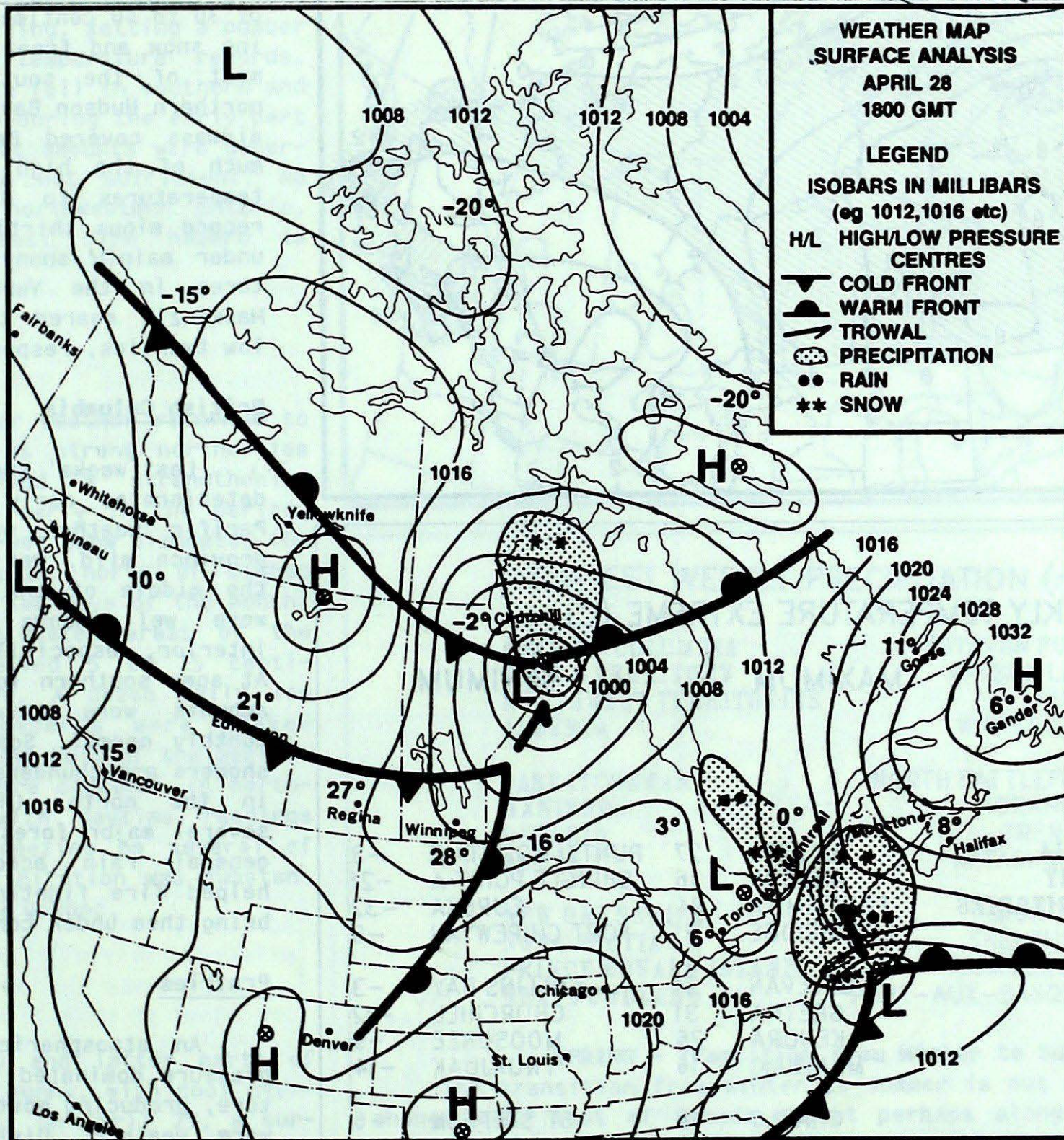
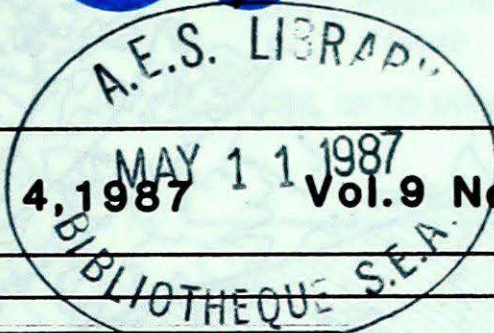




