

# New Brunswick

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## July 2019 Review August 2019 and Summer/Fall Outlook

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August 2, 2019



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Climate Change Canada

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# July 2019; Climate Summary

## Highlights:

The average temperature was slightly above normal (+0.6C). Charlo reported the largest positive anomaly at +1.4C above normal. Only Oak Point and Edmundston reported negative anomalies.

Total precipitation amounts were well below normal, with an average of 67% of total precipitation. Monthly totals ranged from 37 mm in both Woodstock and Red Pines to 106 mm in Mechanic Settlement. However, this precipitation regime is not uncommon for July due to the fact that precipitation usually falls as unorganized showers and/or thunderstorms.



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>

# July 2019; Climate Summary

## Events:

**July 4-6;** Heat event. The first event of the season brought extreme heat and humidity to most areas of the province. Strong thunderstorms occurred with the passage of a cold front on the 6<sup>th</sup>. Highest temperature recorded was 34.6°C in Miramichi and the highest humidex values were in Moncton and Bouctouche at 41.

**July 12-13;** A slow-moving convective trough brought widely varying amounts of precipitation to the province. The Miramichi area reported as much as 53 mm while the extreme northwest and southeast saw only a few mm's.

**July 14;** A cold front brought strong thunderstorms and up to dime-size hail to parts of the east late in the afternoon.

**July 16-17 July 20-21 July 27-31;** Heat events. Hot, humid and hazy conditions brought some record-setting maximum temperatures and oppressive humidity across parts of the province. Thunderstorms associated with cold fronts and instability, put an end to the hot and humid conditions in all three events.

**Days with thunderstorm activity (lightning) in New Brunswick; 1-3 5 6 8 14 15 17 19-21 27-31 (17 days)**

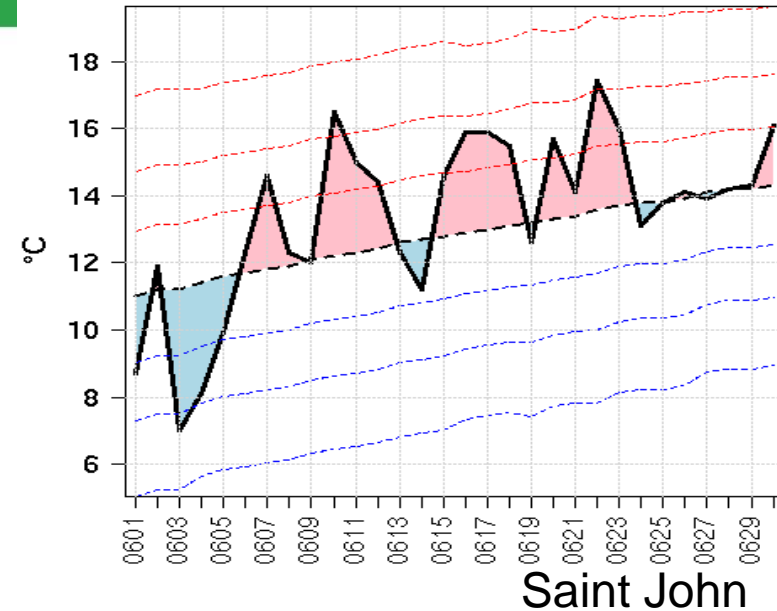
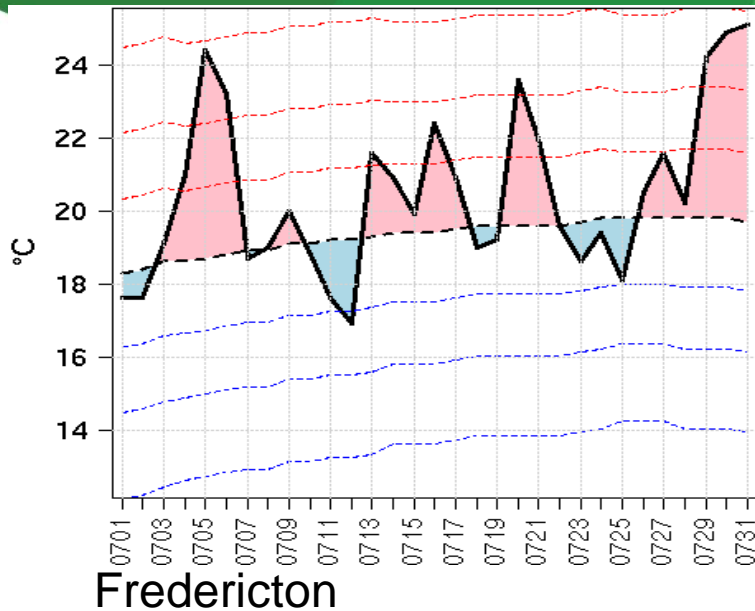
**Days with temperature records broken or tied in New Brunswick; 5 11 16 20 30 31**

**(red=maximum, blue=minimum)**



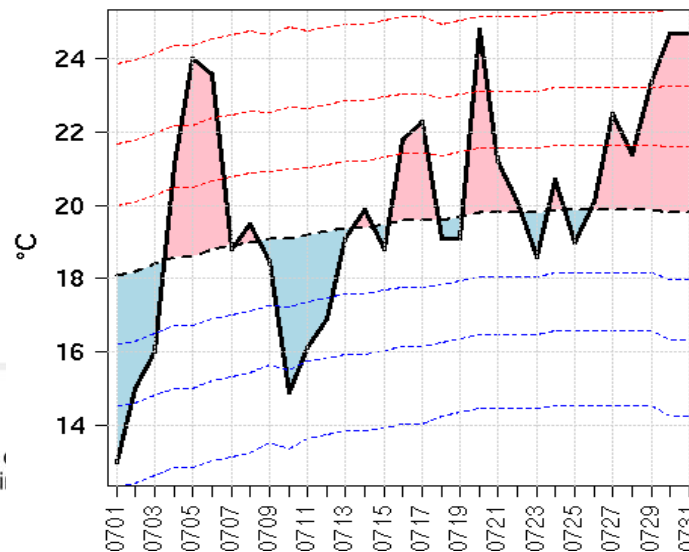
# July 2019 - Temperature

Daily Mean Temperature (bold line) versus Normal (thin line) and +/- 0.7, 1.3, 2.1 SD (red/blue dashes)



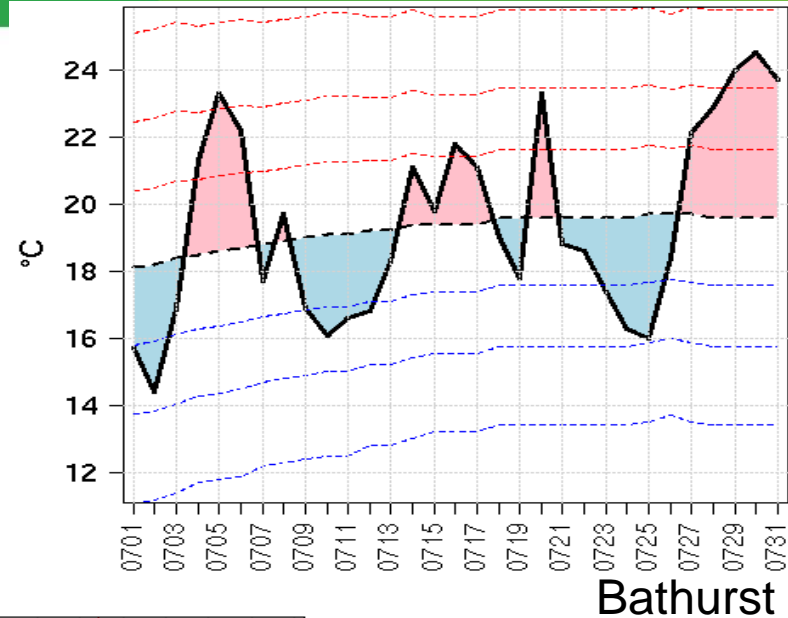
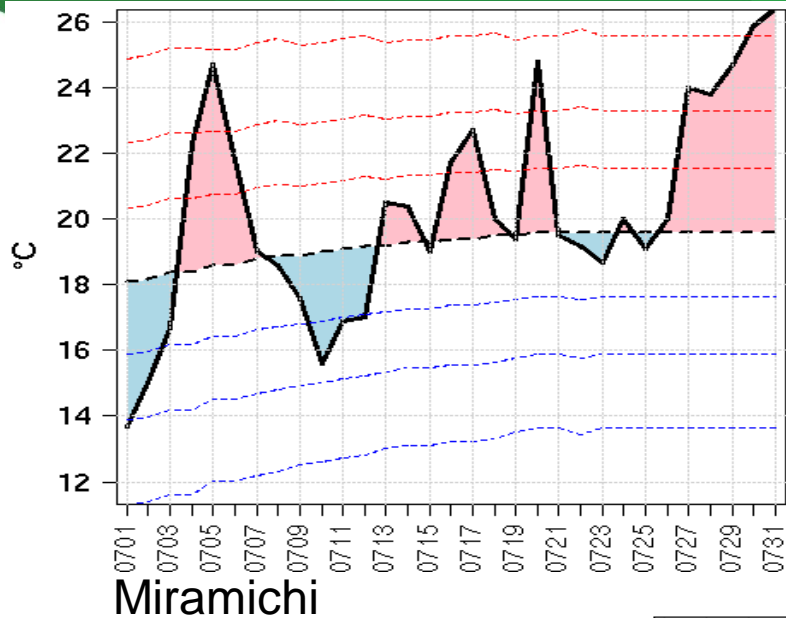
All sites were above normal

