Environnement

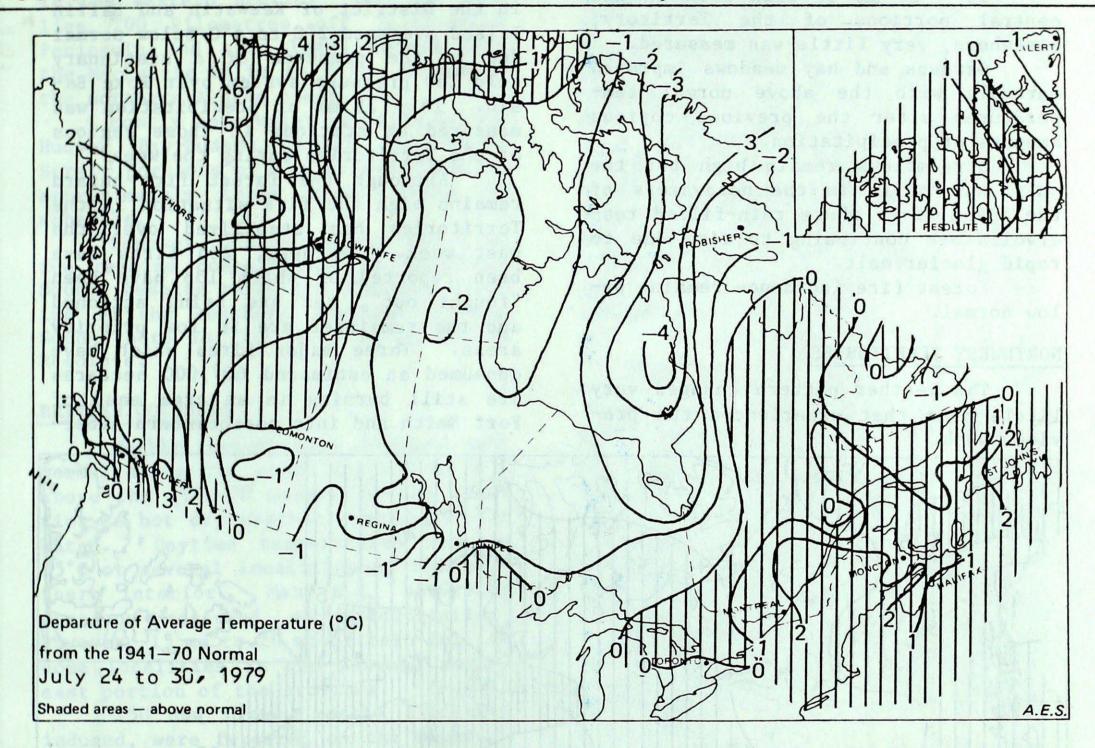
EEKLY REVIEW OF CANADIAN CLIN

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AUGUST 3,1979

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WEATHER HIGHLIGHTS FOR THE WEEK - JULY 24 - 30, 1979

Severe Thunderstorm Lashes Calgary Area

Torrential rain, pea-sized to walnut-sized hail and strong winds associated with a violent thunderstorm struck the Calgary area on the afternoon of the 29th, knocking out power lines and inundating roads and basements in some parts of the city. was piled from 15 cm to 25 cm high in some sections of Calgary.

In the southern interior of Bri-

tish Columbia continuing hot dry weather and dry lightning contributed to the outbreak of 150 new forest fires, mostly small in size, over the weekend.

On July 25, West Guilford, 10cated in the Ontario Haliburton Highlands, was deluged with 122.8 mm of rain, an all time 24-hour record total for that climate station.

NOTE: The data shown in this publication are based on unverified reports from approximately 225 Canadian and 115 northern United States Synoptic stations.

YUKON

The Yukon, particularly southern portions, enjoyed a week of warm pleasant summer weather. Most localities reported extreme maximum temperatures in at least the high 20's for the week. Dawson recorded the warmest temperature, 30°C, on July 25.

15 - 20 mm of rain fell in the central portions of the Territory; elsewhere, very little was measured.

