

Maritimes Monthly Weather & Climate Summary September 2022

Overview

September was a relatively quiet month to start with few precipitation events and a relatively warm period in week two that set several new maximum temperature records. The weather got more active in the latter half of the month with a couple of frontal systems that brought some needed rain to the region. This was quickly followed by Hurricane Fiona that made landfall in eastern NS as a powerful post-tropical storm with hurricane force winds. Fiona was a historic extreme event for the region resulting in millions of dollars in damage from high winds, heavy rainfall and destructive storm surge which affected all 4 Atlantic Provinces and eastern Quebec.

Temperature – Anomaly

Temperatures were generally near to somewhat above normal (1-2C) across the Maritimes in September. At Charlo NB, the mean temperature for the month was 13.7C making September 2022 the 7th warmest on record for that location.

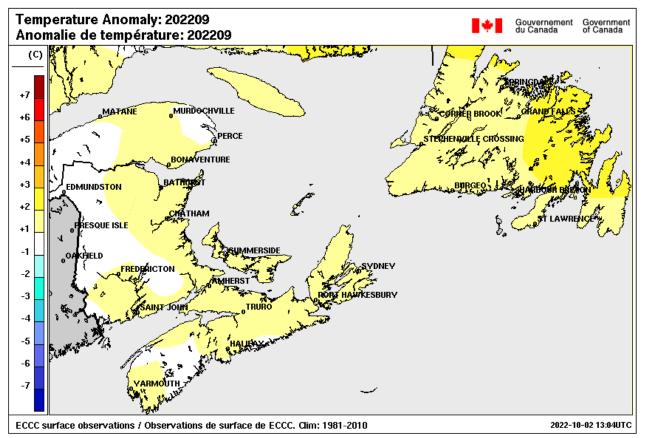


Figure 1: Monthly temperature anomaly map for September 2022 based on archived station data compared to 1981-2010 normals for the Maritimes.

Precipitation – Anomaly

Precipitation in September was variable across the region. Totals were generally near to below normal across northern NB, near to somewhat above normal across portions of southern NB and western NS and significantly above normal across parts of central/eastern NS and PEI.

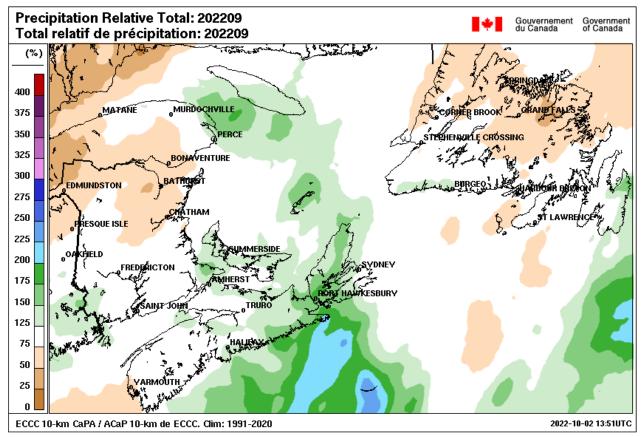


Figure 2: Monthly precipitation anomaly for September 2022 based on ECCC Canadian Precipitation Analysis (CaPA) a gridded blend of model, radar, and station data, compared to 1991-2020 normals for the Maritimes. (Anomaly: Precipitation as a percentage of the average).

Table 1: Monthly average temperature and total precipitation for September 2022 for selected locations in the Maritimes compared to 1981-2010 Canadian Climate Normals (for the same or a nearby station). Temperature difference from normal: cells shaded pink if ≥ 1 °C, blue if ≤ -1 ° C. Precipitation as a percent of normal: cells shaded green if $\geq 125\%$ of normal, yellow if $\leq 75\%$ of normal. Rank (if included) provides a ranking of mean temperature (eg. 1 warmest, 2 second warmest etc.) for the month against long-term data for the month).