Climatic Perspectives

A weekly review of Canadian climate

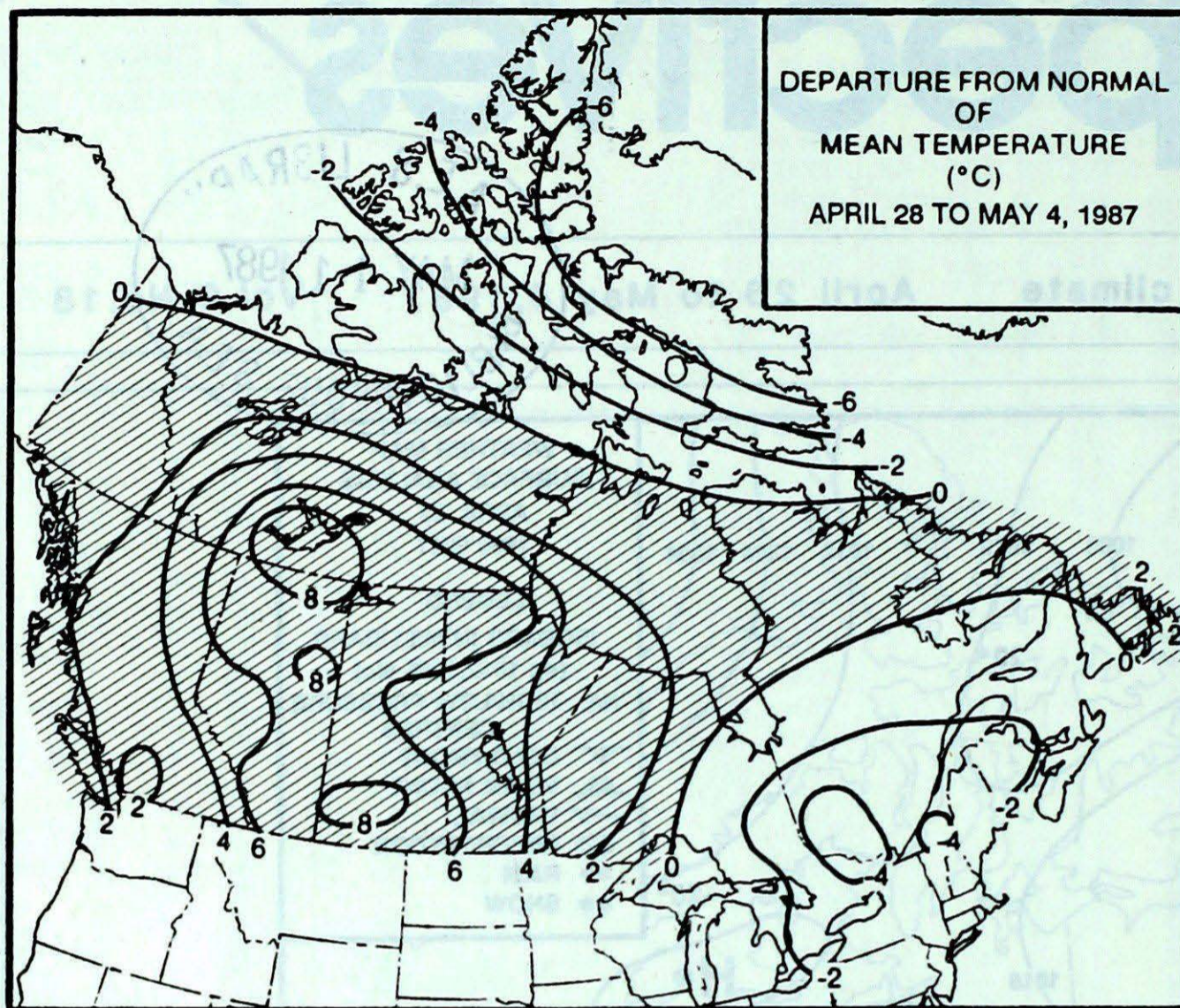
April 28 to May 4, 1987 Vol. 9 No. 18



Summer-like weather over the southwestern Prairies - Winter-like conditions over eastern Canada. The sharp contrast in weather across the country, which often occurs in the spring, is clearly demonstrated in this actual weather map with spot temperatures indicated in degrees celsius. Fronts, transition zones between airmasses, are very often well delineated at this time of year.

- Severe winter conditions linger in the Arctic
- Temperatures soar in the Prairies
- Snowfalls in eastern Canada

TEMPERATURE



ACROSS THE COUNTRY...

Yukon and Northwest Territories

The storm track affected much of northern Canada, producing a variety of weather conditions, and pumping warmer air over the northwest. Heavy snow fell in the northern Yukon and Mackenzie District over the weekend, with accumulations of 30 to 40 centimetres. Snow, blowing snow and freezing rain affected most of the southern Arctic and northern Hudson Bay. A bitterly cold airmass covered Baffin Island and much of the high Arctic, allowing temperatures to dip down to the record minus thirties. In contrast, under mainly sunny skies, temperatures in the Yukon and southern Mackenzie soared to the teens and low twenties, respectively.

British Columbia

Last weeks' sunny, warm weather deteriorated early in the period. Pacific weather systems kept the province mild, wet and dull during the middle of the week. Rainfalls were well above normal in the interior, especially the Okanagan. At some southern localities, weekly amounts were several times the monthly normal. Scattered afternoon showers and thundershowers developed in the north. Lightning started several major forest fires, but the general rain across the region helped fire fighting crews quickly bring them under control.

Prairies

An atmospheric ridge of high pressure dominated the weather picture, producing mostly sunny, record warm weather. Disturbances, which affected the prairies, were relatively weak, consequently precipitation was showery in nature. Numerous daily maximum temperature records were broken in the west; daytime readings soared to the low thirties. Seeding operations are well under way in all agricultural districts. The forest fire hazard is extreme in Manitoba and Alberta, with a number of fires burning. Lightning strikes ignited fires in the Edson district of Alberta.

WEEKLY TEMPERATURE EXTREME (C)

	MAXIMUM	MINIMUM
BRITISH COLUMBIA	LYTTON 27	PUNTZI MOUNTAIN -3
YUKON TERRITORY	DAWSON 16	SHINGLE POINT A -21
NORTHWEST TERRITORIES	FORT SMITH 24	EUREKA -32
ALBERTA	LETHBRIDGE 31	FORT CHIPEWYAN -3
SASKATCHEWAN	ESTEVAN 31	COLLINS BAY -3
MANITOBA	GRETNA 31	CHURCHILL -12
ONTARIO	KENORA 26	MOOSONEE -9
QUEBEC	MANIWAKI 16	INUKJUAK -14
NEW BRUNSWICK	CHARLO 18	ST STEPHEN -6
NOVA SCOTIA	SYDNEY 16	SYDNEY -4
PRINCE EDWARD ISLAND	SUMMERSIDE 13	CHARLOTTETOWN -5
NEWFOUNDLAND	ST JOHN'S 15	BADGER -13

