



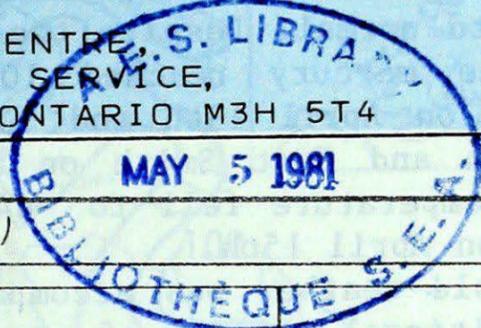
Environment Canada / Environnement Canada

A WEEKLY REVIEW OF CANADIAN CLIMATE

Atmospheric Environment / Environnement atmosphérique

CLIMATIC PERSPECTIVES

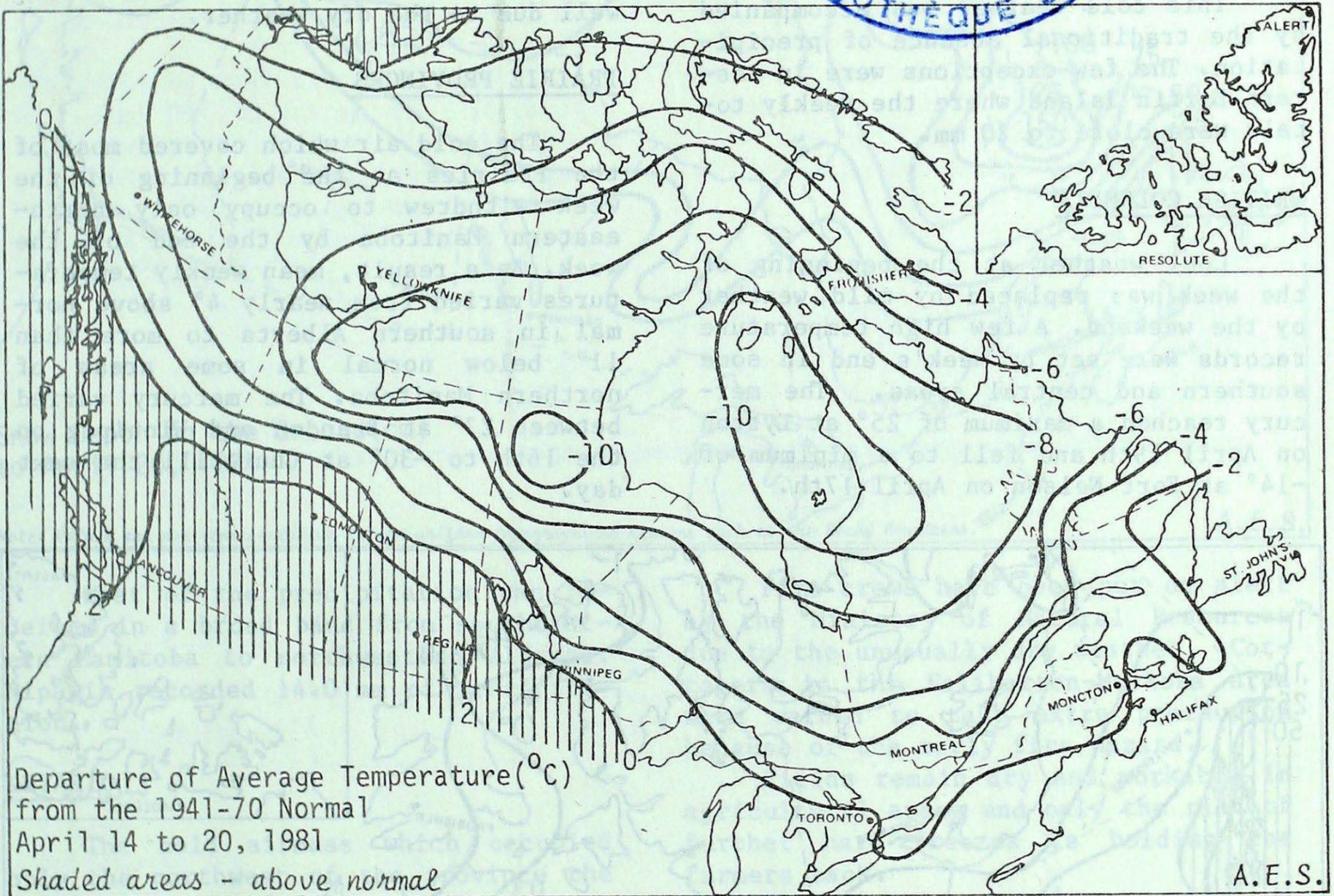
THE CANADIAN CLIMATE CENTRE, S. LIBRARY
 ATMOSPHERIC ENVIRONMENT SERVICE,
 4905 DUFFERIN ST., DOWNSVIEW, ONTARIO M3H 5T4



APRIL 24, 1981

(Aussi disponible en français)

VOL. 3 NO. 16



WEATHER HIGHLIGHTS FOR THE PERIOD - APRIL 14 TO 20 1981

Cold Arctic air covers most of the country

Cold air covered most of the country and held mean temperatures below normal except for an area south of a line from southern Manitoba to north-western British Columbia. Mean temperatures were more than 13° below normal in some areas of western Québec.

The passage of the cold air produced snow in Ontario as far south as Ottawa and in Québec in the area of Lac Saint-Jean.

A vigorous storm traversed the country accompanied by strong winds. Wind gusts of 130 km/h were registered at Nicolet in Québec. Wind damage was reported in Québec and New Brunswick.

The mercury reached a maximum of 27° at Winnipeg and Brandon. The temperature fell to a minimum of -44° at Hall Beach. The highest weekly precipitation total was 112.7 mm as recorded at Prince Rupert.

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

Cold air remained entrenched over the Arctic this week. Only in the western archipelago was the mean temperature close to normal. Despite the cold airmass, the mercury reached 10° at Watson Lake on April 19th and 13° at Fort Simpson and Fort Smith on April 20th. The temperature fell to -44° at Hall Beach on April 15th.

This cold weather was accompanied by the traditional absence of precipitation. The few exceptions were in eastern Baffin Island where the weekly totals were close to 20 mm.