Moncton



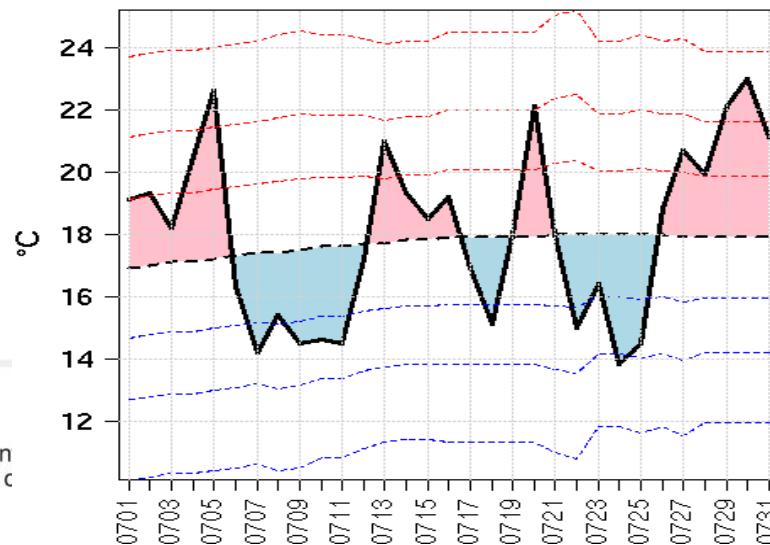
# July 2019 - Temperature

Daily Mean Temperature (bold line) versus Normal (thin line) and +/- 0.7, 1.3, 2.1 SD (red/blue dashes)



Edmundston  
was near normal

Edmundston

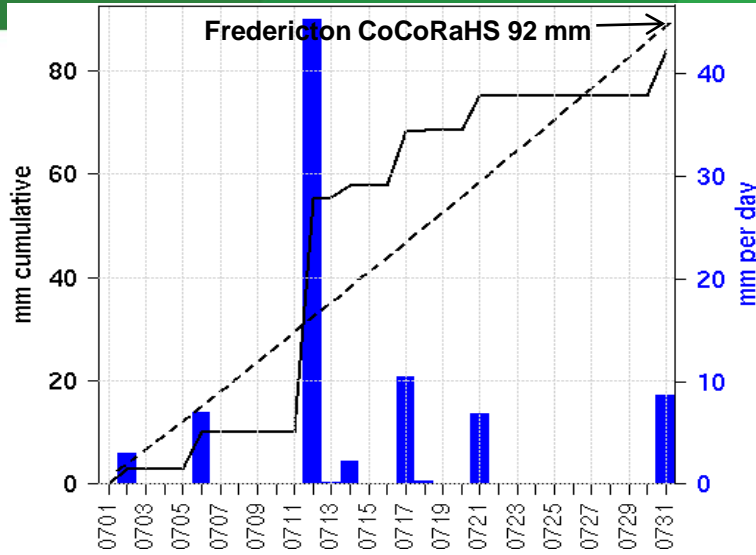


Miramichi and  
Bathurst were  
above normal

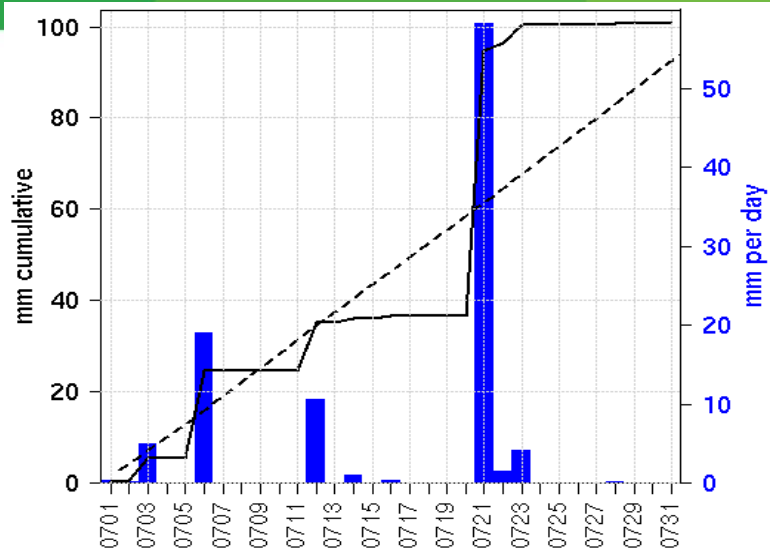


# July 2019 - Precipitation

Observed Cumulative Precipitation (line) versus Normal (dashed line) and Daily Amounts (bars)



Fredericton (and area)



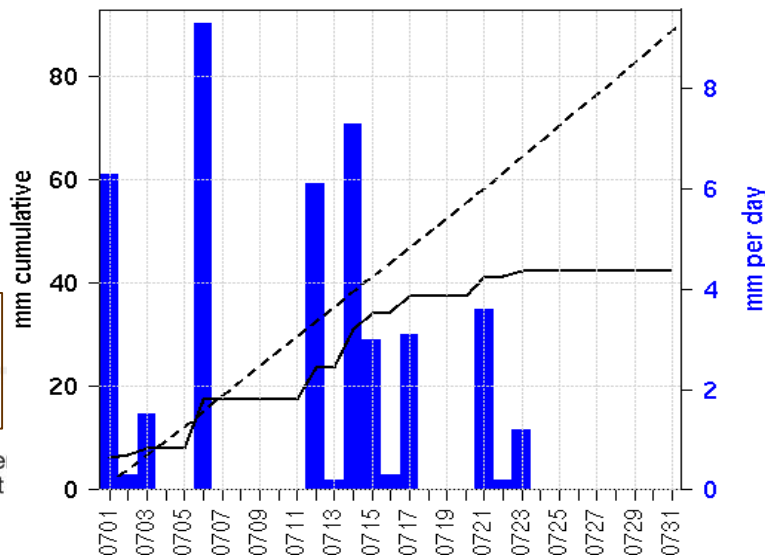
Saint John

Fredericton was near normal

Saint John was slightly above normal

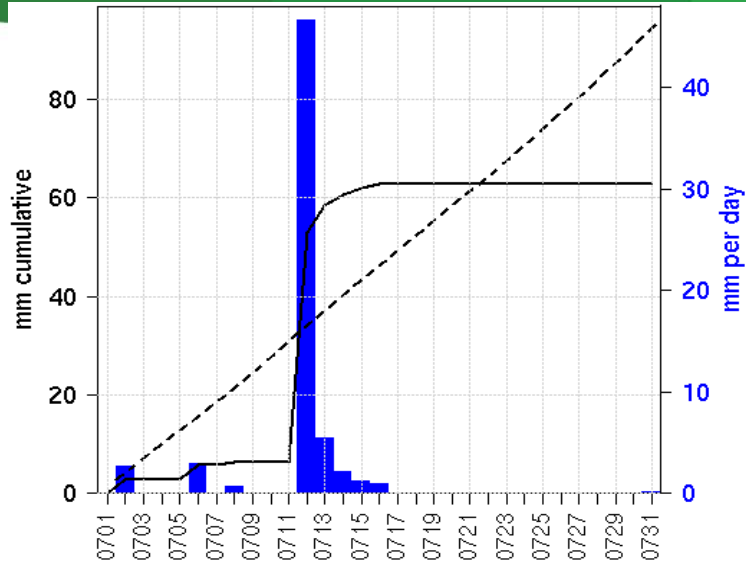
Moncton

Moncton was well below normal

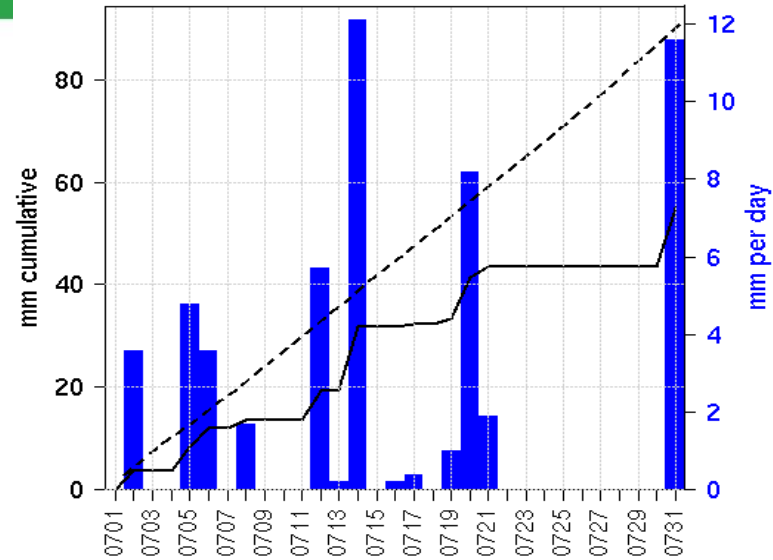


# July 2019 - Precipitation

Observed Cumulative Precipitation (line) versus Normal (dashed line) and Daily Amounts (bars)



