

Table 3-1 7/16/07 Revision

Table 3-1 Screening Level Values for Soil/Stormwater Sediment, Stormwater, Groundwater, and Surface Water^(A)

Chemical	CAS #	GROUNDWATER / SURFACE WATER / STORMWATER				GROUNDWATER / SURFACE WATER / STORMWATER			UPLAND SOIL / STORMWATER SEDIMENT ^(D)			
		Water ^(C)									Soil/Stormwater Sediment ^(D)	
		Human Health [#]				Ecological Receptors [#]					Toxicity	Bioaccumulation
		Fish Consumption		Drinking Water		EPA's 2004 NRWQC (chronic)	DEQ's 2004 AWQC (chronic)	Oak Ridge National Laboratory's (Tier II SCV) ^(D)	MacDonald PECs and other SQVs ⁽¹⁾	DEQ 2007 Bioaccumulative Sediment SLVs ^(E)		
		EPA's 2004 NRWQC (organism only)	Portland Harbor specific fish consumption rate	DEQ's 2004 AWQC (organism only)	Portland Harbor specific fish consumption rate						MCL	Tap Water PRGs
		17.5 g/day consumption rate	175 g/day consumption rate	17.5 g/day consumption rate	175 g/day consumption rate							
Units		µg/l	µg/l	µg/l	µg/l	µg/l	µg/l	µg/l	µg/kg	µg/kg		
NOTE: Numbers highlighted in yellow are values to be used for initial upland source control screening evaluations for water.		NOTE: Numbers highlighted in orange are to be used for initial upland source control screening evaluations for soil and stormwater sediment.										
Metals/Inorganics	CAS #	Metals in these columns are expressed as dissolved metal in the water column except where noted		Metals in these columns are expressed in terms of total recoverable metal in the water column			Metals in this column are expressed as dissolved metal in the water column except where noted	Metals in this column are expressed in terms of total recoverable metal in the water column				
Aluminum (pH 6.5 - 9.0) ⁽¹³⁾	7429-90-5					(50-200) ²⁹	37,000	87				
Antimony	7440-36-0	640	64	640	64	6	15	1600 ⁽¹⁶⁾	30	64,000 ⁽³⁾		
Arsenic	7440-38-2	0.14	0.014	0.14	0.014	10	0.045	150	3.1 ⁽⁹⁾	33,000 ⁽²⁾	7000 ⁽³¹⁾	
Arsenic III	22569-72-8							190 ⁽¹⁴⁾				
Cadmium ⁽¹⁵⁾	7440-43-9					5	18	0.094	0.38 ⁽¹⁴⁾	4,980 ⁽²⁾	1000 ⁽³¹⁾	
Chromium, total	7440-47-3					100				111,000 ⁽²⁾		
Chromium, hexavalent	18540-29-9						110	11	11 ⁽¹⁴⁾			
Copper ⁽¹⁵⁾	7440-50-8					1,300 = TT	1,400	2.7	3.6 ⁽¹⁴⁾	149,000 ⁽²⁾		
Lead ⁽¹⁵⁾	7439-92-1					15 = TT	15	0.54	0.54 ⁽¹⁴⁾	128,000 ⁽²⁾	17000 ⁽³¹⁾	
Manganese	7439-96-5	100	10	100	10	(50) ²⁹	1700		120	1,100,000 ^(6,9)		
Mercury	7439-97-6			0.146	0.0146	2	11	0.77	0.012	1.3 ⁽⁹⁾	1,060 ⁽²⁾	70 ⁽³¹⁾
Methyl Mercury	22967-92-6	300 µg/kg ⁽²⁰⁾	30 µg/kg ⁽²⁰⁾	300 µg/kg ⁽²⁰⁾	30 µg/kg ⁽²⁰⁾		3.7		0.0028			
Nickel ⁽¹⁵⁾	7440-02-0	4,600	460	4,600	460		730	16	49 ⁽¹⁴⁾	48,600 ⁽²⁾		
Selenium	7782-49-2	4,200	420	4,200	420	50	180	5 ⁽¹⁹⁾	35 ⁽¹⁴⁾	5,000 ⁽⁴⁾	2000 ⁽³¹⁾	
Silver ⁽¹⁵⁾	7440-22-4					(100) ²⁹	180		0.12 ⁽¹⁴⁾	0.36	5,000 ^(5,4)	
Zinc ⁽¹⁵⁾	7440-66-6	26,000	2,600	26,000	2,600	(5,000) ²⁹	11,000	36	33	459,000 ⁽²⁾		
Perchlorate	14797-73-0					<24.5						
Cyanide ⁽¹⁸⁾	57-12-5	140	14	140	14	200	730	5.2	5.2			