Gardens and hay meadows improved markedly with the above normal temperatures after the previous copious amounts of precipitation.

Streamflows remain high but the only concern is in the headwaters of the Yukon River where rain-filled reservoirs are continuing to rise due to rapid glacier melt.

Forest fire incidence remains below normal.

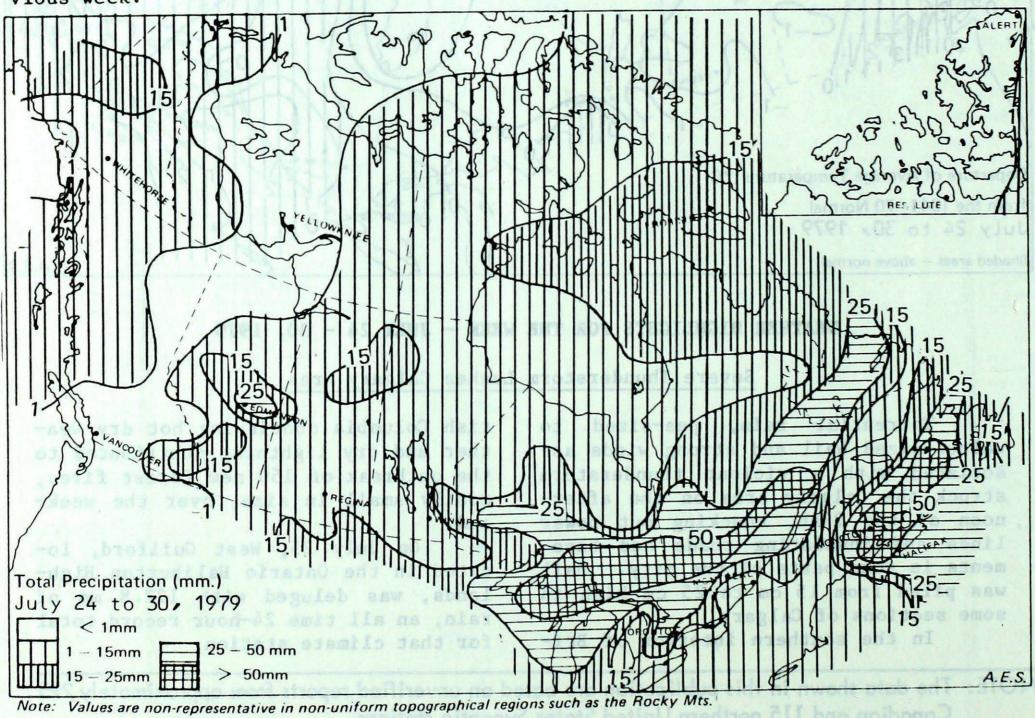
NORTHWEST TERRITORIES

The weather pattern changed very little from that experienced the previous week.

It was exceptionally warm and dry in the Mackenzie Valley where temperatures for the week averaged 3°C to 7°C above the 1941-70 normal. On the 26th daytime temperatures soared to 31°C at Fort Simpson and Norman Wells and on the same day Inuvik recorded a maximum temperature of 30°C.

In contrast weekly temperatures in the District of Keewatin and Baffin Island averaged 2°C to 4°C below normal due to the presence of a stationary cold low pressure system over Foxe Basin. 15 - 25 mm of precipitation was measured at stations in those regions of the Territories during the week.

Although the forest fire hazard remains high the fire situation in the Territories has stabilized over the past week. To date, 265 fires have been reported of which 133 have been "fought out", ten are being actioned and the remainder are in low priority areas. Three major fires which have consumed an estimated 607,000 hectares are still burning in an area east of Fort Smith and into northeastern Alber-



ta and northwestern Saskatchewan. Decreasing winds and higher humidities have assisted fire crews in containing fires in this area. In addition, two fires are being fought in the Norman Wells area, two in the Yellowknife area and one near Fort Simpson.

