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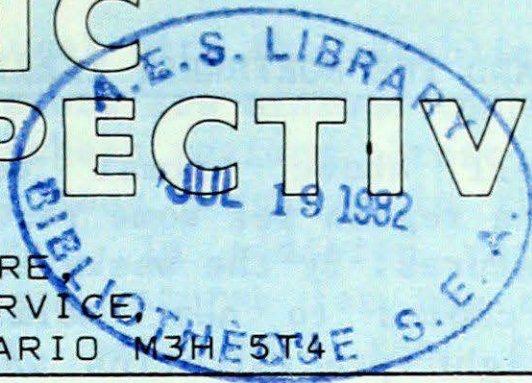
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A WEEKLY REVIEW OF CANADIAN CLIMATE

CLIMATIC PERSPECTIVES



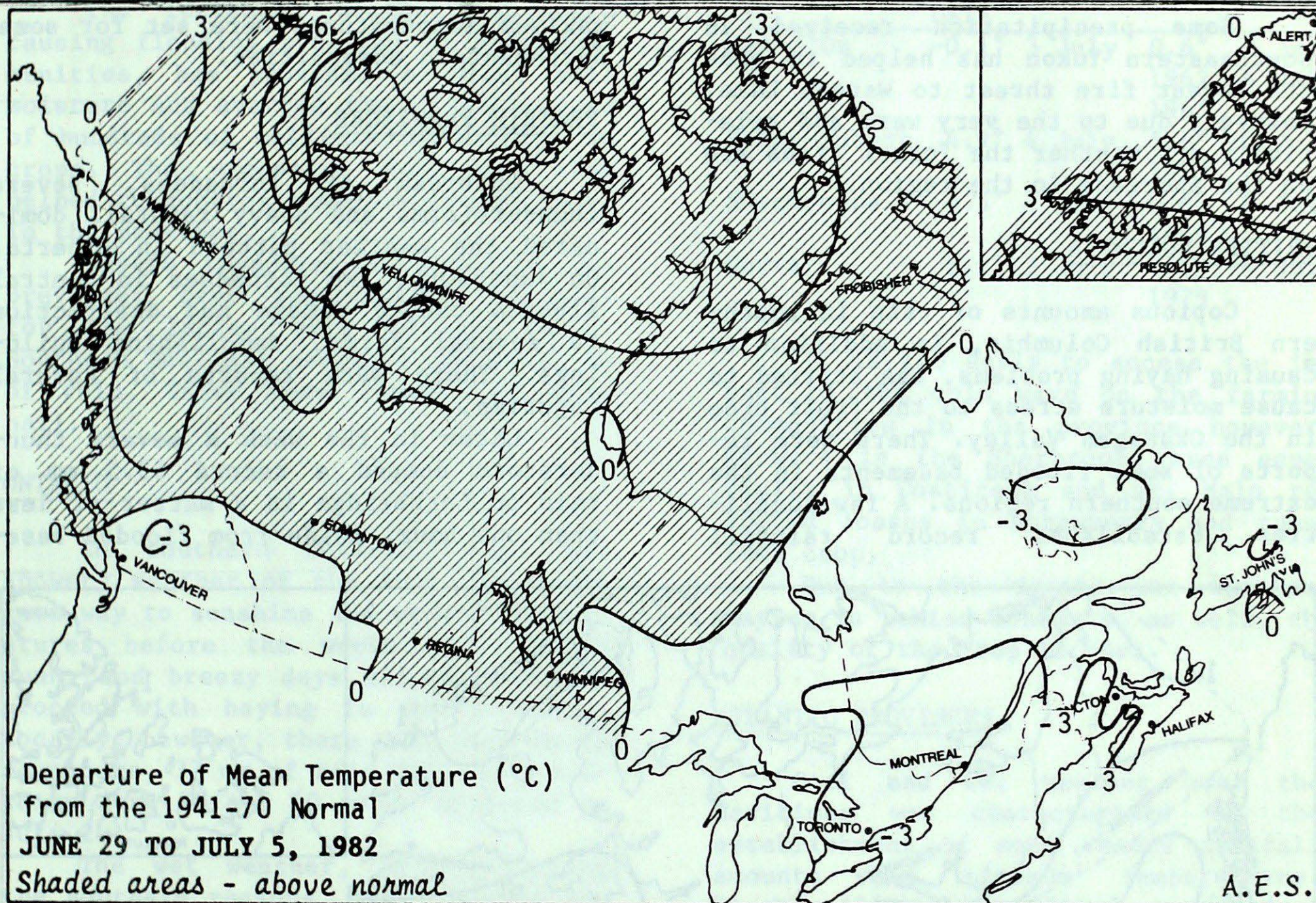
Canada

THE CANADIAN CLIMATE CENTRE
ATMOSPHERIC ENVIRONMENT SERVICE
4905 DUFFERIN ST., DOWNSVIEW, ONTARIO M3H 5T4E

JULY 9 1982

(Aussi disponible en français)

VOL.4 NO. 26



WEATHER HIGHLIGHTS FOR THE PERIOD - JUNE 29 TO JULY 5, 1982

Tornadoes cause damage and destruction to farms in central Alberta

Severe thunderstorms spawning tornadoes and heavy rainfalls in Alberta caused damage and destruction to the agricultural communities, with the initial damages estimated at over a quarter million dollars. There were numerous reports of flooded basements and some structural damages, as well several injuries were reported.

A cold wave swept through southern Québec establishing record low minimum temperatures for the month of July for several localities.

There were reports of some crop damage from frost near Sherbrooke Québec.

Very warm and dry weather in Yukon and Northwest Territories has kept the hazard of forest fires high to extreme, mainly in the western communities.

Temperatures ranged from a high of 34° at Norman Wells to a low of -4° at Cape Hooper both in Northwest Territories. Highest precipitation of the week was reported at Edson, Alberta, 144 mm.

