

New Brunswick

July 2021 Review August and Summer/Fall Outlook

Jill Maepea

Meteorological Service of Canada

Environment and Climate Change Canada

August 3, 2021



Environment and
Climate Change Canada

Environnement et
Changement climatique Canada

Canada

July 2021; Climate Summary

Station Name / Nom de la station	Prov	TC ID / ID de TC	Type / Type de station	Mean Temperature / Température moyenne (°C)			Total Precipitation / Précipitations totales (mm)		
				Monthly Mean / Moyenne mensuelle	Mean / Moyenne Normale	Diff from Normal / Écart avec la normale	Monthly Total / Total mensuel	Normal Total / Total normal	Normal / Total en % de la normale
BAS CARAQUET	NB	WXS	AU8	17.7	18.7	-1.0			
BAS CARAQUET	NB		DAILY				90.6	80.9	112
BATHURST A	NB	ZBF	NCA	17.7	19.1	-1.3	77.8		
BOUCTOUCHE CDA CS	NB	ABT	AU8	17.7	19.2	-1.5	143.2	99.1	144
CHARLO AUTO	NB	ZCR	AU8	17.3	17.9	-0.6	92.6	102.1	91
MIRAMICHI RCS	NB	ACQ	AU8	18.2	19.1	-0.9	171.8	99.9	172
DOAKTOWN AUTO RCS	NB	ADN	AU8	17.5	19.1	-1.6	149.4	105.8	141
EDMUNDSTON	NB	ERM	AU8	15.8			45.5	113.8	40
FREDERICTON INTL A	NB	YFC	NCA	17.8	19.3	-1.5			
FREDERICTON CDA CS	NB	AFC	AU8	18.1	19.4	-1.3	146.3	89.0	164
FUNDY PARK (ALMA) CS	NB	AFY	AU8	17.3	17.1	0.2			
GAGETOWN AWOS A	NB	YCX	AU5	17.6	19.5	-1.9			
KOUCHIBOUGUAC	NB	AKC	AU8	17.5	19.2	-1.7	116.1	110.4	105
MISCOU ISLAND (AUT)	NB	WMI	AU8	17.0			101.2		
MONCTON INTL A	NB	YQM	NCH	18.0	18.8	-0.8	159.6	92.1	173
OAK POINT	NB		DAILY	18.0	19.5	-1.5	108.5	96.9	112
POINT LEPREAU CS	NB	WPE	AU8	16.0	15.6	0.4			
RED PINES	NB	ARP	AU8	17.0	18.6	-1.6	83.3	105.8	79
SAINT JOHN A	NB	YSJ	NCH	16.7	17.1	-0.4	233.4	88.4	264
ST. STEPHEN	NB	WSS	AU8	17.5			156.8	*record*	
SUSSEX FOUR CORNERS	NB	ASF	AU8	17.8	19.2	-1.5	108.7	84.0	129
WOODSTOCK NEWBRIDGE	NB	EWD	AU8	16.9	19.0	-2.1	122.6	100.2	122
Average				17.4	18.6	-1.1	124.0	97.7	132
Max				18.2	19.5	0.4	233.4	113.8	264
Min				15.8	15.6	-2.1	45.5	80.9	40

Highlights:

The average temperature anomaly was below normal (-1.1°C). Most sites reported negative anomalies with only coastal sites reporting positive anomalies. The temperature was coolest at the beginning and again at the end of the month corresponding with precipitation events.

Total precipitation amounts were above normal, with an average of 132% of total precipitation. Northern areas of were below normal while central and southern areas were above normal. Saint John saw their wettest July on record associated with several events including P.T. Elsa.

July 2021; Climate Summary

Events:

July 4: “Rain Event”. A slow moving low pressure system brought welcome rain to southern areas of the province. Generally, 10-35 mm fell but locally up to 47 mm was reported over eastern coastal Bay of Fundy.

July 9-10: “Post-Tropical Storm Elsa”. Heavy rain fell (40-100 mm) across two-thirds of the province associated with a trough and Elsa. The Miramichi area reported the most rain at 107 mm.

July 14-15: “Thunderstorms”. Slow-moving, nocturnal thunderstorms brought localized torrential rain to southern areas of the province. In the Saint John area, 80 mm fell over a brief period and caused flooded streets and basements.

Days of month with lightning in New Brunswick; 8 9 11 14-16 20-23 25-27 30 (14 days)

Day of month with temperature record broken or tied in New Brunswick; 3 8 29

(red=maximum, blue=minimum)



July 2021; Provincial Climate Extremes

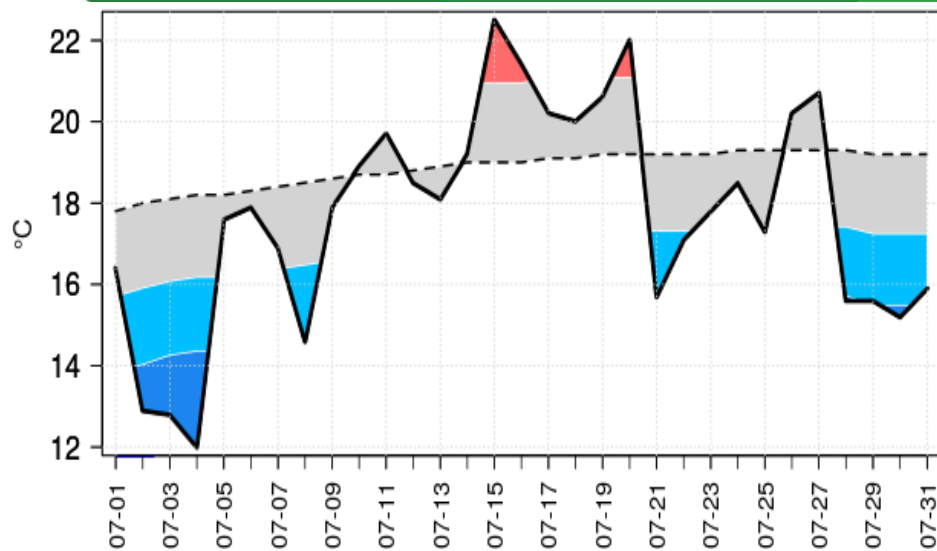
Parameter	Value	ECCC Station	Day of month
Daily Maximum Temperature	+30.4°C	Bathurst	6
Daily Minimum Temperature	+1.4°C	Edmundston	3
Maximum Daily Total Precipitation*	87.3 mm	Saint John	9
Daily Maximum Wind Gust	67 km/h	Bathurst	11
Daily Maximum Humidex	40	St. Stephen	16

*this precipitation value could be higher, but due to ongoing network issues with precipitation data, this is the largest value amongst the few reporting stations



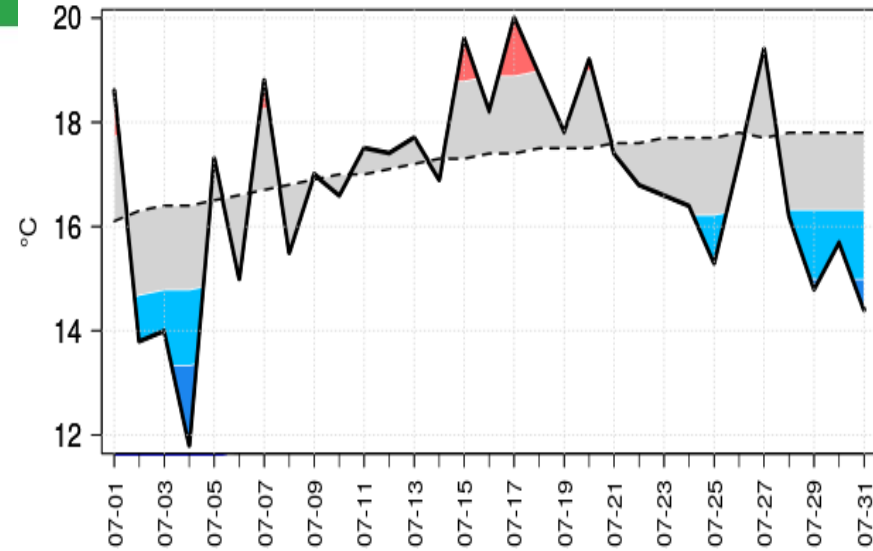
July 2021 - Temperature

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



Fredericton

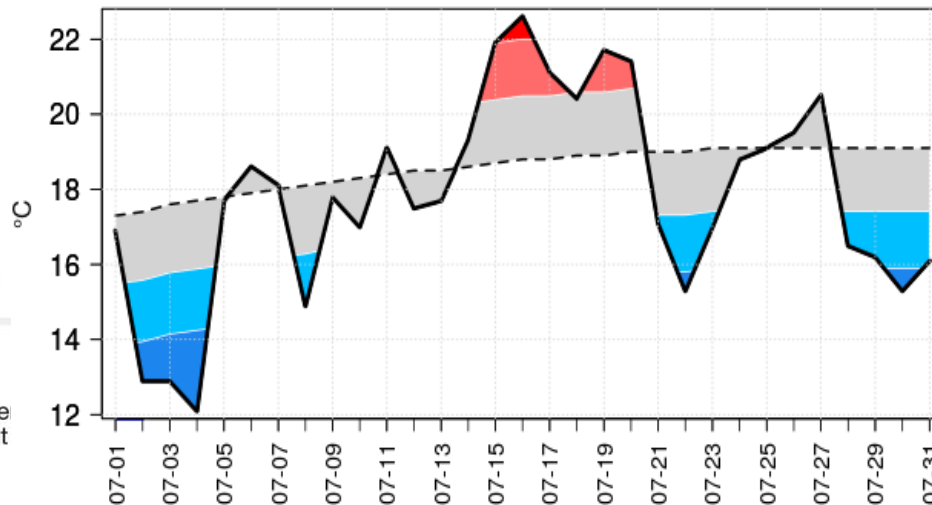
■ <<< normal
 ■ << normal
 ■ < normal
 ■ normal
 ■ > normal
 ■ >> normal
 ■ >>> normal



