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2 ISS 17 VOL CLIMATIC PERSPECTIVES

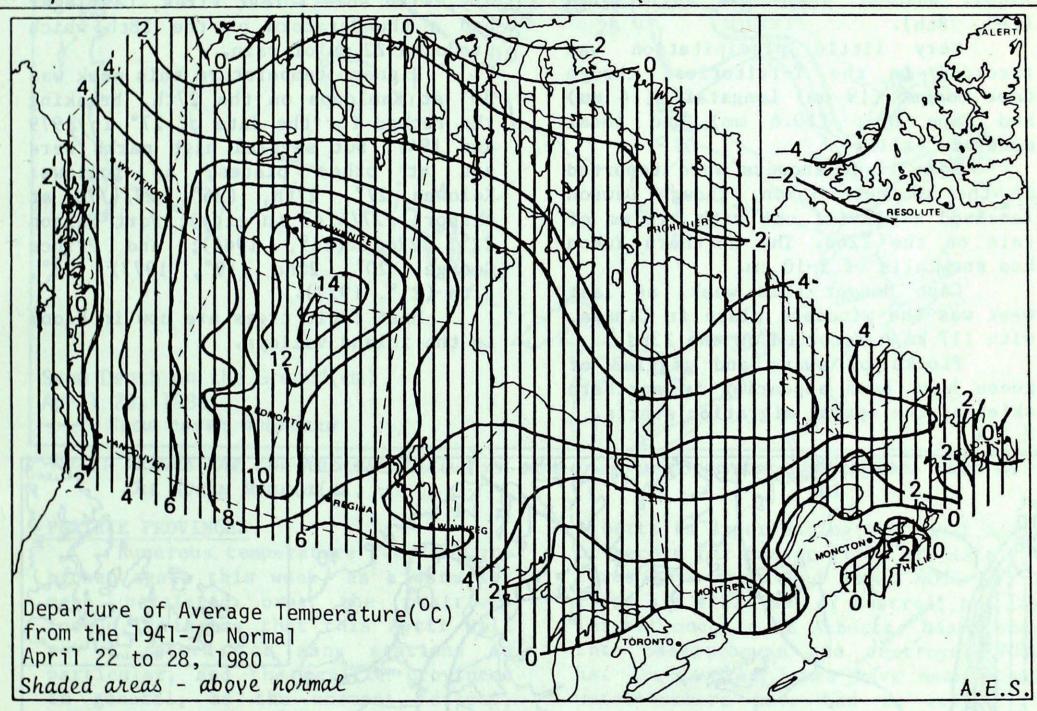
REVIEW OF CANADIAN CLIMATE

PECTIVES

THE CANADIAN CLIMATE C ATMOSPHERIC ENVIRONMENT 4905 DUFFERIN ST., DOWNSVIEW

MAY 2,1980

(Aussi disponible en français)



WEATHER HIGHLIGHTS FOR THE WEEK - APRIL 22 - 28 1980

Devastating Forest Fires in Alberta as Western Warm Spell Continues

Warm weather continued this week in western Canada, breaking numerous stations had 20° days, eliminating the little snow cover remaining. The snowline is now north of 65°N.

The long dry spell has aggravated the already bad forest-fire situation in Alberta and Saskatchewan, where hundreds of fires, some still out of control, have destroyed about 15000 ha. Winnipeg, Brandon and Dauphin have had one month without measurable precipitation.

Nova Scotia was hit by a severe storm, and local fishermen face heavy high-temperature records. Even northern costs as they go about the job of repairing damaged equipment.

> Gaspé had a two-day deluge of torrential rain this week. On the 24th, 144.2 mm fell, breaking the record for the date; a further 108.9 mm had fallen the previous day. The 253.1 mm two-day total broke the previous record for April.

> Warmest temperature was 31° at Windsor, Ont. (22nd); coldest was -37 at Eureka NWT (22nd).

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

As the length of day increases, the hours of bright sunshine are increasing steadily. Alert recorded 165.4 hours this week. The snow cover is now limited to north of about 65°N. The chill in the air, however, was still apparent in Eureka (-37° minimum on 22nd). Warmest place was Fort Smith (26°, 28th).

Very little precipitation was recorded in the Territories, though Cape Dorset (19 mm) Longstaff (14 mm) and Cape Dyer (10.6 mm) had local moderate falls.

Some light showers were reported in the southern Yukon, though Dawson received a heavier one with 4.6 mm of rain on the 22nd. The northern Yukon had snowfalls of 5-10 cm.

Cape Hooper this week, as last week was the windiest place in Canada, with 117 km/h recorded on the 23rd.

Flocks of swans and gaggles of geese have been appearing in northern skies as the spring migration starts.

