

New Brunswick

August 2021 Review September and Fall Outlook

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Environment and Climate Change Canada
September 1, 2021



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Canada

August 2021; Climate Summary

Station Name / Nom de la station	Prov	TC ID / ID de TC	Station Type / Type de station	Mean Temperature / Température moyenne (°C)			Total Precipitation / Précipitations totales (mm)		
				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
BAS CARAQUET	NB	WXS	AU8	20.4	18.6	1.8	69.7	95.0	73
BAS CARAQUET	NB		DAILY	*record*			76.8	95.0	81
BATHURST A	NB	ZBF	NCA	20.7	18.2	2.5	70.7	82.0	86
BOUCTOCHE CDA CS	NB	ABT	AU8	20.4	18.5	2.0	41.8	85.2	49
CHARLO AUTO	NB	ZCR	AU8	19.8	17.2	2.6	82.9	90.1	92
MIRAMICHI RCS	NB	ACQ	AU8	21.0	18.5	2.5	60.1	93.1	65
DOAKTOWN AUTO RCS	NB	ADN	AU8	20.0	18.4	1.6	53.0	94.4	56
EDMUNDSTON	NB	ERM	AU8	18.6			39.7	93.4	43
FREDERICTON INTLA	NB	YFC	NCA	20.6	18.4	2.1	72.9	85.6	85
FREDERICTON CDA CS	NB	AFC	AU8	20.7	18.6	2.2	94.8	85.9	110
FUNDY PARK (ALMA) CS	NB	AFY	AU8	18.8	17.2	1.6	158.2	93.9	168
GAGETOWN AWOS A	NB	YCX	AU5	20.5	19.2	1.3			
GRAND MANAN SAR CS	NB	XGM	AU8	18.8			97.4		
KOUCHIBOUGUAC	NB	AKC	AU8	20.3	18.5	1.8	66.2	86.7	76
MECHANIC SETTLEMENT	NB	AMS	AU8	18.8			120.5		
MISCOU ISLAND (AUT)	NB	WMI	AU8	20.1	*record*		65.4		
MONCTON INTLA	NB	YQM	NCH						
OAK POINT	NB		DAILY	19.8			73.8	86.5	85
POINT LEPREAU CS	NB	WPE	AU8	17.5	15.6	1.9	79.1	98.0	81
RED PINES	NB	ARP	AU8	19.8	17.9	1.9	80.4	93.6	86
SAINT JOHN A	NB	YSJ	NCH	18.7	16.8	1.8	136.6	81.7	167
ST. STEPHEN	NB	WSS	AU8	20.2			72.4		
SUSSEX FOUR CORNERS	NB	ASF	AU8	20.0	18.8	1.2	98.4	74.3	132
WOODSTOCK NEWBRIDGE	NB	EWD	AU8	20.0	18.4	1.6	79.1	100.6	79
Average				19.8	18.0	1.9	81.4	89.7	90
Max				21.0	19.2	2.6	158.2	100.6	168
Min				17.5	15.6	1.2	39.7	74.3	43

Highlights:

The average temperature anomaly was much above normal (**+1.9°C**). All sites reported positive anomalies with Charlo reporting the largest anomaly at 2.6°C. Four sites in the north had their warmest August on record with most other sites recording their top 5 warmest.

Total precipitation amounts were below normal, with an average of **90%** of total precipitation. Northern areas received very few days with precipitation and were very dry for the first two-thirds before the remnants of Henri arrived. Southern areas received more days with precipitation associated with organized showers and thunderstorms.



August 2021; Climate Summary

Events:

August 5-6: “Rain Event”. A slow moving low pressure system brought rain to mainly southern areas of the province. Generally, 15-40 mm fell but locally up to 83 mm was reported in the Saint John area.

August 12-14: “Heat Event I”. A tropical-like air mass brought heat and humidity to most areas of the province. Air temperatures reached as high as 34.0 °C in Bathurst while St. Stephen saw the highest humidex value at 43.

August 19-20: “Heat Event II”. Another round of heat and humidity affected most areas of the province with air temperatures again as high as 34.0 °C and humidex values reaching 41.

August 23-24: “Henri”. Remnant moisture from post-tropical depression Henri brought some rain (10-30 mm) except up to 53 mm fell in the northeast where the precipitation somewhat alleviated the dry conditions.

August 25-26: “Heat Event III”. A tropical-like air mass remained over the province after the passage of Henri and brought air temperatures of up to 32.8 °C and humidex values reaching 40.

August 26: “Severe thunderstorms”. A cold front crossed the province bringing heavy downpours, frequent lightning and strong winds. Charlo reported 46 mm of rain in less than two hours along with a wind gust of 76 km/h and thousands of customers were without power, mostly in the Acadian Peninsula.

Days of month with lightning in New Brunswick; 4 6 7 12 13 14 19 20 24 26 30 (11 days)

Day of month with temperature record broken or tied in New Brunswick; 1 2 3 13 17 18 19 20 24 25 26
(red=maximum, blue=minimum)



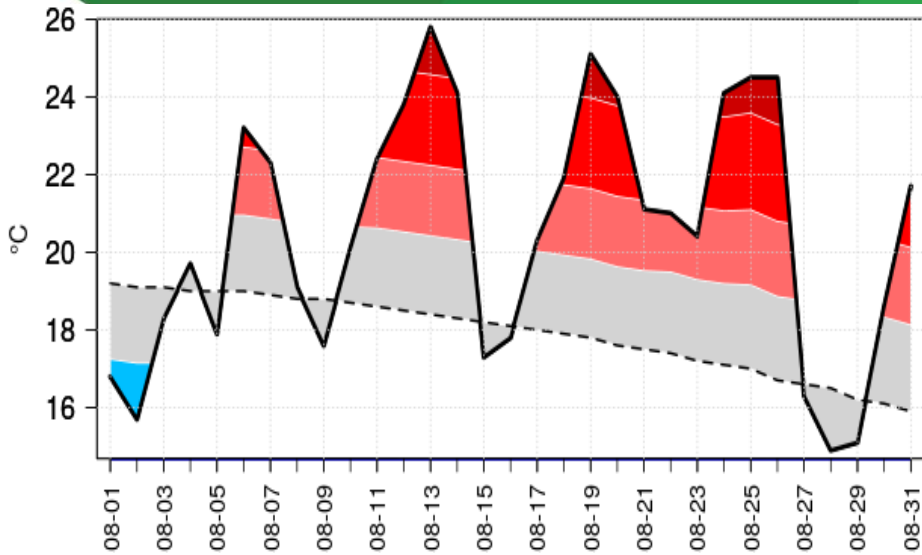
August 2021; Provincial Climate Extremes

Parameter	Value	ECCC Station	Day of month
Daily Maximum Temperature	+34.1°C	Bathurst	17
Daily Minimum Temperature	+1.9°C	Edmundston	28
Maximum Daily Total Precipitation	57.3 mm	Saint John	5
Daily Maximum Wind Gust	76 km/h	Charlo	26
Daily Maximum Humidex	43	St. Stephen	13

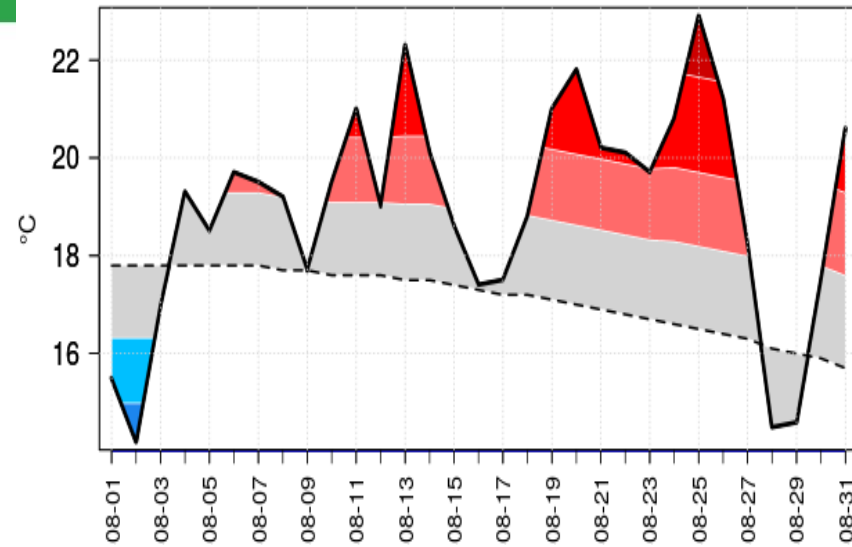


August 2021 - Temperature

Daily Mean Temperature (line), Long-Term Mean (dashed line) and Categories based on Standard Deviations (blue and red) Based on gridded observations / Climatology 1981-2010
Std. dev. thresholds +/- 0.7, 1.3, 2.1



Fredericton

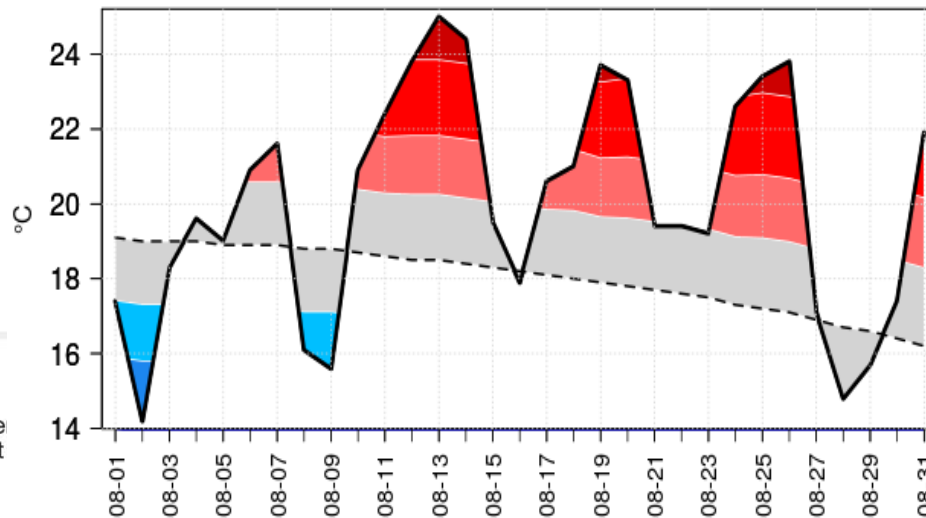


Saint John

■ <<< normal
 ■ << normal
 ■ < normal
 ■ normal
 ■ > normal
 ■ >> normal
 ■ >>> normal