Saint John

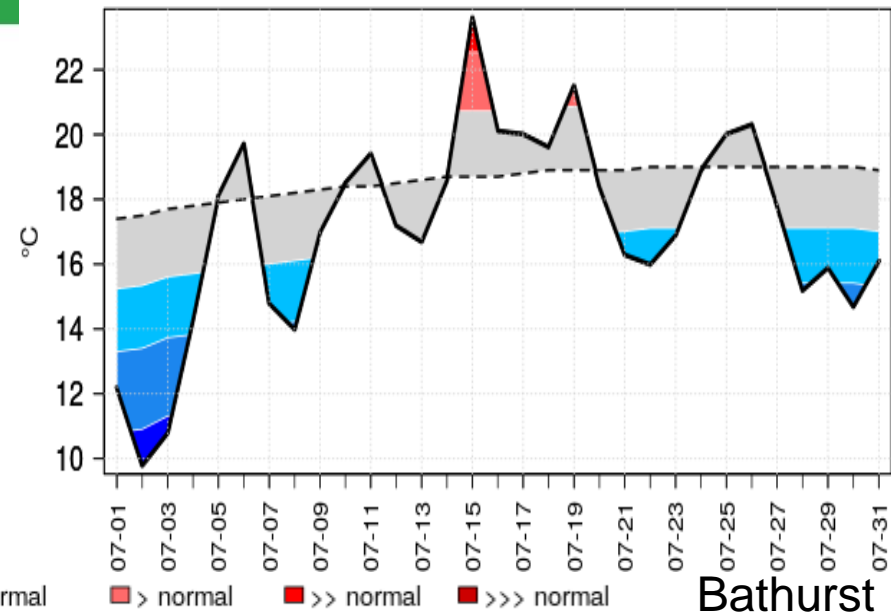
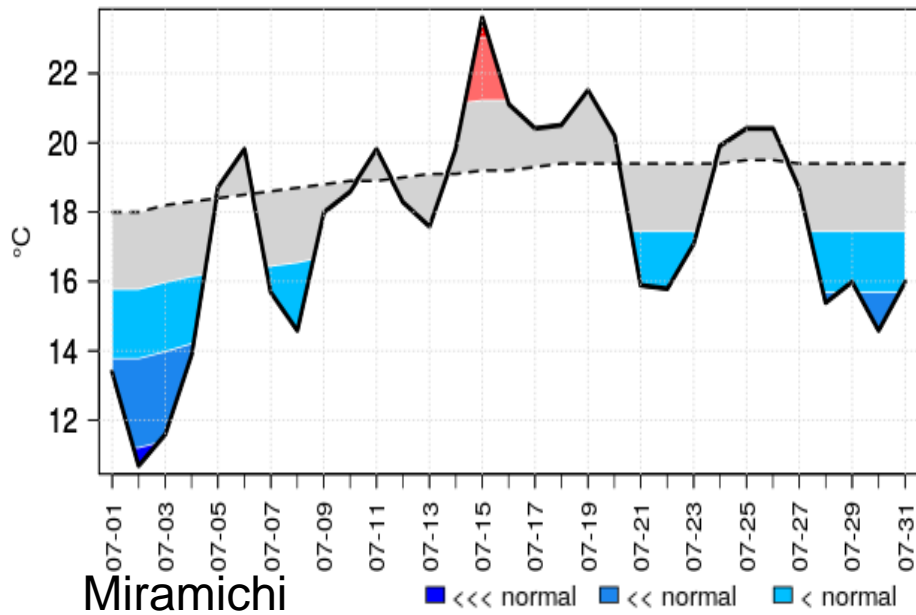
All sites were below normal

Moncton



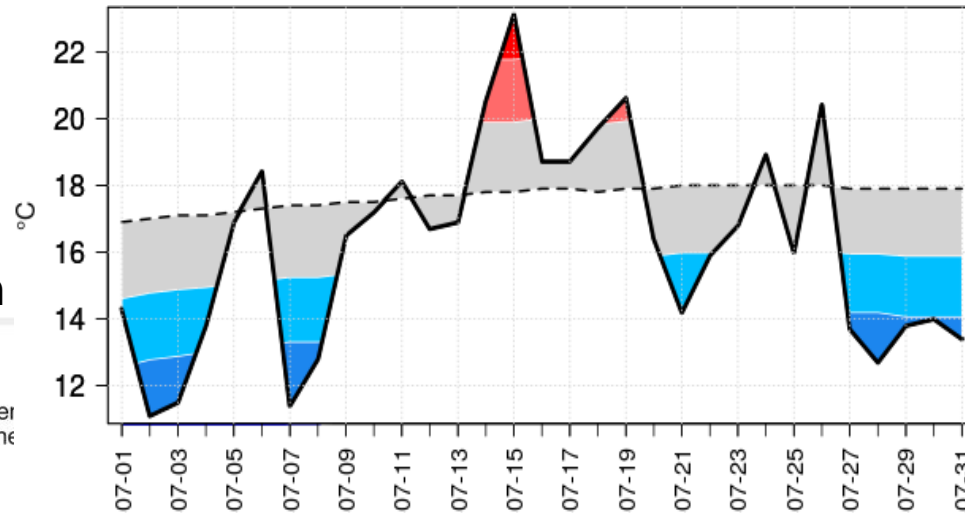
July 2021 - Temperature

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 below normal

Edmundston



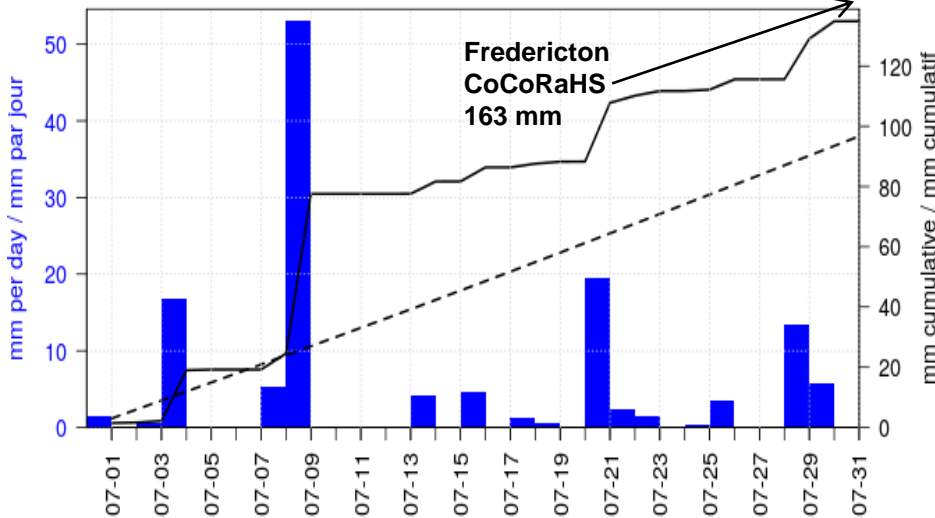
Environment and Climate Change Canada

Environnement Changement

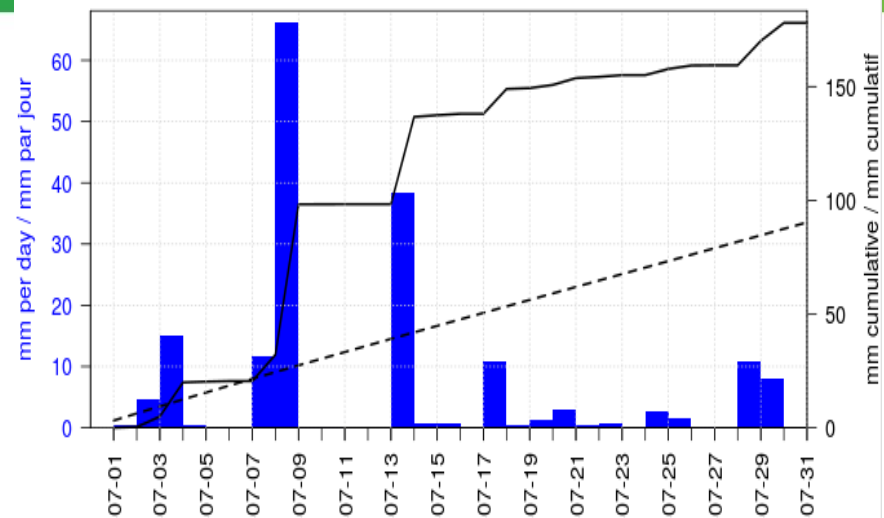
Canada

July 2021 - Precipitation

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



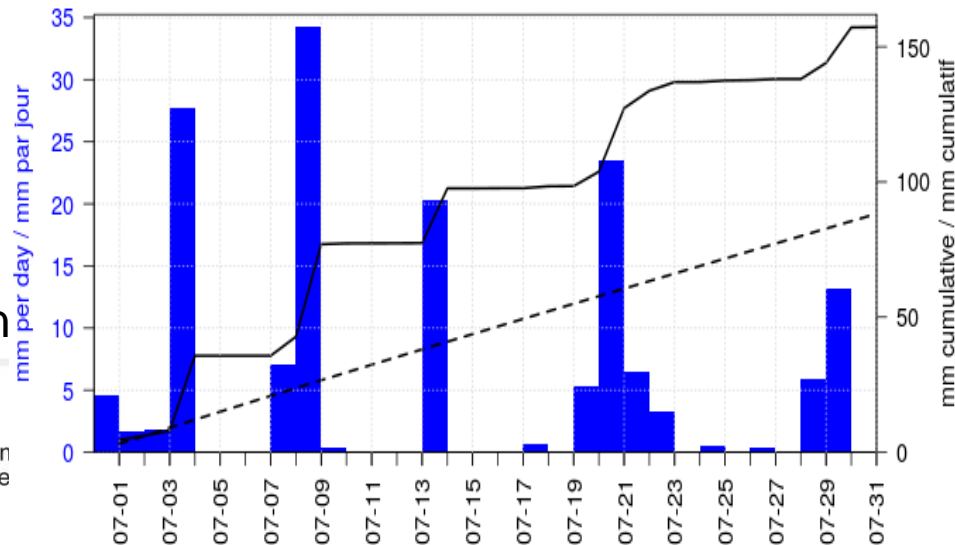
Fredericton (and area)



