



CLIMATIC PERSPECTIVES

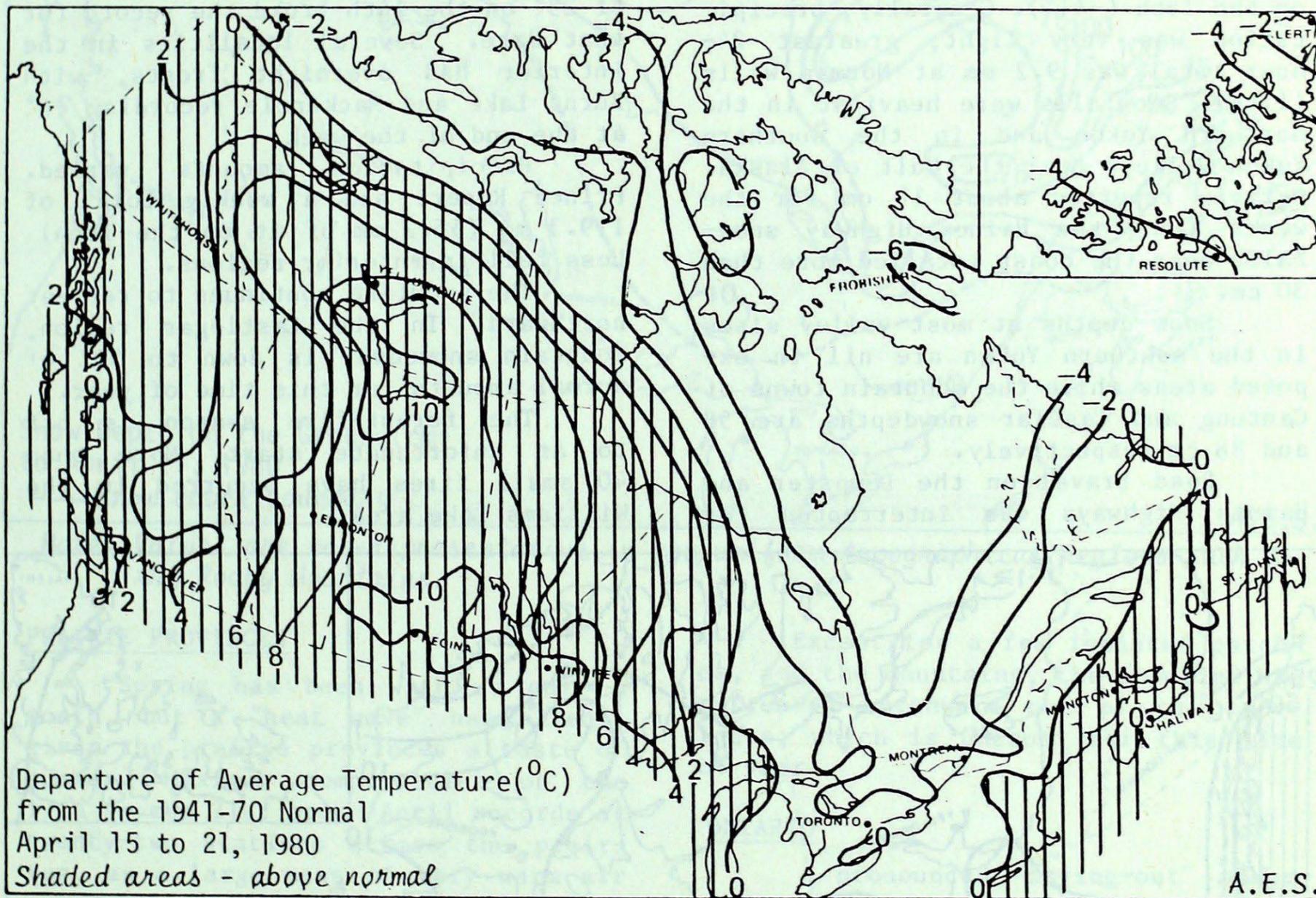
THE CANADIAN CLIMATE CENTRE,
ATMOSPHERIC ENVIRONMENT SERVICE
4905 DUFFERIN ST., DOWNSVIEW, ONTARIO M3H 5T6

NON-CIRCULATING

APRIL 25, 1980

(Aussi disponible en français)

VOL. 2 NO. 16



WEATHER HIGHLIGHTS FOR THE WEEK - APRIL 15 - 21, 1980

Heat Wave for the Prairies

Record-breaking high temperatures moved into the Prairies during the week, breaking records at twenty-two stations. Brandon, Portage-la-Prairie, Pilot Mound and Dauphin all recorded 35° on the 21st, setting a new April record for each station.

The warm air brought about spectacular reductions in snow cover. Indeed, the snowline has now virtually

vanished northward from the Prairie Provinces, which is unusual for this time of year.

The week's temperatures ranged from -41° at Eureka (15th) to the 35° mentioned above. Most rainfall was at St. Albans, Nfld. (77 mm, 16th), but there were local heavy falls on the west coast: Prince Rupert had 55.2 mm on the 18th, and 119.3 mm for the week.

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

Increasing insolation this past week has had its effect on ice conditions in the Arctic, where considerable open water is reported. In Lancaster Sound, ice is broken and moving.

Many stations had maximum temperatures well above zero all week, including Dawson, Fort Smith, and Hay River. The latter station recorded 22° on the 19th. Coldest place was Eureka on the 15th (-41°). Generally, precipitation was very light; greatest 24-hour total was 9.2 mm at Norman Wells (17th). Snowfalls were heaviest in the northern Yukon and in the southern Yukon valleys near the Gulf of Alaska. Ogilvie reported about 15 cm for the week. Along the Haines Highway snowfalls near the coast totalled more than 30 cm.

Snow depths at most valley sites in the southern Yukon are nil in exposed areas while the mountain towns of Cantung and Cassiar snowdepths are 58 and 88 cm respectively.

Road travel on the Dempster and Haines Highways was interrupted for

several days due to snow and blowing snow. The Carcross Skyway road has recently been plowed and will open for traffic this coming week.

At Cape Hooper, a maximum wind gust of 98 km/h was sustained for 1 minute on the 20th.

