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VOL 2 ISS 33
CLIMATIC PERSPECTIVES

EW OF CANADIAN CLIMATE
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THE CANADIAN CLIMATE CENTRE,
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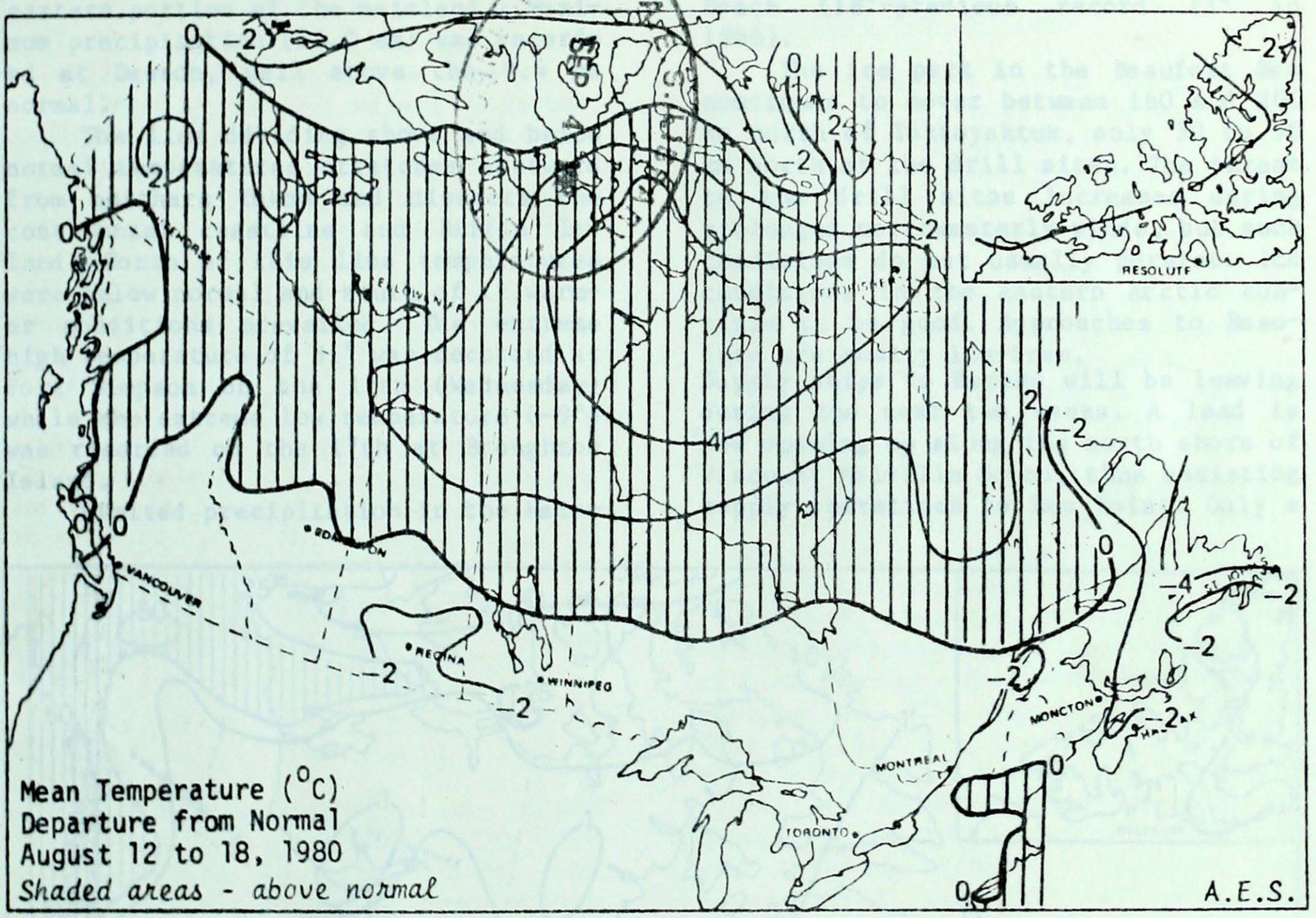
AUGUST 22, 1980 *(Aussi disponible en français)* **VOL. 2 NO. 33**



WEATHER HIGHLIGHTS FOR THE WEEK - AUGUST 12-18, 1980

Heavy Rain in Maritimes - Cool Weather Throughout Southern Canada

While much of the Northwest Territories, Alberta and Ontario experienced dry weather this past week, rainfall was much above normal throughout most of British Columbia, southern Quebec and the Maritimes.

The line dividing above and below normal temperatures across the country roughly parallels the 52nd and 53rd lines of latitude. South of this line relatively cool conditions were experienced while higher than average temperatures extended northward to the Arctic mainland coast.

Weekend storms resulted in heavy rain and some localized flooding at Bonavista, Nfld., and considerable wind damage to tobacco crops in P.E.I. Five tornadoes were reported in southern Ontario on the 14th.

The highest reported temperature was 33°, again at Lytton, B.C., on the 12th, while the lowest was -9° at Broughton Island on the 17th. The greatest weekly precipitation was 109.5 mm at Gander, Nfld.

NOTE: The data shown in this publication are based on unverified reports from approximately 225 Canadian and 115 northern United States Synoptic stations.

YUKON AND NORTHWEST TERRITORIES

The dry conditions of the previous week were replaced by above normal precipitation throughout most of the Yukon, along the continental coastline, and in western and southern mainland areas. Dry conditions continued in the southeast corner of the Yukon, the far north, much of Baffin Island, and the eastern portion of the mainland. Maximum precipitation (56.0 mm) was recorded at Dawson, well above the 9.4 mm normal.