Saint John

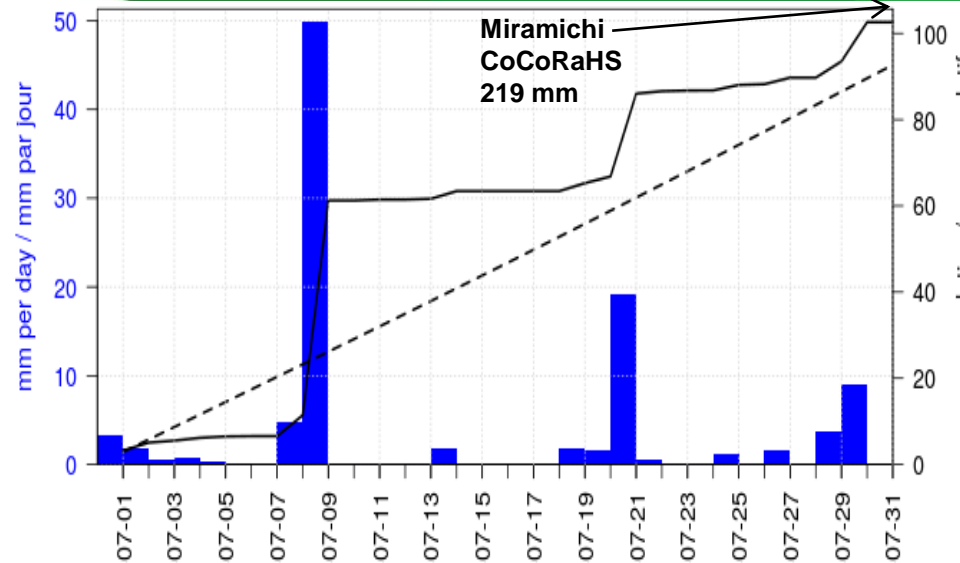
All sites were above normal

Moncton

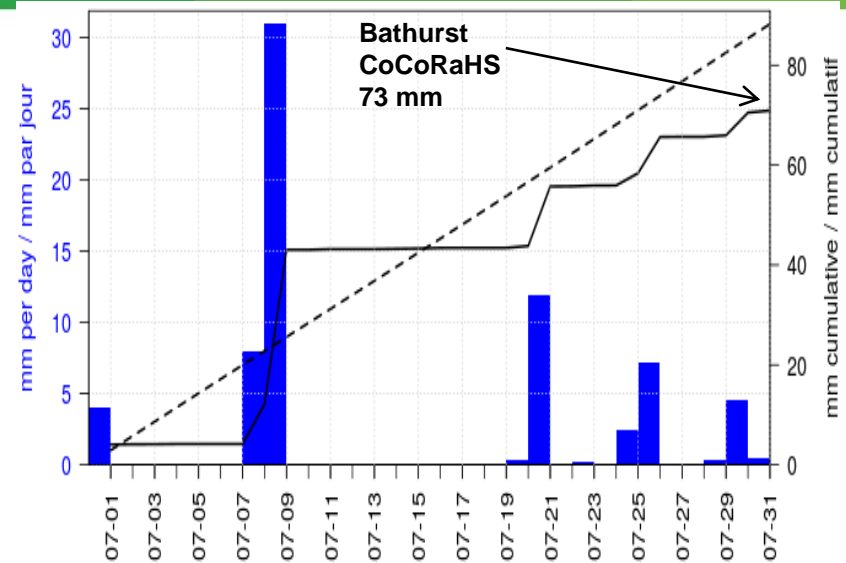


July 2021 - Precipitation

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



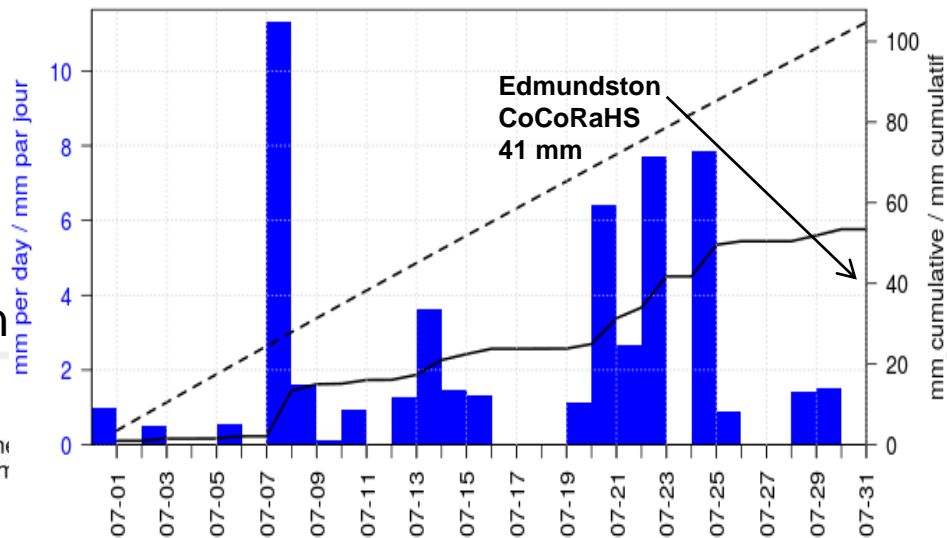
Miramichi



Bathurst

Miramichi was above normal

Edmundston



Edmundston and Bathurst were below normal



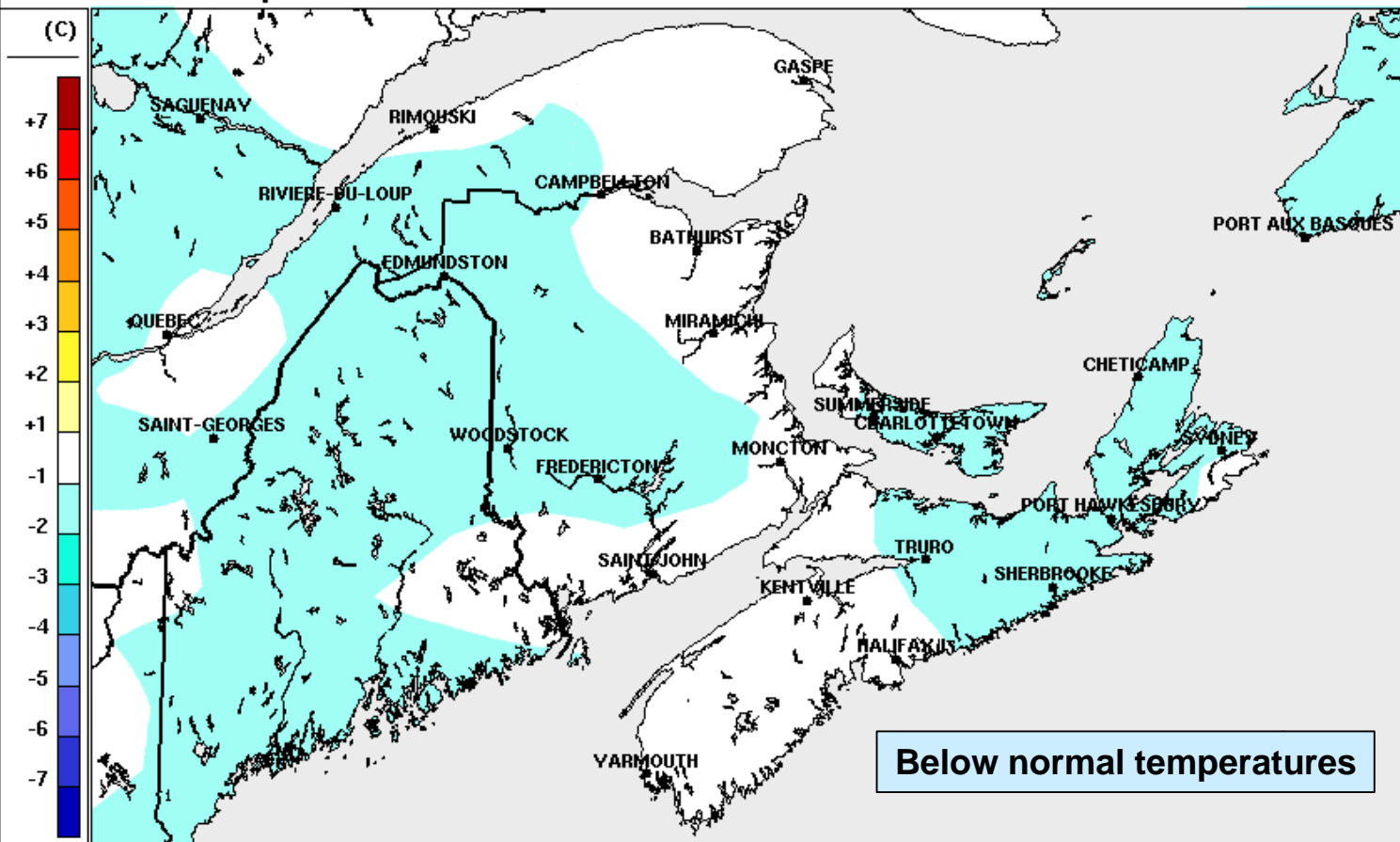
July 2021 – Temperature departure from 1981-2010 mean

