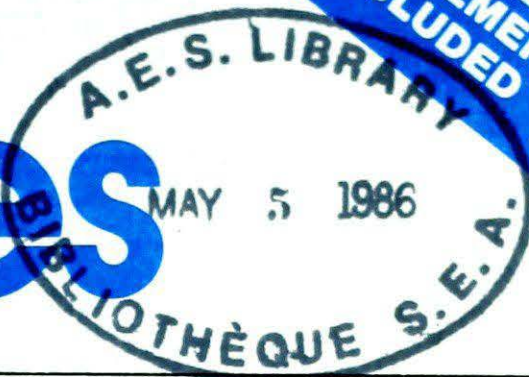


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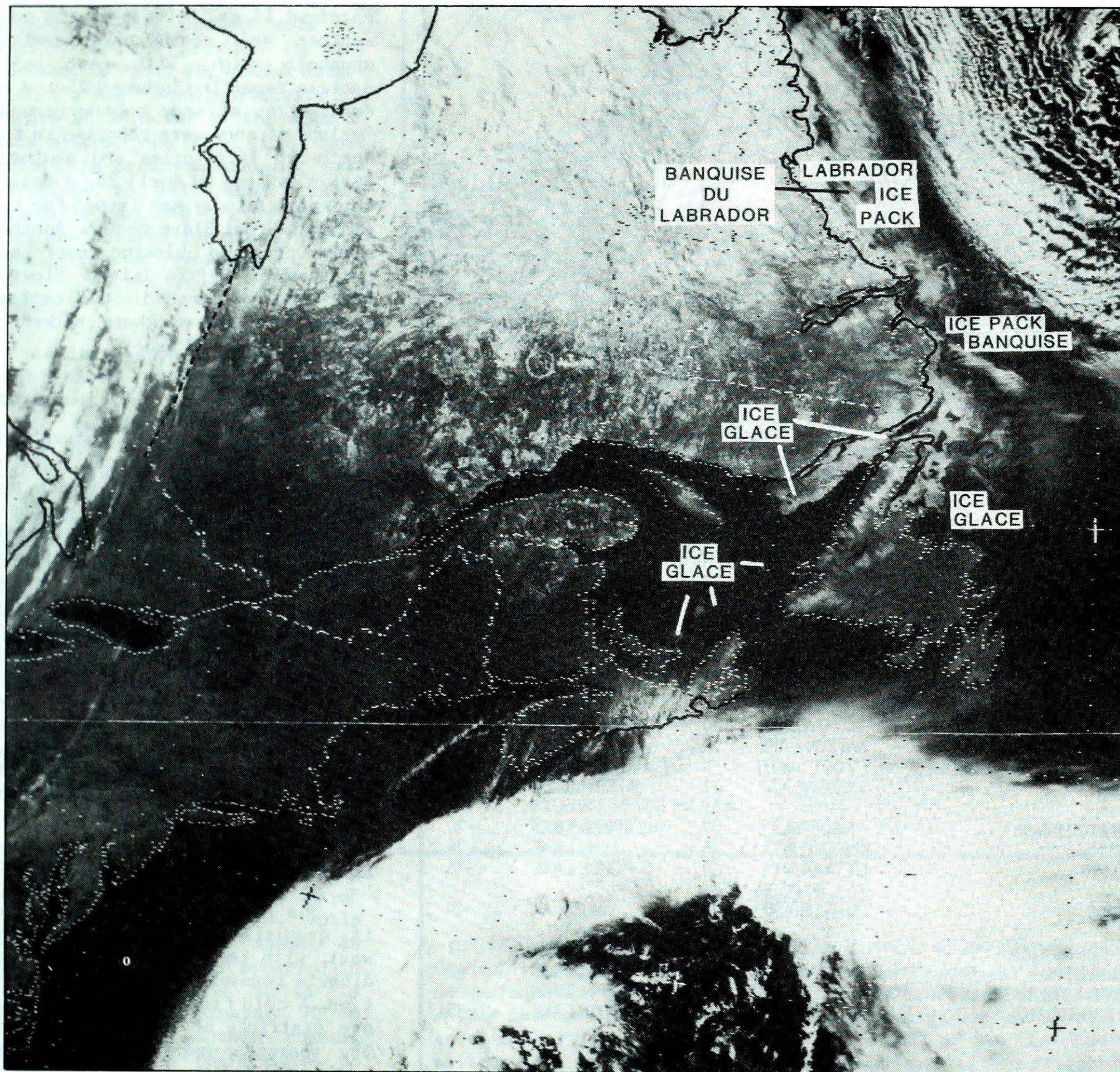


