1-Dichloroethylene (1,1-DCE)	UG/L	0.5	6		4	ND	ND	ND	ND
1,2,4-Trichlorobenzene	UG/L	0.5	5		4	ND	ND	ND	ND
1,2-Dichlorobenzene (o-DCB)	UG/L	0.5	600		4	ND	ND	ND	ND
1,2-Dichloroethane (1,2-DCA)	UG/L	0.5	0.5		4	ND	ND	ND	ND
1,2-Dichloropropane	UG/L	0.5	5		4	ND	ND	ND	ND
1,4-Dichlorobenzene (p-DCB)	UG/L	0.5	5		4	ND	ND	ND	ND
2,4,5-TP (SILVEX)	UG/L	1	50		4	ND	ND	ND	ND
2,4-D	UG/L	10	70		4	ND	ND	ND	ND
Bentazon (BASAGRAN)	UG/L	2	18		4	ND	ND	ND	ND
Benzene	UG/L	0.5	1		4	ND	ND	ND	ND
Bromodichloromethane	UG/L	1			4	ND	ND	ND	ND

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Bromoform	UG/L	1		4	ND	ND	ND	ND
Carbofuran (FURADAN)	UG/L	5	18	4	ND	ND	ND	ND
Carbon Tetrachloride	UG/L	0.5	0.5	4	ND	ND	ND	ND
Chlorodibromomethane	UG/L	1		4	ND	ND	ND	ND
Chloroform (Trichloromethane)	UG/L	1		4	ND	ND	ND	ND
cis-1,2-Dichloroethylene (c-1,2-DCE)	UG/L	0.5	6	4	ND	ND	ND	ND
Dibromochloropropane (DBCP)	UG/L	0.01	0.2	4	ND	ND	ND	ND
Dichloromethane (Methylene Chloride)	UG/L	0.5	5	4	ND	ND	ND	ND
Dinoseb (DNBP)	UG/L	2	7	4	ND	ND	ND	ND
Ethyl Benzene	UG/L	0.5	300	4	ND	ND	ND	ND
Ethylene Dibromide (EDB)	UG/L	0.02	0.05	4	ND	ND	ND	ND
meta,para xylenes	UG/L	0.5		4	ND	ND	ND	ND
Methyl tert-Butyl Ether (MTBE)	UG/L	3	13	5	4	ND	ND	ND
Monochlorobenzene (Chlorobenzene)	UG/L	0.5	70	4	ND	ND	ND	ND
Oxamyl (Vydate)	UG/L	20	50	4	ND	ND	ND	ND
o-Xylene	UG/L	0.5		4	ND	ND	ND	ND
Pentachlorophenol (PCP)	UG/L	0.2	1	4	ND	ND	ND	ND
Picloram	UG/L	1	500	4	ND	ND	ND	ND
Styrene	UG/L	0.5	100	4	ND	ND	ND	ND
Tetrachloroethylene (PCE)	UG/L	0.5	5	4	ND	ND	ND	ND
Toluene	UG/L	0.5	150	4	ND	ND	ND	ND
Total Organic Carbon (TOC)	MG/L	0.3		157	3.53	15	8.76	8.85
trans-1,2-Dichloroethylene (t-1,2-DCE)	UG/L	0.5	10	4	ND	ND	ND	ND
Trichloroethylene (TCE)	UG/L	0.5	5	4	ND	ND	ND	ND
Trichlorofluoromethane (FREON 11)	UG/L	5	150	4	ND	ND	ND	ND
Trichlorotrifluoroethane (FREON 113)	UG/L	10	1200	4	ND	ND	ND	ND
Vinyl Chloride (VC)	UG/L	0.5	0.5	4	ND	ND	ND	ND
Organic Constituents, Unregulated			MCL	SMCL	Min	Max	Mean	Median
1,1,1,2-Tetrachloroethane	UG/L	0.5		4	ND	ND	ND	ND
1,1-Dichloropropene	UG/L	0.5		4	ND	ND	ND	ND
1,2,3-Trichlorobenzene	UG/L	0.5		4	ND	ND	ND	ND
1,2,4-Trimethylbenzene	UG/L	0.4		4	ND	ND	ND	ND
1,3,5-Trimethylbenzene	UG/L	0.5		4	ND	ND	ND	ND
1,3-Dichlorobenzene (m-DCB)	UG/L	0.5		4	ND	ND	ND	ND
1,3-Dichloropropane	UG/L	0.5		4	ND	ND	ND	ND
2,2-Dichloropropane	UG/L	0.5		4	ND	ND	ND	ND
2,4,5-T	UG/L	3		4	ND	ND	ND	ND
2,4-DB	UG/L	3		4	ND	ND	ND	ND
2-Chlorotoluene	UG/L	0.5		4	ND	ND	ND	ND
3,5-Dichlorobenzoic Acid	UG/L	3		4	ND	ND	ND	ND
3-Hydroxycarbofuran	UG/L	3		4	ND	ND	ND	ND
4-Chlorotoluene	UG/L	0.5		4	ND	ND	ND	ND
4-Nitrophenol	UG/L	5		4	ND	ND	ND	ND
Acifluorfen	UG/L	3		4	ND	ND	ND	ND
Aldicarb (TEMIK)	UG/L	3		4	ND	ND	ND	ND
Aldicarb Sulfone	UG/L	4		4	ND	ND	ND	ND
Aldicarb Sulfoxide	UG/L	3		4	ND	ND	ND	ND
Baygon	UG/L	0.4		4	ND	ND	ND	ND
Bromobenzene	UG/L	0.5		4	ND	ND	ND	ND
Bromochloromethane	UG/L	0.5		4	ND	ND	ND	ND
Bromomethane (Methyl Bromide)	UG/L	0.5		4	ND	ND	ND	ND
Carbaryl (Sevin)	UG/L	5		4	ND	ND	ND	ND
Chloramben	UG/L	3		4	ND	ND	ND	ND
Chloroethane	UG/L	0.5		4	ND	ND	ND	ND