	N	Mean Ten	nperature ('	°C)	Total P	recipitati	on (mm)
Location	Monthly Mean	Normal Mean	Diff. from Normal	Rank (Warmest)	Monthly Total	Normal Total	Total as % of Normal
Bas Caraquet	13.9	14.2	-0.2	>10	76.8	73.8	104
Charlo	13.7	12.1	1.6	7	54.4	79.3	69
Fredericton	15.0	14.0	1.0	>10	105.1	94.7	111
Moncton	14.7	13.6	1.1	>10	105.8	93.5	113
Saint John	14.4	13.0	1.4	>10	123.3	105.6	117
Woodstock	13.7	13.2	0.5	>10	87.8	95.7	92
Amherst (Nappan)	14.6	14.2	0.4	>10	102.8	102.1	101
Greenwood	15.4	14.5	0.9	>10	93.5	96.2	97
Halifax	15.8	14.6	1.3	>10	150.5	102.0	147
Halifax (Shearwater)	16.7	15.1	1.6	>10	142.2	103.0	138
Sydney	15.0	14.0	1.1	>10	143.2	118.7	121
Truro (Debert)	15.1	13.7	1.4	>10			
Yarmouth	15.4	14.1	1.3	>10	58.9	94.9	62
Charlottetown	14.8	14.1	0.7	>10	155.1	95.9	162
Summerside	n/a						

Significant Weather Events & Impacts

Sept 11-14- A broad ridge of high pressure and plenty of sunshine over the region resulted in warmer than normal conditions for a few days across all 3 provinces. Maximum temperatures reached the upper twenties with a number of new records set. The warm spell came to an end with the passage of a cold front on the 14th.

September 15-16 – Windy conditions were felt across northeastern NB, PEI, and Cape Breton as an intense low pressure system slowly crossed the northern Gulf of St. Lawrence. Northerly winds gusted to 85 km/h in NB, 87 km/h in PEI and 80 km/h in NS and caused a few power outages due to trees remaining in full foliage, along with travel disruptions. The persistent onshore and upslope winds also caused localized heavy rainfall near 100 mm in the Cape Breton Highlands.

Northumberland Ferries cancels ferry crossings to be 'extra cautious' amid high winds | CBC News

September 22-25 – Hurricane Fiona formed in the Tropical Atlantic on September 14th and became the 3rd hurricane of the season on the 18th. After impacting Puerto Rico and the Dominican Republic, it strengthened to the first major hurricane (category 3 or higher) of the season on the 20th. Fiona maintained its strength as it travelled north in the Atlantic and eventually made landfall over eastern Nova Scotia (near Whitehead) on Sept 24th as a powerful post-tropical storm with hurricane force winds. Fiona continued northwards across Cape Breton and into the eastern Gulf of St Lawrence reaching the Quebec Lower North Shore on the 25th, then moved inland crossing southeastern Labrador.

Fiona is a historic extreme event for Atlantic Canada, likely the strongest and most destructive tropical storm to have ever affected Canada with what is likely (pending review), the lowest mean sea level pressures reported over land associated with any storm in Canada. This includes 932.7 mb on Sept 24th, 07 UTC (04 ADT) at Hart Island NS and 931.7 mb at St. Peters NS (a Cape Breton Mesonet station). Extreme winds, heavy rainfall and destructive storm surge accompanied Fiona causing millions of dollars in damage in all 4 Atlantic Provinces and eastern Quebec.

In the Maritimes the heaviest rainfall affected parts of eastern PEI, and eastern NS/Cape Breton where the greatest totals reached the 100 to 175 mm range. A couple of locations in southeast NB reported amounts just over 100 mm. The strongest winds affected eastern NB, PEI and central/eastern NS where maximum gusts reached the 100 to 170 km/h range. An unofficial extreme gust of 179 km/h was reported at a station in Arisaig NS (North Shore). Water level monitors along the coast of eastern NB, PEI and NS reported peak storm surge values in the 1.5 to 2 m range associated with Fiona.

