A		B		C		D	
		FRESHWATER		SALTWATER		HUMAN HEALTH	
						For Consumption of:	
Compound	CAS Number	CMC d (ug/L) B1	CCC d (ug/L) B2	CMC d (ug/L) C1	CCC d (ug/L) C2	Water & Organisms (ug/L) D1	Organisms Only (ug/L) D2
1. Antimony	7440360					14 a,s	4300 a,t
2. Arsenic	7440382	340 i,m,w	150 i,m,w	69 i,m	36 i,m		
3. Beryllium	7440417					n	n
4. Cadmium	7440439	4.3 e,i,m, w,x	2.2 e,i,m, w	42 i,m	9.3 i,m	n	n
5a. Chromium (III)	16065831	550 e,i,m, o	180 e,i,m, o			n	n
5b. Chromium (VI)	18540299	16 i,m,w	11 i,m,w	1100 i,m	50 i,m	n	n
6. Copper	7440508	13 e,i,m, w,x	9.0 e,i,m, w	4.8 i,m	3.1 i,m	1300	
7. Lead	7439921	65 e,i,m	2.5 e,i,m	210 i,m	8.1 i,m	n	n
8. Mercury	7439976	1.4 i,m,w	0.77 i,m,w	1.8 i,m	0.94 i,m	0.050 a	0.051 a
9. Nickel	7440020	470 e,i,m, w	52 e,i,m, w	74 i,m	8.2 i,m	610 a	4600 a
10. Selenium	7782492	p	5.0 q	290 i,m	71 i,m	n	n
11. Silver	7440224	3.4 e,i,m		1.9 i,m			
12. Thallium	7440280					1.7 a,s	6.3 a,t
13. Zinc	7440666	120 e,i,m,	120 e,i,m,	90 i,m	81 i,m		

Compound	CAS Number	B FRESHWATER CMC d (ug/L) B1	B FRESHWATER CCC d (ug/L) B2	C SALTWATER CMC d (ug/L) C1	C SALTWATER CCC d (ug/L) C2	D HUMAN HEALTH For Consumption of: Water & Organisms (ug/L) D1	D HUMAN HEALTH For Consumption of: Organisms Only (ug/L) D2
102. Aldrin	309002	3 g		1.3 g		0.00013 a,c	0.00014 a,c
103. alpha-BHC	319846					0.0039 a,c	0.013 a,c
104. beta-BHC	319857					0.014 a,c	0.046 a,c
105. gamma-BHC	58899	0.95 w		0.16 g		0.019 c	0.063 c
106. delta-BHC	319868						
107. Chlordane	57749	2.4 g	0.0043 g	0.09 g	0.004 g	0.00057 a,c	0.00059 a,c
108. 4,4'-DDT	50293	1.1 g	0.001 g	0.13 g	0.001 g	0.00059 a,c	0.00059 a,c
109. 4,4'-DDE	72559					0.00059 a,c	0.00059 a,c
110. 4,4'-DDD	72548					0.00083 a,c	0.00084 a,c
111. Dieldrin	60571	0.24 w	0.056 w	0.71 g	0.0019 g	0.00014 a,c	0.00014 a,c
112. alpha-Endosulfan	959988	0.22 g	0.056 g	0.034 g	0.0087 g	110 a	240 a
113. beta-Endosulfan	33213659	0.22 g	0.056 g	0.034 g	0.0087 g	110 a	240 a
114. Endosulfan Sulfate	1031078					110 a	240 a

115. Endrin	72208	0.086 w	0.036 w	0.037 g	0.0023 g	0.76 a				0.81 a,j		
116. Endrin Aldehyde	7421934					0.76 a				0.81 a,j		
117. Heptachlor	76448	0.52 g	0.0038 g	0.053 g	0.0036 g	0.00021 a,c				0.00021 a,c		
118. Heptachlor Epoxide	1024573	0.52 g	0.0038 g	0.053 g	0.0036 g	0.00010 a,c				0.00011 a,c		
119.- 125. Polychlorinated biphenyls (PCBs)			0.014 g,u				0.03 g,u	0.00017 v			0.00017 v	
126. Toxaphene	8001352	0.73	0.0002	0.21			0.0002	0.00073 a,c			0.00075 a,c	
TOTAL NUMBER OF CRITERIA (h):		24	28	23			27	99			97	