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		Water ^(C)								Soil/Stormwater Sediment ^(D)		
		Human Health [#]				Ecological Receptors [#]			Toxicity	Bioaccumulation		
		Fish Consumption		Drinking Water		EPA's 2004 NRWQC (chronic)	DEQ's 2004 AWQC (chronic)	Oak Ridge National Laboratory's (Tier II SCV) ^(I)	MacDonald PECs and other SQVs ⁽¹⁾	DEQ 2007 Bioaccumulative Sediment SLVs ^(E)		
		EPA's 2004 NRWQC (organism only)	Portland Harbor specific fish consumption rate	DEQ's 2004 AWQC (organism only)	Portland Harbor specific fish consumption rate						MCL	Tap Water PRGs
17.5 g/day consumption rate	175 g/day consumption rate	17.5 g/day consumption rate	175 g/day consumption rate	µg/l	µg/l	µg/l	µg/l	µg/l	µg/kg	µg/kg		
Butyltins¹²												
Monobutyltin	78763-54-9											
Dibutyltin	1002-53-5											
Tributyltin	56573-85-4					11	0.072				2.3 ⁽³²⁾	
Tetrabutyltin	1461-25-2											
PCBs Aroclors												
Aroclor 1016	12674-11-2						0.96				530 ⁽⁹⁾	
Aroclor 1221	11104-28-2						0.034		0.28			
Aroclor 1232	11141-16-5						0.034		0.58			
Aroclor 1242							0.034		0.053			
Aroclor 1248	12672-29-6						0.034		0.081		1,500 ⁽⁹⁾	
Aroclor 1254	11097-69-1						0.034		0.033		300 ⁽⁹⁾	
Aroclor 1260	11096-82-5						0.034		94		200 ⁽⁹⁾	
Aroclor 1262	37324-23-5											
Aroclor 1268	11100-14-4											
Total PCBs		0.000064	0.000064	0.000064	0.000064	0.5	0.034	0.014	0.014	0.14	676 ⁽²⁾	0.39 ⁽³³⁾
PCB Congeners												
All 209 PCB congener target analytes												
3,3',4,4'-TCB	32598-13-3											0.052 ⁽³³⁾
3,4,4',5'-TCB												0.017 ⁽³³⁾
2,3,3',4,4'-PeCB	32598-14-4											0.17 ⁽³³⁾
2,3,4,4',5'-PeCB												0.17 ⁽³³⁾
2,3',4,4',5'-PeCB	31508-00-6											0.12 ⁽³³⁾
2',3,4,4',5'-PeCB												0.21 ⁽³³⁾
3,3',4,4',5'-PeCB												0.00005 ⁽³³⁾
2,3,3',4,4',5'-HxCB												0.21 ⁽³³⁾
2,3,3',4,4',5'-HxCB												0.21 ⁽³³⁾
2,3',4,4',5',5'-HxCB												0.21 ⁽³³⁾
3,3',4,4',5,5'-HxCB	32774-16-6											0.00021 ⁽³³⁾
2,3,3',4,4',5,5'-HpCB												1.2 ⁽³³⁾
Chlorinated Herbicides												
Dalapon	75-99-0					200	1,100					