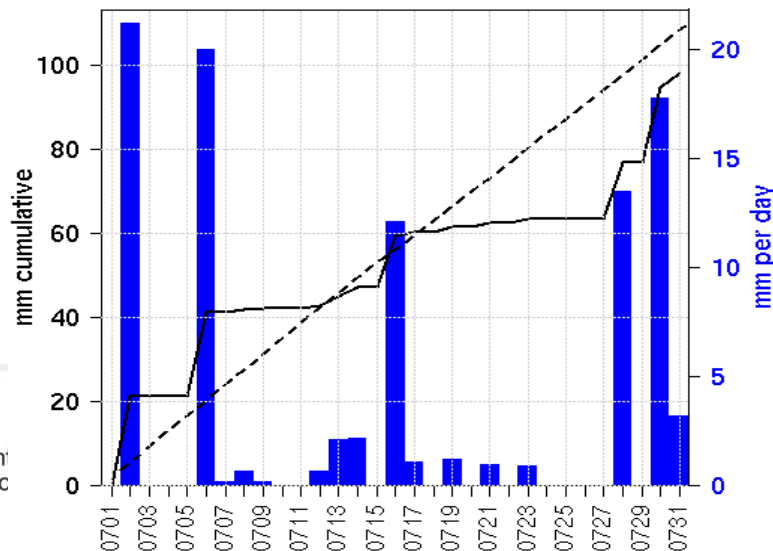
Miramichi



Bathurst

Edmundston was slightly below normal

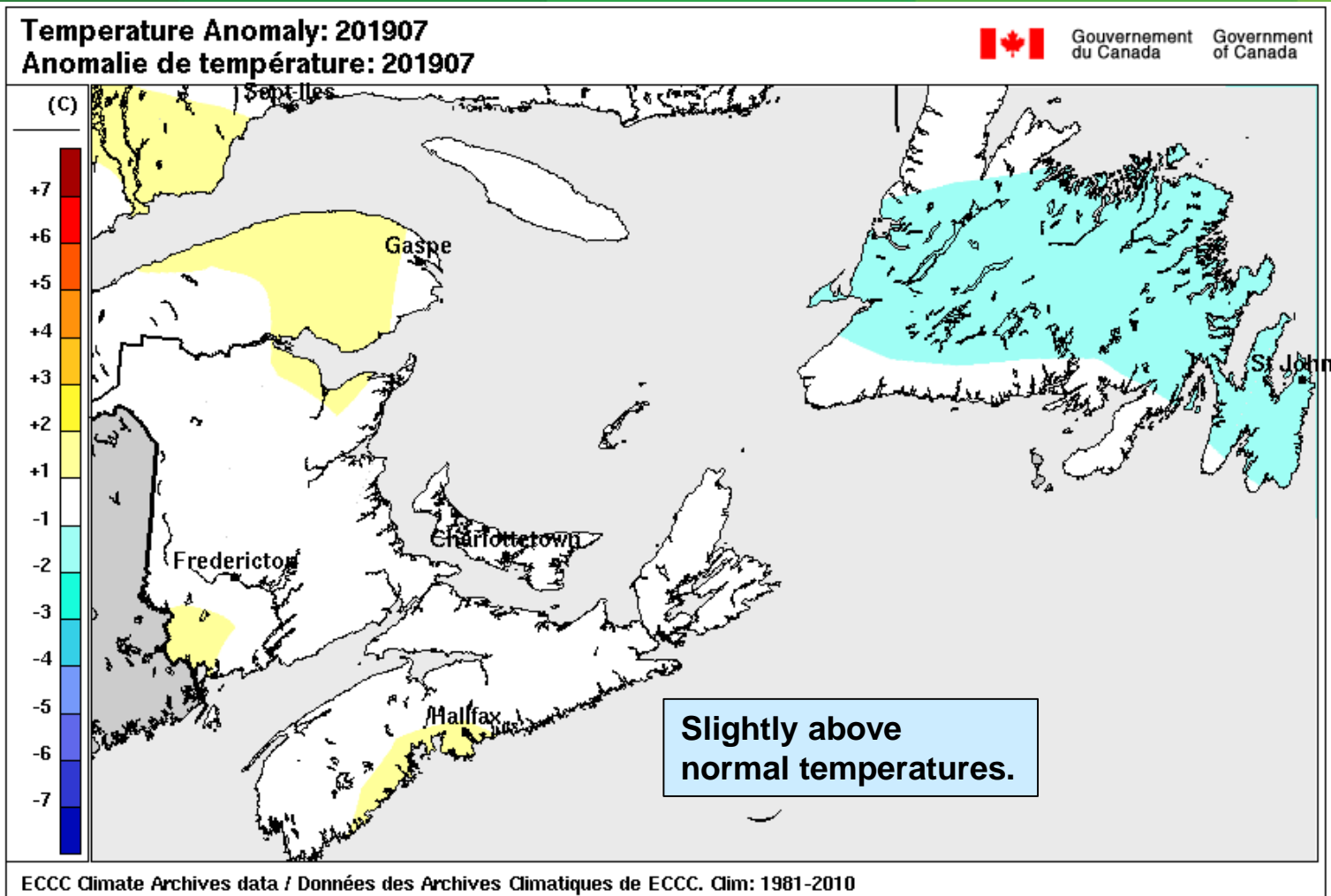
Edmundston



Miramichi and Bathurst were below normal



# July 2019 – Temperature departure from 1981-2010 mean





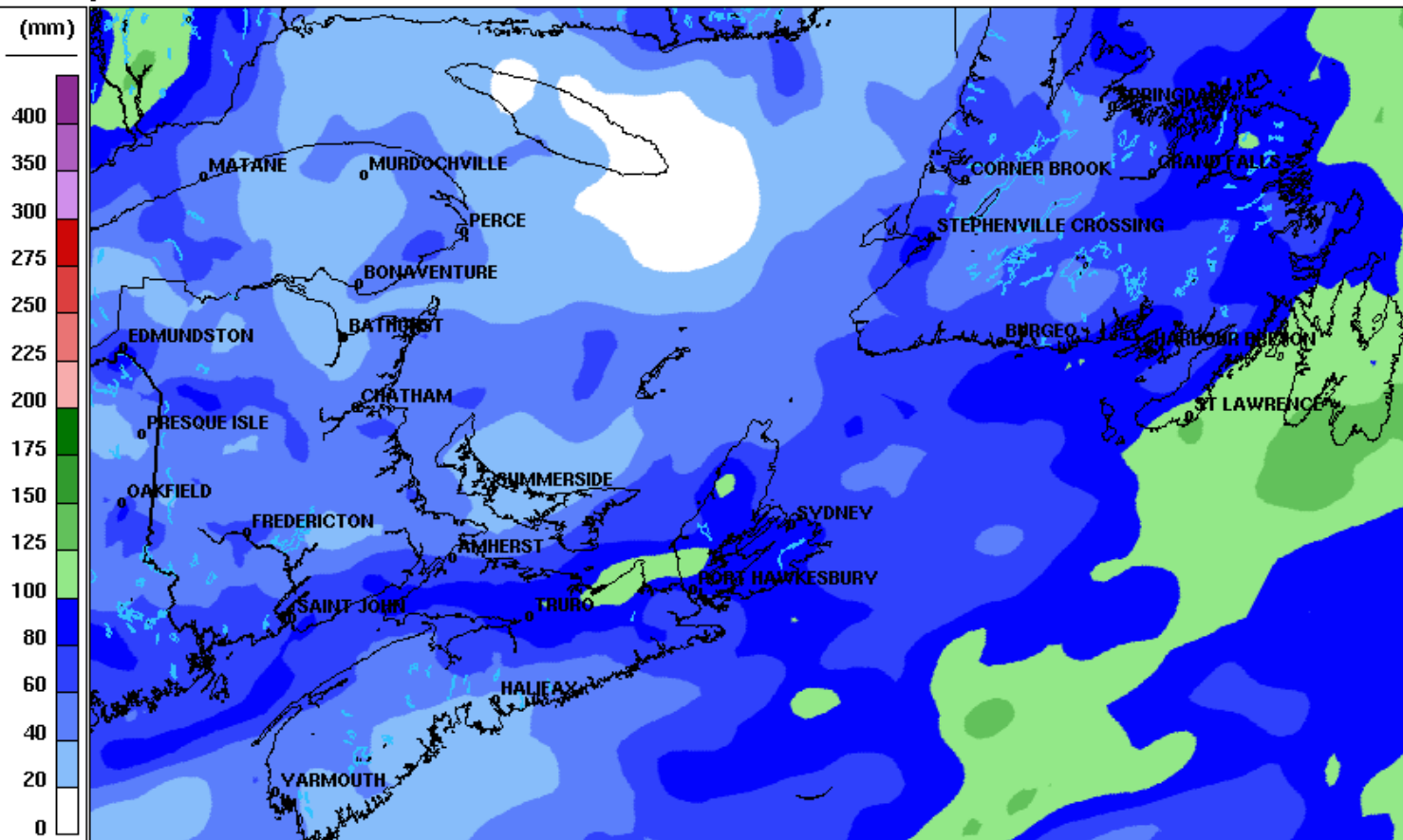
# July 2019 – Total precipitation

Total precipitation: 201907  
Précipitation totale: 201907



Gouvernement  
du Canada

Government  
of Canada



ECCC NWP model gridded data / Données sur grille de modèle de PNT de ECCC



