

Climatic Perspectives

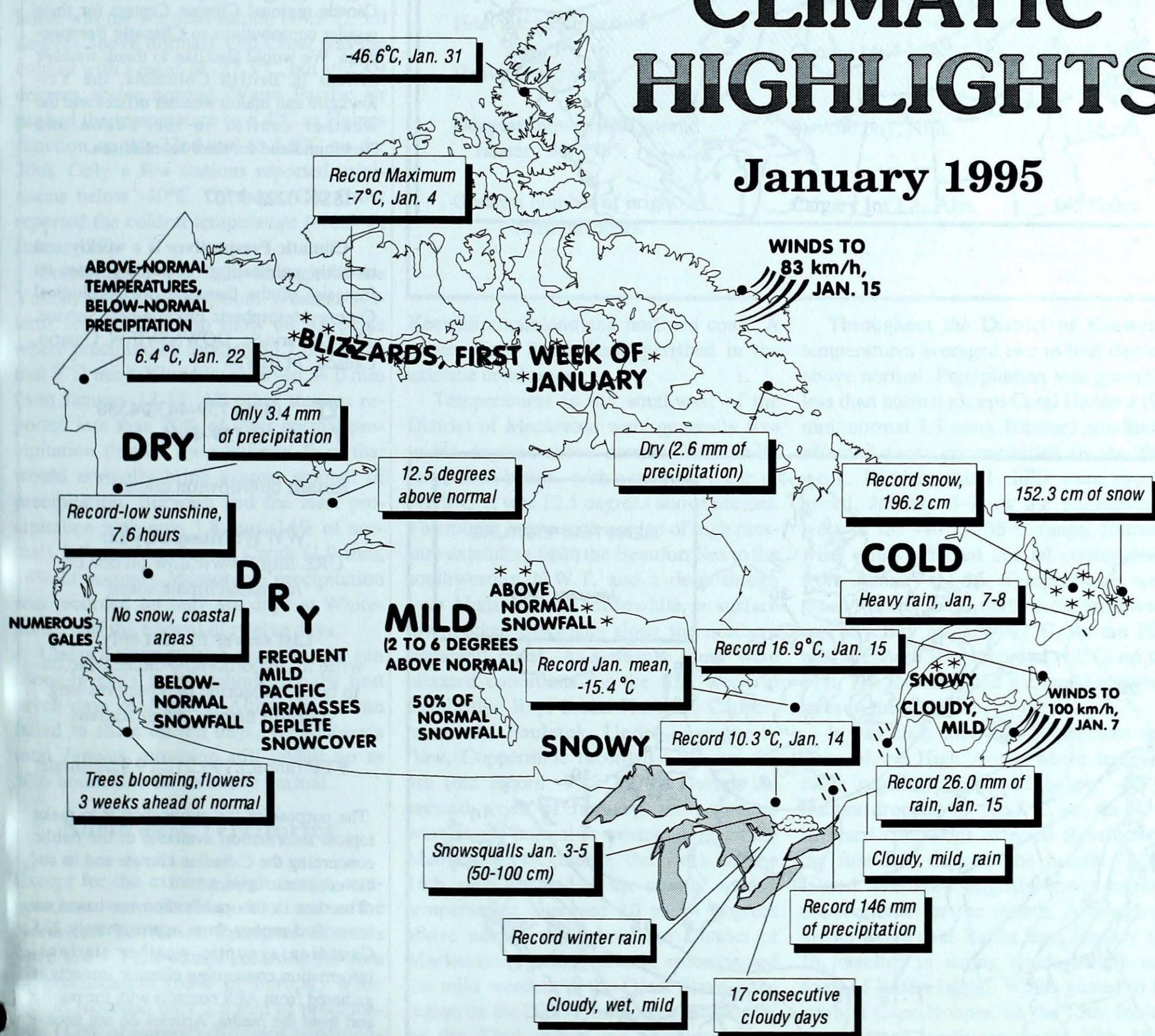
January 1995

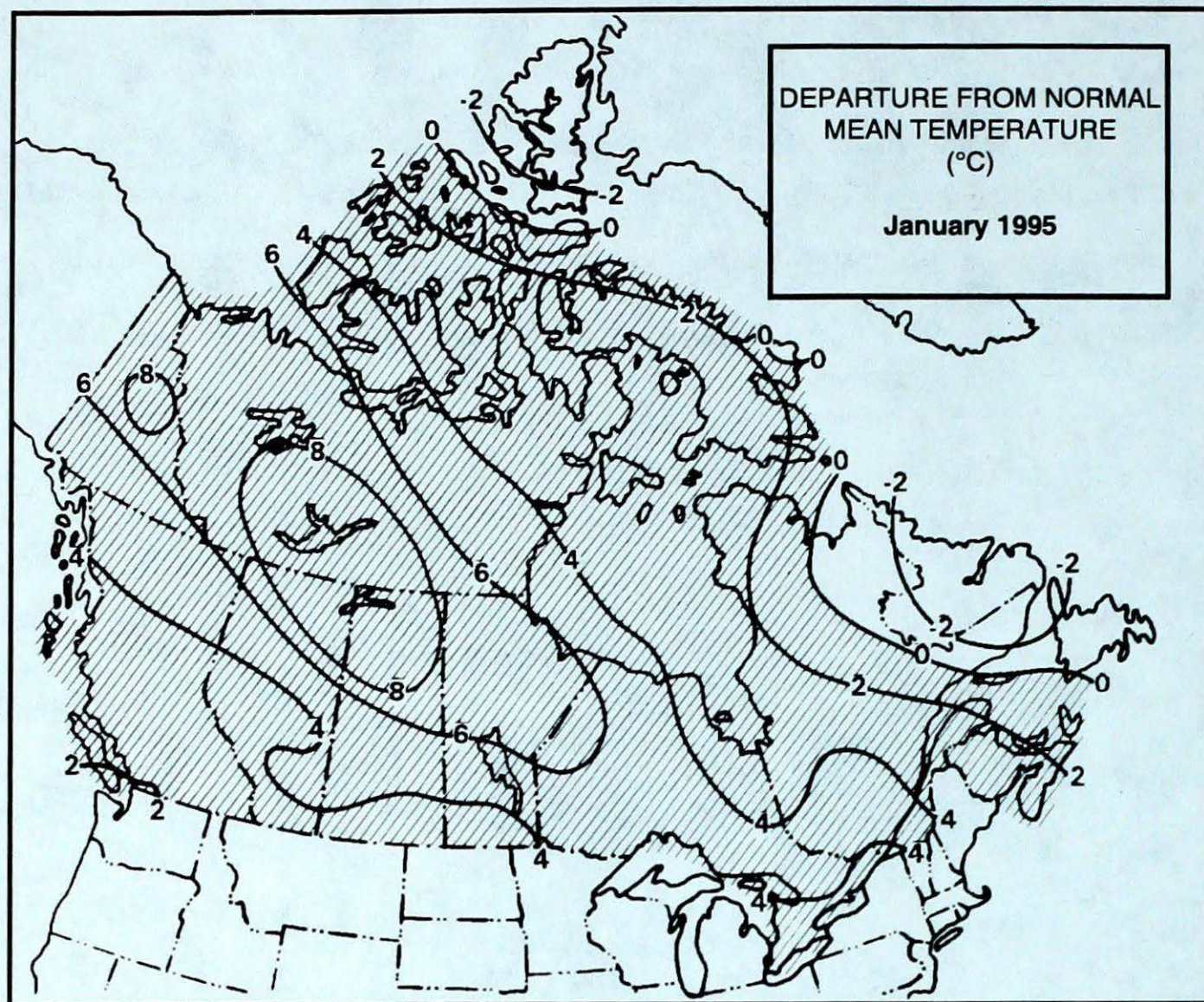
Monthly review of Canadian climate and water

vol. 17

CLIMATIC HIGHLIGHTS

January 1995





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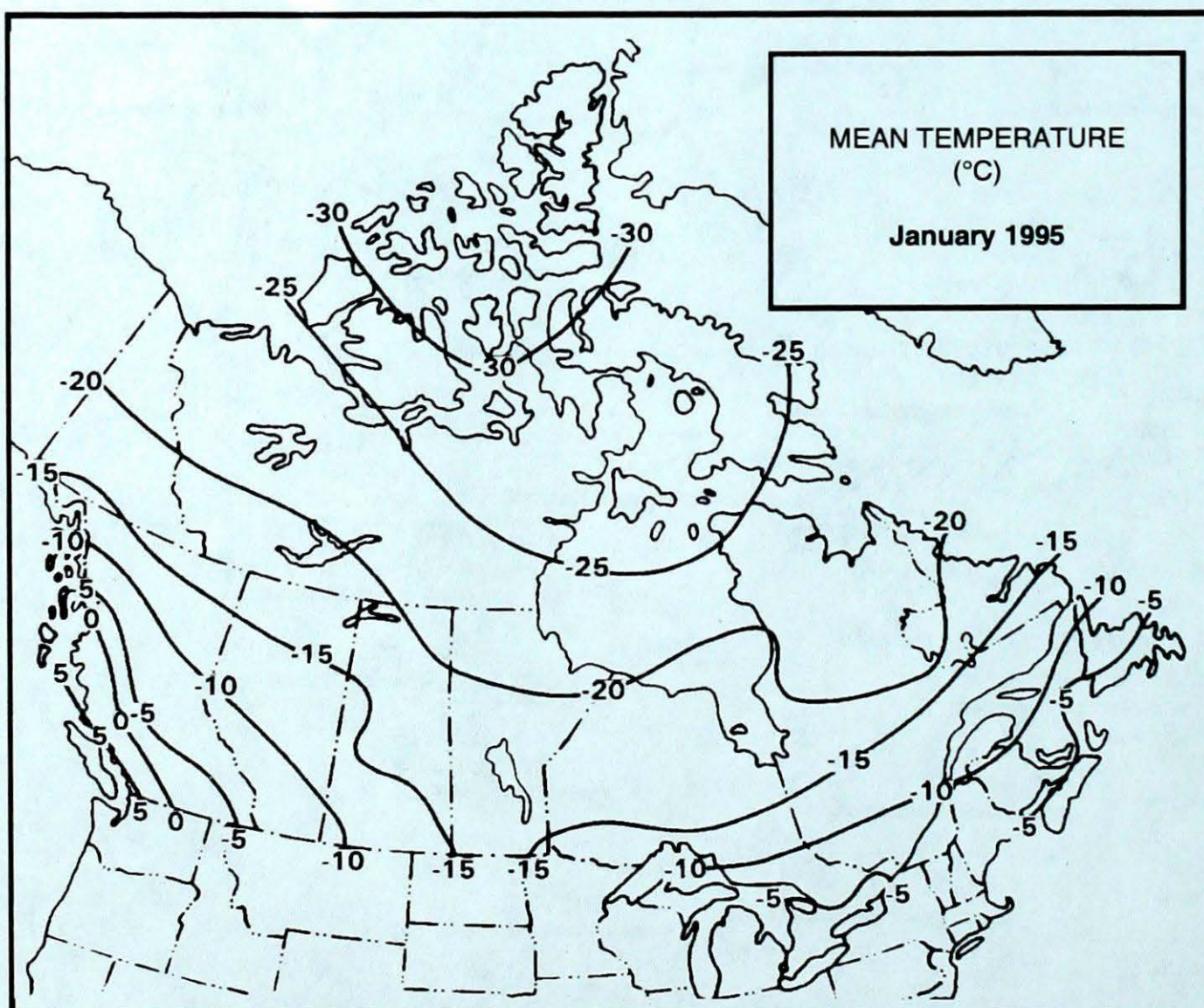
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The purpose of the publication is to make topical information available to the public concerning the Canadian climate and its socio-economic impact.

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 Atmospheric Environment Service.



Across the country

Yukon

Above-normal temperatures and below-normal precipitation dominated the weather picture in the Yukon. A generally southerly flow of air from the Pacific resulted in most stations reporting temperatures from 1.0 to as great as 6.5 degrees above normal at Mayo. Only two stations averaged below-normal temperatures: Blanchard River (1.7 degrees below normal) and Carcross (0.3 degree). Whitehorse was the warmest station (14.9°C, 3.8 degrees above normal). Old Crow was the coldest with a mean of -27.3°C, but still 3.9 degrees above normal. Warm Pacific air pushed the temperature to 6.4°C at Haines Junction on the 22nd and to 5.5°C on the 30th. Only a few stations reported minimums below -40°C. Of these, Old Crow reported the coldest temperature (-46.5°C, January 27).

Precipitation was light throughout the Yukon, with one exception. Weather systems seemed to dump snow on Klondike where precipitation totalled 53.7 mm (normal 27.2 mm). Klondike received 34.0 mm from January 13-15. All other stations reported less than 70% of their normal precipitation despite the southerly flow that would normally bring a great amount of precipitation. Burwash had the least precipitation with only 1.8 mm (14% of normal) followed by Beaver Creek (1.9 mm, 14% of normal). Measurable precipitation was recorded on only six days at Whitehorse, half the normal of twelve days.

Under a ridge of high pressure, the sun shone brightly at Whitehorse for the first seven days of January. Although the sun failed to shine on ten days, Whitehorse's total January sunshine still added up to 50.6 hours, five hours above normal.

Northwest Territories

Except for the extreme High Arctic, temperatures were above normal across the Northwest Territories. Precipitation totals were low - Yellowknife recorded 9.7 mm of precipitation (65% of normal) while Iqaluit recorded only 2.6 mm of precipitation (12% of normal). Blizzard conditions persisted for three days at the beginning of the month over most of the District of

Keewatin mainland and northern coast. A hunter from Baker Lake perished in the extreme conditions.