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		Water ^(C)							Soil/Stormwater Sediment ^(D)		
		Human Health [#]				Ecological Receptors [#]			Toxicity	Bioaccumulation	
		Fish Consumption		Drinking Water		EPA's 2004 NRWQC (chronic)	DEQ's 2004 AWQC (chronic)	Oak Ridge National Laboratory's (Tier II SCV) ^(I)	MacDonald PECs and other SQVs ⁽¹⁾	DEQ 2007 Bioaccumulative Sediment SLVs ^(E)	
		EPA's 2004 NRWQC (organism only)	Portland Harbor specific fish consumption rate	DEQ's 2004 AWQC (organism only)	Portland Harbor specific fish consumption rate						MCL
17.5 g/day consumption rate	175 g/day consumption rate	17.5 g/day consumption rate	175 g/day consumption rate	µg/l	µg/l	µg/l	µg/l	µg/l	µg/kg	µg/kg	
Dicamba	1918-00-9										
MCPA	94-74-6										
Dichlorprop	120-36-5										
2,4-D	94-75-7					70	370				
2,4,5-TP (Silvex)	93-72-1					50	370				
2,4,5-T	93-76-5						370				
2,4-DB	94-82-6						290				
Dinoseb	88-85-7					7	37				
MCPP	93-65-2						37				
Organochlorine Pesticides											
α - BHC	319-84-6	0.0049	0.00049	0.0049	0.00049		0.011			2.2 ^(G)	
β - BHC	319-85-7	0.017	0.0017	0.017	0.0017		0.037				
γ - BHC (Lindane)	58-89-9	1.8	0.18	1.8	0.18		0.052	0.08		4.99 ⁽²⁾	
δ - BHC	319-86-8						0.037				
Heptachlor	76-44-8	0.000079	0.0000079	0.000079	0.0000079	0.4	0.015	0.0038	0.0038	0.0069	10 ⁽⁶⁾
Heptachlor epoxide	102-45-73	0.000039	0.0000039	0.000039	0.0000039	0.2	0.0074	0.0038	0.0038		16 ⁽²⁾
Aldrin	309-00-2	0.00005	0.000005	0.00005	0.000005		0.004				40 ⁽⁶⁾
Chlordane	57-74-9	0.00081	0.000081	0.00081	0.000081	2	0.19	0.0043	0.0043		17.6 ⁽²⁾
Endosulfan alpha-	959-98-8	89	8.9	89	8.9		220	0.056	0.056	0.051	
Endosulfan beta-	33213-65-9	89	8.9	89	8.9		220	0.056	0.056	0.051	
Endosulfan sulfate	1031-07-8	89	8.9	89	8.9						
DDE ⁽³⁴⁾	72-55-9	0.00022	0.000022	0.00022	0.000022		0.2				31.3 ⁽²⁾
DDD ⁽³⁴⁾	72-54-8	0.00031	0.000031	0.00031	0.000031		0.28			0.011 ^(d)	28 ⁽²⁾
DDT ⁽³⁴⁾	50-29-3	0.00022	0.000022	0.00022	0.000022		0.2	0.001	0.001	0.013 ^(e)	62.9 ⁽²⁾
DDT - total ⁽³⁵⁾	50-29-3						0.2				0.33 ⁽³³⁾
Dieldrin	60-57-1	0.000054	0.0000054	0.000054	0.0000054		0.0042	0.056	0.0019 ⁽¹⁴⁾		61.8 ⁽²⁾
Endrin	72-20-8	0.06	0.006	0.06	0.006	2	11	0.036	0.0023 ⁽¹⁴⁾	0.061	207 ⁽²⁾
Endrin aldehyde	7421-93-4	0.3	0.03	0.3	0.03						
Endrin ketone	53494-70-5										
Methoxychlor	72-43-5					40	180	0.03	0.03	0.019	
Toxaphene	8001-35-2	0.00028	0.000028	0.00028	0.000028	3	0.061	0.0002	0.0002		
oxy chlordane							0.19				
cis - nonachlor	5103-73-1						0.19				
trans - nonachlor	39765-80-5						0.19				
Volatile Organic Compounds											



