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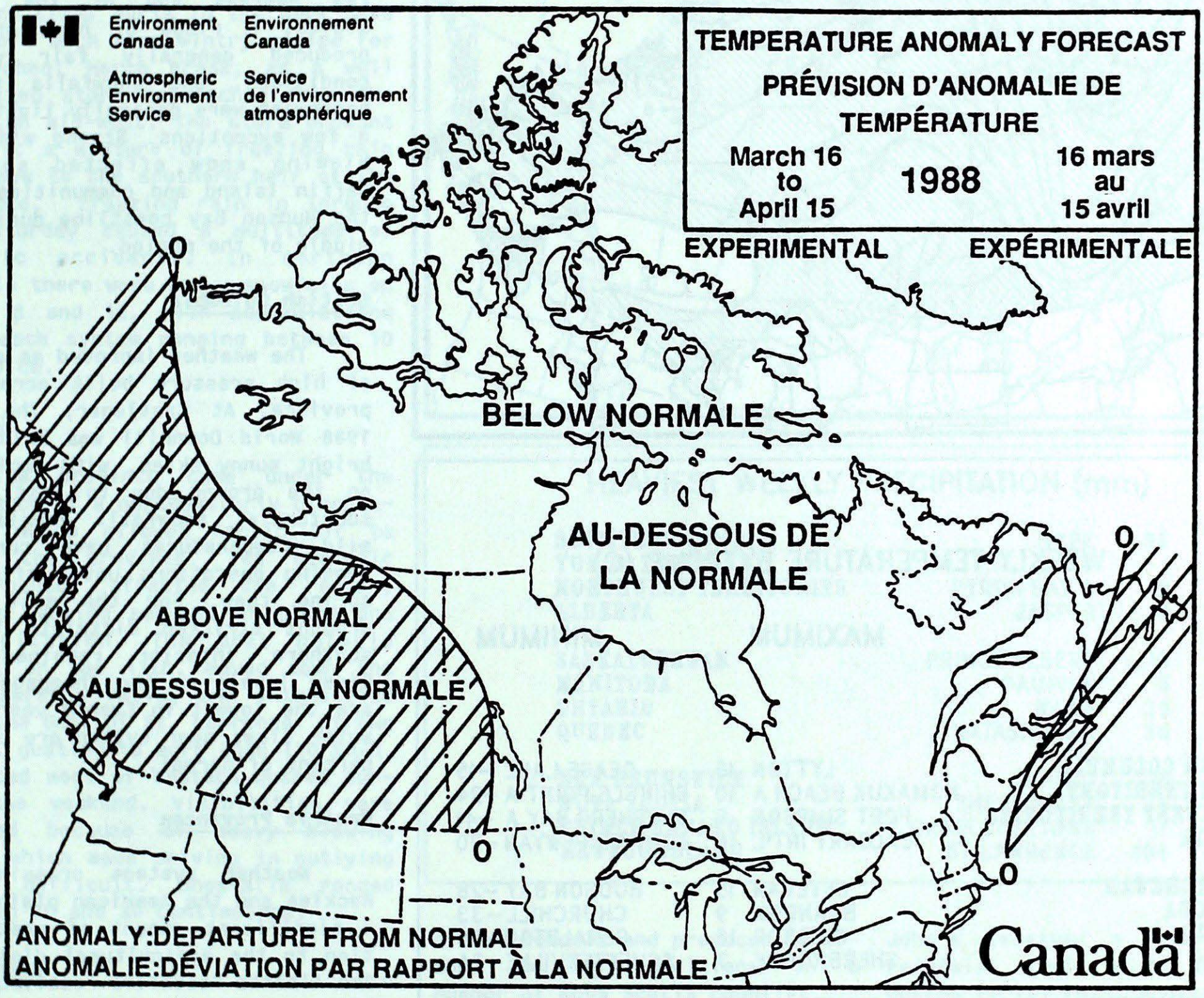
Climatic Perspectives