Damage across the Maritimes was widespread and extensive in the hardest hit areas with thousands of uprooted/snapped trees, toppled power and telecommunication lines affecting close to 600 thousand customers, damage to homes, businesses, ports, fishing grounds, crops and other infrastructure. Transportation was severely impacted with road/bridge closures, flight and ferry cancellations. Clean-up and repairs from the damage are expected to take weeks and just over a week after the storm close to 50,000 power customers in the Maritimes were still waiting to be reconnected. Significant erosion of shorelines due to high waves/storm surge were reported mostly in PEI. The Canadian Military was deployed to assist with the restoration and the Federal Government has indicated they will provide financial assistance for uninsured losses. The articles below capture more of the details of Fiona's impact on the region.

CHC Tropical Cyclone Information Statement A week after Fiona, tens of thousands in N.S., P.E.I. wait for power to be restored | CBC News More than half the fishing ports in Fiona's path damaged | CBC News Fiona reshaped P.E.I.'s coastlines, stoking fears for the Island's future | CBC News Feds deploy more troops to Fiona-hit areas, promise compensation | CBC News Fiona's insurance bill could hit \$700M — but most damage won't be covered | CBC News N.S. farmers reckon with storm damage from Fiona's winds and rain | CBC News 'Everything is unusable': Fishers, farmers assess damage as Fiona wreaks havoc on industry | CBC News Fiona's fury: A look at what the powerful storm did to Nova Scotia | CBC News Sydney airport reopens after heavy storm damage | CBC News 75,000 P.E.I. households still without power as utility pleads for public's help | CBC News

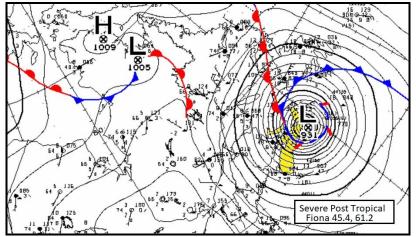


Figure3: CMC surface pressure analysis shows the position of Fiona on Sept 24, 2022 at 06 UTC (03 ADT)

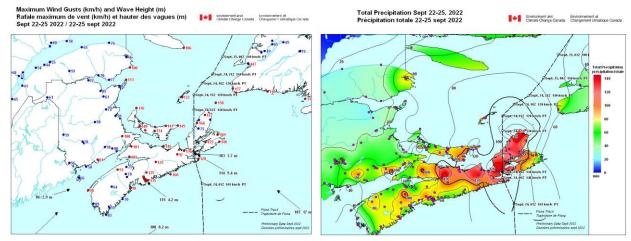


Figure 4&5: Maximum Wind Gust map (left) and Total Precipitation map (right) for Sept 22-25, 2022 associated with Fiona

September Lightning – Lightning activity was somewhat below normal in PEI and NS and somewhat above normal in NB in September. Year-to-date totals for all three provinces continue to be well below normal with PEI having the least activity, ranking as the second lowest year on record since statistics began in 2002.

Province	September 2022 Observed	September Average	September 2022 Rank	Year-to-Date Observed	Year-to-Date Average	Year-to-Date Rank
NB	2,655	2,338	9 th Highest	34,335	49,661	6 th Lowest
NS	862	1,136	7 th Highest	13,529	23,947	5 th Lowest
PEI	95	156	11 th Highest	809	3,304	2 nd Lowest

Daily Temperature and Precipitation Time Series

The precipitation time series below for the three provincial capitals indicate similar patterns with very little precipitation up until about the 17th followed by dry conditions near the end of the month. Most of the precipitation that fell was quite heavy and associated with frontal systems ahead of Hurricane Fiona and the passage of Fiona between the 23rd and 25th. Precipitation totals ended up being somewhat above normal at all 3 locations for the month. The temperature time series are also similar for the 3 capitals with generally near to above normal temperatures most of the month and a pronounced warm period in week two and week four.

