



Climatic Perspectives



April 26 to May 2, 1993 **A weekly review of Canadian climate and water**

Vol. 15 No 18

Water, Water, Almost Everywhere

Mild and wet describe the conditions that prevailed generally over the western and central part of the country this week, but winter lingered over north-eastern Canada.

Unsettled weather continued over British Columbia bringing rain and showers almost every day. Victoria, Kelowna and Port Hardy set new monthly records for the number of days with precipitation in April. Hours of bright sunshine were below long-term averages. Consequently, some fruit trees are blooming about three weeks later than last spring.

Unsettled conditions extended into the Prairies. Rain and snow, totalling 43 mm, was reported in Lloydminster over Monday and Tuesday. Grand Prairie, Alberta, ended the month with 200 percent of its normal monthly precipitation.

On the 27th, a cold front combined with a low pressure system to produce heavy precipitation over the southern half of Saskatchewan and Manitoba. Dauphin reported a total of nearly 33 mm of wet snow and rain. This caused extremely slippery road conditions and the closure of the highway between Dauphin and Swan River. However, most of the snow melted quickly, as temperatures hovered above the freezing mark the next day.

Much further east, over the southern Maritimes, a winter-like storm dumped a mixture of snow, freezing rain, ice pellets

and rain Tuesday. There were several weather-related accidents. Three deaths occurred when a car skidded off the Trans-Canada highway near Glasgow, Nova Scotia. A truck carrying chemicals overturned near Shubenacadie, Wednesday. Seventy-five local residents were evacuated, and a section of the main highway and a school was closed, due to a threat from hazardous fumes.

A series of disturbances spread clouds and precipitation over Newfoundland and Labrador. A northerly circulation pulled cold air down from the ice-pack and temperatures were well-below normal.

Over the Arctic

In the Yukon, a ridge in the upper air circulation forced the Arctic front to remain north of the Ogilvie Mountains. Clouds and scattered showers invaded the southern and central areas. This resulted in a large temperature contrast between the northern and southern parts of the Yukon. The southern Mackenzie District experienced relatively mild and sunny conditions. In contrast, temperatures over the Arctic Islands were 6°C below normal and numerous all-time minimum temperature records were set.

High water levels on lower Great Lakes

Excessive autumn and winter precipitation lead to record high April water supplies to Lake Ontario. Lake levels rose

46 cm this month and are reported to be at their highest since 1973. They are currently 60 cm above the long-term average and only 10 cm below the record high set in 1952. Consequently, some flooding has occurred in low-lying areas around the lake.

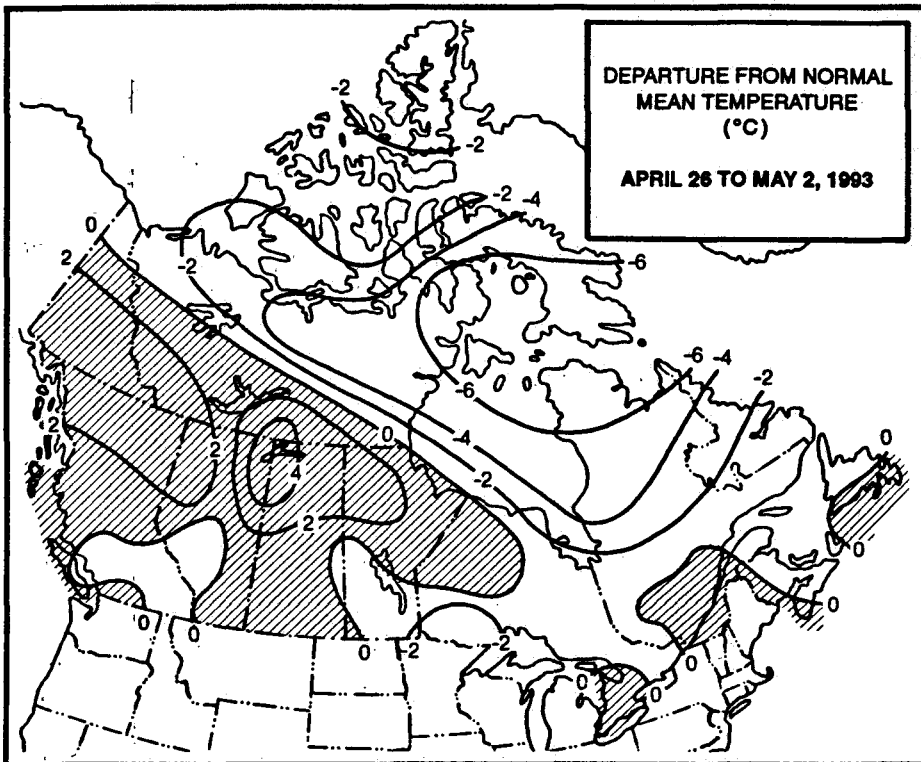
As many of our readers are aware, water levels on some of the Great Lakes are regulated. To minimize the possibility of further storm damage the hydro dam controlling flows in the St Lawrence River at Cornwall is being operated so as to provide all possible relief to shoreline properties. The monthly issue of Climatic Perspectives will provide further details.