MONTHLY SUPPLEMENT INCLUDED

A weekly review of Canadian climate

April 15 to 21, 1986

Vol.8 No.16

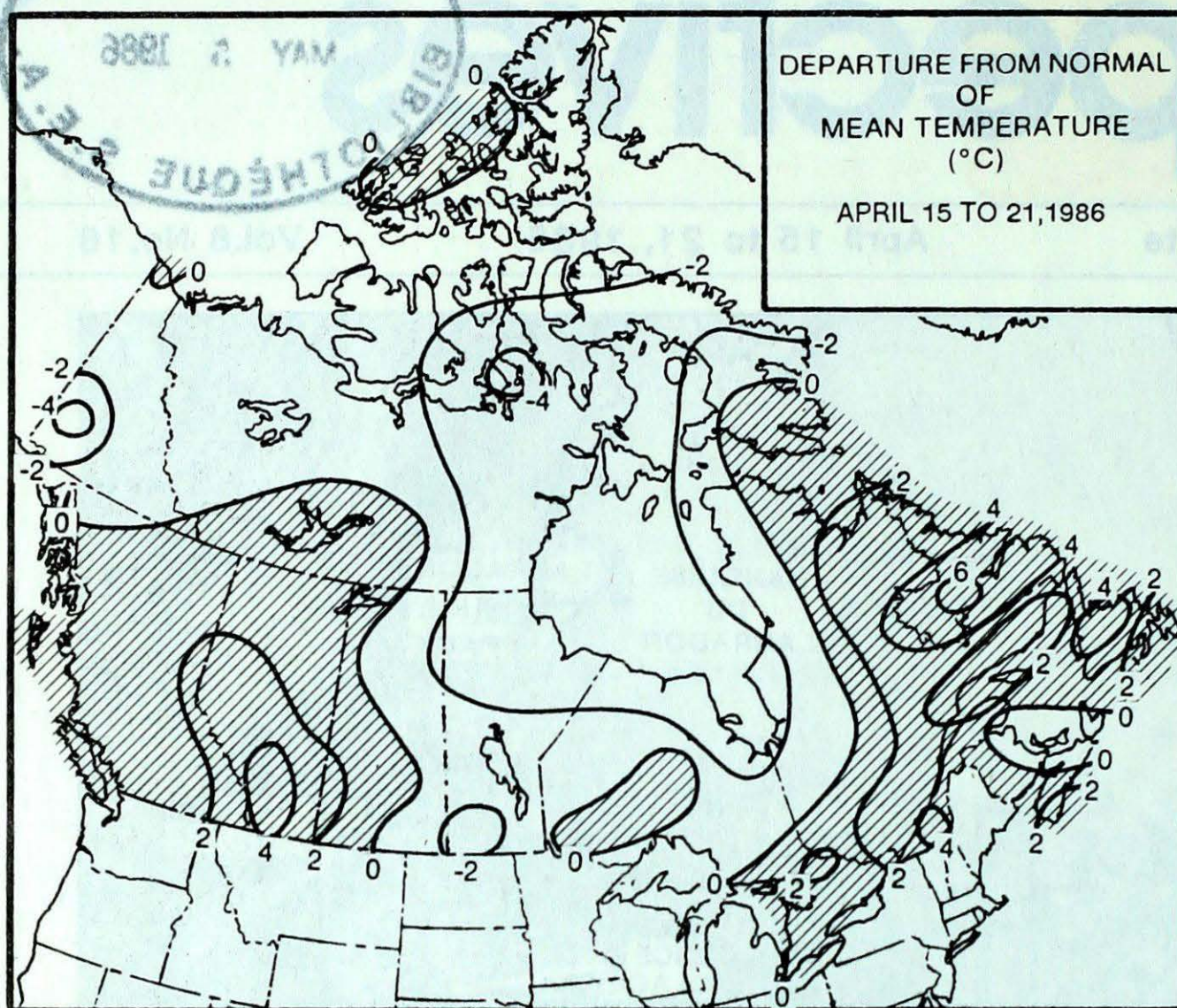


On April 19, an east-west ridge of high pressure produced sunny conditions throughout eastern Canada, as evident in this NOAA 9 satellite photo. For more detail see page 3.

● **Unsettled, changeable spring weather**

- heavy rains drenched B.C., Manitoba and Newfoundland
- fresh snow blankets Northern Ontario and Northern Quebec

TEMPERATURE



ACROSS THE COUNTRY...

Yukon and Northwest Territories

In the Yukon, temperatures returned to more seasonal values. Generally 2 to 6 centimetres of snow fell across the Yukon, except in the extreme west, where Beaver Creek received 16 cm. Because of the cool weather, snow depths have remained unusually high, with most major centres reporting between 25 and 35 centimetres of snow on the ground. Periods of snow were reported in the Northwest Territories and southern Baffin Island. On April 20, a freezing rain advisory was issued for the southern Great Slave region. Another storm produced blowing snow and blizzards on Baffin Island. Blowing snow also occurred in the central Arctic and the northern Mackenzie District the last day.

British Columbia

Several frontal disturbances approached the Pacific coast, giving frequent periods of rain. Cloudy and wet weather plagued the southern portions of the province. Port Hardy received 75 mm of rain on April 19, while elsewhere along the coast weekly totals exceeded 100 mm. Some interior valleys also received unusually heavy amounts of rain. Thunderstorms with hail were reported in the Peace River district on the evening of the 17th. In the east Kootenays, the precipitation put a damper on range burning activities. Fire weather forecast operations have begun in the province.

Prairie Provinces

The week started off cool, but it gradually warmed up from the west, with temperatures in southern Alberta recovering to the low twenties. A cold front crossed the eastern districts of the prairies over the weekend, dropping temperatures to record daily low values. Weak weather systems brought showers to Alberta, with amounts in central and more northern districts ranging between 10 and 20 millimetres. Heavy rains, between 15 and 40 millimetres, drenched southern Manitoba just before the weekend. Sky conditions varied from day to day.

WEEKLY TEMPERATURE EXTREME (C)

	MAXIMUM	MINIMUM
BRITISH COLUMBIA	QUESNEL 20	FORT NELSON -9
YUKON TERRITORY	WATSON LAKE 9	OGILVIE -31
NORTHWEST TERRITORIES	FORT SMITH 11	POND INLET -35
ALBERTA	MEDICINE HAT 23	HIGH LEVEL -8
SASKATCHEWAN	KINDERSLEY 22	COLLINS BAY -20
MANITOBA	WINNIPEG INT'L 16	LYNN LAKE -26
ONTARIO	OTTAWA INT'L 21	PICKLE LAKE -16
QUEBEC	WINDSOR 23	SHERBROOKE -21
NEW BRUNSWICK	CHATHAM 16	CHATHAM -7
NOVA SCOTIA	YARMOUTH 17	GREENWOOD -3
PRINCE EDWARD ISLAND	CHARLOTTETOWN 15	CHARLOTTETOWN -4
NEWFOUNDLAND	BADGER 21	WABUSH LAKE -15

ACROSS THE NATION

WARMEST MEAN TEMPERATURE	11	OTTAWA INT'L	ONT
COOLEST MEAN TEMPERATURE	-27	POND INLET	NWT

PRECIPITATION

Ontario

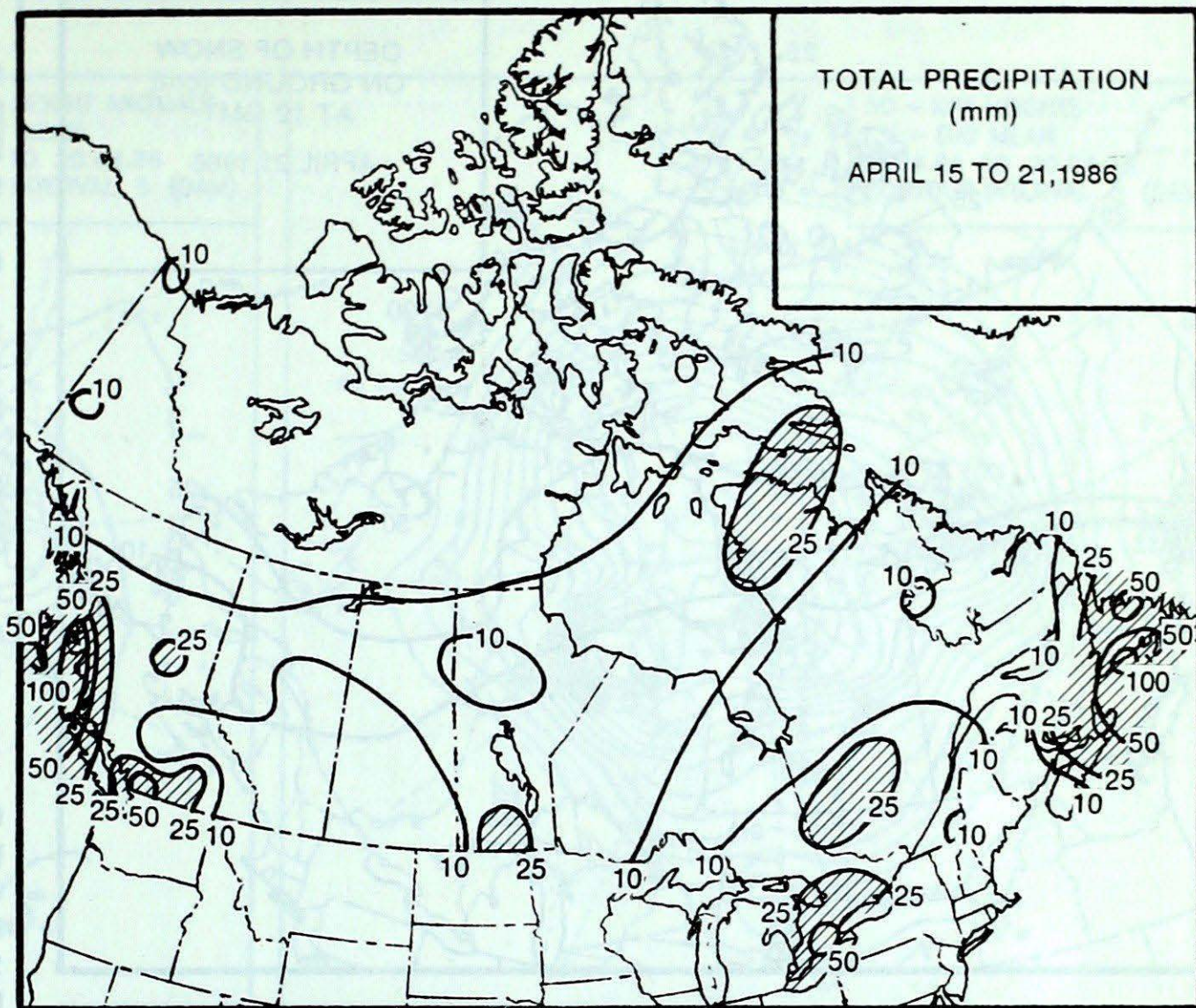
During the first part of the week, a slow moving weather system plagued the southern half of the province, giving cloudy, cool and damp weather conditions. A high pressure area in the north produced mostly sunny weather. Another low pressure system brought more wet weather to the province for the weekend. On April 20, London established a new 24-hour precipitation record of 24.6 mm. In the wake of this system, very cold air flooded across the province, dropping temperatures to well below normal values by the end of the period. Northern Ontario received 5 to 10 centimetres of fresh snow.