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 THE NORTHWEST TERRITORIES

Well above normal temperatures over the region set some record maximum temperatures. By the week end temperatures cooled to near normal values. Only light precipitation was recorded by most localities, the largest fall was at Quiet Lake receiving 21 mm on July 5.

Some precipitation received in southeastern Yukon has helped to ease the forest fire threat to Watson Lake, however, due to the very warm and relatively dry weather the forest fires are on the increase in the region.

BRITISH COLUMBIA

Copious amounts of rain in southern British Columbia, in addition to causing haying problems, has started to cause moisture stress to the fruit crop in the Okanagan Valley. There were reports of some flooded basements in the extreme southern regions. A few localities established record rainfall

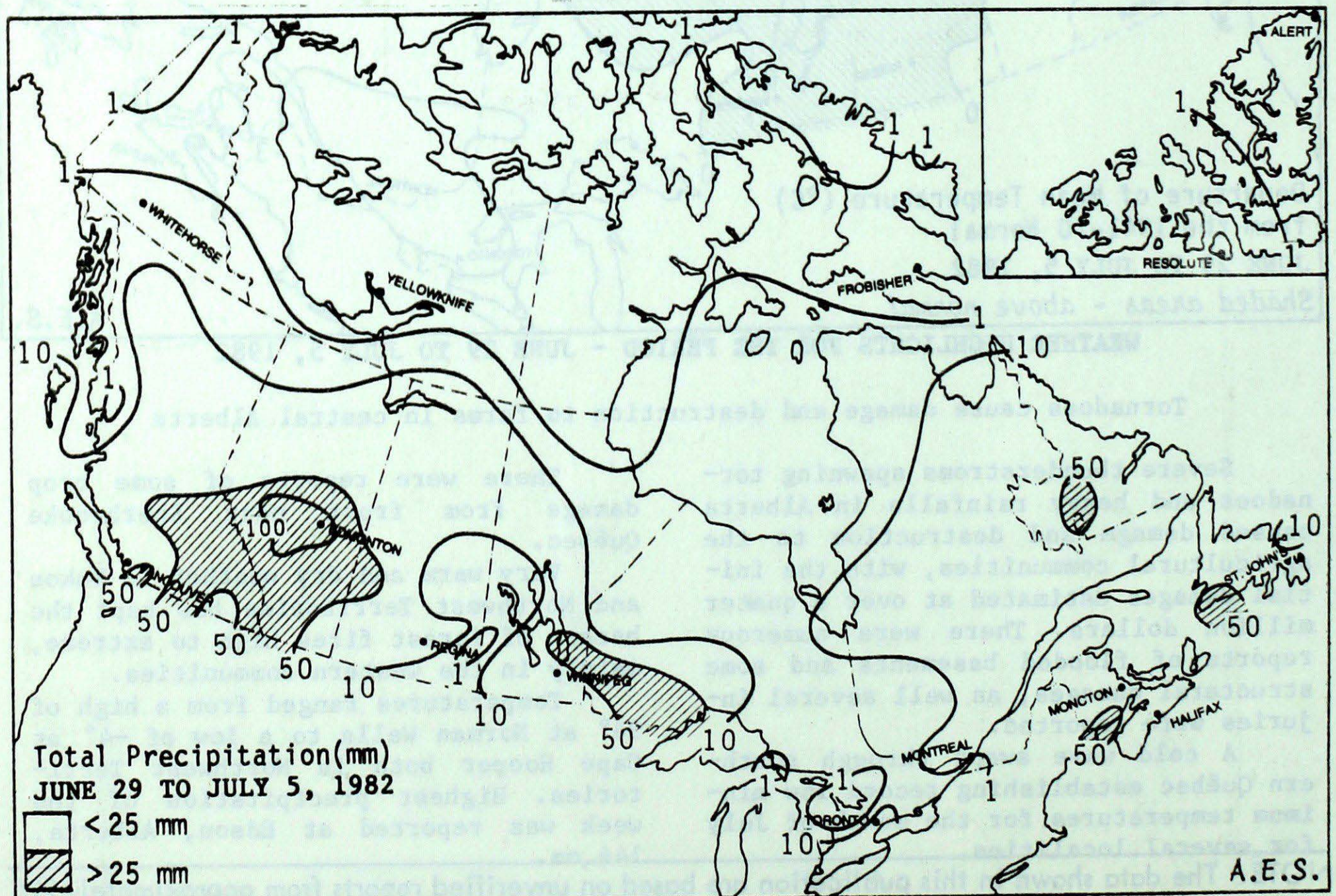
amount, Kelowna area received 23 mm of rain in 24 hours on July 4 and northeastern outskirts of Castlegar received 86 mm of rain in 12 hours on June 28.

Some rain fell over the northern regions, which has substantiated soil moisture reserves. Although rain in the area has helped to reduce forest fires, the hazard of forest fires still remains high for some localities. Record maximum temperatures were set for some northeastern communities.

PRAIRIE PROVINCES

Outbreak of tornadoes, severe thunderstorms and heavy rainfall dominated the weather pattern in Alberta. On June 30th, two tornadoes in central Alberta caused damage and destruction to several farms, demolishing buildings. There were reports of several injuries.

Later in the week a severe thunderstorm dumped a record 63.5 mm of rain on Lethbridge in a matter of less than one hour. Aside from flooded base-



ments, there were reports of considerable damage to the farming areas as a result of heavy rain, hail and gusty winds.

Yet another significant rainstorm moved into the Edmonton area over the long weekend. Some 120 to 135 mm of rain fell along Edson - Edmonton line, causing more flooding problems to the residential areas.

The inclement weather, although causing flooding problems to some communities, has provided abundant soil moisture and averted the possible loss of hundreds of millions of dollars in crops. The excessive rain has also helped to control numerous forest fires in the province.

