

**New Brunswick**

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**Integrated Climate Bulletin  
Summer 2019 Review  
& Fall Outlook**

**Jill Maepea**

**Meteorological Service of Canada  
Environment and Climate Change Canada  
September 3, 2019**



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# June 2019; Climate Summary

Station Name	TC ID	Station Type	Mean Temperature (°C)			Total Precip (mm)			
			Monthly Mean	Normal Mean	Diff from Normal	Monthly Total	Normal Total	Total as % of Normal	Diff from Normal as % of Normal
AROOSTOOK		DAILY	9.1	11.0	-1.8	105.4	86.6	122	22
BAS CARAQUET	WXS	AU8	6.9	8.8	-2.0	58.2	85.6	68	-32
BAS CARAQUET		DAILY				67.2	85.6	79	-21
BATHURST A	ZBF	NCA	7.6	9.7	-2.1	64.5	103.1	63	-37
BOUCTOUCHE CDA CS	ABT	AU8	7.4	9.8	-2.4	95.9	100.5	95	-5
CHARLO AUTO	ZCR	AU8	7.6	9.0	-1.4	78.0	84.8	92	-8
MIRAMICHI RCS	ACQ	AU8	7.9	10.0	-2.2	84.4	99.5	85	-15
DOAKTOWN AUTO RCS	ADN	AU8	7.9	10.6	-2.7	76.7	113.2	68	-32
EDMUNDSTON	ERM	AU8	7.5	10.3	-2.8	73.3	90.4	81	-19
FREDERICTON INTL A	YFC	NCA	8.8	11.1	-2.3	82.2	96.2	85	-15
FREDERICTON CDA CS	AFC	AU8	9.0	11.3	-2.4	79.1	103.8	76	-24
GAGETOWN AWOS A	YCX	AU5	8.8	11.3	-2.4	68.0	105.8	64	-36
GRAND MANAN SAR CS	XGM	AU8	7.5			162.0			
KOUCHIBOUGUAC	AKC	AU8	7.0	9.8	-2.8	85.8	112.2	76	-24
MECHANIC SETTLEMENT	AMS	AU8	6.9			99.0			
MISCOU ISLAND (AUT)	WMI	AU8	6.2						
MONCTON INTL A	YQM	NCH	7.6	10.0	-2.4	106.6	96.9	110	10
MONCTON A	YQM	NCA	7.6	10.0	-2.4				
OAK POINT		DAILY	8.8	11.3	-2.5	96.8	105.8	92	-8
POINT LEPREAU CS	WPE	AU8	7.6	8.7	-1.1	135.3	130.2	104	4
RED PINES	ARP	AU8	6.9	9.8	-2.9	69.6	96.0	73	-27
SAINT JOHN A	YSJ	NCH	7.2	9.5	-2.3	119.8	109.8	109	9
ST. STEPHEN	WSS	AU8	8.7			112.1			
SUSSEX FOUR CORNERS	ASF	AU8	8.5	11.1	-2.6	86.3	103.0	84	-16
WOODSTOCK		DAILY	8.9	10.9	-2.0	58.2	94.2	62	-38
WOODSTOCK NEWBRIDGE	EWD	AU8	8.3	10.9	-2.6	61.8	94.2	66	-34
<b>Average</b>			<b>7.8</b>	<b>10.2</b>	<b>-2.3</b>	<b>88.6</b>	<b>99.9</b>	<b>83</b>	<b>-17</b>
<b>Max</b>			<b>9.1</b>	<b>11.3</b>	<b>-1.1</b>	<b>162.0</b>	<b>130.2</b>	<b>122</b>	<b>22</b>
<b>Min</b>			<b>6.2</b>	<b>8.7</b>	<b>-2.9</b>	<b>58.2</b>	<b>84.8</b>	<b>62</b>	<b>-38</b>



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# July 2019; Climate Summary

Station Name	Prov	TC ID	Station Type	Mean Temperature (°C)			Total Precip (mm)			
				Monthly Mean	Normal Mean	Diff from Normal	Monthly Total	Normal Total	Total as % of Normal	Diff from Normal as % of Normal
BAS CARAQUET	NB	WXS	AU8	19.2	18.7	0.5				
BAS CARAQUET	NB		DAILY				82.2	80.9	102	2
BATHURST A	NB	ZBF	NCA	19.4	19.1	0.4	55.0	100.8	55	-45
BOUCTOUCHE CDA CS	NB	ABT	AU8	19.8	19.2	0.6	74.4	99.1	75	-25
CHARLO AUTO	NB	ZCR	AU8	19.3	17.9	1.4	64.4	102.1	63	-37
MIRAMICHI RCS	NB	ACQ	AU8	20.3	19.1	1.1	63.1	99.9	63	-37
DOAKTOWN AUTO RCS	NB	ADN	AU8	19.5	19.1	0.4	69.4	105.8	66	-34
EDMUNDSTON	NB	ERM	AU8	18.1	18.2	-0.1	98.1	113.8	86	-14
FREDERICTON INTL A	NB	YFC	NCA	20.0	19.3	0.8	70.7	88.3	80	-20
FREDERICTON CDA CS	NB	AFC	AU8	20.5	19.4	1.2	83.9	89.0	94	-6
GAGETOWN AWOS A	NB	YCX	AU5	20.2	19.5	0.7	43.0	96.9	44	-56
GRAND MANAN SAR CS	NB	XGM	AU8	18.4						
KOUCHIBOUGUAC	NB	AKC	AU8	19.4	19.2	0.2				
MECHANIC SETTLEMENT	NB	AMS	AU8	18.6			106.2			
MISCOU ISLAND (AUT)	NB	WMI	AU8	18.2						
MONCTON INTL A	NB	YQM	NCH	20.0	18.8	1.2	42.4	92.1	46	-54
OAK POINT	NB		DAILY	19.2	19.5	-0.3	84.6	96.9	87	-13
POINT LEPREAU CS	NB	WPE	AU8	16.9	15.6	1.3				
RED PINES	NB	ARP	AU8	18.8	18.6	0.2	37.2	105.8	35	-65
SAINT JOHN A	NB	YSJ	NCH	18.0	17.1	0.9	100.5	88.4	114	14
ST. STEPHEN	NB	WSS	AU8	20.1						
SUSSEX FOUR CORNERS	NB	ASF	AU8	19.6	19.2	0.4	44.9	84.0	53	-47
WOODSTOCK	NB		DAILY	19.9	19.0	1.0	37.2	100.2	37	-63
WOODSTOCK NEWBRIDGE	NB	EWD	AU8	19.4	19.0	0.4	40.7	100.2	41	-59
<b>Average</b>				<b>19.3</b>	<b>18.7</b>	<b>0.6</b>	<b>66.6</b>	<b>96.7</b>	<b>67</b>	<b>-33</b>
<b>Max</b>				<b>20.5</b>	<b>19.5</b>	<b>1.4</b>	<b>106.2</b>	<b>113.8</b>	<b>114</b>	<b>14</b>
<b>Min</b>				<b>16.9</b>	<b>15.6</b>	<b>-0.3</b>	<b>37.2</b>	<b>80.9</b>	<b>35</b>	<b>-65</b>



# August 2019; Climate Summary

Station Name	TC ID	Station Type	Mean Temperature (°C)			Total Precip (mm)			
			Monthly Mean	Normal Mean	Diff from Normal	Monthly Total	Normal Total	Total as % of Normal	Diff from Normal as % of Normal
BAS CARAQUET	WXS	AU8	18.8	18.6	0.2	59.2	95.0	62	-38
BAS CARAQUET		DAILY				61.8	95.0	65	-35
BATHURST A	ZBF	NCA	18.5	18.2	0.3	51.9	82.0	63	-37
BOUCTOUCHE CDA CS	ABT	AU8	18.5	18.5	0.1	94.0	85.2	110	10
CHARLO AUTO	ZCR	AU8	18.0	17.2	0.9				
MIRAMICHI RCS	ACQ	AU8	19.3	18.5	0.8	60.7	93.1	65	-35
DOAKTOWN AUTO RCS	ADN	AU8	18.0	18.4	-0.4	98.9	94.4	105	5
EDMUNDSTON	ERM	AU8	16.1	17.1	-1.0	62.4	93.4	67	-33
FREDERICTON INTL A	YFC	NCA	18.2	18.4	-0.3	79.9	85.6	93	-7
FREDERICTON CDA CS	AFC	AU8	18.5	18.6	-0.1	109.1	85.9	127	27
GAGETOWN AWOS A	YCX	AU5	18.4	19.2	-0.8				
GRAND MANAN SAR CS	XGM	AU8	17.4			78.2			
KOUCHIBOUGUAC	AKC	AU8	18.4	18.5	0.0	72.8	86.7	84	-16
MECHANIC SETTLEMENT	AMS	AU8	17.6			120.6			
MISCOU ISLAND (AUT)	WMI	AU8	18.3			67.8			
MONCTON INTL A	YQM	NCH	18.8	18.2	0.6	106.7	80.8	132	32
MONCTON A	YQM	NCA	18.8	18.2	0.7				
OAK POINT		DAILY	18.4	19.2	-0.8				
POINT LEPREAU CS	WPE	AU8	16.7	15.6	1.1				
RED PINES	ARP	AU8	18.0	17.9	0.1	67.7	93.6	72	-28
SAINT JOHN A	YSJ	NCH	16.9	16.8	0.1	107.0	81.7	131	31
ST. STEPHEN	WSS	AU8	18.1			109.0			
SUSSEX FOUR CORNERS	ASF	AU8	18.4	18.8	-0.4	60.6	74.3	82	-18
WOODSTOCK		DAILY	17.8	18.4	-0.6	85.6	100.6	85	-15
WOODSTOCK NEWBRIDGE	EWD	AU8	17.1	18.4	-1.3	75.6	100.6	75	-25
<b>Average</b>			<b>18.0</b>	<b>18.1</b>	<b>0.0</b>	<b>81.5</b>	<b>89.3</b>	<b>89</b>	<b>-11</b>
<b>Max</b>			<b>19.3</b>	<b>19.2</b>	<b>1.1</b>	<b>120.6</b>	<b>100.6</b>	<b>132</b>	<b>32</b>
<b>Min</b>			<b>16.1</b>	<b>15.6</b>	<b>-1.3</b>	<b>51.9</b>	<b>74.3</b>	<b>62</b>	<b>-38</b>

