

Table 749-3

Ecological Indicator Soil Concentrations (mg/kg) for Protection of Terrestrial Plants and Animals^a. For chemicals where a value is not provided, see footnote ^b.

Note: These values represent soil concentrations that are expected to be protective at any MTCA site and are provided for use in eliminating hazardous substances from further consideration under WAC 173-340-7493 (2)(a)(i). Where these values are exceeded, various options are provided for demonstrating that the hazardous substance does not pose a threat to ecological receptors at a site, or for developing site-specific remedial standards for eliminating threats to ecological receptors. See WAC 173-340-7493 (1)(b)(i), 173-340-7493 (2)(a)(ii) and 173-340-7493(3).

Hazardous Substance^b	Plants^c	Soil biota^d	Wildlife^e
METALS^f			
Aluminum (soluble salts)	50		
Antimony	5		
Arsenic III			7
Arsenic V	10	60	132
Barium	500		102
Beryllium	10		
Boron	0.5		
Bromine	10		
Cadmium	4	20	14
Chromium (total)	42 ^g	42 ^g	67
Cobalt	20		
Copper	100	50	217
Fluorine	200		
Iodine	4		
Lead	50	500	118
Lithium	35 ^g		
Manganese	1,100 ^g		1,500
Mercury, Inorganic	0.3	0.1	5.5
Mercury, Organic			0.4
Molybdenum	2		7
Nickel	30	200	980
Selenium	1	70	0.3
Silver	2		

Technetium	0.2		
Thallium	1		
Tin	50		
Uranium	5		
Vanadium	2		
Zinc	86 ^g	200	360
PESTICIDES			
Aldrin			0.1
Benzene hexachloride (including lindane)			6
Chlordane		1	2.7
DDT/DDD/DDE (total)			0.75
Dieldrin			0.07
Endrin			0.2
Hexachlorobenzene			17
Heptachlor/heptachlor epoxide (total)			0.4
Pentachlorophenol	3	6	4.5
OTHER CHLORINATED ORGANICS			
1,2,3,4-Tetrachlorobenzene		10	
1, 2,3-Trichlorobenzene		20	
1,2,4-Trichlorobenzene		20	
1,2-Dichloropropane		700	
1,4-Dichlorobenzene		20	
2,3,4,5-Tetrachlorophenol		20	
2,3,5,6-Tetrachloroaniline	20	20	
2,4,5-Trichloroaniline	20	20	
2,4,5-Trichlorophenol	4	9	
2,4,6-Trichlorophenol		10	
2,4-Dichloroaniline		100	
3,4-Dichloroaniline		20	
3,4-Dichlorophenol	20	20	
3-Chloroaniline	20	30	
3-Chlorophenol	7	10	
Chlorinated dibenzofurans (total)			2E-06
Chloroacetamide		2	
Chlorobenzene		40	
Dioxins			2E-06

Hexachlorocyclopentadiene	10		
PCB mixtures (total)	40		0.65
Pentachloroaniline		100	
Pentachlorobenzene		20	
OTHER NONCHLORINATED ORGANICS			
2,4-Dinitrophenol	20		
4-Nitrophenol		7	
Acenaphthene	20		
Benzo(a)pyrene			12
Biphenyl	60		
Diethylphthalate	100		
Dimethylphthalate		200	
Di-n-butyl phthalate	200		
Fluorene		30	
Furan	600		
Nitrobenzene		40	
N-nitrosodiphenylamine		20	
Phenol	70	30	
Styrene	300		
Toluene	200		
PETROLEUM			
Gasoline Range Organics		100	5,000 mg/kg except that the concentration shall not exceed residual saturation at the soil surface.
Diesel Range Organics		200	6,000 except that the concentration shall not exceed residual saturation at the soil surface.

Table 749-3 Notes

^a Caution on misusing ecological indicator concentrations. Exceedances of the values in this table do not necessarily trigger requirements for cleanup action under this chapter. Natural

background concentrations may be substituted for ecological indicator concentrations provided in this table. The table is not intended for purposes such as evaluating sludges or wastes.

This list does not imply that sampling must be conducted for each of these chemicals at every site. Sampling should be conducted for those chemicals that might be present based on available information, such as current and past uses of chemicals at the site.

^b For hazardous substances where a value is not provided, plant and soil biota indicator concentrations shall be based on a literature survey conducted in accordance with WAC 173-340-7493(4) and calculated using methods described in the publications listed below in footnotes c and d. Methods to be used for developing wildlife indicator concentrations are described in Tables 749-4 and 749-5.

^c Based on benchmarks published in *Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Terrestrial Plants: 1997 revision*, Oak Ridge National Laboratory, 1997.

^d Based on benchmarks published in *Toxicological Benchmarks for Potential Contaminants of Concern for Effects on Soil and Litter Invertebrates and Heterotrophic Process*, Oak Ridge National Laboratory, 1997.

^e Calculated using the exposure model provided in Table 749-4 and chemical-specific values provided in Table 749-5. Where both avian and mammalian values are available, the wildlife value is the lower of the two.

^f For arsenic, use the valence state most likely to be appropriate for site conditions, unless laboratory information is available. Where soil conditions alternate between saturated, anaerobic and unsaturated, aerobic states, resulting in the alternating presence of arsenic III and arsenic V, the arsenic III concentrations shall apply.

^g Benchmark replaced by Washington state natural background concentration.

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