Severe thunderstorm activity was prevalent over southeastern prairies for the latter part of the week. Southern Manitoba recorded nearly 75 mm of rain. There were reports of some hail.

ONTARIO

In southern Ontario, cool and showery weather of the last few weeks gave way to sunshine and warmer temperatures before the weeks end. Mainly sunny and breezy days allowed work to proceed with haying in the province. Locally, however, there were some heavy downpours, 37 mm of rain fell in Toronto on June 28 and 60 mm in Atikokan on July 2.

The wet weather, before leaving the southern regions, set a record low bright sunshine hours in Toronto for the month of June, being a meagre 180.6 hours (previous low, 181.3 hours in 1839).

The cool and wet weather of recent weeks have resulted in the outbreak of numerous crop diseases in the southern portions of the province.

QUÉBEC

Below normal temperatures domin-

ated the week with the establishment of several record low minimum temperatures in the southern regions. Frost was prevalent on many mornings in the Sherbrooke area. In addition record low minimum temperatures for the month of July was set for the following locations:

PLACE	TEMPERATURE DATE	OLD RECORD DATE
Val d'Or	-0.1° 3 July	0.6° 3 July 1962, 6 July 1965
Saint-Hubert	4.9° 4 July	5.6° 20 July 1929
Sherbrooke	0.5° 4 July	0.6° 8 July 1969
Dorval	6.1° 3 July	7.0° 4 July 1979

It is too early to assess the impact of the cold wave on the farming communities in the province however, growers in the Sherbrooke area especially in Coaticook and St. Malo reported losses in strawberry and tomatoes crop.

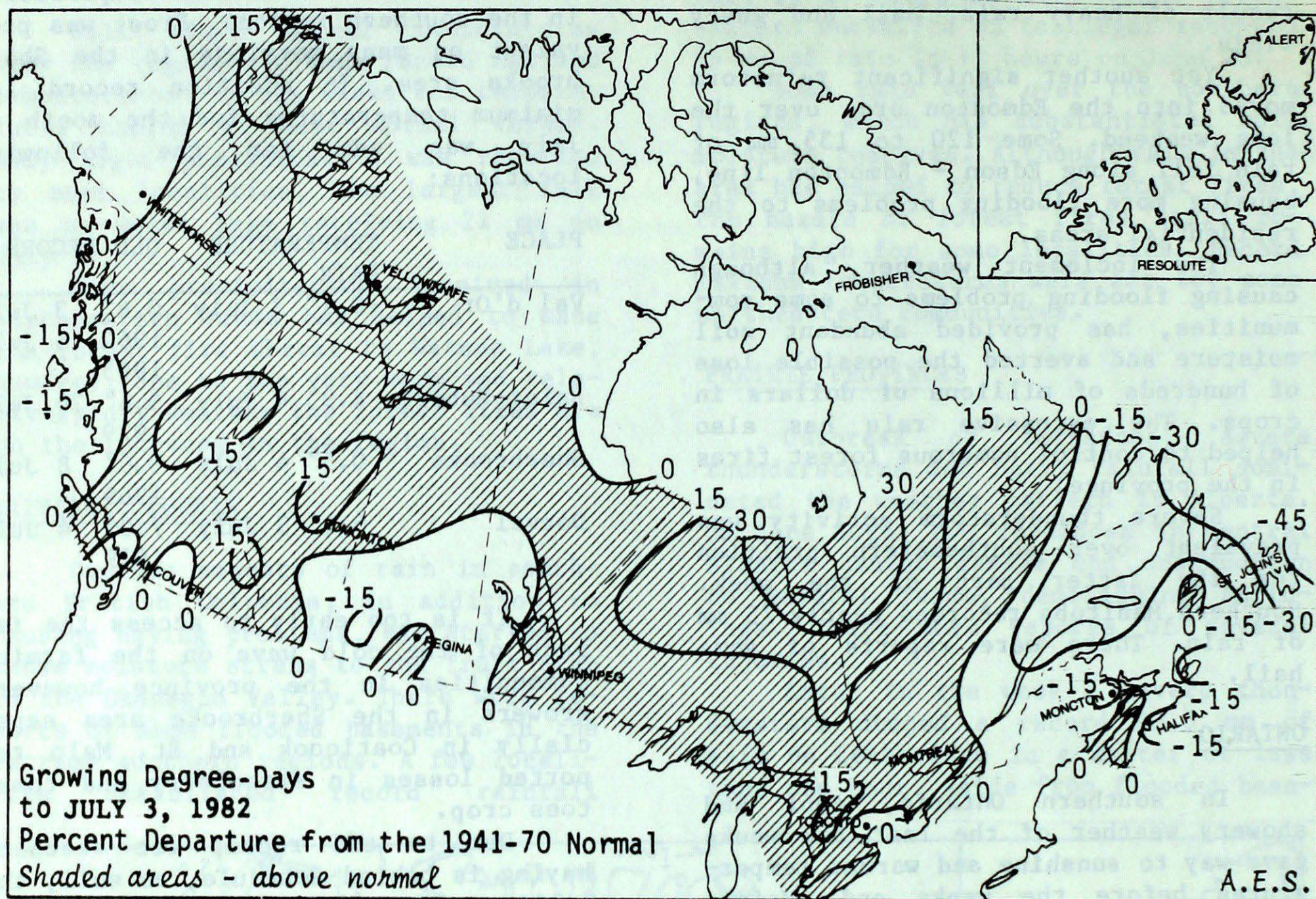
Due to the recent wet weather, haying is behind schedule, as well, the quality of the crop is poor.