BRITISH COLUMBIA

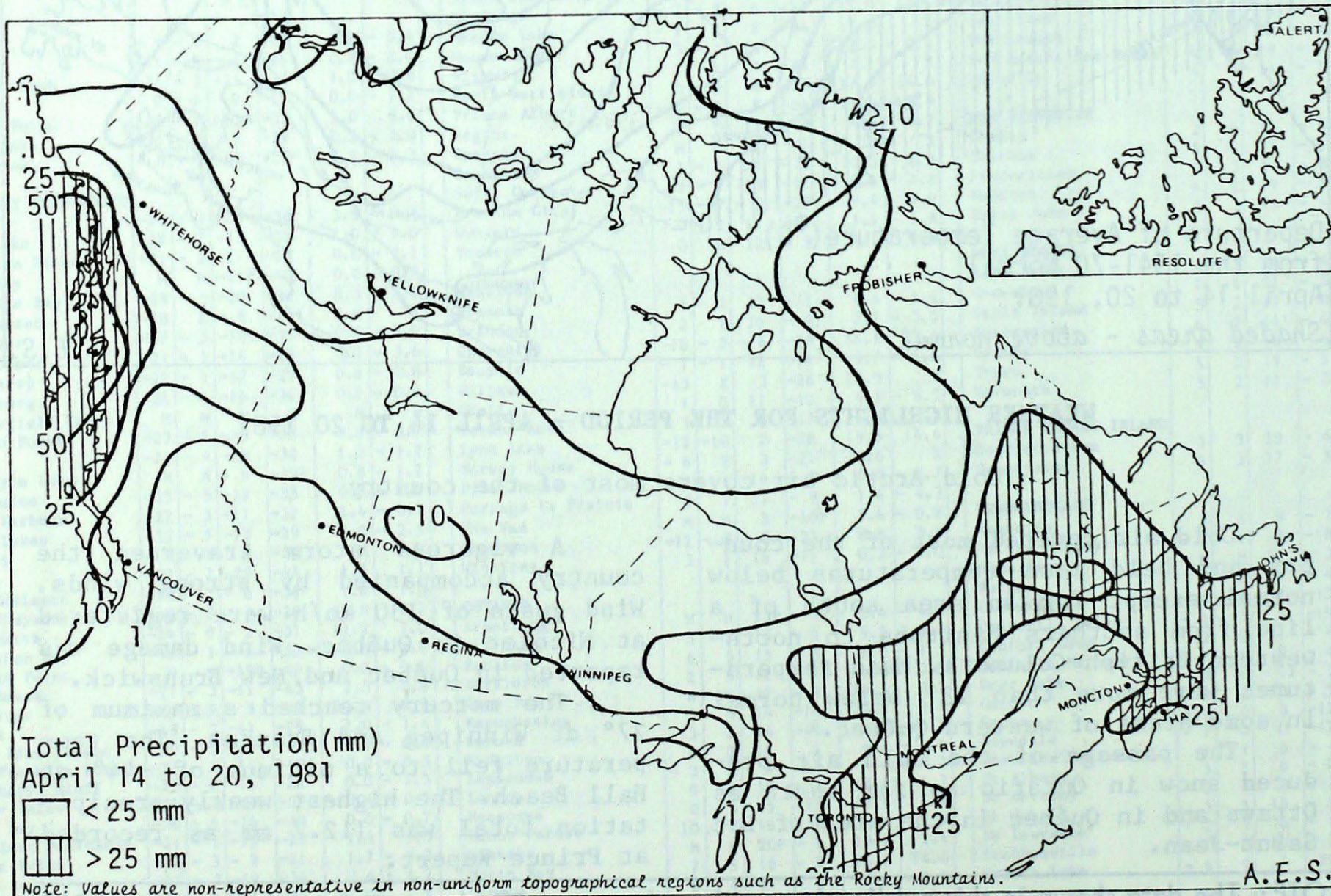
Cool weather at the beginning of the week was replaced by mild weather by the weekend. A few high temperature records were set by week's end in some southern and central areas. The mercury reached a maximum of 25° at Lytton on April 19th and fell to a minimum of -14° at Fort Nelson on April 17th.

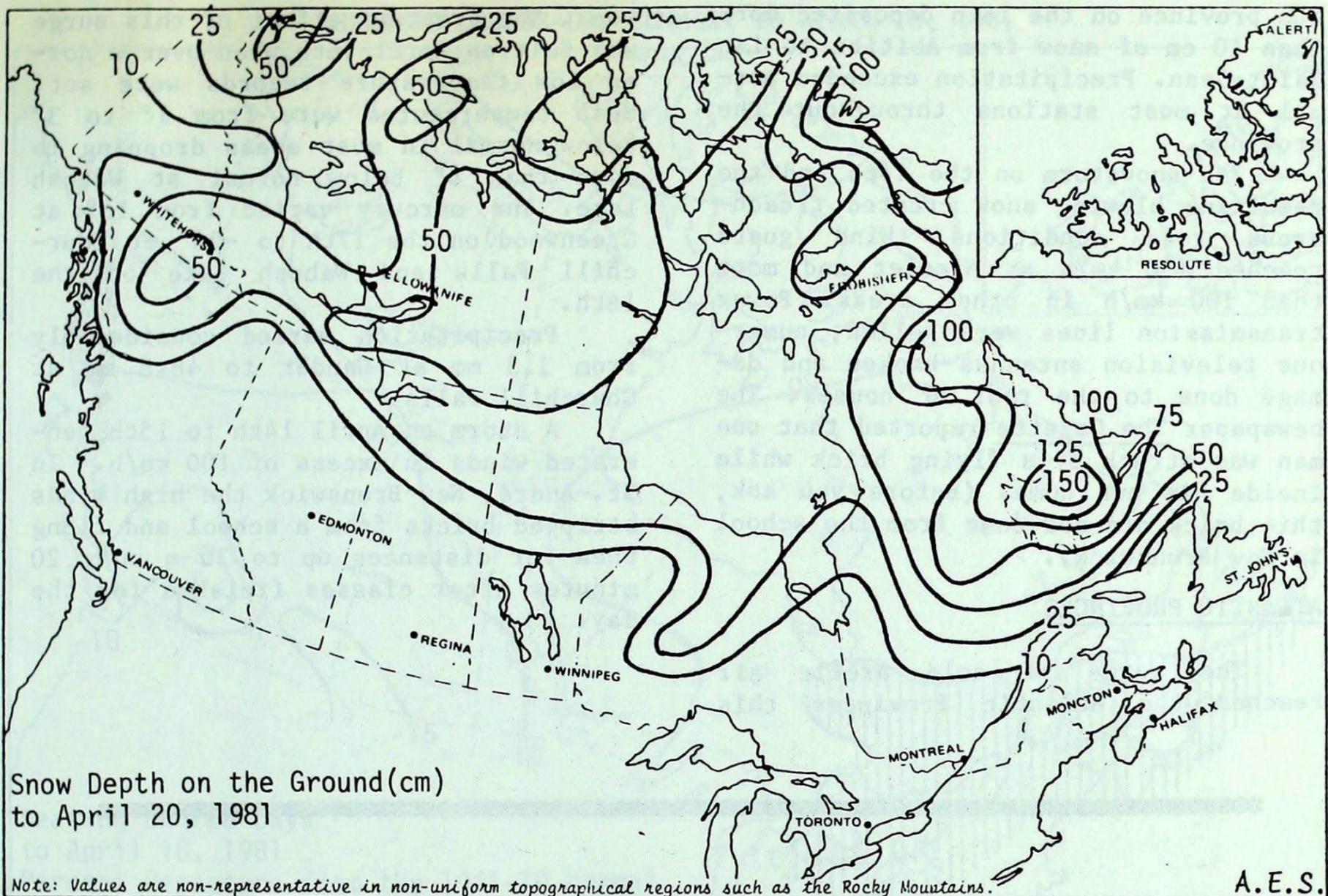
Precipitation was generally below normal with the exception of the north coastal areas and northern British Columbia. Fort Nelson reported 22.6 cm of snowfall from April 14th to 18th but less than 2 cm was left on the ground by week's end. Prince Rupert recorded the highest precipitation total, 112.7 mm.

Forestry operations are underway in southern areas and are progressing well due to the dry weather.

PRAIRIE PROVINCES

The cold air which covered most of the Prairies at the beginning of the week withdrew to occupy only northeastern Manitoba by the end of the week. As a result, mean weekly temperatures varied from nearly 4° above normal in southern Alberta to more than 11° below normal in some areas of northern Manitoba. The mercury varied between 27° at Brandon and Winnipeg on the 16th to -30° at Churchill the next day.





Most of the precipitation was received in a broad band from southeastern Manitoba to northwestern Alberta. Nipawin recorded 14.0 mm of precipitation.

ONTARIO

The cold airmass which occupied only the northwest of the province the previous week moved to occupy the entire province this week. Mean temperatures were below normal throughout the province and a number of minimum temperature records were broken. The mercury varied between 24° at Windsor on the 17th and -23° at Lansdowne House the next day.

This week saw the first significant rainfalls of a dry spring. Up to 30 mm of precipitation was reported in southwestern Ontario. The weekly accumulation reached 46.9 mm at London. Snow produced by the passage of the cold air fell over northern and central areas and as far south as Muskoka and Ottawa.