ACROSS THE NATION

WARMEST MEAN TEMPERATURE	16	MEDICINE HAT	ALB
COOLEST MEAN TEMPERATURE	-24	EUREKA	NWT

Ontario

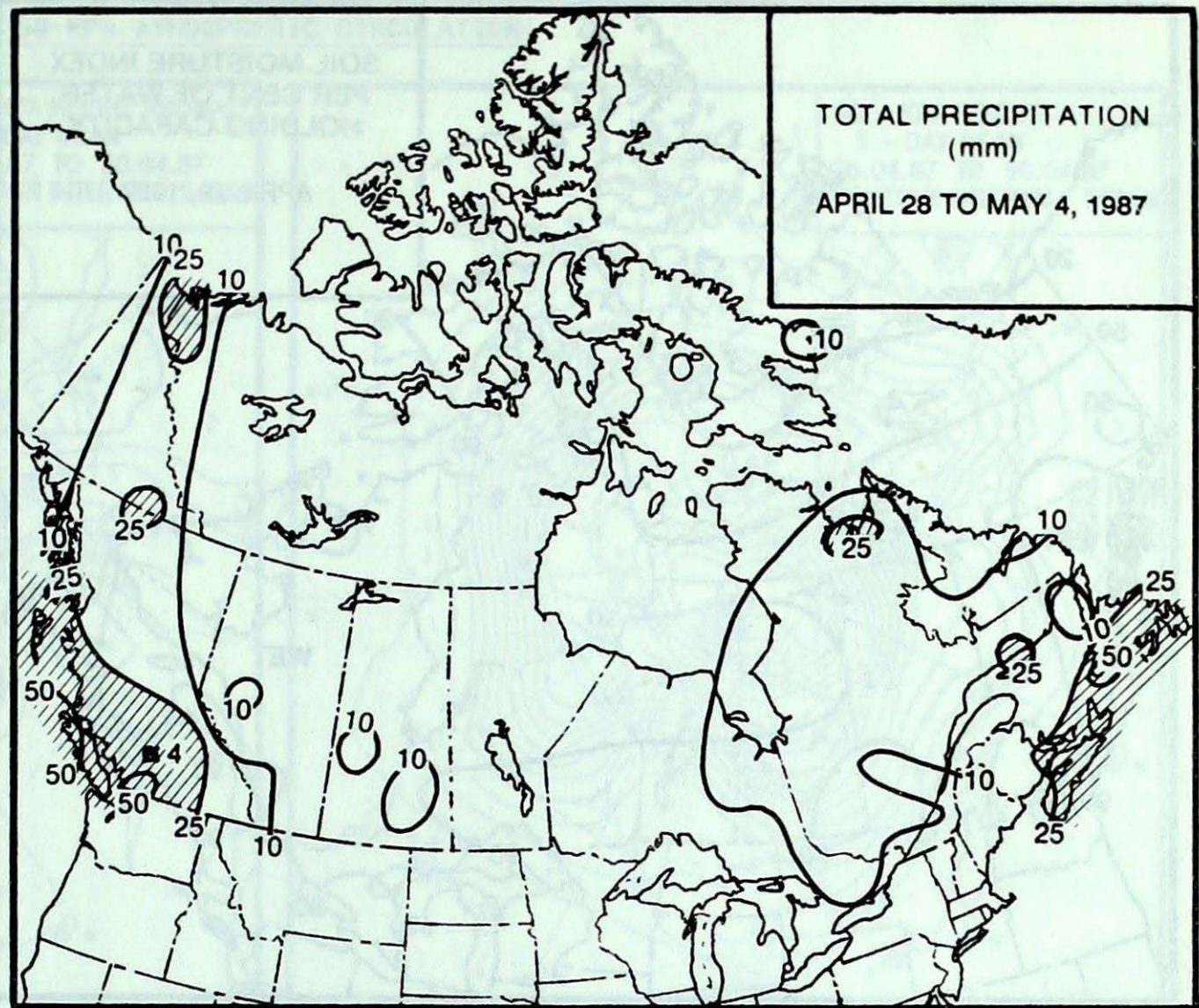
A northwesterly circulation resulted in seasonably cool weather conditions most of the week. Under mainly clear skies, ground frost developed in a number of low lying agricultural areas of the south, but early blossoming fruit trees were not harmed. Early morning temperatures in central and northern Ontario dipped well below freezing, setting a number of daily low temperature records. Much needed rain fell in southern and central Ontario during the early part of the week, but amounts were generally light and not sufficient. No rain fell in northwestern Ontario, where the forest fire hazard is extreme.

Quebec

Much cooler weather returned to the province, as strong northerlies swept in behind a strengthening weather system early in the period. Up to 30 cm of wet snow blanketed the Laurentian region, north of Quebec City, the last two days of the month, while other elevated areas of the southwest received 5 to 15 centimetres of snow. A dozen daily low temperature records were broken during the latter half of the period. Temperatures were seasonal in northern Quebec, with daytime readings rising near freezing on several of the days. Precipitation was substantial in central Quebec.

Atlantic

The early and latter parts of the week were sunny, with cool overnight minimums. On April 29, a surprise snowstorm hit northern New Brunswick. Up to 30 cm of snow fell on Bathurst, which forced the closure of many schools and caused a rash of traffic accidents. Elsewhere in the province falls of 5 to 15 centimetres were more common. Rain and drizzle affected other parts of the region. In Newfoundland, fair weather gave way to rain and strong winds on the 29th. At Burgeo, winds gusted to 95 km/h. The weather system brought a mixture of snow and rain to Labrador. Mild fair weather returned by the weekend everywhere.

