



Environment and
Climate Change Canada

Environnement et
Changement climatique Canada

Canada

New Brunswick

March 2019 Review April 2019 and Spring Outlook

Jill Maepea

Meteorological Service of Canada

Environment and Climate Change Canada

April 1, 2019

March 2019; Climate Summary

| Station Name | TC ID | Station Type | Mean Temperature (°C) | | | Total Precip (mm) | | | Departure from Normal as % of Normal |
|----------------------|-------|--------------|-----------------------|-------------|-----------------------|-------------------|--------------|----------------------|--------------------------------------|
| | | | Monthly Mean | Normal Mean | Departure from Normal | Monthly Total | Normal Total | Total as % of Normal | |
| AROOSTOOK | | DAILY | -5.2 | -4.1 | -1.2 | 58.4 | 74.2 | 79 | -21 |
| BAS CARAQUET | WXS | AU8 | -5.1 | -4.1 | -1.0 | 86.0 | 91.2 | 94 | -6 |
| BAS CARAQUET | | DAILY | | | | 71.0 | 91.2 | 78 | -22 |
| BATHURST A | ZBF | NCA | -5.1 | -3.8 | -1.4 | | | | |
| BOUCTOUCHE CDA CS | ABT | AU8 | -2.8 | -3.0 | 0.2 | | | | |
| CHARLO AUTO | ZCR | AU8 | -5.2 | -4.9 | -0.3 | | | | |
| MIRAMICHI RCS | ACQ | AU8 | -4.0 | -3.4 | -0.6 | 57.3 | 90.8 | 63 | -37 |
| DOAKTOWN AUTO RCS | ADN | AU8 | -5.1 | -3.3 | -1.7 | 77.7 | 90.1 | 86 | -14 |
| EDMUNDSTON | ERM | AU8 | -7.4 | -5.0 | -2.4 | 70.0 | 56.1 | 125 | 25 |
| FREDERICTON INTL A | YFC | NCA | -3.8 | -2.4 | -1.4 | | | | |
| FREDERICTON CDA CS | AFC | AU8 | -3.9 | -2.2 | -1.7 | 68.3 | 90.1 | 76 | -24 |
| FUNDY PARK (ALMA) CS | AFY | AU8 | -2.2 | -1.7 | -0.4 | 103.2 | 145.8 | 71 | -29 |
| GAGETOWN AWOS A | YCX | AU5 | -3.0 | -1.8 | -1.2 | 56.5 | 100.7 | 56 | -44 |
| GRAND MANAN SAR CS | XGM | AU8 | -1.6 | | | 101.1 | | | |
| KOUCHIBOUGUAC | AKC | AU8 | -3.4 | -3.2 | -0.2 | 55.9 | 123.4 | 45 | -55 |
| MECHANIC SETTLEMENT | AMS | AU8 | -3.8 | | | 105.2 | | | |
| MISCOU ISLAND (AUT) | WMI | AU8 | -5.3 | | | 72.0 | | | |
| MONCTON INTL A | YQM | NCH | -2.5 | -2.9 | 0.4 | 62.2 | 115.6 | 54 | -46 |
| MONCTON A | YQM | NCA | -2.5 | -2.9 | 0.4 | | | | |
| OAK POINT | | DAILY | -2.9 | -1.8 | -1.1 | 93.4 | 100.7 | 93 | -7 |
| POINT LEPREAU CS | WPE | AU8 | -0.9 | -1.5 | 0.6 | 76.2 | 130.1 | 59 | -41 |
| RED PINES | ARP | AU8 | -5.6 | -4.2 | -1.3 | 89.7 | 73.1 | 123 | 23 |
| SAINT JOHN A | YSJ | NCH | -3.5 | -2.5 | -1.0 | 98.3 | 108.2 | 91 | -9 |
| ST. STEPHEN | WSS | AU8 | -2.8 | | | 94.6 | | | |
| SUSSEX FOUR CORNERS | ASF | AU8 | -2.4 | -1.9 | -0.6 | 61.5 | 114.7 | 54 | -46 |
| WOODSTOCK | | DAILY | -3.9 | -3.4 | -0.6 | 46.4 | 91.2 | 51 | -49 |
| WOODSTOCK NEWBRIDGE | EWD | AU8 | -4.4 | -3.4 | -1.0 | 64.6 | 91.2 | 71 | -29 |
| Average | | | -3.8 | -3.1 | -0.8 | 75.9 | 98.8 | 76 | -24 |
| Max | | | -0.9 | -1.5 | 0.6 | 105.2 | 145.8 | 125 | 25 |
| Min | | | -7.4 | -5.0 | -2.4 | 46.4 | 56.1 | 45 | -55 |

Highlights:

The average temperature was slightly below normal (-0.8C). Most sites reported a negative anomaly with Edmundston reporting the largest negative anomaly at -2.4C below normal.

Total precipitation amounts were below normal, with an average of 76% of total precipitation. Kouchibouguac was the driest and recorded less than half of their normal precipitation. However, snow depths remained above normal in northern and central regions.

March 2019; Climate Summary

Events:

Mar. 3-4; A winter storm brought significant snowfall amounts ranging from 15-30 cm across most of the province. The Bouctouche area reported the most snow at 31 cm.

Mar. 10-11; A weak system brought snow mainly to the north and some rain mainly to the south. The most snow was reported in the Saint-Quentin area with 13 cm. The most precipitation was recorded at Mechanic Settlement with 28 mm.

Mar. 15-16; Another weak system brought some precipitation (10-20 mm) in the form of rain confined mainly to the southern portions of the province. The most rain was recorded at Fundy Park with 30 mm.

Mar. 22-23; A low pressure system crossed the province giving mainly rain and some snow to the north. Most areas of the province (with the exception of a few areas in the southeast) received between 20-30 mm of precipitation and the most rain was recorded in the St. Stephen area with 38 mm.

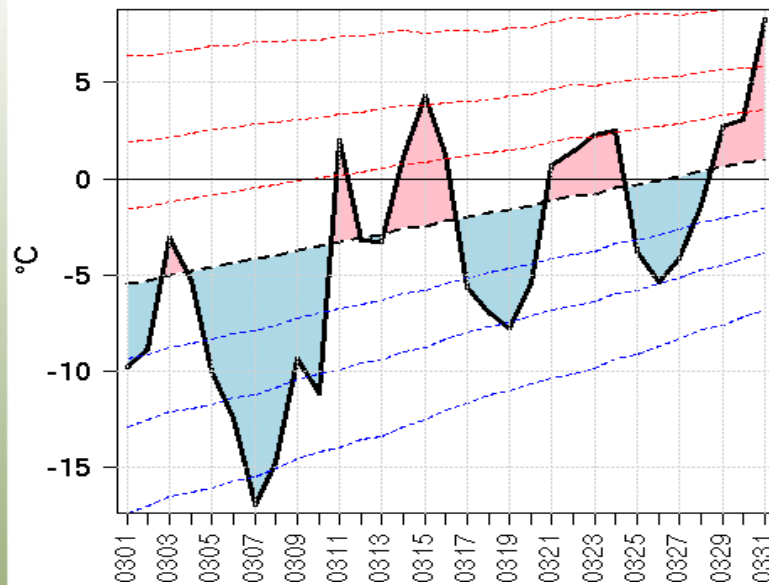
Days with thunderstorm activity (lightning) in New Brunswick; 15

Days with temperature records broken or tied in New Brunswick; 7 8 10 14 15 20 27 31
(red=maximum, blue=minimum)



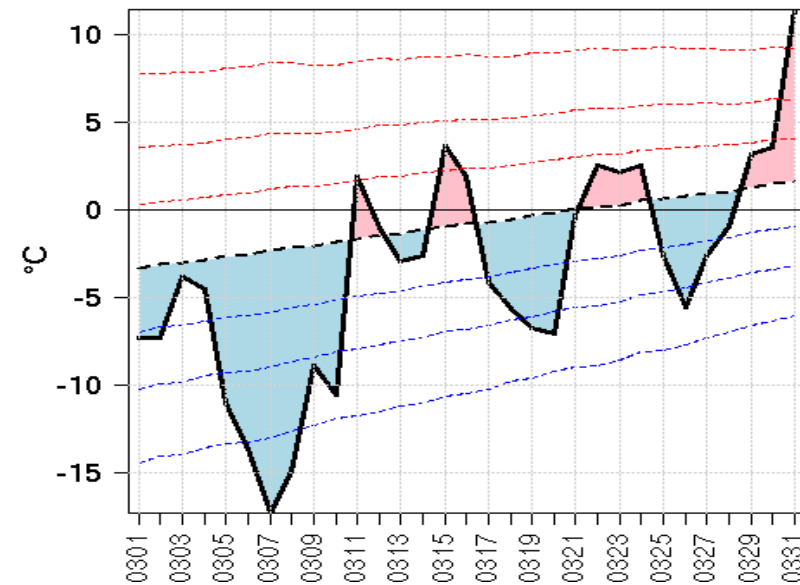
March 2019 - Temperature

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



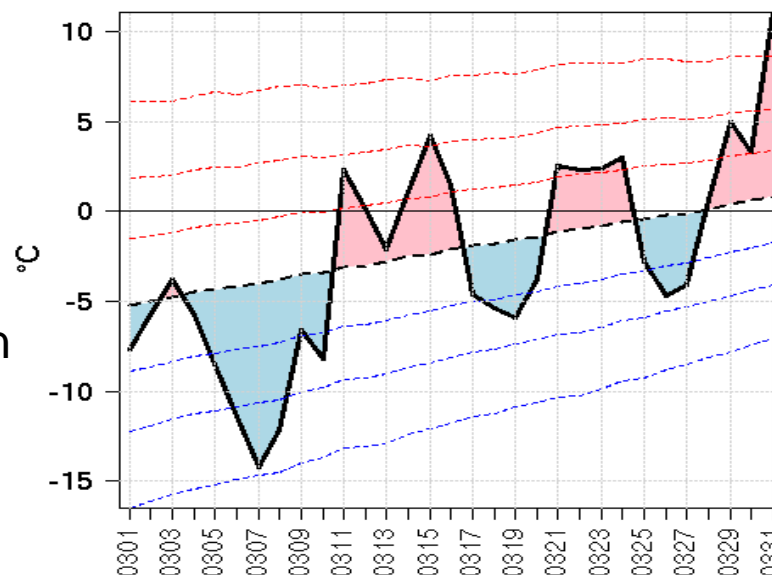
Fredericton (and area)