Fire crews have been put on alert by the Ministry of Natural Resources due to the unusually dry weather. Cottagers in the Haliburton-Muskoka area were warned to take extra precaution because of the early fire hazard.

Fields remain dry and workable in agricultural areas and only the risk of further hard freezes is holding the farmers back.

QUÉBEC

In contrast to the warm weather of the previous two weeks of April, the entire province found itself under the influence of cold weather this week. This cold air set more than 60 low temperature records. Mean temperatures were well below normal; the mercury fell to -29° at Poste-de-la-Baleine on April 18th where the mean weekly temperature was more than 13° below normal. During the course of the same day Montréal reached a maximum of 17°.

The cold air did not arrive without precipitation. A snowstorm crossing

the province on the 14th deposited more than 10 cm of snow from Abitibi to Lac Saint-Jean. Precipitation exceeded normal at most stations throughout the province.

The snowstorm on the 14th and the resulting blowing snow created treacherous road conditions. Wind gusts reached 130 km/h at Nicolet and more than 100 km/h in other areas. Power transmission lines were felled, numerous television antennas broken and damage done to the roof of houses. The newspaper The Gazette reported that one man was struck by a flying brick while inside his own home. (Before you ask, this brick did not come from the school in New Brunswick).

ATLANTIC PROVINCES

The surge of cold arctic air reached the Atlantic Provinces this

week. The greatest effect of this surge was felt on April 16th when over a dozen low temperature records were set. Mean temperatures were from 1° to 3° below normal in most areas dropping to more than 6° below normal at Wabush Lake. The mercury varied from 16° at Greenwood on the 17th to -24° at Churchill Falls and Wabush Lake on the 16th.

Precipitation varied considerably from 1.3 mm at Gander to 48.8 mm at Churchill Falls.

A storm on April 14th to 15th generated winds in excess of 100 km/h. In St.-André, New Brunswick the high winds stripped bricks from a school and flung them for distances up to 30 m only 20 minutes after classes finished for the day.

CLIMATIC PERSPECTIVES

Staff

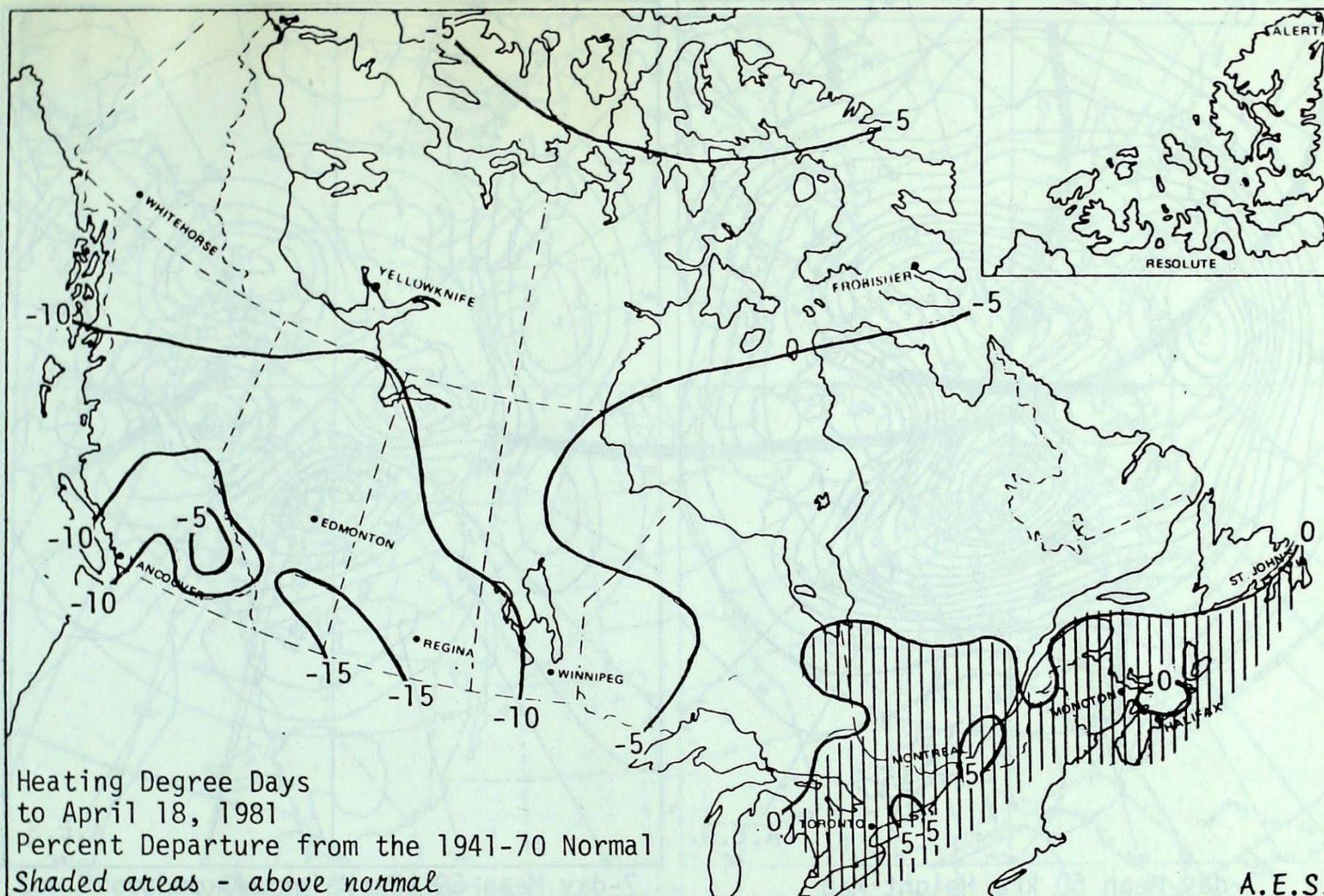
Editor:	Yves Durocher
Assistant Editor:	Bob Paterson
Technical Staff:	Fred Richardson, Andy Radomski
Graphics and Layout:	Bill Johnson, Debbie Allsopp
Word Processing:	Naseem Khaja

Correspondents

Terry Mullane,	(Ice Forecasting Central)
H.E. Wahl,	(Whitehorse)
Bill Prusak,	(Western Region)
Fred Luciw,	(Central Region)
Brian Smith	(Ontario Region)
Jacques Miron,	(Quebec Region)
J.F. Amirault,	(Atlantic Region)
Staff of Prince	George, Kamloops, Castlegar, Fort
	Nelson, Penticton and Kelowna
	weather office (Pacific Region)

