

Figure: 30 TAC §307.6(c)(1)

TABLE 1  
 Criteria in Water for Specific Toxic Materials  
 AQUATIC LIFE PROTECTION

(All values are listed or calculated in micrograms per liter)

(Hardness concentrations are input as milligrams per liter)

Parameter	CASRN	Freshwater Acute Criteria	Freshwater Chronic Criteria	Saltwater Acute Criteria	Saltwater Chronic Criteria
Acrolein	107-02-8	3.0	3.0	---	---
Aldrin	309-00-2	3.0	---	1.3	---
Aluminum (d)	7429-90-5	991w	---	---	---
Arsenic (d)	7440-38-2	340w	150w	149w	78w
Cadmium (d)	7440-43-9	$(1.136672 - (\ln(\text{hardness})(0.041838))) (we^{(0.9789(\ln(\text{hardness}))-3.866)})$	$(1.101672 - (\ln(\text{hardness})(0.041838))) (we^{(0.7977(\ln(\text{hardness}))-3.909)})$	33w	7.9w
Carbaryl	63-25-2	2.0	2.0	1.6	---
Chlordane	57-74-9 and 12789-03-6	2.4	0.004	0.09	0.004

Parameter	CASRN	Freshwater Acute Criteria	Freshwater Chronic Criteria	Saltwater Acute Criteria	Saltwater Chronic Criteria
Chlorpyrifos	2921-88-2	0.083	0.041	0.011	0.006
Chromium (Tri)(d)	16065-83-1	$0.316we^{(0.8190(\ln(\text{hardness}))+3.7256)}$	$0.860we^{(0.8190(\ln(\text{hardness}))+0.6848)}$	---	---
Chromium (Hex)(d)	18540-29-9	15.7w	10.6w	1,090w	49.6w
Copper (d) <sup>1</sup>	7440-50-8	$0.960me^{(0.9422(\ln(\text{hardness}))-1.6448)}$	$0.960me^{(0.8545(\ln(\text{hardness}))-1.6463)}$	13.5w	3.6w
Cyanide <sup>2</sup> (free)	57-12-5	45.8	10.7	5.6	5.6
4,4'-DDT	50-29-3	1.1	0.001	0.13	0.001
Demeton	8065-48-3	---	0.1	---	0.1
Diazinon	333-41-5	0.17	0.17	0.819	0.819
Dicofol	115-32-2	59.3	19.8	---	---
Dieldrin	60-57-1	0.24	0.002	0.71	0.002
Diuron	330-54-1	210	70	---	---
Endosulfan I ( <i>alpha</i> )	959-98-8	0.22	0.056	0.034	0.009
Endosulfan II ( <i>beta</i> )	33213-65-9	0.22	0.056	0.034	0.009
Endosulfan sulfate	1031-07-8	0.22	0.056	0.034	0.009

Parameter	CASRN	Freshwater Acute Criteria	Freshwater Chronic Criteria	Saltwater Acute Criteria	Saltwater Chronic Criteria
Endrin	72-20-8	0.086	0.002	0.037	0.002
Guthion	86-50-0	---	0.01	---	0.01
Heptachlor	76-44-8	0.52	0.004	0.053	0.004
Hexachloro-cyclohexane ( <i>gamma</i> )(Lindane)	58-89-9	1.126	0.08	0.16	---
Lead (d)	7439-92-1	$(1.46203 - (\ln(\text{hardness})(0.145712))) (we^{(1.273(\ln(\text{hardness}))-1.460)})$	$(1.46203 - (\ln(\text{hardness})(0.145712))) (we^{(1.273(\ln(\text{hardness}))-4.705)})$	133w	5.3w
Malathion	121-75-5	---	0.01	---	0.01
Mercury	7439-97-6	2.4	1.3	2.1	1.1
Methoxychlor	72-43-5	---	0.03	---	0.03
Mirex	2385-85-5	---	0.001	---	0.001
Nickel (d)	7440-02-0	$0.998we^{(0.8460(\ln(\text{hardness}))+2.255)}$	$0.997we^{(0.8460(\ln(\text{hardness}))+0.0584)}$	118w	13.1w
Nonylphenol	84852-15-3 and 25154-52-3	28	6.6	7	1.7
Parathion (ethyl)	56-38-2	0.065	0.013	---	---
Pentachlorophenol	87-86-5	$e^{(1.005(\text{pH})-4.869)}$	$e^{(1.005(\text{pH})-5.134)}$	15.1	9.6

Parameter	CASRN	Freshwater Acute Criteria	Freshwater Chronic Criteria	Saltwater Acute Criteria	Saltwater Chronic Criteria
Phenanthrene	85-01-8	30	30	7.7	4.6
Polychlorinated Biphenyls (PCBs) <sup>3</sup>	1336-36-3	2.0	0.014	10	0.03
Selenium	7782-49-2	20	5	564	136
Silver, as free ion	7440-22-4	0.8w	---	2w	---
Toxaphene	8001-35-2	0.78	0.0002	0.21	0.0002
Tributyltin (TBT)	688-73-3	0.13	0.024	0.24	0.0074
2,4,5 Trichlorophenol	95-95-4	136	64	259	12
Zinc (d)	7440-66-6	$0.978we^{(0.8473(\ln(\text{hardness}))+0.884)}$	$0.986we^{(0.8473(\ln(\text{hardness}))+0.884)}$	92.7w	84.2w

- 1 In designated oyster waters, an acute saltwater copper criterion of 3.6w micrograms per liter applies outside of the mixing zone of permitted discharges and specified mixing zones for copper do not encompass oyster reefs containing live oysters.
  - 2 Compliance will be determined using an analytical method for free or available cyanide.
  - 3 These criteria apply to the sum of all congener or all isomer or homolog or Aroclor analysis.
- (d) Indicates that the criteria for a specific parameter are for the dissolved portion in water. All other criteria are for total recoverable concentration, except where noted.
- e* The mathematical constant that is the basis of the natural logarithm. When rounded to four decimal points, *e* is equal to 2.7183.
- m* Indicates that a criterion may be multiplied by a water-effect ratio (WER) or based on a biotic ligand model result in order to incorporate the effects of local water chemistry on toxicity. The WER multiplier is equal to 1 except

where sufficient data is available to establish a site-specific multiplier. WER multipliers and criteria based on biotic ligand models for individual water bodies are listed in Appendix E of §307.10 of this title when standards are revised. The number preceding the m in the freshwater equation is an EPA conversion factor. The biotic ligand model is based on the dissolved portion of copper, and the equation is not used in this case.

- w Indicates that a criterion is multiplied by a WER in order to incorporate the effects of local water chemistry on toxicity. The WER is equal to 1 except where sufficient data is available to establish a site-specific WER. WERs for individual water bodies are listed in Appendix E of §307.10 of this title when standards are revised. The number preceding the w in the freshwater criterion equation is an EPA conversion factor.