A Look Ahead...

For the week of May 10, above-normal temperatures are expected across southern Ontario and southwestern Quebec. The Yukon, British Columbia and the Atlantic provinces will experience below-normal temperatures. Elsewhere, near normal values are anticipated.

Unsettled periods of weather are possible over the southern Prairies and the southern parts of Ontario and Quebec. Stormy weather is expected in the Atlantic region and the western half of British Columbia.

With continued high water levels on Lakes Erie and Ontario, there is a significant risk of storm damage along the shorelines.



DEPARTURE FROM NORMAL
MEAN TEMPERATURE
(°C)
APRIL 26 TO MAY 2, 1993

Weekly normal temperatures (°C)

	max.	min.
Whitehorse A	9.1	-2.3
Iqaluit A	-5.0	-14.0
Yellowknife A	3.8	-6.4
Vancouver Int'l A	14.4	6.1
Victoria Int'l A	14.4	5.1
Calgary Int'l A	11.6	-1.1
Edmonton Int'l A	14.3	0.1
Regina A	13.3	0.0
Saskatoon A	13.5	0.4
Winnipeg Int'l A	13.8	1.0
Ottawa Int'l A	14.9	3.3
Toronto (Pearson Int'l A)	14.7	3.1
Montréal Int'l A	14.9	3.8
Québec A	12.4	1.3
Fredericton A	12.7	0.8
Saint John A	10.8	0.4
Halifax (Shearwater)	10.0	1.5
Charlottetown A	8.7	0.1
Goose A	6.0	-3.1
St John's A	6.1	-0.8

Weekly temperature and precipitation extremes

	Maximum temperature (°C)	Minimum temperature (°C)	Heaviest precipitation (mm)
British Columbia	Blue River A 24	Fort Nelson A -6	Abbotsford A 42
Yukon Territory	Watson Lake A 15	Komakuk Beach A -22	Watson Lake A 9
Northwest Territories	Fort Smith A 17	Hall Beach A -31	Fort Smith A 22
Alberta	Fort McMurray A 20	Edson A -4	Lloydminster A 43
Saskatchewan	Elbow (aut) 25	Meadow Lake -5	North Battleford A 16
Manitoba	Portage La Prairie A 21	Churchill A -20	Dauphin A 44
Ontario	Petawawa A 24	Moosonee -15	Upsala (aut) 44
Quebec	Sherbrooke A 24	Kuujuarapik A -25	La Grande IV A 20
New Brunswick	St-Léonard A 21	Moncton A -7	Moncton A 22
Nova Scotia	Yarmouth A 20	Amherst (aut) -7	Greenwood A 45
Prince Edward Island	Charlottetown A 13	Charlottetown A -4	Charlottetown A 21
Newfoundland	St John's A 19	Wabush Lake A -17	Port Aux Basques 99

Across The Country...