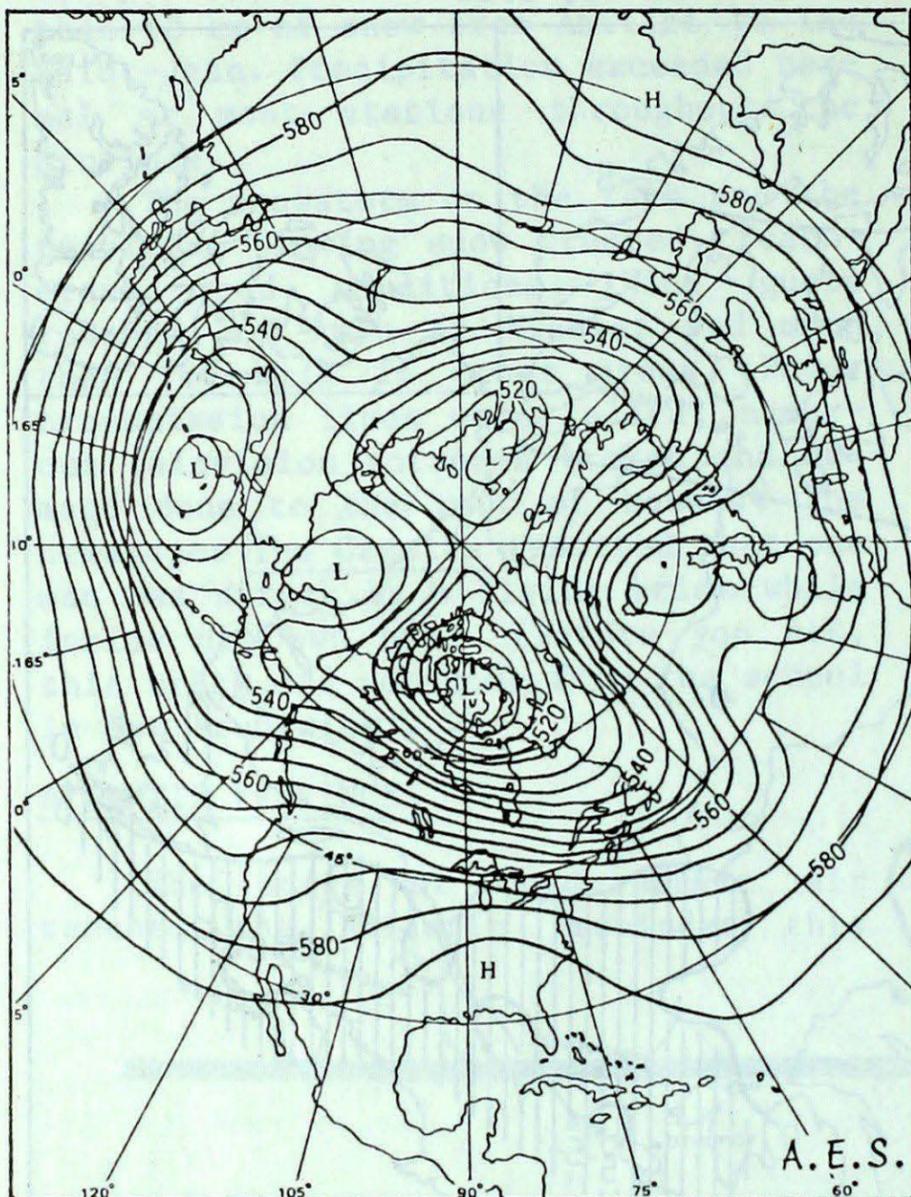
Telephone Inquiries (416) 667-4711/4906

HEATING DEGREE-DAY SUMMARY TO APRIL 18, 1981

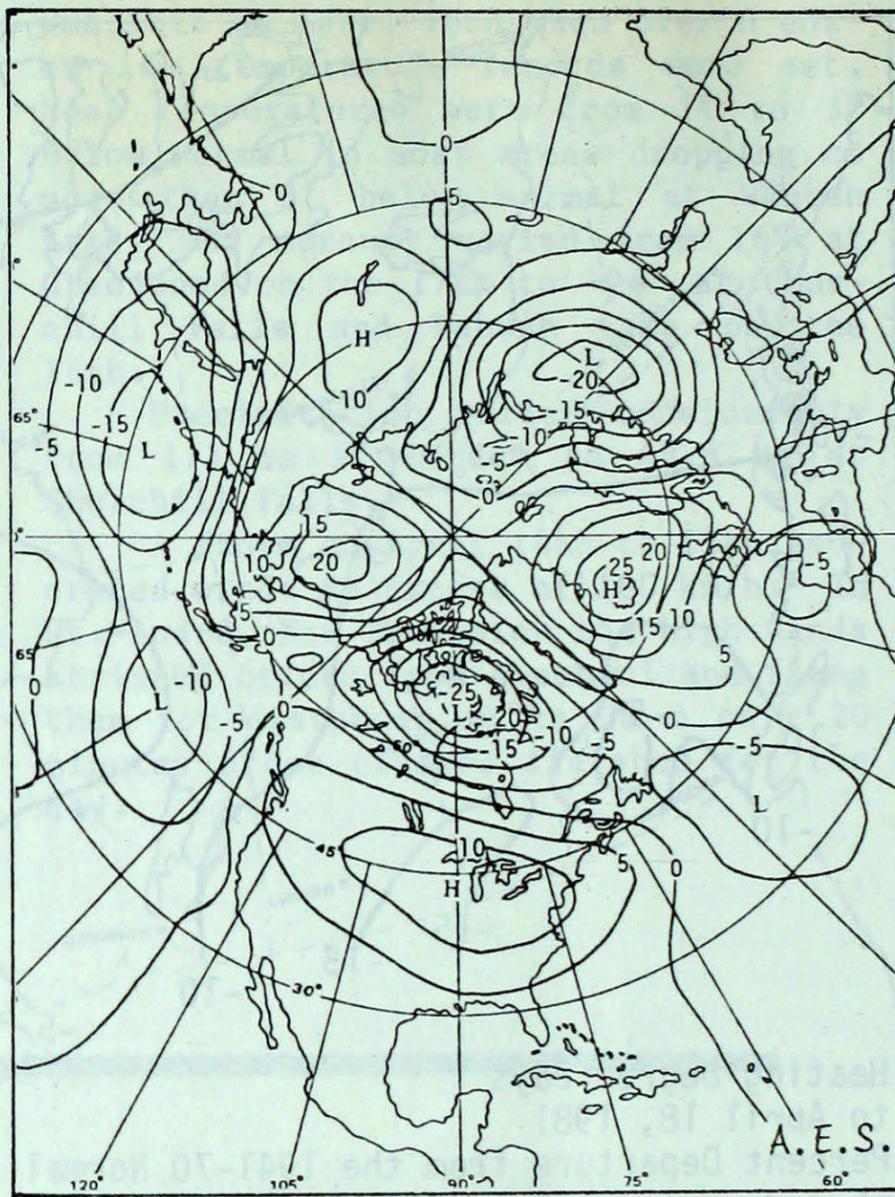


STATION	MONTHLY CUMULATIVE TOTAL	MONTHLY DIFF. FROM 1941-70 NORMAL	SEASONAL TOTAL	SEASONAL DIFF. FROM 1941-70 NORMAL	SEASONAL PERCENT OF NORMAL
Resolute	835.0	59.0	10320.5	-334.5	97
Inuvik	617.5	-6.5	8357.5	-646.5	93
Whitehorse	428.0	73.0	5749.5	-432.5	93
Vancouver	190.0	17.0	2447.5	-201.5	92
Edmonton Mun	276.0	-7.0	4348.5	-771.5	85
Calgary	270.0	-17.0	4037.0	-737.0	85
Regina	249.5	-51.5	4708.0	-741.0	86
Winnipeg	251.5	-50.5	4961.5	-476.5	91
Thunder Bay	256.5	-54.5	4972.0	-184.0	96
Windsor	128.0	-73.0	3387.0	61.0	102
Toronto	159.0	-77.0	3847.0	112.0	103
Ottawa	188.5	-61.5	4398.5	71.5	102
Montreal	197.0	-51.0	4383.5	239.5	106
Quebec	250.0	-45.0	4852.5	226.5	105
Saint John, N.B.	258.5	-28.5	4314.5	124.5	103
Halifax	237.5	-29.5	3737.0	177.0	105
Charlottetown	243.5	-55.5	4097.0	63.0	102
St. John's, Nfld.	291.0	-28.0	4073.0	73.0	102

