

WEATHER HIGHLIGHTS FOR THE WEEK - JUNE 10 - 16, 1980

Drought in the West - Cold in the East

The agricultural situation continues to deteriorate in Saskatchewan and Manitoba and is critical for the livestock industry due to drought-related feed shortages. This drought area, which also includes parts of North Dakota and Montana, is currently one of the 3 most serious drought areas in the world; the others are in Mexico and East Africa. Forest fires continued to be a problem from northwestern Ontario to the Yukon.

Frost damaged gardens and corn and tobacco crops in Ontario and Quebec, snowfall occurred at some locations in both provinces, and cold weather generally slowed crop growth throughout eastern Canada.

The extreme highest and lowest temperatures for the week were 33° at Meadow Lake on June 10 and Portage 1a Prairie on June 11, and -9° at Alert on June 11.

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

Precipitation was generally below normal for the week except in the extreme north, on the east coast of Baffin Island and in some southern and western parts of the Mackenzie District and the Yukon, where precipitation was somewhat above normal. Dawson reported the heaviest precipitation, 34.6 mm, well above the normal 7.9mm.

Those regions with below normal precipitation during the past week also tended to experience above normal temperatures. The abnormally warm weather experienced at Dawson during the previous week became more seasonable. On June 15, a maximum temperature of  $29^{\circ}$ C was recorded at Fort Smith, the highest recorded during the week. The lowest temperature of the week occurred at Alert (-9°C) on the llth.

There was extensive forest fire activity in the Yukon at the beginning of the week but rain on June 16 reduced the fire hazard and should help control operations.

Little further ice decay has occ-

urred during the past week in the Beaufort Sea. Fast ice still persists along the coast with most drill sites still being covered. Lancaster Sound and northern Baffin Bay are mostly open water. In northern and eastern Hudson Bay the early breakup of ice continues, about 2 weeks ahead of normal, and muchopen water exists.

### BRITISH COLUMBIA

In the Vancouver and Victoria areas, as well as in central portions of British Columbia's interior, precipitation was above normal. While Prince George was one of the sunniest locations in the province, it also reported more precipitation than anywhere else (24.6mm), the rainfall occurring during only two days. Northern Vancouver Island, the northern mainland coastline, and portions of the northern and southern interior regions were drier than normal.

Temperatures along the coast varied only slightly from normal. The central interior averaged above normal co-





nditions. The highest temperature reported during the week was 32° at Lytton and the lowest 3° at Dease Lake. Haying conditions in southern British Columbia remained variable. While suitable around Kamloops. the weather continued to be changeable and unsettled in the Castlegar, Kelowna and Penticton areas inhibiting both haying operations and the spraying of orchards. At Fort Nelson, precipitation received on the 15th and 16th brought welcome relief to those fighting forest fires. Grain crops in northeastern British Columbia are in generally good condition and the warm temperatures advanced crop growth considerably.

# ALBERTA

In contrast to previous weeks, precipitation was below normal throughout central and southern Alberta. At Slave Lake no rain fell, and most locations farther south had less than 10 mm of rainfall during the week. The heaviest precipitation in the province was 52.5 mm, at High Level, in the northeast corner of the province.

High Level also reported the lowest temperature during the week, 3° on June 12. The highest temperature in the province also occurred in the north, 31° at Fort McMurray on June 10. Average temperatures for the week ranged from 2 to 5° above normal, except in northernmost parts of the province where they were near normal.

Grain crops are generally in good condition and the warm weather advanced crop growth considerably. Moisture conditions are generally adequate for normal crop growth although some eastern have been reported, compared to 200 to the same date last year. Forest fire hazards are presently rated as low in west central Alberta and moderate in northern districts and in some areas of the southern foothills.

### SASKATCHEWAN AND MANITOBA

The drought continued during the week in Saskatchewan and Manitoba with mainly sunny, dry weather and only spotty light rain at most places, and some scattered thunderstorms and hail reported. Yorkton reported no rain and only Dauphin and Brandon had above normal precipitation. The livestock industry is experiencing serious difficulties due to feed shortages resulting from the poor hay crop. Grain yields are likely to be significantly reduced by the drought, and in some cases fields are being ploughed and reseeded due to poor germination. Precipitation since April 1 has been generally less than half of normal. In southwestern Manitoba and the interlake area, and in the Broadview area of Saskatchewan, since April 1st only 7 to 10% of normal precipitation has fallen. Insect attacks have resulted in further reduction of agricultural prospects.