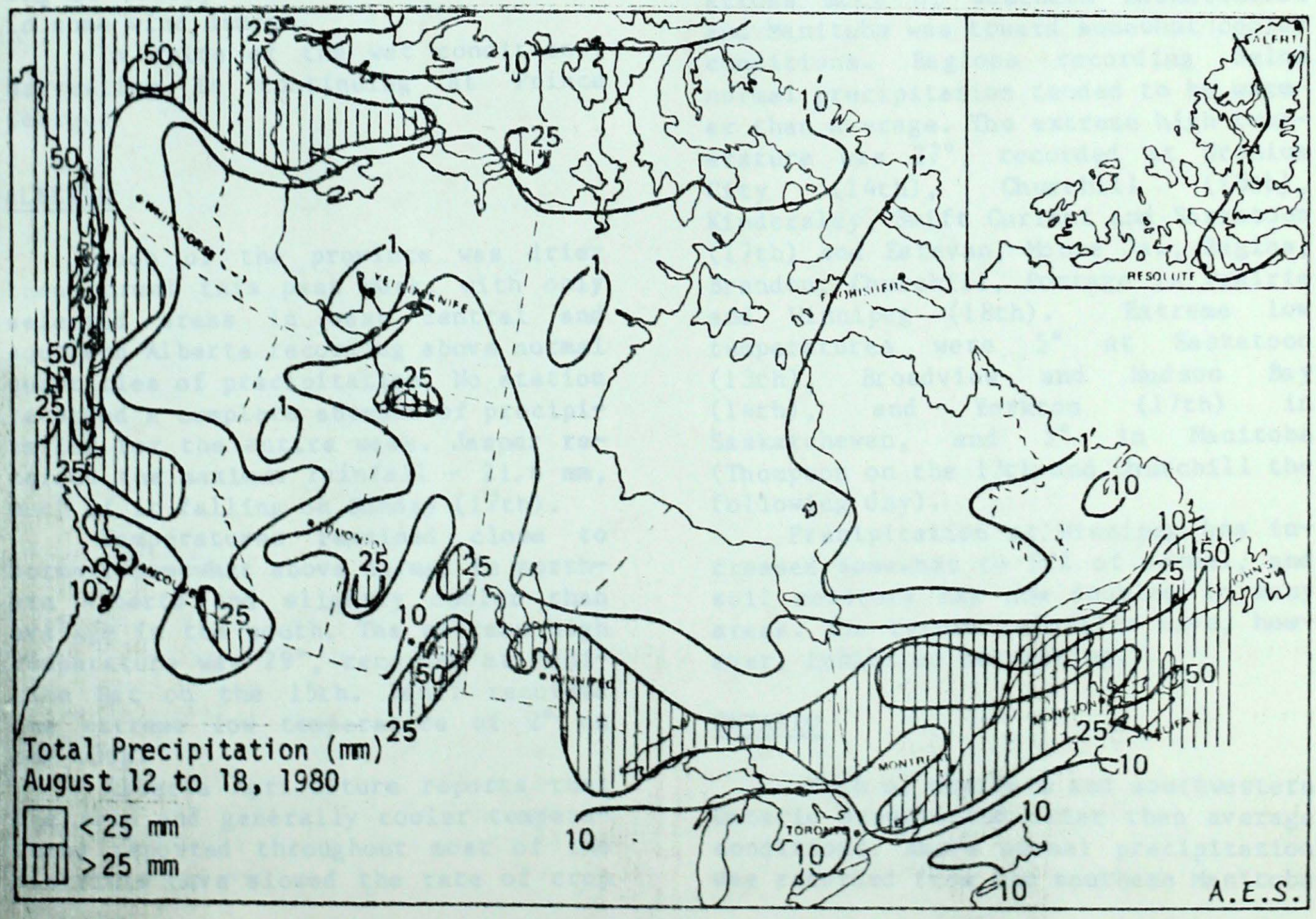
The line dividing above and below normal temperatures stretches eastward from northern Yukon and dissects the continental coastline and Baffin Island. North of this line temperatures were below normal and south of it warmer conditions prevailed. The extreme high temperature of 31° was recorded at Fort Simpson on the 13th (Wednesday) while the extreme low temperature (-9°) was recorded on the 17th at Broughton Island.

Limited precipitation in the Haines Junction Carmacks region has resulted in forest fires continuing to burn, although they are under control.

Record daily maximum temperatures were established on Saturday August 16 at Chesterfield (23°-previous record 21° in 1953), Coral Harbour (21°- previous record 19° in 1954), and Hall Beach (18°-previous record 11° in 1966).

The ice pack in the Beaufort Sea continues to hover between 160 and 200 km north of Tuktoyaktuk, only 30 to 50 km north of the drill sites. The threat to the drill sites increases during prolonged northwesterly winds, but such conditions do not usually persist. Ice conditions in the eastern Arctic continue to be good. Approaches to Resolute are mostly ice-free.

Supply ships to Eureka will be leaving during the next two weeks. A lead is now opening up along the north shore of Viscount Melville Sound, thus assisting supply operations to Rea Point. Only a



little ice remains in Baffin Bay.

BRITISH COLUMBIA

The sunny, dry weather of the previous week gave way to above normal precipitation throughout much of British Columbia. While scattered areas along the east coast of Vancouver Island, in the southern interior and the northeast corner of B.C. were somewhat drier than normal, no station in the province recorded a complete absence of precipitation. Prince Rupert recorded the maximum quantity for the week; 84.9 mm, much of which fell on August 16th.

Temperatures varied only slightly from normal throughout the province. The extreme high was 33°, recorded at Lytton on August 12th, and the lowest temperature was recorded the following Monday, the 18th, at Dease Lake; 2°.

In southern British Columbia the fair weather during the early part of the week was followed during the weekend by unsettled conditions. Kamloops experienced thunderstorms on the evening of Sunday the 17th which resulted in some wind damage.

In spite of the wet conditions, harvesting is continuing at Prince George.

ALBERTA

Much of the province was drier than normal this past week, with only selected areas in west central and southern Alberta recording above normal quantities of precipitation. No station recorded a complete absence of precipitation for the entire week. Jasper recorded the maximum rainfall - 21.6 mm, much of it falling on Sunday (17th).

Temperatures remained close to normal; somewhat above normal in northern Alberta and slightly cooler than average in the south. The extreme high temperature was 29°, recorded at Medicine Hat on the 15th. Banff recorded the extreme low temperature of 2° on the 13th.

Alberta Agriculture reports that the rain and generally cooler temperatures reported throughout most of the districts have slowed the rate of crop development, but sufficient moisture now exists to ensure proper filling of later seeded crops. The latest assessment by the Alberta Wheat Pool is for above average crop yields for all of Alberta. If warm and sunny weather should prevail, the swathing of the early seeded spring grain in the rest of the province should begin within the next two weeks.

SASKATCHEWAN AND MANITOBA

Some northern areas were drier than normal, but most of Saskatchewan and Manitoba recorded above normal quantities of rainfall, especially in the south. Yorkton recorded 61.9 mm (48.3 mm above normal) and Portage la Prairie 31.4 mm, the largest quantities for their respective provinces. Other communities experiencing heavy rainfall include Indian Head, Saskatchewan (72.8 mm), and Morris, Manitoba (64.0 mm).No station recorded a complete absence of precipitation.

Although temperatures departed only slightly from normal, the trend across much of southern Saskatchewan and Manitoba was toward somewhat cooler conditions. Regions recording below normal precipitation tended to be warmer than average. The extreme high temperature was 27°, recorded at Uranium City (14th), Churchill (15th), Kindersley, Swift Current and Saskatoon (17th) and Estevan, Moose Jaw, Regina, Brandon, Churchill, Portage la Prairie and Winnipeg (18th). Extreme low temperatures were 5° at Saskatoon (13th), Broadview and Hudson Bay (14th), and Yorkton (17th) in Saskatchewan, and 3° in Manitoba (Thompson on the 13th and Churchill the following day).

Precipitation at Winnipeg has increased somewhat to 52% of normal, and soil moisture has now doubled in many areas. The record rainfalls have, however, inhibited harvesting.

ONTARIO

Much of northern and southwestern Ontario experienced drier than average conditions. Above normal precipitation was recorded from the southern Manitoba

border to Lake Superior and in the vicinity of Trenton which recorded the maximum rainfall for the province - - 40.0 mm (26.2 mm above normal). Much of this precipitation occurred on the 12th (Tuesday). No station in Ontario remained precipitation-free throughout the week.

Below normal temperatures prevailed throughout most of the province. The extreme high temperature of 28° was recorded at Mount Forest on the 14th and Windsor on the 18th. Armstrong (16th) and Moosonee (17th) recorded the extreme low temperature of 1°.

On Thursday August 14, five tornadoes were reported in southern Ontario. At London, golf-ball sized hail fell, considerable property damage was incurred and two people were injured. Hail also accompanied the tornadoes at Joyceville and Smugglers' Cove. Sharbot Lake and Snake River also witnessed tornadoes.

QUÉBEC

While areas in northern and eastern Québec did experience drier than average conditions, the rest of the province recorded above normal precipitation. At Gaspé the maximum amount was 96.9 mm, much of which fell on the 15th. Heavy rainfall also occurred in the Lac-St-Jean and Chibougamau regions.

Generally speaking, northern Quebec was warmer and southern Québec was cooler than normal. The extreme high temperature was 27°, recorded at Québec City on the 17th and at Poste-de-la-Baleine the following day. The extreme low temperature (0°) occurred at Fort Chimo on the 12th.