Quebec

A large area of high pressure kept skies predominantly sunny throughout the first part of the week. Daytime temperatures at Ottawa and Sherbrooke on April 19 and 20 climbed to 21°C and 23°C, respectively. During the weekend, a weather system gave snow to the northern parts of the province, while rain fell in the south. Inukjuak received 26 cm of new snow, while Val d'Or, in western Quebec, received 8 cm. The rain was beneficial in the south, especially in the Eastern Townships, where some fields have been seeded.

Atlantic

All areas in the Maritimes had alternating periods of cloud and sun. Unsettled and wet conditions occurred primarily during the early part of the week. Up to 65 mm of rain fell on Cape Breton, while Charlottetown received almost 40 mm; some freezing rain occurred in parts of eastern Nova Scotia. In Newfoundland, approximately 70 mm of rain fell on southern coastal communities, with temperatures on April 16 climbing up to the low teens. At St. Anthony some snow was also reported. The combination of heavy precipitation and snow melt caused local flooding in some low lying communities. It became mainly sunny over the weekend. Generally fair weather prevailed in Labrador for the entire period.



HEAVIEST WEEKLY PRECIPITATION (mm)

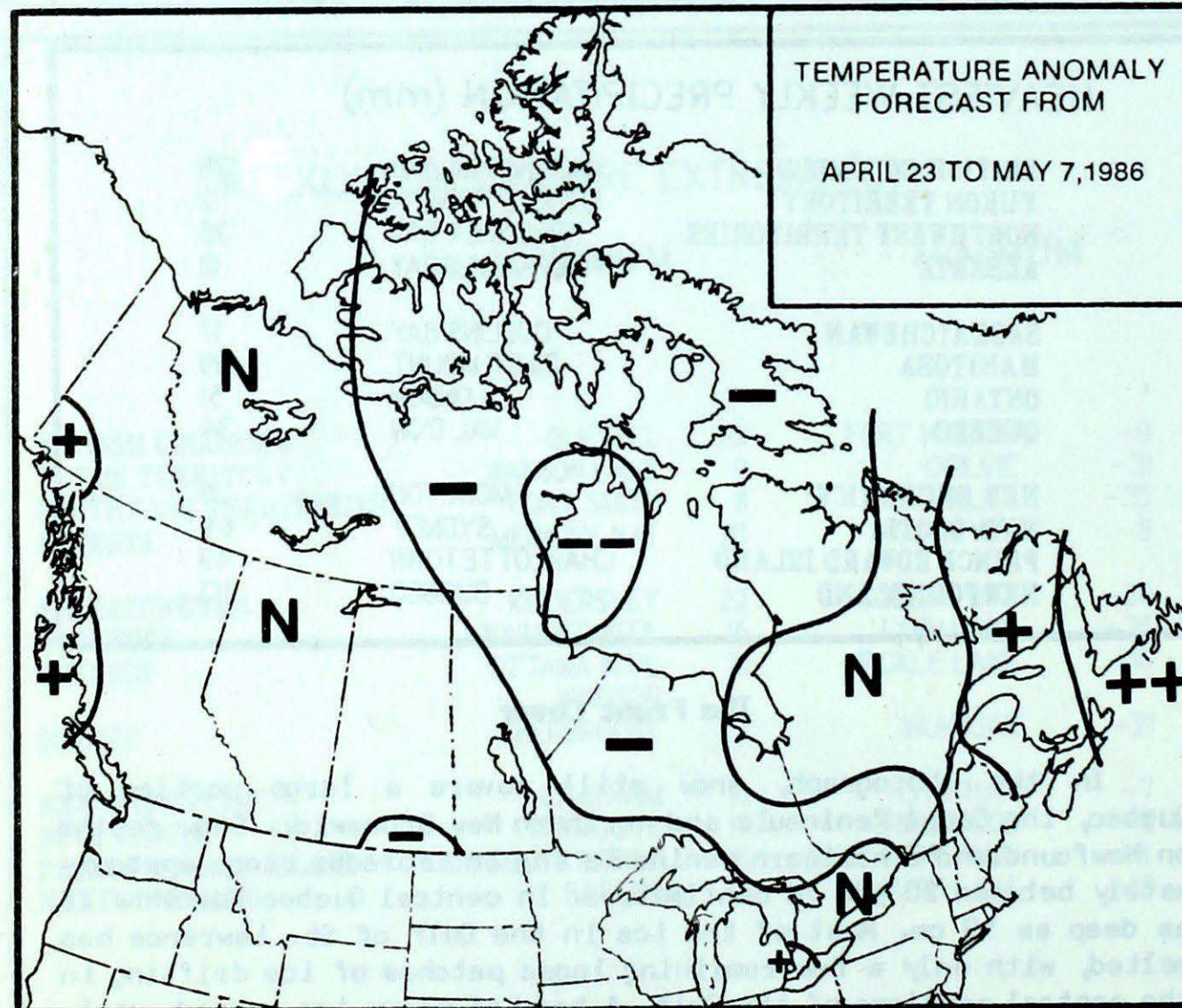
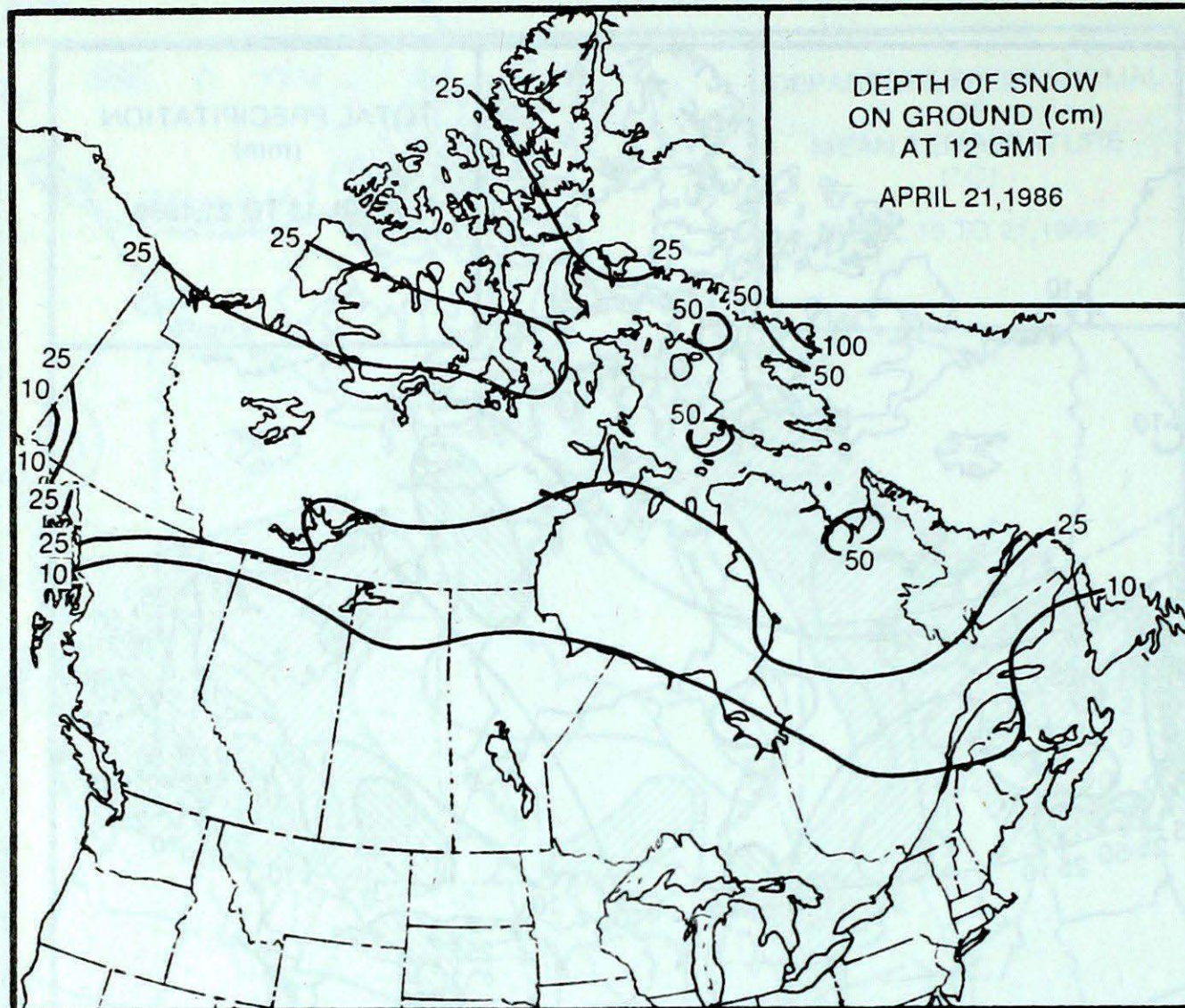
BRITISH COLUMBIA	MCINNES ISLAND	128
YUKON TERRITORY	SHINGLE POINT A	12
NORTHWEST TERRITORIES	FROBISHER BAY	28
ALBERTA	FORT McMURRAY	18
SASKATCHEWAN	COLLINS BAY	17
MANITOBA	PILOT MOUNT	39
ONTARIO	LONDON	51
QUEBEC	VAL D'OR	34
NEW BRUNSWICK	MONCTON	20
NOVA SCOTIA	SYDNEY	64
PRINCE EDWARD ISLAND	CHARLOTTETOWN	49
NEWFOUNDLAND	BURGIO	112