MONTHLY SUPPLEMENT INCLUDED

March 8 to 14, 1988 | *A weekly review of Canadian climate* | *Vol. 10 No. 11*

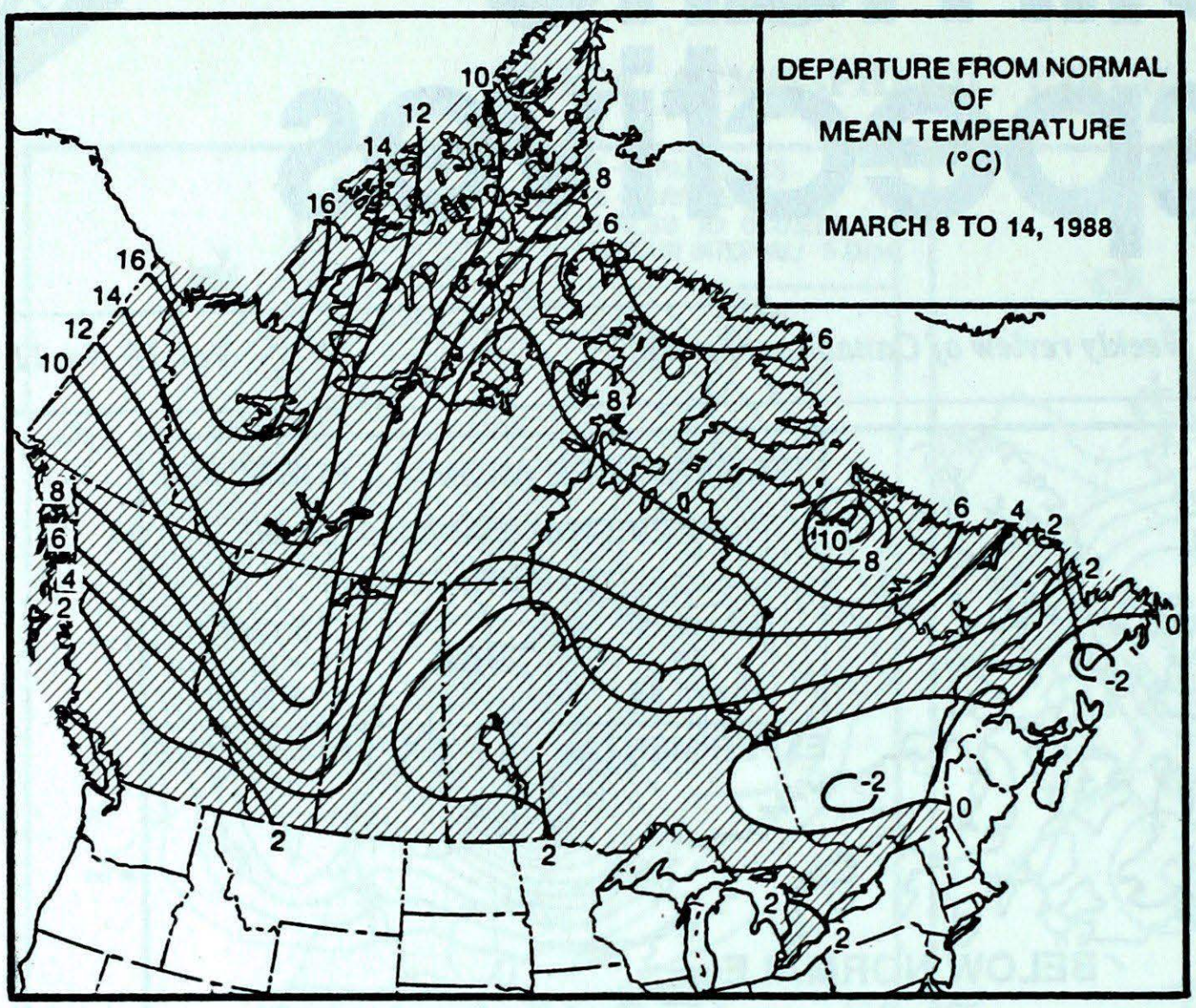


The above map is the latest in the evolution towards developing an acceptable format to be used in the official public product, which will be formally introduced May 16, 1988. Stations near the line separating the two categories are expected to be in the transition zone between above and below normal averaged temperatures. Please forward any comments to the Canadian Climate Centre at the address or phone number listed on page 4.

- **Prairies receive some much needed moisture**
- **Stormy and cold in eastern Canada**

– Fishing boat sinks off Nova Scotia

TEMPERATURE



WEEKLY TEMPERATURE EXTREME (C)

	MAXIMUM		MINIMUM	
BRITISH COLUMBIA	LYTTON	15	DEASE LAKE	-15
YUKON TERRITORY	KOMAKUK BEACH A	10	SHINGLE POINT A	-24
NORTHWEST TERRITORIES	FORT SIMPSON	8	SHEPHERD BAY A	-41
ALBERTA	CALGARY INT'L	16	FORT CHIPEWYAN	-20
SASKATCHEWAN	ESTEVAN	15	HUDSON BAY	-28
MANITOBA	BRANDON	9	CHURCHILL	-33
ONTARIO	WINDSOR	16	GERALDTON	-30
QUEBEC	SHERBROOKE	7	SCHEFFERVILLE	-34
NEW BRUNSWICK	SAINT JOHN	7	CHARLO	-19
NOVA SCOTIA	YARMOUTH	7	AMHERST	-14
PRINCE EDWARD ISLAND	SUMMERSIDE	2	CHARLOTTETOWN	-14
NEWFOUNDLAND	DEER LAKE	8	CHURCHILL FALLS	-31

ACROSS THE NATION

WARMEST MEAN TEMPERATURE	7	HOPE	BC
COOLEST MEAN TEMPERATURE	-33	SHEPHERD BAY A	NWT

ACROSS THE COUNTRY

Yukon and Northwest Territories

A Pacific air mass continued to give record warm weather to the Yukon, Mackenzie district and the western Arctic. In the southern Arctic, the mercury rose to near freezing, while maximum readings in the southern Yukon climbed just a few degrees shy of the double digits. A ridge of high pressure produced generally fair weather conditions, and snowfalls in the northwest were generally light, with a few exceptions. Strong winds and blowing snow affected southern Baffin Island and communities along the Hudson Bay coastline during the middle of the period.

British Columbia

The weather improved as a ridge of high pressure built across the province. At Castlegar, The Husky 1988 World Downhill was held under bright sunny skies, with ample snow on the ground due to last week's substantial snowfall. Persistently mild temperatures have curtailed logging operations until after the spring thaw. For the most part, drought stricken districts in the southern interior remained dry. River levels on the Thompson River are the lowest in twenty years, and water flows near Lytton are only 64 percent of normal.

