

Kentville, NS - Climate Change and Sea-Level Rise Scenario Data

Parameter		Historical 1980s	Projected 2020s	Projected 2050s	Projected 2080s
Temperature (°C)	Annual	6.9	8.1	9.3	10.6
	Winter	-4.4	-3.1	-1.7	-0.3
	Spring	5.0	6.0	7.1	8.3
	Summer	18.1	19.2	20.4	21.5
	Autumn	9.0	10.2	11.3	12.6
Precipitation (mm)	Annual	1212.5	1245.8	1256.1	1293.4
	Winter	357.8	375.1	384.2	405.0
	Spring	298.2	308.1	312.5	324.7
	Summer	254.5	258.8	258.0	258.4
	Autumn	302.0	305.7	305.3	312.1
Heating Degree Days		4163.1	3825.3	3466.7	3120.5
Cooling Degree Days		146.9	213.6	307.0	418.5
Hot Days (Tmax > 30)		3.5	8.4	15.4	24.9
Very Hot Days (Tmax > 35)		0.0	0.1	0.4	1.2
Cold Days (Tmax < -10)		6.2	4.5	2.6	1.3
Very Cold Days (Tmax < -20)		0.0	0.0	0.0	0.0
Growing Degree Days > 5		1906.3	2134.8	2406.8	2704.1
Growing Degree Days > 10		1001.9	1169.3	1370.2	1589.7
Growing Season Length (days)		184.4	200.9	214.2	233.1
Corn Heat Units (CHU)		2318.9	2583.2	2878.8	3189.3
Corn Season Length (days)		152.9	165.0	173.9	188.2
Freeze Free Season (days)		180.6	201.5	217.9	233.0
Days With Rain		124.8	137.9	142.4	146.9
Days With Snow		49.6	55.4	46.9	40.0
Freeze-Thaw Cycles - Annual		87.8	80.6	70.3	61.7
Winter		36.7	37.9	37.8	37.7
Spring		33.2	29.1	22.6	17.2
Summer		0.0	0.0	0.0	0.0
Autumn		18.0	13.7	10.0	6.8
Water Surplus (mm)		728.0	714.7	697.3	708.3
Water Deficit (mm)		56.0	62.8	76.7	91.2
Δ Intensity Short Period Rainfall (%)		0	5	9	16

Sea Level Rise

Extreme Total Sea Level (metres CD) – Hantsport (Kentville)						
Return Period	Residual	Level 2000	Level 2025	Level 2055	Level 2085	Level 2100
Total Sea Level Rise (m)			0.16 ± 0.03	0.45 ± 0.15	0.86 ± 0.36	1.10 ± 0.48
Extreme TSL - 10 Yr Ret Period	0.85 ± 0.20	16.11 ± 0.20	16.27 ± 0.23	16.56 ± 0.35	16.97 ± 0.56	17.21 ± 0.68
Extreme TSL - 25 Yr Ret Period	0.96 ± 0.20	16.22 ± 0.20	16.38 ± 0.23	16.67 ± 0.35	17.08 ± 0.56	17.32 ± 0.68
Extreme TSL - 50 Yr Ret Period	1.04 ± 0.20	16.30 ± 0.20	16.46 ± 0.23	16.75 ± 0.35	17.16 ± 0.56	17.40 ± 0.68
Extreme TSL - 100 Yr Ret Period	1.13 ± 0.20	16.39 ± 0.20	16.55 ± 0.23	16.84 ± 0.35	17.25 ± 0.56	17.49 ± 0.68

Chart Datum (CD) – CGVD28 (lidar) relationship:7.23

Source: W. Richards Climate Consulting, August 2011