



Environment and
Climate Change Canada

Environnement et
Changement climatique Canada

Canada

A decorative horizontal banner with a green background. It features several yellow maple leaves of various sizes and white, swirling lines that create a sense of movement across the banner.

New Brunswick

Integrated Climate Bulletin

Fall Review

Winter 2019 Outlook

Jill Maepea

**Meteorological Service of Canada
Environment and Climate Change
Canada**

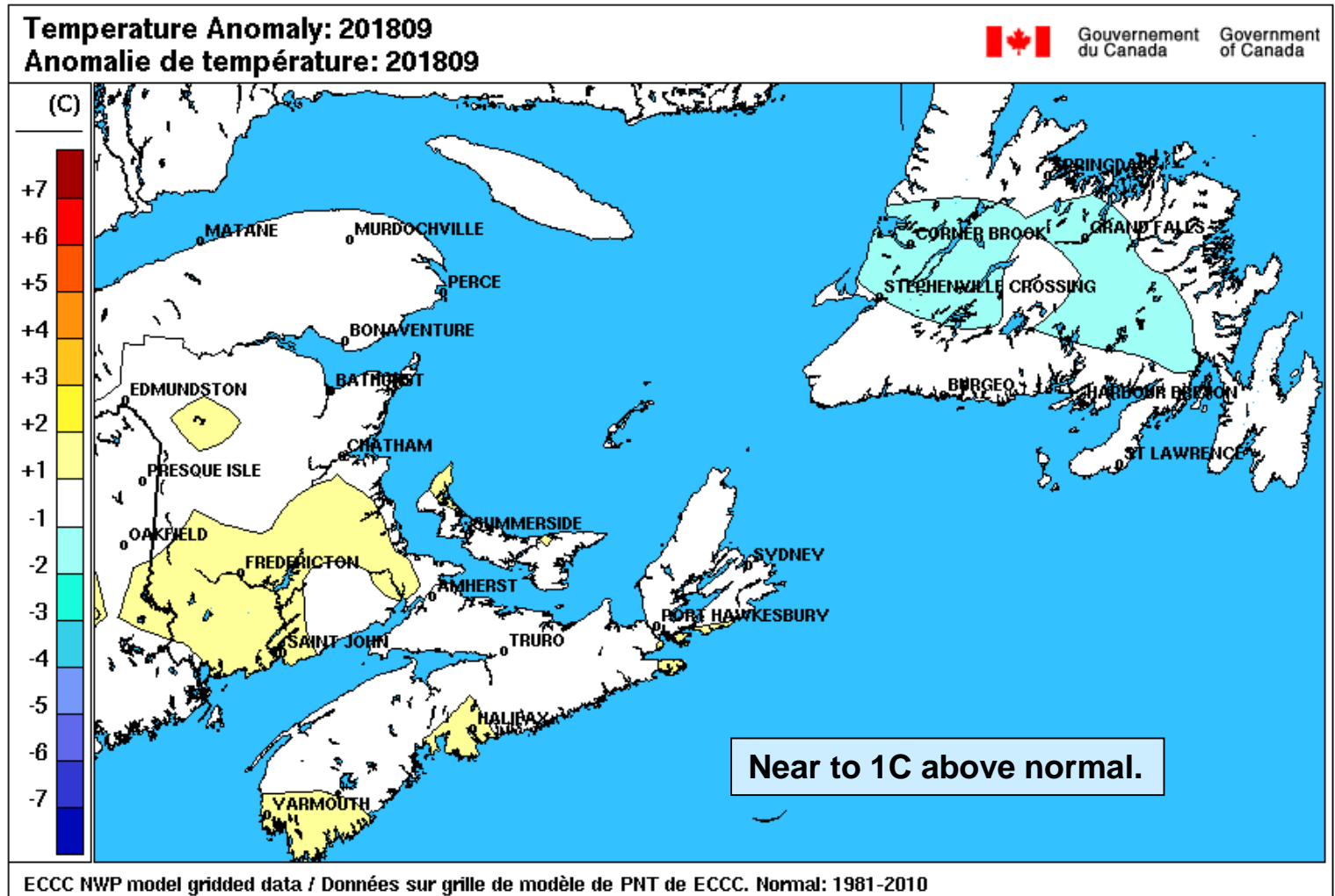
December 14, 2018

September 2018; Climate Summary

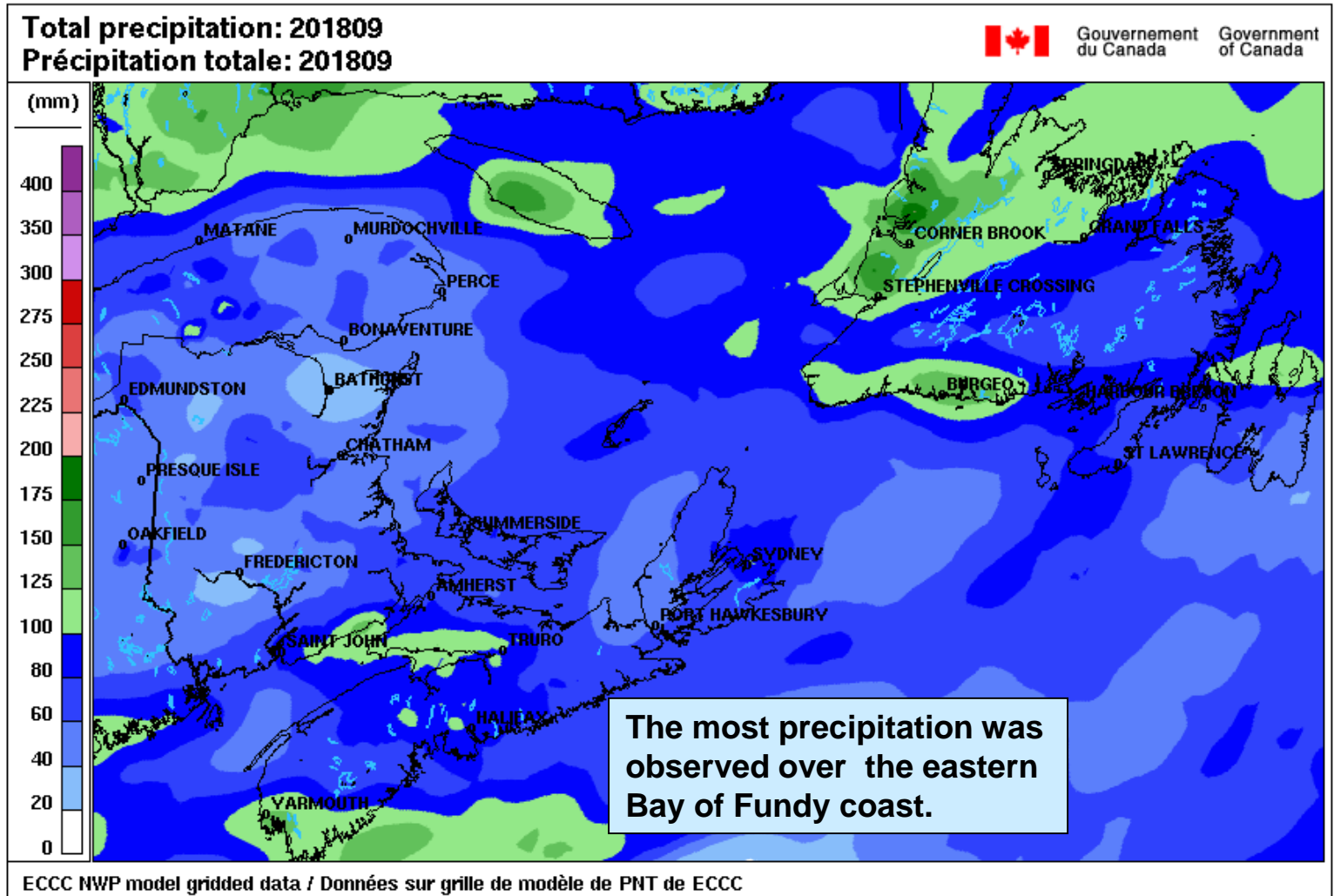
Station Name	TC ID	Station Type	Mean Temperature (°C)			Total Precip (mm)			Departure from Normal as % of
			Monthly Mean	Normal Mean	Departure from Normal	Monthly Total	Normal Total	Total as % of Normal	
BAS CARAQUET	WXS	AU8	13.4	13.1	0.3	51.6	72.6	71	-29
BAS CARAQUET		DAILY				35.0	72.6	48	-52
BATHURST A	ZBF	NCH	13.1	13.5	-0.4	28.9	84.2	34	-66
BOUCTOUCHE CDA CS	ABT	AU8	14.2	13.8	0.4	66.4	86.3	77	-23
CHARLO AUTO	ZCR	AU8	12.6	12.1	0.5	55.4	79.3	70	-30
MIRAMICHI RCS	ACQ	AU8	14.0	13.5	0.5	66.0	84.5	78	-22
DOAKTOWN AUTO RCS	ADN	AU8	13.7	13.5	0.2	47.0	100.2	47	-53
EDMUNDSTON	ERM	AU8	11.7	12.2	-0.5	70.8	94.6	75	-25
FREDERICTON	YFC	NCA	14.4	13.6	0.8				
FREDERICTON CDA CS	AFC	AU8	14.8	14.0	0.8	32.6	94.7	34	-66
FUNDY PARK (ALMA) CS	AFY	AU8	14.2	13.7	0.5	183.3	122.7	149	49
GAGETOWN AWOS A	YCX	AU5	14.4	14.7	-0.3	33.0	86.1	38	-62
GRAND MANAN SAR CS	XGM	AU8	13.5			102.6			
KOUCHIBOUGUAC	AKC	AU8	13.4	13.3	0.1	55.7	83.7	67	-33
MECHANIC SETTLEMENT	AMS	AU8	13.6			89.5			
MONCTON INTL A	YQM	NCH	14.4	13.6	0.8	100.5	93.5	107	7
OAK POINT		DAILY	14.9	14.7	0.2	69.6	86.1	81	-19
POINT LEPREAU CS	WPE	AU8	14.1	12.4	1.7	53.7	120.9	44	-56
RED PINES	ARP	AU8	12.3	13.1	-0.8	20.5	76.5	27	-73
SAINT JOHN A	YSJ	NCH	13.3	13.0	0.4	109.0	105.6	103	3
ST. STEPHEN	WSS	AU8	14.7			64.0			
SUSSEX FOUR CORNERS	ASF	AU8	14.1	14.3	-0.2	58.2	99.9	58	-42
WOODSTOCK		DAILY	14.0	13.2	0.8	57.6	95.7	60	-40
WOODSTOCK NEWBRIDGE	EWD	AU8	13.0	13.2	-0.2	51.4	95.7	54	-46
Average			13.7	13.4	0.3	65.3	91.8	66	-34
Max			14.9	14.7	1.7	183.3	122.7	149	49
Min			11.7	12.1	-0.8	20.5	72.6	27	-73



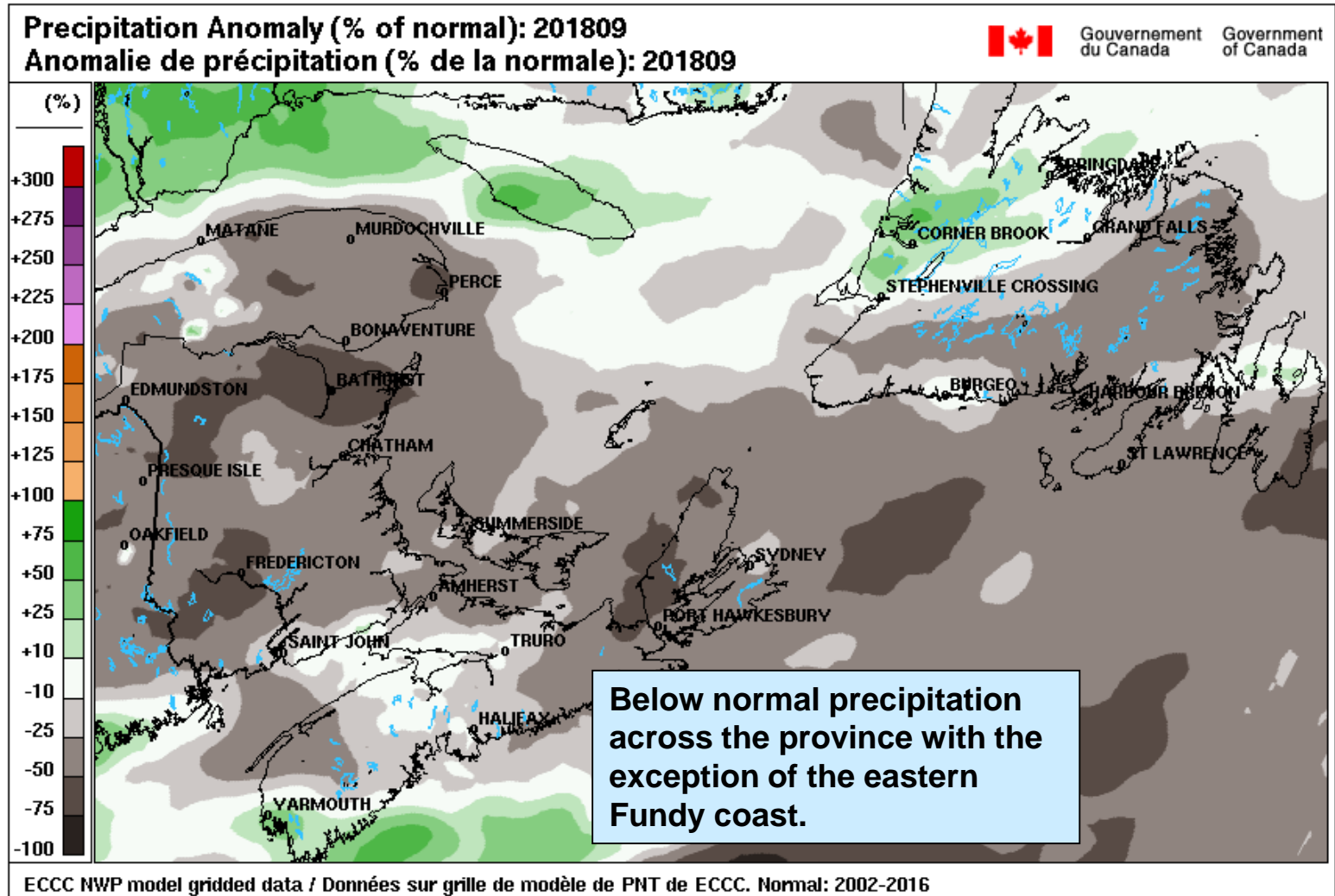
September 2018 Temperature departure from 1981-2010 mean.



