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A WEEKLY REVIEW OF CANADIAN CLIMATE

Atmospheric Environnement

areas continued to

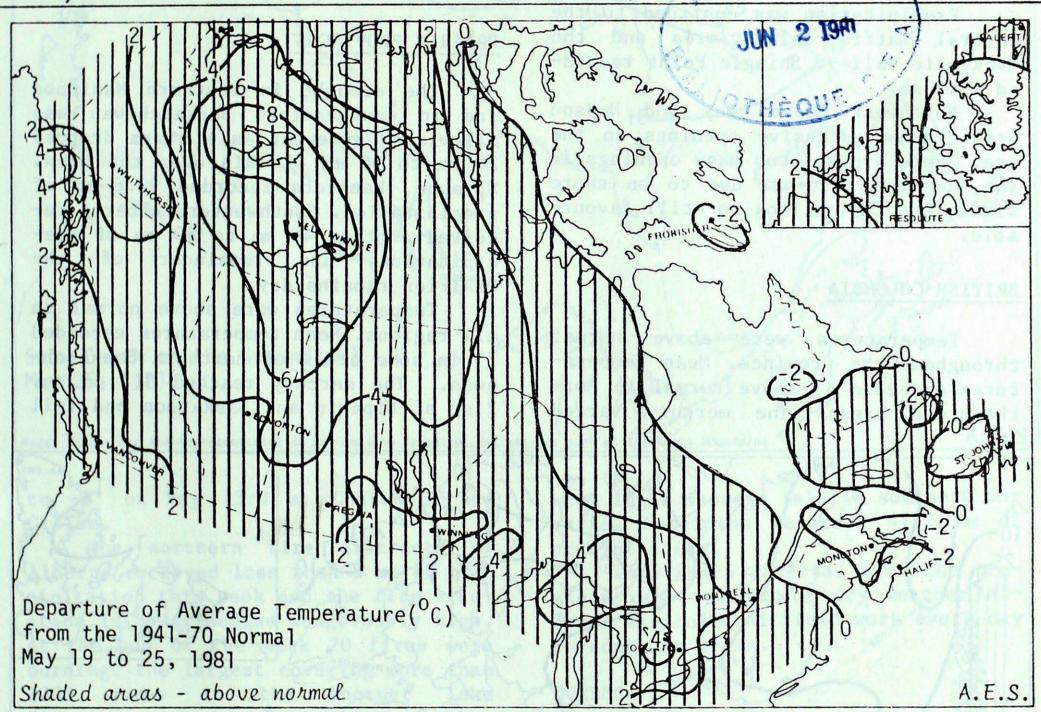
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THE CANADIAN CLIMATE CENTRE, ATMOSPHERIC ENVIRONMENT SERVICE, 4905 DUFFERIN ST., DOWNSVIEW, ONTARIO

MAY 29, 1981

(Aussi disponible en français)

VOL.3 NO.21



### WEATHER HIGHLIGHTS FOR THE PERIOD - MAY 19 TO 25, 1981

Southern Manitoba receives rain

was alleviated somewhat by rainfalls of 20 mm to 50 mm over the weekend. Southeastern Alberta received more precipitation in the predominately open rangeland regions. The rest of the Prairies remain dry.

The fire situation in southern Alberta is described as dangerously dry and 20 fires were burning at week's end the largest covering 2200 acres.

The drought in southern Manitoba A weekend storm produced heavy rains in central and eastern Nova Scotia giving amounts generally in excess of 50 mm. Severe flooding was reported in Cape Breton where greatest rainfalls occurred.

The mercury varied from 31° at Saskatoon, Saskatchewan to -18° at Mackar Inlet, Northwest Territories. The highest weekly precipitation total was 109.2 mm at Sydney, Nova Scotia.

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

Mean temperatures were above normal with the exception (again this week) of the Baffin Island area. Mean temperatures exceeded 8° above normal in the Great Bear Lake region. The mercury reached 27° on May 25th at Fort Simpson and Fort Smith. It fell to -18° at Mackar Inlet on the same day.

Precipitation was confined to the central Baffin Island area and the Mackenzie Valley. Shingle Point recorded 19.9 mm.

Northwest Hudson Bay and Hudson Strait have extensive openings in the ice. There are not too many openings in the southern Beaufort due to on shore winds, but the outlook is still favourable.

## BRITISH COLUMBIA

Temperatures were above normal throughout the province. Mean temperatures exceeded 4° above normal in northeastern areas. The mercury varied

from 28° at Revelstoke on the 20th to -2° at Dease Lake on the 23rd.

