Metals

	CBSQGs for Sediment		Soil Values From DNR RSL Spreadsheet			EPA Region 5 Ecological Screening Levels		Washington State Standards	
Constituent	TEC (mg/kg dry wt)	PEC (mg/kg dry wt)	Non-industrial (mg/kg)	Industrial (mg/kg)	Groundwater Pathway (mg/kg)	R5 Sediment ESL (mg/kg)	R5 Soil ESL (mg/kg)	SCO (mg/kg)	CLS (mg/kg)
Antimony	2	25	31.3	409	0.542		0.142		
Arsenic	9.8	3	0.613	2.39	0.584	9.79	5.7	14	120
Cadmium	0.99	5	70	799	0.752	0.99	0.00222	2.1	5.4
Chromium	43	110				43.4	0.4	72	88
Copper	32	150	3,130	40,900	91.6	31.6	5.4	400	1,200
Iron	20,000	40,000	54,800	100,000					
Lead	36	130	400	800	27	35.8	0.0537	360	> 1,400
Manganese	460	1,100	1,830	22,900	39.1244				
Mercury	0.18	1.1	3.13	3.13	0.208	0.174	0.1	0.66	0.8
Nickel	23	49		19,800	13.0612	22.7	13.6	26	110
Silver	1.6	2.2	391	5,110	0.8491	0.5	4.04	0.57	1
Zinc	120	460	23,500	100,000		121	6.62	3,200	> 4,200

Green shaded areas are the most protective concentrations

NOTE: The Region 5 Ecological screening levels are one of several tools available through the Risk Assessment Information System (RAIS) housed by the University of Tennessee. The tool can be found at: https://rais.ornl.gov/tools/eco_search.php

Washington State Freshwater Clean Up Objectives Definitions:

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Cleanup Screening Level (CSL). The cleanup screening level is established in accordance with the requirements in WAC 173-204-560(4). If a risk-based concentration is below the regional background level or practical quantitation limit, then the cleanup screening level is established at a concentration equal to the practical quantitation limit or regional background, whichever is higher.

PAHs & PCBs

	CBSQGs for Sediment		Soil Values From DNR RSL Spreadsheet			EPA Region 5 Ecological Screening Levels		Washington State Standards	
Constituent	TEC (mg/kg dry wt)	PEC (mg/kg dry wt)	Non-industrial (mg/kg)	Industrial (mg/kg)	Groundwater Pathway (mg/kg)	R5 Sediment ESL (mg/kg)	R5 Soil ESL (mg/kg)	SCO (mg/kg)	CLS (mg/kg)
Acenapthene	0.0067	0.089	3,440	33,000		0.00671	682		
Acenaphtylene	0.0059	0.128				0.00587	682		
Anthracene	0.0572	0.845	17,200	100,000	196.9492	0.0572	1480		
Fluorene	0.0774	0.536	2,290	22,000	14.8299	0.0074			
Naphthalene	0.176	0.561	5.15	26	0.6582	0.176	0.0994		
2-methylnaphthalene	0.0202	0.201	229	22,000		0.0202	3.24		
Phenanthrene	0.204	1.17				0.204	45.7		
Benza(a)anthracene	0.108	1.05	0.147	2.1		0.108	5.21		
Benzo(a)pyrene	0.15	1.45	0.015	0.211	0.47	0.15	1.52		
Benzo(e)pyrene	0.15	1.45							
Benzo(b)fluoranthene	0.24	13.4	0.148	2.11	0.4793	10.4	59.8		
Bnezo(k)fluoranthene	0.24	13.4	1.48	21.1		0.24	148		
Benzo(g,h,i)perylene	0.17	3.2				0.17	119		
Chrysene	0.166	1.29	14.8	211	0.1446	0.166	4.73		
Dibenzo(a,h)anthracene	0.033	0.135	0.015	0.211		0.033	18.4		
Fluoranthene	0.423	2.23	2,290	22,000	88.8778	0.423	122		
Indeno(1,2,3-cd)pyrene	0.2	3.2	0.148	2.11		0.2	109		
Pyrene	0.195	1.52	1720	16500	54.5455	0.195	78.5		
Total PAHs	1.61	22.80						17	30
Total PCBs	0.06	0.676	0.208	0.714		0.0598		0.11	2.5

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Pesticides, etc.