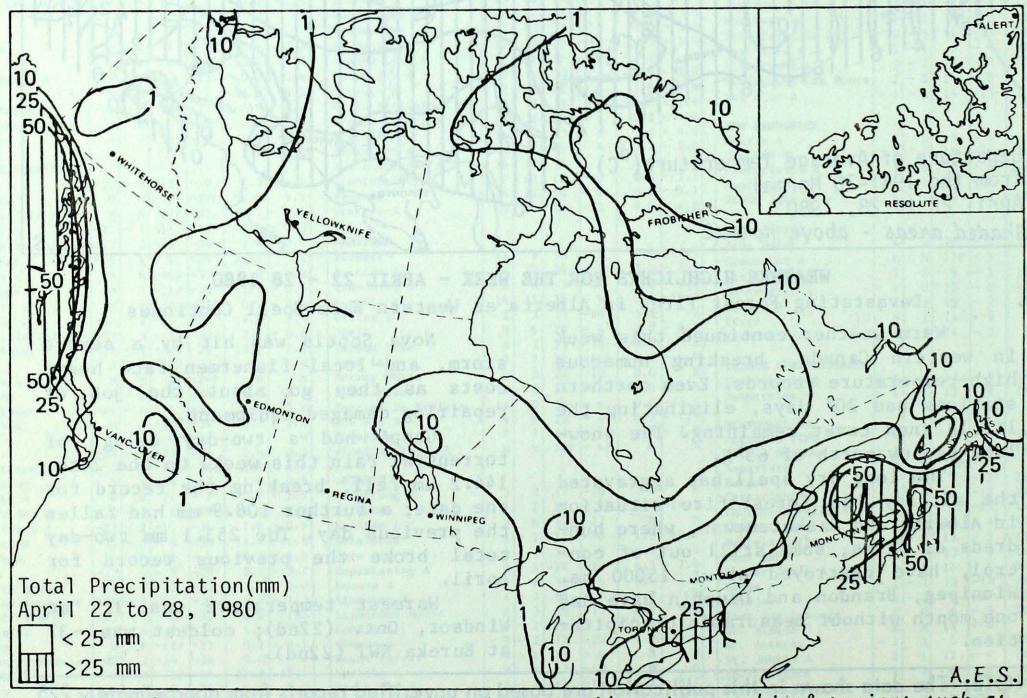
BRITISH COLUMBIA

Considerable rain fell on the Pacific Coast: Cape Scott (72.6 mm), Cape St. James (67.8 mm), Sandspit (53.5 mm) and Prince Rupert (52.2 mm) were among the wettest areas.

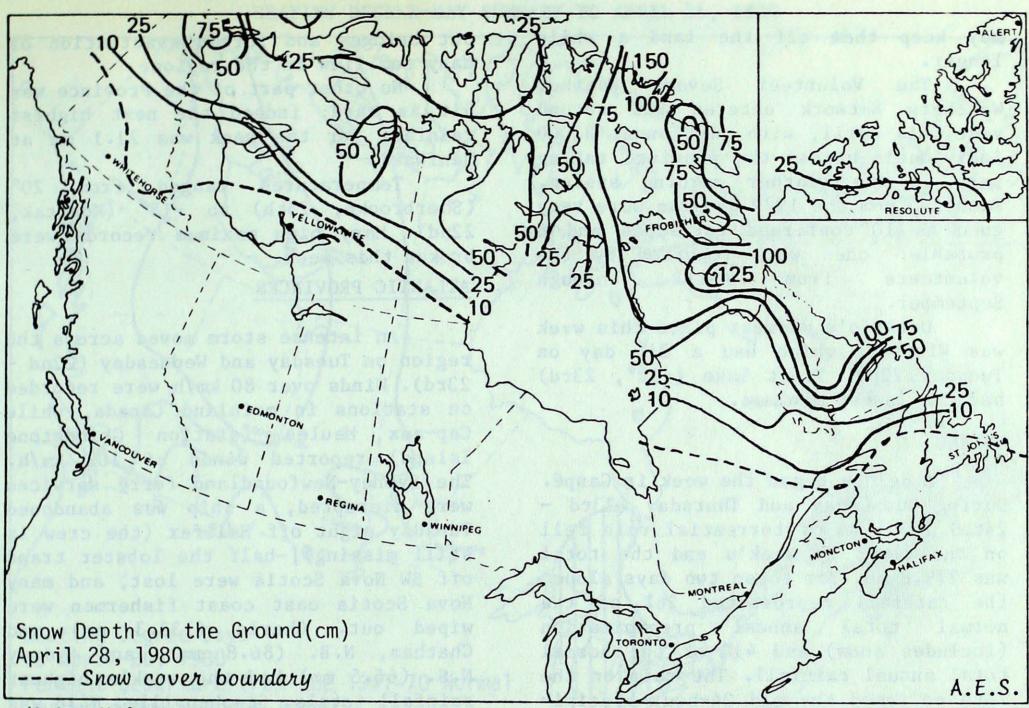
Inland, precipitation has been quite localized. While Fort Nelson was dry, with some forest fires, Castlegar had a thunderstorm on the 28th which produced 22 mm of rain.

Highest temperature this week was 30° at Kamloops on the 27th, breaking the record for the date of 27° in 1979 and 1947, but several high marks were set at other places, as follows: Kelowna 27°, 27th, (26°, 27/4/79 at airport, 27/4/47 in city); Fort Nelson 22°, 22nd (21°, 1944); and Prince George, 20°, 22nd (19°, 1977), 22°, 27th (21°, 1972).

Most fruit trees are now in bloom in the inland valleys.



Note: Values are non-representative in non-uniform topographical regions such as the Rocky Mountains.



Note: Values are non-representative in non-uniform topographical regions such as the Rocky Mountains.

PRAIRIE PROVINCES

Numerous temperature records were broken again this week, as a warm air mass persisted over the prairies. Indeed, it seems that this April will set a record for many stations in particular, and the prairie provinces in general, as the warmest, driest, sunniest ever.

On the 27th, three stations recorded a maximum of 26°, breaking or tying records for the date: The Pas (24°, 1939), Thompson (18°, 1972), and Lac la Ronge (26° in 1939). In the period 22nd to 27th, scores of high-maximum or high-minimum temperature records were broken or tied. Fort McMurray's 30° on the 28th was the week's highest.