Ice Forecasting Central reports that ice conditions are very favourable in the western Arctic. The ice pack lies 200 kilometres off Tuktoyaktuk Peninsula and open leads extend from the Mackenzie Delta to Point Barrow on the northern Alaska coast.

Mostly open water prevails in the Hudson Bay-Hudson Strait and Davis Strait portions of the eastern Arctic, approximately three weeks ahead of schedule.

However, further north the pack ice remains consolidated in Lancaster Sound. Despite three ice breakers working in the southern portions of the Sound there is, to date, no access to Resolute.

BRITISH COLUMBIA

Weekly temperatures averaged near normal along the coast and 2°C to 4°C above the 1941-70 normal in the interior as hot dry weather continued unabated. Daytime temperatures reached 35°C at several localities in the southern interior. Many B.C. observing stations measured no precipitation; however, 15 mm to 20 mm of rain fell at some localities in the extreme southeast portion of the province.

150 new fires, mostly lightning induced, were reported on the weekend, bringing the total forest fires currently burning to over 400. The Kamloops and Nelson districts were the worst hit areas. Most fires are small, the largest, covering 200 hectares, is reported in the Shuswap Lake area of the Kamloops Forest District. Precipitation since June 1 is only 24% of normal at Kamloops.

ALBERTA

A violent thunderstorm accompanied by torrential rain, hail and gusty winds lashed the Calgary area during the afternoon of July 29 leaving in its wake a path of general chaos. The storm knocked out power lines and flooded roads and basements. The brief but violent storm created waist deep floods in some parts of the city as small cars and mail boxes mounted on lumber bases floated down the street.

The full brunt of the storm missed Calgary International Airport as the airport recorded 10.2 mm while in the northwest section of the city rainfall was estimated at 50 mm to 75 mm. Hail, mostly pea size with some walnut sized stones, was piled from 15 cm to 25 cm deep in some sections of the city.

Southern Alberta crop conditions remain basically unchanged from those reported during the previous week. The hardest hit area is within and bordering on a Calgary-Lethbridge-Pincher Creek triangle where growing season precipitation from April to mid-July varies from 50 to 75 per cent of nor-The hot dry weather, particularly of the previous week, has hastened crop maturity. Swathing of fall rye has commenced in some districts east of Lethbridge and west of Medicine Hat. Swathing of winter wheat should commence shortly. Crops in central Alberta south of Lacombe were beginning to show signs of burning due to the hot dry weather. While some crop damage due to excessive moisture has been reported on a Grande Prairie-Edmonton line, crop prospects in north central Alberta and the Peace River regions generally appeared favourable as a result of warm temperatures and excellent moisture conditions.

With cooler temperatures and scattered showers, the forest fire situation in Alberta has eased slightly during the past week. As of mid-week 25 fires were reported burning within the province, two of which were still out of control in the Athabasca District. The fire hazard rating, however, remains moderate to high in west central Alberta where campfire restrictions are still in effect.

SASKATCHEWAN AND MANITOBA

Weekly temperatures averaged near normal in the north and approximately

2°C below normal in the south in contrast to the hot weather of the previous week. Nevertheless a warming trend by mid-period caused daytime temperatures to reach the 30°C level at several localities in both provinces on the 28th. The warmest, 32°C, was recorded at Regina.

With the exception of the northern Saskatchewan-Manitoba border area where 15 - 20 mm fell, most localities measured less than 10 mm of rain during the week.

Conditions remain very dry from the Roblin-Russel area in Manitoba to the Yorkton-Broadview area in Saskatchewan. Yorkton has received only 45% of the 1941-70 normal precipitation since April 1.

29 forest fires are currently burning in Saskatchewan and 57 in Manitoba, of which 19 are out of control.

ONTARIO

Some relief was received this week from the abnormally dry July weather as showers fell in most areas of the province. Amounts varied extensively with the fruit growing area of the Niagara Peninsula measuring 30 - 50 mm during the week, Muskoka-Algonquin area 35-50 mm, but the London-St. Thomas area continued on the dry side with generally less than 10 mm of precipitation.