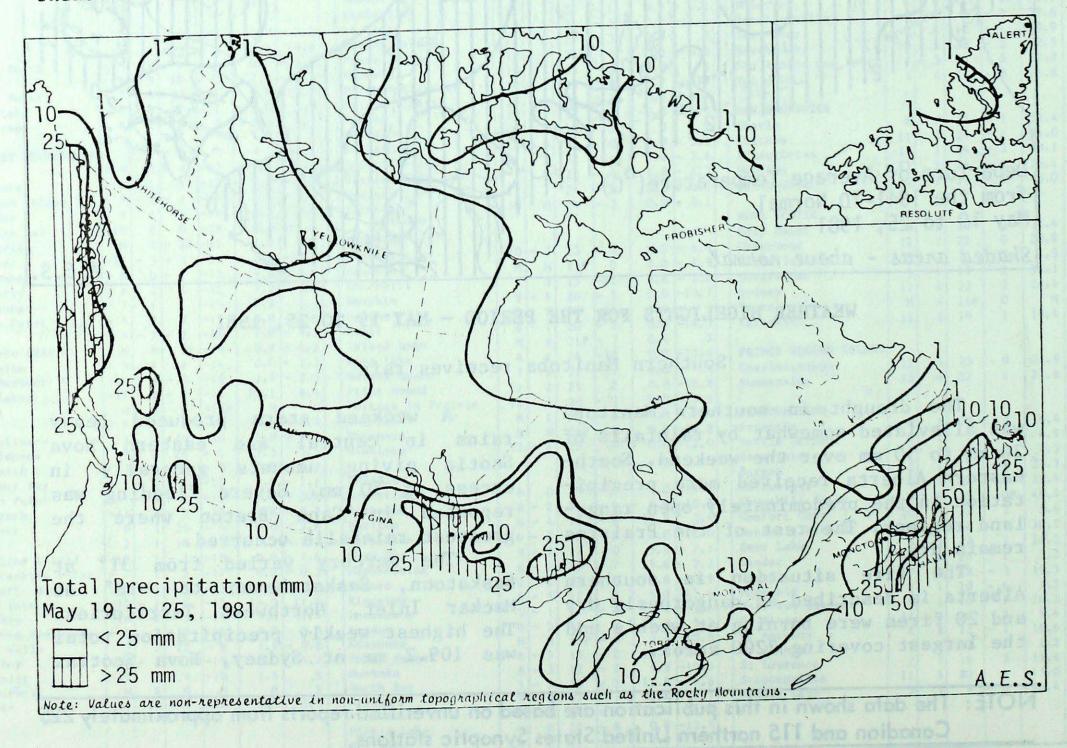
Southern areas continued to receive above normal precipitation amounts while northern areas remained dry. The greatest precipitation total, 50.2 mm, was recorded at Quesnel.

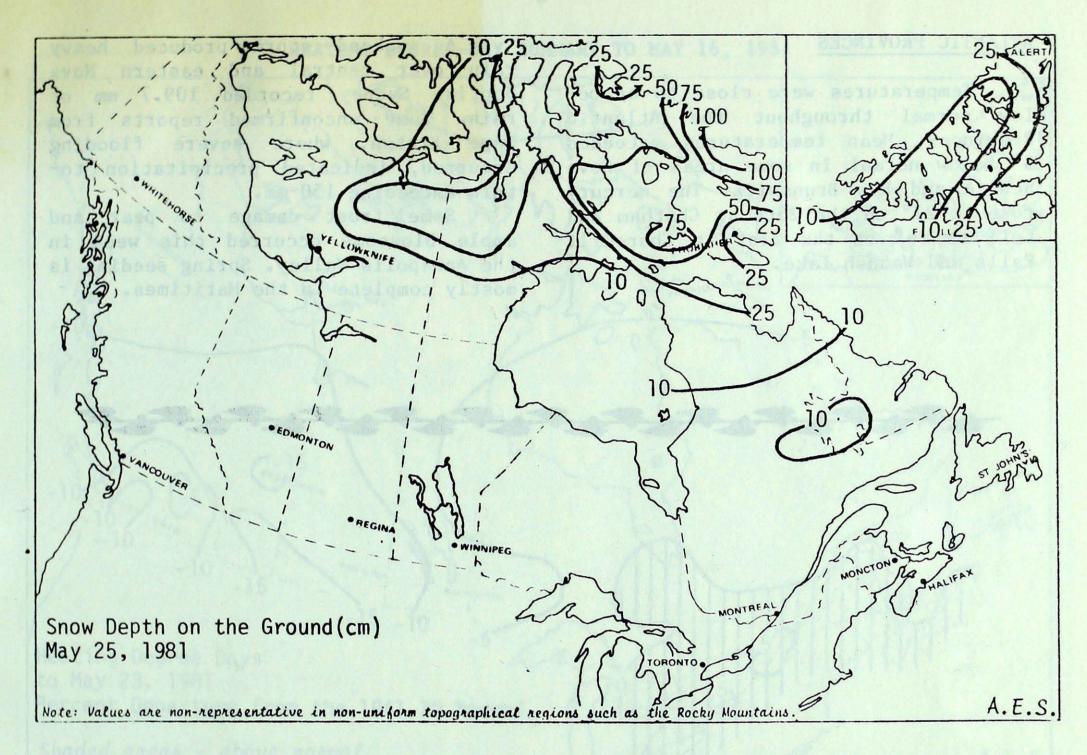
The fire hazard decreased in central areas as showers occurred for most of the week.

