Health Canada
Santé Canada
Environment Canada
Environnement Canada

Canadian Water Guidelines

SUMMARY OF GUIDELINES FOR WATER QUALITY IN CANADA 1995

Canada

RADIOLOGICAL PARAMETERS	DRINKING WATER *	
^{137} Cesium	50 Bq/L	(10)
^{131} Iodine	10 Bq/L	(10)
^{226} Radium	1 Bq/L	(10)
Radon		(10)
^{90} Strontium	10 Bq/L	(10)
^{3} Tritium	40,000 Bq/L	(10)

PHYSICAL PARAMETERS	DRINKING WATER (7)*	RECREATION **	FRESHWATER AQUATIC LIFE ***
Aesthetics		Refer to GCRWQ	
Aquatic plants		Refer to GCRWQ	
Clarity		Secchi disc visible at 1.2 metres	
Colour	≤ 15 TCU	Refer to GCRWQ	
Oil and grease		Refer to GCRWQ	
Odour	Inoffensive		
pH	6.5-8.5	5.0-9.0	6.5-9.0
Taste	Inoffensive		
Temperature	≤ 15° C	Refer to GCRWQ	Refer to CWQG
Total suspended solids			Refer to CWQG
Turbidity	1 NTU; ≤ 5 NTU	Refer to GCRWQ	

MICROBIOLOGICAL PARAMETERS	DRINKING WATER*		RECREATION **	IRRIGATION (9)***	LIVESTOCK WATERING ***
Blue-green algae	(Toxins)	(10)			Limit growth of blue-green algae
Coliforms, fecal	0/100 mL		Refer to GCRWQ	100/100 mL	
Coliforms, total	0/100 mL	(15)		1000/100 mL	
Coliphages			Refer to GCRWQ		
Enterococci			Refer to GCRWQ		
E. coli			Refer to GCRWQ		
Parasites					Refer to CWQG
Pathogens					Refer to CWQG
P. aeruginosa			Refer to GCRWQ		
Protozoa		(10)			
Viruses		(10)			

NOTES

1. Guideline changes with hardness.
2. Guideline changes with temperature and pH.
3. Guideline changes with pH.
4. Guideline varies depending on crop.
5. Guideline varies with pH, calcium and dissolved organic carbon concentrations.
6. Guideline for marine water.
7. Several parameters may also have aesthetic objectives; a "≤" denotes the aesthetic objective for this parameter.
8. Interim water guideline.
9. Applies to all soils; for details on neutral to alkaline soils, refer to CWQG.
10. Guideline under review for addition to, or possible changes to, the current value.
11. mg per L (ppm) unless otherwise stated.
12. Equivalent to 10.0 mg/L nitrate as nitrogen. Where nitrate and nitrite are determined separately, levels of nitrite should not exceed 3.2 mg/L (1.0 mg/L as nitrogen).
13. Parameters identified as not requiring a numerical guideline.
14. Expressed as a running annual average of quarterly samples.
15. The operational definition of zero is given as not more than 10 total coliforms per 100 mL and no fecal coliforms.

mg	=	**milligram**
mL	=	**millilitre**
L	=	**litre**
mg per L	=	**ppm**
Bq	=	**Becquerel**
NTU	=	**Nephelometric turbidity units**
TCU	=	**True colour units**