Temperatures were generally above normal in Saskatchewan and southern Manitoba but some minimum temperatures near freezing were reported even in southern areas, particularly on June 15, and frost damage occurred in the interlake area of Manitoba. The highest temperature during the week in Saskatchewan was 33° on June 10 at Meadow Lake, Moose Jaw and Prince Albert, and the lowest was -1° at Yorkton on June 15. In Manitoba the highest was 33° at Portage la Prairie on June 11 and the lowest was -3° at Thompson on June 14. The dry warm weather has been contributing to continued forest fire problems. Fifty-one fires were reported burning in Saskatchewan at the end of the week and 1000 men were involved in fighting them.

parts of the province would benefit from more rain and there has been some crop deterioration due to lack of soil moisture.

Streamflow in southern and central Alberta was reported to be near normal. It was below normal in northern areas.

Forty-nine forest fires were reported burning. Twelve were out of control, and several of these were smaller fires ignited by recent lightning strikes. To date a total of 840 fires

# ONTARIO

With the exception of a portion of northwest Ontario and Windsor in the southwest, all of Ontario experienced below normal precipitation from June 10th to the 16th. The greatest departure occurred at Geraldton where only 0.4 of the normally expected 30.1 mm of rain fell. At Windsor, the normal precipitation of 23.0 mm was exceeded by 10.6 mm. A trace of snow was recorded at Trout Lake on the morning of the 14th:

Record low temperatures dominated the entire province. Only Kenora averaged a slightly above normal mean temperature. The greatest below normal departures occurred in eastern Ontario between North Bay and Trenton. The lowest minimum temperature ( $-5^{\circ}$ C) was recorded at Moosonee on the 16th. The highest temperature was 30°, at Ottawa on the 14th. More than half of the stations reporting temperature conditions in Ontario experienced frost at least once during the week.

As a result, frost damage to unprotected gardens did occur throughout the province, with reports of some damage in the tobacco growing regions of southwestern Ontario as well.

Weather conditions in northern Ontario did little to hinder the 48 forest fires currently burning in the province. To date, 970 fires have been recorded in the province. There were only 379 in all of 1979.

# QUÉBEC

The week was cold throughout the province. Except for the Gulf of St. Lawrence north shore, temperatures were below normal in all areas. At Val d'Or the mean temperature was 5.7° below nor mal, new low record temperatures were reported on several days, and 4.6 cm of snow have fallen so far this month, exceeding the previous record June snowfall. During a brief warm spell the highest temperature in the province for the week, 29°, was recorded at Gaspé on June 14, but then the cold weather returned and the lowest temperature, -4°, was reached at Matagami on June 15. areas, and several crops were damaged. In the Buckingham area a total loss to the tobacco crop is reported and some corn fields were frozen. In the Lac St.-Jean area frost damaged blueberries and potatoes. The cold weather also has generally slowed the growth of heat-loving crops such as corn and tomatoes in the province, but has not affected cereals. A few farmers have begun the first cutting of hay but yields are low.

# ATLANTIC PROVINCES

The weather was dry from Wednesday to Friday in the Maritimes but wet on the weekend, while in Newfoundland and Labrador it was wet most of the week. Precipitation for the week was above normal in most parts of the Atlantic provinces, with more than 20 mm at many stations. The heaviest was 57.2 mm at St. Anthony.

Temperatures were near or above normal in most of Newfoundland and eastern parts of Nova Scotia and Labrador but below normal farther west. In the Maritimes the highest temperature was 30° at Chatham on June 14 and the lowest was 2° at Charlo and Sydney on June 10 and Greenwood on June 11. In the Province of Newfoundland the extreme temperatures for the week were 27° at Comfort Cove on June 14 and -1° at Wabush Lake on June 10 and Hopedale on June 16. The temperature finally reached 20° at Halifax on June 13. This was the latest date on record for it to reach 20° there; the previous record was June 4.

Cool weather has been generally slowing growth in Prince Edward Island and Nova Scotia but has been good for hay growth in Nova Scotia, where first cut haying is reported farther advanced than usual. Crops in Prince Edward Island would benefit from warmer weather with rain. In Newfoundland wet weather has delayed planting operations, particularly in eastern and southern areas where they are behind schedule. Despite showers there is still some forest fire activity reported in Nova Scotia. The retreat of the ice along the Labrador coast is 2 or 3 weeks ahead of normal.