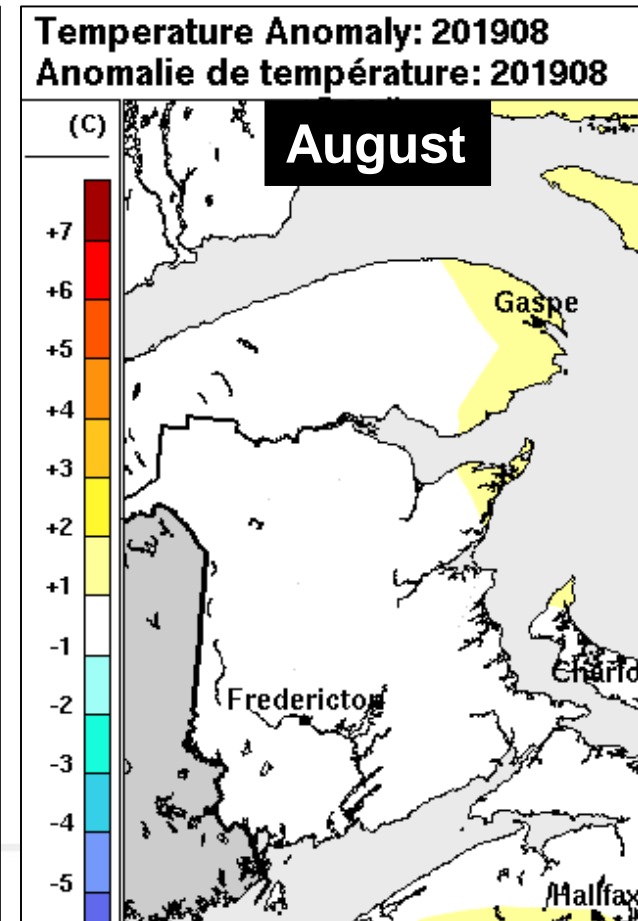
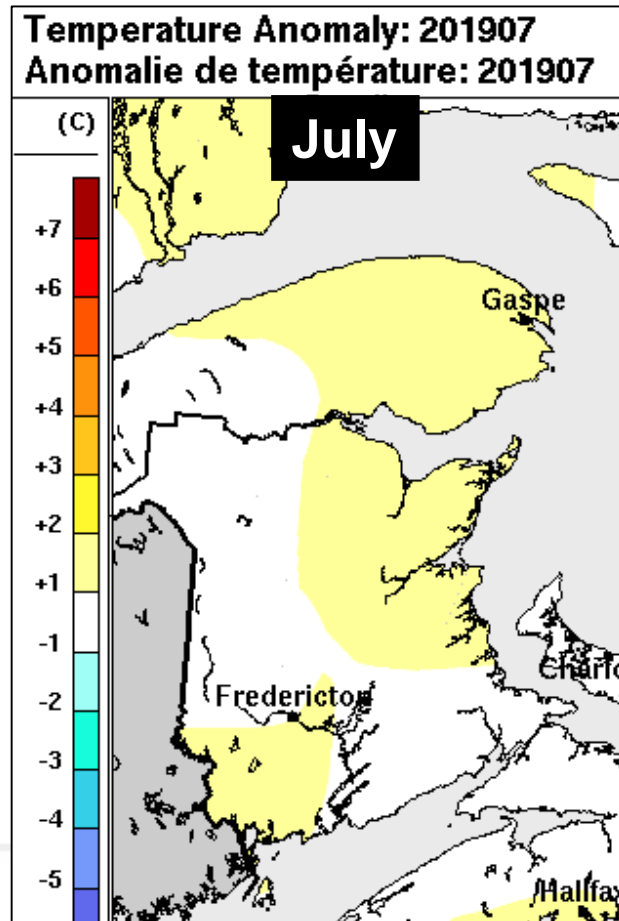
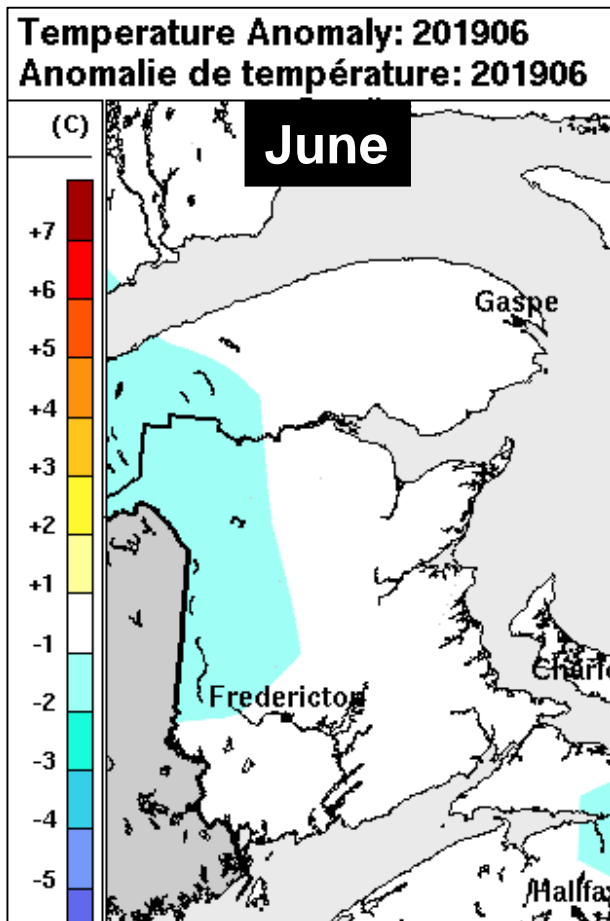


# June-July-August 2019; Temperature departure from 1981-2010 mean

below normal (+0.2 to -2.0C)

slightly above normal (-0.3 to +1.4C)

near normal (-1.3 to +1.1C)



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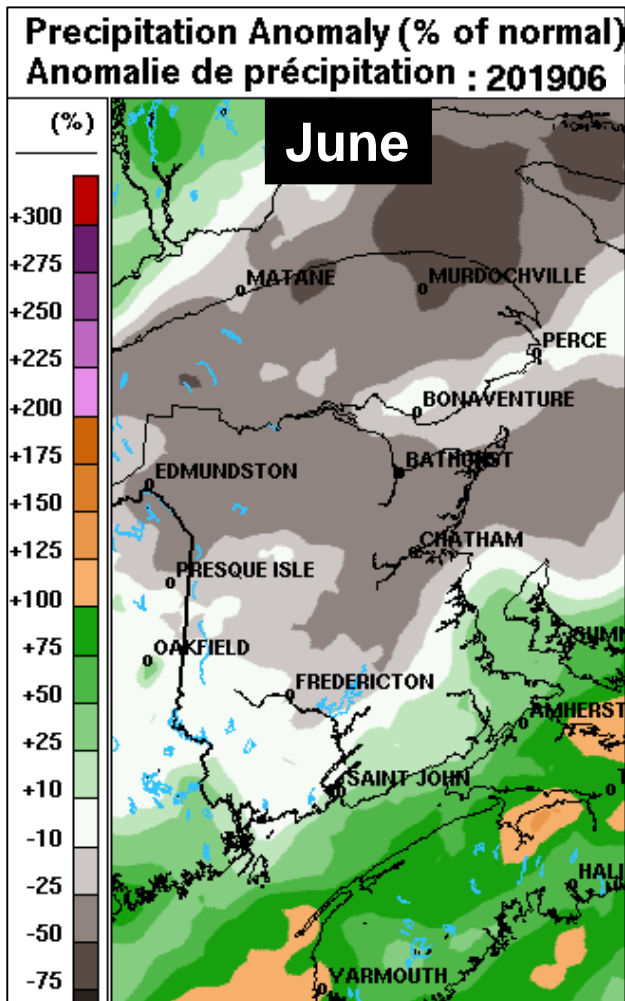
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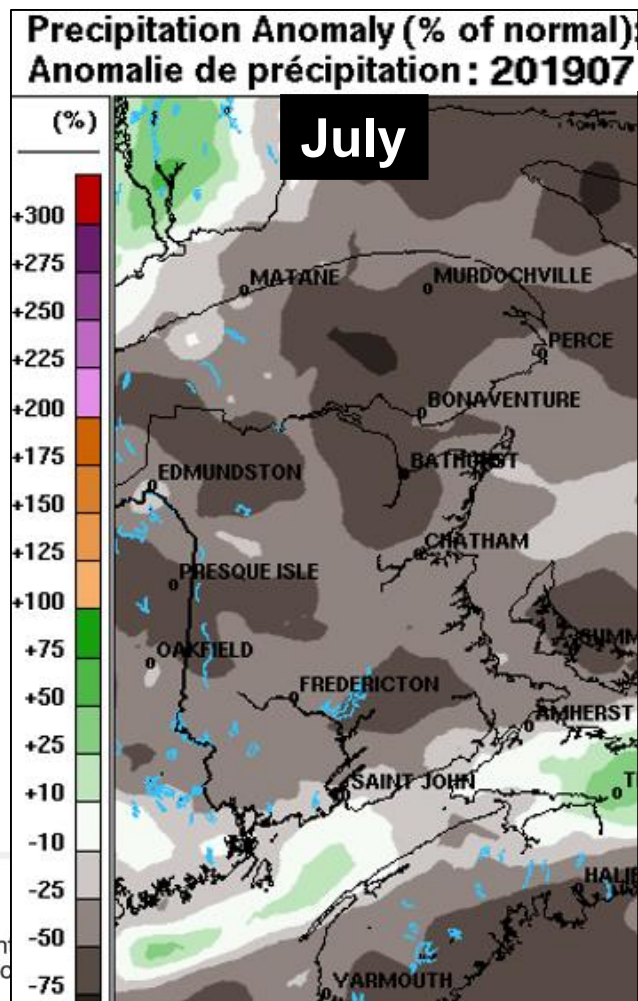


# June-July-August 2019; Precipitation departure from 1981-2010 mean

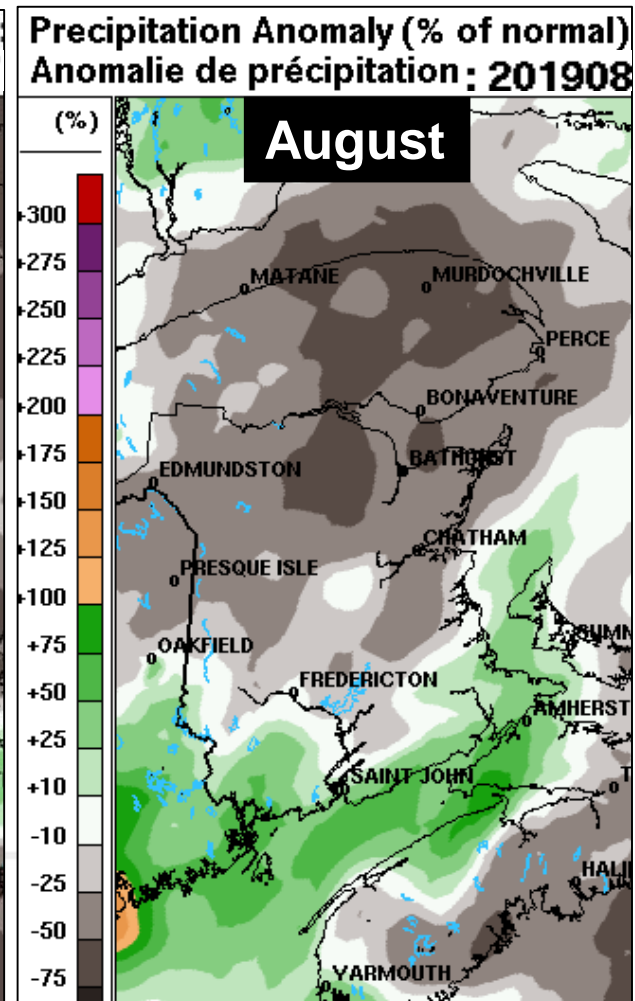
Below normal NORTH,  
above normal SOUTH