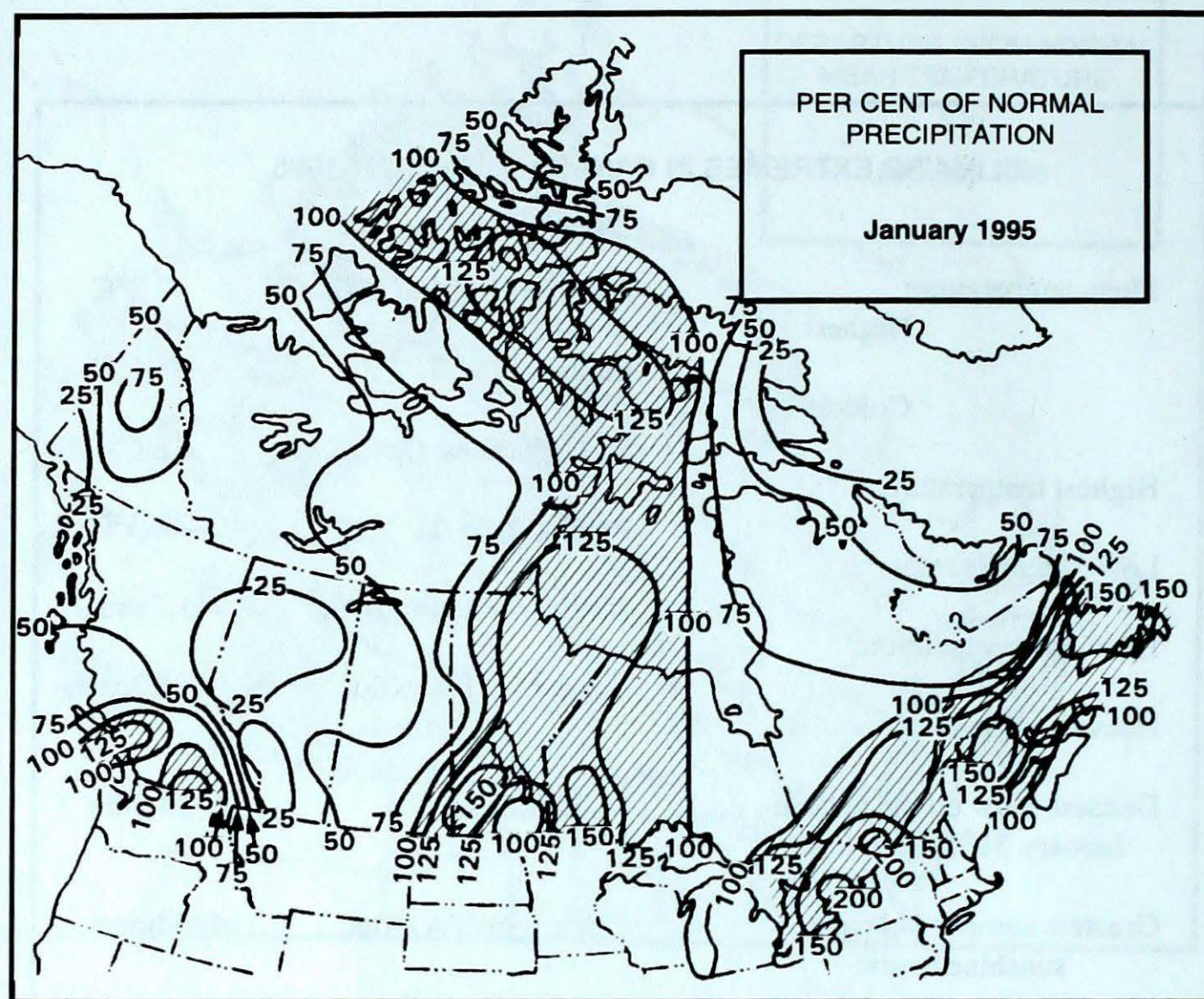
Temperatures in the southwest of the District of Mackenzie were generally five to ten degrees above normal. Fort Smith fared even better - with a monthly mean of -12.9°C, it was 12.5 degrees above normal. The month began with a ridge of high pressure extending from the Beaufort Sea to the southwestern N.W.T. and a deep trough over Hudson Bay. Meanwhile, a surface low tracked eastwards along the northern mainland coast. As a result, there were blizzard conditions for the first week in Cambridge Bay, Sachs Harbour, Coppermine and Paulatuk. Under a southerly flow, Coppermine recorded -7°C, on the 4th (old record -9°C, 1979). During the second week of January, temperatures were above normal in western areas of the Mackenzie. Beginning the week of the 16th, until the end of the month, weekly temperatures averaged 10 to 14 degrees above normal throughout the District of Mackenzie. Freezing drizzle accompanied the mild weather in the Great Slave Lake region on the 20th. Trout Lake reached 0°C on the 22nd and in the northwest, Fort McPherson recorded -4°C, on the 23rd.

Throughout the District of Keewatin, temperatures averaged two to four degrees above normal. Precipitation was generally less than normal except Coral Harbour (9.6 mm, normal 7.5 mm). Blizzard conditions affected most communities in the first week. Extreme wind chills were experienced, January 8-9, as the temperatures were in the -40 to -35°C range. Extreme wind chills affected coastal communities from January 11-15. Temperatures were much warmer in the north in the third week as Pelly Bay reached -11°C, on the 20th and Shepherd Bay recorded -12°C, on the 21st. The month ended with mild temperatures in the southern communities.

It was clear and cold in northern sections of the High Arctic where temperatures regularly dropped below -40°C. Eureka dropped to -46.5°C, on the 31st. Blizzard conditions affected Resolute for the first five days of the month. Baffin Island averaged slightly-above-normal temperatures for the month. A trough of low pressure over Baffin Bay, January 14-15, resulted in strong winds on the east coast of Baffin Island. Winds gusted to 83 km/h at Cape Hooper, on the 15th. Iqaluit had blizzard conditions on the 20th. Mild conditions on the 23rd extended north to

CLIMATIC EXTREMES IN CANADA - JANUARY 1995

Mean temperature:	Amphitrite Point, B.C.	7.3°C
Highest	Eureka, N.W.T.	-38.6°C
Coldest	St. Catharines, Ont.	18.6°C
Highest temperature:	Eureka, N.W.T.	-46.5°C
Lowest temperature:	Amphitrite Point, B.C.	431.7 mm
Heaviest precipitation:	Gander Int'l A, Nfld.	196.2cm
Heaviest snowfall:	St. Anthony, Nfld.	146 cm
Deepest snow on the ground January 31, 1995:	Calgary Int'l A, Alta.	145 hours
Greatest number of bright sunshine hours:		



Cape Dyer (-11°C) and to Iqaluit, on the 24th (-11°C) and 25th (-9°C).

British Columbia

January was a changeable month. The New Year began dry and crisp, but changed to dull and mild with several days of precipitation. This was followed by a return of dry, cooler weather and the month ended with very mild, spring-like conditions.

Temperatures averaged above normal, province-wide. Northeastern areas were 2 to 3.5 degrees above normal. The rest of the province averaged from just less than 1, to 2.5 degrees above normal.

Precipitation was variable with 75 to 145% reported along the south coast. The Thompson-Okanagan through the West Kootenay region received above-normal precipitation ranging from 100 to 140% of normal except near 220% at Penticton. Drier-than-normal areas included the East Kootenay-Columbia region (75-95%) and Hope and Princeton (60 to 70%). Even drier, areas northwards from the northern tip of Vancouver Island received 60% or less of normal precipitation with as little as 10 to 40% in the northern half of B.C. Only one precipitation record was set for the month: Dease Lake recorded only 3.4 mm (11% of normal, old record 5.6 mm, 1969).

The strong ridge over the interior at the beginning of the month broke down around the 6th, allowing a mild, moist pattern for the next seven to ten days. Considerable freezing rain was reported at Castlegar, on the 9th, and in some instances, rain was recorded to the top of ski hills. Northern areas also experienced patchy freezing rain, drizzle and low clouds, resulting in poor flying conditions and slippery roads. A ridge built over the province during the third week bringing a return to sunnier, cooler conditions although low-level clouds and fog persisted in valleys. The last part of the month saw maximum temperatures in the record low- to mid-teens in south coastal areas. At the end of the month, trees were blooming in Victoria and flowers were a few weeks ahead of normal.

Snowfall on coastal areas was nonexistent and well below normal over most of the province. The Kootenays received 80% of average while other southern interior locations recorded 50 to 70% of average. The northern half of B.C. received less than 50%.

Sunshine hours along most of the coast ranged from 120 to 150% of normal except central Vancouver Island, near 90%. Most of the northern half of the province received 120 to 160% of normal. In contrast,

very low sunshine values were recorded in north-central regions with only 13% in Prince George and 30 to 45% in the Kootenays through the Thompson-Okanagan. The remaining southern interior received 90 to 120%. Several low-monthly sunshine records were set, including Prince George (7.6 hours, old record 21.7 hours, 1992), Penticton (12.6 hours, old record 17.9 hours, 1981) and Kamloops (23.8 hours, old record 27.6 hours, 1965).

A combination of outflow winds and Pacific storms contributed to a high occurrence of gales on the coast. General gales were reported on 15 days along the north coast, 13 days along the central coast and five days along the south coast.

Alberta

Temperatures averaged above normal across most of the province. The month started cold but ended with above-normal temperatures. Precipitation values were well below normal in all regions, creating concerns for ski resorts in the mountains, moisture supplies across the southern farm areas, and for Winter Games' organisers in Grande Prairie.

During the first week, a northerly flow provided Arctic air that kept temperatures four to seven degrees below normal. Snowfall with this airmass was minimal. The second week of January, a southwesterly flow of Pacific air crossed the Rockies bringing a series of disturbances. An intense system, on the 11th, gave 5 cm of snow to the Edmonton area and up to 25 cm over east-central Alberta. Low clouds and fog prevailed in mid-January as the warmer Pacific air aloft flooded into the province and cool, moist air was trapped near the surface. The low cloud and fog blocked out the sunshine, keeping the daytime temperatures from rising but effectively prevented overnight temperatures from falling drastically. Visibilities were lowered to near zero in the fog. Frequent drizzle added to hazardous driving conditions. The last ten days of January saw warmer air become established over the province. The airmass became drier as a ridge of high pressure built over the province and there was lots of sunshine. Spring-like ski conditions were reported in the mountain parks as temperatures rose above freezing. The above-freezing temperatures were reported throughout Alberta by the

end of the month. Sunny, mild weather for the last ten days of the month pushed the monthly temperature and sunshine values to above normal in most areas. The above-freezing temperatures and chinook conditions depleted the snow cover across the southern third of Alberta. Temperatures in the south rose into the teens, on the 29th.

Saskatchewan and Manitoba

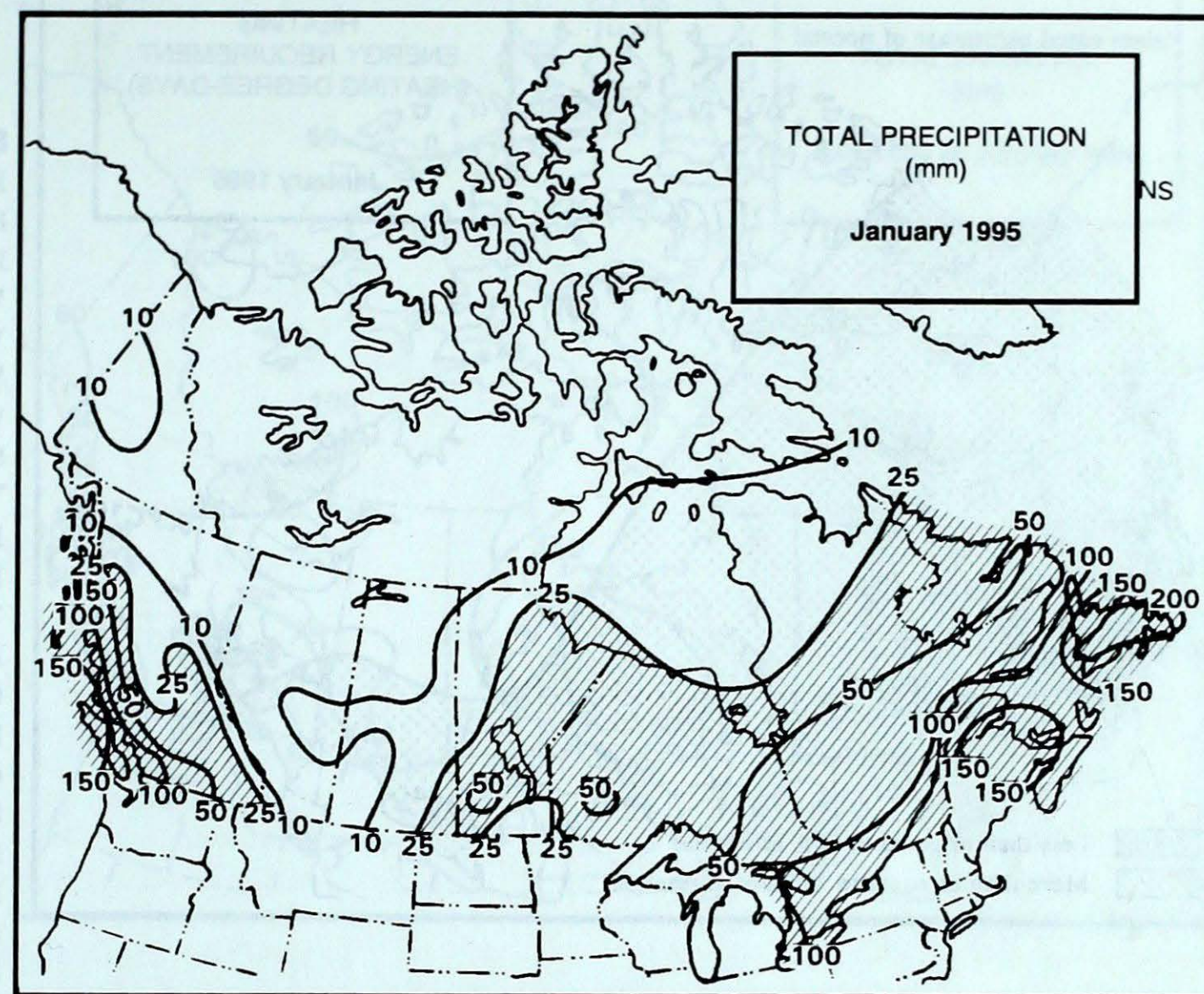
January was a very mild month as temperatures averaged two to six degrees above normal with northern areas showing the greatest departures. Only extreme northern Saskatchewan and northern Manitoba failed to reach 0°C, although they came close. Mild Pacific air flowed over the Prairies for most of the month. There were a few outbreaks of cold Arctic air but they were rare. Thompson, Manitoba, set a new record low of -43.6°C on the 9th (old record -43.3°C, 1968).

