

Table 6B - Nova Scotia Tier II Pathway-Specific Standards (PSS) for Groundwater - Residential / Parkland Land Use (µg/L)

Land Use	Residential / Parkland				
	Pathway	Potable Groundwater Drinking Water		Vapour Migration from Groundwater to Indoor Air	
Parameter	Fine / Coarse	Reference	Fine	Coarse	Reference
Inorganic Parameters					
Aluminum	100	HC, 2019 (OG)	-	-	
Antimony	6	HC, 2019	-	-	
Arsenic	10	HC, 2019 (ALARA)	-	-	
Barium	1000	HC, 2019	-	-	
Beryllium	4	MOECC, 2011	-	-	
Boron	5000	HC, 2019	-	-	
Cadmium	5	HC, 2019	-	-	
Chromium (hexavalent)	50	HC, 2019	-	-	
Chromium (total)	50	HC, 2019	-	-	
Cobalt	3.8	MOECC, 2011	-	-	
Copper	2000	HC, 2019 (MAC)	-	-	
Cyanide	200	HC, 2019	-	-	
Iron	300	HC, 2019 (AO)	-	-	
Lead	5	HC, 2019 (ALARA)	-	-	
Manganese	120	HC, 2019	-	-	
Mercury (total)	1	HC, 2019	-	-	
Molybdenum	70	MOECC, 2011	-	-	
Nickel	100	MOECC, 2011	-	-	
Selenium	50	HC, 2019	-	-	
Silver	Not required	HC, 2019	-	-	
Strontium	2400	USEPA, 2019 [5]	-	-	
Thallium	2	MOECC, 2011	-	-	
Tin	2400	USEPA, 2019 [5]	-	-	
Uranium	20	HC, 2019	-	-	
Vanadium	6.2	MOECC, 2011	-	-	
Zinc	5000	HC, 2019 (AO)	-	-	
General Chemistry Parameters					
Chloride	250 000	HC, 2019 (AO)	-	-	
Sodium	200 000	HC, 2019 (AO)	-	-	
Petroleum Hydrocarbons (PHC) Parameters					
Benzene	5	ARBCA, 2021	2 700	530	ARBCA, 2021
Toluene	24	ARBCA, 2021	>Sol	>Sol	ARBCA, 2021
Ethylbenzene	1.6	ARBCA, 2021	>Sol	>Sol	ARBCA, 2021
Xylene	20	ARBCA, 2021	>Sol	38 000	ARBCA, 2021
Modified TPH (Gas)	4400	ARBCA, 2021	>Sol	>Sol	ARBCA, 2021
Modified TPH (Fuel)	3200	ARBCA, 2021	>Sol	>Sol	ARBCA, 2021
Modified TPH (Lube)	7800	ARBCA, 2021	> Sol	>Sol	ARBCA, 2021
MTBE	15	HC, 2019 (AO)	6100	340	AEP, 2019
Polycyclic Aromatic Hydrocarbons (PAH) Parameters					
Non-Carcinogenic PAH Compounds					
Naphthalene	470	AEP, 2019	NGR	7000	AEP, 2019
1 - Methylanthracene	12	MOECC, 2011	-	-	MOECC, 2011
2 - Methylanthracene	12	MOECC, 2011	-	-	MOECC, 2011
Acenaphthene	1400	AEP, 2019	NGR	NGR	AEP, 2019
Acenaphthylene	4.5	MOECC, 2011 [4]	1200	360	MOECC, 2011 [4]
Anthracene	NGR	AEP, 2019	NGR	NGR	AEP, 2019
Fluoranthene	NGR	AEP, 2019	NGR	NGR	AEP, 2019
Fluorene	940	AEP, 2019	NGR	NGR	AEP, 2019
Phenanthrene	-	AEP, 2019	-	-	AEP, 2019
Pyrene	710	AEP, 2019	NGR	NGR	AEP, 2019
Carcinogenic PAH Compounds					
BaP Total Potency Equivalents	0.04	HC, 2019	-	-	
Benzo[a]anthracene	-		-	-	
Benzo[a]pyrene	0.04	HC, 2019	-	-	
Benzo[b,j,k]fluoranthene isomers	-		-	-	
Benzo[g,h,i]perylene	-		-	-	
Chrysene	-		-	-	
Dibenz[a,h]anthracene	-		-	-	
Indeno[1,2,3-c,d]pyrene	-		-	-	

