



State of Oregon Department of Environmental Quality

Risk Based Concentrations For Sediment

Table 3

Chemical	CAS No.	Risk-Based Concentration	
		Freshwater	Marine
Inorganics (mg/kg)			
Antimony and compounds	7440-36-0	3 g	9 f
Arsenic III	7440-38-2	6 c	7 c
Barium and compounds	7440-39-3		48 f
Beryllium			
Cadmium and compounds	7440-43-9	0.6 c	0.7 d
Chromium (total)		37 c	52 d
Copper and compounds	7440-50-8	36 c	19 d
Lead	7439-92-1	35 c	30 d
Manganese and compounds	7439-96-5	1100 g	
Mercury (elemental, total)	7439-97-6	0.2 c, j	0.1 d
Mercury (methyl)	22967-92-6		
Nickel	7440-02-0	18 c	16 d
Selenium	7782-49-2		1 f
Silver and compounds	7440-22-4	4.5 b, g	0.7 d
Thallium			
Vanadium	7440-62-2		57 f
Zinc	7440-66-6	123 c	124 d
Organics (ug/kg)			
Acetone			
Acenaphthene	83-32-9	290 g	7 d
Acenaphthylene	208-96-8	160 g	6 d
Aldrin	309-00-2	40 g	10 f
Anthracene	120-12-7	57 j	47 d
Benzene			
Benzo[a]anthracene	56-55-3	32 c	75 d
Benzo[b]fluoranthene	205-99-2		1800 f
Benzo[k]fluoranthene	207-08-9	27 c	1800 f
Benzo[a]pyrene	50-32-8	32 c	89 d
Benzo[g,h,i]perylene	191-24-2	300 g	670 a, f

Chemical	CAS No.	Risk-Based Concentration	
		Freshwater	Marine
Benzoic acid	65-85-0		65 f
Benzyl alcohol	100-51-6		52~57 a, f
BHC (beta)	319-85-7		
BHC (gamma) Lindane	58-89-9	0.9 c	0.3 d
BHC (technical)	608-73-1	100 g	
Bis(2-ethylhexyl)phthalate (DEHP)	117-81-7	750 b, g	1300 f
Butyl benzyl phthalate	85-68-7		63 f
Carbazole	86-74-8	140 b	
Carbon tetrachloride			
Chlordane	57-74-9	4.5 c	2 d
Chlordane (alpha)	12789-03-6		10:00 AM
Chloroform			
Chrysene	218-01-9	57 c	107 d
DDD	72-54-8	4 c	1 d
DDE	72-55-9	1.5 c	2 d
DDT	50-29-3	4 j	1 d
DDT (Total)		7 c	4 d
Dibenz[a,h]anthracene	53-70-3	33 j	6 d
Dibenzofuran	132-64-9	5100 g	110 f
Di-n-butyl phthalate	84-74-2	110 g	58 f
1,2-Dichlorobenzene	95-50-1		13 f
1,3-Dichlorobenzene	541-73-1		170 a
1,4-Dichlorobenzene	106-46-7		110 a, f
1,1-Dichloroethylene			
1,2-Dichloroethane			
1,2-Dichloroethylene			
Dieldrin	60-57-1	3 c	0.7 d
Diethyl phthalate	84-66-2		6 f
2,4-Dimethylphenol	105-67-9		18 f
Dimethyl phthalate	131-11-3		6 f
Di-n-octyl phthalate	117-84-0		61 f
1,4-Dioxane			
Endosulfan	115-29-7		
Endrin	72-20-8	3 c	
Ethanol			