MARITIME PROVINCES

Above normal precipitation was recorded throughout New Brunswick, Prince Edward Island, and Newfoundland during the previous week. Drier conditions prevailed in Nova Scotia and Labrador. The maximum amount, 109.5 mm, was recorded at Gander and is 86.9 mm above the average. No station recorded a completely dry week.

Temperatures were consistently below normal throughout all of the Maritimes, with the exception of a few locations in Labrador. The extreme high temperature, 27° occurred at Fredericton on the 18th. On the same day, Deer Lake, Nfld., recorded the extreme low, 0°.

The heavy rainfall occurring at Bonavista, Nfld., during Saturday and Sunday resulted in some localized flooding. Record low daily maximum temperatures were recorded on Sunday the 17th at Gander (9°), St. John's (12°) and Cartwright (8°). All agricultural crops in Newfoundland tend to be approximately 3 weeks behind in their development, and to date little harvesting has occurred.

In spite of below average precipitation in Nova Scotia this past week, the number of forest fires this season is less than half the average.

Strong winds with gusts to 100 kph over the weekend did considerable damage to PEI tobacco fields. Torn leaves and uprooted plants resulted in more than 27,000 kg of tobacco being lost. Minor damage was also sustained by corn and cereal crops. Yields continue to be below average.

CLIMATIC PERSPECTIVES

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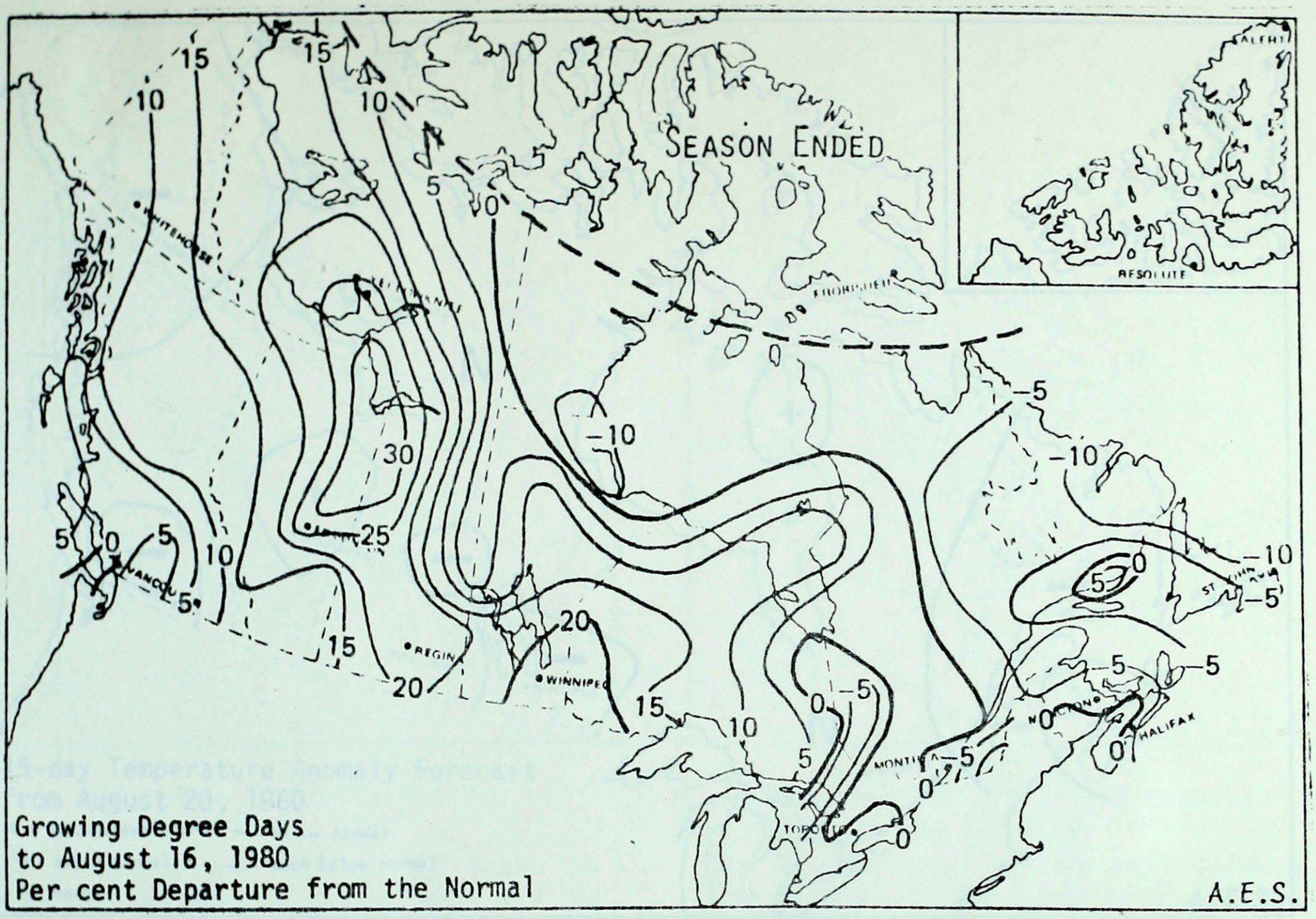
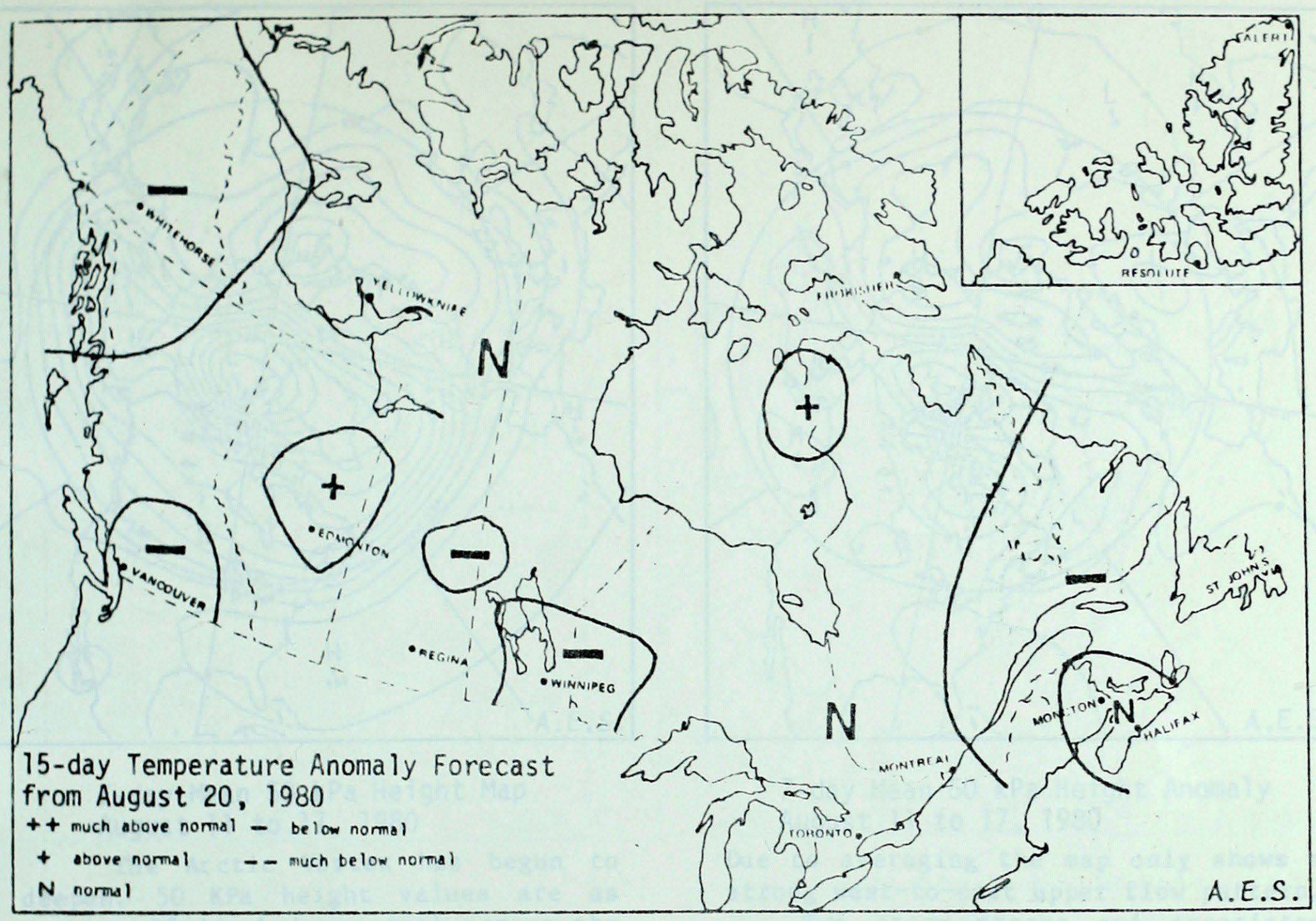
GROWING DEGREE-DAY SUMMARY TO AUGUST 16, 1980



