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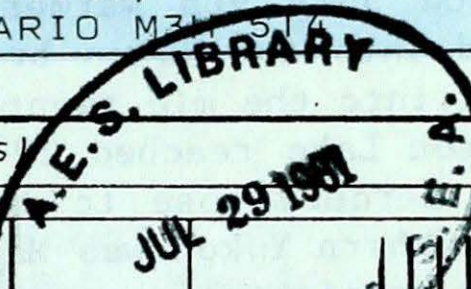
A WEEKLY REVIEW OF CANADIAN CLIMATE

CLIMATIC PERSPECTIVES

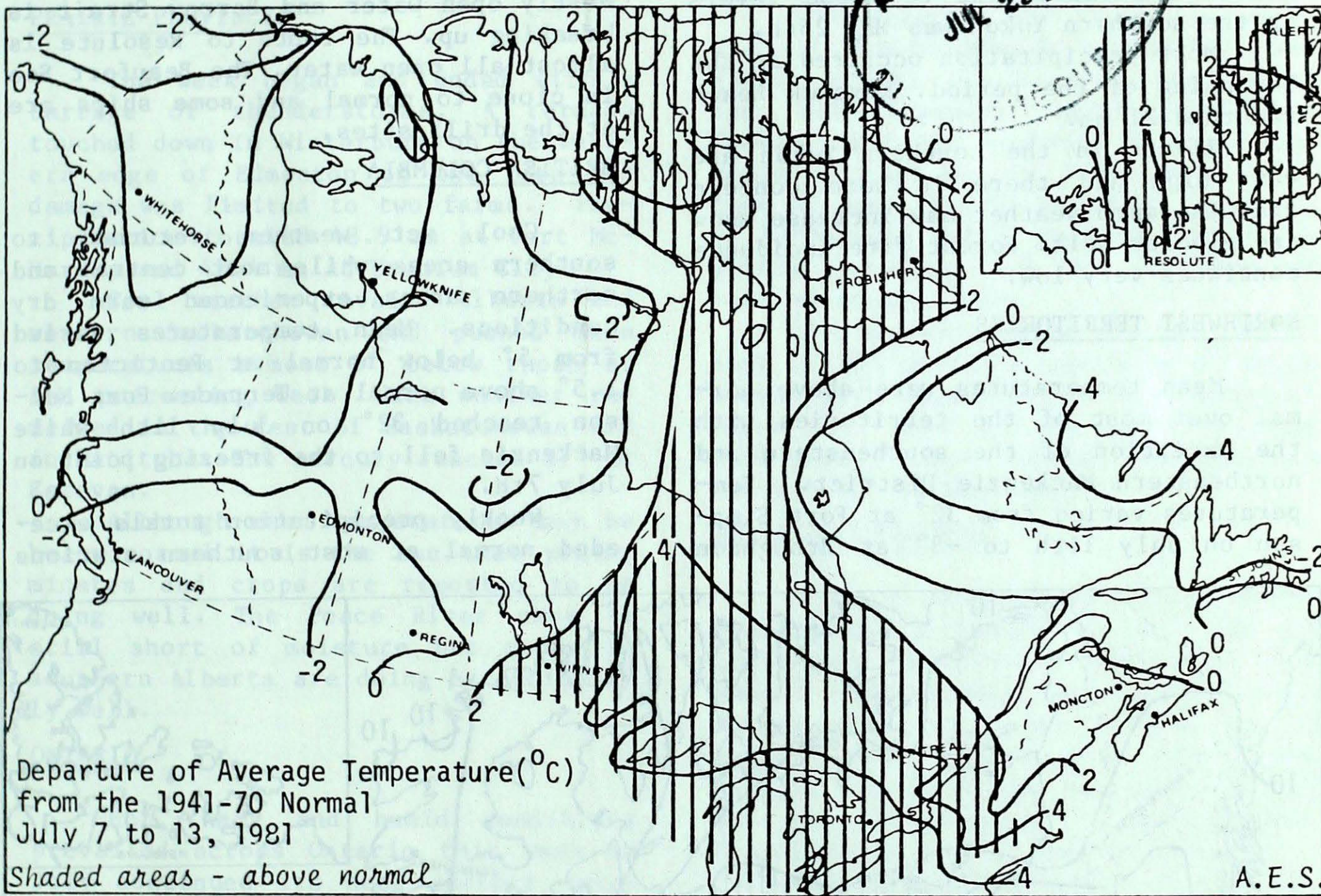
THE CANADIAN CLIMATE CENTRE,
ATMOSPHERIC ENVIRONMENT SERVICE,
4905 DUFFERIN ST., DOWNSVIEW, ONTARIO M3H 5T4

JULY 17, 1981

(Aussi disponible en français)



VOL.3 NO.28



WEATHER HIGHLIGHTS FOR THE PERIOD - JULY 7 TO JULY 13, 1981

Funnel Clouds and Tornadoes sighted from coast to coast

Heavy thunderstorms, some accompanied by funnel clouds or tornadoes, occurred in many areas across the country. Funnel clouds were reported at Fort St. John, British Columbia and in the Saint-Lawrence south of Baie Comeau, Quebec. Tornadoes were reported at Winterburn on the western edge of Edmonton, Alberta and in southeastern New Brunswick. No significant damage was reported at any location.

Sixty-four fires were burning at week's end in northwestern Ontario as thunderstorm activity, combined with the hot yet dry conditions of the past week, started a rash of fires.

The highest temperature in the country was 37° at Estevan, Saskatchewan and the lowest was -3° at Broughton and Pond Inlet, Northwest Territories. Argentia, Newfoundland recorded the highest precipitation total, 79 mm.

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

NUN-01100-0000

YUKON

The cool wet weather that plagued the Yukon through June and early July finally broke on July 9th. The week began with temperatures 4° to 7° below normal. On July 9th warmer and drier air moved into the Yukon bringing temperatures into the mid twenties; by the 11th Watson Lake reached 29°. The last time the mercury rose to these levels in the southern Yukon was May 25th.

Most precipitation occurred at the beginning of the period. Komakuk Beach recorded 21 mm.

Rivers in the southern Yukon are very high and there is some concern that the warm weather may increase snow and glacier melt. Forest fire incidence continues very low.

