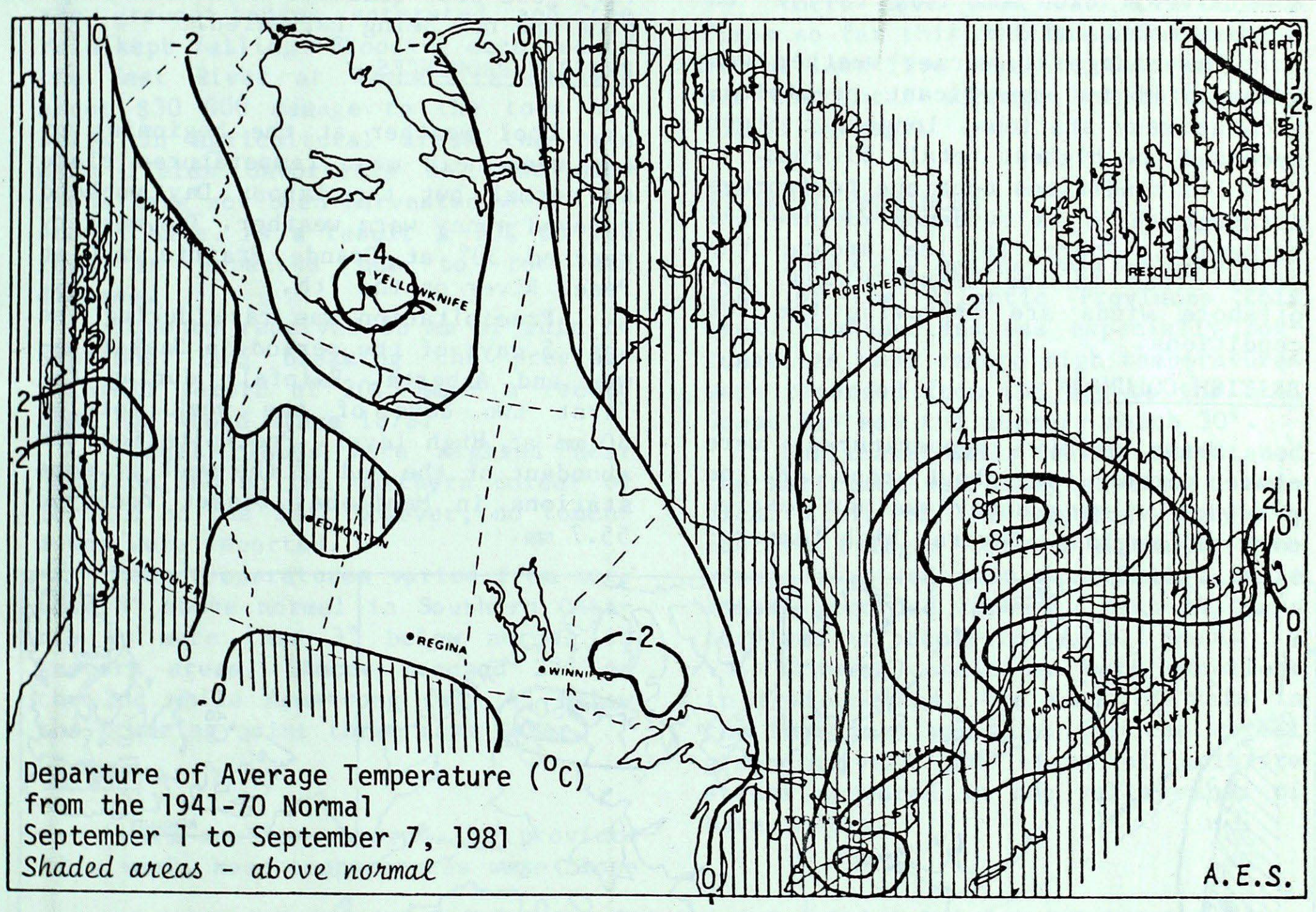
Environment Canada / Environnement Canada
Atmospheric Environment / Environnement atmosphérique

A WEEKLY REVIEW OF CANADIAN CLIMATE

CLIMATIC PERSPECTIVES

THE CANADIAN CLIMATE CENTRE,
ATMOSPHERIC ENVIRONMENT SERVICE,
4905 DUFFERIN ST., DOWNSVIEW, ONTARIO M3H 5T4

SEPTEMBER 11, 1981 *(Aussi disponible en français)* **VOL.3 NO. 36**



Departure of Average Temperature (°C)
from the 1941-70 Normal
September 1 to September 7, 1981
Shaded areas - above normal

WEATHER HIGHLIGHTS FOR THE PERIOD - SEPTEMBER 1 - 7, 1981

Rains continue in Ontario for a second week

Heavy rains for a second week in a row caused numerous problems in southern and eastern Ontario. In agricultural areas the rain made fields unworkable and many crops are overdue for harvesting. As a result a 10% to 15% crop loss is expected due to rot and disease.

Funnel clouds were sighted near Hamilton and Toronto on September 2nd but no touchdowns were reported.

Warm dry weather in the West is providing good harvesting conditions. An excellent second hay crop is reported in some areas of southern British Columbia. Harvesting operations in Alberta are ahead of those of previous years.

Temperatures varied from 34° at Lytton, British Columbia to -12° at several Yukon stations. Kenora, Ontario recorded 108.6 mm of precipitation.

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 THE NORTHWEST TERRITORIES

The beginning of the week was dominated by cold Arctic air. Temperatures recovered to more normal values by the end of the week. By September 7th Watson Lake reached 24° equalling the record maximum for the day. Frosts were general throughout the Territories. Tischu River, Sheldon Lake and Ross River, Yukon all fell to -12° on September 2nd and 3rd.

The change to warmer weather was accompanied by significant precipitation at many stations. Longstaff Bluff recorded the highest total, 51.4 mm.

Ice conditions continue to improve although there is evidence of new ice formation. There is ice around the drill sites in the Beaufort Sea, but offshore winds are improving the ice conditions.

BRITISH COLUMBIA

Mean weekly temperatures were above normal throughout most of the province as warm sunny weather settled over all regions. Several high temperature records were set on the 7th in central and northern areas. Lytton reached 34° on the same day.