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Chloromethane (Methyl Chloride)	UG/L	0.5		4	ND	ND	ND	ND
cis-1,3-dichloropropene	UG/L	0.5		4	ND	ND	ND	ND
Dibromomethane	UG/L	0.5		4	ND	ND	ND	ND
Dicamba (BANVEL)	UG/L	1.5		4	ND	ND	ND	ND
Dichlorodifluoromethane (Freon 12)	UG/L	0.5		4	ND	ND	ND	ND
Dichloroprop	UG/L	3		4	ND	ND	ND	ND
Diisopropyl Ether (DIPE)	UG/L	3		4	ND	ND	ND	ND
Ethyl-tert-Butyl Ether (ETBE)	UG/L	3		4	ND	ND	ND	ND
Hexachlorobutadiene	UG/L	0.5		4	ND	ND	ND	ND
Isopropylbenzene (Cumene)	UG/L	0.5		4	ND	ND	ND	ND
MCPA	UG/L	3		4	ND	ND	ND	ND
MCPP	UG/L	3		4	ND	ND	ND	ND
Methiocarb	UG/L	0.4		4	ND	ND	ND	ND
Methomyl	UG/L	2		4	ND	ND	ND	ND
Naphthalene	UG/L	0.5		4	ND	ND	ND	ND
n-Butylbenzene	UG/L	0.5		4	ND	ND	ND	ND
n-Propylbenzene	UG/L	0.5		4	ND	ND	ND	ND
p-Isopropyltoluene	UG/L	0.4		4	ND	ND	ND	ND
sec-Butylbenzene	UG/L	0.5		4	ND	ND	ND	ND
tert-Amyl Methyl Ether (TAME)	UG/L	3		4	ND	ND	ND	ND
tert-Butyl Alcohol (TBA)	UG/L	2		4	ND	ND	ND	ND
tert-Butylbenzene	UG/L	0.5		4	ND	ND	ND	ND
trans-1,3-dichloropropene	UG/L	0.5		4	ND	ND	ND	ND

NOTES:

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

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

(1) The sampling points summarized are: JAM4, PVR2, RHR2 AND UOR1

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

(3) Trace metal values were from filtered and unfiltered samples. Differences in values were negligible.