Highest Mean Temperature	Lytton (B.C.) 12
Lowest Mean Temperature	Eureka (N.W.T.) -24

CLIMATIC PERSPECTIVES
VOLUME 15

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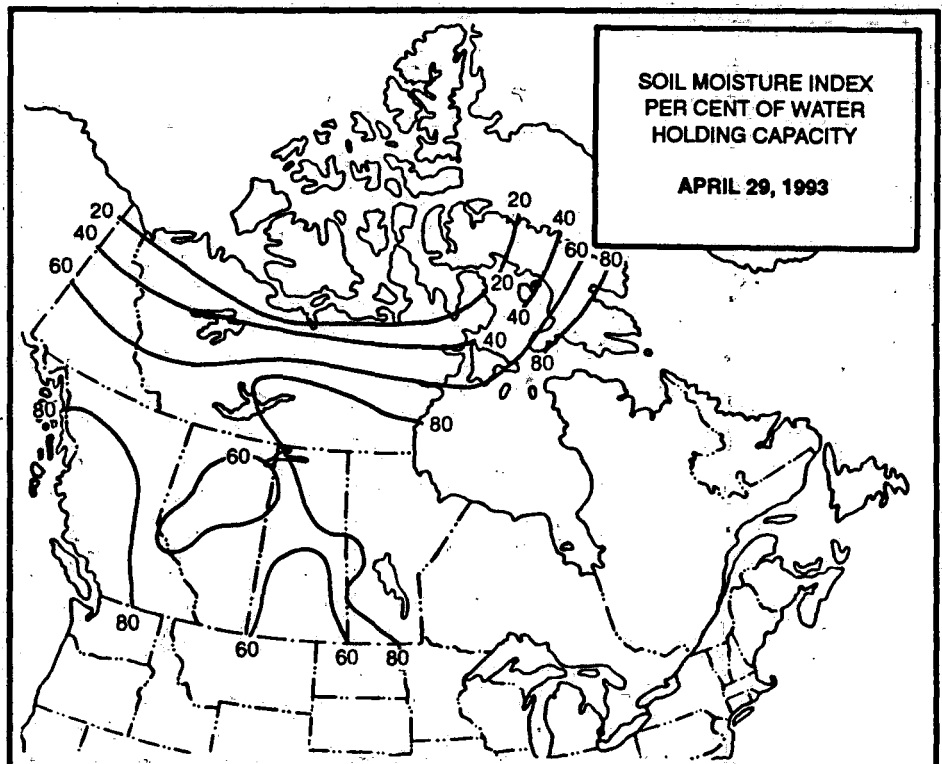
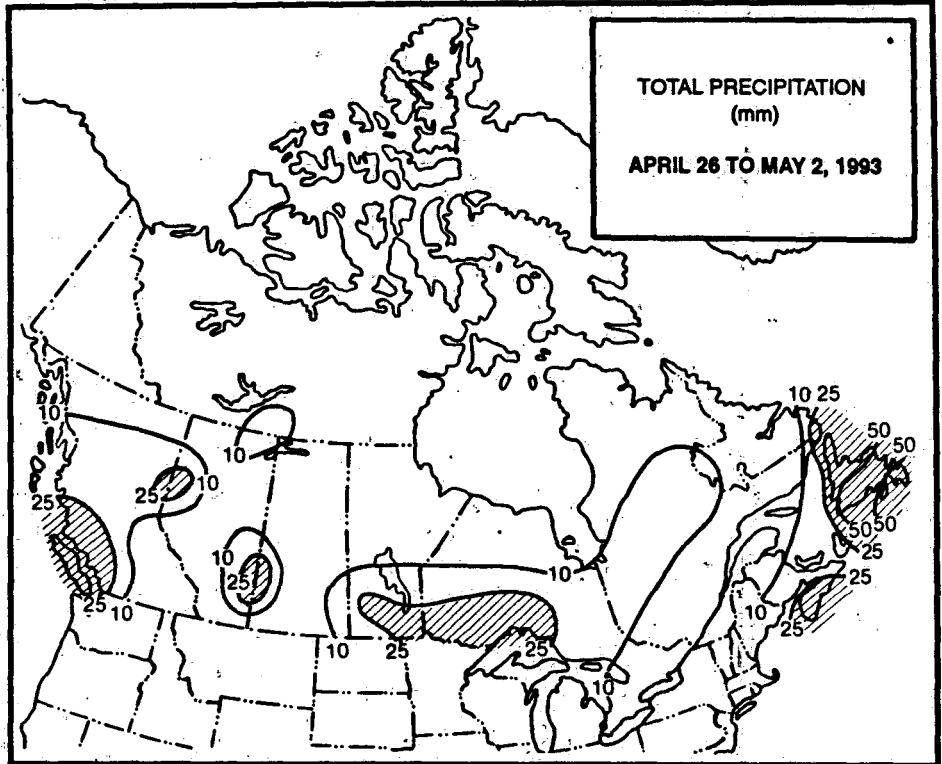
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The purpose of the publication is to make topical information available to the public concerning the Canadian Climate and its socio-economic impact.