Fredericton and
Saint John were
below normal



Saint John

Moncton



Moncton was
near normal

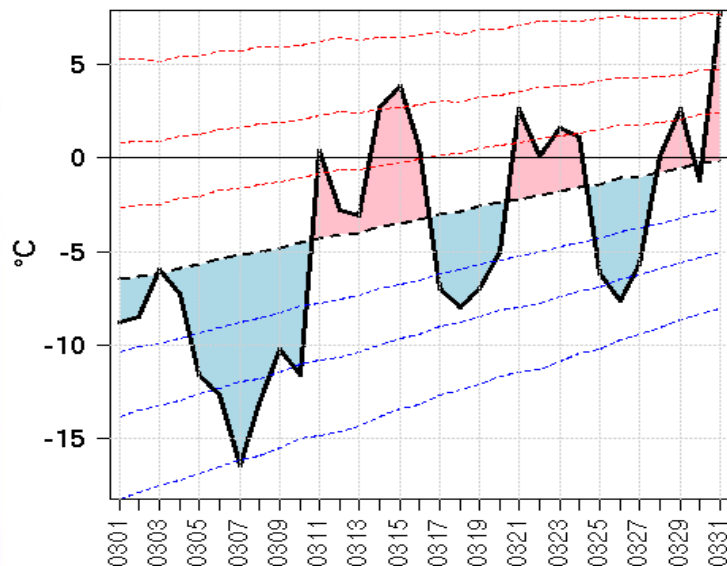


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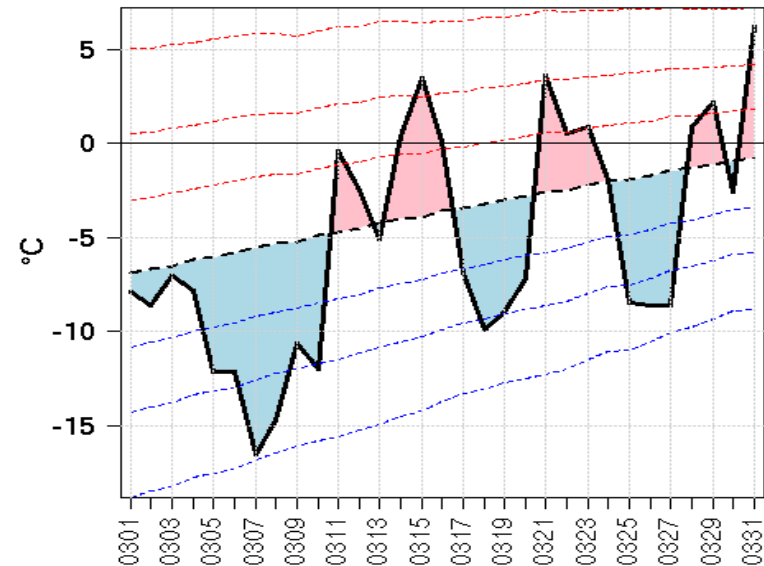
Canada

March 2019 - Temperature

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



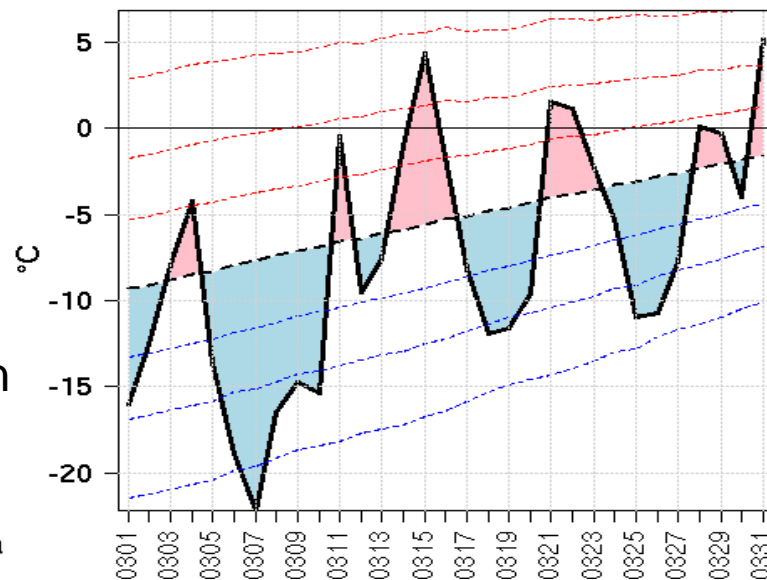
Miramichi



Bathurst

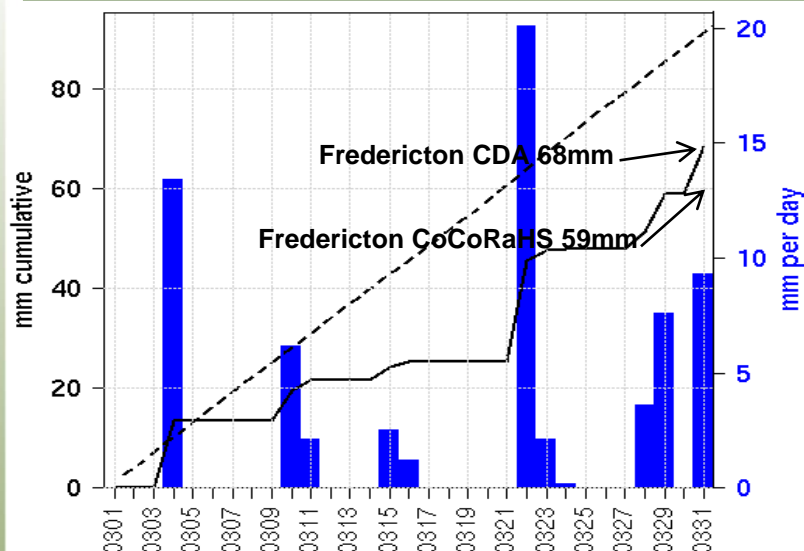
All sites were
below normal

Edmundston

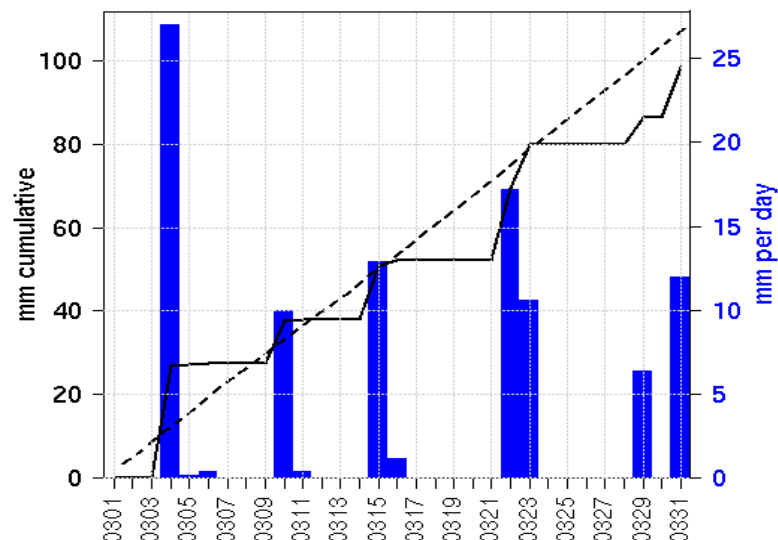


March 2019 - Precipitation

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



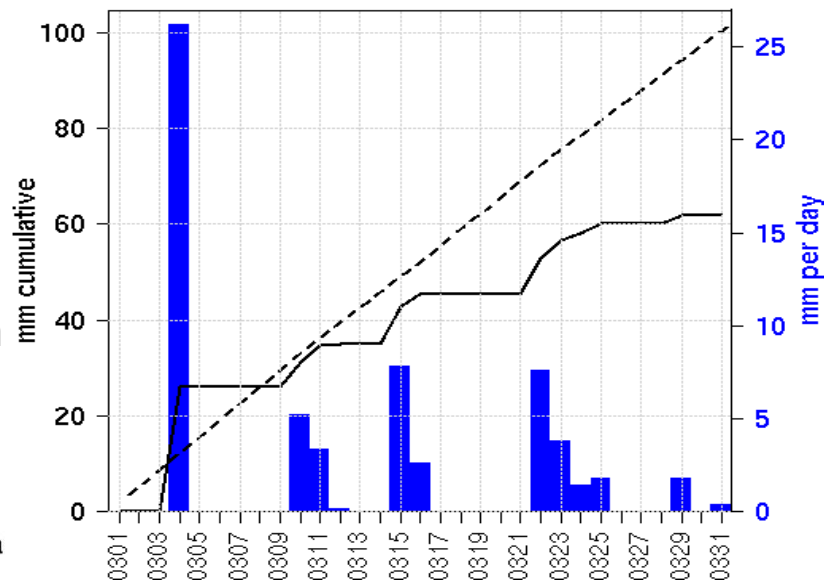
Fredericton (and area)