The warm sunny days are carrying a price in dry soil conditions. Winnipeg and Brandon have gone 33 days without measurable precipitation; Dauphin's dry spell has lasted 37 days (as of 29th). Good rains are badly needed for farm crops. Similarly,

Alberta is experiencing the worst April on record for forest fires. To date 274 fires have destroyed about 8000 ha; 9 fires are still out of control, and the largest one, in NE Alberta, has spread into Saskatchewan and destroyed 7000 ha. Ice-covered lakes have meant that water-bombers have had to refill at airports, slowing fire-fighting efforts.

Crop prospects for 6000 km² dry area in SE Alberta are not bright.

ONTARIO

The sunny dry weather over Ontario since April 17th finally gave way on April 25th, ushering in a cloudy wet weekend in most areas except the extreme north and north-west. One positive fact was the complete disappearance of snow cover right across the Province by the end of the week.

Farmers in Ontario have seen their fields drying well with sun and light winds even though the recent rain may keep them off the land a while longer.

The Volunteer Severe Weather Watchers Network entered its second year this April, with just under 3,000 individuals across the province taking part in the weather warning system. Results from the 1979 program were very good as 10 confirmed tornadoes and 6 probable ones were reported by the volunteers from April through September.

Ontario's warmest place this week was Windsor, which had a 31° day on Tuesday 22nd. Trout Lake (-12°, 23rd) had the lowest minimum.

QUEBEC

A deluge began the week in Gaspé. During Wednesday and Thursday (23rd -24th) 253.1 mm of torrential rain fell on the city; by week's end the total was 279.8 mm. For these two days alone, the rainfall represented 26% of the annual precipitation total normal (includes snow) and 41% of the normal total annual rainfall. The rain on the 24th eclipsed the old 24-hour precipitation record (114.3 mm, September 1955), the old monthly record (231 mm, October 1977), and will undoubtedly stand as a two-day record for some time. The floods which resulted washed out bridges and forced evactuation of many families in the region.

No other part of the Province was hit as hard; indeed the next highest rainfall for the week was 21.1 mm at Maniwaki.

Temperatures ranged from 20° (Sherbrooke, 25th) to -15° (Koartak, 22nd). Many high maximum records were broken this week.

ATLANTIC PROVINCES

An intense storm moved across the region on Tuesday and Wednesday (22nd -23rd). Winds over 80 km/h were recorded on stations in mainland Canada, while Cap-aux Meules (station Grindstone Island) reported winds of 102 km/h. The Sydney-Newfoundland ferry services were disrupted, a ship was abandoned Tuesday night off Halifax (the crew is still missing), half the lobster traps off SW Nova Scotia were lost, and many Nova Scotia east coast fishermen were wiped out. Charlo (133.3 mm) and Chatham, N.B. (86.8 mm), and Sydney N.S. (66.5 mm) had the week's highest rainfall totals. Stephenville, Nfld was the only station without any rain at all for the entire seven days. It was also the warmest place (20° on the 26th). Extreme minimum was Cartwright, Nfld on the 28th.



