Table 19 - Proposed Brine Line
Comparison of Projected Water Quality Constituents to California Water Quality Criteria

Constituent	Units	Project Brine Line			California Toxics Rule Criteria Enclosed Bays & Estuaries				California Ocean Plan					
						Salt Water Aquatic Life Protection				Marine Aquatic Life Protection				
		Mean Concentration	90th Percentile Concentration Values	90th Percentile Concentration & Flows	Human Health (30-day Average)	Continuous Concentration (4-day Average)	Maximum Concentration (1-hour Average)	Instantaneous Maximum	Human Health* (30-day Average)	6-Month Median	30-Day Average	7-Day Average	Daily Maximum	Instaneous Maximum
General Constituents														
Ammonia as Nitrogen	mg/l	**3.523**	**4.824**	**4.819**						**0.6 (89)**			**2.4 (89)**	60.0 (89)
Ammonia w/ Nitrification	mg/l	0.6	1.13	1.17										
Boron	mg/l	0.63	0.67	0.67										
BOD	mg/l	6	9	9										
COD	mg/l	11	17	19										
Chloride	mg/l	192	206	204										
Chlorine Residual	µg/L	5.069	9.072	8.897										
Oil and Grease	mg/l	3.118	3.119	3.079							25.0 (117)	40.0 (117)		75.0 (117)
Settleable solids	ml/l	0.061	0.061	0.06							1.0 (117)	1.5 (117)		3.0 (117)
Sodium	mg/l	141	152	150										
Sulfate	mg/l	258	308	299										
Total dissolved solids (TDS)	mg/l	1,153	1,234	1,204										
TSS	mg/l	5.298	5.754	5.680										
Turbidity	NTU	2.5	4.1	4.1							75 (117)	100 (117)		225 (117)
pH	---	7.05	7.14	7.15										6 to 9 units (30,117)
Miscellaneous Compounds														
Chlorinated phenols	µg/L	**1.174**	**1.174**	**1.170**						**1**			4	10
Halomethanes	µg/L	0.624	2.429	2.283					130 # (13)					
PAHs	µg/L	**0.077**	**0.089**	**0.089**					**0.0088 # (33)**					
Phenol	µg/L	1.924	1.923	1.916	4,600,000					30 (86)			120 (86)	300 (86)
2,3,7,8-TCDD (Dioxin)	µg/L	5.64E-13	5.64E-13	5.63E-13	0.000000014 #(113,144)				0.0000000039 # (76)					
Tributyltin	µg/L	**0.002675**	**0.002268**	**0.002224**					**0.0014**					
Bacteria Characteristics														
Total Coliform	MPN/100 mL	2	2	2							1000**			10000
Fecal Coliform	MPN/100 mL	2	6	6							200**			400
Metals														
Antimony	µg/L	1.203	1.909	1.849	4,300 (2)				1,200					
Arsenic	µg/L	2.620	3.871	3.709		36 (1,142)	69 (1,142)			8			32	80
Beryllium	µg/L	0.062	0.062	0.062					0.033 #					
Cadmium	µg/L	0.257	0.332	0.324		9.3 (1,142)	42 (1,142)			1			4	10
Chromium (III)	µg/L	3.224	4.459	4.336					190,000					
Chromium (VI)	µg/L	1.937	**2.103**	**2.049**		50 (1,142)	1100 (1,142)			**2 (12)**			8 (12)	20 (12)
Copper	µg/L	**10.022**	**14.867**	**14.874**		**3.1 (1,142)**	**4.8 (1,142)**			3			12	30
Cyanide	µg/L	**1.798**	**2.294**	**2.283**	220,000 (142)	**1 (142,143)**	**1 (142,143)**			**1**			4	10
Lead	µg/L	**2.143**	**2.677**	**2.657**		8.1 (1,142)	210 (1,142)			**2**			8	20
Mercury (total)	µg/L	**0.172**	**0.124**	**0.124**	0.051 (2,142)					**0.04**			**0.16**	0.4
Nickel	µg/L	**5.502**	**6.569**	**6.495**	4,600 (2,142)	8.2 (1,142)	74 (1,142)			**5**			20	50
Selenium	µg/L	2.192	2.426	2.296		71 (1,142)	290 (1,142)			15			60	150
Silver	µg/L	0.084	0.124	0.123			1.9 (1,142)			0.7			2.8	7