The milder flow of Pacific air also led to greater-than-normal snowfall in the north. Northern Manitoba had the largest departure from normal with over double the normal snowfall. Thompson set a record for January snowfall with 44.2 cm (old record 42.4 cm, 1968). However, snowfall in southwestern and north-central Saskatchewan was less than 50% of normal.

Ontario

Southern and central Ontario were cloudy, wet and mild. In the south, the sun did not shine for 17 consecutive days from January 10 to 27. The result was the cloudiest January in Toronto since 1949. Wiarton recorded only 30 hours, the least sunshine in its 23-year history. January 1995 was the fifth month in succession, in Ontario, with warmer-than-normal temperatures.

Record rainfalls, four to six times the normal, occurred in southern and central Ontario. Peterborough, St. Catharines, Ottawa and Toronto-Pearson Airport all recorded their wettest January on record. Ottawa (146 mm, normal 58 mm) was the wettest location in the province. At Toronto City, 115 mm of rain (normal 25 mm) combined with 25 cm of snow and amounted to the most January precipitation since 1932. Toronto recorded 62.8 mm of rain, January 14-15, second only to the re-



cord January 31, 1843 total of 63.5 mm. Generally, all locations south of Sudbury experienced above-normal January precipitation due to abundant rain. Sudbury, for example, recorded its least snow (29 cm) since 1981, but the rainfall more than made up the difference as the total precipitation totalled 86 mm, the most since 1982. Northeastern Ontario received slightly less total precipitation than normal as snowfall was only 60 to 80% of normal. In contrast, northwestern Ontario was snowy - Thunder Bay recorded 74 cm (normal 43 cm, the most snow since 1982). Snowfall in most southern and central regions was close to normal: Muskoka recorded 97 cm (normal 86 cm). Snowsqualls, January 3-5, deposited 50 to 100 cm of snow in the traditional snowbelt areas to the south, north and east of Georgian Bay. The three-day snowfall was followed by heavy rain and mild temperatures, preventing both the formation of a good snow cover and thick ice cover on lakes and rivers. Skiing and snowmobiling enthusiasts suffered.

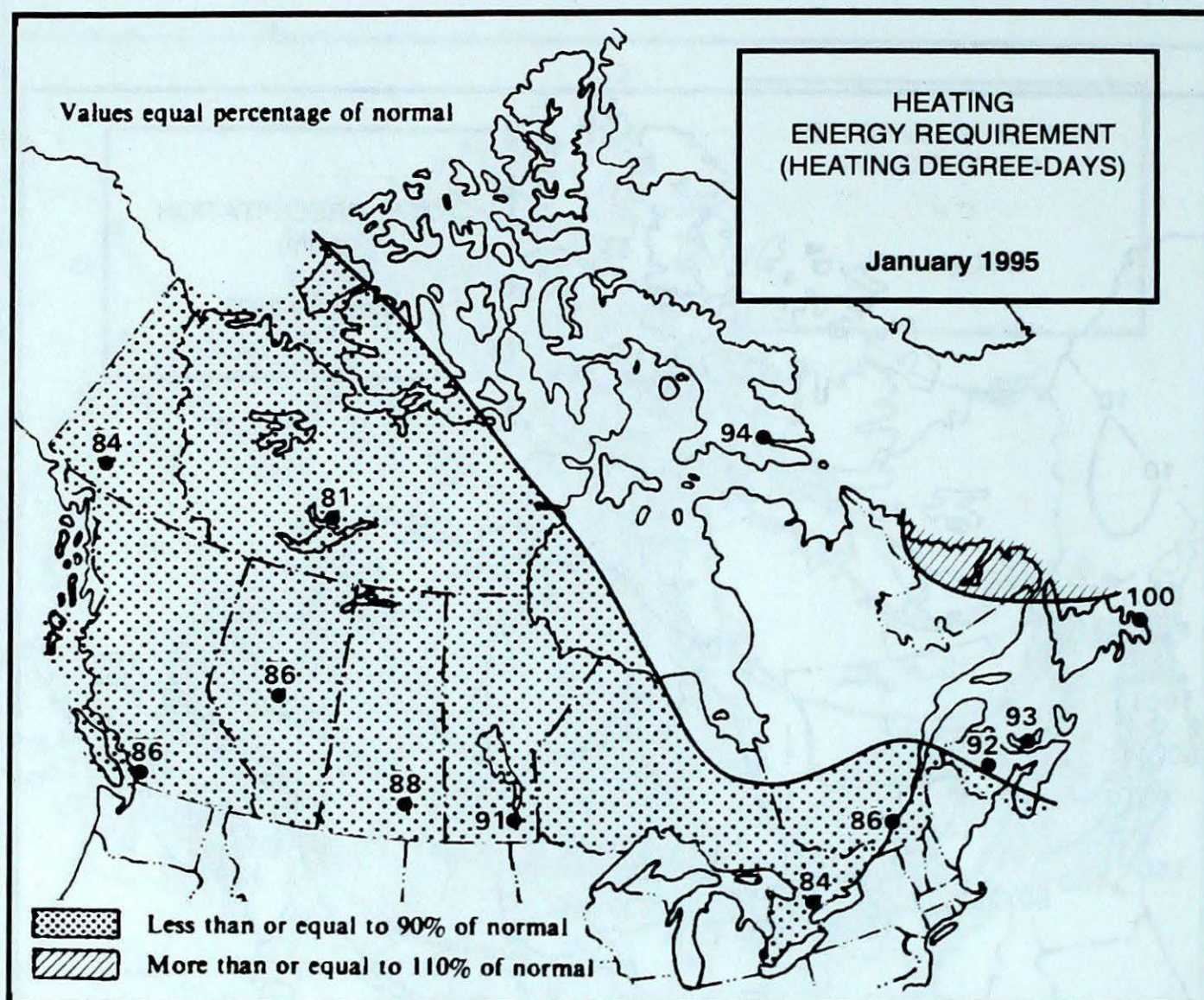
Mild monthly-mean temperatures were another feature of Ontario's nearly month-long "January thaw." Positive anomalies of three to four degrees resulted in the mildest January since the record-mild January of

1990 in most of the province. The exception was in the northwest again, where similar anomalies only gave them the mildest January since 1992. Mid-monthly daily high temperatures were exceptionally mild. On the 14th, North Bay recorded 10.3°C (old record 3.9°C) while at St. Catharines Airport, 18.6°C beat the all-time January record (15.4°C, January 31, 1988). It was one of the warmest January temperatures ever recorded in Ontario.

Quebec

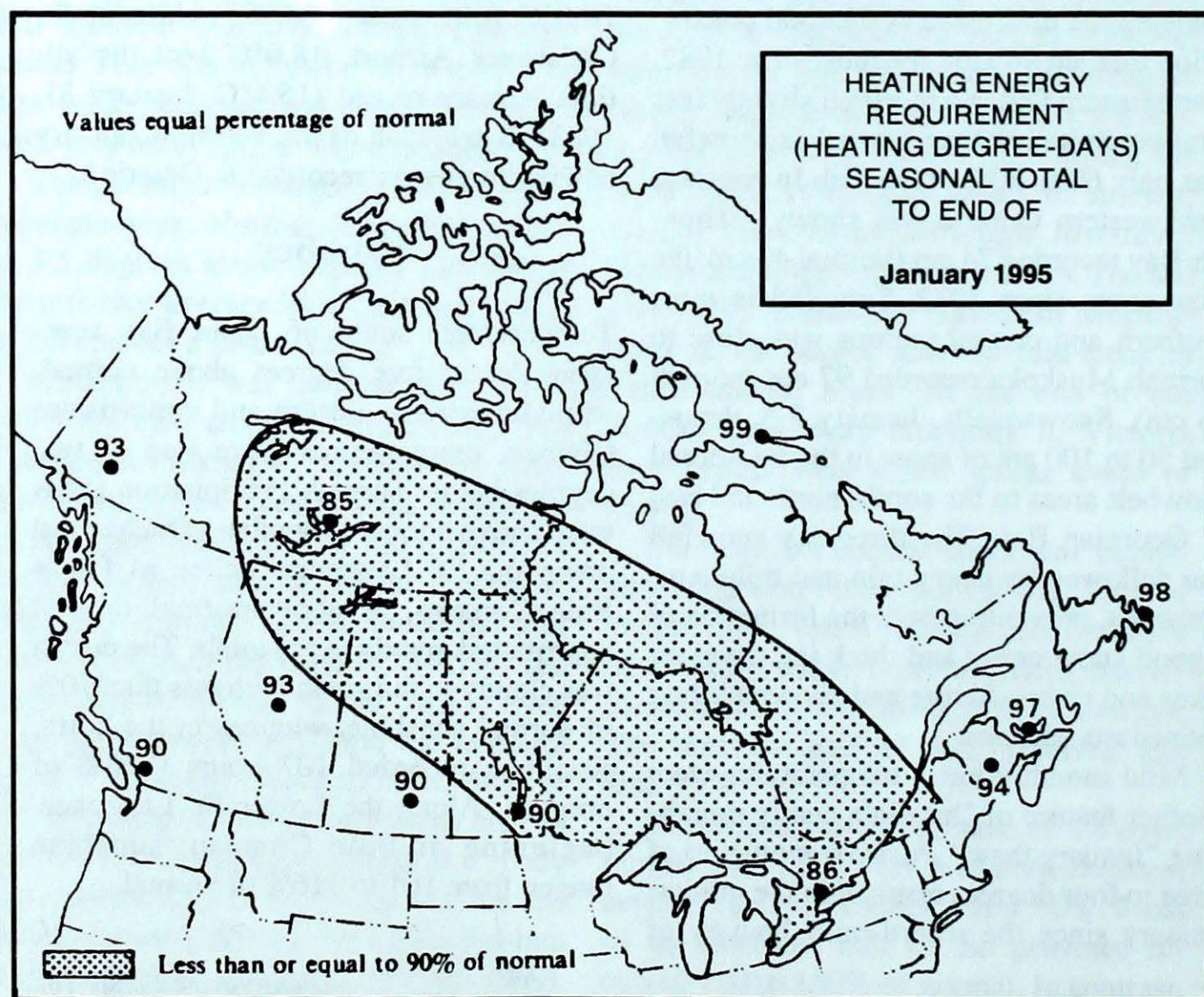
Temperatures south of James Bay averaged almost five degrees above normal, while in extreme eastern and northeastern Quebec, temperatures were one to two degrees below normal. Precipitation totals were above normal in southern Quebec and down the St. Lawrence Valley as far as Baie Comeau, as above-normal rainfall contributed greatly to the totals. The month was cloudy in the south with less than 70% of normal sunshine, whereas in the north, Kuujuaq recorded 107 hours (170% of normal). Along the Lower St. Lawrence, beginning at Baie Comeau, sunshine ranged from 101 to 116% of normal.

