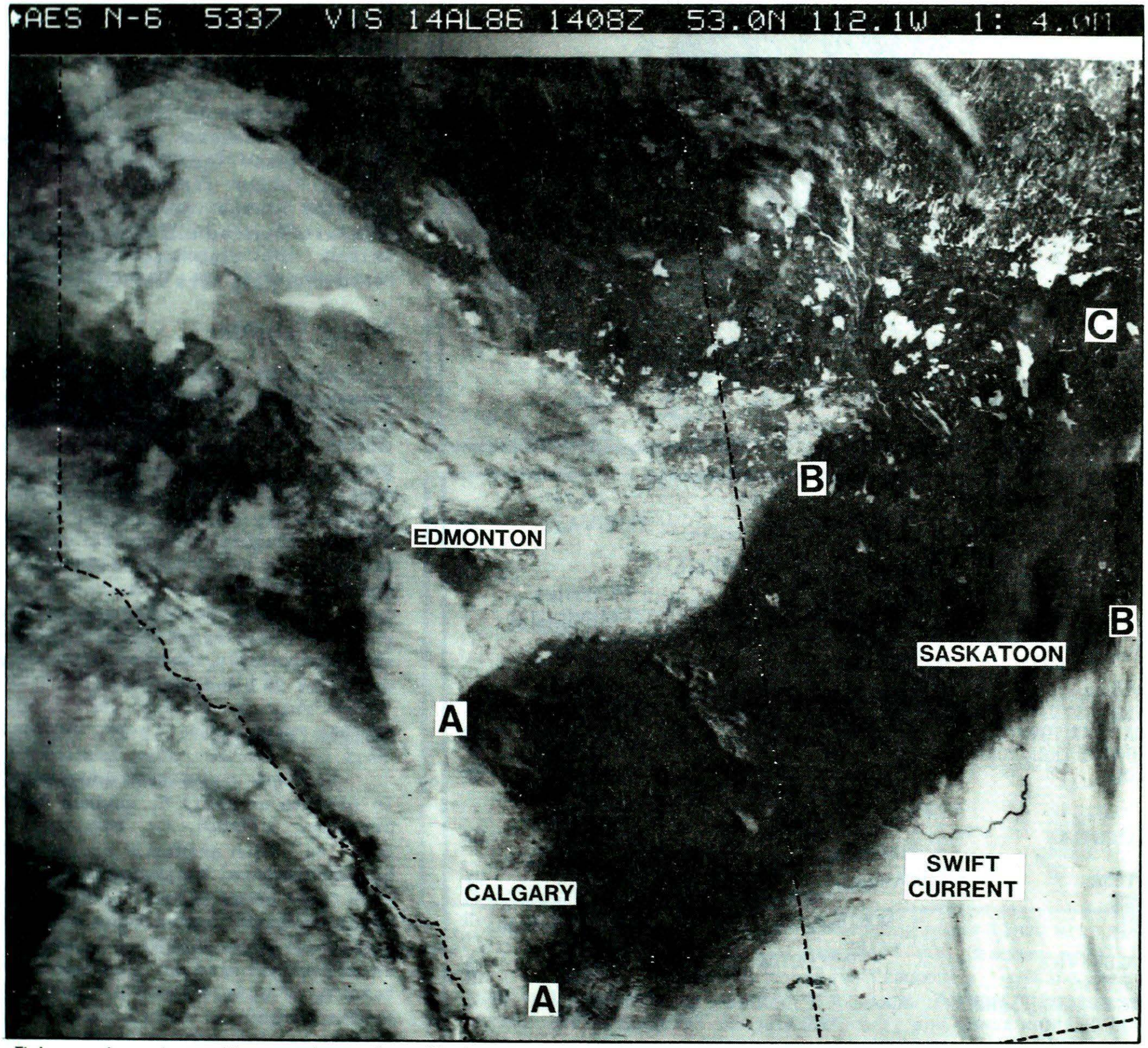
Climatic Perspectives

A weekly review of Canadian climate | April 8 to 14, 1986 | Vol.8 No.15



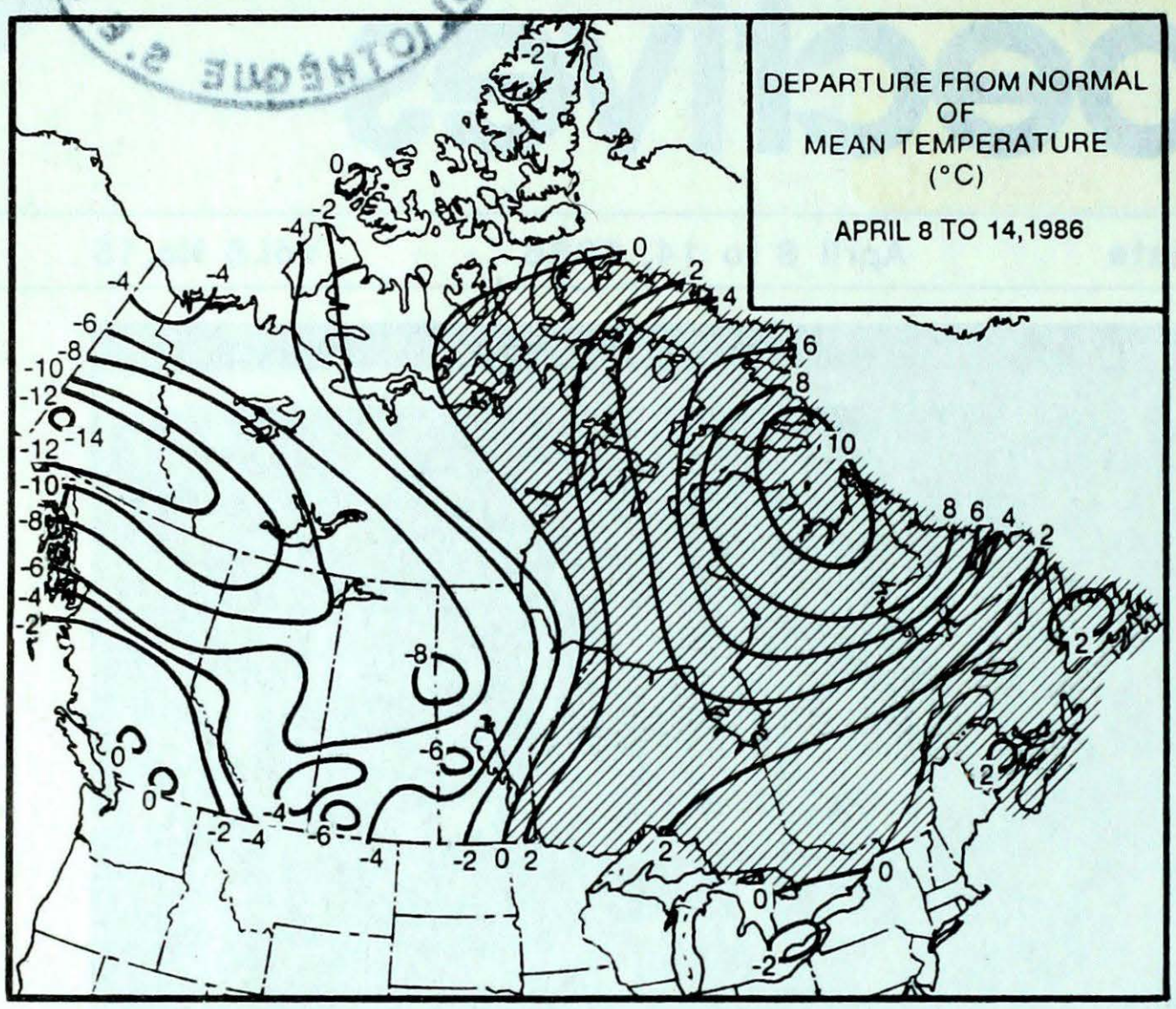
This past week weather systems deposited snow in two distinctly separate areas of the Prairies, as evidenced by this NOAA 6 photo of April 14, 1986. The edge of the snowfall areas or snow lines (A, B) are very well defined in the agricultural districts of the south, because of the lack of heavy vegetation obscuring the ground. This is not the case in the more heavily treed areas of central Alberta and Saskatchewan (c), even though the snow cover is significantly more substantial.