Saint John

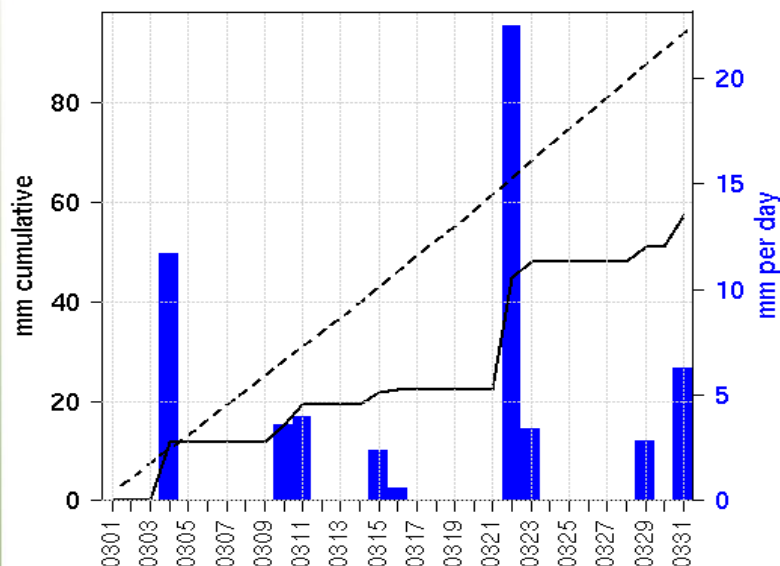
All sites were below normal

Moncton



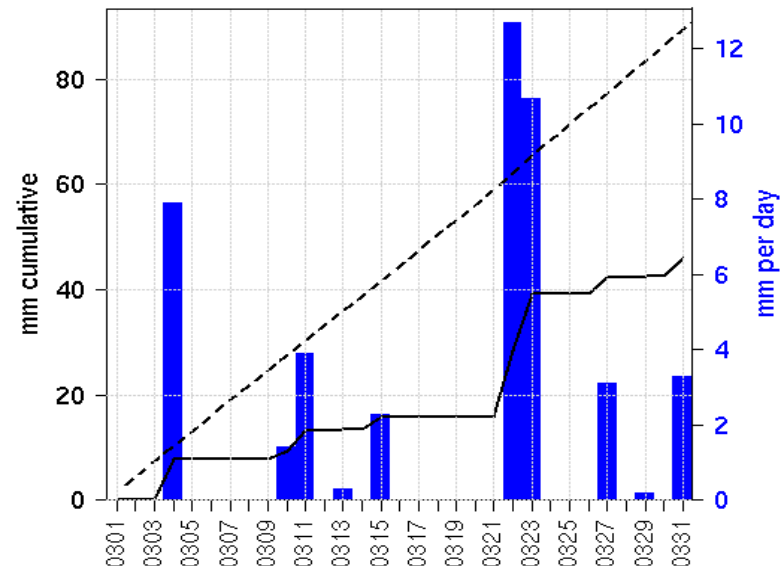
March 2019 - Precipitation

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



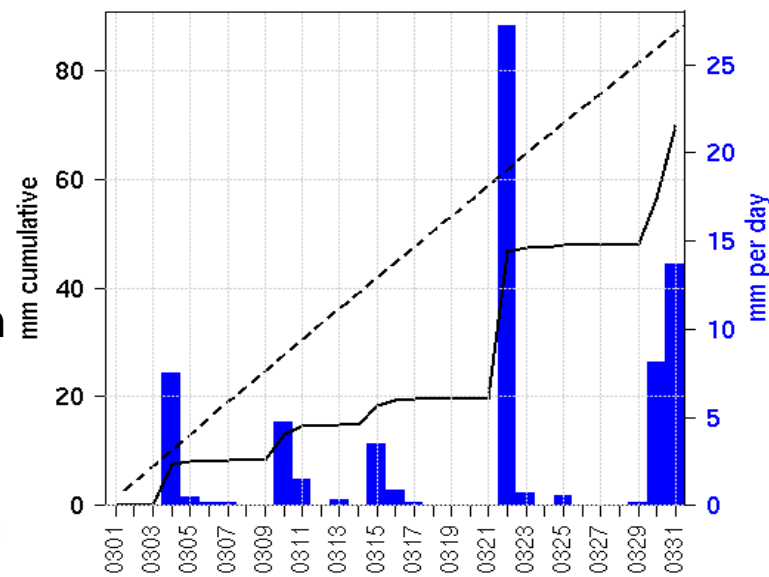
Miramichi

Miramichi and Bathurst were below normal



Bathurst

Edmundston



Edmundston was near normal

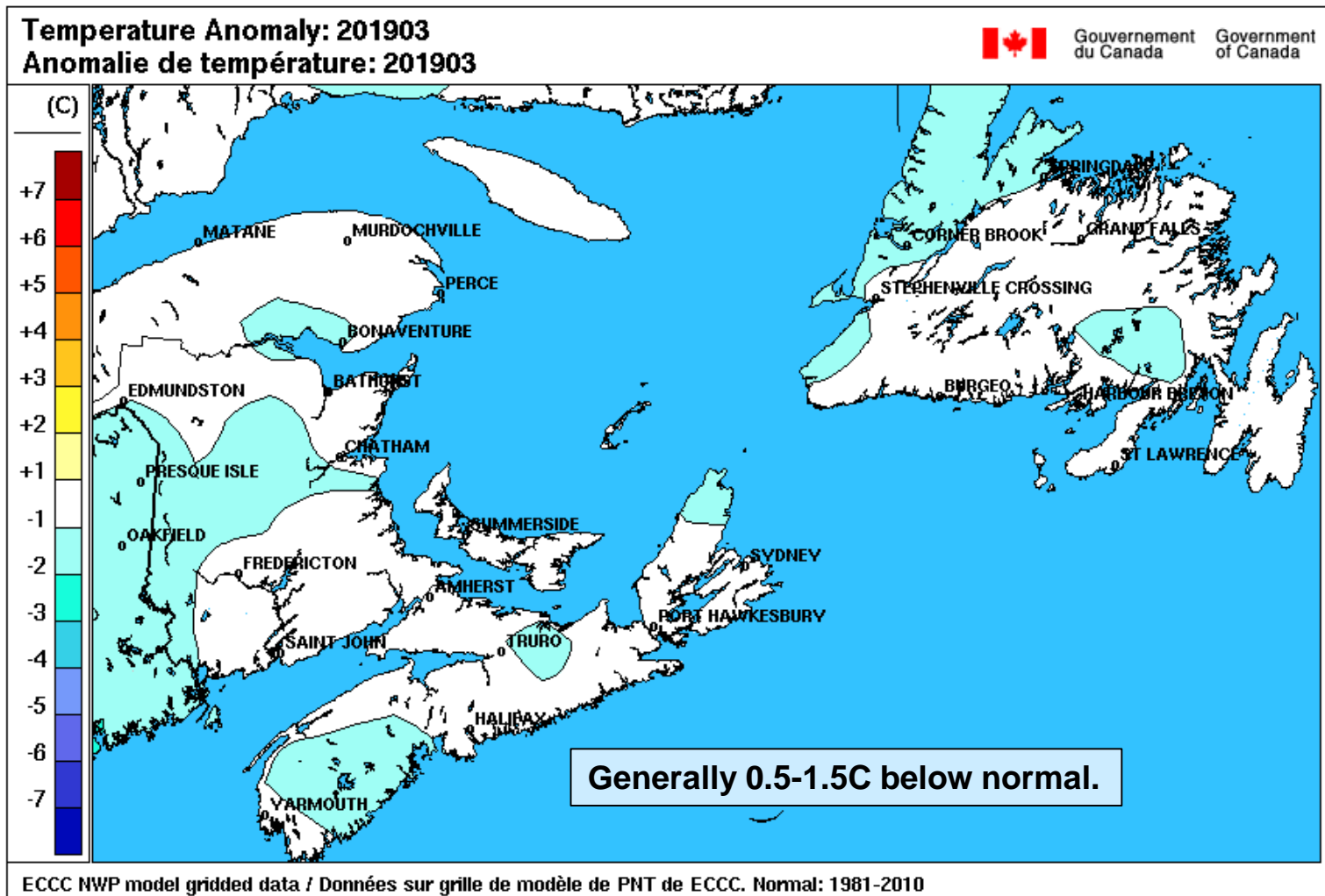
*the normal line on this graph isn't correctly depicted



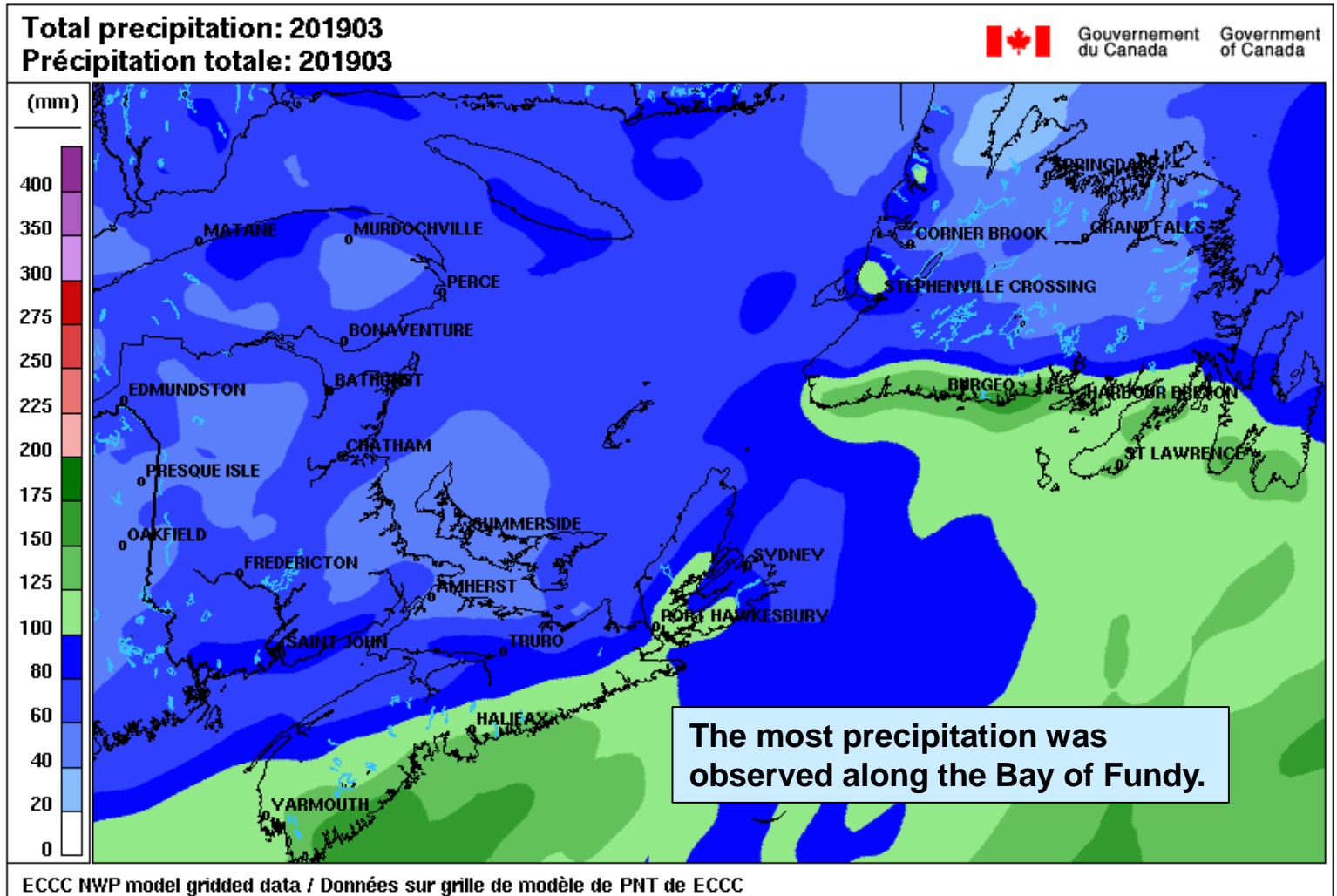
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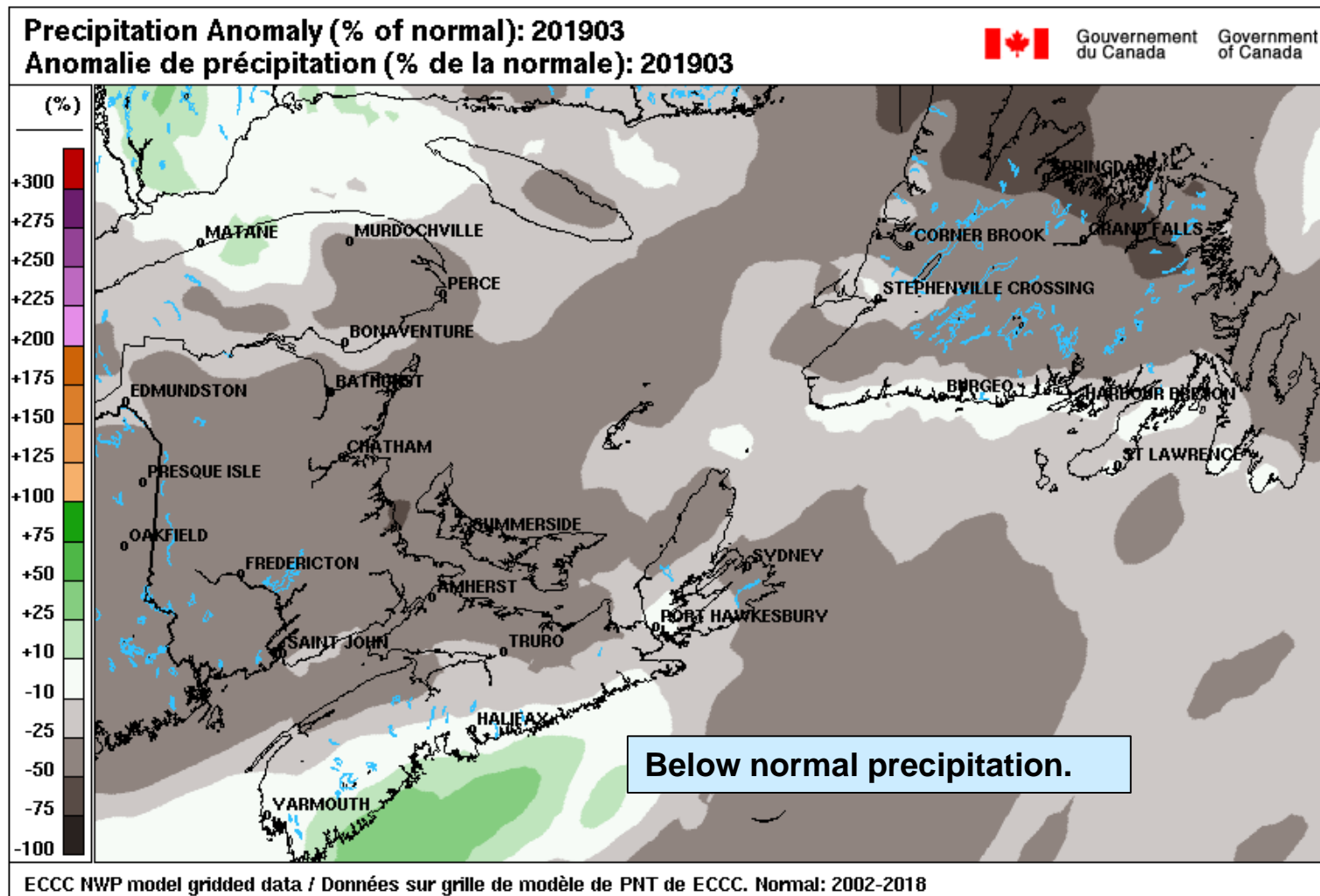
March 2019 Temperature departure from 1981-2010 mean.