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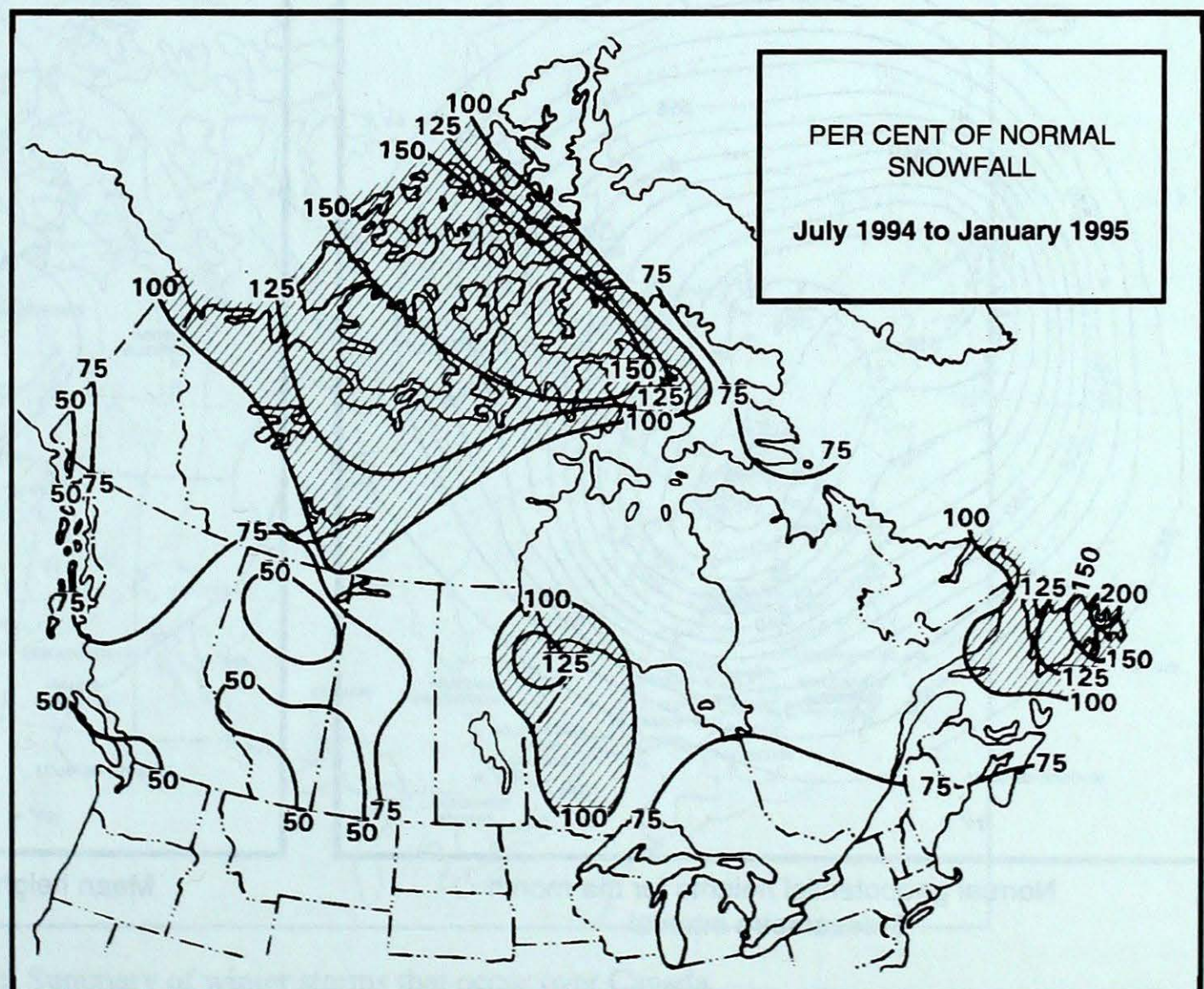
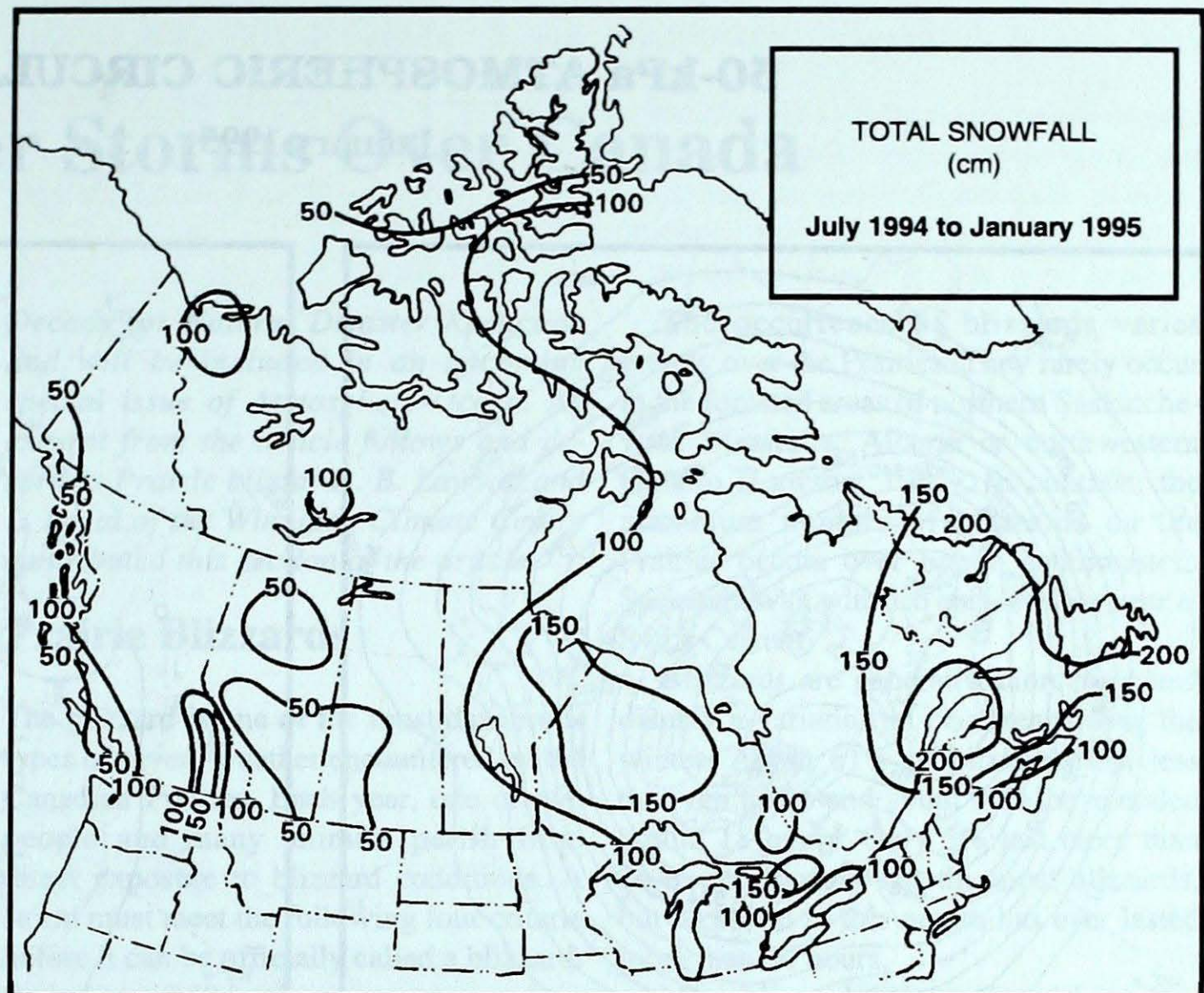
SEASONAL TOTAL OF HEATING DEGREE-DAYS TO END OF JANUARY

	1995	1994	NORMAL
BRITISH COLUMBIA			
Kamloops	2061	2026	2281
Penticton	1940	1915	2056
Port Hardy	1902	2790	3234
Vancouver	1534	1546	1698
Victoria	1567	1604	1745
YUKON TERRITORY			
Whitehorse	3934	3647	4224
NORTHWEST TERRITORIES			
Iqaluit	5293	5644	5362
Inuvik	5167	5239	5661
Yellowknife	4119	4903	4833
ALBERTA			
Calgary	2827	2940	3091
Edmonton Mun.	3000	3057	3218
Grande Prairie	3550	3326	3644
SASKATCHEWAN			
Estevan	3016	3543	3146
Regina	3021	3532	3370
Saskatoon	3263	3699	3506
MANITOBA			
Brandon	3231	3868	3506
Churchill	4357	5340	4943
Dauphin	3189	4176	3489
Winnipeg	3037	3666	3367
ONTARIO			
Kapuskasing	3070	3995	3602
London	1941	2417	2224
Ottawa	2283	2893	2617
Sudbury	2609	3404	2996
Thunder Bay	2813	3607	3210
Toronto	1921	2475	2225
Windsor	1698	2189	1983
QUEBEC			
Baie Comeau	3042	3534	3310
Montréal	2214	2767	2516
Québec	2564	3152	2856
Sept-Îles	3257	3700	3421
Sherbrooke	2563	3040	2900
Val-d'Or	3005	3887	3440
NEW BRUNSWICK			
Fredericton	2420	2768	2581
Moncton	2435	2762	2517
NOVA SCOTIA			
Yarmouth	1884	2133	2094
PRINCE EDWARD ISLAND			
Charlottetown	2309	2630	2381
NEWFOUNDLAND AND LABRADOR			
Gander	2595	2827	2603
St. John's	2380	2598	2424



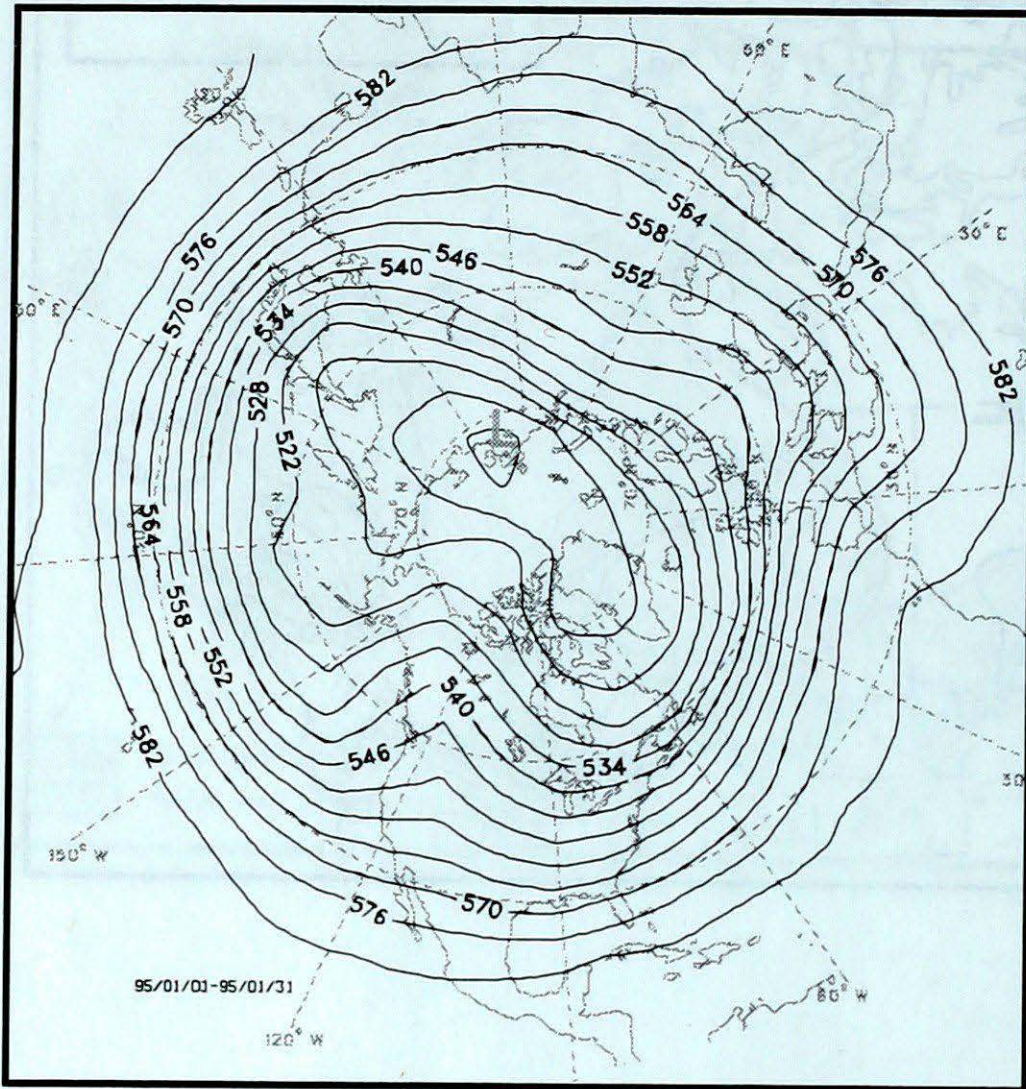
**SEASONAL SNOWFALL TOTALS (cm)
TO END OF JANUARY**

	1995	1994	NORMAL
BRITISH COLUMBIA			
Kamloops	31	19	74
Port Hardy	25	2	49
Prince George	123	152	164
Vancouver	4	0	46
Victoria	2	0	35
YUKON TERRITORY			
Whitehorse	89	119	91
NORTHWEST TERRITORIES			
Iqaluit	99	118	144
Inuvik	124	87	117
Yellowknife	104	102	94
ALBERTA			
Calgary	47	46	77
Edmonton Mun.	68	112	78
Grande Prairie	89	134	115
SASKATCHEWAN			
Estevan	89	106	63
Regina	58	89	65
Saskatoon	41	*	65
MANITOBA			
Brandon	66	51	64
The Pas	71	75	96
Winnipeg	62	63	72
ONTARIO			
Kapuskasing	141	160	193
London	77	58	133
Ottawa	100	134	132
Sudbury	73	153	150
Thunder Bay	99	97	128
Toronto	61	51	75
Windsor	64	68	70
QUEBEC			
Baie Comeau	191	190	203
Montréal	105	140	134
Québec	155	300	202
Sept-Îles	222	242	244
Sherbrooke	102	222	180
Val-d'Or	110	196	188
NEW BRUNSWICK			
Fredericton	127	124	156
Moncton	170	152	175
NOVA SCOTIA			
Sydney	115	173	93
Yarmouth	69	188	114
PRINCE EDWARD ISLAND			
Charlottetown	168	199	174
NEWFOUNDLAND AND LABRADOR			
Gander	346	251	194
St. John's	274	156	172