The Front Cover

In the photograph, snow still covers a large portion of Quebec, the Gaspé Peninsula and northern New Brunswick. Snow depths on Newfoundland's northern peninsula and in Labrador range approximately between 20 and 30 centimetres. In central Quebec the snow is as deep as 50 cm. Most of the ice in the Gulf of St. Lawrence has melted, with only a few remaining loose patches of ice drifting in the central portions of the Gulf. A band of heavy ice extends westward along the north shore of the Gulf from the Strait of Belle Isle; some leads of open water are visible near the coast, having only opened up in the last few days, due to a shift in wind direction. The decaying Labrador ice pack, swirled by the current, is several hundred kilometres wide, and extends southward along the Atlantic coastline to Newfoundland's north coast.

For more information, and a chart of the ice conditions on April 13, 1986, see feature article on page 14B.

FORECAST



Temperature Anomaly Forecast

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

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.

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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.

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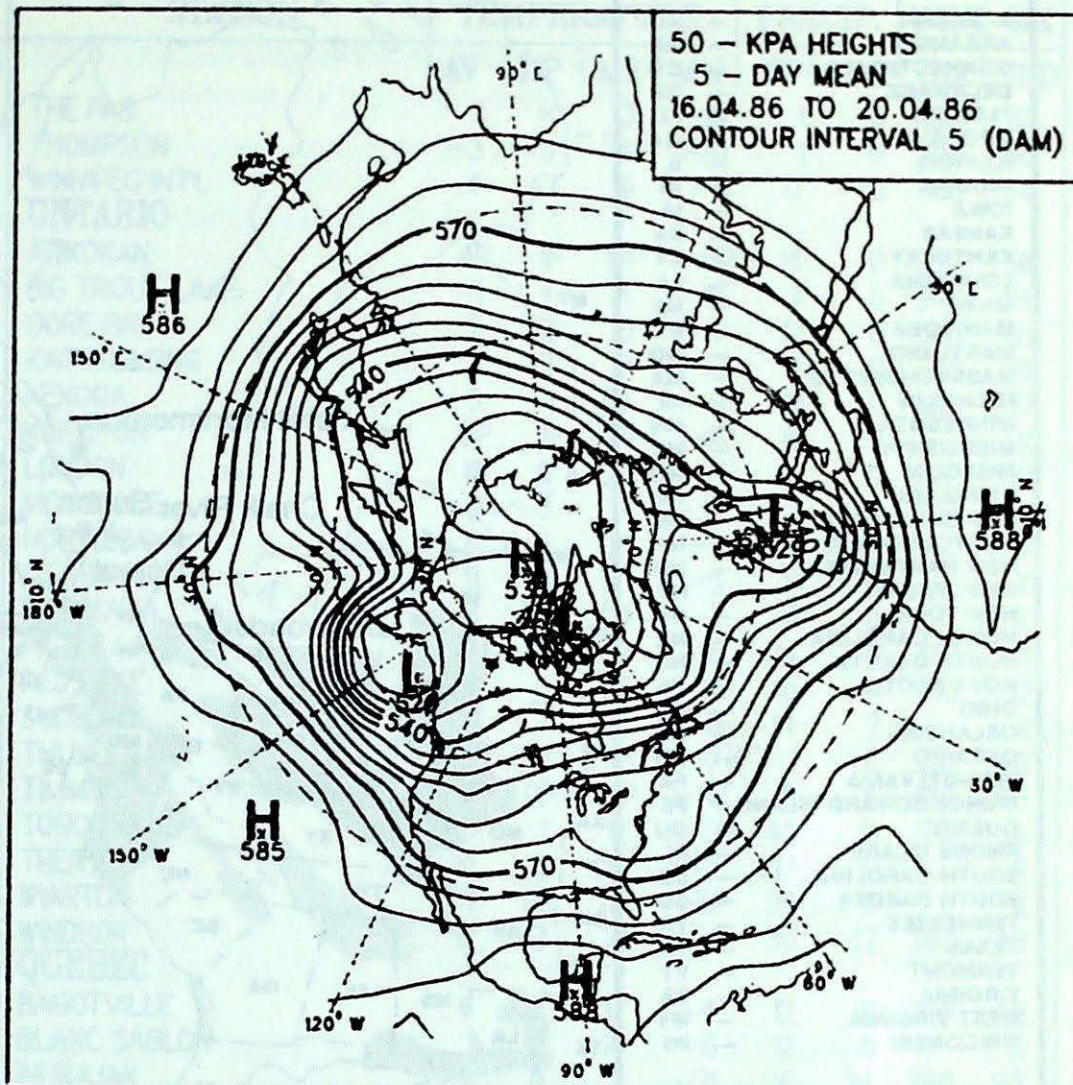
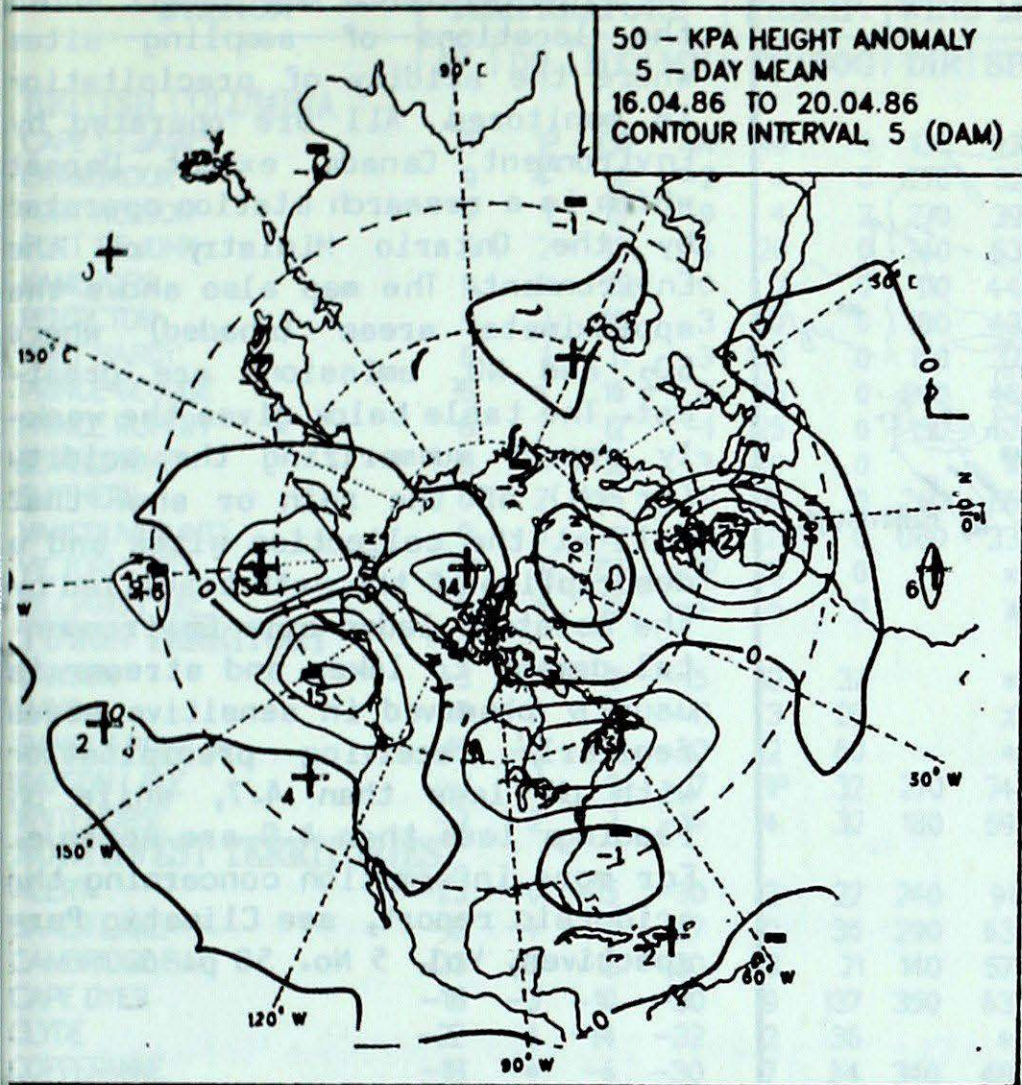
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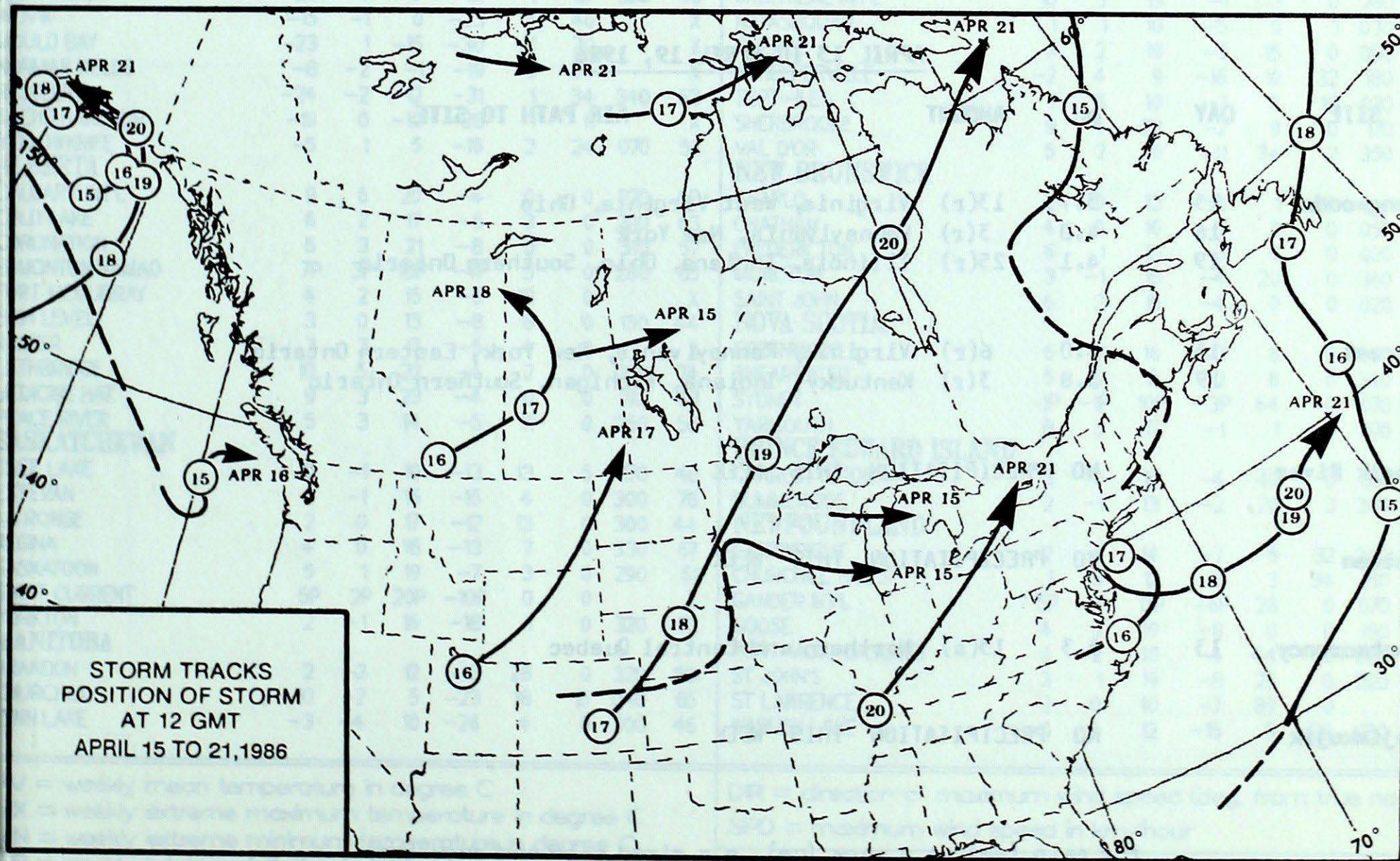
CIRCULATION