NORTHWEST TERRITORIES

Mean temperatures were above normal over most of the territories with the exception of the southeastern and northeastern Mackenzie District. Temperatures varied from 32° at Fort Simpson on July 11th to -3° at Broughton

Point and Pond Inlet on the 7th and 5th respectively.

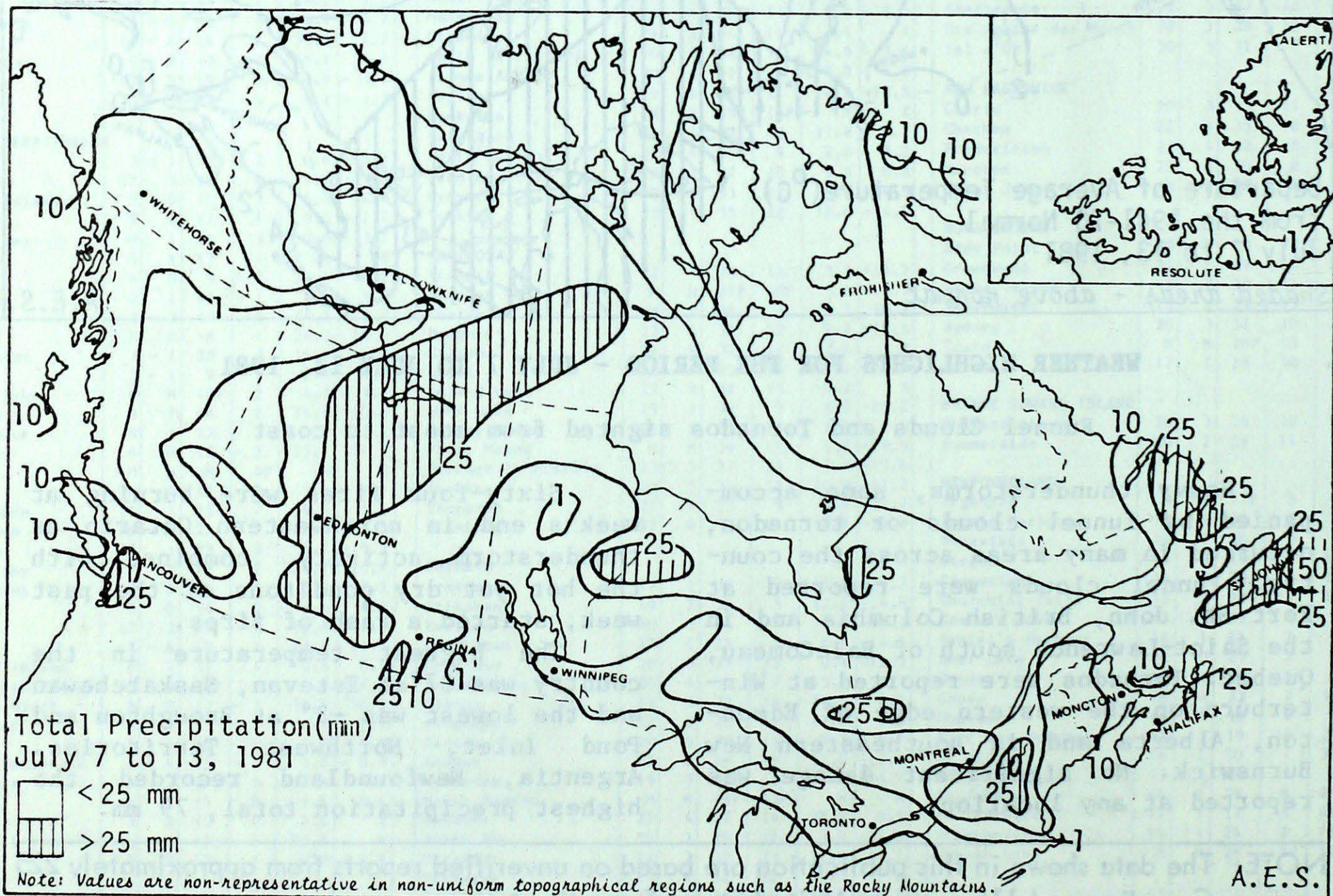
Precipitation was generally light except in the southern Mackenzie District and in the central Keewatin District where Baker Lake recorded 37.1 mm.

Hudson Bay and Hudson Strait are improving steadily and are 2 to 3 weeks ahead of normal. Lancaster Sound is mostly open water and Barrow Strait is breaking up. The route to Resolute is almost all open water. The Beaufort Sea is close to normal and some ships are at the drill sites.

BRITISH COLUMBIA

Cool wet weather returned to southern areas while most central and northern areas experienced warm dry conditions. Mean temperatures varied from 5° below normal at Penticton to 1.5° above normal at Terrace. Fort Nelson reached 32° on July 11th while Mackenzie fell to the freezing point on July 7th.

Weekly precipitation totals exceeded normal at most southern stations



with Castlegar recording 37.6 mm.

Heavy thunderstorms occurred in some northeastern areas on July 13th. Funnel clouds were reported at Fort St. John and a plane crash was attributed to the thunderstorms.

Hay is rotting in the fields in some southern areas. Many fruit tree diseases are in evidence and there will be few apricots this year.

PRAIRIE PROVINCES

The week began and ended with a barrage of thunderstorms. A tornado touched down in Winterburn on the western edge of Edmonton on the 13th but damage was limited to two farms. Precipitation totaled 48.9 mm at Fort McMurray and 47.4 mm at Uranium City.

Cool weather invaded Alberta and western Saskatchewan and pushed mean temperatures almost 6° below those of the preceding week. Warm weather remained in the rest of Saskatchewan and in Manitoba. The mercury reached 37° at Estevan.

Although mean temperatures may be below normal it is the sun that predominates and crops are reported to be doing well. The Peace River area is still short of moisture but crops in southern Alberta are doing exceptionally well.

ONTARIO

Hot, hazy and humid conditions prevailed across Ontario this week as July continued its near perfect vacation weather. In northern Ontario, Kapuskasing soared to 34° on the 7th breaking the old record of 32° set in 1936.

Precipitation totals exceeded normal at only three stations. Trout Lake led with 29.4 mm.