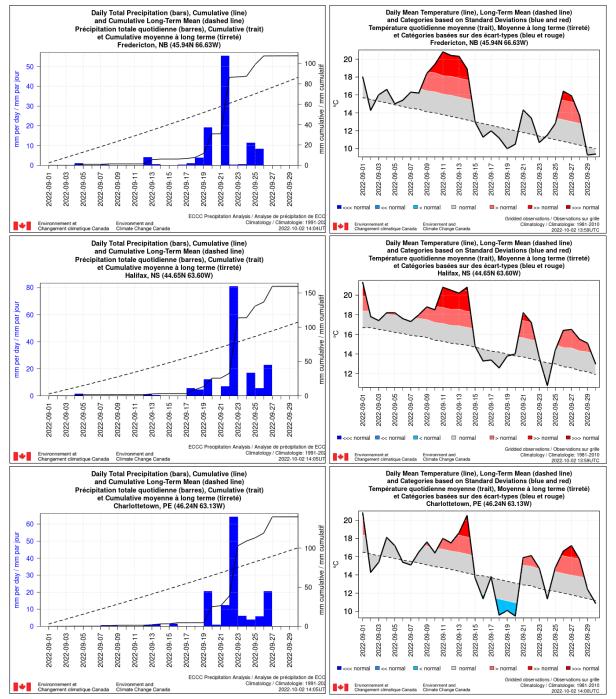


Figure 6: Daily total precipitation (Canadian Precipitation Analysis (CaPA) data) and mean temperature for Fredericton, NB (top), Halifax, NS (middle), and Charlottetown, PEI (bottom), for September 2022 based on

gridded data, compared to long-term means (Canadian Precipitation Analysis (CaPA) data, 1991-2020, and temperature data, 1981 to 2010).

River Flows

The stream flow anomaly map for the Maritime Provinces for Oct 2, 2022 indicates generally below normal flows across most of northern NB. This is in part due to the below normal precipitation across the north in September. Normal to above normal flows across the rest of NB, PEI and NS are in large part due to the more recent heavy precipitation in the region ahead of and with Fiona.

North America WaterWatch

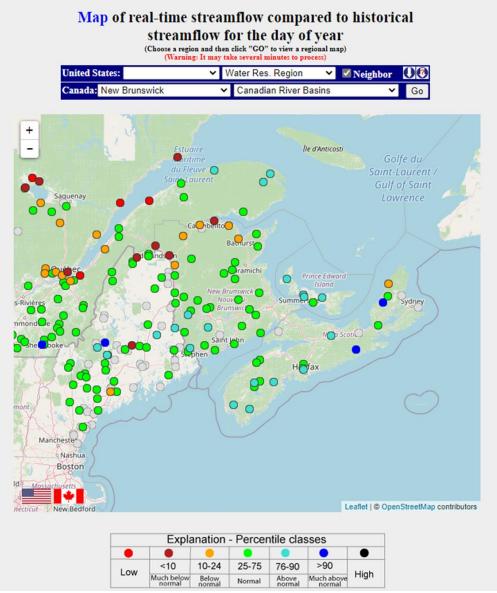
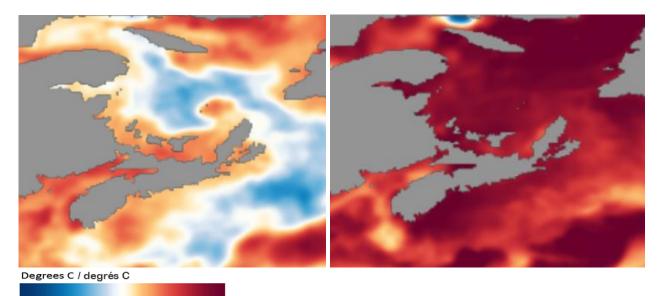


Figure 7: North America Water Watch map of stream flow compared to historical stream flow for the day of the year, as of October 2, 2022, for the Maritime Provinces drainage. Source: <u>https://watermonitor.gov/naww/index.php</u>

Sea Surface Temperature - Departure from Normal

The sea surface temperature (SST) departure from normal map during the week of Sept 26-Oct 2, 2022 left and Sept 12-18, 2022 right, indicates significant cooling took place across much of the region which is mostly attributed to the passage of Hurricane Fiona toward the end of the month. The Sept 26-Oct 2 map indicates near to above normal SSTs across most of the coastal areas and northeastern part of the Gulf of St. Lawrence with the warmest anomalies in the 2-3C range. Most of the Gulf of St. Lawrence and waters south and east of NS have near to below normal temperatures with the coldest anomalies near 2C below normal.