CITY	MONTHLY CUMULATIVE TOTAL	MONTHLY DIFF. FROM 1941-70 NORMAL	SEASONAL TOTAL	SEASONAL DIFF. FROM 1941-70 NORMAL	SEASONAL PERCENT OF NORMAL
Whitehorse	136.0	5.0	757.0	60.0	109
Penticton	233.5	-5.5	1568.0	102.0	107
Vancouver	200.0	0.0	1233.5	-49.5	96
Edmonton	163.5	-19.5	1287.5	301.5	131
Calgary	143.5	-34.5	1071.0	136.0	115
Regina	182.0	-36.0	1425.5	270.5	123
Saskatoon	188.5	-23.5	1416.0	269.0	123
Winnipeg	195.5	-38.5	1498.0	263.0	121
Thunder Bay	197.0	5.0	1121.0	156.0	116
Windsor	286.5	21.5	1620.5	-25.5	98
Toronto	260.0	13.0	1362.5	-60.5	96
Ottawa	254.5	17.5	1401.5	10.5	101
Montréal	250.0	2.0	1381.0	-51.0	96
Québec	230.5	19.5	1173.0	-5.0	100
Fredericton	243.0	21.0	1214.0	31.0	103
Halifax	227.0	15.0	977.0	-51.0	95
Charlottetown	226.0	10.0	968.5	-34.5	97
St John's	135.5	-43.5	647.0	-44.0	94

15 DAY TEMPERATURE ANOMALY FORECAST



Forecast Method

Analogue technique based on point prediction at 70 Canadian stations.

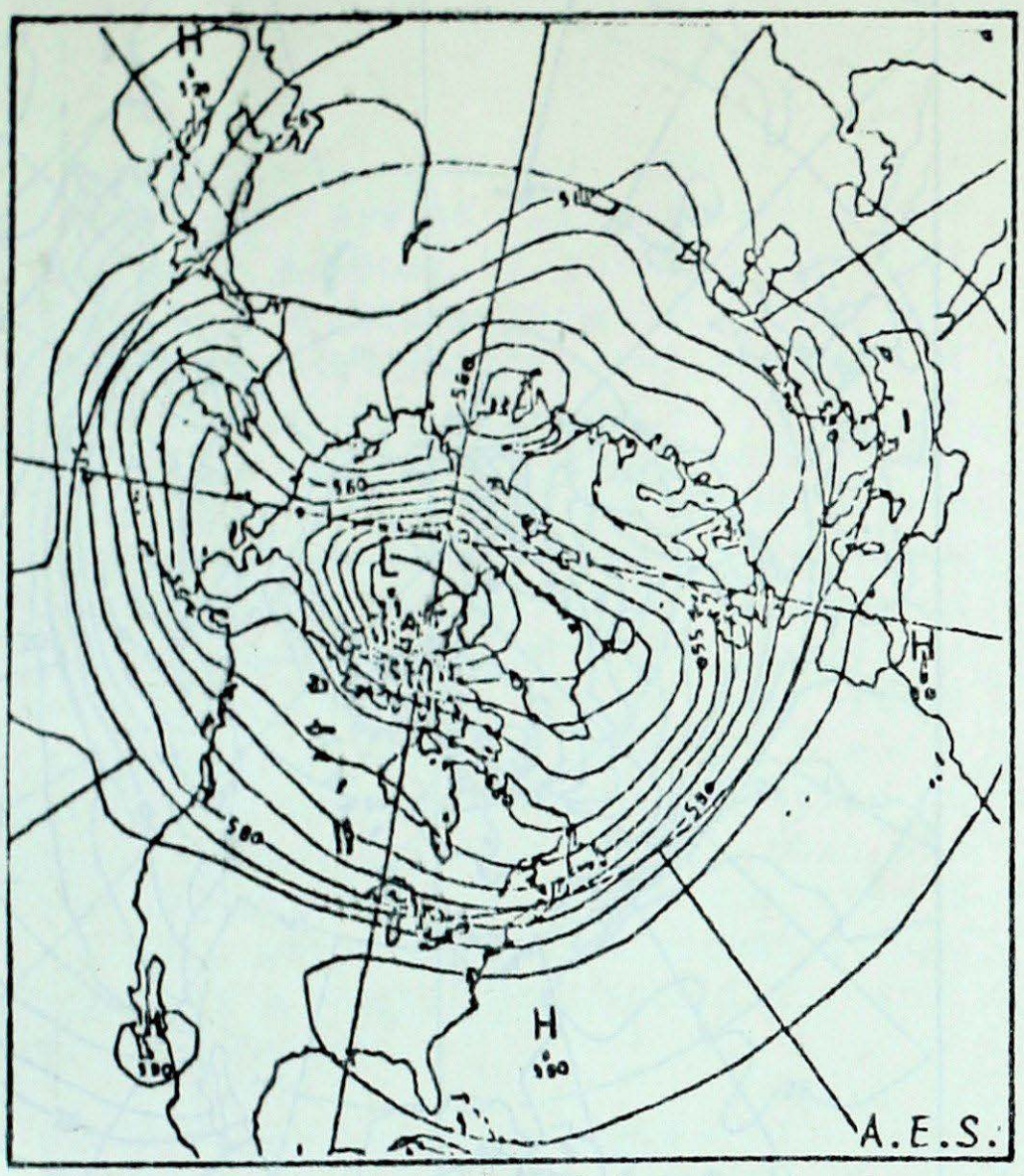
Temperature Scale

Each temperature class is designed to contain 20% of the historically observed 15 day means pertinent to specific location and time of year:

Station	Current Temperature Anomaly Forecast	
Whitehorse	Below Normal	From 0.4° to 1.5° below Normal
Victoria	Below Normal	From 0.3° to 0.9° below Normal
Vancouver	Below Normal	From 0.3° to 1.0° below Normal
Edmonton	Above Normal	From 0.5° to 1.8° above Normal
Regina	Near Normal	Within 0.5° of Normal
Winnipeg	Below Normal	From 0.5° to 1.7° below Normal
Thunder Bay	Near Normal	Within 0.4° of Normal
Toronto	Near Normal	Within 0.5° of Normal
Ottawa	Near Normal	Within 0.4° of Normal
Montreal	Near Normal	Within 0.4° of Normal
Quebec	Below Normal	From 0.4° to 1.3° below Normal
Fredericton	Below Normal	From 0.4° to 1.3° below Normal
Halifax	Near Normal	Within 0.3° of Normal
Charlottetown	Near Normal	Within 0.3° of Normal
St. John's	Below Normal	From 0.4° to 1.3° below Normal
Goose Bay	Below Normal	From 0.4° to 1.3° below Normal
Frobisher Bay	Near Normal	Within 0.3° of Normal
Inuvik	Near Normal	Within 0.6° of Normal

Note: Anomaly denotes departure from the 1949-73 mean.