March 2019 Total Precipitation

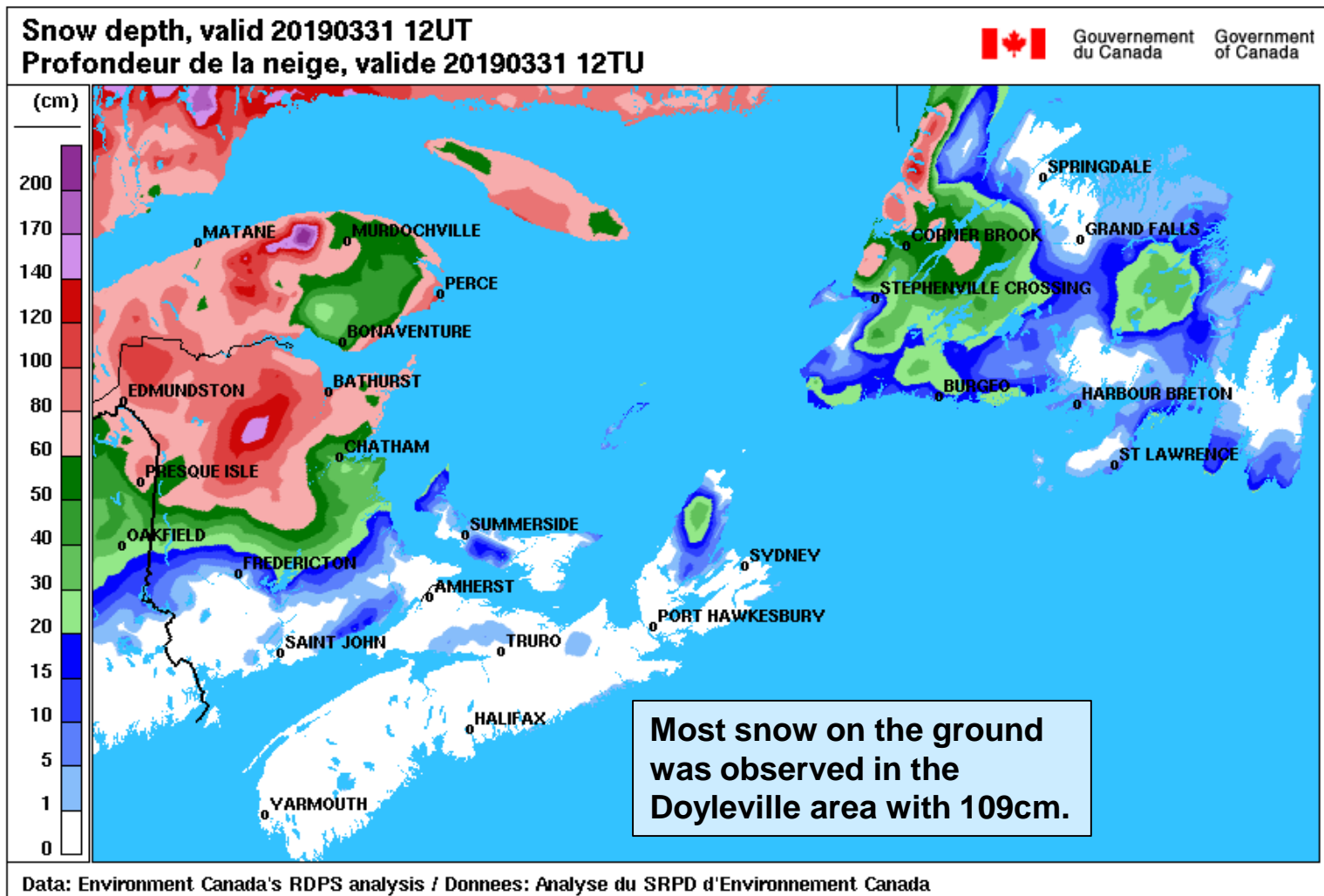


March 2019 Precipitation departure from 1981-2010 mean.



March 2019 Snow depth at month end

Extracted from Canadian computer model



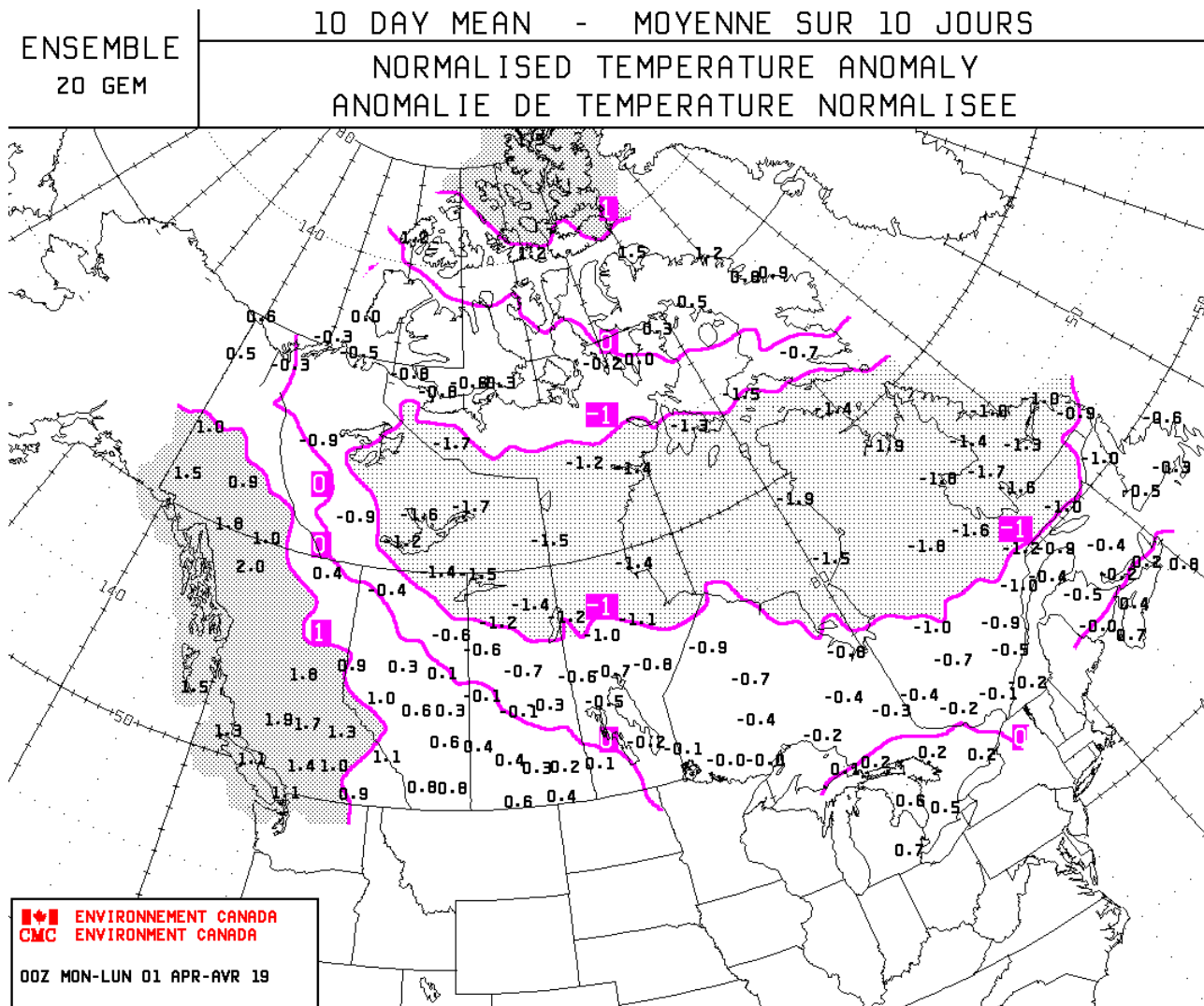
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Outlook - 10 day mean temperature

(Suggesting slightly below normal conditions (-0.0 to -0.5C))