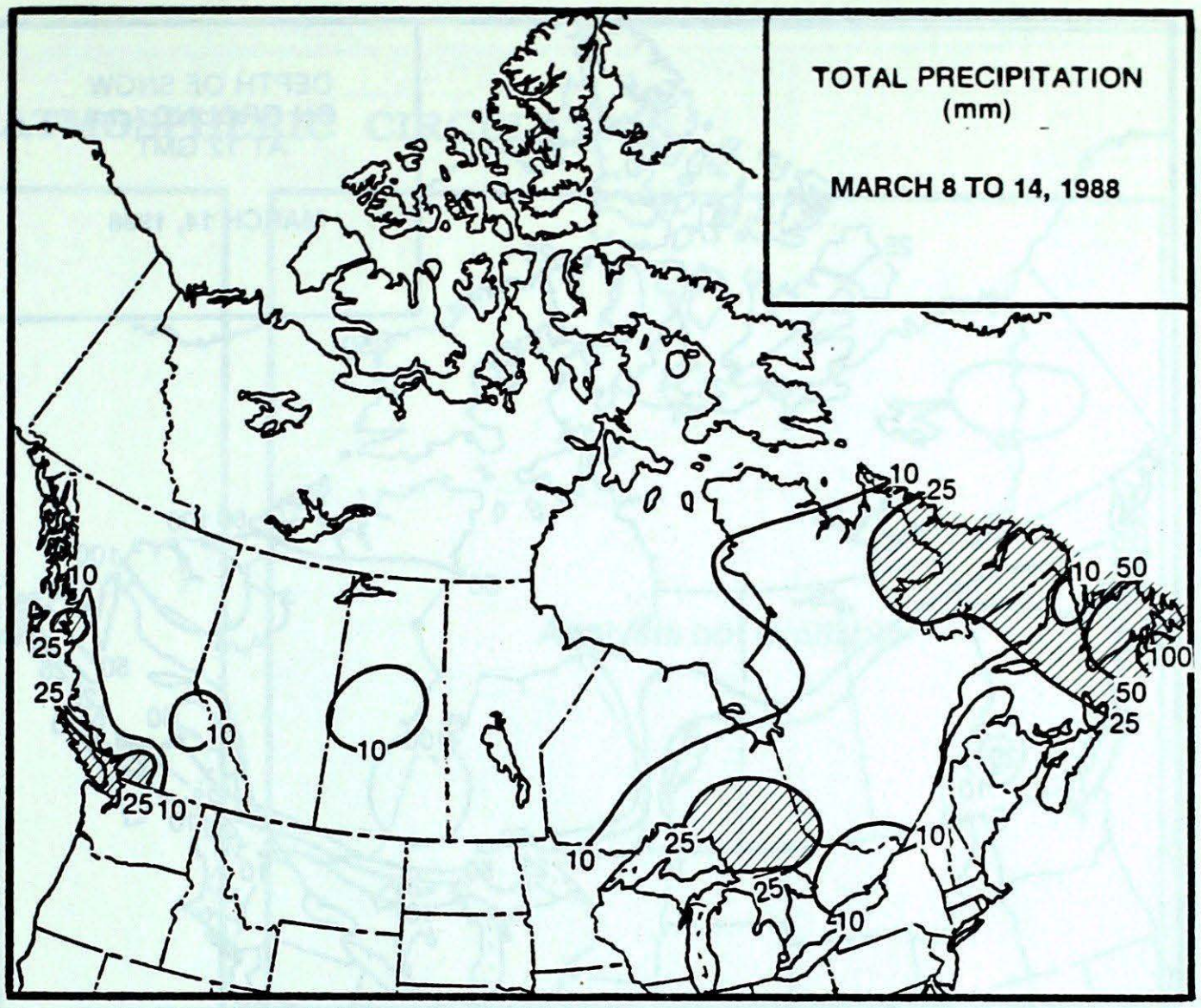
Prairie Provinces

Weather systems crossing the Rockies and the American plains gave a significant amount of precipitation to the agricultural districts. The Alberta foothills received 10 to 25 centimetres of snow during the early and latter parts of the period, while 10 to 15 centimetres of snow fell in southern Alberta on the 15th. Temperatures early in the week soared to the mid-teens, breaking many daily temperature records throughout the province.

In Saskatchewan and Manitoba, the week began on a pleasant, mild note after a 10 to 15 centimetre snowfall in southern Manitoba on March 7. Numerous daily high temperature records were broken the first three days of the period. A

PRECIPITATION

mixture of rain and freezing drizzle fell in the southern and central parts of both provinces during the middle of the week. The weekend saw a return to wintry weather conditions, with below normal temperatures and strong northerly winds producing high wind chill readings.



HEAVIEST WEEKLY PRECIPITATION (mm)

BRITISH COLUMBIA	HOPE	36
YUKON TERRITORY	MAYO	1
NORTHWEST TERRITORIES	BYRON BAY A	9
ALBERTA	JASPER	10
SASKATCHEWAN	PRINCE ALBERT	15
MANITOBA	DAUPHIN	5
ONTARIO	WAWA	39
QUEBEC	NATASHQUAN	30
NEW BRUNSWICK	CHARLO	16
NOVA SCOTIA	SHEARWATER	24
PRINCE EDWARD ISLAND	CHARLOTTETOWN	17
NEWFOUNDLAND	ST LAWRENCE	104

Ontario

In the south, spring-like weather conditions early in the week gave way to a much more wintry regime for the school March break, as a well organized storm approached from the American mid-west. The storm brought with it a mixture of freezing rain and snow to the southern half of the province. Freezing rain in Toronto on Saturday caused a multitude of traffic accidents. In northern Ontario there were heavy snowfalls on March 8 and 12, with accumulations from each system ranging between 10 and 20 cm.

