

**Appendix 5.2 - Summary of Raw Water Quality
El Capitan Reservoir @ Surface 2011-2015**

Parameters	Units	DLR*/MD L	Drinking Water Standards ¹		No. of Samples	Raw Water Quality**			
			MCL	SMCL		Min	Max	Mean	Median
General Physical									
Alkalinity, (Total) (as CaCO ₃ equivalents)	MG/L	10			20	113	148	129	126
Calcium Hardness (CaCO ₃)	MG/L	10			19	78.4	108	90.7	90.1
Color, Apparent (Unfiltered)	COLOR	1		15	20	1	16	9.53	10
Corrosivity ²	.				20	-0.11	0.79	0.348	0.37
Hydroxide Alkalinity	MG/L				19	0	0	0	0
MBAS (Foaming Agents)	MG/L	0.04		0.5	5	ND	ND	ND	ND
pH	PH				20	7.65	8.58	8.14	8.18
Specific Conductance (E.C.)	UMHO/CM			1600	20	375	779	589	578
Total Filterable Residue @ 180 C (TDS)	MG/L	10		1000	20	299	412	361	364
Total Hardness (CaCO ₃)	MG/L	10			19	154	204	185	194
Turbidity, Laboratory	NTU	0.07		5	20	0.47	1.25	0.844	0.815
			MCL	SMCL		Min	Max	Mean	Median
Microbiological									
Enterococcus	/100 ML				729	<1	83	1	<1
Escherichia Coli	/100 ML	1			729	<10	31	<10	<10
Total Coliform	/100 ML	1			729	<10	>24000	3692	1200
Total Crypto Oocyst Count	/ L	0.1			9	ND	ND	ND	ND
Total Giardia Cyst Count	/ L	0.1			9	ND	ND	ND	ND
			MCL	SMCL		Min	Max	Mean	Median
Radiologicals									
Gross Alpha	PCI/L	3	15		2	ND	4.96	3.47	3.47
Gross Beta	PCI/L	4	50		1	ND	ND	ND	ND
Uranium	PCI/L	1	20		1	1.3	1.3	1.3	1.3
			MCL	SMCL		Min	Max	Mean	Median
Metals									
Aluminum (Al)	UG/L	50	1000	200	20	ND	57.7	ND	ND
Antimony	UG/L	6	6		20	ND	ND	ND	ND
Arsenic	UG/L	2	10		20	ND	ND	ND	ND
Barium (Ba)	UG/L	100	1000		20	ND	ND	ND	ND
Beryllium	UG/L	1	4		18	ND	ND	ND	ND
Boron	UG/L	100			20	ND	ND	ND	ND
Cadmium (Cd)	UG/L	1	5		20	ND	ND	ND	ND
Calcium (Ca)	MG/L				21	31.4	43.2	36.3	36
Chromium (Total Cr)	UG/L	10	50		20	ND	ND	ND	ND
Chromium, Hexavalent	UG/L	1			6	ND	ND	ND	ND
Copper (Cu)	UG/L	50	1300	1000	20	ND	ND	ND	ND
Iron (Fe)	UG/L	100		300	15	ND	ND	ND	ND
Lead (Pb)	UG/L	5	15		16	ND	ND	ND	ND
Magnesium (Mg)	MG/L				16	17.8	26.9	21.5	20.5
Manganese (Mn)	UG/L	20		50	16	ND	78.5	20.9	ND
Mercury (Hg)	UG/L	1	2		16	ND	ND	ND	ND
Nickel	UG/L	10	100		20	ND	ND	ND	ND