10 day
forecast
ending
April 11,
2019



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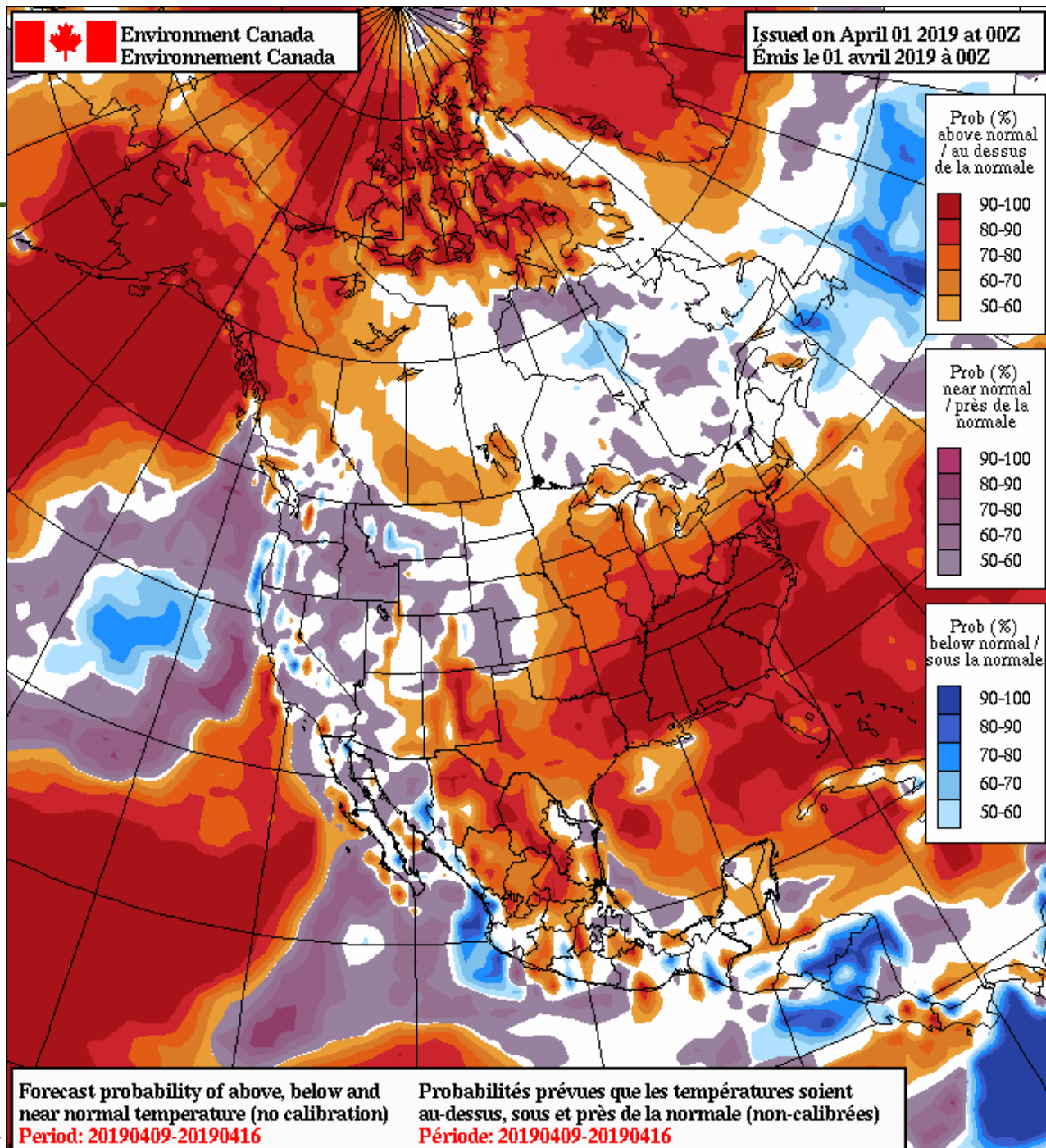
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Day 8 to 14 Forecast

Period ending
April 16, 2019

Generally, no
conclusive signal.



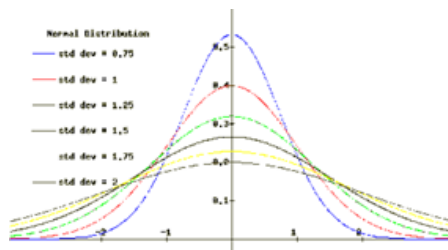
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Fredericton

April

Next 15 days; ending
April 16, 2019

Below normal for the period for the first half, then no conclusive signal mainly due to uncertainties.



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

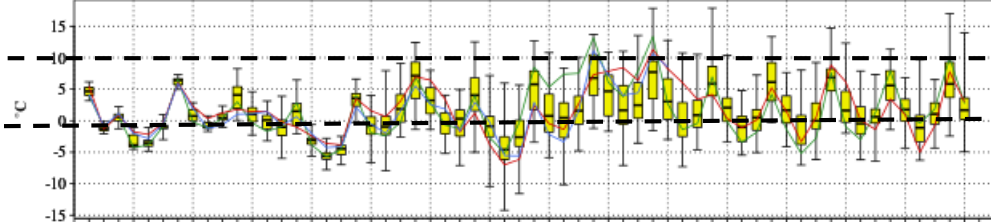
NAEFS / SPENA

FREDERICTON (YFC) 45.87 N 66.53 W/O

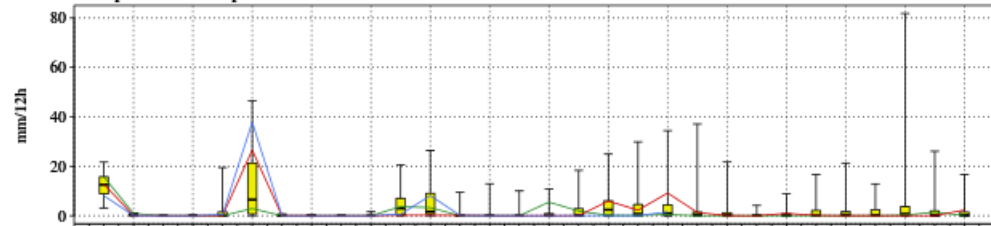
Surface air temperature/Température de l'air à la surface

Normal high: 10.0C

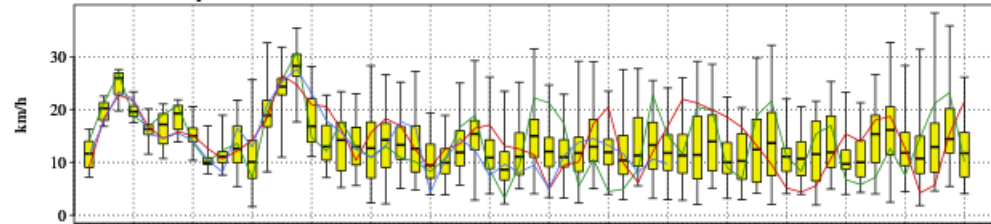
Normal low: -1.0C



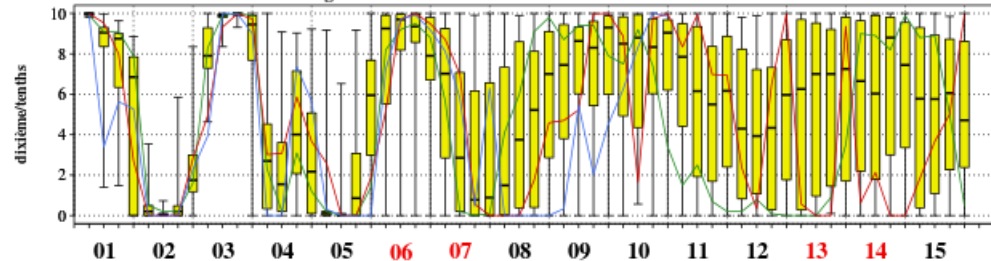
Précipitations/Precipitation



Surface wind speed/Vitesse du vent à la surface



Total cloud cover/Couvert nuageux



April/Avril 2019

max
 75%
 median/médiane
 25%
 min

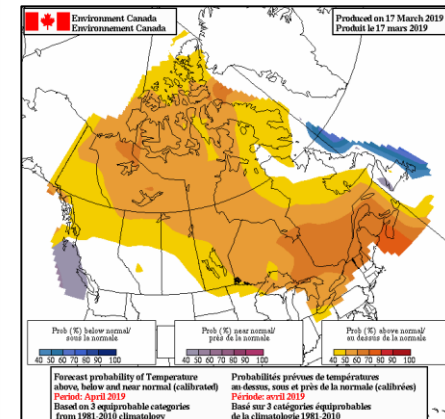
Global Model / Modèle global
 Control Member / Membre contrôlé CMC
 Control Member / Membre contrôlé NCEP

Temperature April 2019

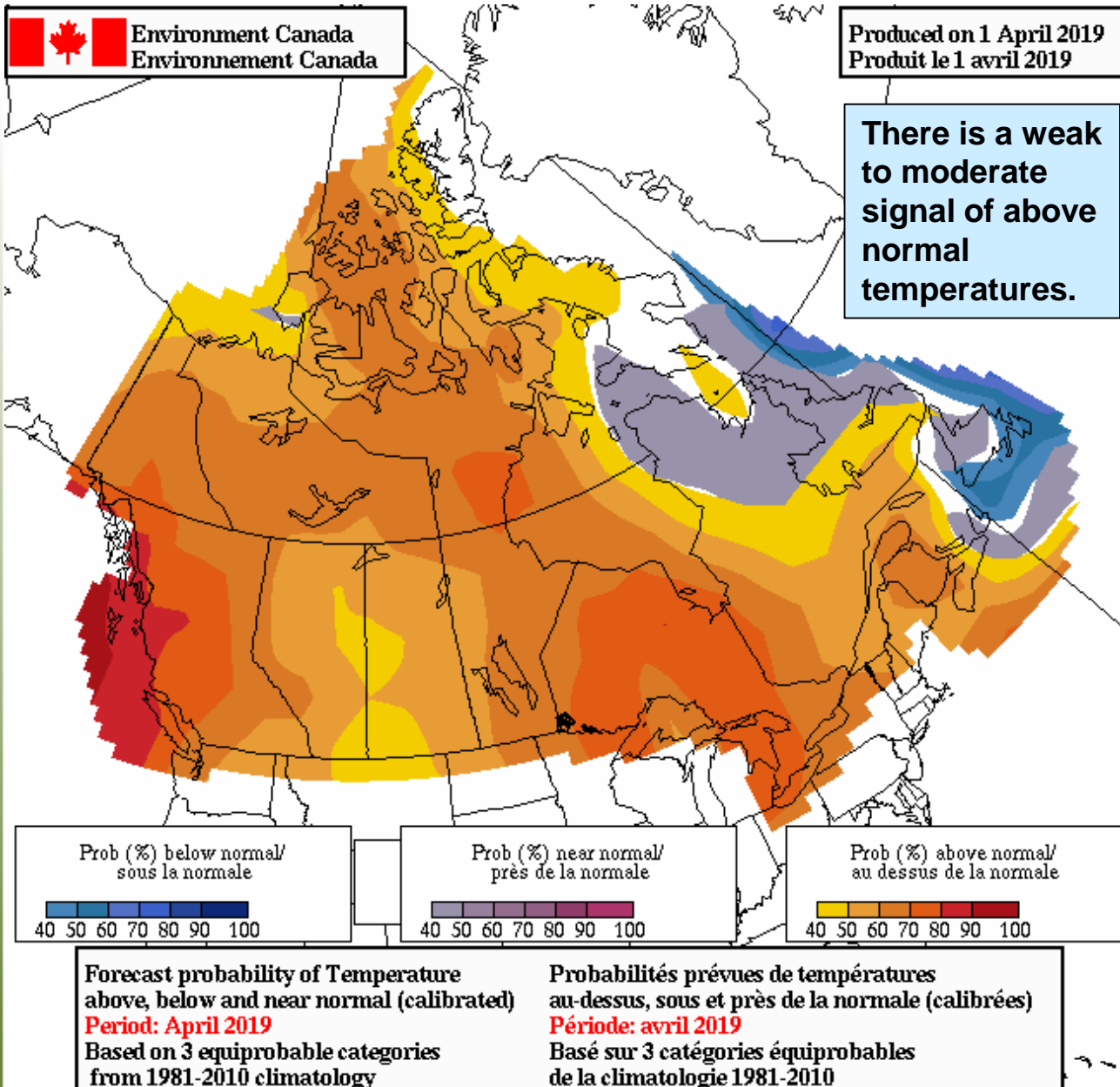
CanSIPS
(Canadian Seasonal and
Interannual Prediction
System)