• *Winter weather returns*

- damaging winter storm crosses Atlantic Canada
- record subfreezing temperatures envelop the West

Canada

TEMPERATURE



WEEKLY TEMPERATURE EXTREME (C)

	MAXIMUM		MINIMUM	
BRITISH COLUMBIA	KAMLOOPS	23	FORT NELSON	−25
YUKON TERRITORY	WHITEHORSE	3	OGILVIE	−40
NORTHWEST TERRITORIES	FORT SMITH	14	MOULD BAY	−42
ALBERTA	CALGARY INT'L RED DEER	25	COLD LAKE	−20
SASKATCHEWAN	ELBOW MOOSE JAW	25	COLLINS BAY LA RONGE	−23
MANITOBA	PORTAGE LA PRAIRIE	22	LYNN LAKE	−25
ONTARIO	KENORA	18	WINISK	−13
QUEBEC	MONTREAL INT'L	14	INUKJUAK	−11
NEW BRUNSWICK	FREDERICTON	14	CHATHAM	−4
NOVA SCOTIA	TRURO	15	SYDNEY	−4
PRINCE EDWARD ISLAND	CHARLOTTETOWN	14	CHARLOTTETOWN	−4
NEWFOUNDLAND	ARGENTIA	15	CARTWRIGHT	−15

ACROSS THE NATION

WARMEST MEAN TEMPERATURE	9	LYTTON	BC
COOLEST MEAN TEMPERATURE	−31	EUREKA	NWT

ACROSS THE COUNTRY...

Yukon and Northwest Territories

A very cold Arctic airmass firmly established itself over northwestern Canada, dropping temperatures to record low values. Nearly every location in the Yukon and Mackenzie District set new daily low temperature records. Whitehorse established a new monthly minimum temperature record of -29.4°C on April 10. Blizzards were common in the Northwest Territories and the Arctic, while freezing rain was reported in the Keewatin District. Snowfalls were substantial on Baffin Island, but elsewhere across the north snowfalls were light.