50 KPa ATMOSPHERIC CIRCULATION



MEAN 50 KPa HEIGHT ANOMALY (dam)
April 16 to April 20, 1986

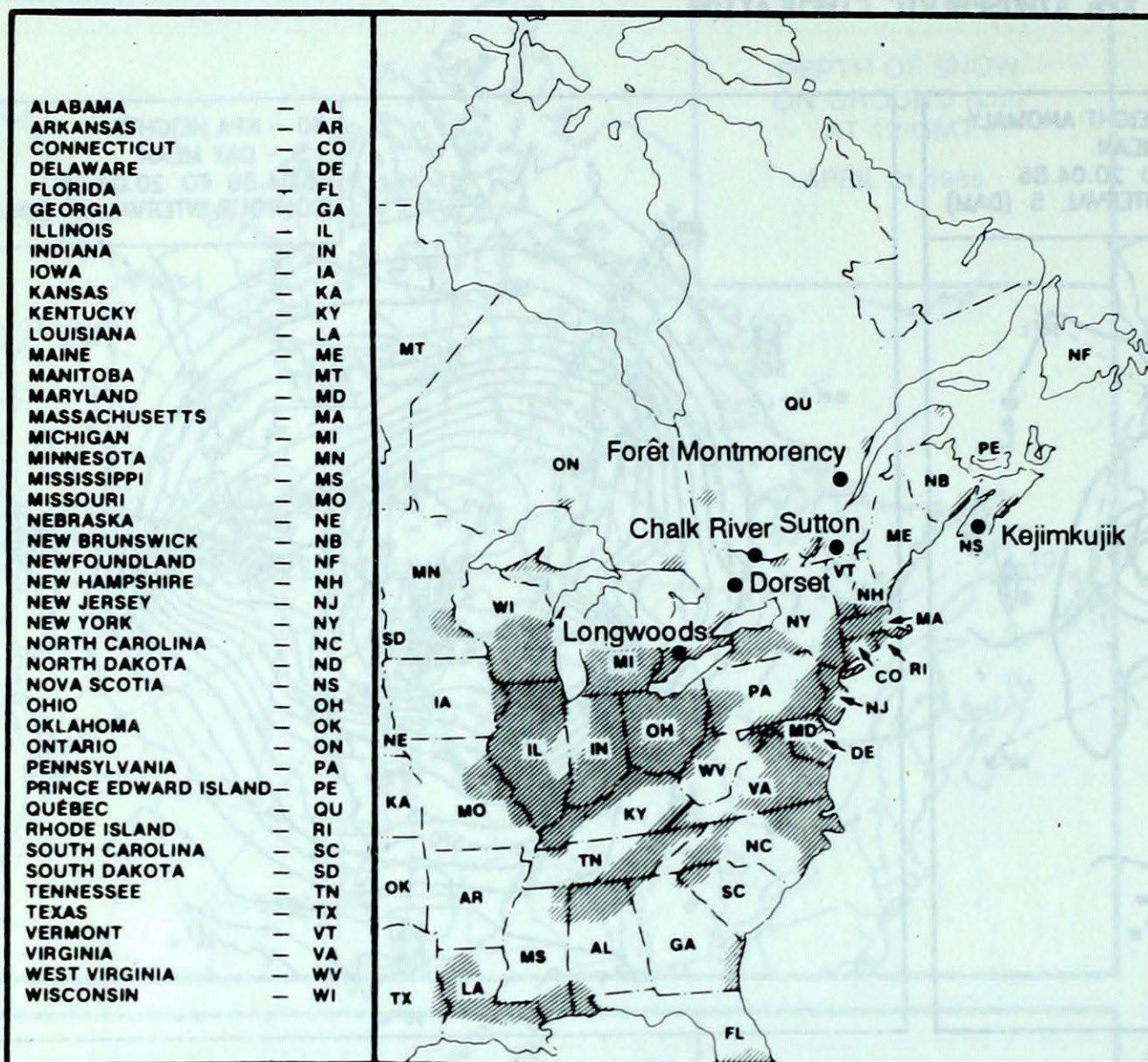
MEAN 50 KPa HEIGHTS (dam)
April 16 to April 20, 1986



STORM TRACKS
POSITION OF STORM
AT 12 GMT
APRIL 15 TO 21, 1986

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 13 TO APRIL 19, 1986

SITE	DAY	pH	AMOUNT	AIR PATH TO SITE
Longwoods	15	3.7	13(r)	Virginia, West Virginia, Ohio
	16	4.0	3(r)	Pennsylvania, New York
	19	4.1	25(r)	Illinois, Indiana, Ohio, Southern Ontario
Dorset	15	4.0	6(r)	Virginia, Pennsylvania, New York, Eastern Ontario
	19	3.8	3(r)	Kentucky, Indiana, Michigan, Southern Ontario
Chalk River			NO PRECIPITATION THIS WEEK	
Sutton			NO PRECIPITATION THIS WEEK	
Montmorency	13	5.3	13(s)	Northern and Central Quebec
Kejimikujik			NO PRECIPITATION THIS WEEK	