Chemical	CAS No.	Risk-Based Concentration	
		Freshwater	Marine
Ethyl acetate			
Ethylbenzene	100-41-4		4 f
Fluoranthene	206-44-0	111 c	113 d
Fluorene	86-73-7	77 j	21 d
Formaldehyde			
Heptachlor	76-44-8	10 g	0.3 f
Heptachlor epoxide	102-45-73	0.6 c	
Hexachlorobenzene (HCB)	118-74-1	100 g	6 f
Hexachlorobutadiene	87-68-3		1 f
Hexachloroethane	67-72-1		73 f
Indeno[1,2,3-cd]pyrene	193-39-5	17 c	600 f
Kepone (Chlordecone)	143-50-0		
Methanol			
Methoxychlor	72-43-5		
Methyl ethyl ketone			
Methylene chloride			
2-Methylnaphthalene	91-57-6		20 d
2-Methylphenol (o-cresol)	95-48-7		8 f
4-Methylphenol (p-cresol)	106-44-5		100 f
4-Methyl-2-pentanone			
Mirex	2385-85-5	800 g	
Naphthalene	91-20-3	176 j	35 d
Nitrobenzene	98-95-3		21 f
N-Nitrosodiphenylamine	86-30-6		28 a, f
Pentachloronitrobenzene	82-68-8		
Pentachlorophenol	87-86-5		17 f
Phenanthrene	85-01-8	42 c	86 d
Phenol	108-95-2	48 b, g	130 f
Polychlorinated biphenyls (total)	1336-36-3	34 c	22 d
Aroclor 1016	12674-11-2		
Aroclor 1242			
Aroclor 1248		21 b	
Aroclor 1254	11097-69-1	7 b	
Polycyclic aromatic hydrocarbons			

Chemical	CAS No.	Risk-Based Concentration	
		Freshwater	Marine
Total PAH		1610 j	1684 d
Total LPAH		76 c	312 d
Total HPAH		193 c	655 d
Pyrene	129-00-0	53 c	152 d
2,3,7,8-TCDD (dioxin)	1746-01-6	0.009 g	0.004 f
Tetrachloroethylene (PCE)	127-18-4		57 f
Toluene			
Toxaphene	8001-35-2		
Tributyltin	56573-85-4		3 f
1,2,4-Trichlorobenzene	120-82-1		5 f
1,1,1-Trichloroethane			
Trichloroethylene (TCE)	79-01-6		41 f
2,4,5-Trichlorophenol	95-95-4		3 f
2,4,6-Trichlorophenol	88-06-2		6 f
Vinyl chloride			
Xylene (mixed)	1330-20-7		4 f

Notes:

a = Screening Level (SL), Table 8-1, *Dredged Material Evaluation Framework, Lower Columbia River Management Area*, U.S. Army Corps of Engineers, April 1998 Draft.

b = Lowest Apparent Effects Threshold (LAET), Table 11, *Creation and Analysis of Freshwater Sediment Quality Values in Washington State*, Washington Department of Ecology, Pub. No. 97-323a, July 1997.

c = Threshold Effects Level (TEL) or lowest ARCs *H. azteca* TEL, Freshwater Sediment, Screening Quick Reference Tables (SQuiRTs), NOAA, Coastal Resource Coordination Branch, Hazmat Report 99-1, 1999.

d = Threshold Effects Level (TEL), Marine Sediment, SquiRTs.

e = Apparent Effects Threshold (AET), Freshwater Sediment, SquiRTs.

f = Apparent Effects Threshold (AET), Marine Sediment, SquiRTs.

g = Upper Effects Threshold (UET), Freshwater Sediment, SquiRTs.

h = Upper Effects Threshold (UET), Marine Sediment, SquiRTs.

i = Freshwater Chronic Criteria, *Ambient Water Quality Criteria Document for Tributyltin*, U.S. Environmental Protection Agency, 62 FR 42554, August 7, 1997.

j = Threshold Effects Concentration (TEC). Smith, SL., MacDonald, DD, Keenleyside, KA, Ingersoll, CG, and Field, J. 1996. A preliminary evaluation of sediment quality assessment values for freshwater ecosystems. *Journal of Great Lakes Research* 22:624-638.