ATLANTIC PROVINCES

Cool and wet weather over the Maritimes was characterized by the establishment of some record rainfall amounts and minimum temperatures. Stephenville Newfoundland reported a record 37.8 mm of rain on June 30th (old record 15.5 mm set in 1977). In addition a few record low temperatures were set over the region. Some scattered ground frost was reported in north central New Brunswick on the morning of July 4 and July 5.

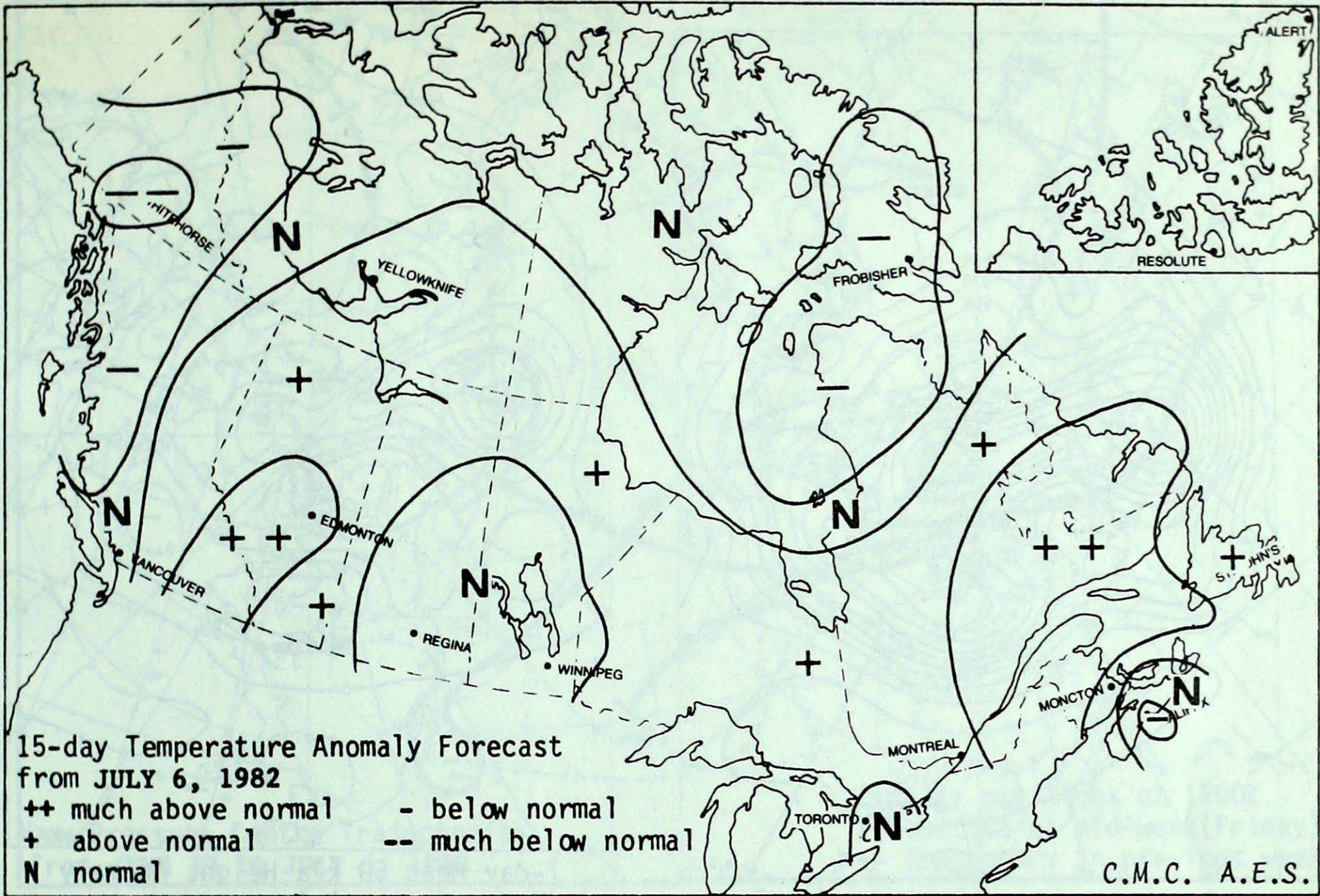
Due to abnormally cool and wet weather of the past weeks, the quality of the crop is a little below normal in most areas. Haying is about two weeks behind schedule.