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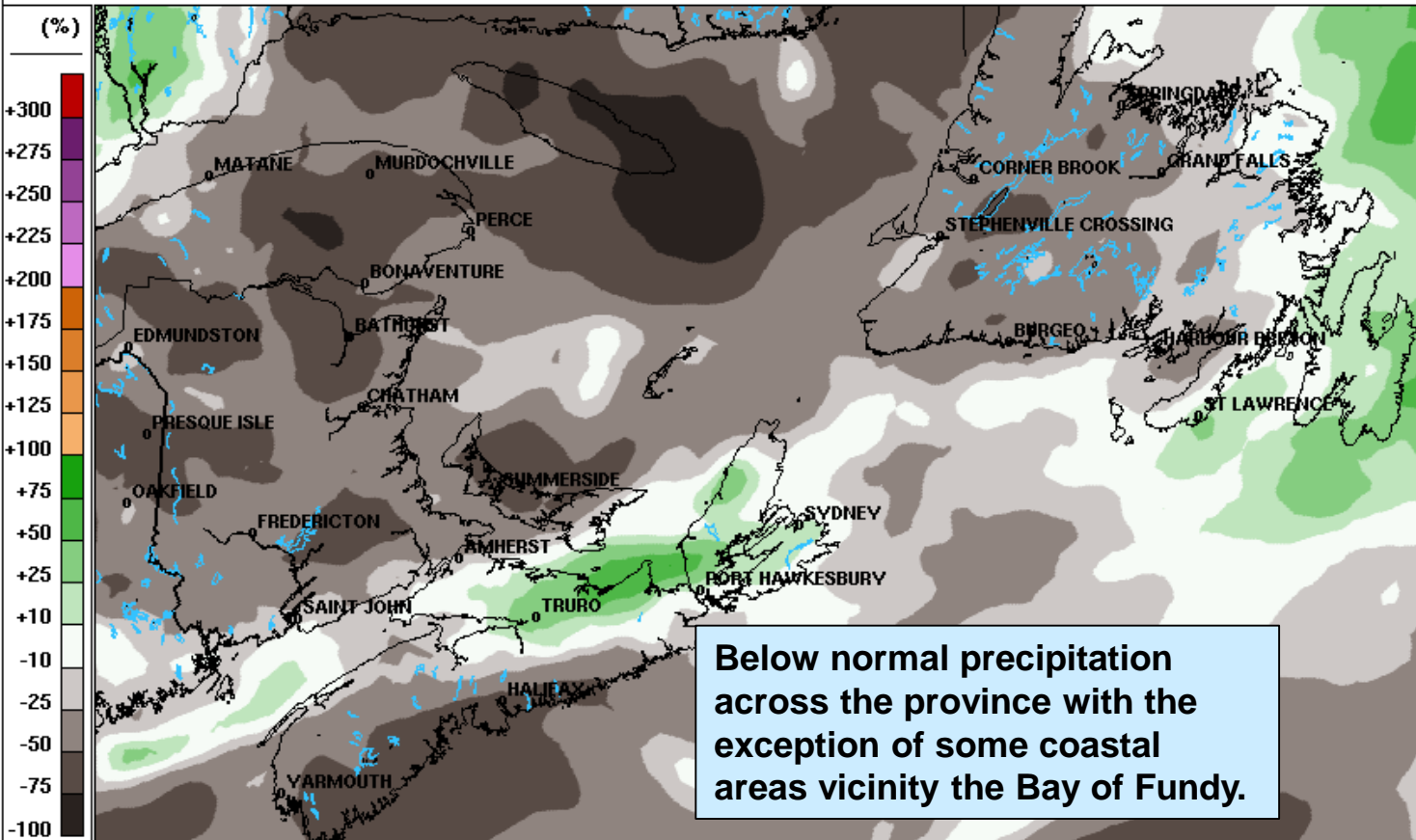
Canada

# July 2019 – Precipitation departure from 1981-2010 mean

Precipitation Anomaly (% of normal): 201907  
Anomalie de précipitation (% de la normale): 201907



Gouvernement du Canada / Government of Canada



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



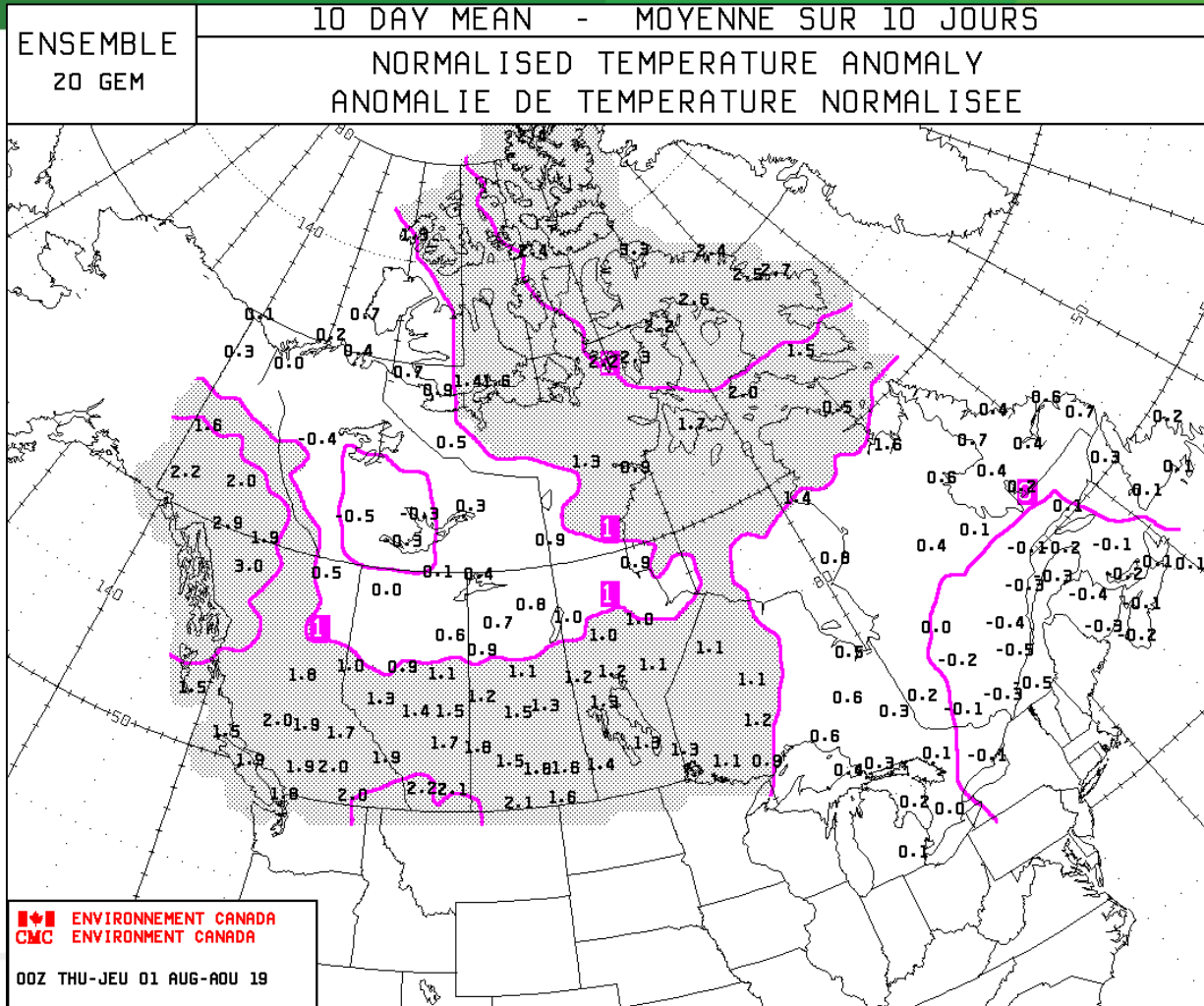
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# Outlook – 10 day mean temperature

(Suggesting slightly below normal conditions (-0.1 to -0.5°C))