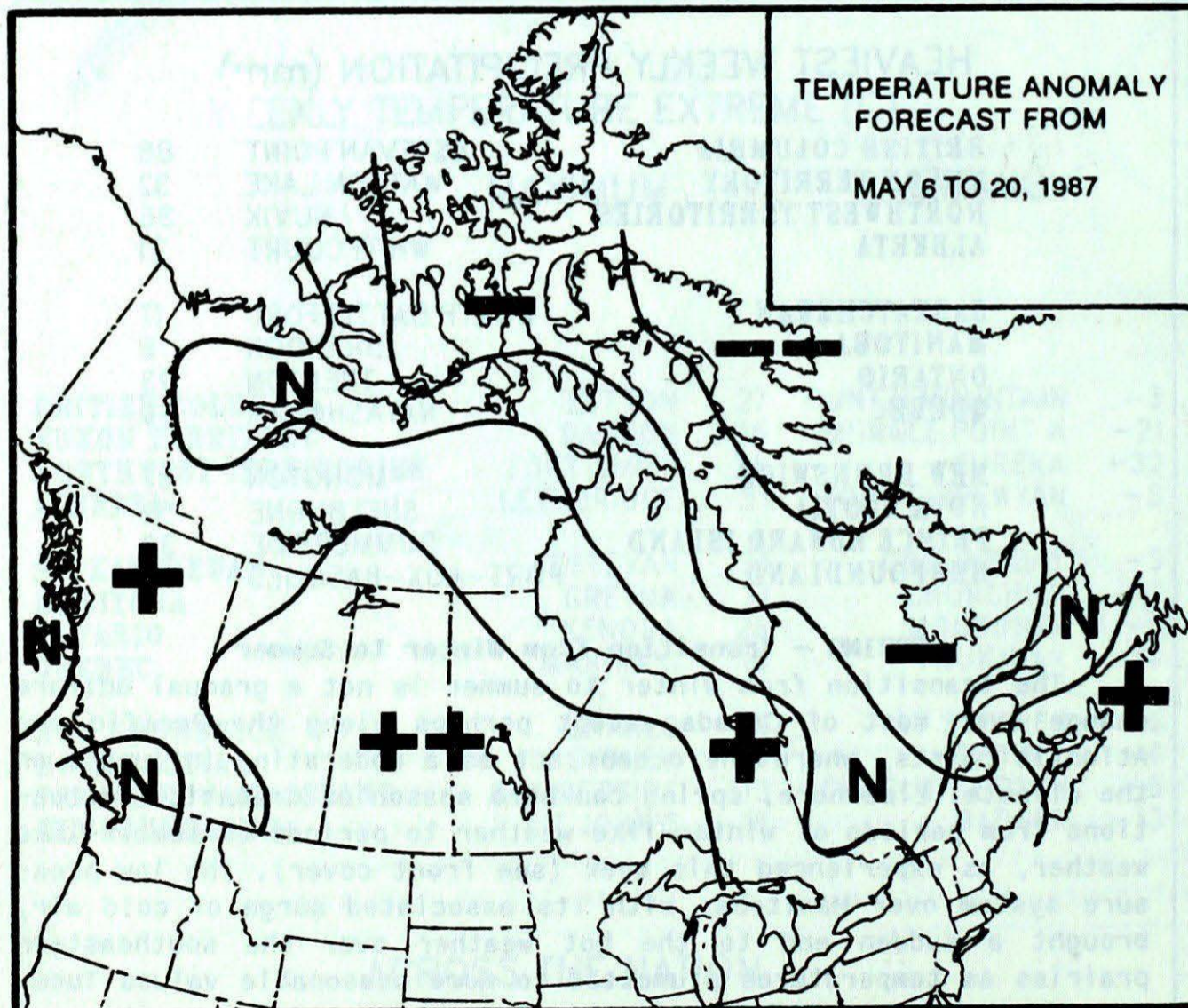
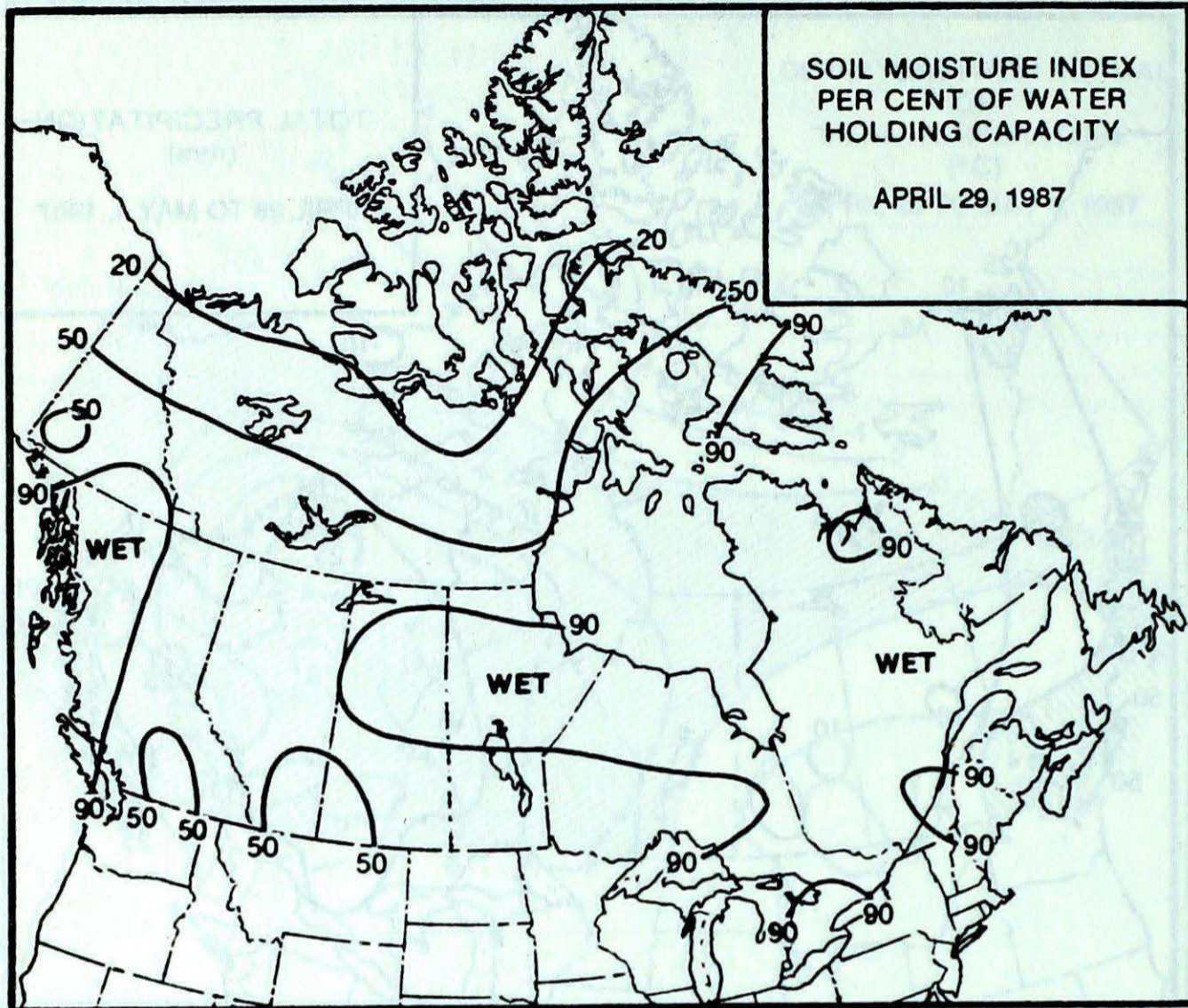
**HEAVIEST WEEKLY PRECIPITATION (mm)**

BRITISH COLUMBIA	ESTEVAN POINT	88
YUKON TERRITORY	WATSON LAKE	32
NORTHWEST TERRITORIES	INUVIK	36
ALBERTA	WHITECOURT	21
SASKATCHEWAN	NORTH BATTLEFORD	17
MANITOBA	BRANDON	6
ONTARIO	TRENTON	23
QUEBEC	NATASHQUAN	30
NEW BRUNSWICK	MONCTON	37
NOVA SCOTIA	SHELBURNE	52
PRINCE EDWARD ISLAND	SUMMERSIDE	30
NEWFOUNDLAND	PORT-AUX-BASQUES	55

SPRING - Transition from Winter to Summer

The transition from winter to summer is not a gradual uniform change over most of Canada except perhaps along the Pacific and Atlantic coasts, where the oceans act as a moderating influence on the climate. Elsewhere, spring can be a season of dramatic fluctuations from periods of winter-like weather to periods of summer-like weather, as experienced this week (see front cover). The low pressure system over Manitoba, with its associated surge of cold air, brought a sudden end to the hot weather over the southeastern prairies as temperatures plummeted to more seasonable values Tuesday and Wednesday. This same cold airmass intensified as it moved into eastern Canada later in the week, where temperatures dropped to below normal values and widespread frost occurred. Meanwhile, a building upper ridge in the west brought a return of unseasonably warm weather to the Prairies later in the week. Despite these pronounced airmass changes, there has not been much precipitation associated with the fronts, so developing drought conditions are an increasing concern in the forestry and agriculture sectors.