Below normal

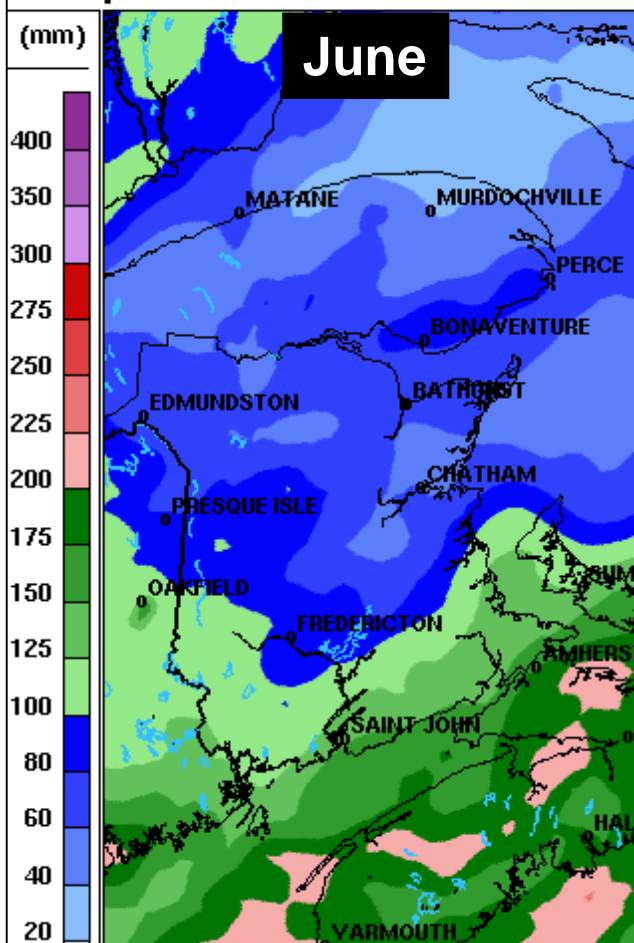


Below normal NORTH,  
above normal SOUTH

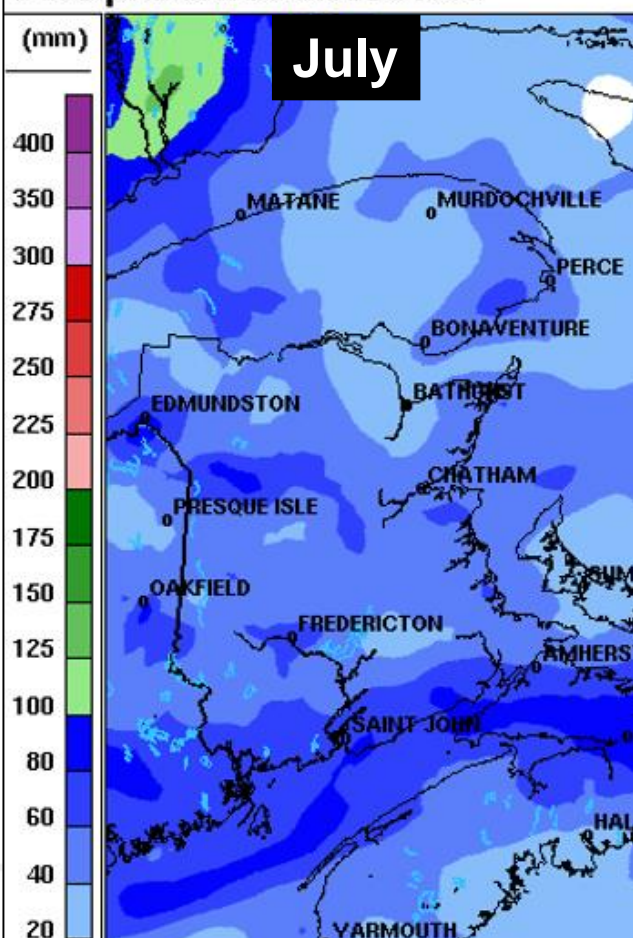


# June-July-August 2019; Total precipitation

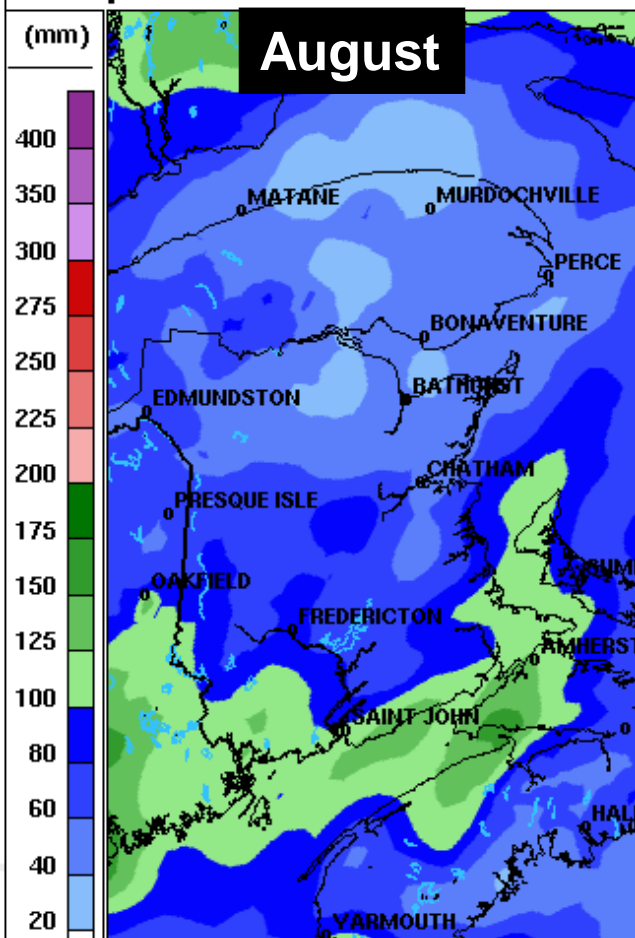
Total precipitation: 201906  
Précipitation totale: 201906



Total precipitation: 201907  
Précipitation totale: 201907



Total precipitation: 201908  
Précipitation totale: 201908



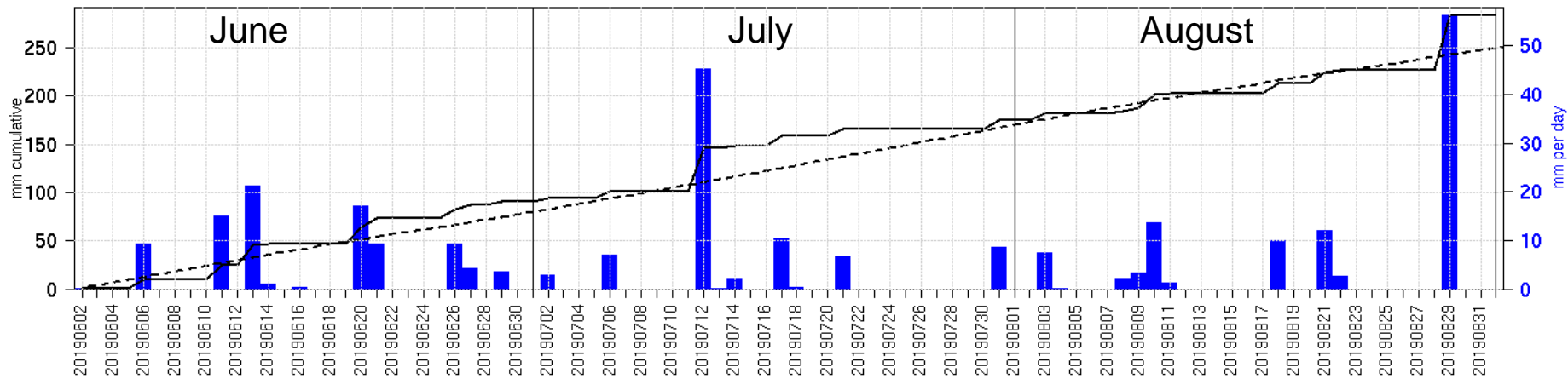
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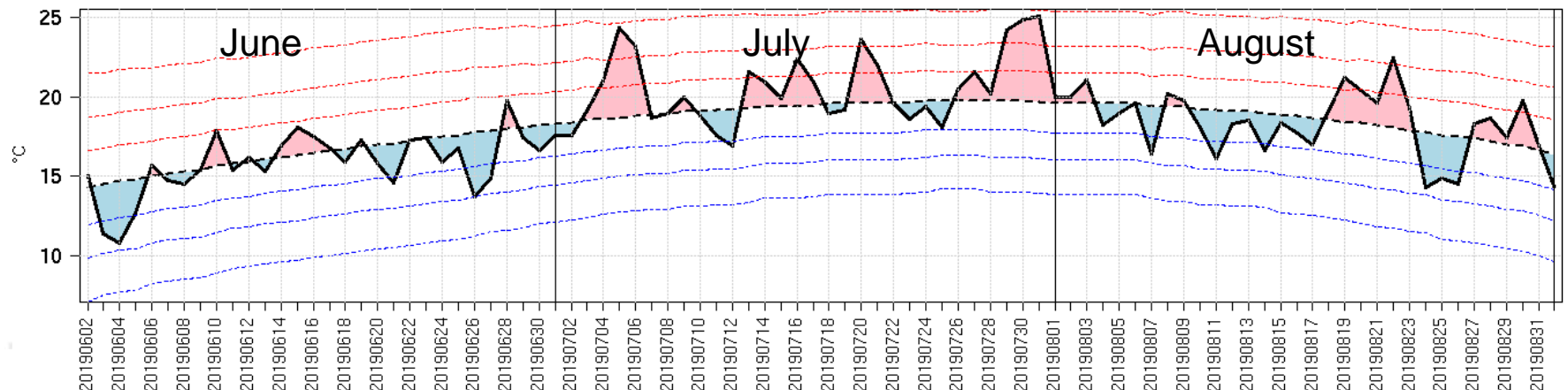
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# 2019 Temperature and precipitation – (J,J,A) for Fredericton

Observed Cumulative Precipitation (line) versus Normal (dashed line) and Daily Amounts (bars) for Fredericton, NB (45.94N 66.63W)



Daily Mean Temperature (bold line) versus Normal (thin line) and  $\pm 0.7, 1.3, 2.1$  SD (red/blue dashes) for Fredericton, NB (45.94N 66.63W)



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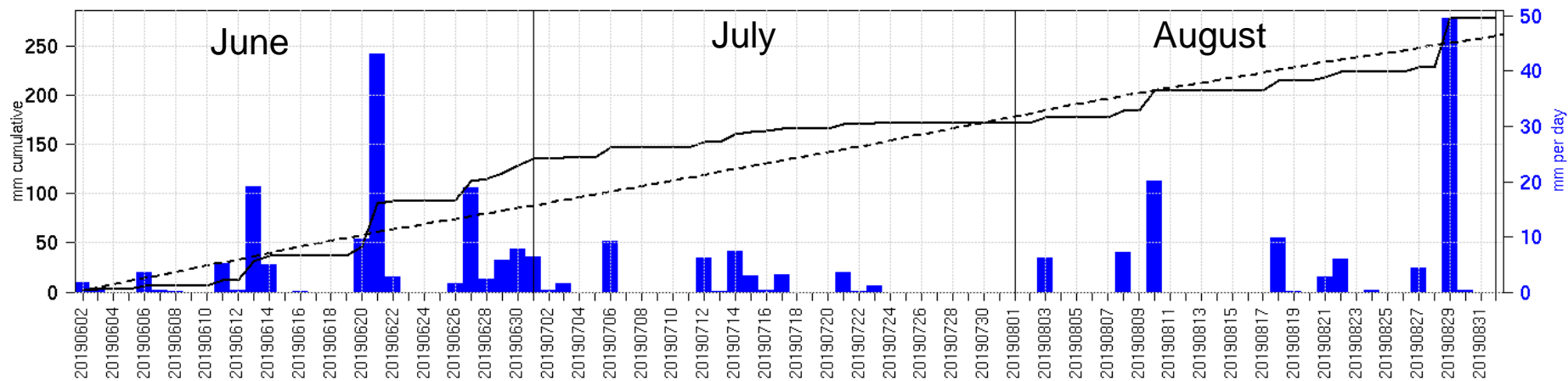
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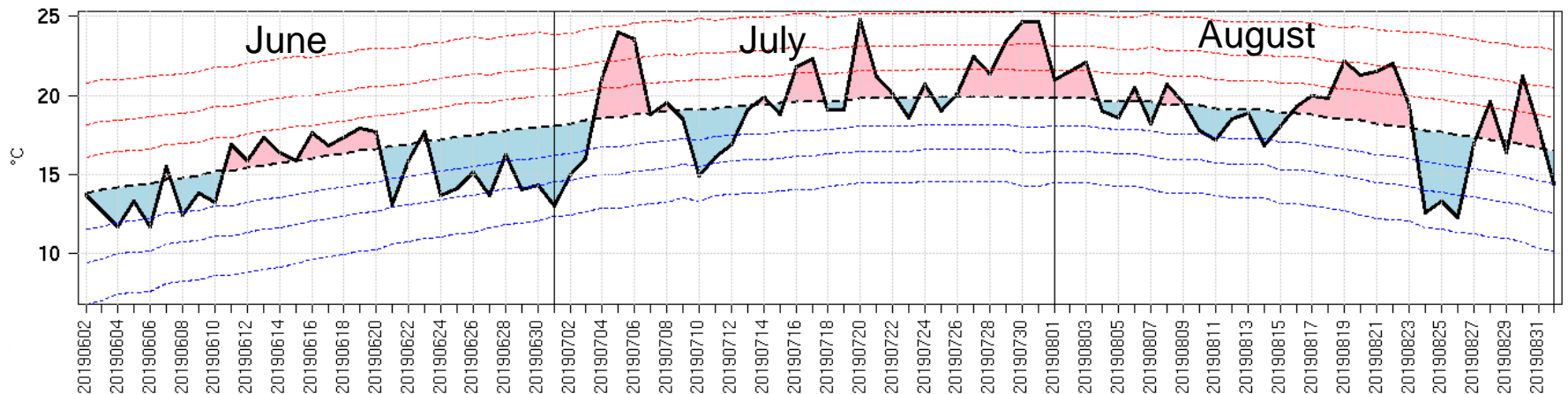


# 2019 Temperature and precipitation – (J,J,A) for Moncton

Observed Cumulative Precipitation (line) versus Normal (dashed line) and Daily Amounts (bars) for Moncton, NB (46.08N 64.76W)

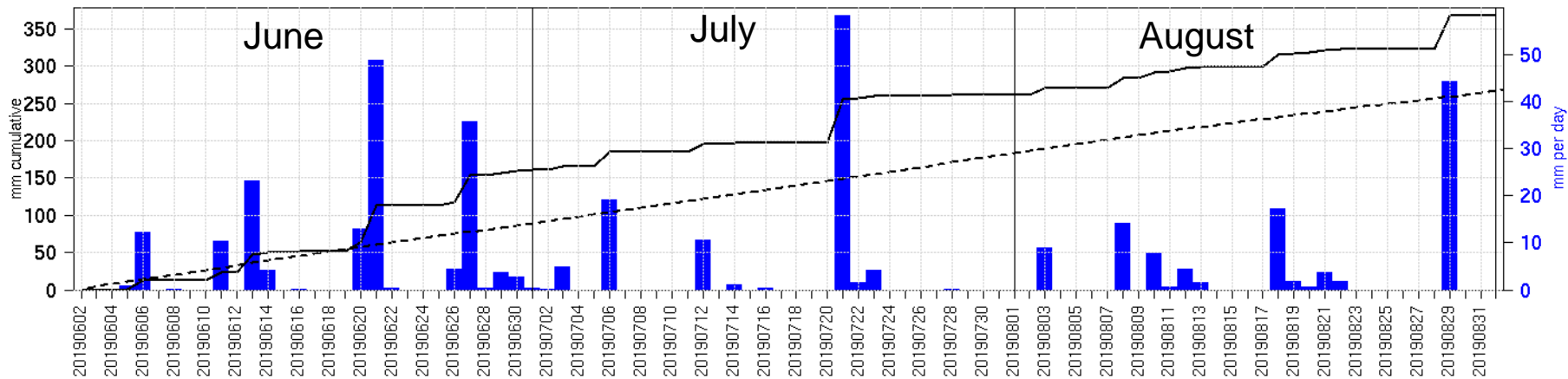


Daily Mean Temperature (bold line) versus Normal (thin line) and  $\pm 0.7, 1.3, 2.1$  SD (red/blue dashes) for Moncton, NB (46.08N 64.76W)