All sites were above normal

Moncton



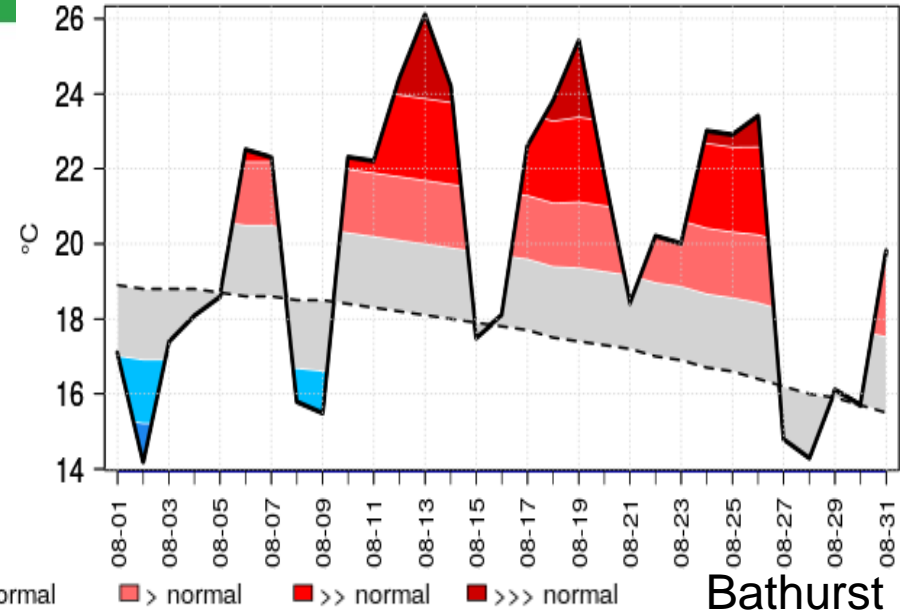
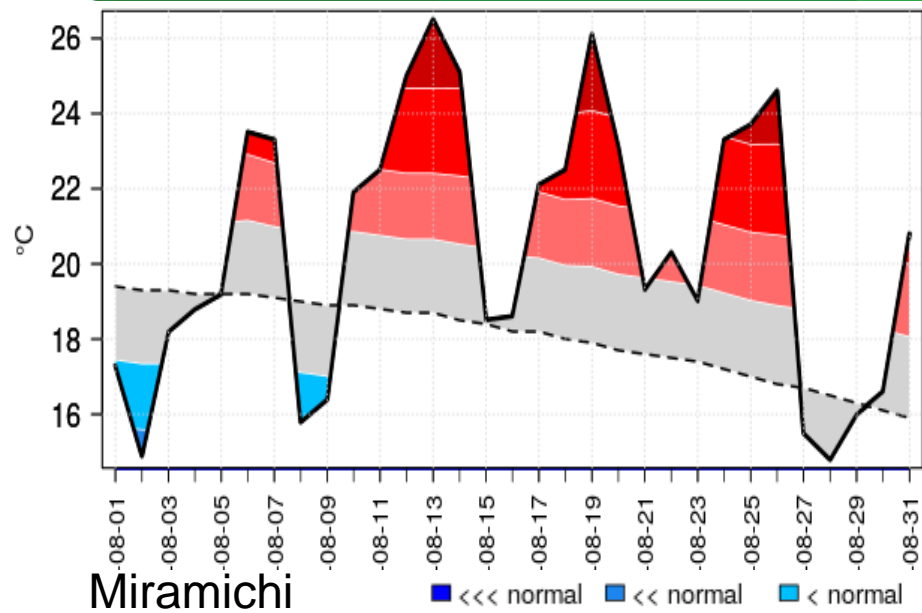
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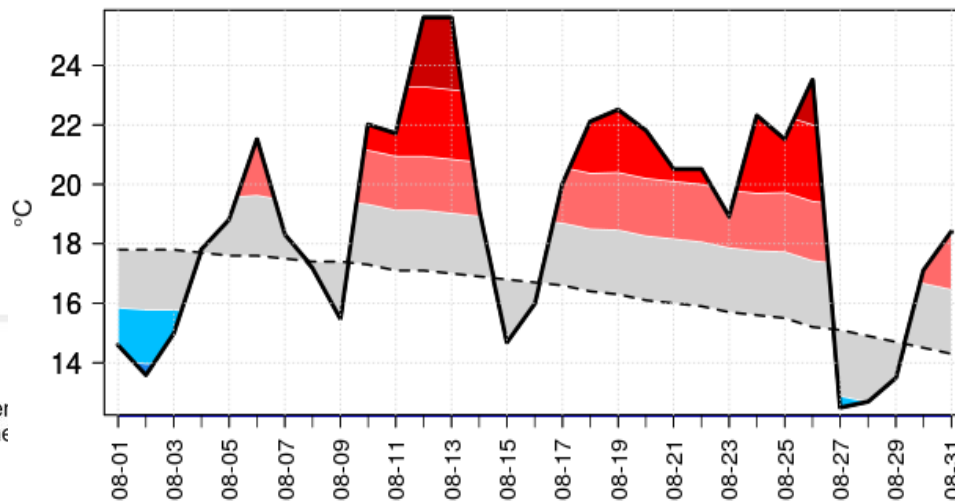
August 2021 - Temperature

Daily Mean Temperature (line), Long-Term Mean (dashed line) Based on gridded observations / Climatology 1981-2010 and Categories based on Standard Deviations (blue and red) Std. dev. thresholds +/- 0.7, 1.3, 2.1



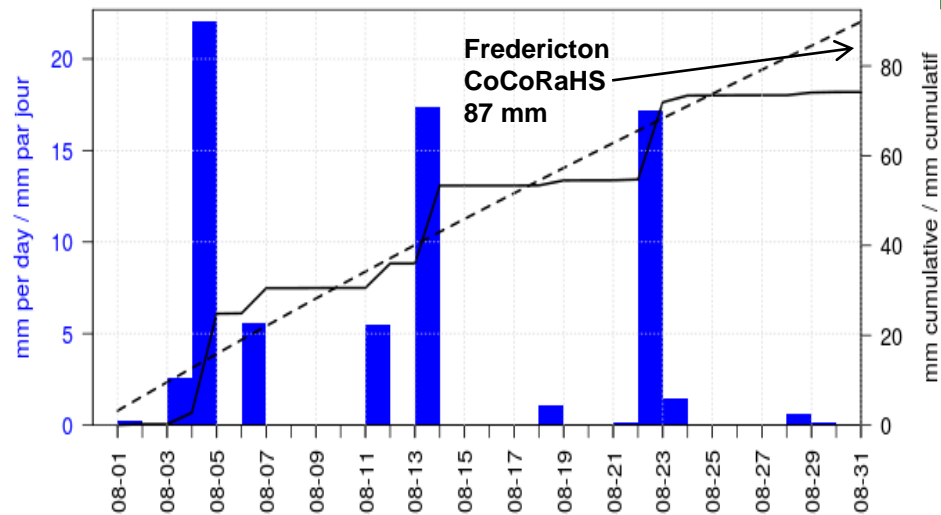
All sites were above normal

Edmundston

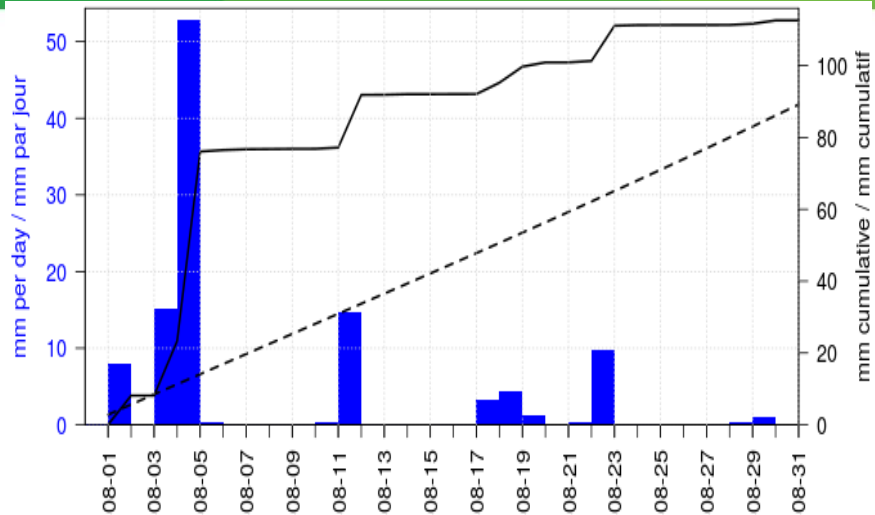


August 2021 - Precipitation

Daily Total Precipitation (bars), Cumulative (line) and Cumulative Long-Term Mean (dashed line) Based on ECCC gridded precipitation analysis Climatology 2002-2020