### PRAIRIE PROVINCES

The drought in southern Manitoba and in southeastern Saskatchewan was alleviated somewhat as a storm dropped 20 mm to 50 mm of rain over the area. Sprague, Manitoba recorded 90.8 mm of precipitation. Southwestern Alberta received another 40 mm to 80 mm of precipitation. The remainder of the Prairies remains dry.

Temperatures were above normal in all regions. Mean temperatures exceeded 7° in some areas of northern Saskatchewan. The mercury reached 31° on May 21st at Nipawin and Saskatoon and fell





to -4° on May 23rd at Churchill and Gillam.

The northern fire districts of Alberta received less than 5 mm of precipitation this week and the fire situation is described as dangerously high. At the end of the week 20 fires were burning, the largest covering more than 2200 acres in the Footner Lake district.

#### ONTARIO

Temperatures soared into the mid to high twenties during the latter part of the week. Some high temperature records were set. Mean weekly temperatures were above normal exceeding 5° above normal in some central areas. The mercury reached 30° at Sioux Lookout on the 20th and at Kapuskasing two days later. It fell to -4° at Wawa on the 19th.

Rains in northwestern Ontario over the weekend helped dampen down forest fires that had broken out due to the previously tinder dry conditions. Only very light showers fell in southern Ontario. Geraldton recorded 47.2 mm of precipitation.

In a sharp reversal from the previous week, sunny and dry weather allowed agricultural field work every day in southern areas.

## QUÉBEC

Mean temperatures were above normal in southern areas, but clear skies produced large diurnal variations in temperatures. Some temperature records were set. The mercury varied from 30° at Maniwaki on May 24th to -10° at Nitchecun on May 21st.

In contrast to the preceeding week, this week was marked by well below normal precipitation. Most stations recorded less than 6 mm of precipitation. Cap-aux-Meules (station Grindstone Island) reported 25.6 mm.

#### ATLANTIC PROVINCES

Temperatures were close to or below normal throughout the Atlantic Provinces. Mean temperatures exceeded 3° below normal in some areas of Nova Scotia and New Brunswick. The mercury rose to 27° on the 25th at Chatham and fell to -6° on the 21st at Churchill Falls and Wabush Lake.

A weekend storm produced heavy rain over central and eastern Nova Scotia. Sydney recorded 109.7 mm of rain. Some unconfirmed reports from Cape Breton, where severe flooding occurred, indicated precipitation totals exceeding 150 mm.

Some frost damage to pear and apple blossoms occurred this week in the Annapolis Valley. Spring seeding is mostly complete in the Maritimes.

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OMPARIO



CLIMATIC PERSPECTIVES

Staff

Editor: Assistant Editor: Technical Staff: Graphics and Layout: Word Processing:

Yves Durocher Bob Paterson, Alain Patoine Fred Richardson, Andy Radomski Bill Johnson, Debbie Allsopp Velma MacDonald