Temperature Anomaly: 2021-07
Anomalie de température: 2021-07



Gouvernement du Canada

Government of Canada



ECCC Climate Archives data / Données des Archives Climatiques de ECCC. Cim: 1981-2010

2021-08-02 13:55UTC

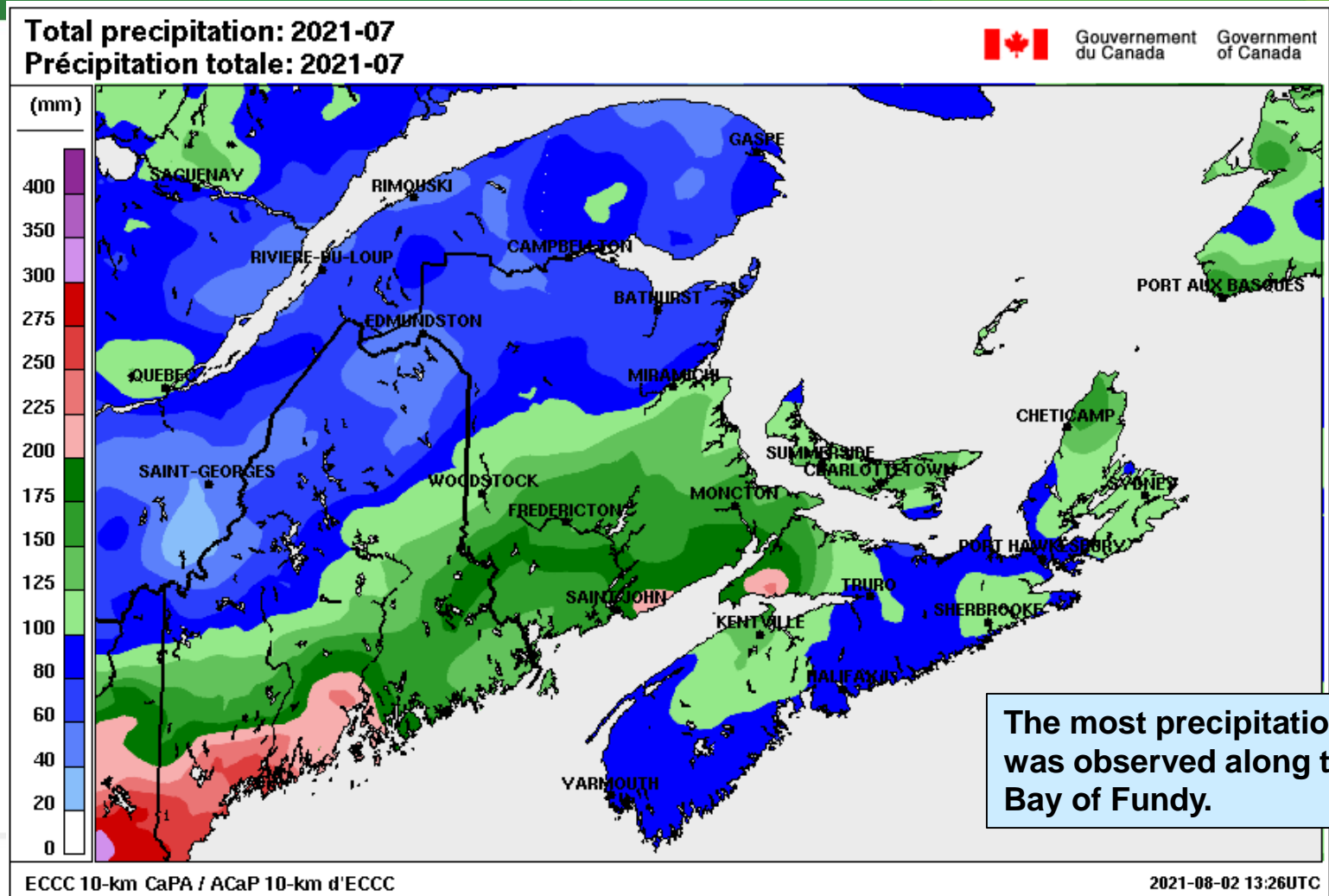


Environment and
Climate Change Canada

Environnement et
Changement climatique Canada

Canada

July 2021 – Total precipitation



Gouvernement du Canada

Government of Canada

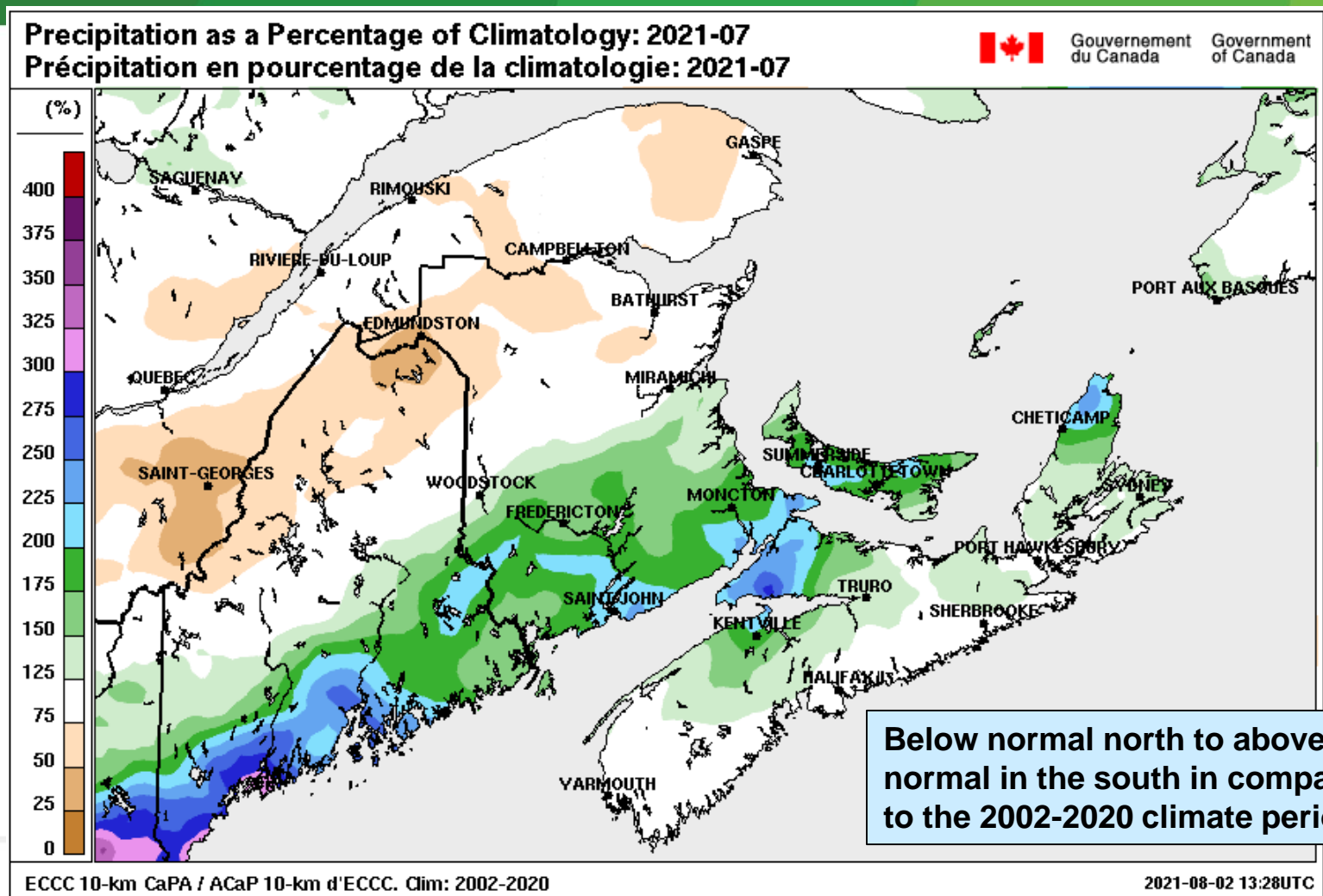


Environment and Climate Change Canada

Environnement et Changement climatique Canada



July 2021 – Precipitation departure from 2002-2020 mean



Gouvernement du Canada

Government of Canada



Environment and Climate Change Canada

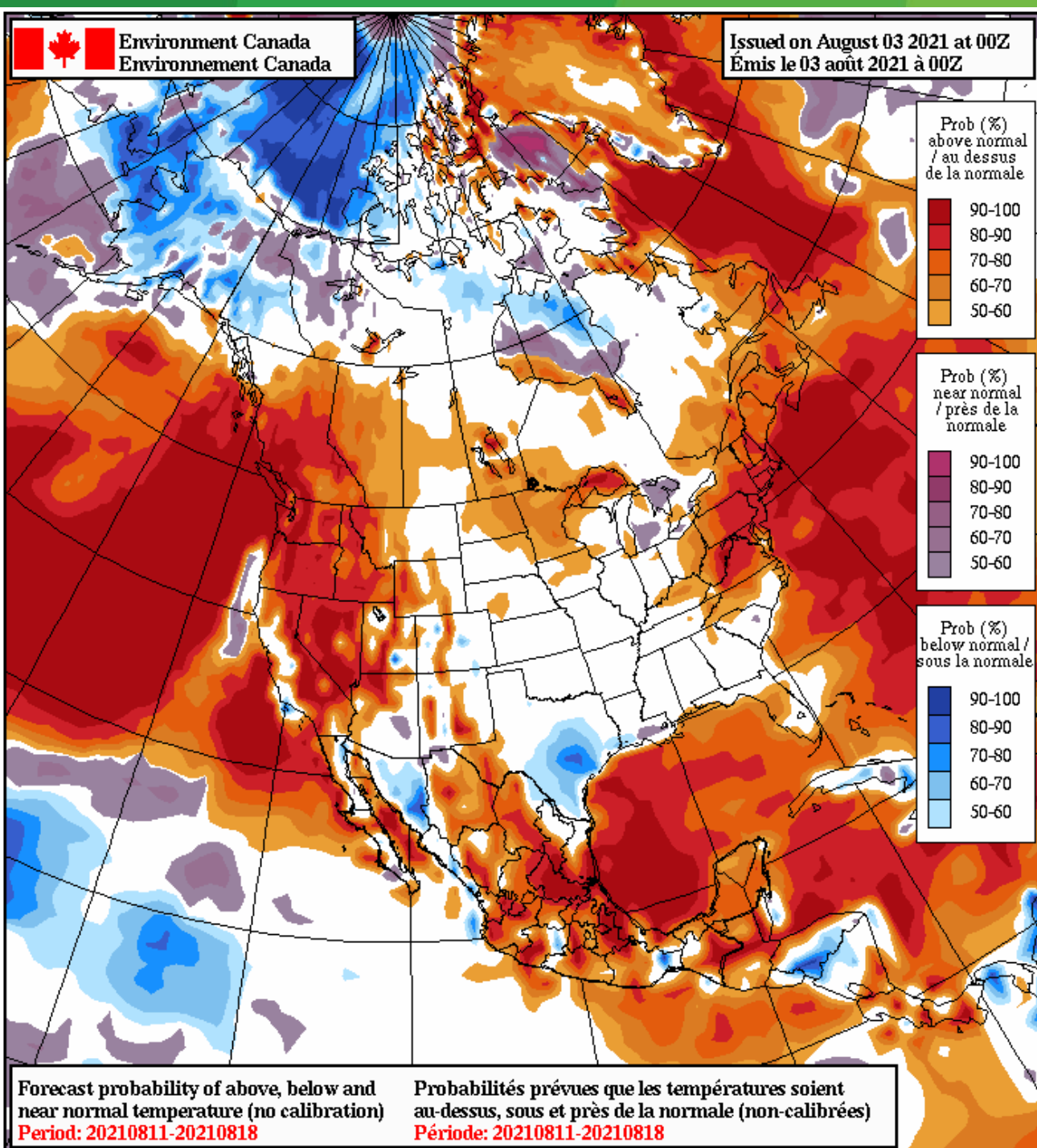
Environnement et Changement climatique Canada

Canada

Outlook Day 8 to 14 Forecast

Period ending
August 18, 2021

Suggesting a
weak to moderate
signal of above
normal conditions.



Environment and
Climate Change Canada

Environnement