Atmospheric Circulation



7-day Mean 50 kPa Height Map
(in dam) April 13 to 19, 1981



7-day Mean 50 kPa Height Anomaly
(in 5 dam intervals) April 13 to 19, 1981

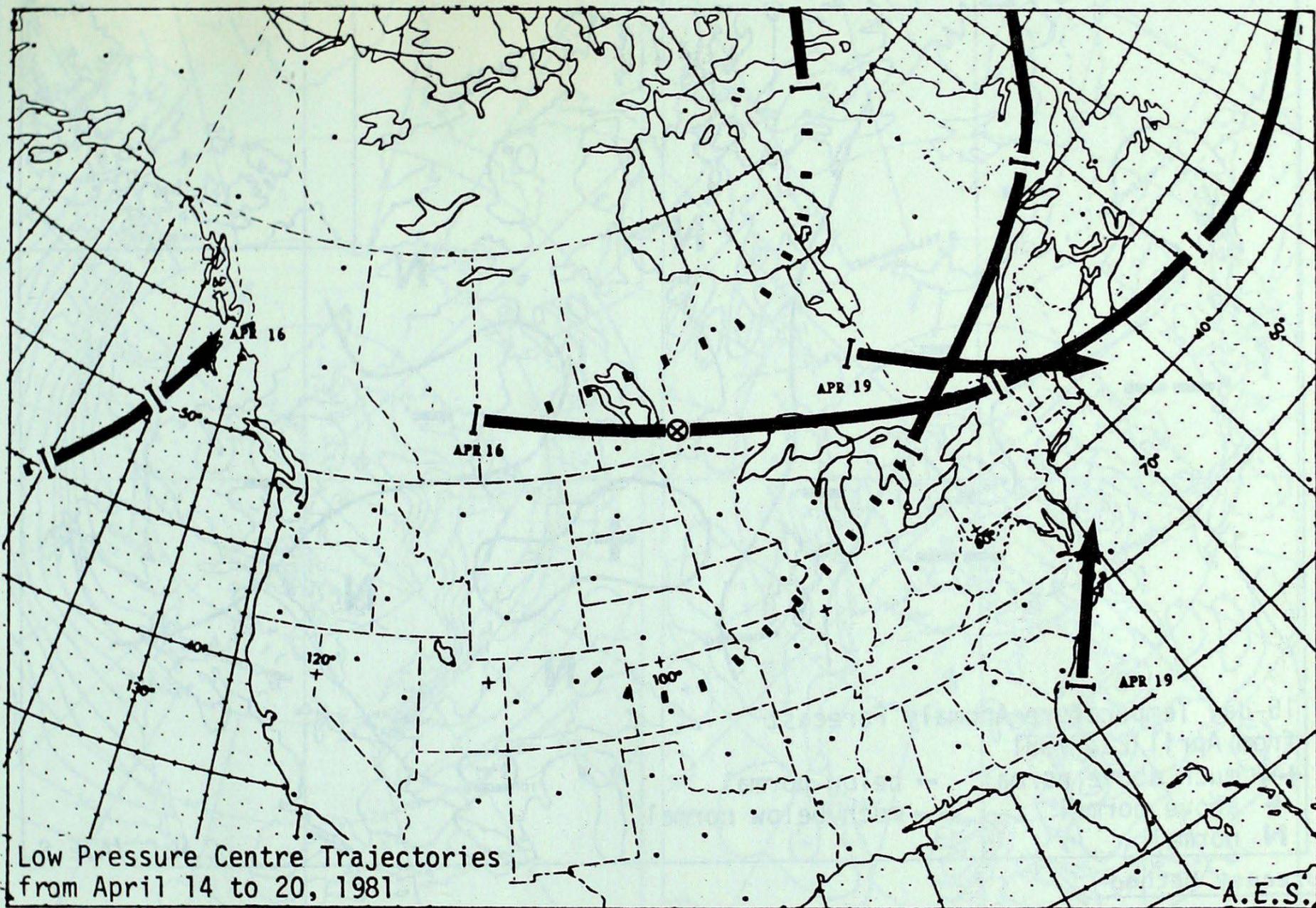
A weak ridge over Western Canada combined with a broad trough off the east coast was the major influence on this week's weather. Warm air moved into the ridge position producing near normal mean heights while cold Arctic air moving into the trough position brought mean heights below normal. Heights were more than 25 dam below normal in northwestern Hudson Bay.

This upper circulation pattern was reflected at the surface. Mean temperatures were above normal south of a line from southeastern Manitoba to northwestern British Columbia and below normal elsewhere. The greatest below normal departures were in east-central Hudson Bay.

The influx of cold air into eastern Canada produced few storms, but the storm mainly associated with the cold air movement was vigorous. This storm started to the lee of the Rocky Mountains as a result of a triggering pulse in the upper flow. Once started it fed on the energy released by the push of cold air. This storm produced most of the precipitation received across the Prairie Provinces, then moved into Ontario and Québec where extensive snowfalls were recorded. It was also responsible for the high winds (in excess of 100 km/h) experienced in Québec and New Brunswick.