Quebec

The province came under the influence of a northwesterly circulation, which allowed Arctic air to cover the province. Two cyclonic disturbances affected the region, giving varying amounts of cloud and precipitation. The most notable storm, on the 11th, moved down the St. Lawrence Valley and intensified over the Gulf of St. Lawrence. Strong winds, gusting to more than 120 km/h, buffeted most of eastern Quebec during the weekend. Visibilities were reduced because of heavy blowing snow, which made driving in outlying areas difficult. Snowfalls ranged between 10 and 30 centimetres.

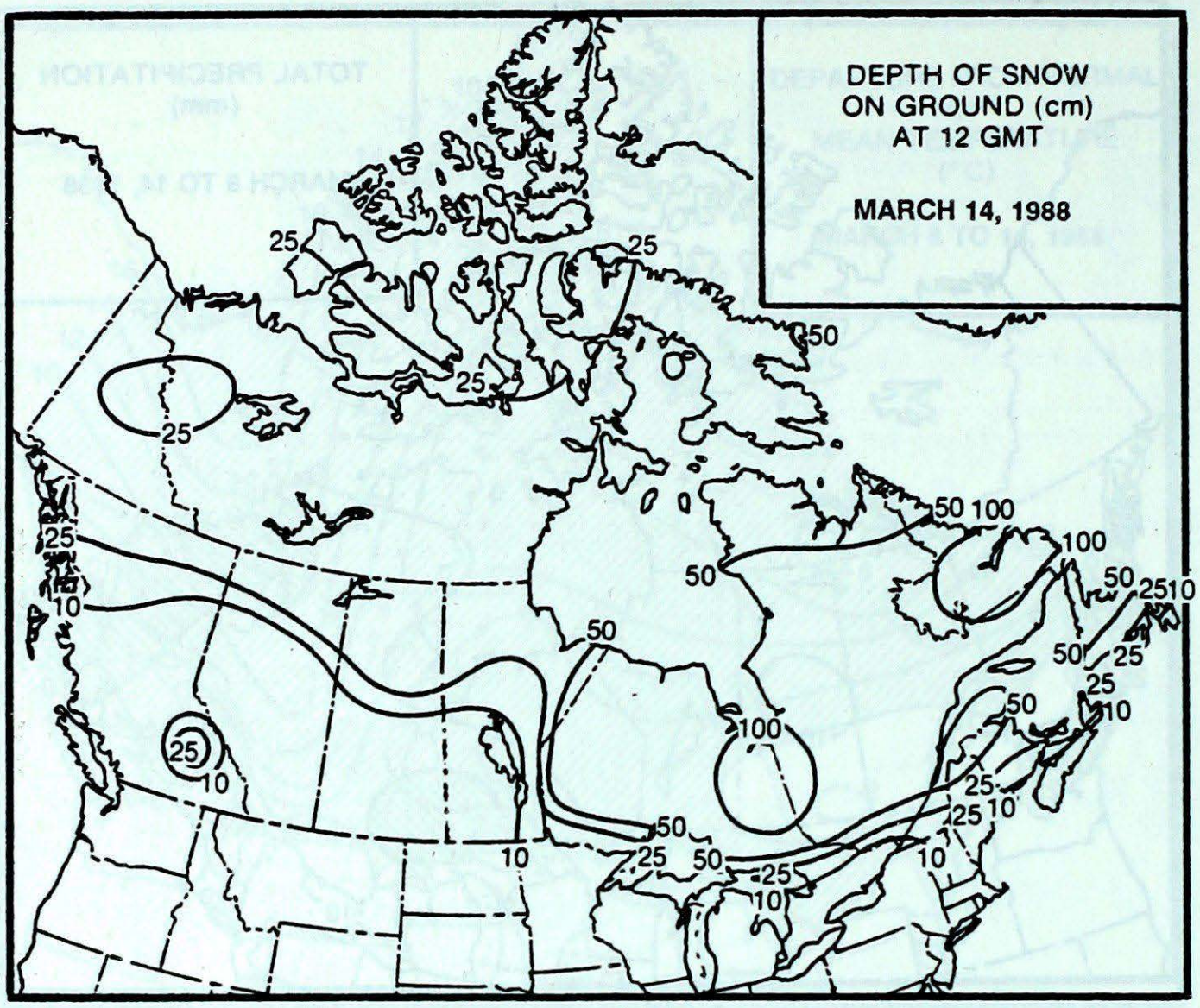
Maritimes

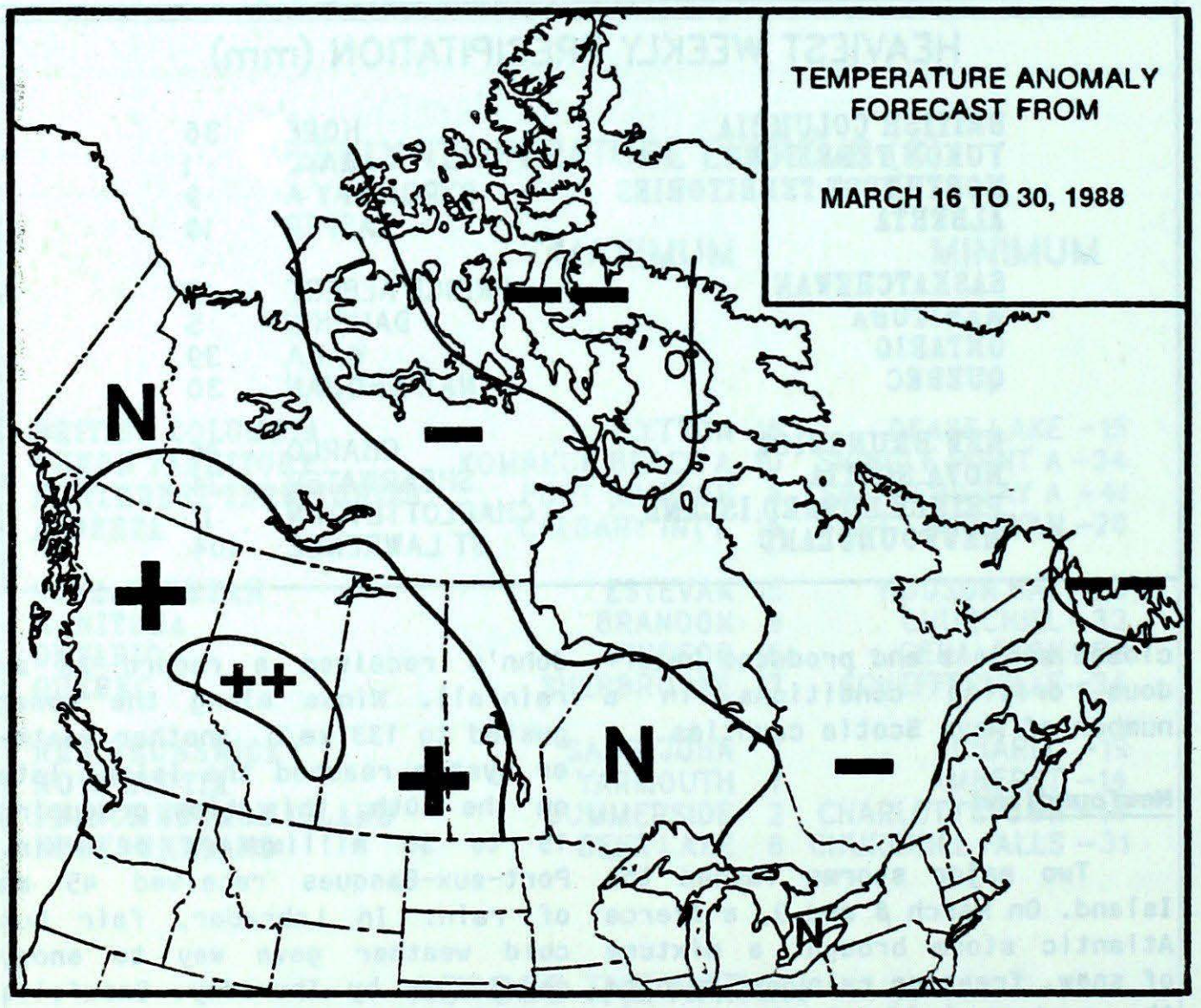
Atlantic storms resulted in changeable weather conditions and fluctuating temperatures. An intensifying storm, which tracked east of Nova Scotia on March 8, was attributed for the loss of the fishing vessel, Bonnie Lou II, and its crew of five, off the coast of Nova Scotia during the night. At the time, winds at Sable Island were clocked gusting to more than 100 km/h for twelve consecutive hours. High seas and poor visibility hampered the unsuccessful search and rescue attempt. On March 10, another developing storm brought freezing rain to the region, which closed schools and produced hazardous driving conditions in a number of Nova Scotia counties.

Newfoundland

Two major storms lashed the Island. On March 8 and 9, a fierce Atlantic storm brought a mixture of snow, freezing rain and rain to the eastern half of the Island. Gander received the brunt of the storm, 63 cm of snow and winds gusting to 87 km/h, while nearby 33 mm of freezing rain coated the ground. This record 24-hour snowfall closed schools, businesses and snarled all forms of transportation. The same day, St. John's received a record 38 mm rainfall. Winds along the coast gusted to 133 km/h. Another weather system reached the Island late on the 10th, this time producing 15 to 30 millimeters of rain. Port-aux-Basques received 45 mm of rain. In Labrador, fair but cold weather gave way to snowy conditions by Thursday. Snowfalls of 15 to 30 cm were common, as was a mixture of rain and freezing rain along the coast. A much colder air mass covered Newfoundland for the weekend, and snow flurries were associated with the on-shore flow.

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.