Thallium	µg/L	0.680	0.163	0.156	6.3 (2,143)				2					
Zinc	µg/L	48.218	57.777	57.478		81 (1,142)	90 (1,142)			**20**			80	200
Pesticides														
Aldrin	µg/l	**0.0040**	**0.0040**	**0.0039**	**0.00014 # (113)**			1.3	**0.000022 #**					
Chlordane	µg/L	**0.0028**	**0.0028**	**0.0028**	**0.00059 # (113)**	0.004 (114)		0.09	**0.000023 # (81)**					
DDT	µg/L	**0.0244**	**0.0247**	**0.0242**	0.00059 # (113)	**0.001 (114)**		0.13	**0.00017 # (50)**					
Dieldrin	µg/L	**0.0023**	**0.0023**	**0.0023**	**0.00014 # (113)**	**0.0019 (114)**		0.71	**0.00004 #**					
Endosulfan	µg/L	**0.0131**	**0.0202**	**0.0203**	240 (115)	**0.0087 (114,115)**		0.034 (115)		**0.009 (42)**			**0.018 (42)**	0.027 (42)
Endrin	µg/L	**0.0021**	**0.0021**	0.0020	0.81 (18)	0.0023 (114)		0.037		**0.002**			0.004	0.006
Heptachlor	µg/L	**0.0037**	**0.0037**	**0.0036**	**0.00021 # (113)**	0.0036 (114)		0.053	**0.00005 #**					
Heptachlor epoxide	µg/L	**0.0035**	**0.0036**	**0.0034**	**0.00011 # (113)**	0.0036 (114)		0.053	**0.00002 #**					
Alpha-Hexachlorocyclohexane	µg/L	0.0039	0.0039	0.0037	0.013 # (113)					0.004 (43)			0.008 (43)	0.012 (43)
Beta-Hexachlorocyclohexane					0.046 # (113)					0.004 (43)			0.008 (43)	0.012 (43)
Gamma-Hexachlorocyclohexane (Lindane)					0.063 # (113)			0.16		0.004 (43)			0.008 (43)	0.012 (43)
Delta-Hexachlorocylohexane										0.004 (43)			0.008 (43)	0.012 (43)
PCBs	µg/L	**3.8806**	**10.9561**	**10.9588**	**0.00017 # (113)**	**0.03 (114,116)**			**0.000019 # (118)**					
Toxaphene	µg/L	**0.1504**	**0.1665**	**0.1644**	**0.00075 # (113)**	**0.0002**	0.21		**0.00021 #**					
Volatile Organic Compounds (VOCs)														
1,1,1-Trichloroethane	µg/L	0.2290	0.2396	0.2334					540,000					
1,1,2,2-Tetrachloroethane	µg/L	0.2304	0.2320	0.2254	11 # (113,143)				2.3 #					
1,1,2-Trichloroethane	µg/L	0.2371	0.2392	0.2329	42 # (113,143)				9.4 #					
1,1-Dichloroethylene	µg/L	0.2224	0.2316	0.2250	3.2 # (113,143)				0.9 #					
1,2-Dichloroethane	µg/L	0.2084	0.2098	0.2032	99 # (113,143)				28 #					
1,3-Dichloropropene	µg/L	0.1929	0.1855	0.1783	1,700 (143)				8.9 #					
1,4-Dichlorobenzene	µg/L	0.1720	0.2080	0.2017	2,600				18 #					
Acrolein	µg/L	2.0170	2.1031	2.0385	780 (143)				220					
Acrylonitrile	µg/L	**0.7440**	**0.7666**	**0.7408**	**0.66 # (113,143)**				**0.1 #**					
Benzene	µg/L	0.2245	0.2266	0.2206	71 # (113)				5.9 #					
Carbon tetrachloride	µg/L	0.3293	0.4694	0.4637	4.4 # (113,143)				0.9 #					
Chlorobenzene	µg/L	0.2122	0.2197	0.2135	21,000 (143)				570					
Dibromochloromethane	µg/L	4.4329	6.9577	7.2406	34 # (113)				8.6 #					
Chloroform	µg/L	5.5599	8.9933	9.2222					130 #					
Dichloromethane	µg/L	0.1551	0.1551	0.1487	1,600 # (113)				450 #					
Bromodichloromethane	µg/L	6.0529	**10.7108**	**11.0155**	46 # (113)				**6.2 #**					
Ethylbenzene	µg/L	0.2077	0.2146	0.2085	29,000 (143)				4,100					
Tetrachloroethylene (PCE)	µg/L	0.5896	0.6623	0.6571	8.85 # (113,143)				2 #					
Toluene	µg/L	0.6643	1.3622	1.3605	20,0000				85,000					
Trichloroethylene (TCE)	µg/L	0.2442	0.2450	0.2371	81 # (113,143)				27 #					
Vinyl chloride	µg/L	0.2373	0.2503	0.2440	525 # (113,143)				36 #					