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	µg/l	µg/l	µg/l	µg/l	µg/l	µg/l	µg/l	µg/l	µg/kg	µg/kg
1,1,1,2- Tetrachloroethane	630-20-6						2.5			
1,1,1- Trichloroethane (TCA)	71-55-6					200	840		11	
1,1,2,2- Tetrachloroethane	79-34-5	4	0.4	4	0.4		0.33	2,400 ⁽¹⁶⁾	610	
1,1,2- Trichloroethane	79-00-5	16	1.6	16	1.6	5	1.2	9,400 ⁽¹⁶⁾	1,200	
1,1- Dichloroethane	75-34-3						1200		47	
1,2,3- Trichloropropane	96-18-4						0.0095			
1,2- Dichloroethane (EDC)	107-06-2	37	3.7	37	3.7	5	0.73	20,000 ⁽¹⁶⁾	910	
cis-1,2-Dichloroethylene	156-59-2					70	61			
1,2- Dichloropropane	78-87-5	15	1.5	15	1.5	5	0.97			
1,2- Dibromoethane (EDB)	106-93-4						0.033			
2- Butanone (MEK)	78-93-3						7,100		14,000	
2- Chloroethyl Vinyl Ether	110-75-8								99	
2- Hexanone	591-78-6								170	
4- Methyl-2-Pentanone (MIBK)	108-10-1						2000		1,500	
Acetone	67-64-1						5,500			
Acrolein	107-02-8	290	29	290	29		0.042	21 ⁽¹⁶⁾		
Acrylonitrile	107-13-1	0.25	0.025	0.25	0.025		0.12	2,600 ⁽¹⁶⁾		
Bromochloromethane	74-97-5									
Bromodichloromethane	75-27-4						1.1			
Bromoform	75-25-2	140	14	140	14		8.5			
Bromomethane	74-83-9						8.7			
Carbon Disulfide	75-15-0						1,000		0.92	
Carbon Tetrachloride	56-23-5	1.6	0.16	1.6	0.16	5	0.51		9.8	
Chlorobenzene	108-90-7	1600	160	1,600	160	100	91	50 ⁽¹⁶⁾	64	
Chlorodibromomethane	124-48-1	13	1.3	13	1.3		0.79			
Chloroethane	75-00-3						23			
Chloroform	67-66-3	470	47	470	47		0.17	1,240 ⁽¹⁶⁾	28	
Chloromethane	74-87-3						2.1			
cis-1,2-dichloroethylene	156-59-2								590	
cis-1,3-Dichloropropene	10061-01-5								0.055	
Dibromomethane	74-95-3						61			
Dichlorodifluoromethane	75-71-8						390			
Iodomethane (Methyl Iodide)	74-88-4									
Isopropylbenzene	98-82-8						660			
Methylene chloride	75-09-2	590	59	590	59		8.9	2,200		
Styrene	100-42-5					100	1,600			
trans-1,4-Dichloro-2-butene	110-57-6						7100			
Trichlorofluoromethane	75-69-4						1,300			
Vinyl Acetate	108-05-4						410		16	
Benzene	71-43-2	51	5.1	51	5.1	5	1.2	130		

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		Fish Consumption		Drinking Water		EPA's 2004 NRWQC (chronic)	DEQ's 2004 AWQC (chronic)	Oak Ridge National Laboratory's (Tier II SCV) ^(I)	MacDonald PECs and other SQVs ⁽¹⁾	DEQ 2007 Bioaccumulative Sediment SLVs ^(E)		
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17.5 g/day consumption rate	175 g/day consumption rate	17.5 g/day consumption rate	175 g/day consumption rate	µg/l	µg/l	µg/l	µg/l	µg/l	µg/kg	µg/kg		
EthylBenzene	100-41-4	2,100	210	2,100	210	700	1,300			7.3		
m,p-Xylene										1.8 ^(I)		
o-Xylene	95-47-6						1400			13 ^(I)		
Xylenes (total)	1330-20-7					10,000	200					
Methyltert-butyl ether	1634-04-4						37					
Tetrachloroethene (PCE)	127-18-4	3.3	0.33	3.3	0.33	5	0.12	840 ⁽¹⁶⁾	98	500 ⁽⁷⁾		
Toluene	108-88-3	15,000	1,500	15,000	1,500	1,000	2300		9.8			
trans-1,2-Dichloroethene	156-60-5	10,000	1,000	10,000	1,000	100	110		590			
trans-1,3-Dichloropropene	10061-02-6						0.4		0.055			
Trichloroethene (TCE)	79-01-6	30	3	30	3	5	0.17	21,900 ⁽¹⁶⁾	47	2,100 ⁽⁷⁾		
Vinyl Chloride	75-01-4	2.4	0.24	2.4	0.24	2	0.015					
Semivolatile Organic Compounds												
Halogenated Compounds												
1,2-Dichlorobenzene	95-50-1	1,300	130	1,300	130	600	49	763 ⁽¹⁶⁾	14	1,700 ⁽⁷⁾		
1,3-Dichlorobenzene	541-73-1	960	96	960	96		14	763 ⁽¹⁶⁾	71	300 ⁽⁷⁾		
1,4-Dichlorobenzene	106-46-7	190	19	190	19	75	2.8	763 ⁽¹⁶⁾	15	300 ⁽⁷⁾		
1,2,4-Trichlorobenzene	120-82-1	70	7	70	7	70	8.2		110	9,200 ⁽⁷⁾		
Hexachlorobenzene	118-74-1	0.00029	0.000029	0.00029	0.000029	1	0.042			100 ⁽⁶⁾	19 ⁽³³⁾	
2-Chloronaphthalene	91-58-7	1,600	160	1,600	160		490					
Hexachloroethane	67-72-1	3.3	0.33	3.3	0.33		4.8	540 ⁽¹⁶⁾	12			
Hexachlorobutadiene	87-68-3	18	1.8	18	1.8		0.86			600 ⁽⁸⁾		
Hexachlorocyclopentadiene	77-47-4	1,100	110	1,100	110	50	220	9.3 ⁽¹⁶⁾		400 ⁽⁸⁾		
2,2'-oxybis(1-chloropropane)	108-60-1						0.95					
Bis-(2-chloroethoxy) methane	111-91-1											
Bis-(2-chloroethyl) ether	111-44-4	0.53	0.053	0.53	0.053		0.06					
4-Chlorophenyl-phenyl ether	7005-72-3						0.06					
4-bromophenyl-phenyl ether	101-55-3											
3,3'-Dichlorobenzidine	91-94-1	0.028	0.0028	0.028	0.0028		0.15	763 ⁽¹⁶⁾				
4-Chloroaniline	106-47-8						150					
Organonitrogen Compounds												
Nitrobenzene	98-95-3	690	69	690	69		3.4					
Aniline	62-53-3						12					
2-Nitroaniline	88-74-4						110.0					
3-Nitroaniline	99-09-2						3.2					
4-Nitroaniline	100-01-6						3.2					