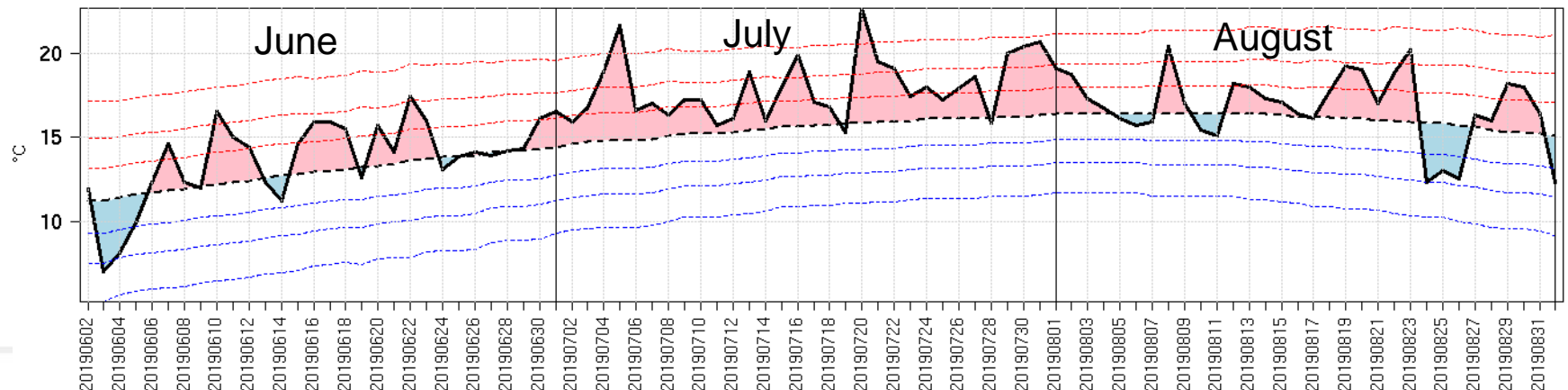


# 2019 Temperature and precipitation – (J,J,A) for Saint John

Observed Cumulative Precipitation (line) versus Normal (dashed line) and Daily Amounts (bars) for Saint John, NB (45.26N 66.07W)

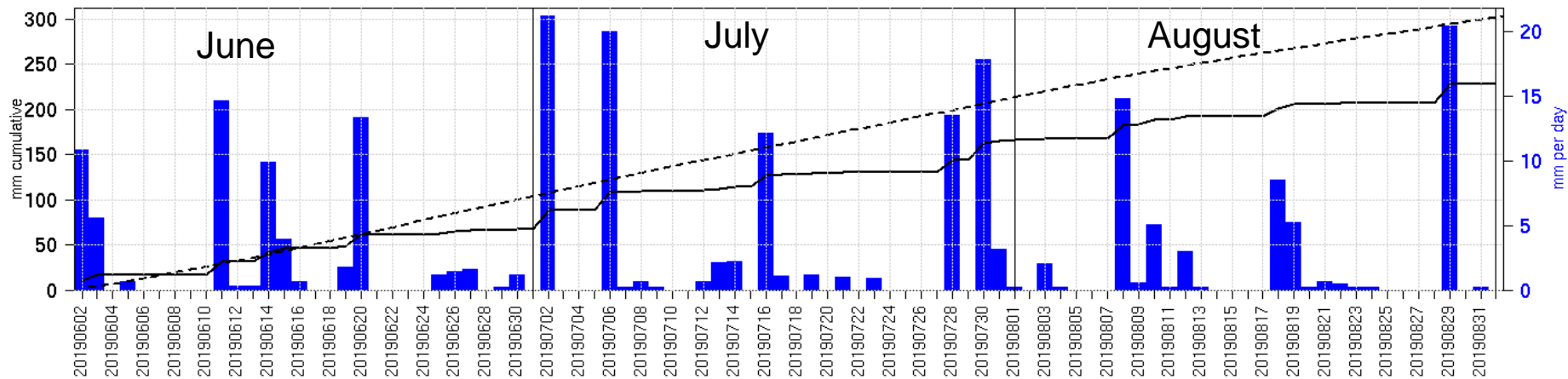


Daily Mean Temperature (bold line) versus Normal (thin line) and  $\pm 0.7, 1.3, 2.1$  SD (red/blue dashes) for Saint John, NB (45.26N 66.07W)

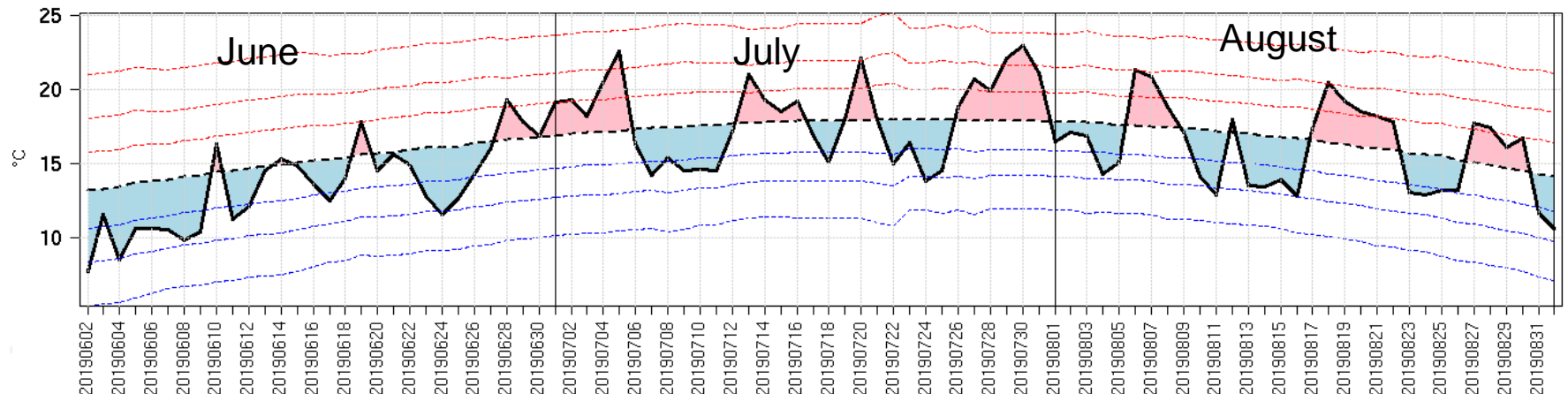


# 2019 Temperature and precipitation – (J,J,A) for Edmundston

Observed Cumulative Precipitation (line) versus Normal (dashed line) and Daily Amounts (bars) for Edmundston, NB (47.37N 68.33W)



Daily Mean Temperature (bold line) versus Normal (thin line) and  $\pm 0.7, 1.3, 2.1$  SD (red/blue dashes) for Edmundston, NB (47.37N 68.33W)



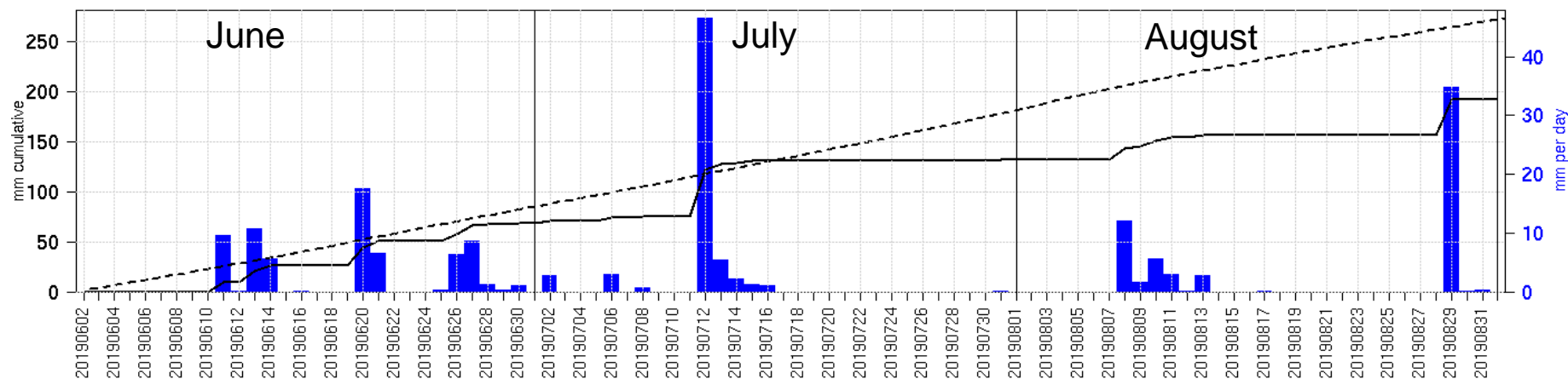
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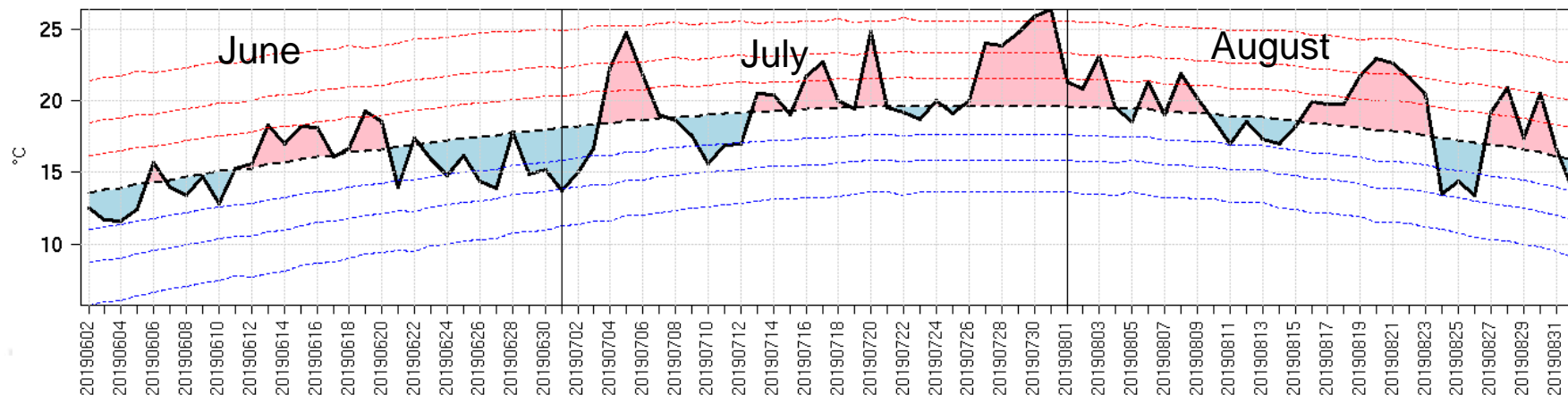
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# 2019 Temperature and precipitation – (J,J,A) for Miramichi

Observed Cumulative Precipitation (line) versus Normal (dashed line) and Daily Amounts (bars) for Miramichi, NB (47.02N 65.50W)