Potassium (K)	MG/L	0.5			19	3.76	5.79	4.77	4.69
Selenium (Se)	UG/L	5	50		20	ND	ND	ND	ND
Silver	UG/L	10		100	20	ND	ND	ND	ND
Sodium (Na)	MG/L	20			19	45.4	68.7	55.6	55.1
Thallium	UG/L	1	2		20	ND	ND	ND	ND
Vanadium	UG/L	3			20	ND	8.16	4.69	4.18
Zinc (Zn)	UG/L	50		5000	20	ND	ND	ND	ND
			MCL	SMCL		Min	Max	Mean	Median
Inorganic Constituents									
Ammonia-N	MG/L	0.031			59	ND	0.132	ND	ND
Asbestos Chrysotile Fibers >10 microns	MFL	0.2	7		1	ND	ND	ND	ND
Bicarbonate (as HCO ₃)	MG/L				21	137	177	156	153
Bromide	MG/L	0.1			20	ND	0.173	ND	0.109
Carbonate (as CO ₃)	MG/L				21	0	5.08	0.8	0
Chloride	MG/L	0.5		500	20	34	150	68.1	62.7
Cyanide	MG/L	100	0.15		4	ND	ND	ND	ND

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Fluoride	MG/L	0.1	2	20	0.163	0.469	0.239	0.233
Nitrate (as NO3)	MG/L	2	45	79	ND	7.36	ND	ND
Nitrite (NO2)	MG/L	1.31	3.42	59	ND	ND	ND	ND
Perchlorate	UG/L	4	6	39	ND	ND	ND	ND
Phosphate, Ortho (as PO4)	MG/L	0.2		20	ND	ND	ND	ND
Phosphorus	MG/L	0.39		73	ND	ND	ND	ND
Silica	MG/L	0.625		20	9.96	17.4	13.7	13.7
Sulfate (SO4)	MG/L	0.5	500	20	17.7	162	73.7	70.1
Total Nitrogen	MG/L	0.78		77	ND	1.01	ND	ND
Organic Constituents, Regulated			MCL	SMCL	Min	Max	Mean	Median
1,1,1-Trichloroethane (1,1,1-TCA)	UG/L	0.5	200	19	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	UG/L	0.5	1	19	ND	ND	ND	ND
1,1,2-Trichloroethane (1,1,2-TCA)	UG/L	0.5	5	19	ND	ND	ND	ND
1,1-Dichloroethane (1,1-DCA)	UG/L	0.5	5	19	ND	ND	ND	ND
1,1-Dichloroethylene (1,1-DCE)	UG/L	0.5	6	19	ND	ND	ND	ND
1,2,4-Trichlorobenzene	UG/L	0.5	5	19	ND	ND	ND	ND
1,2-Dichlorobenzene (o-DCB)	UG/L	0.5	600	19	ND	ND	ND	ND
1,2-Dichloroethane (1,2-DCA)	UG/L	0.5	0.5	19	ND	ND	ND	ND
1,2-Dichloropropane	UG/L	0.5	5	19	ND	ND	ND	ND
1,4-Dichlorobenzene (p-DCB)	UG/L	0.5	5	19	ND	ND	ND	ND
2,3,7,8-tetra CDD	UG/L	0.000005	0.00003	1	ND	ND	ND	ND
2,4,5-TP (SILVEX)	UG/L	1	50	20	ND	ND	ND	ND
2,4-D	UG/L	10	70	20	ND	ND	ND	ND
Alachlor (ALANEX)	UG/L	1	2	18	ND	ND	ND	ND
Atrazine (AATREX)	UG/L	0.5	1	18	ND	ND	ND	ND
Bentazon (BASAGRAN)	UG/L	2	18	20	ND	ND	ND	ND
Benzene	UG/L	0.5	1	19	ND	ND	ND	ND
Benzo(a)pyrene	UG/L	0.1	0.2	16	ND	ND	ND	ND