Atmospheric Circulation

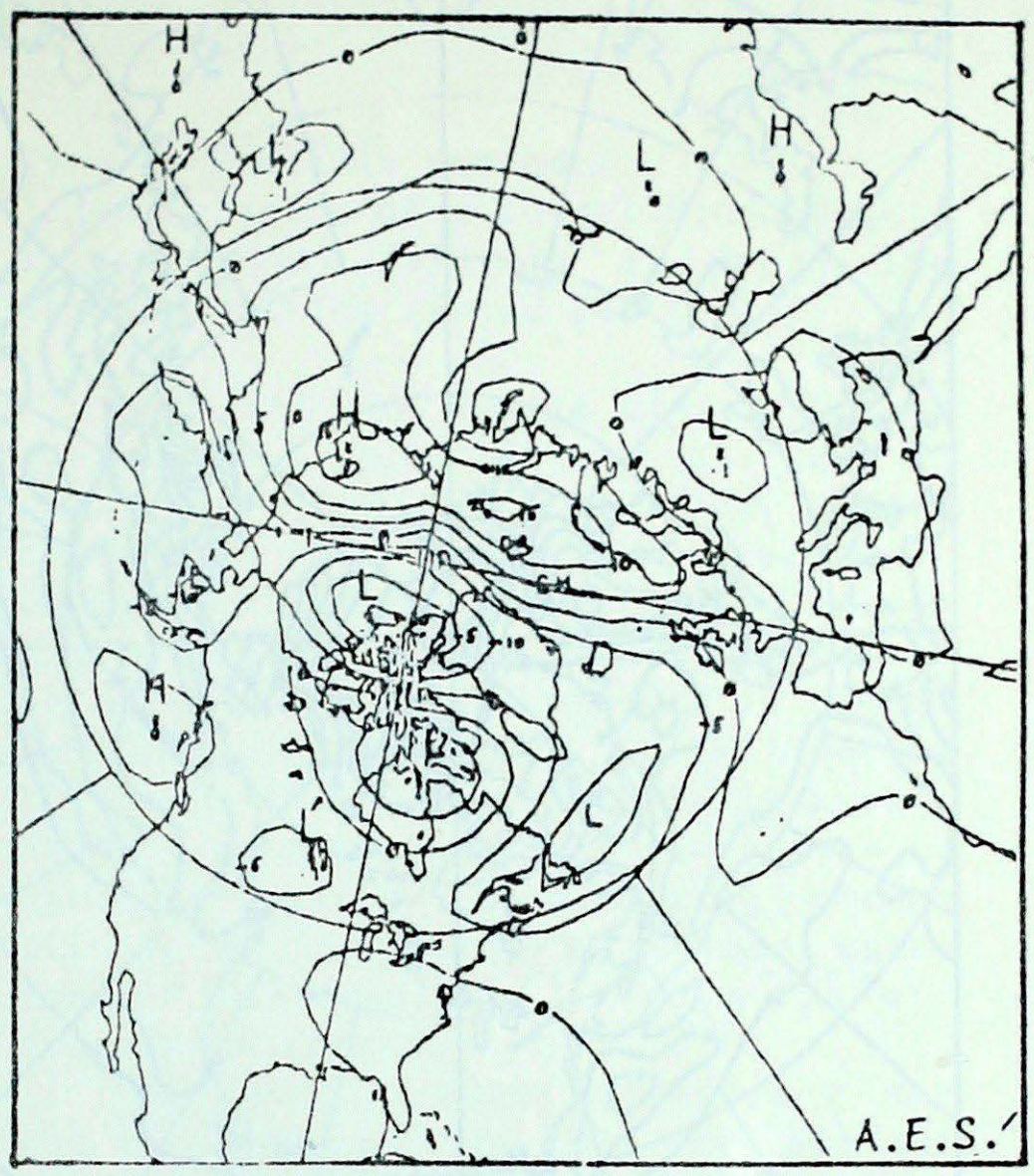


7-day Mean 50 kPa Height Map
August 11 to 17, 1980

The Arctic Vortex has begun to deepen. 50 KPa height values are as much as 20 dam below normal across the northern half of the Arctic Islands. This would suggest that the Arctic is beginning to cool down and that winter is rapidly approaching.

Positive height anomalies were once again evident in the vicinity of Hudson Bay and Northwest Territories. Respective mean temperatures at the surface were up to five degrees above the normal. Negative temperatures and height anomalies were in evidence elsewhere across the country. Temperatures across the island of Newfoundland averaged as much as 5 degrees below normal, and were accompanied by a continuation of unsettled weather conditions.

Strong Atmospheric troughs and ridges drifted slowly eastward across the country. The major ridge which was situated over Western Canada last week reached and encompassed the Great Lakes Basin by the end of the period; either side of it, upper troughs brought cool, unsettled conditions to both the Prairie and Atlantic provinces. These features are not depicted very well on the 7 day mean map.



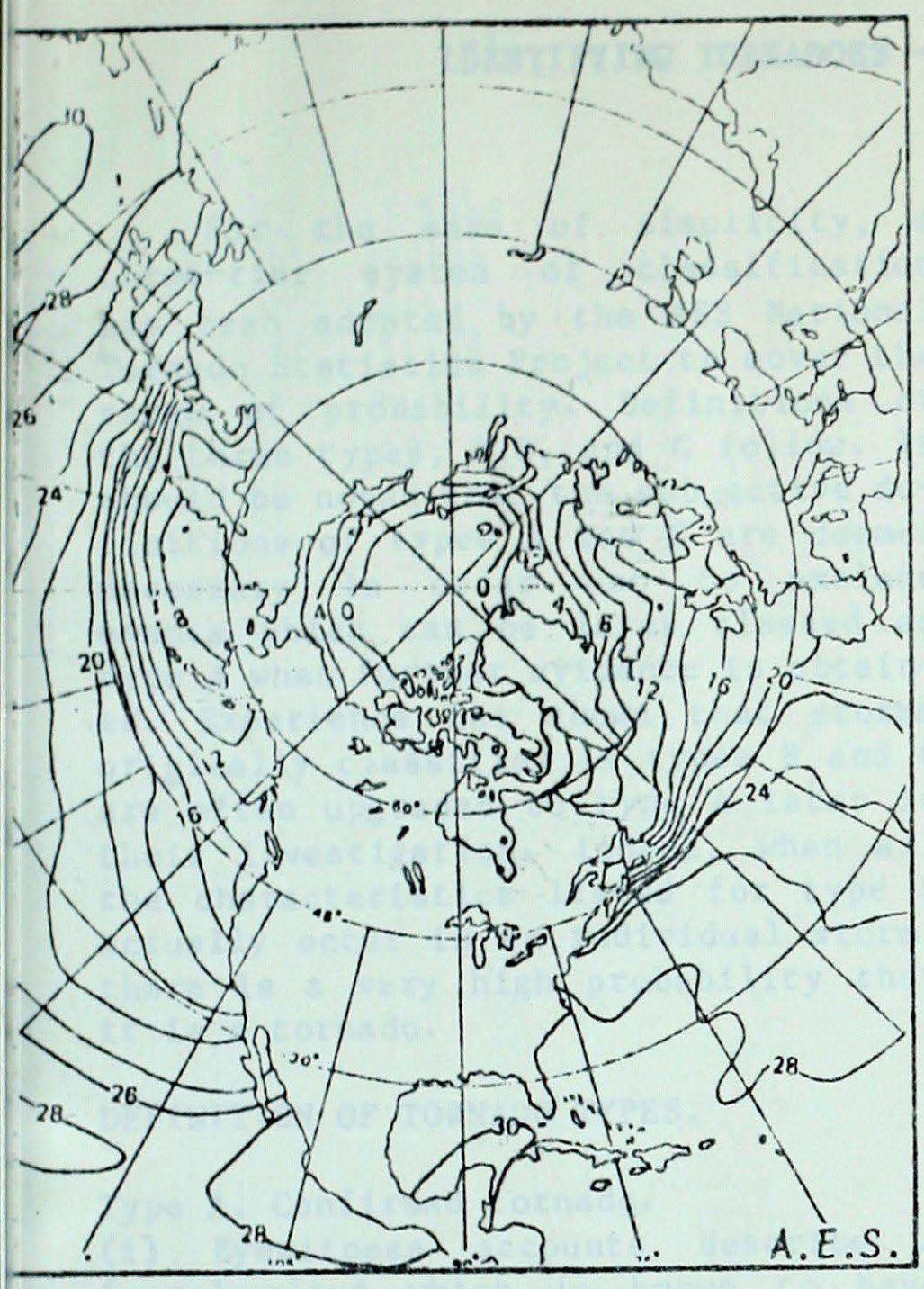
7-day Mean 50 kPa Height Anomaly
August 11 to 17, 1980