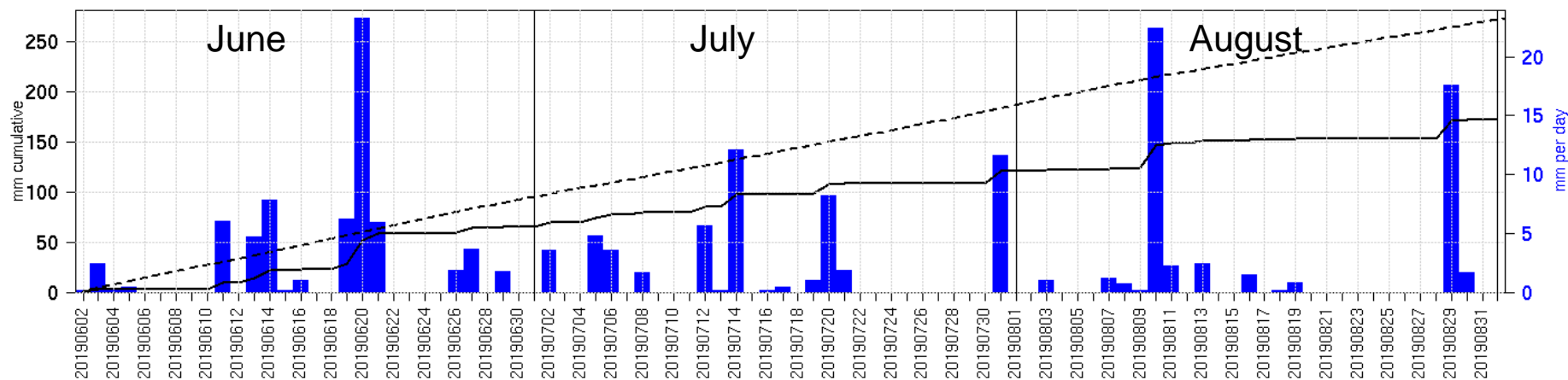


Daily Mean Temperature (bold line) versus Normal (thin line) and  $\pm 0.7, 1.3, 2.1$  SD (red/blue dashes) for Miramichi, NB (47.02N 65.50W)

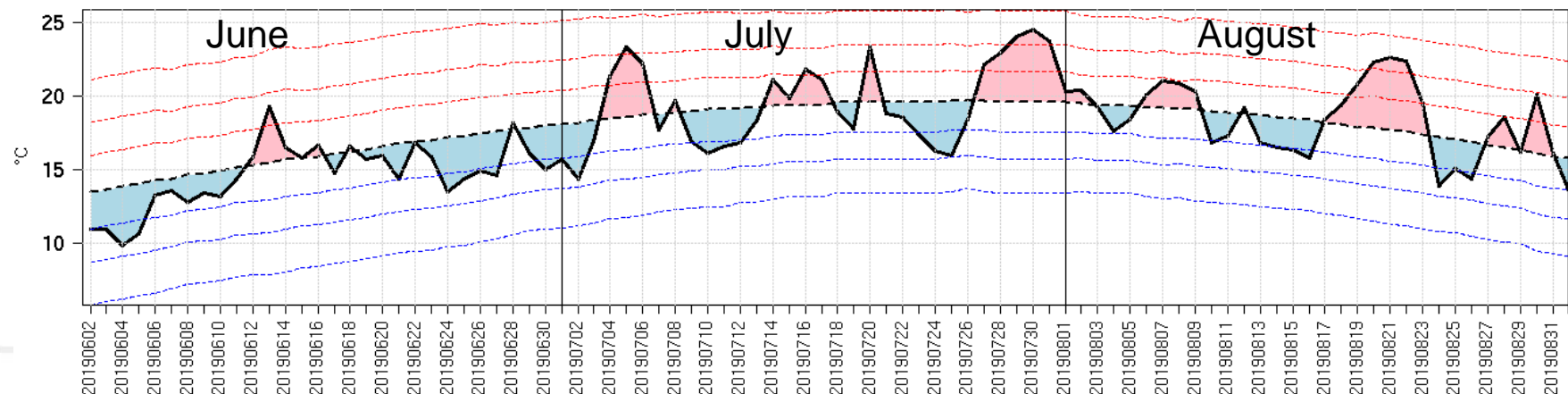


# 2019 Temperature and precipitation – (J,J,A) for Bathurst

Observed Cumulative Precipitation (line) versus Normal (dashed line) and Daily Amounts (bars) for Bathurst, NB (47.59N 65.64W)



Daily Mean Temperature (bold line) versus Normal (thin line) and  $\pm 0.7, 1.3, 2.1$  SD (red/blue dashes) for Bathurst, NB (47.59N 65.64W)



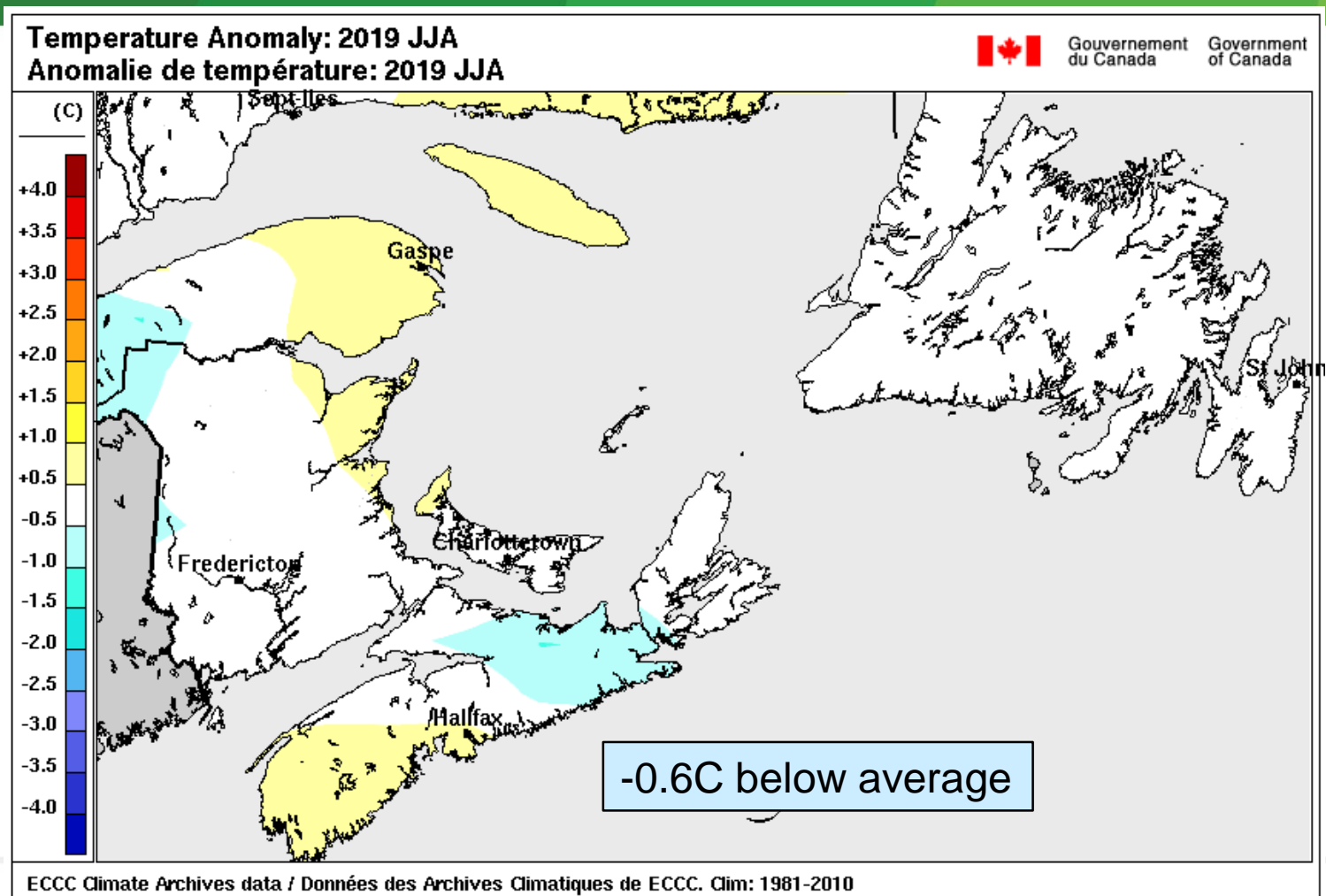
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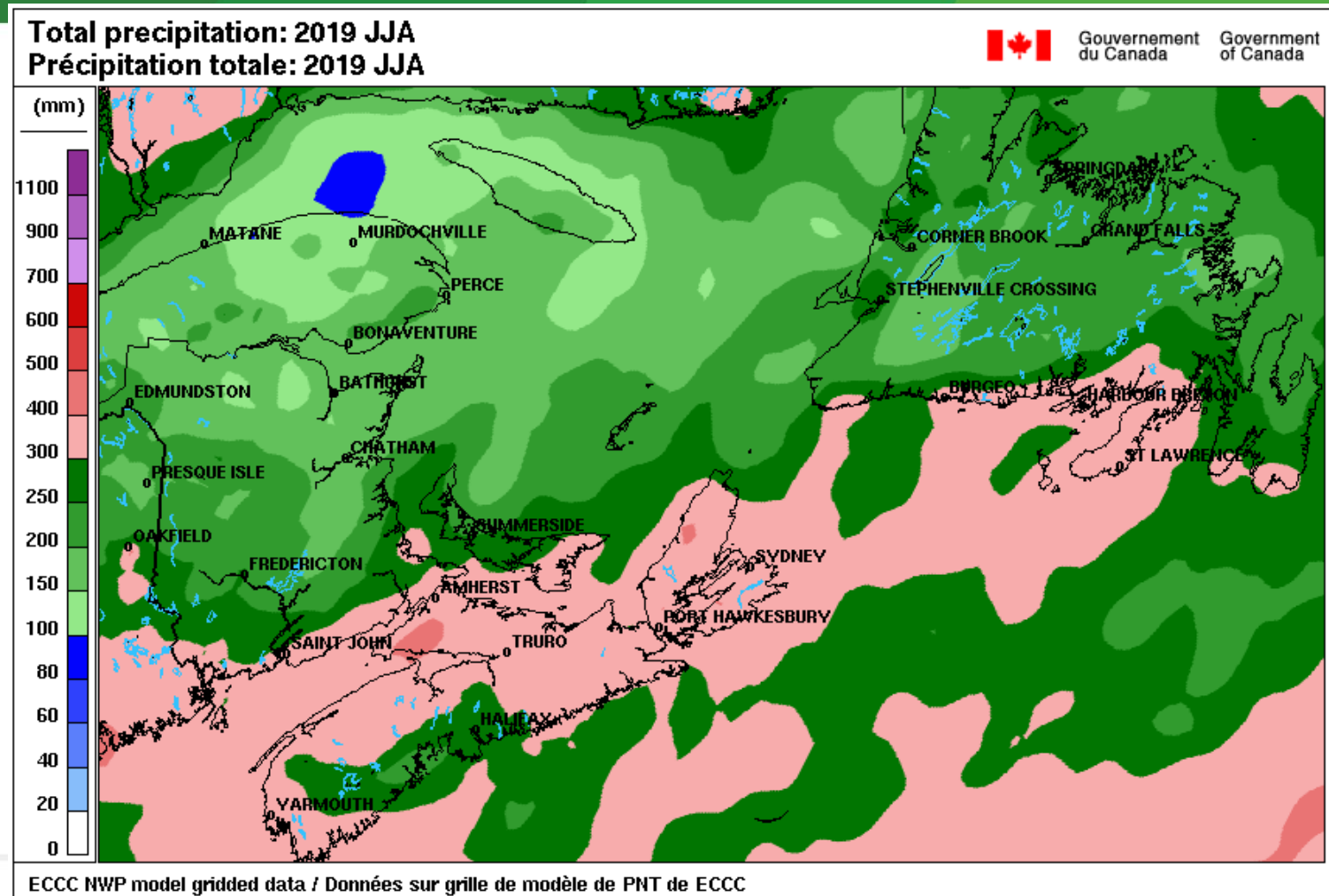
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# Summer 2019 (J,J,A) Temperature Departure from 1981-2010 mean