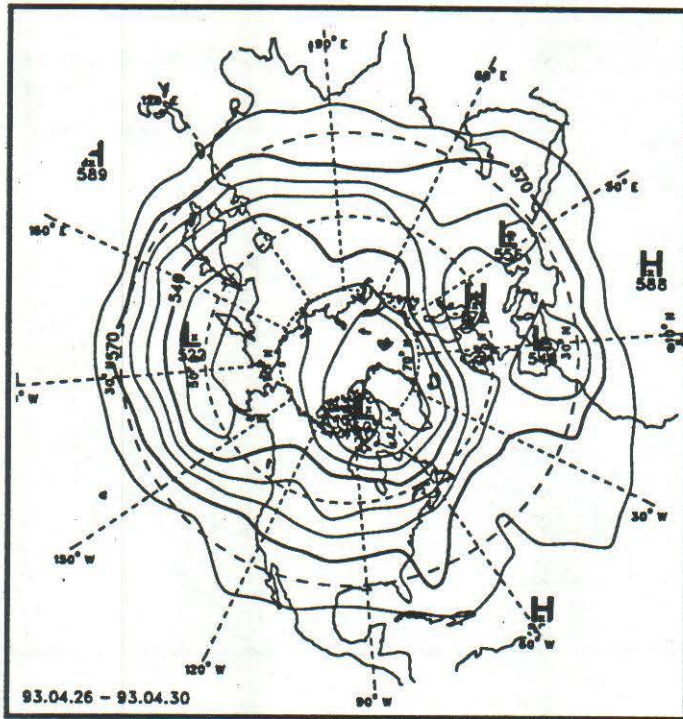
The data in this publication are based on unverified reports from approximately 225 Canadian synoptic weather stations. Information concerning climatic impacts is gathered from AES contacts with the public and from the media. Articles do not necessarily reflect the views of the Atmospheric Environment Service.

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and changes:

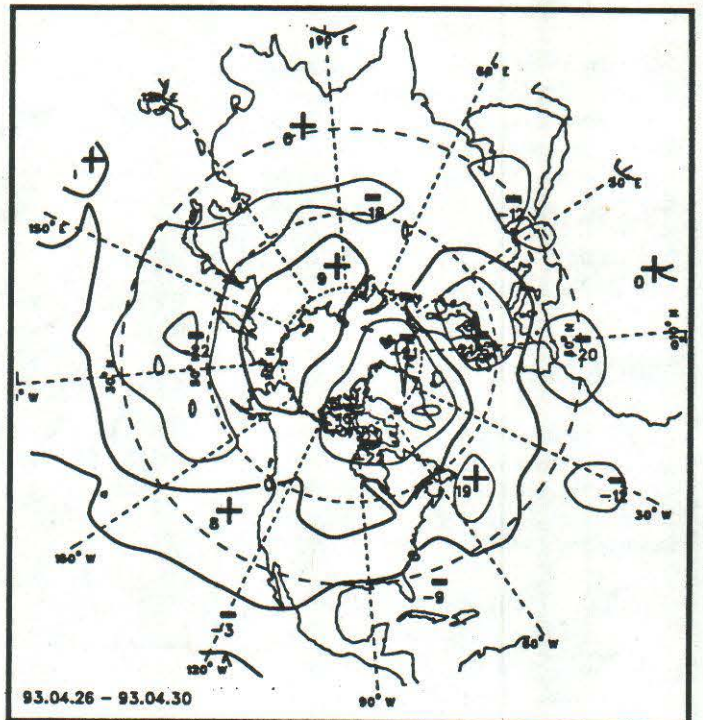
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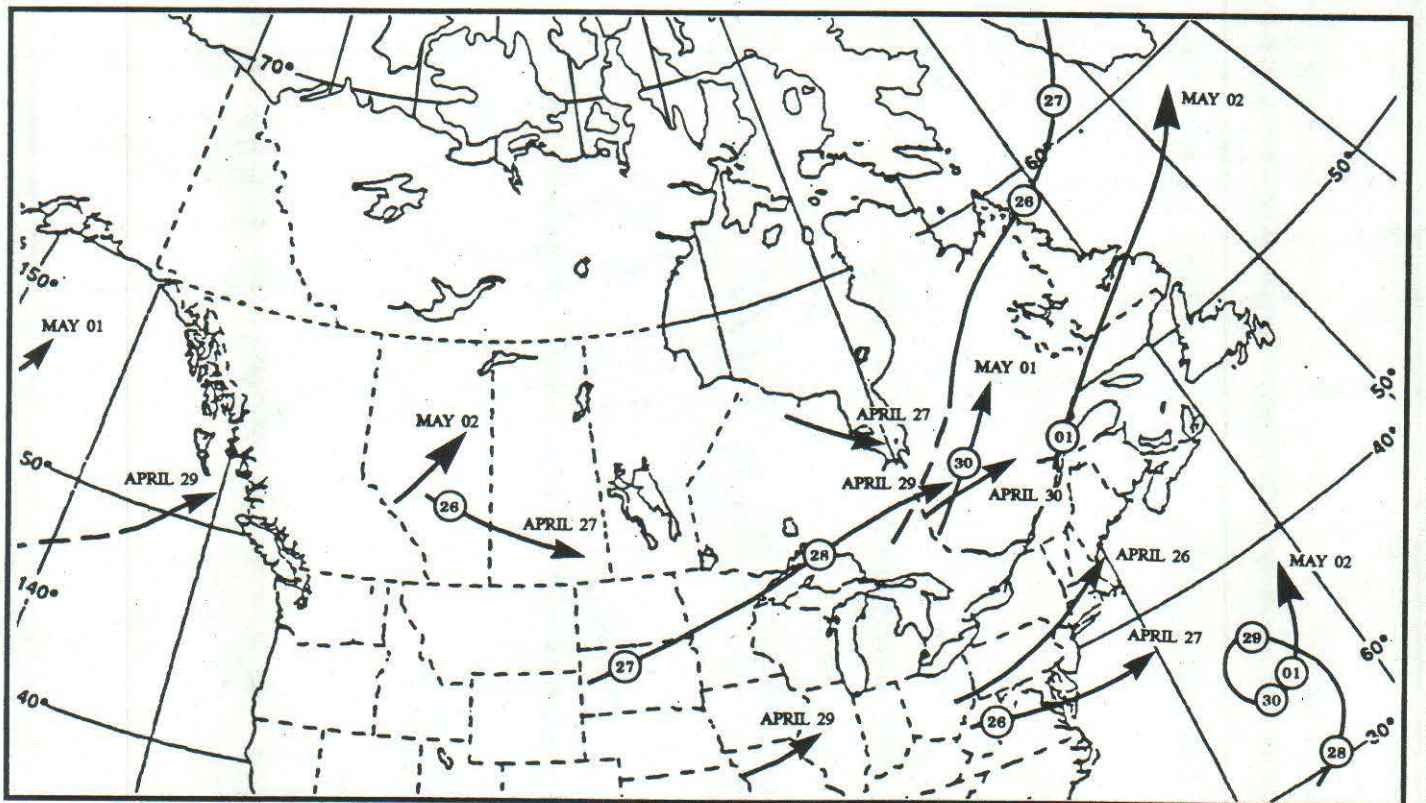
50-kPa ATMOSPHERIC CIRCULATION