CanAM3
CanAM4
+
CanOM4

Produced March 17



Canada

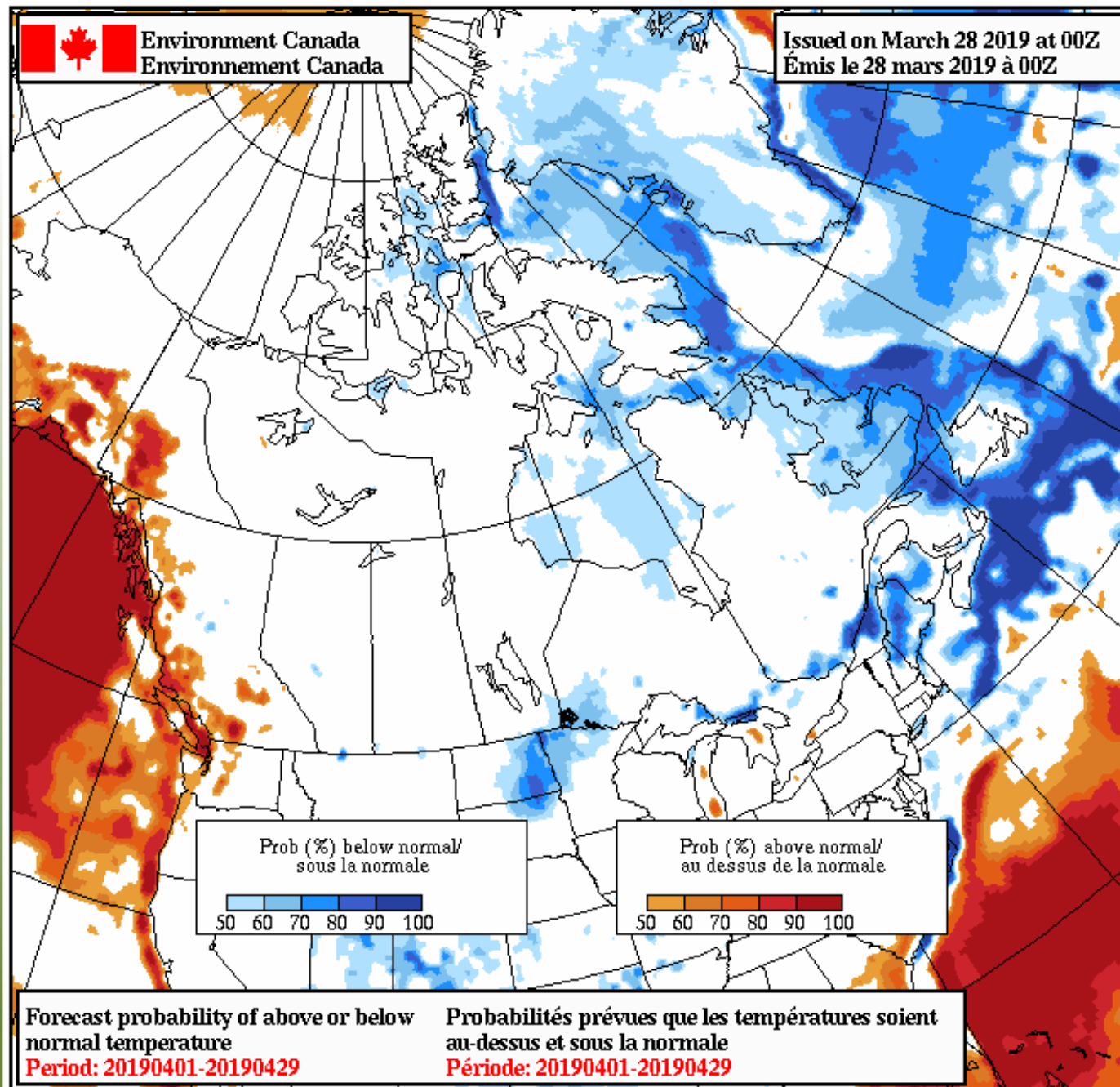


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Temperature April 1 to April 29

CMC
Monthly
Forecast
Product
using GEPS
50km res.

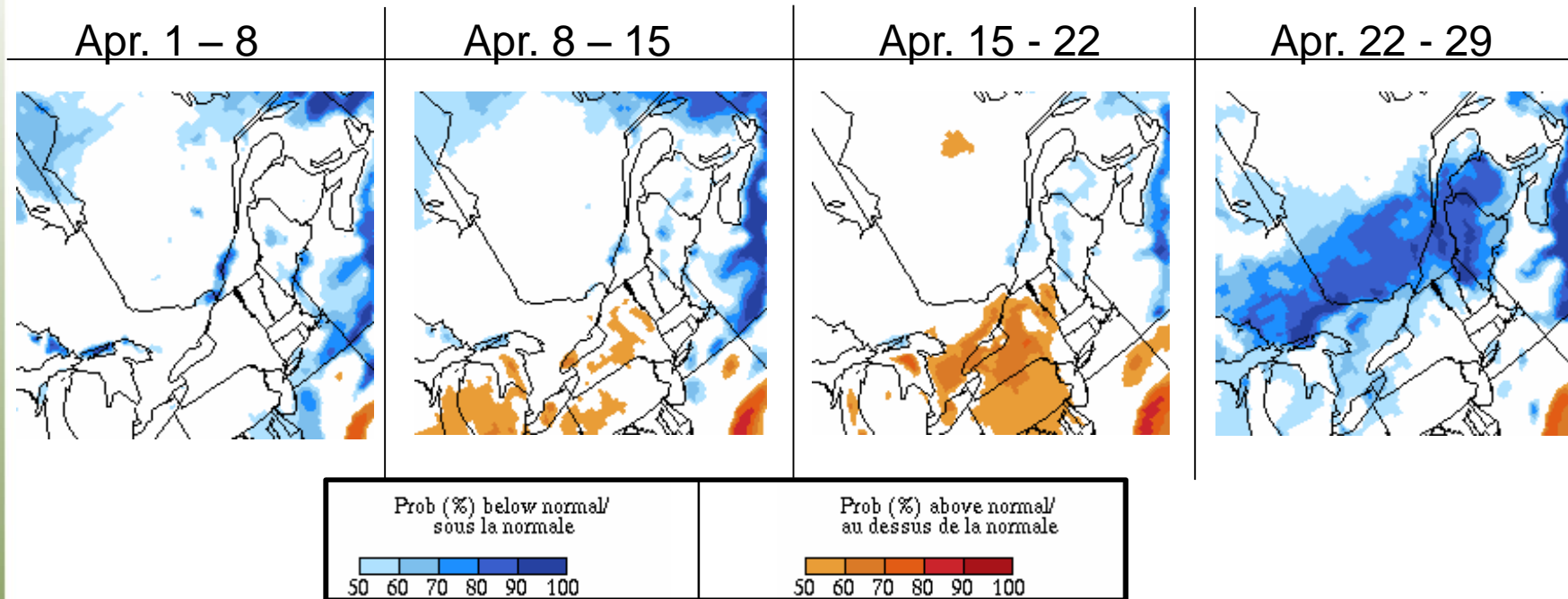


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Weekly signature from GEPS 50km resolution



No conclusive signal or a weak signal of below normal for the first three weeks then below normal for the last week of April.



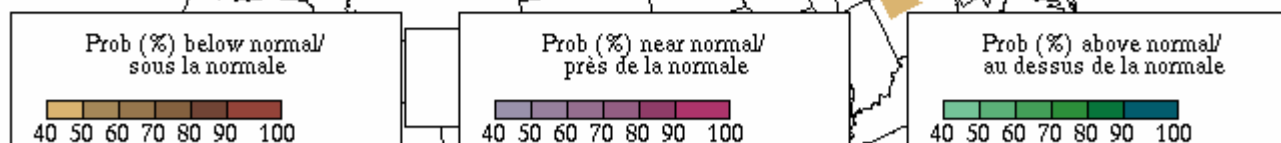
Precipitation April 2019

There is weak
to moderate
signal for
below normal
precipitation.