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		Parameter	Fine / Coarse	Reference	Fine	Coarse
Volatile Organic Compound (VOC) Parameters						
Bromodichloromethane	100		HC, 2019	-	-	
Bromoform	100		HC, 2019	7700	3800	MOECC, 2011 [4]
Bromomethane	51		BC CSR Schedule 3.2	56	5.6	MOECC, 2011
Carbon Tetrachloride (Tetrachloromethane)	2		HC, 2019	12	0.57	AEP, 2019
Chlorobenzene	80		HC, 2019	300	14	AEP, 2019
Chloroethane	-			-	-	
Chloroform	80		AEP, 2019	530	30	AEP, 2019
Chloromethane	38		USEPA, 2019 [5]	-	-	
Dibromochloromethane	190		AEP, 2019	26 000	1100	AEP, 2019
1,2-Dichlorobenzene	200		HC, 2019	116 000	5400	AEP, 2019
1,3-Dichlorobenzene	59		MOECC, 2011	-	-	
1,4-Dichlorobenzene	5		HC, 2019	4600	220	AEP, 2019
1,1-Dichloroethane	3700		BC CSR Schedule 3.2	3100	320	MOECC, 2011
1,2-Dichloroethane	5		HC, 2019	170	10	AEP, 2019
1,1-Dichloroethylene	14		ARBCA, 2021	4600	950	ARBCA, 2021
cis-1,2-Dichloroethylene	70		ARBCA, 2021	3900	770	ARBCA, 2021
trans-1,2-Dichloroethylene	100		ARBCA, 2021	4100	820	ARBCA, 2021
1,2-Dichloropropane	9.9		BC CSR Schedule 3.2	140	16	MOECC, 2011
1,3-Dichloropropene	6.7		BC CSR Schedule 3.2	45	5.2	MOECC, 2011
Ethylene Dibromide	0.34		BC CSR Schedule 3.2	8.3	2.5	MOECC, 2011 [4]
Methylene Chloride (Dichloromethane)	50		HC, 2019	61 000	3400	AEP, 2019
Styrene	100		MOECC, 2011	11 000	1300	MOECC, 2011
1,1,1,2-Tetrachloroethane	26		BC CSR Schedule 3.2	280	33	MOECC, 2011 [4]
1,1,2,2-Tetrachloroethane	3.4		BC CSR Schedule 3.2	150	32	MOECC, 2011 [4]
Tetrachloroethylene	10		ARBCA, 2021	1000	210	ARBCA, 2021
1,1,1-Trichloroethane	10 000		BC CSR Schedule 3.2	6700	640	MOECC, 2011
1,1,2-Trichloroethane	12		BC CSR Schedule 3.2	300	47	MOECC, 2011 [4]
Trichloroethylene	5		ARBCA, 2021	92	19	ARBCA, 2021
Vinyl Chloride	2		ARBCA, 2021	41	8.6	ARBCA, 2021
Pesticides						
Aldicarb	-			-	-	
Aldrin	-			-	-	
Atrazine	5		HC, 2019	-	-	
Azinphos-methyl	20		HC, 2019	-	-	
Bendiocarb	40		AEP, 2019	-	-	
Bromoxynil	5		HC, 2019	-	-	
Carbaryl	90		HC, 2019	-	-	
Carbofuran	90		HC, 2019	-	-	
Chlorothalonil	140		AEP, 2019	-	-	
Chlorpyrifos	90		HC, 2019	-	-	
Cyanazine	10		AEP, 2019	-	-	
2,4-D	100		HC, 2019	-	-	
DDT	93		AEP, 2019	-	-	
Diazinon	20		HC, 2019	-	-	
Dicamba	120		HC, 2019	-	-	
Dichlorop-methyl	-			-	-	
Dieldrin	-			-	-	
Dimethoate	20		HC, 2019	-	-	
Dinoseb	-			-	-	
Diquat	70		HC, 2019	-	-	
Diuron	150		HC, 2019	-	-	
Endosulfan	57		AEP, 2019	-	-	
Endrin	2.8		AEP, 2019	-	-	
Glyphosate	280		HC, 2019	-	-	
Heptachlor	0.052		AEP, 2019	4.3	0.24	AEP, 2019
Lindane	2.8		AEP, 2019	-	-	
Linuron	19		AEP, 2019	-	-	
Malathion	190		HC, 2019	-	-	