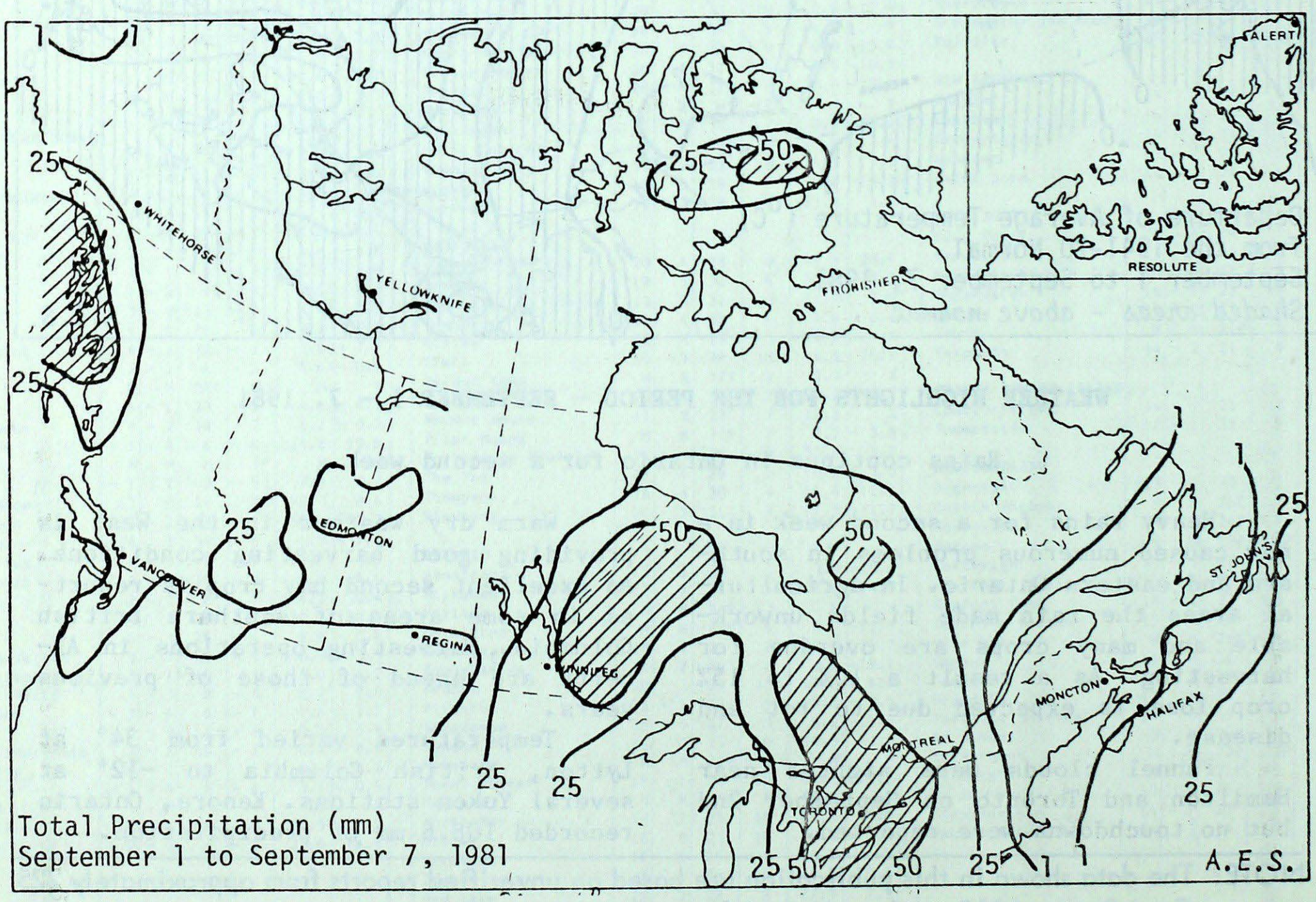
Precipitation varied widely across the province with the northern coast receiving the greatest weekly totals. Prince Rupert recorded 57 mm.

Some areas of southern British Columbia are reporting excellent haying weather for the second hay cut and a very good crop quality. A few early apples are now being harvested.

PRAIRIE PROVINCES

Cool weather at the beginning of the week held mean temperatures close to normal but the Labour Day weekend enjoyed sunny warm weather. The mercury reached 30° at Grande Prairie and at Peace River on the 7th.

Precipitation was rare during the last 5 days of the period in Saskatchewan and Alberta. Rainfall during the first two days of the week totaled 30 mm at High Level. Precipitation was abundant at the end of the week at some stations in Manitoba. Bisset received 55.7 mm.



Total Precipitation (mm)
September 1 to September 7, 1981

A.E.S.

The warm weather at the end of the week caused a resurgence of forest fire activity in Alberta. In contrast, harvest operations are ahead of those of previous years.

ONTARIO

Heavy rains continued in southern and eastern Ontario for the second week in a row causing numerous problems as the ground became saturated and the rain kept falling. Flooding occurred on the East River at Huntsville causing about $30 000 damage to the town itself. In agricultural areas the rain made fields unworkable so that many crops have not been harvested when they should have. As a result a 10% to 15% loss is expected due to rot and disease.

Toronto received 36 mm of rain on September 3rd breaking the previous rainfall record of 20.3 mm - a record that had stood since 1878.

Funnel clouds were sighted near Hamilton and on the northern border of Toronto on the 2nd, however, no touchdowns were reported.

Mean temperatures varied from more than 4° above normal in Southern Ontario to more than 3° below normal in western areas. Simcoe reached 28° on the 2nd while Armstrong fell 4° below the freezing point three days later.

QUÉBEC

Warm weather covered the province this week. Mean temperatures were close to 7° above normal at Schefferville. The mercury reached 28° at Poste-de-la-Baliene on the 1st.

Precipitation was very light in eastern areas and in the Saint Lawrence Valley. In contrast, precipitation exceeded normal in western areas, south of the Laurentians and along the coast of Hudson Bay. La Grande Riviere recorded 69 mm.

There have been 125 more forest fires so far this year than the average of the last five years to the same date but the total acreage burned is only 13% of average.

ATLANTIC PROVINCES

Sunny dry weather was enjoyed over most of the Atlantic Provinces this week. Newfoundland was especially fortunate as many record high temperatures were recorded from the 3rd to the 5th. Goose Bay saw the mercury reach 30°.

Hurricane Emily which threatened the Maritimes was downgraded to a tropical storm on the weekend. Only the eastern fringes of the Atlantic Provinces received rain from Emily. Sable Island recorded 27.9 mm. Most stations received no precipitation all week.

Growing conditions were excellent in Newfoundland. The lack of rain in the Maritimes was good for the cereal grain harvest but signs of moisture stress appeared in the valley area of Nova Scotia.