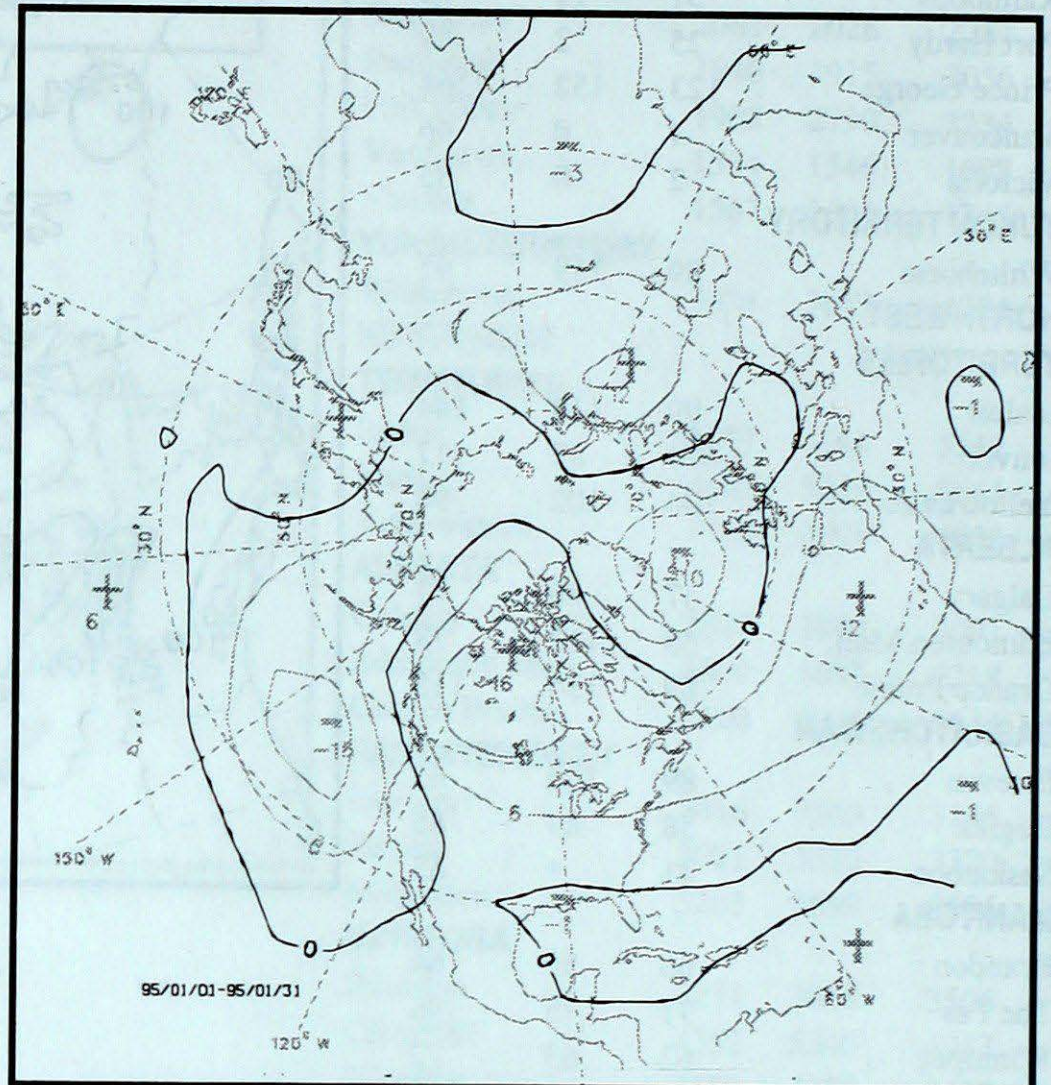


50-kPa ATMOSPHERIC CIRCULATION

January 1995



Mean geopotential heights
6-decametre interval



Winter Storms Over Canada

Anyone who has experienced a winter storm in Canada knows the disruption that can occur - nerve-wracking driving conditions, ensuring livestock are protected from the elements, increased costs to keep transportation routes open. Comprehensively forecasting conditions that can be expected when a storm passes, in terms of temperatures, winds and types of precipitation, lessens the impacts to society. **Figure 1** is a summary diagram of a few of the types and locations of winter storms that occur in Canada. This figure is part of an article, compiled by Ron Stewart (Climate Research Branch), several regional meteorologists with Atmospheric Environment Service and a McGill University researcher that summarizes particular aspects of each storm type. The article is a contribution to the International

Decade for Natural Disaster Reduction and will be included in an upcoming special issue of *Atmosphere-Ocean*. An excerpt from the article follows and describes Prairie blizzards. B. Lawson and L. Legal of the Winnipeg Climate Centre contributed this section of the article.

Prairie Blizzards

The blizzard is one of the most dangerous types of severe weather encountered on the Canadian Prairies. Each year, one or two people and many animals perish from direct exposure to blizzard conditions. A storm must meet the following four criteria before it can be officially called a blizzard:

- wind speed 40 km/h
- windchill 1600 W/m^2
- visibility 1 km in snow or blowing snow
- duration 4 hours (6 hours prior to 1991).

The occurrence of blizzards varies greatly over the Prairies. They rarely occur in the forested areas of northern Saskatchewan, Manitoba, Alberta or northwestern Ontario (Lawson, 1987). In contrast, the maximum number of blizzards on the Prairies occurs over barren southwestern Saskatchewan with 1.6 episodes per year at Swift Current.

Blizzards are generally short-lived and display a variation in occurrence over the winter. About 61% of blizzards last less than ten hours and about 90% have ended within 18 hours. Only 5% last more than 24 hours. January has the most blizzards, but no storm in this month has ever lasted more than 30 hours.

Most blizzards are produced by a low pressure system. In these storm situations, fresh snow is produced ahead of the low centre and strong northerly winds and cold

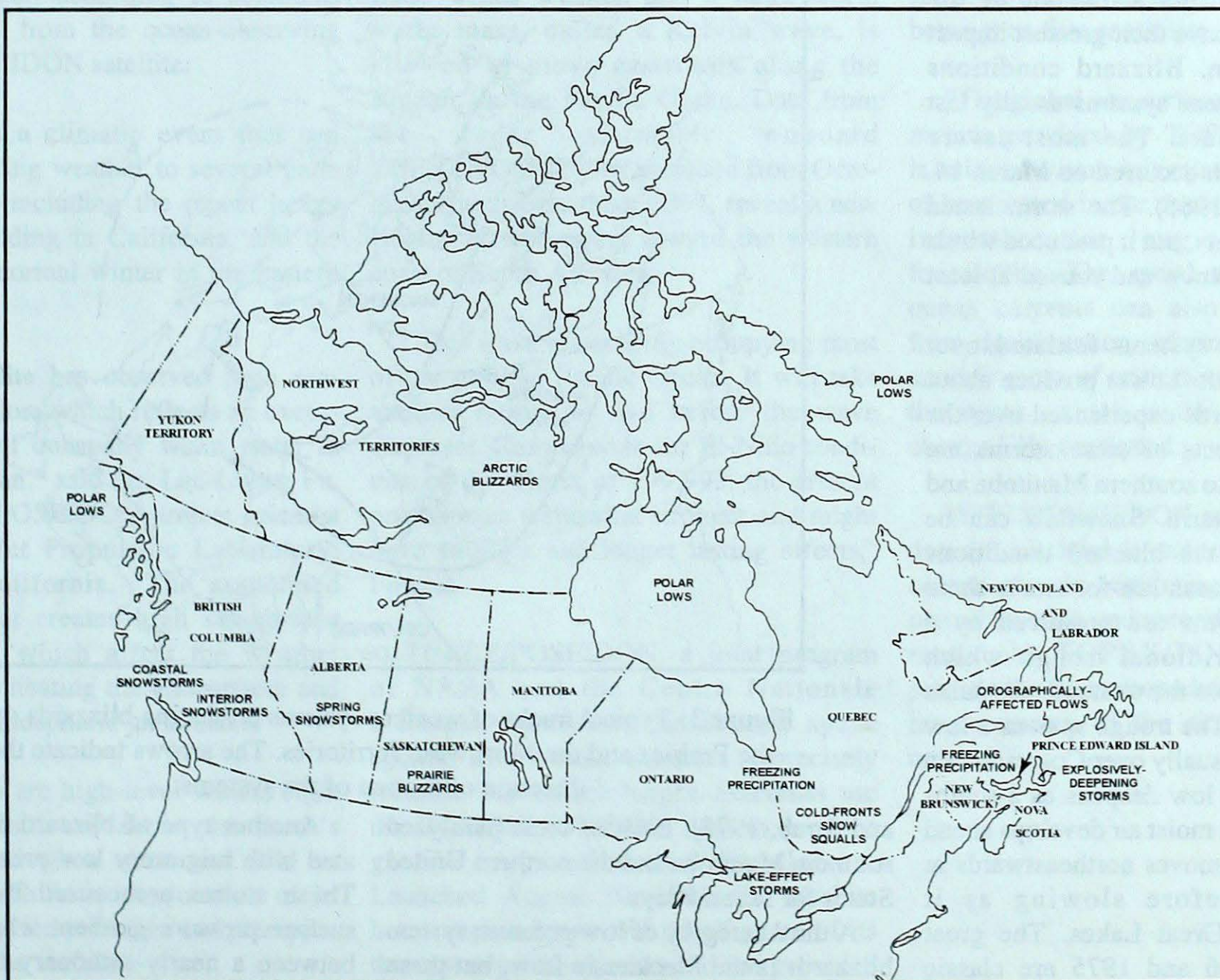


Figure 1: Summary of winter storms that occur over Canada

temperatures behind it produce the blizzard conditions. Figure 2 is a schematic diagram of such a situation. It was based on the detailed studies of actual events and is routinely confirmed during operational experiences. Although unusual, it is sometimes possible for blizzard conditions to be produced northeast of the low centre as well, but generally the wind and temperature criteria are not met in this region.

Blizzards are typically classified by the source region of the low pressure system (Storr, 1953; Black, 1971; and Lawson, 1987). The most frequent blizzard-producing storm is the Alberta Low or Alberta Clipper (Figure 3). This type of storm produces approximately five blizzards over the Prairies each winter and accounts for about 65% of all the blizzards. Alberta Lows usually develop east of the Rockies over Alberta or western Saskatchewan as a result of a vigorous shortwave trough in a westerly to northwesterly flow aloft. These lows move quite rapidly (about 65 km/h) in a southeasterly direction towards southern Manitoba or North Dakota. Alberta Low storms affect all of the Prairies, but they have their greatest impact on Saskatchewan. Blizzard conditions associated with these systems usually last less than 12 hours. The most severe Alberta Low storm occurred on March 14, 1941 (Stommel, 1966). The storm lasted for only seven hours, but it produced winds in excess of 100 km/h and caused at least 76 deaths.

Low pressure systems initiated over Colorado (Colorado Lows) produce about 15% of the blizzards experienced over the Prairies. The effects of these storms are usually restricted to southern Manitoba and northwestern Ontario. Snowfalls can be fairly large and the blizzard conditions behind these lows can last for one to three days. These storms are produced by a progressive meridional trough which moves inland across the western mountains of the continent. The trough spawns a low pressure system usually over Colorado or a nearby state. The low deepens as a southerly flow of warm moist air develops ahead of the system. It moves northeastwards at 50-60 km/h before slowing as it approaches the Great Lakes. The great blizzards of 1966 and 1975 are classic examples of Colorado Low storms (Stommel, 1966; Babin, 1975; and Graff

and Strub, 1975). Each of these paralyzed southern Manitoba and the northern United States for several days.

A third category of low pressure system blizzards is the Mackenzie Low, but these almost exclusively affect the barren Hudson Bay coastline (Lawson, 1987).

Another type of blizzard is not associated with migratory low pressure centres. These storms are caused by an intense surface pressure gradient which develops between a nearly-stationary trough and a nearly-stationary surface ridge. Accounting for 19% of Prairie blizzards, they are

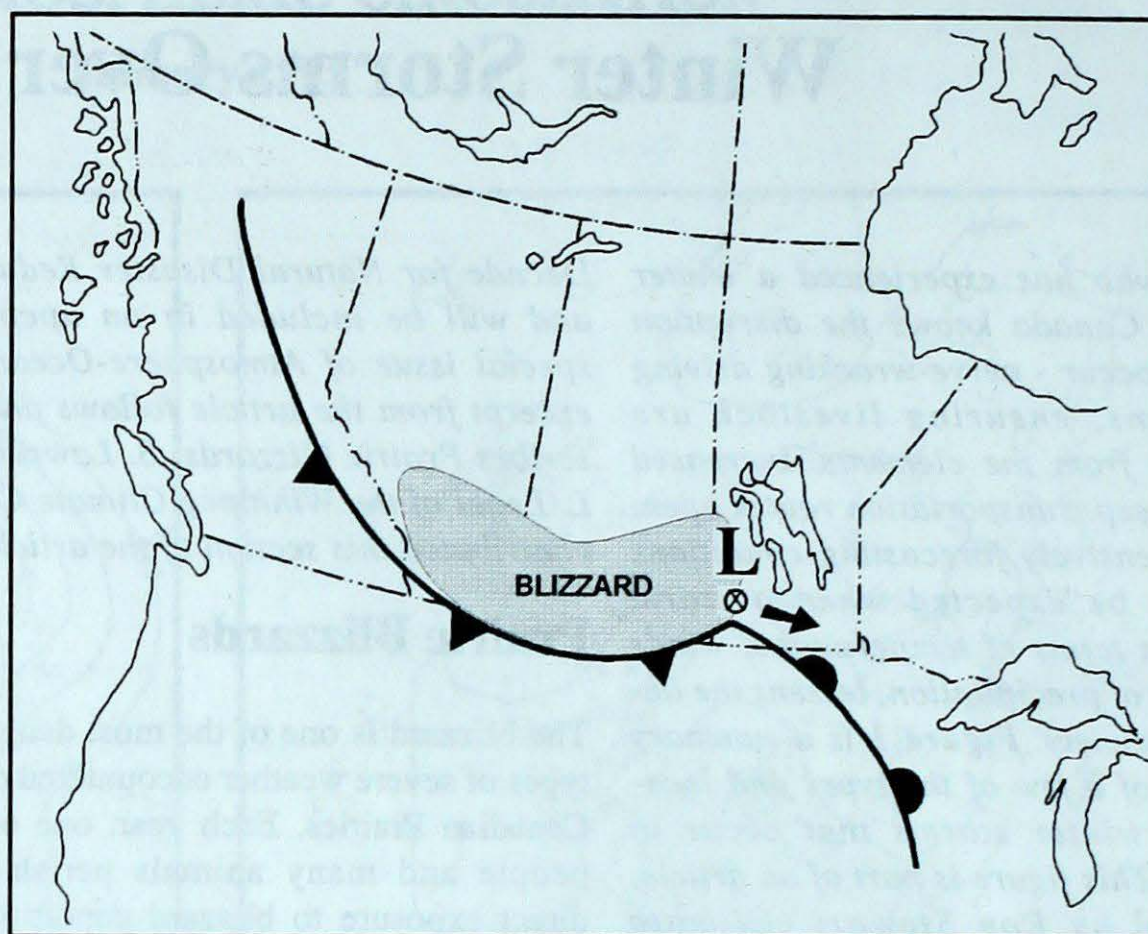


Figure 2: A summary sketch showing the region that typically experiences blizzard conditions within an overall low pressure system over the Prairies. The arrow indicates the track of the low pressure centre.