On July 25, West Guilford, a small community in the Haliburton High-lands, was deluged with an all time record of 122.8 mm of rain in just 24 hours. This is the greatest precipitation at West Guilford in any 24-hour period since records began in 1968 and also exceeds the greatest 24-hour precipitation ever recorded in the neighbouring station at the town of Haliburton, where observations date back to 1883.

Also on July 25, the mercury only fell to 23°C in Toronto setting a new high minimum temperature record and erasing the old mark of 22°C set in 1867. London, Sarnia, Mount Forest and Wiarton also set high minimum records that day.

The Ontario Ministry of Agricul-

ture and Food reports some problems with curling and yellowing of corn leaves due to drought stress. Irrigation is offsetting very dry conditions in the tobacco growing regions in Elgin and Norfolk Counties. Also, the tomato crop is reported to be about 10 days late in development due to generally cool nighttime temperatures primarily in June and early July.

One type of insect, the earwig, possibly encouraged by dry weather, continues to be a nuisance to homegardens everywhere, particularly in the northern part of Simcoe County.

The general shower activity throughout Ontario has eased the forest fire situation during the past week, however, a period of continuous wet weather is needed before any permanent relief from the past dry weather is felt. Burning conditions remain moderate to high.

QUEBEC

Sunny weather continued throughout the province. Several high maximum
records were broken at the beginning of
the week. 33°C at Bagotville on the
24th and 34°C the following day, 32°C
on the 24th at Roberval, 32.8°C at
Sherbrooke on the 24th, followed by
33°C on the 25th.

A cold front and associated thunderstorms crossed the province from the northwest on the 25th to the St. Lawrence Valley on the 26th, causing copious rainfalls in several localities. More than 70 mm fell over a good part of the northwestern area; the North Shore and Lake St. John areas received more than 30 mm. Only the southern part of the province escaped heavy precipitation.

NEWFOUNDLAND AND LABRADOR

Above normal temperatures prevailed on the Island of Newfoundland and the western interior of Labrador. Temperatures were near normal elsewhere throughout Labrador.

The maximum temperature of 31°C at Gander on the 26th is a record for that day.

Except for light precipitation over southeastern Newfoundland and portions of the Labrador coast, precipitation generally ranged from 20 mm to 60 mm.

The Newfoundland government announced that there will be an attempt to recover some of the less damaged timber in the Gambo area where a forest fire burnt over 22,000 hectares earlier this month.

MARITIME PROVINCES

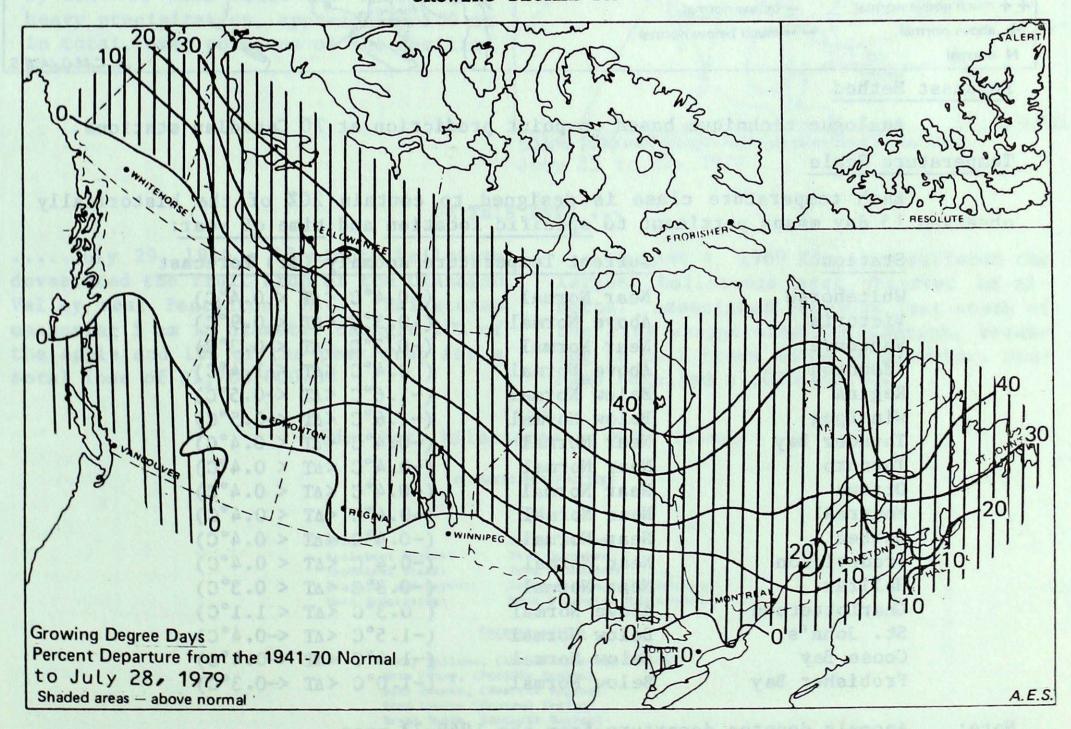
For the second consecutive week warm wet weather engulfed the Maritimes. Weekly temperature anomalies ranged from +1°C to +3°C. A record high