Items in parentheses are footnotes

Table 19 - Proposed Brine Line
Comparison of Projected Water Quality Constituents to California Water Quality Criteria

Constituent	Units	Project Brine Line			California Toxics Rule Criteria Enclosed Bays & Estuaries				California Ocean Plan					
						Salt Water Aquatic Life Protection				Marine Aquatic Life Protection				
		Mean Concentration	90th Percentile Concentration Values	90th Percentile Concentration & Flows	Human Health (30-day Average)	Continuous Concentration (4-day Average)	Maximum Concentration (1-hour Average)	Instantaneous Maximum	Human Health* (30-day Average)	6-Month Median	30-Day Average	7-Day Average	Daily Maximum	Instaneous Maximum
Semi-Volatile Organic Compounds														
1,2-Diphenylhydrazine	µg/L	**0.5549**	**0.5753**	**0.5717**	**0.54 # (113,143)**				**0.16 #**					
2,4,6-Trichlorophenol	µg/L	**0.9664**	**0.9835**	**0.9784**	6.5 # (113)				**0.29 #**	1 (87)			4 (87)	10 (87)
2,4-Dinitrophenol	µg/L	2.3927	2.4136	2.4053	14,000 (143)				4	30 (86)			120 (86)	300 (86)
2,4-Dinitrotoluene	µg/L	0.7751	0.7955	0.7914	9.1 # (113,143)				2.6 #					
3,3'-Dichlorobenzidine	µg/L	**0.7280**	**0.7317**	**0.7226**	**0.077 # (113,143)**				**0.0081 #**					
4,6-Dinitro-o-cresol	µg/L	2.0842	2.0841	2.0821	765 (143)				220	30 (86)			120 (86)	300 (86)
Benzidine	µg/L	**9.8691**	**9.9164**	**9.8959**	**0.00054 # (113,143)**				**0.000069 #**					
Bis(2-chloroethoxy) methane	µg/L	0.5380	0.5788	0.5770					4.4					
Bis(2-chloroethyl) ether	µg/L	**0.4328**	**0.4600**	**0.4594**	1.4 # (113,143)				**0.045 #**					
Bis(2-chloroisopropyl) ether	µg/L	0.6184	0.6333	0.6306	170,000 (143)				1200					
Di(2-ethylhexyl)phthalate	µg/L	1.4210	1.5441	1.5336	5.9 # (113,143)				3.5 #					
Dichlorobenzenes	µg/L	0.3800	0.4379	0.4381					5,100 (77)					
Diethyl phthalate	µg/L	0.3396	0.3634	0.3609	120,000 (143)				33,000					
Dimethyl phthalate	µg/L	0.6838	0.7042	0.7008	2,900,000 (143)				820,000					
Dibutyl phthalate	µg/L	0.6768	0.7145	0.7120	12,000 (143)				3,500					
Fluoranthene	µg/L	0.6966	0.6966	0.6930	370				15					
Hexachlorobenzene	µg/L	**0.4520**	**0.4520**	**0.4510**	**0.00077 # (113)**				**0.00021 #**					
Hexachlorobutadiene	µg/L	0.4417	0.4757	0.4749	50 # (113,143)				14 #					
Hexachlorocyclopentadiene	µg/L	0.2872	0.3076	0.3079	17,000 (143)				58					
Hexachloroethane	µg/L	0.3751	0.4023	0.4020	8.9 # (113,143)				2.5 #					
Isophorone	µg/L	0.4891	0.5250	0.5240	600 # (113,143)				730 #					
Nitrobenzene	µg/L	0.6678	0.6950	0.6922	1,900 (143)				4.9					
N-Nitrosodimethylamine	µg/L	0.8645	0.8783	0.8630	8.1 # (113,143)				7.3 #					
N-Nitrosodipropylamine	µg/L	**0.5733**	**0.6104**	**0.6079**	1.4				**0.38 #**					
N-Nitrosodiphenylamine	µg/L	0.5894	0.6099	0.6066	16 # (113,143)				2.5 #					

Criteria Source: RWQCB 2003

Legend

- No Criteria
- Criteria are dependent on site-specific factors
- Criteria Exceedance