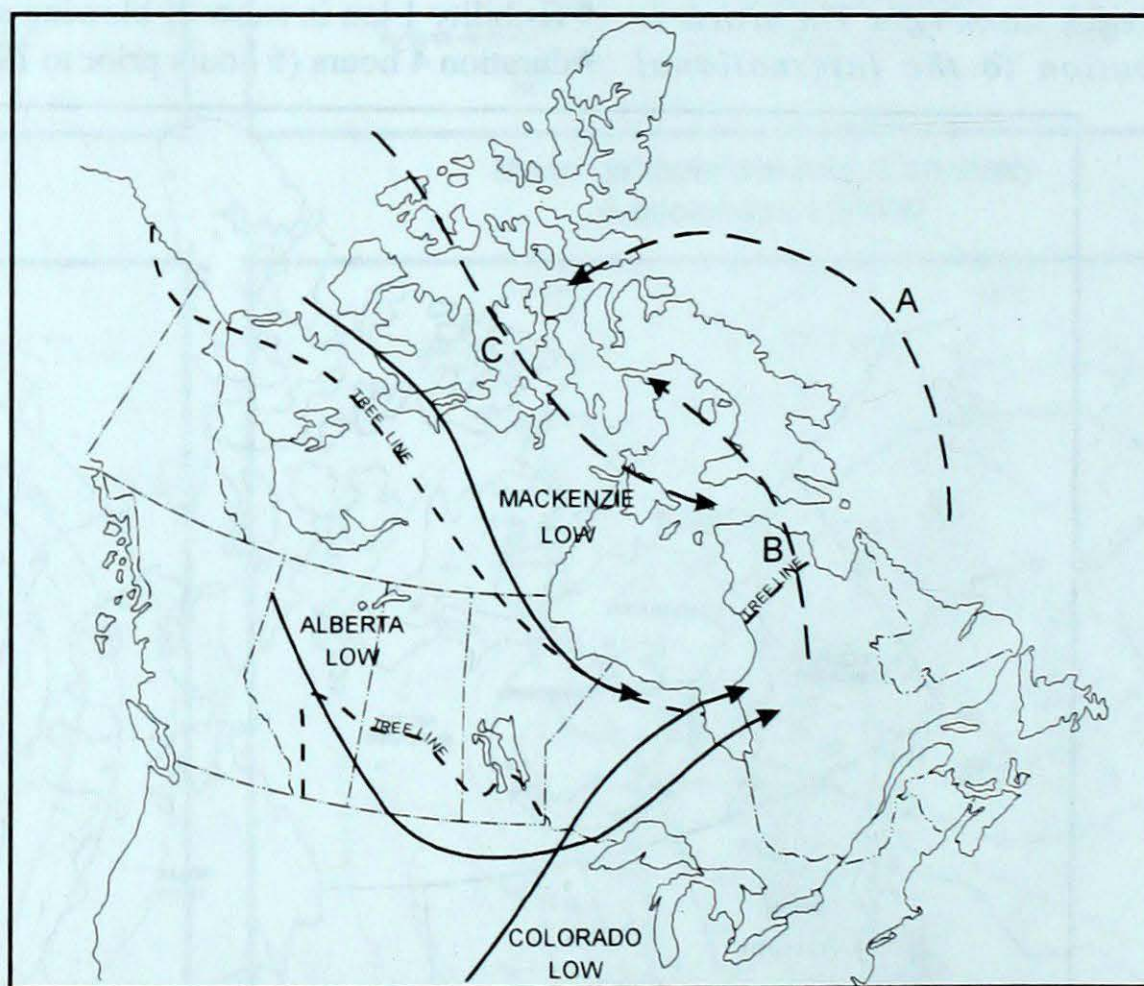


Figure 3: Typical tracks of weather systems producing blizzards over the Prairies and the Northwest Territories. The arrows indicate the direction of motion of the systems.

more common than those produced by Colorado Lows. A classic pressure gradient storm occurred on February 5-9, 1978 (Schroeder, 1985). In spite of negligible snowfall amounts, it brought all activity to a standstill over southern Saskatchewan, for nearly four days.

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TOPEX/POSEIDON Confirms El-Niño is back and stronger than in 1993

The El-Niño phenomenon is back and is getting stronger, according to scientists studying data from the ocean-observing TOPEX/POSEIDON satellite.

El-Niño is a climatic event that can bring devastating weather to several parts of the world, including the recent heavy rains and flooding in California, and the warmer-than-normal winter in the eastern United States.

"The satellite has observed high sea-surface elevation, which reflects an excessive amount of unusually warm water in the upper ocean," said Dr. Lee-Lveng Fu, JPL TOPEX/POSEIDON project scientist at NASA's Jet Propulsion Laboratory, Pasadena, California. "The associated excess of heat creates high sea-surface temperatures, which affect the weather worldwide by heating the atmosphere and altering the atmospheric jet streams."

Jet streams are high-level winds, eight to sixteen kilometres above the Earth's surface, created when warm and cold air masses meet. Shifts in the location of jet streams change temperatures and precipitation zones at the surface.

El-Niño begins when the westward trade winds weaken and a large warm water mass, called a Kelvin wave, is allowed to move eastwards along the equator, in the Pacific Ocean. Data from the radar altimeter onboard TOPEX/POSEIDON, recorded from October through December 1994, reveal a new Kelvin wave moving toward the western coast of South America.

"This wave is currently occupying most of the tropical Pacific Ocean. It will take another month or two before the wave disperses. Compared to the El-Niño condition of the winter of 1992-93, the present one appears somewhat stronger and might have stronger and longer lasting effects," Fu said.

TOPEX/POSEIDON, a joint program of NASA and the Centre Nationale d'Études Spatiales, the French space agency, uses a radar altimeter to precisely measure sea-surface height. Scientists use the TOPEX/POSEIDON data to produce global maps of ocean circulation. Launched August 10, 1992, the satellite has completed two and a half years of its three-year prime mission and has provided

oceanographers with unprecedented global sea level measurements that are accurate to better than five centimetres.

"The global sea-surface elevation information provided by TOPEX/POSEIDON is unique because it is related to the amount of heat stored in the upper ocean, which is important for long-range weather forecasting. The speed and direction of ocean currents can also be determined from the elevation information, providing another piece of critical information about the ocean, which is the key to climate change," Fu continued.

TOPEX/POSEIDON sea-surface height data are essential to understanding the role oceans play in regulating global climate, one of the least understood areas of climate research. TOPEX/POSEIDON will provide the first comprehensive, consistent measurements of the circulations of the ocean.

NASA News

End-of-January Ice Edge (East Coast)

Mean air temperatures averaged 1.5 to 4.0 degrees below normal over eastern Canadian waters during the first two weeks of January. However, during the second half of the month, mean air temperatures rose to 2.5 degrees above seasonal values

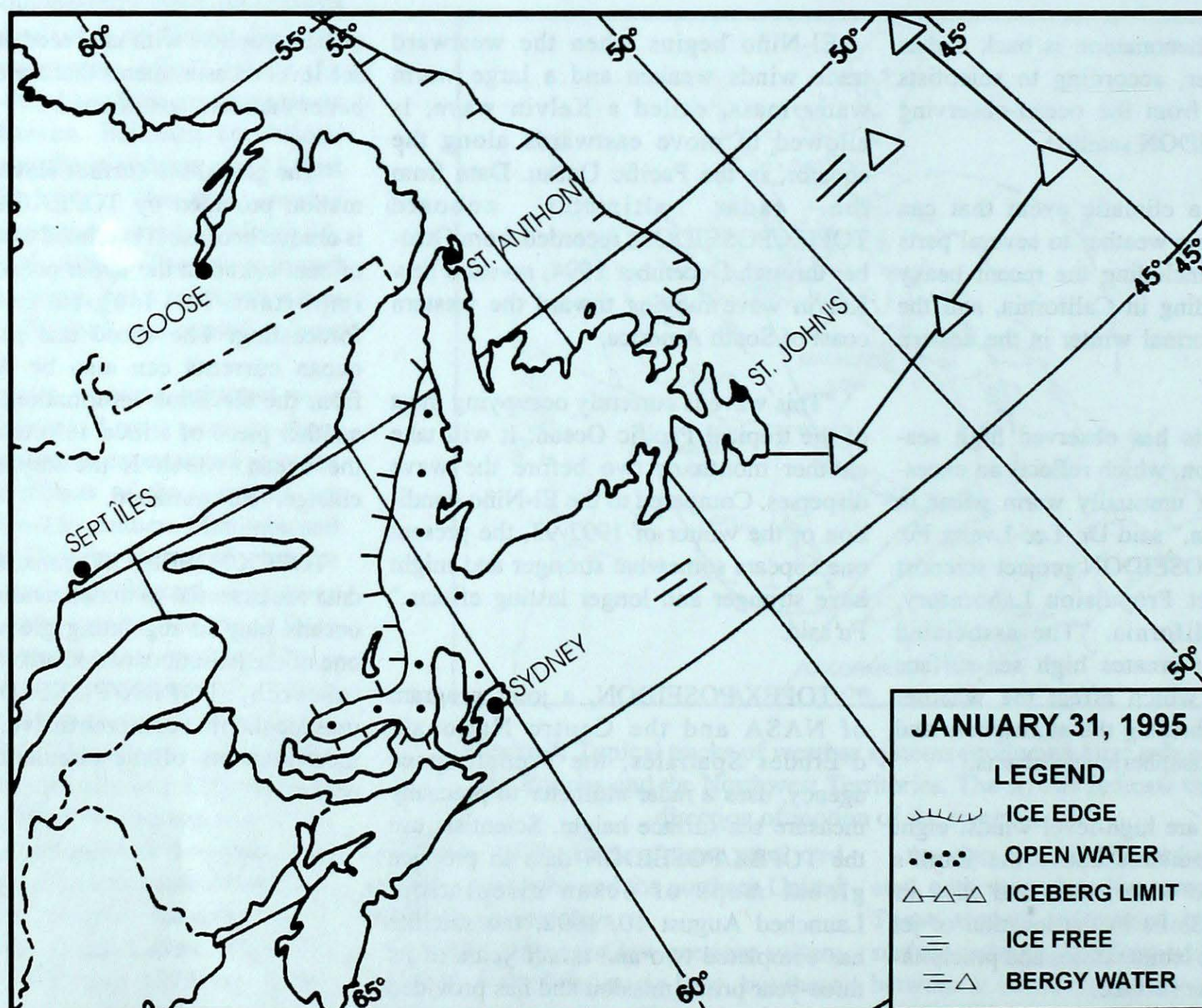
over the Gulf of St. Lawrence and 0.5 degrees above normal over Newfoundland waters.

As a result, ice over the Gulf of St. Lawrence was lighter and less extensive than in a normal year. Ice conditions over

Newfoundland waters were about two weeks ahead of normal.