# Summer 2019 (J,J,A) Total precipitation

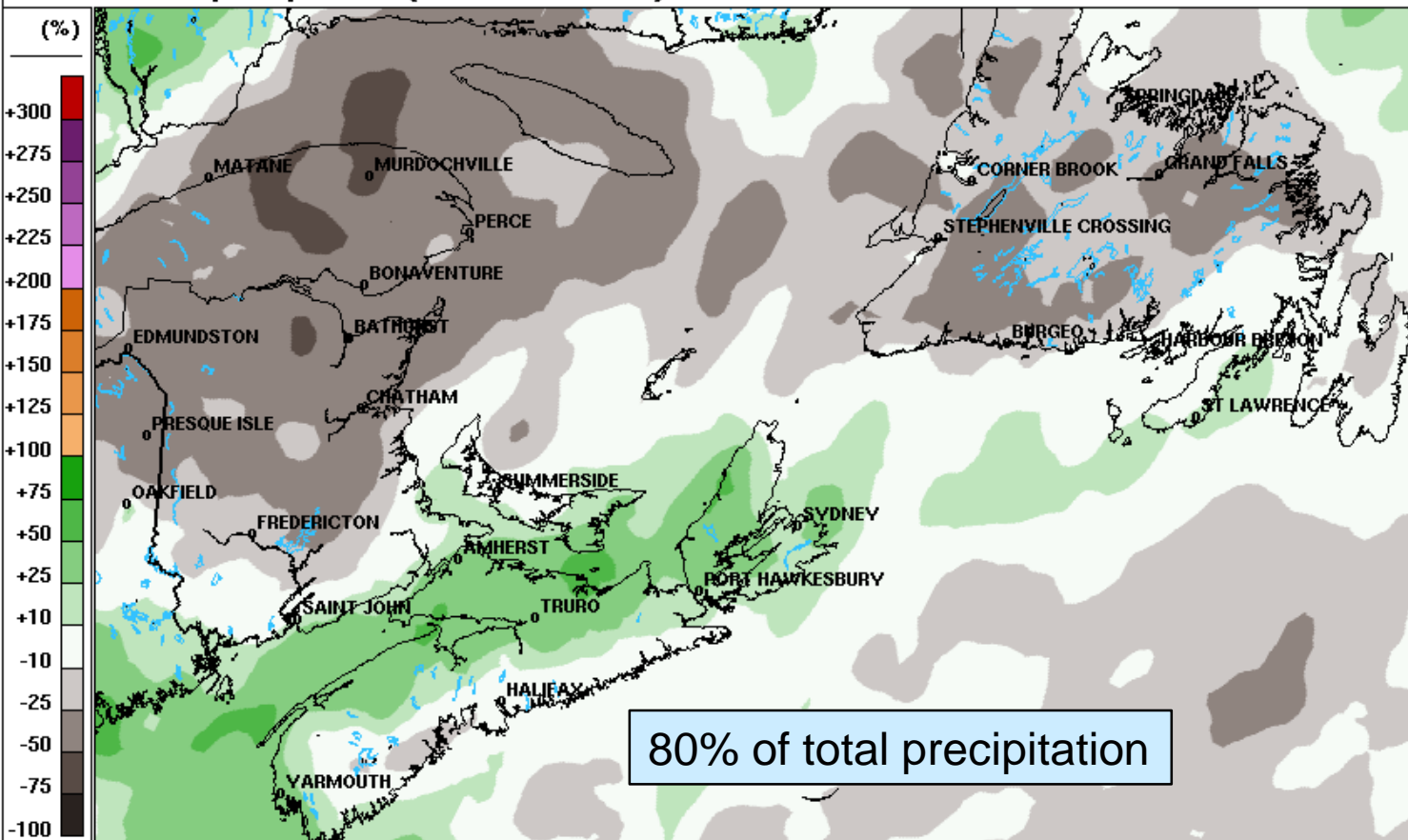


# Summer 2019 (J,J,A) Precipitation departure from 1981-2010 mean

Precipitation Anomaly (% of normal): 2019 JJA  
Anomalie de précipitation (% de la normale): 2019 JJA



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ECCC NWP model gridded data / Données sur grille de modèle de PNT de ECCC. Normal: 2002-2018

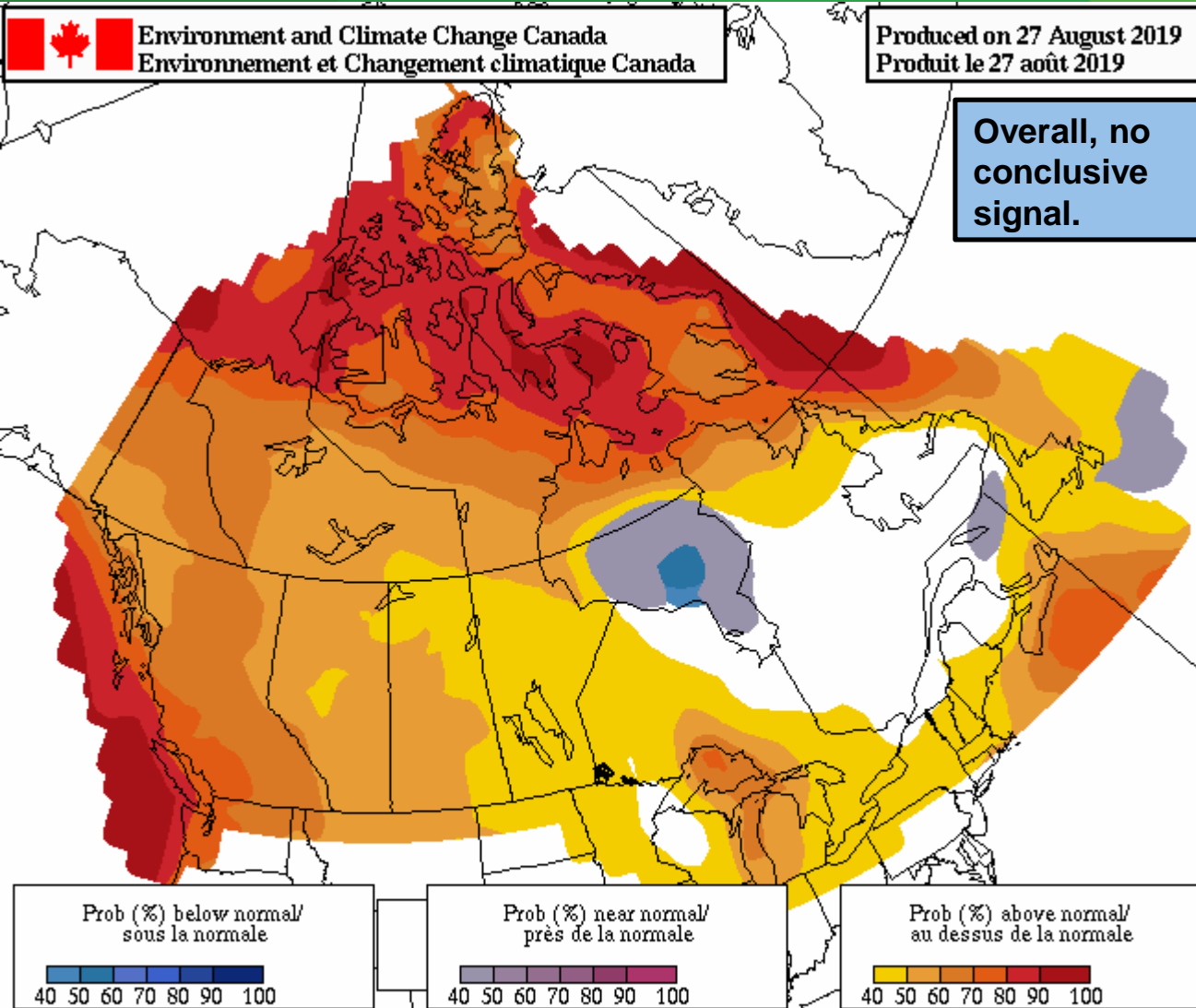


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# Outlook – Fall 2019 (S,O,N)



Forecast probability of Temperature  
above, below and near normal (calibrated)  
**Period: September-October-November 2019**  
Based on 3 equiprobable categories  
from 1981-2010 climatology

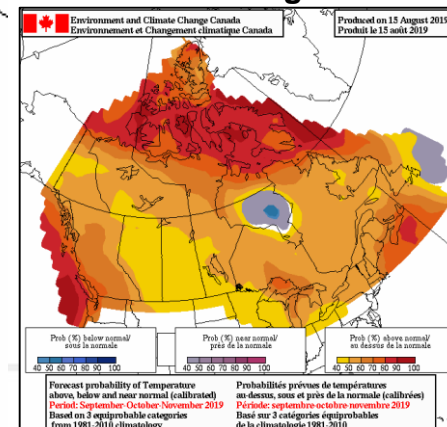
Probabilités prévues de températures  
au-dessus, sous et près de la normale (calibrées)  
**Période: septembre-octobre-novembre 2019**  
Basé sur 3 catégories équiprobables  
de la climatologie 1981-2010

## Temperature

September  
October  
November

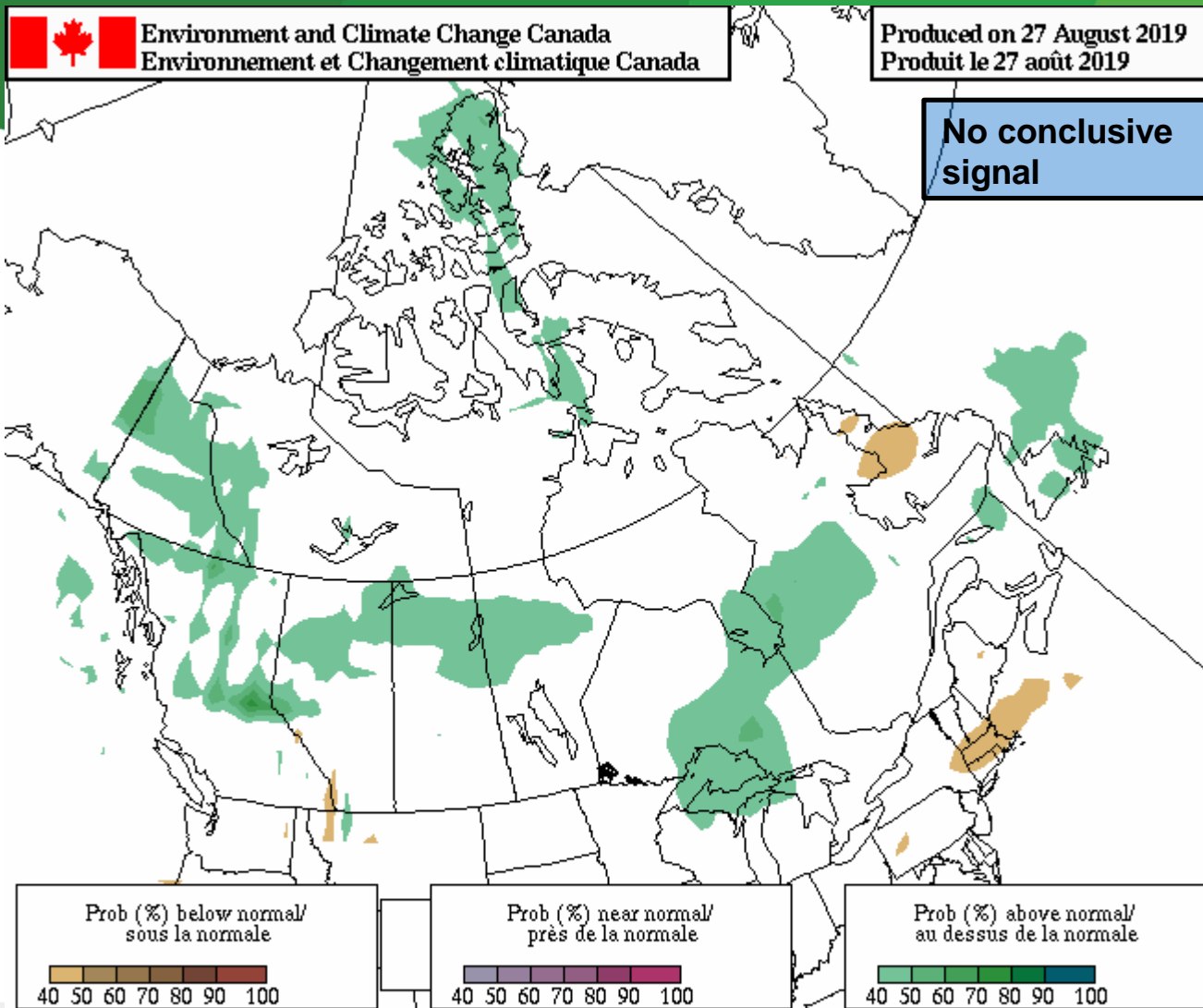
NB (S, O, N)  
Normal; 11.9/1.8C

Produced August 15



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# Outlook – Fall 2019 (S,O,N)



**Forecast probability of Precipitation  
above, below and near normal (calibrated)**  
**Period: September-October-November 2019**  
Based on 3 equiprobable categories  
from 1981-2010 climatology

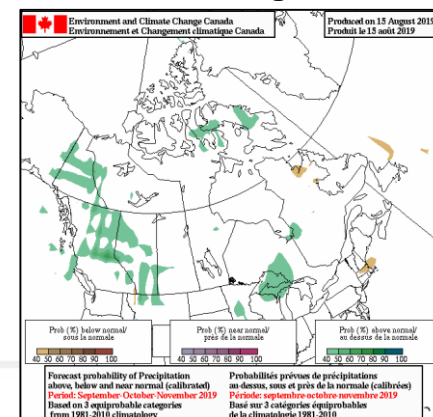
**Probabilités prévues de précipitations  
au-dessus, sous et près de la normale (calibrées)**  
**Période: septembre-octobre-novembre 2019**  
Basé sur 3 catégories équiprobables  
de la climatologie 1981-2010