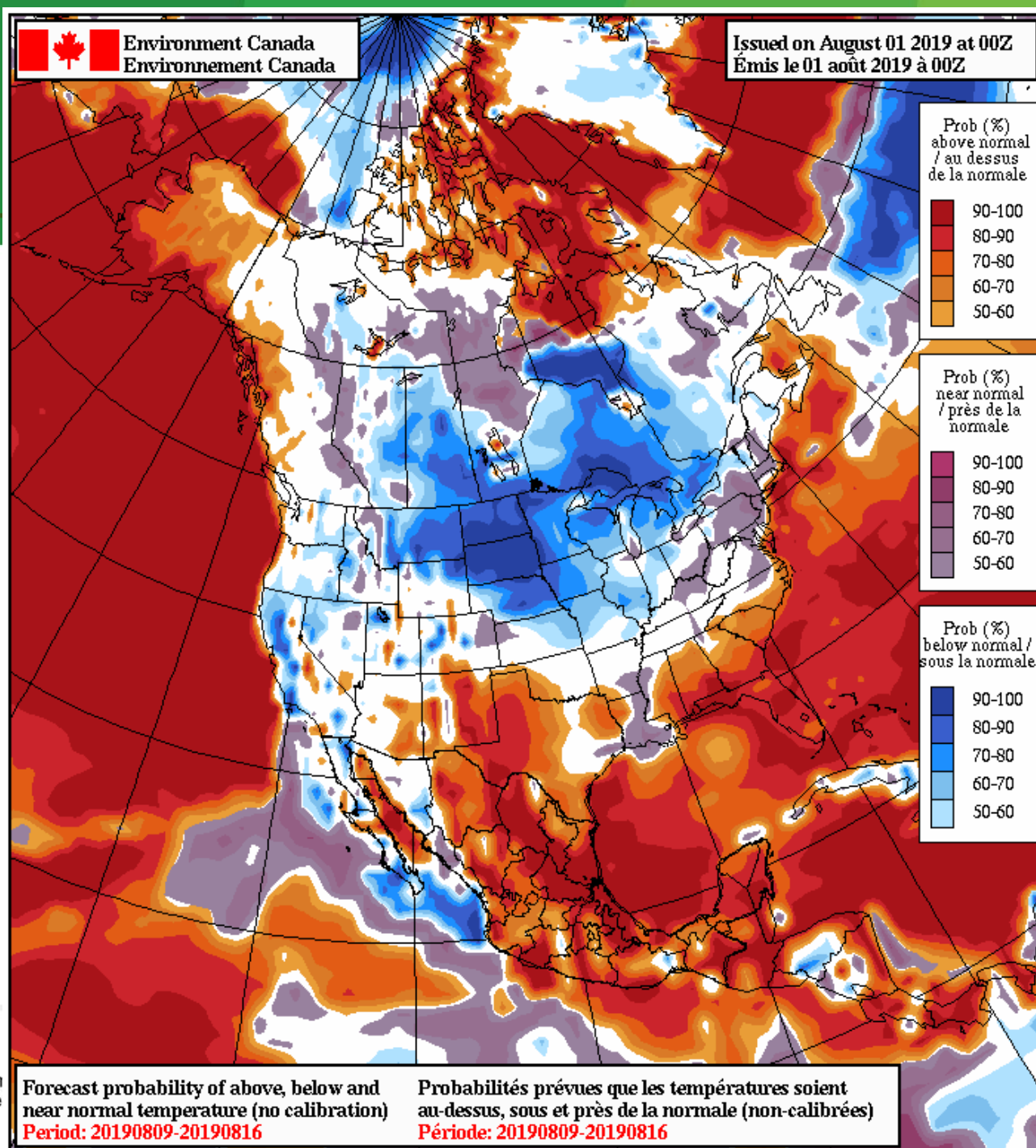
10 day  
forecast  
ending  
August 11,  
2019



# Day 8 to 14 Forecast

Period ending  
August 16, 2019

No real conclusive  
signal (near normal).



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# Fredericton



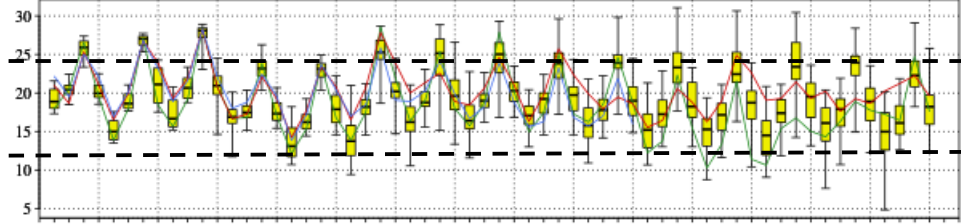
Ensemble and Deterministic Forecasts issued 1 August 2019 00 UTC  
Prévision d'ensemble et déterministe émises le 1 Août 2019 00 UTC  
for/pour

NAEFS / SPENA

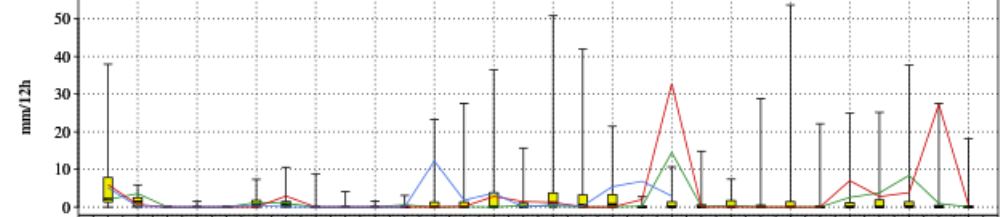
**FREDERICTON (YFC) 45.87 N 66.53 W/O**

Surface air temperature/Température de l'air à la surface

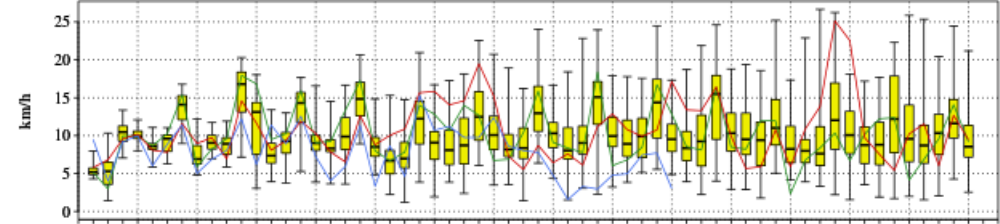
Normal high: 24.8C  
August  
Normal low: 12.1C



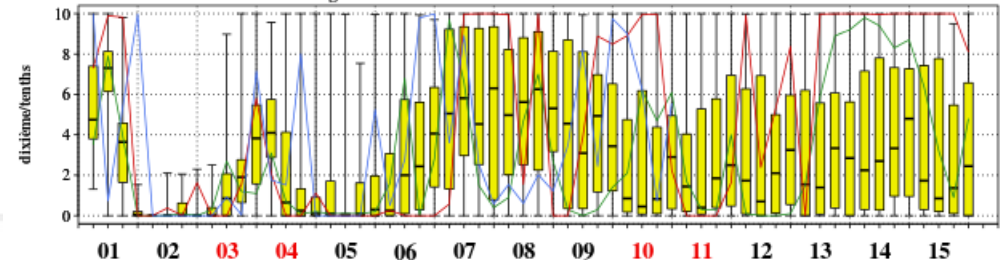
Précipitations/Precipitation



Surface wind speed/Vitesse du vent à la surface



Total cloud cover/Couvert nuageux



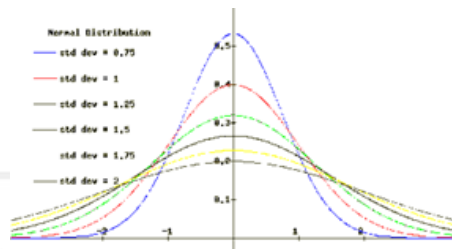
August/Août 2019

max  
75%  
median/médiane  
25%  
min

— Global Model / Modèle global  
— Control Member / Membre contrôle CMC  
— Control Member / Membre contrôle NCEP