daily maximum temperature was set at Saint John on the 26th when the mercury rose to 27°C. Greenwood, Nova Scotia set a record high minimum for the same day when the temperature fell to only 20°C.

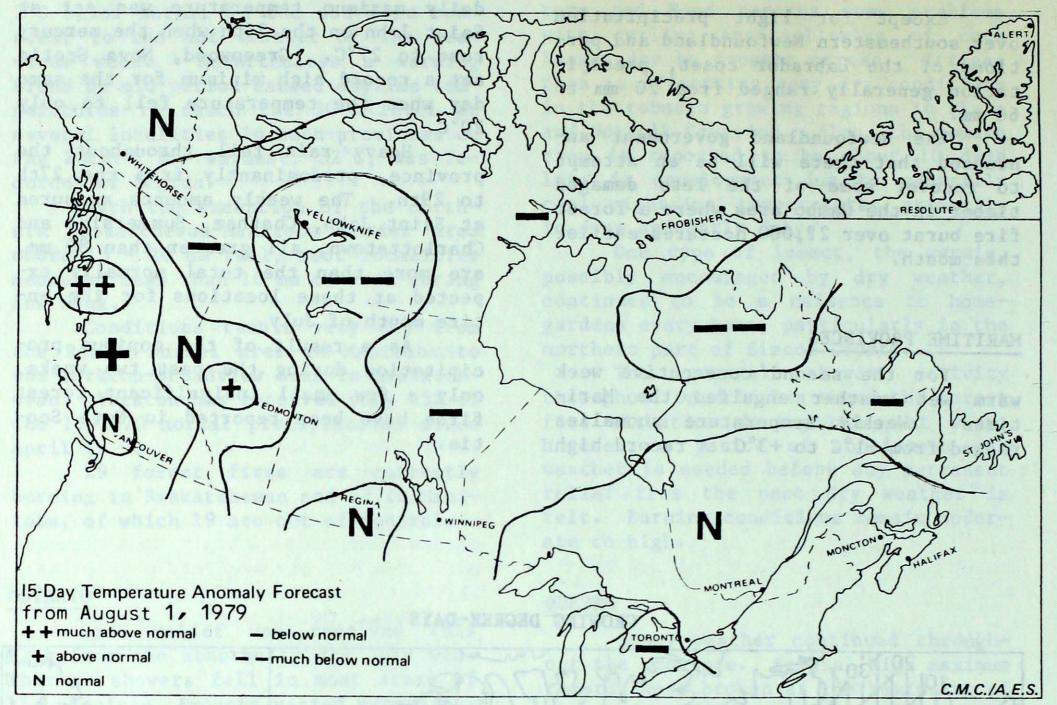
Heavy rain fell throughout the province, predominantly from the 27th to 29th. The weekly amounts measured at Saint John, Chatham, Summerside and Charlottetown, all greater than 80 mm, are more than the total normally expected at these locations for the entire month of July.