CLIMATIC PERSPECTIVES

Staff

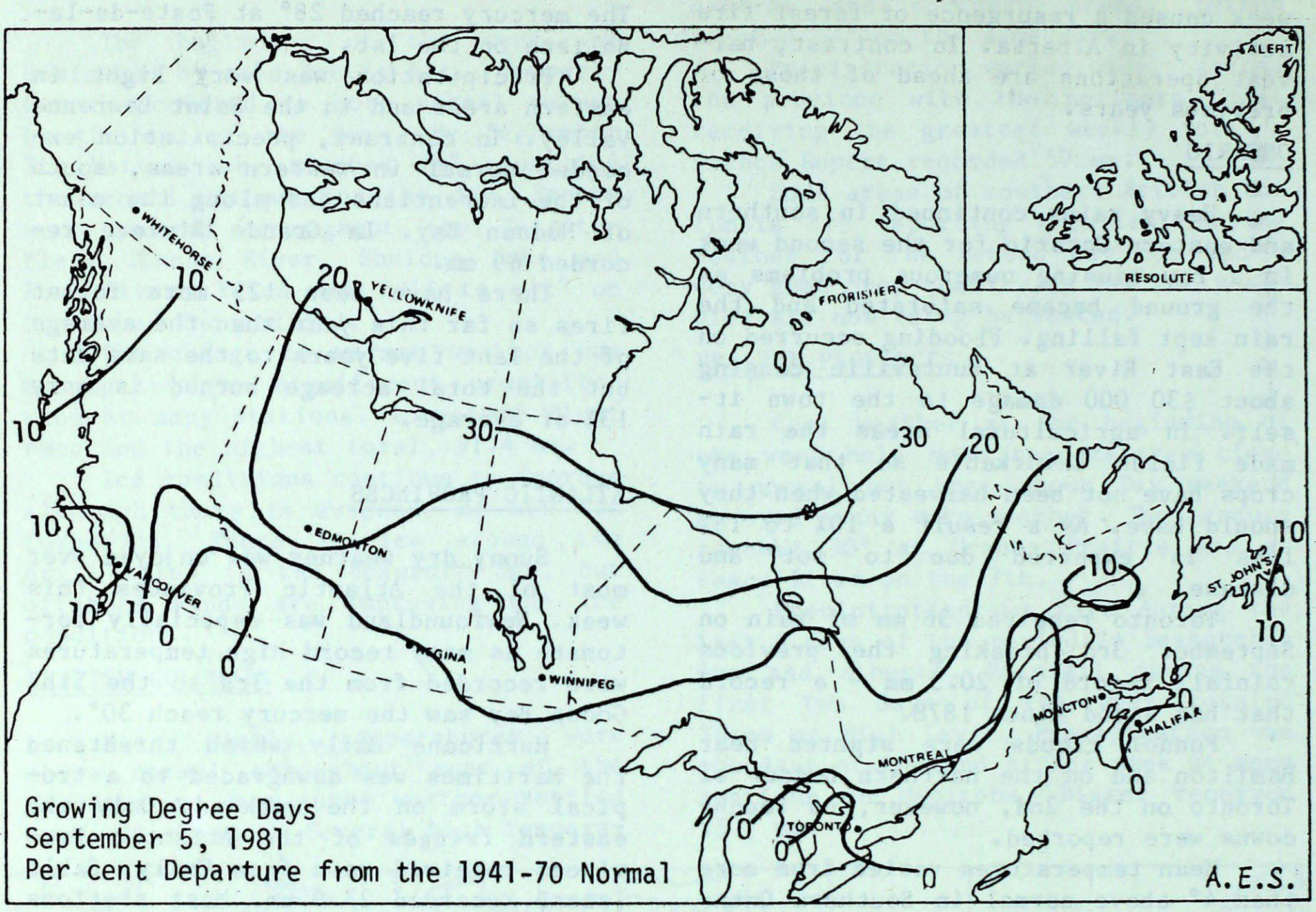
Editor: Yves Durocher
Assistant Editor: Bob Paterson
Technical Staff: Fred Richardson, Andy Radomski
Graphics and Layout: Bill Johnson
Word Processing: Naseem Khaja

Correspondents

Terry Mullane, (Ice Forecasting Central)
H.E. Wahl, (Whitehorse)
Bill Prusak, (Western Region)
Fred Luciow, (Central Region)
T.J. Moyer, (Ontario Region)
Jacques Miron, (Quebec Region)
Michel Howe, (Atlantic Region)
Staff of Prince George, Kamloops, Castlegar, Fort Nelson, Penticton and Kelowna weather office (Pacific Region)

Telephone Inquiries (416) 667-4711/4906

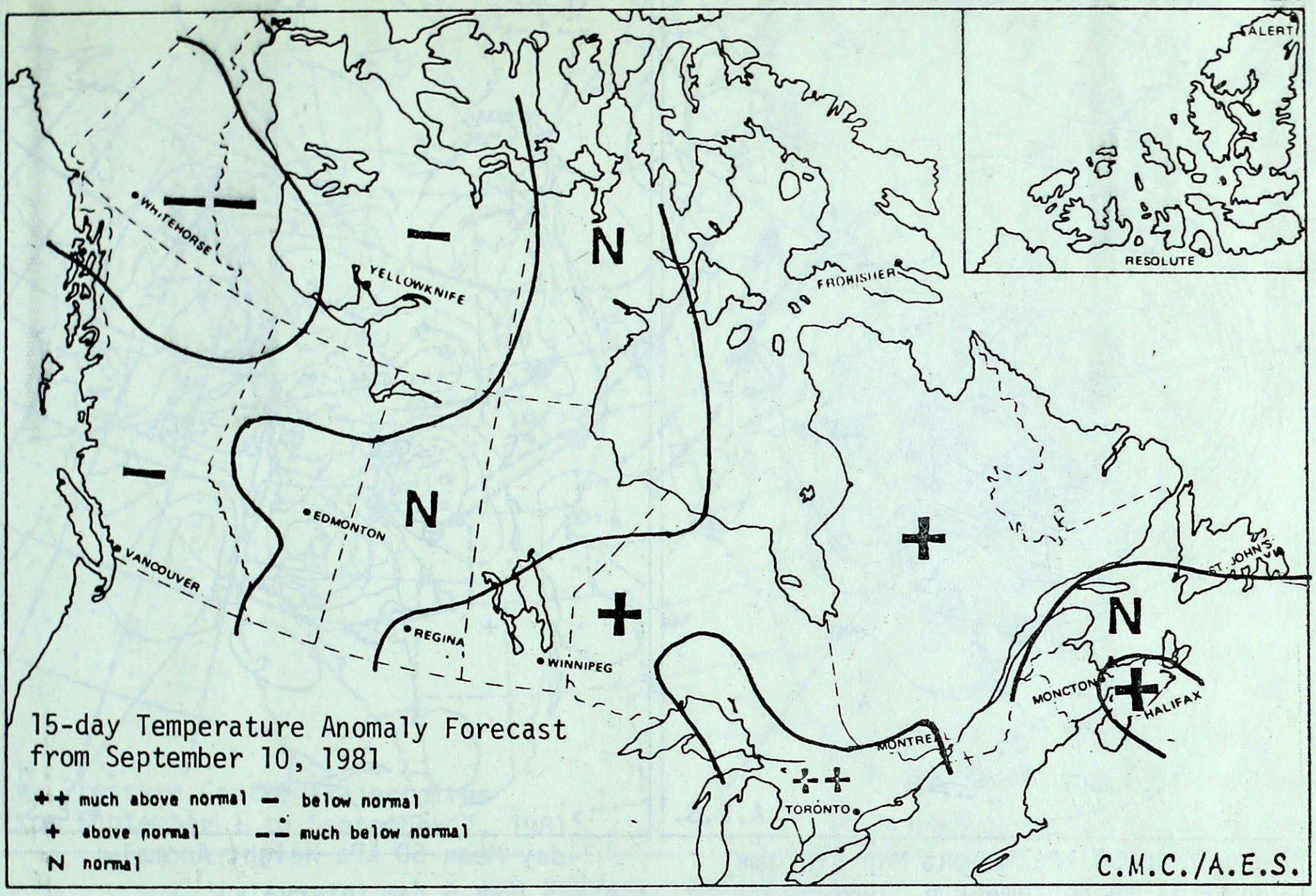
GROWING DEGREE-DAY SUMMARY TO SEPTEMBER 5, 1981