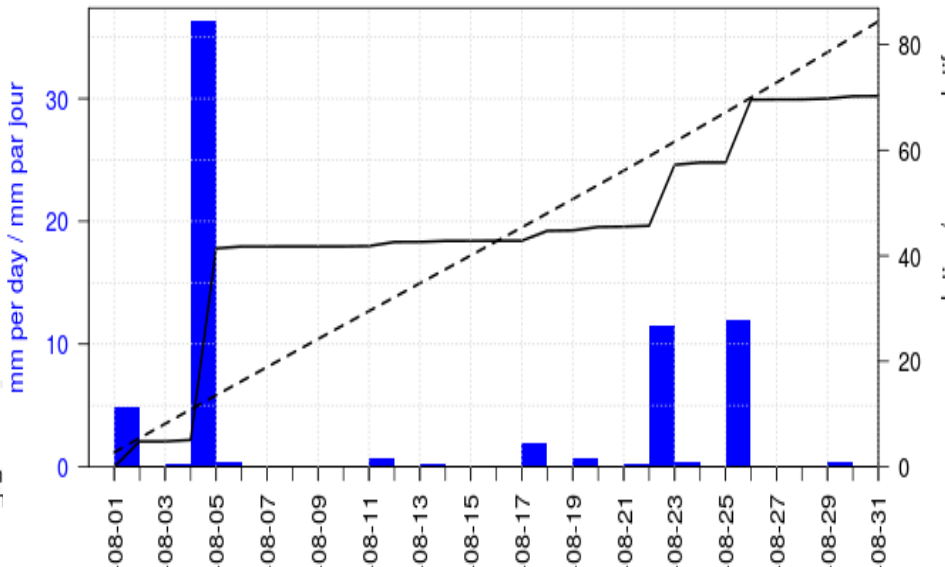
Fredericton (and area)



Saint John

Fredericton and Moncton were below normal

Moncton

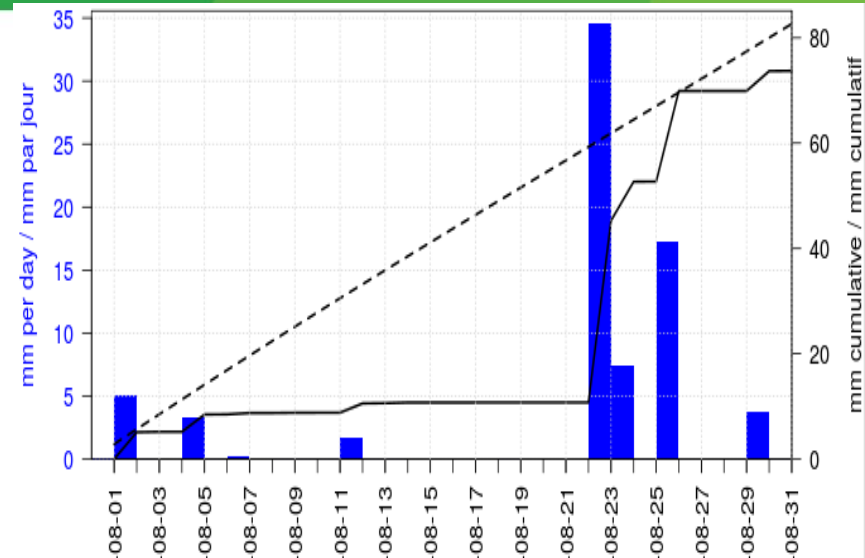
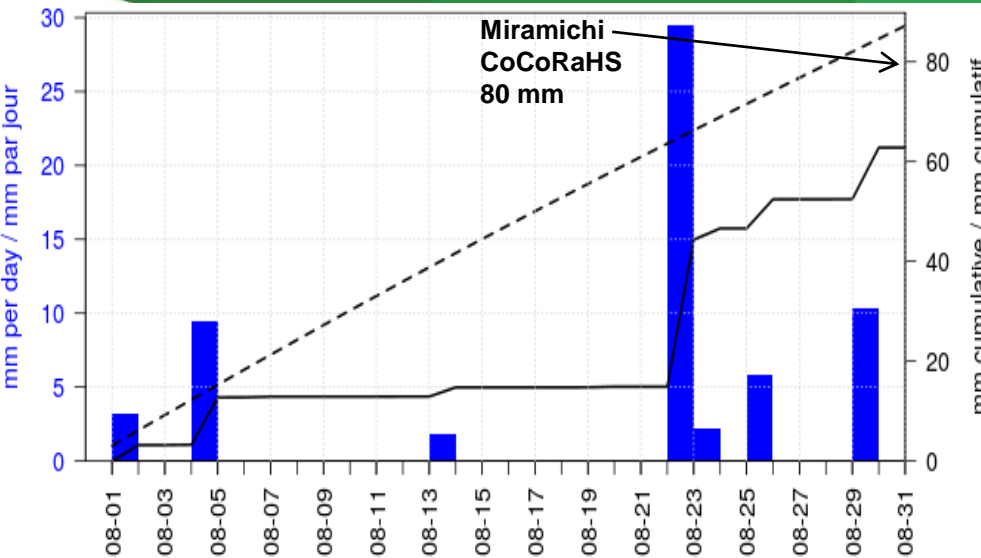


Saint John was above normal



August 2021 - Precipitation

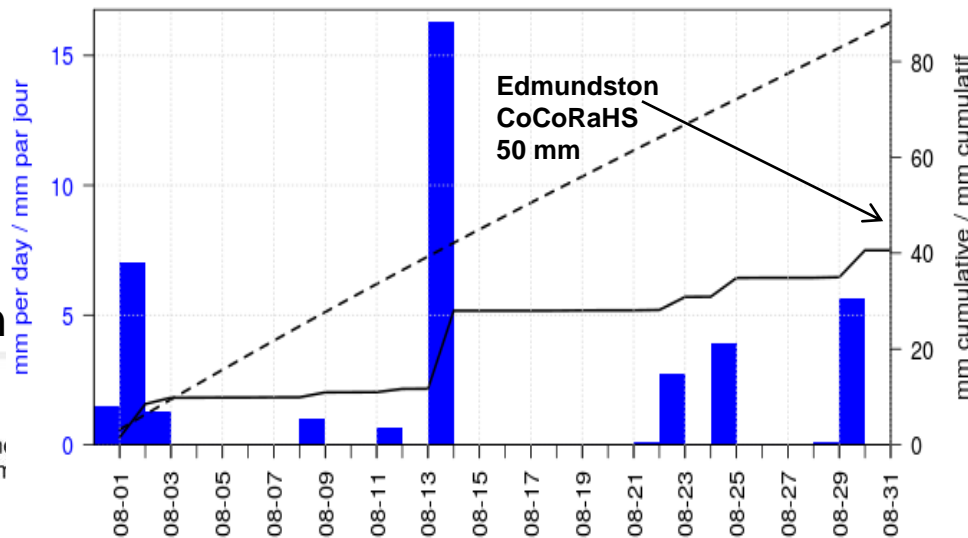
Daily Total Precipitation (bars), Cumulative (line) and Cumulative Long-Term Mean (dashed line) Based on ECCC gridded precipitation analysis
Climatology 2002-2020



Miramichi

All sites were below normal

Edmundston



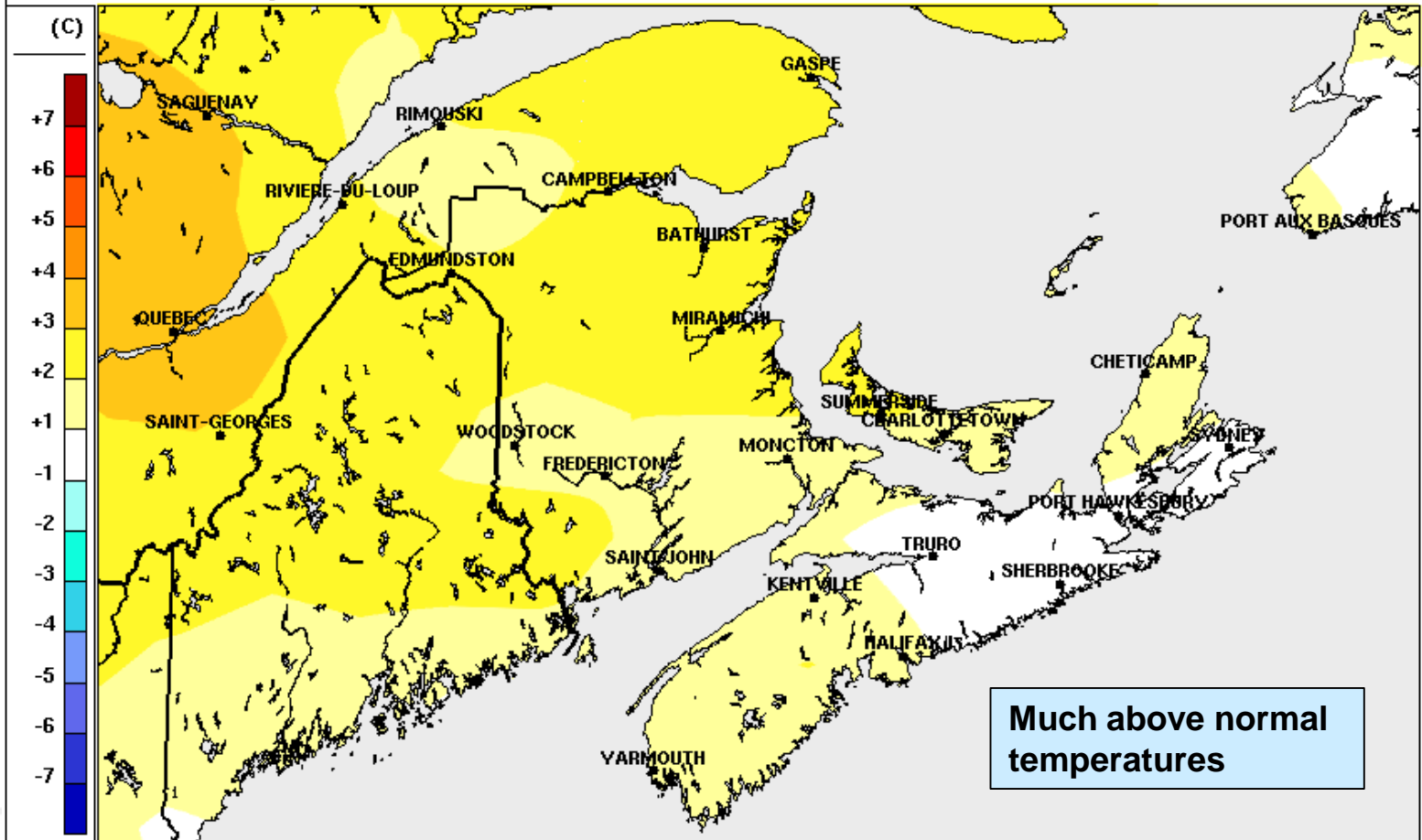
August 2021 – Temperature departure from 1981-2010 mean