Changement

Fredericton

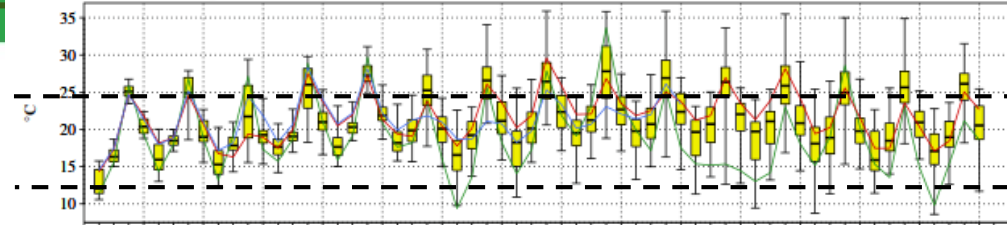


Ensemble and Deterministic Forecasts issued 3 August 2021 00 UTC
Prévision d'ensemble et déterministe émises le 3 Août 2021 00 UTC
for/pour

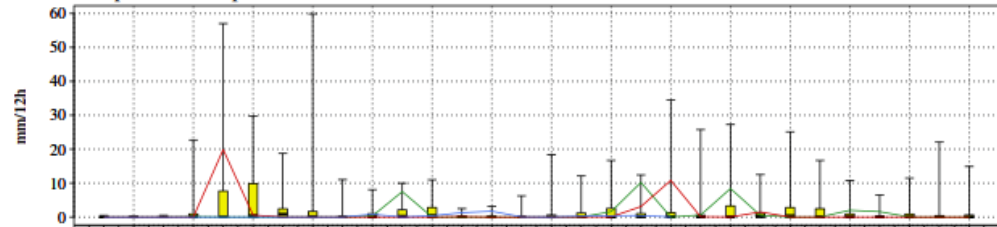
NAEFS / SPENA

FREDERICTON (YFC) 45.87 N 66.53 W/O
Surface air temperature/Température de l'air à la surface

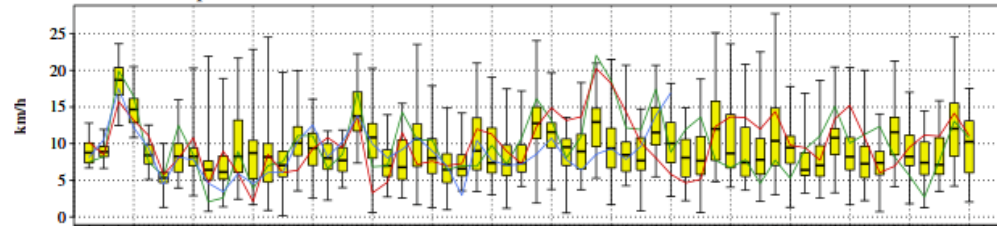
August
Normal high: 24.8C
Normal low: 12.1C



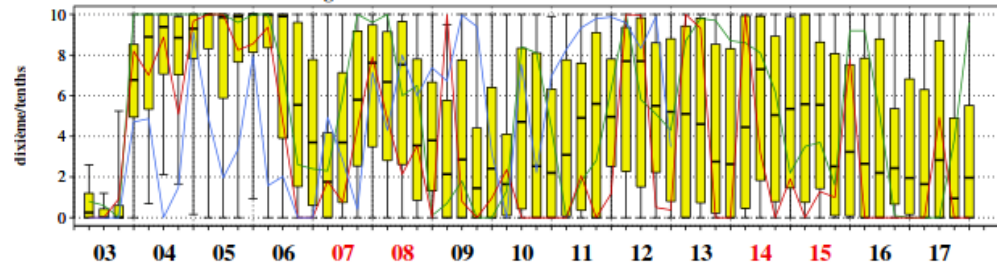
Précipitations/Precipitation



Surface wind speed/Vitesse du vent à la surface



Total cloud cover/Couvert nuageux



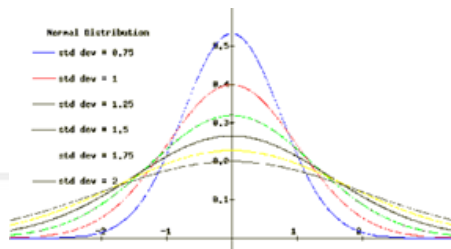
August/Août 2021

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

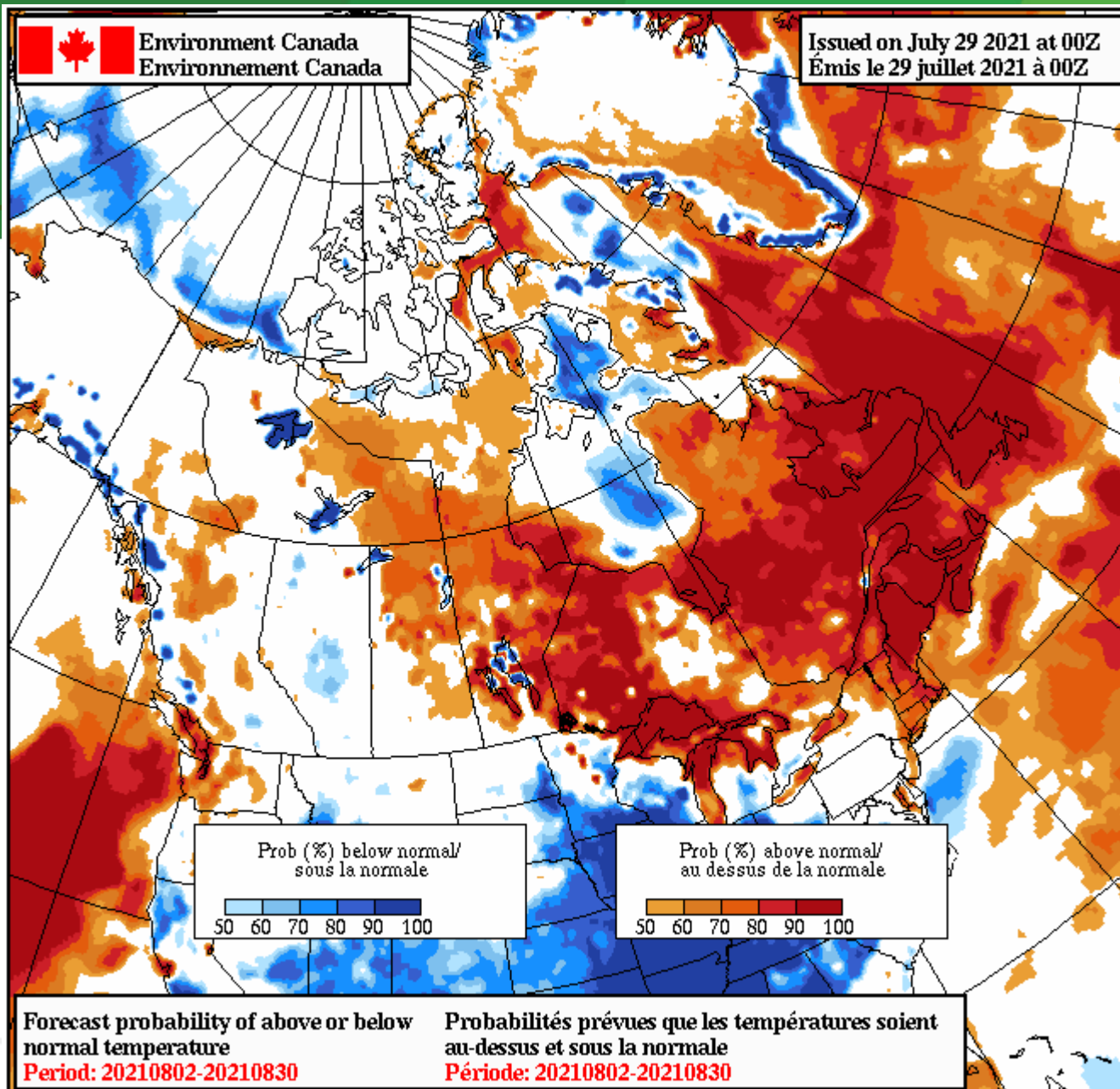
max
75%
median/médiane
25%
min

Next 15 days; ending
August 17, 2021

Generally suggesting near normal with above normal minimum temperatures until near mid-period then lots of variability for the remainder of the period.