September 2018 Total Precipitation



September 2018 Precipitation departure from 1981-2010 mean.



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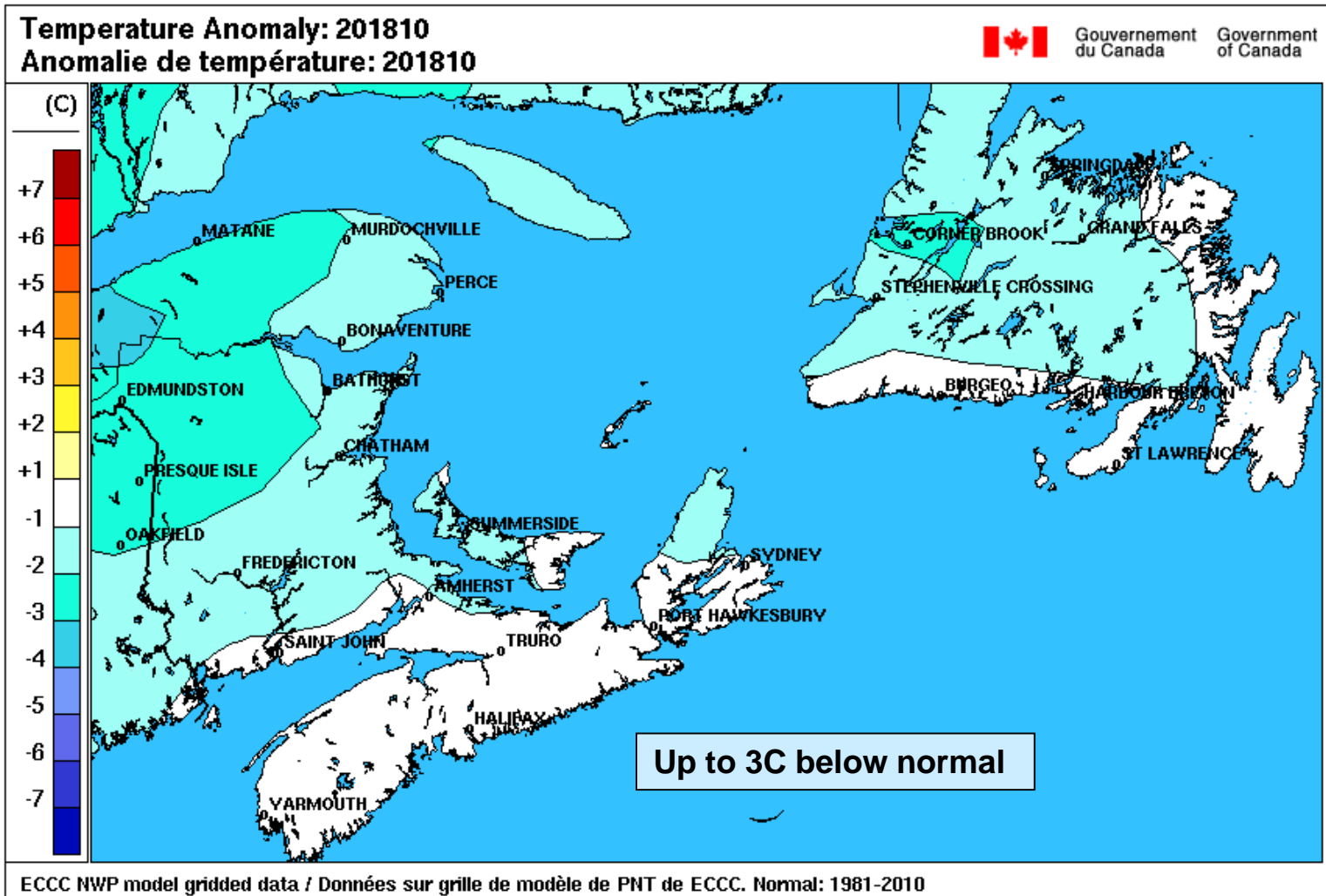
Canada

October 2018; Climate Summary

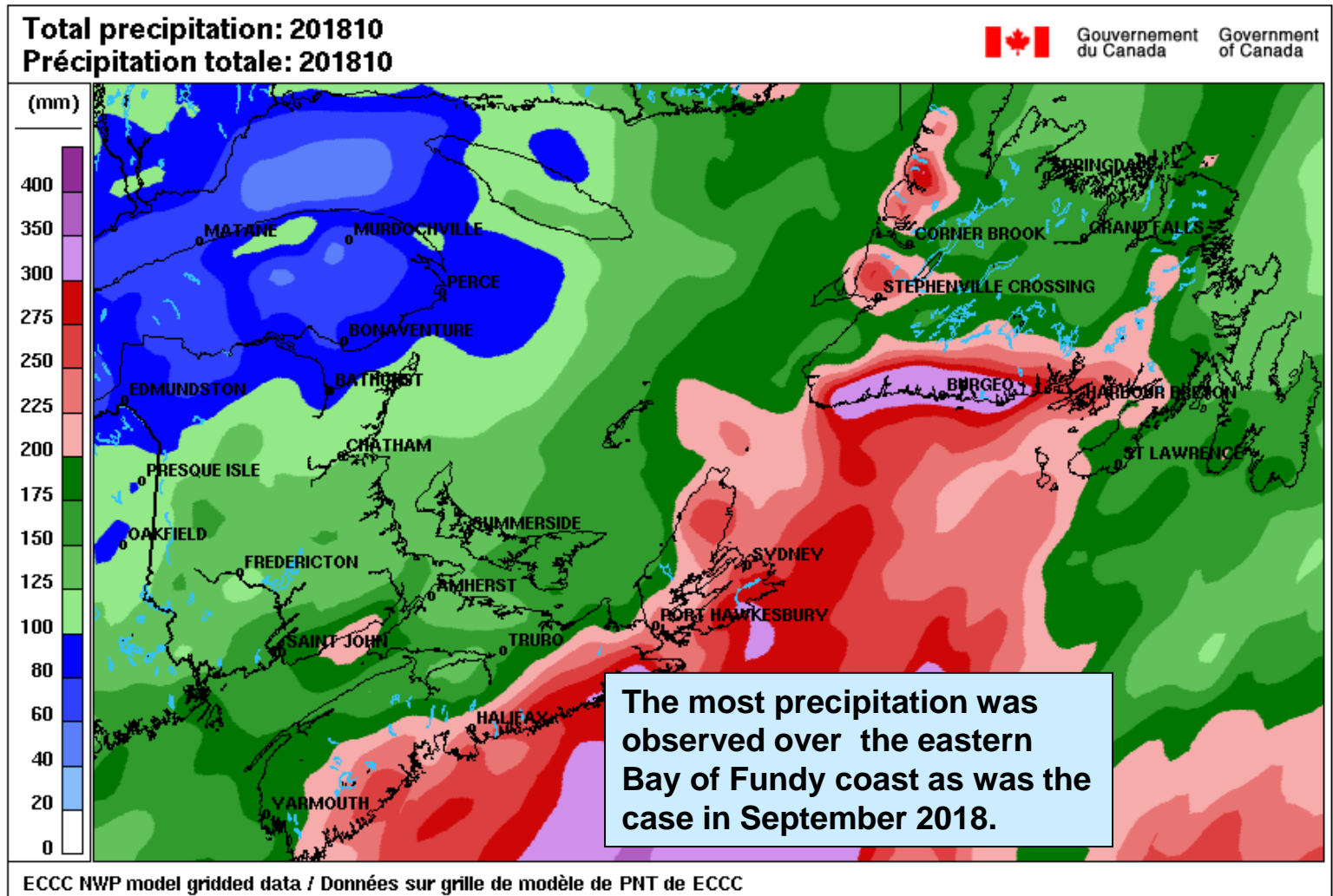
Station Name	Prov	TC ID	Station Type	Mean Temperature (°C)			Total Precip (mm)			Departure from Normal as % of
				Monthly Mean	Normal Mean	Departure from Normal	Monthly Total	Normal Total	Total as % of Normal	
BAS CARAQUET	NB	WXS	AU8	5.6	7.4	-1.8	113.3	96.2	118	18
BAS CARAQUET	NB		DAILY				97.6	96.2	101	1
BATHURST A	NB	ZBF	NCA	4.1	6.8	-2.7	67.9	122.9	55	-45
BOUCTOUCHE CDA CS	NB	ABT	AU8	6.0	7.9	-1.9				
CHARLO AUTO	NB	ZCR	AU8	3.7	5.7	-2.0	73.0	84.0	87	-13
MIRAMICHI RCS	NB	ACQ	AU8	5.3	6.9	-1.6	131.5	89.7	147	47
DOAKTOWN AUTO RCS	NB	ADN	AU8	5.0	7.0	-2.0	146.2	100.8	145	45
FREDERICTON INTL A	NB	YFC	NCA	5.6	7.5	-1.9	132.8	89.1	149	49
FREDERICTON CDA CS	NB	AFC	AU8	5.9	7.8	-1.9	144.9	89.7	162	62
FUNDY PARK (ALMA) CS	NB	AFY	AU8	7.0	8.2	-1.2				
GAGETOWN AWOS A	NB	YCX	AU5	6.0	8.6	-2.6	123.5	105.7	117	17
GRAND MANAN SAR CS	NB	XGM	AU8	7.0			211.1			
KOUCHIBOUGUAC	NB	AKC	AU8	5.4	7.6	-2.2	187.3	99.6	188	88
MECHANIC SETTLEMENT	NB	AMS	AU8	4.7			199.6			
MONCTON INTL A	NB	YQM	NCH	6.3	7.6	-1.3	164.2	113.4	145	45
OAK POINT	NB		DAILY	6.5	8.6	-2.1	188.5	105.7	178	78
POINT LEPREAU CS	NB	WPE	AU8	7.7	7.6	0.1	171.0	115.8	148	48
RED PINES	NB	ARP	AU8	3.5	6.5	-3.0	102.5	90.2	114	14
SAINT JOHN A	NB	YSJ	NCH	5.9	7.6	-1.7	202.1	116.4	174	74
ST. STEPHEN	NB	WSS	AU8	6.1			137.3			
SUSSEX FOUR CORNERS	NB	ASF	AU8	6.6	8.1	-1.4	140.1	106.5	132	32
WOODSTOCK	NB		DAILY	4.8	6.6	-1.8	115.8	95.3	122	22
WOODSTOCK NEWBRIDGE	NB	EWD	AU8	4.2	6.6	-2.3	128.6	95.3	135	35
Average				5.6	7.4	-1.9	141.8	100.7	134	34
Max				7.7	8.6	0.1	211.1	122.9	188	88
Min				3.5	5.7	-3.0	67.9	84.0	55	-45



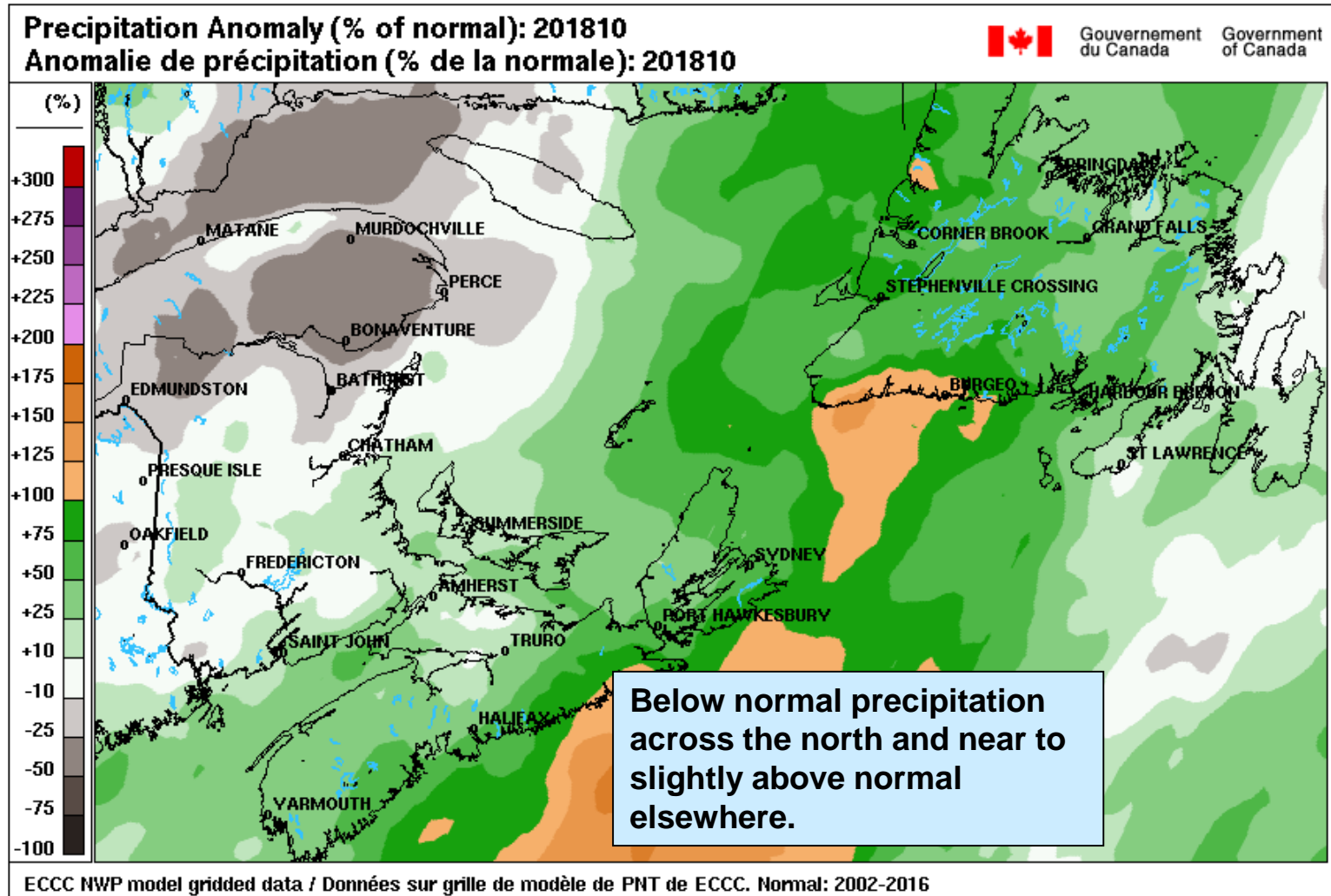
October 2018 Temperature departure from 1981-2010 mean.