Vegetable and fruit crops are doing very well although the heat and humidity caused some problems with ap-

ple scab. The forest fire situation has quickly gone from a low hazard rating to a high hazard one. Sixty-four fires were burning at week's end as thunderstorm activity during the hot yet mainly dry week in northwestern regions has created the worst picture in many weeks.

QUÉBEC

Precipitation was light but showers and thundershowers touched all regions. Funnel clouds were sighted in the Saint-Lawrence south of Baie-Comeau. Hail was reported in the Sherbrooke region on the 13th; precipitation of more than 40 mm on the same day at Sherbrooke and at Vald'or pushed the weekly accumulations to 61.7 mm and 51.4 mm respectively.

The airmass cooled in the northeast of the province resulting in below normal mean temperatures. Mean temperatures over most of the province were more than 3° above normal. The mercury reached 34° at Maniwaki.

ATLANTIC PROVINCES

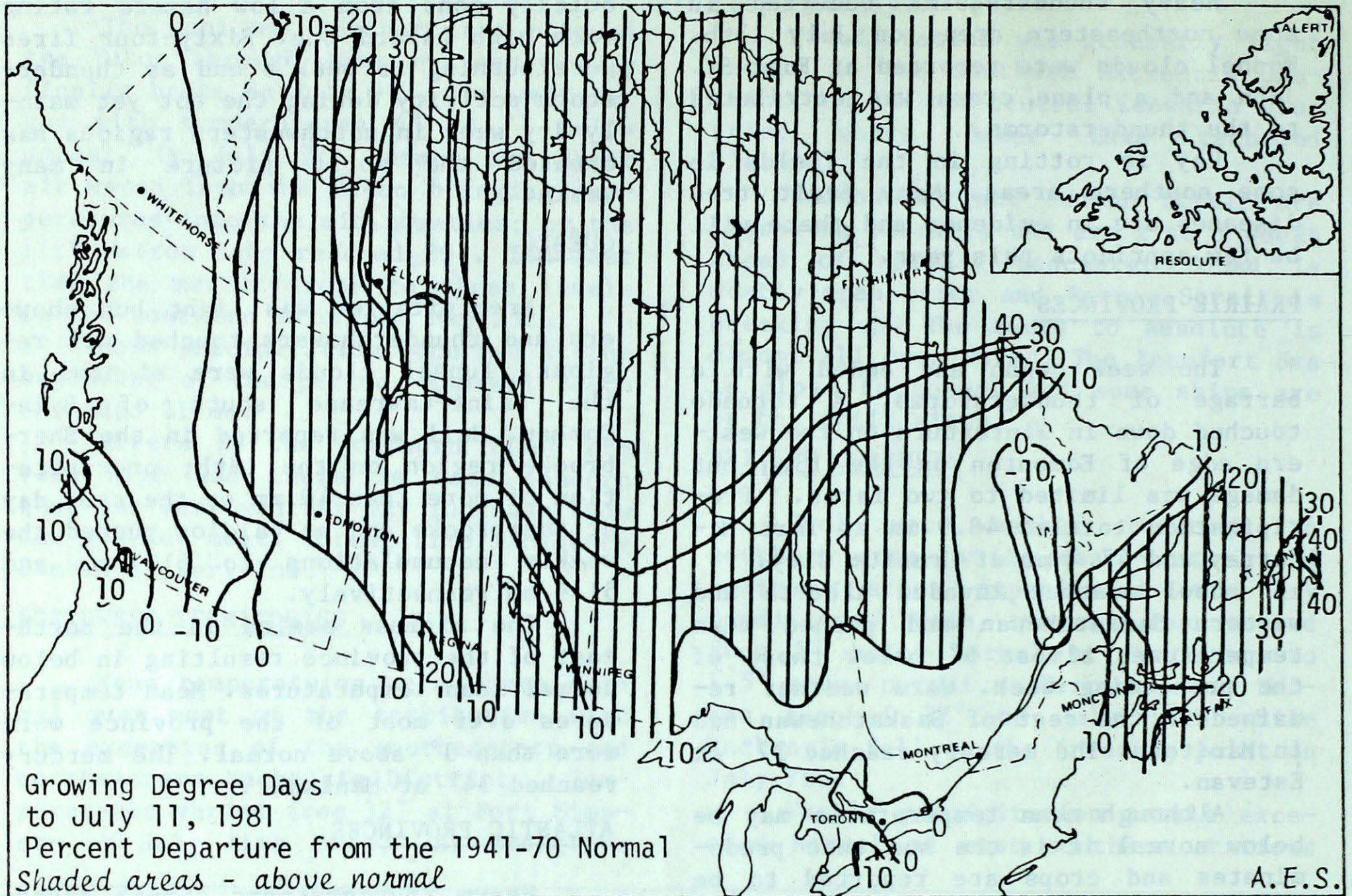
Heavy thunderstorms struck southeastern New Brunswick on July 8th and there were unconfirmed reports of Tornadoes. Most damage was limited to a wooded area which was cleared by the storms. Precipitation was light over most of the Maritimes but weekly totals were much above normal in southern Newfoundland. Argentia reported 79 mm.

Mean temperatures were below normal over most of Newfoundland. The mercury fell to 3° at Hopedale and Cartwright on July 9th and 13th respectively. The airmass over most of the Maritimes remained warm and Fredricton reached 33° on July 8th.

Newfoundland is starting its first hay cut but the cool wet weather has forced farmers to wait for drier conditions.