Temperature Anomaly: 2021-08
Anomalie de température: 2021-08



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Government of Canada



ECCC surface observations / Observations de surface de ECCC. Clim: 1981-2010

2021-09-01 14:06UTC

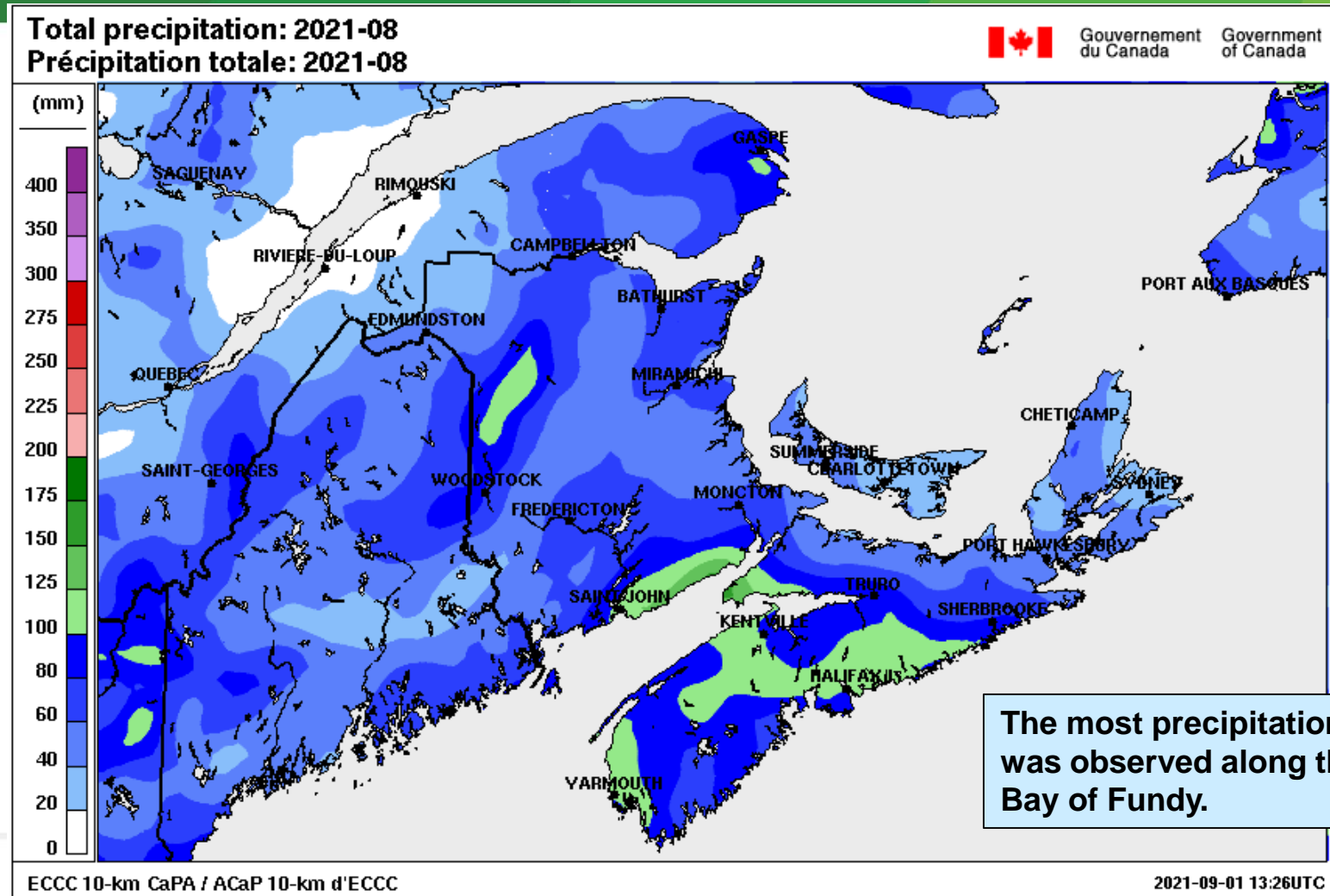


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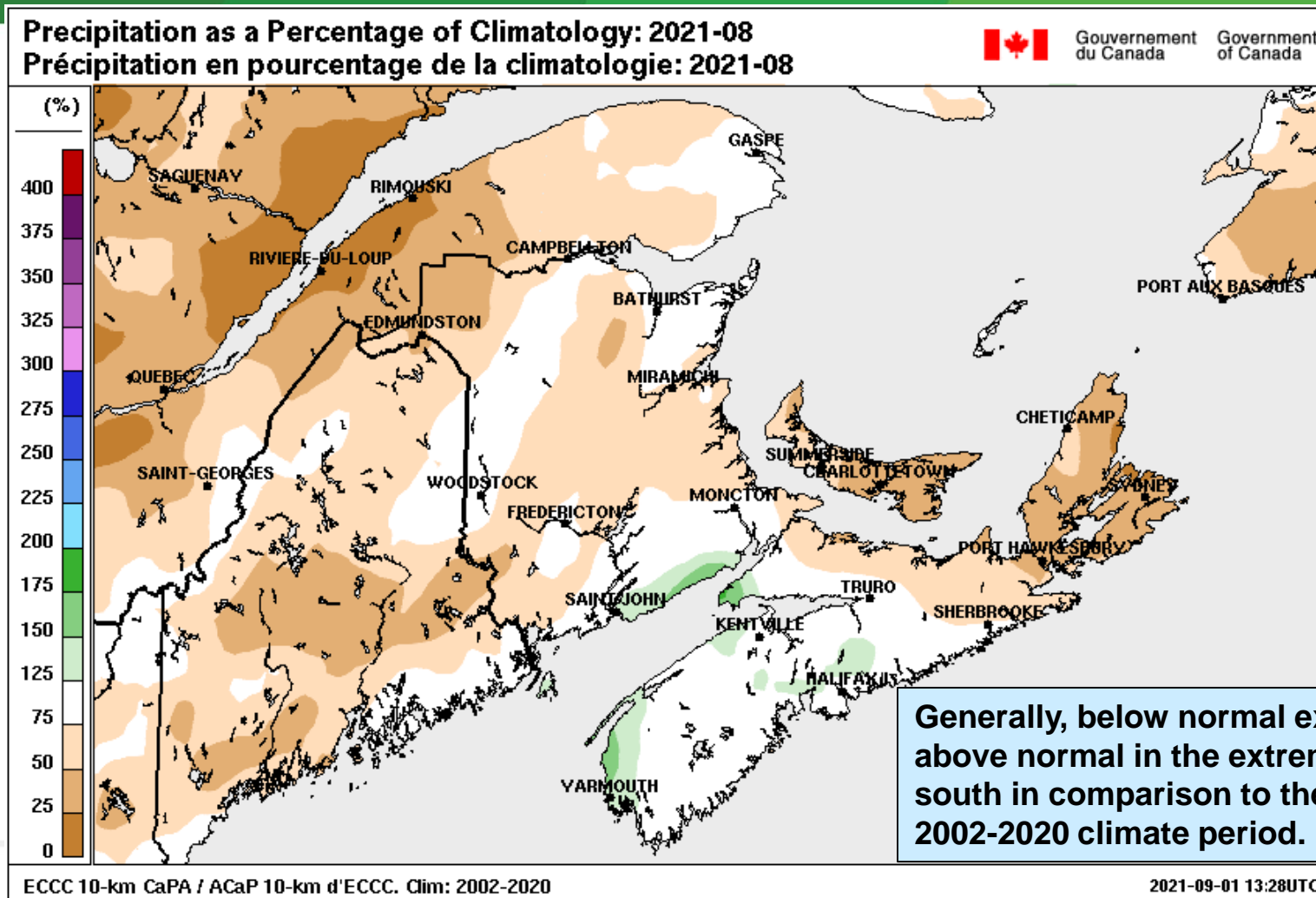
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August 2021 – Total precipitation