Precipitation was below normal to the southwest of the Saguenay Valley but generally above normal in the north and farther east, exceeding 42 mm at Blanc Sablon.

Frosts were experienced in many



CITY	MONTHLY CUMULATIVE TOTAL	MONTHLY DIFF. FROM 1941-70 NORMAL	SEASONAL TOTAL	SEASONAL DIFF. FROM 1941-70 NORMAL	SEASONAL PERCENT OF NORMAL
Whitehorse	132.5	36.5	215.5	56.5	136
Penticton	149.0	-17.0	666.5	108.5	119
Vancouver	120.5	-13.5	516.5	-6.5	99 00000
Edmonton	147.0	22.0	560.5	261.5	187
Calgary	101.5	-8.5	426.5	162.5	162
Regina	154.5	18.5	608-0	275.0	183

Regina	154.5	18.5	608.0	275.0	183	
Saskatoon	152.5	20.5	618.0	288.0	187	
Winnipeg	152.5	5.5	616.0	271.0	179	
Thunder Bay	98.5	-12.5	355.0	124.0	154	
Windsor	156.0	-29.0	552.5	-30.5	95	
Toronto	114.0	-53.0	430.0	-29.0	94	083
Ottawa	128.0	-49.0	465.5	14.5	103	115
Montréal	131.0	-40.0	463.5	16.5	104	TOPS
Québec	114.5	-19.5	346.0	24.0	107	
Fredericton	115.0	-19.0	333.5	10.5	103	
Halifax	90.5	-28.5	239.0	-11.0	96	
Charlottetown	88.5	-19.5	176.0	-28.0	86	
St John's	68.0	13.0	91.5	9.5	112	

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	Much Below Normal	More than 1.6° below Normal								
Victoria	Near Normal	Within 0.3° of Normal								
Vancouver	Near Normal	Within 0.3° of Normal								
Edmonton	Much Above Normal	More than 1.5° above Normal								
Regina	Much Above Normal	More than 1.5° above Normal								
Winnipeg	Much Above Normal	More than 1.6° above Normal								
The state of the s	[4] M. Martin, Song M. C. Martin, Phys. Rev. B 107, 191 (1998).									

Toronto Ottawa Montreal Quebec Fredericton Halifax Charlottetown St. John's Goose Bay Frobisher Bay Inuvik Much Above Normal Below Normal Below Normal Below Normal Below Normal Below Normal Much Below Normal Above Normal Below Normal Below Normal Much Below Normal Nuch Below Normal

More than 1.2° above Normal From  $0.5^{\circ}$  to  $1.5^{\circ}$  below Normal From  $0.4^{\circ}$  to  $1.4^{\circ}$  below Normal From  $0.4^{\circ}$  to  $1.3^{\circ}$  below Normal From  $0.4^{\circ}$  to  $1.3^{\circ}$  below Normal From  $0.4^{\circ}$  to  $1.3^{\circ}$  below Normal More than  $1.0^{\circ}$  below Normal More than  $1.3^{\circ}$  below Normal From  $0.5^{\circ}$  to  $1.7^{\circ}$  above Normal From  $0.5^{\circ}$  to  $1.7^{\circ}$  below Normal More than  $1.3^{\circ}$  below Normal

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

Atmospheric Circulation



7-day Mean 50 kPa Height Map(in dam) June 9 to 15, 1980

The mean atmospheric upper flow pattern increased its north-south component from the previous week due to the amplification of a major trough over Eastern Canada.

A major upper ridge remained stationary across the Canadian Prairies and the Northwest Territories while a deep atmospheric trough, with height anomalies of more than 10 dam below normal over Ontario and Quebec, dominated the upper flow over the eastern half of the country. The resultant northerly air flow steered surges of very cold air southeastward from the Western Arctic, suppressing tropical air to well south of the border.



7-day Mean 50 kPa Height Anomaly (in 5 dam intervals)June 9 to 15, 1980

the lower Great Lakes and the St. Lawrence Valley experienced an unusually late occurrence of frost, resulting in numerous reports of crop damage. With the upper flow pattern expected to remain essentially unchanged for the next week cool temperatures and frost may be a recurring problem.

Positive height anomalies and a southerly air flow across most of Western Canada contributed to the very warm

All of Ontario, Quebec and parts of the Maritimes experienced record breaking cold temperatures. Many prime agricultural areas in the vicinity of relatively dry weather. Saskatchewan and southern Manitoba are still badly in need of rain while Alberta received ample amounts during the past few weeks. An on shore flow along the Pacific coastline and the remnants of an upper trough across southern British Columbia resulted in some unsettled weather through part of the period, but precipitation totals remained relatively light.