ORGANIC PARAMETERS	DRINKING WATER (7,11)*	FRESHWATER AQUATIC LIFE (11)***	IRRIGATION WATER (11)***	LIVESTOCK WATER (11)***
Aldicarb	0.009	0.001 (8) 0.00015 (6) (8)	0.0549 (8)	0.011 (8)
Aldrin + dieldrin	0.0007 (total)	0.000004		
Aniline		0.002		
Atrazine + N-dealkylated metabolites	0.005 (8)	0.002	0.01 (8)	0.06 (8)
Azinphos-methyl	0.02			
Bendiocarb	0.04			
Benzene	0.005	0.3		
Benzo(a)pyrene	0.00001			
Bromate	(10)			
Bromoxynil	0.005 (8)	0.005	0.00035	0.011 (8)
Captan		0.0028 (8)		0.010 (8)
Carbaryl	0.09			
Carbofuran	0.09	0.00175		0.045
Chloramines	(10)			
Chlordane	0.007 (10)	0.000006		
Chlorinated Benzenes				
Monochlorobenzene	0.08; ≤ 0.03	0.015 (10)		
Dichlorobenzene, 1,2-	0.2; ≤ 0.003	0.0025 (10)		
Dichlorobenzene, 1,3-		0.0025 (10)		
Dichlorobenzene, 1,4-	0.005; ≤ 0.001	0.004 (10)		
Trichlorobenzene, 1,2,3-		0.0009 (10)		
Trichlorobenzene, 1,2,4-		0.0005 (10)		
Trichlorobenzene, 1,3,5-		0.00065 (10)		
Tetrachlorobenzene, 1,2,3,4-		0.0001 (10)		
Tetrachlorobenzene, 1,2,3,5-		0.0001 (10)		
Tetrachlorobenzene, 1,2,4,5-		0.00015 (10)		
Pentachlorobenzene		0.00003 (10)		
Hexachlorobenzene		0.0000065 (10)		
Chlorinated Phenols				
Monochlorophenol		0.007		
Dichlorophenols	0.9; ≤ 0.0003 (2,4-DCP)	0.0002		
Trichlorophenols	0.005; ≤ 0.002 (2,4,6-TCP)	0.018		
Tetrachlorophenols	0.1; ≤ 0.001 (2,3,4,6-TeCP)	0.001		
Pentachlorophenol	0.06; ≤ 0.03	0.0005		

ORGANIC PARAMETERS	DRINKING WATER (7,11)*	FRESHWATER AQUATIC LIFE (11)***	IRRIGATION WATER (11)***	LIVESTOCK WATER (11)***
Chlorothalonil		0.00018 (8) 0.00036 (6) (8)	0.0058 (8)	0.17 (8)
Chlorpyrifos	0.09			
Cyanazine	0.01 (8)	0.002 (8)	0.0005 (8)	0.01 (8)
2,4-D	0.1 (8)	0.004		0.1 (8)
DDT	0.03 (10) (total isomers)	0.000001		
Diazinon	0.02			
Dicamba	0.12	0.01 (8)	0.000006	0.122
Dichloroethane, 1,2-	0.005 (8)	0.1 (8)		0.005 (8)
Dichloroethylene, 1,1-	(10)			
Dichloromethane	0.05			
Diclofop-methyl	0.009	0.0061	0.00018	0.009 (8)
Dimethoate	0.02 (8)	0.0062 (8)		0.003 (8)
Dinoseb	0.01	0.00175	0.016	0.15
Dioxins	(10)			
Diquat	0.07			
Diuron	0.15			
Endosulfan		0.00002		
Endrin	(13)	0.0000023		
Ethylbenzene	≤ 0.0024	0.7 (10)		
Furans	(10)			
Glycols				
Ethylene glycol		3.0 (8) (10)		
Diethylene glycol		31 (8) (10)		
Propylene glycol		74 (8) (10)		
Glyphosate	0.28 (8)	0.065 (8)		0.28 (8)
Halogenated methanes				
Carbon tetrachloride	0.005	0.013 (8)		0.005 (8)
Chloroform	0.1 (8) (14)	0.002 (8)		
Methylene chloride	0.05	0.098 (8)		0.05 (8)
Heptachlor + heptachlor epoxide	0.003	0.00001		
Hexachlorobutadiene		0.0001		
Hexachlorocyclohexane (total isomers)		0.00001		
Lindane	0.004			
Linuron		(10)		

ORGANIC PARAMETERS	DRINKING WATER (7,11)*	FRESHWATER AQUATIC LIFE (11)***	IRRIGATION WATER (11)***	LIVESTOCK WATER (11)***
Malathion	0.19			
Methoxychlor	0.9			
Methyl-4-chlorophenoxyacetic acid, 2- (MCPA)	(10)	0.0026 (8) 0.0042 (6) (8)	0.0026	0.025
Metolachlor	0.05 (8)	0.008 (8)	0.028 (8)	0.05 (8)
Metribuzin	0.08	0.001 (8)	0.005 (8)	0.08 (8)
Nitrilotriacetic acid (NTA)	0.4			
Organotins Tributyltin	(10)	0.000008 (8) 0.000001 (6)		0.25
Tricyclohexyltin				0.25 (8)
Triphenyltin	(10)	0.00002 (8)		0.8
Paraquat	0.01 (8)			
Parathion	0.05			
Phorate	0.002 (8)			
Phthalate Esters DBP		0.019 (8)		
DEHP		0.016 (8)		
Picloram	0.19 (8)	0.029 (8)		0.19 (8)
Polychlorinated biphenyls (total)	(10)	0.000001 0.00001 (6)		
Simazine	0.01 (8)	0.01	0.005 (8)	0.01 (8)
2,4,5-T	0.28; ≤ 0.02			
Temephos	0.28 (8)			
Terbufos	0.001 (8)			
Tetrachloroethylene	(10)	0.11 (8)		
Toluene	≤ 0.024	0.3 (10)		
Toxaphene	(13)	0.000008		
Triallate	0.23	0.00024 (8)		0.23 (8)
Trichloroacetic acid (TCA)				
Trichloroethane,1,1,1-	(10)			
Trichloroethylene	0.05 (10)	0.02 (8)		0.05 (8)
Trifluralin	0.045 (8)	0.0001		0.045 (8)
Trihalomethanes (THMs)	0.1 (8) (14)			0.35 (8)
Vinyl Chloride	0.002			
Xylenes	≤ 0.3			