CLIMATIC PERSPECTIVES

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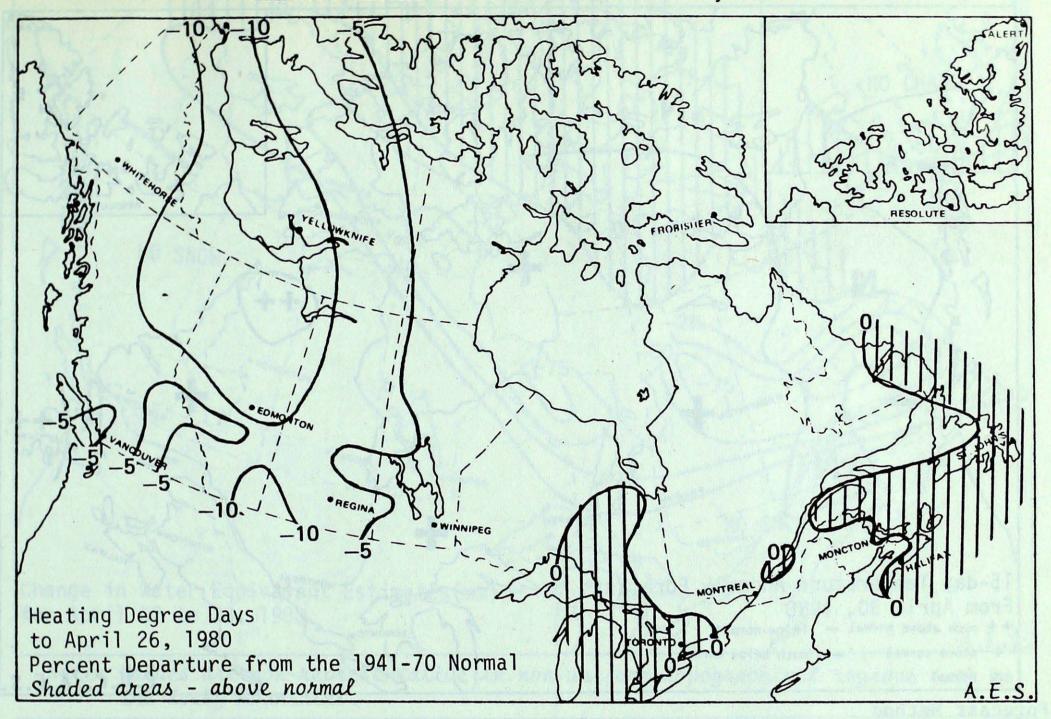
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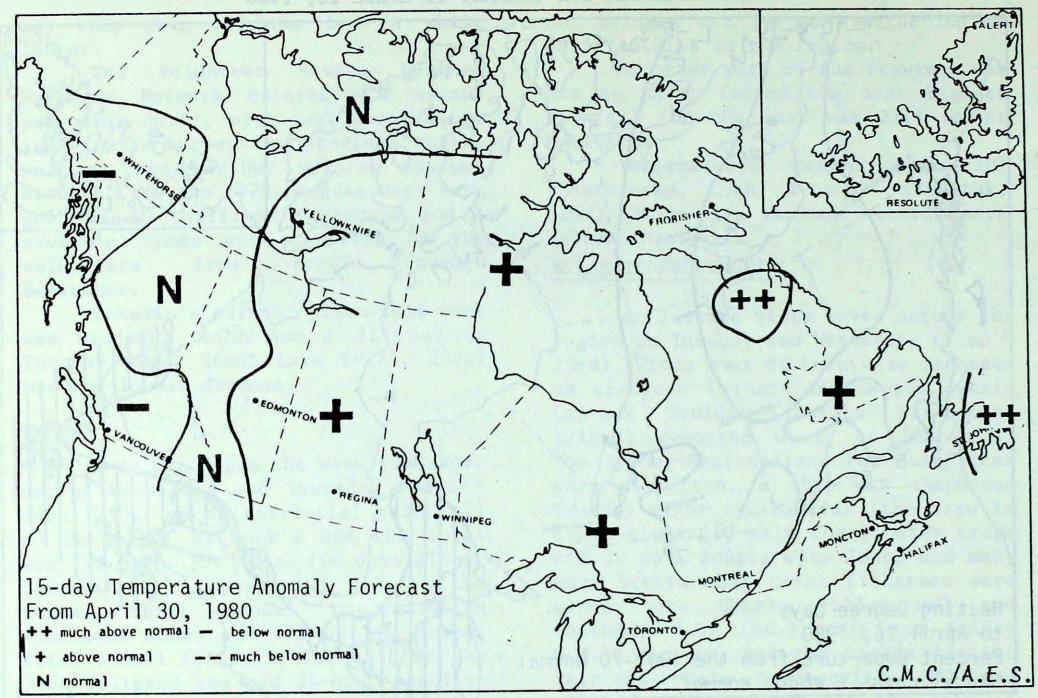
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HEATING DEGREE-DAY SUMMARY TO APRIL 26, 1980



CITY	MONTHLY CUMULATIVE TOTAL	MONTHLY DIFF. FROM 1941-70 NORMAL	SEASONAL TOTAL	SEASONAL DIFF. FROM 1941-70 NORMAL	SEASONAL PERCENT OF NORMAL
Resolute	1169.5	81.5	10943.0	-75.0	99
Inuvik	932.6	75.0	8282.5	-999.5	89
Whitehorse	393.0	-92.0	5831.0	-510.0	92
Vancouver	215.0	-25.0	2624.5	-104.5	96
Edmonton	244.5	-135.5	4606.5	-638.5	88
Calgary	283.5	-107.5	4565.0	-337.0	93
Regina	255.0	-145.0	5152.5	-426.5	92
Winnipeg	298.5	-102.5	5502.0	-67.0	99
Thunder Bay	379.0	-42.0	5218.0	-77.0	99
Windsor	273.0	6.0	3433.0	21.0	101
Toronto	317.5	5.5	3875.5	41.5	101
Ottawa	310.0	-24.0	4283.0	-155.0	97
Montreal	308.5	-23.5	4197.5	-54.5	99
Quebec	369.0	-28.0	4789.5	35.5	101
Saint John, N.B.	348.5	-46.5	4186.0	-136.0	97
Halifax	350.5	-20.5	3749.0	64.0	102
Charlottetown	360.5	-53.5	4173.0	0.0	100
St. John's, Nfld.	452.5	5.5	4218.5	69.5	102

15 DAY TEMPERATURE ANOMALY FORECAST



Forecast Method

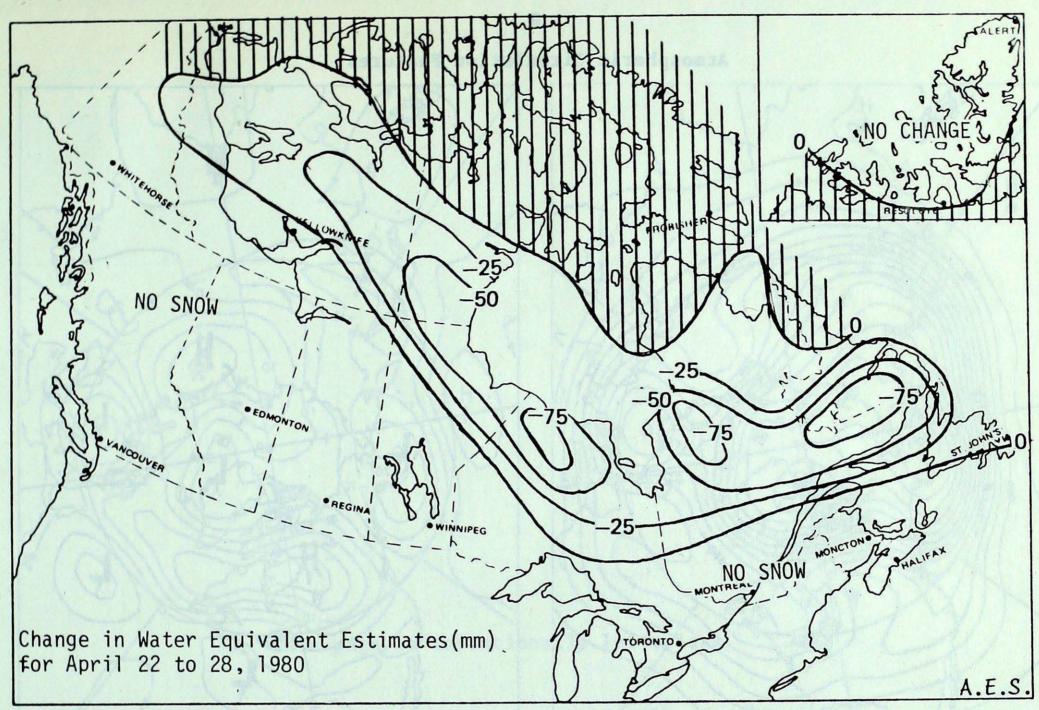
Analogue technique based on point prediction at 70 Canadian stations.