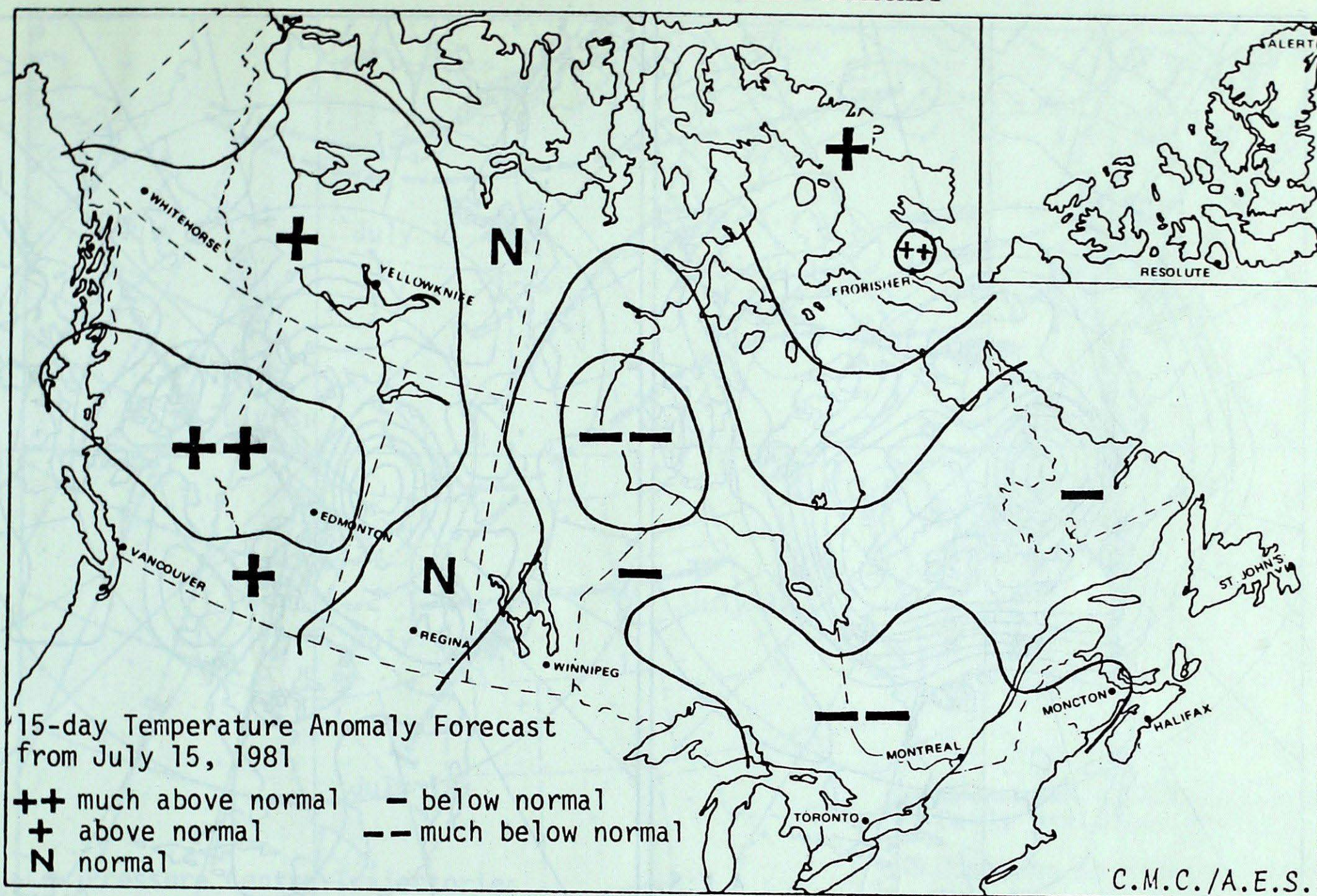


GROWING DEGREE-DAY SUMMARY TO JULY 11, 1981



CITY	MONTHLY CUMULATIVE TOTAL	MONTHLY DIFF. FROM 1941-70 NORMAL	SEASONAL TOTAL	SEASONAL DIFF. FROM 1941-70 NORMAL	SEASONAL PERCENT OF NORMAL
Whitehorse	72.0	-26.0	368.5	-14.5	96
Penticton	141.0	-11.0	827.0	-82.0	91
Vancouver	118.0	-14.0	863.0	33.0	104
Edmonton	136.0	14.0	735.0	162.0	128
Calgary	113.0	-4.0	557.0	41.0	108
Regina	188.5	41.5	793.5	140.5	122
Saskatoon	161.0	16.0	757.5	105.5	116
Winnipeg	194.0	34.0	755.0	51.0	107
Thunder Bay	161.0	31.0	562.5	46.5	109
Windsor	214.0	27.0	1124.5	91.5	109
Toronto	194.0	31.0	793.5	-56.5	93
Ottawa	204.5	37.5	866.5	30.5	104
Montreal	202.5	30.5	871.5	17.5	102
Quebec	183.5	35.5	717.5	43.5	106
Fredericton	191.0	47.0	757.5	92.5	114
Halifax	159.5	21.5	588.0	36.0	107
Charlottetown	151.0	10.0	636.0	125.0	124
St John's	102.0	-3.0	425.0	127.0	143

15 DAY TEMPERATURE ANOMALY FORECAST

Forecast Method

Analogue technique based on point prediction at 70 Canadian stations.