Bromodichloromethane	UG/L	1		19	ND	ND	ND	ND
Bromoform	UG/L	1		19	ND	ND	ND	ND
Carbofuran (FURADAN)	UG/L	5	18	20	ND	ND	ND	ND
Carbon Tetrachloride	UG/L	0.5	0.5	19	ND	ND	ND	ND
Chlordane	UG/L	0.1	0.1	3	ND	ND	ND	ND
Chlorodibromomethane	UG/L	1		19	ND	ND	ND	ND
Chloroform (Trichloromethane)	UG/L	1		19	ND	ND	ND	ND
cis-1,2-Dichloroethylene (c-1,2-DCE)	UG/L	0.5	6	19	ND	ND	ND	ND
Dalapon	UG/L	10	200	1	ND	ND	ND	ND
Di(2-ethylhexyl) Adipate	UG/L	5	400	18	ND	ND	ND	ND
Di(2-ethylhexyl)phthalate (DEHP)	UG/L	3	4	18	ND	ND	ND	ND
Dibromoacetic Acid (DBAA)	UG/L	1		1	ND	ND	ND	ND
Dibromochloropropane (DBCP)	UG/L	0.01	0.2	22	ND	ND	ND	ND
Dichloroacetic Acid (DCAA)	UG/L	1		1	ND	ND	ND	ND
Dichloromethane (Methylene Chloride)	UG/L	0.5	5	19	ND	ND	ND	ND
Dinoseb (DNBP)	UG/L	2	7	20	ND	ND	ND	ND
Diquat	UG/L	4	20	1	ND	ND	ND	ND
Endothall	UG/L	45	100	2	ND	ND	ND	ND
Endrin	UG/L	0.1	2	21	ND	ND	ND	ND
Ethyl Benzene	UG/L	0.5	300	19	ND	ND	ND	ND
Ethylene Dibromide (EDB)	UG/L	0.02	0.05	22	ND	ND	ND	ND
Glyphosate	UG/L	25	700	18	ND	ND	ND	ND
Haloacetic Acids (five) (HAA5)	UG/L	1	60	1	ND	ND	ND	ND
Heptachlor	UG/L	0.01	0.01	3	ND	ND	ND	ND
Heptachlor Epoxide	UG/L	0.01	0.01	3	ND	ND	ND	ND
Hexachlorobenzene	UG/L	0.5	1	21	ND	ND	ND	ND
Hexachlorocyclopentadiene	UG/L	1	50	20	ND	ND	ND	ND
Lindane (gamma-BHC)	UG/L	0.2	0.2	3	ND	ND	ND	ND
meta,para xylenes	UG/L	0.5		19	ND	ND	ND	ND

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Methoxychlor	UG/L	10	30	21	ND	ND	ND	ND
Methyl tert-Butyl Ether (MTBE)	UG/L	3	13	5	19	ND	ND	ND
Molinate (ORDRAM)	UG/L	2	20	17	ND	ND	ND	ND
Monobromoacetic Acid (MBAA)	UG/L	1		1	ND	ND	ND	ND
Monochloroacetic Acid (MCAA)	UG/L	2		1	ND	ND	ND	ND
Monochlorobenzene (Chlorobenzene)	UG/L	0.5	70	19	ND	ND	ND	ND
Oxamyl (Vydate)	UG/L	20	50	20	ND	ND	ND	ND
o-Xylene	UG/L	0.5		19	ND	ND	ND	ND
Pentachlorophenol (PCP)	UG/L	0.2	1	20	ND	ND	ND	ND
Picloram	UG/L	1	500	20	ND	ND	ND	ND
Polychlorinated Biphenyls, Total, as DCB	UG/L	0.5	0.5	15	ND	ND	ND	ND
Simazine (PRINCEP)	UG/L	1	4	17	ND	ND	ND	ND
Styrene	UG/L	0.5	100	19	ND	ND	ND	ND
Tetrachloroethylene (PCE)	UG/L	0.5	5	19	ND	ND	ND	ND