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Figure 8: Sea surface temperature (SST) anomaly map for Sept 26-Oct 2, 2022, left and Sept 12-18 right. Data based on 1981-present. Source: <u>https://www.nnvl.noaa.gov/view/#SSTA</u>

Hurricane Fiona changed ocean temperatures, tore up marine life habitats | CBC News

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Tropical Weather Update

After a long period without activity in the Atlantic Basin, September arrived and things picked up very quickly. Tropical storm Danielle formed on September 1st and then became the first hurricane of 2022 the next day. Tropical storm Earl formed on the 2nd and became a category 2 hurricane on the 7th. It made its way north into the Southern Grand Banks as a hurricane, where it stalled and transitioned to a post-tropical storm. Earl dumped over 200 mm of rain to parts of the Avalon Peninsula of Newfoundland the weekend of September 10th and 11th.

Fiona formed on September 14th and became the 3rd hurricane of the season on the 18th. After affecting Puerto Rico and the Dominican Republic, it strengthened to the first major hurricane (category 3 or higher) of the season on the 20th. Fiona maintained its strength as it travelled north in the Atlantic and eventually made landfall over eastern Nova Scotia as a post-tropical storm with hurricane force winds on September 24th. Extreme winds gusts and severe storm surge caused major damage to most areas along the Gulf of St. Lawrence and Cabot Strait. Record low pressure, extreme water levels and devastating wind gusts were all observed with Fiona.

Tropical storms Gaston and Hermine formed over the eastern Atlantic the third week of September, while Ian formed over the central Caribbean Sea. Ian eventually strengthened to a major hurricane before making landfall in Florida on September 28th.

NOAA still expects above-normal Atlantic hurricane season | National Oceanic and Atmospheric Administration (noaa.gov)

Other Climate Related Information

Town of Antigonish orders residents to stop watering lawns, gardens | CBC News Dry start to September will make potato crop average at best, says board | CBC News Shark rarely seen in Bay of Fundy spotted 31 times in past week | CBC News Blue-green algae bloom detected in Belleisle Bay | CBC News

Temperature & Precipitation Outlook

The four-week outlook for temperature and precipitation from the Canadian Global Ensemble Prediction System (GEPS) for October 3 to 31, 2022 indicates generally near normal temperatures expected across the Maritimes. A moderate to strong probability of below normal precipitation is forecast across the most of the region.

The four-week outlook from September 1st performed reasonably well for temperatures with all areas reporting near to above normal temperatures similar to what was predicted. The precipitation outlook performed reasonably well in northern NB and parts of southern NB and western NS, however, eastern NS and PEI received above normal precipitation where as the forecast indicated near to below normal.

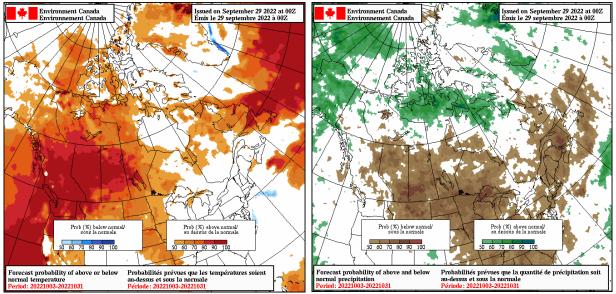


Figure 9: Temperature and Precipitation Anomaly Forecasts from the MSC Global Ensemble Prediction System issued September 29, 2022 for October 3 to 31, 2022. Source: http://collaboration.cmc.ec.gc.ca/cmc/ensemble/monthly/prev_mens_geps.html

Contact

Environment and Climate Change Canada, Meteorological Service of Canada, Prediction Services Operations – Atlantic and Ice, Applied Climatology Services Email address: <u>climatatlantique-climateatlantic@ec.gc.ca</u>