CanSIPS
(Canadian Seasonal and
Interannual Prediction
System)

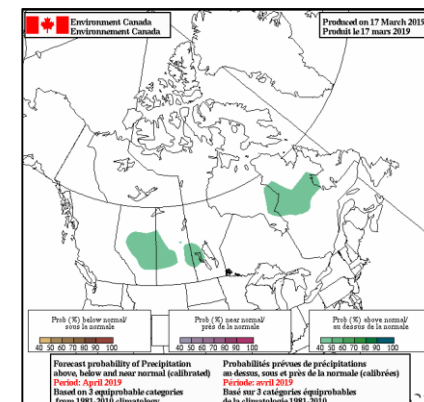
CanAM3
CanAM4
+
CanOM4

Produced March 17



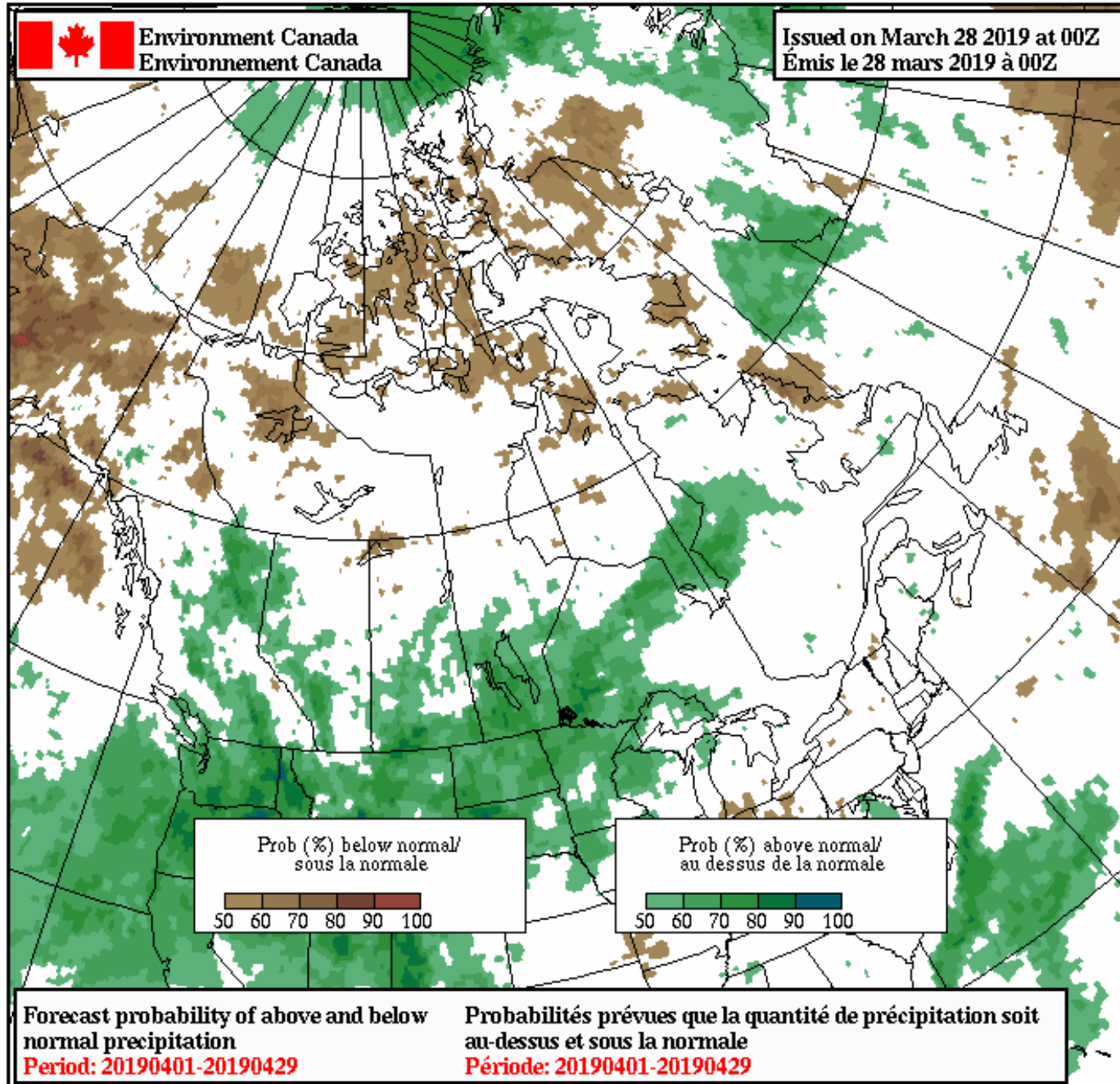
**Forecast probability of Precipitation
above, below and near normal (calibrated)**
Period: April 2019
Based on 3 equiprobable categories
from 1981-2010 climatology

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

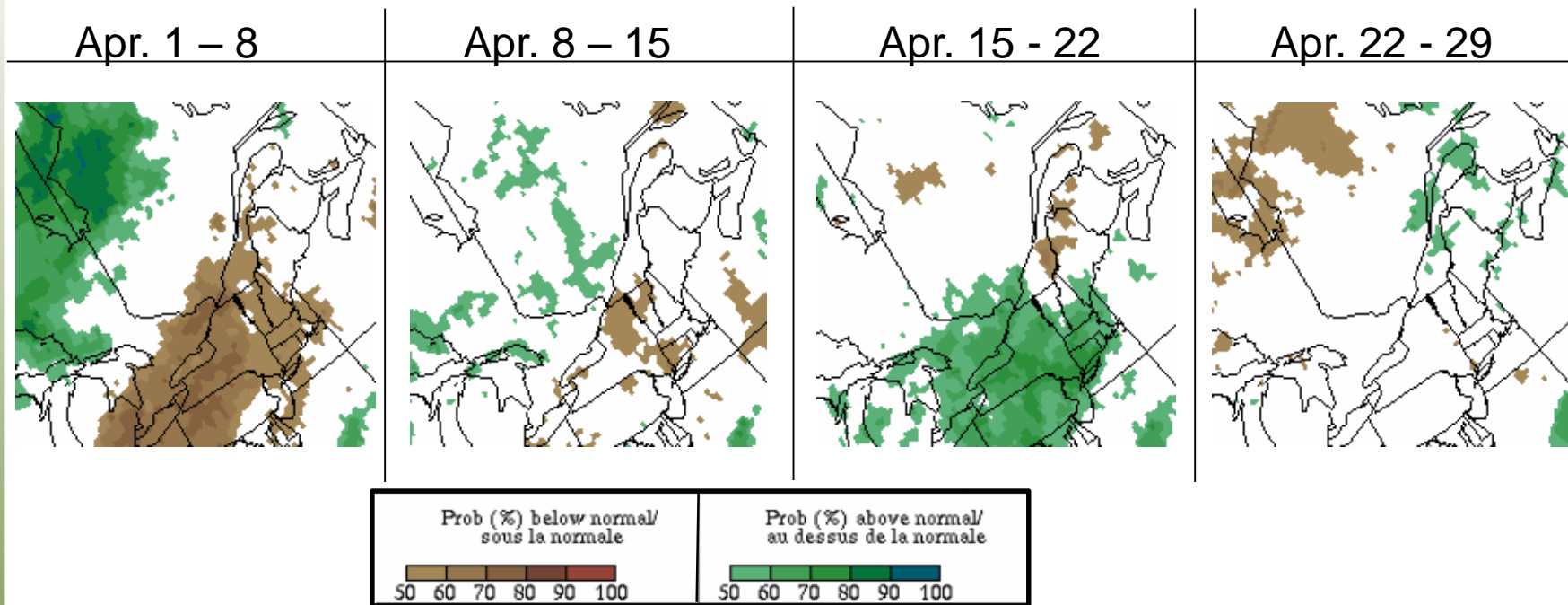


Precipitation April 1 to April 29

CMC
Monthly
Forecast
Product
using GEPS
50km res.



Weekly signature from GEPS 50km resolution



Overall, no real conclusive signal or a weak signal of below normal for the first three weeks then a weak signal for above normal for the last week of April.

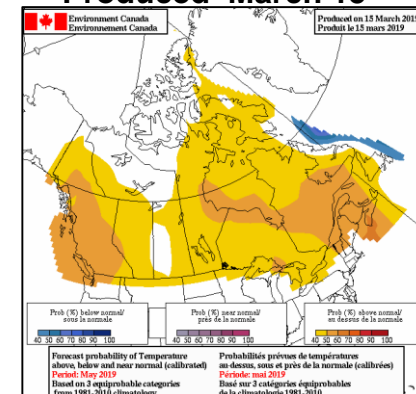


Temperature May 2019

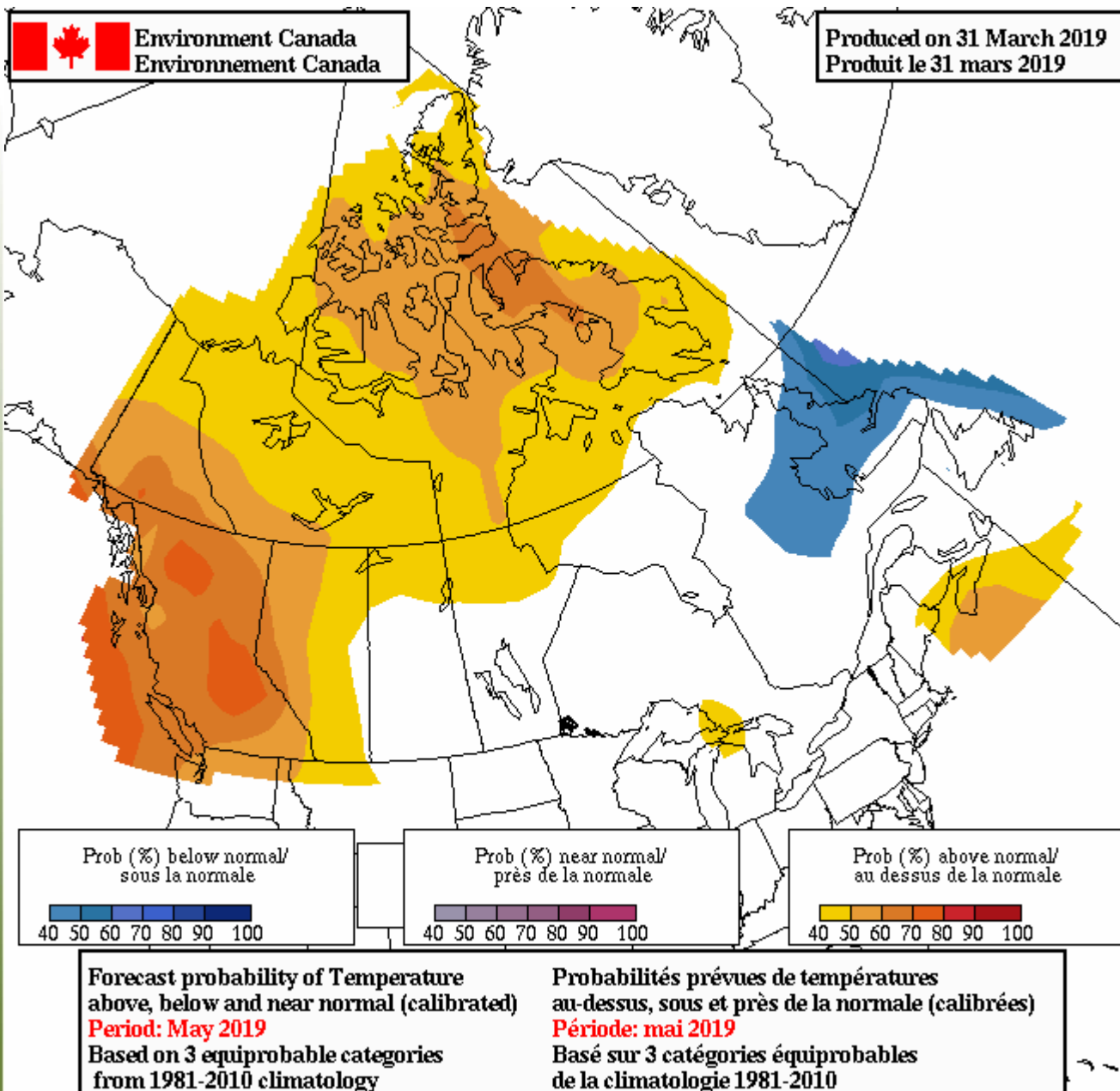
CanSIPS
(Canadian Seasonal and
Interannual Prediction
System)