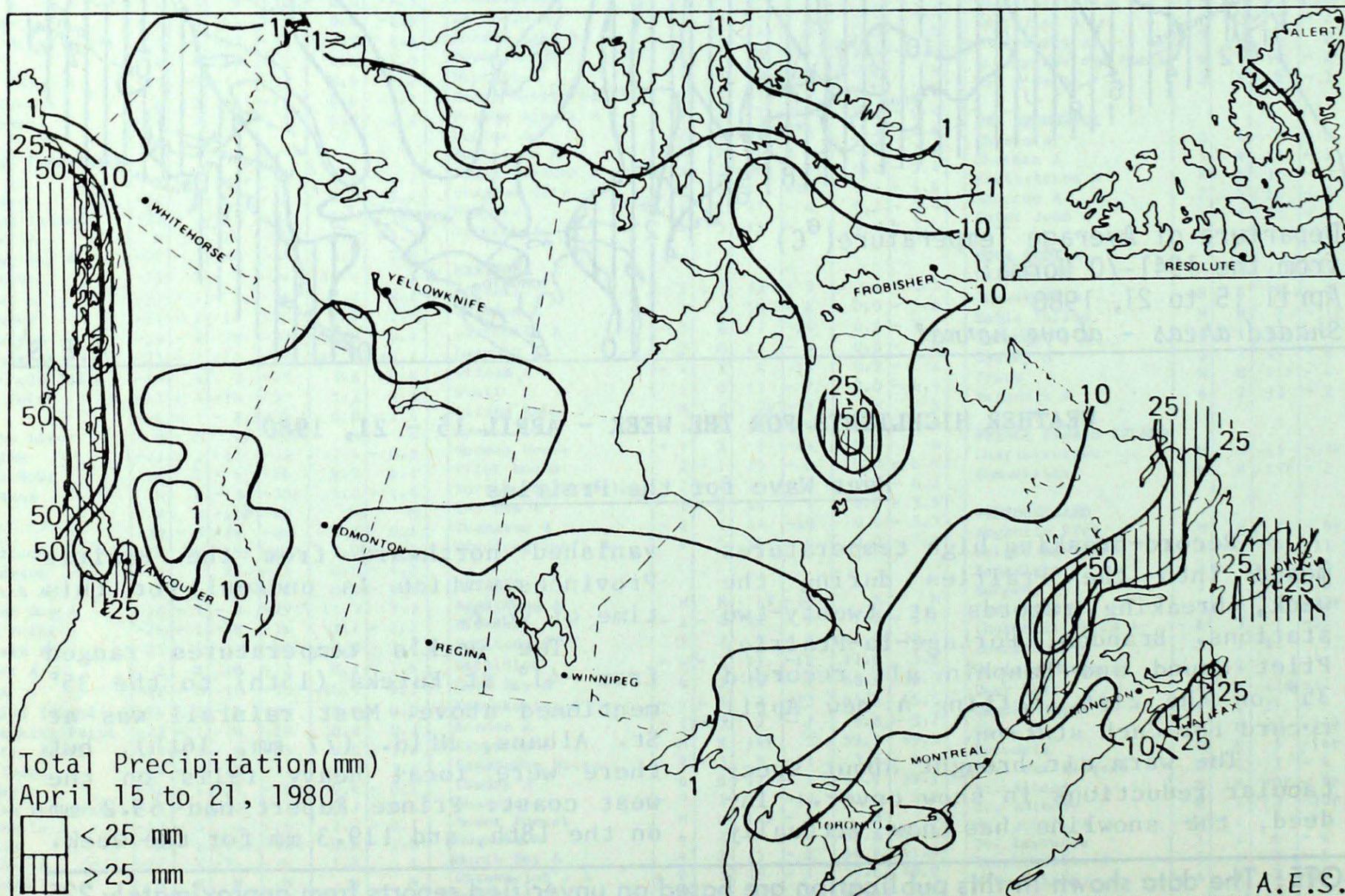
BRITISH COLUMBIA

Mild weather continued this week in British Columbia. Kamloops' maximum of 25° on the 16th broke the record for that date. Several localities in the interior had overnight frosts, with Burns Lake and Mackenzie recording -6° at the end of the week.

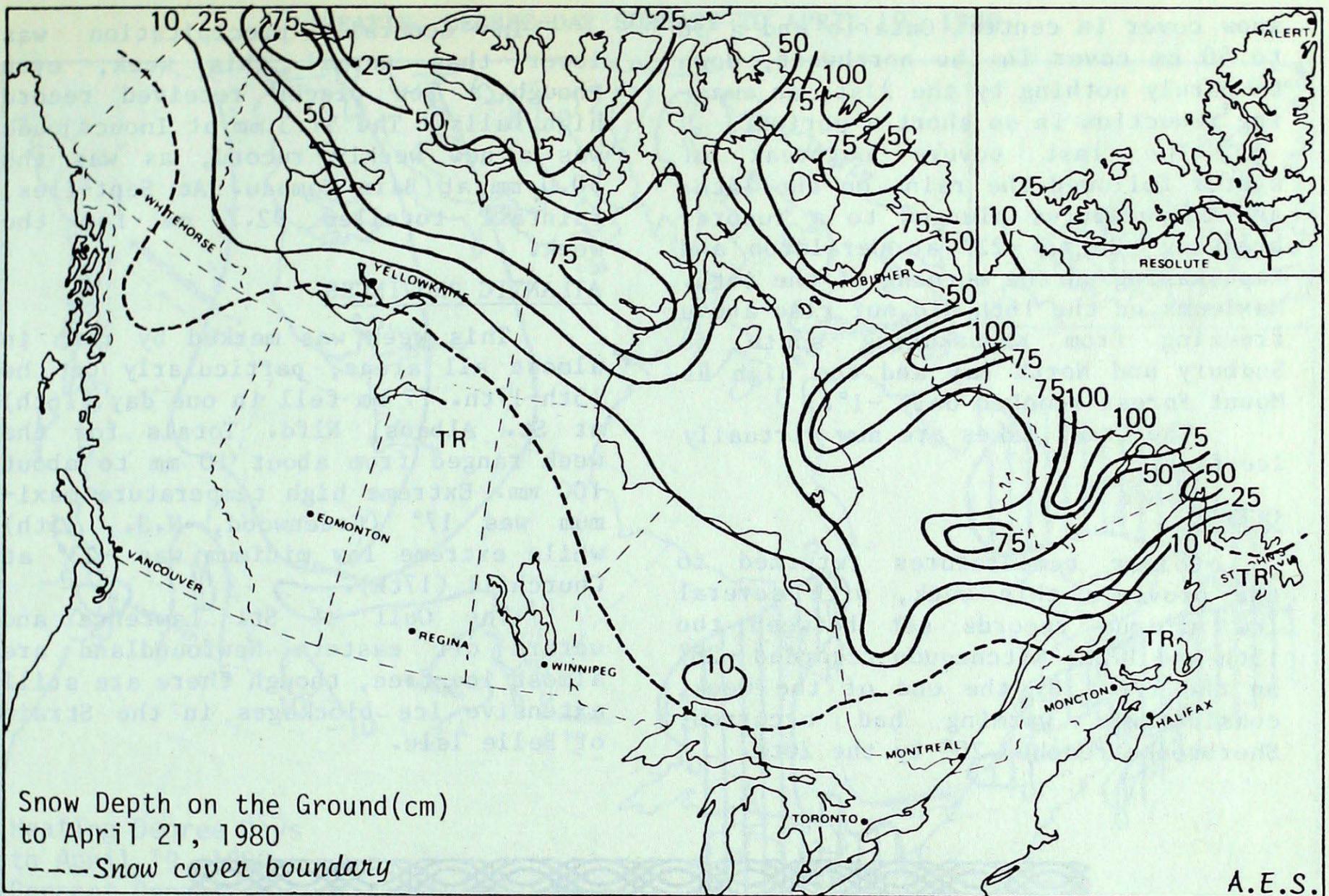
Precipitation amounts varied. Prince Rupert had a weekly total of 119.3 mm (55.2 mm of it on the 18th). Less fell in interior regions.

The snowline continues to retreat northward. In the Castlegar region, mountain snowcover is down to 50% of normal amounts for this time of year.

The forest-fire season is off to an unfortunate start. More than 40 small fires have occurred in the Williams Lake area.