As a result of the copious precipitation during the past two weeks, only a few small insignificant forest fires have been reported in Nova Scotia.

GROWING DEGREE-DAYS



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 (AT) Forecast									
Whitehorse	Near Normal	$(-0.4^{\circ}C < \Delta T < 0.4^{\circ}C)$								
Victoria	Above Normal	$(0.3^{\circ}C < \Delta T < 0.9^{\circ}C)$								
Vancouver	Near Normal	$(-0.3^{\circ}C < \Delta T < 0.3^{\circ}C)$								
Edmonton	Above Normal	$(0.4^{\circ}C < \Delta T < 1.4^{\circ}C)$								
Regina	Below Normal	(-1.6°C < \D <-0.5°C)								
Winnipeg	Below Normal	(-1.6°C <ΔT <-0.5°C)								
Thunder Bay	Near Normal	$(-0.4^{\circ}C < \Delta T < 0.4^{\circ}C)$								
Toronto	Near Normal	$(-0.4^{\circ}C < \Delta T < 0.4^{\circ}C)$								
Ottawa	Near Normal	$(-0.4^{\circ}C < \Delta T < 0.4^{\circ}C)$								
Montreal Montreal	Near Normal	$(-0.4^{\circ}C < \Delta T < 0.4^{\circ}C)$								
Quebec	Near Normal	$(-0.4^{\circ}C < \Delta T < 0.4^{\circ}C)$								
Fredericton	Near Normal	$(-0.4^{\circ}C < \Delta T < 0.4^{\circ}C)$								
Halifax	Near Normal	$(-0.3^{\circ}C < \Delta T < 0.3^{\circ}C)$								
Charlottetown	Above Normal	$(0.3^{\circ}C < \Delta T < 1.1^{\circ}C)$								
St. John's	Below Normal	$(-1.5^{\circ}C < \Delta T < -0.4^{\circ}C)$								
Goose Bay	Below Normal	$(-1.4^{\circ}C < \Delta T < -0.4^{\circ}C)$								
Frobisher Bay	Below Normal	(-1.0°C <ΔT <-0.3°C)								

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

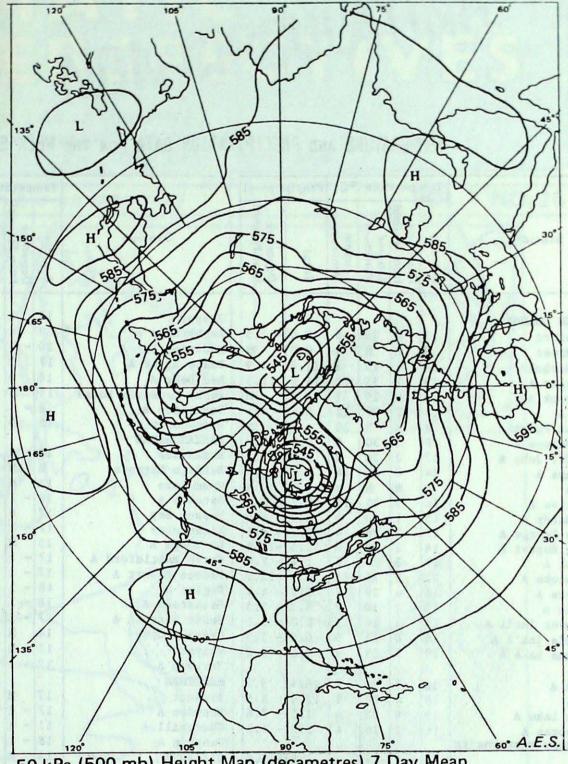
Synoptic History

In the north, the atmospheric flow pattern remained virtually unchanged from the previous week. A deep intense stationary cold low centred over Foxe Basin produced cooler and wetter than normal weather over the eastern Arctic.