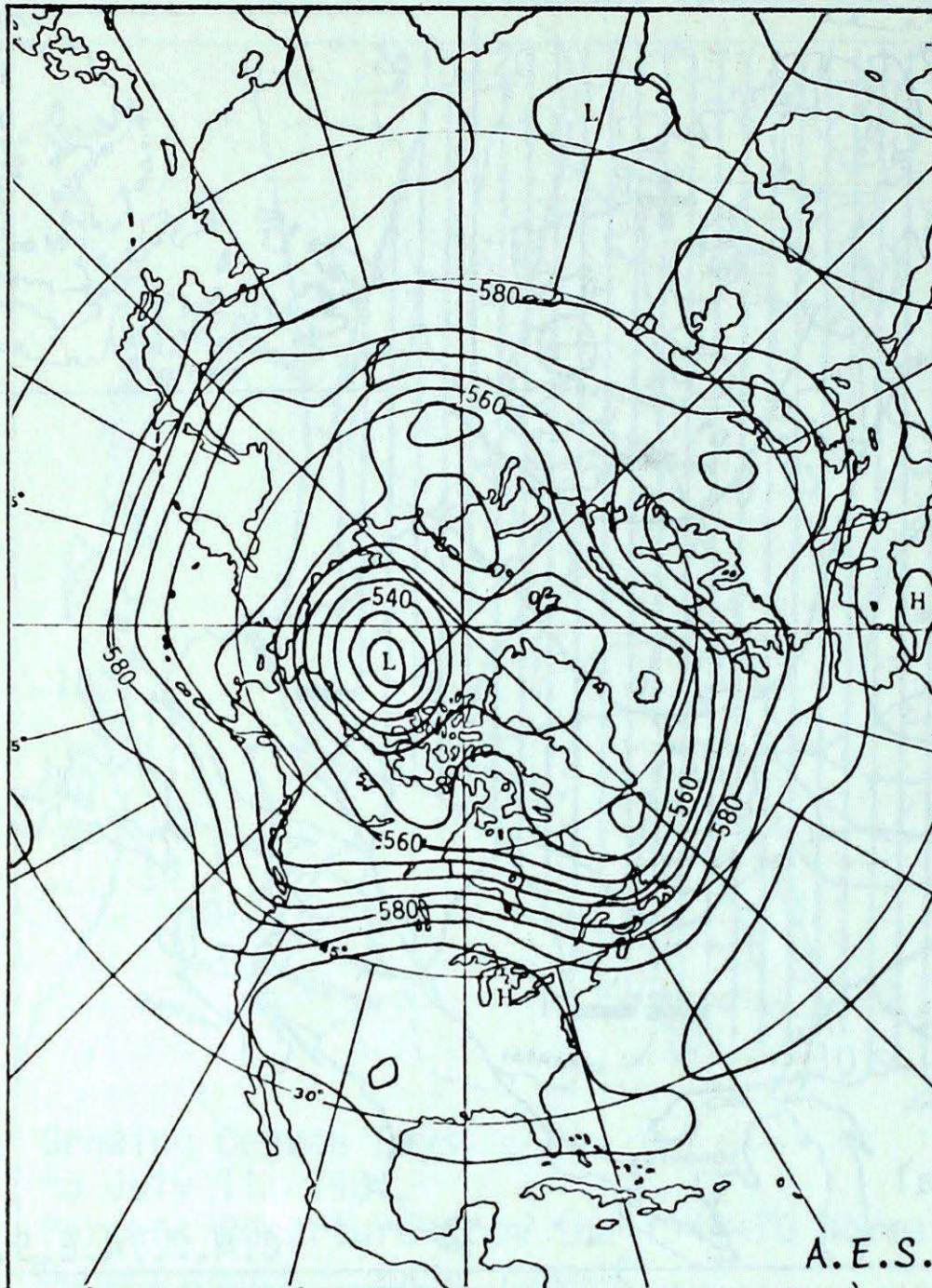
Temperature Scale

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

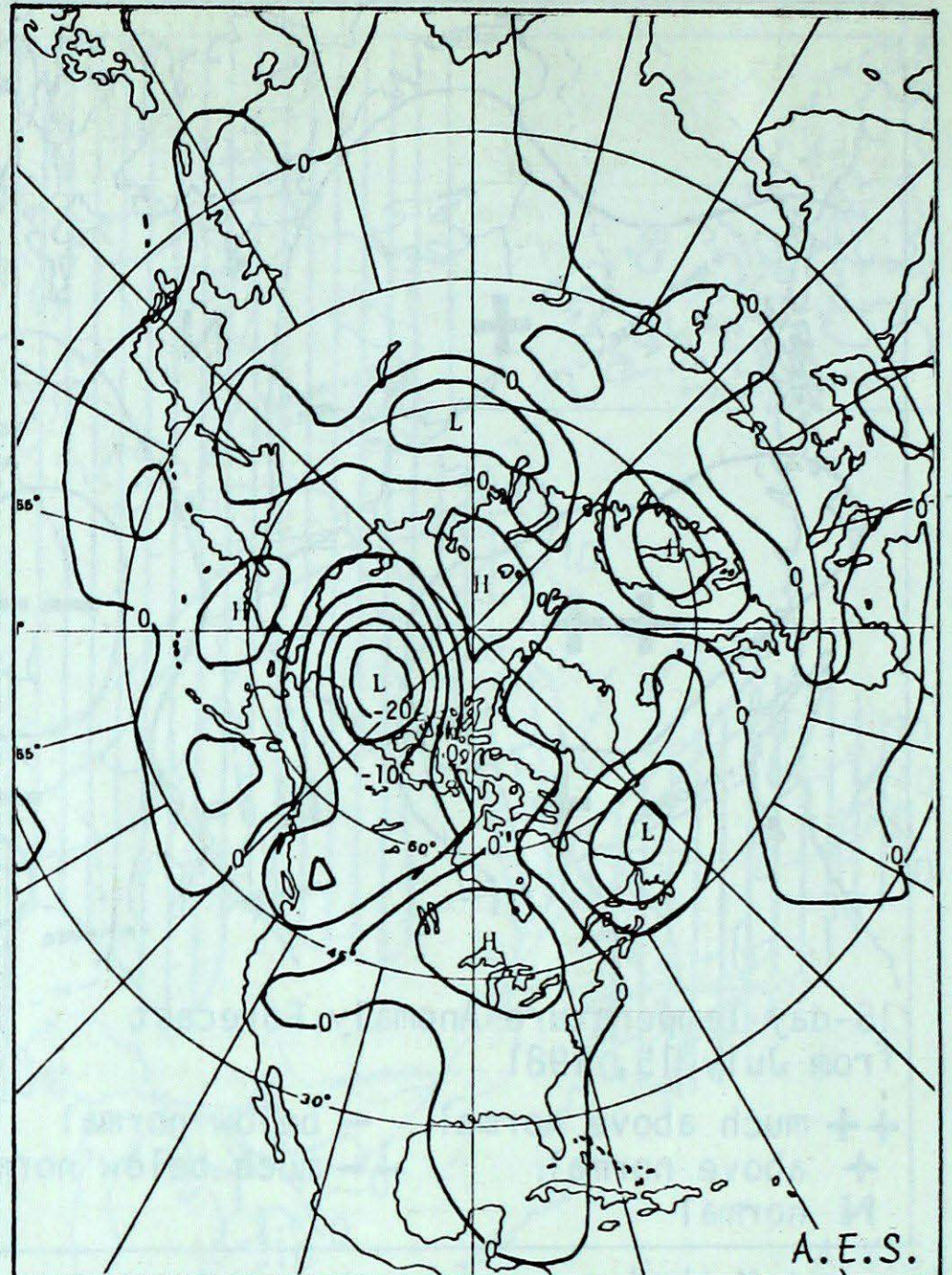
<u>Station</u>	<u>Current Temperature Anomaly Forecast</u>	
Whitehorse	Above Normal	From 0.4° to 1.4° above Normal
Victoria	Above Normal	From 0.3° to 1.0° above Normal
Vancouver	Near Normal	Within 0.3° Normal
Edmonton	Much Above Normal	More than 1.4° above Normal
Regina	Near Normal	Within 0.4° of Normal
Winnipeg	Below Normal	From 0.4° to 1.5° below Normal
Thunder Bay	Below Normal	From 0.4° to 1.2° below Normal
Toronto	Much Below Normal	More than 1.4° below Normal
Ottawa	Much Below Normal	More than 1.4° below Normal
Montreal	Below Normal	From 0.4° to 1.3° below Normal
Quebec	Much Below Normal	More than 1.3° below Normal
Fredericton	Much Below Normal	More than 1.3° below Normal
Halifax	Below Normal	From 0.3° to 1.0° below Normal
Charlottetown	Below Normal	From 0.4° to 1.2° below Normal
St. John's	Below Normal	From 0.5° to 1.6° below Normal
Goose Bay	Below Normal	From 0.5° to 1.5° below Normal
Frobisher Bay	Much Above Normal	More than 1.2° above 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(in dam)
July 6 to 12, 1981