FORECAST



- ++ much above normal
- + above normal
- N normal
- below normal
- much below normal

Temperature Anomaly Forecast
 This forecast is prepared by searching historical weather maps to find cases similar to the present. The historical outcome during the 15 days subsequent to the chosen analogues is assumed to be a forecast for the next 15 days from now.

SOIL MOISTURE INDEX
 PER CENT OF WATER
 HOLDING CAPACITY
 APRIL 29, 1987

TEMPERATURE ANOMALY
 FORECAST FROM
 MAY 6 TO 20, 1987

CLIMATIC PERSPECTIVES VOLUME 9

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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.

Unsolicited articles are welcome but should be at maximum about 1500 words in length. They will be subject to editorial change without notice due to publishing time constraints. The contents may be reprinted freely with proper credit.

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.

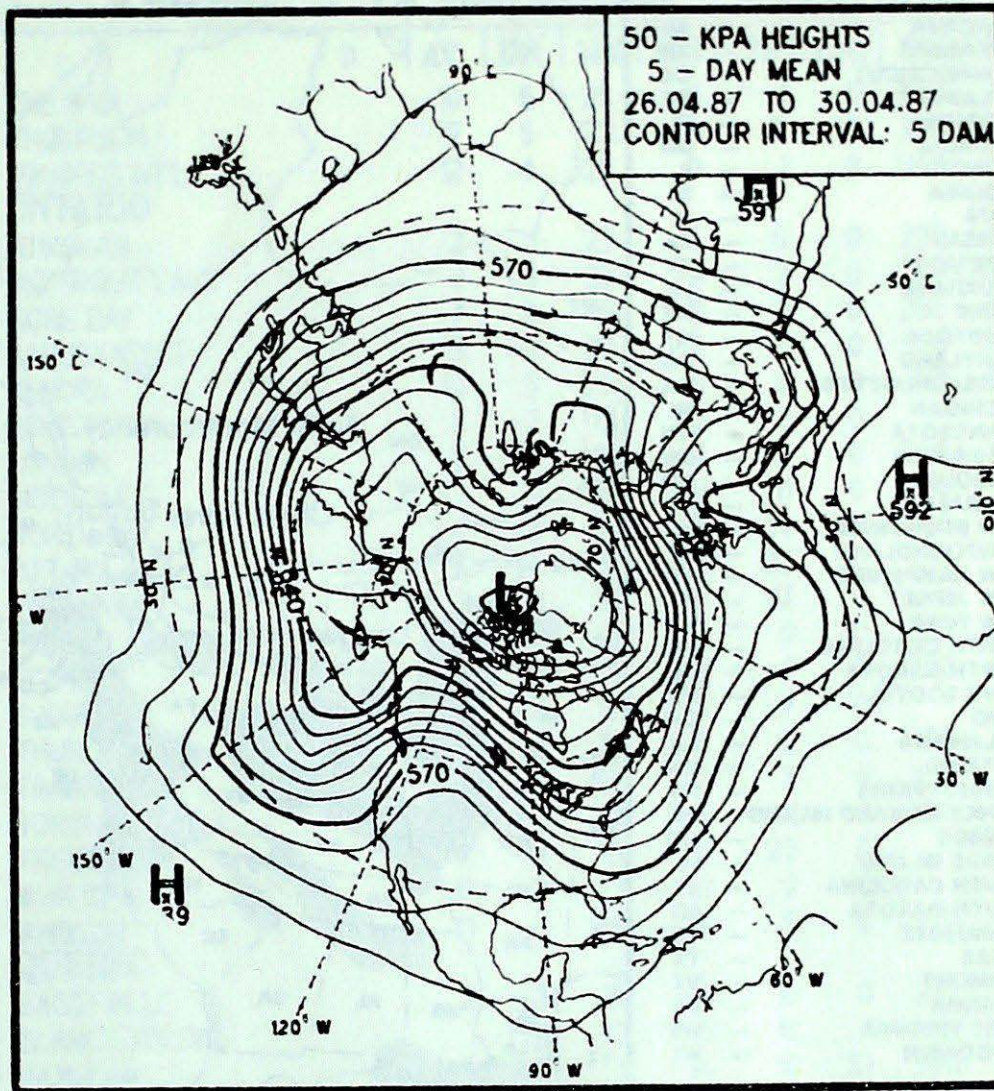
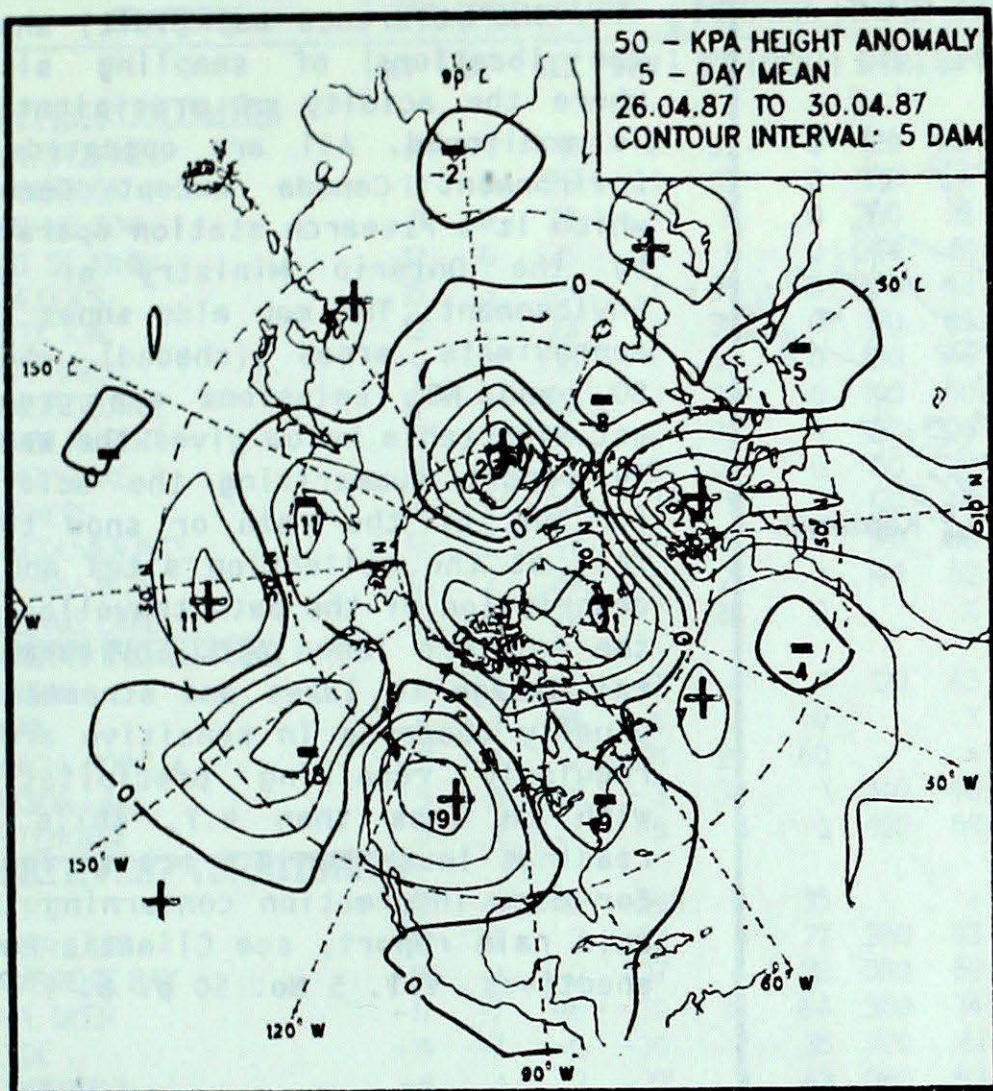
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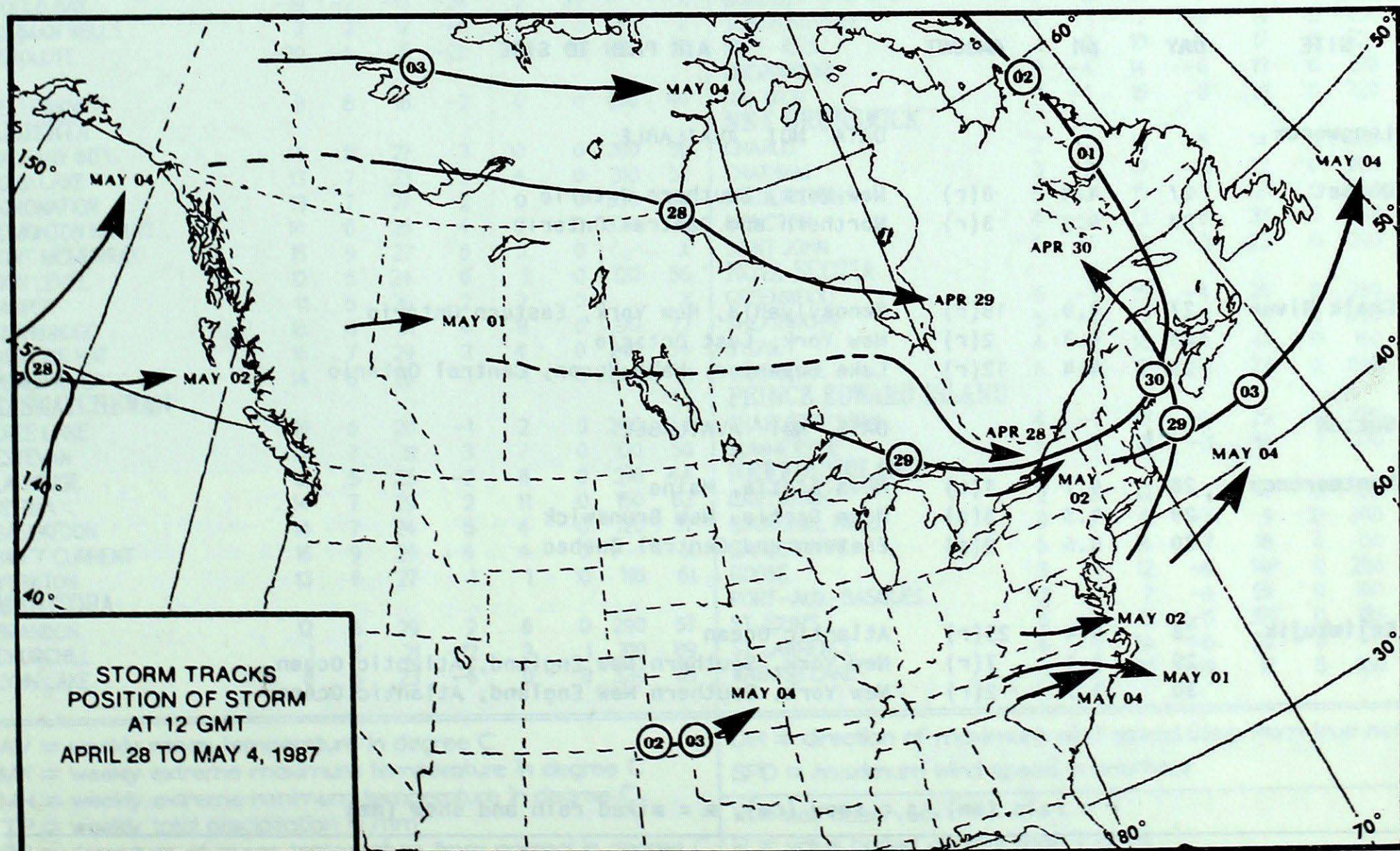
CIRCULATION