Further west a cut off ridge gave rise to anomalously warm dry conditions in the Yukon and Mackenzie Valley.

A weak upper air trough associated with the Foxe Basin cold low resulted in cool weather early in the week over the Prairies. During the latter half of the week temperatures in the Canadian Prairies ameliorated somewhat as a ridge developed over the area to reinforce the cut off ridge in the western Arctic.

Eastern Canada was dominated by a broad, slightly retrogressing atmospheric trough pattern which produced showery, humid unsettled weather for most of the week. To the east of the atmospheric trough line, a southwesterly flow of warm moist air resulted in heavy precipitation, approaching 100 mm in total, over portions of the Maritime provinces.



50 kPa (500 mb) Height Map (decametres) 7 Day Mean July 23 to 29, 1979

ON THIS DATE ...

....July 29, 1946 a 15-minute hailstorm devastated the fruit crop of the Okanagan Valley near Penticton, B.C. Hailstones measuring 5 cm in diameter damaged 10% of the apple and 15% of the pear crop for a total loss of \$1,700,000.00

.... August 4, 1969 Edmonton suffered the largest hailstones ever observed in Alberta. Associated tornados just south of the city exaggerated the damages, breaking in half trees 60 cm in diameter. Damages totalled \$7,000,000.00.

from

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flow partern remained virtually win-