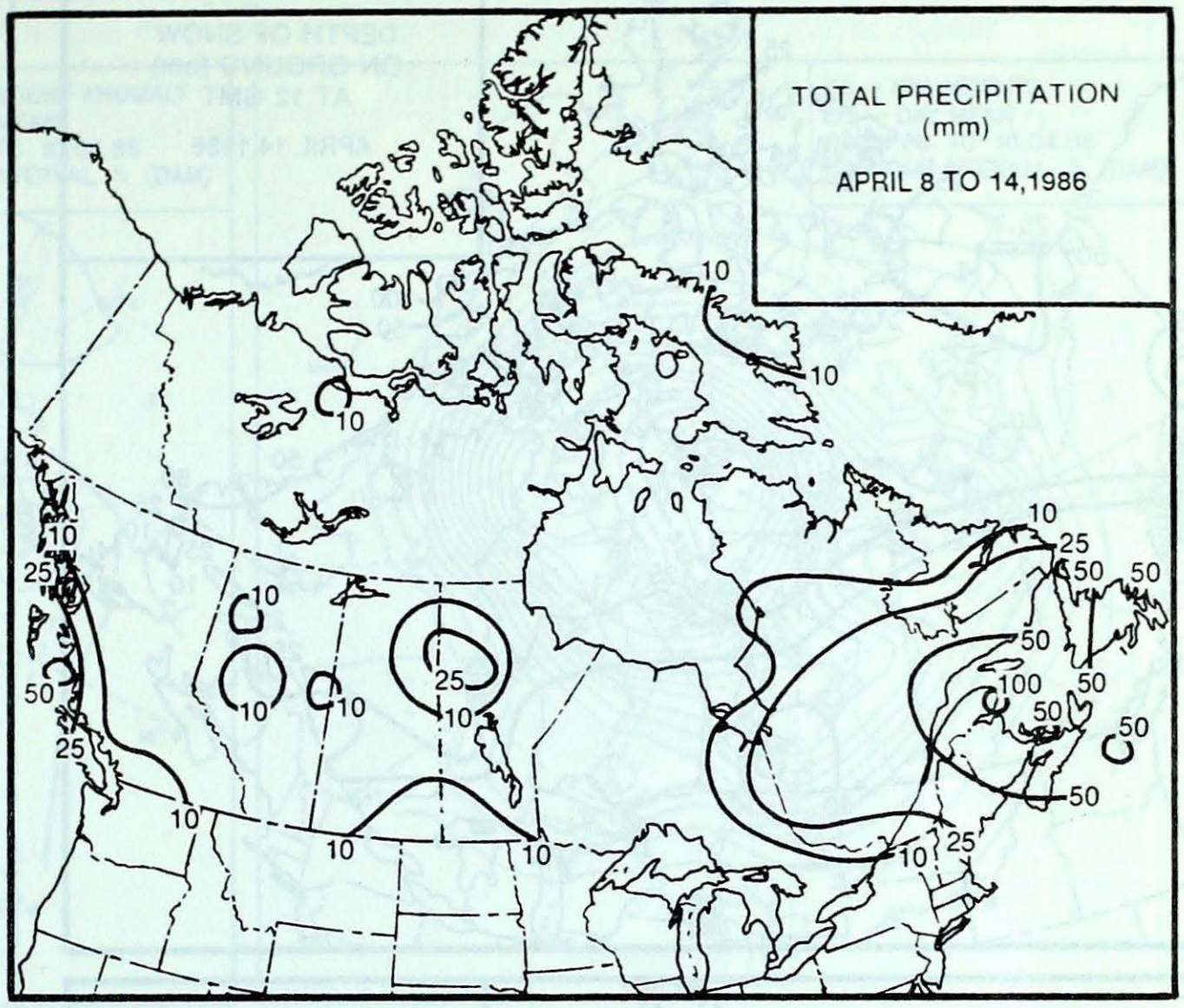
British Columbia

Weather conditions varied across the province. A record cold Arctic outbreak affected the north during the middle of the week, with blowing snow and low wind chills. On April 11, most of the south was drenched by heavy rains, with amounts ranging between 20 and 40 millimetres. Heavy snow fell above the 1000 metre level in the mountains the same day. Sunniest areas were to the extreme north and the southern valleys, where fruit trees are still in bloom.

Prairie Provinces

The week began mild and sunny. In Alberta on April 8, maximum temperatures climbed to the record twenties, which gradually progressed eastwards into Manitoba. A sharp cold front moved across the Prairies after mid-week. Temperatures dropped dramatically, and between April 10 and 12 many new daily low temperature records were set. The weather system dumped up to 15 cm of new snow in the Peace River District and the Swan Hills of central Alberta. Another developing disturbance moving across the northern States brought more snow to southern Alberta on April 10, which spread northeastwards into Manitoba by the weekend. Amounts ranged from just a few centimetres in agricultural districts to more than 30 cm in northern Manitoba.

PRECIPITATION



HEAVIEST WEEKLY PRECIPITATION (mm)

BRITISH COLUMBIA	MCINNES ISLAND	50
YUKON TERRITORY	MAYO	2
NORTHWEST TERRITORIES	ROBERTSON LAKE	20
ALBERTA	EDSON	21
SASKATCHEWAN	BROADVIEW	18
MANITOBA	LYNN LAKE	34
ONTARIO	MOOSONEE	31
QUEBEC	GASPE	138
NEW BRUNSWICK	CHARLO	89
NOVA SCOTIA	SYDNEY	81
PRINCE EDWARD ISLAND	SUMMERSIDE	60
NEWFOUNDLAND	BURGEO	83

Ontario

A slow moving weather system gave winter-like weather conditions to most of southern and central Ontario, with raw northerly winds, overcast skies and snow. In the northwest, a ridge of high pressure gave predominantly sunny, dry weather, which eventually made its way eastward across the province. Snow flurries occurred frequently to the lee of the Great Lakes. On April 11, most of southern Ontario woke up to a fresh dusting of snow, while some snow belt communities received up to 15 cm of the white stuff. The weekend saw much improved conditions in the south, while cloud from another disturbance advanced into the northwest.

Quebec

Winter returned with a vengence as a large, complex slow moving low pressure system plagued the province for most of the week. Heavy snowfalls were reported along the lower St. Lawrence Valley, the north shore and on the Gaspé. Amounts ranged between 55 and 60 centimetres. Gaspé received 136.6 mm of precipitation this week. Significant amounts of snow also fell in northern and eastern Quebec. Winds at Sept-Iles were clocked gusting to 124 km/h on April 10, setting a wind speed record. Many roofs and outdoor structures were damaged, and tree branches broken.