CLIMATIC PERSPECTIVES VOLUME 10

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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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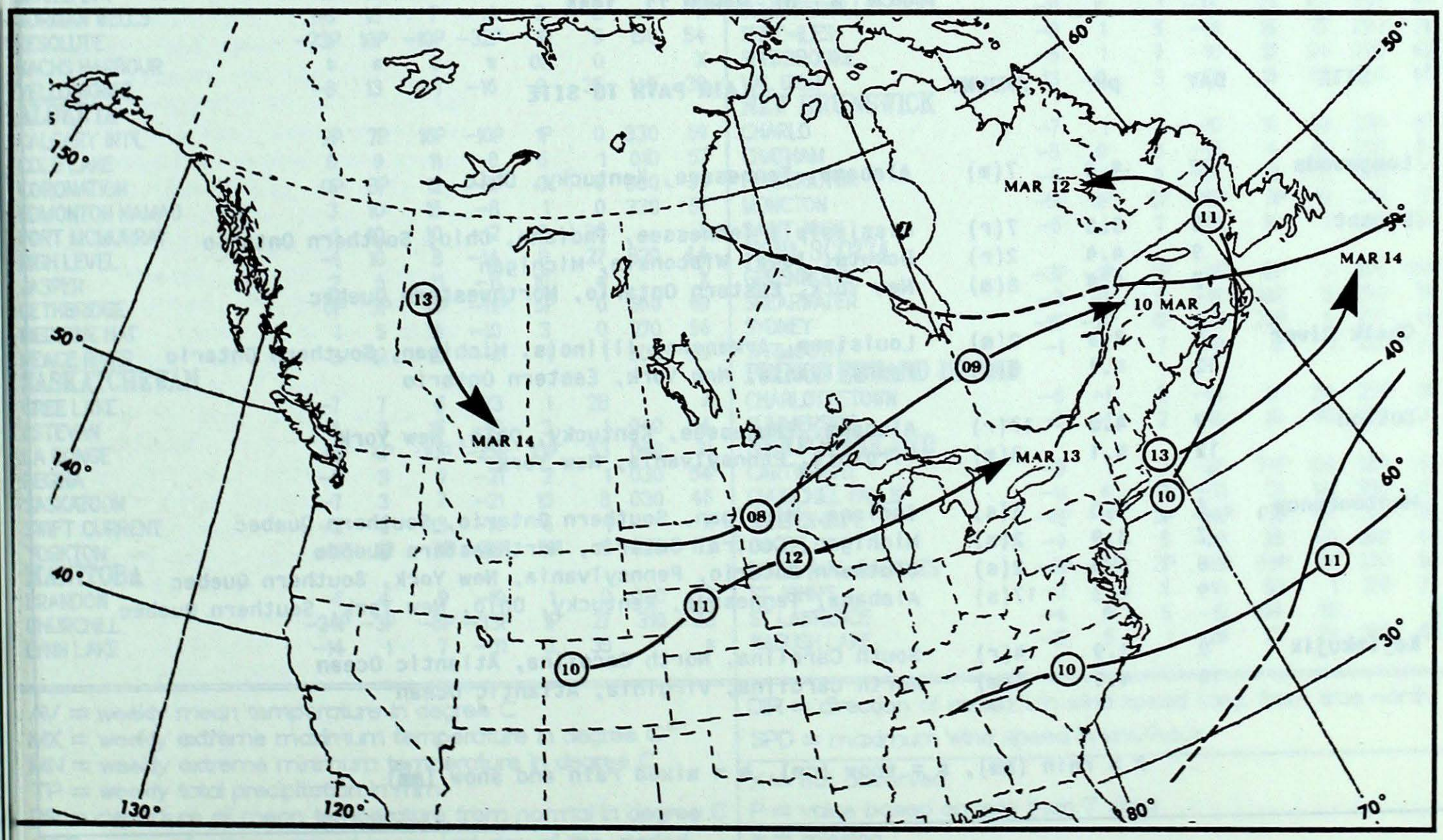
50 kPa ATMOSPHERIC CIRCULATION

Analysis not available

Analysis not available

Mean geopotential heights 50 kPa level (in decameter)

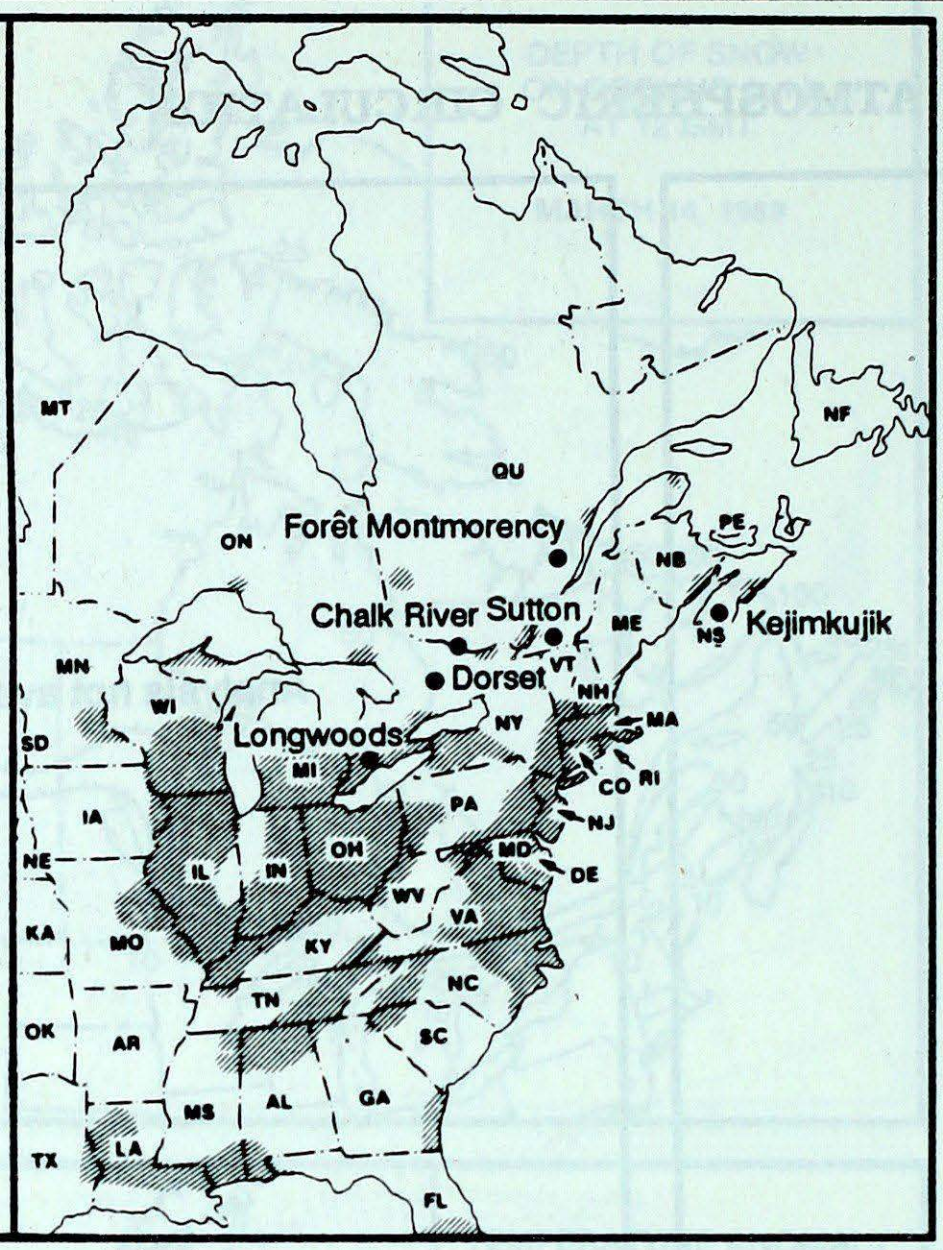
Mean geopotential height anomaly 50 kPa level (in decameter)