Appendix

Location/ Emplacement	cation/ Emplacement Station Name/ Nom de la station			
Bas Caraquet	BAS CARAQUET	8100467	ECCC-MSC	А
Charlo	CHARLO AUTO	8100885	ECCC-MSC	А
Fredericton	FREDERICTON CDA CS	8101605	ECCC-MSC	А
Moncton	MONCTON/GREATER MONCTON ROMEO LEBLANC INTLA	8103201	NavCan	Н
Saint John	SAINT JOHN A	8104901	NavCan	н
Woodstock	WOODSTOCK NEWBRIDGE	8105603	ECCC-MSC	А
Amherst (Nappan)	NAPPAN AUTO	8203702	ECCC-MSC	Α
Greenwood	GREENWOOD A	8202000	DND	н
Halifax (Shearwater)	SHEARWATER RCS	8205092	ECCC-MSC	Α
Halifax Stanfield Intl A	HALIFAX STANFIELD INT'L A	8202251	NavCan	н
Sydney	SYDNEY A	8205701	NavCan	Н
Truro (Debert)	DEBERT	8201390	ECCC-MSC	Α
Yarmouth	YARMOUTH A	8206495	NavCan	Н
Charlottetown	CHARLOTTETOWN A	8300301	NavCan	Н
Summerside	SUMMERSIDE	8300596	ECCC-MSC	А

Table A1: Station metadata for the selected locations in Table 1.

¹Station Operator: CCN = Cooperative Climate Network, ECCC-MSC = Environment and Climate Change Canada,

Meteorological Service of Canada, DND = Department of National Defence, NavCan = Nav Canada

² Type: A = Automatic observation, H = Human observation

Table A2: Monthly totals for September 2022 for New Brunswick stations compared to 1981-2010 Canadian Climate Normals (if available for same or nearby station). Temperature difference from normal: cells shaded pink if ≥ 1 °C, blue if $\le -1^{\circ}$ C. Precipitation as a percent of normal: cells shaded green if $\ge 125\%$ of normal, yellow if $\le 75\%$ of normal.

				Mean Temperature / Température moyenne (°C)			Total Precipitation / Précipitations totales (mm)			
Station Name / Nom de la		TC ID / ID de	Station Type / Type de	Monthly Mean / Moyenne	Normal Mean / Moyenne	Diff from Normal / Écart avec	Monthly Total / Total	Normal Total / Total	Total as % of Normal / Total en % de la	
station	Prov	тс	station	mensuelle	Normale	la normale	mensuel	normal	normale	
BAS CARAQUET	NB	WXS	AU8	13.9	14.2	-0.2	76.8	73.8	104	
BAS CARAQUET	NB		DAILY				70.6	73.8	96	
BATHURST A	NB	ZBF	NCA	14.1	13.5	0.6	48.5	84.2	58	
CHARLO AUTO	NB	ZCR	AU8	13.7	12.1	1.6	54.4	79.3	69	
DOAKTOWN AUTO RCS	NB	ADN	AU8	14.3	13.5	0.8	71.9	100.2	72	
EDMUNDSTON	NB	ERM	AU8	12.3			57.6	94.6	61	
FREDERICTON CDA CS	NB	AFC	AU8	15.0	14.0	1.0	105.1	94.7	111	
FREDERICTON INTLA	NB	YFC	NCA	14.8	13.6	1.2	97.4	87.5	111	
FUNDY PARK (ALMA) CS	NB	AFY	AU8	14.7	13.7	0.9	190.3	122.7	155	
GRAND MANAN SAR CS	NB	XGM	AU8	14.2			141.5			
KOUCHIBOUGUAC	NB	АКС	AU8	14.3	13.3	1.0	77.4	83.7	92	
MECHANIC SETTLEMENT	NB	AMS	AU8	13.6			141.9			
MIRAMICHI RCS	NB	ACQ	AU8	14.6	13.5	1.1	69.2	84.5	82	
MISCOU ISLAND (AUT)	NB	WMI	AU8	14.3			71.7			
MONCTON/GREATER MONCTON ROMEO LEBLANC INTL A	NB	YQM	NCH	14.7	13.6	1.1	105.8	93.5	113	
ΟΑΚ ΡΟΙΝΤ	NB		DAILY	15.2	14.7	0.4				
POINT LEPREAU CS	NB	WPE	AU8	14.4	12.4	2.0	116.5	120.9	96	
RED PINES	NB	ARP	AU8	13.3	13.1	0.2	50.4	76.5	66	
SAINT JOHN A	NB	YSJ	NCH	14.4	13.0	1.4	123.3	105.6	117	
ST. STEPHEN	NB	WSS	AU8	14.7			115.1			
SUSSEX FOUR CORNERS	NB	ASF	AU8	15.0	14.3	0.8	95.3	99.9	95	
WOODSTOCK NEWBRIDGE	NB	EWD	AU8	13.7	13.2	0.5	87.8	95.7	92	
Average				14.2	13.5	0.9	93.7	92.4	94	
Max				15.2	14.7	2.0	190.3	122.7	155	
Min				12.3	12.1	-0.2	48.5	73.8	58	