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



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PRAIRIE PROVINCES

Spring has been with us only a month, but a "heat wave" has already given the prairie provinces a taste of summer. Maximum temperatures on the 17th to the 21st broke April records at twenty-two stations across the prairies, as a large mass of very warm air moved into the region. Swift Current recorded 34° on the 20th (previous high for April being 33° on 29/4/39). Portage-la-Prairie reached 31° on the 18th (29 on 18/4/15), while farther east, Winnipeg soared to 34° on the 20th, equalling the all-time April record of 29/4/51. Highest temperatures were 35° on the 21st at Portage-la-Prairie, Brandon, Pilot Mound and Dauphin, all being April records.

Soil moisture is still classed as "good", even though Winnipeg has now gone 26 days without measurable precipitation. In fact this spring has been the longest without precipitation since 1944.

Except for a few isolated patches, and the mountains, the snowline has retreated northward out of the provinces, which is unusual for this time of year.

ONTARIO

A pronounced "drying-out" occurred across Ontario during the week, following a wet March in southern Ontario and the heavy rains of early April culminating in the 30 to 40 mm falls on the 14th, barely any precipitation at all fell across the province since. Sunny skies took hold on the 18th and all Ontario enjoyed the first good weekend weather of the spring season on the 19th and 20th.

During the week, very warm temperatures spilled over from the then current Prairie heat wave into northwestern Ontario, driving afternoon readings into the twenties celsius. The effect of this warm spell in the north was to reduce a 10 to 15 cm of

snow cover in central Ontario and a 30 to 40 cm cover in the northwest, down to barely nothing by the 21st, an amazing reduction in so short a period.

The last severe outbreak of winter followed the rains on the 14th, and temperatures plunged to a record-breaking -20 to -22° at Geraldton and Kapuskasing on the morning of the 16th. Maximums on the 16th did not rise above freezing from Kapuskasing south to Sudbury and North Bay and the high at Mount Forest reached only -1° .

The Great Lakes are now virtually ice-free.

QUEBEC

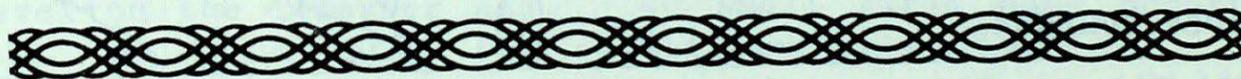
Colder temperatures returned to the province this week, with several low minimum records set between the 15th and 17th. Nichequon recorded -28° on the 17th. By the end of the week, considerable warming had occurred; Sherbrooke reached 20° by the 20th.

In General, precipitation was lower than normal this week, even though a few places received record high falls. The 51.3 mm at Inoucdjouac was a new weekly record, as was the 50.0 mm at Baie Comeau. At Sept-Iles, rainfall totalled 92.7 mm for the week.

ATLANTIC PROVINCES

This week was marked by rain in almost all areas, particularly on the 15th-17th. 77 mm fell in one day (16th) at St. Albans, Nfld. Totals for the week ranged from about 10 mm to about 100 mm. Extreme high temperature maximum was 17° (Greenwood, N.S., 15th) while extreme low minimum was -23° at Churchill (17th).

The Gulf of St. Lawrence and waters off eastern Newfoundland are almost ice-free, though there are still extensive ice blockages in the Strait of Belle Isle.