Footnotes

Carcinogen
* Aquatic organism consumption only
** REC-1 Marine Waters; Value based on geometric mean of at least 5 samples equally spaced over a 30-day period
(1) Expressed as dissolved.
(2) Expressed as total recoverable.
(12) Value developed for chromium (VI); may be applied to total chromium if valence unknown.
(13) For sum of bromoform, bromomethane and chloromethane.
(18) Applies separately to endrin and endrin aldehyde
(30) This limit has a range of values between the first and second numbers shown.
(33) For sum of acenaphthylene, anthracene, benz(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perylene, benzo(a)pyrene, chrysene, dibenz(a,h)anthracene, fluorene, indeno(1,2,3-c,d)pyrene, phenanthrene, a
(42) For endosulfan-alpha, endosulfan-beta and endosulfan sulfate.
(43) For benzene hexachloride isomers.
(50) For DDT, DDD, and DDE, in combination.
(76) For "TCDD equivalents" calculated as the sum of 2,3,7,8-chlorinated dibenzodioxin and dibenzofuran concentrations multiplied by their respecitve USEPA Toxicity Equivalency Factors.
(77) For 1,2- and 1-3-dichlorobenzenes
(81) For oxychlordane and alpha and gamma isomers of chlordane, chlordene and nonachlor.
(86) For nonchlorinated phenolic compounds.
(87) For chlorinated phenolic compounds.
(89) Expressed as nitrogen.
(113) Based on carcinogenicity at 1-in-a-million risk level.
(114) Developed as 24-hour average usinig 1980 USEPA Guidelines; but applied as 4-day average in the National Toxics Rule See Reference "National Toxics Rule" published in Federal Register, Volume 57, No. 246 pp. 60848-60923.
(115) Criterion most appropriately applied to the sum of alpha-Endosulfan and beta-Endosulfan. Reference: "National Recommended Water Quality Criteria" U.S. EPA Office of Water. November 2002. EPA 822-R-02-047
(116) Applies separately to Aroclors 1016, 1242, 1254, 1221, 1232, 1248, and 1260; based on carcinogenicity at 1-in-a-million risk level.
(117) Effluent limitation for wastes discharged to waters.
(118) For the sum of Aroclors 1016, 1221, 1232, 1242, 1248, 1254, and 1260.
(142) Criteria do not apply to waters subject to water quality objectives in Tables III-2A and III-2B of the San Francisco Bay Regional Water Quality Control Board's 1986 Basin Plan. See Reference 17.
(143) These criteria were promulgated for specific California waters in the National Toxics Rule, Reference 23.
(144) Applies to "TCDD Equivalents" calculated from the concentrations of 2,3,7,8-chlorinated dibenzodioxins and 2,3,7,8-chlorinated dibenzofurans and their corresponding toxic equivalency factors (TEFs); see Reference: "Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California" California State Water Resources Control Board. March 2000.

Table 20 - Proposed Brine Line
Comparison of Projected Water Quality Constituents to USEPA Water Quality Criteria