October 2018 Total Precipitation



October 2018 Precipitation departure from 1981-2010 mean.

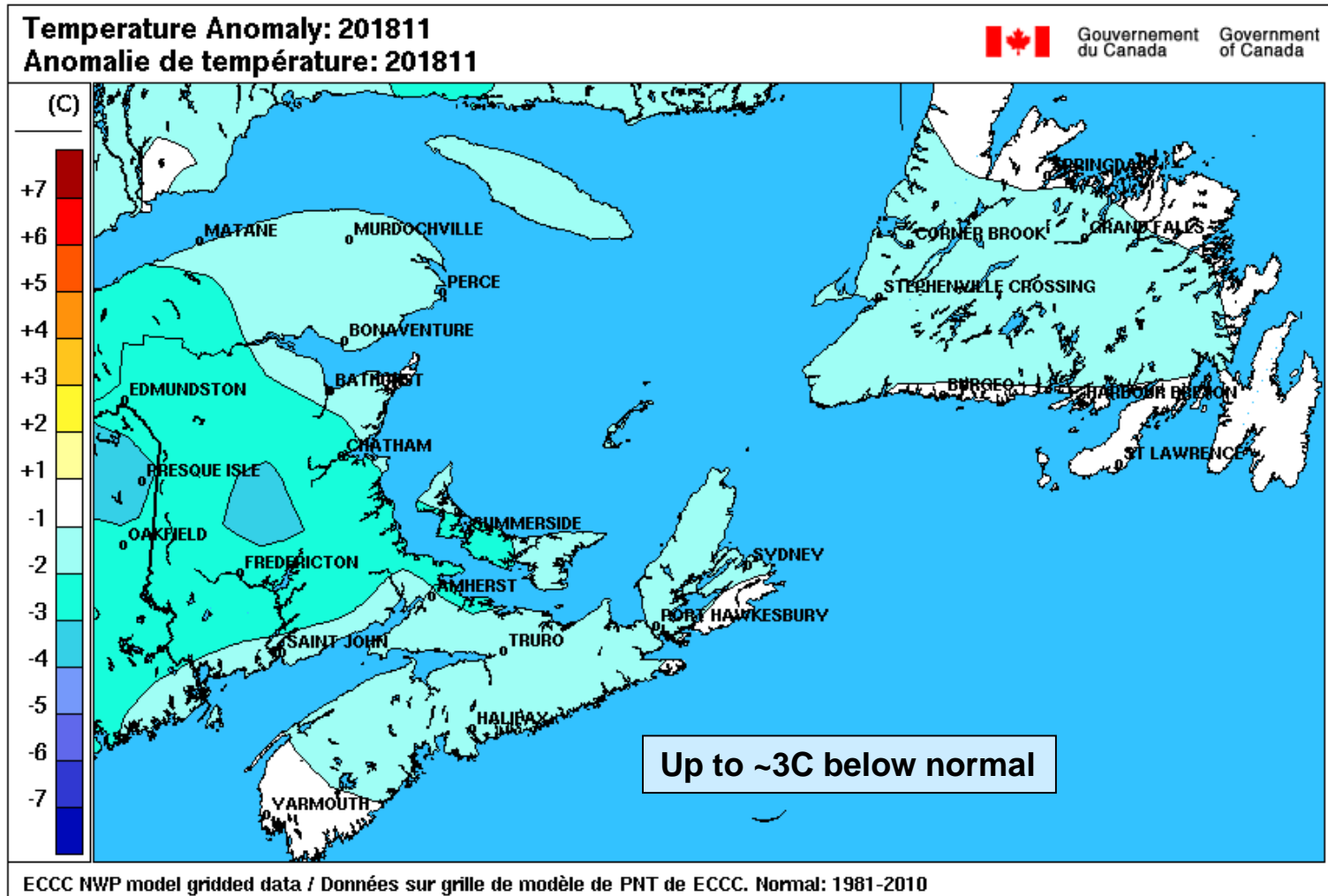


November 2018; Climate Summary

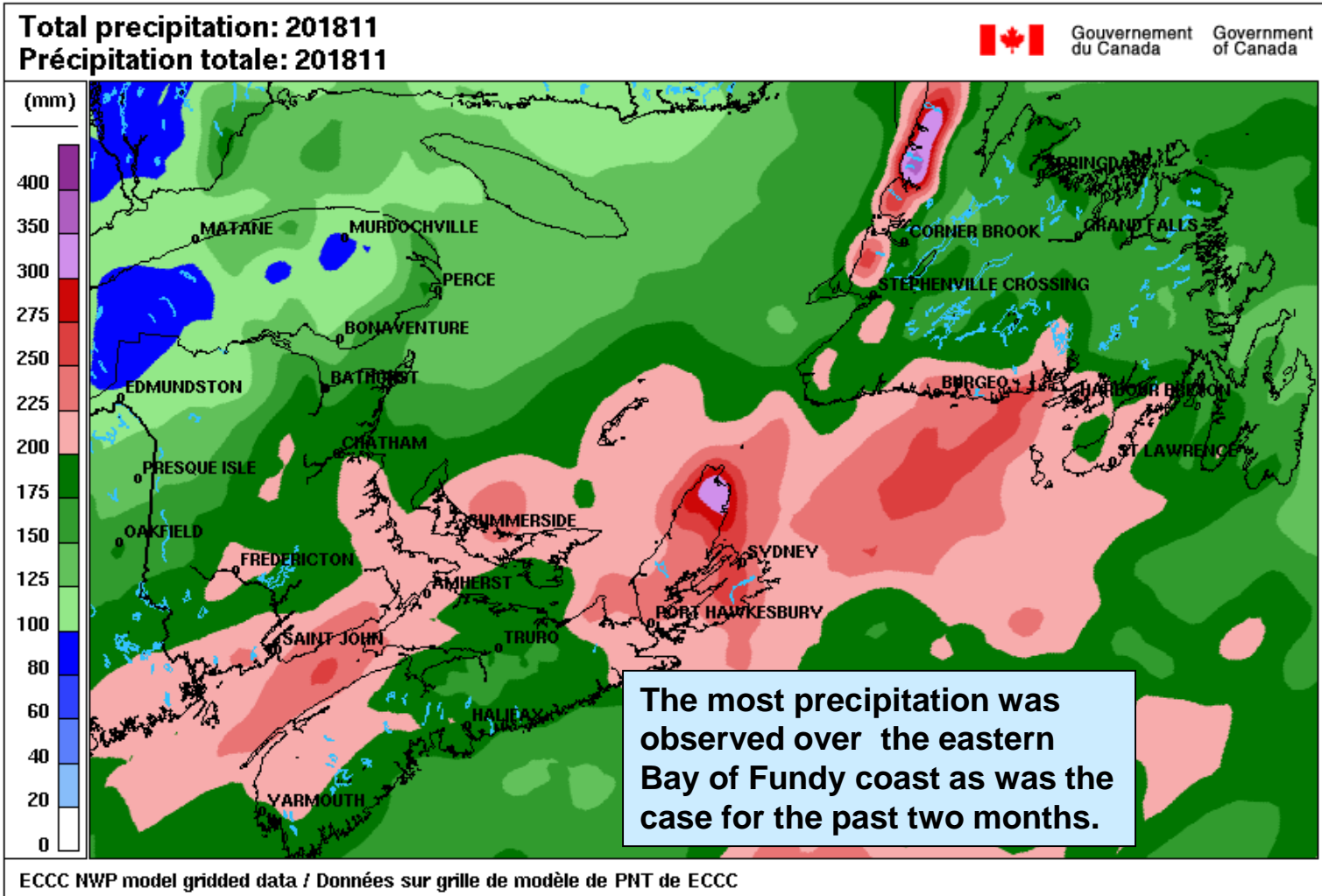
Station Name	Prov	TC ID	Station Type	Mean Temperature (°C)			Total Precip (mm)			Departure from Normal as % of Normal
				Monthly Mean	Normal Mean	Departure from Normal	Monthly Total	Normal Total	Total as % of Normal	
BAS CARAQUET	NB	WXS	AU8	-0.6	1.2	-1.8				
BAS CARAQUET	NB		DAILY				142.2	112.8	126	26
BATHURST A	NB	ZBF	NCA	-2.6	0.8	-3.4	119.5	103.8	115	15
BOUCTOUCHE CDA CS	NB	ABT	AU8	-0.4	1.7	-2.1				
CHARLO AUTO	NB	ZCR	AU8	-2.6	-0.7	-1.9	86.2	92.3	93	-7
MIRAMICHI RCS	NB	ACQ	AU8							
DOAKTOWN AUTO RCS	NB	ADN	AU8	-1.6	0.7	-2.3				
EDMUNDSTON	NB	ERM	AU8							
FREDERICTON INTL A	NB	YFC	NCA	-1.0	1.5	-2.5				
FREDERICTON CDA CS	NB	AFC	AU8	-0.7	1.8	-2.5	154.1	109.9	140	40
FUNDY PARK (ALMA) CS	NB	AFY	AU8	1.1	3.0	-2.0				
GAGETOWN AWOS A	NB	YCX	AU5	-1.1	2.5	-3.6				
GRAND MANAN SAR CS	NB	XGM	AU8	1.2						
KOUCHIBOUGUAC	NB	AKC	AU8	-0.8	1.2	-2.0				
MACTAQUAC PROV PARK	NB		DAILY							
MECHANIC SETTLEMENT	NB	AMS	AU8	-1.6						
MISCOU ISLAND (AUT)	NB	WMI	AU8	0.2						
MONCTON INTL A	NB	YQM	NCH	-0.4	1.9	-2.2	224.2	107.2	209	109
MONCTON A	NB	YQM	NCA	-0.4	1.9	-2.2				
OAK POINT	NB		DAILY	0.6	2.5	-1.9	221.3	101.8	217	117
POINT LEPREAU CS	NB	WPE	AU8	2.1	2.7	-0.6				
RED PINES	NB	ARP	AU8	-2.7	-0.1	-2.7	184.4	89.4	206	106
SAINT JOHN A	NB	YSJ	NCH	0.6	2.3	-1.7	237.8	134.1	177	77
ST. STEPHEN	NB	WSS	AU8	0.2			208.2			
SUSSEX FOUR CORNERS	NB	ASF	AU8	-0.2	2.4	-2.5				
WOODSTOCK	NB		DAILY	-2.1	0.3	-2.4	148.4	103.2	144	44
WOODSTOCK NEWBRIDGE	NB	EWD	AU8	-2.2	0.3	-2.4				
Average				-0.7	1.5	-2.2	172.6	106.0	159	59
Max				2.1	3.0	-0.6	237.8	134.1	217	117
Min				-2.7	-0.7	-3.6	86.2	89.4	93	-7



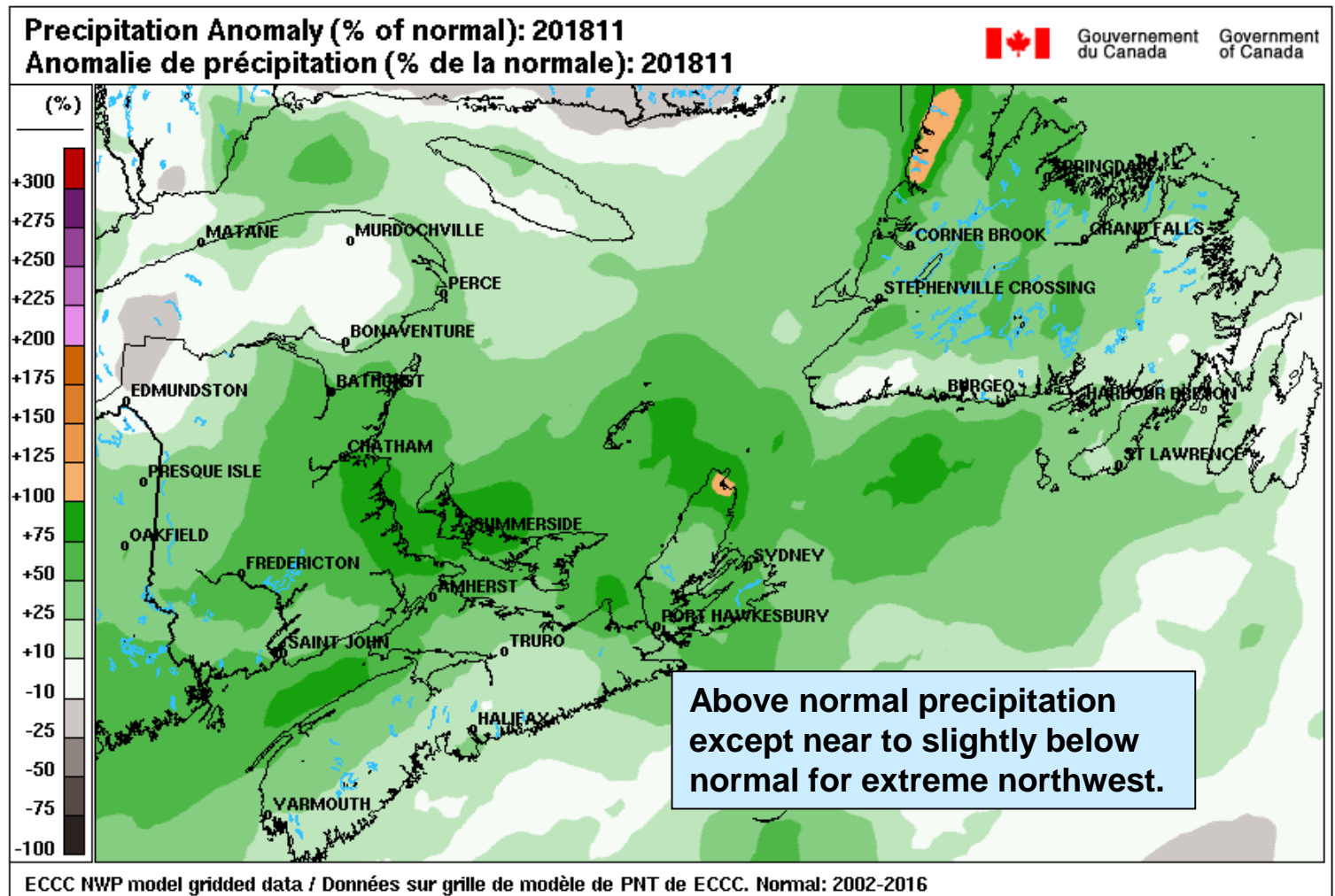
November 2018 Temperature departure from 1981-2010 mean.