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Footnotes:

a. These criteria have been revised to reflect the Agency q1* or RfD, as contained in the Integrated Risk Information System (IRIS) as of October 1, 1996. The fish tissue bioconcentration factor (BCF) from the 1980 documents was retained in each case.

b. This letter is not used as a footnote.

c. These criteria are based on carcinogenicity of 10 (−6) risk.

d. The Criteria Maximum Concentration (CMC) equals the highest concentration of a pollutant to which aquatic life can be

exposed for a short period of time without deleterious effects. Criteria Continuous Concentration (CCC) equals the highest concentration of a pollutant to which aquatic life can be exposed for an extended period of time (4 days) without deleterious effects. ug/l equals micrograms per liter.

e. These freshwater aquatic life criteria for metals are expressed as a function of total hardness (mg/l) in the water body. The equations are provided in matrix at paragraph (b)(2) of this section. Values displayed above in the matrix correspond to a total hardness of 100 mg/l.

f. These freshwater aquatic life criteria for pentachlorophenol are expressed as a function of pH, and are calculated as follows: Values displayed above in the matrix correspond to a pH of 7.8.
CMC=exp(1.005(pH)—4.830).
CCC=exp(1.005(pH)—5.290).

g. These aquatic life criteria for these compounds were issued in 1980 utilizing the 1980 Guidelines for criteria development. The acute values shown are final acute values (FAV) which by the 1980 Guidelines are instantaneous values as contrasted with a CMC which is a short-term average.

h. These totals simply sum the criteria in each column. For aquatic life, there are 30 priority toxic pollutants with some type of freshwater or saltwater, acute or chronic criteria. For human health, there are 100 priority toxic pollutants with either "water + organism" or "organism only" criteria. Note that these totals count chromium as one pollutant even though EPA has developed criteria based on two valence states. In the matrix, EPA has assigned numbers 5a and 5b to the criteria for chromium to reflect the fact that this list of 126 priority pollutants includes only a single listing for chromium.

i. Criteria for these metals are expressed as a function of the water-effect ratio, WER, as defined in paragraph (c) of this section.
CMC=column B1 or C1 valuexWER;
CCC=column B2 or C2 valuexWER.

j. No criteria for protection of human health from consumption of aquatic organisms (excluding water) was presented in the 1980 criteria document or in the 1986 Quality Criteria for Water. Nevertheless, sufficient information was presented in the 1980 document to allow a calculation of a criterion, even though the results of such a calculation were not shown in the document.

k. This criterion for asbestos is the MCL (40 CFR 131.36).

l. This letter is not used as a footnote.

m. These freshwater and saltwater criteria for metals are expressed in terms of the dissolved fraction of the metal in the water column. Criterion values were calculated by using EPA's Clean Water Act 304(a) guidance values (described in the total recoverable fraction) and then applying the conversion factors.

n. EPA is not promulgating human health criteria for these contaminants. However, permit authorities should address these contaminants in NPDES permit actions using the State's existing narrative criteria for toxics.

o. These criteria were promulgated for specific waters in California in the National Toxics Rule ("NTR"), codified at 40 CFR 131.36, December 22, 1992, as amended by May 4, 1995. The specific waters to which the NTR criteria apply include: Waters of the State defined as bays or estuaries and waters of the State defined as inland, i.e., all surface waters of the State not ocean waters. These waters specifically include the San Francisco Bay upstream to and including Suisun Bay and the Sacramento-San Joaquin Delta.

Note: This section does not supersede § 131.36 (the NTR, as amended), for this criterion.

p. The CMC = 1/[(f1/CMC1) + (f2/CMC2)] where f1 and f2 are the fractions of total selenium that are treated as selenite and selenate respectively, and f1 + f2 = 1. CMC1 and CMC2 are the CMCs for selenite and selenate, respectively, or 185.9 ug/l and 12.83 ug/l, respectively. This criterion is in the total recoverable form. A criterion of 20 ug/l was promulgated for specific waters in California in the NTR, as amended, and was promulgated in the total recoverable form. The specific waters to which the NTR criterion applies include: Waters of the San Francisco Bay upstream to and including Suisun Bay and the Sacramento-San Joaquin Delta; and waters of Salt Slough, Mud Slough (north) and the San Joaquin River, Sack Dam to the mouth of the Merced River.