Temperature Scale

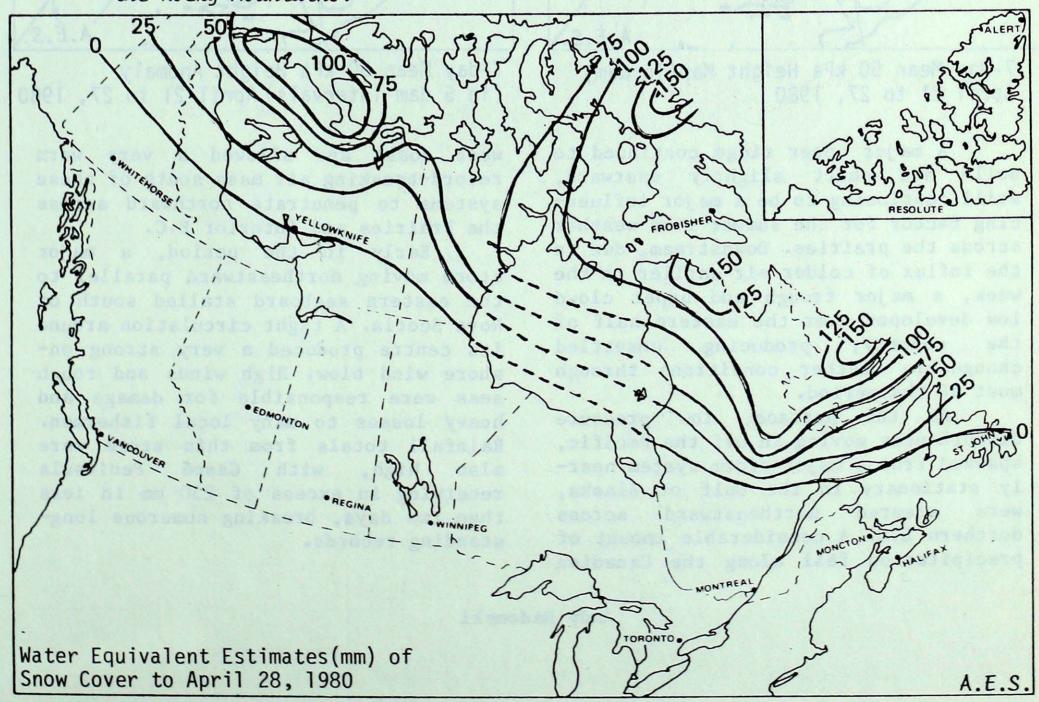
Each temperature class is designed to contain 20% of the historically observed 15 day means pertinent to specific location and time of year:

Station		Current	Temperature	Anomaly	Forecast		
Whitehorse	Below Normal		Fr	om 0.5°	to 1.6°	below	Normal
Victoria	Below Normal		Fr	om 0.3°	to 1.0°	below	Normal
Vancouver	Below Normal		Fr	om 0.3°	to 1.0°	below	Normal
Edmonton	Above Normal		Fre	om 0.6°	to 2.0°	above	Normal
Regina	Above Normal		Fr	om 0.7°	to 2.2°	above	Normal
Winnipeg	Above Normal		Fr		to 2.3°		
Thunder Bay	Above Normal		Fr	AND CONTRACTOR OF THE PARTY OF	to 1.7°		
Toronto	Above Normal		Fr		to 1.8°		
Ot tawa	Above Normal		Fr		to 1.9°		
Montreal	Above Normal		Fr		to 1.8°		
Quebec	Above Normal		Fr		to 1.5°		
Fredericton	Above Normal		Fr		to 1.5°		
Halifax	Above Normal		Fr		to 1.2°		
Charlottetown	Above Normal		Fr		to 1.6°		
St. John's	Much Above N	ormal	Mo	re than			
Goose Bay	Above Normal		Fr		to 1.9°		
Frobisher Bay	Above Normal		Fr	om 0.8°	to 2.7°	above	Normal
Inuvik	Near Normal		Wi	thin 0.9	of Nor	nal	

