



Environment and
Climate Change Canada

Environnement et
Changement climatique Canada

Canada

New Brunswick

December 2018 Review January 2019 and Winter Outlook

**Jill Maepea
Meteorological Service of Canada
Environment and Climate Change Canada
January 4, 2019**

December 2018; Climate Summary

Station Name	Prov	TC ID	Station Type	Mean Temperature (°C)			Total Precip (mm)			
				Monthly Mean	Normal Mean	Departure from Normal	Monthly Total	Normal Total	Total as % of Normal	Departure from Normal as % of Normal
AROOSTOOK	NB		DAILY	-8.3	-7.6	-0.7	118.6	89.7	132	32
BAS CARAQUET	NB	WXS	AU8	-6.1	-6.0	-0.1				
BAS CARAQUET	NB		DAILY				89.8	112.6	80	-20
BATHURST A	NB	ZBF	NCA	-8.7	-6.0	-2.7	46.8	98.4	48	-52
BOUCTOUCHE CDA CS	NB	ABT	AU8	-6.8	-5.1	-1.8	97.9	101.1	97	-3
CHARLO AUTO	NB	ZCR	AU8	-8.4	-7.9	-0.4	64.1	79.6	81	-19
MIRAMICHI RCS	NB	ACQ	AU8	-7.3	-6.2	-1.0	59.5	85.3	70	-30
DOAKTOWN AUTO RCS	NB	ADN	AU8	-7.5	-6.4	-1.2	85.2	96.7	88	-12
FREDERICTON INTL A	NB	YFC	NCA	-6.4	-5.7	-0.7	100.8	94.9	106	6
FREDERICTON CDA CS	NB	AFC	AU8	-6.2	-5.3	-0.9	111.5	91.8	122	22
FUNDY PARK (ALMA) CS	NB	AFY	AU8	-4.8	-3.3	-1.5	140.3	146.6	96	-4
GAGETOWN AWOS A	NB	YCX	AU5	-6.2	-4.4	-1.8	97.5	98.4	99	-1
GRAND MANAN SAR CS	NB	XGM	AU8	-3.6			184.9			
KOUCHIBOUGUAC	NB	AKC	AU8	-7.0	-6.2	-0.8	79.0	125.4	63	-37
MECHANIC SETTLEMENT	NB	AMS	AU8	-7.0			178.3			
MISCOU ISLAND (AUT)	NB	WMI	AU8	-5.3						
MONCTON INTL A	NB	YQM	NCH	-5.9	-4.8	-1.1	83.4	114.4	73	-27
OAK POINT	NB		DAILY	-4.9	-4.4	-0.5	157.1	98.4	160	60
POINT LEPREAU CS	NB	WPE	AU8	-3.3	-3.4	0.1	119.7	132.0	91	-9
RED PINES	NB	ARP	AU8	-8.9	-7.2	-1.7	68.6	87.4	79	-21
SAINT JOHN A	NB	YSJ	NCH	-5.5	-4.4	-1.1	156.0	130.4	120	20
ST. STEPHEN	NB	WSS	AU8	-5.2			123.7			
SUSSEX FOUR CORNERS	NB	ASF	AU8	-5.8	-4.5	-1.3	79.6	105.6	75	-25
WOODSTOCK	NB		DAILY	-7.6	-7.0	-0.6	84.8	103.2	82	-18
WOODSTOCK NEWBRIDGE	NB	EWD	AU8	-7.9	-7.0	-0.9	86.6	103.2	84	-16
Average				-6.4	-5.6	-1.0	104.9	104.7	92	-8
Max				-3.3	-3.3	0.1	184.9	146.6	160	60
Min				-8.9	-7.9	-2.7	46.8	79.6	48	-52

Highlights:

The average temperature was below normal (-1.0C below normal). All sites reported a negative anomaly (with the exception of Point Lepreau) and Bathurst recorded the largest negative anomaly at a temperature of -2.7C below their normal average.

Total precipitation amounts were slightly below normal, with an average of 92% of total precipitation. The province was drier in the east and wetter in the west. Bathurst was the driest and was just shy of receiving half of their normal precipitation while Oak Point saw over 1.5 times their normal precipitation for the month. Despite being cooler than normal, there was more rain than snow (128% vs 85%) recorded due to the event on Dec. 21-22.



December 2018; Climate Summary

Events:

Dec. 2-3; A low pressure system brought snow, freezing precipitation and rain to the province. Northern portions of the province saw near 15cm of snow while the south recorded 20-40mm of rain.

Dec. 17-18; Winter storm; A system brought snow and blowing snow with the southern portion of the province receiving the most snow 15-25cm (Bouctouche 30cm saw the most) while northern sections saw generally 10-15cm.

Dec. 21-22; Warm and wet. Several sites saw record breaking maximum temperatures and combined with snowmelt and rain, led to some localized flooding. Rainfall ranged from 40-60mm with eastern sections receiving the least at around 10-20mm. The most rain was recorded at Mechanic Settlement with 103mm. The Campbellton area saw up to 5 hours of freezing rain before changing over to rain.

Dec. 28-29; Messy weather; A system brought a mix of precipitation with generally 5-12cm of snow across the province and 15-25mm of rain for the south, 2-5mm of rain for the north. Several sites also saw several hours of freezing rain during the changeover.

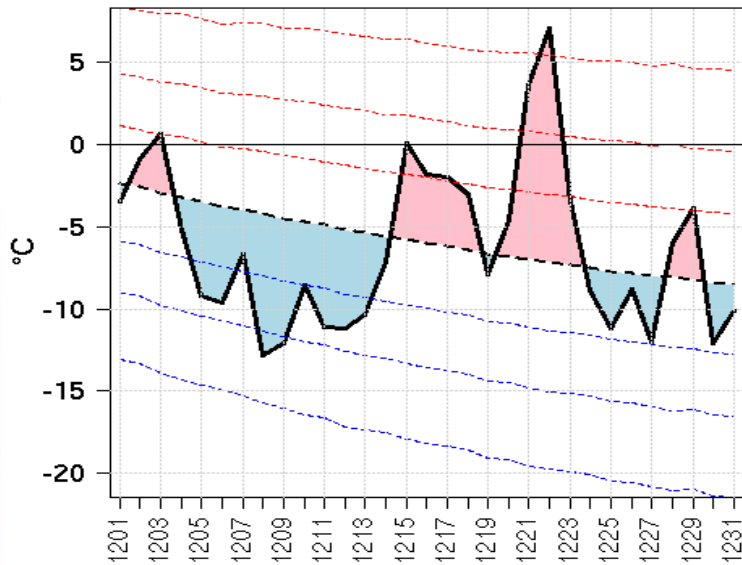
Days with thunderstorm activity (lightning) in New Brunswick; zero

Days with temperature records broken or tied in New Brunswick; 6 21 22
(red=maximum, blue=minimum)

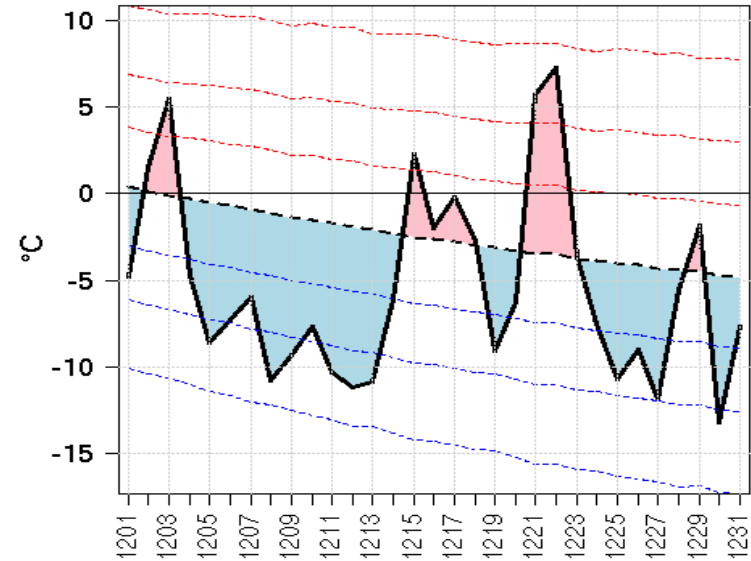


December 2018 - Temperature

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



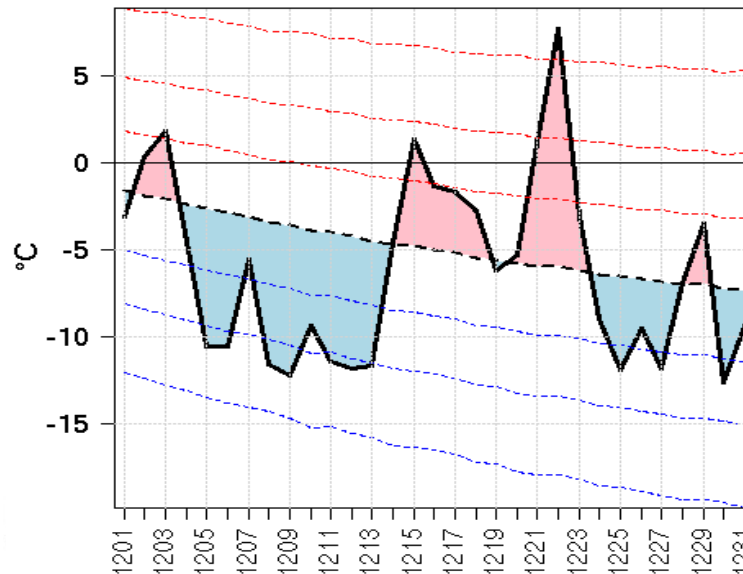
Fredericton (and area)