	CBSQGs		From DNR RSL Spreadsheet			EPA Region 5 Ecological Screening Levels		Washington State Standards	
Constituent	TEC (mg/kg dry wt)	PEC (mg/kg dry wt)	Non-industrial (mg/kg)	Industrial (mg/kg)	Groundwater Pathway (mg/kg)	R5 Sediment ESL (mg/kg)	R5 Soil ESL (mg/kg)	SCO (mg/kg)	CLS (mg/kg)
Aldrin	0.002	0.08	0.037	0.164		0.002	0.00332		
BHC	0.003	0.12	0.27	0.948					
alpha-BHC	0.006	0.1	0.077	0.274		0.006	0.0994		
beta-BHC	0.005	0.21	0.27	0.958		0.005	0.00398		
gamma-BHC (lindane)	0.003	0.005	0.516	2.06		0.00237	0.005		
Chlordane	0.0032	0.018	1.55	6.23		0.00324	0.24		
Dieldrin	0.0019	0.062	0.03	0.018		0.0019	0.00238	0.0049	0.0093
Sum DDD	0.0049	0.028	2.02	7.18		0.00488	0.758	0.31	0.86
Sum DDE	0.0032	0.031	1.84	8.25		0.00316	0.596	0.021	0.033
Sum o,p' + p,p' DDT	0.0042	0.063						0.1	8.1
Sum of DDT + DDD DDE	0.0053	0.572							
Endrin	0.0022	0.207	18.3	185	0.1616	0.00222	0.0101		
Heptachlor Epoxide	0.0025	0.016	0.066	0.299	0.0082	0.00247	0.152		
Mirex	0.007	0.014	0.034	0.151					
Toxaphene	0.001	0.002	0.441	1.57	0.928	0.000077	0.119		

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Other Assorted

	CBSQGs for Sediment		Soil Values From DNR RSL Spreadsheet			EPA Region 5 Ecological Screening Levels		Washington State Standards	
Constituent	TEC (mg/kg dry wt)	PEC (mg/kg dry wt)	Non-industrial (mg/kg)	Industrial (mg/kg)	Groundwater Pathway (mg/kg)	R5 Sediment ESL (mg/kg)	R5 Soil ESL (mg/kg)	SCO (mg/kg)	CLS (mg/kg)
Benzene	0.057	0.11	1.49	7.41	0.0051	0.14157	0.255		
Toluene	0.89	1.8	818	818	1.1072	1.22	5.45		
Xylene	0.025	0.05	260	260	3.96	0.433	10		
2,3,7,8-TCDD (pgTEQ/g)	0.00085	0.0215	0.00000439	0.000018	0.00003	0.00000012	0.00000019		
Pentachlorophenol	0.15	0.2	0.892	2.7	0.0202	23	0.119	1.2	> 1.2
Tributyltin	0.00052	0.00294	18.3	185				0.047	0.32
1,2-dichlorobenzene	0.023	0.023	376	376	1.168	0.294	2.96		
1,4-dichlorobenzene	0.031	0.09	3.48	17.5	0.144	0.318	0.546		
1,2,4-trichlorobenzene	0.008	0.018	22	98.7	0.408	5.062	11.1		
Dimethyl Phthalate	0.53	0.53	7,820	100,000			734		
Diethyl Phthalate	0.61	1.1	48,900	100,000		0.295	24.8		
Di-N-Butyl Phthalate	2.2	17	6,110	61,600		1.114	0.15		
Di-N-Octyl Phthalate	0.58	45	611	6,160		4.06	709		
Dibenzofuran	0.15	0.58	72.2	853		0.449		0.2	0.68
Phenol	4.2	12	18,300	100,000	2.2946	0.0491	120	0.12	0.21
2-methylphenol	6.7	6.7				0.30453			
2,4 dimethyl phenol	0.29	0.29	1,220	12,300		30453	0.01		
Benzyl Alcohol	0.57	0.73	6,110	61,600		0.00104	65.8		
Benzoic Acid	6.5	6.5	100,000	100,000				2.9	3.8

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EPA Region 5 ESLs - Sed

The ESL reference database consists of Region 5 media-specific (soil, water, sediment, and air) Ecological Screening Levels (ESLs) for RCRA Appendix IX hazardous constituents. The ESLs are initial screening levels with which the site contaminant concentrations can be compared. The ESLs help to focus the investigation on those areas and chemicals that are most likely to pose an unacceptable risk to the environment. ESLs also impact the data requirements for the planning and implementation of field investigations. ESLs alone are not intended to serve as cleanup levels. See the August 2003 revision of the ESLs (formerly EDQLs) at EPA_RS_ESL.pdf

EPA Region 5 ESLs – Soil

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