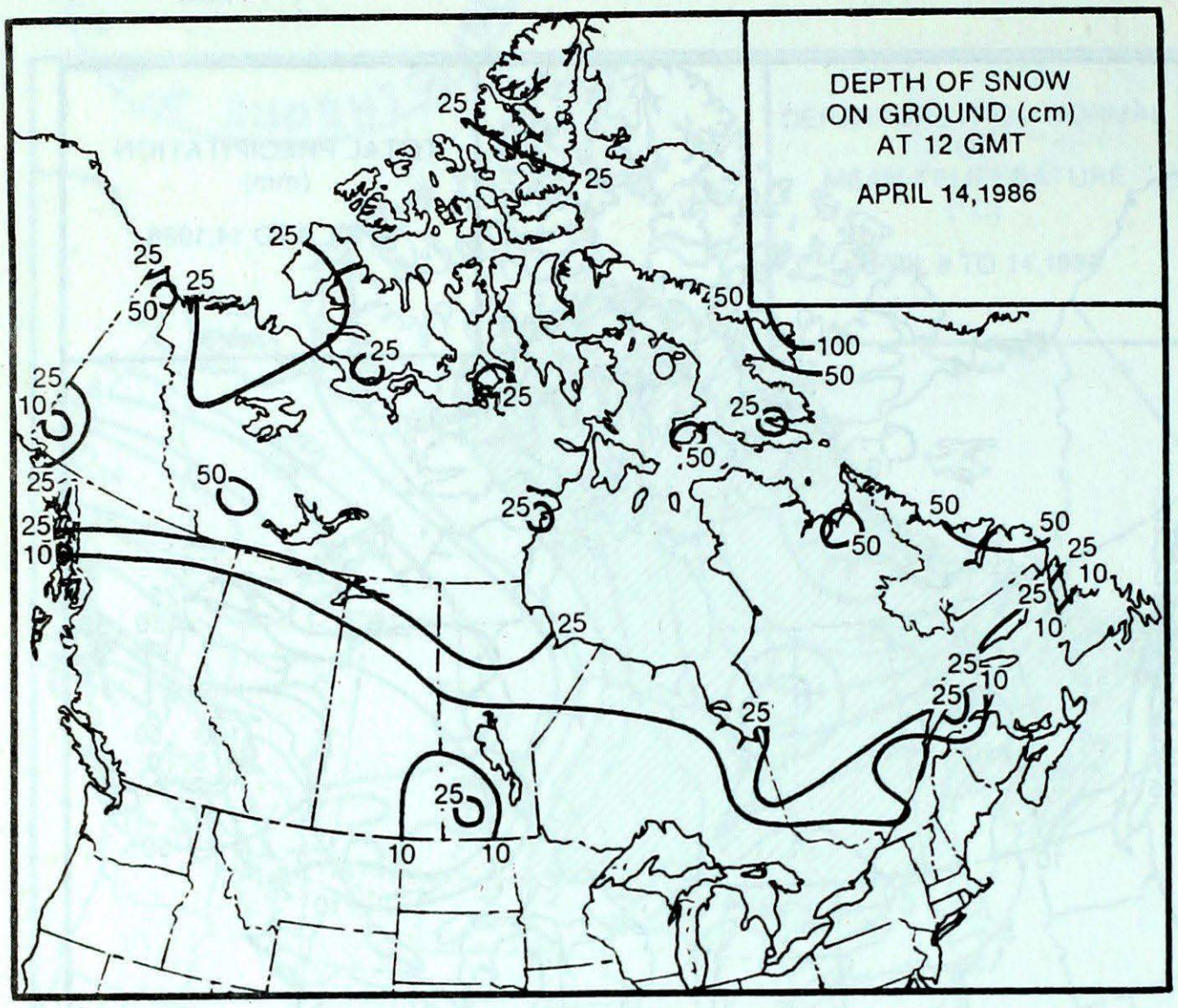
Atlantic

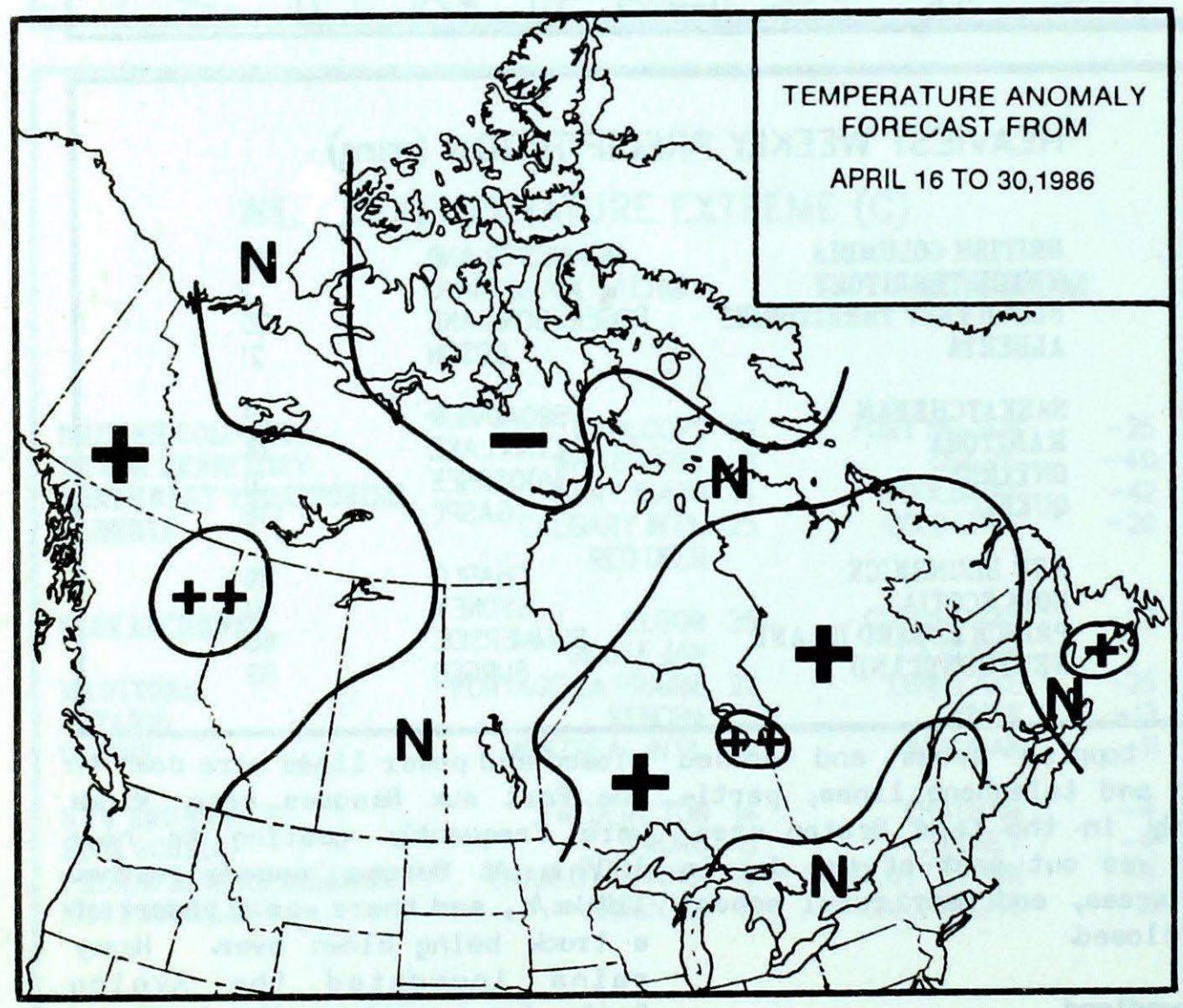
A complex low pressure system gave most cloudy and very wet weather conditions. A number of locations received more than two-thirds their normal monthly precipitation. Charlo, with 84 mm this week alone, has already exceeded their normal precipitation total for the month. Snow covered northern New Brunswick. Charlo was buried under 75 cm of snow this week, more than double their April normal. The stormiest weather occurred on April 10, consisting of rain, freezing rain, snow and thunderstorms. Winds at Sydney were reported gusting to 115 km/h. The storm caused flooding, power outages, toppled trees and downed power and telephone lines, particularly in the Cape Breton area. Power was out most of the day in some areas, and many rural school were closed.

Newfoundland

Typical spring weather, with strong easterly winds, affected the Island. An intensifying storm, crossing the Maritimes on April 10, gave copious amounts of rain and freezing rain to the southwest portion of the Island. Schools were closed and power lines were down in the Port aux Basques area. Winds were frequently gusting to near 100/hr. At Burgeo, speeds reached 119 km/h, and there was a report of a truck being blown over. Heavy rains inundated the Avalon Peninsula, causing flooding and washouts. Gander and St. John's received more than 70 mm of rain. Approximately 40 cm of fresh snow fell in Labrador. As the storm moved off, sunny and mild weather returned to western Newfoundland over the weekend, but the east remained primarily fogbound.