August 2021 – Precipitation departure from 2002-2020 mean



Gouvernement du Canada / Government of Canada



Environment and Climate Change Canada

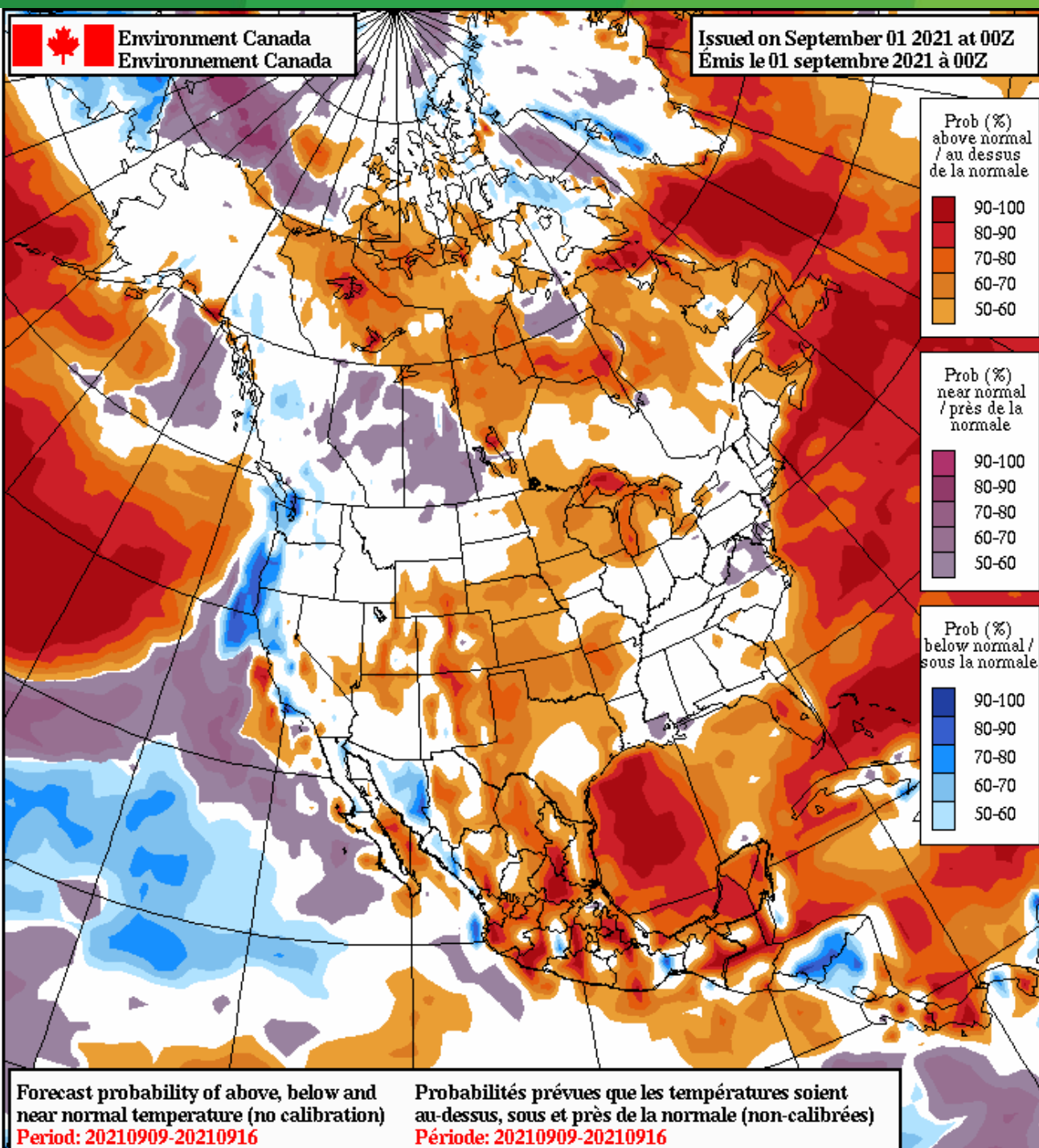
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Outlook Day 8 to 14 Forecast

Period ending
September 16,
2021

Suggesting a
weak signal of
above normal
conditions.



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Environne
Changem

Fredericton

Ensemble and Deterministic Forecasts issued 1 September 2021 00 UTC
Prévision d'ensemble et déterministe émises le 1 Septembre 2021 00 UTC

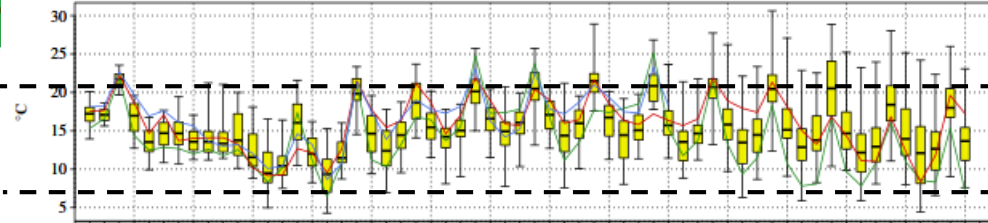
for/pour

NAEFS / SPENA

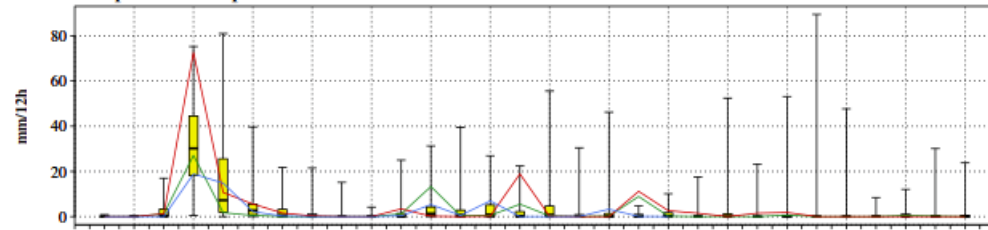
FREDERICTON (YFC) 45.87 N 66.53 W/O

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

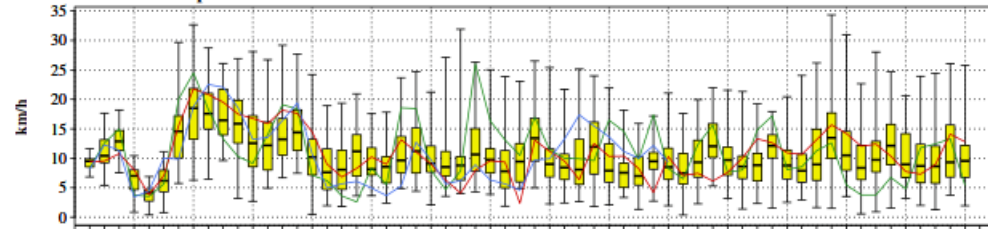
Normal high: 20.0C
September
Normal low: 7.1C



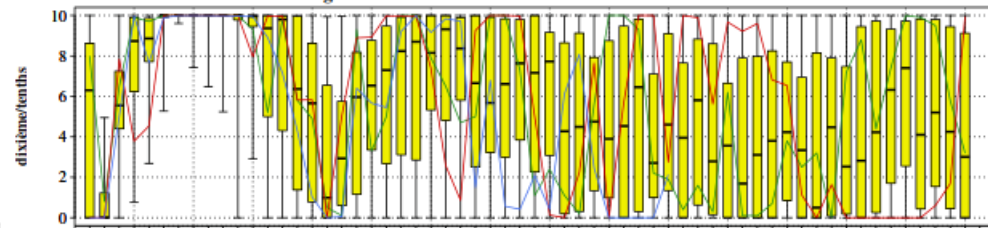
Précipitations/Precipitation



Surface wind speed/Vitesse du vent à la surface



Total cloud cover/Couvert nuageux



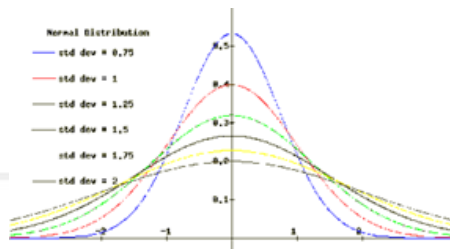
September/Septembre 2021

max
75%
median/médiane
25%
min

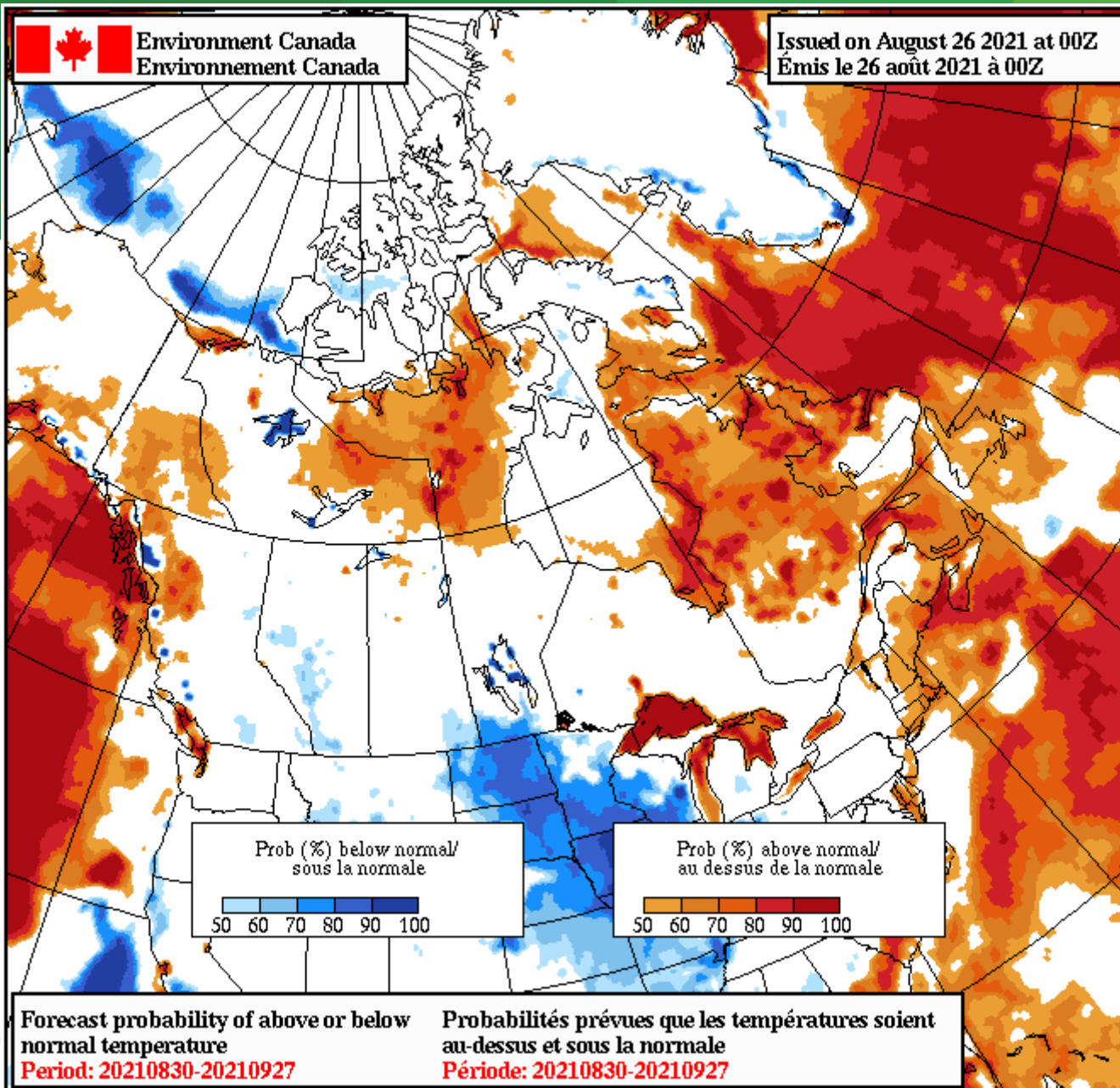
— Global Model / Modèle global
— Control Member / Membre contrôlé CMC
— Control Member / Membre contrôlé NCEP