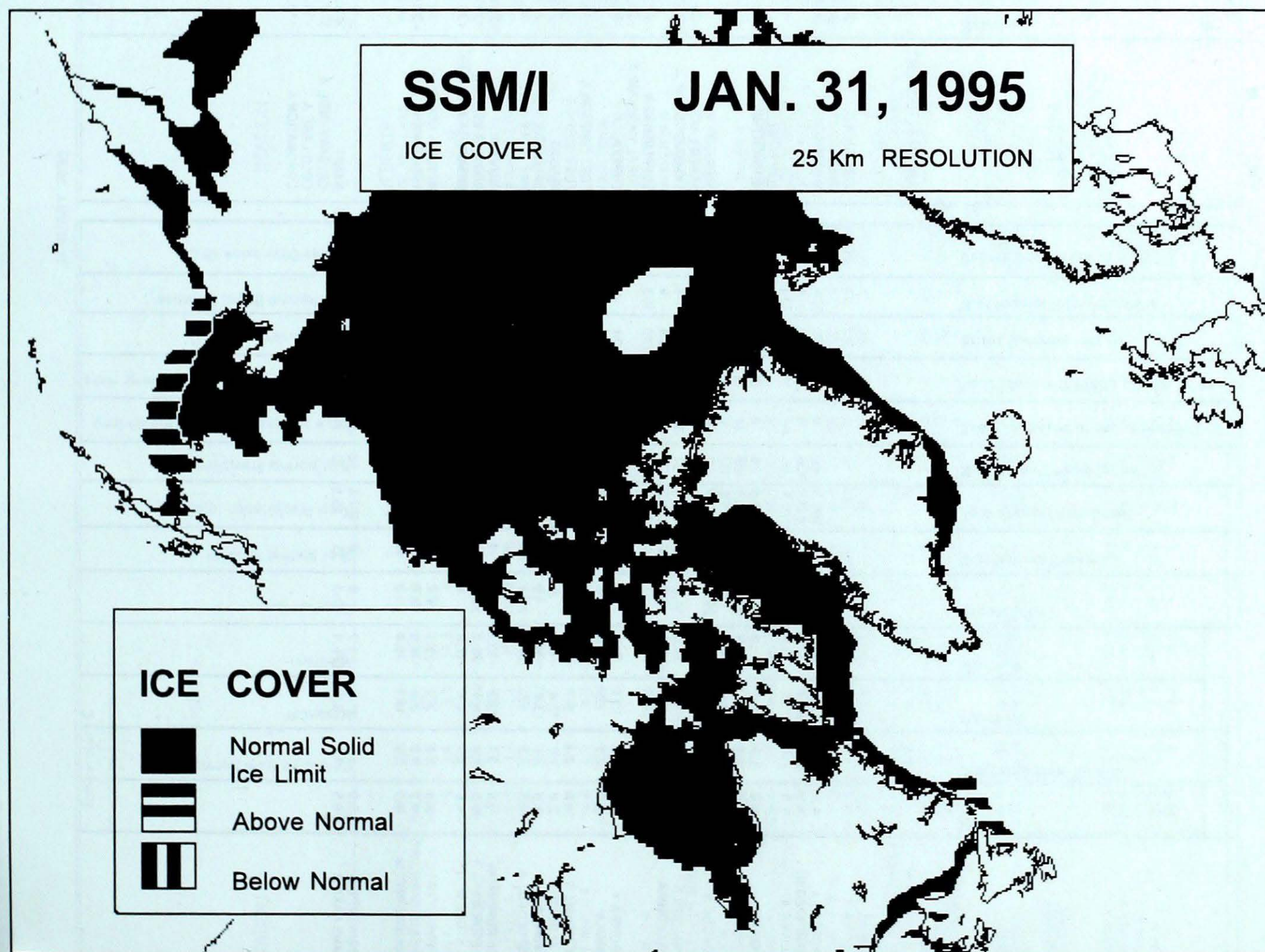
Ice Services-Ottawa

January 1995	Freezing Degree-Days	
	Accumulated	Normal (1962-87)
Sept-Îles	803	823
Sydney	136	185
St. John's	254	160
St. Anthony	638	460
Goose	1128	994



End-of-January Ice Image

Arvids Silis
Climate Processes and Earth Observation Branch



JANUARY 1995

STATION	Temperature C				Snowfall (cm)	% of Normal Snowfall	Total Precipitation (mm)	% of Normal Precipitation	Snow on ground at end of month (cm)	No. of days with Precip 1.0 mm or more	Bright Sunshine (hours)	% of Normal Bright Sunshine	Degree Days below 18 C
	Mean	Difference from Normal	Maximum	Minimum									
BRITISH COLUMBIA													
ABBOTSFORD A	4.0	2.4	13.4	-6.8	.0	0	180.9	86	0	17	91	134	434.4
AMPHITRITE POINT	7.3	2.6	14.3	.0	.0	0	431.7	106	0	20	*	*	331.0
BLUE RIVER A	-9.0	2.4	1.5	-31.5	56.6	58	70.4	86	64	14	63	133	*
CAPE SCOTT	6.9	3.3	12.0	.9	.0	0	213.8	64	0	21	*	*	342.8
CASTLEGAR A	1.6	2.8	4.6	10.8	54.2	65	103.0	128	24	13	17	38	608.9
COMOX A	3.8	1.6	13.9	-6.5	.2	0	245.0	127	0	18	49	*	441.8
CRANBROOK A	-7.4	3.1	4.9	-26.7	29.8	55	32.7	75	21	9	33	42	786.4
FORT NELSON A	-18.4	5.4	-1.5	34.0	10.8	35	9.3	37	35	4	74	*	1129.6
FORT ST JOHN A	-12.8	4.9	3.7	-28.8	9.3	24	6.2	17	16	4	101	*	955.0
HOPE A	1.3	1.7	13.0	-9.3	.2	0	170.2	66	0	15	18	103	516.3
KAMLOOPS A	-2.3	3.8	10.1	-13.2	13.2	41	26.7	84	0	8	24	41	629.8
KELOWNA A	-2.0	4.5	7.5	-10.6	18.6	59	36.6	110	0	9	18	41	617.4
PENTICTON A	-6	2.1	8.7	-11.8	18.7	64	60.6	189	0	11	13	26	576.3
PORT ALBERNI A	2.8	2.0	12.4	-6.3	.0	0	362.0	148	0	16	25	*	470.8
PORT HARDY A	4.8	2.4	13.4	-5.4	.0	0	134.2	64	0	17	73	114	411.1
PRINCE GEORGE A	-9.8	2.3	6.5	-26.8	29.2	48	25.4	44	5	8	8	13	861.6
PRINCE RUPERT A	1.6	2.1	12.2	-10.1	.4	1	97.1	42	0	14	56	117	509.6
PRINCETON A	-6.0	1.9	6.4	-25.0	25.2	46	33.8	62	13	8	60	*	*
REVELSTOKE A	-4.6	3.2	4.4	-17.8	*	*	*	*	*	*	*	*	*
SMITHERS A	-8.9	2.0	2.3	-25.7	19.4	34	17.0	31	32	7	62	113	834.7
TERRACE A	-4.2	1.7	2.6	-16.0	47.8	41	62.0	40	34	9	60	115	685.8
VANCOUVER INT'L A	4.5	2.0	14.1	-6.4	.0	0	164.4	107	0	17	84	155	419.4
YUKON TERRITORY													
DAWSON A	-24.5	*	-9.2	-38.5	23.6	*	11.4	*	*	*	*	*	*
MAYO A	-20.4	8.6	5.5	-40.7	15.1	81	12.6	72	*	*	*	*	*
WHITEHORSE A	-14.9	5.8	2.0	-33.8	14.7	69	9.1	51	15	3	51	110	1020.1
NORTHWEST TERRITORIES													
ALERT	*	*	*	*	*	*	*	*	*	*	*	*	*
BAKER LAKE A	-28.7	4.3	-14.6	-40.7	6.2	78	5.6	73	25	2	36	99	1448.6
CAMBRIDGE BAY A	-29.8	3.8	-11.8	-39.9	5.4	102	4.4	92	23	1	8	780	1480.7
COPPERMINE A	-23.2	6.9	-6.9	-45.2	4.0	43	2.4	26	65	1	14	348	1278.3
CORAL HARBOUR A	-27.2	2.5	-14.8	-38.8	9.6	113	9.6	116	18	3	56	127	1405.4
EUREKA	-38.6	-2.2	-23.5	-46.5	.8	25	.8	28	7	0	*	*	1754.9
FORT SIMPSON A	-19.6	8.7	-9.7	-38.4	12.4	60	6.4	36	44	2	22	45	1165.2
FORT SMITH A	-16.9	9.9	-3.2	-24.5	21.8	102	4.8	26	38	3	26	45	1084.7
IQUALUIT	-23.5	2.1	-8.7	-36.1	2.6	9	2.6	10	19	0	17	47	1289.3
HALL BEACH A	-27.4	3.6	-11.7	-40.4	19.4	220	11.0	126	38	4	*	*	1408.0
HAY RIVER A	-16.7	9.1	-3.2	-37.1	10.5	47	5.0	24	49	2	*	*	1077.7
INUVIK A	-23.6	6.0	-3.6	-40.4	10.6	52	8.0	45	43	3	14	203	1289.7
NORMAN WELLS A	-22.4	6.5	-6.2	-39.8	12.0	58	9.0	46	24	2	25	82	1252.0
RESOLUTE A	-30.3	1.8	-15.0	-45.1	6.0	176	4.3	130	48	1	*	*	1496.6
YELLOWKNIFE A	-20.5	8.3	-9.5	-39.5	18.6	120	9.7	73	26	2	45	31	1191.4
ALBERTA													
BANFF	-8.4	3.1	6.5	-32.5	5.4	12	4.6	12	18	1	*	*	818.8
CALGARY INT'L A	-7.3	4.5	10.6	-23.4	4.3	21	2.8	17	0	2	145	142	785.2
COLD LAKE A	-14.5	4.5	4.8	-28.0	11.3	47	7.5	34	22	2	76	83	1009.3
CORONATION A	-13.5	3.0	4.0	-30.6	*	*	19.6	91	10	*	*	*	*

JANUARY 1995

STATION	Temperature C				Snowfall (cm)	% of Normal Snowfall	Total Precipitation (mm)	% of Normal Precipitation	Snow on ground at end of month (cm)	No. of days with Precip 1.0 mm or more	Bright Sunshine (hours)	% of Normal Bright Sunshine	Degree Days below 18 C
	Mean	Difference from Normal	Maximum	Minimum									
EDMONTON INT'L A	-13.7	2.8	6.5	-30.4	14.2	49	12.2	50	14	3	111	113	982.2
EDMONTON MUNICIPAL	-10.4	4.6	6.3	-25.3	17.8	*	17.2	70	13	7	113	126	880.9
EDMONTON NAMAO A	-11.6	4.0	6.5	-27.1	6.6	27	3.0	12	12	1	*	*	917.1
EDSON A	-11.9	2.4	8.9	-27.8	*	*	*	*	*	*	*	*	*
FORT MCMURRAY A	-13.4	8.4	4.9	-27.4	15.0	57	5.4	24	14	1	78	88	972.5
GRANDE PRAIRIE A	-15.5	2.2	5.6	-32.2	7.2	19	5.3	16	35	3	99	*	1036.2
HIGH LEVEL A	-15.5	7.7	3.5	-31.9	10.0	38	4.6	20	24	1	47	86	1039.3
JASPER	-9.2	3.6	7.7	-26.0	6.6	17	2.8	8	5	0	84	*	*
LETHBRIDGE A	-7.4	2.9	10.1	-30.1	5.9	21	5.7	24	0	2	143	150	788.0
MEDICINE HAT A	-8.3	4.3	9.6	-26.3	8.2	32	7.0	31	0	2	103	111	858.5
PEACE RIVER A	-14.6	5.8	4.2	-28.5	6.0	22	5.2	24	14	2	*	*	971.5
RED DEER A	-12.2	3.3	6.9	-29.4	8.7	35	7.3	31	6	2	*	*	937.6
SLAVE LAKE A	-12.6	4.6	3.6	-27.6	*	*	*	*	*	*	*	*	*
SUFFIELD A	-10.8	*	8.5	-24.2	6.1	*	5.3	*	0	1	130	*	892.6
WHITECOURT A	-11.6	5.0	9.6	-28.8	9.0	28	7.1	24	25	2	*	*	916.4
SASKATCHEWAN													
BROADVIEW	-15.0	4.7	*	*	*	*	31.0	176	*	*	*	*	*
COLLINS BAY	-18.6	*	*	*	*	*	*	*	*	*	*	*	*
ESTEVAN A	-14.6	1.7	2.8	-30.7	28.4	139	25.0	130	16	3	114	94	1011.4
KINDERSLEY	-13.8	3.4	3.6	-27.8	12.6	70	8.7	51	7	4	94	*	986.8
LA RONGE A	-17.1	5.6	3.4	-37.8	7.7	35	6.4	37	30	1	*	*	1088.7
MEADOW LAKE A	17.2	*	4.0	-35.6	19.6	*	12.0	*	36	2	67	*	1091.5
MOOSE JAW A	-12.6	3.2	5.8	-26.7	24.4	105	13.1	70	4	3	89	85	948.3
NIPAWIN A	-17.7	*	1.0	-40.0	28.8	*	14.8	*	28	3	89	*	1106.0
NORTH BATTLEFORD A	-14.6	4.4	5.5	-27.8	7.0	32	5.1	26	8	1	*	*	1011.2
PRINCE ALBERT A	-16.1	5.4	5.9	-35.2	24.2	133	*	*	*	*	*	*	*
REGINA A	-14.0	3.9	3.4	-29.2	19.0	95	13.2	80	10	6	89	89	991.2
SASKATOON A	14.6	4.7	5.0	-30.8	17.7	89	11.9	67	12	3	70	*	1012.0
SWIFT CURRENT A	-11.2	3.5	*	*	*	*	*	*	*	*	*	*	*
WYNYARD	-14.9	5.0	4.0	-31.0	*	*	10.6	59	*	*	*	*	1020.2
YORKTON A	-15.9	4.0	4.8	-32.4	27.0	112	25.2	111	34	8	72	67	1050.9
MANITOBA													
BRANDON A	-16.7	3.0	2.9	-31.3	39.8	189	27.3	141	32	5	99	*	1073.0
CHURCHILL A	-22.4	5.1	-8.5	-39.8	*	*	30.4	199	*	*	*	*	1251.2
DAUPHIN A	-15.8	3.7	4.4	-33.3	*	*	59.4	242	*	*	*	*	1046.6
GILLAM A	-21.2	6.8	5.9	-40.6	47.0	204	36.8	208	55	10	*	*	1214.7
GIMLI	-16.9	*	3.3	-35.8	*	*	32.1	*	*	*	*	*	1081.4