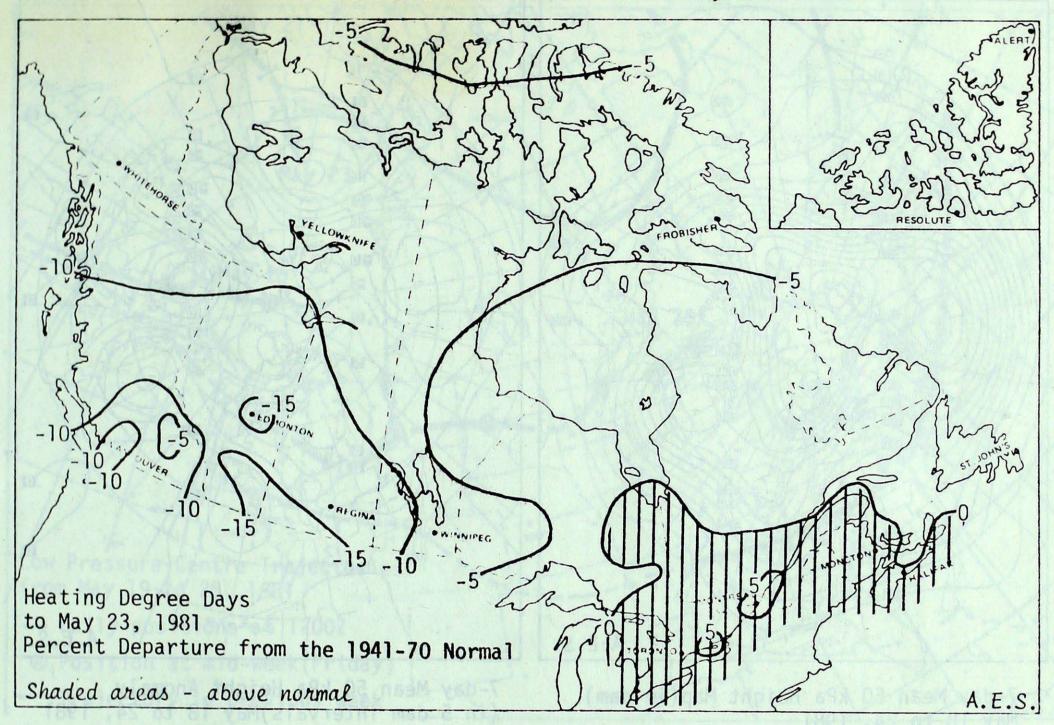
Correspondents

H.E. Wahl, Bill Prusak, Fred Luciow, Brian Smith Jacques Miron, J.F. Amirault,

Terry Mullane, (Ice Forecasting Central) (Whitehorse) (Western Region) (Central Region) (Ontario Region)
(Quebec Region) J.F. Amirault, (Atlantic Region)
Staff of Prince George, Kamloops, Castlegar, Fort Nelson, Penticion and Kelowna weather office (Pacific Region)

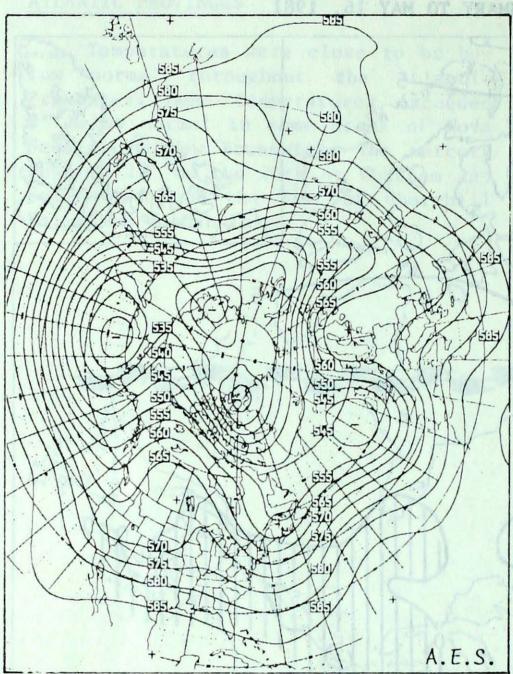
Telephone Inquiries (416) 667-4711/4906

HEATING DEGREE-DAY SUMMARY TO MAY 16, 1981



STATION	MONTHLY CUMULATIVE TOTAL	MONTHLY DIFF. FROM 1941-70 NORMAL	SEASONAL TOTAL	SEASONAL DIFF. FROM 1941-70 NORMAL	SEASONAL PERCENT OF NORMAL
Resolute	665.5	-22.5	11399.5	-399.5	97
Inuvik	355.0	-122.0	8976.5	-846.5	91
Whitehorse	233.5	-35.5	6157.0	-482.0	93
Vancouver	152.0	12.0	2685.5	-202.5	93
Edmonton Mun	140.5	-40.5	4586.5	-852.5	84
Calgary	214.5	-0.5	4355.0	-786.0	85
Regina	151.5	-43.5	4963.0	-821.0	86
Winnipeg	176.5	-15.5	5289.0	-480.0	92
Thunder Bay	220.0	-15.0	5373.5	-175.5	97
Windsor	141.0	21.0	3648.0	108.0	103
Toronto	184.5	26.5	4183.0	178.0	104
Ottawa	155.0	3.0	4703.5	103.5	102
Montreal	153.0	8.0	4684.5	274.5	106
Quebec	202.5	13.5	5213.5	252.5	105
Saint John, N.B.	205.0	-27.0	4681.5	99.5	102
Halifax	217.5	-8.5	4109.5	171.5	104
Charlottetown	190.0	-46.0	4464.5	23.5	101
St. John's, Nfld.	213.5	-89.5	4447.5	-43.5	99

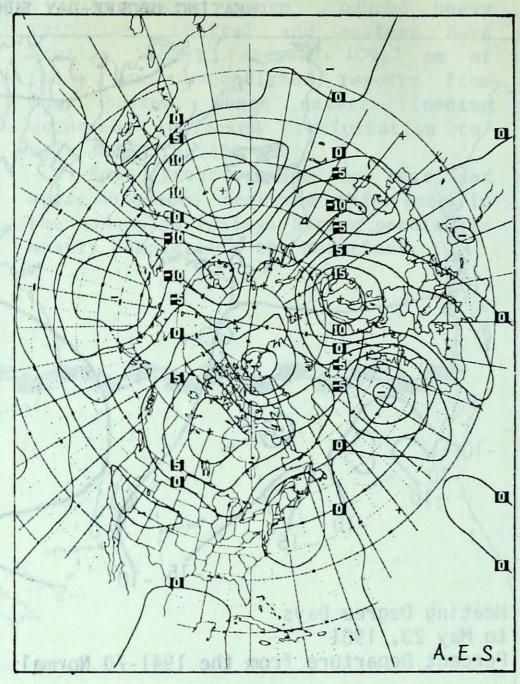
## Atmospheric Circulation



7-day Mean 50 kPa Height Map(in dam) May 18 to 24, 1981

A major 50 kPa ridge persisted over central Canada and extended its influence northwestward across the Yukon continuing a trend of mild dry weather. Positive 50 kPa height anomalies coincided well with above normal mean temperatures.