November 2018 Total Precipitation



November 2018 Precipitation departure from 1981-2010 mean.



Fall 2018; Climate Summary Table

Currently unavailable



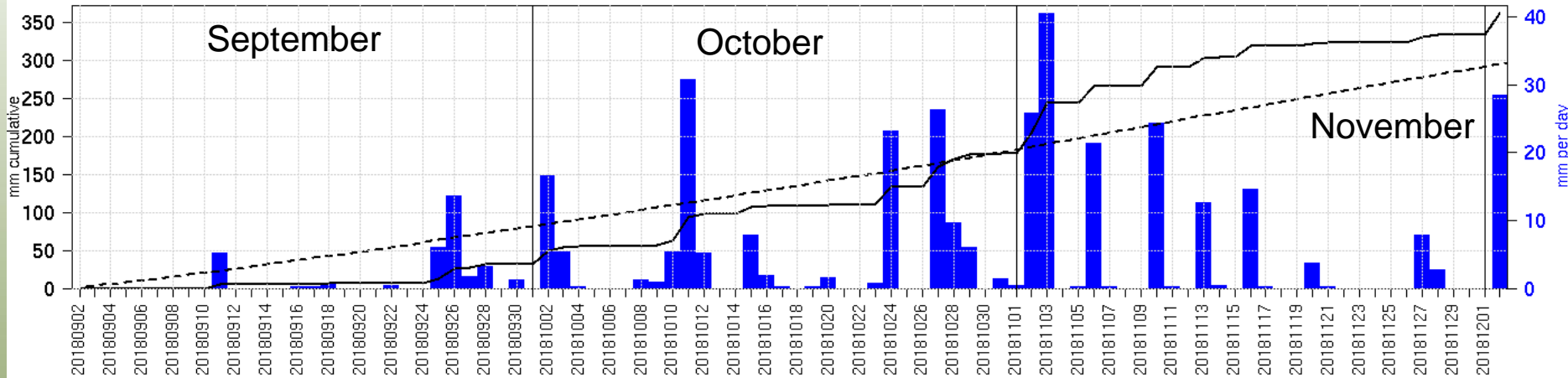
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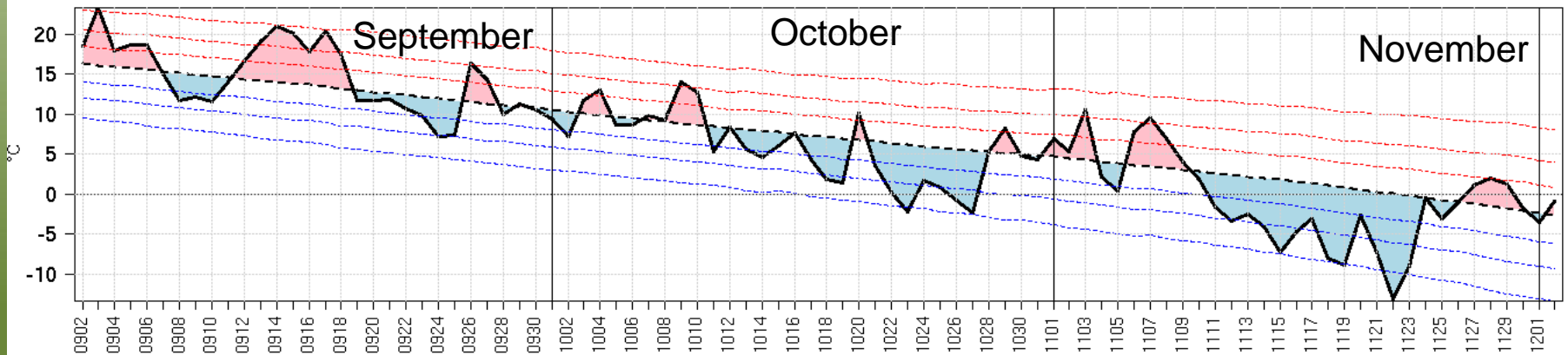
Canada 

2018 Temperature and precipitation – (S,O,N) for Fredericton

Observed Cumulative Precipitation (line) versus Normal (dashed line) and Daily Amounts (bars) for Fredericton, NB (45.94N 66.63W)

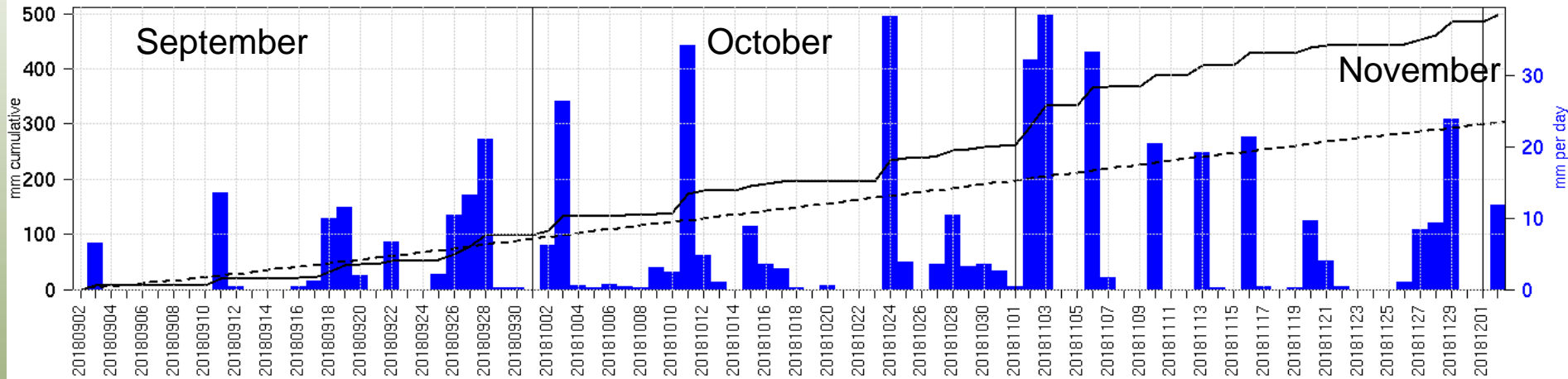


Daily Mean Temperature (bold line) versus Normal (thin line) and +/- 0.7, 1.3, 2.1 SD (red/blue dashes) for Fredericton, NB (45.94N 66.63W)

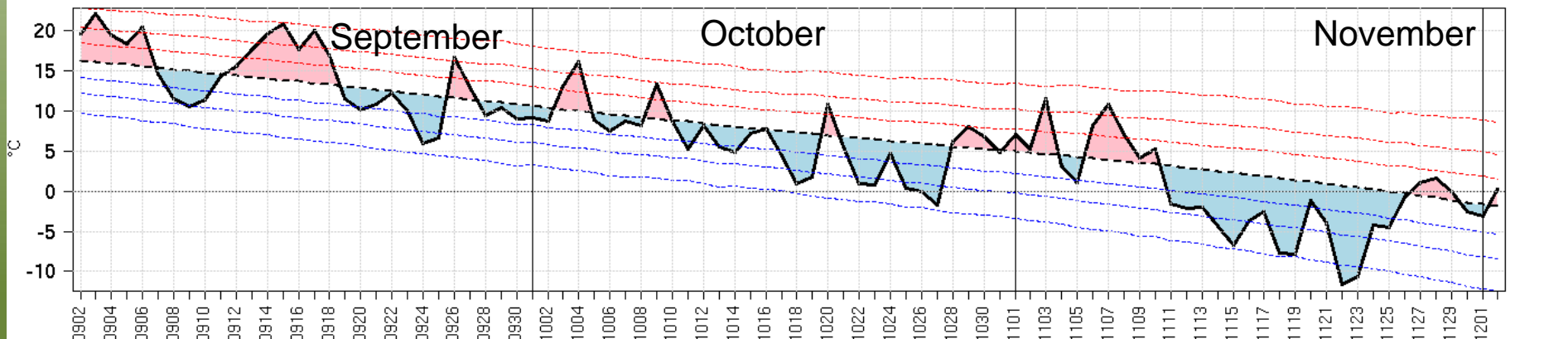


2018 Temperature and precipitation – (S,O,N) for Moncton

Observed Cumulative Precipitation (line) versus Normal (dashed line) and Daily Amounts (bars) for Moncton, NB (46.08N 64.76W)

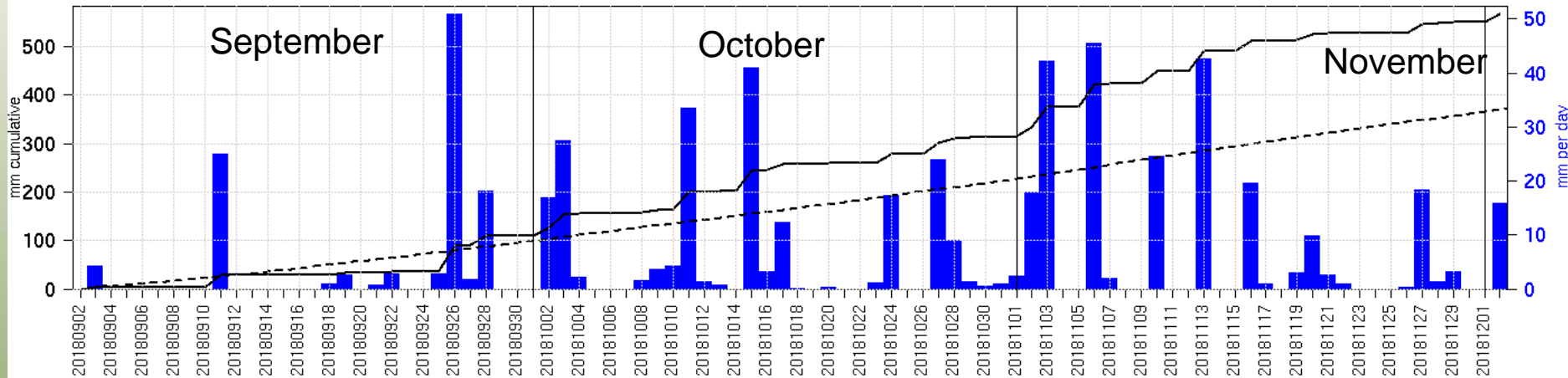


Daily Mean Temperature (bold line) versus Normal (thin line) and +/- 0.7, 1.3, 2.1 SD (red/blue dashes) for Moncton, NB (46.08N 64.76W)

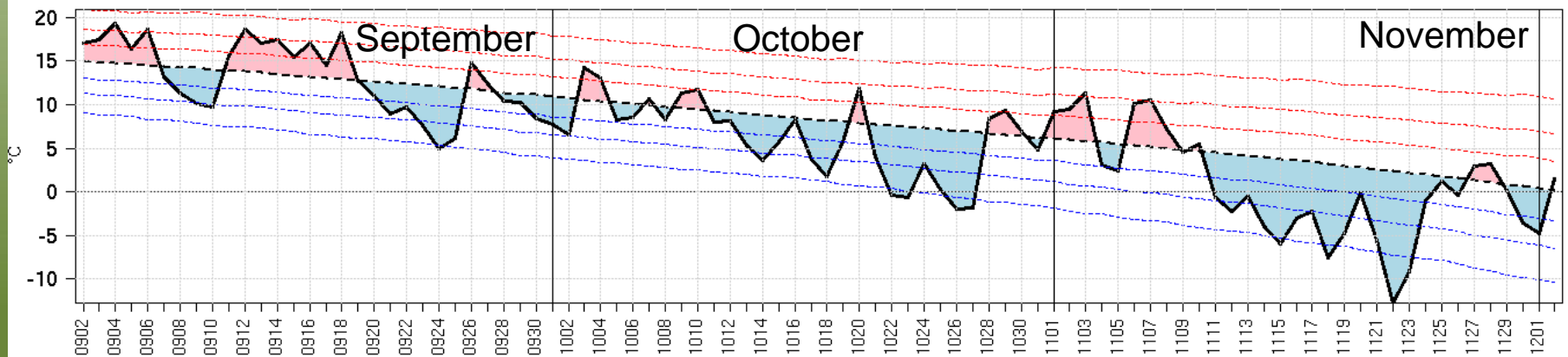


2018 Temperature and precipitation – (S,O,N) for Saint John

Observed Cumulative Precipitation (line) versus Normal (dashed line) and Daily Amounts (bars) for Saint John, NB (45.26N 66.07W)