Due to averaging the map only shows a strong west-to-east upper flow pattern.

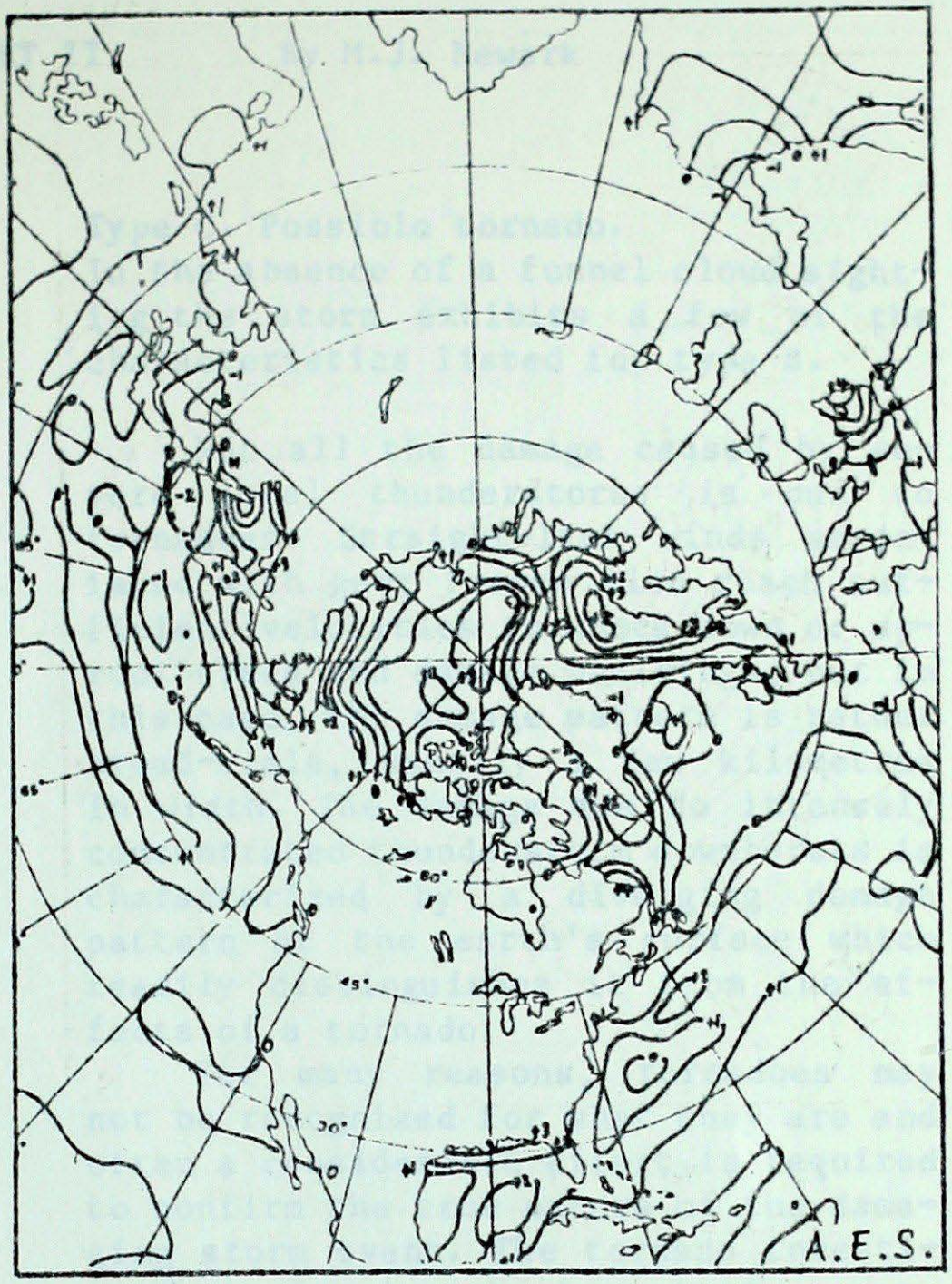
Two storm tracks and associated frontal zones are now affecting the country, depositing heavy precipitation amounts. Strong atmospheric pulses moving inland from the north Pacific resulted in low pressure systems moving eastward across the Yukon and Northwest Territories along a line dividing Arctic and Pacific air masses. Across the eastern half of the country disturbances continued moving eastward along oscillating frontal zones dividing Tropical and Polar air. Parts of Ontario, Quebec, the Maritimes and especially the island of Newfoundland once again received the bulk of precipitation, generally in excess of 25 mm. Gander, Newfoundland, received more than 100 mm of rain.

On Thursday August 14 a cyclonic disturbance and leading edge of colder air crossed the Great Lakes region. Unstable tropical air being forced to rise by the system triggered numerous thunderstorms, which in turn spawned five tornadoes in the afternoon and evening, one in the London area and four in eastern Ontario.

Andy Radomski



Mean Sea Surface Temperature
July 16 to August 15, 1980



Sea Surface Temperature Anomalies
for July 16 to August 15, 1980

IDENTIFYING TORNADOES - PART II

By M.J. Newark

For the sake of simplicity, a three-tier system of classification has been adopted by the AES National Tornado Statistics Project to cover the range of probability. Definitions of the three types, A,B, and C follow. It should be noted that the subjective definitions of types B and C are deemed necessary in order not to exclude events which can be later classed as type A when further evidence is obtained. Experience has shown that storms originally classified as types B and C are often upgraded to type A later in their investigation. Indeed, when all the characteristics listed for type B actually occur in an individual storm, there is a very high probability that it is a tornado.

DEFINITION OF TORNADO TYPES.

Type A. Confirmed tornado.
(i) Eyewitness accounts describe a funnel cloud which is known to have touched the ground.
(ii) On-site examination of destruction reveals the damage to have rotary or convergent patterns, or else to be confined to an unmistakeable narrow path usually less than four or five hundred metres.