## Precipitation

September  
October  
November

NB (S, O, N)  
Normal; ~298 mm

Produced August 15



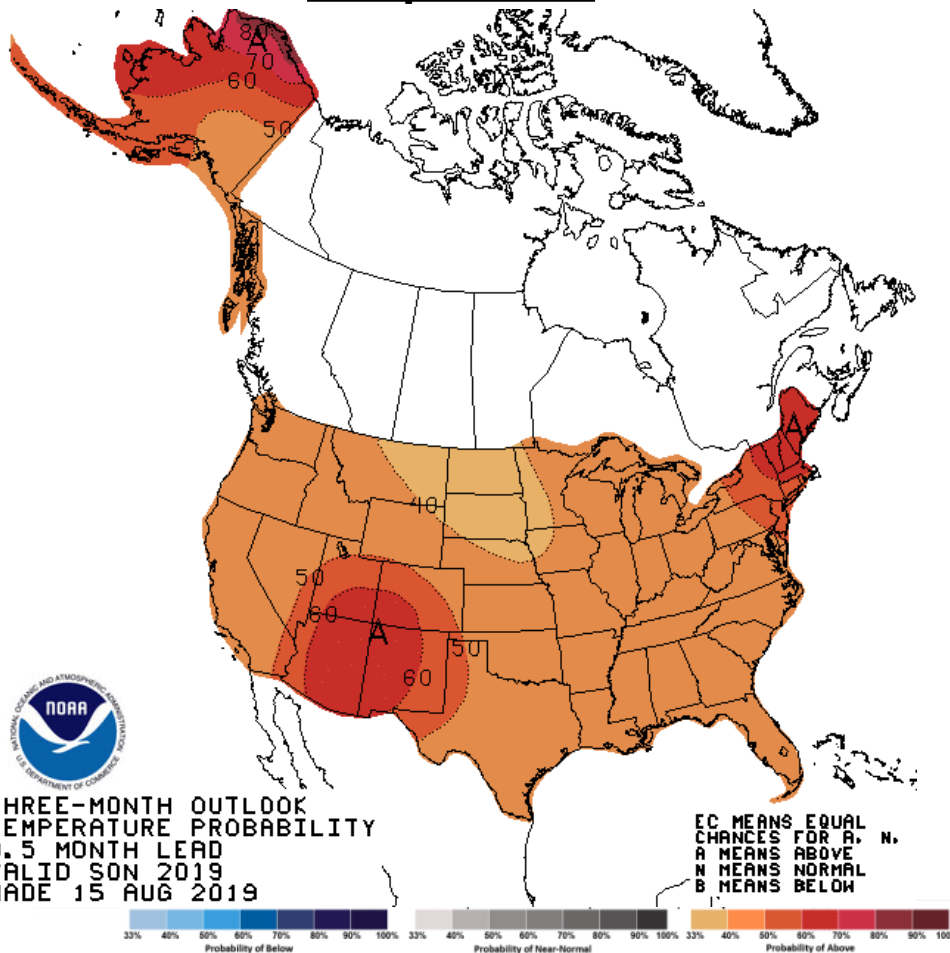




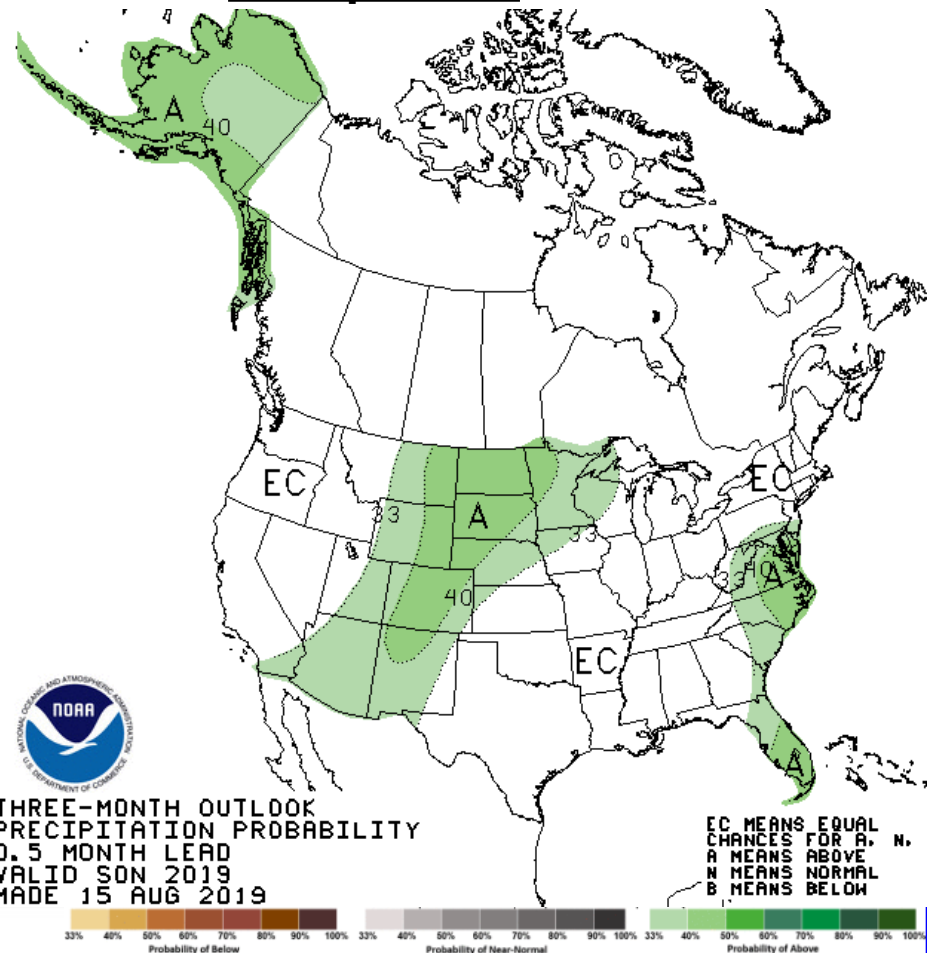


# September – October - November 2019

## Temperature



## Precipitation

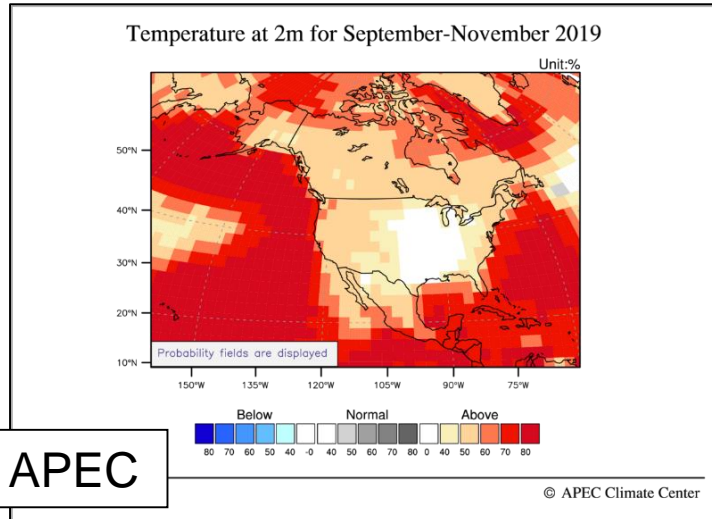
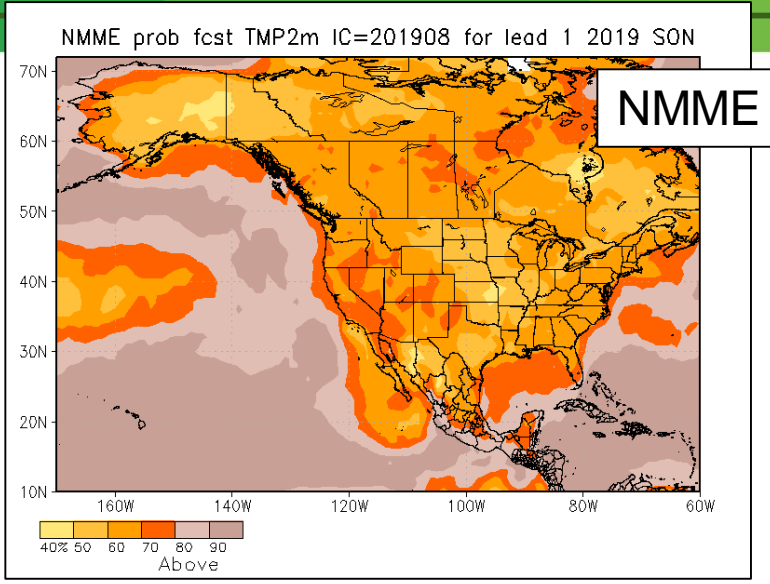
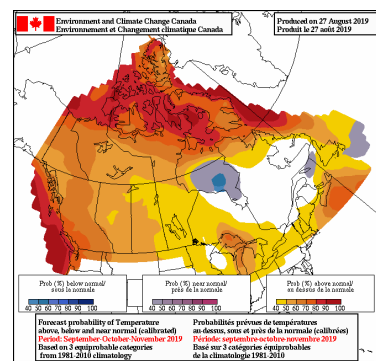
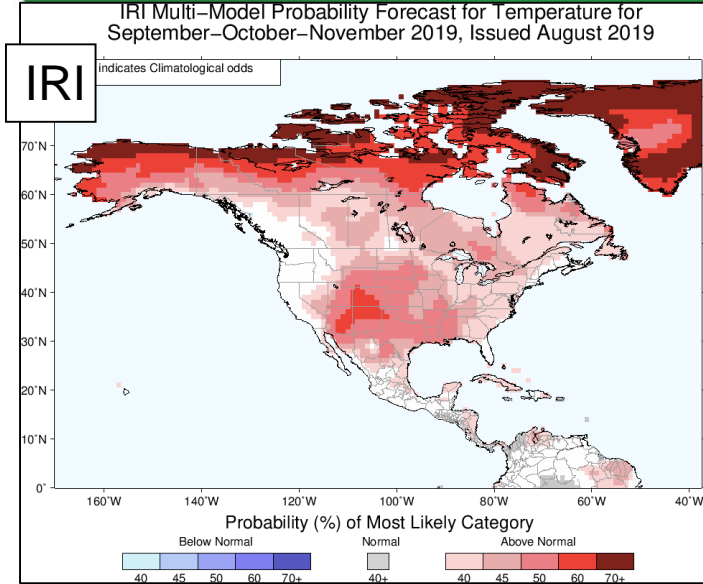


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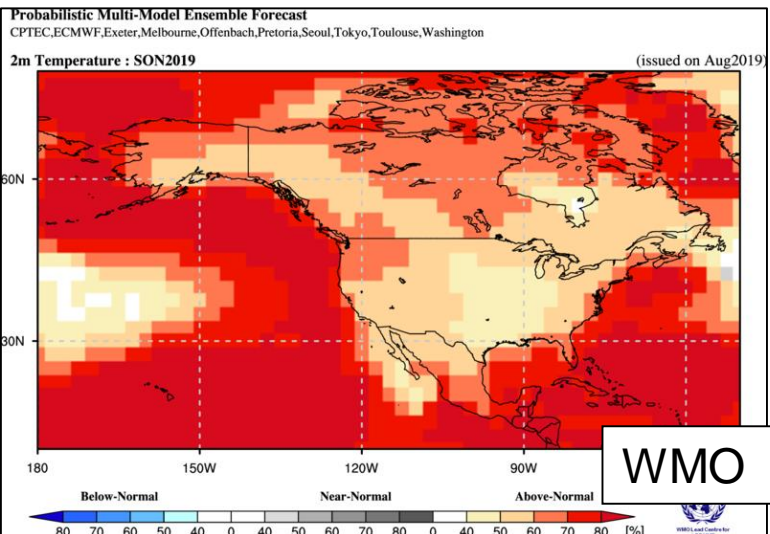
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# Fall 2019 Probabilistic Forecast From foreign models (temperature)