CLIMATIC PERSPECTIVES

Staff

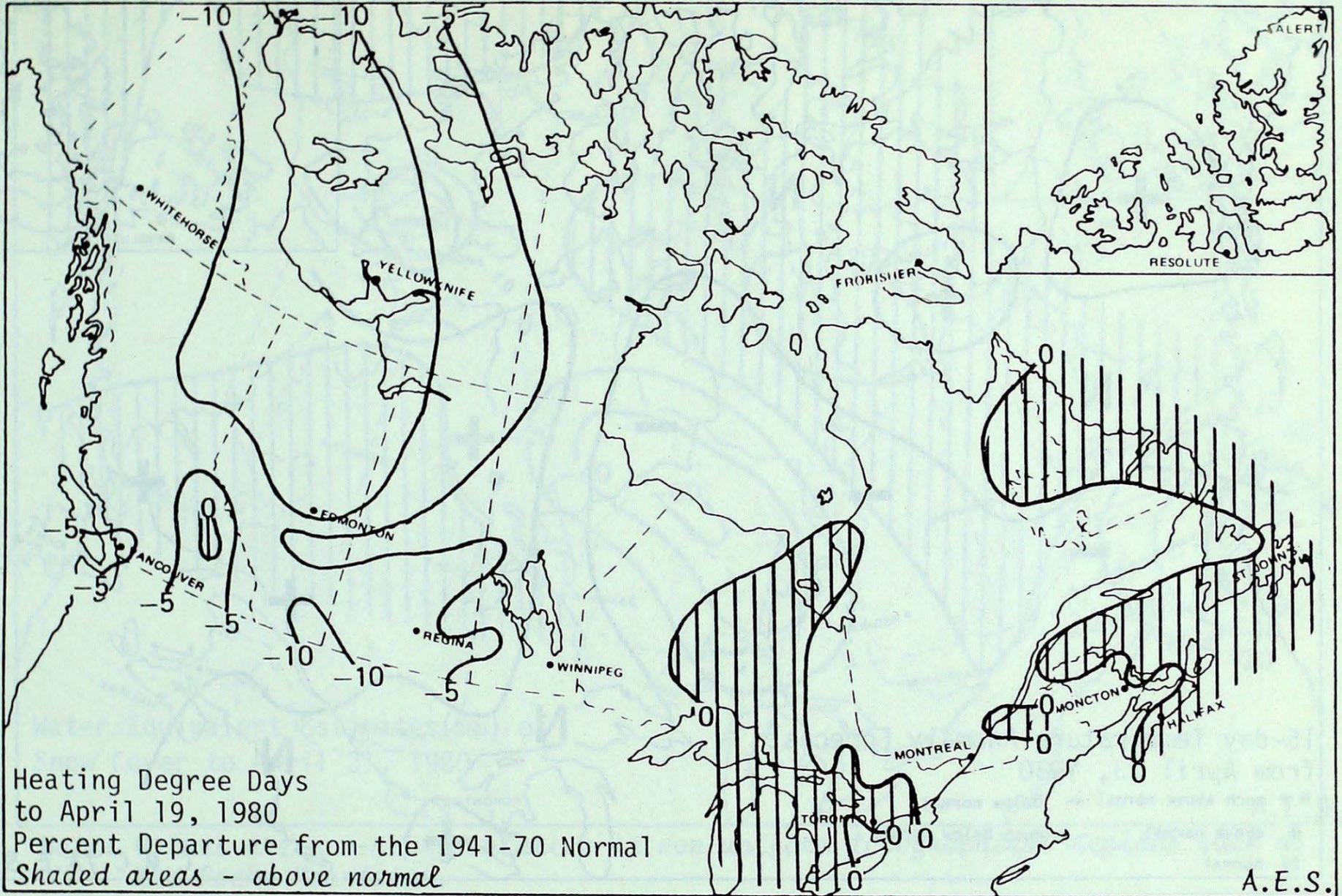
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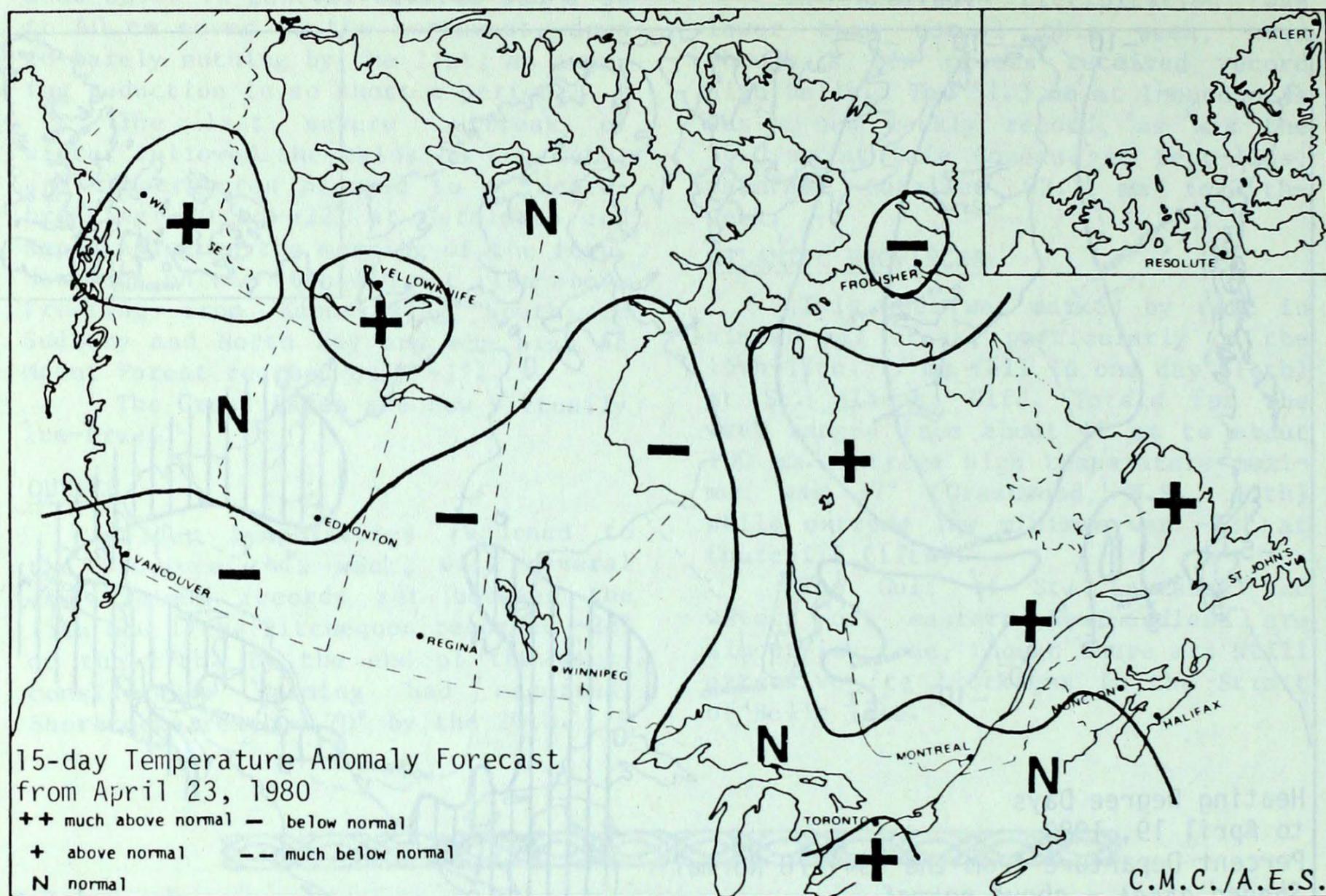
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HEATING DEGREE-DAY SUMMARY TO APRIL 19, 1980



STATION	MONTHLY CUMULATIVE TOTAL	MONTHLY DIFF. FROM 1941-70 NORMAL	SEASONAL TOTAL	SEASONAL DIFF. FROM 1941-70 NORMAL	SEASONAL PERCENT OF NORMAL
Resolute	886.5	69.5	1065.0	-87.0	99
Inuvik	723.0	68.0	8073.5	-1006.5	89
Whitehorse	292.0	-80.0	5730.0	-498.0	92
Vancouver Int'l A	164.5	-17.5	2574.0	-97.0	96
Edmonton Mun A	209.0	-87.0	4671.0	-590.0	89
Calgary Int'l A	239.0	-62.0	4520.5	-291.5	94
Regina	223.5	-90.5	5121.0	-372.0	93
Winnipeg Int'l A	250.0	-66.0	6453.5	-30.5	99
Thunder Bay	307.5	-18.5	5146.5	-53.5	99
Windsor	219.5	9.5	3379.5	24.5	101
Toronto Int'l A	245.0	-1.0	3803.0	35.0	101
Ottawa Int'l A	238.0	-23.0	4211.0	-154.0	96
Montreal Int'l A	236.5	-22.5	4125.0	-53.5	99
Quebec	278.0	-31.0	4698.5	32.5	101
Saint John, N.B.	264.0	-37.0	4101.5	-126.5	97
Halifax	270.0	-10.0	3668.5	74.5	102
Charlottetown	277.5	-36.5	4090.0	17.0	100
St. John's, Nfld.	339.5	4.5	4105.5	68.5	102