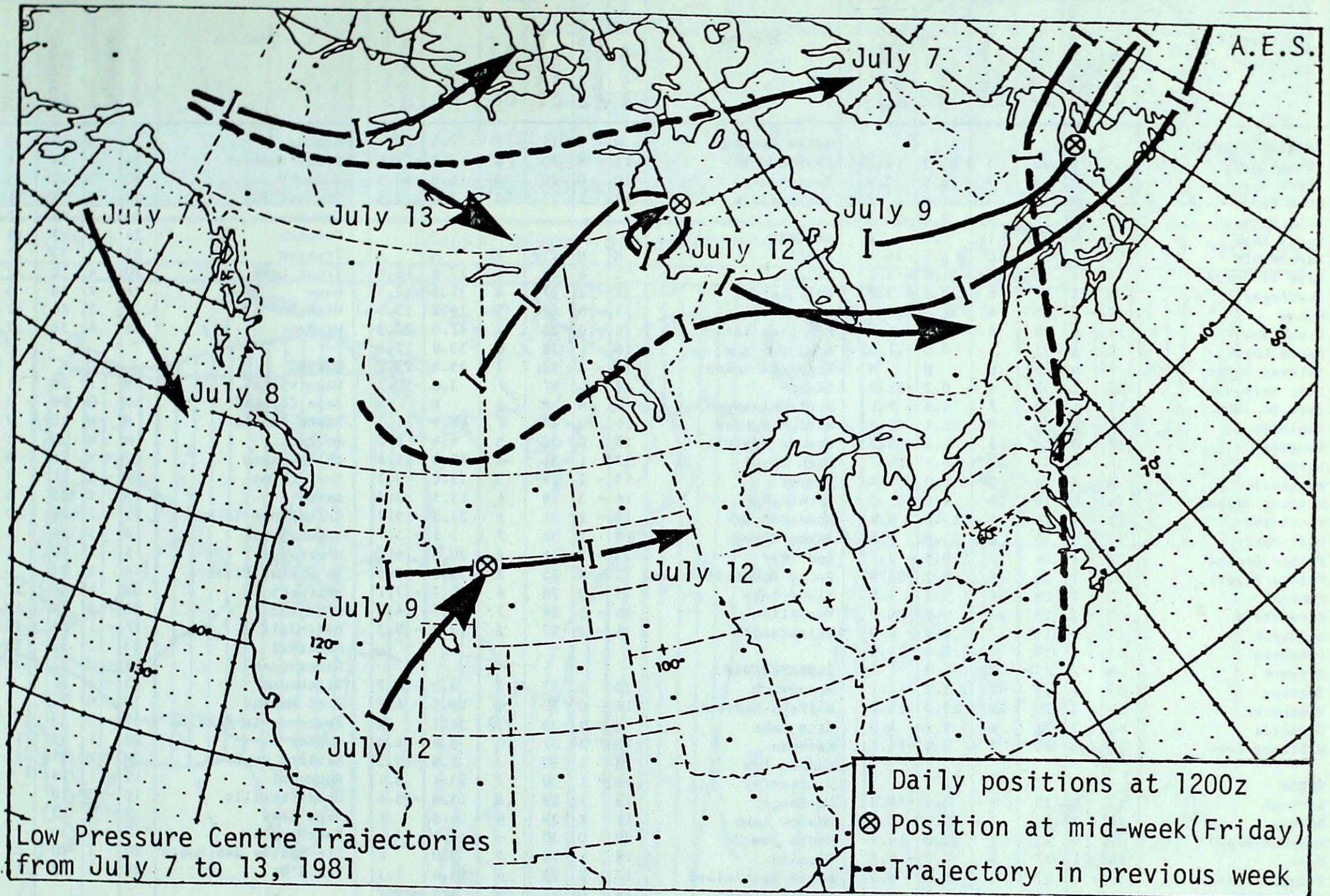
7-day Mean 50 kPa Height Anomaly
(in 5 dam intervals) July 6 to 12, 1981

A warm upper ridge was the predominant feature over central North America controlling the weather pattern across Canada. The surface storm track was displaced well north of its position of just a few weeks ago and as a result very warm air continued to infiltrate northward. At the surface, frontal waves and their associated low pressure areas weakened as they approached the upper ridge position, or were deflected northeastwards across the prairies and Hudson Bay. Rainfall amounts varied widely; a common characteristic of the showery nature of summer precipitation.

Two mean upper troughs plagued both the west and east coasts; 50 KPa heights were well below normal. The southern half of British Columbia and Alberta endured cool unsettled weather conditions. Severe thunderstorm activity and tornados were reported in many areas of Alberta and British Columbia.

The Atlantic provinces reverted back to the rapidly changing weather pattern of previous weeks. A series of low pressure systems approached from Hudson Bay and increased in strength as they phased with the mean upper trough. With the exception of Western Newfoundland and the Labrador coast, overall precipitation amounts were light. Heavy thunderstorms with hail and high winds were reported by some Maritime communities.