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Parameter	Fine / Coarse	Reference	Fine	Coarse	Reference
MCPA	100	HC, 2019	-	-	
Methoxychlor	-		-	-	
Metolachlor	50	HC, 2019	-	-	
Metribuzin	80	HC, 2019	-	-	
Paraquat	10	HC, 2019	-	-	
Parathion	-		-	-	
Phorate	2	HC, 2019	-	-	
Picloram	190	HC, 2019	-	-	
Simazine	10	HC, 2019	-	-	
Tebuthiuron	660	AEP, 2019	-	-	
Terbufos	1	HC, 2019	-	-	
Toxaphene	0.43	AEP, 2019	6400	310	AEP, 2019
Triallate	120	AEP, 2019	-	-	
Trifluralin	45	HC, 2019	-	-	
PFAS Substances					
Perfluorooctanoic acid (PFOA)	0.2 [7]	HC, 2019	-	-	
Perfluorooctane sulfonate (PFOS)	0.6 [7]	HC, 2019	-	-	
Perfluorobutanoate (PFBA)	30	HC, 2019	-	-	
Perfluorobutane sulfonate (PFBS)	15	HC, 2019	-	-	
Perfluorohexanesulfonate (PFHxS)	0.6	HC, 2019	-	-	
Perfluoropentanoate (PFPeA)	0.2	HC, 2019	-	-	
Perfluorohexanoate (PFHxA)	0.2	HC, 2019	-	-	
Perfluoroheptanoate (PFHpA)	0.2	HC, 2019	-	-	
Perfluorononanoate (PFNA)	0.02	HC, 2019	-	-	
Other Parameters					
Polychlorinated Biphenyl (Total PCB)	9.4	AEP, 2019	150	78	MOECC, 2011 [4]
Dioxins and Furans (TEQ) [6]	0.00012	AEP, 2019	0.023	0.014	MOECC, 2011
Pentachlorophenol (PCP)	60	HC, 2019	-	-	
Organotins - Tributyltin	0.74	USEPA, 2019 [5]	-	-	
Ethylene Glycol	31 000	AEP, 2019	NGR	NGR	AEP, 2019
Propylene Glycol	-		-	-	
Phenol	570	AEP, 2019	73 000 000	3 700 000	AEP, 2019

Notes:

[1] All values in µg/L unless otherwise noted.

[2] "-" indicates no guideline available; ">SOL" means no criteria are shown as theoretical aqueous solubilities may be exceeded; "NGR" indicates no guideline required.

[3] Health Canada MAC (Maximum Acceptable Concentration), IMAC (Interim MAC), AO (Aesthetic Objectives), OG (Operational Guidance) and ALARA (As Low As Reasonably Achievable) criteria are shown for the Potable Groundwater Drinking Water pathway, where applicable.

[4] Value has been adjusted from its original jurisdictional value, to reflect a 1×10^{-05} Target Cancer Risk Level.

[5] Original USEPA value has been divided by 5 to adjust from a target hazard quotient of 1.0 to a target hazard quotient of 0.2.

[6] Dioxins and Furans Toxic Equivalents (TEQ), are to be calculated following the methodology shown in "Canadian Council of Ministers of the Environment. 2002. Canadian soil quality guidelines for the protection of environmental and human health: Dioxins and Furans".

[7] When PFOS and PFOA co-occur in soil or groundwater, it is recommended that both chemicals be considered together when comparing to screening values. Refer to Health Canada's "Summary Table: Health Canada Draft Guidelines, Screening Values and Toxicological Reference Values (TRVs) for Perfluoroalkyl Substances (PFAS). May, 2019." for specific guidance on calculating PFOS/PFOA ratios and hazard indices.