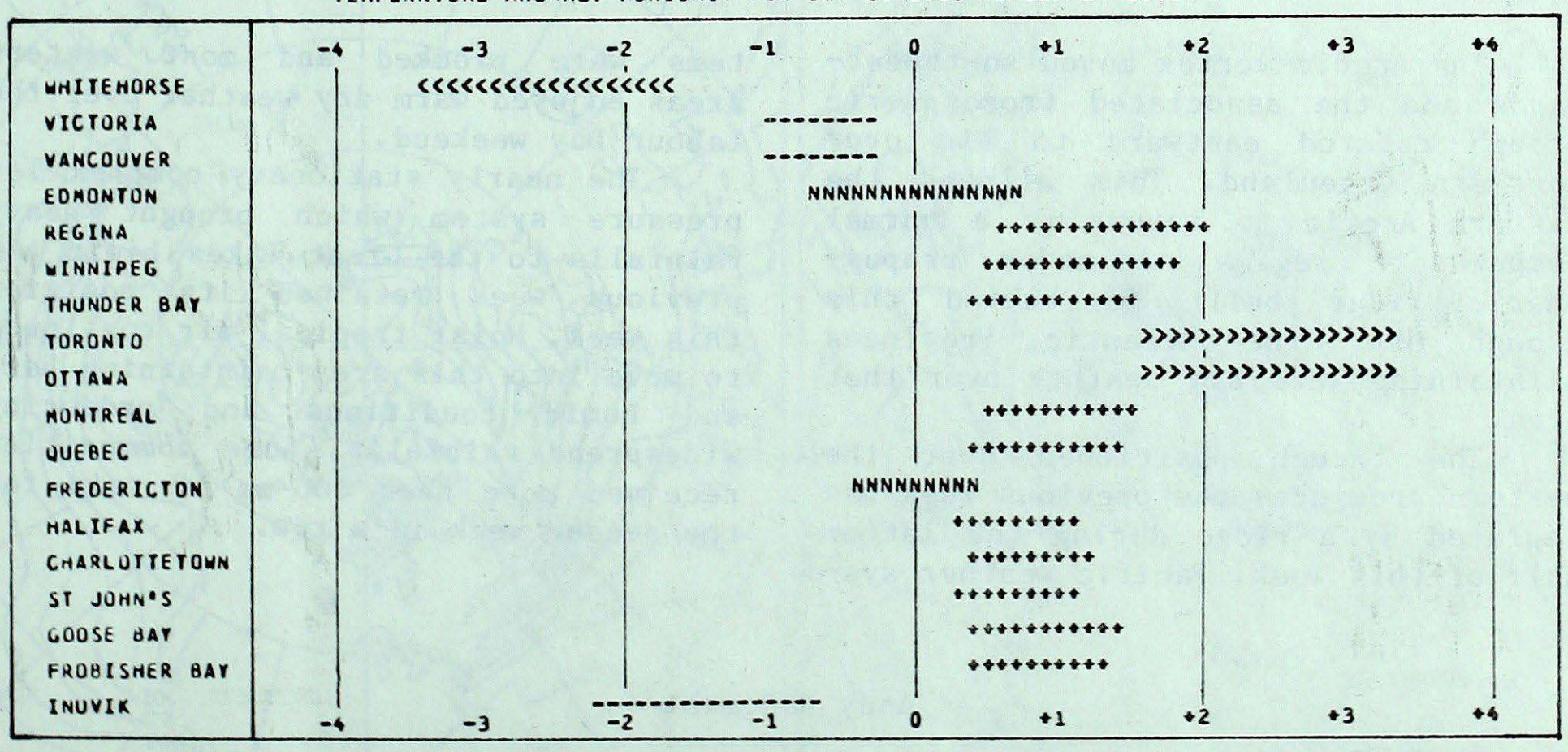
CITY	MONTHLY CUMULATIVE TOTAL	MONTHLY DIFF. FROM 1941-70 NORMAL	SEASONAL TOTAL	SEASONAL DIFF. FROM 1941-70 NORMAL	SEASONAL PERCENT OF NORMAL
Whitehorse*	-	-	853.5	35.5	104
Penticton	57.0	-2.0	1716.0	-12.0	99
Vancouver	55.0	0.0	1601.0	89.0	106
Edmonton	34.0	-1.0	1500.0	342.0	130
Calgary	33.0	-7.0	1184.5	70.5	106
Regina*	-	-	1566.0	178.0	113
Saskatoon	42.0	-9.0	1558.0	186.0	114
Winnipeg	44.0	-11.0	1549.0	70.0	105
Thunder Bay	38.0	-8.0	1243.0	67.0	106
Windsor	73.5	-2.5	2043.0	79.0	104
Toronto	79.0	13.0	1608.0	-99.0	94
Ottawa	74.0	13.0	1678.0	19.0	101
Montreal	77.0	8.0	1680.0	-35.0	98
Quebec	73.5	17.5	1442.5	23.5	102
Fredericton	58.0	4.0	1490.5	71.5	105
Halifax	57.0	1.0	1263.5	-8.5	99
Charlottetown	61.0	3.0	1342.5	98.5	108
St John's	31.0	-13.0	966.0	86.0	110