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.

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. Black and white photographs can be used, but not colour. The contents may be reprinted freely with proper credit.

The data shown 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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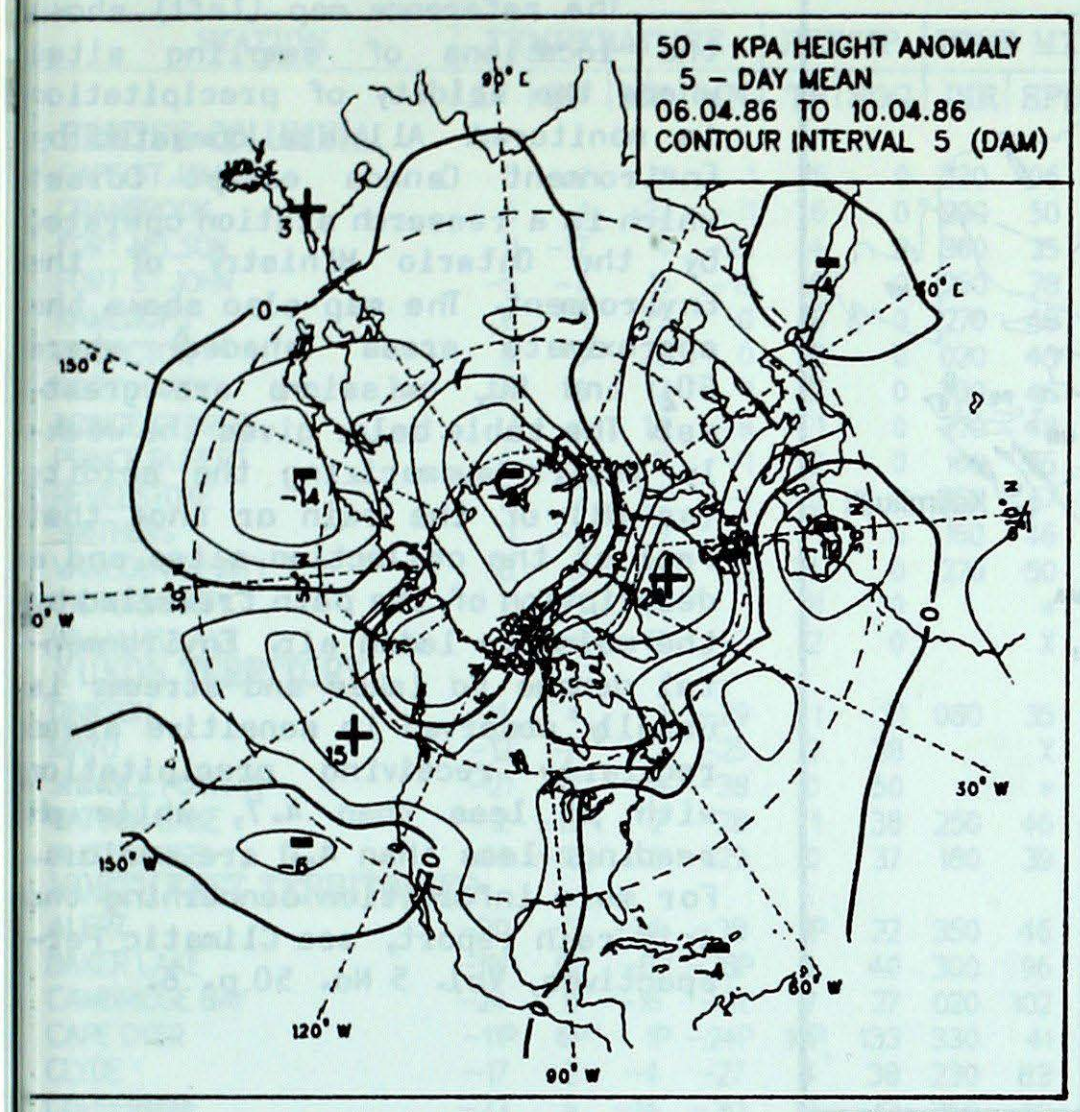
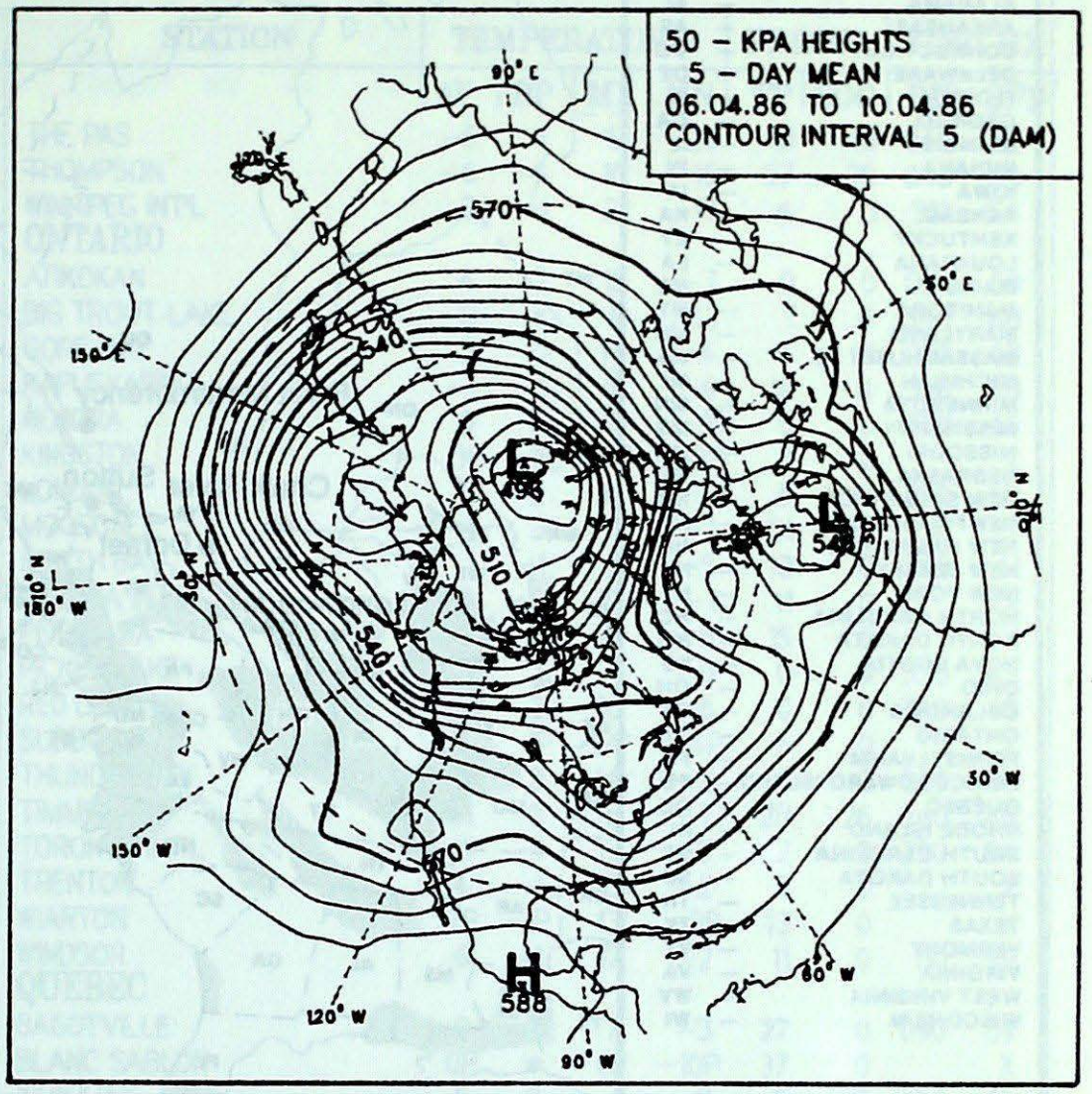
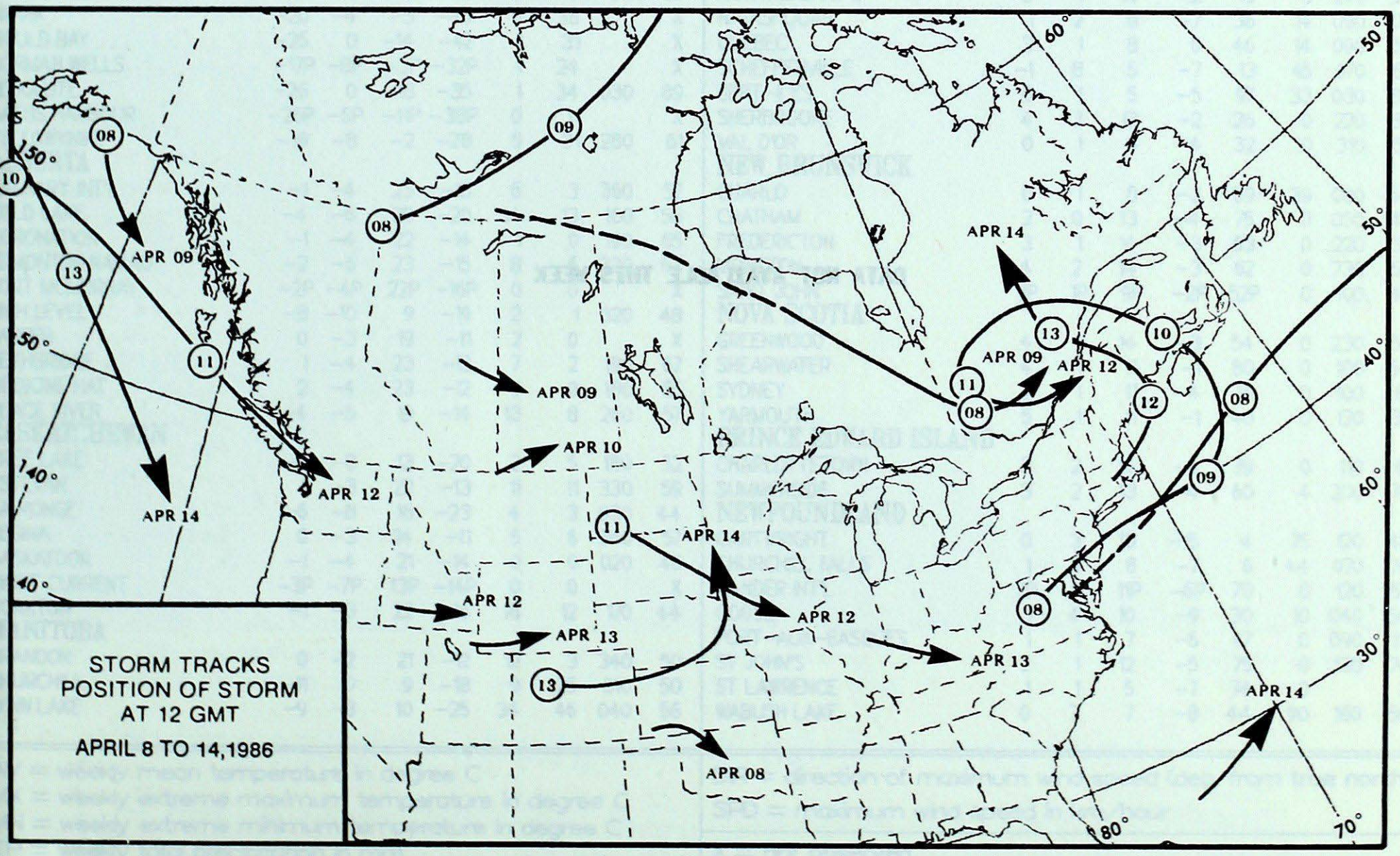
50 KPa ATMOSPHERIC CIRCULATION