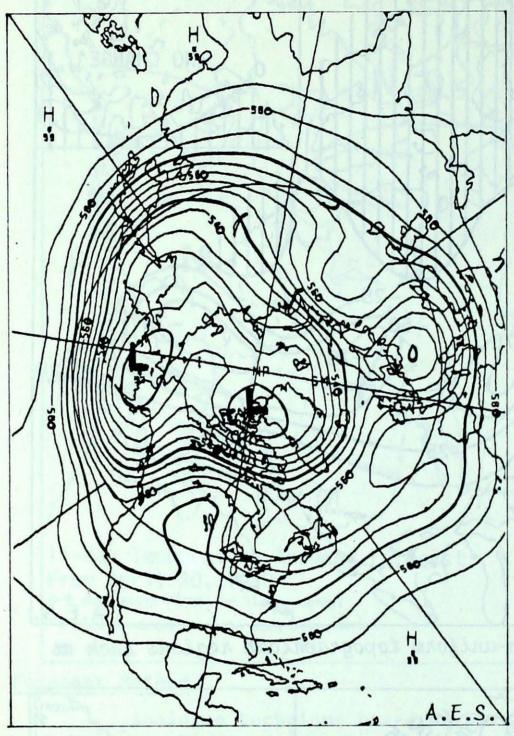
Note: Anomaly denotes departure from the 1949-73 mean.



Note: Values are non-representative in non-uniform topographical regions such as the Rocky Mountains.



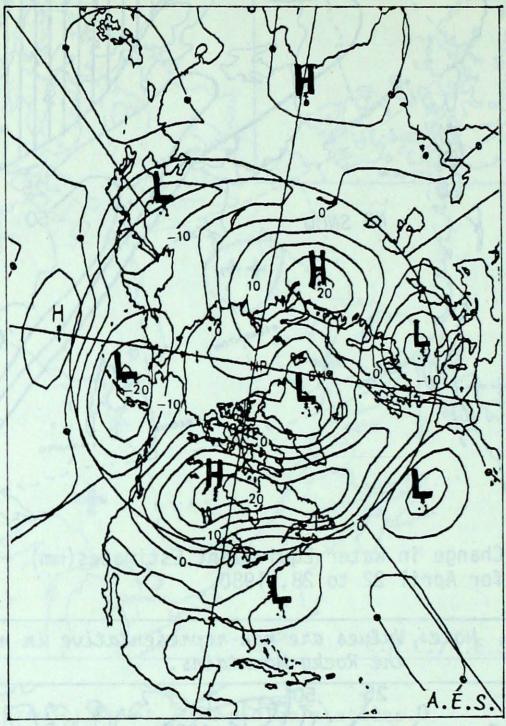
Atmospheric Circulation Features



7-day Mean 50 kPa Height Map(in dam) April 21 to 27, 1980

A major upper ridge continued to build and shift slightly eastward, still continuing to be a major influencing factor for the summer-like weather across the prairies. Downstream, due to the influx of colder air earlier in the week, a major trough and upper cloud low developed over the eastern half of the country, producing unsettled changeable weather conditions through most of the period.

At the surface, low pressure disturbances moving in off the Pacific, spawned from a major storm system nearly stationary in the Gulf of Alaska, were steered northeastward across northern B.C. A considerable amount of precipitation fell along the Canadian



7-day Mean 50 kPa Height Anomaly (in 5 dam intervals) April 21 to 27, 1980

west coast and allowed a very warm record-breaking air mass south of these systems to penetrate northward across the Prairies and interior B.C.

Early in the period, a major storm moving northeastward parallel to the eastern seaboard stalled south of Nova Scotia. A tight circulation around its centre produced a very strong onshore wind blow. High winds and rough seas were responsible for damage and heavy losses to many local fishermen. Rainfall totals from this storm were Peninsula with Gaspé high, also receiving in excess of 250 mm in less than two days, breaking numerous longstanding records.