Departure Tenn 1941-70 Monral

Andy Radomski

SPRING 1980 (MARCH - APRIL - MAY)

15 DAY TEMPERATURS ATTIMATE PREFERENCE



A.E.S.

Mean Temperature(<sup>O</sup>C) Departure from 1941-70 Normal March to May, 1980 Shaded areas - above normal



June 8th through 12th will long be remembered by North Bay and area residents as the year of the big freeze. The year that November came in June.

On June 7th a mass of Arctic air was edging slowly southeastward. Daytime temperatures climbed to near 18° and at 1 A.M. EDT on the 8th the mercury still hovered near the 15° mark. Then at shortly after 1 A.M. the Arctic air began to move into the region. By 2 A.M. the temperature had fallen to 8° and by 8 in the morning had plunged to 0.6°. Rain which was falling in advance of the system changed to snow by 7 A.M. Flurry activity continued through the day with a snowfall accumulation of 0.2 cm recorded at the airport.

The cold weather continued unabated throughout this period (8th - 12th) with daytime temperatures some 10° to 15° below normal. Night-time minimums dropped to near or at times below the freezing mark. Frost was widespread with local farmers and gardeners reporting losses, especially of tomatoes, strawberries, and corn.

Many low temperature records were broken during this cold spell (see table). The coldest day of the period was the 10th, when daytime minimum temperatures struggled to reach the 7° mark while the night-time minimum of -1.3 at the airport was the second coldest ever recorded in June. The coldest minimum for June was -1.7 first recorded on June 1st, 1945 and equalled on June 10th, 1972.

Until this year snow had only been reported on two other occasions during June. During this month we have had four occurrences and a total of 0.6 cm accumulation. The latest occurrences of snow ever reported in June was on June 16th, 1950 when 0.3 cm were recorded.

In summary:- In analysing station records dating back to 1939 we can conclude that this was the coldest period ever for June and although colder minimums have been reported in past years never have daytime maximums or daily means been this low. However, now that daytime temperatures are once again soaring upwards to summer-time values, we can sit back and lick our wounds and file the weather of the past few days in the memory banks of our mind, hoping that any re-occurrences are few and far between.

> J.J.A. MacLean North Bay Weather Office

Temperature and snowfall records - June 8th - 12th incl.												
Date	Low Maximum	Previous Record/Date	Low Minimum	Previous Record/Date	Daily Mean	Previous Record/Date	Snow	Previous Record/Date				
8/80	8.8*	11.1*/1977			4.7	7.2°/1949	0.2 cm	lst occurrence				
9/80	9.0°	10.6°/1972	-1.0°	1.1*/1972	4.0°	6.1°/1972	Trace	lst occurrence				
10/80	6.5**	8.9°/1972	and and the		2.6**	3.9°/1972	0.4 cm	Trace/1972				
11/80	10.4°	10.6°/1963	P-FA		5.6*	8.7°/1979	Trace	lst occurrence				
12/80			2.8°	3.3°/1947		1 Ast						

\* Note - Low maximum and Daily temperatures on 10th are the coldest for any date in June since records began in 1939.

## ON THIS DATE ...

...June 11, 1972, a widespread recordbreaking killing frost struck the rich agricultural lands of Ontario's southwestern counties. Official screen temperatures dropped to  $-3^{\circ}$ , and grass minimum temperatures to  $-8^{\circ}$ . Farmers and growers suffered substantial economic losses as hundreds of acres of young tobacco, tomato, potato and cash crop vegetables were killed overnight. ...June 14, 1969, the highest temperatures on record in the Yukon Territory occurred on this date, 36° at Mayo and

at Whitehorse Riverdale.

### CLIMATIC PERSPECTIVES

11

### Staff

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

Yves Durocher Dan Williams Fred Richardson, Andy Radomski Gregory Wilson, Debbie Allsopp Lillian Merhven, Una Ellis

### Correspondents

(Ice Forecasting Central)
(Whitehorse)
(Western Region)
(Central Region)
(Ontario Region)
(Quebec Region)
(Atlantic Region)
George, Kamloops, Castlegar, For
Nelson, Penticton and Kelowna
weather office (Pacific Region)

Telephone Inquiries (416) 667-4711/4956

TORDA Surveyal Survey Surveyal Surveyal Surveyal Survey Survey Survey Surve

DULTINEST TREATIONS LIST AREA LANK C. 3 MARK LANK C. 3 MARK LANK TREAT MARK LANK A MARK LANK A GUN DULTE CAUSE DULTE LANK DULTE

1 . . . .