* Season ended

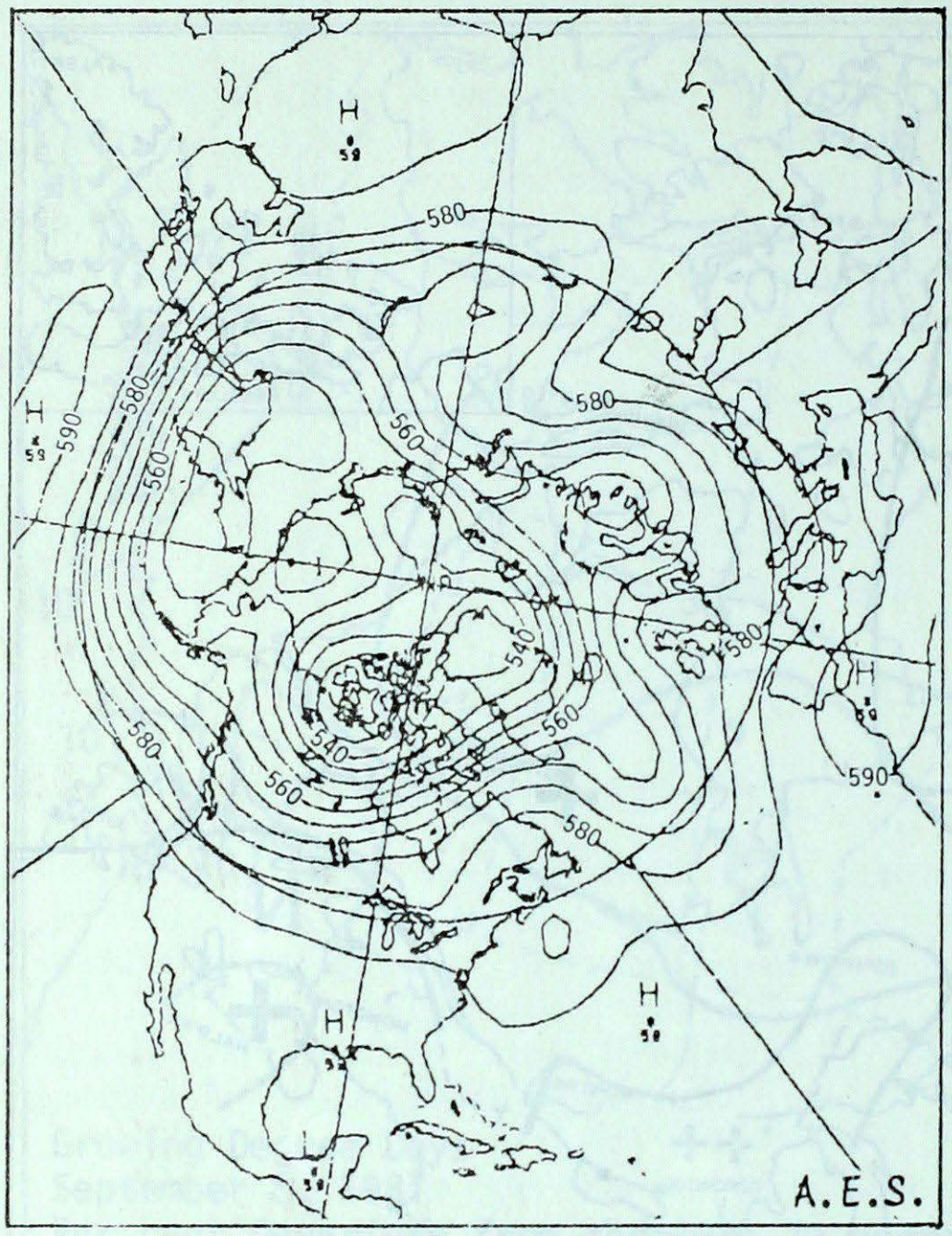
TEMPERATURE ANOMALY FORECAST



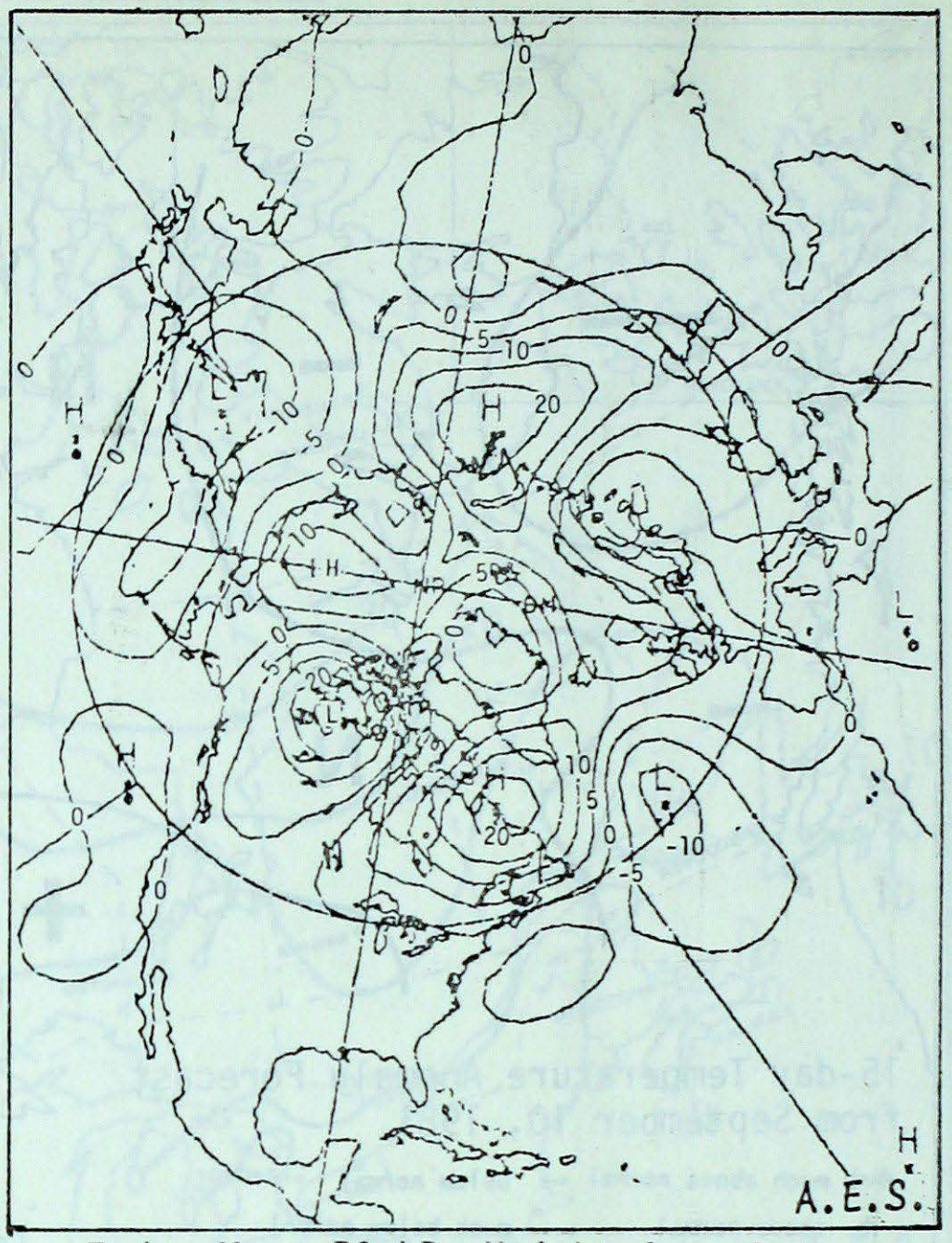
TEMPERATURE ANOMALY FORECAST FOR SEP 10 1981 TO SEP 24 1981