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	Temperature (°C)			(°C)	Precip. (mm)			Temperature (°C)			Precip. (mm)				Temperature (°C)			Precip. (mn		
Station	Average	Departure from Normal	Extreme	Extreme Minimum	Total	Departure from Normal	Station	Average	Departure from Normal	Extreme Moximum	Extreme Minimum	Total	Departure from Normal	Station'	Averoge	from Normal	Extreme	Extreme Minimum	Total	Departure from Normal
BRITISH COLUMBIA Abbotsford A	12	3	24	3		-16.0	Resolute A Sachs Harbour	-22 -15	- 2 2	-17 - 7	-28 -25 -29	0.0 1.0 M	- 1.2 0.2 M	Pickle Lake Red Lake A Simcoe	6 9 M	5 4 M	22 25	- 7 - 3	5.1 0.4 M	- 2. - 7.
Alert Bay Blue River Bull Harbour	9 M 8 M	X	15 22P 14 17P	3 0 0 - 3P	12.6 M 31.4	7.5	Shepherd Bay A Tuktoyaktuk Yellowknife A	м м 8	M M 12	- 5P - 5P 20	-29 -18 - 8	M 0.8	- 0.9	Sioux Lookout A Sudbury A Thunder Bay A	8 6 7	5 1 3	23 17 27	- 3. - 2 - 4	0.0 18.5 2.8	- 9.
Burns Lake Cape Scott Cape St. James	7 8		12 12	4 4	72.6	40.0	ALBERTA Banff	11	8	23	- 4	0.0	-12.5	Timmins A Toronto Int'l A	7 7 8		18 15 18	- 2 - 2 0	2.2 31.6 40.0	- 4. 16.
Castlegar A Comox A Cranbrook A	15 10 14	5 2 7	28 19 26	5 2 5	20.8 19.6 7.2	11.1 8.3 - 4.1	Brooks Calgary Int'l A Cold Lake A	13 M	м 9 м	M 26 28	0 - 2P	0.0 0.0	- 9.2 - 5.6	Trenton A Trout Lake Wawa A	3 M	- 1 5 X	22 20P	-12 - 3P	2.2 M	- 4.
Dease Lake Estevan Point	4 M	2 M	12 12P	- 5 3	2.2 M	0.9 M	Coronation A Edmonton Int'l. A	14 14	9	29 28	- 7 0	0.0	- 6.5 - 4.5	Wiarton A Windsor A	6 10	- 1 0	19	- 1 2	6.8	-12. - 6.
Fort Nelson A Fort St. John A Kamloops A	11 11 15	7 7 5	22 22 30	- 3 - 1 0	0.0	- 3.7	Edmonton Mun. A Edmonton Namao A Edson A	15 12	M 11 6	29P 28 27	- 1 0 - 6	0.0 2.0	- 5.7 - 6.4	QUEBEC Bagotville A	7	3	18	- 3		
Langara Lytton	M 15	M 4	12P 27	3 2	42.6	18.7	Fort Chipewyan Fort McMurray A	M 16 12	M 13 7	24P 30 26	- 3 - 6 - 3	M 0.2 1.4	- 4.8 - 4.1	Baie Comeau Blanc Sablon Border	M M	2 M M	1 1 1 2 5 m	- 4 - 5P - 6	18.8 1.0	-11.
Mackenzie A McInnes Island Penticton A	M M 14	M 5	17P 11P 26	- 5P 5	M M 3.8	- 2.3	Grande Prairie A High Level A Jasper	12 11	7 7	26 23	- 3 - 4	6.5	- 8.1 - 4.3	Chibougamau Fort Chimo A	- 2	X 5	17 10	- 7 -14	6.6 0.0 279.8	1
Port Hardy A Prince George A Prince Rupert A	8 10 7	5	14 22 13	0 - 3 0	20.9 3.0 52.2	- 2.3 - 4.4 6.9	Lethbridge A Medicine Hat A Peace River A	14 17 13	8 10 9	28 29 26	- 3 - 1 - 3	2.4 0.0 5.7	- 9.0 - 8.4 1.5	Gaspé A Grindstone Island Inoucdjouac	M - 5	х м 3	9P 3	- 1 -14	48.1 8.6	1,630
Quesnel A Revelstoke A	10	3	25 27	- 4	9.4	3.0	Red Deer A Rocky Mountain House	14 13	10	28 26	- 3 - 2	1.2	- 7.6 - 5.4	Koartak La Grande Rivière A Maniwaki	M 5	X X 3	3 15 17	-15P - 5 - 4	20.2 0.0 21.2	
Sandspit A Smithers A Spring Island	7 8 M	1 3 M	11 16 M	2 - 3 M	53.5 6.8 M	38.2 1.1 M	Slave Lake A Vermilion A Whitecourt	13 15 14	6 11 10	28	- 4 - 1 - 4	100000000000000000000000000000000000000	- 4.8 - 5.8 - 3.7	Matagami A Mont-Joli A	7 3	X	18	- 9 - 3	6.7 5.5	- 5.0
Stewart A Terrace A	M 7	-	14P 12	3P 1 M	22.0 M	10.6	SASKATCHEWAN Broadview	11	Я	26	0	0.0	-12.3	Montréal (A int.) Natashquan A Nitchequon	9 4 2	3 6	17 10 11	- 2 - 4 - 7	0.6	- 3.2 - 7.2
Tofino A Vancouver Int'l A Victoria Int'l A	12 11	2 2	20	3	3.4	-11.1 - 7.4	Buffalo Narrows Cree Lake	M 12	M X	27P 25	- 2 - 2	0.0	M X	Port Menier Poste-de-la-Baleine Ouébec A	3 3	2	8 14 11	- 5 - 6 - 3		
Williams Lake A YUKON	10	4	23	- 4	0.0	- 6.2	Estevan A Hudson Bay Kindersley	11 12 15	6 8 11	26 26 29	- 1 - 1 - 4	0.0	- 8.0 - 8.4 - 8.3	Rivière du Loup Roberval A	3 7	- 1 3	11 16	- 3 - 1	16.7 10.4	- 0.4