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N-Nitrosodimethylamine	62-75-9	3	0.3	3	0.3		0.00042						
N-Nitroso-di-n-propylamine	621-64-7	0.51	0.051	0.51	0.051		0.0096						
N-Nitrosodiphenylamine	86-30-6	6	0.6	6	0.6		14		210				
2,4-Dinitrotoluene	121-14-2	3.4	0.34	3.4	0.34		73						
2,6-Dinitrotoluene	606-20-2						37						
Carbazole	86-74-8						3.4			1,600 ⁽⁵⁾			
Oxygen-Containing Compounds													
Benzoic Acid	65-85-0						150,000			42			
Benzyl Alcohol	100-51-6						11,000			8.6			
Dibenzofuran	132-64-9						12			3.7			
Isophorone	78-59-1	960	96	960	96		71						
Phenols and Substituted Phenols													
Phenol	108-95-2	1,700,000	170,000	1,700,000	170,000		11,000	2,560 ⁽¹⁶⁾		50 ^(5,6)			
2-Methylphenol (o-Cresol)	95-48-7						1,800		13				
4-Methylphenol (p-Cresol)	106-44-5						180						
2,4-Dimethylphenol	105-67-9	850	85	850	85		730						
2-Chlorophenol	95-57-8	150	15	150	15		30	2,000 ⁽¹⁶⁾					
2,4-Dichlorophenol	120-83-2	290	29	290	29		110	365 ⁽¹⁶⁾					
2,4,5-Trichlorophenol	95-95-4	3,600 ⁽²⁴⁾	360 ⁽²⁴⁾	3,600	360		3,700						
2,4,6-trichlorophenol	88-06-2	2.4	0.24	2.4	0.24		6.1	970 ⁽¹⁶⁾					
2,3,4,6-Tetrachlorophenol	58-90-2						1,100						
Pentachlorophenol	87-86-5	3	0.3	3	0.3	1	0.56	15 ⁽²²⁾	13 ^(14,23)	1,000 ⁽⁸⁾	250 ⁽³³⁾		
4-Chloro-3-methylphenol	59-50-7												
2-Nitrophenol	88-75-5						1100			150 ⁽¹⁶⁾			
4-Nitrophenol	100-02-7						290		300	150 ⁽¹⁶⁾			
2,4-Dinitrophenol	51-28-5	5,300	530	5,300	530		73			150 ⁽¹⁶⁾			
Methyl-4,6-Dinitrophenol 2-	534-52-1	280	28	280	28					150 ⁽¹⁶⁾			
Phthalate Esters													
Dimethylphthalate	131-11-3	1,100,000	110,000	1,100,000	110,000		370,000			3 ⁽¹⁶⁾			
Diethylphthalate	84-66-2	44,000	4,400	44,000	4,400		29,000		210	600 ⁽⁷⁾			
Di-n-butylphthalate	84-74-2	4,500	450	4,500	450		3,700			100 ⁽¹⁶⁾	60		
Butylbenzylphthalate	85-68-7	1900	190	1900	190		7,300		19	3 ⁽¹⁶⁾			
Di-n-octylphthalate	117-84-0						1,500			3 ⁽¹⁶⁾			
bis(2-Ethylhexyl)phthalate	117-81-7	2.2	0.22	2.2	0.22	6	4.8			3 ⁽¹⁶⁾	800 ^(5,6)		