TEMPERATURE AND PRECIPITATION DATA FOR THE WEEK ENDING OGQO G.M.T. JUNE 16, 1980

. .

-12

and an array of the second

- John B.

	Temperature (°C)			(°C)	Precip	). (mm)	Temperature (°C)         Precip. (mm)         T					Ten	Temperature (°C)				Precip. (mm)			
Station	Average	Departure from Normal	Extreme Maximum	Extreme Minimum	Total	Departure from Normal	Station	Average	Departure from Normal	Extreme Moximum	Extreme Minimum	Total	Departure from Normal	Station'	Average	from Normal	Extreme Maximum	Extreme Minimum	Total	Departure from Normal
BRITISH COLUMBIA Abbotsford A Alert Bay Blue River Bull Harbour Burns Lake Cape Scott Capt St. James Castlegar A Comox A Cranbrook A Dease Lake Estevan Point Fort Nelson A Fort St. John A Kamloops A Langara Lytton Mackenzie A McInnes Island Penticton A Port Hardy A Prince George A Prince Rupert A Quesnel A Revelstoke A Sandspit A Smithers A Spring Island Stewart A Terrace A Tofino A Vancouver Int'l A Victoria Int'l A	14 14 12 M M 11 11 17 15 16 M 16 17 20 10 20 M 13 15 12 17 19 13 15 M 16 M 15 16 16 17 20 10 20 M 13 15 16 16 17 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 10 10 10 10 10 10 10 10 1	100 00 00 00 00 00 00 00 00 00 00 00 00	21 18 26P 15P 22P 15 17 29 22 26 24P 15P 27 28 31 14 32 28P 16 28 16 31 29 17 26 M 21P 24 M 20 20 26 24 24 28 28 28 28 28 28 28 28 28 28	IXI       8       7       5       9       9       6       8       7       7       3       9       6       8       7       7       7       3       9       6       8       9       7       10       6       6       7       5       8       9       7       10       6       6       7       5       8       9       5       9       9       9       10       M       9       8       6       6       7       5       8       9       5       9       9       9       10       M       9       8       6       6       7       5       8       9       5       9       9       9       10       M       9       8       6       6       7       5       8       6       6       7       5       8       9       5       9       9       9       10       M       9       8       6       6       7       5       8       6       6       7       5       8       6       6       6       8       6       6       6       6       6       6       8       6       6       6       6       6	8.4 8.4 5.4 M 1.6 M 3.0 3.1 2.0 16.4 8.8 7.2 12.9 9.7 1.4 20.2 10.0 M 1.0 0.8 24.6 6.8 16.0 15.6 3.6 1.2 M 1.2 M 1.6 6.2 M	- 7.2 - 7.2 - 7.1 x -10.9 x -24.8 -12.3 -11.6 9.4 - 2.9 - 1.0 M 0.8 -8.2 - 5.2 1.1 9.0 x -20.6 -10.4 - 8.6 15.3 - 7.2 2.8 - 5.2 1.1 9.0 x - 7.1 x - 7.1 x - 2.9 - 1.0 M 0.8 - 8.2 - 5.2 1.1 9.0 x - 7.1 x - 7.1 x - 7.1 x - 7.1 x - 7.1 x - 7.1 x - 2.9 - 1.0 M 0.8 - 8.2 - 5.2 1.1 9.0 x - 7.2 - 7.2 - 5.2 1.1 9.0 x - 7.2 - 7.1 - 7.2 - 7.2 - 7.1 - 7.2 - 7.1 - 7.2 - 7.2 - 7.1 - 7.2 - 7.1 - 7.2 - 7.1 - 7.2 - 7.1 - 7.2 - 7.1 - 7.2 - 7.1 - 7.2 - 7.2 - 7.1 - 7.2 - 7.2 - 7.1 - 7.2 - 7.2 - 7.1 - 7.2 - 7.1 - 7.2 - 7.2 - 7.2 - 7.2 - 7.3 - 7.2 - 7.2 - 7.2 - 7.1 - 7.2 - 7.2 - 7.1 - 7.2 - 7.3 - 7.2 - 7.3 - 7.2 - 7.2 - 7.3 - 7.2 - 7.3 - 7.3	Resolute A Sachs Harbour Shepherd Bay A Tuktoyaktuk Yellowknife A ALBERTA Banff Brooks Calgary Int'l A Cold Lake A Coronation A Edmonton Int'l. A Edmonton Namao A Edmonton Nama	0 2 0 8 M 14 M 16 17 17 17 20 18 17 M 15 16 17 19 18 17 17 18 M 17 18 18 18 18 18 18 18 18 18 18 18 18 18	ODORM RMRRAS4SHAMNARA4444 MRXR1R	4 7 3 20 24P 24 M 26 29 28 27 30 28 27 30 28 27 30 28 27 30 28 27 27 29 29 27 29 29 27 29 29 27 29 29 27 29 29 27 29 29 27 29 29 27 29 29 27 29 29 27 29 29 27 29 29 27 20 20 20 20 20 20 20 20 20 20 20 20 20	± - 5 - 2 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3	€ 1.7 0.0 0.0 0.0 M 10.8 M 1.8 2.4 3.1 5.6 13.9 7.8 M 52.5 8.0 13.9 9.7 17.2 3.9 1.4 0.0 1.6 3.6 0.4 M 2.2 13.2 5.0 4.7	- 2.0 - 0.5 - 4.6 - 0.3 M - 5.2 M - 19.7 - 15.8 - 10.5 - 11.0 - 14.8 - 0.5 - 22.8 M - 8.3 M 48.1 - 4.2 - 5.5 - 6.1 8.4 - 19.9 - 21.7 - 21.6 - 13.6 - 14.9 - 11.3 M x - 7.8 - 5.2 - 9.2	Pickle Lake Red Lake A Simcoe Sioux Lookout A Sudbury A Thunder Bay A Timmins A Toronto Int'l A Trenton A Trout Lake Wawa A Wiarton A Windsor A QUEBEC Bagotville A Baie Comeau Blanc Sablon Border Chibougamau Fort Chimo A Gaspé A Grindstone Island Inoucd jouac Koartak La Grande Rivier A Maniwaki Matagami A Mont Joli A Nontréal Int'l A Natashquan A Nitchequon Port Menier Poste de la Baleine Québec A Riviere du Loup Koberval A	X c 12 M 13 11 13 10 13 11 13 10 13 11 13 10 13 11 15 11 10 M M 7 5 10 M 2 M 3 11 6 12 14 10 5 9 2 13 M 11 15 11 15 11 15 11 11 15 11 11	OM M 2 5 1 4 5 7 2 X 5 5 4 2 M M X 2 X M 2 X X 5 X 2 5 0 4 1 4 3 M 4	28 28 28 28 25 27 22 28 28 26 24 20 22 28 28 26 24 20 22 25 25 25 25 25 28 21 9 9 25 25 25 25 28 21 9 9 9 6 9 12 29 18 29 12 29 18 29 12 29 12 29 29 25 25 25 25 25 25 25 25 25 25 25 25 25		22.0 M M 8.0 4.8 6.9 5.9 13.3 14.6 17.5 M 1.4 33.6 18.4 26.4 M 18.2 17.5 27.7 37.0 1.0 10.6 40.4 4.4 14.8 23.3 6.2 40.2 32.1 34.8 18.6 9.8 M 14.9	4.8 M M -1 L 1 -16.3 -13.8 -13.3 -2.00 -0.8 1.22 x -11.7 10.6 -2.8 8.00 M M x 6.5 x 17.5 -7.7 x -13.9 x 11.0 -13.9 x 11.0 -14.6 M M x -13.3 -2.00 -0.8 -13.3 -2.00 -0.8 -13.3 -2.00 -0.8 -13.3 -2.00 -0.8 -13.3 -2.00 -0.8 -13.3 -2.00 -0.8 -13.3 -2.00 -0.8 -1.22 -1.22 -1.22 -1.22 -1.22 -1.22 -1.23 -2.0 -0.8 -2.8 -1.22 -1.22 -1.25 -7.7 -7.7 x -1.3.9 -1.39 -1.22 -1.1.0 -1.22 -1.22 -1.22 -1.22 -1.22 -1.22 -1.22 -1.22 -1.25 -7.7 -7.7 -1.39 -1.22 -1.1.7 -1.1.7 -1.23 -1.22 -1.23 -1.22 -1.23 -1.22 -1.23 -1.22 -1.23 -1.22 -1.23 -1.22 -1.23 -1.23 -2.88 -2.88 -2.88 -1.22 -7.7 -2.88 -1.22 -1.1.7 -7.7 -1.3.9 -1.1.7 -1.1.7 -1.1.7 -1.1.7 -1.23 -1.22 -1.1.7 -1.23 -1.22 -1.1.7 -1.23 -1.22 -1.1.7 -1.23 -1.22 -1.1 -1.22 -1.1 -1.22 -1.1 -1.22 -1.1 -1.22 -1.1 -1.1.4 -1.1.7 -1.
YUKON Burwash A Dawson A Komakuk Beach A Mayo A Shingle Point A Watson Lake A Whitehorse A NORTHWEST TERRITORIE: Alert Baker Lake Broughton Island	10 13 6 14 9 15 13 8 8	- 1 - 1 3 1 3 1 0 - 4 2 M	24 24 21 23 23 24 24 24 0 13	- 3 3 - 2 5 - 1 7 2 - 9 - 2 - 8	5.0 34.6 0.0 7.9 0.0 15.8 5.6 5.0 2.1	$\begin{array}{r} -5.4\\ 26.7\\ 0.3\\ 3.1\\ -0.7\\ 4.7\\ 0.5\\ 2.8\\ -2.5\\ 6.0\\ \end{array}$	La Ronge A Meadow Lake A Moose Jaw A Nipawin A North Battleford A Prince Albert A Regina A Saskatoon A Swift Current A Uranium City Wynyard Yorkton A	16 16 19 17 17 17 16 19 18 M 14 14 17 17	4 X 3 X 2 3 2 M 1 3 2	31 33 33 32 31 33 32 32 32 29P 29 32 32	4 2 7 5 8 2 7 5 4 2 4 - 1	4.8 0.4 2.8 3.0 8.9 3.4 0.6 1.6 1.6 5.4 2.6 0.0	-13.3 x -16.8 x -7.4 -8.5 -19.1 -12.6 M -3.0 -16.2 -11.8	Schefferville A Sept-Iles A Sherbrooke A Ste.Agathe des Monts Val d'Or A NEW BRUNSWICK Charlo A Chatham A Fredericton A Moncton A Saint John A	4 10 12 11 9 - 13 - 14 - 15 - 13 - 12 -	-4 -3 -5 -6 -1 -1 -1 -1 -1 -1 -1	9 22 28 25 24 29 30 28 27 24	- 1 1 3 - 1 - 3 2 4 4 5 4	26.9 16.2 4.1 9.4 11.6 27.1 20.0 18.0 32.5 37.4	5.2 - 6.0 -15.7 -14.5 - 3.8 10.0 1.4 - 0.3 13.1 17.0
Byron Bay A Cambridge Bay A Cape Dorset Cape Dyer A Cape Hooper Cape Parry A Cape Young A Chesterfield Inlet Clinton Point Clyde Contwoyto Lake Coppermine Coral Harbour Dewar Lakes Ennadai Eureka	- 3 - 3 - 3 - 2 - 4 - 1 - 1 - 1	1 2 X 1 2 1 1 2 X 1 2 1 1 3 3 3 M 1 0 1 M 4	7 9 8P 5 4 7 5 13 12 5 9P 15 7 6 M	- 3 - 1 - 2 - 4 - 6 - 2 - 3 - 1 - 1 - 8 - 1P - 3 - 4 - 5 0 - 7	2.6 4.3 M 27.6 3.0 0.0 0.3 0.0 0.0 18.8 M 0.4 0.2 0.0 M 4.4	1.7 0.2 x 17.9 - 4.7 - 1.1 - 2.6 - 4.8 - 3.0 15.2 M - 2.9 - 6.5 - 4.5 M 2.9	MANITOBA Bissett Brandon A Churchill A Dauphin A Gillam A Gimli Island Lake Lynn Lake Norway House Pilot Mound Portage la Prairie The Pas A Thompson A Winnipeg Int'l A	14 17 5 17 7 16 12 11 13 17 17 15 10 17	- 12 X O X O X 2 1 1 2 O	29 32 21 31 22 29 27 28 30 31 33 32 24 32	$   \begin{array}{r}     1 \\     5 \\     - 2 \\     2 \\     - 2 \\     3 \\     1 \\     0 \\     1 \\     5 \\     3 \\     1 \\     - 3 \\     1   \end{array} $	8.9 16.8 5.8 26.6 19.5 1.6 10.2 8.0 7.8 5.8 6.8 0.4 7.1 2.2	$ \begin{array}{r} -16.5 \\ 2.9 \\ -1.7 \\ 13.4 \\ x \\ -10.4 \\ x \\ -5.2 \\ x \\ -8.2 \\ -6.5 \\ -10.1 \\ -14.2 \\ -9.7 \end{array} $	NOVA SCOTIA Eddy Point Greenwood A Sable Island Shearwater A Sydney A Truro Yarmouth A PRINCE EDWARD ISLAND Charlottetown Summerside NEWFOUNDLAND Argentia VTMS Battle Harbour	13 13 - 11 14 13 M 12 - 13 - 13 - 13 - 10 7	X - 2 1 0 1 M - 1 - 1 - 1 - 1 - 1 X 1	22 24 16 21 26 23P 21 24 22 18 16	4 2 6 8 2 3 3 3 5 7 5 0	15.5 36.2 38.3 28.8 14.0 M 11.8 28.6 27.6 51.2 M	x 21.3 18.5 8.9 - 4.8 M -11.7 7.7 10.8 X M
Fort Reliance Fort Simpson Fort Smith A Frobisher Bay A Gladman Point A Hall Boach A Huy Rivor A Inuvik A Jenny Lind Island Lady Franklin Point Longstaff Bluff Mackar Inlet Mould Bay Nicholson Peninsula Norman Wells A Pelly Bay Pond, Inlet A Port Burwell	M 13 14 4 1 - 2 12 12 2 2 0 - 2 1 7 13 - 2 0 M	<pre>M H 1 1 1 1 1 1 1 1 2 1 1 2 1 0 0 2 3 - 1 X X</pre>	19P 26 29 10 4 6 23 26 7 0 6 4 7 18 26 6 6 6 M	2 2 4 - 1 - 2 - 8 4 0 - 2 - 4 - 5 - 7 - 3 - 2 5 - 7 - 7 - 6 M	M 4.7 16.1 2.5 0.9 0.0 1.2 0.0 1.1 0.3 0.0 0.8 0.0 0.0 9.4 0.4 0.0 M	$\begin{array}{c} M \\ = 5.8 \\ 8.0 \\ = 4.4 \\ = 0.6 \\ = 3.0 \\ = 5.4 \\ = 1.1 \\ 0.3 \\ = 1.6 \\ = 5.1 \\ = 1.4 \\ = 0.7 \\ = 0.7 \\ = 0.7 \\ 2.1 \\ = 1.7 \\ \times \\ \times \end{array}$	ONTARIO Armstrong A Atikokan Earlton A Geraldton Gore Bay A Kapuskasing A Kenora A Kingston A Lansdowne House London A Moosonee Mount Forest Muskoka A North Bay A Ottawa Int'l A Petawawa A	M 13 M 11 10 16 M 11 13 7 M M 9 13 11	M-M-440M-54MM65X	24P 26 26P 27 28 18P 28 23 23 23 23 22P 26P 20 30 27	-2 -1 -1 -3 -3 -3 -3 -5 -1 -1 -2 -3	7.0 19.1 M 0.4 5.0 5.2 1.2 M 20.2 1.6 3.6 M M 3.0 1.6 3.4	-14.3 -7.8 M -29.7 -6.2 -10.9 -18.6 M 6.1 -18.1 -16.6 M M -21.8 -17.5 X	Bonavista Burgeo Cartwright Churchill Falls A Comfort Cove Daniels Harbour Deer Lake Gander Int'l A Goose A Hopedale Port aux Basques St. Albans St. Anthony St. John's A St. Lawrence Stephenville A Wabush Lake	13 8 6 13 9 11 12 8 - 5 - 8 M 8 13 - - - - - - - - - - - - -	4 1 0 2 2 0 0 0 2 2 1 0 M X 3 1 0 3	21 12 16 13 27 15 21 25 15 14 15 19P 23 21 13 20 16	6 4 0 49 2 3 4 2 - 1 5 3 0 5 3 4 - 1	27.4 56.0 25.4 33.8 31.0 41.2 M 18.2 25.2 3.2 54.5 M 57.2 19.1 49.7 40.0 15.8	11.0 25.7 7.8 11.1 16.7 25.5 M - 0.3 7.1 -11.9 29.4 M x 4.6 25.4 20.8 2.4

F - extreme value based on less than 7 days

X - no normal due to short period

M - not available at press time

-