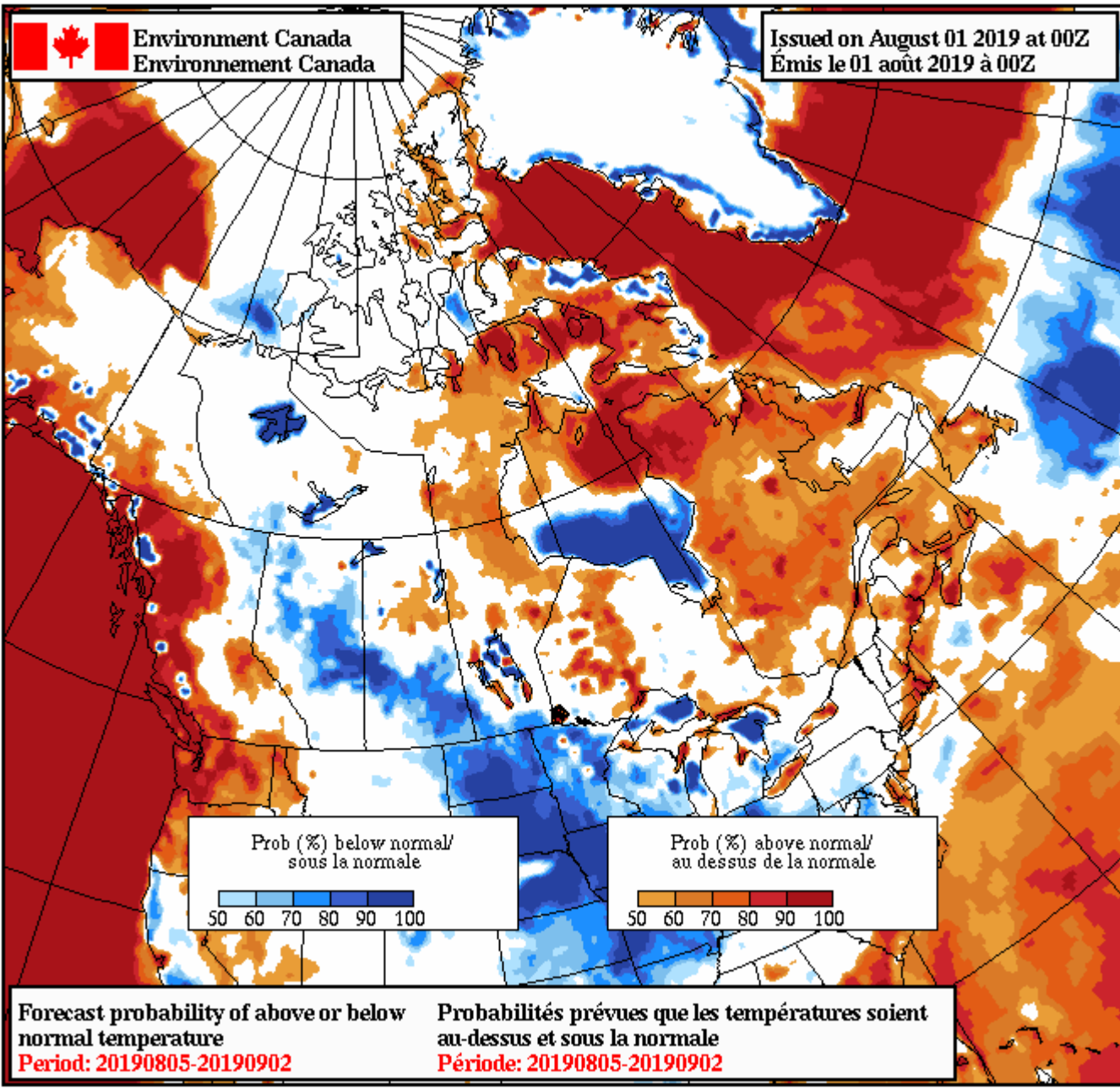
## Next 15 days; ending August 16, 2019

Above normal for the first few days, then near normal or slightly above for the rest of the period.

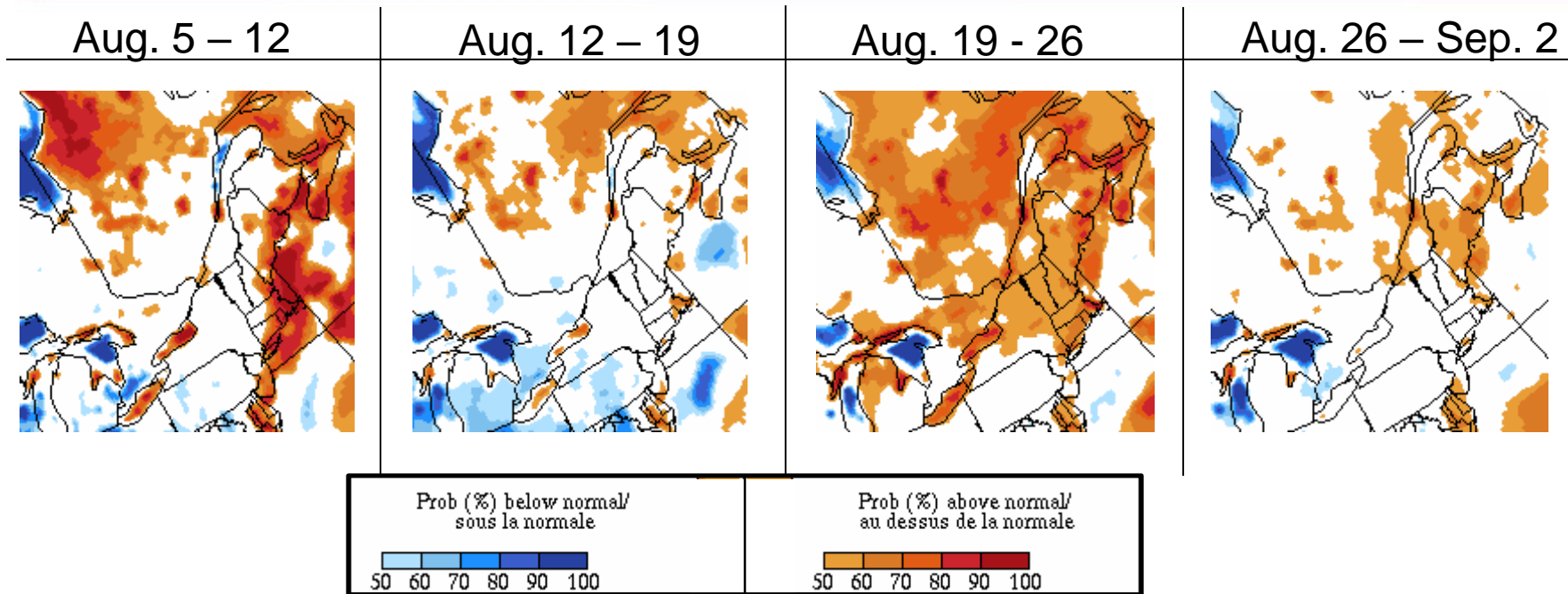


# Temperature August 5 to September 2

CMC  
Monthly  
Forecast  
Product  
using GEPS  
50km res.



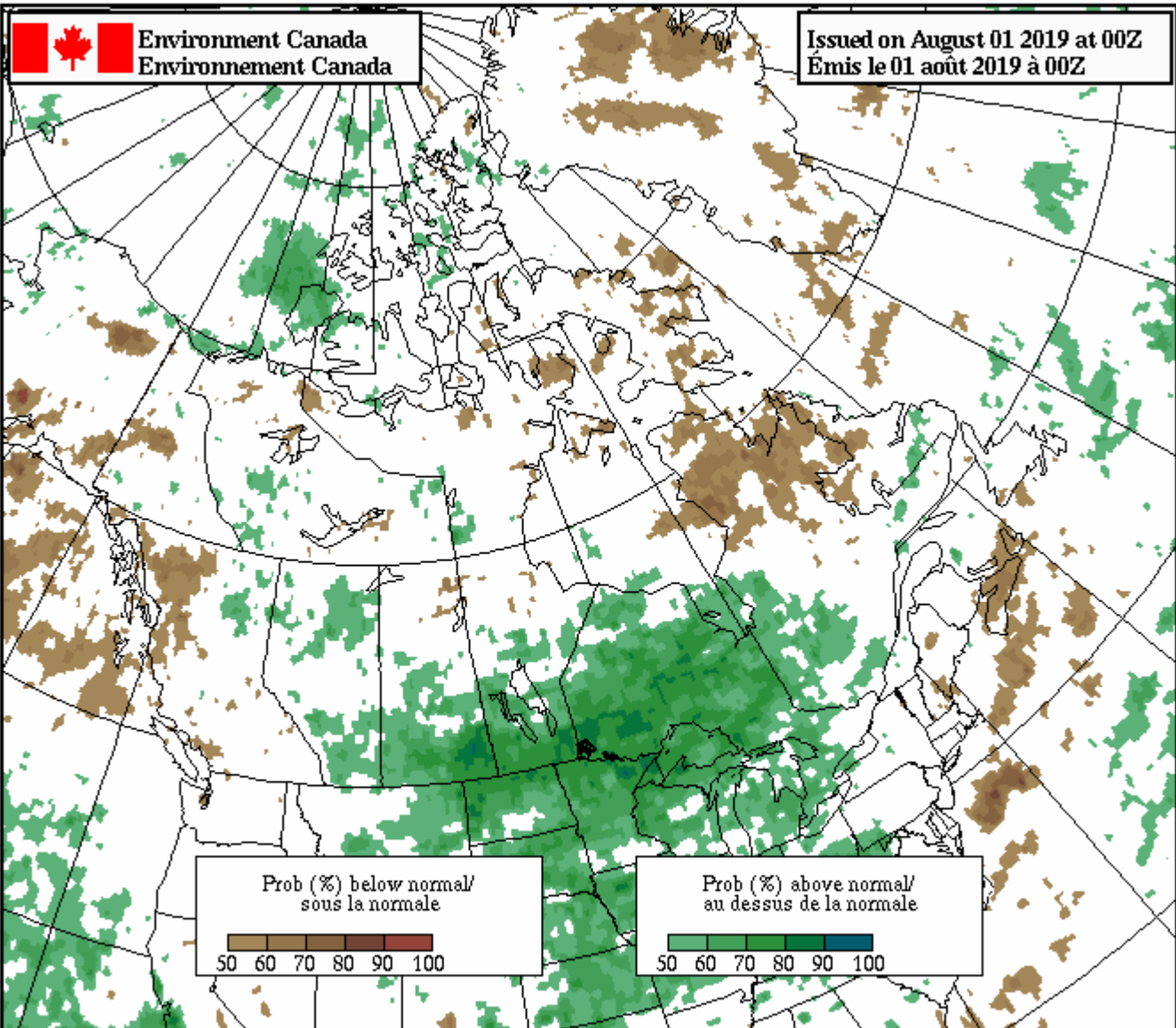
# Weekly signature from GEPS 50km resolution



Overall, a weak signal of above normal over the southeastern half of the province. For the northwestern half, no real conclusive signal with the exception of the third week where a weak signal of above normal is indicated.



# Precipitation August 5 to September 2



CMC  
Monthly  
Forecast  
Product  
using GEPS  
50km res.