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

TEMPERATURE, PRECIPITATION AND MAXIMUM WIND DATA FOR THE WEEK ENDING 0600 GMT APRIL 22, 1988

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	1	*	13	-18	1	0	130	52
CAPE ST. JAMES	7P	1P	13P	4P	49	0	130	93	THOMPSON	-3	-3	14	-20	1	0	010	46
CRANBROOK	9	4	19	-2	4	0	270	52	WINNIPEG INT'L	4	-1	16	-8	17	0	160	54
FORT NELSON	4	1	13	-9	4	2	270	39	ONTARIO								
FORT ST. JOHN	5	2	13	-4	20	0	240	63	ATIKOKAN	4P	-1P	17P	-8P	16	0	270	56
KAMLOOPS	9	0	15	0	2	0	110	44	BIG TROUT LAKE	-1	*	14	-15	9	0	340	59
PENTICTON	9	1	16	3	27	0	180	43	GORE BAY	7	2	18	-4	12	0	180	65
PORT HARDY	8	1	11	3	100	0	150	37	KAPUSKASING	1	-2	17	-13	4	0	210	74
PRINCE GEORGE	6	*	16	0	26	0	260	46	KENORA	5	1	15	-9	19	0	010	37
PRINCE RUPERT	6	2	12	-1	125	0	150	67	KINGSTON	8P	1P	17P	-4P	16	0		X
REVELSTOKE	8	1	12	3	40	0		*	LONDON	8	0	20	-1	51	0	100	50
SMITHERS	6	2	15	-5	19	0	260	65	MOOSONEE	-3	-3	17	-15	2	6	230	54
VANCOUVER INT'L	9	0	14	4	31	0	080	33	NORTH BAY	8	2	21	-9	30	0	350	52
VICTORIA INT'L	9P	1P	12P	3P	13	0		*	OTTAWA INT'L	11	3	21	-5	11	0		X
WILLIAMS LAKE	5	*	16	-4	6	0		X	PETAWAWA	8	2	19	-7	18	0		X
YUKON TERRITORY									PICKLE LAKE	2	0	19	-16	24	5	350	50
DAWSON	-3	*	8	-15	10	37		*	RED LAKE	3	0	17	-12	16	0	310	52
MAYO	0	0	6	-11	3	25		X	SUDBURY	7	2	20	-8	14	2		X
SHINGLE POINT A	-19	-2	-11	-30	12	60		*	THUNDER BAY	3	-1	12	-7	3	0	350	48
WATSON LAKE	-1	-1	9	-17	1P	32	270	74	TIMMINS	3P	0P	18P	-11P	0	6	180	65
WHITEHORSE	-2	-2	7	-14	4	32	180	59	TORONTO INT'L	8	1	17	-3	40	0	310	56
NORTHWEST TERRITORIES									TRENTON	10	2	20	-3	37	0		X
ALERT	-23	0	-15	-30	3	22	240	91	WIARTON	7P	0P	17P	-5P	35	0		X
BAKER LAKE	-19	-4	-10	-27	0	36	290	63	WINDSOR	8	-2	21	-1	30	62	360	48
CAMBRIDGE BAY	-23	-3	-12	-30	3	21	140	57	QUEBEC								
CAPE DYER	-18	-3	-10	-30	9	137	350	63	BAGOTVILLE	6	3	17	-4	12	0	070	48
CLYDE	-22	-4	-14	-32	2	36		*	BLANC SABLON	1	*	10	-6	12	0		X
COPPERMINE	-18	*	-6	-30	7	34	340	48	INUKJUAQ	-9	0	2	-21	26	24	350	83
CORAL HARBOUR	-18P	-3P	0	-25P	1	26		X	KUUJUAQ	-5	3	8	-15	3	50	250	59
EUREKA	-26	0	-17	-34	1	22	270	65	KUUJUARAPIK	-7	-2	12	-20	6	28	340	65
FORT SMITH	1	2	11	-8	3	12		X	MANIWAKI	9	4	21	-7	12	0	300	37
FROBISHER BAY	-13	2	-4	-21	28	40	140	54	MONT JOLI	5	2	20	-5	2	0	150	54
HALL BEACH	-24	-4	-17	-31	1	37	350	46	MONTREAL INT'L	10	3	19	-1	13	0	260	46
INUVIK	-15	-1	0	-23	5	40		X	NATASHQUAN	1	1	10	-5	0	1	030	56
MOULD BAY	-23	1	-15	-30	1	30		X	QUEBEC	7	2	19	-3	15	0	090	46
NORMAN WELLS	-8	-2	-1	-19	9	24		X	SCHEFFERVILLE	-2	4	9	-16	10	32	180	67
RESOLUTE	-24	-2	-12	-31	1	34	340	63	SEPT-ILES	1	0	10	-7	6	18	020	50
SACHS HARBOUR	-19	0	-10	-28	1	11		X	SHERBROOKE	9	4	23	-2	9	0	170	44
YELLOWKNIFE	-5	1	5	-16	2	24	070	52	VAL D'OR	5	2	19	-11	34	2	350	69
ALBERTA									NEW BRUNSWICK								
CALGARY INT'L	9	6	20	-4	0	0	270	63	CHARLO	2	0	13	-6	1	13		*
COLD LAKE	6	2	17	-5	3	0	290	63	CHATHAM	4	0	16	-7	0	0	050	48
CORONATION	6	3	21	-8	0	0	310	57	FREDERICTON	6	1	15	-3	0	0	020	46
EDMONTON NAMA0	7P	3P	18P	-4P	3	0	280	65	MONCTON	3	-1	15	-4	20	0	340	81
FORT MCMURRAY	4	2	15	-6	18	0		X	SAINT JOHN	6	2	15	-4	0	0	020	67
HIGH LEVEL	3	0	13	-8	8	0	130	44	NOVA SCOTIA								
JASPER	7	3	17	-5	4	0		X	GREENWOOD	6	0	16	-3	8	0	060	70
LETHBRIDGE	10	5	22	-4	2	0	250	74	SHEARWATER	5	0	15	-2	8	0	340	78
MEDICINE HAT	9	3	23	-4	0	0	190	48	SYDNEY	1P	-1P	10P	-3P	64	0	070	59
PEACE RIVER	5	3	14	-5	11	0	260	56	YARMOUTH	8	3	17	-1	1	0	070	56
SASKATCHEWAN									PRINCE EDWARD ISLAND								
CREE LAKE	0	-1	10	-13	13	5	170	48	CHARLOTTETOWN	3	0	15	-4	49	0	010	56
ESTEVAN	4	-1	16	-15	4	0	300	76	SUMMERSIDE	2	-1	13	-2	20	3	360	83
LA RONGE	2	0	17	-12	13	0	300	44	NEWFOUNDLAND								
REGINA	4	0	18	-13	7	0	330	67	CARTWRIGHT	2	4	14	-7	5	32	340	65
SASKATOON	5	1	19	-7	3	0	290	61	CHURCHILL FALLS	1	8	12	-13	3	34	210	70
SWIFT CURRENT	5P	2P	20P	-10P	0	0		X	GANDER INT'L	5P	4P	17P	-6P	28	0	070	48
YORKTON	2	-1	16	-18	1	0	320	72	GOOSE	4	5	19	-8	0	0	180	41
MANITOBA									PORT-AUX-BASQUES	4	2	10	-4	44	0	060	80
BRANDON	2	-2	12	-13	28	0	320	80	ST JOHN'S	3	1	19	-8	26	0	320	76
CHURCHILL	-10	-2	5	-23	18	15	040	65	ST LAWRENCE	2	0	10	-7	89	0		X
LYNN LAKE	-3	-4	10	-26	4	0	300	46	WABUSH LAKE	0	5	12	-15	5	39	180	74

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

The Forage Drought Early Warning System Report (FoDEWS)

J.A. Dyer
Resources and Environment Section
Regional Development Branch
Agriculture Canada

BACKGROUND

This report projects possible drought stricken areas for the Prairies Provinces by the end of May. It includes weather based estimates of soil moisture reserves for silty clay loam, under a perennial forage. Weather records from three selected past years are used as proxy future weather. At each update historical records are replaced by the most recent daily weather observations.

Two contour maps show the dryness relative to past years. In Figure 1, various percent of normal classes are shown. Figure 2 shows areas with reserves below the lowest levels at several different frequencies of occurrence. To illustrate; in the "below one year in three" area, 20 out of a sample of 30 years can be expected to have more moisture reserves than given. The report now includes 58 weather stations but should still be interpreted as a general outlook or reconnaissance. The Agrometeorology Section, Research Branch is acknowledged for providing the weather data used in this report.

As of March 23, 1986, the higher risk areas are limited to several isolated locations throughout Saskatchewan and Alberta. These are the sites projected to be drier than the driest year in five. Otherwise, most of the prairie region is showing normal or above normal soil moisture conditions.

