

Source Water Quality for Public Water Supplies in Newfoundland and Labrador Physical Parameters and Major Ions

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Physical Parameters and Major Ions

Serviced Area(s)	Source Name	Sample Date	Alkalinity	Colour	Conductivity	Hardness	pH	TDS	TSS	Turbidity	Boron	Bromide	Calcium	Chloride	Fluoride	Potassium	Sodium	Sulphate																		
Guidelines for Canadian Drinking Water Quality																																				
Aesthetic (A) or Contaminant (C) Parameter																																				
Charlottetown (Labrador)																																				
Charlottetown (Labrador)	Middle Pond	Oct 10, 2024	3.00	<u>65</u>	20.0	5.10	6.51	11	1.30	LTD	LTD	1.10	2	LTD	0.200	2	LTD																			
Charlottetown (Labrador) - PWDU	Middle Pond	Oct 10, 2024	3.00	<u>65</u>	20.0	5.10	6.51	11	1.30	LTD	LTD	1.10	2	LTD	0.200	2	LTD																			
Churchill Falls																																				
Churchill Falls	Smallwood Reservoir	Oct 15, 2024	26.00	<u>13</u>	25.0	11.00	7.22	14	0.68	LTD	LTD	2.80	LTD	LTD	0.270	1	LTD																			
Clarenville																																				
Clarenville, Shoal Harbour	Shoal Harbour River	Dec 05, 2024	11.00	<u>45</u>	69.0	5.70	6.95	38	0.43	LTD	LTD	1.60	5	LTD	0.170	3	LTD																			
Come By Chance																																				
Come By Chance	Butchers Brook	Dec 02, 2024	5.30	<u>100</u>	27.0	7.60	6.68	15	2.30	LTD	LTD	2.20	3	LTD	LTD	3	LTD																			
Conception Bay South																																				
Conception Bay South	Bay Bulls Big Pond	Dec 10, 2024	LTD	<u>31</u>	46.0	4.30	<u>6.27</u>	26	0.53	LTD	LTD	0.89	10	LTD	0.250	6	LTD																			
Conne River																																				
Conne River	Southwest Brook	Nov 12, 2024	LTD	<u>83</u>	20.0	3.60	<u>5.71</u>	11	0.59	LTD	LTD	0.82	3	LTD	0.130	2	LTD																			
Corner Brook																																				
Corner Brook (+Massey Drive, +Mount Moriah)	Trout Pond, Third Pond (2 intakes)	Dec 03, 2024	18.00	<u>52</u>	55.0	22.00	7.37	31	1.10	LTD	LTD	7.20	4	LTD	0.330	2	LTD																			
Crow Head																																				
Crow Head	Oars Pond	Nov 20, 2024	7.70	<u>84</u>	300.0	38.00	6.68	170	1.30	LTD	LTD	6.60	80	LTD	1.500	41	9																			
Daniel's Harbour																																				
Daniel's Harbour	Unnamed Spring & Brook	Nov 08, 2024	240.00	LTD	680.0	240.00	7.95	380	0.10	LTD	LTD	56.00	70	LTD	1.300	50	13																			
Deadman's Bay																																				
Deadman's Bay	Deadman's Pond	Nov 26, 2024	LTD	<u>150</u>	53.0	4.90	<u>4.91</u>	30	0.99	LTD	LTD	0.68	11	LTD	0.270	6	LTD																			
Dover																																				
Dover	Hare Bay Pond	Dec 03, 2024	LTD	<u>220</u>	26.0	4.20	<u>5.61</u>	15	0.79	LTD	LTD	0.88	5	LTD	0.250	3	LTD																			
Elliston																																				
Elliston	Big Pond	Nov 27, 2024	LTD	<u>30</u>	49.0	3.50	<u>5.83</u>	27	0.30	LTD	LTD	0.40	11	LTD	0.250	7	2																			