MEAN 50 KPa HEIGHT ANOMALY (dam)
April 6 to April 10, 1986

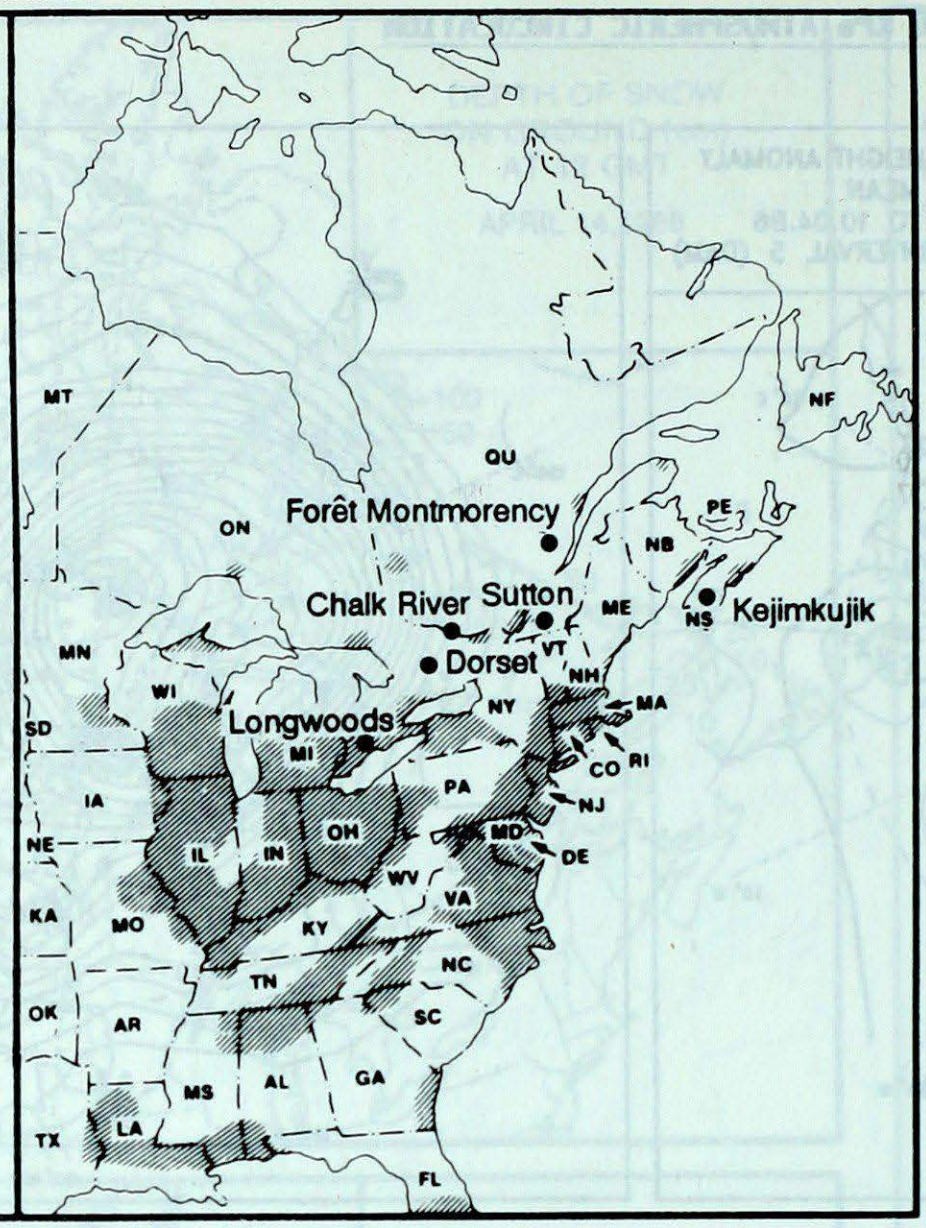


MEAN 50 KPa HEIGHTS (dam)
April 6 to April 10, 1986



ACID RAIN

ALABAMA	—	AL
ARKANSAS	—	AR
CONNECTICUT	—	CO
DELAWARE	—	DE
FLORIDA	—	FL
GEORGIA	—	GA
ILLINOIS	—	IL
INDIANA	—	IN
IOWA	—	IA
KANSAS	—	KA
KENTUCKY	—	KY
LOUISIANA	—	LA
MAINE	—	ME
MANITOBA	—	MT
MARYLAND	—	MD
MASSACHUSETTS	—	MA
MICHIGAN	—	MI
MINNESOTA	—	MN
MISSISSIPPI	—	MS
MISSOURI	—	MO
NEBRASKA	—	NE
NEW BRUNSWICK	—	NB
NEWFOUNDLAND	—	NF
NEW HAMPSHIRE	—	NH
NEW JERSEY	—	NJ
NEW YORK	—	NY
NORTH CAROLINA	—	NC
NORTH DAKOTA	—	ND
NOVA SCOTIA	—	NS
OHIO	—	OH
OKLAHOMA	—	OK
ONTARIO	—	ON
PENNSYLVANIA	—	PA
PRINCE EDWARD ISLAND	—	PE
QUÉBEC	—	QU
RHODE ISLAND	—	RI
SOUTH CAROLINA	—	SC
SOUTH DAKOTA	—	SD
TENNESSEE	—	TN
TEXAS	—	TX
VERMONT	—	VT
VIRGINIA	—	VA
WEST VIRGINIA	—	WV
WISCONSIN	—	WI



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.