Thiobencarb (BOLERO)	UG/L	1	70	1	18	ND	ND	ND
Toluene	UG/L	0.5	150	19	ND	ND	ND	ND
Total Organic Carbon (TOC)	MG/L	0.3		48	4.9	6.88	5.62	5.55
Total Toxaphene	UG/L	1	3	3	ND	ND	ND	ND
Total Trihalomethanes (TTHMs)	UG/L	0.5	80	1	ND	ND	ND	ND
trans-1,2-Dichloroethylene (t-1,2-DCE)	UG/L	0.5	10	19	ND	ND	ND	ND
Trichloroacetic Acid (TCAA)	UG/L	1		1	ND	ND	ND	ND
Trichloroethylene (TCE)	UG/L	0.5	5	19	ND	ND	ND	ND
Trichlorofluoromethane (FREON 11)	UG/L	5	150	19	ND	ND	ND	ND
Trichlorotrifluoroethane (FREON 113)	UG/L	10	1200	19	ND	ND	ND	ND
Vinyl Chloride (VC)	UG/L	0.5	0.5	19	ND	ND	ND	ND
Organic Constituents, Unregulated			MCL	SMCL	Min	Max	Mean	Median
1,1,1,2-Tetrachloroethane	UG/L	0.5		19	ND	ND	ND	ND
1,1-Dichloropropene	UG/L	0.5		19	ND	ND	ND	ND
1,2,3-Trichlorobenzene	UG/L	0.5		19	ND	ND	ND	ND
1,2,4-Trimethylbenzene	UG/L	0.4		19	ND	ND	ND	ND
1,3,5-Trimethylbenzene	UG/L	0.5		19	ND	ND	ND	ND
1,3-Dichlorobenzene (m-DCB)	UG/L	0.5		19	ND	ND	ND	ND
1,3-Dichloropropane	UG/L	0.5		19	ND	ND	ND	ND
2,2-Dichloropropane	UG/L	0.5		19	ND	ND	ND	ND
2,4,5-T	UG/L	3		20	ND	ND	ND	ND
2,4-DB	UG/L	3		20	ND	ND	ND	ND
2-Chlorotoluene	UG/L	0.5		19	ND	ND	ND	ND
2-Methylisoborneol	NG/L	5		229	ND	55	ND	ND
3,5-Dichlorobenzoic Acid	UG/L	3		20	ND	ND	ND	ND
3-Hydroxycarbofuran	UG/L	3		20	ND	ND	ND	ND
4-Chlorotoluene	UG/L	0.5		19	ND	ND	ND	ND
4-Nitrophenol	UG/L	5		20	ND	ND	ND	ND
Acenaphthylene	UG/L	5		16	ND	ND	ND	ND
Acifluorfen	UG/L	3		20	ND	ND	ND	ND
Aldicarb (TEMIK)	UG/L	3		20	ND	ND	ND	ND
Aldicarb Sulfone	UG/L	4		20	ND	ND	ND	ND
Aldicarb Sulfoxide	UG/L	3		20	ND	ND	ND	ND
Aldrin	UG/L	0.075		3	ND	ND	ND	ND
Anthracene	UG/L	5		16	ND	ND	ND	ND
Baygon	UG/L	0.4		20	ND	ND	ND	ND
Benzo (a) Anthracene	UG/L	10		18	ND	ND	ND	ND
Benzo (b) Fluoranthene	UG/L	10		16	ND	ND	ND	ND
Benzo (ghi) Perylene	UG/L	10		16	ND	ND	ND	ND
Benzo (k) Fluoranthene	UG/L	10		16	ND	ND	ND	ND
Benzyl Butyl Phthalate	UG/L	10		18	ND	ND	ND	ND
Bromobenzene	UG/L	0.5		19	ND	ND	ND	ND
Bromochloromethane	UG/L	0.5		19	ND	ND	ND	ND

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Bromomethane (Methyl Bromide)	UG/L	0.5		19	ND	ND	ND	ND
Carbaryl (Sevin)	UG/L	5		20	ND	ND	ND	ND