Burwash A Dawson A	3 M	3 M	9 14P	- 4 - 4 -24	0.0 7.2 M	- 4.2 5.2 M	La Ronge A Meadow Lake A Moose Jaw A	13 15 12	9 X 7	27 29	- 1 - 2 0	0.0	- 4.5 X - 9.6	Schefferville A Sept-Iles Sherbrooke A	4 8	6 3 4	9 11 20	- 5 - 4 - 2	13.0 19.2	2.8
Komakuk Beach A Mayo A Shingle Point A	6 M	4	14 - 6P	- 2 -20	0.0 M	- 1.9 M	Nipawin A North Battleford A	13 15	X 10	27 29	1 - 2	0.0	- 6.2	Ste-Agathe des Monts Val d'Or A	7 7	2 3		- 2 - 6		-10.2 - 0.7
Watson Lake A Whitehorse A	4	3 2	W 325	- 5 - 3	1.8	0.5	Prince Albert Regina A Saskatoon A	13 13 15	9 7 9	27 26 28	0 0 - 1	0.0	- 8.2 - 8.6 - 6.7	NEW BRUNSWICK Charlo A	5	2	12	- 1	133.3	
NORTHEWEST TERRITORIE Alert Baker Lake		- 4		-30 -24	0.0	- 1.6 - 2.9	Swift Current A Uranium City Wynyard	13 13 13	8 14 9	26	- 2 - 5	0.0	- 9.9 - 2.0	Chatham A Fredericton A Moncton A	5 4	0 - 1 - 1	13 11	- 3 - 3 - 4	86.8 23.4 28.0	71.6
Broughton Island Byron Bay	-14 M	1 100	- 4 - 6P	-22 -29	2.0 M	- 0.7 M	Yorkton A	12	7	26	0		- 7.9	Saint John A NOVA SCOTIA	6	1	12	- 2	21.2	- 1.0
Cape Dyer A	- 9 -14		- 2 - 5	-29 -17 -23	19.0 10.6	M X 5.3	MANITOBA Bissett Brandon A	10 11	4	The state of the s	- 2 - 3	0.0	- 6.5 -10.1	Eddy Point Greenwood A	7	X 0		- 1 - 1 - 1	66.0 19.4 32.6	4.5
	-15 M	2	- 5 - 8P	-21 -22	4.0 M M	0.5 M	Churchill A Dauphin A Gillam A	M 10 7	M 5 X		-12 - 5 - 8	A STATE OF THE PARTY OF THE PAR	- 4.7 -11.0 X	Sable Island Shearwater A Sydney A	7 3	0 1 0	14	- 1 - 2	36.4	14.2
Chesterfield Inlet Clinton Point	- 7 M	7 M	4 - 1P	-22 -25	0.4 M	- 2.8 M	Gimli Island Lake	10	5 X	21 23	- 1 - 6 - 3		-10.3 X	Truro Yarmouth A	7 8	3 2	13	- 2 2	21.1	7.4
Clyde Contwoyto Lake Coppermine	-15 M M	M	1 P	-23 -17P -23	7 - 8 M M	5.9 M M	Lynn Lake Norway House Pilot Mound	11 9 11	X 7	23 25	- 5 - 2	11.0	-10-4	PRINCE EDWARD ISLAND Charlottetown	5	1 0	A STATE OF THE STA	- 2 - 1	18.4	3.9
Coral Harbour Dewar Lakes	-10 -16	3 1	- 1 - 8	-22 -23 - 3	0.9 4.5 M	- 3.0 1.3 M	Portage la Prairie The Pas A Thompson A	10	10 7	27	- 3 - 1 - 7	A SALIGORIAN SALAS	-13.7 - 1.6 0.8	Summerside NEWFOUNDLAND		· ·	55			
Ennadai Eureka Fort Reliance	M M 6	M M 12	-24P	-37 -12	0.0	- 2.1	Winnipeg Int'l A	10	4	Marie Control	- 4	THE PARTY OF THE P	-11-1	Argentia VTMS Battle Harbour Bonavista	7 M	X M O	3	- 2 - 4P - 2		-11.0 - 9.0
Fort Simpson Fort Smith A Frobisher Bay A	10 14 -11	10 14 0	26	- 2 - 3 -20	1.2 0.4 8.2	- 5.7 - 2.8 2.9	ONTARIO Armstrong A Atikokan	6 8	3 4	24	- 7 - 4	0.0	- 9.1 -12.3	Burgeo Cartwright	7 2	3	15	- 1 - 9 - 6	14.4	-13.2
Gladman Point A Hall Beach A Hay River A	-17 M 10		- 7P	-28 -28 - 3	1.1 M 0.0	0.5 M	Earlton A Geraldton Core Bay A	M 4 7	M 2 1	18	- 4 - 8 - 2	12.8 11.3	5.4 - 8.7	Churchill Falls A Comfort Cove Daniel's Harbour	4	2 5	17	- 3 - 2	13.0	-10.4 5.8
Inuvik A Jenny Lind Island	-10 M	0 M	- 2 - 8	-22 -28	11.3 M	7.6 M	Kapuskasing Kenora A	6 11 8	6 0		- 3 - 2	4.9	- 4.4 -11.3 26.1	Deer Lake Gander Int'l A Goose A	5 3 4	1 4	15 13	- 6 - 3 - 6	3.8	-13.7 3.0 - 8.2
Lady Franklin Point Longstaff Bluff Mackar Inlet	-15 M	2 M	- 7	-22 -20P	14.0 8.3	7.3	Kingston A Lansdowne House London A	4 7	- 2	21 19	-10 - 2	6.5	- 4.1 4.2	Hopedale Port aux Basques St. Albans	1 6 M	4 4 M	12	- 7 - 1 - 2P	3.3 31.0 M	- 6.0 18.6
Mould Bay Nicholson Peninsula Norman Wells A	-23 M 0	М	1 - 4P	-31 -23 - 9	0.0 M 9.0	М	Moosonee Mount Forest Muskoka A	5 6 M	- 1 M	16	- 5 - 4 - 4	M M	- 8.7 M M	St. Anthony St. John's A	0 2	X 0	6	- 5 - 3	11.4 12.3 54.2	
Pelly Bay Pond Inlet Port Burwell	-18 M	M X	1 - 8P	74 ()	1.0 2.6 M	- 2.2 X	North Bay A Ottawa Int'l A Petawawa A	7 8 8	1 0 X	16 16	- 3 - 1 - 5	17.4 19.2 17.6	3.0 0.3 X	St. Lawrence Stephenville A Wabush Lake	M 3	M 7	20	- 1 P - 4	0.0	- 6.9 - 4.8
	1		A	Allering	A STATE OF THE PARTY	A STATE OF						- CONS.				1				