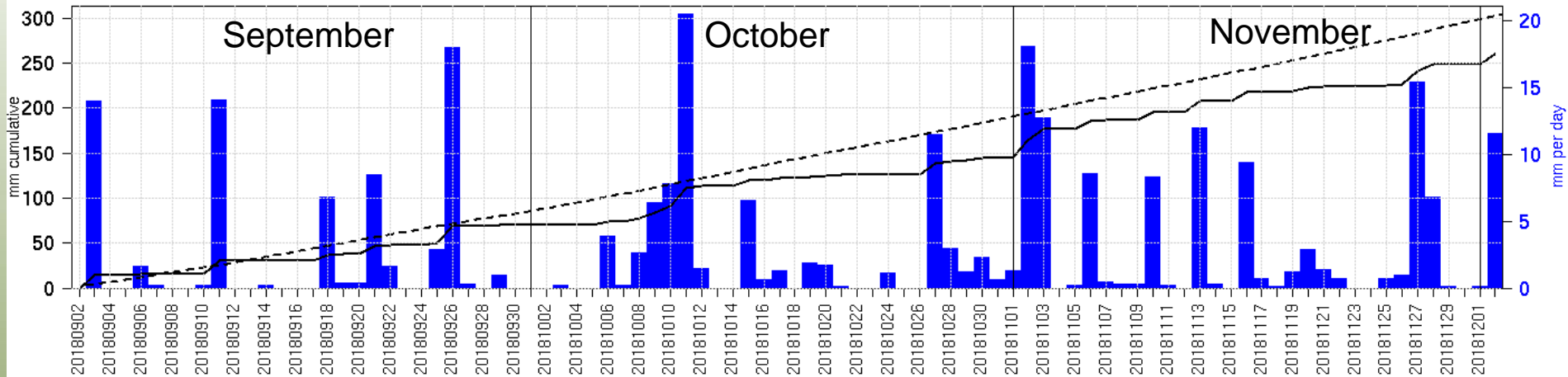


Daily Mean Temperature (bold line) versus Normal (thin line) and +/- 0.7, 1.3, 2.1 SD (red/blue dashes) for Saint John, NB (45.26N 66.07W)

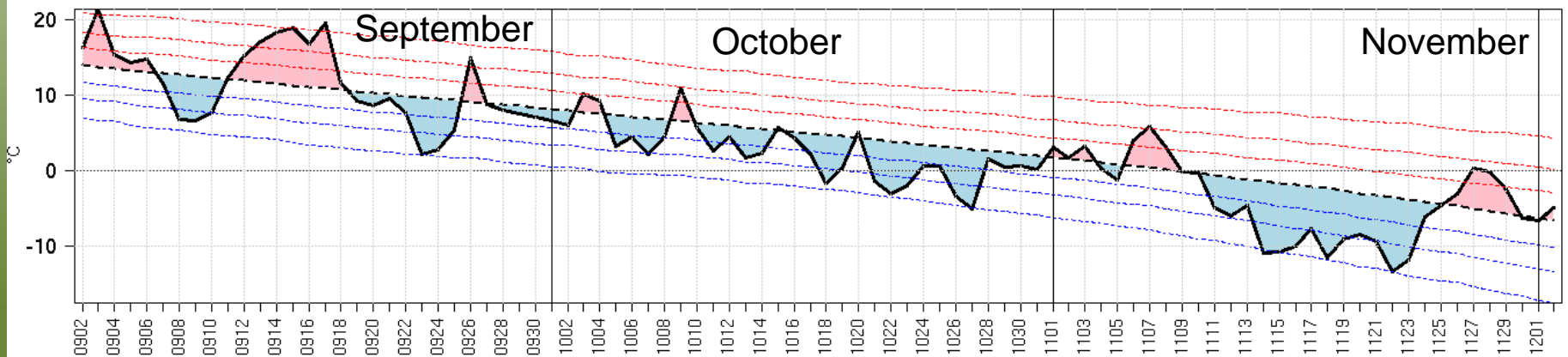


2018 Temperature and precipitation – (S,O,N) for Edmundston

Observed Cumulative Precipitation (line) versus Normal (dashed line) and Daily Amounts (bars) for Edmundston, NB (47.37N 68.33W)

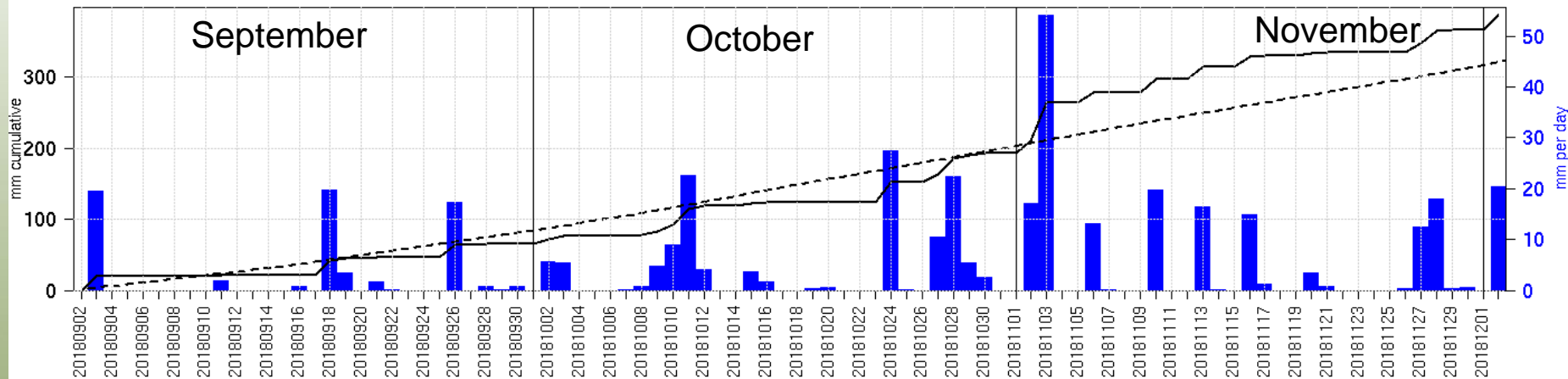


Daily Mean Temperature (bold line) versus Normal (thin line) and +/- 0.7, 1.3, 2.1 SD (red/blue dashes) for Edmundston, NB (47.37N 68.33W)

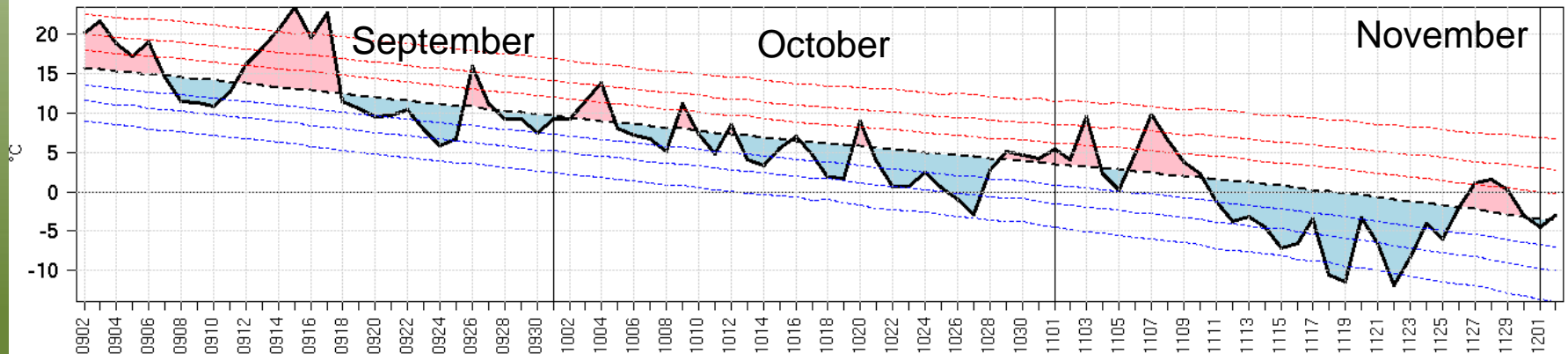


2018 Temperature and precipitation – (S,O,N) for Miramichi

Observed Cumulative Precipitation (line) versus Normal (dashed line) and Daily Amounts (bars) for Miramichi, NB (47.02N 65.50W)

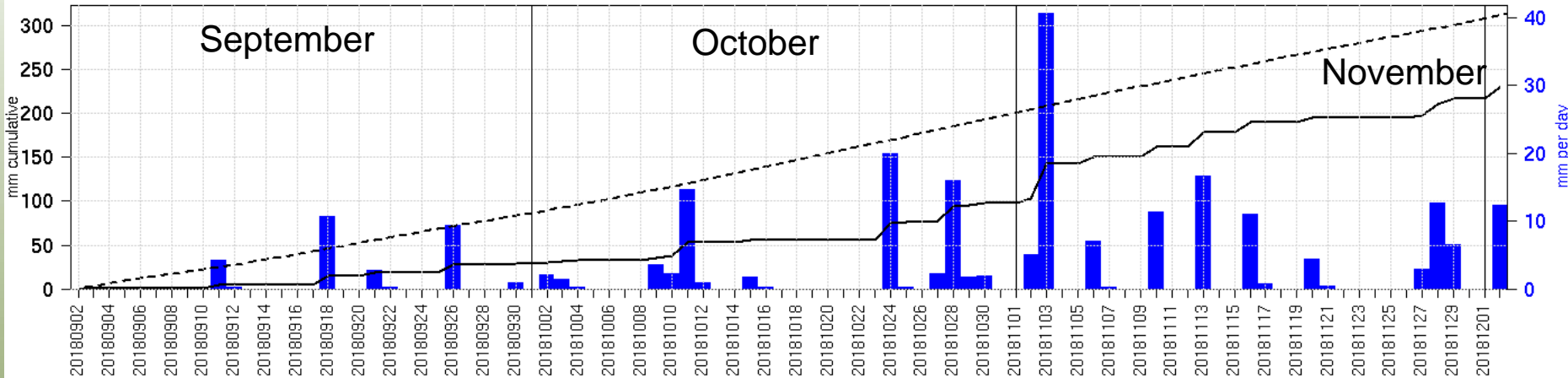


Daily Mean Temperature (bold line) versus Normal (thin line) and +/- 0.7, 1.3, 2.1 SD (red/blue dashes) for Miramichi, NB (47.02N 65.50W)

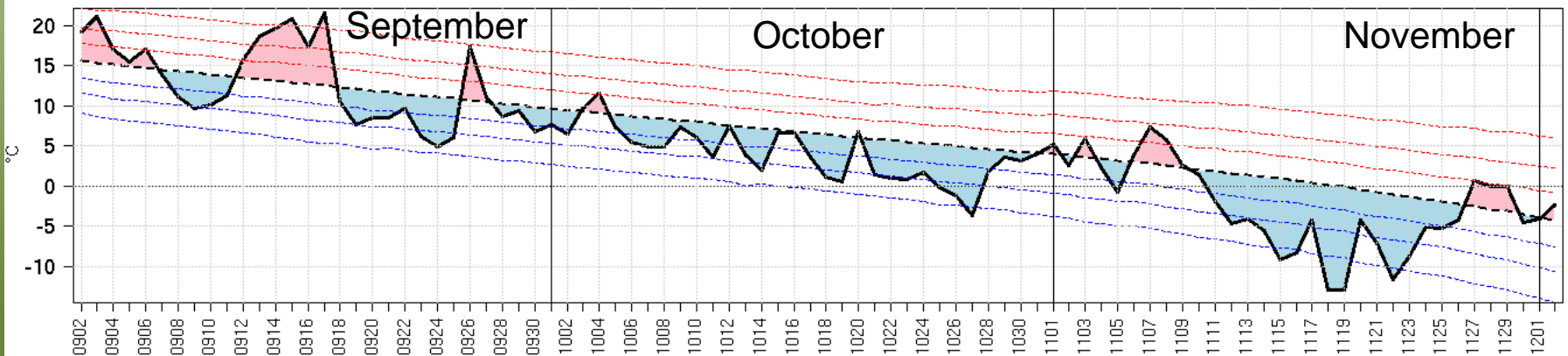


2018 Temperature and precipitation – (S,O,N) for Bathurst

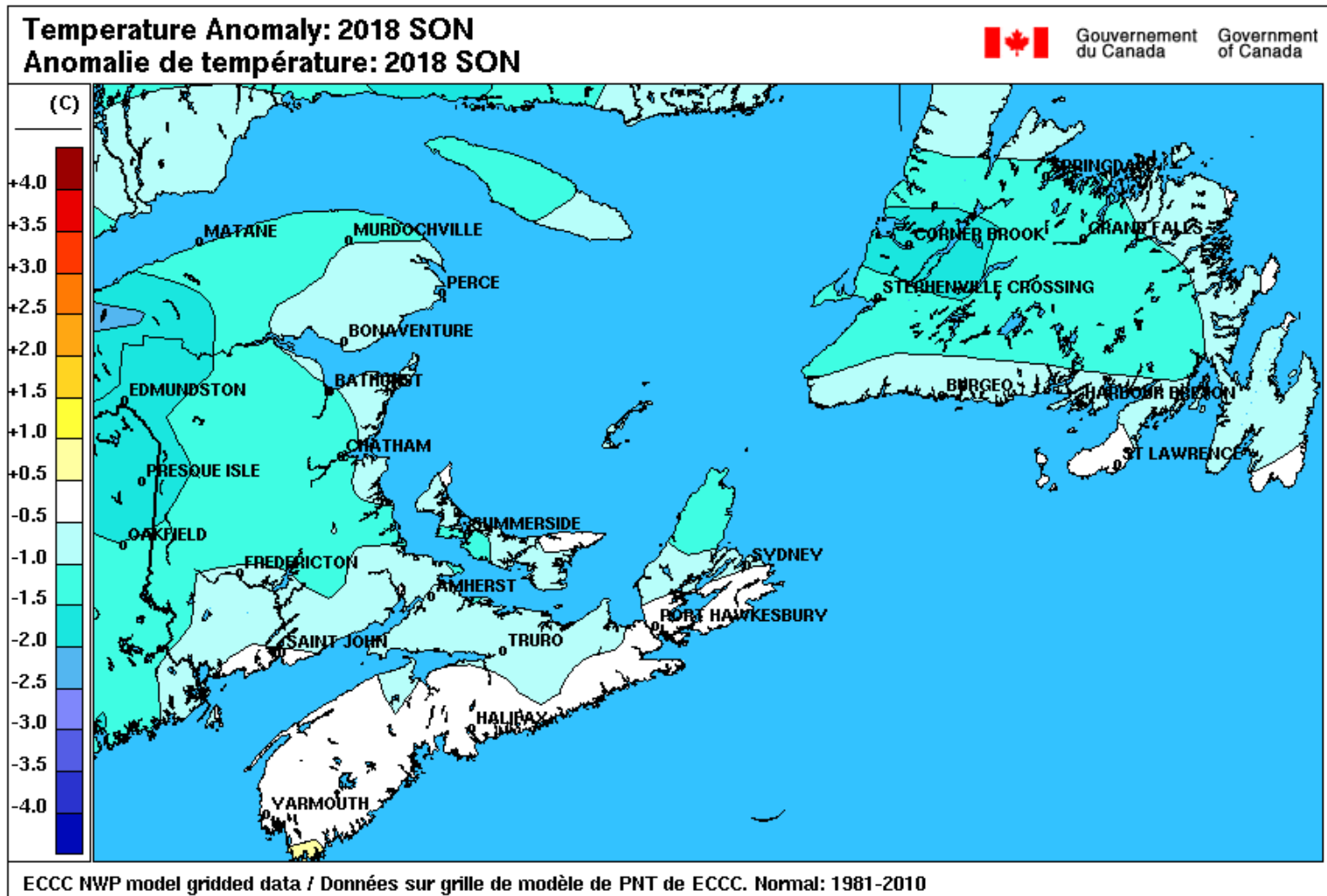
Observed Cumulative Precipitation (line) versus Normal (dashed line) and Daily Amounts (bars) for Bathurst, NB (47.59N 65.64W)