TEMPERATURE AND PRECIPITATION DATA FOR THE WEEK ENDING 0600 G.M.T. JULY 31, 1979

Station on one of the original of the original of the original of the original origi	,	Temperature (°C)			Precip. (mm)		Temperature (°C) Precip. (mm)							Tem	pera	ture	(°C)	Precip	o. (mr	
	Average	Departure	Extreme Maximum	Extreme	Total	Departure from Normal	Station	Average	Departure from Normal	Extreme	Extreme	Total	Departure from Normal	Station	Average	Departure from Normal	Extreme	Extreme Minimum	Total	Departure from Normal
BRITISH COLUMBIA Abbotsford Blue River Bull Harbour Castlegar A Cranbrook A Comox A Estevan Point Fort Nelson A Fort St. John A Kamloops A Lytton Penticton A Port Hardy A Prince George A Prince Rupert A Quesnel A Revelstoke A Smithers A Terrace A Vancouver Int'l A Victoria Int'l A Williams Lake A YUKON Dawson A Mayo A Watson Lake A Whitehorse A NORTHWEST TERRITORIES Alert Baker Lake Cambridge Bay A Cape Dyer Chesterfield Inlet Clyde Coppermine Coral Harbour Ennadai Eureka Fort Simpson Fort Smith A Frobisher Bay A Hall Beach A Hay River A Inuvik A Mould Bay Norman Wells A Resolute A Sachs Harbour Yellowknife A ALBERTA Banff Calgary Int'l A Cold Lake A Coronation A Edmonton Mun. A Edmonton Namao A Edson A Fort Chipewyan	177 M 144 23 199 199 199 199 199 199 199 199 199 19		288 MM 199 2 35 35 MM 2 36 2 299 2 36 3 3 29 2 36 3 3 29 2 36 3 3 29 2 36 3 3 29 2 36 3 3 29 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	6 8 12 9 12 10 6 9 14 M 11 9 4 7 7 7 11 7 9 12 9 9 7 9 6 4 2 5 2 1 5 7 6 9 7 4 3 0 3 9 0 9 2 M 9 5 5 7 6 9 7 4	0.0 0.0 0.0 16.4 17.0 1.2 1.7 1.0 13.0 9.1 14.8 16.4 9.2 0.0 15.2 14.3 0.0 24.1 13.6 0.0	- 3.2 - 5.4 - 9.2 10.9 M - 7.0 - 9.0 - 4.2 -10.6 - 5.4 - 5.7 - 7.2	Jasper Lethbridge A Medicine Hat A Peace River A Red Deer A Rocky Mountain House Vermilion A Whitecourt SASKATCHEWAM Broadview Buffalo Narrows Cree Lake Estevan A Hudson Bay Kindersley La Ronge A North Battleford A Prince Albert A Regina A Saskatoon A Swift Current A Uranium City Wynyard Yorkton A MAMITOBA Bissett Brandon A Churchill A Dauphin A Gillam A Gimli Lynn Lake Norway House Pilot Mound Portage la Prairie The Pas A Thompson A Winnipeg Int'l A OMTARIO Armstrong A Atikokan Earlton A Geraldton Gore Bay A Kenora A Kingston A Lansdowne House London A Moosonee Mount Forest Muskoka A North Bay A Ottawa Int'l A Petawawa A Pickle Lake Red Lake	17 M 20 17 16 15 16 15 16 15 17 17 17 17 17 17 17 17 17 17 17 17 17	- 2 1 - 1 M M O O O O M O O O M C C C M C C C M C C C M C C C C	29 30 32 27 28 27 28 26 31 27 30 30 32 30 30 32 30 30 22 29 31 27 30 30 22 29 30 24 29 24 25 27 28 29 29 20 20 20 20 20 20 20 20 20 20 20 20 20	7 6 7 7 7 5 5 5 5 5 6 10 5 11 5 8 4 6 6 5 8 7 5 6 7 4 6 7 6 9 6 8 3 4 11 10 6 1 8 5 7 9 6 12 2 12 16 9 12 2 10 11 10 15 10 7 5 13 9	2.4 1.7 41.1 18.4 12.6 M 4.1 16.1 M 3.0 20.4 2.0 3.7 10.6 6.4 6.5 5.1 11.4 1.1 18.4 2.7 11.0 8.9 4.9 6.8 19.4 8.8 2.8 M 17.4 63.1 28.9 M 10.9 10.9 10.9 10.9 10.9 10.9 10.9 10.9	- 8.9 M -14.4 - 8.2 - 3.5 M M M M - 1.8 - 1.1 M -12.9 - 9.6 45.3 M M M M M M M M M M M M M M M M M M M	Timmins A Toronto Int'l A Trenton A Trout Lake Wawa A Wiarton A Windsor A QUEBEC Bagotville A Baie Comeau Border Chibougamau Fort Chimo A Gaspé A Grindstone Island Inoucdjouac Maniwaki Matagami A Mont Joli A Montréal Int'l A Natashquan A Nitchequon Port Menier Poste de la Baleine Québec A Riviere du Loup Roberval A Schefferville A S	17 21 22 15 16 20 23 M 16 11 18 13 19 19 6 20 17 19 23 15 14 17 10 22 22 23 21 19 20 22 23 21 19 20 19 20 19 20 19 20 19 20 19 20 19 20 20 20 20 20 20 20 20 20 20 20 20 20	- 1011 M 00 M 01 M 12 10 2 2 3 1 2 M 2 3 2 2 0 1 1 3 0 1 M 2 2 2 2 - 1 1 3 0 1 M 2 2 2 2	32 28 M 27 21 29 22 32 24 11 30 30 31 32 22 26 32 29 32 22 33 31 31 32 29 26 30 30 31 31 32 22 32 32 32 32 32 32 32 32 32 32 32	3 8 4 3 12 2 10 7 11 15 4 7 7 7 0 13 11 13 6 9 10 8 8 11 13 12 13 12 13 14 15 16 16 17 18 18 18 18 18 18 18 18 18 18 18 18 18	22.2 12.4 54.2 1.1 6.6 33.3 56.0 22.7 23.4 18.7 6.4 52.3 19.2 25.5 40.0 39.0 39.0 31.8 65.8 4.7 45.0 15.7 43.6 8.4 94.5 51.9 36.2 48.1 94.5 51.9 36.5 89.7 89.8 89.7 89.8 89.8 89.8 89.8 89.8	- 6. 101215 9. 7. 32. 8. 4. 41. 9. 361814. 15. 10. 4015. 2111. 17. 78. 31. 78. 39. 14. 29 7. 72.

M-Denotes missing data

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