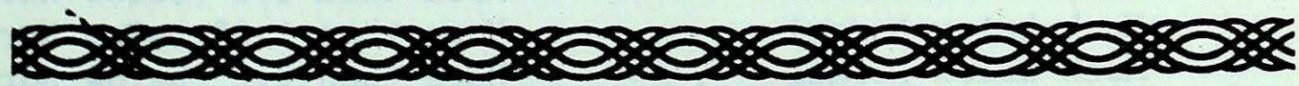
Andy Radomski

LOW PRESSURE CENTRE TRAJECTORIES

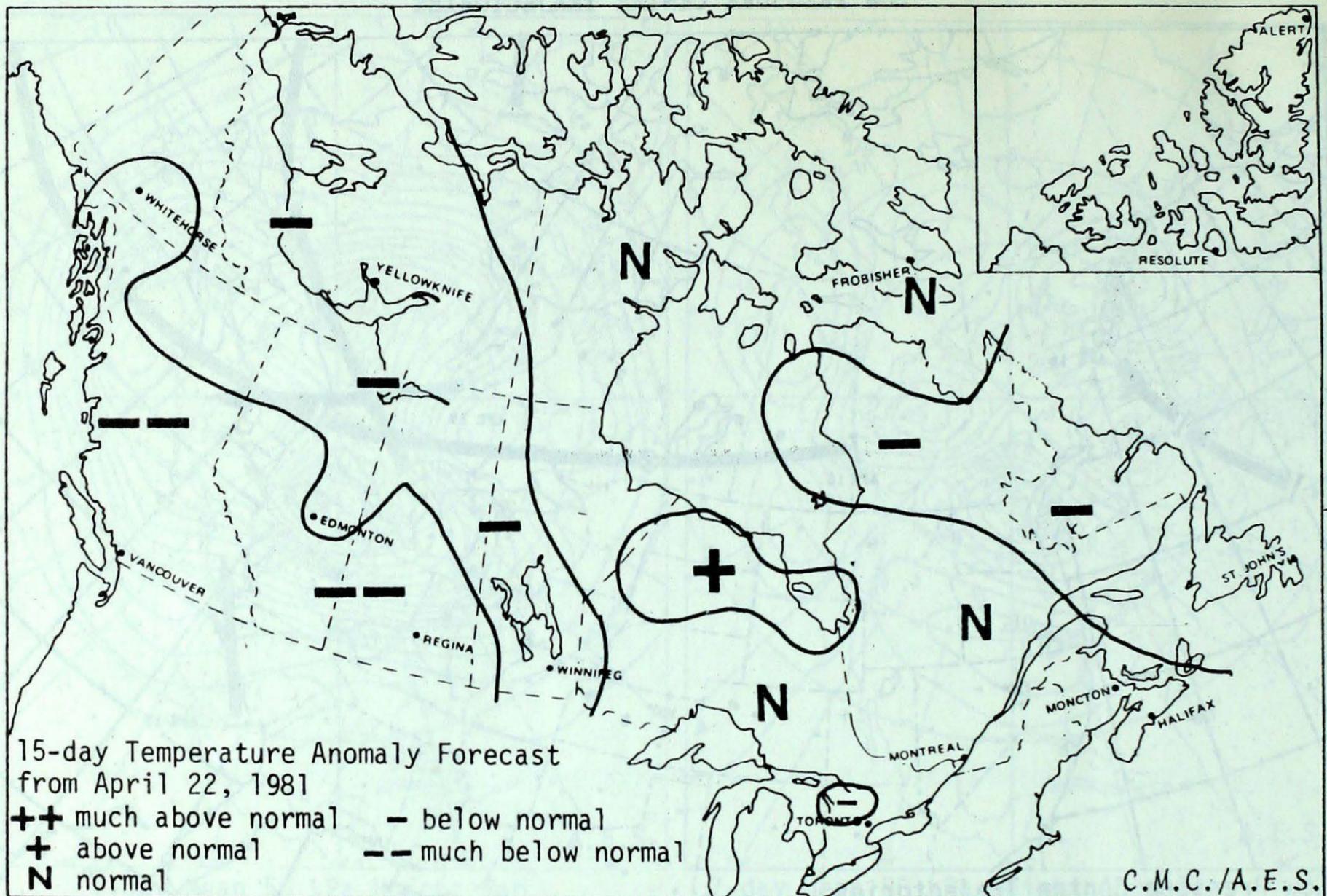


Low Pressure Centre Trajectories
from April 14 to 20, 1981

A.E.S.



15 DAY TEMPERATURE ANOMALY FORECAST

Forecast Method

Analogue technique based on point prediction at 70 Canadian stations.

Temperature Scale

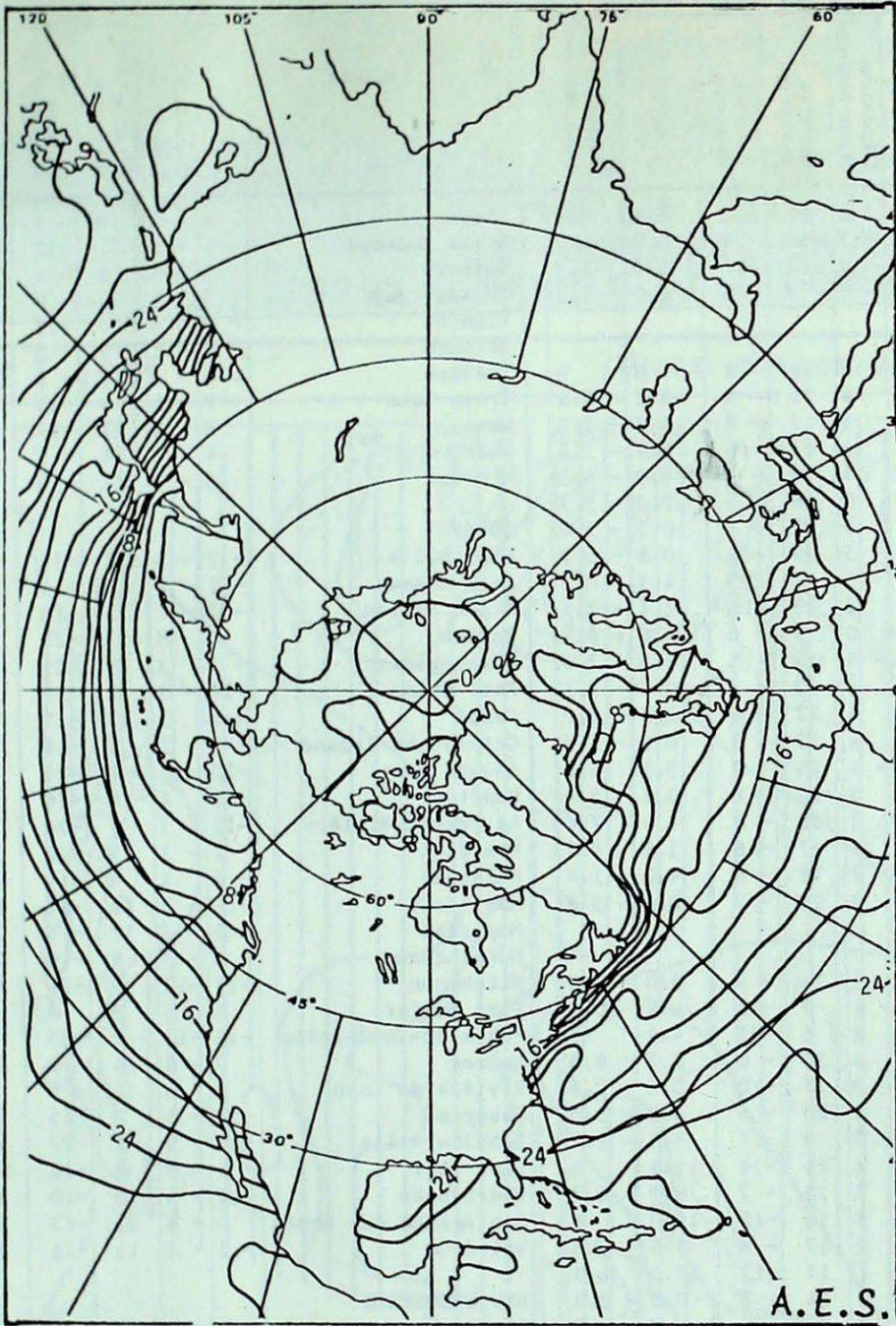
Each temperature class is designed to contain 20% of the historically observed 15 day means pertinent to specific location and time of year:

StationCurrent Temperature Anomaly Forecast

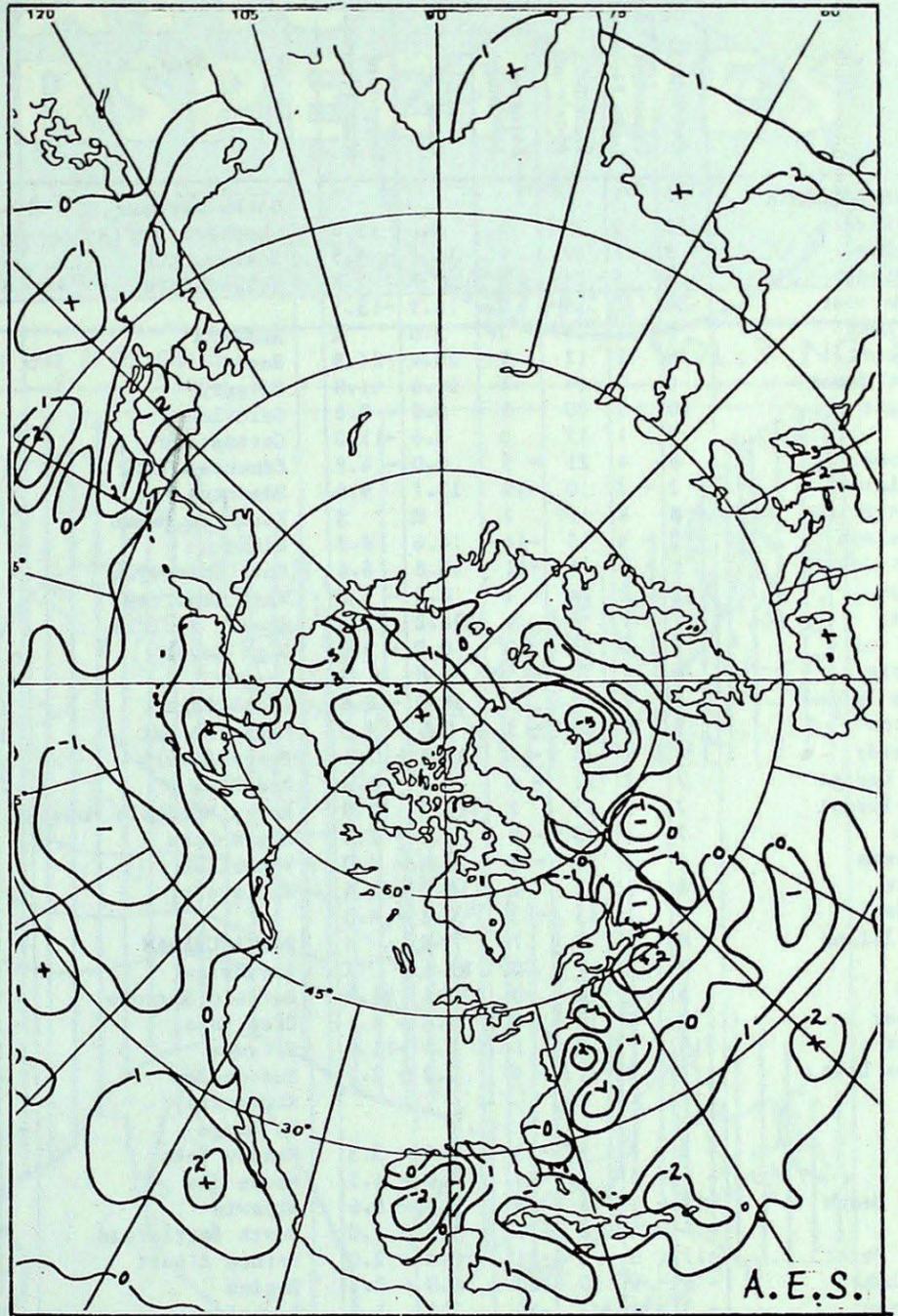
<u>Station</u>	<u>Current Temperature Anomaly Forecast</u>
Whitehorse	Much below Normal More than 1.8° below Normal
Victoria	Much below Normal More than 1.0° below Normal
Vancouver	Much below Normal More than 1.0° below Normal
Edmonton	Much below Normal More than 2.2° below Normal
Regina	Much below Normal More than 2.5° above Normal
Winnipeg	Below Normal From 0.7° to 2.5° below Normal
Thunder Bay	Near Normal Within 0.5° of Normal
Toronto	Near Normal Within 0.6° of Normal
Ottawa	Near Normal Within 0.6° of Normal
Montreal	Near Normal Within 0.5° of Normal
Quebec	Near Normal Within 0.4° of Normal
Fredericton	Near Normal Within 0.4° of Normal
Halifax	Near Normal Within 0.4° of Normal
Charlottetown	Near Normal Within 0.5° of Normal
St. John's	Below Normal From 0.4° to 1.4° below Normal
Goose Bay	Below Normal From 0.6° to 2.0° below Normal
Frobisher Bay	Near Normal Within 0.9° of Normal
Inuvik	Below Normal From 1.0° to 3.2° below Normal