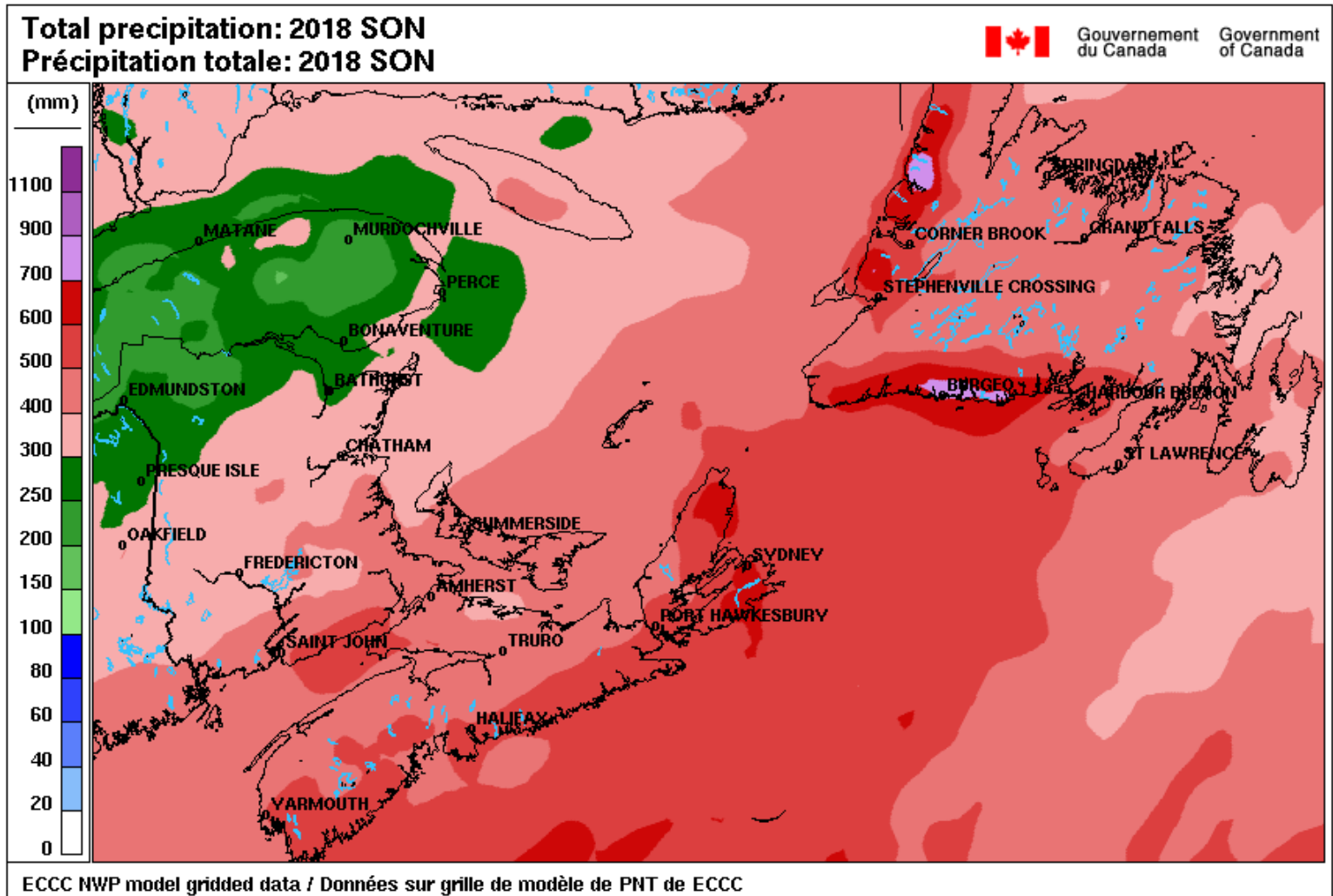
Daily Mean Temperature (bold line) versus Normal (thin line) and +/- 0.7, 1.3, 2.1 SD (red/blue dashes) for Bathurst, NB (47.59N 65.64W)



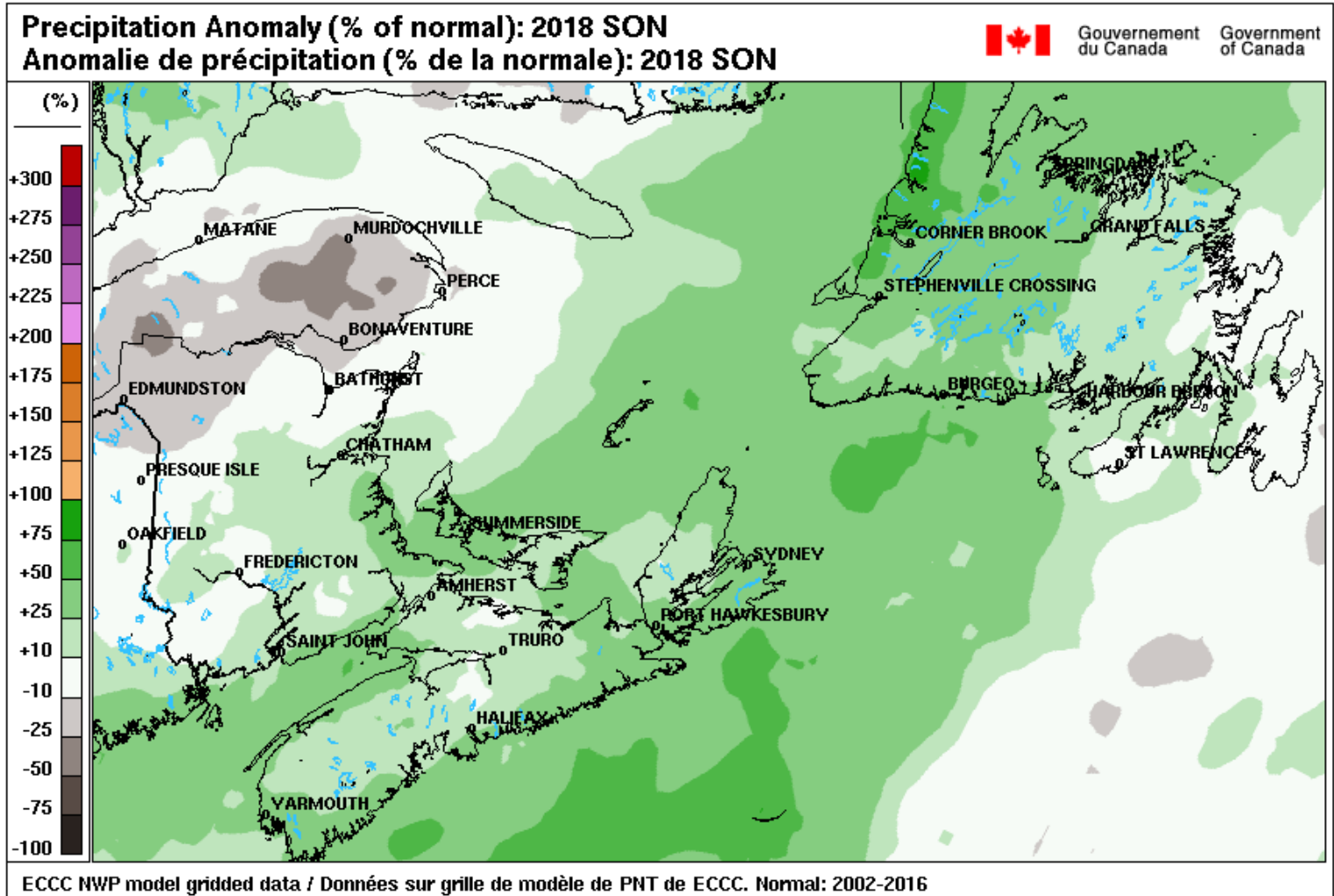
Fall 2018 (S,O,N) Temperature departure from 1981-2010 mean



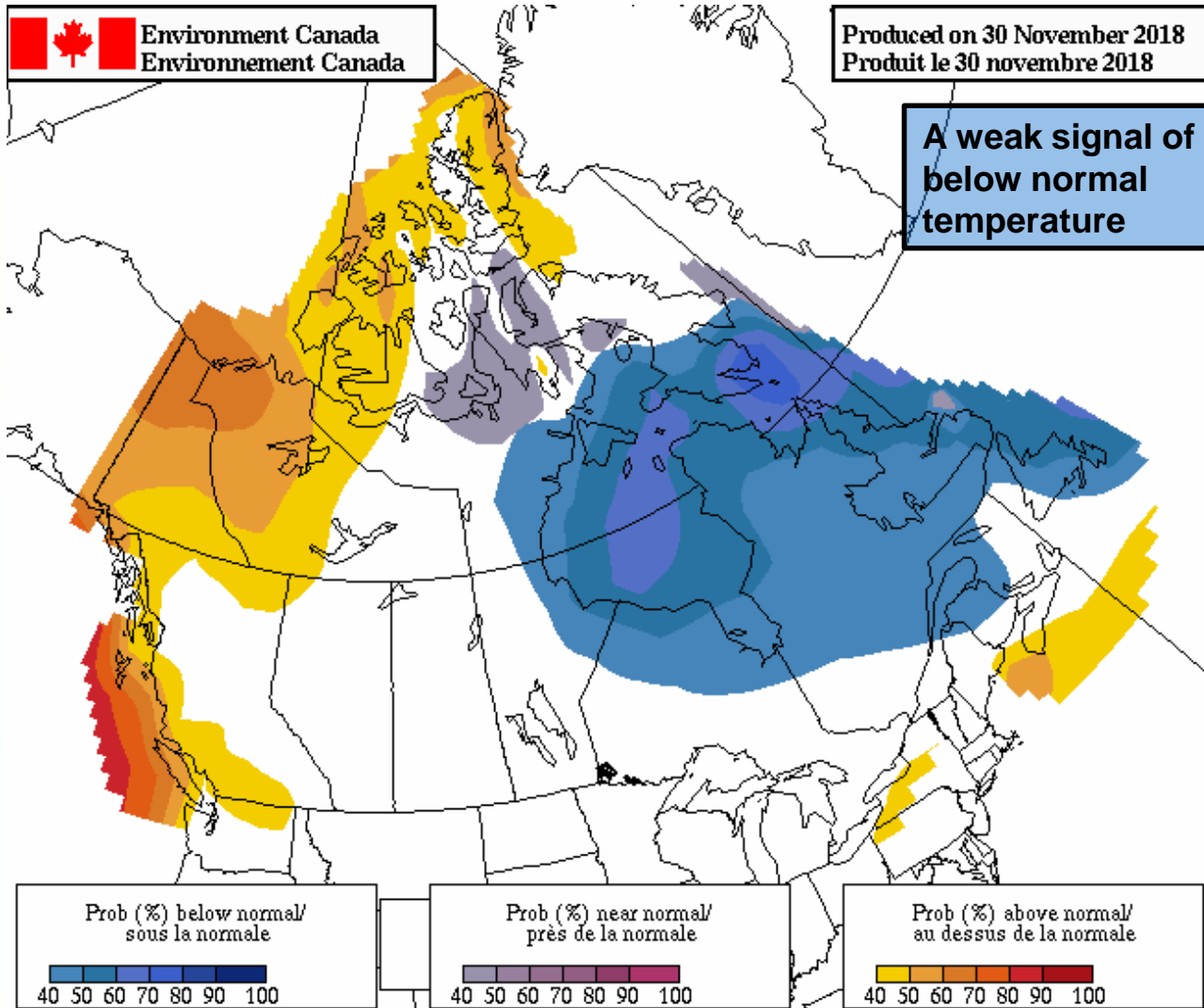
Fall 2018 (S,O,N) Total Precipitation



Fall 2018 (S, O, N) Precipitation departure from 1981-2010 mean



Outlook - Winter 2019 (D, J, F)



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

Period: December 2018 January-February 2019

Based on 3 equiprobable categories
from 1981-2010 climatology

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

Période: décembre 2018 janvier-février 2019

Basé sur 3 catégories équiprobables
de la climatologie 1981-2010



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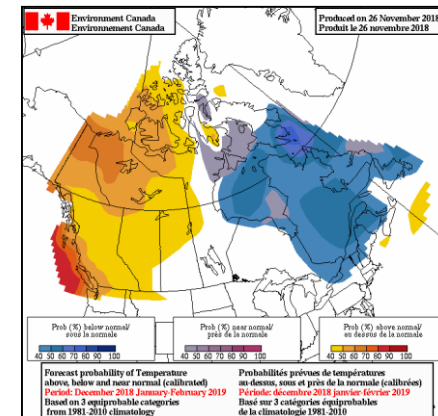
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Changement climatique Canada