Table A3: Same as Table A2, for Nova Scotia.

				•	perature / T noyenne (°	empérature C)	Total Precipitation / Précipitati totales (mm)		
Station Name / Nom de la		TC ID / ID de	Station Type / Type de	Monthly Mean / Moyenne	Normal Mean / Moyenne	Diff from Normal / Écart avec	Monthly Total / Total	Normal Total / Total	Total as % of Normal / Total en % de la
station	Prov	TC	station	mensuelle	-	la normale	mensuel	normal	normale
ALDERSVILLE	NS	ANR	AU8	14.8		0.2	151.8	114.3	133
BACCARO PT	NS	АСР	AU8	15.5	1.10	0.2	89.2	99.5	90
BEAVER ISLAND (AUT)	NS	WBV	AU8	16.9			00.12	55.6	
BEDFORD BASIN	NS	ABB	AU7	17.0		1.5			
BEDFORD RANGE	NS	ABR	AU7	15.6		1.1			
BRIER ISLAND	NS	WVU	AU8	14.8					
CARIBOU POINT (AUT)	NS	WBK	AU8	17.0		2.2	149.4	117.6	127
CHETICAMP HIGHLANDS	NS	AHT	AU8	15.1		1.0	180.6	124.1	146
DEBERT	NS	ZDB	AU8	15.1		1.0	100.0	124.1	140
EMERGENCY WEATHER	113	200	100	15.1	10.7	±.,			
STATION #2 (New Ross)	NS	ERU	AU8	15.2	14.6	0.5	153.9	114.3	135
ESKASONI FIRST NATION	NS	AEI	AU8	15.6	14.6	1.0	175.6	127.8	137
GRAND ETANG	NS	WZQ	AU8	15.0		1.0	1,3.0	127.0	137
GREENWOOD A	NS	YZX	WOD	15.4		0.9	93.5	96.2	97
HALIFAX DOCKYARD	NS	AHD	AU7	17.1		1.6	55.5	50.2	
HALIFAX KOOTENAY	NS	АНК	AU7	16.4		1.3	155.8	103.0	151
HALIFAX STANFIELD INT'L A	NS	YHZ	NCH	15.8		1.3	150.5	103.0	
HALIFAX WINDSOR PARK	NS	AHW	AU7	16.9		1.3	150.4	108.9	138
HART ISLAND (AUT)	NS	WRN	AU8	16.8		2.0	10011	100.0	200
INGONISH BEACH RCS	NS	XIB	AU7	15.0		0.5	214.3	143.7	149
KEJIMKUJIK 1	NS	WKG	AU8	15.3		1.8	118.5	83.4	
KENTVILLE CDA CS	NS	ХКТ	AU7	15.7	14.5	1.2	94.3	84.4	
LOUISBOURG	NS	AUU	AU8	15.6		1.3	134.8	133.0	
LUNENBURG	NS	XLB	AU8	16.6		2.0	10.00	200.0	
MALAY FALLS	NS	XMY	AU8	14.8		1.1	186.9	147.5	127
MCNABS ISLAND (AUT)	NS	XMI	AU8	17.0		1.9			
NAPPAN AUTO	NS	XNP	AU8	14.6		0.4	102.8	102.1	101
NORTH MOUNTAIN CS	NS	XNM	AU7	12.9		-0.8	297.1		
NORTHEAST MARGAREE (AUT)	NS	WNS	AU7	13.9		-0.1	226.3	122.6	185
OSBORNE HEAD DND	NS	AOS	AU7	16.0		0.8			
PARRSBORO	NS	APR	AU8	14.3		0.2	132.4	113.2	117
PORT HAWKESBURY	NS	YPD	NCA	14.7		0.7	230.8	116.6	198
SABLE ISLAND	NS	ASB	AU8	16.8		1.0			
SABLE ISLAND A	NS	WSA	NCA	16.7					
SHEARWATER JETTY	NS	WZU	AU7	16.8		1.7	164.6	103.0	160
SHEARWATER RCS	NS	AAW	AU8	16.7		1.6	142.2	103.0	
SHELBURNE SANDY POINT	NS	ESB	AU8	15.3			145.6		
ST PAUL ISLAND (AUT)	NS	WEF	AU8	15.8					
SYDNEY A	NS	YQY	NCH	15.0		1.1	143.2	118.7	121
SYDNEY CS	NS	AQY	AU8	15.2		1.3	131.9	118.7	
TRACADIE	NS	XTD	AU8	15.3		1.4	202.6	114.8	
UPPER STEWIACKE RCS	NS	AOH	AU8	15.0		1.0	156.3	113.6	
WATERVILLE CAMBRIDGE	NS		DAILY	16.3		1.4			
WESTERN HEAD	NS	WWE	AU8	15.9			120.9		
YARMOUTH A	NS	YQI	NCH	15.4		1.3	58.9	94.9	62
YARMOUTH RCS	NS	EQI	AU8	15.1		0.9	53.2	94.9	
Average	-	-**		15.7		1.1	150.3	111.7	
Max				13.7		2.2	297.1	147.5	
Min				17.1				83.4	