Next 15 days; ending September 15, 2021

Generally suggesting below normal until the the 5th then near normal with above normal minimum temperatures until near the 11th then lots of variability for the remainder of the period.



Temperature August 30 to September 27

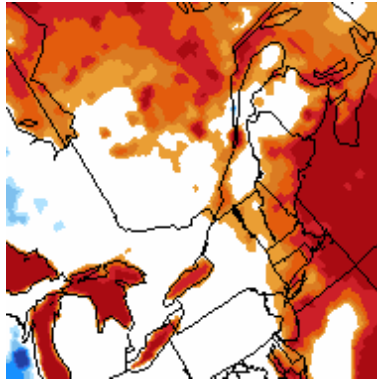


CMC
Monthly
Forecast
Product
using GEPS
50km res.

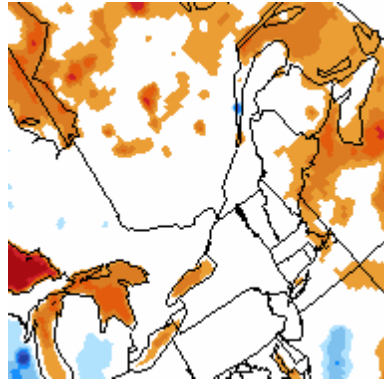


Weekly signature from GEPS 50km resolution

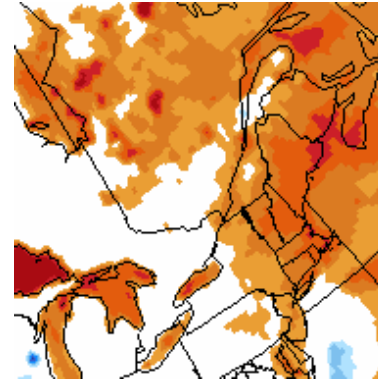
Aug. 30 – Sep. 6



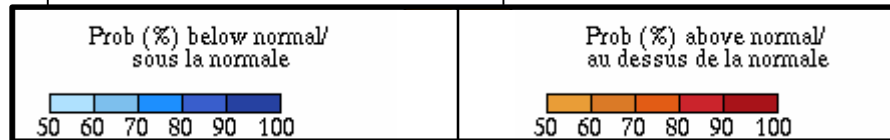
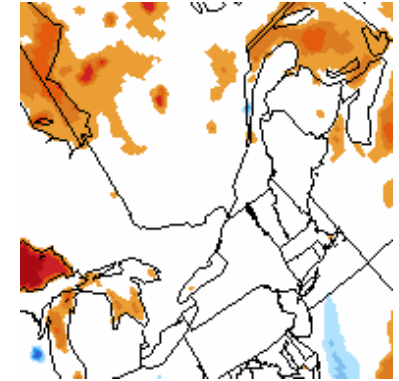
Sep. 6 – 13



Sep. 13 – 20



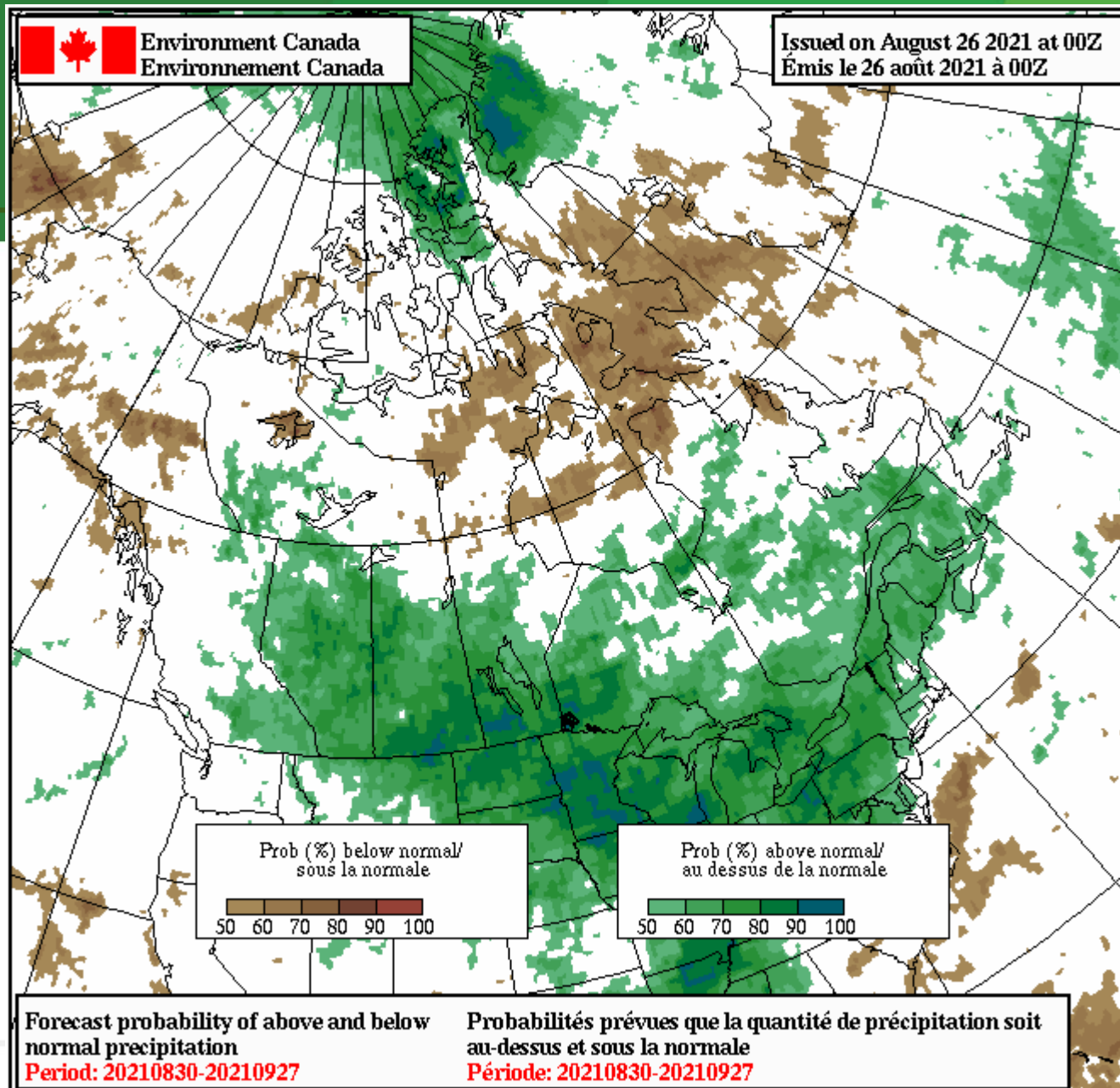
Sep. 20 – 27



Generally, no signal (near normal) or a weak signal for above normal for the period.