GROWING DEGREE-DAY SUMMARY TO JULY 3, 1982

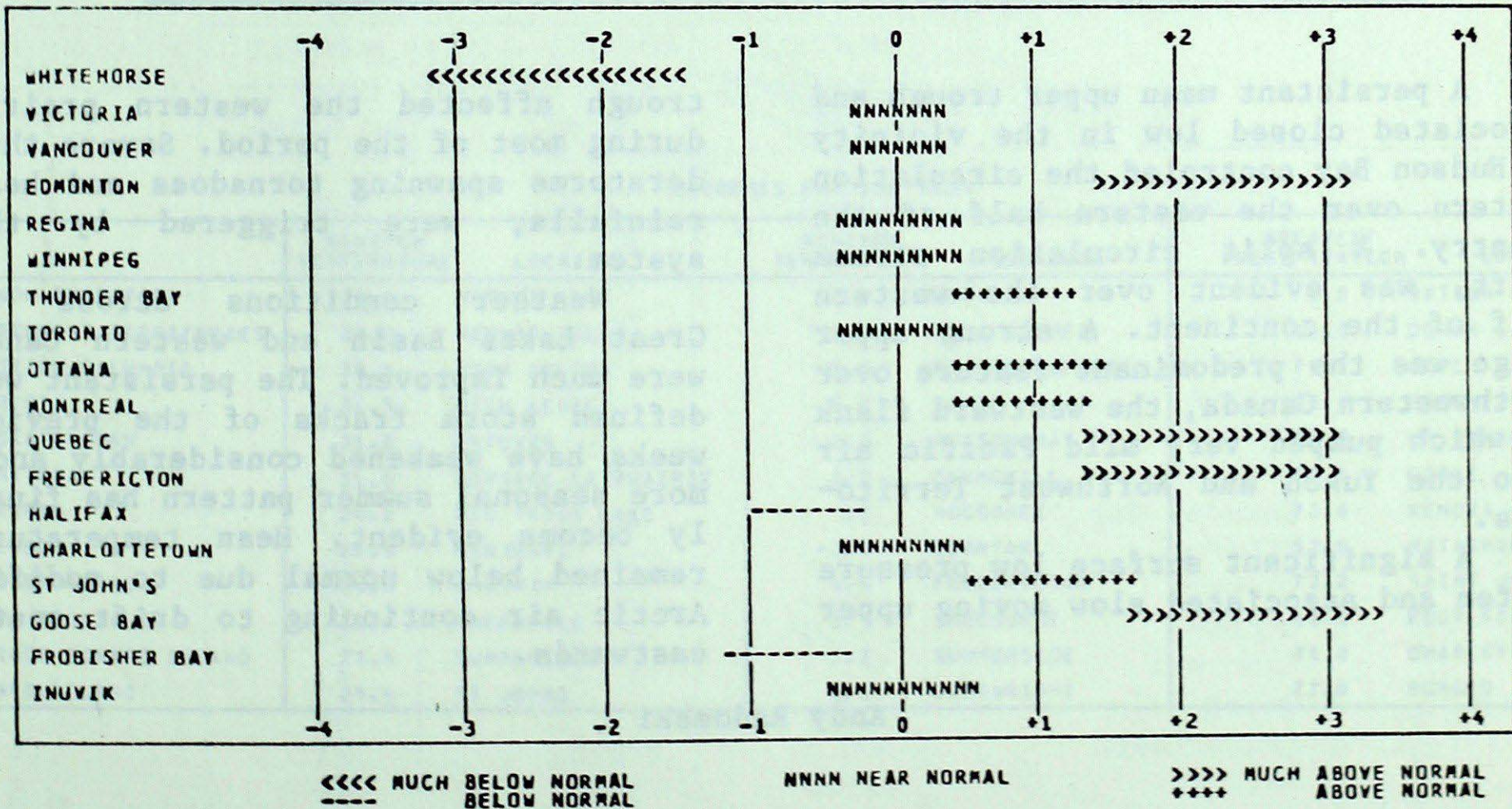


STATION	MONTHLY CUMULATIVE TOTAL	MONTHLY DIFF. FROM 1941-70 NORMAL	SEASONAL TOTAL	SEASONAL DIFF. FROM 1941-70 NORMAL	SEASONAL PERCENT OF NORMAL
Whitehorse	31.0	6.0	306.0	-4.0	99
Penticton	42.0	3.0	783.5	-12.5	98
Vancouver	30.5	-5.5	701.5	-32.5	96
Edmonton	38.0	7.0	584.5	102.5	121
Calgary	32.0	5.0	461.5	35.5	108
Regina	47.0	11.0	584.0	42.0	108
Saskatoon	46.0	10.0	501.0	-42.0	92
Winnipeg	44.5	5.5	625.0	42.0	107
Thunder Bay	30.5	-3.5	437.5	17.5	104
Windsor	44.0	-7.0	934.5	37.5	104
Toronto	33.5	-13.5	686.5	-47.5	94
Ottawa	30.5	-17.5	765.0	48.0	107
Montréal	27.5	-20.5	757.5	27.5	104
Québec	22.5	-18.5	564.0	-3.0	99
Fredericton	30.0	-9.0	554.0	-6.0	99
Halifax	31.5	-6.5	371.5	-80.5	82
Charlottetown	28.0	-10.0	359.5	-48.5	88
St. John's	32.5	4.5	122.0	-99.0	55