Saint John

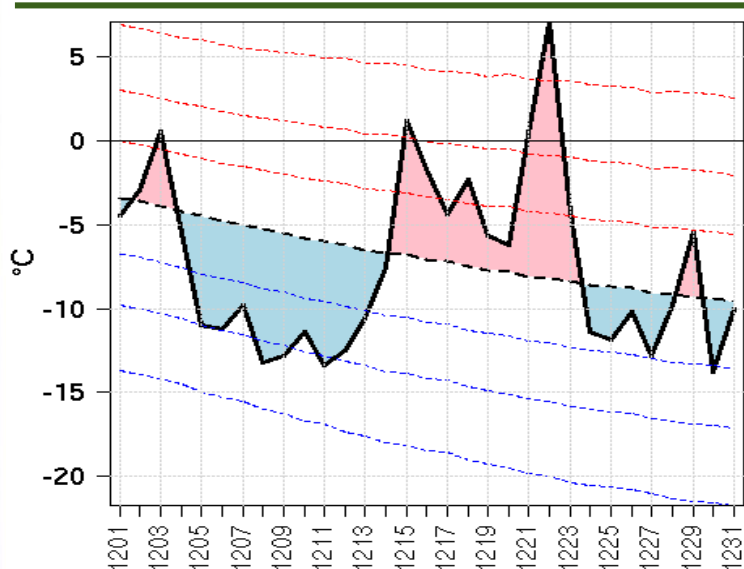
All sites were below normal

Moncton

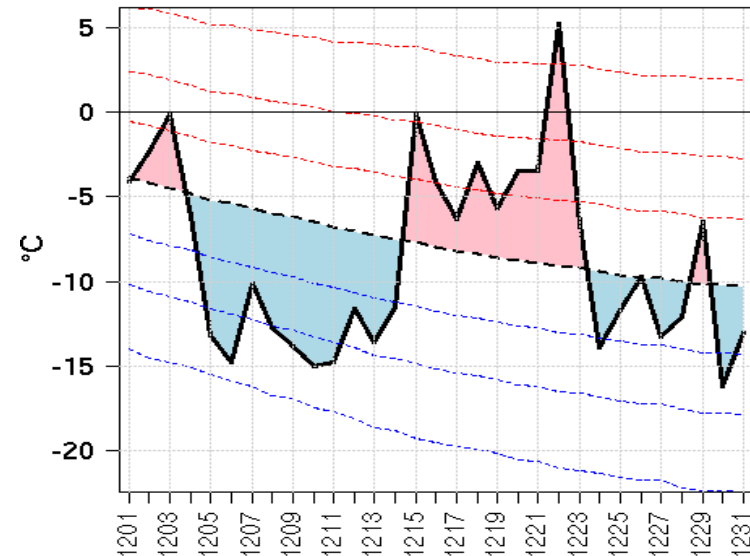


December 2018 - Temperature

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



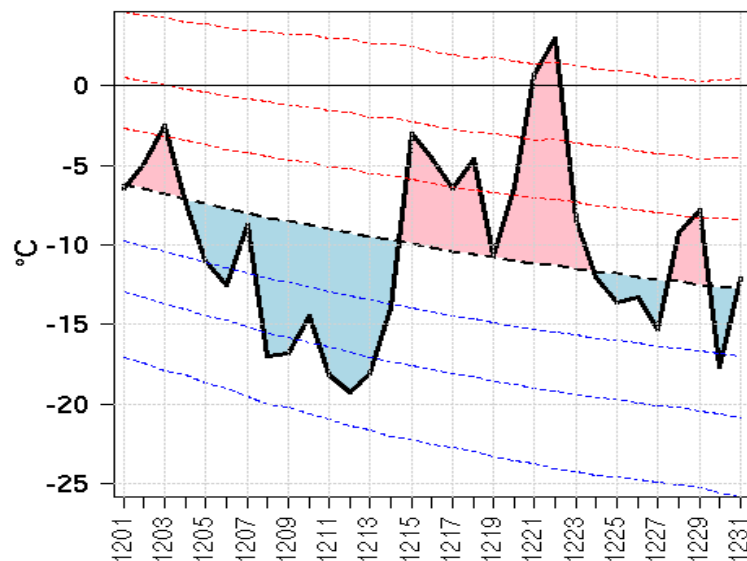
Miramichi



Bathurst

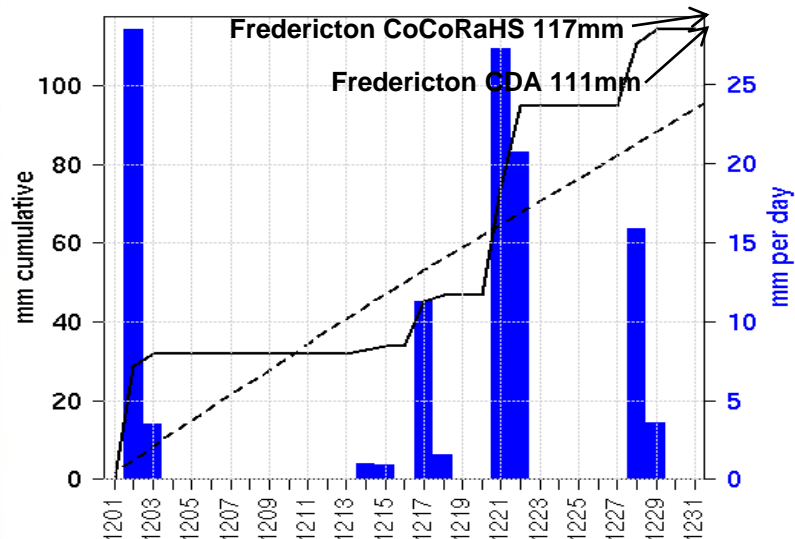
All sites were below normal

Edmundston



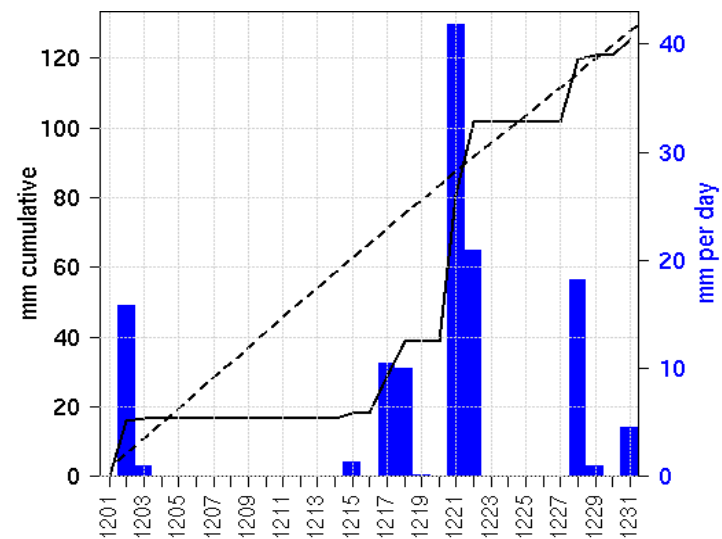
December 2018 - Precipitation

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



Fredericton (and area)

Fredericton was above normal

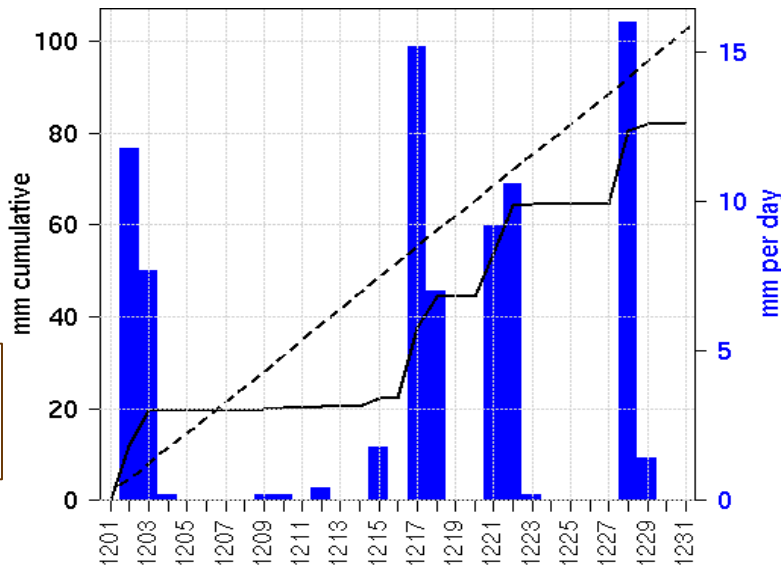


Saint John

Saint John was near normal

Moncton

Moncton was below normal

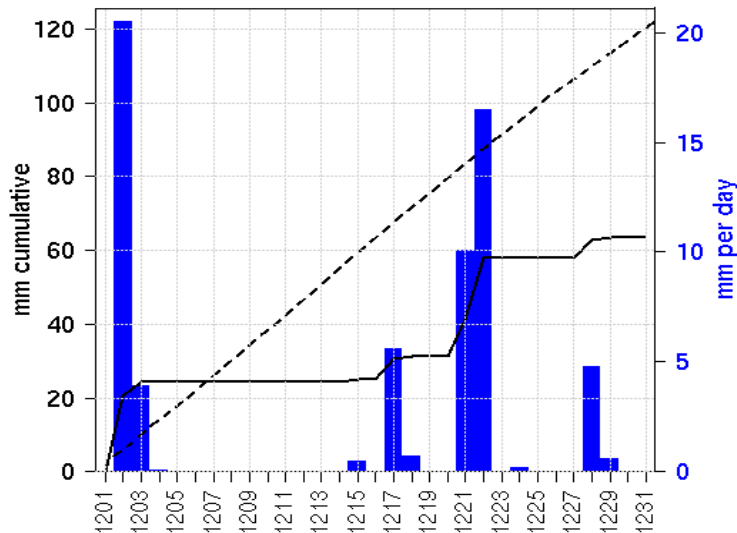


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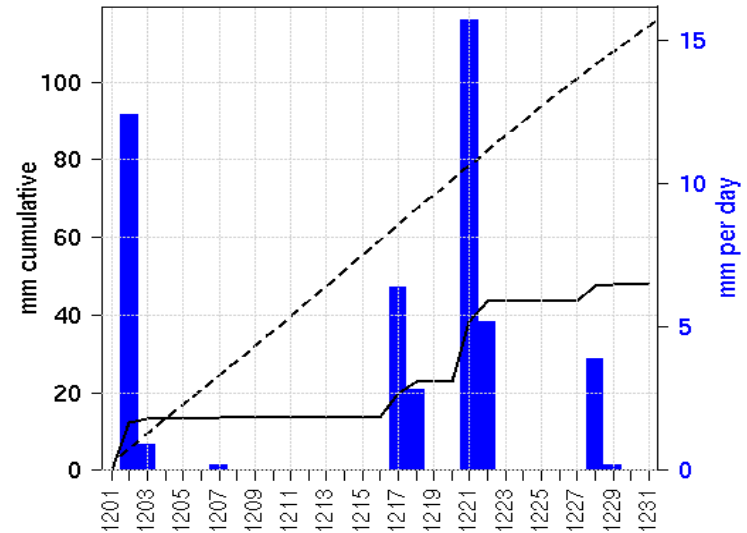
December 2018 - Precipitation