Type B. Probable tornado.
In the absence of a funnel cloud sighting, the storm exhibits many of the phenomena known to accompany type A, namely:
(i) Convective atmospheric activity.
(ii) Narrow damage path.
(iii) Large, heavy or unusual objects thrown as projectiles.
(iv) Spearing by light-weight objects.
(v) Locally selective damage rather than broad-scale damage.
(vi) Explosive damage.
(vii) Unusual cloud colour tints (green for example).
(viii) Unusual roaring noise distinct from the ordinary sound of the wind.

Type C. Possible tornado.
In the absence of a funnel cloud sighting,the storm exhibits a few of the characteristics listed for type B.

Not all the damage caused by severe local thunderstorms is due to tornadoes. Straight-line winds associated with gust fronts also reach sufficient velocities to knock down or uproot trees and damage buildings, but in this case, the damage pattern is rather broad-scale, usually a few kilometres in width. The damage due to intensely concentrated thunderstorm downbursts is characterized by a diverging damage pattern at the earth's surface which readily distinguishes it from the effects of a tornado.

For many reasons, tornadoes may not be recognized for what they are and often a considerable effort is required to confirm the true nature of the damaging storm event. The tornado investigator is faced with three basic types, the tornado, thunderstorm gust-front straight line winds, and intense thunderstorm downbursts, and in the absence of a funnel cloud sighting a thorough investigation and mapping of the damage is required before a conclusion can be reached.

Careful surveying of storm damage, and logical decisions concerning storm categories are essential in obtaining correct tornado statistics. The statistics, in turn are necessary to those who need to make decisions that depend on the incidence and risk of tornadoes and such physical characteristics as the average tornado damage length and width and tornado intensity and distribution. In an increasingly urban society, the number of people and structures exposed to tornadoes is increasing, which correspondingly increases the risk of a tornado hit.

TEMPERATURE AND PRECIPITATION DATA FOR THE WEEK ENDING 0600 G.M.T. AUGUST 19, 1980

Station	Temperature (°C) Average	Departure from Normal	Extreme Maximum	Extreme Minimum	Precip. (mm) Total	Departure from Normal
SH COLUMBIA						
sford A	16	- 1	23	11	23.8	13.0
Bay	14	- 1	20	10	24.6	9.9
River	M	X	21P	9P	M	X
Harbour	13	0	16	11	33.1	14.8
Lake	M	X	26P	4P	M	X
Scott	13	0	16	10	40.5	9.3
St. James	13	0	17	10	23.1	3.1
gar A	18	- 1	31	10	37.8	22.5
A	18	1	23	12	6.8	- 2.0
ooke	16	- 1	27	8	19.0	8.4
Lake	11	- 1	25	2	28.9	14.0
n Point	M	M	15P	10P	M	M
elson A	16	1	28	5	8.9	- 5.2
t. John A	15	0	24	6	9.6	- 0.9
ps A	20	0	30	12	13.8	9.6
	13	- 1	16	11	41.8	18.9
	20	0	33	12	2.8	- 3.9
zie A	M	X	25P	4P	M	X
s Island	14	- 1	17	11	50.8	2.4
ton A	19	0	31	9	8.7	3.8
ardy A	14	1	19	11	13.3	- 0.2
George A	14	0	25	5	24.1	4.6
Rupert A	12	- 1	16	6	84.9	21.0
A	15	0	27	6	38.4	21.0
Lake A	18	0	29	10	16.0	2.4
t	10	1	20	11	11.6	- 1.1
s A	14	0	27	4	8.2	0.5
Island	M	M	M	11P	M	M
A	M	X	29P	8P	M	X
A	10	0	30	7	8.8	- 9.0
er Int'l A	17	- 1	22	12	12.2	3.4
a Int'l A	15	- 1	21	8	9.9	3.9
n Lake A	14	- 2	24	5	39.4	29.9
A	11	0	24	1	12.5	3.2
A	13	0	29	4	56.0	46.6
Beach A	4	- 2	8	0	28.4	24.8
	15	2	28	7	5.3	- 4.3
Point A	7	- 2	13	1	39.1	36.7
Lake A	M	M	25P	3	6.4	- 4.5
rse A	12	0	26	3	11.8	1.5
ST TERRITORIES						
	- 1	- 2	5	- 5	0.0	- 7.2
ake	14	4	22	6	0.8	- 8.7
on Island	6	2	16	- 9	8.3	4.3
ay	9	2	17	2	3.2	- 0.6
ge Bay A	7	0	16	1	36.0	31.3
rset	9	X	15	5	2.0	X
er A	6	1	15	- 1	0.7	-20.3
per	6	3	13	0	8.0	- 0.6
ry A	5	- 1	8	2	8.6	4.8
ng A	7	0	12	2	29.0	25.9
field Inlet	14	5	24	7	1.9	- 5.5
Point	6	- 2	16	2	18.1	10.9
	6	2	16	0	2.2	- 5.1
o Lake	M	M	21P	5	M	M
ne	12	3	25	2	4.4	- 2.8
rbour	12	4	21	5	5.0	- 5.1
kes	5	0	12	- 5	10.3	0.9
	M	M	M	10P	M	M
	0	- 4	3	- 4	1.8	- 2.5
lance	14	1	24	8	19.5	12.0
pson	M	M	31P	7	M	M
th A	M	M	28P	7P	21.0	14.1
r Bay A	11	4	22	3	0.0	-14.3
Point A	8	2	18	0	21.2	17.8
h A	6	1	18	0	11.2	0.2
A	15	1	28	7	0.2	- 6.3
	9	- 2	23	2	21.3	9.7
d Island	6	1	18	- 2	11.7	7.0
klin Point	10	3	15	4	7.0	2.3
Bluff	4	- 3	12	- 1	11.0	4.0
let	8	3	17	- 2	8.4	- 3.1
	- 3	- 5	0	- 5	4.2	- 1.2
Peninsula	5	- 2	11	1	4.6	- 0.5
lls A	15	2	29	8	34.4	14.0
	9	4	20	0	10.2	- 8.6
t	4	X	10	- 2	24.0	X
ell	6	X	13	2	0.0	X
A	M	M	4P	- 3	1.0	- 4.3