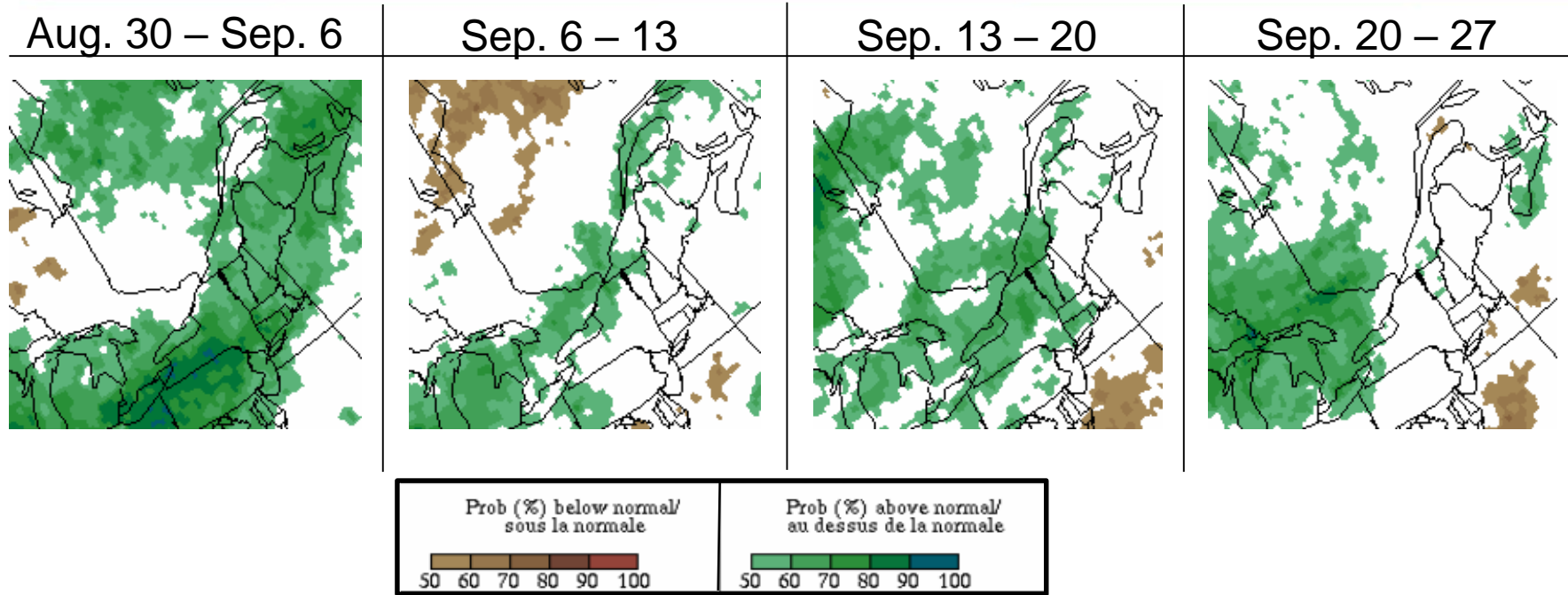


Precipitation August 30 to September 27



CMC
Monthly
Forecast
Product
using GEPS
50km res.

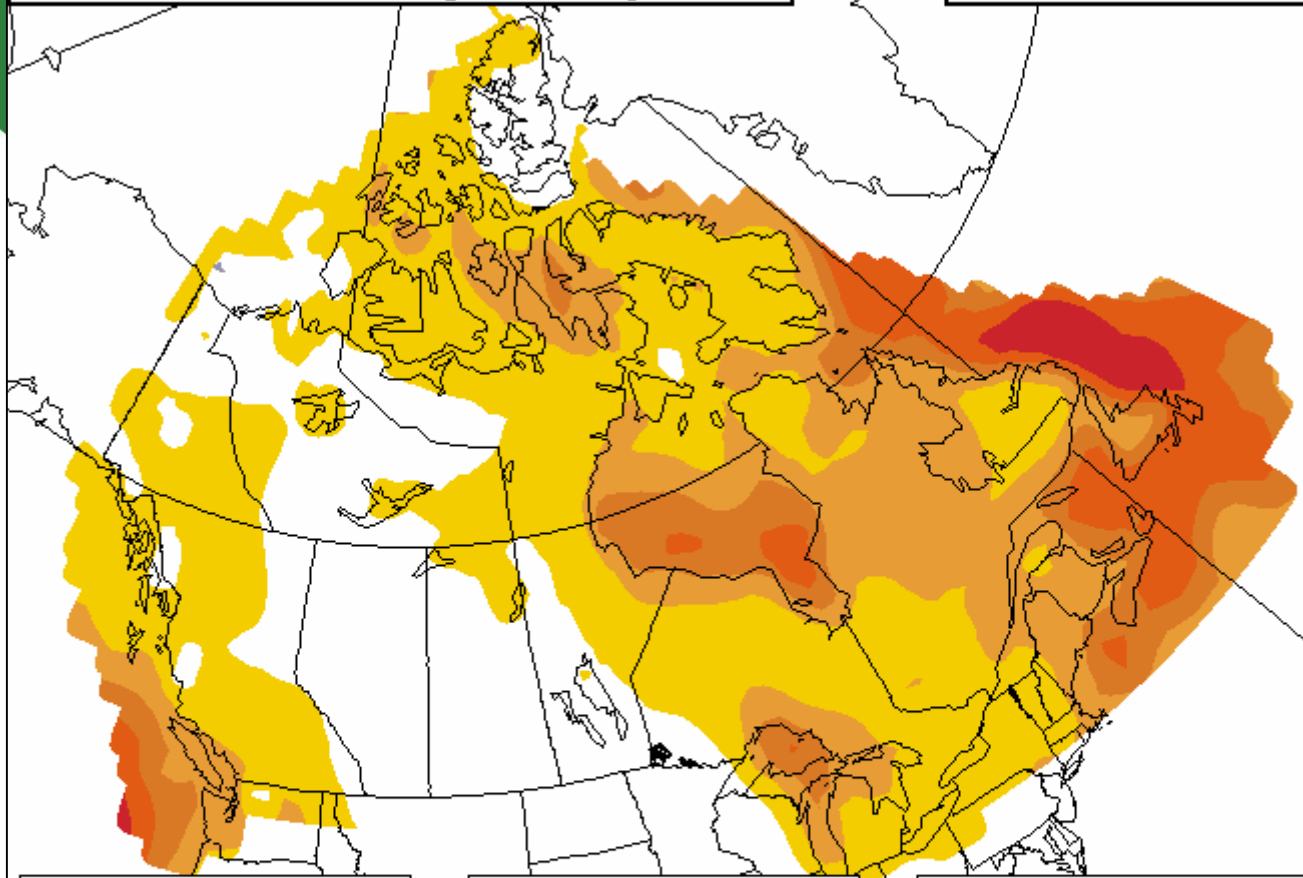
Weekly signature from GEPS 50km resolution



Beginning above normal and transitioning to near normal (no signal) through the period.

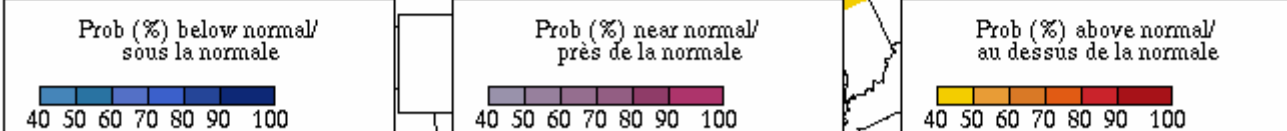
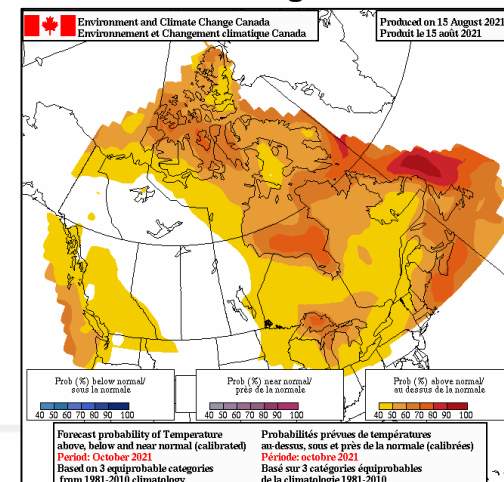


Temperature October 2021



CanSIPS
 (Canadian Seasonal and
 Interannual Prediction
 System)
 CanAM3
 CanAM4
 +
 CanOM4

Produced August 15



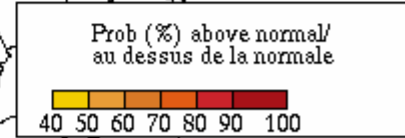
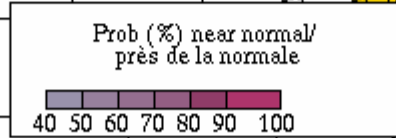
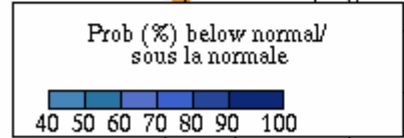
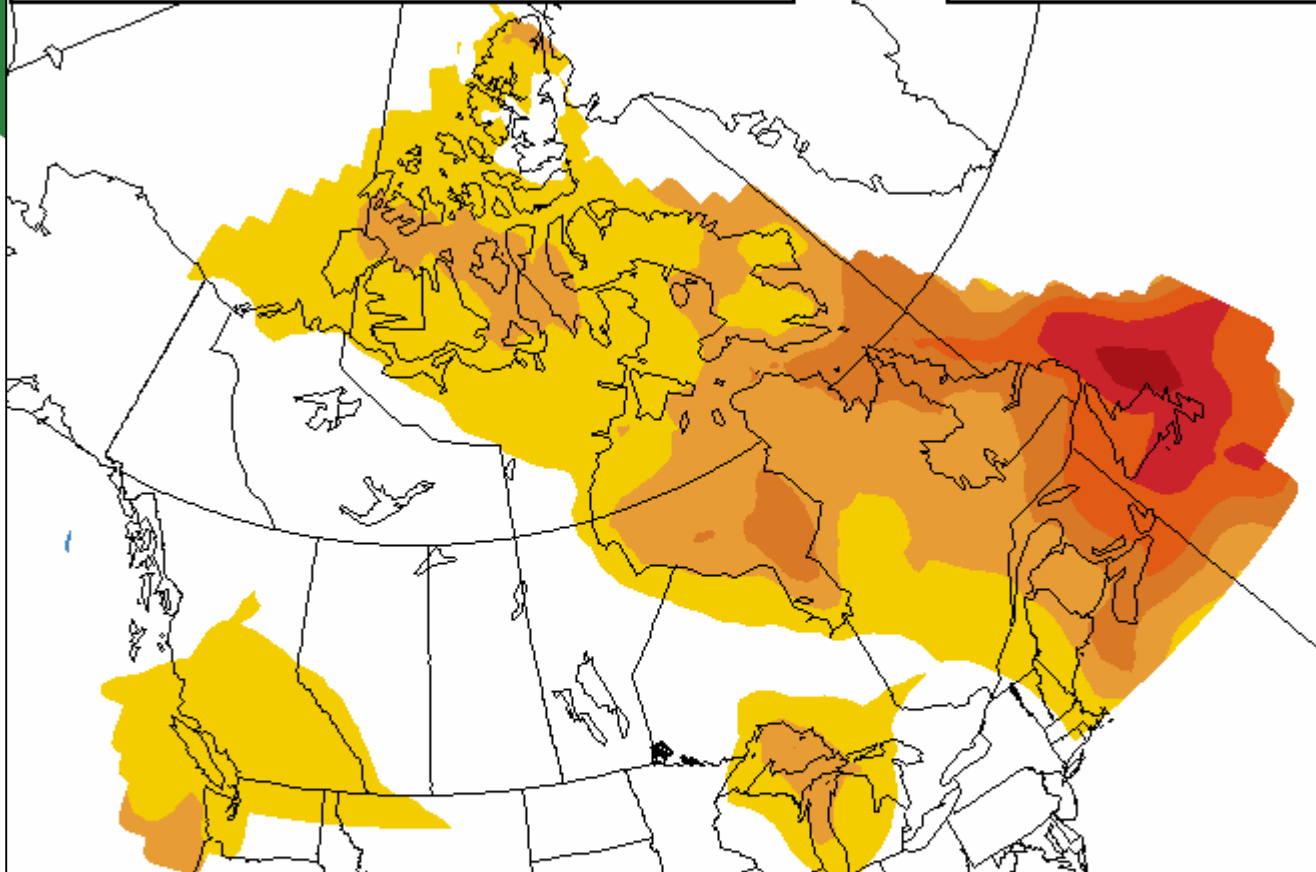
**Forecast probability of Temperature
 above, below and near normal (calibrated)**
Period: October 2021
**Based on 3 equiprobable categories
 from 1981-2010 climatology**