A major upper trough and closed low remained entrenched over the southern regions of western Canada resulting in a split flow in the upper circulation. A surface low pressure system feature associated with the upper strengthened over the northwestern United States early in the period and moved slowly eastward across the northern plains reaching the upper great lakes by the weekend. Shower and thunderstorm activity was prevalent in southern British Columbia and Alberta. The drought stricken areas of southern Manitoba and northwestern Ontario received most of the precipitation.

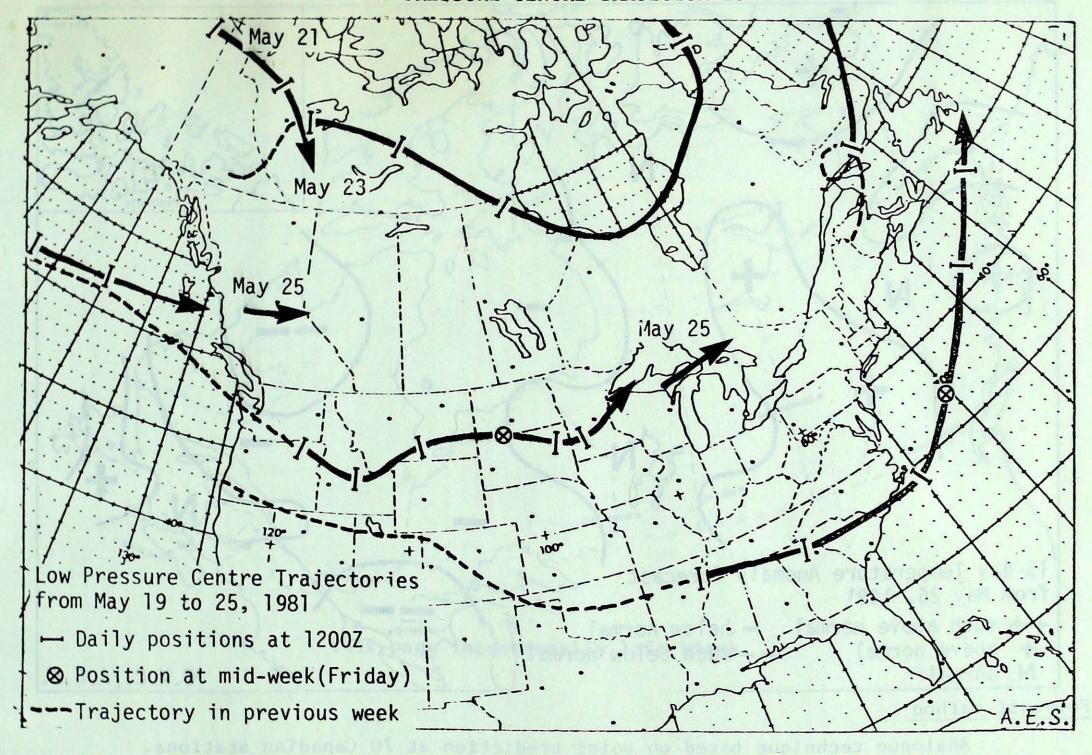


7-day Mean 50 kPa Height Anomaly (in 5 dam intervals) May 18 to 24, 1981

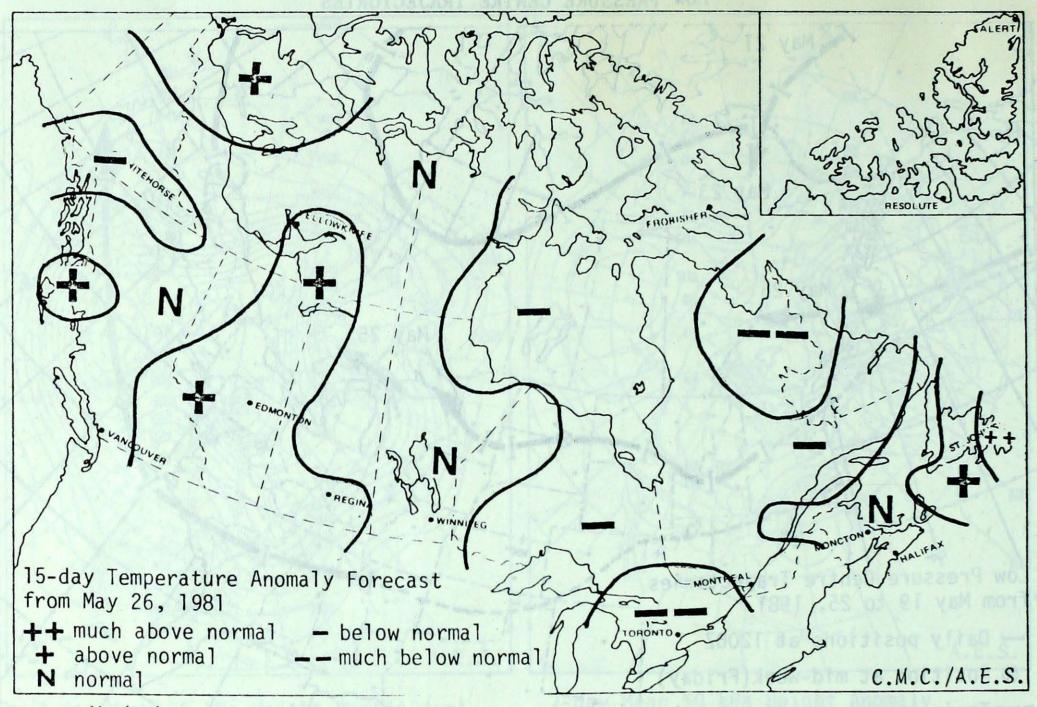
An area of strong high pressure originating in northern Canada drifted southward early in the period. Preceeding the weather system approching from the west, it encompassed the Great Lakes Basin giving sunny dry conditions. Temperatures were cool at first but modified rapidly to above seasonal values by mid period and became humid and unsettled in the southerly flow preceeding the approaching weather system.