Table 3-1 Screening Level Values for Soil/Stormwater Sediment, Stormwater, Groundwater, and Surface Water^(A)

Chemical	Units	GROUNDWATER / SURFACE WATER / STORMWATER				GROUNDWATER / SURFACE WATER / STORMWATER			UPLAND SOIL / STORMWATER SEDIMENT ^(D)			
		Water ^(C)							Soil/Stormwater Sediment ^(D)			
		Human Health [#]				Ecological Receptors [#]			Toxicity	Bioaccumulation		
		Fish Consumption		Drinking Water		EPA's 2004 NRWQC (chronic)	DEQ's 2004 AWQC (chronic)	Oak Ridge National Laboratory's (Tier II SCV) ^(I)	MacDonald PECs and other SQVs ⁽¹⁾	DEQ 2007 Bioaccumulative Sediment SLVs ^(E)		
		EPA's 2004 NRWQC (organism only)	Portland Harbor specific fish consumption rate	DEQ's 2004 AWQC (organism only)	Portland Harbor specific fish consumption rate						MCL	Tap Water PRGs
17.5 g/day consumption rate	175 g/day consumption rate	17.5 g/day consumption rate	175 g/day consumption rate	µg/l	µg/l	µg/l	µg/l	µg/l	µg/kg	µg/kg		
Polycyclic Aromatic Hydrocarbons												
Naphthalene	91-20-3					0.2 ⁽²⁶⁾	6.2		620 ⁽¹⁶⁾	12	561 ⁽²⁾	
2-Methylnaphthalene	91-57-6					0.2 ⁽²⁶⁾				2.1 ⁽⁸⁾	200 ⁽¹¹⁾	
Acenaphthylene	208-96-8					0.2 ⁽²⁶⁾					200 ⁽⁶⁾	
Acenaphthene	83-32-9	990	99	990	99	0.2 ⁽²⁶⁾	370		520 ⁽¹⁶⁾		300 ⁽⁶⁾	
Fluorene	86-73-7	5,300	530	5,300	530	0.2 ⁽²⁶⁾	240			3.9	536 ⁽²⁾	
Phenanthrene	85-01-8					0.2 ⁽²⁶⁾					1,170 ⁽²⁾	
Anthracene	120-12-7	40,000	4,000	40,000	4,000	0.2 ⁽²⁶⁾	1,800			0.73	845 ⁽²⁾	
Fluoranthene	206-44-0	140	14	140	14	0.2 ⁽²⁶⁾	1,500				2,230 ⁽²⁾	37000 ⁽³²⁾
Pyrene	129-00-0	4,000	400	4,000	400	0.2 ⁽²⁶⁾	180				1,520 ⁽²⁾	1900 ⁽³²⁾
Benzo(a)anthracene	56-55-3	0.018	0.0018	0.018	0.0018	0.2 ⁽²⁶⁾	0.092			0.027	1,050 ⁽²⁾	
Chrysene	218-01-9	0.018	0.0018	0.018	0.0018	0.2 ⁽²⁶⁾	9.2				1,290 ⁽²⁾	
Benzo(b)fluoranthene	205-99-2	0.018	0.0018	0.018	0.0018	0.2 ⁽²⁶⁾	0.092					
Benzo(k)fluoranthene	207-08-9	0.018	0.0018	0.018	0.0018	0.2 ⁽²⁶⁾	0.92				13,000 ⁽⁶⁾	
Benzo(a)pyrene	50-32-8	0.018	0.0018	0.018	0.0018	0.2	0.0092			0.014	1,450 ⁽²⁾	
Indeno(1,2,3-cd)pyrene	193-39-5	0.018	0.0018	0.018	0.0018	0.2 ⁽²⁶⁾	0.092				100 ⁽¹⁰⁾	
Dibenzo(a,h)anthracene	53-70-3	0.018	0.0018	0.018	0.0018	0.2 ⁽²⁶⁾	0.0092				1,300 ⁽⁹⁾	
Benzo(g,h,i)perylene	191-24-2					0.2 ⁽²⁶⁾					300 ⁽¹⁶⁾	
Chlorinated Dioxins and Furans												
2,3,7,8,-TCDD (Toxicity Equivalence Quotient)	1746-01-6	5.1E-09	5.1E-10	5.1E-09	5.1E-10	0.00003	4.5E-07					
2,3,7,8,-TCDD	1746-01-6	5.1E-09	5.1E-10	5.1E-09	5.1E-10		4.5E-07		0.00038 ⁽¹⁶⁾		0.009 ⁽⁶⁾	0.000091 ⁽³³⁾
2,3,7,8,-TCDF												0.00077 ⁽³³⁾
1,2,3,7,8,-PeCDD												0.0026 ⁽³³⁾
1,2,3,7,8,-PeCDF												0.0026 ⁽³³⁾
2,3,4,7,8,-PeCDF												0.00003 ⁽³³⁾
2,3,4,7,8,-PeCDF												
1,2,3,6,7,8,-HxCDD												
1,2,3,7,8,9,-HxCDD												
1,2,3,4,7,8,-HxCDF												0.0027 ⁽³³⁾
1,2,3,6,7,8,-HxCDF												0.0027 ⁽³³⁾
1,2,3,7,8,9,-HxCDF												0.0027 ⁽³³⁾