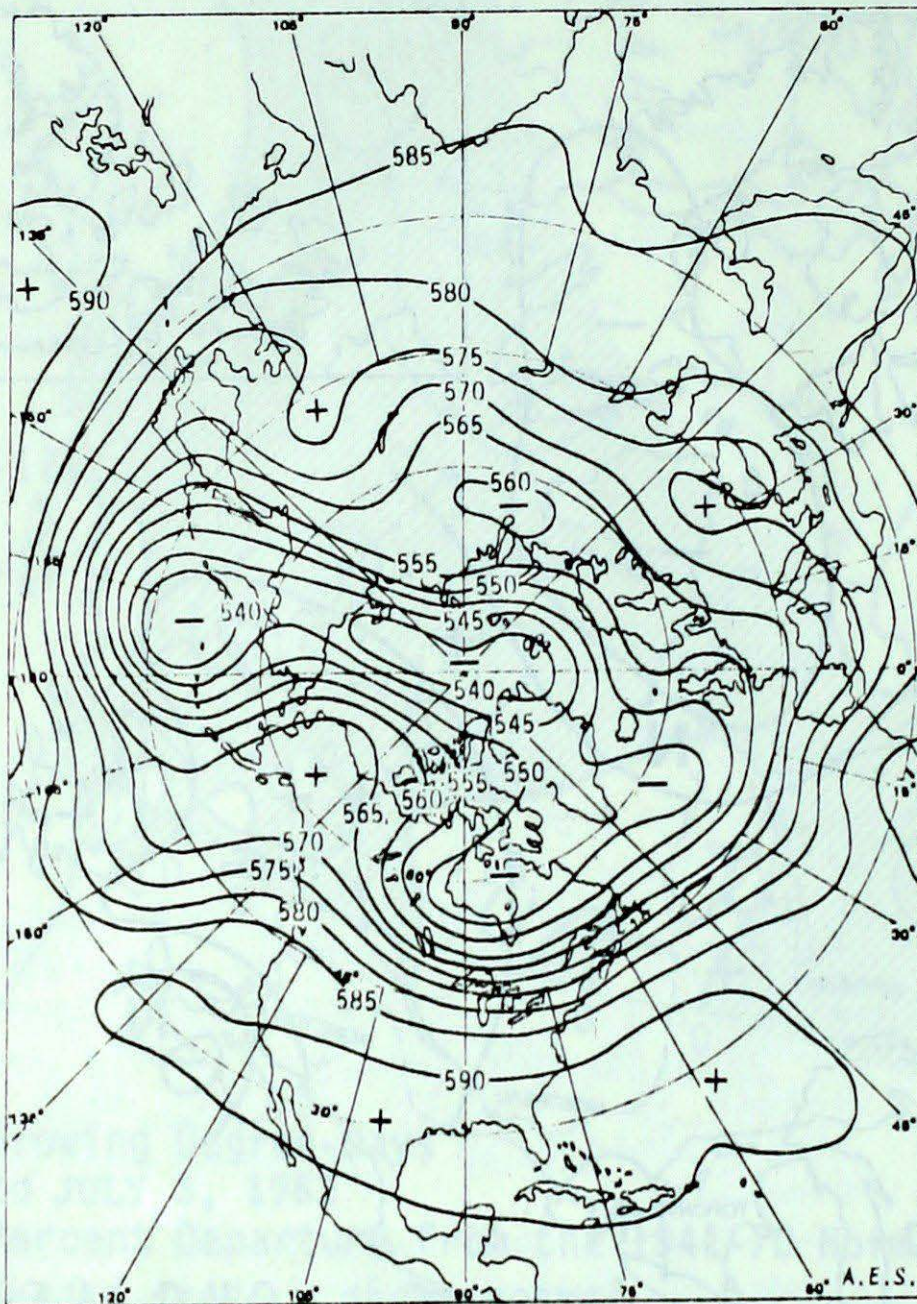
TEMPERATURE ANOMALY FORECAST



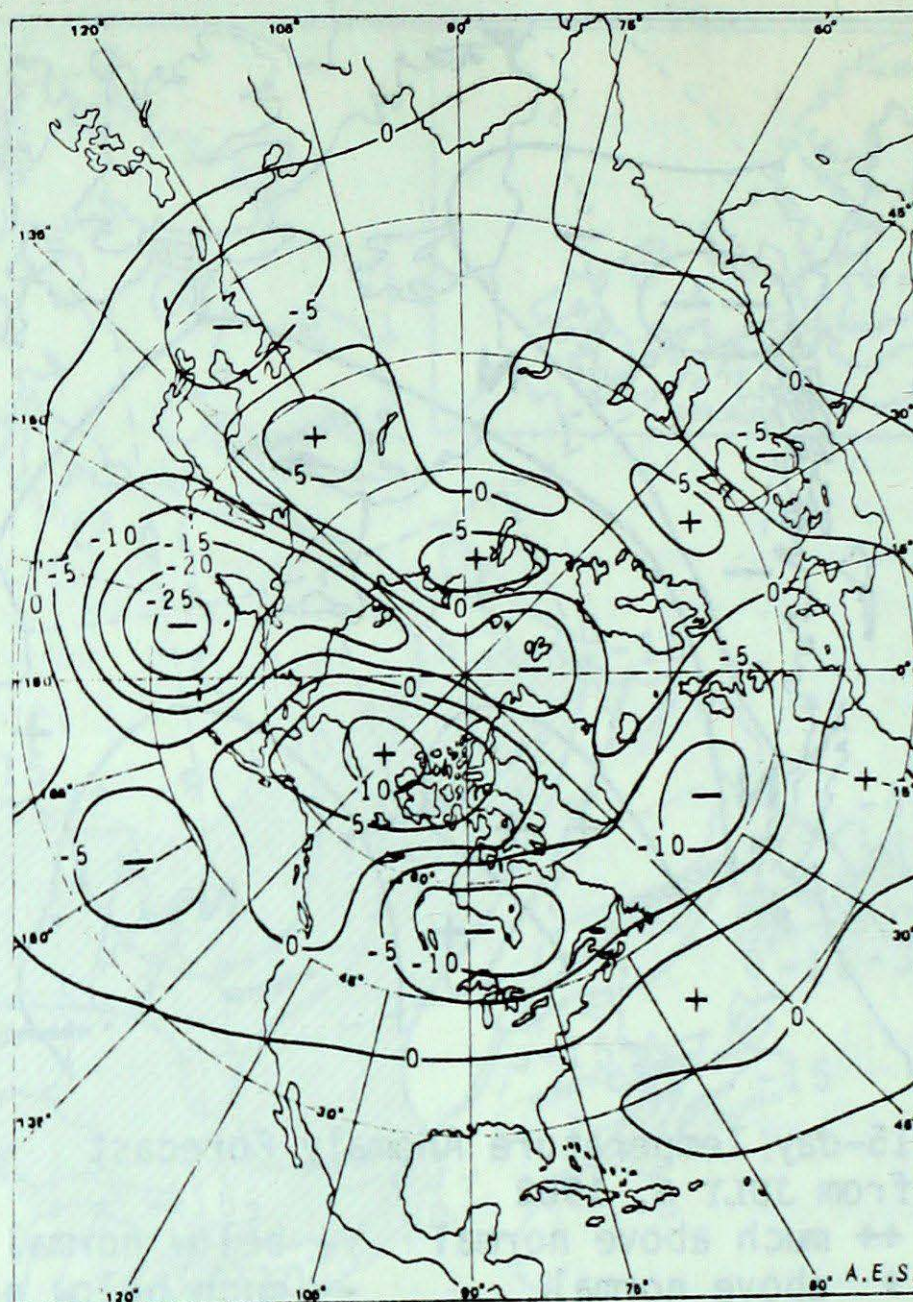
TEMPERATURE ANOMALY FORECAST FOR JUL 6 1982 TO JUL 20 1982



ATMOSPHERIC CIRCULATION



7-day Mean 50 kPa Height (dam)
JUNE 28 to JULY 4, 1982



7-day Mean 50 kPa Height Anomaly
(5 dam intervals)
JUNE 28 to JULY 4, 1982

A persistent mean upper trough and associated closed low in the vicinity of Hudson Bay controlled the circulation pattern over the eastern half of the country. A split circulation stream aloft, was evident over the western half of the continent. A strong upper ridge was the predominant feature over northwestern Canada, the westward flank of which pumped very mild Pacific air into the Yukon and Northwest Territories.