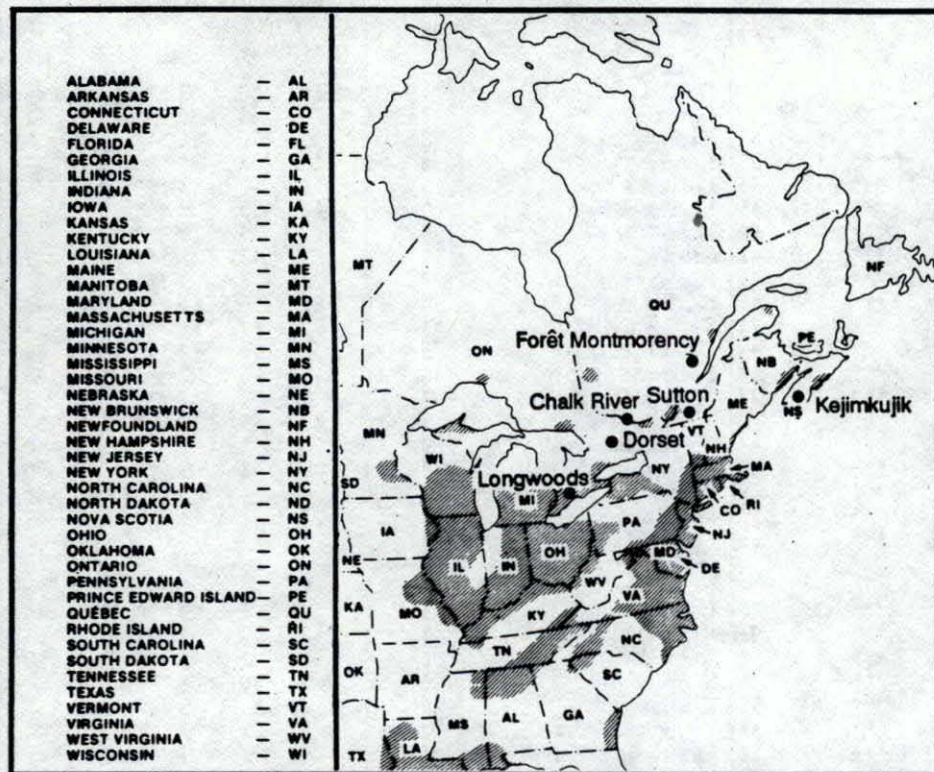
Mean geopotential height
50-kPa level (10 decametre intervals)



Mean geopotential height anomaly
50-kPa level (10 decametre intervals)



Tracks of low pressure centres at 12:00 U.T. each day during the period.



ACID RAIN

The reference map (left) shows the locations of sampling sites, where the acidity of precipitation is monitored. All are operated by Environment Canada except Dorset (*), which is a research station operated by the Ontario Ministry of Environment and Energy. The map also shows the approximate areas (shaded), where SO₂ and NO_x emissions are greatest.

The table below gives the weekly report summarizing the acidity (or pH) of the acid rain or snow that fell at the collection sites, and a description of the path travelled by the moisture laden air. Environmental damage to lakes and streams is usually observed in sensitive areas regularly receiving precipitation with pH readings less than 4.7, while pH readings less than 4.0 are serious.



SITE	day	pH	amount	AIR PATH TO SITE
April 25 to May 1, 1993				
Longwoods				.... Data not available this week
Dorset *	29	4.0	4 P	.... Trajectory not available
	30	3.7	1 P	.... Trajectory not available
Chalk River	29	4.1	1 P	.... Trajectory not available
Sutton	25	3.9	15 P	.... New York, Ohio, Pennsylvania
Montmorency	25	4.3	15 M	.... Southern Quebec, eastern and southern Ontario, New York
Kejimikujik	26	4.0	6 M	.... Atlantic Ocean
	27	4.5	1 M	.... Atlantic Ocean
	30	5.0	13 P	.... Trajectory not available
	01	5.0	4 P	.... Trajectory not available
.... R = rain (mm), S = snow (cm), M = mixed rain and snow (mm)				