CanAM3
CanAM4
+
CanOM4

Produced March 15



Canada



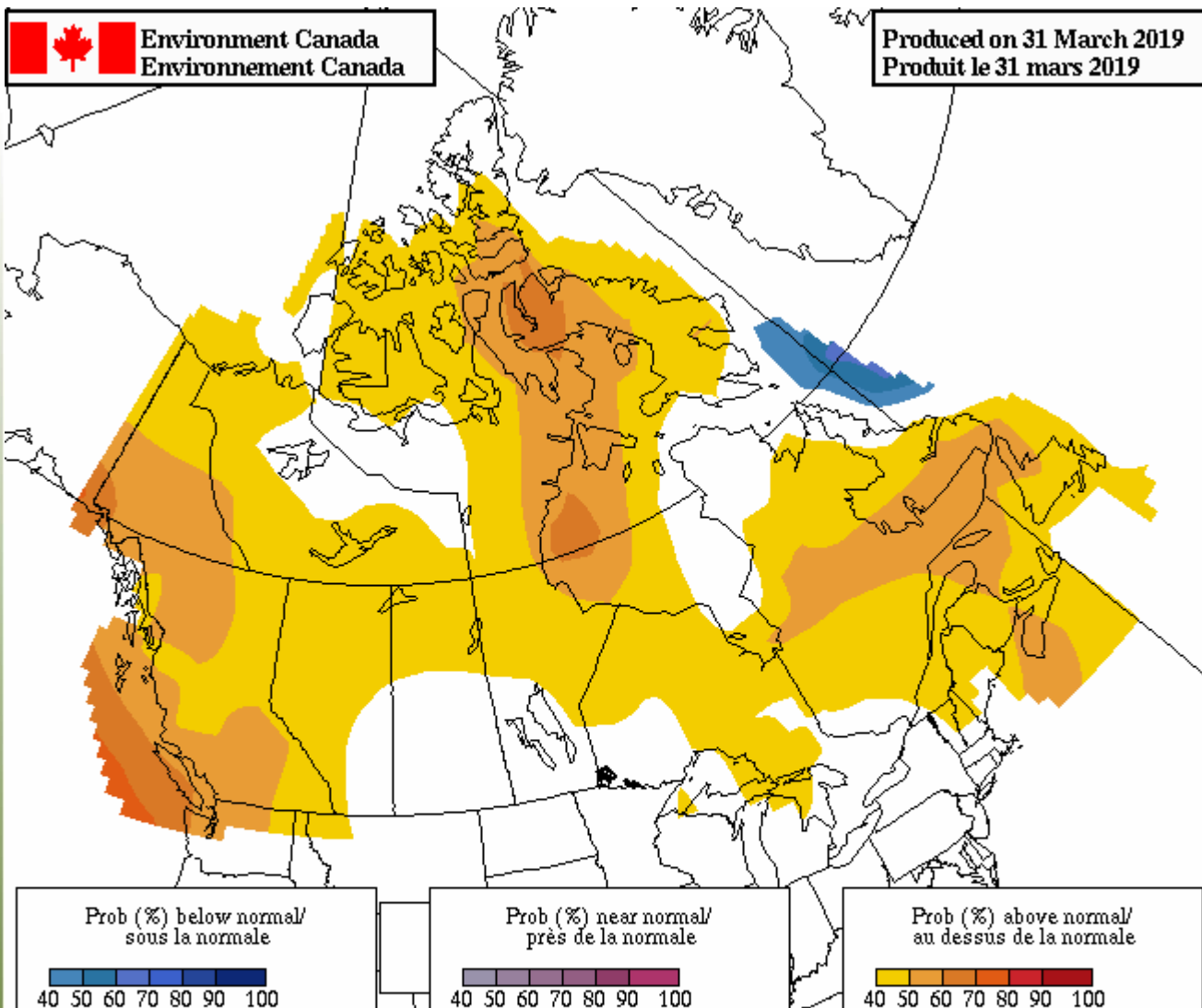
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Temperature June 2019

CanSIPS
(Canadian Seasonal and
Interannual Prediction
System)

CanAM3
CanAM4
+
CanOM4



**Forecast probability of Temperature
above, below and near normal (calibrated)**

Period: June 2019

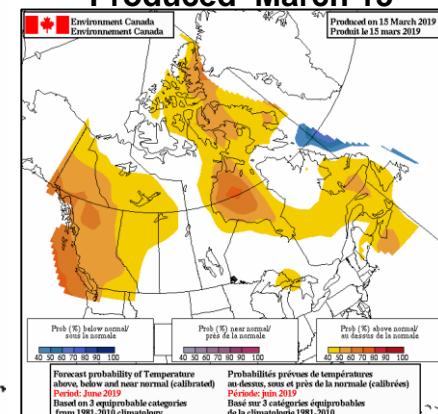
**Based on 3 equiprobable categories
from 1981-2010 climatology**

**Probabilités prévues de températures
au-dessus, sous et près de la normale (calibrées)**

Période: juin 2019

**Basé sur 3 catégories équiprobables
de la climatologie 1981-2010**

Produced March 15

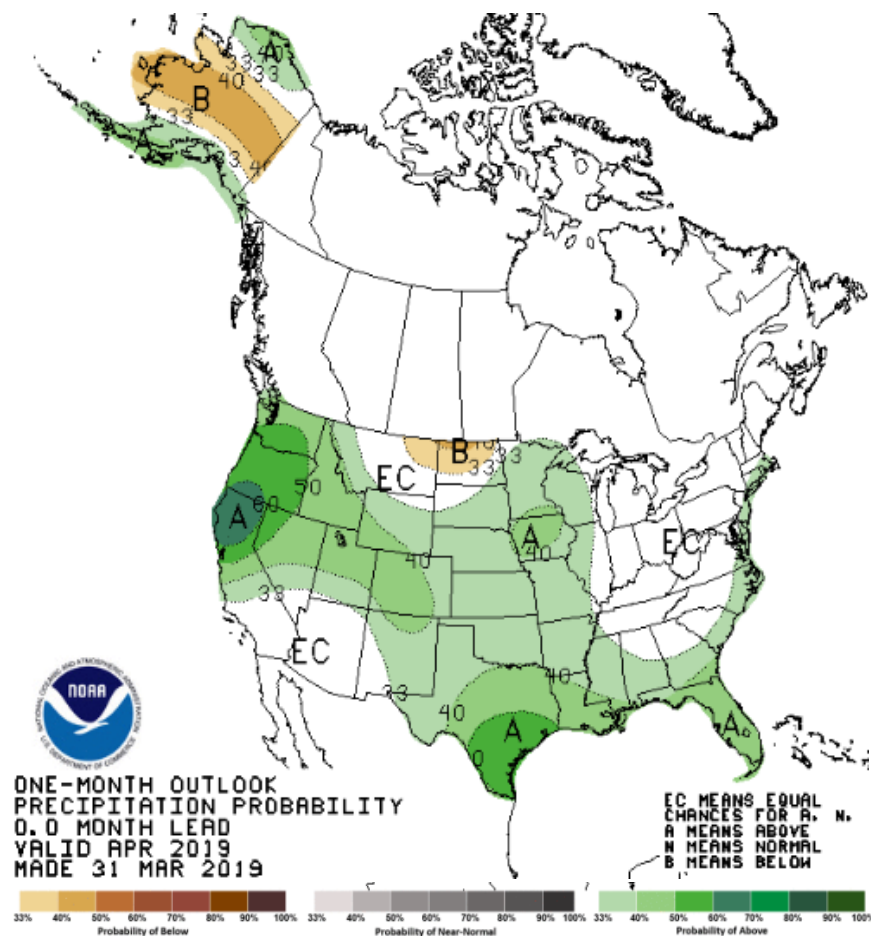
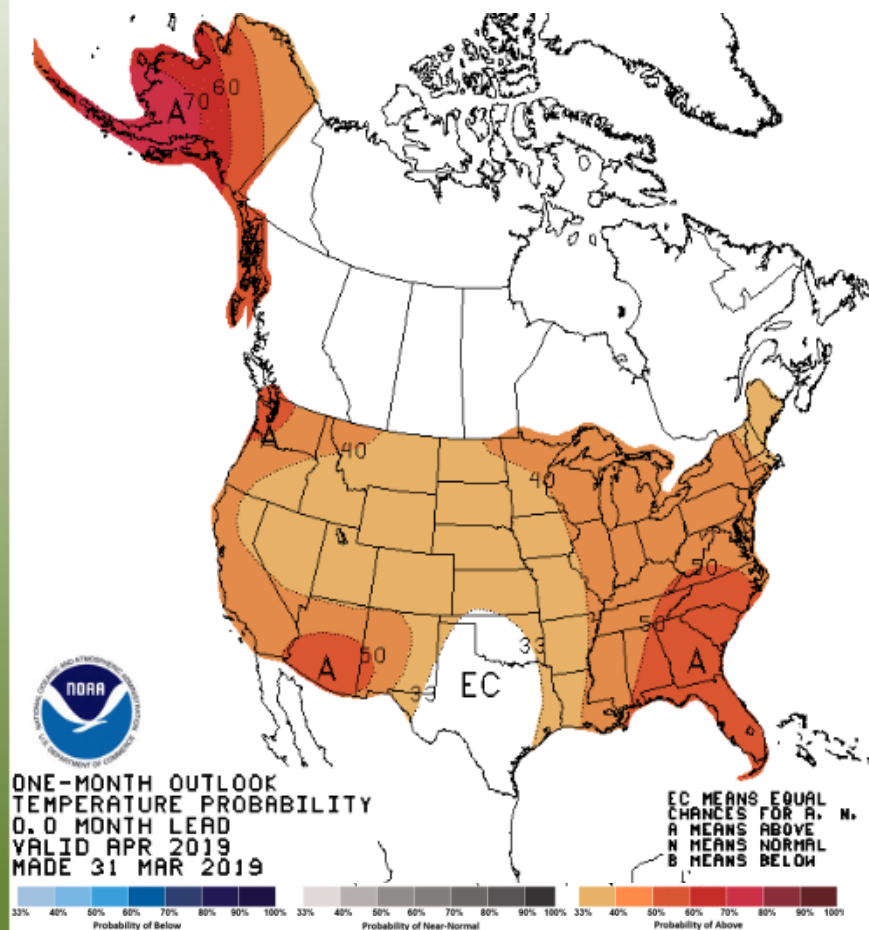




April 2019

Temperature

Precipitation



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Contact

Jill Maepea

Warning Preparedness Meteorologist

jill.maepea@canada.ca

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