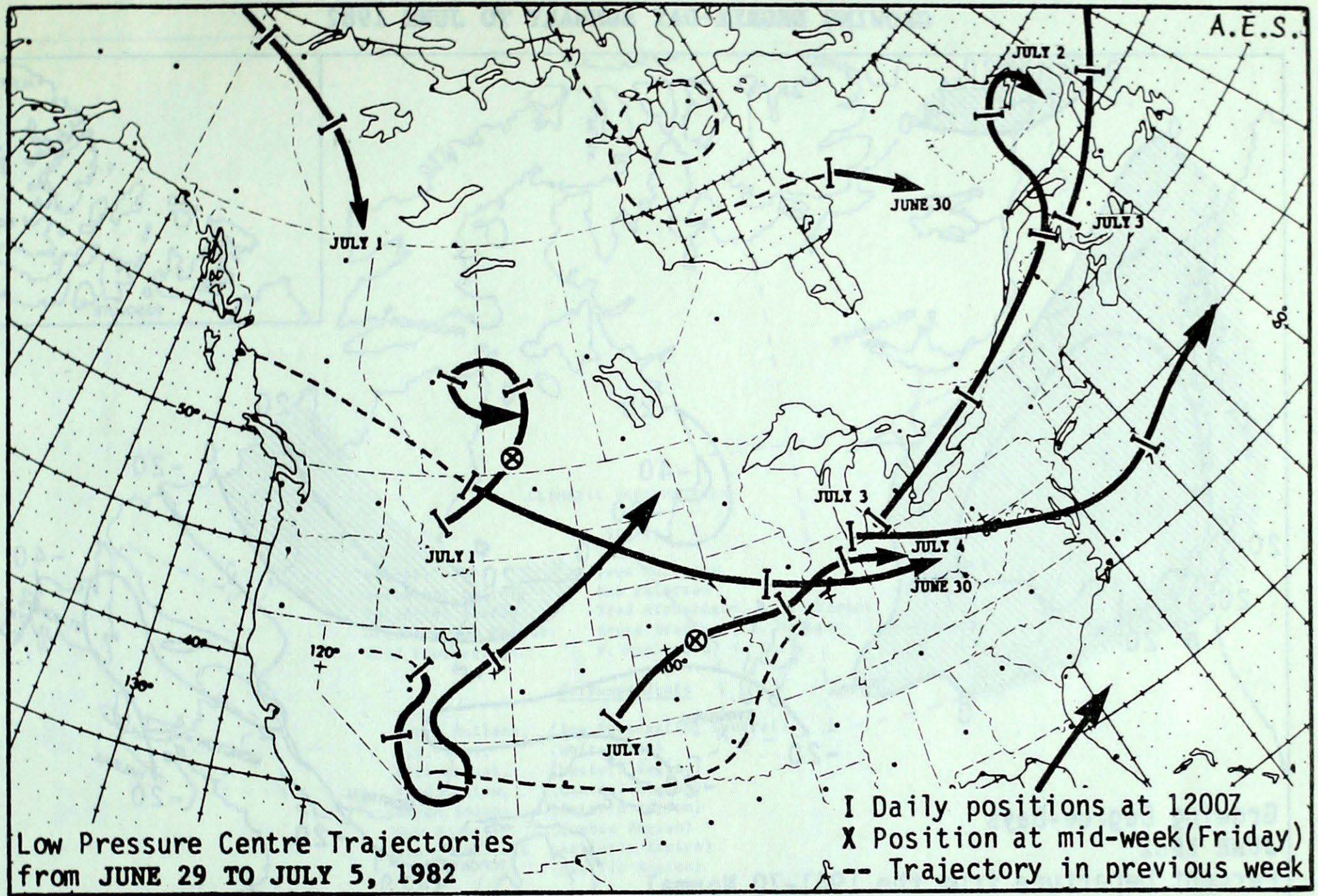
A significant surface low pressure system and associated slow moving upper

trough affected the western prairies during most of the period. Severe thunderstorms spawning tornadoes and heavy rainfalls, were triggered by this system.

Weather conditions across the Great Lakes Basin and western Canada were much improved. The persistent well defined storm tracks of the previous weeks have weakened considerably and a more seasonal summer pattern has finally become evident. Mean temperatures remained below normal due to modified Arctic air continuing to drift south-eastwards.