The weather pattern Atlantic Provinces continued to vary considerably. No sooner does one weather system depart than another disturbance approaches from the southwest. The latest in the series moved off the Carolina coast and tracked along the eastern sea-board south of Nova Scotia and Newfoundland, during the weekend.

#### LOW PRESSURE CENTRE TRAJECTORIES



## 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 Temperatur	re Anomaly Forecast
Whitehorse Victoria Vancouver Edmonton Regina	Below Normal Near Normal Near Normal Above Normal Above Normal	From 0.5° to 1.6° below Normal Within 0.3° of Normal Within 0.3° of Normal From 0.5° to 1.6° above Normal From 0.5° to 1.8° above Normal
Winnipeg Thunder Bay Toronto Ottawa Montreal Quebec Fredericton	Below Normal  Much Below Normal  Much Below Normal  Below Normal  Below Normal  Below Normal  Wear Normal	Within 0.6° of Normal From 0.4° to 1.4° below Normal More than 1.6° below Normal More than 1.6° below Normal From 0.5° to 1.6° below Normal From 0.4° to 1.4° below Normal Within 0.4° of Normal
Halifax Charlottetown St. John's Goose Bay Frobisher Bay Inuvik	Near Normal  Much Above Normal  Below Normal  Below Normal  F	Within 0.3° of Normal Within 0.4° of Normal More than 1.7° above Normal From 0.5° to 1.7° below Normal From 0.5° to 1.8° below Normal From 0.7° to 2.3° above Normal

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

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TEMPERATURE AND PRECIPITATI								
	Temperature (°C) Precip. (mm)							
Station	q: (?)	Departure from Normal	Extreme	Extreme Minimum	Totai	Departure from Normal		
BRITISH COLUMBIA Abbotsford Alert Bay Blue River Bull Harbour Burns Lake Cape Scott Cape St James Castlegar Comox Cranbrook Dease Lake Estevan Point Fort Nelson Fort St John Kamloops Langara Lytton Mickenzle McInnes Island Penticton Port Hardy Prince George Prince Rupert Quesnel Revelstoke Sandspit Smithers	14 12 11 10 15 16 16 19 13 M	1 1 X 1 X 1 X 1 X 1 X 1 X 1 X 1 X 1 X 1	24 18 22P 15 21P 14 15 22 20 21 22 14P 26 25 27 13 27 24P 16 24 17 24 16 25 28 14 21 21 21 21 21 21 21 21 21 21 21 21 21	6 7 5 6 3P 7 10 11 7 - 2 8 5 7 10 7 11 2P 8 7 8 8 7 8 8 7 8 8 8 8 9 8 8 8 8 8 8 8	22.5 13.1 M 12.8 M 36.5 32.2 40.4 33.0 19.9 3.3 M 0.6 0.3 10.6 M 5.1 M 34.8 19.8 8.4 16.3 28.2 50.2 15.2 30.8 20.6	7.9 2.2 X - 5.4 X - 4.5 17.0 28.6 28.3 6.1 - 1.8 M - 9.1 - 7.3 5.3 M 3.0 X 11.0 10.6 - 4.9 5.9 - 7.2 40.4 1.6 20.8		
Stewart Terrace Vancouver Victoria Williams Lake  YUKON Burwash Dawson Fomakuk Beach Mivo Shingle Point Watson Lake Whitehorse	14 14 13 13 13 0 12 2 11 9	2 1 0 2 1 M 3 2 3 2	21 20 19 22 18 20P 7 23 14 24	7 6 6 6 1 - 4 1 - 7 - 1 - 4 - 1	38.2 15.7 12.1 35.7 0.4 M 0.0 4.9 19.9 4.2	28.9 6.2 5.6 25.8 - 8.7 M - 0.5		
NORTHWEST TERRITORIE Alert Baker Lake Broughton Island Byron Bay Cambridge Bay Cape Dorset Cape Dorset Cape Parry Cape Hooper Cape Parry Cape Young Clinton Point Clyde Contwoyto Lake Coppermine Coral Harbour Dewar Lakes Ennadat Eureka Fort Reliance Fort Simpson Fort Smith Frobisher Riv Gladman Point Hall Beach Hay River Inuvik Jenny Lind Island Lady Franklin Point Longstaff Bluff Mackar Inlet Mould Bay Nicholson Penfusula Norman Wells Pelly Bay Pond Inlet Port Burweli Resolute	- 9	5 0 0 5 4 X 1 0 3 4 5 0 M 6 0 2 M - 1 8 7 7 3 2 - 1 7 4 3 5 5 - 1 1 2 5 9 1	6 7 6 10 2 5 3 4 7 11 4 7 14 1- 4 2 2 7 2 7 14 1- 4 2 2 7 1 7 1 7 1 7 1 7 1 7 1 7 1 7 1 7 1	- 7	0.8 2.5 1.6 6.1 1.4 11.4 0.6 0.0 0.0 0.0 9.5 0.2 0.3 6.4 4.2 0.0 2.1 1.7 7.5 4.9	0.7 3.4 X 3.0 - 6.5 - 1.3 - 0.5 - 1.7 6.3 - 3.9 - 2.7 1.7 0.5 M - 0.2 - 2.1 - 9.4 - 6.1 3.4 3.2 7.3 - 5.3 2.1 14.2 3.4 1.3 - 0.9 - 0.5 - 0.6 10.0 0.2 X X		