Station	Temperature (°C) Average	Departure from Normal	Extreme Maximum	Extreme Minimum	Precip. (mm) Total	Departure from Normal
Sachs Harbour	1	- 3	6	- 4	12.8	8.8
Shepherd Bay A	10	4	21	2	12.6	2.1
Tuktoyaktuk	6	- 3	13	2	21.2	15.8
Yellowknife A	15	1	23	10	0.0	- 6.6
ALBERTA						
Banff	13	- 1	23	2	8.4	- 2.0
Calgary Int'l A	14	- 2	24	5	4.1	- 4.7
Cold Lake A	16	0	25	7	11.4	1.0
Coronation A	15	- 2	25	6	3.4	- 5.9
Edmonton Int'l. A	14	- 1	25	6	12.2	- 2.4
Edmonton Mun. A	16	0	26	10	8.4	- 6.8
Edmonton Namao A	16	0	25	10	3.1	- 8.2
Edson A	13	0	23	4	18.2	2.3
Fort Chipewyan	M	M	M	6	M	M
Fort McMurray A	M	M	28P	5	4.3	-10.4
Grande Prairie A	15	0	25	6	3.8	- 7.9
High Level A	14	1	25	6	13.3	7.2
Jasper	14	- 1	25	5	21.6	12.1
Lethbridge A	16	- 2	28	9	10.2	6.0
Medicine Hat A	18	- 1	29	9	5.9	0.7
Peace River A	M	M	26	5P	0.2	- 8.3
Red Deer A	14	- 1	25	4	5.4	- 6.9
Rocky Mountain House	13	- 1	22	4	2.2	- 8.3
Slave Lake A	14	1	24	6	12.6	- 8.8
Vermilion A	16	0	26	7	3.5	-10.1
Whitecourt	14	0	23	6	11.5	- 6.2
SASKATCHEWAN						
Broadview	15	- 2	24	5	27.7	18.1
Buffalo Narrows	M	M	25P	8	10.5	- 9.6
Cree Lake	16	X	24	6	9.8	X
Estevan A	16	- 3	27	7	33.6	21.0
Hudson Bay	M	M	23P	5	23.3	13.5
Kindersley	17	- 1	27	6	6.3	0.8
La Ronge A	16	1	24	6	9.5	- 4.8
Meadow Lake A	16	X	25	7	13.2	X
Moose Jaw A	16	- 3	27	6	9.4	2.0
Nipawin A	17	X	25	8	25.6	X
North Battleford A	17	0	26	6	35.9	28.9
Prince Albert	M	M	25P	6	4.2	- 2.8
Regina A	16	- 2	27	7	18.9	10.7
Saskatoon A	17	0	27	5	8.8	2.1
Swift Current A	M	M	27P	6	M	M
Uranium City	17	2	27	10	27.7	17.1
Wynyard	16	0	24	8	17.2	10.0
Yorkton A	15	- 3	22	5	61.9	48.3
MANITOBA						
Bissett	17	- 1	25	7	25.8	15.0
Brandon A	16	- 2	27	9	23.2	8.2
Churchill A	15	4	27	3	3.8	- 4.5
Dauphin A	16	- 1	26	8	21.1	5.7
Gillam A	15	X	25	6	2.0	X
Gimli	16	- 1	24	9	15.6	- 3.7
Island Lake	M	X	24P	11	8.5	X
Lynn Lake	16	3	25	7	16.2	- 3.0
Norway House	16	X	25	7	1.2	X
Pilot Mound	16	- 2	25	8	21.4	12.7
Portage la Prairie	17	- 1	27	9	31.4	15.3
The Pas A	17	1	24	9	16.3	- 0.9
Thompson A	15	2	25	3	8.8	-12.3
Winnipeg Int'l A	17	- 1	27	9	18.0	1.2
ONTARIO						
Armstrong A	M	M	21P	1	12.2	- 6.8
Atikokan	15	- 1	25	4	28.9	0.3
Earlton A	M	M	24P	7	M	M
Geraldton	14	- 1	22	2	12.8	-12.9
Gore Bay A	18	0	25	10	10.4	1.6
Kapuskasing	14	- 2	24	6	11.0	- 9.9
Kenora A	17	0	25	12	26.8	9.1
Kingston A	M	M	26P	12	M	M
Lansdowne House	15	0	24	8	9.4	- 8.9
London A	19	- 1	27	11	15.1	- 0.5
Moosonee	13	- 1	24	1	17.1	- 5.2
Mount Forest	M	M	28P	10P	M	M
Muskoka A	M	M	24P	9	M	M
North Bay A	16	- 1	23	10	28.8	5.3
Ottawa Int'l A	19	0	27	13	14.8	- 2.8
Petawawa A	18	X	24	9	20.3	X
Pickle Lake	14	- 1	23	4	23.8	- 1.5
Red Lake A	15	- 2	22	4	35.1	14.3

Station	Temperature (°C) Average	Departure from Normal	Extreme Maximum	Extreme Minimum	Precip. (mm) Total	Departure from Normal
Simcoe	M	M	25P	12P	M	M
Sioux Lookout A	16	- 1	22	7	29.2	9.0
Sudbury A	M	M	25P	10	33.9	14.9
Thunder Bay A	16	- 1	25	5	30.4	12.0
Timmins A	14	- 2	24	6	28.3	9.7
Toronto Int'l A	19	- 1	27	11	1.3	-11.5
Trenton A	19	- 1	25	11	40.0	26.2
Trout Lake	15	1	22	7	7.6	-15.3
Wawa A	16	X	25	8	31.4	X
Wiarton A	18	- 1	24	11	2.2	-11.4
Windsor A	21	- 1	28	13	5.2	-14.1
QUÉBEC						
Bagotville A	16	- 1	25	8	60.3	31.9
Baie Comeau	16	0	25	9	45.0	19.5
Blanc Sablon	M	M	15P	5	M	M
Border	M	M	11P	5P	M	M
Chibougamau	14	X	25	8	84.4	X
Fort Chimo A	13	2	24	0	0.0	-12.9
Gaspé A	15	X	24	10	96.9	X
Grindstone Island	15	- 3	22	10	49.6	27.8
Inoucdjouac	12	3	19	6	0.0	-14.5
Koartak	M	X	19P	4	M	X
La Grande Rivière A	16	X	25	7	0.2	X
Maniwaki	M	M	24P	7	M	M
Matagami A	M	X	25P	6	M	X
Mont-Joli A	14	- 3	22	9	39.0	19.6
Montréal (A int.)	18	- 2	26	10	25.2	4.7
Natashquan A	15	1	22	8	3.0	-28.5
Nitchequon	14	2	21	8	0.0	-29.1
Port Menier	16	1	23	10	8.7	-11.6
Poste-de-la-Baleine	12	2	27	4	1.4	-25.0
Québec A	17	- 1	27	11	35.7	9.4
Rivière du Loup	M	M	M	13P	M	M
Roberval A	17	0	24	11	84.1	60.0
Schefferville A	14	3	23	7	6.2	-19.8
Sept-Iles	16	1	26	10	4.2	-18.5
Sherbrooke A	15	- 2	24	4	49.8	25.3
Ste.Agathe des Monts	16	- 1	24	8	20.4	0.1
Val d'Or A	15	- 1	23	7	36.8	12.3
NEW BRUNSWICK						
Charlo A	16	- 1	25	10	52.2	24..
Chatham A	M	M	23P	11	43.8	21.3
Fredericton A	17	- 1	27	9	43.0	25.3
Moncton A	17	- 2	24	10	55.4	35.8
Saint John A	16	- 1	25	10	17.7	0.5
NOVA SCOITA						
Eddy Point	16	X	21	12	42.4	X
Greenwood A	17	- 2	26	9	15.7	- 1.7
Sable Island	M	M	20P	13	M	M
Shearwater A	17	- 2	24	11	12.6	- 7.8
Sydney A	15	- 4	24	6	45.1	23.0
Truro	M	M	22P	7P	M	M
Yarmouth A	15	- 1	22	10	7.0	-17.8
PRINCE EDWARD ISLAND						
Charlottetown	16	- 2	23	12	68.3	45.7
Summerside	17	- 2	22	11	48.9	23.4
NEWFOUNDLAND						
Argentia VTMS	13	X	17	6	78.4	X
Battle Harbour	M	M	12P	6	M	M
Bonavista	11	- 5	17	7	87.8	64.2
Burgeo	14	- 1	21	7	60.9	21.6
Cartwright	9	- 4	19	3	3.3	-20.0
Churchill Falls A	14	2	22	6	7.4	-20.0
Comfort Cove	11	- 5	19	5	91.6	54.7
Daniel's Harbour	11	- 5	17	2	29.0	2.8
Deer Lake	11	- 4	20	0	30.7	3.3
Gander Int'l A	11	- 6	22	4	109.5	86.9
Goose A	13	- 2	22	7	16.8	-10.6
Hopedale	9	- 3	15	5	0.2	-21.7
Port aux Basques	14	- 2	19	8	78.2	43.7
St. Albans	M	M	20P	4	M	M
St. Anthony	M	X	14P	3	M	X
St. John's A	M	M	18	4P	92.0	67.3
St. Lawrence	13	- 2	18	3	80.6	50.1
Stephenville A	15	- 2	24	6	29.1	8.9
Wabush Lake	14	2	22	8	0.2	-26.3

P - extreme value based on less than 7 days X - no normal due to short period M - not available at press time