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



Miramichi

Miramichi was below normal

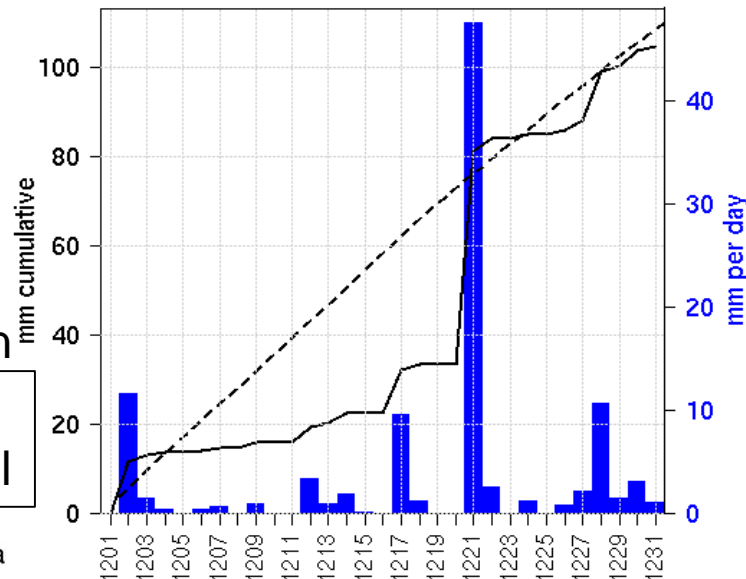


Bathurst

Bathurst was below normal

Edmundston

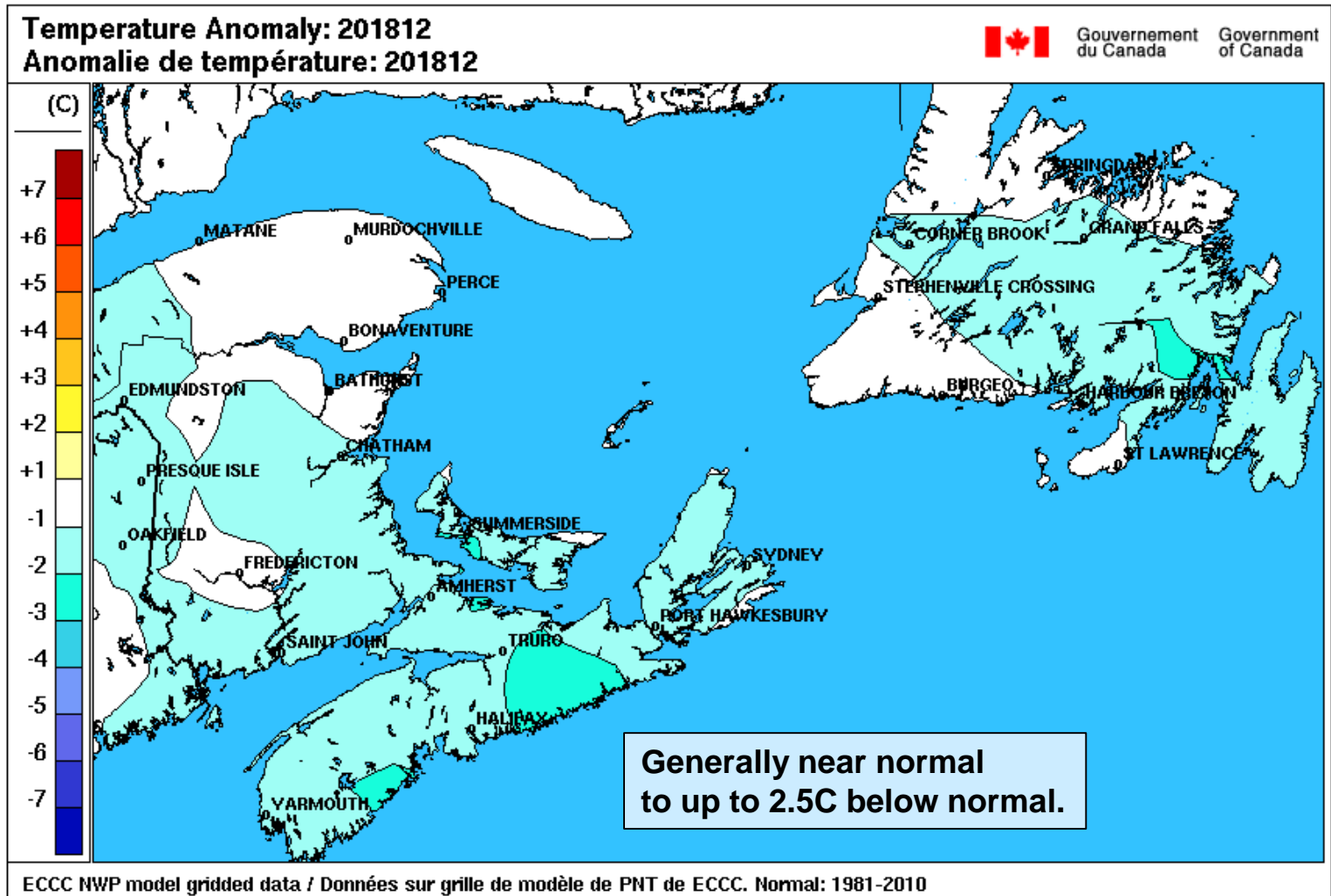
Edmundston was near normal



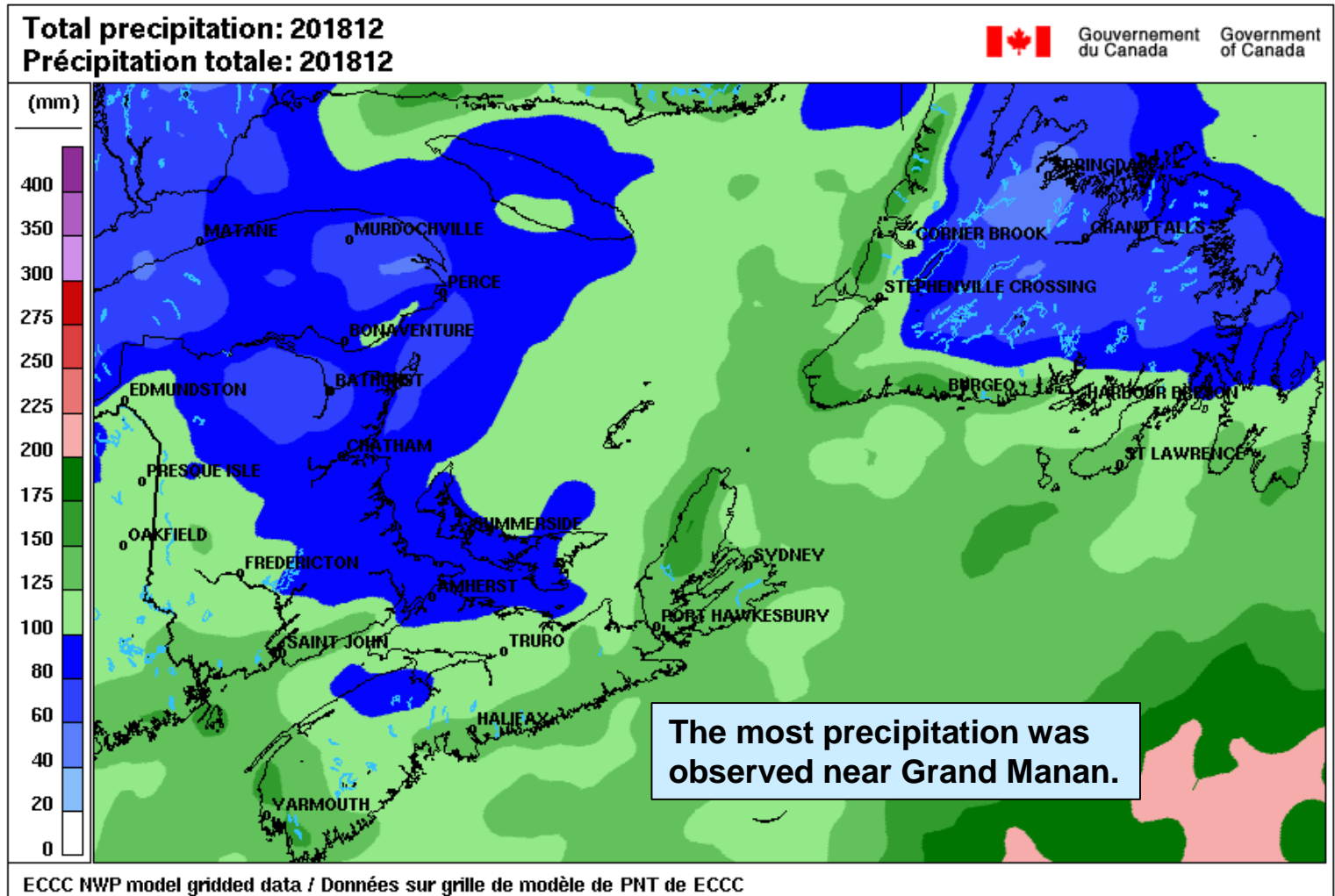
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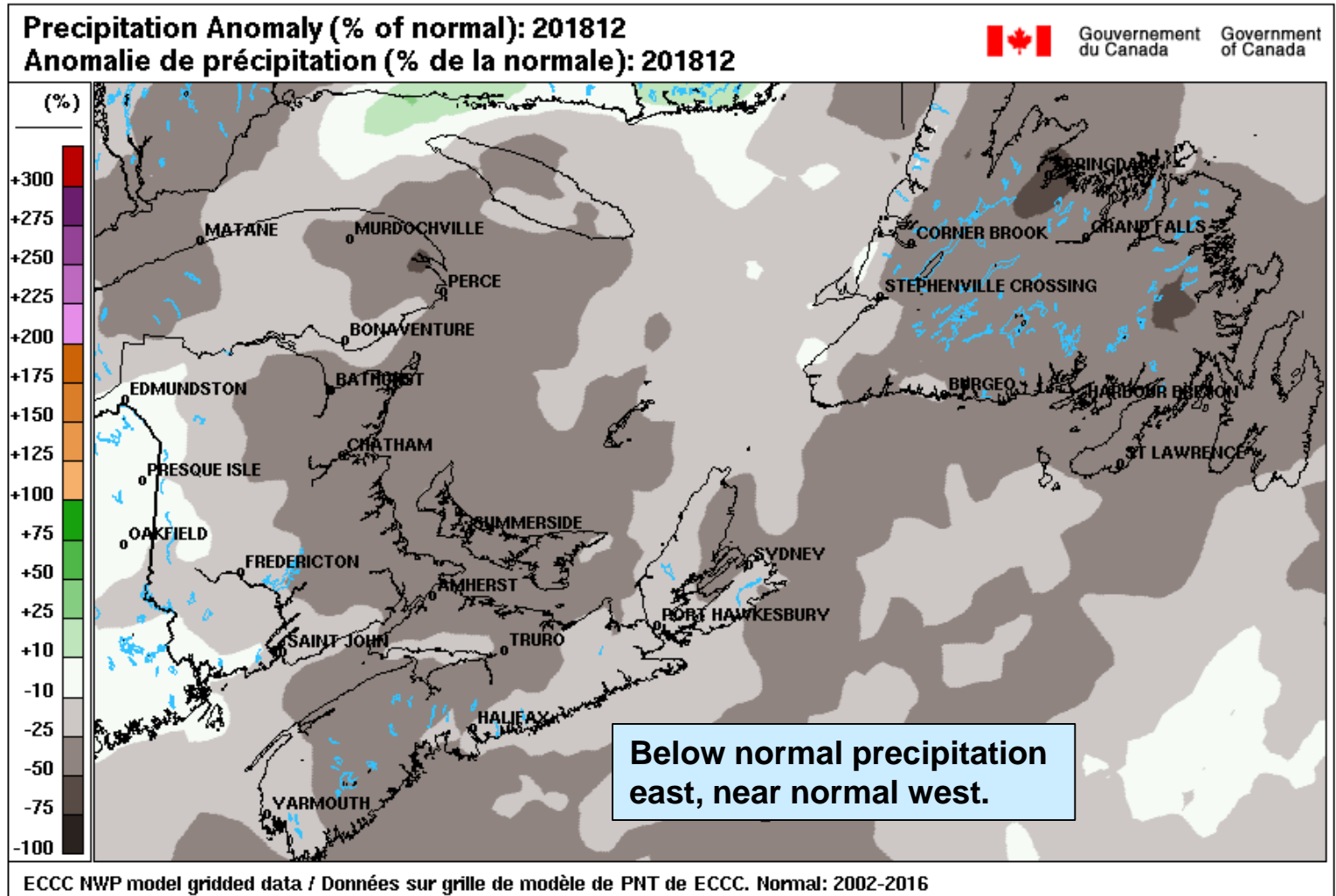
December 2018 Temperature departure from 1981-2010 mean.



December 2018 Total Precipitation

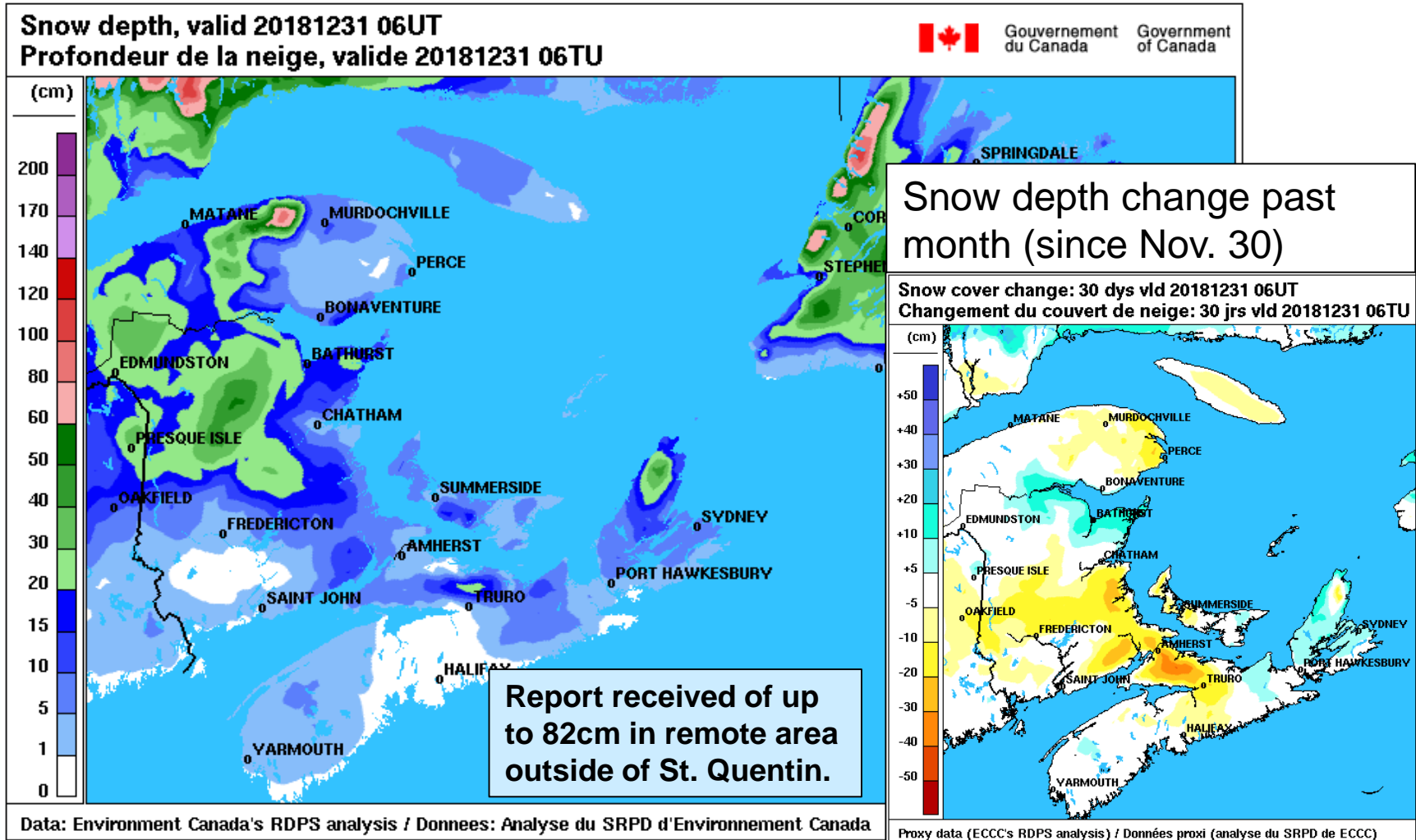


December 2018 Precipitation departure from 1981-2010 mean.