Temperature

December 2018
January 2019
February 2019

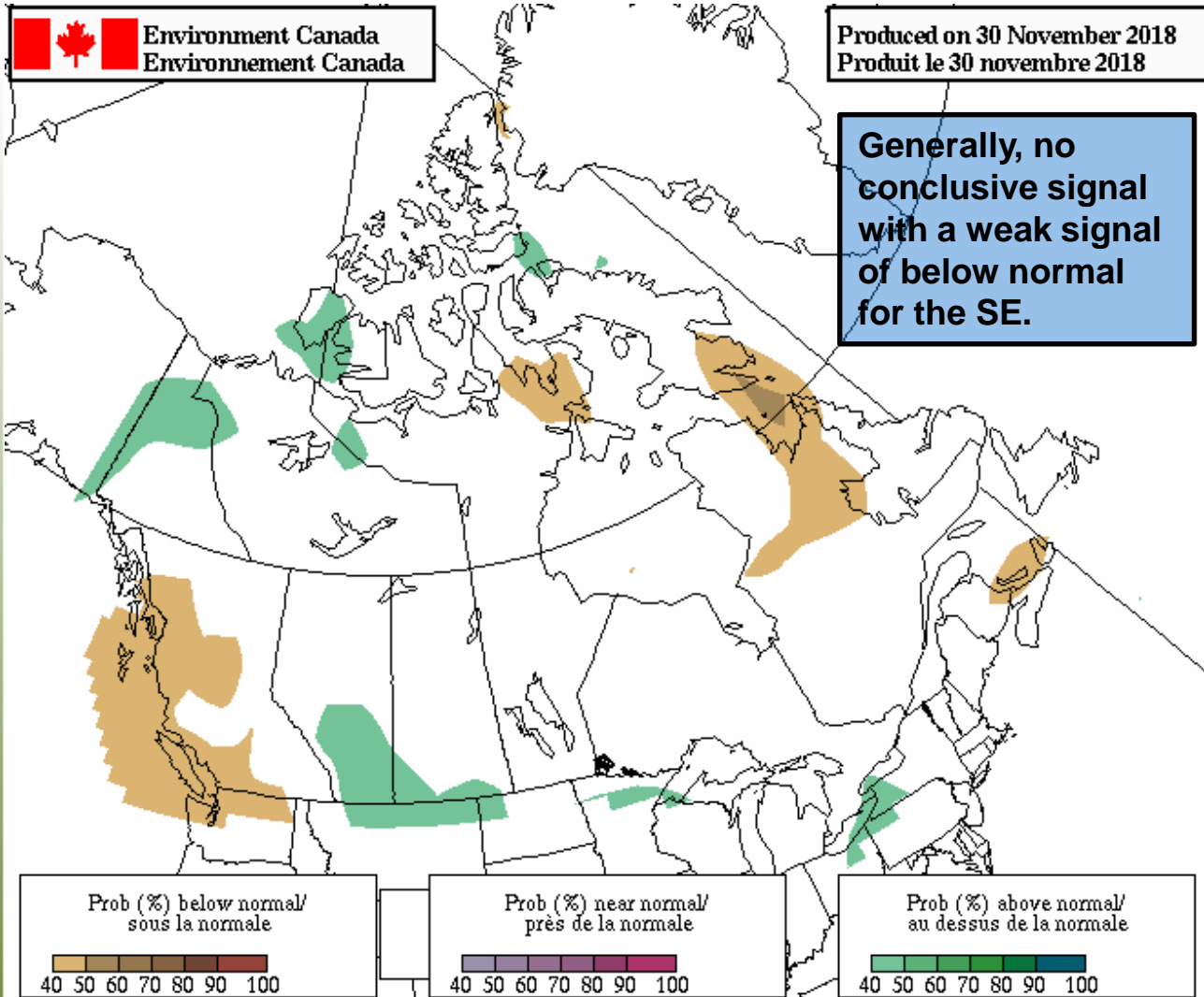
NB (D, J, F)
Normal; -13/-2

Produced November 26



Canada

Outlook - Winter 2019 (D, J, F)



<p>Prob (%) below normal/ sous la normale</p> <p>40 50 60 70 80 90 100</p>	<p>Prob (%) near normal/ près de la normale</p> <p>40 50 60 70 80 90 100</p>	<p>Prob (%) above normal/ au dessus de la normale</p> <p>40 50 60 70 80 90 100</p>
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Forecast probability of Precipitation above, below and near normal (calibrated)
Period: December 2018 January-February 2019
Based on 3 equiprobable categories from 1981-2010 climatology

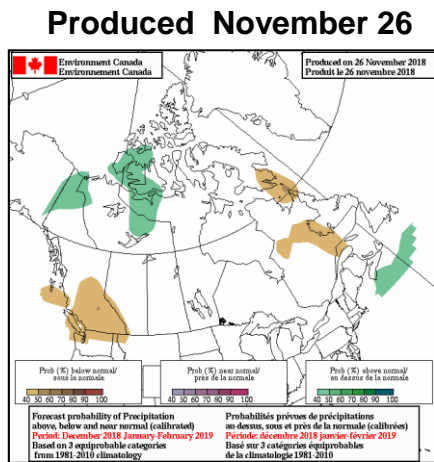
Probabilités prévues de précipitations au-dessus, sous et près de la normale (calibrées)
Période: décembre 2018 janvier-février 2019
Basé sur 3 catégories équiprobables de la climatologie 1981-2010

Produced on 30 November 2018
Produit le 30 novembre 2018

Precipitation

**December 2018
January 2019
February 2019**

**NB (D, J, F)
Normal; ~263 mm**

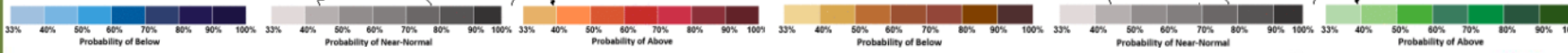
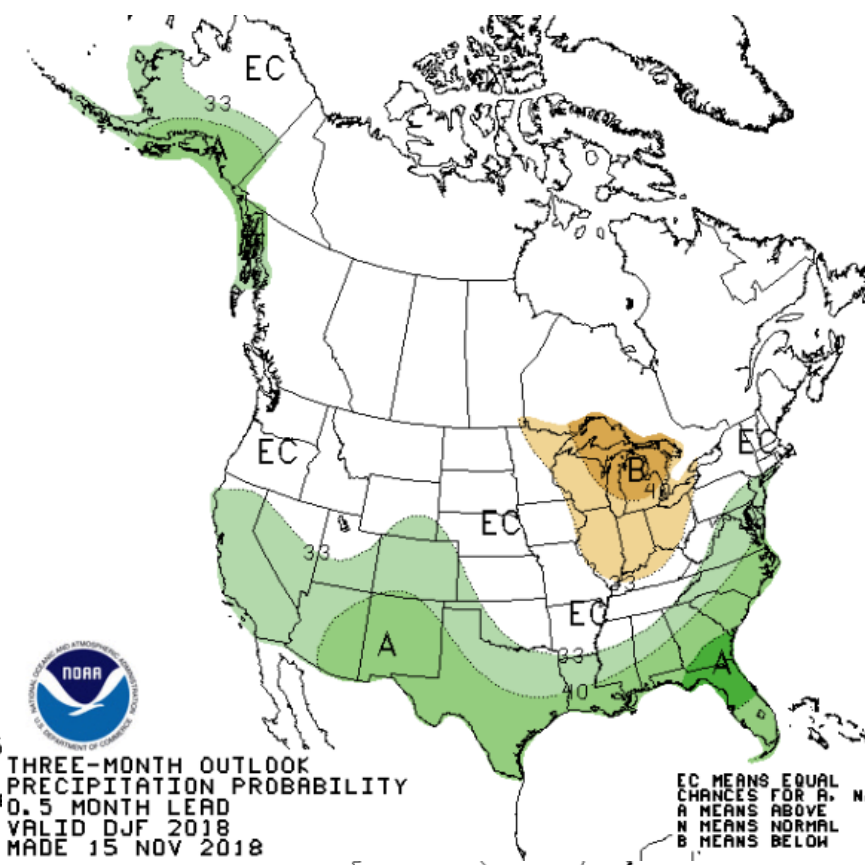
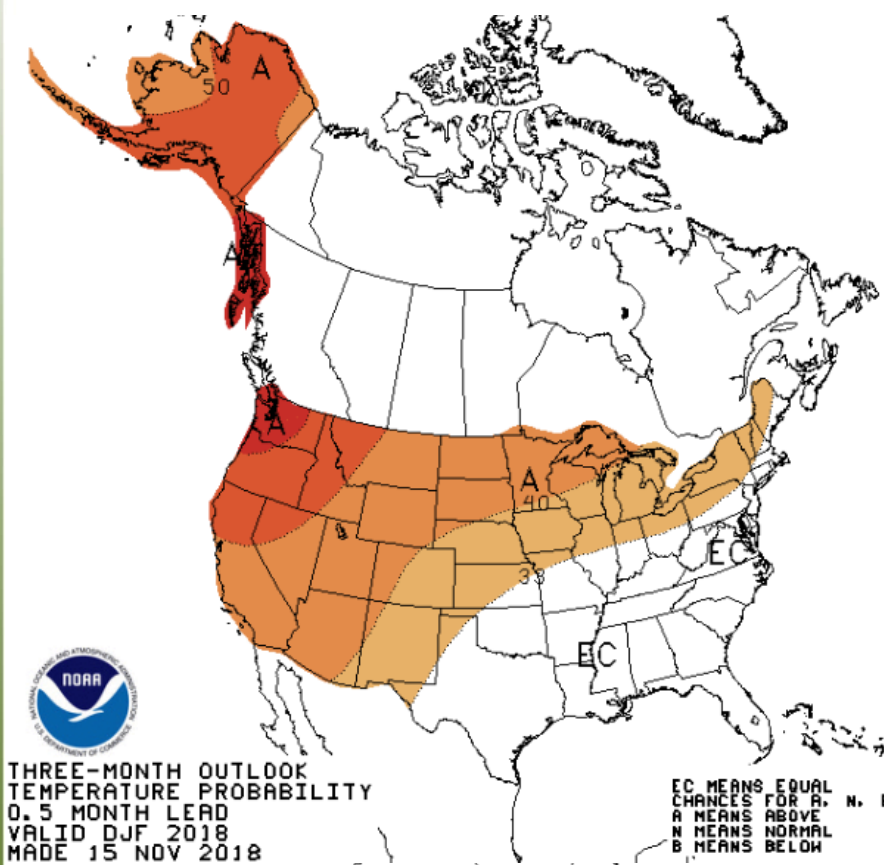




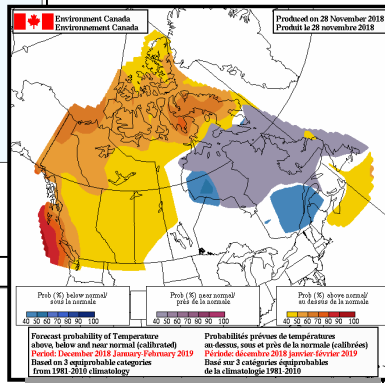
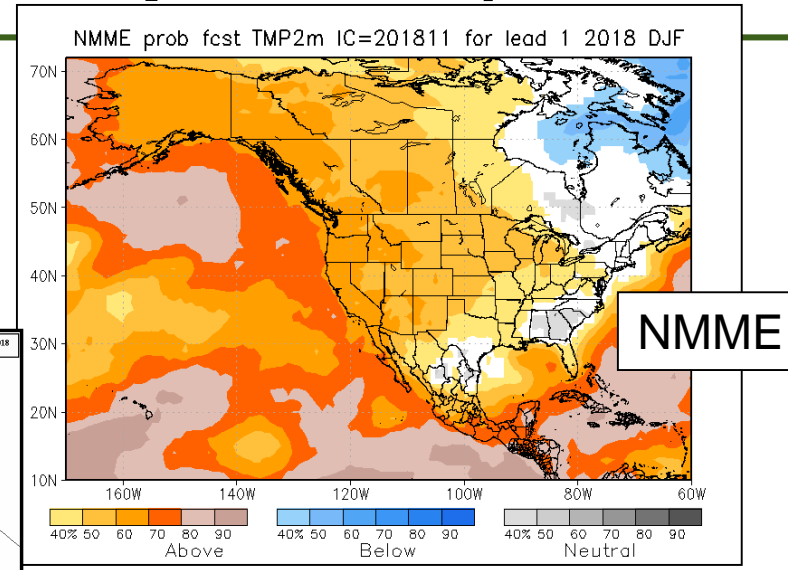
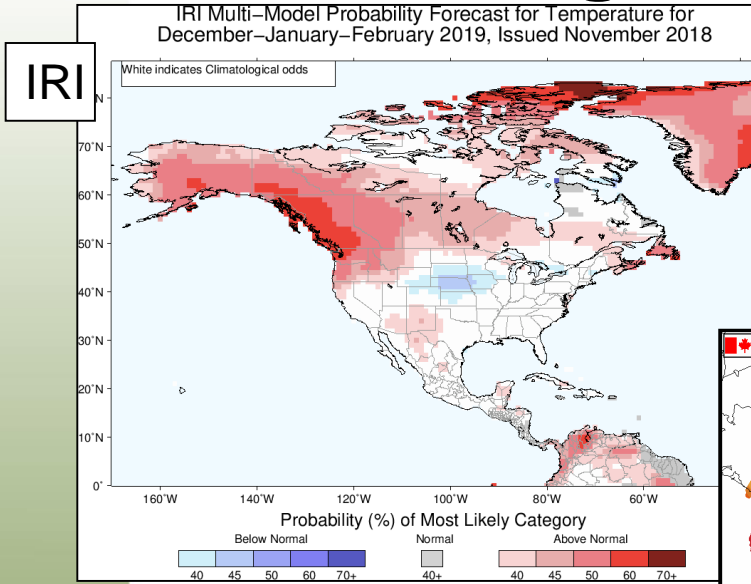
December - January - February