50 KPa ATMOSPHERIC CIRCULATION



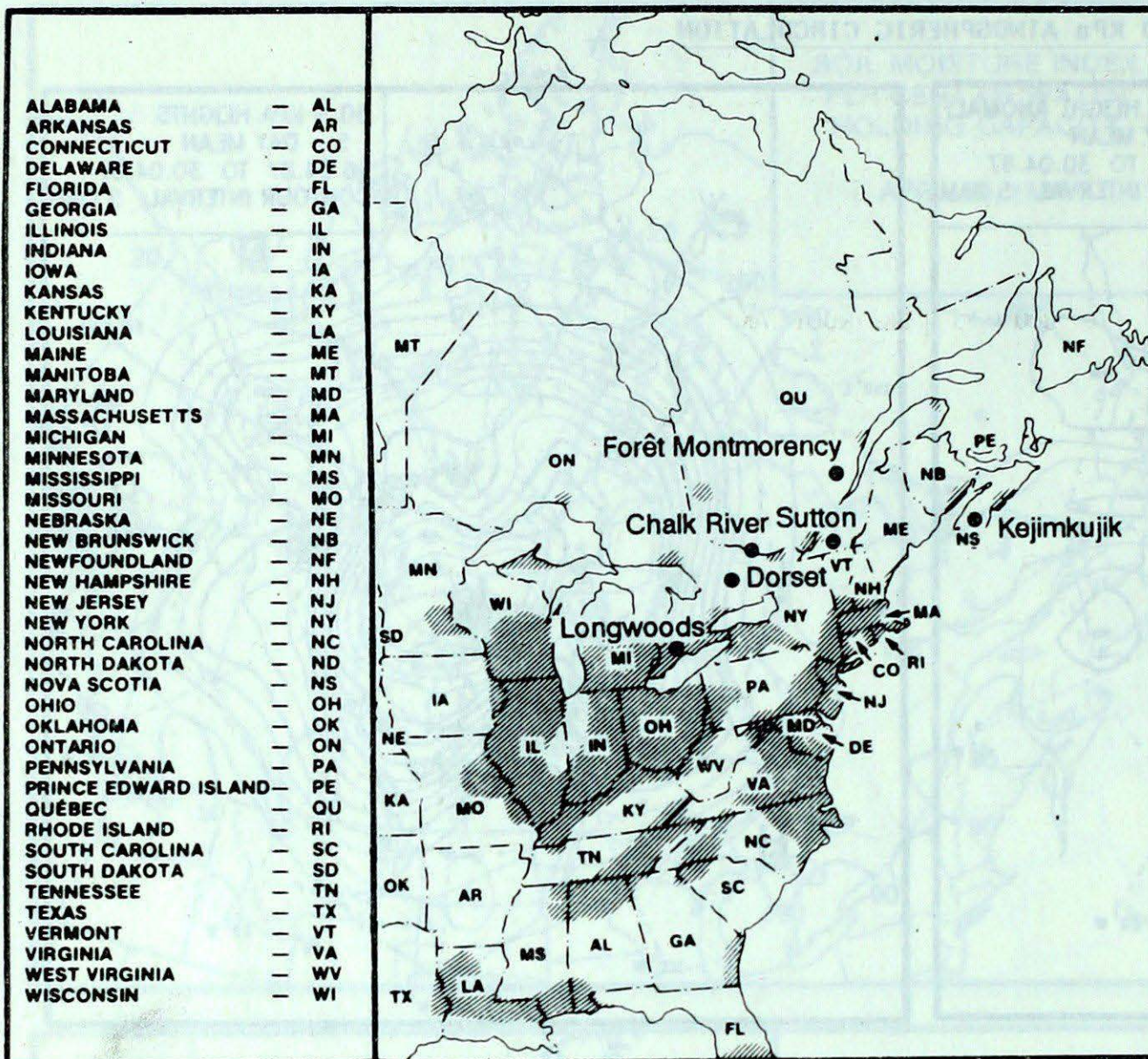
MEAN 50 KPa HEIGHT ANOMALY (dam)
April 26 to 30, 1987

MEAN 50 KPa HEIGHTS (dam)
April 26 to 30, 1987



ACID RAIN

ACID RAIN REPORT



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 the Environment. The map also shows the approximate areas (shaded) where SO_2 and NO_x emissions are greatest. The table below gives the weekly report summarizing the acidity (or pH) of the 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 less than 4.7, while pH readings less than 4.0 are serious. For more information concerning the acid rain report, see Climatic Perspectives, Vol. 5 No. 50 p. 6.

APRIL 26 TO MAY 2, 1987

SITE	DAY	pH	AMOUNT	AIR PATH TO SITE
Longwoods				DATA NOT AVAILABLE
Dorset	27	4.4	8(r)	New York, Southern Ontario
	28	4.9	3(r)	Northern and Central Ontario
Chalk River	27	4.0	18(r)	Pennsylvania, New York, Eastern Ontario
	28	4.3	2(r)	New York, East Ontario
	29	4.4	12(r)	Lake Superior, Lake Huron, Central Ontario
Sutton				DATA NOT AVAILABLE
Montmorency	28	4.7	1(s)	Nova Scotia, Maine
	29	4.3	3(s)	Nova Scotia, New Brunswick
	30	4.6	9(s)	Eastern and Central Quebec
Kejimikujik	28	4.4	25(r)	Atlantic Ocean
	29	4.1	7(r)	New York, Southern New England, Atlantic Ocean
	30	3.7	2(r)	New York, Southern New England, Atlantic Ocean

r = rain (mm), s = snow (cm), m = mixed rain and snow (mm)