15 DAY TEMPERATURE ANOMALY FORECAST

Forecast Method

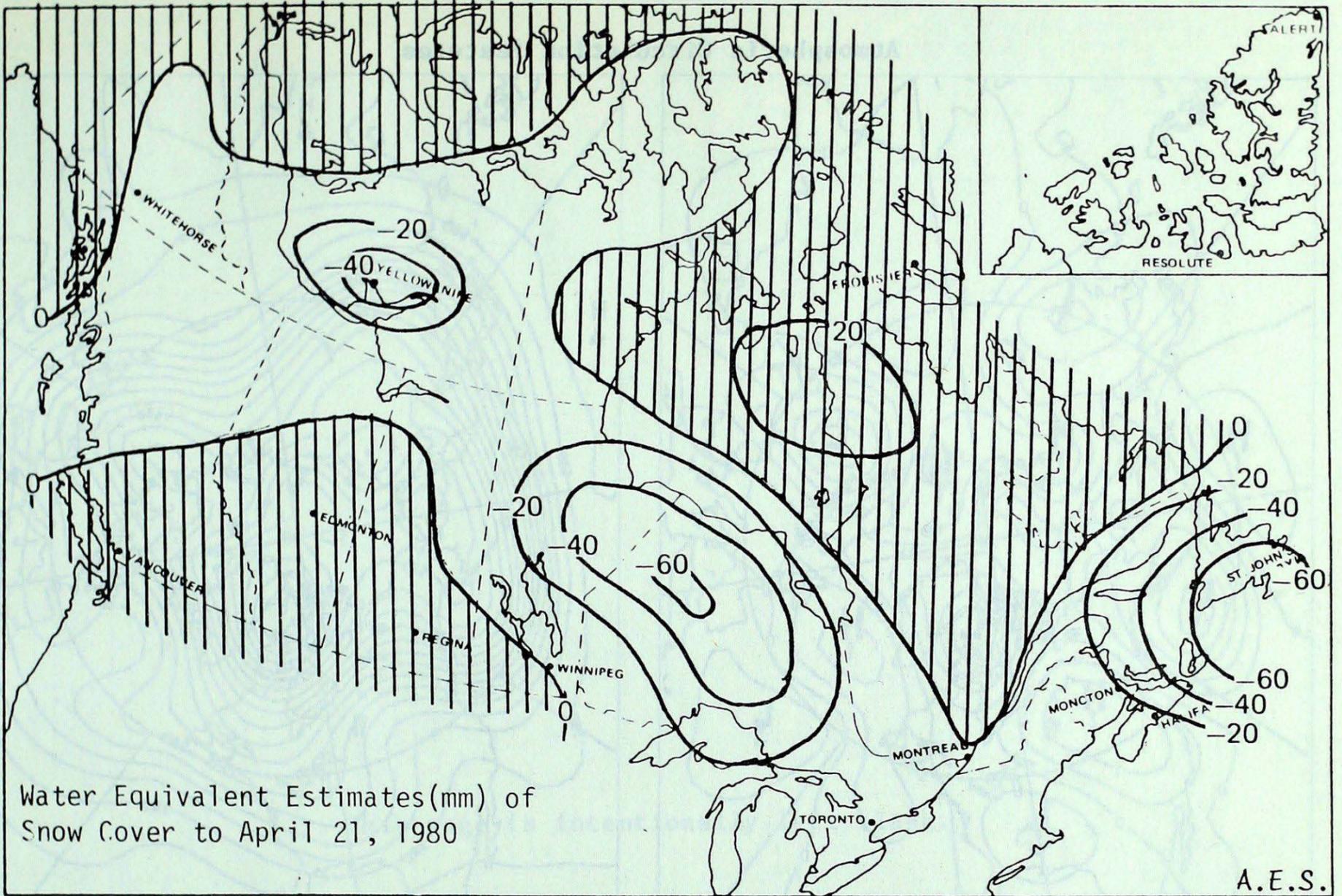
Analogue technique based on point prediction at 70 Canadian stations.

Temperature Scale

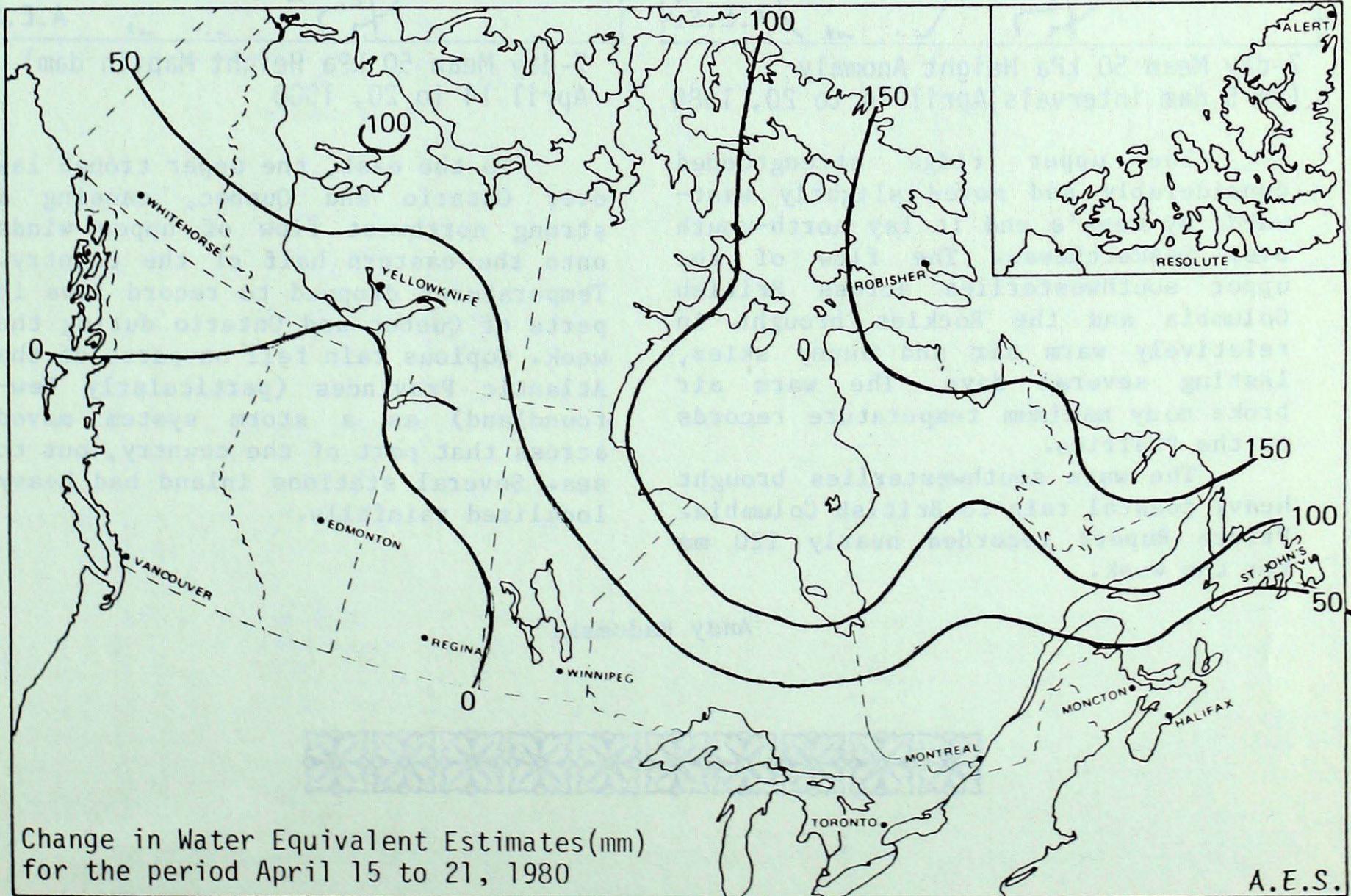
Each temperature class is designed to contain 20% of the historically observed day means pertinent to specific location and time of year:

StationCurrent Temperature Anomaly Forecast

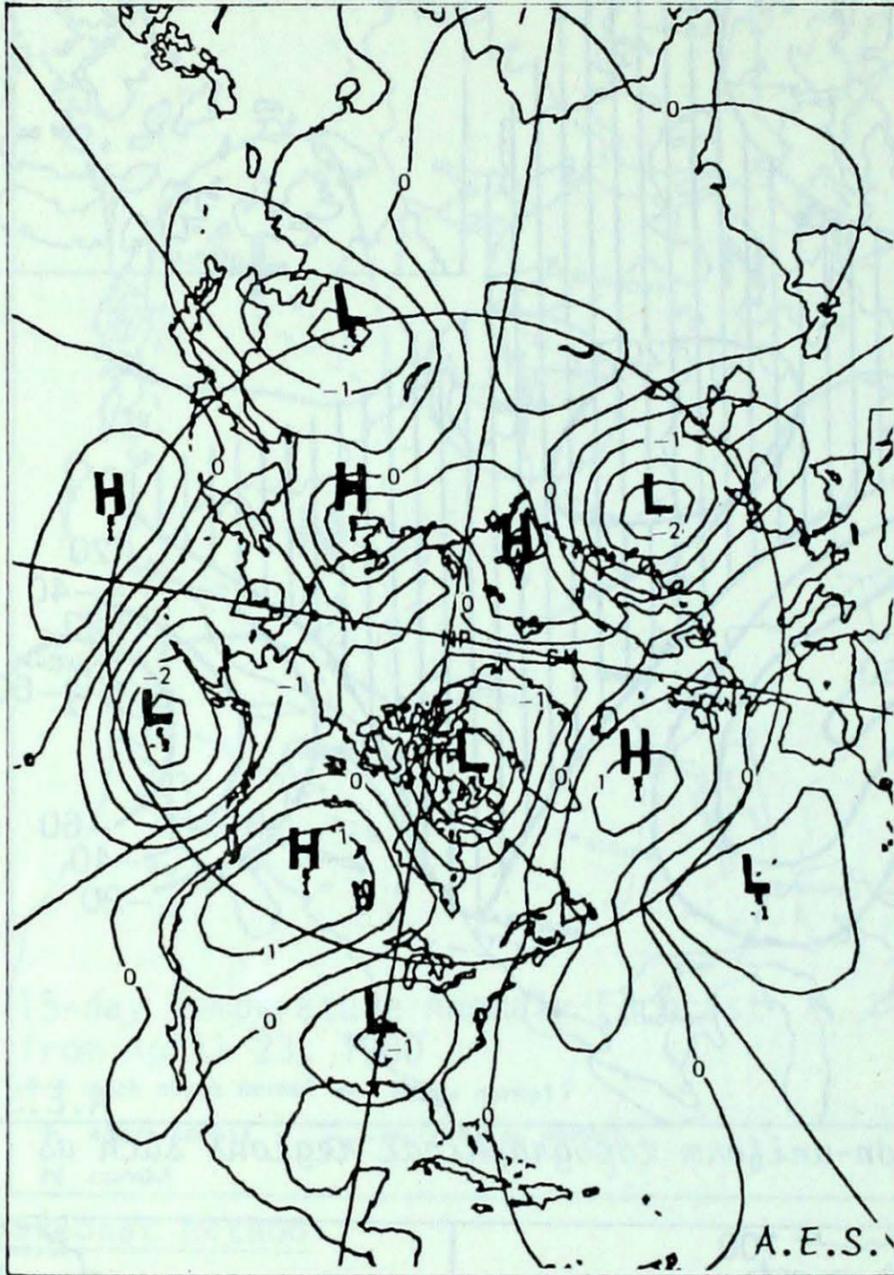
<u>Station</u>		<u>Current Temperature Anomaly Forecast</u>
Whitehorse	Above Normal	From 0.5° to 1.7° above Normal
Victoria	Below Normal	From 0.3° to 1.0° below Normal
Vancouver	Below Normal	From 0.3° to 1.0° below Normal
Edmonton	Near Normal	Within 0.6° of Normal
Regina	Below Normal	From 0.7° to 2.4° below Normal
Winnipeg	Below Normal	From 0.7° to 2.5° below Normal
Thunder Bay	Near Normal	Within 0.5° of Normal
Toronto	Above Normal	From 0.6° to 1.9° above Normal
Ottawa	Near Normal	Within 0.6° of Normal
Montreal	Near Normal	Within 0.5° of Normal
Quebec	Above Normal	From 0.4° to 1.5° above Normal
Fredericton	Above Normal	From 0.4° to 1.5° above Normal
Halifax	Above Normal	From 0.4° to 1.3° above Normal
Charlottetown	Above Normal	From 0.5° to 1.6° above Normal
St. John's	Above Normal	From 0.4° to 1.4° above Normal
Goose Bay	Above Normal	From 0.6° to 2.0° above Normal
Frobisher Bay	Below Normal	From 0.9° to 3.0° below Normal
Inuvik	Near Normal	Within 0.9° of Normal



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



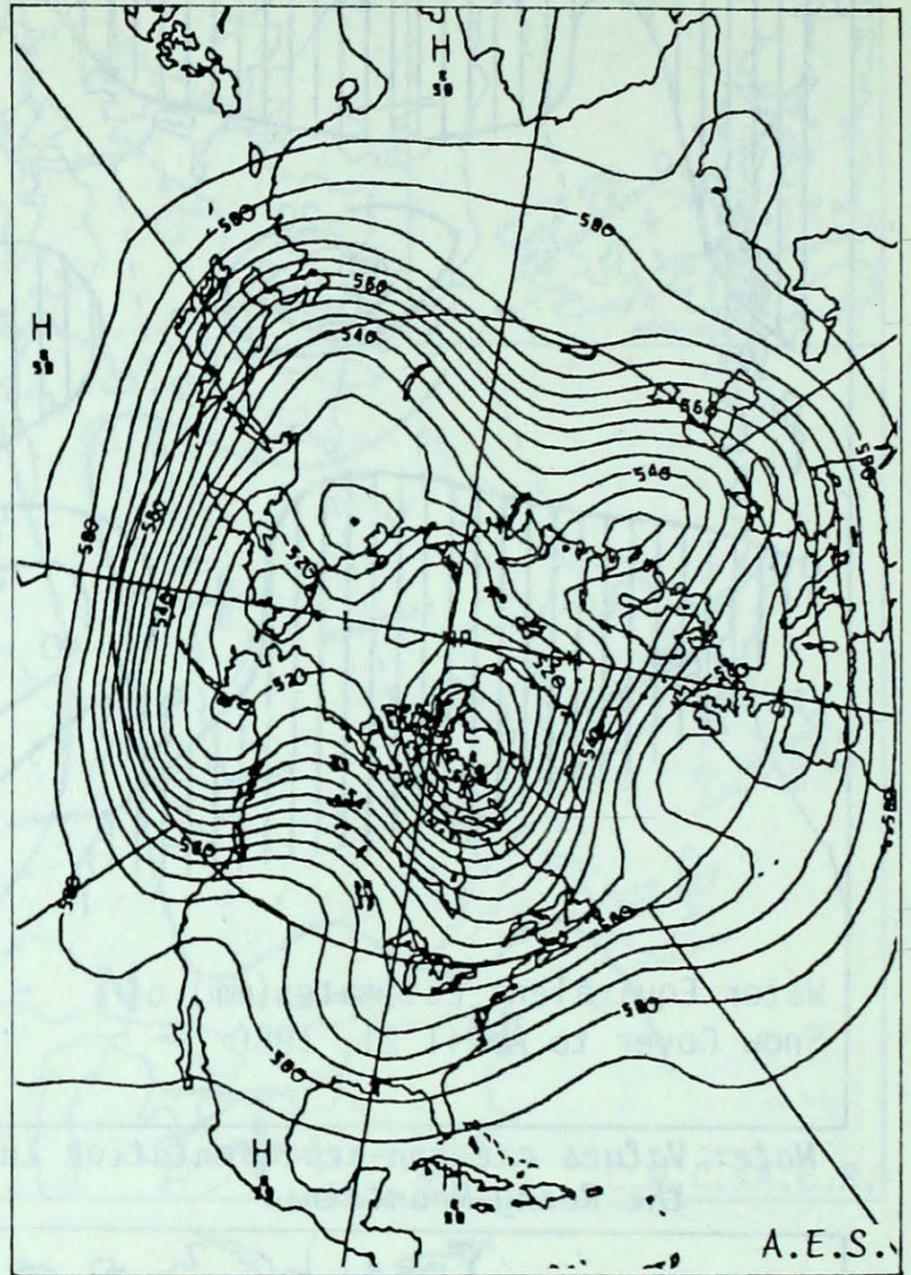
Atmospheric Circulation Features



7-day Mean 50 kPa Height Anomaly
(in 5 dam intervals) April 14 to 20, 1980

The upper ridge strengthened considerably and moved slightly eastward; by week's end it lay north-south over Saskatchewan. The flow of the upper southwesterlies across British Columbia and the Rockies brought in relatively warm air and sunny skies, lasting several days. The warm air broke many maximum temperature records on the Prairies.

