

Table 4B - Nova Scotia Tier I Environmental Quality Standards (EQS) for Groundwater - All Land Uses; Non-potable Groundwater Condition (µg/L)

Land Use	Agricultural		Residential / Parkland		Commercial		Industrial	
	Fine	Coarse	Fine	Coarse	Fine	Coarse	Fine	Coarse
Inorganic Parameters								
Aluminum	-	-	-	-	-	-	-	-
Antimony	-	-	-	-	-	-	-	-
Arsenic	-	-	-	-	-	-	-	-
Barium	-	-	-	-	-	-	-	-
Beryllium	-	-	-	-	-	-	-	-
Boron	-	-	-	-	-	-	-	-
Cadmium	-	-	-	-	-	-	-	-
Chromium (hexavalent)	-	-	-	-	-	-	-	-
Chromium (total)	-	-	-	-	-	-	-	-
Cobalt	-	-	-	-	-	-	-	-
Copper	-	-	-	-	-	-	-	-
Cyanide	-	-	-	-	-	-	-	-
Iron	-	-	-	-	-	-	-	-
Lead	-	-	-	-	-	-	-	-
Manganese	-	-	-	-	-	-	-	-
Mercury (total)	-	-	-	-	-	-	-	-
Molybdenum	-	-	-	-	-	-	-	-
Nickel	-	-	-	-	-	-	-	-
Selenium	-	-	-	-	-	-	-	-
Silver	-	-	-	-	-	-	-	-
Strontium	-	-	-	-	-	-	-	-
Thallium	-	-	-	-	-	-	-	-
Tin	-	-	-	-	-	-	-	-
Uranium	-	-	-	-	-	-	-	-
Vanadium	-	-	-	-	-	-	-	-
Zinc	-	-	-	-	-	-	-	-
General Chemistry Parameters								
Chloride	-	-	-	-	-	-	-	-
Sodium	-	-	-	-	-	-	-	-
Petroleum Hydrocarbons (PHC) Parameters								
Benzene	2,700	530	2,700	530	20,000	6300	20,000	6300
Toluene	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
Ethylbenzene	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
Xylene	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
Modified TPH (Gas)	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
Modified TPH (Fuel)	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
Modified TPH (Lube)	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
MTBE	6100	340	6100	340	40,000	4300	40,000	4300
Polycyclic Aromatic Hydrocarbons (PAH) Parameters								
Non-Carcinogenic PAH Compounds								
Naphthalene	NGR	7000	NGR	7000	NGR	7000	NGR	7000
1 - Methyl-naphthalene	-	-	-	-	-	-	-	-
2 - Methyl-naphthalene	-	-	-	-	-	-	-	-
Acenaphthene	NGR	NGR	NGR	NGR	NGR	NGR	NGR	NGR

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Acenaphthylene	1200	360	1200	360	17,000	7500	17,000	7500
Anthracene	NGR	NGR	NGR	NGR	NGR	NGR	NGR	NGR
Fluoranthene	NGR	NGR	NGR	NGR	NGR	NGR	NGR	NGR
Fluorene	NGR	NGR	NGR	NGR	NGR	NGR	NGR	NGR
Phenanthrene	-	-	-	-	-	-	-	-
Pyrene	NGR	NGR	NGR	NGR	NGR	NGR	NGR	NGR
Carcinogenic PAH Compounds								
BaP Total Potency Equivalents (BaP TPE)	-	-	-	-	-	-	-	-
Benz[a]anthracene	-	-	-	-	-	-	-	-
Benzo[a]pyrene	-	-	-	-	-	-	-	-
Benzo[b,j,k]fluoranthene isomers	-	-	-	-	-	-	-	-
Benzo[g,h,i]perylene	-	-	-	-	-	-	-	-
Chrysene	-	-	-	-	-	-	-	-
Dibenz[a,h]anthracene	-	-	-	-	-	-	-	-
Indeno[1,2,3-c,d]pyrene	-	-	-	-	-	-	-	-
Volatile Organic Compound (VOC) Parameters								
Bromodichloromethane	-	-	-	-	-	-	-	-
Bromoform	7700	3800	7700	3800	130,000	84,000	130,000	84,000
Bromomethane	56	5.6	56	5.6	230	33	230	33
Carbon Tetrachloride (Tetrachloromethane)	12	0.57	12	0.57	80	6.9	80	6.9
Chlorobenzene	300	14	300	14	2200	180	2200	180
Chloroethane	-	-	-	-	-	-	-	-
Chloroform	530	30	530	30	3500	380	3500	380
Chloromethane	-	-	-	-	-	-	-	-
Dibromochloromethane	26,000	1100	26,000	1100	250,000	10,000	250,000	10,000
1,2-Dichlorobenzene	116,000	5400	116,000	5400	NGR	64,000	NGR	64,000
1,3-Dichlorobenzene	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	4600	220	4600	220	32,000	2600	32,000	2600
1,1-Dichloroethane	3100	320	3100	320	44,000	6600	44,000	6600
1,2-Dichloroethane	170	10	170	10	1200	130	1200	130
1,1-Dichloroethylene	4600	940	4600	950	27,000	5600	27,000	5600
cis-1,2-Dichloroethylene	3900	770	3900	770	23,000	4600	23,000	4600
trans-1,2-Dichloroethylene	4100	820	4100	820	25,000	4900	25,000	4900
1,2-Dichloropropane	140	16	140	16	2000	330	2000	330
1,3-Dichloropropene	45	5.2	45	5.2	610	100	610	100
Ethylene Dibromide	8.3	2.5	8.3	2.5	120	51	120	51
Methylene Chloride (Dichloromethane)	61,000	3400	61,000	3400	410,000	43,000	410,000	43,000
Styrene	11,000	1300	11,000	1300	160,000	26,000	160,000	26,000
1,1,1,2- Tetrachloroethane	280	33	280	33	3800	660	3800	660
1,1,1,2,2-Tetrachloroethane	150	32	150	32	2100	630	2100	630
Tetrachloroethylene	1000	210	1000	210	5900	1200	5900	1200
1,1,1-Trichloroethane	6700	640	6700	640	95,000	13,000	95,000	13,000
1,1,2-Trichloroethane	300	47	300	47	4100	910	4100	910
Trichloroethylene	92	19	92	19	540	110	540	110
Vinyl Chloride	41	8.6	41	8.6	470	99	940	200