INORGANIC PARAMETERS	DRINKING WATER (7,11)*	FRESHWATER AQUATIC LIFE (11)***	IRRIGATION WATER (11)***	LIVESTOCK WATER (11)***
Aluminum (total)	(10)	0.005-0.1 (5)	5.0	5.0
Ammonia (total)	(13)	1.37-2.2 (2)		
Antimony	(10)			
Arsenic (total)	0.025 (8)	0.05 (10)	0.1 (10)	0.5-5.0 (10)
Barium	1.0			
Beryllium	(10)		0.1	0.1
Boron (total)	5.0 (8)		0.5-6.0	5.0
Cadmium (total)	0.005	0.0002-0.0018 (1) (10)	0.01	0.02
Calcium	(13)	0.00006		1000
Chloride (total)	≤ 250		100-700	
Chlorine (total residual)	(10)	0.002		
Chromium (total)	0.05	0.002-0.02	0.1	1.0
Cobalt (total)	(10)		0.05	1.0
Copper (total)	≤ 1.0	0.002-0.004 (1)	0.2-1.0 (4)	0.5-5.0
Cyanide	0.2 (total) (10)	0.005 (free CN)		
Fluoride (total)	1.5 (10)	(10)	1.0 (10)	1.0-2.0 (10)
Iron (total)	≤ 0.3	0.3	5.0	
Lead (total)	0.01	0.001-0.007 (1)	0.2	0.1
Lithium (total)			2.5	
Manganese (total)	≤ 0.05		0.2	
Mercury (total)	0.001	0.0001		0.003
Molybdenum (total)			0.01-0.05	0.5
Nickel (total)	(10)	0.025-0.15 (1)	0.2	1.0
Nitrate	45.0 (12)	Avoid prolific weed growth		
Nitrate and nitrite				100
Nitrite	3.2 (12)	0.06		10.0
Oxygen (dissolved)		5.0-9.5		
Selenium (total)	0.01	0.001	0.02-0.05	0.05
Silver (total)	(13)	0.0001		
Sodium	≤ 200		Refer to CWQG	
Sulphate	≤ 500			1000
Sulphide (as H_2S)	≤ 0.05			
Total dissolved solids	≤ 500		500-3500	3000
Uranium (total)	0.1 (10)		0.01	0.2
Vanadium (total)			0.1	0.1
Zinc (total)	≤ 5.0	0.03	1.0-5.0 (3)	50.0

The information in this pamphlet is presented in summary form only. The Guidelines for Canadian Drinking Water Quality (GCDWQ)* specify the conditions which affect drinking water quality and the Guidelines for Canadian Recreational Water Quality (GCRWQ)** specify conditions for primary and secondary recreational uses including swimming, boating, fishing, etc. The Canadian Water Quality Guidelines (CWQG)*** should be consulted for information on the use of those guidelines in developing water quality objectives. Environment Canada and Health Canada worked closely with the provinces and territories to develop these guidelines. The GCDWQ include guidelines approved up to 1994 by the Federal-Provincial Committee on Environmental and Occupational Health; the CWQG include guidelines approved by the Canadian Council of Ministers of the Environment up to 1994.

*and ** For further information on the Guidelines for Canadian Drinking Water Quality (GCDWQ) and the Guidelines for Canadian Recreational Water Quality (GCRWQ), contact:

Bureau of Chemical Hazards
Monitoring and Criteria Division
Health Canada
Ottawa, Ontario
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*** For further information on the Canadian Water Quality Guidelines (CWQG), contact:

Evaluation and Interpretation Branch
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Ottawa, Ontario
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