Storm track - Position of storm at 12 GMT during the period: March 8 to 14, 1988

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.

MARCH 6 TO MARCH 12, 1988

SITE	DAY	pH	AMOUNT	AIR PATH TO SITE
Longwoods	12	4.4	7(m)	Alabama, Tennessee, Kentucky, Ohio
Dorset	8	3.8	7(r)	Mississipi, Tennessee, Indiana, Ohio, Southern Ontario
	9	4.4	2(r)	Dakota, Iowa, Wisconsin, Michigan
	12	4.4	8(m)	New York, Eastern Ontario, Northwestern Quebec
Chalk River	8	3.8	2(m)	Louisiana, Arkansas, Illinois, Michigan, Southern Ontario
	12	4.1	8(s)	Pennsylvania, New York, Eastern Ontario
Sutton	9	4.0	17(r)	Alabama, Tennessee, Kentucky, Ohio, New York
	12	4.1	3(m)	Virginia, Pennsylvania, New York
Montmorency	6	4.0	1(s)	Indiana, Michigan, Southern Ontario, Southern Quebec
	7	3.9	2(s)	Michigan, Central Ontario, Northwestern Quebec
	8	5.0	2(s)	Southern Ontario, Pennsylvania, New York, Southern Quebec
	9	4.3	17(s)	Alabama, Tennessee, Kentucky, Ohio, New York, Southern Quebec
Kejimkujik	9	3.9	4(r)	South Carolina, North Carolina, Atlantic Ocean
	10	4.1	5(m)	North Carolina, Virginia, Atlantic Ocean