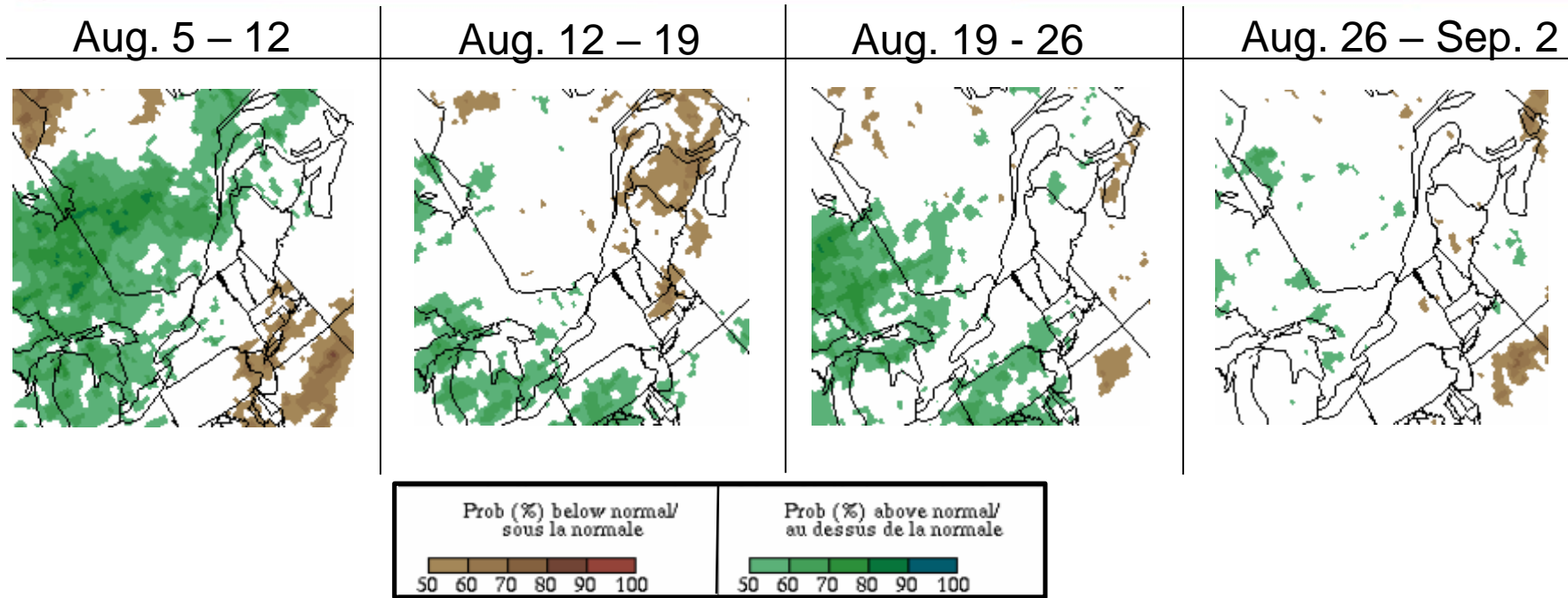
**Forecast probability of above and below normal precipitation**  
**Period: 20190805-20190902**

**Probabilités prévues que la quantité de précipitation soit au-dessus et sous la normale**  
**Période: 20190805-20190902**





# Weekly signature from GEPS 50km resolution



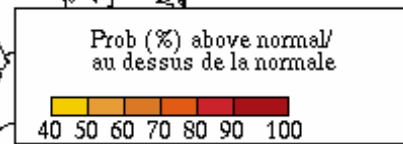
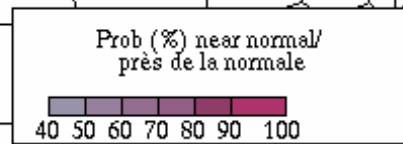
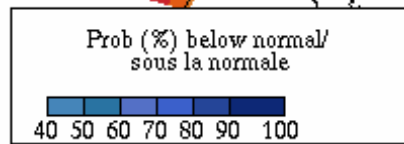
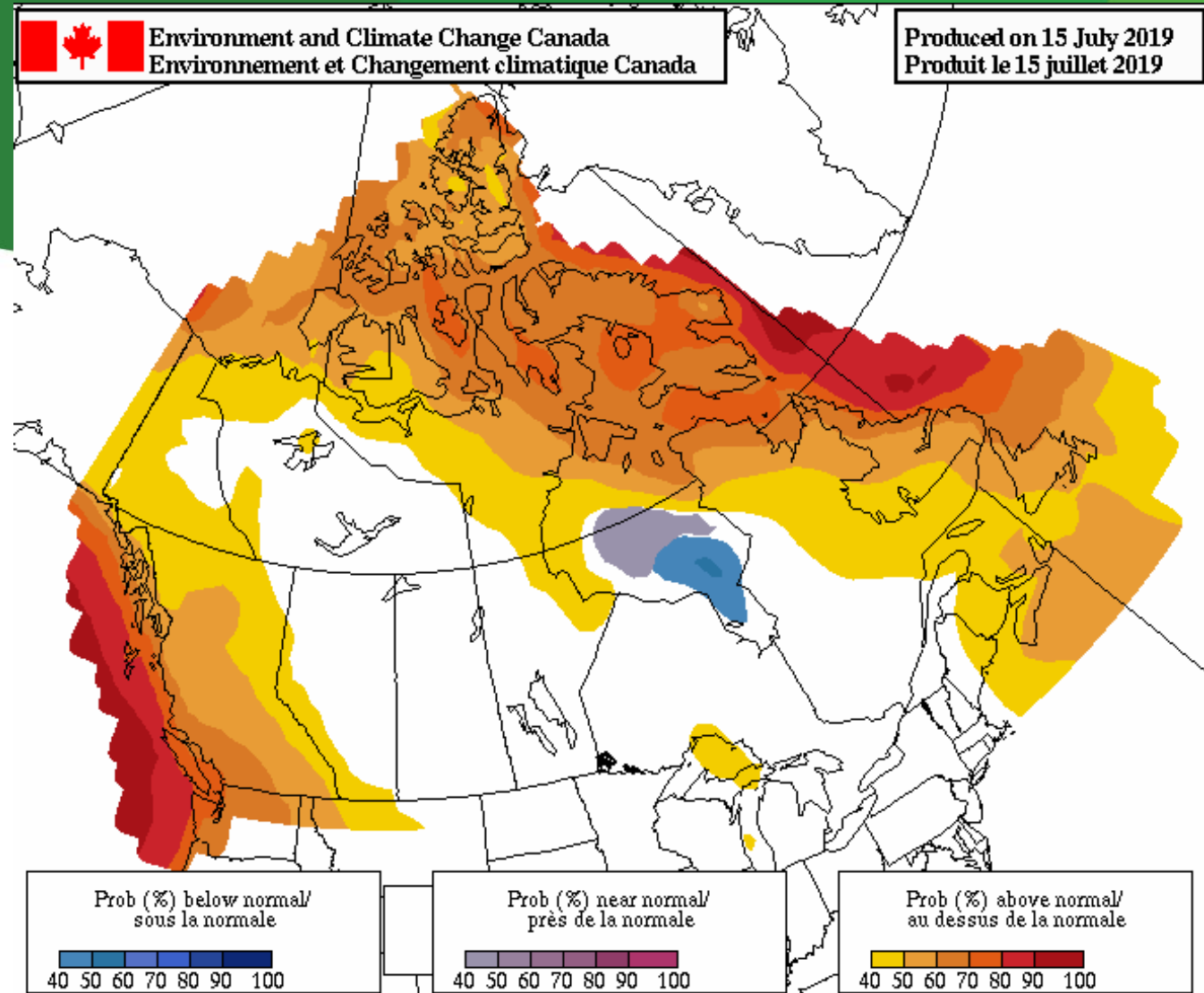
A mixed bag of signals from slightly above to slightly below to slightly above to no real signal progressing through the four week period.



# Temperature September 2019

CanSIPS  
 (Canadian Seasonal and  
 Interannual Prediction  
 System)