Constituent	Units	Project Brine Line			U.S. EPA National Recommended Ambient Water Quality Criteria																
					For Human Health and Welfare Protection			For Fresh Water Aquatic Life Protection							For Salt Water Aquatic Life Protection						
								Recommended Criteria				Toxicity Information (Lowest Observed Effect Level)			Recommended Criteria				Toxicity Information (Lowest Observed Effect Level)		
		Mean Concentration	90th Percentile Concentration Values	90th Percentile Concentration & Flows	Non-Cancer Health Effects*	One-in-a-Million Cancer Risk Estimate*	Taste & Odor or Welfare	CCC	24-hr Avg	CMC	Instantaneous Maximum	Acute	Chronic	Other	CCC	24-hr Avg	CMC	Instantaneous Maximum	Acute	Chronic	Other
General Constituents																					
Ammonia as Nitrogen	mg/l	3.523	4.824	4.819				see Figure A-1		see Figure A-1					35 (112) see Figure A-2		233 (112) see Figure A-2				
Ammonia w/ Nitrification	mg/l	0.6	1.13	1.17																	
Boron	mg/l	0.63	0.67	0.67																	
BOD	mg/l	5.59	8.64	9.33																	
COD	mg/l	11.19	17.27	18.66																	
Chloride	mg/l	191.87	206.00	204.00				230 (4)		860 (4)											
Chlorine Residual	µg/L	5.069	9.072	8.897																	
Oil and Grease	mg/l	3.118	3.119	3.079			(51,128)				(51,129)							(51,129)			
Settleable solids	ml/l	0.061	0.061	0.06							(51,131)										
Sodium	mg/l	141	152	150																	
Sulfate	mg/l	258	308	299			250 (51,133)														
Total dissolved solids (TDS)	mg/l	1,153	1,234	1,204			250 (51,133)														
TSS	mg/l	5.298	5.754	5.680																	
Turbidity	NTU	2.5	4.1	4.1							(51,131)										
pH	---	7.05	7.14	7.15			5 to 9 units (30,51)				6.5 to 9 units (30,51)							6.5 to 8.5 units			
Miscellaneous Compounds																					
Chlorinated phenols	µg/L	1.174	1.174	1.170																	
Halomethanes	µg/L	0.624	2.429	2.283								1,1000							1,2000	6,400	11,500 (82)
PAHs	µg/L	**0.077**	**0.089**	**0.089**		**0.049 (41)**													300		
Phenol	µg/L	1.924	1.923	1.916	1,700,00		300					10,200	2,560						5,800		
2,3,7,8-TCDD (Dioxin)	µg/L	5.64E-13	5.64E-13	5.63E-13		5.1E-09 #						< 0.01	< 0.00001								
Tributyltin	µg/L	**0.00268**	**0.00227**	**0.00222**				0.063		0.46					0.01 / 0.001 (68)		0.37 / 0.38 (68)				
Bacteria Characteristics																					
Total Coliform	MPN/100 mL	2	2	2																	
Fecal Coliform	MPN/100 mL	2	6	6																	
Metals																					
Antimony	µg/L	1.203	1.909	1.849	640 (2)							9,000	1,600	610 (38)							
Arsenic	µg/L	**2.620**	**3.871**	**3.709**		**0.14 # (2,94)**		150 (1)		340 (1)					36 (1)		69 (1)				
Beryllium	µg/L	0.062	0.062	0.062								130	5.3								
Cadmium	µg/L	0.257	0.332	0.324				see Figure A-3 (1)	see Figure A-3 (1)						8.8 (1)	40 (1)					
Chromium (III)	µg/L	3.224	4.459	4.336				see Figure A-10 (1)		see Figure A-10 (1)									10,300 (96)		
Chromium (VI)	µg/L	1.937	2.103	2.049				11 (1)		16 (1)					50 (1)		1,100 (1)				
Copper	µg/L	**10.022**	**14.867**	**14.874**			1,000	see Figure A-		see Figure A-4 (1)					**3.1 (1)**		**4.8 (1)**				
Cyanide	µg/L	**1.798**	**2.294**	**2.283**	1,6000			5.2 (137)		22 (137)					**1 (137)**		**1 (137)**				
Lead	µg/L	2.143	2.677	2.657				see Figure A-5 (1)		see Figure A-5 (1)					8.1 (1)		210 (1)				
Mercury (total)	µg/L	0.172	0.124	0.124				0.77 (1,140)		1.4 (1,140)					0.94 (1,140)		1.8 (1,140)				
Nickel	µg/L	5.502	6.569	6.495	4,600 (2)			see Figure A-6 (1)		see Figure A-6 (1)					8.2 (1)		74 (1)				
Selenium	µg/L	2.192	2.426	2.296	4,200 (2)			5 (135)		(135,136)					71 (1)		290 (1)				