Temperature August 2 to August 30



CMC
Monthly
Forecast
Product
using GEPS
50km res.

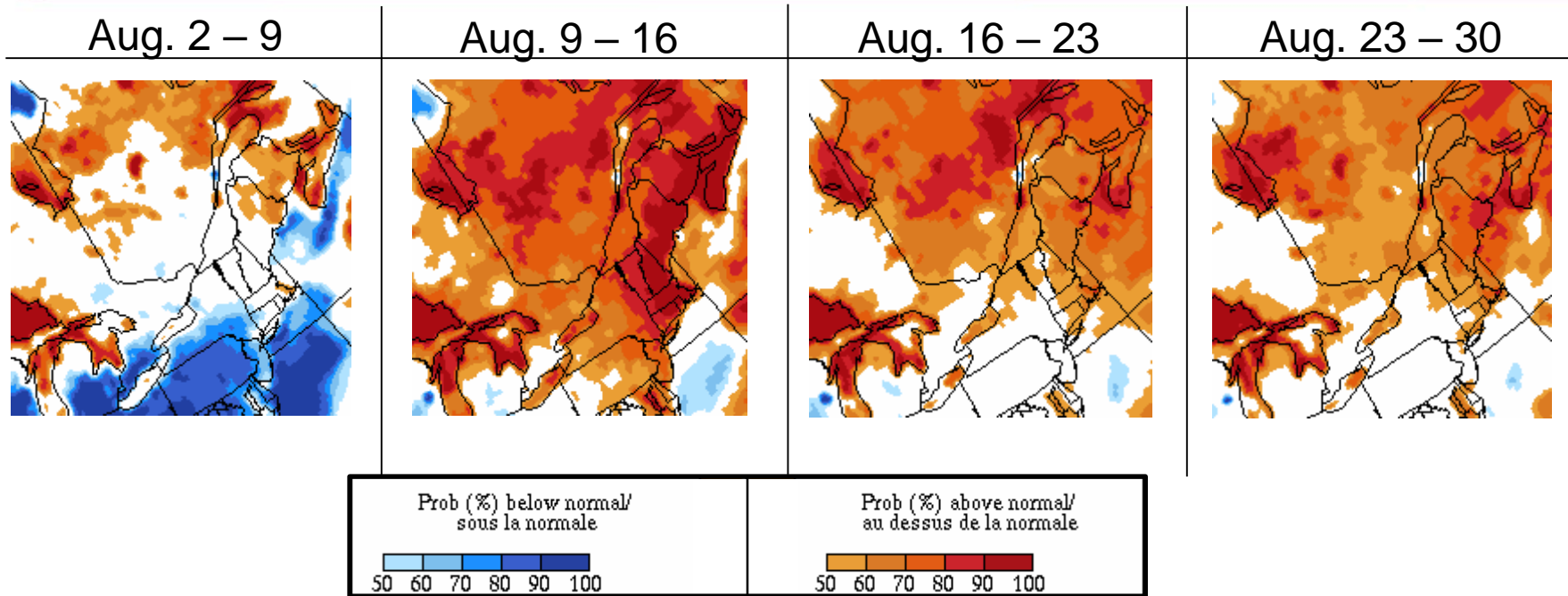


Environment and
Climate Change Canada

Environnement et
Changement climatique Canada

Canada

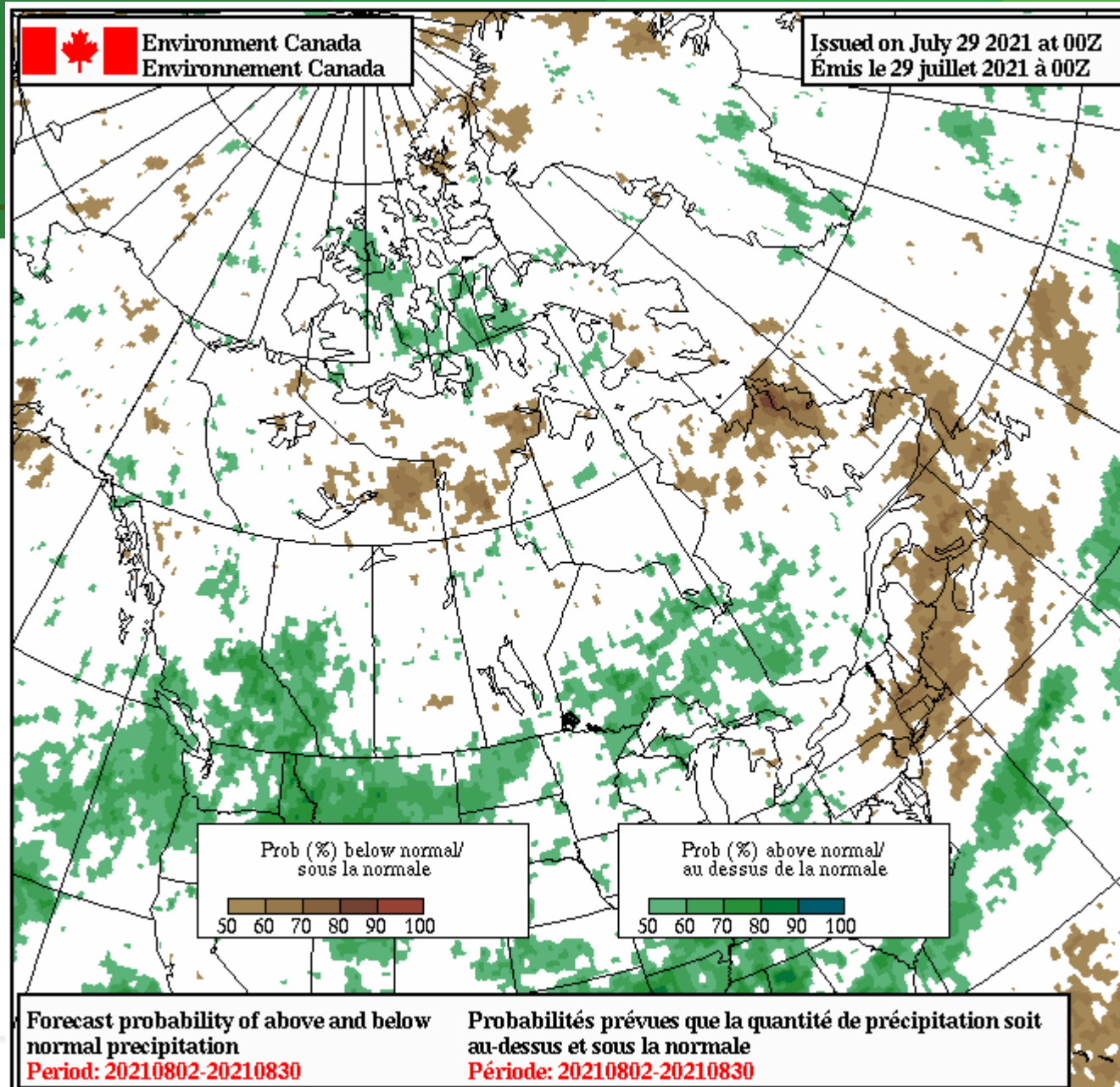
Weekly signature from GEPS 50km resolution



Generally, a weak to moderate signal for above normal for the period with the strongest signal for above normal during the second week.