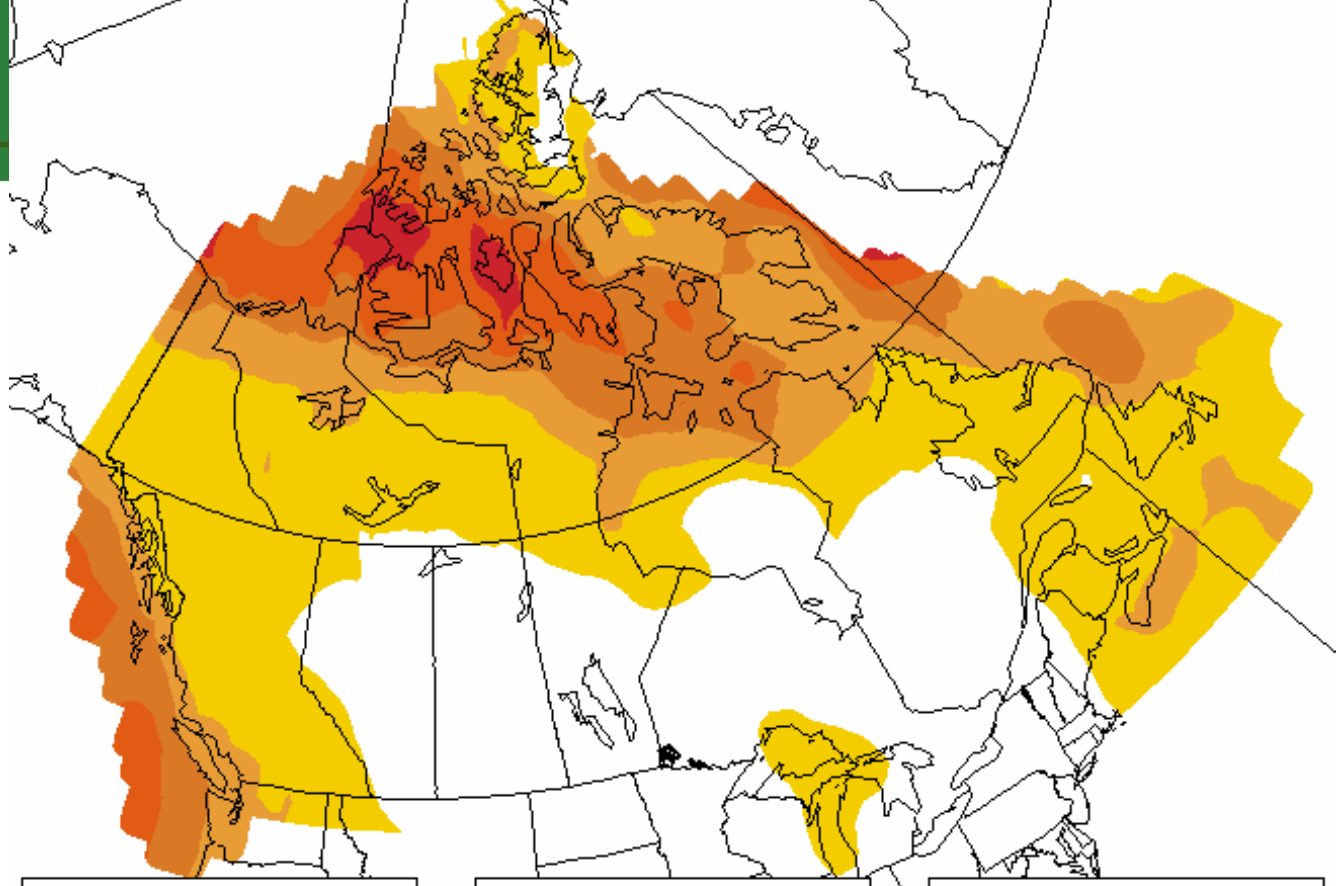
CanAM3  
 CanAM4  
 +  
 CanOM4



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

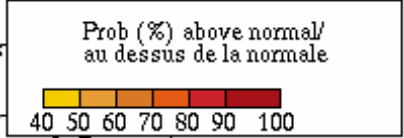
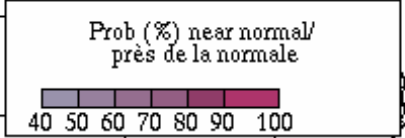
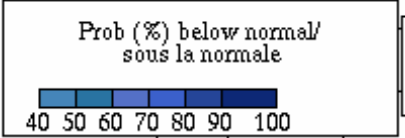
**Probabilités prévues de températures  
 au-dessus, sous et près de la normale (calibrées)**  
**Période: septembre 2019**  
 Basé sur 3 catégories équiprobables  
 de la climatologie 1981-2010

# Temperature October 2019



CanSIPS  
 (Canadian Seasonal and  
 Interannual Prediction  
 System)

CanAM3  
 CanAM4  
 +  
 CanOM4



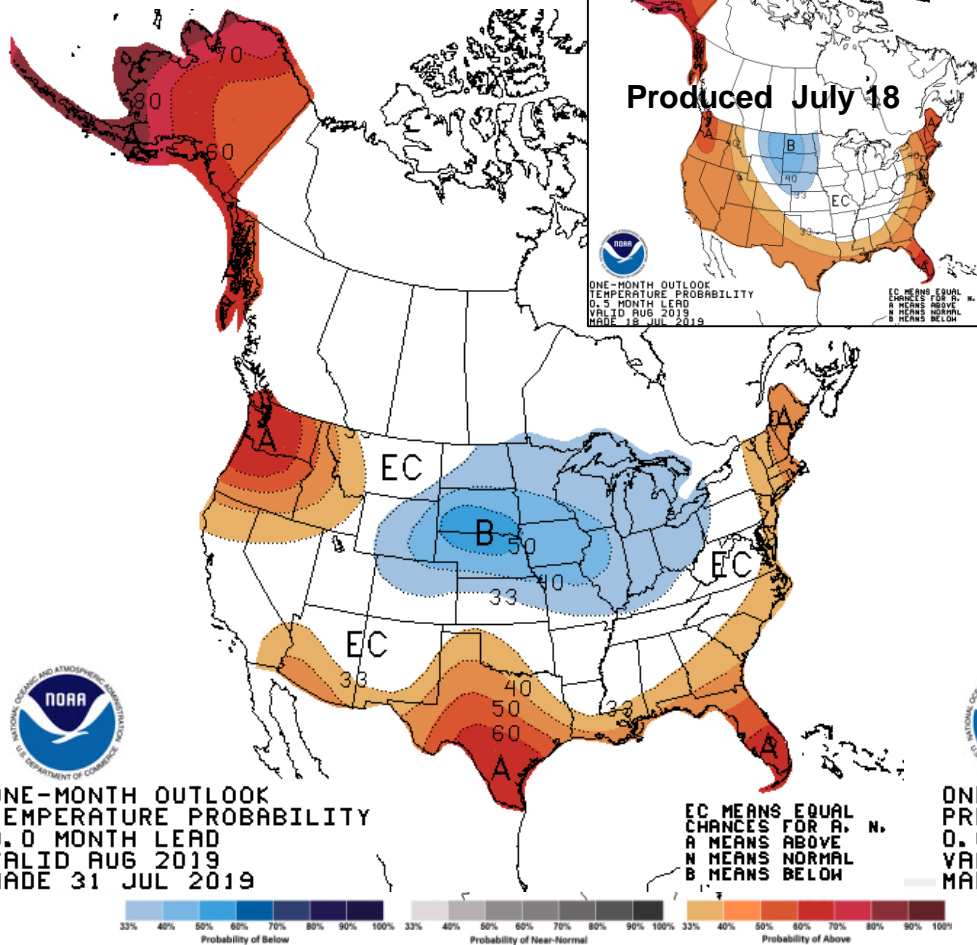
**Forecast probability of Temperature  
 above, below and near normal (calibrated)**  
**Period: October 2019**  
 Based on 3 equiprobable categories  
 from 1981-2010 climatology

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

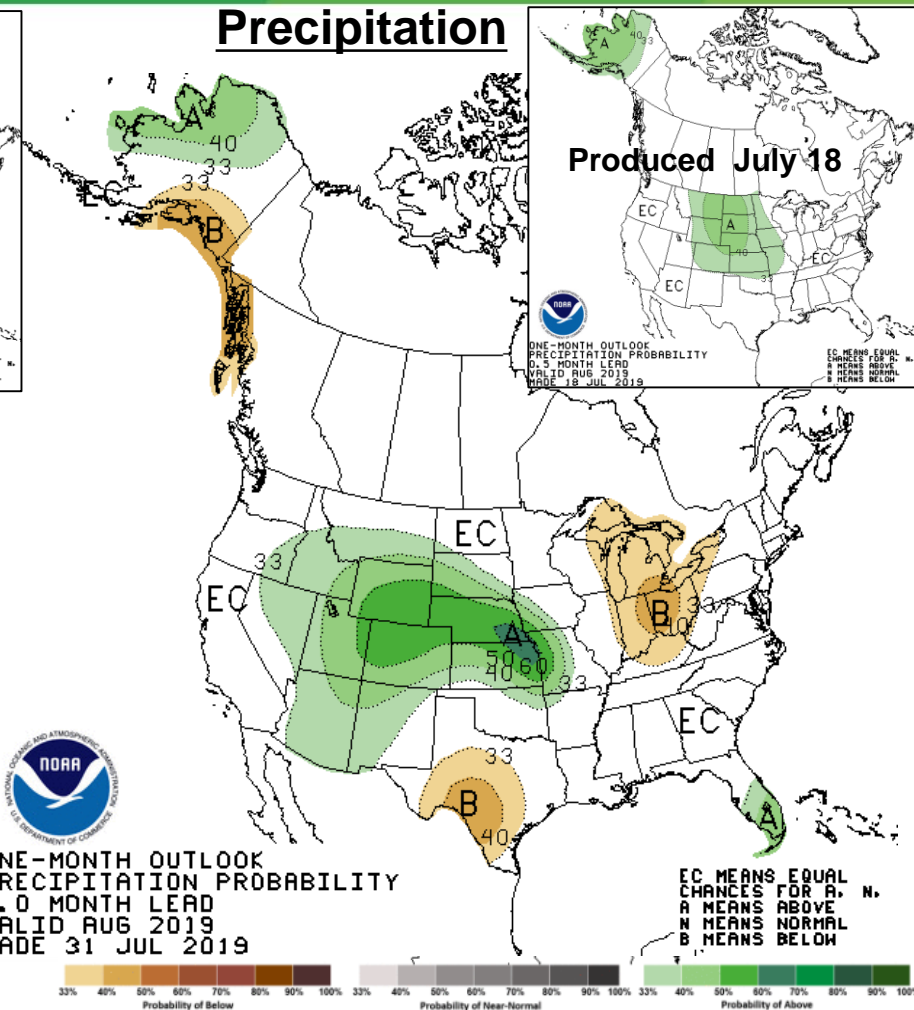


# August 2019

## Temperature



## Precipitation



# Contact

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Environment and Climate Change

Canada Weather Pages

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