STATION	temperature				precip. ptot st	wind max dir vel	STATION	temperature				precip. ptot st	wind max dir vel				
	mean	anom	max	min				mean	anom	max	min						
British Columbia							Ontario										
Blue River A	9P	2P	24P	2P	0P***	X	Geraldton A	1	***	14	-10	43	***	070	44		
Comox A	10	0	14	5	29	***	130	65	Gore Bay A	7	0	18	-4	30	***	160	61
Cranbrook A	8	-1	15	-2	5	***	270	52	Kapuskasing A	3	-1	15	-10	18	***	130	35
Fort Nelson A	8	3	18	-6	1	***	190	37	Kenora A	4	-2	15	-2	31	***	180	52
Fort St John A	8	2	16	0	11	***	230	44	London A	10	1	19	-1	3	***	230	48
Kamloops A	11	-1	19	2	7	***	040	46	Moosonee	0	-1	13	-15	4	***	010	37
Penticton A	11	0	18	2	4	***	170	69	North Bay A	8	1	20	-5	19	***	010	32
Port Hardy A	9	1	12	4	34	***	110	41	Ottawa Int'l A	10	1	22	-2	2	***	090	41
Prince George A	7	1	15	-1	20	***	210	48	Petaawawa A	7	-1	24	-8	2	***	010	39
Prince Rupert A	8	1	12	4	39	***	160	59	Pickle Lake	3	0	16	-10	11	***	050	44
Smithers A	7	1	15	1	16	***	190	46	Red Lake A	***	***	12	***	***	***	070	54
Vancouver Int'l A	11	1	15	7	39	***	140	44	Sioux Lookout A	3	-2	12	-6	43	***	080	44
Victoria Int'l A	11	1	16	6	19	***	220	39	Sudbury A	6	0	18	-6	22	***	190	48
Williams Lake A	6	-1	13	0	9	***	140	37	Thunder Bay A	2	-3	8	-7	41	***	X	
Yukon Territory							Québec										
Komakuk Beach A	-14	-2	-7	-22	0	***	X		Bagotville A	7	1	18	-6	1	***	090	56
Teslin (aut)	5P	***	13P	-4P	0P***	X		Baie Comeau A	3	0	13	-7	3	***	090	44	
Watson Lake A	7	4	15	-5	9	***	180	50	Blanc Sablon A	-1	***	5	-9	3	***	010	65
Whitehorse A	7	3	14	-3	1	***	170	41	Gaspé A	1	-3	11	-22	1	***	290	50
Northwest Territories							New Brunswick										
Alert	-20P	-2P	-15P	-25P	0P***	270	44	Fredericton A	7	0	20	-4	7	***	070	46	
Baker Lake A	-18	-5	-9	-26	1	***	340	43	Miscou Island (aut)	2P	-1P	11P	-5P	4P***	X		
Cambridge Bay A	-16	-1	16	-28	2	***	310	70	Moncton A	3	-2	13	-7	22	***	050	41
Cape Dyer A	***	***	***	***	***	***	X	Saint John A	6	0	18	-5	22	***	030	46	
Clyde A	-17	-4	-9	-28	1	***	300	33	St Leonard A	8	***	21	-4	1	***	110	37
Coppermine A	-16	-7	-6	-27	2	***	260	37	Nova Scotia								
Coral Harbour A	-20	-8	-10	-31	8	***	090	52	Greenwood A	6	-1	17	-6	45	***	050	50
Eureka	-24P	-5P	-16P	-30P	1P***	X		52	Shearwater A	6	1	16	-2	32	***	030	48
Fort Smith A	8	5	17	-4	22	***	X	74	Sydney A	***	***	16	***	***	***	350	54
Hall Beach A	-22	-6	-12	-31	1	***	180	52	Yarmouth A	9P	2P	20P	-2P	42P***	040	59	
Inuvik A	-9	-1	3	-24	2	***	X	52	Prince Edward Island								
Iqaluit A	-17	-8	-9	-24	0	***	340	48	Charlottetown A	3	-2	13	-4	21	***	020	48
Mould Bay A	-18	-1	-12	-25	5	***	X	48	East Point (auto)	1P	***P	9P	-2P	1P***	X		
Norman Wells A	0	1	10	-7	6	***	280	43	Newfoundland								
Resolute A	-18	-1	-14	-23	6	***	070	65	Cartwright	-1	-2	7	-11	4	***	330	82
Yellowknife A	1	2	10	-12	1	***	040	43	Churchill Falls A	-4P	-3P	9P	-16P	0P***	290	57	
Alberta							Alberta										
Calgary Int'l A	7	1	17	-4	0	***	350	63	Gander Int'l A	2	-1	13	-6	72	***	350	70
Cold Lake A	9	3	19	-1	14	***	220	48	Goose A	0	-2	11	-10	6	***	270	52
Edmonton Namao A	8	1	18	1	3	***	290	63	Stephenville A	5P	1P	12P	-1P	64P***	060	46	
Fort McMurray A	9	4	20	-1	5	***	270	44	St John's A	3	1	19	-3	49	***	350	78
Grande Prairie A	6P	0P	16P	-1P	30P***	260	56	St Lawrence	4	0	11	-2	46	***	X		
High Level A	8	0	18	-3	0	***	330	37	Wabush Lake A	-3	-1	9	-17	13	***	290	50
Lethbridge A	9	2	17	-1	5	***	250	74	93/04/26-93/05/02								
Medicine Hat A	10	2	19	1	3	***	240	67	mean = mean weekly temperature, °C								
Peace River A	8P	3P	17P	-3P	17P***	280	43	max = maximum weekly temperature, °C									
Saskatchewan							Saskatchewan										
Cree Lake	7	3	17	-3	1	***	210	57	min = minimum weekly temperature, °C								
Estevan A	8	0	22	-5	5	***	310	65	anom = mean temperature anomaly, °C								
La Ronge A	7	2	19	-5	3	***	260	56	ptot = weekly precipitation total in mm								
Regina A	7	1	21	-4	9	***	190	48	st = snow thickness on the ground in cm								
Saskatoon A	8P	1P	22P	-3P	9P***	140	56	dir = direction of max wind, deg. from north.									
Swift Current A	7	1	19	-3	2	***	250	63	vel = wind speed in km/h								
Yorkton A	6	0	20	-4	13	***	160	46	X = no observation								
Manitoba							Manitoba										
Brandon A	6	0	21	-2	9	***	210	41	P = less than 7 days of data								
Churchill A	-6	0	14	-20	0	***	220	37	* = missing data when going to printing.								
Lynn Lake A	6	3	20	-6	1	***	170	43									
The Pas A	6	2	18	-5	1	***	130	54									
Thompson A	4	2	19	-12	1	***	150	41									
Winnipeg Int'l A	7	-1	20	-1	19	***	170	63									

