Table F-1—Summary of Sediment Quality Guidelines

	Long & Morgan[d]		WA State SMS[e]		AETs[f]		MacDonald et al.[g]		PSDDA[h]		EP Marine[i]	
Compound	ER-L	ER-M	SQS	CSL	LAET	2LAET	TEL	PEL	SL	ML	CHRONIC	ACUTE
Inorganics (mg/kg DW)												
Antimony	2.0	25			150	200			150	200		
Arsenic	8.2	70	57	93	57	93	7.24	41.6	57	700	33	64
Cadmium	1.2	9.6	5.1	6.7	5.1	6.7	0.676	4.21	5.1	14	31	96
Chromium	81	370	260	270	260	270	52.3	160				
Copper	34	270	390	390	390	390	18.7	108	390	1,300	136[a]	216[a]
Lead	46.7	218	450	530	450	530	30.2	112	450	1,200	132[a]	3,360[a]
Mercury	0.15	0.71	0.41	0.59	0.41	0.59	0.13	0.7	0.41	2.3	0.032[a]	0.6[a]
Nickel	20.9	51.6			>140	>140	15.9	42.8	140	370		
Silver	1.0	3.7	6.1	6.1	6.1	6.1	0.73	1.77	6.1	8.4		
Zinc	150	410	410	960	410	960	124	271	410	3,800	760[a]	2,240[a]
BNAs (µg/kg DW)												
2-Methylnaphthalene	70	670			670	1,400	20.2	201	670	1,900		
Naphthalene	160	2,100			2,100	2,400	34.6	391	2,100	2,400	500[b,c]	42,000[a]
Acenaphthylene	44	640			1,300	1,300	5.87	128	560	1,300		
Acenaphthene	16	500			500	730	6.71	88.9	500	2,000	16,500[b]	23,000[b]
Fluorene	19	540			540	1,000	21.2	144	540	3,600	59[b,c]	
Phenanthrene	240	1,500			1,500	5,400	86.7	543.5	1,500	21,000	110[b,c]	
Anthracene	85	1,100			960	4,400	46.9	245	960	13,000	190[b,c]	
Total LPAH	552	3,160			5,200	13,000	312	1442	5,200	29,000		
Fluoranthene	600	5,100			1,700	2,500	113	1494	1,700	30,000	1,600[b,c]	36,000[a]
Pyrene	665	2,600			2,600	3,300	153	1398	2,600	16,000	850[b,c]	
Benzo(a)anthracene	261	1,600			1,300	1,600	74.8	693	1,300	5,100	1,600[b,c]	220,000[a]
Chrysene	384	2,800			1,400	2,800	107.8	846	1,400	21,000	1,200[b,c]	
Total Benzofluoranthenes					3,200	3,600			3,200	9,900		
Benzo(a)pyrene	430	1,600			1,600	3,000	88.8	763	1,600	3,600	18,000[b,c]	
Dibenz(a,h)anthracene	63	260			230	540	6.22	135	230	1,900	12,000[b,c]	
Benzo(g,h,i)perylene					670	720			670	3,200		
Total HPAH	1,700	9,600			12,000	17,000	655	6676	12,000	69,000		
Phenol			420	1,200	420	1,200			420	1,200		
2-Methylphenol			63	63	63	72			63	77		
4-Methylphenol			670	670	670	1,800			670	3,600		
2,4-Dimethylphenol			29	29	29	72			29	210		

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Compound	Long & Morgan[d]		WA State SMS[e]		AETs[f]		MacDonald et al.[g]		PSDDA[h]		EP Marine[i]	
	ER-L	ER-M	SQS	CSL	LAET	2LAET	TEL	PEL	SL	ML	CHRONIC	ACUTE
Pentachlorophenol			360	690	360	690			400	690		
Benzyl alcohol			57	73	57	73			57	870		
Benzoic acid			650	650	650	650			650	760		
1,2-Dichlorobenzene					35	50			35	110		
1,3-Dichlorobenzene					170	170			170			
1,4-Dichlorobenzene					110	120			110	120		
1,2,4-Trichlorobenzene					31	51			31	64		
Hexachlorobenzene					22	70			22	230		
Dimethylphthalate					71	160			1,400			
Diethylphthalate					200	200			1,200			
Di-n-butylphthalate					1,400	1,400			5,100			
Butylbenzylphthalate					63	900			970			
Bis(2-ethylhexyl)phthalate					1,300	1,900	182	2647	8,300			
Di-n-octylphthalate					6,200	6,200			6,200			
Dibenzofuran					540	700			540	1,700		
Hexachlorobutadiene					11	120			29	270		
Hexachloroethane									1,400	14,000		
n-Nitrosodiphenylamine					28	40			28	130		
BNAs (µg/kg TOCN)												
2-Methylnaphthalene			38,000	64,000								
Naphthalene			99,000	170,000								
Acenaphthylene			66,000	66,000								
Acenaphthene			16,000	57,000								
Fluorene			23,000	79,000								
Phenanthrene			100,000	480,000								
Anthracene			220,000	1,200,000								
Total LPAH			370,000	780,000								
Fluoranthene			960,000	1,200,000								
Pyrene			1,000,000	1,400,000								
Benzo(a)anthracene			110,000	270,000								
Chrysene			110,000	460,000								
Total Benzofluoranthenes			230,000	450,000								
Benzo(a)pyrene			99,000	210,000								
Indeno(1,2,3-cd)pyrene			34,000	88,000								