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

STATISTICS

TEMPERATURE, PRECIPITATION AND MAXIMUM WIND DATA FOR THE WEEK ENDING 0600 GMT MARCH 15,1988

STATION	TEMPERATURE				PRECIP.		WIND MX	
	AV	DP	MX	MN	TP	SOG	DIR	SPD
BRITISH COLUMBIA								
CAPE ST.JAMES	6	2	10	2	23	0	300	89
CRANBROOK	3	2	11	-6	7	0	010	46
FORT NELSON	2	14	10	-6	0	26	310	70
FORT ST.JOHN	3	11	9	-5	1	1	350	61
KAMLOOPS	5P	2P	12P	-6P	2P	0	250	65
PENTICTON	4P	1P	12P	-5P	5P	0	160	67
PORT HARDY	5	1	10	-1	13	0	150	43
PRINCE GEORGE	0	*	8	-9	5	6	310	43
PRINCE RUPERT	4	1	10	-4	29	0	270	43
REVELSTOKE	2	1	8	-7	24	26	310	48
SMITHERS	1	3	11	-7	0P	19	300	48
VANCOUVER INT'L	6	1	10	-2	23	0	280	67
VICTORIA INT'L	5	0	13	-2	19	0	260	37
WILLIAMS LAKE	1	*	11	-8	3	0		X
YUKON TERRITORY								
DAWSON						*		
MAYO	-3P	11P	7P	-17P	1P	20		X
SHINGLE POINT A	-10	15	3	-24	0	35		*
WATSON LAKE	-5	8	5	-18	0	45	280	56
WHITEHORSE	-1	8	5	-17	0	29	150	63
NORTHWEST TERRITORIES								
ALERT	-25P	9P	-11P	-35P	2P	39	240	96
BAKER LAKE	-25	4	-15	-35	2	*	310	50
CAMBRIDGE BAY	-25P	8P	-15P	-38P	2P	30	020	56
CAPE DYER	-18	6	-10	-30	1	74	310	81
CLYDE	-25P	2P	-11P	-33P	1P	28	310	56
COPPERMINE	-15	*	-2	-28	3	*	200	61
CORAL HARBOUR	-20	7	-8	-33	3P	35		X
EUREKA	-30	8	-12	-40	1	14	110	70
FORT SMITH	-5P	12P	5P	-16P	0P	0		X
FROBISHER BAY	-17	7	-6	-30	8P	35	100	59
HALL BEACH	-30P	1P	-18P	-38P	2P	34	330	35
INUVIK	-10	17	3	-23	1	39		X
MOULD BAY	-19	15	-10	-31	2	13		X
NORMAN WELLS	-6	16	7	-19	2	8		X
RESOLUTE	-23P	10P	-10P	-32P	1P	9	150	54
SACHS HARBOUR	*	*	*	*	0P	0		X
YELLOWKNIFE	-8	13	-1	-16	0	35	140	39
ALBERTA								
CALGARY INT'L	2P	7P	16P	-10P	1P	0	330	69
COLD LAKE	0	9	11	-8	6	1	010	57
CORONATION	0P	8P	12	-8P	0	0	330	59
EDMONTON NAMAO	3	10	15	-8	1	0	330	57
FORT MCMURRAY	-1	10	10	-12	0	26		X
HIGH LEVEL	-1	10	8	-14	0	27	320	44
JASPER	2	5	11	-11	10	*		X
LETHBRIDGE	0P	3P	10P	-11P	5P	0	360	69
MEDICINE HAT	1	5	15	-10	3	0	270	56
PEACE RIVER	3	12	10	-6	1	1	300	39
SASKATCHEWAN								
CREE LAKE	-7	7	6	-23	1	28		*
ESTEVAN	-4	3	15	-18	3	1	040	54
LA RONGE	-8P	4P	10P	-25P	10P	33	060	31
REGINA	-5	3	9	-21	2	1	030	54
SASKATOON	-7	3	7	-21	10	8	030	46
SWIFT CURRENT	-3	3	13	-16	6	1		X
YORKTON	-9P	2P	7P	-22P	5P	6	020	63
MANITOBA								
BRANDON	-6	4	9	-19	1	0	030	72
CHURCHILL	-24P	-3P	-8P	-33P	1P	27	310	33
LYNN LAKE	-14	1	7	-31	3	35		*
THE PAS	-9	*	7	-26	0	3	070	43
THOMPSON	-13P	2P	7P	-29P	0P	15	080	35
WINNIPEG INT'L	-6	3	3	-18	2	1	030	59
ONTARIO								
ATIKOKAN	-5P	4P	5P	-16P	7P	42	060	39
BIG TROUT LAKE	-15P	*	4P	-28P	1P	78	100	37
GORE BAY	-5	1	4	-15	25	17	070	61
KAPUSKASING	-13	-2	1	-28	29	122	320	44
KENORA	-7	1	3	-19	7	36	040	48
KINGSTON	-2	1	3	-10	0	0		X
LONDON	1	3	11	-9	16	4	090	57
MOOSONEE	-15	-1	-1	-30	14	108	330	37
NORTH BAY	-8	-1	3	-18	38	69	340	46
OTTAWA INT'L	-4	1	5	-13	5	8		X
PETAWAWA	-5P	1P	6P	-17P	4P	36		X
PICKLE LAKE	-12P	0P	3P	-28P	8P	62	360	48
RED LAKE	-10	1	7	-23	4	51	040	43
SUDBURY	-7P	0P	3P	-17P	28P	73		X
THUNDER BAY	-6P	1P	5P	-14P	12P	7	050	48
TIMMINS	-12P	-1P	2P	-25P	26P	110	330	37
TORONTO INT'L	-1	2	8	-9	5	1	090	59
TRENTON	-1	2	8	-10	2P	1		X
WIARTON	-3	1	8	-13	16	6		X
WINDSOR	2P	2P	16P	-7P	12P	2	190	52
QUEBEC								
BAGOTVILLE	-10	-1	5	-23	14	49	270	72
BLANC SABLON	-6P	*	3P	-16P	12P	42		X
INUKJUAK	-18P	5P	-5P	-32P	14P	51	340	57
KUUJJUAQ	-9	10	2	-28	18	33	360	61
KUUJJUARAPIK	-17	2	2	-29	4	36	290	44
MANIWAKI	-7	0	6	-20	12	36	330	52
MONT JOLI	-7	-1	0	-16	14	33	270	83
MONTREAL INT'L	-4	1	5	-13	11	1	270	48
NATASHQUAN	-7P	1P	2P	-20P	30P	48	260	83
QUEBEC	-8P	-1P	3P	-17P	20P	93	270	69
SCHEFFERVILLE	-11	6	1	-34	29	83	340	67
SEPT-ILES	-8	1	5	-18	14	27	290	74
SHERBROOKE	-5	1	7	-18	15	24	280	63
VAL D'OR	-13	-2	3	-27	15	59	340	48
NEW BRUNSWICK								
CHARLO	-7	1	5	-19	16	63	270	85
CHATHAM	-5	0	5	-15	4	35	300	69
FREDERICTON	-5	-1	6	-14	13	21	310	72
MONCTON	-5P	0P	5P	-15P	7P	12	270	81
SAINT JOHN	-5	-1	7	-14	14	7	280	69
NOVA SCOTIA								
GREENWOOD	-3P	-1P	4P	-11P	12P	3	290	104
SHEARWATER	-3	-1	5	-12	24P	5	280	74
SYDNEY	-5P	-2P	6P	-13P	23P	6	290	69
YARMOUTH	-1	0	7	-9	8	1	320	87
PRINCE EDWARD ISLAND								
CHARLOTTETOWN	-6	-1	2	-14	17	34	270	65
SUMMERSIDE	-5	-1	2	-14	10	48	270	74
NEWFOUNDLAND								
CARTWRIGHT	-9	1	3	-26	34P	139	350	69
CHURCHILL FALLS	-11	4	2	-31	31	141	300	65
GANDER INT'L	-6P	-1P	3P	-14P	75P	53	350	87
GOOSE	-9	2	5	-26	38	101	350	43
PORT-AUX-BASQUES	-6P	-2P	3P	-11P	64P	27	350	98
ST JOHN'S	-2	1	5	-10	66	1	150	74
ST LAWRENCE	-4	0	6	-12	104	10		X
WABUSH LAKE	-12	5	1	-28	23	79	350	65

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