December 2018 Snow depth at month end

Extracted from Canadian computer model



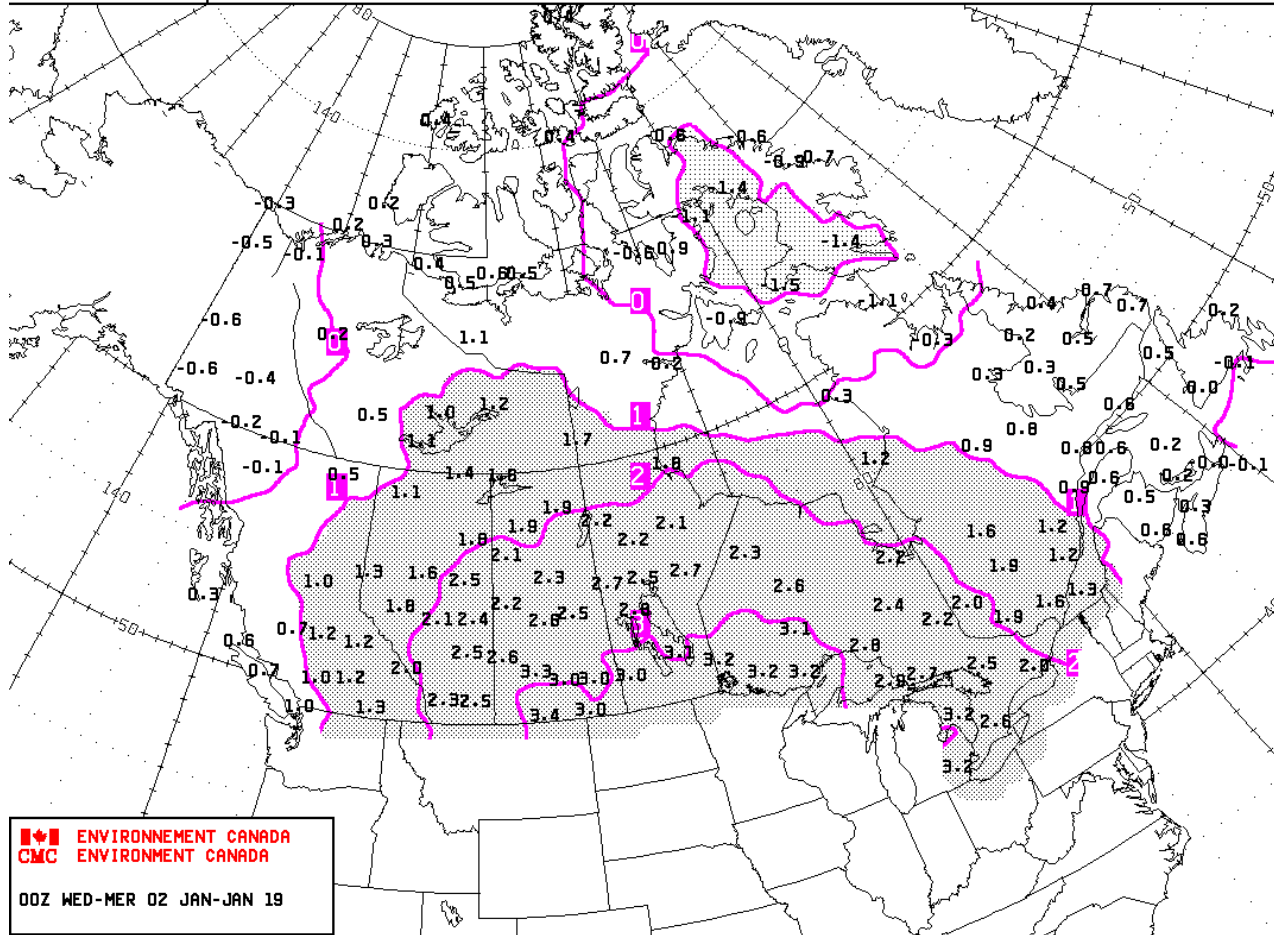
Outlook - 10 day mean temperature

(Suggesting slightly above normal conditions (+0.5C))

ENSEMBLE 20 GEM

10 DAY MEAN - MOYENNE SUR 10 JOURS

NORMALISED TEMPERATURE ANOMALY
ANOMALIE DE TEMPERATURE NORMALISEE



10 day
forecast
ending
January
12, 2019

ENVIRONNEMENT CANADA
CMC ENVIRONNEMENT CANADA

00Z WED-MER 02 JAN-JAN 19



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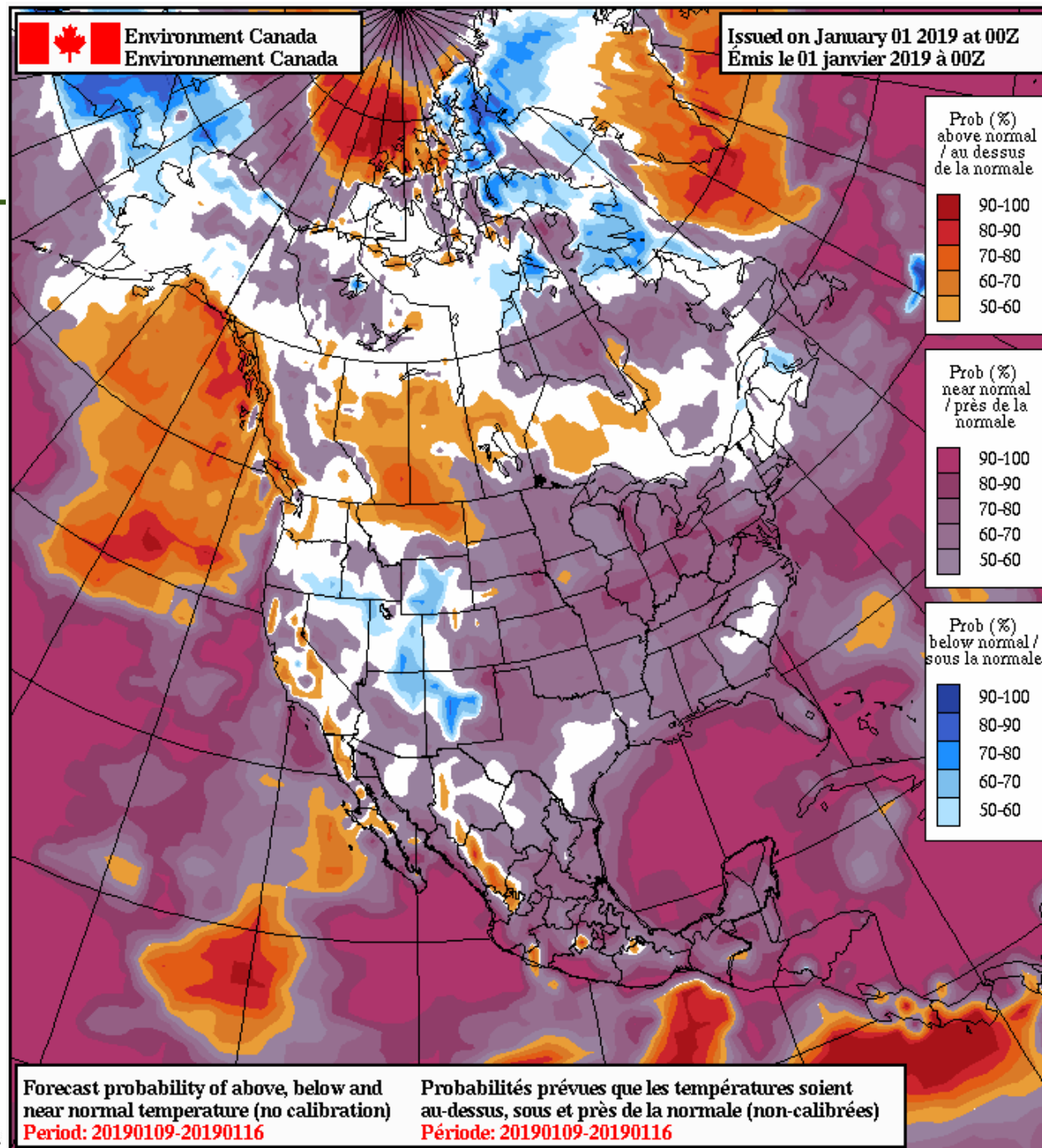
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Day 8 to 14 Forecast

Period ending
January 16, 2019

No conclusive
signal.





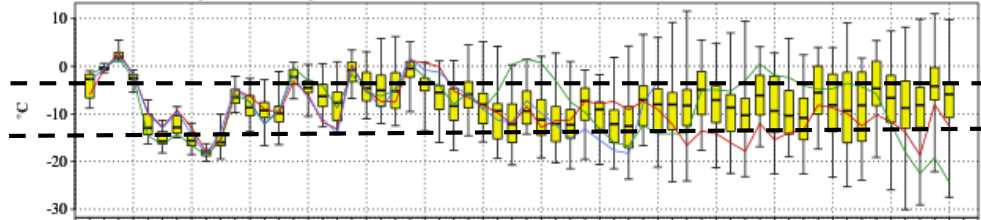
Fredericton

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

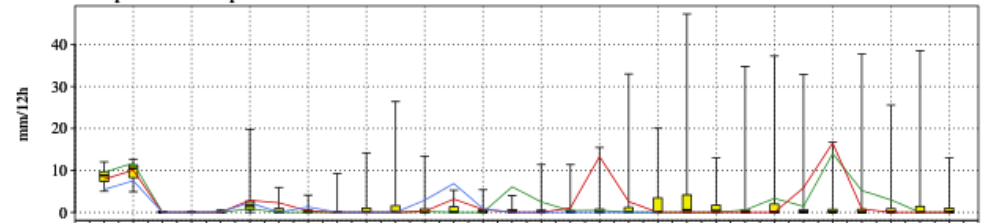
NAEFS / SPENA

FREDERICTON (YFC) 45.87 N 66.53 W/O

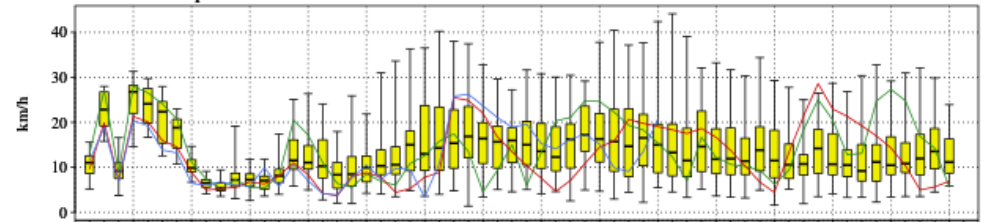
Surface air temperature/Température de l'air à la surface