IUN DATA FOR THE V	DATA FOR THE WEEK ENDING 06Q0 G.M.T. MA							
	Temperature (°C)			Precip. (mm)				
Station	Average	Departure from Normal	Extreme	Extreme	Total	Departure from Normal		
Sachs Harbour Shepherd Bay Tuktoyaktuk Yellowkuife	- 2 - 6 1 14	4 2 4 8	4 1 15 24	-10 -15 - 7 3	0.6 1.5 0.2 1.6	0.0 0.2 - 0.9 - 1.4		
ALBERTA Banff Calgary Cold Lake Coronation Edmonton Intl Edmonton Nun Edmonton Namao Edson	11 15 16 15 15 17 16 14	2 4 4 3 3 4 3 4	24	1 7 5 2 4 8 7 4	M 10.4 0.0 3.4 2.3 1.2 1.2	- 7.4 - 6.8 4.5		
Fort Chipewyan Fort McMurray Grande Prairie High Level Jasper Lethbridge Medicine Hat Peace River Red Deer	M 17 16 13 16 17 16 15	7 5 6 3 3 3 5	M 27 27 28 24 25 27 27 25	6 7 5 2 6 4 4	M 2.0 4.2 3.0 4.8 11.5 1.0 2.8 1.3	- 6.3 - 3.7 - 2.3 - 4.9 1.5 - 8.5 - 6.8		
Rocky Mountain House Slave Lake Vermilion Whitecourt SASKATCHEWAN Broadview Buffalo Narrows	14 17 16 16 16	4 6 5 5 5	24 26 26 25	3 4 5 6	10.5 5.4 0.0 12.0	- 1.8 - 7.7 - 7.4 1.8 - 0.8 - 4.0		
Cree Lake Estevan Hudson Bay Kinderslev La Ronge Meadow Like Moose Jaw Nipawin North Battleford	13 13 16 16 14 15 16 15 17	X 1 5 4 4 X 3 X 5	25 30 29 28 28 29 30 31 30	2 3 0 1 0 - 1 4 0 4	2.0 19.8 0.0 0.0 0.0 0.0 0.0 0.0 3.6	11.7 - 8.2 - 5.4 -15.1 X - 9.3 X - 4.1		
Prince Albert Regina Rockglen Saskatoon Swift Current Uranium City Wynyard Yorkton	15 16 M 16 15 15 15	4 X 3 3 8 3	29 30 27P 31 28 27 29 29	- 1 6 3 0 1 2 2 3	0.0 1.2 M 0.0 0.0 0.0 1.8 12.0	- 8.3 X - 7.8 - 5.5 - 6.2 -13.4		
MANITOBA Bissett Brandon Churchill Dauphin Gillam Gimli Island Lake Lynn Lake Norway House Pilot Mound Portage la Prairie The Pas Thompson Winnipeg	14 12 3 15 9 14 M 12 13 12 14 13 12 15	0 4 3 X 2	26 29 14 30 27 29 28P 27 27 28 30 28 29 30	4 3 - 4 2 - 4 6 0 - 2 0 3 5 0 - 3 6	33.2 13.7 5.3 46.9 0.0 29.7 0.0 0.6 0.0 33.8 39.9 0.0 0.0 42.6	- 0.7 - 3.7 35.8 X 19.0 X -13.2 X 24.8 24.0 - 9.7		
ONTARIO Armstrong Atikokan, Earlton Geraldton Gore Bay Kapuskasing Kenora Kingston Lausdowne London Moosonee Nount Forest Muskoka North Bay Ottawa Pickie Lake Red Lake	12 14 15 13 15 14 10 16 8 8 16 14 15 16 14 15 16 14 15 16 16 17 18 18 18 18 18 18 18 18 18 18 18 18 18	4 2 4 2 4 4 3 0 2 3 1 5 2 4 2 4 2 4 4 3 7	27 27 29 28 24 30 25 23 27 26 28 26 27 27 29 29 28 27	0 - 1 0 - 3 1 - 2 7 3 - 1 1 - 3 2 - 3 2 2 - 3 1 1 1	20.4 23.7 8.7 47.2 6.0 7.5 4.0 0.2 0.7 5.0 0.2 1.2 4.6 8.0 2.8 6.2 18.0 22.5	7.9 0.8 - 4.4 29.4 - 1.3 -14.1 - 6.0 -12.7 -13.2 -10.5 -15.2 -18.4 -13.2 - 6.0 -12.7 X 5.7 12.7		