Silver	µg/L	0.084	0.124	0.123							see Figure A-8 (1,154)							1.9 (1,154)			
Thallium	µg/L	**0.680**	0.163	0.156	**0.47 (2)**							1,400	40	20 (16)					2,130		
Zinc	µg/L	48.218	57.777	57.478	26,000		5,000	see Figure A-9 (1)		see Figure A-9 (1)					81 (1)		90 (1)				
Pesticides																					
Aldrin	µg/l	**0.0040**	**0.0040**	**0.0039**		**0.00005 #**					3 (154)							1.3 (154)			
Chlordane	µg/L	**0.0028**	**0.0028**	**0.0028**		**0.00081 #**		0.0043			2.4 (154)				0.004 (114)			0.09 (154)			
DDT	µg/L	**0.0244**	**0.0247**	**0.0242**		**0.00022 #**		**0.001**			1.1				**0.001**			0.13			
Dieldrin	µg/L	**0.0023**	**0.0023**	**0.0023**		**0.000054 #**		0.056 (139)		0.24					**0.0019**			0.71 (154)			
Endosulfan	µg/L	**0.0131**	**0.0202**	**0.0203**	89 (115)			0.056 (114,116)			0.22 (115)				**0.0087 (114,115)**			0.034 (115)			
Endrin	µg/L	0.0021	0.0021	0.0020	0.06			0.036 (139)		0.086					0.0023			0.037 (154)			
Heptachlor	µg/L	**0.0037**	**0.0037**	0.0036		0.000079 #		0.0038			0.52 (154)				**0.0036**			0.053 (154)			
Heptachlor epoxide	µg/L	0.0035	0.0036	0.0034		0.000039 #		0.0038			0.52 (154)				0.0036			0.053 (154)			
Alpha-Hexachlorocyclohexane	µg/L	0.0039	0.0039	0.0037		0.0049 #															
Beta-Hexachlorocyclohexane						0.017 #															
Gamma-Hexachlorocyclohexane (Lindane					1.8			0.08 (114)		0.95								0.16 (154)			
Delta-Hexachlorocylohexane																					
PCBs	µg/L	**3.8806**	**10.9561**	**10.9588**		**0.000064 # (173)**		**0.014**				**2**			**0.03**				**10**		
Toxaphene	µg/L	**0.1504**	**0.1665**	**0.1644**		**0.00028 #**		**0.0002**		0.73					**0.0002**		0.21				
Volatile Organic Compounds (VOCs)																					
1,1,1-Trichloroethane	µg/L	0.2290	0.2396	0.2334								18,000							31,200		
1,1,2,2-Tetrachloroethane	µg/L	0.2304	0.2320	0.2254		4 #						9,320 (47)	2,400						9,020		
1,1,2-Trichloroethane	µg/L	0.2371	0.2392	0.2329		16 #						18,000	9,400								
1,1-Dichloroethylene	µg/L	0.2224	0.2316	0.2250		7,100						11,600 (27)							224,000 (27)		
1,2-Dichloroethane	µg/L	0.2084	0.2098	0.2032		37 #						11,8000	2,0000						11,3000		
1,3-Dichloropropene	µg/L	0.1929	0.1855	0.1783		21 #						6,060 (29)	244 (29)						790 (29)		
1,4-Dichlorobenzene	µg/L	0.1720	0.2080	0.2017	190							1,120 (24)	763 (24)	50 (22,23)					1,970 (24)	129 (22)	
Acrolein	µg/L	2.0170	2.1031	2.0385	290							68	21						55		
Acrylonitrile	µg/L	**0.7440**	**0.7666**	**0.7408**		**0.25 #**						7,550		2,600 (17)							
Benzene	µg/L	0.2245	0.2266	0.2206		51 #						5,300							5,100		700 (83)
Carbon tetrachloride	µg/L	0.3293	0.4694	0.4637		1.6 #						35,200							50,000	6,400 (20)	11,500
Chlorobenzene	µg/L	0.2122	0.2197	0.2135	1,600		20					250 (22)		50 (22,23)					160 (22)	129 (22)	
Dibromochloromethane	µg/L	4.4329	6.9577	7.2406		13 #						11,000 (20)							12,000 (20)	6,400 (20)	11,500
Chloroform	µg/L	5.5599	8.9933	9.2222		470 #						28,900	1240						12,000 (20)	6,400 (20)	11,500
Dichloromethane	µg/L	0.1551	0.1551	0.1487		590 #						11,000 (20)							12,000 (20)	6,400 (20)	11,500
Bromodichloromethane	µg/L	6.0529	10.7108	11.0155		17 #						11,000 (20)							12,000 (20)	6,400 (20)	11,500
Ethylbenzene	µg/L	0.2077	0.2146	0.2085	2,100							32,000							430		
Tetrachloroethylene (PCE)	µg/L	0.5896	0.6623	0.6571		3.3 #						5280	840						10,200	450	
Toluene	µg/L	0.6643	1.3622	1.3605	15,000							17,500							6,300	5,000	
Trichloroethylene (TCE)	µg/L	0.2442	0.2450	0.2371		30 #						45,000		21,900					2,000		
Vinyl chloride	µg/L	0.2373	0.2503	0.2440		2.4 #															