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Guidelines for Canadian Drinking Water Quality			15		6.5 - 8.5	500		1.0		5.0		250		1.5		200		500		
Aesthetic (A) or Contaminant (C) Parameter			A		A			C		C		A		C		A		A		
Natuashish																				
Natuashish (Sango Bay)	Sango Brook and Wellfield	Nov 11, 2024	9.50	<u>22</u>	71.0	12.00	7.25	40	2.90	LTD	LTD	2.70	12	0.300	0.730	9	2			
Natuashish (Sango Bay)	Sango Brook and Wellfield	Nov 11, 2024	67.00	LTD	1,000.0	92.00	8.09	<u>560</u>	0.10	0.17	LTD	13.00	250	2.200	8.500	150	40			
New-Wes-Valley																				
Wesleyville-Badger's Quay-Pool's Island, Brookfield-Poundcove-N ewtown-Templeman	Little Northwest Pond	Dec 03, 2024	LTD	<u>230</u>	61.0	6.70	<u>5.05</u>	34	0.59	LTD	LTD	1.20	12	LTD	0.400	9	3			
Norris Point																				
Norris Point	Neddy Harbour Pond	Nov 14, 2024	120.00	<u>12</u>	270.0	130.00	8.13	150	0.50	LTD	LTD	29.00	10	LTD	0.430	6	2			
Paradise																				
Paradise	Bay Bulls Big Pond	Dec 10, 2024	LTD	<u>31</u>	46.0	4.30	<u>6.27</u>	26	0.53	LTD	LTD	0.89	10	LTD	0.250	6	LTD			
Parkers Cove																				
Parkers Cove	Unnamed brook	Nov 04, 2024	LTD	<u>150</u>	27.0	3.70	<u>5.31</u>	15	1.60	LTD	LTD	0.71	5	LTD	0.210	3	LTD			
Phillips Head																				
Phillips Head	Dogberry Brook	Nov 12, 2024	9.60	<u>63</u>	50.0	18.00	7.11	28	0.77	LTD	LTD	5.50	6	LTD	LTD	4	1			
Pilley's Island																				
Pilley's Island	Loadabats Pond	Nov 27, 2024	60.00	<u>25</u>	210.0	62.00	7.81	120	0.50	LTD	LTD	20.00	26	LTD	0.550	18	3			
Pleasantview																				
Pleasantview	Little Arm Pond	Nov 12, 2024	8.70	<u>62</u>	68.0	16.00	7.01	38	1.40	LTD	LTD	4.20	10	LTD	0.320	7	5			
Point Leamington																				
Point Leamington	Little Pond	Nov 05, 2024	9.00	<u>45</u>	44.0	14.00	6.99	24	0.72	LTD	LTD	4.20	6	LTD	0.240	4	2			
Point of Bay																				
Point of Bay	Indian Cove Pond	Nov 13, 2024	14.00	<u>50</u>	64.0	19.00	7.25	36	0.55	LTD	LTD	6.00	9	LTD	0.290	6	1			
Port Anson																				
Port Anson	Anchor Pond	Nov 27, 2024	6.40	<u>90</u>	47.0	13.00	6.69	26	0.72	LTD	LTD	3.60	9	LTD	0.190	5	1			
Portland Creek																				

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	Aesthetic (A) or Contaminant (C) Parameter																																		
St. Bride's	St. Bride's	North Side Brook	Dec 13, 2024	4.00	<u>46</u>	64.0	8.20	<u>6.44</u>	35	0.36	LTD	LTD	1.40	14	LTD	0.480	8	1																	
St. John's	St. Bride's	South Side Brook	Dec 13, 2024	3.50	<u>95</u>	53.0	9.40	<u>6.12</u>	29	0.54	LTD	LTD	2.10	11	LTD	0.310	6	1																	
Tilt Cove	St. John's (+Mt. Pearl, +Paradise, +Portugal Cove-St. Phillips, +CBS)	Bay Bulls Big Pond	Dec 10, 2024	LTD	<u>31</u>	46.0	4.30	<u>6.27</u>	26	0.53	LTD	LTD	0.89	10	LTD	0.250	6	LTD																	
Trout River	St. John's	Windsor Lake	Dec 04, 2024	LTD	<u>10</u>	74.0	5.70	<u>6.40</u>	41	0.38	LTD	LTD	1.30	18	LTD	0.300	11	2																	
West Bay	St. John's	Petty Harbour Long Pond	Dec 04, 2024	LTD	<u>23</u>	34.0	3.60	<u>5.93</u>	19	0.84	LTD	LTD	0.54	8	LTD	0.280	5	1																	
Wild Cove	Tilt Cove	Castle Rock Pond	Dec 03, 2024	43.00	<u>15</u>	120.0	50.00	<u>7.64</u>	64	0.74	LTD	LTD	11.00	9	LTD	0.160	5	2																	
Trout River	Trout River	Feeder Brook	Nov 14, 2024	40.00	<u>15</u>	100.0	44.00	<u>7.78</u>	57	0.42	LTD	LTD	3.00	7	LTD	0.150	4	2																	
West Bay	West Bay	Victor's Brook	Dec 16, 2024	89.00	<u>60</u>	240.0	110.00	<u>7.98</u>	130	0.64	LTD	LTD	32.00	18	LTD	0.430	11	5																	
Wild Cove	Wild Cove	Hedderson's Pond Brook	Nov 06, 2024	8.50	<u>91</u>	53.0	17.00	<u>6.93</u>	29	<u>1.20</u>	LTD	LTD	5.00	8	LTD	0.790	4	1																	

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				15			6.5 - 8.5	500		1.0	5.0			250	1.5		200	500
				A			A	A		C	C			A	C		A	A

Source water samples are collected directly from the source such as a groundwater well, lake, pond, or stream prior to disinfection or other treatment. The source water quality is analyzed to determine the quality of water that flows into your water treatment and distribution system. The quality of this water is a direct indicator of the health of the ecosystem that makes up the natural drainage basin, well head recharge area or watershed area. Monitoring of source water quality is the most important tool to assess the impact of land use changes on source water quality, the presence of disinfection by-product (DBP) pre-cursors and to ensure the integrity of a public water supply. The values for each parameter are as reported by the lab and verified by the department.

Quality Assurance / Quality Control (QA/QC) - The department is striving to improve the quality of the data using standard QA/QC protocols. This is an evolving process which may result in minor changes to the reported data.