LOW PRESSURE CENTRE TRAJECTORIES



CLIMATIC PERSPECTIVES

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TEMPERATURE AND PRECIPITATION DATA FOR THE WEEK ENDING 0600 G.M.T. JULY 14, 1981

Station	Temperature (°C)				Precip. (mm)		Station	Temperature (°C)				Precip. (mm)		Station	Temperature (°C)				Precip. (mm)	
	Average	Departure from Normal	Extreme Maximum	Extreme Minimum	Total	Departure from Normal		Average	Departure from Normal	Extreme Maximum	Extreme Minimum	Total	Departure from Normal		Average	Departure from Normal	Extreme Maximum	Extreme Minimum	Total	Departure from Normal
BRITISH COLUMBIA							Sachs Harbour	4	-2	11	-1	7.3	2.7	Simcoe	24	3	32	13	M	M
Abbotsford	15	-2	22	7	25.5	18.3	Shepherd Bay	13	5	20	4	1.8	-1.6	Sioux Lookout	24	5	33	14	0.0	-18.1
Alert Bay	13	-1	19	7	18.6	0.3	Tuktoyaktuk	10	0	20	4	18.9	14.5	Sudbury	23	5	32	15	4.6	-16.4
Blue River	M	X	20P	4P	M	X	Yellowknife	17	1	27	10	3.6	-2.5	Thunder Bay	22	5	32	11	0.3	-16.2
Bull Harbour	13	0	17	8	9.8	-11.0	ALBERTA							Timmins	23	5	35	12	25.3	6.2
Burns Lake	M	X	27P	1P	0.6	X	Banff	M	M	21P	1P	M	M	Toronto	24	4	33	13	0.0	-15.3
Cape Scott	13	1	17	10	5.5	-26.1	Calgary	13	-4	25	4	27.6	16.5	Trenton	25	5	33	17	0.0	-10.8
Cape St James	14	1	19	9	11.0	-5.2	Cold Lake	17	-1	27	8	31.5	17.7	Trout Lake	20	4	32	12	29.4	7.2
Castlegar	15	-5	26	6	22.9	3.2	Coronation	15	-3	28	5	26.2	13.5	Wawa	16	X	26	6	0.2	X
Comox	15	-2	25	8	37.6	30.7	Edmonton Intl	14	-3	26	4	41.0	20.3	Warton	21	2	28	12	0.0	-10.9
Cranbrook	14	-4	28	6	15.7	6.7	Edmonton Mun	16	-1	28	8	33.8	17.8	Windsor	26	4	34	17	28.4	9.8
Dease Lake	12	-1	25	4	0.0	-11.4	Edmonton Namao	15	-2	27	7	35.8	23.2	QUÉBEC						
Estevan Point	M	M	15P	8	M	M	Edson	13	-1	27	1	3.6	-30.2	Bagotville	19	1	28	11	19.4	-4.2
Fort Nelson	18	1	32	4	0.2	-21.9	Fort Chipewyan	M	M	M	6	M	M	Baie Comeau	16	0	24	8	11.6	-2.1
Fort St John	17	1	30	7	4.8	-9.1	Fort McMurray	16	0	29	7	48.9	31.3	Blanc Sablon	M	M	15P	7	37.2	24.0
Kamloops	17	-4	30	8	16.1	12.5	Grande Prairie	16	0	30	5	6.6	-6.2	Border	M	M	M	3	M	M
Langara	12	0	16	9	5.4	-13.2	High Level	17	1	31	4	39.3	21.8	Chibougamau	17	X	26	9	19.9	X
Lytton	16	-4	31	7	16.9	14.7	Jasper	13	-2	28	3	13.6	3.2	Fort Chimo	9	-3	21	2	2.4	-9.7
Mackenzie	M	X	28	0P	0.0	X	Lethbridge	16	-3	28	4	15.5	3.3	Gaspé	15	X	25	5	15.5	X
McInnes Island	14	0	19	10	4.0	-21.5	Medicine Hat	19	-2	31	8	24.2	15.7	Grindstone Island	15	-1	20	10	16.0	1.6
Penticton	15	-5	26	5	12.8	9.9	Peace River	18	-1	32	7	1.5	-5.7	Inoucdjouac	8	0	23	1	0.0	-14.3
Port Hardy	13	-1	18	8	25.8	9.7	Red Deer	13	-3	25	2	20.8	6.7	Koartak	5	X	14	1	3.0	X
Prince George	14	-1	26	2	10.8	-2.7	Rocky Mountain House	12	-4	25	2	30.0	10.9	La Grande Rivière	14	X	24	6	27.2	X
Prince Rupert	13	1	20	6	2.2	-32.8	Slave Lake	15	0	28	6	23.7	-7.1	Maniwaki	22	4	34	12	6.8	-15.6
Quesnel	15	-2	28	4	3.2	-9.8	Vermilion	16	-1	28	7	16.7	4.5	Matagami	20	X	28	10	5.3	X
Revelstoke	15	-2	28	7	0.0	-20.7	Whitecourt	14	-1	27	2	13.2	-9.3	Mont-Joli	17	-1	26	10	5.8	-8.9
Sandspit	14	0	19	7	2.8	-8.0	SASKATCHEWAN							Montréal	23	2	32	15	6.2	-14.8
Smithers	15	0	29	3	0.0	-11.9	Broadview	20	2	35	7	0.2	-10.7	Natashquan	14	-0	23	6	3.4	-15.1
Stewart	M	X	27P	8P	M	X	Buffalo Narrows	17	0	30	9	19.7	-4.9	Nitchecon	13	-1	21	7	11.1	-9.1
Terrace	17	1	29	7	3.2	-11.1	Cree Lake	M	X	29	5P	36.7	X	Port Menier	M	M	22P	5	M	M
Vancouver	15	-3	20	10	23.0	15.1	Estevan	22	2	37	10	8.6	-4.0	Poste-de-la-Baleine	9	-2	23	1	14.0	-5.8
Victoria	14	-2	21	6	9.1	4.0	Hudson Bay	18	1	30	7	2.8	-10.3	Québec	20	1	33	12	13.0	-13.7