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

SEA SURFACE TEMPERATURE



Mean Sea Temperature
for mid-March to mid-April



Sea Surface Temperature Anomalies
for mid-March to mid-April



TEMPERATURE AND PRECIPITATION DATA FOR THE WEEK ENDING 0600 G.M.T. APRIL 21, 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	-19	0	-10	-29	1.6	0.9	Simcoe	6	-2	18	-4	36.4	9.9
Abbotsford	11	2	22	1	7.0	-15.4	Shepherd Bay	-27	-5	-19	-35	0.0	-2.8	Sioux Lookout	1	-1	21	-12	4.6	-8.1
Alert Bay	8	1	17	1	16.1	-6.5	Tuktoyaktuk	-16	2	-2	-27	3.0	1.9	Sudbury	1	-4	16	-11	24.0	9.7
Blue River	M	X	21P	-4	M	X	Yellowknife	-15	-8	3	-30	0.0	-2.2	Thunder Bay	3	0	20	-8	0.6	-11.4
Bull Harbour	8	1	16	0	16.9	-13.5	ALBERTA							Timmins	-4	-6	16	-18	35.1	22.0
Burns Lake	M	X	14P	-2P	2.0	X	Banff	M	M	16P	-8	M	M	Toronto	6	-1	19	-5	27.6	11.8
Cape Scott	8	2	12	4	26.4	-21.8	Calgary	8	4	21	-6	0.2	-6.6	Trenton	4	-3	13	-5	29.7	12.8
Cape St James	8	2	14	4	63.6	41.8	Cold Lake	4	1	17	-8	5.2	-1.2	Trout Lake	-9	-5	9	-23	1.5	-6.0
Castlegar	10	3	20	-3	0.0	-9.6	Coronation	7	4	21	-6	0.0	-5.3	Wawa	M	X	12P	-19P	11.5	X
Comox	9	1	17	0	3.6	-11.0	Edmonton Intl	7	4	19	-5	0.0	-4.5	Warton	4	-2	14	-5	12.7	-2.8
Cranbrook	8	4	21	-5	0.0	-4.8	Edmonton Mun	8	3	18	-3	0.0	-5.7	Windsor	8	-1	24	-3	7.9	-10.0
Dease Lake	-2	-2	10	-10	13.7	9.6	Edmonton Namao	7	3	17	-4	0.3	-2.4	QUÉBEC						
Estevan Point	M	X	11P	2	M	X	Edson	5	3	19	-10	0.8	-5.2	Bagotville	-2	-4	12	-15	16.9	3.3
Fort Nelson	-2	-4	15	-14	14.6	9.8	Fort Chipewyan	-9	-10	13	-25	4.5	0.3	Baie Comeau	-2	-3	8	-14	24.7	7.2
Fort St John	1	-2	14	-11	10.8	4.6	Fort McMurray	0	2	19	-16	1.7	-2.0	Blanc Sablon	-3	-1	5	-15	M	M
Kamloops	11	2	24	-1	0.2	-1.2	Grande Prairie	4	0	19	-6	1.6	-3.3	Border	M	M	-3P	-25	M	X
Langara	7	1	9	4	96.2	71.6	High Level	-5	-9	13	-18	8.4	7.3	Chibougamau	-7	X	9	-21	27.7	M
Lytton	12	3	25	0	0.0	-3.1	Jasper	6	2	20	-5	0.4	-5.1	Fort Chimo	-17	-8	2	-27	10.1	6.5
Mackenzie	M	X	13P	-5P	M	X	Lethbridge	10	4	23	-6	2.8	-5.0	Gaspé	-2	X	11	-12	25.3	X
McInnes Island	8	1	12	4	34.0	-2.8	Medicine Hat	10	4	23	-3	0.0	-7.2	Grindstone Island	-1	-2	6	-11	33.4	18.6
Penticton	9	0	20	-3	0.6	-4.5	Peace River	2	-1	16	-9	3.5	0.6	Inoucdjouac	-20	-10	-8	-27	0.2	-4.3
Port Hardy	8	1	15	-1	19.1	-7.1	Red Deer	7	3	20	-8	0.2	-5.7	Koartak	-19	X	-6	-26	18.6	X
Prince George	7	2	21	-5	0.2	-6.4	Rocky Mountain House	6	3	18	-8	1.4	-7.4	La Grande Rivière	-12	X	1	-24	2.5	X
Prince Rupert	7	2	13	2	112.7	77.9	Slave Lake	3	1	17	-8	2.4	0.2	Maniwaki	2	-3	15	-10	15.8	0.5
Quesnel	7	2	23	-4	2.2	-2.0	Vermillion	5	2	18	-6	4.0	-1.4	Matagami	-6	X	9	-19	26.9	X
Revelstoke	8	2	21	-3	0.8	-4.0	Whitecourt	6	3	19	-7	0.0	-5.8	Mont-Joli	-1	-3	12	-11	13.0	-0.3
Sandspit	8	2	12	2	18.5	-1.6	SASKATCHEWAN							Montréal	3	-3	17	-8	21.8	4.9
Smithers	6	1	15	-3	0.8	-4.0	Broadview	6	3	24	-9	0.0	-8.9	Natashquan	-3	-3	6	-16	40.1	24.5
Spring Island	M	X	M	7	M	X	Buffalo Narrows	-1	-4	9	-13	4.6	0.8	Nithecun	-15	-10	2	-26	47.6	39.2
Stewart	M	X	11	0P	87.6	X	Cree Lake	-7	X	6	-27	4.4	X	Port Menier	M	M	M	M	M	M
Terrace	5	0	12	0	32.6	21.3	Estevan	8	3	25	-8	0.0	-8.3	Poste-de-la-Baleine	-18	-13	-2	-29	3.1	-3.9
Vancouver	9	0	18	1	9.8	-4.1	Hudson Bay	3	0	17	-10	3.4	-2.5	Québec	0	-3	14	-10	40.8	21.4
Victoria	10	1	18	1	1.2	-11.5	Kindersley	7	3	20	-6	0.0	-5.3	Rivière du Loup	M	M	11P	-10	M	M
Williams Lake	7	3	21	-4	0.2	-2.1	La Ronge	-3	-5	9	-17	4.2	-2.2	Roberval	-2	-5	9	-15	19.5	8.8
YUKON							Meadow Lake	3	X	16	-12	11.6	X	Schefferville	-15	-9	2	-27	46.3	38.4
Burwash	-5	-3	9	-23	1.4	-3.5	Moose Jaw	8	3	23	-7	0.0	-6.2	Sept-Iles	-5	-5	5	-16	58.6	45.8
Dawson	-7	-6	7	-24	1.0	-1.1	Nipawin	1	X	16	-12	14.0	X	Sherbrooke	1	-4	13	-10	32.8	15.1
Komakuk Beach	-19	-1	-11	-29	0.0	-0.6	North Battleford	5	2	17	-8	1.6	-2.8	Ste Agathe des Monts	0	-4	11	-13	20.4	6.5
Mayo	-4	-4	8	-16	1.0	-1.0	Prince Albert	3	1	17	-13	10.0	6.1	Val d'Or	-2	-5	11	-16	32.4	22.6
Shingle Point	-17	0	-6	-31	0.0	-2.0	Regina	7	3	24	-8	0.0	-5.3	NEW BRUNSWICK						
Watson Lake	-6	-6	10	-20	6.3	-0.3	Rockglen	M	X	23P	-6	M	X	Charlo	-1	-2	12	-13	6.4	-8.3
Whitehorse	-3	-4	7	-14	3.8	1.3	Saskatoon	6	2	20	-7	1.8	-2.9	Chatham	1	-2	12	-11	6.8	-12.4
NORTHWEST TERRITORIES							Swift Current	8	4	22	-8	0.0	-6.5	Fredericton	3	-2	11	-9	20.1	-0.5
Alert	-23	0	-13	-33	0.0	-1.1	Uranium City	-10	-6	10	-26	1.4	-3.0	Moncton	2	-2	11	-11	13.0	-5.8
Baker Lake	-25	-8	-17	-34	0.0	-2.6	Wynyard	5	3	22	-8	1.6	-1.7	Saint John	1	-2	8	-10	34.4	8.7
Broughton Island	-19	-2	-15	-25	20.4	17.8	Yorkton	4	1	23	-9	1.2	-3.0	NOVA SCOTIA						
Byron Bay	-25	-4	-15	-33	0.0	-1.9	MANITOBA							Eddy Point	1	X	9	-8	35.5	X
Cambridge Bay	-25	-4	-17	-32	0.0	-1.7	Bissett	2	-3	23	-14	6.2	-14.2	Greenwood	3	-2	16	-8	26.5	9.0
Cape Dorset	-22	X	-11	-29	8.4	X	Brandon	5	1	27	-10	0.0	-7.8	Sable Island	3	0	8	-5	34.6	14.0
Cape Dyer	-17	-2	-6	-28	23.2	17.1	Churchill	-19	-9	-9	-30	0.8	-6.2	Shearwater	2	-2	10	-8	13.2	-8.8
Cape Hooper	-20	-3	-15	-23	16.0	13.6	Dauphin	3	-1	20	-13	3.2	-7.0	Sydney	0	-3	10	-10	40.9	17.3
Cape Parry	-18	0	-7	-26	2.9	0.4	Gillam	-16	X	-1	-30	3.0	X	Truro	2	-1	12	-10	22.6	2.9
Cape Young	-22	-3	-14	-32	0.2	-1.0	Gimli	2	-1	24	-12	2.2	-8.3	Yarmouth	3	-2	10	-5	14.6	-5.6
Chesterfield Inlet	M	M	M	M	M	M	Island Lake	M	X	12P	-19	1.2	X	PRINCE EDWARD ISLAND						
Clinton Point	-19	-2	-11	-26	0.0	-2.6	Lynn Lake	-11	-11	5	-29	1.2	-3.6	Charlottetown	1	-2	11	-10	27.1	8.6
Clyde	-19	-1	-11	-29	5.4	4.3	Norway House	-4	X	12	-23	0.2	X	Summerside	2	-1	11	-9	17.1	1.0
Contwoyto Lake	M	M	-13P	-36	0.0	-1.8	Pilot Mound	5	0	26	-11	0.0	-15.6	NEWFOUNDLAND						
Coppermine	-20	-4	-7	-32	0.0	-3.1	Portage la Prairie	5	1	25	-12	0.0	-13.5	Argentia	1	X	11	-7	8.6	X
Coral Harbour	-26	-10	-15	-34	0.0	-2.9	The Pas	-1	-1	11	-14	8.8	1.6	Battle Harbour	-4	-3	2	-14	17.4	4.5
Dewar Lakes	-21	-2	-15	-28	0.4	-0.3	Thompson	-10	-10	3	-28	1.8	-6.8	Bonavista	-1	-1	9	-10	6.0	-8.8
Ennadai	M	M	M	-26	M	M	Winnipeg	5	1	27	-13	0.4	-10.1	Burgeo	0	-2	6	-9	35.0	12.7
Eureka	-28	-2	-15	-40	0.0	-0.4	ONTARIO							Cartwright	M	M	7	-17P	2.7	-7.0
Fort Reliance	-19	-9	-2	-36	0.6	-2.0	Armstrong	M	M	17P	-13	10.4	-2.6	Churchill Falls	-10	-4	3	-24	48.8	37.2
Fort Simpson	-8	-5	13	-22	0.9	-1.2	Atikokan	3	-2	20	-10	0.2	-18.5	Comfort Cove	0	-1	10	-12	2.2	-15.4
Fort Smith	-10	-7	13	-28	2.2	-1.9	Earlton	M	M	16P	-15	19.0	6.8	Daniel's Harbour	0	0	10	-13	23.2	11.2
Frobisher Bay	-17	-4	-4	-29	23.0	16.5	Geraldton	-4	-6	19	-17	3.2	-9.6	Deer Lake	-1	-2	10	-14	19.3	11.7
Gladman Point	-26	-4	-18	-36	0.3	-1.2	Core Bay	3	-2	15	-7	19.6	5.9	Gander	0	-2	9	-11	1.3	-16.3
Hall Beach	-28	-8	-16	-44	0.4	-1.3	Kapuskasung	-5	-7	15	-18	26.0	12.8	Goose	-5	-4	10	-19	17.7	6.4
Hay River	-13	-9	7	-28	0.9	-3.9	Kenora	3	0	20	-12	3.6	-7.0	Hopedale	M	M	3P	-20	M	M
Inuvik	-15	0	4	-35	3.2	-2.6	Kingston	4	-3	12	-5	27.0	16.0	Port aux Basques	0	-2	5	-9	31.7	13.5
Jenny Lind Island	-26	-5	-18	-35	0.0	-0.3	Lansdowne	-9	-8	7	-23	7.2	-2.1	St Albans	1	-1	12	-9	29.4	14.3
L																				