Andy Radomski

LOW PRESSURE CENTRE TRAJECTORIES

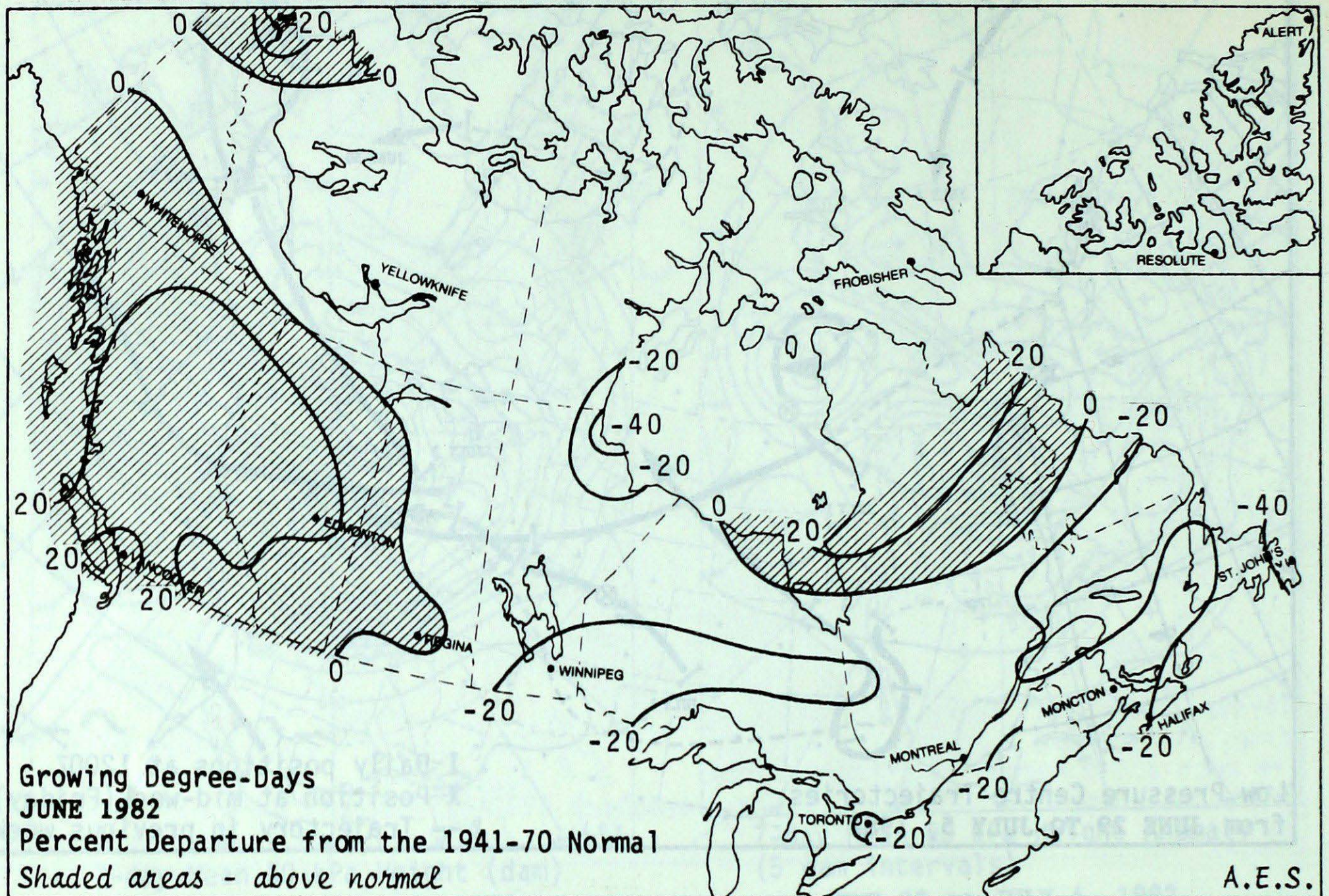


EXTREMES FOR THE WEEK

	MAXIMUM TEMPERATURE	LOCATION	MINIMUM TEMPERATURE	LOCATION	GREATEST PRECIPITATION	LOCATION
YUKON TERRITORY	28.8	WATSON LAKE	-2.0	BURWASH	4.0	WATSON LAKE
NORTHWEST TERRITORIES	33.9	NORMAN WELLS	-3.9	CAPE HOOPER	16.0	DEWAR LAKES
BRITISH COLUMBIA	30.8	FORT NELSON	5.8	PRINCE RUPERT	71.1	HOPE
ALBERTA	31.5	HIGH LEVEL	5.7	BANFF	143.8	EDSON
SASKATCHEWAN	31.0	ESTEVAN	2.9	HUDSON BAY	51.5	LA RONGE
MANITOBA	31.6	PORTAGE LA PRAIRIE	1.0	CHURCHILL	77.0	GIMLI
ONTARIO	29.1	BIG TROUT LAKE	.2	MOCSONEE	73.8	KENORA
QUEBEC	25.9	MANIWAKI	-2.2	KOARTAK	57.6	NATASHQUAN
NEW BRUNSWICK	24.3	CHATHAM	4.4	FREDERICTON	72.2	SAINT JOHN
NOVA SCOTIA	23.8	GREENWOOD	3.5	SHELBURNE	42.0	EDDY POINT
PRINCE EDWARD ISLAND	23.8	SUMMERSIDE	7.7	SUMMERSIDE	36.0	CHARLOTTETOWN
NEWFOUNDLAND	25.4	ST JOHN'S	1.1	CARTWRIGHT	77.0	BURGED

SEASONAL MAPS

GROWING DEGREE-DAY SUMMARY TO JUNE 1982



STATION	MONTHLY CUMULATIVE TOTAL	MONTHLY DIFF. FROM 1941-70 NORMAL	MONTHLY PERCENT OF NORMAL
Whitehorse	235.5	13.5	106
Penticton	445.5	80.5	122
Vancouver	353.5	44.5	114
Edmonton	363.0	86.0	131
Calgary	273.0	28.0	111
Regina	323.0	14.0	105
Saskatoon	317.0	8.0	103
Winnipeg	259.0	-87.0	75
Thunder Bay	224.5	-41.5	84
Windsor	394.0	-54.0	88
Toronto	301.0	-94.0	76
Ottawa	348.0	-47.0	88
Montreal	354.5	-51.5	87
Quebec	302.0	-36.0	89
Fredericton	308.5	-23.5	93
Halifax	226.0	-57.0	80
Charlottetown	252.5	-21.5	92
St. John's	71.5	-94.5	43

CLIMATIC PERSPECTIVES

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