Items in parentheses are footnotes

Table 20 - Proposed Brine Line
Comparison of Projected Water Quality Constituents to USEPA Water Quality Criteria

Constituent	Units	Project Brine Line			U.S. EPA National Recommended Ambient Water Quality Criteria															
					For Human Health and Welfare Protection			For Fresh Water Aquatic Life Protection							For Salt Water Aquatic Life Protection						
								Recommended Criteria				Toxicity Information (Lowest Observed Effect Level)			Recommended Criteria				Toxicity Information (Lowest Observed Effect Level)		
		Mean Concentration	90th Percentile Concentration Values	90th Percentile Concentration & Flows	Non-Cancer Health Effects*	One-in-a-Million Cancer Risk Estimate*	Taste & Odor or Welfare	CCC	24-hr Avg	CMC	Instantaneous Maximum	Acute	Chronic	Other	CCC	24-hr Avg	CMC	Instantaneous Maximum	Acute	Chronic	Other
Semi-Volatile Organic Compounds																					
1,2-Diphenylhydrazine	µg/L	**0.5549**	**0.5753**	**0.5717**		**0.2 #**						270									
2,4,6-Trichlorophenol	µg/L	0.9664	0.9835	0.9784		2.4 #	2						970								
2,4-Dinitrophenol	µg/L	2.3927	2.4136	2.4053	5,300							230 (88)		150					4,850 (88)		
2,4-Dinitrotoluene	µg/L	0.7751	0.7955	0.7914		3.4 #						330 (53)	230 (53)						590 (53)		370
3,3'-Dichlorobenzidine	µg/L	**0.7280**	**0.7317**	**0.7226**		**0.028 #**															
4,6-Dinitro-o-cresol	µg/L	2.0842	2.0841	2.0821	280							230 (88)		150					4,850 (88)		
Benzidine	µg/L	9.8691	9.9164	9.8959		0.0002 #						2,500									
Bis(2-chloroethoxy) methane	µg/L	0.5380	0.5788	0.5770																	
Bis(2-chloroethyl) ether	µg/L	0.4328	0.4600	0.4594		0.53 #						238,000 (46)	122 (58)								
Bis(2-chloroisopropyl) ether	µg/L	0.6184	0.6333	0.6306	65,000							238,000 (46)	122 (58)								
Di(2-ethylhexyl)phthalate	µg/L	1.4210	1.5441	1.5336		2.2 #		(138)							(138)						
Dichlorobenzenes	µg/L	0.3800	0.4379	0.4381								1,120	763	50 (22,23)					1,970	129 (22)	
Diethyl phthalate	µg/L	0.3396	0.3634	0.3609	44,000							940 (45)	3 (45)						2,944 (45)		3.4 (38,45)
Dimethyl phthalate	µg/L	0.6838	0.7042	0.7008	1,100,00							940 (45)	3 (45)						2,944 (45)		3.4 (38,45)
Dibutyl phthalate	µg/L	0.6768	0.7145	0.7120	4,500							940 (45)	3 (45)						2,944 (45)		3.4 (38,45)
Fluoranthene	µg/L	0.6966	0.6966	0.6930	140							3,980							40	16	
Hexachlorobenzene	µg/L	**0.4520**	**0.4520**	**0.4510**		**0.00029 #**						250 (22)		50 (22,23)					160 (22)	129 (22)	
Hexachlorobutadiene	µg/L	0.4417	0.4757	0.4749		18 #						90	9.3						32		
Hexachlorocyclopentadiene	µg/L	0.2872	0.3076	0.3079	1,100		1					7	5.2						7		
Hexachloroethane	µg/L	0.3751	0.4023	0.4020		3.3 #						980	540						940		
Isophorone	µg/L	0.4891	0.5250	0.5240		960 #						117,000							1,2900		
Nitrobenzene	µg/L	0.6678	0.6950	0.6922	690		30					27,000							6,680		
N-Nitrosodimethylamine	µg/L	0.8645	0.8783	0.8630		3 #						5,850 (56)							3,300,000		
N-Nitrosodipropylamine	µg/L	**0.5733**	**0.6104**	**0.6079**		**0.15 #**						5,850 (56)							3,300,000		
N-Nitrosodiphenylamine	µg/L	0.5894	0.6099	0.6066		6 #						5,850 (56)							3,300,000		

Criteria Source: RWQCB 2003

Legend

- No Criteria
- Criteria are dependent on site-specific factors
- Criteria Exceedance

