Bulk Sediment Screening Levels for SEF Chemicals of Concern

This table merges the marine benthic toxicity screening levels from Table 6-3 of the 2009 Sediment Evaluation Framework for the Pacific Northwest *(SEF) and the freshwater benthic toxicity screening levels from Table 7-1 of the 2006* Interim Final Northwest Regional Sediment Evaluation Framework. *The Portland Sediment Evaluation Team uses these screening levels (SLs) to evaluate dredging and ecosystem restoration projects in the Portland District.*

Chemical	CAS Number	2009 Marine SL (dry weight[1])	2006 Interim Freshwater SL (dry weight)[2]
STANDARD CHEMICALS OF CONCERN			
Metals (mg/kg)			
Antimony	7440-36-0	150	--
Arsenic	7440-38-2	57	20
Cadmium	7440-43-9	5.1	1.1
Chromium	7440-47-3	260	95
Copper	7440-50-8	390	80
Lead	7439-92-1	450	340
Mercury	7439-97-6	0.41	0.28
Nickel	7440-02-0	--	60
Silver	7440-22-4	6.1	2.0
Zinc	7440-66-6	410	130
Polynuclear Aromatic Hydrocarbons (µg/kg)			
Total LPAH	--	5,200	6,600
Naphthalene	91-20-3	2,100	500
Acenaphthylene	208-96-8	560	470
Acenaphthene	83-32-9	500	1,100
Fluorene	86-73-7	540	1,000
Phenanthrene	85-01-8	1,500	6,100
Anthracene	120-12-7	960	1,200
2-Methylnaphthalene	91-57-6	670	470
Total HPAH	--	12,000	31,000
Fluoranthene	206-44-0	1,700	11,000
Pyrene	129-00-0	2,600	8,800
Benz(a)anthracene	56-55-3	1,300	4,300
Chrysene	218-01-9	1,400	5,900
Benzofluoranthenes (b+k)	205-99-2 (b) 207-08-9 (k)	3,200	600
Benzo(a)pyrene	50-32-8	1,600	3,300
Indeno(1,2,3-c,d)pyrene	193-39-5	600	4,100
Dibenz(a,h)anthracene	53-70-3	230	800
Benzo(g,h,i)perylene	191-24-2	670	4,000

[1] *The pore water concentration of tributyltin is analyzed in marine sediments and reported in units of µg/L.*

[2] *New freshwater screening level values are currently being considered by the State of Washington for promulgation as sediment management standards (SMSs). If the proposed SMSs are adopted by Washington, the Regional Sediment Evaluation Team may, after public review and comment, incorporate them into the SEF guidance (as freshwater benthic toxicity SLs). In the interim, the freshwater SLs from the 2006 SEF will be used for freshwater dredged material evaluations in the Portland District.*

Chemical	CAS Number	2009 Marine SL (dry weight[1])	2006 Interim Freshwater SL (dry weight)[2]
STANDARD CHEMICALS OF CONCERN			
Chlorinated Hydrocarbons (µg/kg)			
1,4-Dichlorobenzene	106-46-7	110	--
1,2-Dichlorobenzene	95-50-1	35	--
1,2,4-Trichlorobenzene	120-82-1	31	--
Hexachlorobenzene	118-74-1	22	--
Phthalates (µg/kg)			
Dimethyl phthalate	131-11-3	71	46
Diethyl phthalate	84-66-2	200	--
Di-n-butyl phthalate	84-74-2	1,400	--
Butyl benzyl phthalate	85-68-7	63	260
Bis(2-ethylhexyl) phthalate	117-81-7	1,300	220
Di-n-octyl phthalate	117-84-0	6,200	26
Phenols (µg/kg)			
Phenol	108-95-2	420	--
2-Methylphenol	95-48-7	63	--
4-Methylphenol	106-44-5	670	--
2,4-Dimethylphenol	105-67-9	29	--
Pentachlorophenol	87-86-5	400	--
Miscellaneous Extractables (µg/kg)			
Benzyl alcohol	100-51-6	57	--
Benzoic acid	65-85-0	650	--
Dibenzofuran	132-64-9	540	400
Hexachlorobutadiene	87-68-3	11	--
N-Nitrosodiphenylamine	86-30-6	28	--
Pesticides[3]/Polychlorinated Biphenyls (µg/kg)			
p,p'-DDD	72-54-8	16	16
p,p'-DDE	72-55-9	9	9
p,p'-DDT	50-29-3	12	12
Aldrin	309-00-2	9.5	9.5
Chlordane (sum of cis-chlordane, trans-chlordane, cis-nonachlor, trans-nonachlor, and oxychlordane)	12789-03-6	2.8	2.8
Dieldrin	60-57-1	1.9	1.9
Heptachlor	76-44-8	1.5	1.5
gamma-BHC (Lindane)	58-89-9	--	--
Total PCBs	--	130	60
Tributyltin			
TBT pore water (µg/L)	56573-85-4	0.15	--
TBT dry weight (µg/kg ion)		--	75
Total Petroleum Hydrocarbons (mg/kg)			
TPH-Diesel	--	--	--
TPH-Residual	--	--	--

[3] *The marine SLs for pesticides will be used in both marine and freshwater sediment evaluations.*