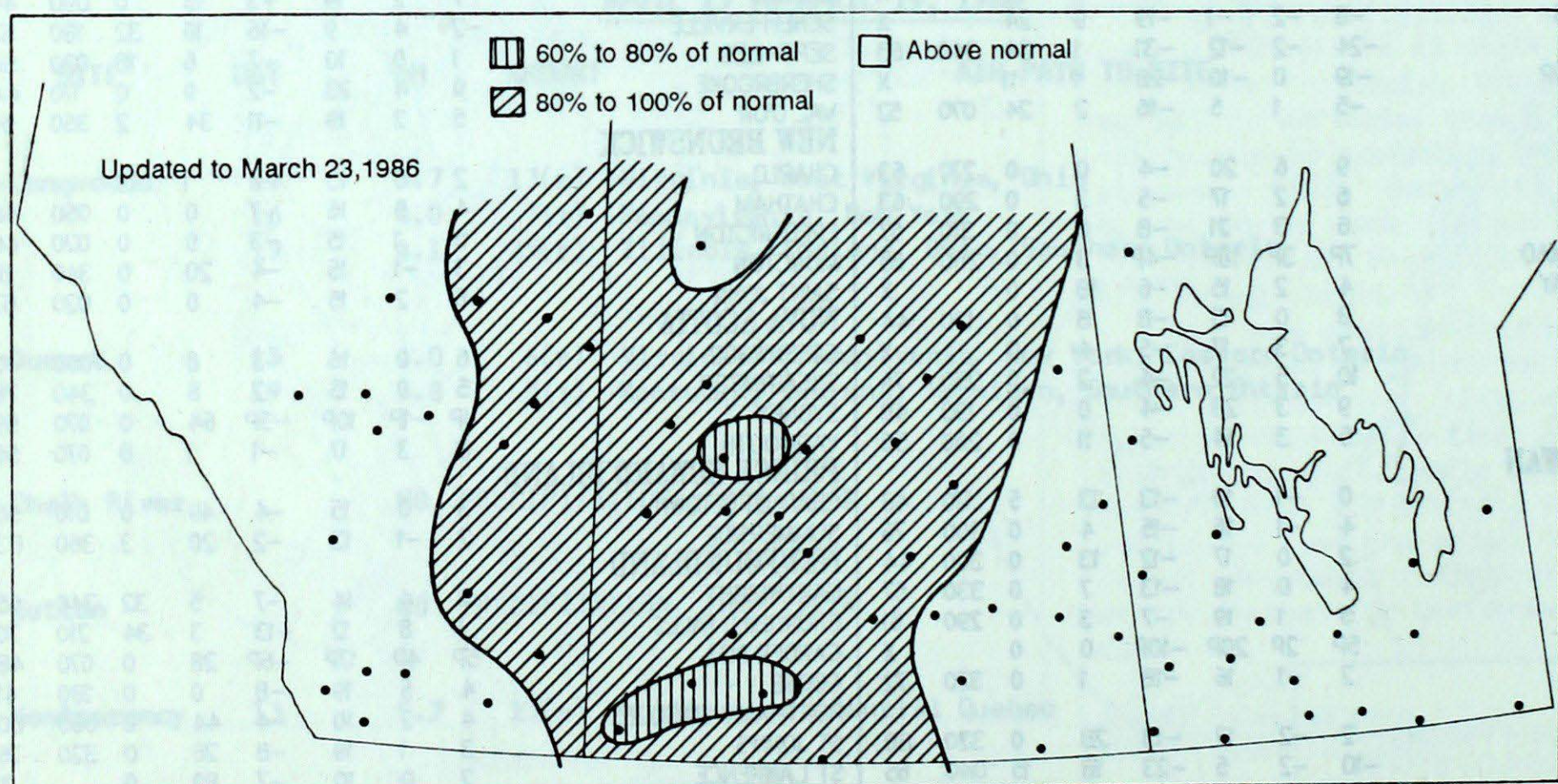


Figure 1: Projected soil moisture reserves under perennial by May 31, expressed as % of normal

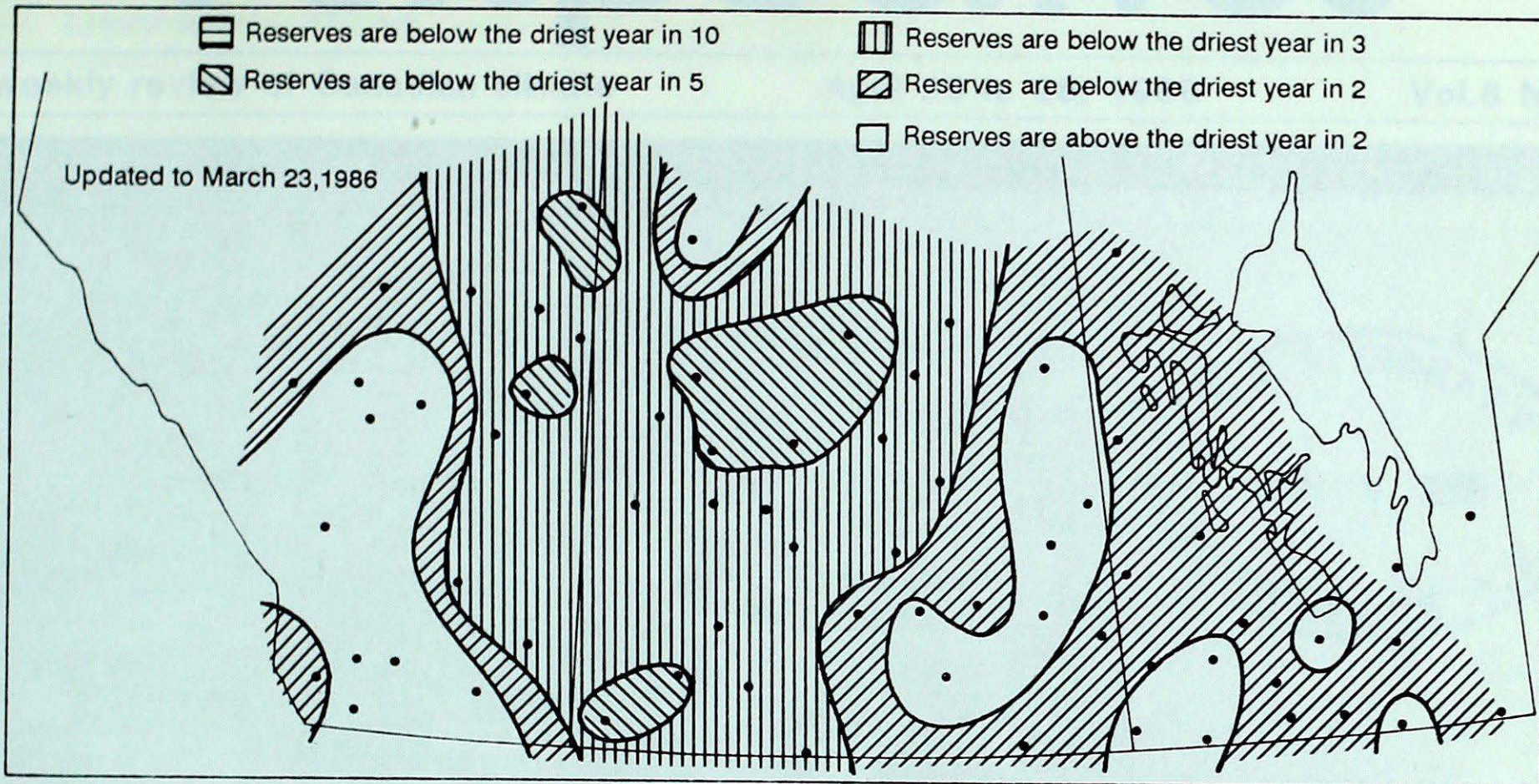
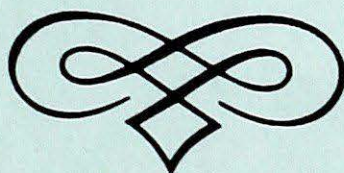


Figure 2: Zones showing the frequency at which the projected moisture conditions for May 31, can be expected to return in future years.



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Water Resources

Cool unsettled weather in the Sacramento Valley
Record warmth follows cold in Owens Valley
Record high temperatures reported in the Central Valley