Chloramben	UG/L	3		20	ND	ND	ND	ND
Chloroethane	UG/L	0.5		19	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	UG/L	0.5		19	ND	ND	ND	ND
Chrysene	UG/L	5		18	ND	ND	ND	ND
cis-1,3-dichloropropene	UG/L	0.5		19	ND	ND	ND	ND
Dibenzo (a,h) anthracene	UG/L	5		16	ND	ND	ND	ND
Dibromomethane	UG/L	0.5		19	ND	ND	ND	ND
Dicamba (BANVEL)	UG/L	1.5		20	ND	ND	ND	ND
Dichlorodifluoromethane (Freon 12)	UG/L	0.5		19	ND	ND	ND	ND
Dichloroprop	UG/L	3		20	ND	ND	ND	ND
Dieldrin	UG/L	0.02		3	ND	ND	ND	ND
Diethylphthalate	UG/L	5		18	ND	ND	ND	ND
Diisopropyl Ether (DIPE)	UG/L	3		19	ND	ND	ND	ND
Dimethyl phthalate	UG/L	5		17	ND	ND	ND	ND
di-n-Butylphthalate	UG/L	5		19	ND	ND	ND	ND
Ethyl-tert-Butyl Ether (ETBE)	UG/L	3		19	ND	ND	ND	ND
Fluorene	UG/L	5		18	ND	ND	ND	ND
Geosmin	NG/L	5		229	ND	55	ND	ND
Hexachlorobutadiene	UG/L	0.5		19	ND	ND	ND	ND
Indeno (1,2,3-cd) Pyrene	UG/L	10		16	ND	ND	ND	ND
Isopropylbenzene (Cumene)	UG/L	0.5		19	ND	ND	ND	ND
MCPA	UG/L	3		20	ND	ND	ND	ND
MCPPE	UG/L	3		20	ND	ND	ND	ND
Methiocarb	UG/L	0.4		20	ND	ND	ND	ND
Methomyl	UG/L	2		20	ND	ND	ND	ND
Naphthalene	UG/L	0.5		36	ND	ND	ND	ND
n-Butylbenzene	UG/L	0.5		19	ND	ND	ND	ND
n-Propylbenzene	UG/L	0.5		19	ND	ND	ND	ND
Paraquat	UG/L	20		1	ND	ND	ND	ND
PCB-1016 (as DCB)	UG/L	0.5	0.5	18	ND	ND	ND	ND
PCB-1221 (as DCB)	UG/L	0.5	0.5	18	ND	ND	ND	ND
PCB-1232 (as DCB)	UG/L	0.5	0.5	18	ND	ND	ND	ND
PCB-1242 (as DCB)	UG/L	0.5	0.5	18	ND	ND	ND	ND
PCB-1248 (as DCB)	UG/L	0.5	0.5	18	ND	ND	ND	ND
PCB-1254 (as DCB)	UG/L	0.5	0.5	18	ND	ND	ND	ND
PCB-1260 (as DCB)	UG/L	0.5	0.5	18	ND	ND	ND	ND
Phenanthrene	UG/L	5		18	ND	ND	ND	ND
p-Isopropyltoluene	UG/L	0.4		19	ND	ND	ND	ND
Propachlor	UG/L	0.5		21	ND	ND	ND	ND
Pyrene	UG/L	0.5		18	ND	ND	ND	ND
sec-Butylbenzene	UG/L	0.5		19	ND	ND	ND	ND
tert-Amyl Methyl Ether (TAME)	UG/L	3		19	ND	ND	ND	ND
tert-Butyl Alcohol (TBA)	UG/L	2		19	ND	ND	ND	ND
tert-Butylbenzene	UG/L	0.5		19	ND	ND	ND	ND
trans-1,3-dichloropropene	UG/L	0.5		19	ND	ND	ND	ND
Trifluralin	UG/L	0.5		18	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) 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.

ND: not detected