

<b>Table 7 Sediment quality benchmarks</b>					
Substance	Ontario Sediment Quality Guidelines <sup>I</sup> (ppm)		Canadian Freshwater Sediment Quality Guidelines <sup>II</sup> (µg/kg)	Probable Effect Levels <sup>II</sup> (µg/kg)	Ontario Guideline for Use at Contaminated Sites Sediments-LEL <sup>III</sup> (mg/kg)
	LEL <sup>IV</sup>	SEL <sup>V</sup>			
Acenaphthene			6.71	88.9	
Acenaphthylene			5.87	128	
Aldrin	0.002	8			0.002
Ammonia		100 <sup>VI</sup>			
Anthracene	0.22	370	46.9	245	0.22
Arsenic	6	33	5.9 mg/kg	17 mg/kg	6
Benzo(a)anthracene	0.32	1480	31.7	385	0.32
Benzo(k)fluoranthene	0.24	1340			0.24
Benzo(g,h,i)perylene	0.17	320			0.17
Benzo(a)pyrene	0.37	1440	31.9	782	0.37
Cadmium	0.6	10	0.6 mg/kg	3.5 mg/kg	0.6
Carbon, Total Organic (TOC)	1%	10%			
Chlordane	0.007	6	4.5	8.87	0.007
Chromium	26	110	37.3 mg/kg	90 mg/kg	(total) 26
Chrysene	0.34	460	57.1	862	0.34
Cobalt		50 <sup>VI</sup>			50
Copper	16	110	35.7 mg/kg	197 mg/kg	16
Cyanide		0.1 <sup>VI</sup>			0.1
DDD ( <i>p,p</i> - and <i>o,p</i> -)	0.008	6	3.54	8.51	0.008
DDE ( <i>p,p</i> - and <i>o,p</i> -)	0.005	19	1.42	6.75	0.005
DDT ( <i>p,p</i> - and <i>o,p</i> -)	0.008 (total-0.007)	71 (total- 12)	1.19	4.77	0.007
Dibenzo(a,h)anthracene	0.06	130	6.22	135	0.06
Dieldrin	0.002	91	2.85	6.67	0.002
Endrin	0.003	130	2.67	62.4	0.003
Fluoranthene	0.75	1020	111	2355	0.75
Fluorene	0.19	160	21.2	144	0.19
Heptachlor epoxide	0.005	5	0.6	2.74	0.005
Hexachlorobenzene	0.02	24			0.02
Indeno(1,2,3-c,d) pyrene	0.2	320			0.2
Iron	2%	4%			
Lead	31	250	35 mg/kg	91.3 mg/kg	31
Lindane (BHC)	0.003	12	0.94	1.38	
Manganese	460	1100			
Mercury	0.2	2	0.17 mg/kg	0.486 mg/kg	0.2
Methylnaphthalene, 2-			20.2	201	
Mirex	0.007	130			
Naphthalene			34.6	391	
Nickel	16	75			16

Nitrogen (total kjeldahl) (TKN)	550	4800			
Nonylphenol and its ethoxylates			1.4 mg/kg		
Oil and Grease		0.15% <sup>VI</sup>			
PAH (total)	4	10000			
Phenanthrene	0.56	950	41.9	515	0.56
Phosphorus (total)	600	2000			
Polychlorinated biphenyls (PCBs)	(total) 0.07	530	(total) 34.1 (Aroclor 1254) 60	(total) 277 (Aroclor 1254) 340	(total) 0.07
Pyrene	0.49	850	53	875	0.49
Silver		0.5 <sup>VI</sup>			0.5
Toxaphene			0.1		
Zinc	120	820	123 mg/kg	315 mg/kg	120

<sup>I</sup> Ontario Ministry of Environment and Energy, "Guidelines for the Protection and Management of Aquatic Sediment Quality in Ontario," August 1993, [Hhttp://www.ene.gov.on.ca/envision/gp/B1-3.pdf](http://www.ene.gov.on.ca/envision/gp/B1-3.pdf)H.

<sup>II</sup> Canadian Council of Ministers of the Environment, "Canadian Sediment Quality Guidelines for the Protection of Aquatic Life," 1999, updated 2002, [Hhttp://www.ccme.ca/assets/pdf/sedqg\\_summary\\_table.pdf](http://www.ccme.ca/assets/pdf/sedqg_summary_table.pdf)H.

<sup>III</sup> Ontario Ministry of Environment and Energy, "Guideline for Use at Contaminated Sites in Ontario," Appendix 2, Table E, Sediment Quality Criteria, February 1997, Appendix revised September 1998, [Hhttp://www.ene.gov.on.ca/envision/gp/3161e01\\_1.pdf](http://www.ene.gov.on.ca/envision/gp/3161e01_1.pdf)H.

<sup>IV</sup> Lowest Effect Level.

<sup>V</sup> Severe Effect Level.

<sup>VI</sup> From the Open Water Disposal Guidelines (OWDG).