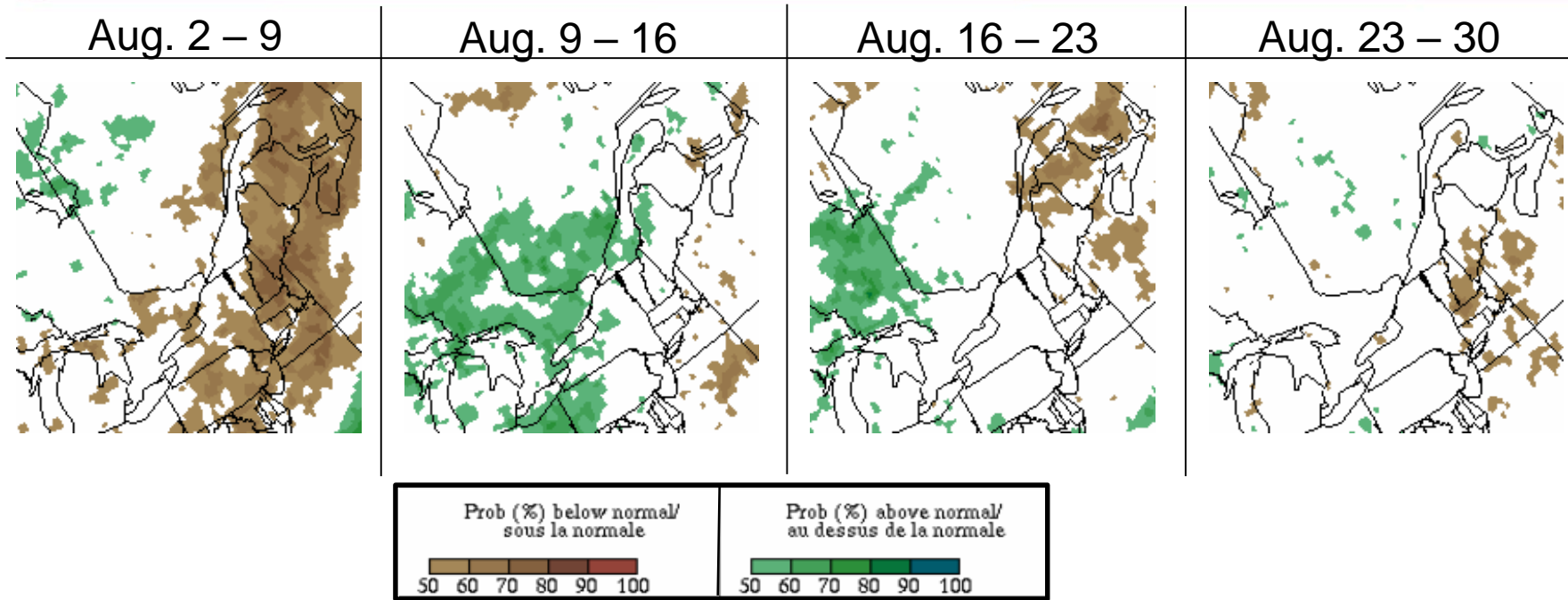


Precipitation August 2 to August 30



CMC
Monthly
Forecast
Product
using GEPS
50km res.

Weekly signature from GEPS 50km resolution



Alternating indications of below or near normal (no signal) for the period.

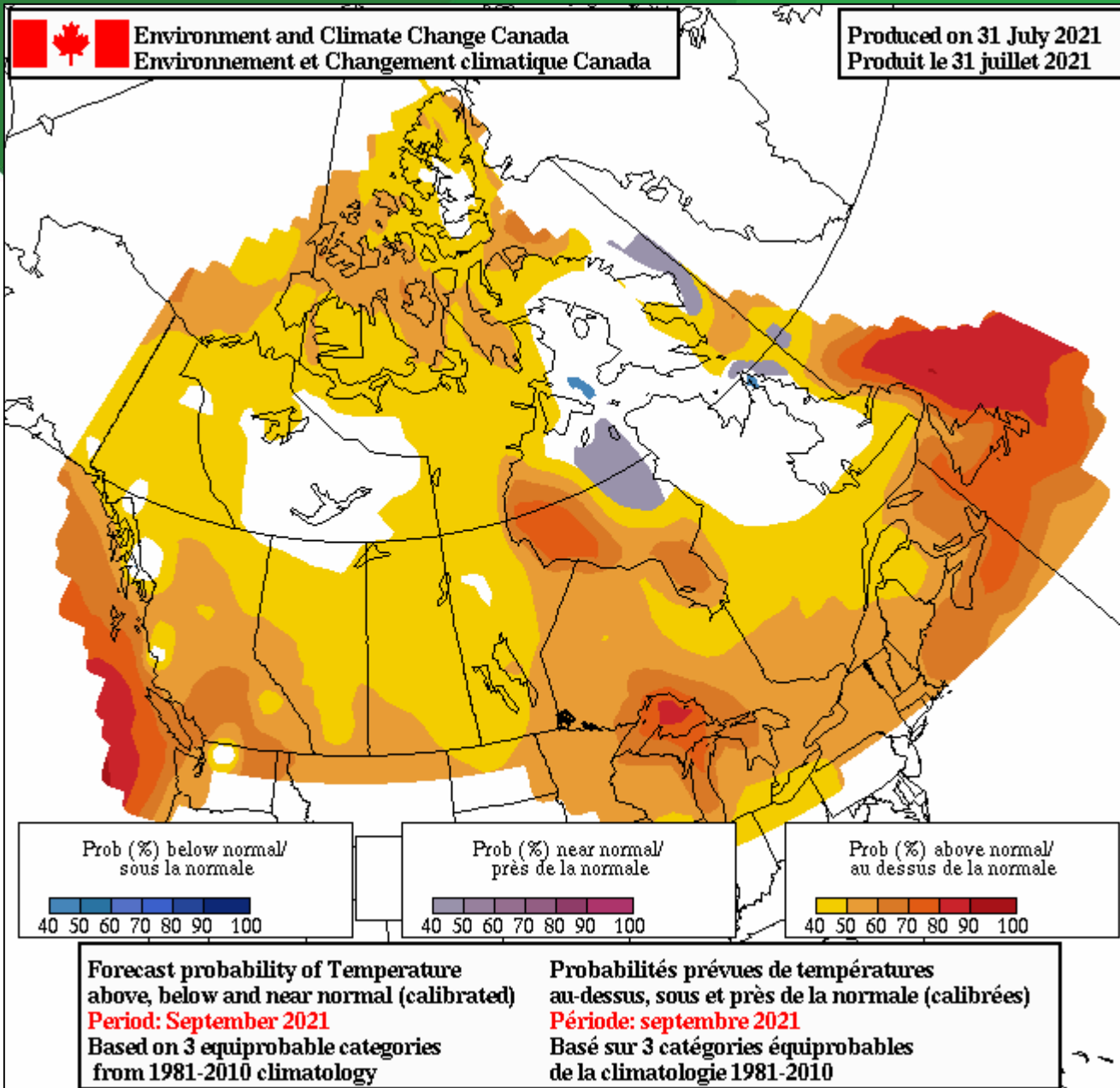




Environment and Climate Change Canada
Environnement et Changement climatique Canada

Produced on 31 July 2021
Produit le 31 juillet 2021

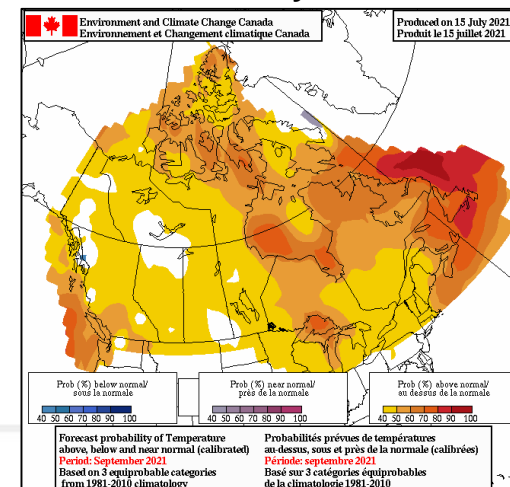
Temperature September 2021



CanSIPS
(Canadian Seasonal and
Interannual Prediction
System)

CanAM3
CanAM4
+
CanOM4

Produced July 15



Environment and
Climate Change Canada

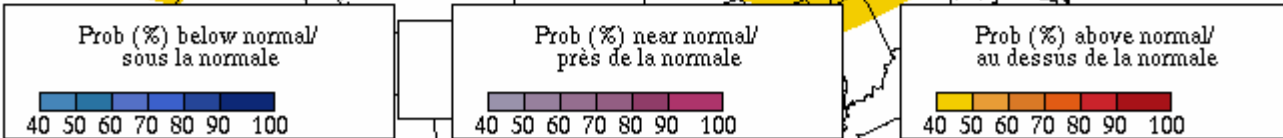
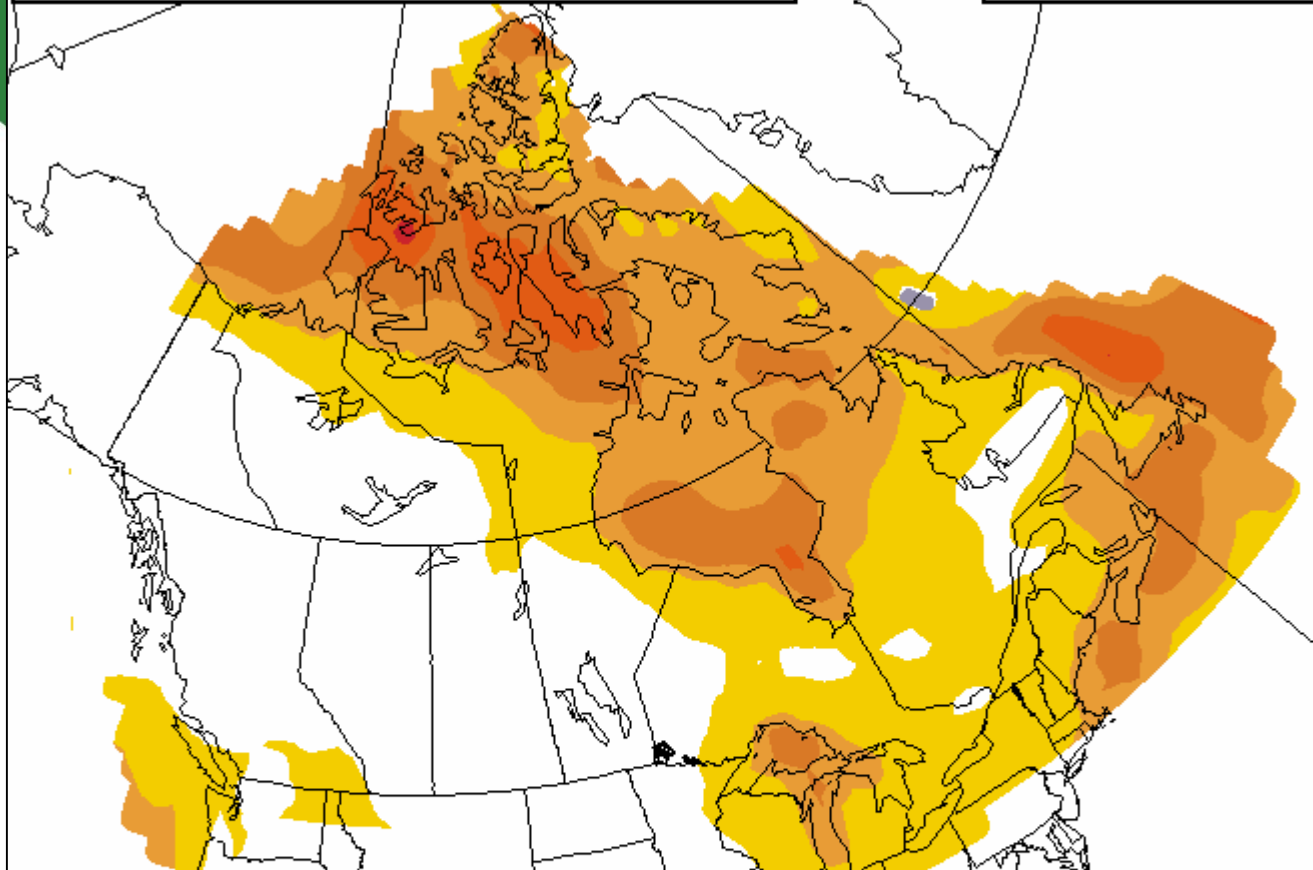
Environnement et
Changement climatique Canada