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	Fine	Coarse	Fine	Coarse	Fine	Coarse	Fine	Coarse
Pesticides								
Aldicarb	-	-	-	-	-	-	-	-
Aldrin	-	-	-	-	-	-	-	-
Atrazine	-	-	-	-	-	-	-	-
Azinphos-methyl	-	-	-	-	-	-	-	-
Bendiocarb	-	-	-	-	-	-	-	-
Bromoxynil	-	-	-	-	-	-	-	-
Carbaryl	-	-	-	-	-	-	-	-
Carbofuran	-	-	-	-	-	-	-	-
Chlorothalonil	-	-	-	-	-	-	-	-
Chlorpyrifos	-	-	-	-	-	-	-	-
Cyanazine	-	-	-	-	-	-	-	-
2,4-D	-	-	-	-	-	-	-	-
DDT	-	-	-	-	-	-	-	-
Diazinon	-	-	-	-	-	-	-	-
Dicamba	-	-	-	-	-	-	-	-
Dichlorfop-methyl	-	-	-	-	-	-	-	-
Dieldrin	-	-	-	-	-	-	-	-
Dimethoate	-	-	-	-	-	-	-	-
Dinoseb	-	-	-	-	-	-	-	-
Diquat	-	-	-	-	-	-	-	-
Diuron	-	-	-	-	-	-	-	-
Endosulfan	-	-	-	-	-	-	-	-
Endrin	-	-	-	-	-	-	-	-
Glyphosate	-	-	-	-	-	-	-	-
Heptachlor	4.3	0.24	4.3	0.24	51	2	51	2
Lindane	-	-	-	-	-	-	-	-
Linuron	-	-	-	-	-	-	-	-
Malathion	-	-	-	-	-	-	-	-
MCPA	-	-	-	-	-	-	-	-
Methoxychlor	-	-	-	-	-	-	-	-
Metolachlor	-	-	-	-	-	-	-	-
Metribuzin	-	-	-	-	-	-	-	-
Paraquat	-	-	-	-	-	-	-	-
Parathion	-	-	-	-	-	-	-	-
Phorate	-	-	-	-	-	-	-	-
Picloram	-	-	-	-	-	-	-	-
Simazine	-	-	-	-	-	-	-	-
Tebuthiuron	-	-	-	-	-	-	-	-
Terbufos	-	-	-	-	-	-	-	-
Toxaphene	6400	310	6400	310	75,000	2900	75,000	2900
Triallate	-	-	-	-	-	-	-	-
Trifluralin	-	-	-	-	-	-	-	-

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Land Use	Agricultural		Residential / Parkland		Commercial		Industrial	
	Fine	Coarse	Fine	Coarse	Fine	Coarse	Fine	Coarse
PFAS Substances								
Perfluorooctanoic acid (PFOA) [4]	-	-	-	-	-	-	-	-
Perfluorooctane sulfonate (PFOS) [4]	-	-	-	-	-	-	-	-
Perfluorobutanoate (PFBA)	-	-	-	-	-	-	-	-
Perfluorobutane sulfonate (PFBS)	-	-	-	-	-	-	-	-
Perfluorohexanesulfonate (PFHxS)	-	-	-	-	-	-	-	-
Perfluoropentanoate (PFPeA)	-	-	-	-	-	-	-	-
Perfluorohexanoate (PFHxA)	-	-	-	-	-	-	-	-
Perfluoroheptanoate (PFHpA)	-	-	-	-	-	-	-	-
Perfluorononanoate (PFNA)	-	-	-	-	-	-	-	-
Other Parameters								
Polychlorinated Biphenyl (Total PCB)	150	78	150	78	250	180	250	180
Dioxins and Furans (TEQ)	0.023	0.014	0.023	0.014	0.45	0.37	0.45	0.37
Pentachlorophenol (PCP)	-	-	-	-	-	-	-	-
Organotins - Tributyltin	-	-	-	-	-	-	-	-
Ethylene Glycol	NGR	NGR	NGR	NGR	NGR	NGR	NGR	NGR
Propylene Glycol	-	-	-	-	-	-	-	-
Phenol	73,000,000	3,700,000	73,000,000	3,700,000	NGR	45,000,000	NGR	45,000,000

Notes:

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

[2] "-" indicates no guideline available; "NGR" indicates no guideline required; For Tier I EQS, the Upper Concentration Limit (UCL) of 20,000 ug/L in water is applied to any petroleum hydrocarbon value that is >SOL (solubility) or exceeds 20,000 ug/L, following Atlantic RBCA guidance.

[3] For Tier I EQS, Health Canada AO and OG values are excluded from consideration; as such, "NG" (no guideline) is indicated.

[4] 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.