Temperature

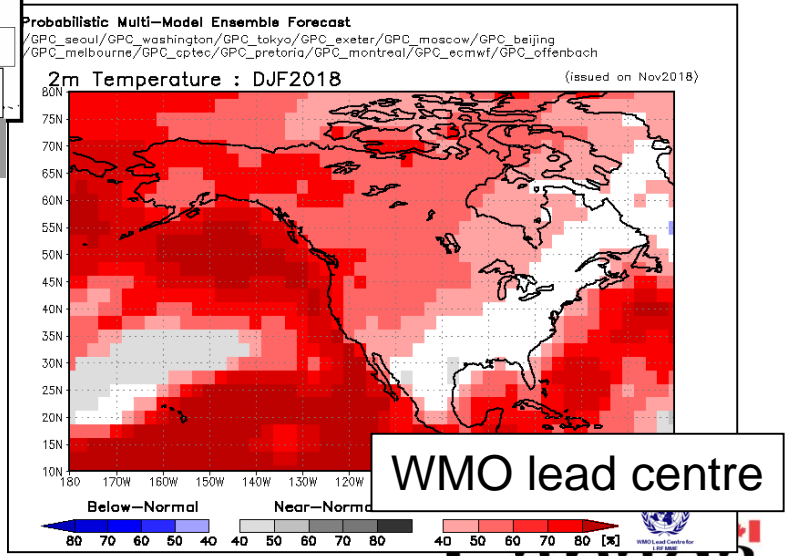
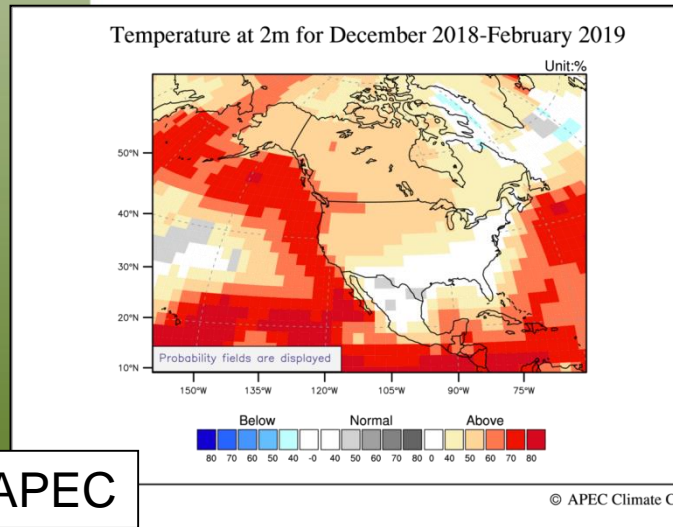
Precipitation



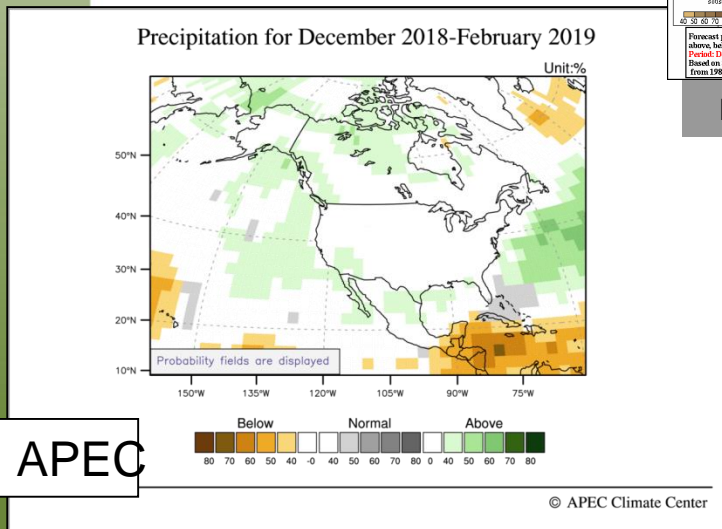
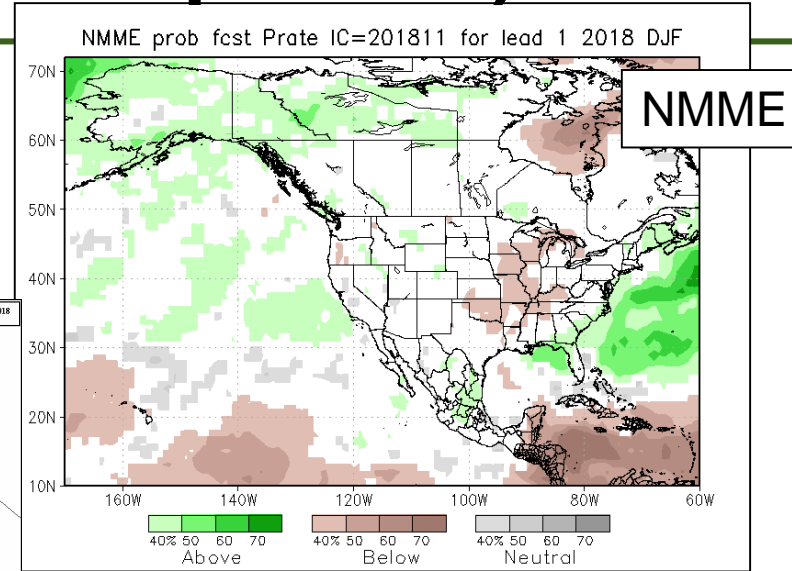
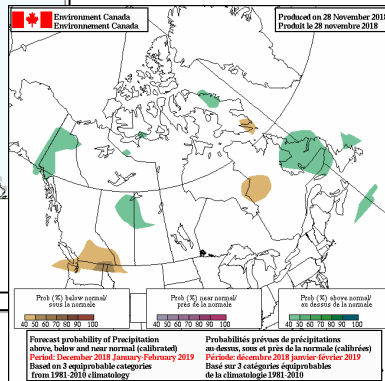
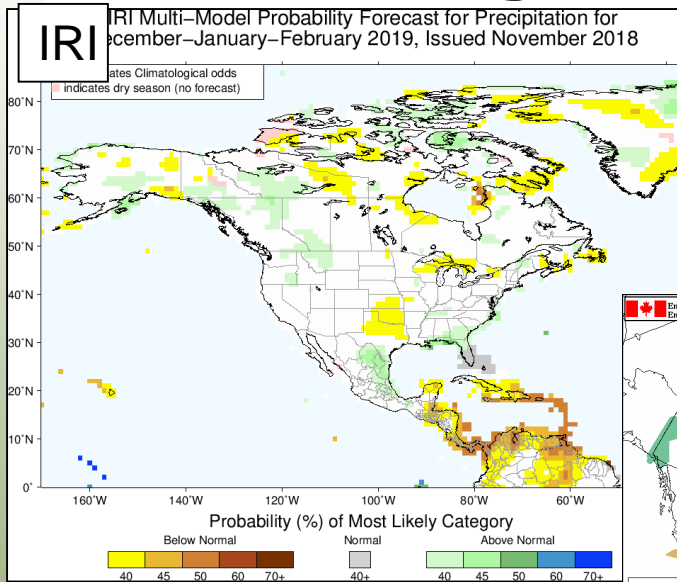
Winter 2019 Probabilistic Forecast from Foreign models (Temperature)



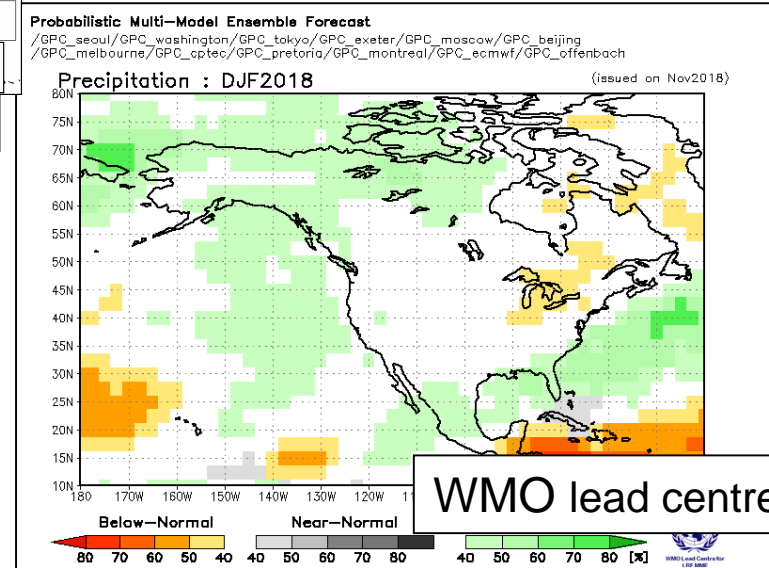
Has shorter lead time



Winter 2019 Probabilistic Forecast from Foreign models (Precipitation)



Has shorter lead time



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2018 Atlantic Tropical Season Summary

Name	Dates	Max Wind (mph)
TS Alberto	25-31 May	65*
H Beryl	4-15 Jul	80*
H Chris	6-12 Jul	105
TS Debby	7- 9 Aug	50
TS Ernesto	15-18 Aug	45
MH Florence	31 Aug-17 Sep	140
TS Gordon	3- 7 Sep	70
H Helene	7-16 Sep	110
H Isaac	7-15 Sep	75
TS Joyce	12-18 Sep	45
TD Eleven	22-23 Sep	35
TS Kirk	22-28 Sep	60
H Leslie	23 Sep-13 Oct	90
MH Michael	7-12 Oct	155
TS Nadine	9-12 Oct	65
H Oscar	27-31 Oct	105

	2018 Season	Average Season
Number of Named Storms	15	12
Number of Hurricanes	8	6
Number of Major Hurricanes	2	3

The 2018 Atlantic hurricane season compared to an average season.

* Denotes a storm for which the post-storm analysis is complete.

Overall, the 2018 Atlantic hurricane season featured above normal activity. Fifteen named storms formed, of which eight became hurricanes and two became major hurricanes - category 3 or higher on the Saffir-Simpson Hurricane Wind Scale. This compares to the long-term average of 12 named storms, 6 hurricanes, and 3 major hurricanes. There was also one tropical depression that did not reach tropical-storm strength. In terms of Accumulated Cyclone Energy (ACE), which measures the combined strength and duration of tropical storms and hurricanes, activity in the Atlantic basin in 2018 was also above normal. In addition, 7 systems were subtropical at some point in their lifetime this season, which eclipses the previous record of 5 in 1969.



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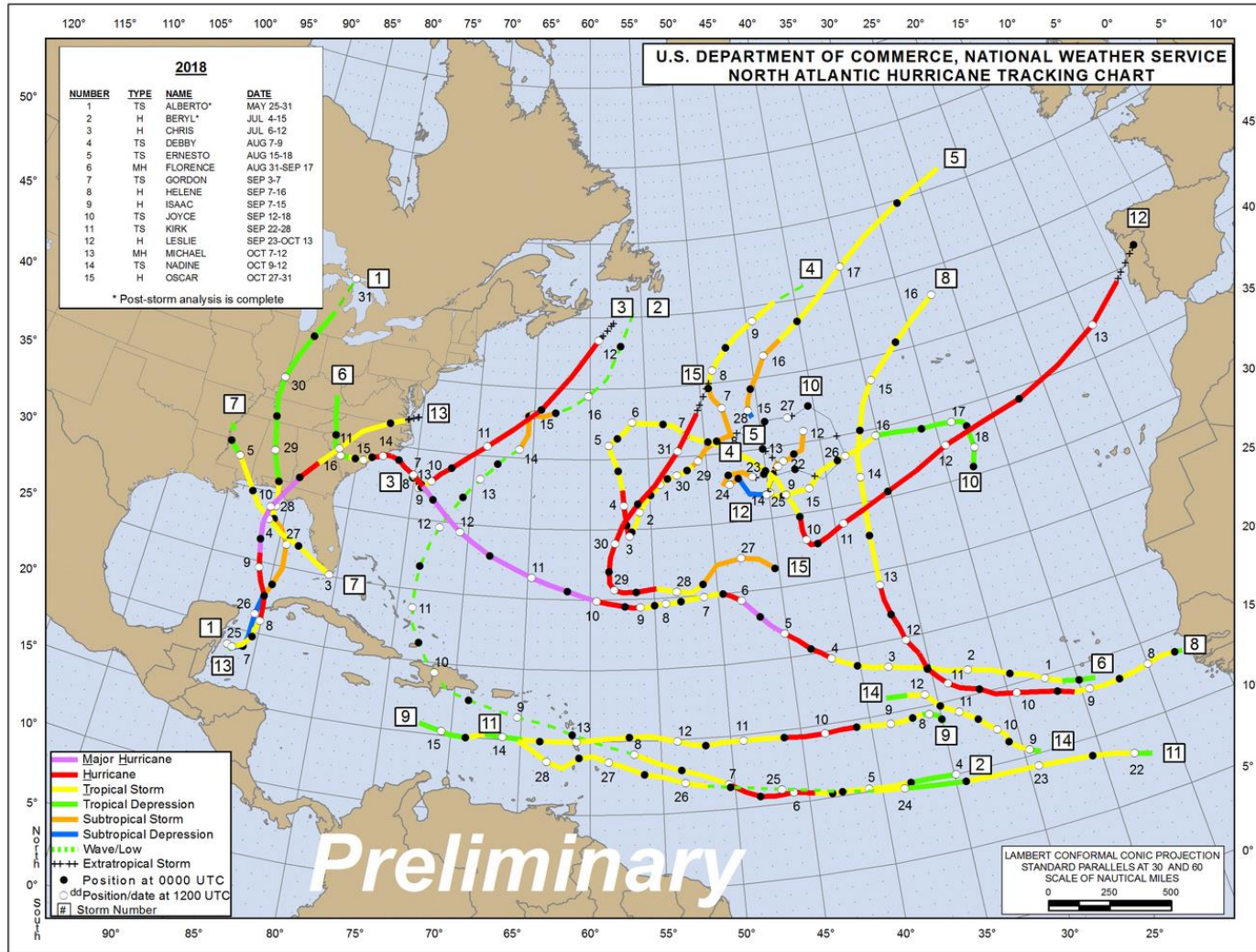
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Tropical Season Summary 2018

(as of December 1 2018 – Still Preliminary)



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