Note: This rule does not supersede § 131.36 (the NTR, as amended), for this criterion. The criterion in this section applies to additional waters of the United States in the State of California by this rulemaking.

Note also: The State of California adopted and EPA approved a site specific criterion for the San Joaquin River, mouth of Merced to Vernalis; therefore, this criterion does not apply to these waters.

q. This criterion is in the total recoverable form. This criterion was promulgated for specific waters in California in the NTR, as amended, and was promulgated in the total recoverable form. The specific waters to which the NTR criterion applies include: Waters of the San Francisco Bay upstream to and including Suisun Bay and the Sacramento-San Joaquin Delta; and waters of Salt Slough, Mud Slough (north) and the San Joaquin River, Sack Dam to Vernalis.

Note: This section does not supersede § 131.36 (the NTR, as amended), for this criterion. This criterion applies to additional waters of the United States in the State of California by this rulemaking.

Note also: The State of California adopted and EPA approved a site-specific criterion for the Grassland Water District, San Luis National Wildlife Refuge, and the Los Banos State Wildlife Refuge; therefore, this criterion does not apply to these waters.

r. These criteria were promulgated for specific waters in California in the NTR, as amended. The specific waters to which the NTR criteria apply include: Waters of the State defined as bays or estuaries including the San Francisco Bay upstream to and including Suisun Bay and the Sacramento-San Joaquin Delta.

Note: This section does not supersede § 131.36 (the NTR, as amended), for these criteria.

s. These criteria were promulgated for specific waters in California in the NTR, as amended. The specific waters to which the NTR criteria apply include: Waters of the Sacramento-San Joaquin Delta and waters of the State defined as inland (i.e., all surface waters of the State not bays or estuaries or ocean) that include a MUN use designation.

Note: This section does not supersede § 131.36 (the NTR, as amended), for these criteria.

t. These criteria were promulgated for specific waters in California in the NTR, as amended. The specific waters to which the NTR criteria apply include: Waters of the State defined as bays and estuaries including San Francisco Bay upstream to and including Suisun Bay and the Sacramento-San Joaquin Delta; and waters of the State defined as inland (i.e., all surface waters of the State not bays or estuaries or ocean) without a MUN use designation.

Note: This section does not supersede § 131.36 (the NTR, as amended), for these criteria.

u. PCBs are a class of chemicals which include aroclors 1242, 1254, 1221, 1232, 1248, 1260, and 1016, CAS numbers 53469219, 11097691, 11104282, 11141165, 12672296, 11096825, and 12674112, respectively. The aquatic life criteria apply to this set of PCBs.

v. This criterion applies to total PCBs or congener or isomer analyses.

w. This criterion has been recalculated pursuant to the 1995 Updates: Water Quality Criteria Documents for the Protection of Aquatic Life in Ambient Water, Office of Water, EPA-820-B-96-001, September 1996. See also Great Lakes Water Quality Initiative Criteria Documents for the Protection of Aquatic Life in Ambient Water, Office of Water, EPA-80-B-95-004, March 1995, available from the Water Resource Center, USEPA, 401 M St. SW., mail code RC 4100, Washington, DC 20460.

x. The State of California has adopted and EPA has approved site specific criteria for the Sacramento River (and tributaries) above Hamilton City; therefore, these proposed criteria do not apply to these waters.

General Notes

1. This chart lists all of EPA's priority toxic pollutants whether or not criteria guidance are available. Blank spaces indicate the absence of criteria guidance. Because of variations in chemical nomenclature systems, this listing of toxic pollutants does not duplicate the listing in Appendix A of 40 CFR Part 423. EPA has added the Chemical Abstracts Service (CAS) registry numbers, which provide a unique identification for each chemical.

2. The following chemicals have organoleptic-based criteria recommendations that are not included on this chart (for reasons which are discussed in the preamble): zinc, 3-methyl-4-chlorophenol.

3. For purposes of this section, freshwater criteria and saltwater criteria apply as specified in paragraph (c)(3) of this section.

(2) Factors for Calculating Metals Criteria:

CMC = WER x (Acute Conversion Factor) x
$(\exp(m_A[\ln(\text{hardness})]+b_A))$