93/04/26-93/05/02

mean = mean weekly temperature, °C
 max = maximum weekly temperature, °C
 min = minimum weekly temperature, °C
 anom = mean temperature anomaly, °C
 ptot = weekly precipitation total in mm
 st = snow thickness on the ground in cm
 dir = direction of max wind, deg. from north.
 vel = wind speed in km/h
 X = no observation
 P = less than 7 days of data
 * = missing data when going to printing.



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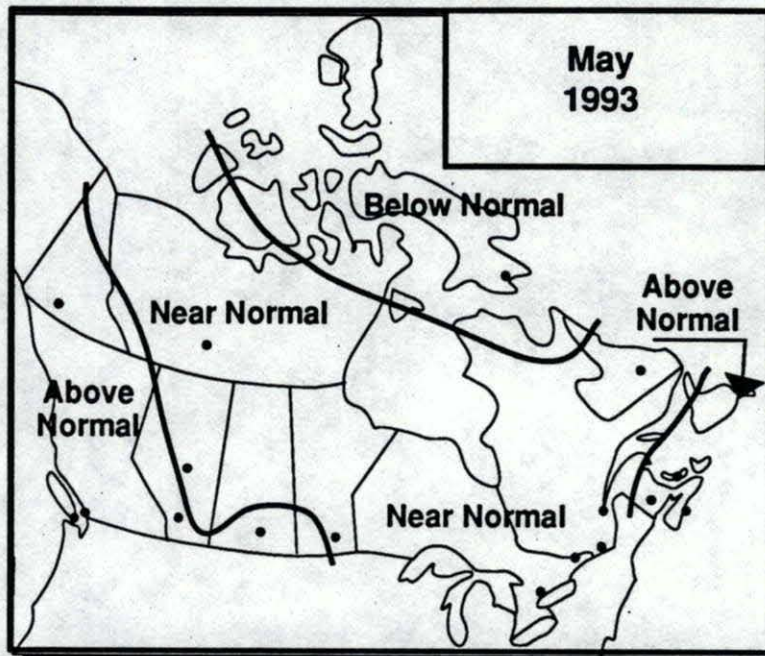
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MONTHLY TEMPERATURE FORECAST

Normal temperatures for May, °C

Whitehorse	7	Toronto	12
Yellowknife	5	Ottawa	13
Iqaluit	-3	Montréal	13
Vancouver	12	Québec	11
Victoria	12	Fredericton	11
Calgary	9	Halifax	9
Edmonton	11	Charlottetown	9
Regina	11	Goose Bay	5
Winnipeg	11	St. John's	5



Canada



Environmental
Citizenship

Whenever we turn on the tap, water comes out -- clean, drinkable water. What many of us don't consider is that municipal systems must treat every drop of water to make it safe for drinking. Processing all that water costs a lot, so use water wisely.

An environmental citizenship message from Environment Canada.