TEMPERATURE, PRECIPITATION AND MAXIMUM WIND DATA FOR THE WEEK ENDING 0600 GMT MAY 5, 1987

STATION	TEMPERATURE				PRECIP.		WIND MX		STATION	TEMPERATURE				PRECIP.		WIND MX	
	AV	DP	MX	MN	TP	SOG	DIR	SPD		AV	DP	MX	MN	TP	SOG	DIR	SPD
BRITISH COLUMBIA									THE PAS	10	6	25	-3	1	0	250	78
CAPE ST. JAMES	9	1	11	6	22	0	130	102	THOMPSON	7	5	23	-4	0	0	300	69
CRANBROOK	12	3	25	1	15	0	180	54	WINNIPEG INT'L	12	4	29	0	1	0	340	63
FORT NELSON	11	6	22	1	8	0	280	52	ONTARIO								
FORT ST. JOHN	12	6	25	4	9	0	240	61	ATIKOKAN	7	1	23	-5	0	0	230	48
KAMLOOPS	15	3	25	3	25	0	300	43	BIG TROUT LAKE	3	3	22	-9	2	0	290	104
PENTICTON	13	2	23	3	38	0	170	63	GORE BAY	7	0	15	-2	2	0	280	67
PORT HARDY	9	1	18	4	53	0	130	46	KAPUSKASING	3	-2	20	-7	5	0	320	83
PRINCE GEORGE	10	4	22	1	20	0	190	50	KENORA	10	3	26	1	0	0	210	59
PRINCE RUPERT	9	2	14	2	26	0	150	96	KINGSTON	6	-2	13	2	2	0		X
REVELSTOKE	11	1	21	5	29	0	150	41	LONDON	7	-2	18	-2	2	0	330	67
SMITHERS	9	2	20	1	11	0	170	46	MOOSONEE	1	-1	21	-9	11	0	330	61
VANCOUVER INT'L	13	2	19	7	37	0	170	35	NORTH BAY	4	-3	14	-3	14	0	340	56
VICTORIA INT'L	12	2	20	6	21	0	140	52	OTTAWA INT'L	6	-4	15	-2	22	0		X
WILLIAMS LAKE	10	4	22	1	28	0		X	PETAWAWA	3	-5	16	-7	17	0		X
YUKON TERRITORY									PICKLE LAKE	6	3	21	-6	0	0	310	69
DAWSON	5	1	16	-7	4	1	120	43	RED LAKE	9	3	23	-2	0	0	290	67
MAYO	6	1	15	-5	12	0		X	SUDBURY	5	-2	16	-3	7	0		X
SHINGLE POINT A	-11	-1	-2	-21	25	60		*	THUNDER BAY	6	0	18	-6	0	0	330	63
WATSON LAKE	5	2	15	-3	32	1	240	48	TIMMINS	3	-3	19	-7	7	0	330	74
WHITEHORSE	5	1	13	-5	1	0	160	59	TORONTO INT'L	7	-2	19	-1	1	0	300	74
NORTHWEST TERRITORIES									TRENTON	7	-3	15	0	23	0		X
ALERT	-22	-5	-16	-29	0	35		*	WIARTON	6	-2	13	-2	2	0		X
BAKER LAKE	-12	0	2	-23	1	77	280	93	WINDSOR	11	-1	24	4	9	0	320	65
CAMBRIDGE BAY	-15	-1	-2	-27	4	38	080	59	QUEBEC								
CAPE DYER	-17	-7	-6	-30	16	64	300	74	BAGOTVILLE	2	-3	15	-6	10	0	270	74
CLYDE	-19	-7	-9	-30	2	35	320	61	BLANC SABLON	1	1	10	-5	10	1		X
COPPERMINE	-9	1	2	-22	3	43	080	63	INUKJUAK	-5	0	3	-14	10	52	340	54
CORAL HARBOUR	-12	0	2	-23	5	66		X	KUJUUJUAQ	-2	2	8	-10	27	10	270	56
EUREKA	-24	-6	-15	-32	0	12	290	67	KUJUUARAPIK	-2	1	15	-11	19	6	330	52
FORT SMITH	12	9	24	-1	3	0		X	MANIWAKI	4	-3	16	-5	17	0	160	52
IQUALUIT	-13	-5	-2	-27	6	33	050	65	MONT JOLI	3	-2	15	-4	6	0	250	70
HALL BEACH	-19	-5	-9	-32	1	36	080	56	MONTREAL INT'L	6	-3	15	1	5	0	270	67
INUVIK	-7	0	6	-21	36	58		X	NATASHQUAN	1	-1	5	-7	30	0	260	67
MOULD BAY	-19	-2	-13	-24	2	39		X	QUEBEC	4	-3	14	-4	5	0	280	78
NORMAN WELLS	2	2	17	-9	7	1		X	SCHIEFFERVILLE	-2	1	7	-9	19	13	250	70
RESOLUTE	-20	-4	-15	-25	2	18	110	57	SEPT-ILES	1	-2	10	-4	17	0	220	72
YELLOWKNIFE	8	8	18	-2	0	0	270	46	SHERBROOKE	3	-4	14	-6	13	0	270	65
ALBERTA									VAL D'OR	1	-4	15	-8	21	0	320	57
CALGARY INT'L	14	8	27	3	10	0	280	56	NEW BRUNSWICK								
COLD LAKE	13	7	23	3	4	0	310	52	CHARLO	2	-2	18	-5	14	0	100	63
CORONATION	13	7	27	2	0	0	330	89	CHATHAM	3	-2	17	-3	22	0	280	56
EDMONTON NAMAQ	14	6	25	4	2	0	330	76	FREDERICTON	5	-2	15	-3	21	0	260	63
FORT MCMURRAY	15	9	27	5	3	0		X	MONCTON	4	-2	13	-5	37	0	260	81
HIGH LEVEL	12	5	24	0	1	0	120	56	SAINT JOHN	5	-1	13	-3	23	0	090	70
JASPER	11	5	26	2	3	0		X	NOVA SCOTIA								
LETHBRIDGE	15	8	31	4	8	0	270	72	GREENWOOD	6	-1	15	-4	26	0	260	98
MEDICINE HAT	16	7	29	3	4	0	240	54	SHEARWATER	5	-1	12	-3	31	0	090	81
PEACE RIVER	14	8	26	-1	1	0	240	61	SYDNEY	4	0	16	-4	47	0	160	89
SASKATCHEWAN									YARMOUTH	6	-1	12	-1	23	0	090	74
CREE LAKE	10	6	20	-1	2	0	240	44	PRINCE EDWARD ISLAND								
ESTEVAN	14	7	31	3	7	0	120	50	CHARLOTTETOWN	4	-1	13	-5	25	0	180	74
LA RONGE	10	5	25	-2	8	0	210	44	SUMMERSIDE	5	-1	13	-3	30	1	270	67
REGINA	14	7	29	2	11	0	150	63	NEWFOUNDLAND								
SASKATOON	14	7	24	5	4	0	120	57	CARTWRIGHT	2	2	12	-7	4	15	210	65
SWIFT CURRENT	16	9	29	4	4	0		X	CHURCHILL FALLS	0	0	8	-7	9	12	300	57
YORKTON	13	6	27	1	1	0	110	61	GANDER INT'L	5	2	14	-7	18	0	150	87
MANITOBA									GOOSE	3	1	12	-6	14P	0	280	54
BRANDON	12	5	29	2	6	0	290	57	PORT-AUX-BASQUES	2	-1	7	-4	55	0	100	102
CHURCHILL	1	7	21	-12	3	1	310	89	ST JOHN'S	5	2	15	-5	37P	0	180	85
LYNN LAKE	8	5	23	-6	0	0	330	65	ST LAWRENCE	4	1	14	-5	22	0		X
									WABUSH LAKE	-1	0	10	-9	17	5	180	48

AV = weekly mean temperature in degree C
 MX = weekly extreme maximum temperature in degree C
 MN = weekly extreme minimum temperature in degree C
 TP = weekly total precipitation in mm
 DP = departure of mean temperature from normal in degree C
 SOG = snow depth on ground in cm, last day of the period

DIR = direction of maximum wind speed (deg. from true north)
 SPD = maximum wind speed in km/hour

X = not observed
 P = value based on less than 7 days
 * = missing