Table 3-1 Screening Level Values for Soil/Stormwater Sediment, Stormwater, Groundwater, and Surface Water^(A)

Chemical	Units	GROUNDWATER / SURFACE WATER / STORMWATER				GROUNDWATER / SURFACE WATER / STORMWATER			UPLAND SOIL / STORMWATER SEDIMENT ^(D)			
		Water ^(C)								Soil/Stormwater Sediment ^(D)		
		Human Health [#]				Ecological Receptors [#]			Toxicity	Bioaccumulation		
		Fish Consumption		Drinking Water		MCL	Tap Water PRGs	EPA's 2004 NRWQC (chronic)	DEQ's 2004 AWQC (chronic)	Oak Ridge National Laboratory's (Tier II SCV) ^(I)	MacDonald PECs and other SQVs ⁽¹⁾	DEQ 2007 Bioaccumulative Sediment SLVs ^(E)
		EPA's 2004 NRWQC (organism only)	Portland Harbor specific fish consumption rate	DEQ's 2004 AWQC (organism only)	Portland Harbor specific fish consumption rate							
17.5 g/day consumption rate	175 g/day consumption rate	17.5 g/day consumption rate	175 g/day consumption rate	µg/l	µg/l	µg/l	µg/l	µg/l	µg/kg	µg/kg		
2,3,4,6,7,8,-HxCDF											0.0027 ⁽³³⁾	
1,2,3,4,6,7,8,-HpCDD											0.69 ⁽³³⁾	
1,2,3,4,6,7,8,-HpCDF											0.69 ⁽³³⁾	
1,2,3,4,7,8,9,-HpCDF											0.69 ⁽³³⁾	
OCDD	3268-87-9										23 ⁽³³⁾	
OCDF	39001-02-0										23 ⁽³³⁾	
Total tetrachlorinated dioxins												
Total pentachlorinated dioxins												
Total hexachlorinated dioxins												
Total heptachlorinated dioxins												
Total tetrachlorinated furans												
Total pentachlorinated furans												
Total hexachlorinated furans												
Total heptachlorinated furans												



Notes:

^A Stormwater values in this table are intended for screening non-permitted discharges.

^C EPA, under CERCLA authority, has identified the Sage Drinking Water Act's MCLs and AWQCs (federal and state, once approved) as potential ARARs under CERCLA. The final determination of whether MCLs or AWQC are ARARs will be made in the EPA Portland Harbor Record of Decision (ROD). Decisions to implement source control, prior to the EPA Portland Harbor ROD, due to an exceedance of an SLV in upland groundwater or stormwater will be prioritized and evaluated on a case-by-case basis.

^D Stormwater sediment is defined as either catch basin sediment, conveyance line sediment, or stormwater particulates

^E All values are from DEQ Guidance for Assessing Bioaccumulative Chemicals of Concern in Sediment, January 31, 2007.

a blank cell indicates an SLV was not available at the time of the last update. DEQ or EPA may develop additional SLVs as determined necessary, on a case-by-case basis.

¹The values were chosen by first referring to the PEC's in the paper listed in footnote 2. If the analyte was not found, we then used the other literature listed in footnotes 3 through 11 to find the value.

² These values were taken MacDonaldd DD, Ingersoll C.G., Berger T.A. (2000) Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems. Environmental Contamination and Toxicity 39: 20-31.

³ Sediment quality value (Hyalella), Washington State, quoted in MacDonaldd et al. (1999); Appendix 3-1.