Atmospheric Circulation



7-day Mean 50 kPa Height Map (in dam)
August 31 to September 6, 1981



7-day Mean 50 kPa Height Anomaly
(in 5 dam intervals)
August 31 to September 6, 1981

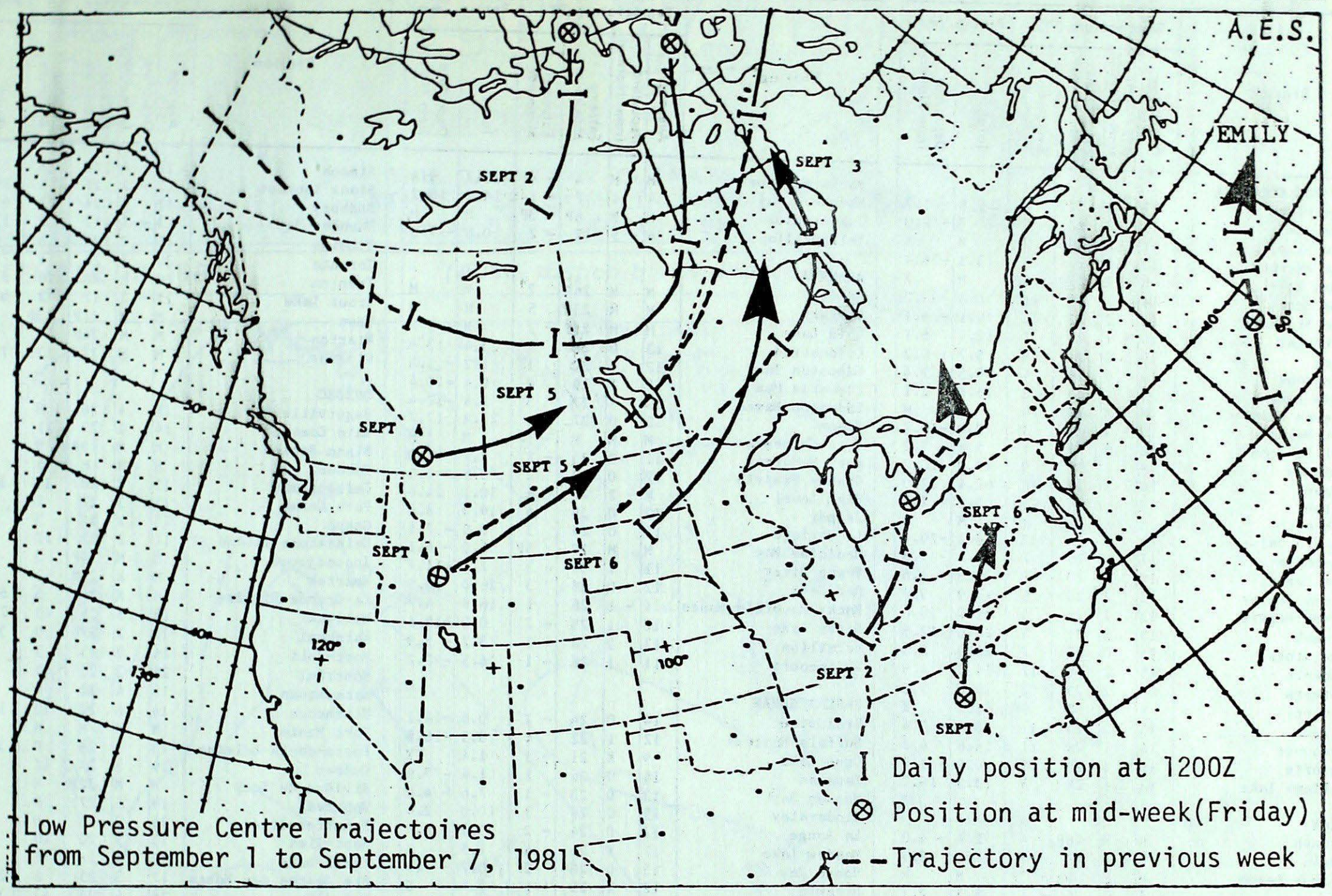
The Arctic vortex moved southwestwards and the associated tropospheric trough rotated eastward to lie over northern Greenland. This allowed the eastern Arctic to return to a normal temperature regime. A major tropospheric ridge built in behind this trough over the Atlantic Provinces maintaining warm dry weather over that area.

The trough positioned over the western provinces the previous week was replaced by a ridge during the latter half of this week. Pacific weather systems were blocked and most western areas enjoyed warm dry weather over the Labour Day weekend.

The nearly stationary complex low pressure system which brought heavy rainfalls to the Great Lakes basin the previous week retained its position this week. Moist tropical air continued to move into this area maintaining hazy and humid conditions and producing widespread rainfalls. Some communities received more than 100 mm of rain for the second week in a row.