Williams Lake	13	-3	25	5	0.0	-14.1	Kindersley	18	-1	30	7	13.4	6.1	Rivière du Loup	M	M	24P	12	M	M
YUKON							La Ronge	18	1	29	8	13.8	-13.6	Roberval	19	1	29	9	18.8	-12.5
Burwash	13	0	23	1	3.4	-16.2	Meadow Lake	16	X	29	6	14.6	X	Schefferville	10	-3	18	4	6.0	-12.3
Dawson	14	-2	24	1	10.9	2.6	Moose Jaw	20	0	32	9	14.2	-3.2	Sept-Iles	15	0	23	8	13.4	-6.7
Komakuk Beach	7	0	22	1	21.0	14.9	Nipawin	18	X	28	7	2.0	X	Sherbrooke	19	2	30	7	61.7	31.6
Mayo	14	-1	27	3	3.1	-8.9	North Battleford	17	-2	28	7	15.4	1.1	Ste Agathe des Monts	20	3	30	11	9.8	-15.8
Shingle Point	11	-1	22	2	16.7	8.0	Prince Albert	18	0	27	6	4.8	-9.7	Val d'Or	21	3	32	11	51.4	24.6
Watson Lake	14	-1	29	3	9.2	-5.1	Regina	21	2	32	7	38.2	23.3	NEW BRUNSWICK						
Whitehorse	14	0	25	3	9.9	-0.6	Rockglen	M	X	30P	7P	M	X	Charlo	18	0	27	10	5.8	-8.8
NORTHWEST TERRITORIES							Saskatoon	18	0	29	8	9.0	-2.6	Chatham	19	0	28	11	20.2	1.1
Alert	4	1	16	-2	7.8	4.1	Swift Current	17	-1	29	7	28.8	12.3	Fredericton	21	1	33	11	8.9	-16.9
Baker Lake	8	-2	18	4	37.1	30.3	Uranium City	15	-2	29	8	47.7	35.1	Moncton	19	0	29	10	24.5	5.4
Broughton Island	3	-1	8	-3	2.0	-0.5	Wynyard	18	0	31	7	25.4	19.2	Saint Jean	18	2	28	9	20.7	-4.5
Byron Bay	8	-1	15	3	18.9	16.8	Yorkton	19	0	32	7	19.0	-1.8	NOVA SCOTIA						
Cambridge Bay	9	0	15	4	9.5	7.0	MANITOBA							Eddy Point	16	X	24	10	47.2	X
Cape Dorset	10	X	19	1	0.6	X	Bissett	22	3	33	10	2.6	-16.3	Greenwood	20	0	29	10	25.1	9.3
Cape Dyer	6	1	13	0	18.9	7.3	Brandon	21	2	33	5	3.4	-9.3	Sable Island	15	0	19	11	13.0	-8.9
Cape Hooper	5	1	14	-2	17.2	11.5	Churchill	11	-1	21	5	12.7	2.1	Shearwater	19	2	28	12	23.8	7.3
Cape Parry	6	0	14	-1	5.4	1.5	Dauphin	20	1	31	9	2.2	-11.9	Sydney	16	-2	25	8	11.4	-9.0
Cape Young	8	1	14	2	2.5	-1.7	Gillam	17	X	25	11	4.4	X	Truro	18	1	25	10	14.8	-7.2
Clinton Point	9	2	16	4	15.2	6.5	Gimli	22	2	31	11	0.2	-11.9	Yarmouth	17	1	22	12	14.5	-5.8
Clyde	7	2	15	-1	0.6	-6.9	Island Lake	20	X	29	14	31.2	X	PRINCE EDWARD ISLAND						
Contwoyto Lake	M	M	15P	5	17.5	9.4	Lynn Lake	14	-2	25	5	9.2	-11.0	Charlottetown	17	-1	25	9	5.6	-9.4
Coppermine	12	3	21	7	3.9	-1.9	Norway House	20	X	30	9	4.2	X	Summerside	19	0	27	12	5.4	-8.2
Coral Harbour	10	2	19	3	0.0	-9.2	Pilot Mound	21	2	33	6	7.4	-7.3	NEWFOUNDLAND						
Dennar Lakes	9	4	19	1	0.0	-7.2	Portage la Prairie	23	3	35	12	7.0	-11.1	Argentia	13	X	16	9	79.0	X
Ecnadai	M	M	M	M	M	M	The Pas	19	1	29	8	1.2	-14.5	Battle Harbour	M	M	13	4P	11.8	0.6
Eureka	8	2	15	2	1.8	-2.9	Thompson	17	2	26	6	0.4	-22.4	Bonavista	M	M	22	6P	19.4	6.8
Fort Reliance	12	-1	24	6	11.1	3.7	Winnipeg	23	3	33	13	8.9	-8.4	Burgeo	14	1	19	9	34.9	13.0
Fort Simpson	18	1	32	6	25.9	20.0	ONTARIO							Cartwright	9	-5	19	3	26.4	12.9
Fort Smith	16	0	28	3	30.2	17.8	Armstrong	M	M	36	8P	6.6	-12.7	Churchill Falls	11	-4	20	5	1.4	-16.8
Frobisher Bay	10	2	23	2	1.3	-13.8	Atikokan	21	4	32	9	5.6	-14.5	Comfort Cove	14	-3	22	6	21.2	4.0
Gladman Point	11	3	19	3	1.2	-4.0	Earlton	23	6	35	13	10.8	-6.2	Daniel's Harbour	12	-2	16	6	16.8	3.3
Hall Beach	8	2	15	0	0.0	-10.3	Geraldton	21	5	32	8	6.6	-21.6	Deer Lake	M	M	22	4P	4.2	-9.1
Hay River	17	1	28	10	0.0	-14.8	Gore Bay	22	4	31	12	0.0	-11.2	Gander	14	-3	22	7	12.8	-3.7
Inuvik	12	-2	22	2	22.0	13.4	Kapusasing	23	6	34	11	8.3	-10.9	Goose	12	-5	23	5	12.3	-5.2
Jenny Lind Island	7	1	13	3	4.3	2.8	Kenora	23	4	32	13	0.0	-22.0	Hopedale	7	-4	18	3	5.1	-10.4
Long Franklin Point	7	0	14	2	9.1	6.6	Kingston	24	3	32	16	10.2	0.7	Port aux Basques	13	1	19	8	31.6	12.9
Longstaff Bluff	11	5	17	5																