Footnotes

* Aquatic organism consumption only
\# Carcinogen
CCC Criteria Continuous Concentration - Estimate of the highest concentration of a material in surface water to which an aquatic community can be exposed indefinitely without resulting in an unacceptable effect
CMC Criteria Maximum Concentration - Estimate of the highest concentration of a material in surface water to which an aquatic community can be exposed briefly without resulting in an unacceptable effect
(1) Expressed as dissolved.
(2) Expressed as total recoverable.
(4) For dissolved chloride associated with sodium; criterion probably will not be adequately protective when chloride is associated with potassium, calcium, or magnesium, rather than sodium.
(17) Mortality in a fish species after 30 day exposure.
(20) For halomethanes.
(22) For chlorinated benzenes.
(23) Toxicity to a fish species exposed for 7.5 days.
(24) For dichlorobenzenes.
(27) For dichloroethylenes.
(29) For dichloropropenes.
(30) This limit has a range of values between the first and second numbers shown.
(31) Adverse behavioral effects occur to one species.
(38) Toxicity to algae occurs.
(41) For carcinogenic polynuclear aromatic hydrocarbons.
(45) For sum of phthalate esters.
(46) For chloroalkyl ethers.
(47) For tetrachloroethanes.
(51) This criterion is from a 1976 USEPA reference and also appears in the current list of recommended criteria published by USEPA. Reference: "Quality Criteria for Water" (Red Book) U.S. EPA 1976.
(53) For dinitrotoluenes.
(56) For nitrosamines.
(58) For haloethers.
(68) Draft / tentative / provisional; applies only to second value if two separate values are listed; applies to range if a range of values is listed.
(82) A decrease in the number of algal cells occurs.
(83) Adverse effects on a fish species exposed for 168 days.
(88) For nitrophenols.
(94) Criterion refers to the inorganic form only.
(96) EC_{50} for eastern oyster embryos.
(112) Listed criterion expressed as unionized ammonia; criteria based on total ammonia are shown on Inorganics Page 14.
(114) Developed as 24-hour average usinig 1980 USEPA Guidelines; but applied as 4-day average in the National Toxics Rule See Reference "National Toxics Rule" published in Federal Register, Volume 57, No. 246 pp. 60848-60923
(115) Criterion most appropriately applied to the sum of alpha-Endosulfan and beta-Endosulfan. Reference: "National Recommended Water Quality Criteria" U.S. EPA Office of Water. November 2002. EPA 822-R-02-047
(128) Virtually free from oil and grease, particularly from the tastes and odors that emanate from petroleum products.
(129) 0.01 of the lowest continuous flow 96-hour LC50 to several important freshwater and marine species, each having a demonstrated high susceptibility to oils and petrochemicals; surface waters shall be virtually free from floating nonpetroleum oils of vegetable or animal origin, as well as petroleum derived oils.
(131) Increased color, in combination with turbidity (suspended and settleable solids) should not reduce the depth of the compensation point for photosynthetic activity by more than 10% from the seasonally established norm for aquatic life.
(132) For open ocean waters where depth is substantially greater than euphotic zone, pH should not be changed > 0.2 units from naturally occurring variation or in any case outside of range 6.5 to 8.5. For shallow highly productive coastal and estuarine areas where naturally occurring pH variations approach the lethal limits of some species, change in pH should be avoided but in any case should not exceed limits for freshwater.,i.e., 6.5 to 9.0.
(133) For chlorides and sulfates in domestic water supplies.
(135) Expressed as total recoverable; may be converted to a value expressed as dissolved by multiplying the maximum criterion by 0.996 and the continuous criterion by 0.922.
(136) The Maximum Concentration is equal to 1/ [(f1/185.9) + (f2/12.83)], where f1 and f2 are the fractions of total selenium that are treated as selenite and selenate, respectively.
(137) Expressed as free cyanide (as CN).
(139) The derivation of this criterion did not consider exposure through the diet, which is probably important for aquatic life occupying upper trophic levels. Reference 26.
(140) Criterion derived from data for inorganic mercury (II), but is applied to total mercury. It will probably be underprotective if a substantial portion of mercury in the water column is methylmercury. Derivation of criterion did not consider exposure through the diet, which is probably important for aquatic life occupying upper trophic levels. Reference: "National Recommended Water Quality Criteria" U.S. EPA Office of Water. November 2002. EPA 822-R-02-047.
(154) If assessment is to be done using an averaging period, the values given should be divided by 2 to obtain a value that is more comparable to a Criteria Maximum Concentration (1-hour average). See Reference: "National Recommended Water Quality Criteria" U.S. EPA Office of Water. November 2002. EPA 822-R-02-047.
(172) Applies to DDT and its metabolites (i.e., the total concentration of DDT and its metabolites should not exceed this value).
(173) Applies to total PCBs (e.g., sum of all congener or all isomer or homolog or Aroclor analyses).

Items in parentheses are footnotes