Canada



Environment and Climate Change Canada
Environnement et Changement climatique Canada

Produced on 31 July 2021
Produit le 31 juillet 2021

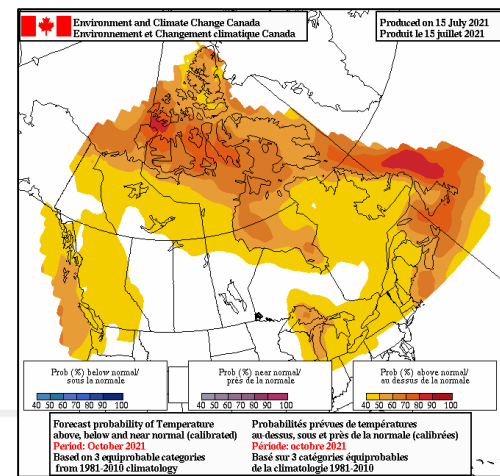


<p>Forecast probability of Temperature above, below and near normal (calibrated) Period: October 2021 Based on 3 equiprobable categories from 1981-2010 climatology</p>	<p>Probabilités prévues de températures au-dessus, sous et près de la normale (calibrées) Période: octobre 2021 Basé sur 3 catégories équiprobables de la climatologie 1981-2010</p>
---	--

Temperature October 2021

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

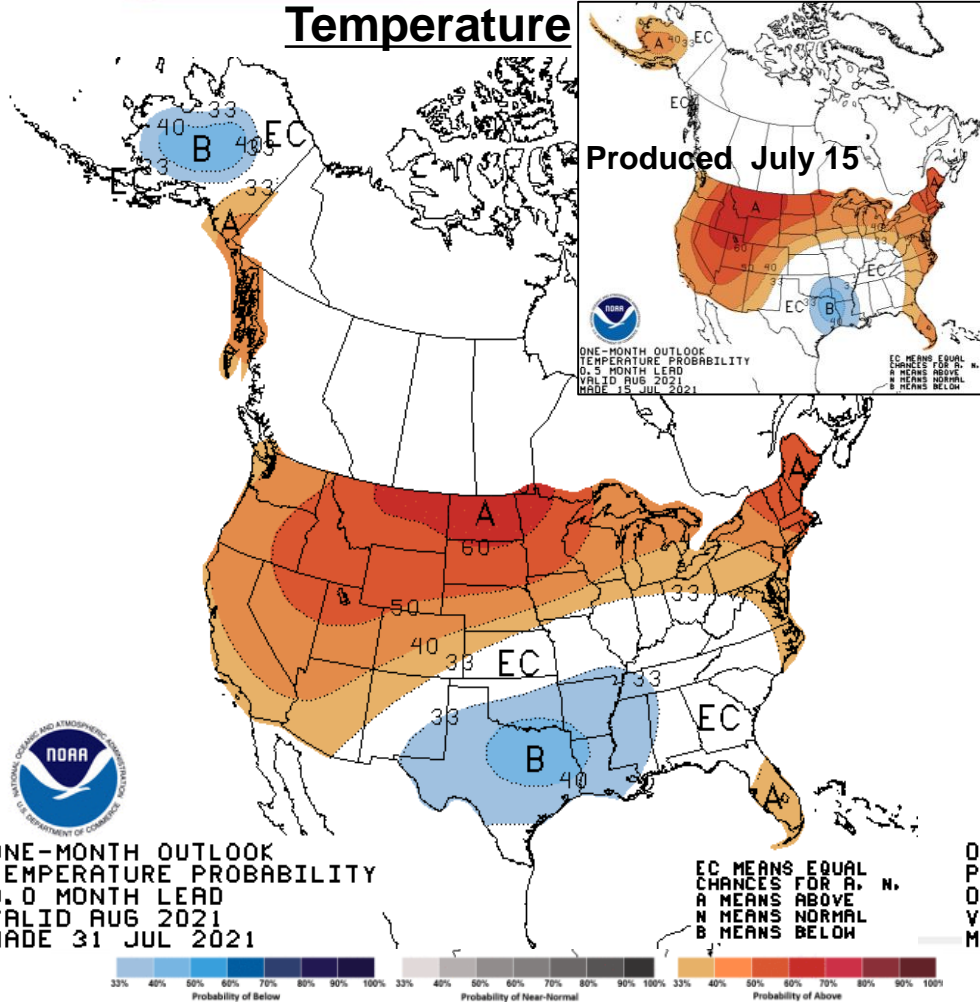
Produced July 15



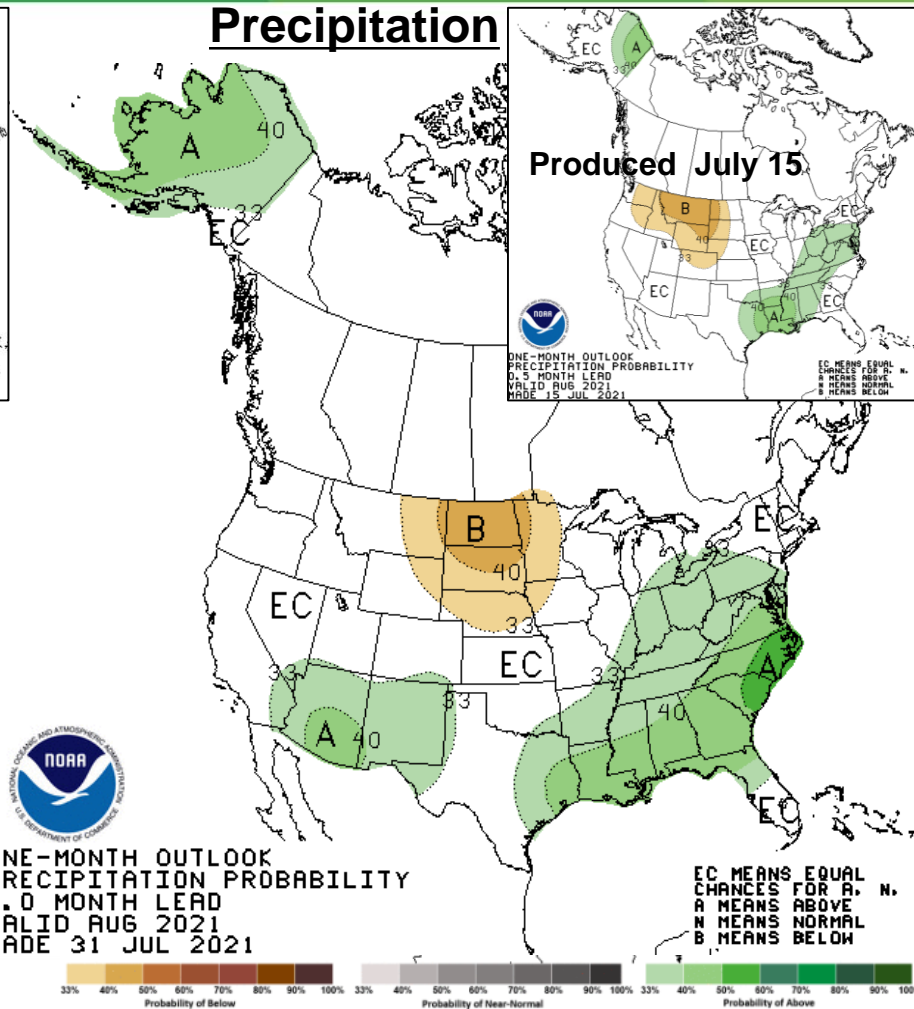


August 2021

Temperature



Precipitation



ONE-MONTH OUTLOOK
TEMPERATURE PROBABILITY
0.0 MONTH LEAD
VALID AUG 2021
MADE 31 JUL 2021

ONE-MONTH OUTLOOK
PRECIPITATION PROBABILITY
0.0 MONTH LEAD
VALID AUG 2021
MADE 31 JUL 2021



Environment and
Climate Change Canada

Environnement et
Changement climatique Canada

Canada

Contact

Jill Maepea

Warning Preparedness Meteorologist

jill.maepea@ec.gc.ca

Environment and Climate Change
Canada Weather Pages

www.weather.gc.ca