⁴ Quoted in MacDonaldd et al. (1999); Appendix 3-1

⁵ Lowest Apparent Effects Threshold (LAET), Table 11, WDOE (1997)

⁶ Upper Effects Threshold (UET), Freshwater Sediment (NOAA, 1999)

⁷ USEPA sediment quality advisory level, quoted in MacDonaldd et al. (1999); Appendix 3-1

⁸ New York State acute criterion, quoted in MacDonaldd et al. (1999); Appendix 3-1

⁹ Severe effect level, British Columbia, quoted in MacDonaldd et al. (1999); Appendix 3-1

¹⁰ 5x conversion from measured "LOW" to estimated "HIGH", NOAEL to chronic LOAEL per USEPA (1997b)

¹¹ PEL, British Columbia, quoted in MacDonaldd et al. (1999); Appendix 3-1

¹² Based on Notice of Availability of Final Aquatic Life Criteria Document for Tributyltin (69 Fed. Reg. 2, 342). USGS web site (http://nwis.waterdata.usgs.gov/or/nwis/qwdata/?site_no=14211720&agency_cd=USGS)

¹³ These values for aluminum are expressed in terms of "total recoverable" concentration of metal in the water column. The criterion applies at pH<6.6 and hardness<12 mg/L (as CaCO₃)

¹⁴ These values were taken from OAR 340-41 Table 20 because they will remain the enforceable values for these particular analytes

¹⁵ This is a hardness dependent metal. All values were calculated based on 25 mg/l of CaCO₃.

¹⁶ Values were taken from Table 33c (OAR 340-41), which are Water Quality Guidance Values, not criteria, that can be used in the application of Oregon's Narrative Toxics Criteria to waters of the state in order to protect aquatic life.

¹⁸ Cyanide value is based on a free cyanide value per DEQ OAR 340-41 Table 33, and EPA values are based on total Cyanide

¹⁹ This metal is listed as the total recoverable metal in the water column

²⁰ This fish tissue residue criterion for methylmercury is based on a total fish consumption rate of 0.0175 kg/day

²² Freshwater aquatic life values for pentachlorophenol are expressed as a function of pH, and are calculated as follows: Chronic = exp(1.005(ph)-5.134). The value displayed in the table corresponds to a pH of 7.8

²³ Freshwater aquatic life values for pentachlorophenol are expressed as a function of pH, and are calculated as follows: Chronic = exp(1.005(ph)-5.29). The value displayed in the table corresponds to a pH of 7.8

²⁴ Listed as a secondary pollutant by EPA

[#] Table 20 from OAR 340-40 was superceded by Tables 33A, 33B, and 33C. As noted above, 33A and 33C were adopted the Oregon Environmental Commission and were effective in February 2005. Implementation of Table 33B (i.e., metals) is pending EPA approval; Table 20 will be used for the compounds listed in Table 33B, pending approval and implementation.

Tier II SCV

(a) = value for Arsenic V

(b) = see notation for ORNL's Mercury value

(c) = SCV for BHC (other)

(d) = SCV for p,p' DDD

(e) = SCV for p,p' DDT

(f) = SCV for m-Xylene

General

AWQC = ambient water quality criteria

MRL = minimum reporting limit

NRWQC = National Recommended Water Quality Criteria

ORNL = Oak Ridge National Laboratory

PRG = preliminary remediation goals



(g) = SCV for Xylene mixture

(!) Screening level values (SLVs) presented in this table may be revised or augmented as data become available from the Portland Harbor RI/FS or in the event the standards, criteria, guidelines or toxicological data are updated. Prior to using this Table, DEQ's website should be checked for updates to this table at <http://www.deq.state.or.us/nwr/PortlandHarbor/jscs>.

(h) = SCV for 1-Methylnaphthalene

(j) = Tier II SCV values were taken from Suter II, G.W. and Tsao, C.L., 1996. Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Aquatic Biota: 1996 Revision. ORNL publication ES/ER/TM-96/R2

MCL

²⁶ MCL is based on benzo(a)pyrene

²⁹ National Secondary Drinking Water Standards

³¹ Presumed background, per Table A-1, DEQ Guidance for Assessing Bioaccumulative Chemicals of Concern in Sediment, January, 31, 2007.

³² Freshwater fish, per Table A-1, DEQ Guidance for Bioaccumulative Chemicals of Concern in Sediment, January 31, 2007.

³³ Human Health General Population, per Table A-1, DEQ Guidance for Bioaccumulative Chemicals of Concern in Sediment, January 31, 2007.

³⁴ This value represents the sum of the 2,4' and 4,4' isomers.

³⁵ This value represents the sum of DDE + DDD + DDT.

TT = see footnote 7 on EPA NPD Drinking Water Standards