The warm southwesterlies brought heavy coastal rain to British Columbia. Prince Rupert recorded nearly 120 mm for the week.



7-day Mean 50 kPa Height Map (in dam)
April 14 to 20, 1980

To the east, the upper trough lay over Ontario and Quebec, causing a strong northwest flow of upper winds onto the eastern half of the country. Temperatures dropped to record lows in parts of Quebec and Ontario during the week. Copious rain fell on parts of the Atlantic Provinces (particularly Newfoundland) as a storm system moved across that part of the country, out to sea. Several stations inland had heavy localized rainfalls.

Andy Radomski



TEMPERATURE AND PRECIPITATION DATA FOR THE WEEK ENDING 0600 G.M.T. APRIL 22, 1980

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							Resolute A	-26	-4	-19	-34	0.2	-1.2	Pickle Lake	4	4	25	-13	0.0	-13.0
Abbotsford A	11	2	19	2	38.1	18.2	Sachs Harbour	-22	-3	-13	-38	0.0	-0.8	Red Lake A	8	6	29	-8	0.0	-8.5
Alert Bay	9	1	15	3	72.8	50.3	Shepherd Bay A	-23	-2	-6	-32	3.0	-0.1	Simcoe	8	0	19	-4	1.0	-27.6
Blue River	M	X	16P	-2	M	X	Tuktoyaktuk	-19	-1	-12	-27	2.2	1.4	Sioux Lookout A	7	5	28	-8	0.0	-14.5
Bull Harbour	8	1	13	2	50.6	21.2	Yellowknife A	1	8	12	-8	1.6	-0.8	Sudbury A	2	-3	16	-14	11.3	-4.1
Burns Lake	M	X	14P	-6P	M	X	ALBERTA							Thunder Bay A	6	2	21	-9	0.2	-14.3
Cape Scott	8	1	12	3	43.9	-5.6	Banff	9	6	19	0	8.1	2.2	Timmins A	1	-2	18	-17	2.4	-11.4
Capt St. James	7	1	13	4	37.5	15.4	Brooks	M	M	M	M	M	M	Toronto Int'l A	5	-2	18	-6	0.6	-15.4
Castlegar A	12	5	24	1	23.8	14.3	Calgary Int'l A	12	8	23	2	0.0	-6.4	Trenton A	6	-2	18	-5	3.3	-13.5
Comox A	10	2	17	1	15.0	2.8	Cold Lake A	12	10	24	4	1.6	-4.3	Trout Lake	1	4	15	-14	0.0	-8.7
Cranbrook A	10	5	22	0	3.4	-3.5	Coronation A	11	7	27	-3	0.0	-5.5	Wawa A	M	X	13P	-13	M	X
Dease Lake	3	2	12	-5	2.0	-1.8	Edmonton Int'l. A	M	M	24P	-1	0.0	-4.5	Warton A	4	-2	20	8	6.8	-9.2
Estevan Point	M	M	11P	3	M	M	Edmonton Mun. A	12	8	25	3	0.0	-5.7	Windsor A	8	-1	22	-2	3.4	-14.2
Fort Nelson A	7	5	18	-4	3.0	-1.9	Edmonton Namao A	11	8	24	1	0.0	-2.9	QUEBEC						
Fort St. John A	8	5	17	0	0.0	-6.6	Edson A	8	5	21	-3	0.0	-6.8	Bagotville A	1	-1	14	-10	21.8	9.3
Kamloops A	14	5	25	2	0.0	-1.3	Fort Chipewyan	M	M	20P	-2	0.0	-4.1	Baie Comeau	0	-1	6	-9	50.0	28.8
Langara	6	0	11	3	117.8	91.6	Fort McMurray A	12	10	25	1	0.0	-3.0	Blanc Sablon	M	M	5P	-5	M	M
Lytton	M	M	23P	3	M	M	Grande Prairie A	9	5	19	-1	1.4	-3.1	Border	M	M	-10P	-26	M	M
Mackenzie A	M	X	14P	-6P	M	X	High Level A	8	4	18	-3	0.6	-0.5	Chibougamau	-4	X	10	-18	20.0	X
McInnes Island	M	M	12P	3P	M	M	Jasper	9	5	17	0	5.1	-1.0	Fort Chimo A	-12	-5	1	-24	4.3	-0.3
Penticton A	12	3	20	0	2.6	-1.2	Lethbridge A	13	7	27	3	0.0	-8.3	Gaspé A	2	X	10	-7	15.5	X
Port Hardy A	8	1	14	1	68.2	43.3	Medicine Hat A	15	8	31	2	0.0	-6.8	Grindstone Island	2	1	8	-3	18.6	3.8
Prince George A	7	2	17	-4	12.5	5.9	Peace River A	8	6	17	-2	0.0	-3.0	Inoucdjouac	-15	-5	-4	-24	51.3	47.0
Prince Rupert A	7	2	11	3	119.3	82.1	Red Deer A	11	7	24	-1	0.0	-5.6	Koartak	M	X	1	-24P	5.6	X
Quesnel A	8	3	20	-5	0.8	-4.1	Rocky Mountain House	9	6	22	-3	1.0	-6.5	La Grande Rivier A	-8	X	8	-21	9.2	X
Revelstoke A	9	3	19	0	22.0	16.1	Slave Lake A	8	5	24	-1	0.0	-2.2	Maniwaki	-2	-3	15	-9	10.4	-5.6
Sandspit A	7	1	11	2	62.5	41.7	Vermilion A	12	9	24	3	1.4	-3.6	Matagami A	-5	X	13	-19	16.3	X
Smithers A	7	2	15	-3	0.9	-3.3	Whitecourt	10	7	22	1	0.0	-6.2	Mont Joli A	2	-1	9	-7	27.7	15.6
Spring Island	M	M	M	M	M	M	SASKATCHEWAN							Montréal Int'l A	5	-2	16	-6	1.2	-15.7
Stewart A	M	X	12P	3P	M	X	Broadview	14	12	32	-3	0.2	-9.7	Natashquan A	-1	-1	4	-8	29.0	14.5
Terrace A	6	0	12	-1	30.5	21.3	Buffalo Narrows	M	M	23P	3P	M	M	Nitchequon	-10	-6	2	-28	16.1	7.9
Tofino A	M	M	M	M	M	M	Cree Lake	8	X	20	-1	0.2	X	Port Menier	-1	-1	6	-8	15.9	4.2