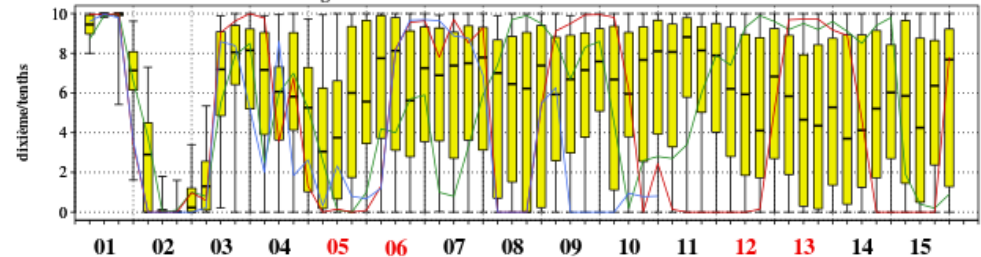
Précipitations/Precipitation



Surface wind speed/Vitesse du vent à la surface



Total cloud cover/Couvert nuageux



January/Janvier 2019

max
75%
median/médiane
25%
min

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

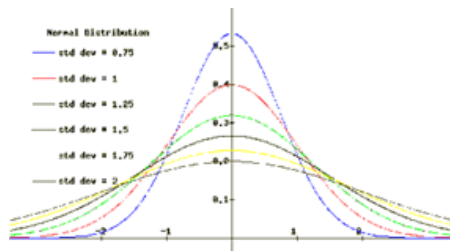
January

Normal high: -3.8C

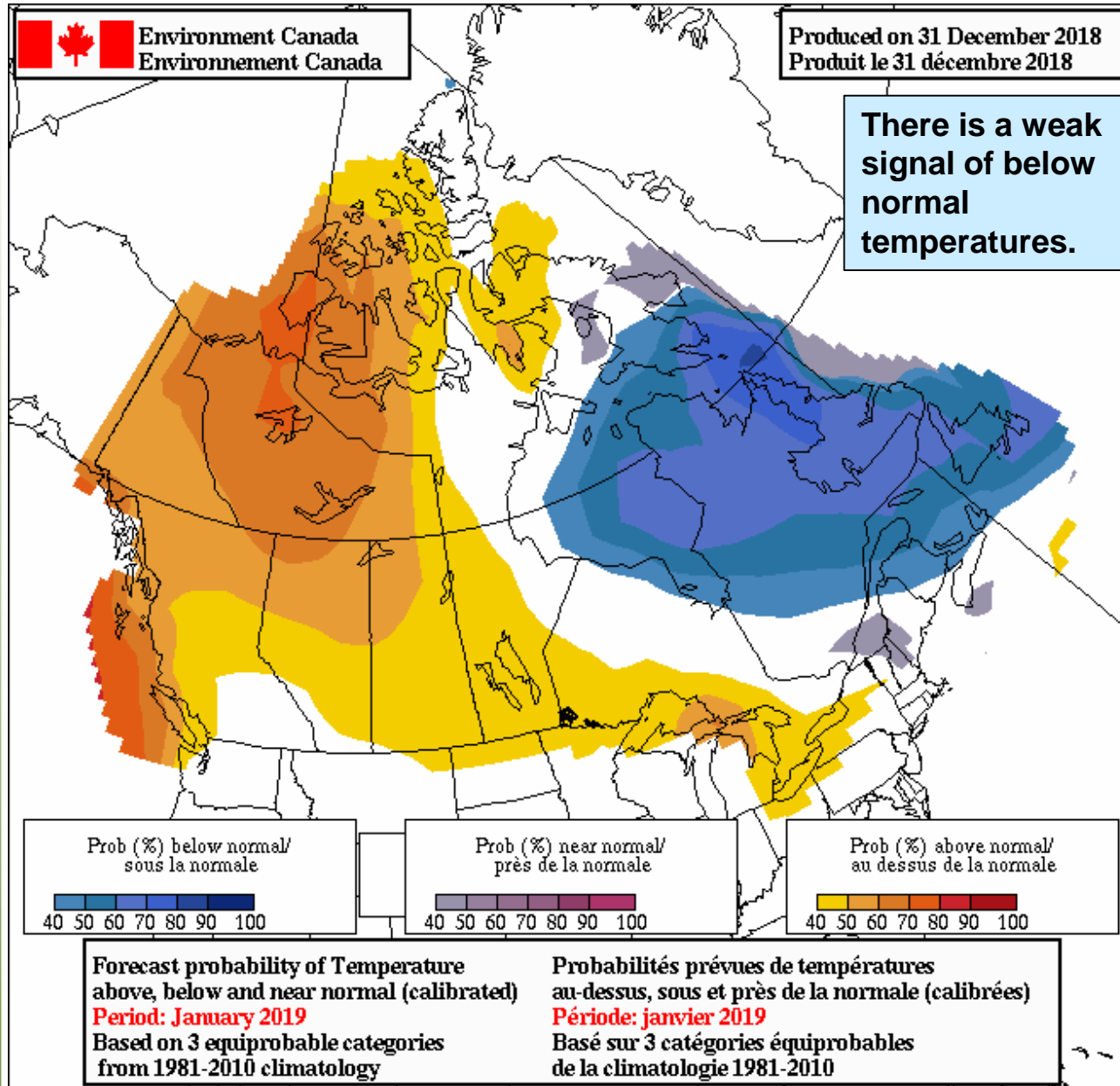
Normal low: -15.0C

**Next 15 days; ending
January 16, 2019**

For the first few days below normal, then above normal until the 7th, then no real agreement amongst the members for the remainder of the period.



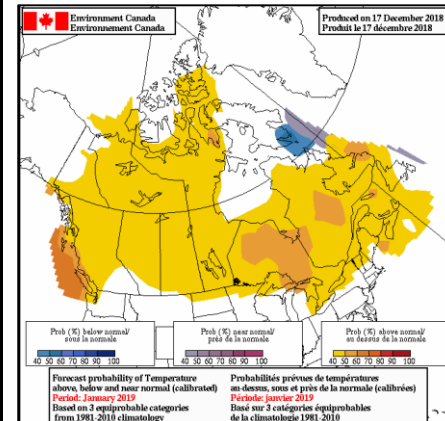
Temperature January 2019



CanSIPS
(Canadian Seasonal and
Interannual Prediction
System)

CanAM3
CanAM4
+
CanOM4

Produced December 17



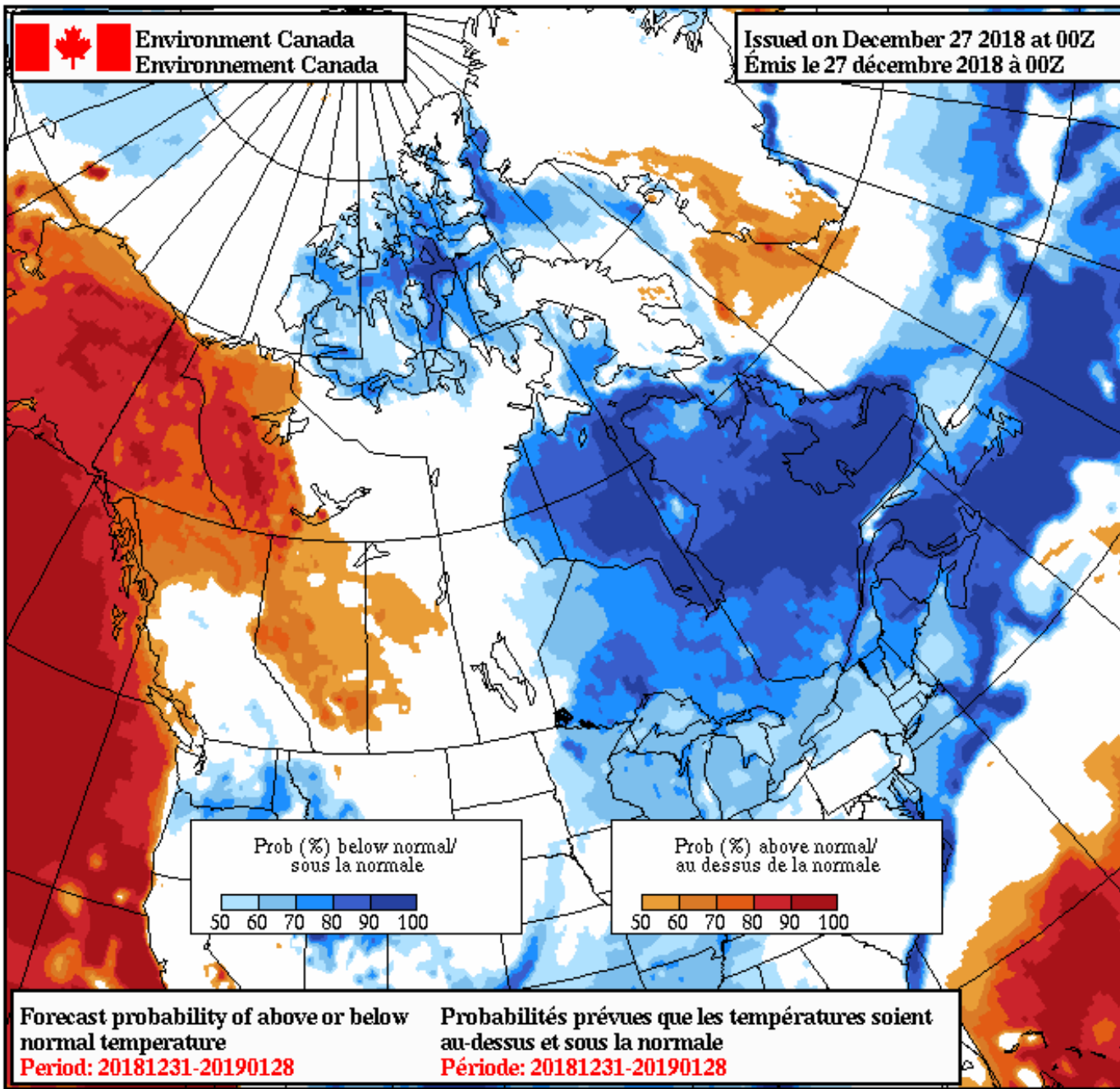
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Temperature December 31 to January 28

CMC
Monthly
Forecast
Product
using GEPS
50km res.



Prob (%) below normal/
sous la normale

50 60 70 80 90 100

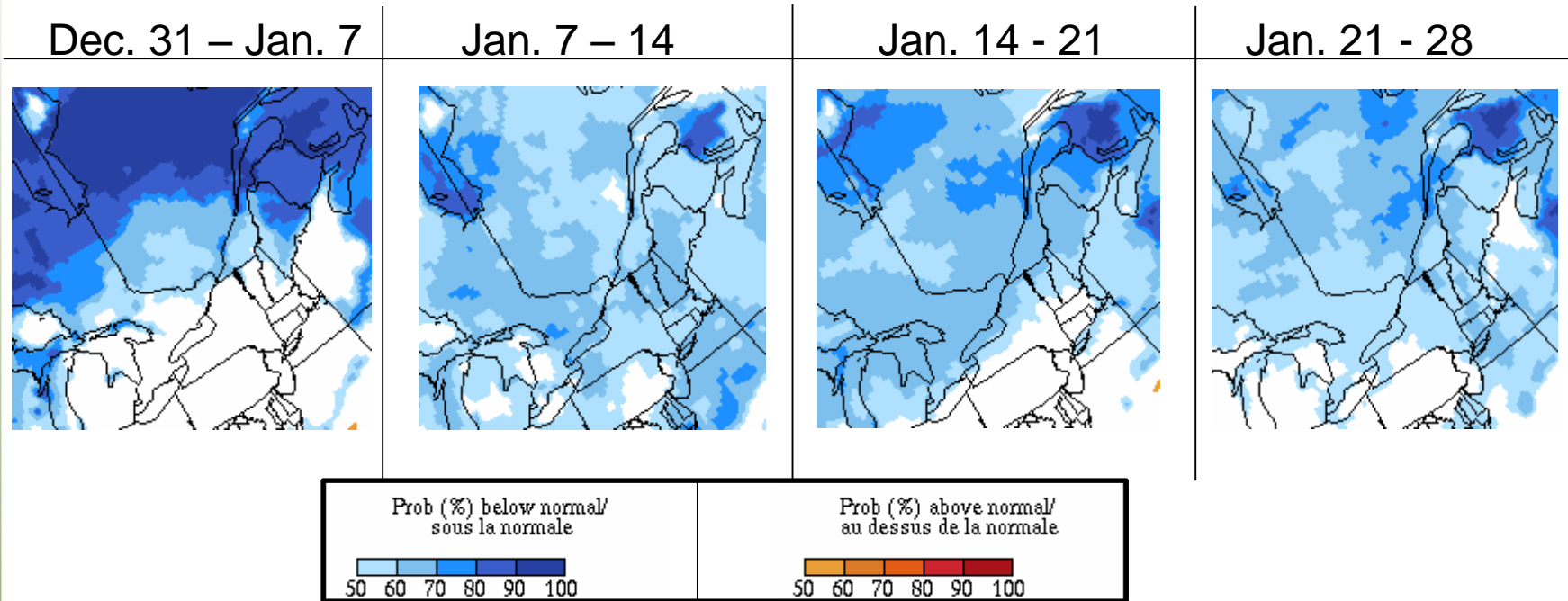
Prob (%) above normal/
au dessus de la normale

50 60 70 80 90 100

Forecast probability of above or below
normal temperature
Period: 20181231-20190128

Probabilités prévues que les températures soient
au-dessus et sous la normale
Période: 20181231-20190128

Weekly signature from GEPS 50km resolution



A strong signal of below normal for the first week then a weak to moderate signal of below normal for the remainder of the period.