LTD - Less Than Detection Limit - The detection limit is the lowest concentration of a substance that can be determined using a particular test method and instrument. Detection limits vary from parameter to parameter and change from time to time due to improvements in analytical procedures and equipment.

The exceedance report for source water provides a brief discussion and interpretation of health related water quality parameters, if any, that exceed the acceptable limits as set out in the Guidelines for Canadian Drinking Water Quality (GCDWQ). This comparison is only for screening purposes since at present there are no guidelines for untreated source water. The GCDWQ applies to water at the consumers tap. However in the absence of water treatment these guidelines could be applicable to source water quality

Aesthetic (A) Parameters - Aesthetic parameters reflect substances or characteristics of drinking water that can affect its acceptance by consumers but which usually do not pose any health effects. Aesthetic exceedances are highlighted in **blue text** and underlined.

Contaminants (C) - Contaminants are substances that are known or suspected to cause adverse effects on the health of some people when present in concentrations greater than the established Maximum Acceptable Concentrations (MACs) or the Interim Maximum Acceptable Concentrations (IMACs) of the GCDWQ. Each MAC has been derived to safeguard health assuming lifelong consumption of drinking water containing the substance at that concentration. IMACs are reviewed periodically as new information becomes available. Please consult your Medical Officer of Health for additional information on the health aspects on contaminants. Contaminant exceedances are highlighted in **red text** and enclosed in a box.

The reported information is for supplies selected for sampling and may not include all public water supplies.

Contaminant and Aesthetic Exceedances

Turbidity - The maximum acceptable concentration for turbidity is 1 NTU. Turbidity refers to the water's ability to transmit light or the cloudiness of the water. Turbidity in tap water can be the result of turbid raw water and influences within the distribution system. Turbidity is usually the result of fine organic and inorganic particles which do not settle out. Increased turbidity of drinking water results in it being less aesthetically pleasing, and may interfere with the disinfection process.

Boron - The interim maximum acceptable concentration for boron in drinking water is 5.0 mg/L. Boron is widespread in the environment, occurring naturally in over 80 minerals and in the earth's crust. Levels in well water have been reported to be more variable and often higher than those in surface waters, most likely due to erosion from natural resources. High levels of this contaminant can cause adverse health effects for some people.

Fluoride - The maximum acceptable concentration for fluoride in drinking water is 1.5mg/L. The fluoride concentration in natural water varies widely as it depends on such factors as the source of the water and the geological formations present. Trace amounts of fluoride may be essential for human nutrition and the presence of small quantities leads to a reduction of dental caries. High levels of this contaminant can cause adverse health effects for some people.

Colour - An aesthetic objective of 15 true colour units (TCU) has been established for colour in drinking water. Colour in drinking water may be due to the presence of coloured organic substances or metals such as iron, manganese and copper. Highly coloured industrial wastes also contribute to colour. The presence of colour is not directly linked to health but it can be aesthetically displeasing.

pH - The acceptable range for drinking water pH is 6.5 - 8.5. The control of pH is primarily based on minimizing corrosion and encrustation in the distribution system. Tap water with low pH may accelerate the corrosion process in the distribution system, and contribute to increased levels of copper, lead and possibly other metals. Incrustation and scaling problems may become more frequent above pH 8.5

TDS - The aesthetic objective for TDS in drinking water is 500 mg/L. The term "total dissolved solids"(TDS) refers mainly to the inorganic substances that are dissolved in water. At low levels TDS contributes to the palatability of water. At high levels it may cause excessive hardness, taste, mineral deposition and corrosion.

Chloride - The aesthetic objective for chloride in drinking water is 250 mg/L. Chloride can be in water from a variety of sources, including the dissolution of salt deposits and salting of roads for ice control. No evidence has been found suggesting that ingestion of chloride is harmful to humans. However, high levels of chloride in water can impart undesirable tastes to water and beverages prepared from water.

Sodium - The aesthetic objective for sodium in drinking water is 200 mg/L. Since the body has very effective means to control levels of sodium, sodium is not an acutely toxic element in the normal range of environmental or dietary concentrations. At extremely high dosages it has adverse health effects. Sodium levels may be of interest to authorities who wish to prescribe sodium restricted diets for their patients..

Sulphate - The aesthetic objective for sulphate in drinking water is 500 mg/L. Sulphates, which occur naturally in numerous minerals, are used in the mining and pulping industries and in wood preservation. Large quantities of sulphate can result in catharsis and gastrointestinal irritation. The presence of sulphate above the aesthetic limit can result in noticeable taste. Some sensitive individuals may find the taste objectionable at lower sulphate concentrations

mg/L = milligrams per litre or parts per million

µS/cm = micro Siemens per centimeter

NTU = nephelometric turbidity units

TDS = total dissolved solids

TSS = total suspended solids

TCU = true colour units

Nitrate(ite) = Nitrate + Nitrite

DOC = dissolved organic carbon

Notes:

Guidelines for Canadian Drinking Water Quality have not been developed for all the parameters listed in this report.

pH has no units