Vancouver Int'l A	10	1	17	2	18.4	6.4	Estevan A	15	10	32	-1	0.0	-8.7	Poste de la Baleine	-10	-5	5	-22	5.2	-1.5
Victoria Int'l A	10	1	17	3	10.8	1.1	Hudson Bay	14	12	29	-4	M	M	Québec A	3	-1	16	-8	18.3	-0.9
Williams Lake A	9	5	17	-3	0.0	-2.5	Kindersley	13	10	31	-0	0.3	-5.1	Rivière du Loup	2	-1	8	-7	27.6	18.7
YUKON							La Ronge A	11	9	28	-0	2.3	-3.8	Roberval A	1	-2	14	-12	10.4	-1.3
Burwash A	1	3	7	-9	0.6	-3.9	Meadow Lake A	11	X	26	-0	1.6	X	Schefferville A	-10	-5	1	-25	8.2	-1.0
Dawson A	1	2	10	-8	3.4	1.0	Moose Jaw A	15	10	33	2	3.8	-2.8	Sept-Iles A	-1	-1	5	-9	92.7	79.4
Komakuk Beach A	-18	-1	-12	-25	0.0	-0.6	Nipawin A	12	X	26	1	1.6	X	Sherbrooke A	3	-2	20	-7	5.7	-12.8
Mayo A	3	3	8	-3	8.6	6.3	North Battleford A	13	9	29	3	0.5	-4.8	Ste. Agathe des Monts	2	-2	14	-8	8.4	-7.2
Shingle Point A	-18	-2	-11	-27	0.8	-1.4	Prince Albert A	12	9	28	-1	0.2	-4.6	Val d'Or A	-1	-4	14	-15	12.0	2.2
Watson Lake A	3	2	10	-5	2.0	-4.6	Regina A	14	10	33	0	0.8	-4.9	NEW BRUNSWICK						
Whitehorse A	3	2	9	-2	1.8	-0.6	Saskatoon A	14	9	30	4	0.2	-5.5	Charlo A	2	0	9	-5	10.4	-4.5
NORTHWEST TERRITORIES							Swift Current A	14	10	34	2	1.6	-3.9	Chatham A	5	1	16	-6	20.5	4.5
Alert	-23	-1	-18	-30	7.0	5.9	Uranium City	7	10	19	-2	0.2	-3.1	Fredericton A	5	0	16	-5	14.9	-2.0
Baker Lake	M	M	-5	-30P	12.0	9.5	Wynyard	14	12	30	-1	0.8	-3.1	Moncton A	5	1	15	-6	11.6	-6.1
Broughton Island	M	M	17P	-32	0.7	-2.1	Yorkton A	13	10	30	-3	0.0	-4.0	Saint John A	4	1	14	-5	15.6	-7.0
Byron Bay A	-22	-2	-14	-34	0.4	-1.3	MANITOBA							NOVA SCOTIA						
Cambridge Bay A	-22	-2	-12	-34	1.4	-0.4	Bissett	11	6	30	-5	0.0	-21.9	Eddy Point	4	X	11	-2	30.1	X
Cape Dorset	-18	X	-6	-25	21.2	X	Brandon A	14	10	35	-7	0.0	-7.5	Greenwood A	M	M	17P	-5	M	M
Cape Dyer A	M	M	-16P	-39	M	M	Churchill A	-6	4	5	-18	4.2	-3.3	Sable Island	4	0	9	-1	10.4	-10.0
Cape Hooper	M	M	-11P	-30	2.5	-0.9	Dauphin A	14	11	35	-6	0.0	-10.2	Shearwater A	4	0	10	-2	41.6	19.3
Cape Parry A	M	M	-13	-27P	0.2	-2.4	Gillam A	2	X	17	-16	5.6	X	Sydney A	4	1	12	-2	20.0	-3.7
Cape Young A	-21	-2	-12	-32	9.0	7.4	Gimli	9	6	28	-4	0.0	-9.8	Truro	5	2	14	-5	M	M
Chesterfield Inlet	-19	-3	-1	-30	2.2	-0.6	Island Lake	8	X	29	-11	0.0	X	Yarmouth A	5	0	14	-2	9.6	-9.1
Clinton Point	-20	-3	-10	-28	10.0	7.6	Lynn Lake	7	7	22	-11	1.0	-4.9	PRINCE EDWARD ISLAND						
Clyde	M	M	16P	-31	M	M	Norway House	8	X	24	-10	0.0	X	Charlottetown	4	1	13	-5	16.6	-1.5
Contwoyto Lake	M	M	OP	-24P	M	M	Pilot Mound	14	10	35	-5	0.0	-15.6	Summerside	4	1	13	-4	19.4	4.4
Coppermine	-18	-1	-7	-29	19.0	16.4	Portage la Prairie	14	10	35	-6	0.0	-13.5	NEWFOUNDLAND						
Coral Harbour	-21	-6	-5	-31	6.8	3.6	The Pas A	9	9	25	-4	0.3	-7.5	Argentia VTMS	4	X	15	-2	16.0	X
Dewar Lakes	M	M	-20P	-31	0.0	-1.1	Thompson A	7	7	22	-12	2.6	-7.5	Battle Harbour	-2	0	3	-6	17.6	3.5
Ennadai	M	M	-6P	-12	M	M	Winnipeg Int'l A	M	M	32P	-6P	M	M	Bonavista	M	M	10P	-3	M	M
Eureka	-32	-6M	-24	-41	0.8	0.3	ONTARIO							Burgeo	2	1	7	-3	26.4	1.3
Fort Reliance	-1	8	10	-12	8.4	6.0	Armstrong A	3	2	17	-15	M	M	Cartwright	-2	0	6	-12	32.2	21.1
Fort Simpson	5	8	16	-7	1.4	-0.9	Atikokan	7	2	28	-9	0.0	-18.2	Churchill Falls A	-7	0	3	-23	14.4	2.1
Fort Smith A	8	10	21	-2	1.7	-2.5	Earlton A	M	M	15P	-17	M	M	Comfort Cove	3	2	11	-4	43.1	23.2
Frobisher Bay A	-20	-7	-6	-29	12.1	6.5	Geraldton	2	-1	17	-20	1.6	-14.7	Daniels Harbour	3	2	15	-3	15.6	3.2
Gladman Point A	-23	-2	-10	-34	1.0	-0.9	Gore Bay A	4	-1	16	-9	10.5	-5.6	Deer Lake	3	2	13	-3	16.4	8.2
Hall Beach A	-25	-5	-8	-38	14.4	-12.8	Kapusking A	0	-1	18	-20	6.2	-7.9	Gander Int'l A	3	1	10	-5	37.1	18.0
Hay River A	6	10	22	-6	0.2	-5.0	Kenora A	11	8	30	-4	0.0	-11.6	Goose A	-1	-1	10	-13	18.5	7.2
Inuvik A	-15	0	-5	-20	2.2	-3.7	Kingston A	4	-3	15	-5	M	M	Hopedale	-6	-2	5	-17		