Andy Radomski

LOW PRESSURE CENTRE TRAJECTORIES



Low Pressure Centre Trajectoires
from September 1 to September 7, 1981

SEA SURFACE TEMPERATURE

Monthly Mean Sea Temperature
for August, 1981

Sea Surface Temperature Anomalies
for August, 1981

TEMPERATURE AND PRECIPITATION DATA FOR THE WEEK ENDING 0600 G.M.T. SEPTEMBER 8, 1981

Station	Temperature (°C) Average	Departure from Normal	Extreme Maximum	Extreme Minimum	Precip. (mm) Total	Departure from Normal
BRITISH COLUMBIA						
Abbotsford	17	1	32	8	9.8	- 5.7
Alert Bay	14	0	22	8	20.7	- 2.0
Blue River	M	X	24P	7	M	X
Bull Harbour	13	0	19	8	13.3	-16.4
Burns Lake	M	X	27P	5P	M	X
Cape Scott	14	1	19	11	10.0	-39.2
Cape St James	16	3	22	12	19.1	- 6.1
Castlegar	16	- 1	26	7	12.1	6.1
Comox	15	0	24	9	6.7	- 0.2
Cranbrook	14	0	29	4	9.5	2.4
Dease Lake	9	1	23	- 3	15.6	2.1
Estevan Point	M	M	20P	10	M	M
Fort Nelson	10	- 1	30	1	0.0	-11.2
Fort St John	12	0	29	1	5.6	- 3.2
Kamloops	18	1	31	9	15.0	10.2
Langara	14	1	21	10	62.4	32.0
Lytton	18	0	34	9	5.6	- 1.4
Mackenzie	M	X	27P	- 1P	M	X
McInnes Island	15	1	20	12	28.2	-20.3
Penticton	17	0	26	7	1.1	- 1.6
Port Hardy	14	1	20	8	20.8	- 4.6
Prince George	13	2	28	6	19.9	9.7
Prince Rupert	13	1	20	5	57.0	10.0
Quesnel	15	2	31	5	21.0	12.6
Revelstoke	14	0	23	7	25.3	2.3
Sandspit	15	2	19	12	14.0	- 4.6
Smithers	13	2	29	2	10.0	1.8
Stewart	M	X	17	9P	61.3	X
Terrace	15	2	25	11	8.0	- 9.4
Vancouver	16	1	26	11	14.6	4.5
Victoria	16	1	29	9	0.0	- 5.7
Williams Lake	13	1	28	3	23.3	16.0
YUKON						
Burwash	M	M	16P	- 4	2.4	- 6.0
Dawson	7	- 2	17	- 6	17.2	8.9
Komakuk Beach	M	M	6p	- 3P	M	M
Mayo	8	0	16	- 4	8.5	2.7
Shingle Point	M	M	8P	- 5P	M	M
Watson Lake	10	0	24	- 2	8.0	- 2.6
Whitehorse	M	M	16	- 2P	7.5	- 3.1
NORTHWEST TERRITORIES						
Alert	- 2	3	2	- 8	1.4	- 7.2
Baker Lake	M	M	12P	0	M	M
Broughton Island	2	1	8	- 3	3.5	- 3.4
Byron Bay	0	- 3	5	- 4	2.5	- 1.9
Cambridge Bay	2	0	5	- 1	8.1	4.5
Cape Dorset	M	X	9P	- 1P	M	X
Cape Dyer	3	0	9	- 3	5.0	- 6.9
Cape Hooper	M	M	4P	- 8	20.9	13.6
Cape Parry	M	M	4P	- 2P	M	M
Cape Young	M	M	7P	- 2P	M	M
Clinton Point	M	M	3P	- 3P	M	M
Clyde	M	M	6P	- 1	M	M
Contwoyto Lake	M	M	5	- 4P	13.4	3.9
Coppermine	M	M	8	- 4P	M	M
Coral Harbour	M	M	10P	- 1P	M	M
Dewar Lakes	M	M	2P	- 5	9.0	- 3.4
Ennadai	M	M	M	1	M	M
Eureka	- 2	0	3	- 6	0.0	- 3.1
Fort Reliance	5	- 3	12	0	12.8	3.9
Fort Simpson	4	- 3	21	- 3	17.2	5.0
Fort Smith	7	- 3	18	- 2	13.0	2.3
Frobisher Bay	M	M	10P	0	M	M
Gladman Point	4	2	8	1	10.4	7.1
Hall Beach	2	- 1	7	- 1	41.7	33.2
Hay River	7	- 4	22	- 2	17.0	4.2
Inuvik	1	- 4	9	- 6	2.5	- 4.9
Jenny Lind Island	2	1	5	0	2.8	- 1.7
Lady Franklin Point	2	- 2	5	- 2	0.2	- 4.8
Longstaff Bluff	1	- 1	5	- 3	51.4	41.9
Mackar Inlet	0	0	5	- 3	9.5	2.0
Mould Bay	- 3	0	1	- 7	2.7	- 0.3
Nicholson Peninsula	M	M	3P	- 2P	M	M
Norman Wells	M	M	15	- 6P	5.1	- 6.5
Pelly Bay	2	1	5	- 2	25.8	14.5
Pond Inlet	2	X	8	- 2	14.4	X
Port Burwell	M	X	11P	3	M	X
Resolute	- 1	1	2	- 7	3.6	- 1.0

Station	Temperature (°C) Average	Departure from Normal	Extreme Maximum	Extreme Minimum	Precip. (mm) Total	Departure from Normal
Sachs Harbour	M	M	4	- 4P	13.7	9.8
Shepherd Bay	4	1	7	- 1	16.2	10.2
Tuktoyaktuk	M	M	6P	- 3P	M	M
Yellowknife	4	- 5	12	- 2	0.8	- 7.2
ALBERTA						
Banff	M	M	26P	2	M	M
Calgary	M	M	23P	5	M	M
Cold Lake	M	M	21P	- 2	M	M
Coronation	13	0	28	1	23.4	13.6
Edmonton Intl	12	1	28	1	1.2	-15.8
Edmonton Mun	14	1	29	4	0.4	-10.4
Edmonton Namao	13	1	27	3	1.4	-12.4
Edson	10	0	27	1	27.8	17.7
Fort Chipewyan	M	M	M	- 1P	M	M
Fort McMurray	11	0	25	- 2	5.1	-11.0
Grande Prairie	12	0	30	2	5.8	- 2.5
High Level	8	- 2	26	- 4	30.1	24.6
Jasper	12	0	28	4	19.4	8.8
Lethbridge	15	0	29	3	0.0	- 7.1
Medicine Hat	M	M	29	5P	3.0	- 6.1
Peace River	11	1	30	- 3	2.2	-11.7
Red Deer	12	0	28	3	26.0	16.5
Rocky Mountain House	11	- 1	26	1	18.8	4.7
Slave Lake	12	1	29	- 2	0.0	-18.1
Vermilion	13	1	28	- 2	3.2	- 5.9
Whitecourt	11	1	26	- 1	6.5	- 7.2
SASKATCHEWAN						
Broadview	14	0	24	- 1	0.6	-14.1
Buffalo Narrows	12	1	22	4	0.5	-16.8
Cree Lake	9	X	21	- 1	1.4	X
Estevan	16	0	26	2	1.4	- 7.6
Hudson Bay	13	0	23	- 1	7.6	- 4.4
Kindersley	15	0	29	3	10.6	2.4
La Ronge	12	0	24	- 2	23.1	8.4
Meadow Lake	11	X	26	- 4	1.5	X
Moose Jaw	15	0	28	2	0.7	- 7.9
Nipawin	12	X	25	- 1	3.4	X
North Battleford	13	- 1	27	- 1	12.4	6.4
Prince Albert	13	0	27	- 3	3.5	- 6.3
Regina	14	- 1	26	- 2	1.0	- 8.2
Rockglen	M	X	M	11P	M	X
Saskatoon	14	0	28	0	6.6	- 2.9
Swift Current	14	0	27	- 1	0.2	-10.0
Uranium City	8	- 2	17	0	12.1	1.6
Wynyard	14	- 1	24	- 1	2.0	- 6.9
Yorkton	13	- 1	23	1	4.3	- 5.6
MANITOBA						
Bissett	13	- 1	23	- 1	55.7	37.6
Brandon	14	- 1	24	3	0.0	-12.6
Churchill	8	0	17	2	23.6	8.5
Dauphin	14	- 1	24	2	7.9	- 4.0
Gillam	10	X	18	4	6.4	X
Gimli	14	- 1	22	4	39.8	28.4
Island Lake	M	X	21P	5	M	X
Lynn Lake	9	0	18	1	26.0	3.5
Norway House	11	X	21	- 1	3.8	X
Pilot Mound	14	- 1	24	3	26.9	15.2
Portage la Prairie	14	- 1	24	2	45.8	30.3
The Pas	12	- 1	22	3	12.9	- 1.0
Thompson	9	0	18	- 2	23.8	4.3
Winnipeg	14	- 2	25	4	36.6	21.3
ONTARIO						
Armstrong	9	- 4	20	- 4	8.9	- 9.9
Atikokan	12	- 2	22	0	16.3	- 7.7
Earlton	16	2	23	7	53.5	29.8
Geraldton	M	M	21	3P	37.6	6.6
Gore Bay	18	1	22	13	31.7	13.0
Kapuskasing	14	0	25	6	53.8	30.7
Kenora	14	- 1	22	5	108.6	89.5
Kingston	20	1	24	16	59.3	44.0
Lansdowne	12	- 1	21	3	14.8	- 3.6
London	21	2	26	15	61.9	44.8
Moosonee	14	1	25	1	32.8	12.3
Mount Forest	19	3	26	15	47.1	24.3
Muskoka	18	2	23	15	67.4	48.4
North Bay	18	2	22	14	72.1	44.2
Ottawa	19	2	26	12	13.2	- 4.1
Petawawa	18	X	24	13	87.4	X
Pickle Lake	11	- 2	20	0	22.0	- 6.8
Red Lake	12	- 2	21	- 2	57.2	35.5