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	ER-L	ER-M	SQS	CSL	LAET	2LAET	TEL	PEL	SL	ML	CHRONIC	ACUTE
Dibenz(a,h)anthracene			12,000	33,000								
Benzo(g,h,i)perylene			31,000	78,000								
Total HPAH			960,000	5,300,000								
1,2-Dichlorobenzene			2,300	2,300								
1,4-Dichlorobenzene			3,100	9,000								
1,2,4-Trichlorobenzene			810	1,800								
Hexachlorobenzene			380	2,300								
Dimethylphthalate			53,000	53,000								
Diethylphthalate			61,000	110,000								
Di-n-butylphthalate			220,000	1,700,000								
Butylbenzylphthalate			4,900	64,000								
Bis(2-ethylhexyl)phthalate			47,000	78,000								
Di-n-octylphthalate			58,000	4,500,000								
Dibenzofuran			15,000	58,000								
Hexachlorobutadiene			3,900	6,200								
n-Nitrosodiphenylamine			11,000	11,000								
VOCs (µg/kg DW)												
Ethylbenzene					10	33			10	50		
Tetrachloroethene					57	140			57	210		
Trichloroethene									160	1,600		
Xylene (Total)					40	100			40	160		
Pesticides (µg/kg DW)												
Aldrin									10			
Chlordane	0.5	6					2.26	4.79	10			
Dieldrin	0.02	8					0.72	4.3	10			
Endrin	0.02	45										
Heptachlor									10			
Lindane							0.32	0.99	10			
p,p'-DDD	2	20			16	43	1.22	7.81				
p,p'-DDE	2.2	27			9	15	2.07	374				
p,p'-DDT	1	7			34	34	1.19	4.77				
Total DDT	1.58	46.1					3.89	51.7	6.9	6.9		

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Compound	ER-L	ER-M	SQS	CSL	LAET	2LAET	TEL	PEL	SL	ML	CHRONIC	ACUTE
PCBs (µg/kg DW)												
Total PCB	22.7	180			130	1,000	21.6	189	130	3,100	280	
PCBs (µg/kg TOCN)												
Total PCB			12,000	65,000								

[a]Based on 4 percent TOC.
[b]Based on 1 percent TOC.
[c]99th percentile value
[d]Long, E.R. and L.G. Morgan. 1990 with 1995 update. The Potential for Biological Effects of Sediment-Sorbed Contaminants Tested in the National Status and Trends Program. NOAA T
Memorandum NOS OMA 52.
[e]WAC 173-204
[f]Barrick, R., S. Becker, L. Brown, H. Beller, and R. Pastorak. 1988. Sediment Quality Values Refinement: 1988 Update and Evaluation of Puget Sound AET.
[g]MacDonald, D.D., R. Carr, F. Calder, E. Long, and C. Ingersoll. 1996. Development and Evaluation of Sediment Quality Guidelines for Florida Coastal Waters.
[h]PSDDA 1998 (http://www.nws.usace.army.mil/dmmo/sl_ml-t.htm)
[i]Equilibrium partitioning values as presented in Barrick et al., 1988 (see footnote f)
DW: Dry-weight
TOCN: Normalized to total organic carbon con
ER-L: Effects range-low
ER-M: Effects range-median.
SQS: Sediment quality standard
CSL: Cleanup screening level
AET: Apparent effects threshold
LAET: Lowest AET
2LAET: Second-lowest AET
TEL: Threshold effects level
PEL: Probable effects level
SL: Screening level
ML: Maximum level
Blank cell indicates criterion not available.