26, 1981	Temperature (°C)				Precip. (mm)		
					<del></del>		
Station	Average	Departure from Norma	Extreme	Extreme	Total	Departure from Norma	
Simcoe	17	100		3	1.2	- 6.2	
Sloux Lookout Sudbury	15		27	2	20.1		
Thunder Bay Timmins	14		29	- 1	28.7	12.7	
Toronto	16	3	28	0 3	0.5	-14.6	
Trenton Trout Lake	15		25 25	- 1	12.7	1.6	
Wawa Wiarton	11	A CONTRACTOR OF THE PARTY OF TH	1 700	- 4	6.2	- 0.2	
Windsor	18			4	2.6		
QUÉBEC				1			
Bagotville Baie Comeau	11			- 3	6.0	1	
Blanc Sablon	6 M			0 - 7	0.6 M		
Border Chibougamau	10	X	24	- 3	2.0	X	
Fort Chimo Caspé	- 1			- 6 - 2	0.4		
Grindstone Island	6	- 1	12	0	25.6	9.8	
Inoucd jouac Koartak	- 1	X	6	- 9	30.5	X	
La Grande Rivière Maniwaki	13	The same		- 7	11.0	4	
Matagami	11	X	29	- 4	0.3	X	
Mont-Joli Montréal	15	1	26	- 2	2.0	-11.5	
Natashquan Nitchecun	7	St. W.		-10		-20.9	
Port Menier	1	I M	M	5P - 7	M	1	
Poste-de-la-Baleine Québec	12	- 1	26	1	4.6	14.4	
Rivière du Loup Roberval	11	1 1		0	2.0	-15.4	
Schefferville		- 2	13	- 9 - 2	4.4	- 6.0	
Sept-Iles Sherbrooke	12	0	25	- 2	8.9	-12.5	
Ste Agathe des Monts Val d'Or	13	200	1	- 2		-12.2	
NEW BRUNSWICK		- 1	22	- 1	3.4	-19.4	
Charlo Chatham	9	- 2	27	- 2	9.2	- 6.4	
Fredericton Moncton	10	- 2	The same of	- 1	36.0		
Saint John	9	- 1	19	1	21.6	- 0.8	
NOVA SCOTIA					00.6		
Eddy Point Greenwood	9	X	1	- 1	80.6	16.5	
Sable Island Shearwater		- 1	177 (51)	5 2	62.5		
Sydney	7	- 2	15	1	109.2	91.0	
Truro Yarmouth		- 1 - 1		- 1 2	40.5		
PRINCE EDWARD ISLAND				1			
Charlottetown	8	- 2 - 2		0 2	24.2	120000	
Summerside	,						
NEWFOUNDLAND Argentia	8	X	17	4	10.7	,	
Battle Harbour	M 6	1	9P 12	- 2P	6.9	- 7.2	
Burgeo	7	1	15	0	38.5	20.0	
Cartwright Churchill Falls	3		11100000	- 2 - 6	3.0	-11.7 - 9.6	
Comfort Cove	6		16 17	- 1	12.8	1.1	
Daniel's Harbour Deer Lake	6	- 1	16	- 3	13.4	- 0.	
Gander Goose	6	- 1	17	- 1	3.8	9.1	
Hopedale , Port aux Basques	2 7	- 1	12 15	- 4	5.0 45.0	16.	
St Albans	8	0	16 10P	- 2 - 2P	30.2 M	13.	
St Anthony St John's	M 7	X 1	15	2	23.6	6.	
St Lawrence Stephenville	7 8	0	16 17	1	34.4	19.	
Wabush Lake	3	0	18	- 6	4.3	-11.	
		1			1		