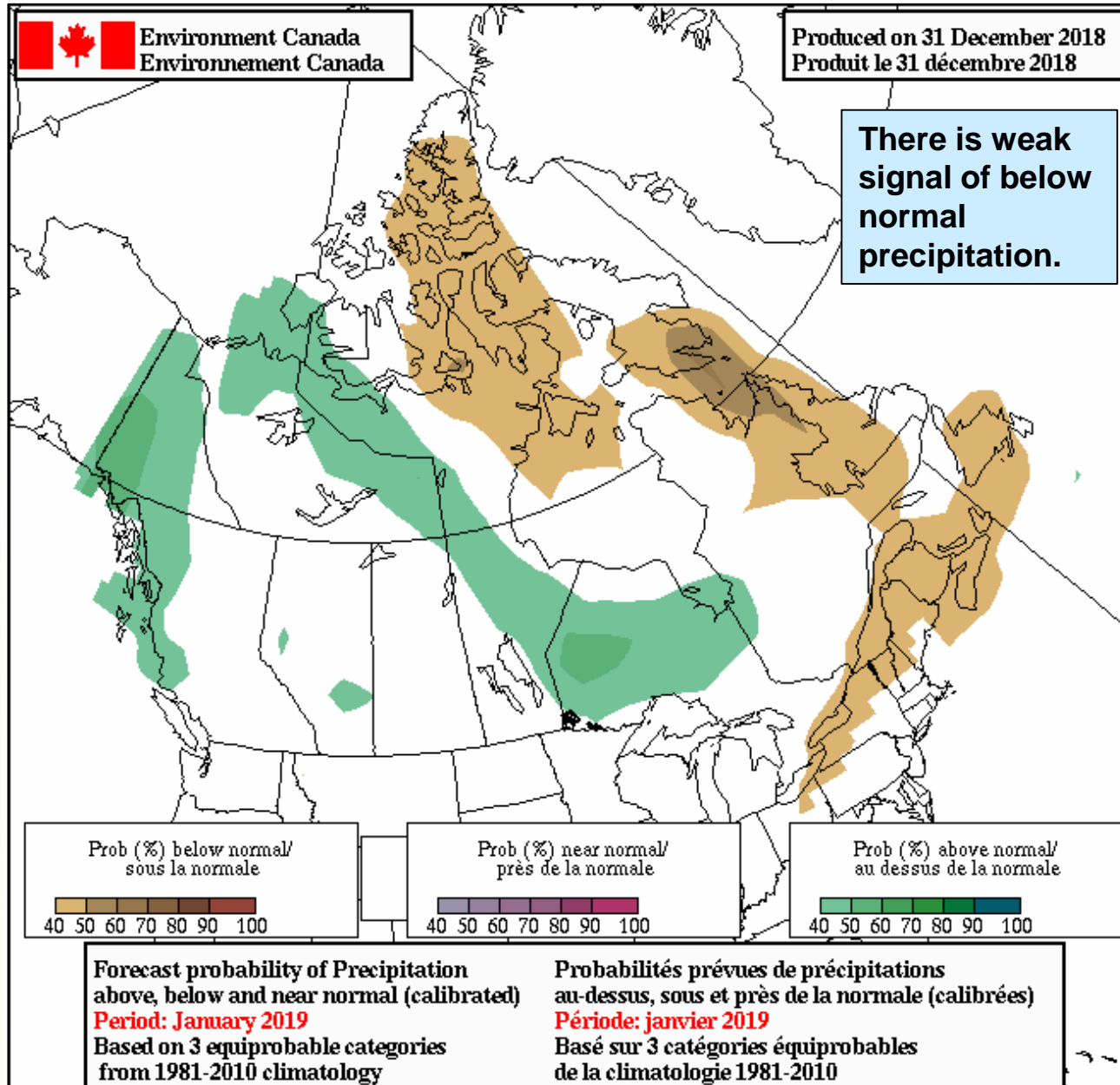
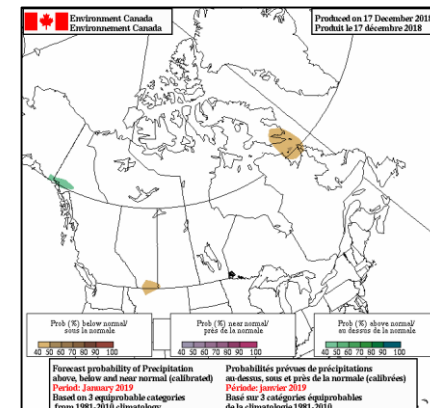


Precipitation January 2019

CanSIPS
(Canadian Seasonal and
Interannual Prediction
System)

CanAM3
CanAM4
+
CanOM4

Produced December 17



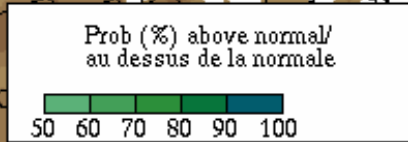
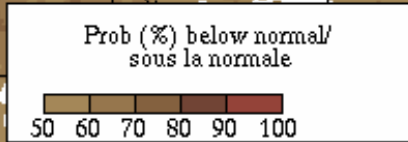
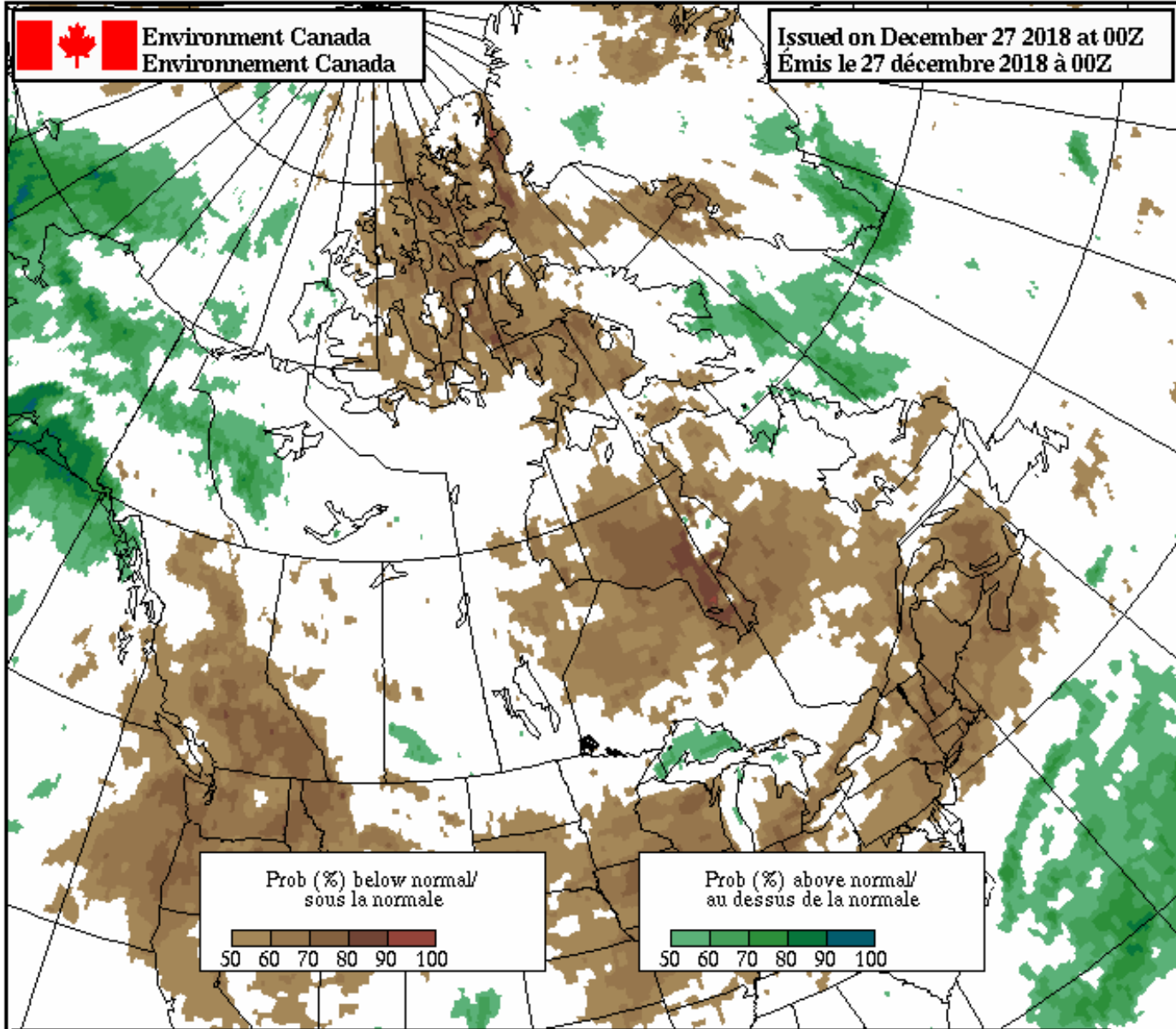
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Precipitation December 31 to January 28

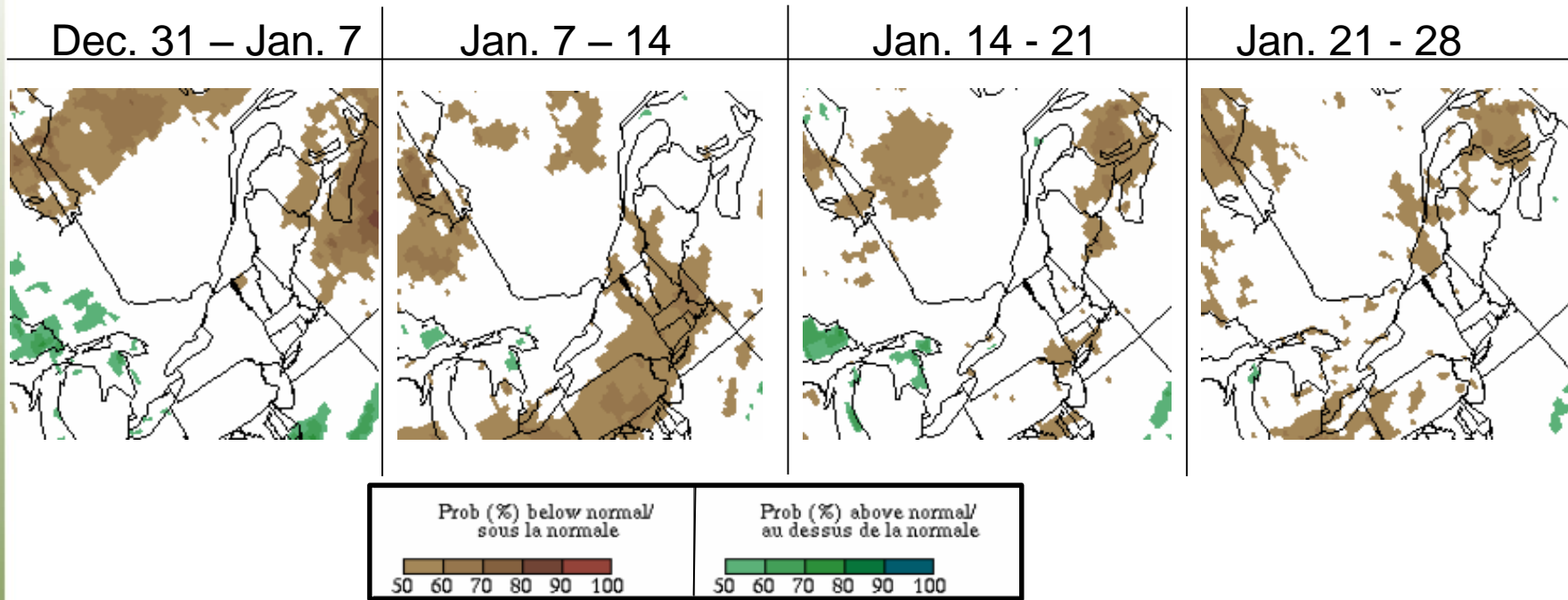
CMC
Monthly
Forecast
Product
using GEPS
50km res.