**Probabilités prévues de températures
 au-dessus, sous et près de la normale (calibrées)**
Période: octobre 2021
**Basé sur 3 catégories équiprobables
 de la climatologie 1981-2010**



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Produced on 31 August 2021
 Produit le 31 août 2021



**Forecast probability of Temperature
 above, below and near normal (calibrated)**
Period: November 2021
 Based on 3 equiprobable categories
 from 1981-2010 climatology

**Probabilités prévues de températures
 au-dessus, sous et près de la normale (calibrées)**
Période: novembre 2021
 Basé sur 3 catégories équiprobables
 de la climatologie 1981-2010



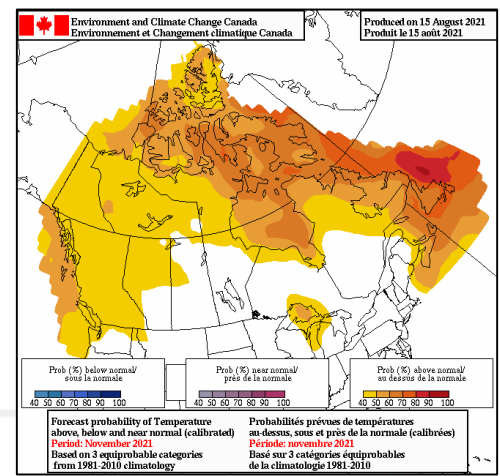
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Temperature November 2021

CanSIPS
 (Canadian Seasonal and
 Interannual Prediction
 System)
 CanAM3
 CanAM4
 +
 CanOM4

Produced August 15



Environment and Climate Change Canada
 Environnement et Changement climatique Canada

Produced on 15 August 2021
 Produit le 15 août 2021

Forecast probability of Temperature
 above, below and near normal (calibrated)
 Period: November 2021
 Based on 3 equiprobable categories
 from 1981-2010 climatology

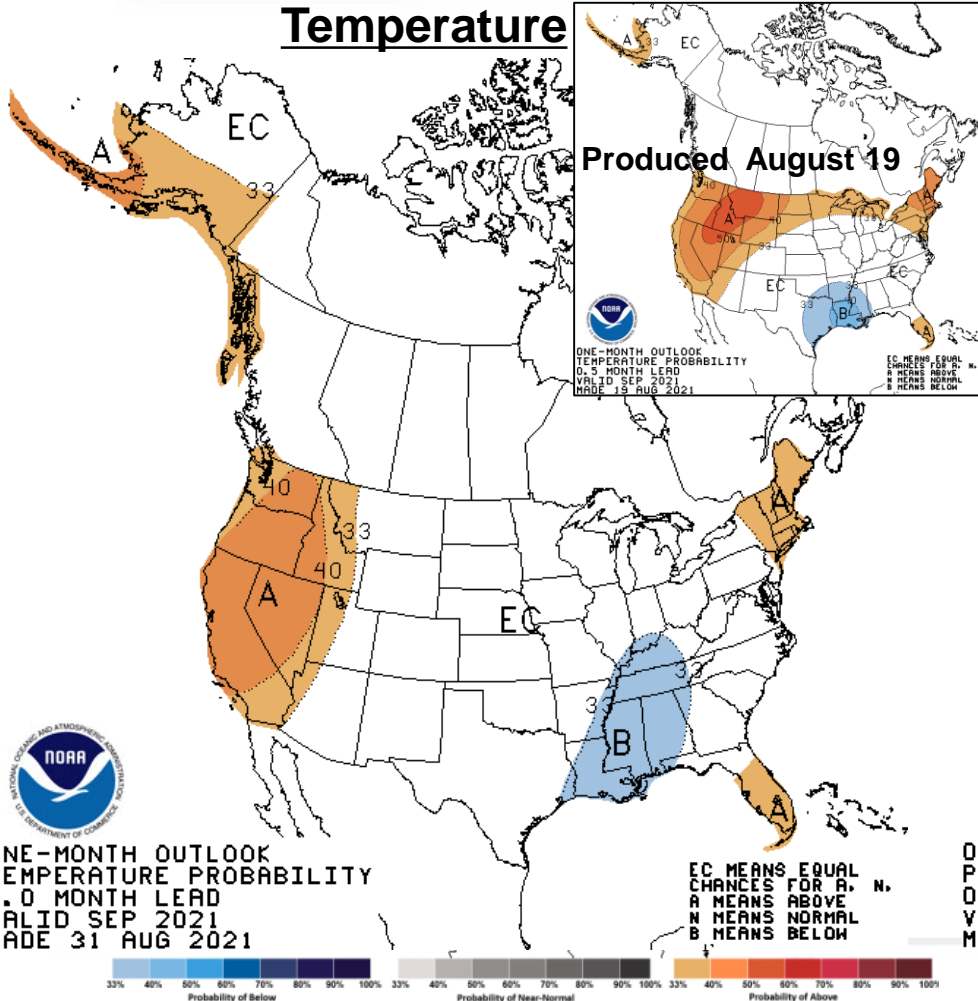
Probabilités prévues de températures
 au-dessus, sous et près de la normale (calibrées)
 Période: novembre 2021
 Basé sur 3 catégories équiprobables
 de la climatologie 1981-2010



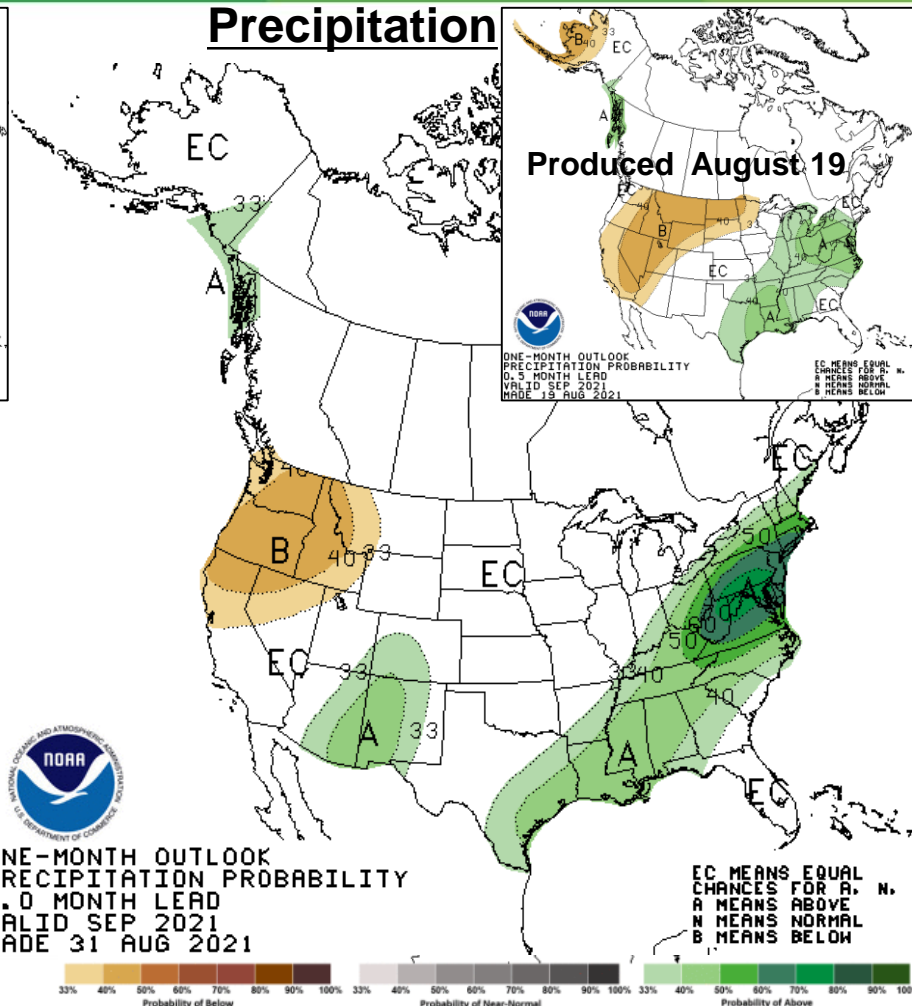


September 2021

Temperature



Precipitation



Contact

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Warning Preparedness Meteorologist

jill.maepea@ec.gc.ca

Environment and Climate Change
Canada Weather Pages

www.weather.gc.ca