DATA NOT AVAILABLE THIS WEEK

STATISTICS

TEMPERATURE, PRECIPITATION AND MAXIMUM WIND DATA FOR THE WEEK ENDING 0600 GMT APRIL 15,1986

STATION	TEMPERATURE				PRECIP.		WIND MX	
	AV	DP	MX	MN	TP	SOG	DIR	SPD
BRITISH COLUMBIA								
CAPE ST.JAMES	5	−1	11	1	35	0	330	106
CRANBROOK	5	−1	22	−11	6	0	290	50
FORT NELSON	−11	−12	4	−25	4	8	360	35
FORT ST.JOHN	−5	−7	15	−19	2	0	250	78
KAMLOOPS	8	−1	23	0	8	0	270	48
PENTICTON	8	0	23	0	10	0	020	43
PORT HARDY	6	0	12	1	27	0	330	46
PRINCE GEORGE	1	*	14	−8	1	0	270	48
PRINCE RUPERT	4	−1	11	−1	19	0	160	65
REVELSTOKE	7	2	20	−1	5	0	350	57
SMITHERS	1	−2	11	−5	1	0	160	46
VANCOUVER INT'L	8	0	15	3	34	0	270	50
VICTORIA INT'L	7	−1	16	1	11	0		*
WILLIAMS LAKE	1	*	17	−7	2	0		X
YUKON TERRITORY								
DAWSON	−14	*	1	−29	1	31	080	35
MAYO	−12	−11	2	−25	2	28		X
SHINGLE POINT A	−21	−2	−8	−38	0	50		*
WATSON LAKE	−12	−10	2	−28	1	38	250	46
WHITEHORSE	−14	−13	3	−29	0	37	180	39
NORTHWEST TERRITORIES								
ALERT	−30	−3	−24	−38	2P	22	350	46
BAKER LAKE	−19P	0P	−8P	−28P	4	40	300	96
CAMBRIDGE BAY	−24	0	−16	−31	7	27	020	102
CAPE DYER	−11P	6P	1P	−24P	10P	133	330	41
CLYDE	−17	2	−4	−27	4	38	230	83
COPPERMINE	−23	*	−14	−30	12	42	350	69
CORAL HARBOUR	−14	3	−6	−28	2	30		X
EUREKA	−31	−1	−22	−40	3	22	290	61
FORT SMITH	−10	−7	14	−23	0	14		X
FROBISHER BAY	−4	12	2	−11	9	13	140	39
HALL BEACH	−18	4	−5	−30	9	0	170	59
INUVIK	−20	−4	−5	−40	0	38		X
MOULD BAY	−25	0	−14	−42	1	31		X
NORMAN WELLS	−17P	−8P	−3P	−32P	1	24		X
RESOLUTE	−26	0	−18	−35	1	34	030	89
SACHS HARBOUR	−26P	−5P	−11P	−38P	0	11		X
YELLOWKNIFE	−16	−8	−2	−28	5	31	280	61
ALBERTA								
CALGARY INT'L	−1	−4	25	−13	6	3	360	57
COLD LAKE	−4	−6	20	−20	14	13	160	56
CORONATION	−1	−4	22	−14	1	0	190	65
EDMONTON NAMAO	−2	−6	23	−15	8	6	330	63
FORT MCMURRAY	−2P	−4P	22P	−16P	0	0		X
HIGH LEVEL	−8	−10	9	−19	2	1	320	48
JASPER	0	−3	19	−11	2	0		X
LETHBRIDGE	1	−4	23	−12	7	2	190	67
MEDICINE HAT	2	−4	23	−12	3	0	180	65
PEACE RIVER	−4	−5	19	−14	13	8	260	57
SASKATCHEWAN								
CREE LAKE	−9	−8	13	−20	2	5	180	52
ESTEVAN	1	−3	22	−13	11	11	330	59
LA RONGE	−6	−8	16	−23	4	3	030	44
REGINA	0	−3	24	−11	5	6	340	57
SASKATOON	−1	−4	21	−14	0	0	020	46
SWIFT CURRENT	−3P	−7P	13P	−14P	0	0		X
YORKTON	−1	−3	22	−16	16	12	170	44
MANITOBA								
BRANDON	0	−2	21	−12	12	3	340	50
CHURCHILL	−11	0	9	−18	9	25	010	50
LYNN LAKE	−9	−8	10	−25	34	46	040	56
THE PAS	−6	*	19	−20	10	10	040	52
THOMPSON	−6	−4	16	−16	27	25	040	59
WINNIPEG INT'L	2	−1	21	−10	4	1	310	54
ONTARIO								
ATIKOKAN	4	2	15	−7	0	0	090	50
BIG TROUT LAKE	−3	*	6	−12	1	4	340	48
GORE BAY	3	1	14	−4	4	0	290	48
KAPUSKASING	−1	1	8	−6	19	4	320	78
KENORA	5	4	18	−5	0	0	360	46
KINGSTON	3P	−1P	10P	−3P	3	0		X
LONDON	3	−2	15	−3	6	0	290	59
MOOSONEE	−1	3	7	−7	31	20	350	57
NORTH BAY	1	−1	11	−5	13	0	350	41
OTTAWA INT'L	4	0	14	−1	11	0		X
PETAWAWA	3	2	14	−5	15	0		X
PICKLE LAKE	1	3	11	−8	0	9	330	43
RED LAKE	4	3	16	−6	0	0	340	48
SUDBURY	1P	1P	12P	−4P	5	0		X
THUNDER BAY	4	3	14	−3	0	0	330	56
TIMMINS	−1	0	8	−7	28	26	340	48
TORONTO INT'L	3	−1	13	−2	2	0	290	54
TRENTON	4	−1	13	−2	3	0		X
WIARTON	2P	−1P	13	−3P	13	0		X
WINDSOR	6	−1	17	−2	11	0	110	56
QUEBEC								
BAGOTVILLE	2	1	7	−3	27	0	090	59
BLANC SABLON	0P	*	6P	−10P	37	0		X
INUKJUAK	−5	8	1	−11	3	25	050	48
KUUJJUAQ	−1	11	10	−8	3	66	070	48
KUUJJUARAPIK	−1	8	8	−9	11	36	030	61
MANIWAKI	3	2	13	−4	19	0	320	35
MONT JOLI	1	1	6	−2	52	2	170	61
MONTREAL INT'L	5	1	14	−2	19	0	240	54
NATASHQUAN	1	2	8	−7	36	14	090	106
QUEBEC	3	1	8	0	46	14	090	57
SCHEFFERVILLE	−1	8	5	−7	13	45	070	65
SEPT−ILES	0	1	5	−5	97	33	080	83
SHERBROOKE	4	2	12	−2	26	0	220	33
VAL D'OR	0	1	5	−4	32	10	310	52
NEW BRUNSWICK								
CHARLO	0	1	8	−3	89	39	090	54
CHATHAM	2	0	13	−4	75	0	050	48
FREDERICTON	3	1	14	−3	63	0	220	37
MONCTON	4	2	14	−3	62	0	230	56
SAINT JOHN	3P	1P	9P	−2P	52P	0	100	48
NOVA SCOTIA								
GREENWOOD	4	1	14	−3	54	0	230	50
SHEARWATER	4	1	11	−1	80	0	100	54
SYDNEY	2	1	11	−4	81	0	100	61
YARMOUTH	5	1	11	−1	40	0	120	37
PRINCE EDWARD ISLAND								
CHARLOTTETOWN	3	2	14	−4	39	0	110	61
SUMMERSIDE	3	2	13	−4	60	4	200	76
NEWFOUNDLAND								
CARTWRIGHT	0	3	10	−15	4	75	120	48
CHURCHILL FALLS	1	9	8	−7	6	44	070	70
GANDER INT'L	2P	1P	11P	−6P	78	0	120	57
GOOSE	1	4	10	−9	30	10	040	50
PORT−AUX−BASQUES	1	1	7	−6	47	0	090	111
ST JOHN'S	2	1	12	−5	75	0	130	74
ST LAWRENCE	1	1	5	−7	74	0		X
WABUSH LAKE	0	7	7	−8	44	90	160	56

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