Forecast probability of above and below
normal precipitation
Period: 20181231-20190128

Probabilités prévues que la quantité de précipitation soit
au-dessus et sous la normale
Période: 20181231-20190128

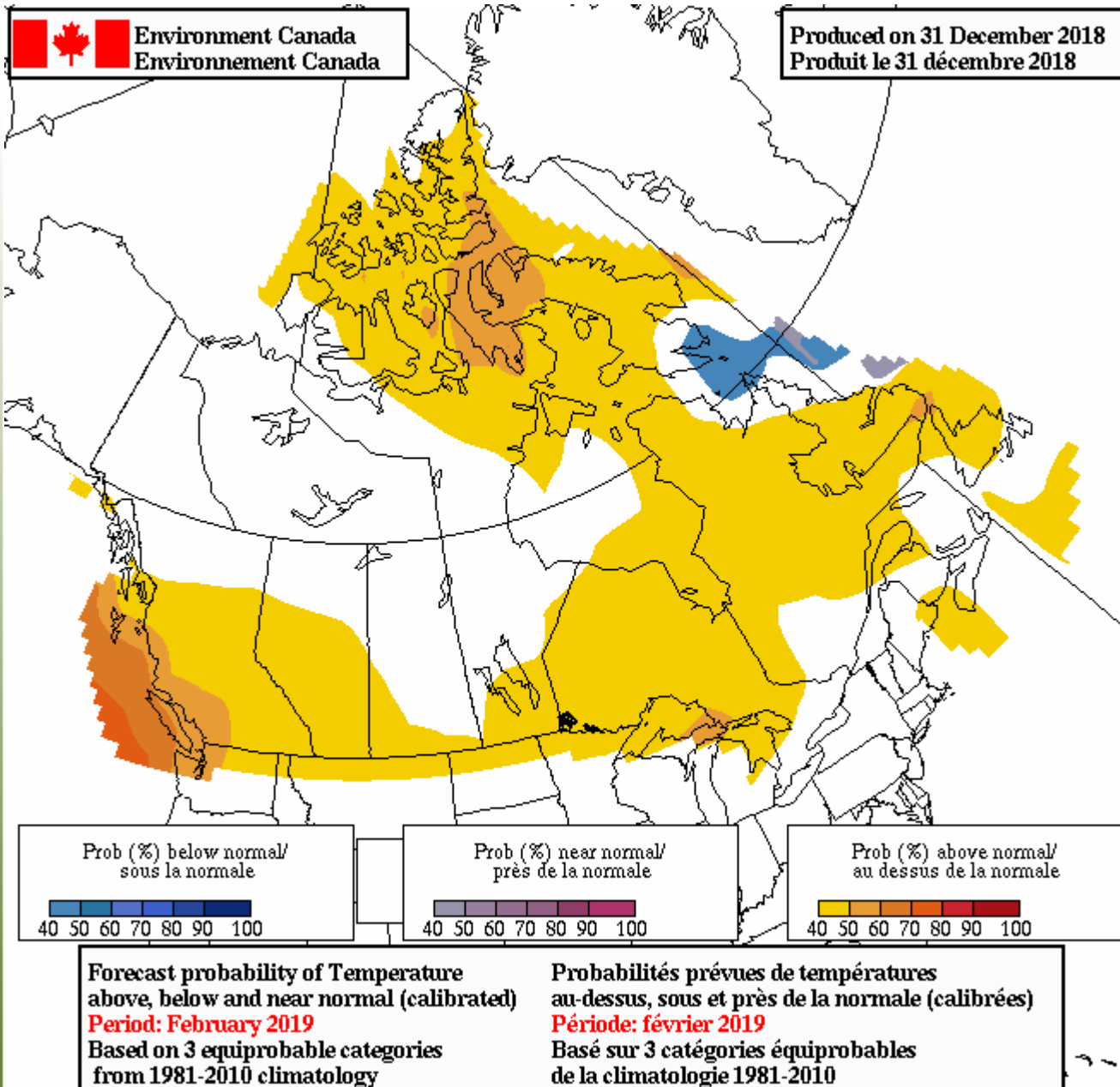
Weekly signature from GEPS 50km resolution



Generally, a weak signal of slightly below normal throughout the period with the exception of the second week where there is no conclusive signal.



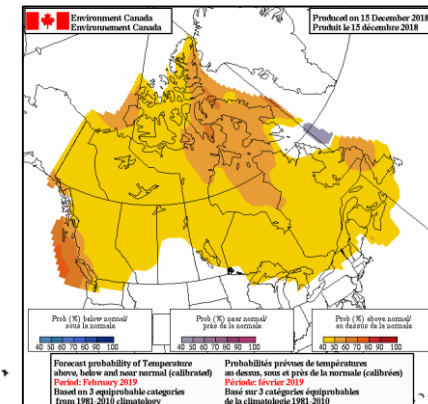
Temperature February 2019



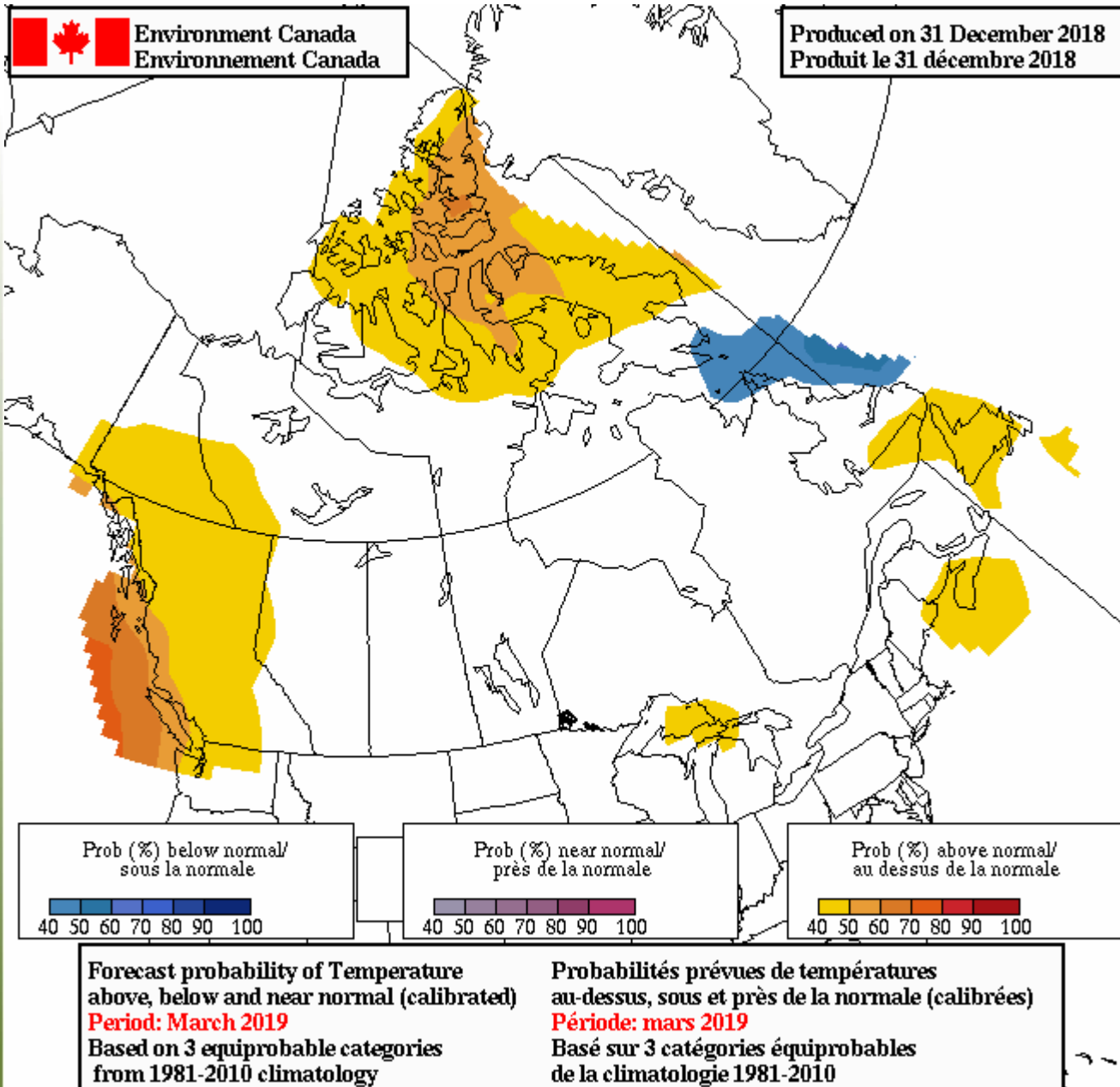
CanSIPS
(Canadian Seasonal and
Interannual Prediction
System)

CanAM3
CanAM4
+
CanOM4

Produced December 15



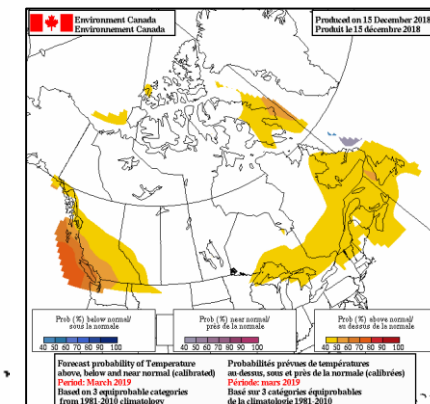
Temperature March 2019



CanSIPS
(Canadian Seasonal and
Interannual Prediction
System)