**The most recent**

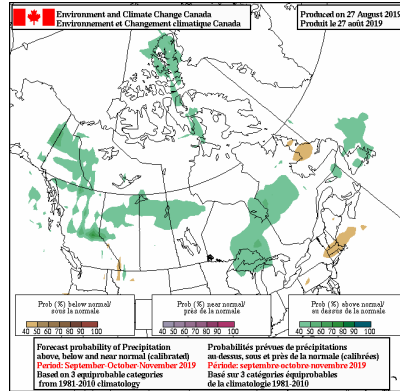
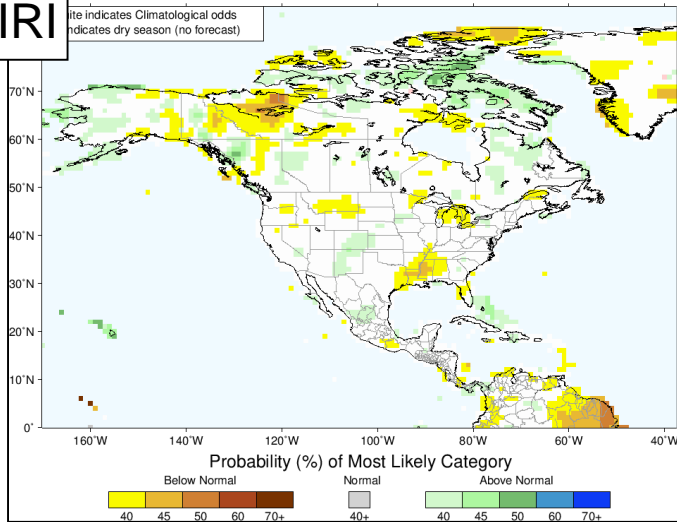
Canada



# Fall 2019 Probabilistic Forecast From foreign models (precipitation)

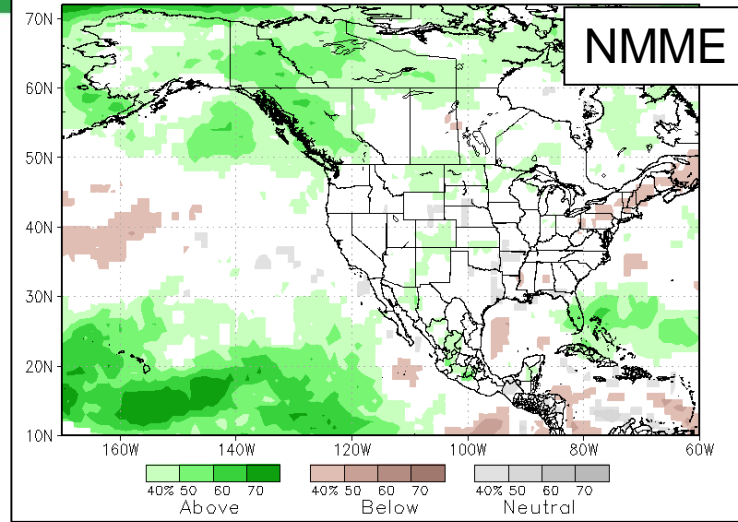
IRI

IRI Multi-Model Probability Forecast for Precipitation for September–October–November 2019, Issued August 2019

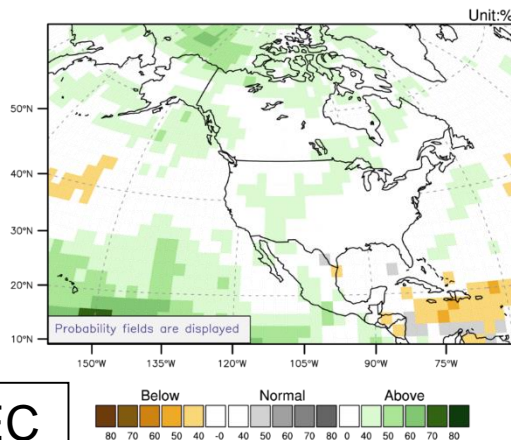


The most recent

NMME prob fcst Prate IC=201908 for lead 1 2019 SON



Precipitation for September–November 2019



APEC

Issued: 23 Aug, 2019

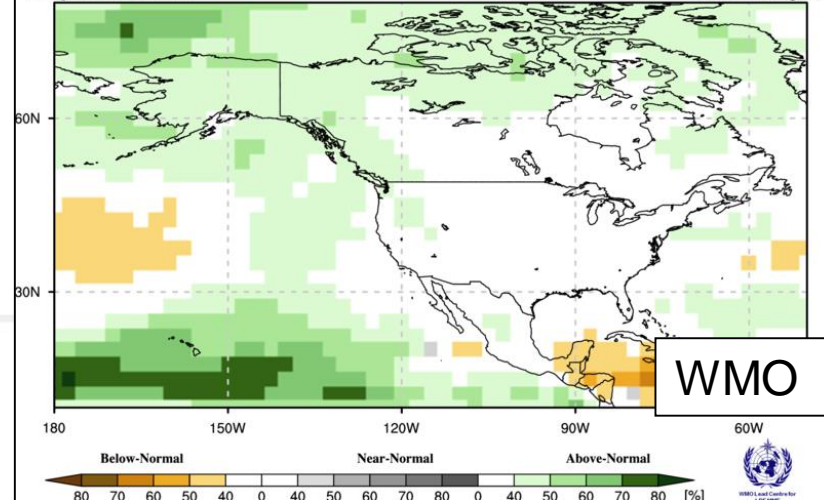
© APEC Climate Center

Probabilistic Multi-Model Ensemble Forecast

CPTEC,ECMWF,Exeter,Melbourne,Offenbach,Pretoria,Seoul,Tokyo,Toulouse,Washington

Precipitation : SON2019

(issued on Aug2019)



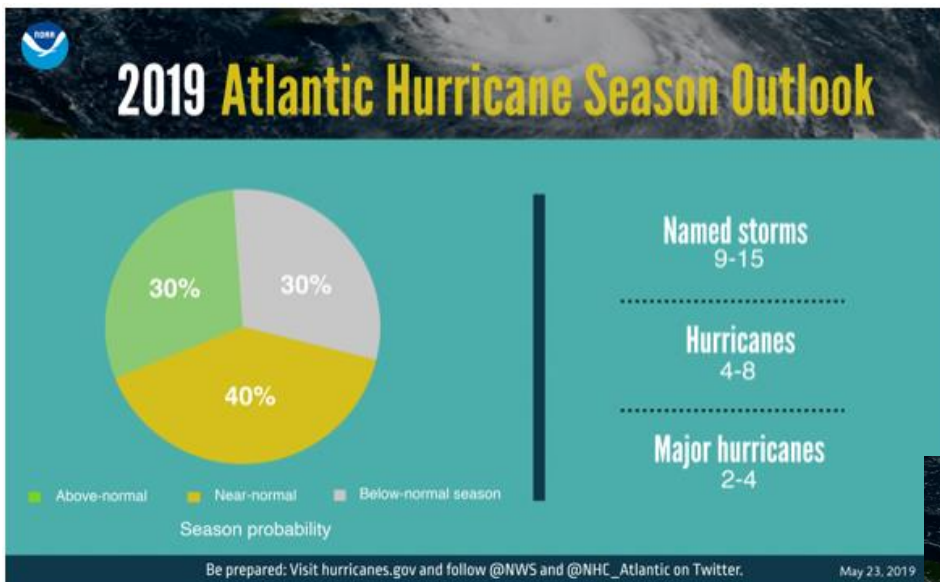


# 2019 Atlantic Tropical Season Forecast

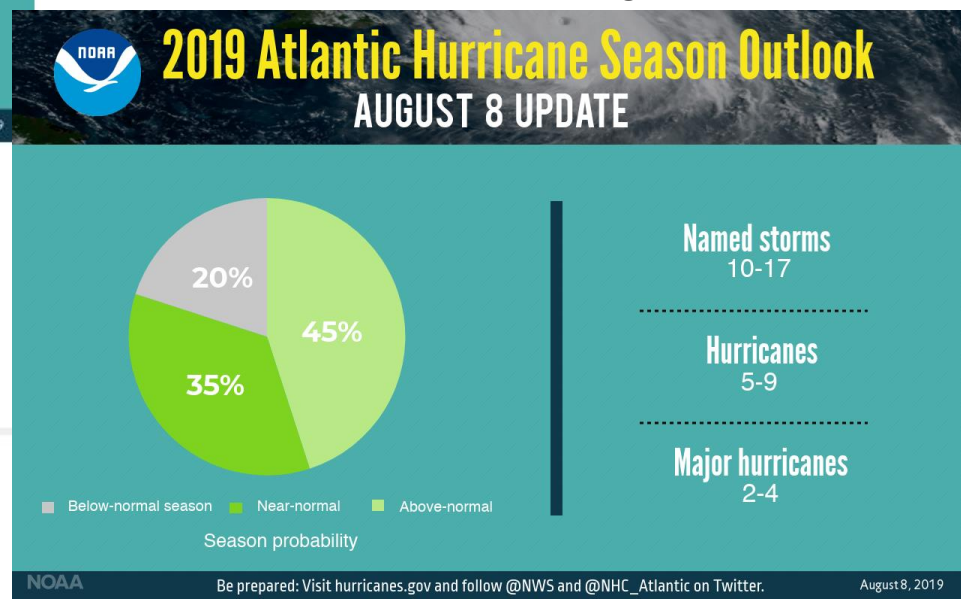
Forecast issued May 23<sup>rd</sup>



**NATIONAL HURRICANE CENTER**  
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Updated August 8<sup>th</sup>



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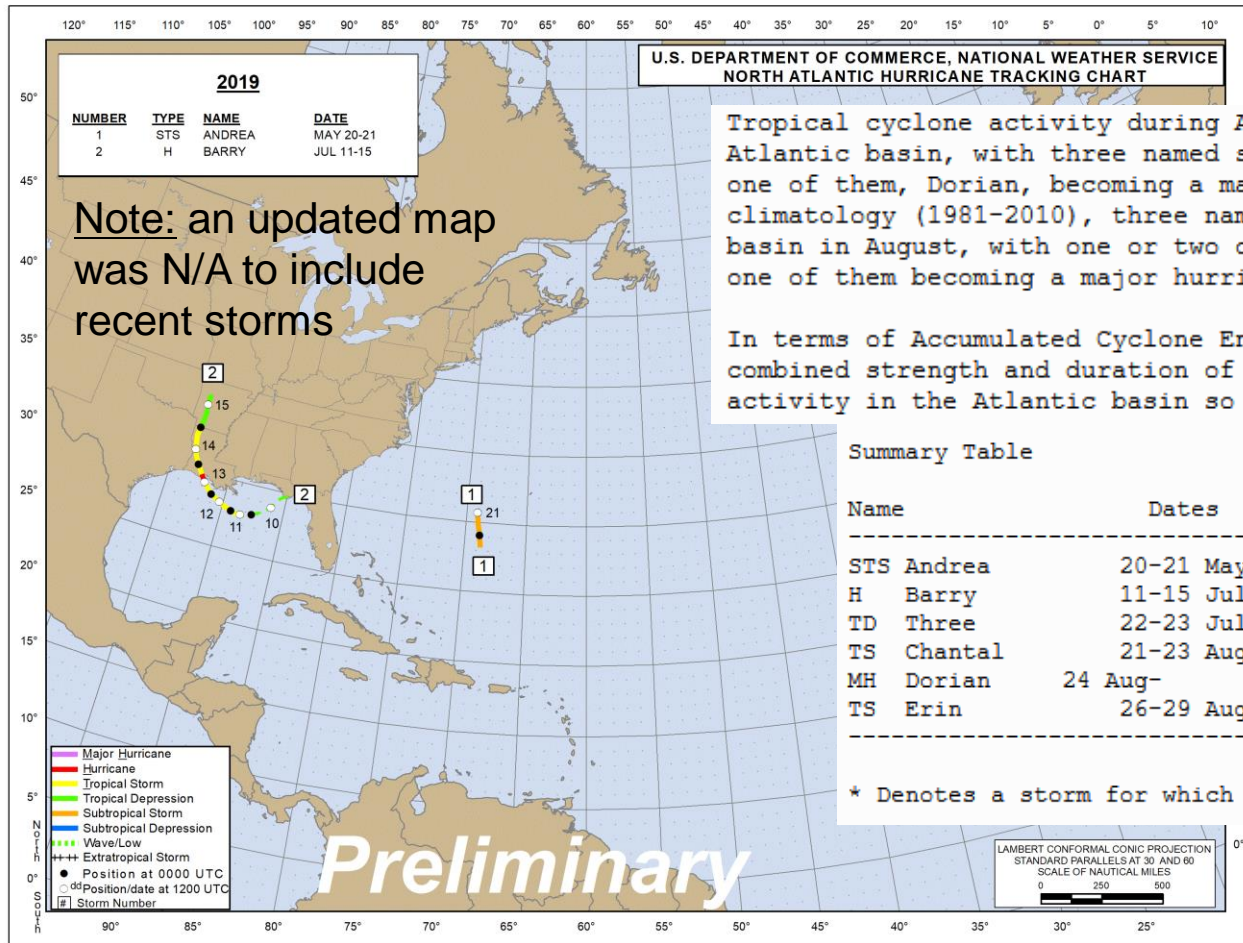
# Preliminary Summary 2019 Season

(as of September 1 2019)



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# Contact

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Environment and Climate Change

Canada Weather Pages

[www.weather.gc.ca](http://www.weather.gc.ca)



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