				Mean Temperature / Température moyenne (°C)			Total Pred	ipitation / Précipitations totales (mm)		
Station Name / Nom de la station	Prov	TC ID / ID de TC	Station Type / Type de station	Monthly Mean / Moyenne mensuelle	Normal Mean / Moyenne Normale	Diff from Normal / Écart avec la normale	Monthly Total / Total mensuel	Normal Total / Total normal	Total as % of Normal / Total en % de la normale	
CHARLOTTETOWN A	PEI	YYG	NCH	14.8	14.1	0.7	155.1	95.9	162	
EAST POINT (AUT)	PEI	WEP	AU8	15.8	14.1	1.7	123.4	114.7	108	
MAPLE PLAINS	PEI	XMP	AU8	14.3	14.4	-0.1				
NORTH CAPE	PEI	WNE	AU8	15.9			107.7			
ST. PETERS	PEI	ZSP	AU8	15.1	14.3	0.8	149.5	107.9	139	
STANHOPE	PEI	ANH	AU8	15.5			132.3			
Average				15.2	14.2	0.8	133.6	106.2	136	
Max				15.9	14.4	1.7	155.1	114.7	162	
Min				14.3	14.1	-0.1	107.7	95.9	108	

Table A4: Same as Table A2, for Prince Edward Island.

Glossary

CaPA: The Canadian Precipitation Analysis. Full details available here.

Standard Deviation: A statistical measure of how data compares to the mean (average) value. The standard deviation referenced in these monthly summaries is relative to the Canadian Climate Normals data set. The higher the standard deviation value, the further the data is from the normal value.

Temperature Anomaly: The deviation of temperature in a given region over a specified period from the long-term average value for the same region.

A more extensive glossary for weather and climate related terminology can be found here.

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