CanAM3
CanAM4
+
CanOM4

Produced December 15

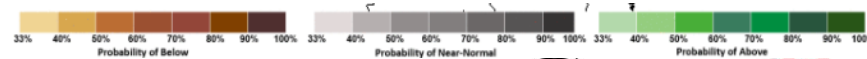
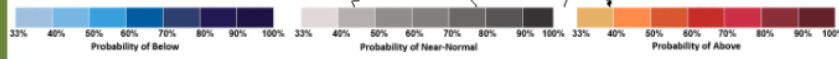
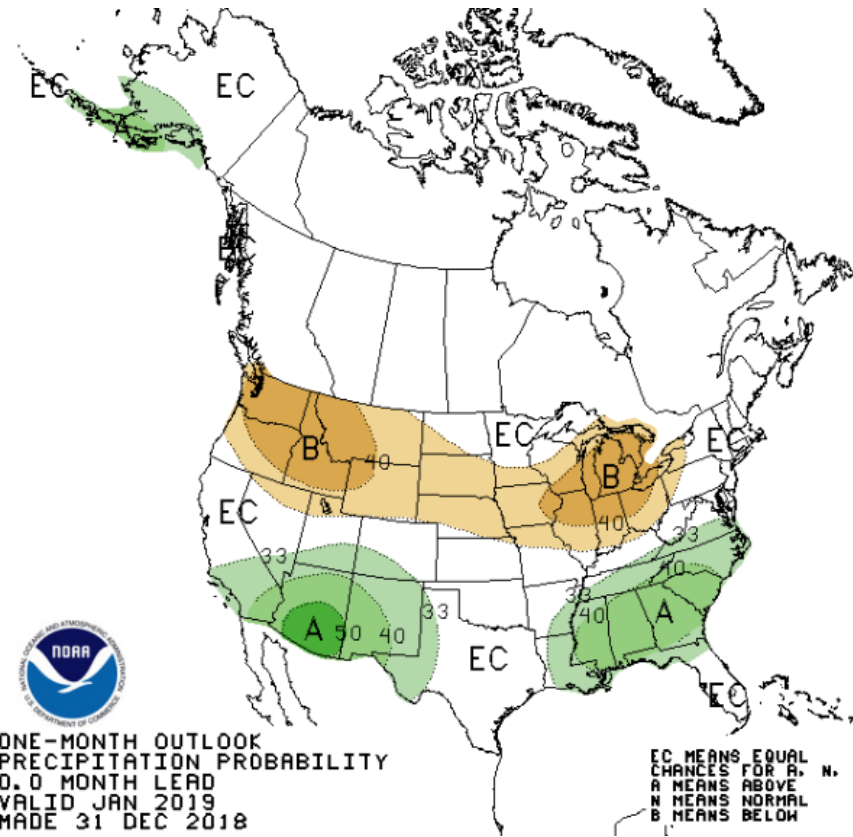
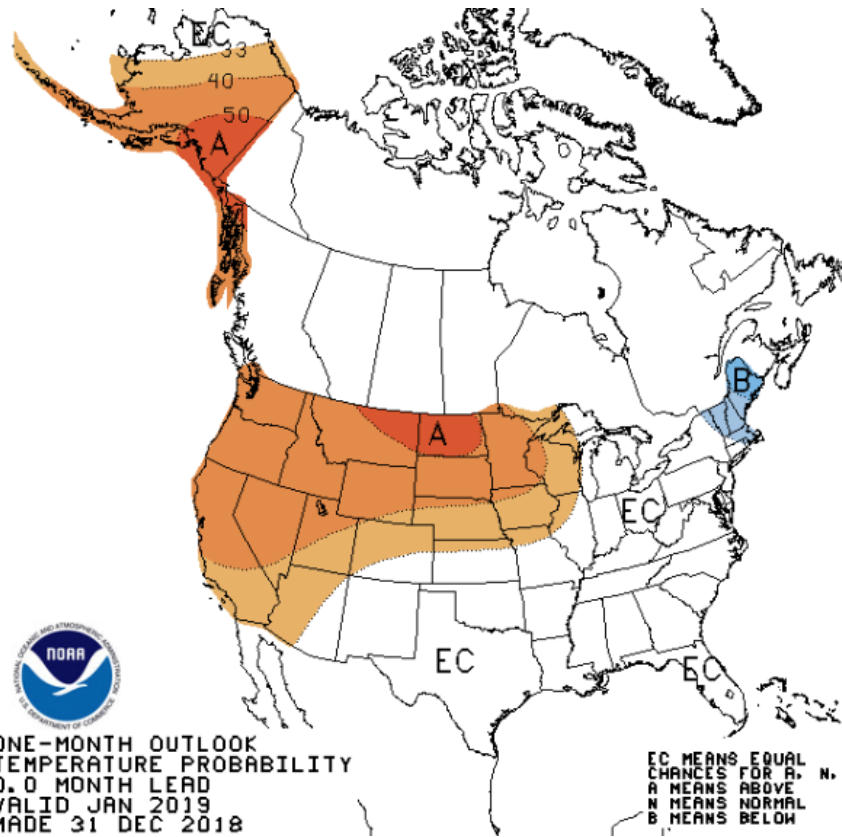




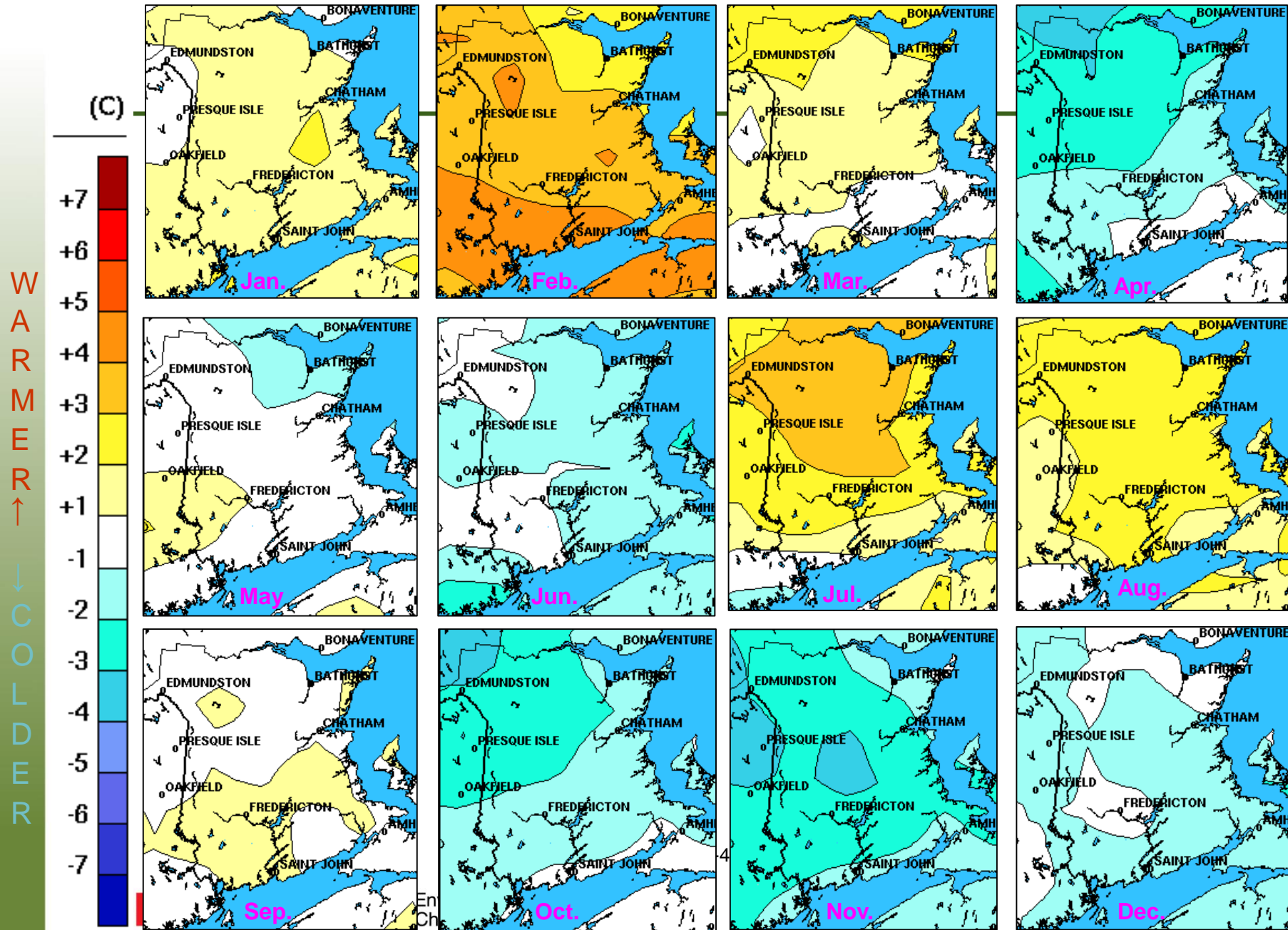
January 2019

Temperature

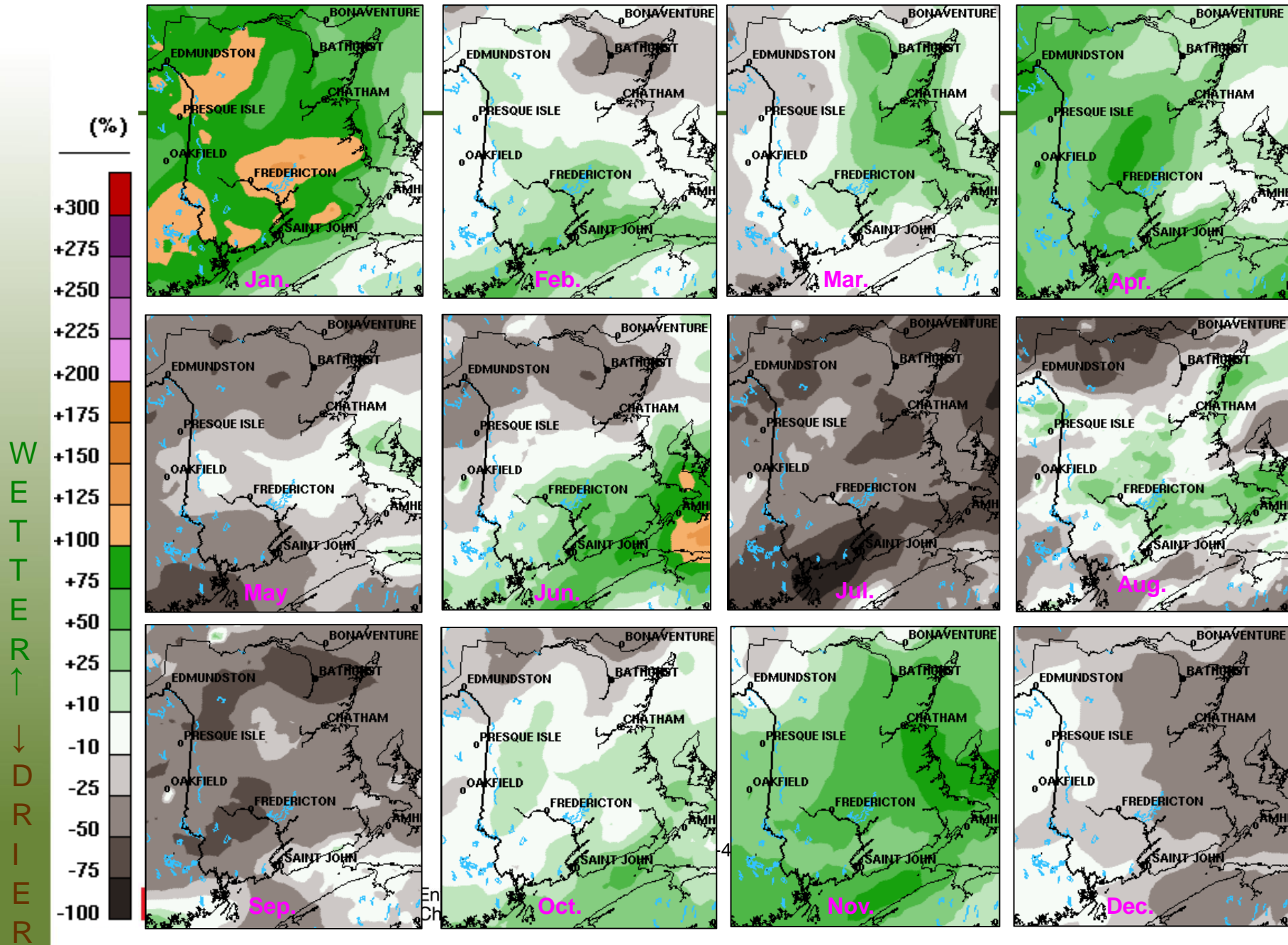
Precipitation



Temperature anomaly by month in 2018



Precipitation anomaly by month in 2018



Contact

Jill Maepea

Warning Preparedness Meteorologist

jill.maepea@canada.ca

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Canada Weather Pages

www.weather.gc.ca