Station	Temperature (°C) Average	Departure from Normal	Extreme Maximum	Extreme Minimum	Precip. (mm) Total	Departure from Normal
Simcoe	22	4	28	18	53.2	37.3
Sioux Lookout	12	- 2	21	1	20.0	- 5.6
Sudbury	17	1	24	11	64.6	38.1
Thunder Bay	13	- 1	23	2	13.9	- 3.2
Timmins	15	1	25	6	6.6	-12.4
Toronto	20	2	26	15	73.8	65.3
Trenton	20	1	26	16	83.4	70.1
Trout Lake	11	- 1	17	2	65.6	41.9
Wawa	M	X	21P	3P	M	X
Wiarton	M	M	24P	14	M	M
Windsor	M	M	27	13P	74.3	63.7
QUÉBEC						
Bagotville	18	4	26	8	0.0	-24.2
Baie Comeau	14	2	20	11	0.4	-25.3
Blanc Sablon	M	M	19P	9	0.4	-13.0
Border	M	M	M	5	M	M
Chibougamau	19	X	26	13	30.0	X
Fort Chimo	11	3	27	2	1.8	-12.1
Gaspé	15	X	27	5	0.0	X
Grindstone Island	17	2	22	12	0.0	-14.6
Inoucdjouac	M	M	14P	3	M	M
Koartak	M	X	21P	2	M	X
La Grande Rivière	14	X	26	5	69.0	X
Maniwaki	18	3	25	10	27.5	- 2.5
Matagami	17	X	27	9	33.0	X
Mont-Joli	14	0	23	5	0.3	-17.5
Montréal	20	2	25	12	9.8	-11.9
Natashquan	15	4	22	9	0.6	-17.0
Nitchecun	16	6	22	10	15.4	- 2.9
Port Menier	M	M	M	M	M	M
Poste-de-la-Baleine	13	3	28	0	35.4	14.6
Québec	19	3	27	12	0.0	-28.6
Rivière du Loup	M	M	22P	8	M	M
Roberval	19	5	27	8	1.0	-28.0
Schefferville	15	7	26	6	3.0	-13.3
Sept-Iles	15	3	20	10	0.0	-24.4
Sherbrooke	17	4	26	6	0.0	-28.5
Ste Agathe des Monts	17	3	23	8	28.6	2.0
Val d'Or	18	4	25	13	39.0	13.3
NEW BRUNSWICK						
Charlo	17	4	24	9	0.0	-28.0
Chatham	17	1	27	6	0.0	-22.3
Fredericton	17	1	25	8	0.0	-23.2
Moncton	16	1	25	8	0.0	-17.8
St. John	17	2	24	8	0.0	-24.6
NOVA SCOTIA						
Eddy Point	17	X	23	11	0.7	X
Greenwood	16	0	26	6	0.3	-15.6
Sable Island	16	- 1	21	6	27.9	7.1
Shearwater	17	0	22	12	7.0	-13.6
Sydney	16	0	24	8	5.0	-15.9
Truro	17	3	25	9	0.2	-18.3
Yarmouth	18	3	25	10	2.0	-17.4
PRINCE EDWARD ISLAND						
Charlottetown	17	1	25	10	0.0	-20.4
Summerside	17	0	24	11	0.2	-18.0
NEWFOUNDLAND						
Argentia	16	X	26	10	2.0	X
Battle Harbour	M	M	17	6P	0.0	-14.3
Bonavista	12	0	21	7	0.2	-17.5
Burgeo	M	M	22	11P	0.0	-36.1
Cartwright	M	M	26	7P	10.5	-12.6
Churchill Falls	16	8	27	8	12.4	-16.3
Comfort Cove	15	2	25	8	0.8	-23.7
Daniel's Harbour	M	M	20	7P	0.8	-18.4
Deer Lake	M	M	29	9P	0.0	-15.9
Gander	15	2	25	8	0.0	-17.6
Goose	17	5	30	8	18.7	2.3
Hopedale	14	4	25	7	1.7	-14.1
Port aux Basques	16	3	22	12	0.0	-30.8
St Albans	17	3	27	9	0.0	-43.3
St Anthony	M	M	23	7P	0.0	M
St John's	12	- 2	19	3	25.0	0.2
St Lawrence	15	3	22	9	2.8	-32.7
Stephenville	19	5	28	11	0.0	-16.9
Wabush Lake	17	8	27	10	3.4	-12.5

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