STATION	Temperature C				Snowfall (cm)	% of Normal Snowfall	Total Precipitation (mm)	% of Normal Precipitation	Snow on ground at end of month (cm)	No. of days with Precip 1.0 mm or more	Bright Sunshine (hours)	% of Normal Bright Sunshine	Degree Days below 18 C
	Mean	Difference from Normal	Maximum	Minimum									
ISLAND LAKE	18.8	6.0	-1.3	-39.5	51.0	128	27.1	123	33	9	*	*	1139.8
LYNN LAKE A	-20.0	6.9	-2.3	-42.0	22.2	83	17.8	96	28	4	71	75	1178.1
NORWAY HOUSE A	-18.7	*	2.3	-40.1	38.0	*	35.6	*	34	6	*	*	1138.8
PORTAGE LA PRAIRIE	-15.0	3.3	4.7	-30.1	*	*	20.4	78	*	*	*	*	1023.8
THE PAS A	-17.9	4.8	4.2	-38.9	18.6	79	12.8	71	25	4	78	76	1112.4
THOMPSON A	-20.6	6.0	-3.3	-43.6	44.2	175	33.2	176	45	9	70	75	1196.1
WINNIPEG INT'L A	-16.1	3.2	2.2	-34.6	28.8	122	19.6	92	23	4	76	63	1057.6
ONTARIO													
EARLTON A	-11.5	4.8	.9	-36.3	39.4	69	53.7	95	18	10	*	*	914.3
GERALDTON A	-16.3	*	1.4	-39.0	34.2	*	31.6	*	37	8	*	*	1064.8
HAMILTON RBG	-1.8	*	14.0	-15.5	19.4	*	90.8	*	1	10	57	*	*
HAMILTON A	-2.7	3.7	15.6	-15.9	*	*	*	*	*	*	*	*	*
KAPUSKASING A	-15.2	3.4	1.6	-36.4	51.9	94	50.7	95	42	10	*	*	1027.7
KENORA A	-14.1	4.4	.9	-31.8	44.1	141	41.5	147	45	9	*	*	995.5
KINGSTON A	-3.9	3.8	13.5	-21.4	23.8	46	102.0	128	0	11	63	63	677.7
LONDON A	-3.3	3.3	14.3	-16.3	33.6	61	108.1	144	4	12	57	81	659.3
MUSKOKA A	-6.2	4.2	12.1	-26.5	96.9	120	128.8	150	6	21	*	*	732.8
NORTH BAY A	-8.8	4.2	11.3	-31.2	47.0	79	70.0	110	6	13	71	73	831.4
OTTAWA INT'L A	-7.0	3.9	11.7	-26.5	62.2	124	146.0	239	4	14	*	*	773.7
PETAWAWA A	-9.0	4.1	7.1	-34.2	43.6	94	92.8	164	7	15	*	*	836.1
PETERBOROUGH A	5.6	4.0	12.2	-25.8	46.6	132	133.2	238	11	11	*	*	729.2
PICKLE LAKE	-17.1	4.3	-1.2	-38.7	36.0	86	30.8	81	40	8	*	*	1089.2
RED LAKE A	-16.5	4.5	.9	-37.3	55.1	177	44.7	156	47	7	72	*	1067.5
ST CATHARINES A	-1.2	3.5	18.5	-13.8	28.0	85	121.6	208	0	12	56	*	593.3
SARNIA A	-3.2	3.3	15.0	-16.9	34.6	120	71.6	136	0	7	72	86	657.0
SAULT STE MARIE A	-6.4	4.3	2.6	-21.7	61.2	80	66.4	83	5	11	69	90	754.4
SIOUX LOOKOUT A	-15.4	4.0	.5	-33.4	66.5	175	67.9	189	67	11	*	*	1036.9
SUDBURY A	-9.3	4.4	7.6	-30.8	29.4	54	85.5	149	11	14	73	73	816.9
THUNDER BAY A	-11.4	4.0	3.7	-28.3	73.5	152	47.6	116	22	8	102	86	910.3
TIMMINS A	-13.6	3.7	1.2	-37.4	44.1	67	53.6	96	24	10	*	*	978.6
TORONTO	-1.4	*	14.7	-13.9	25.2	*	138.4	*	2	11	*	*	601.3
TORONTO INT'L A	-3.1	3.6	12.9	-15.8	25.2	75	133.3	264	2	11	*	*	653.2
TRENTON A	-4.3	3.3	14.5	-21.5	42.7	89	116.7	169	9	11	*	*	689.8
WATERLOO WELLINGTON	-3.5	4.2	14.2	-19.5	35.6	88	115.4	191	5	13	*	*	667.5
WAWA A	-11.3	*	2.6	-32.1	33.4	*	30.4	*	16	11	*	*	908.3
WIARTON A	-3.2	3.9	14.6	-21.5	111.8	110	108.2	112	3	18	30	45	656.2
WINDSOR A	-2.4	2.5	15.0	-15.6	37.0	123	72.0	131	0	10	*	*	631.2

JANUARY 1995

STATION	Temperature C														Temperature C													
	Mean	Difference from Normal	Maximum	Minimum											Mean	Difference from Normal	Maximum	Minimum										
QUEBEC																												
BAGOTVILLE A	-11.5	4.3	12.5	-36.2	87.7	128	76.4	120	49	14	*	*	915.1	GREENWOOD A	-2.5	2.5	16.8	-20.2	56.2	74	130.2	104	2	12	*	*	633.9	
BAIE COMEAU A	-11.2	2.8	4.6	-32.8	96.2	113	102.6	113	39	14	113	115	904.4	HALIFAX INT'L A	-3.2	2.8	14.5	-23.2	32.7	52	131.9	86	5	13	*	*	655.8	
BLANC SABLON A	-14.0	-2.7	-1.1	-30.2	79.2	70	79.2	61	25	15	90	*	988.3	SABLE ISLAND	1.5	1.4	10.8	-10.4	11.8	33	102.8	70	1	16	42	79	511.3	
CHIBOUGAMAU CHAPAIS	-15.4	*	8.1	-41.2	*	*	72.1	*	*	10	*	*	1034.1	SHEARWATER A	-1.9	2.2	14.3	-16.0	25.2	55	129.6	90	0	13	79	70	617.7	
GASPE A	-10.7	*	10.9	-31.7	141.4	*	144.6	*	125	13	108	*	8907.5	SYDNEY A	-3.1	1.6	16.9	-18.3	65.4	88	133.8	90	14	16	77	90	665.6	
KUUJJUAQ A	-24.6	-1.3	-8.4	-36.6	23.2	71	23.0	69	23	6	107	170	1321.4	YARMOUTH A	.1	2.8	14.0	-17.1	21.2	34	107.6	76	0	9	57	81	556.6	
KUUJJUARAPIK A	-19.9	2.6	.6	-33.6	20.2	75	18.4	71	18	9	79	110	1173.2	PRINCE EDWARD ISLAND														
LA GRANDE IV A	-22.8	*	.7	-40.5	37.6	*	34.8	*	49	9	106	*	1264.4	CHARLOTTETOWN A	-5.6	1.5	8.6	-22.8	75.5	98	117.4	101	34	18	*	*	732.9	
LA GRANDE RIVIERE A	-20.0	*	.1	-33.5	21.2	*	22.2	*	38	7	92	*	1176.8	NEWFOUNDLAND														
MANIWAKI	-8.6	4.9	10.8	-31.0	*	*	*	*	*	*	*	*	*	BONAVISTA	-4.1	.2	8.4	-13.6	138.6	272	188.4	209	109	15	*	*	685.0	
MONT JOLI A	-9.4	2.2	11.2	-28.2	103.6	119	113.2	130	28	15	61	75	848.4	BURGED	-4.0	.8	7.1	-15.6	82.8	145	155.4	101	29	20	0	0	682.1	
MONTREAL INT'L A	-6.3	3.9	10.9	-23.9	57.1	108	112.2	156	4	*	72	68	753.3	CARTWRIGHT	-16.7	-3.5	-1.3	-29.9	54.5	65	54.5	61	106	14	77	86	1074.6	
MONTREAL MIRABEL I/	-7.6	*	9.0	-29.6	58.4	*	128.7	*	8	15	77	*	794.4	COMFORT COVE	-7.3	.1	8.6	-22.2	104.4	129	128.6	134	98	13	*	*	782.6	
NATASHQUAN A	-14.3	-2.2	-.9	-37.0	59.8	87	56.4	62	76	*	126	116	*	DANIELS HARBOUR	-8.7	-1.8	4.1	-24.0	122.8	138	176.0	177	39	16	41	73	826.9	
QUEBEC A	-8.8	3.3	9.8	-29.5	91.0	117	123.8	138	56	17	64	66	830.0	DEER LAKE A	-8.7	-.3	9.3	-26.7	148.9	172	160.5	171	87	18	*	*	826.8	
ROBERVAL A	-12.6	3.2	10.7	-38.0	66.4	94	83.6	124	22	10	82	*	948.4	GANDER INT'L A	-6.8	-.6	7.4	-18.8	196.2	249	212.6	195	122	15	93	109	769.1	
SEPT-ILES A	-13.7	.3	1.4	-34.3	73.0	78	69.4	73	44	11	109	101	983.4	GOOSE A	-20.6	-4.2	-1.3	-33.1	40.6	51	23.8	32	38	6	92	104	1195.2	
SHERBROOKE A	-6.4	5.2	16.8	-33.5	53.4	86	100.2	136	5	15	72	*	756.7	MARY'S HARBOUR	-14.9	-4.6	-.6	-31.8	60.2	81	55.6	65	85	11	*	*	1018.6	
ST HUBERT A	-6.1	4.0	13.9	-27.7	42.8	*	113.6	136	5	*	70	*	*	PORT AUX BASQUES	-3.7	.4	8.2	-12.8	109.2	148	176.3	132	58	24	44	*	*	672.4
VAL D'OR A	-12.4	4.4	9.7	-38.7	38.2	64	65.4	109	7	*	57	57	*	ST ANTHONY	-11.7	-.4	-.8	-27.0	117.6	205	127.8	132	146	20	*	*	921.2	
NEW BRUNSWICK														ST JOHN'S A	-4.0	-.1	9.3	-16.8	152.3	187	209.8	135	78	18	52	*	*	682.8
CHARLO A	-10.3	2.4	6.5	-31.0	139.8	166	157.6	175	95	13	93	79	841.1	ST LAWRENCE	-3.0	-.1	7.4	-15.5	81.8	161	179.0	151	36	19	*	*	653.0	
FREDERICTON A	-7.2	2.0	12.0	-31.7	87.1	136	168.2	163	24	14	*	*	781.9	STEPHENVILLE A	-5.5	-.5	6.4	-19.7	164.1	172	205.2	178	80	19	36	*	*	730.2
MONCTON A	-7.0	1.1	14.2	-28.7	95.0	122	151.2	121	18	13	67	62	774.9	WABUSH LAKE A	-23.7	-1.4	-3.2	-40.8	64.9	*	41.0	63	71	6	89	*	*	1291.8
SAINT JOHN A	-5.3	2.5	9.9	-24.5	45.7	60	155.1	104	6	13	*	*	721.5															

AGROCLIMATOLOGICAL STATIONS

JANUARY 1995

STATION	Temperature C				Snowfall (cm)	Total Precipitation (mm)	% of Normal Precipitation	Snow on ground at end of month (cm)	No. of days with Precip 1.0 mm or more	Bright Sunshine (hours)	Degree days above 5 C	
	Mean	Difference from Normal	Maximum	Minimum							This month	Since Jan. 1st
BRITISH COLUMBIA												
AGASSIZ	4.6	3.4	12.0	-7.5	.0	167.8	73	0	15	79	**	36.3
SUMMERLAND	-1.8	1.6	8.5	-10.5	11.0	48.2	135	0	11	7	**	.0
ALBERTA												
BEAVERLODGE	-12.6	3.3	6.0	-27.5	6.0	6.9	21	33	3	86	**	.0
LACOMBE	-11.9	3.6	2.3	-30.7	6.8	6.8	32	4	0	**	**	.0
SASKATCHWAN												
INDIAN HEAD	-14.6	3.3	4.5	-31.0	35.5	26.4	126	36	5	**	**	.0
MELFORT	-16.1	4.8	4.5	-34.0	16.9	17.1	90	44	4	65	**	.0
SCOTI	-18.6	.5	4.0	-26.0	6.1	8.5	50	6	4	51	**	.0
SWIFT CURRENT	-10.8	4.0	4.1	-27.7	18.2	14.3	87	4	3	112	**	.0
MANITOBA												
BRANDON	-16.3	3.0	4.3	-33.2	32.4	32.4	152	26	4	**	**	.0
MORDEN	-14.0	5.7	5.0	-28.0	19.4	21.6	84	14	4	95	**	.0
GLENLEA	-16.9	.4	1.0	-34.0	15.1	15.1	64	28	7	79	**	.0
ONTARIO												
DELHI	-2.1	3.9	16.5	-16.0	19.1	140.1	210	0	9	**	**	17.2
ELORA	-4.4	3.8	13.1	-20.6	45.2	114.9	197	9	16	**	**	3.5
HARROW	-2.9	1.9	14.0	-16.0	18.2	37.0	63	4	3	70	**	7.0
KAPUSKASING	-10.2	8.1	2.0	-38.5	52.2	40.0	83	21	8	53	**	.0
OTTAWA	-6.4	4.4	9.5	-26.3	43.2	112.7	204	7	15	72	**	1.1
SMITHFIELD	-5.7	1.8	14.1	-20.6	40.3	111.0	135	10	11	**	**	.9

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Courtesy of Agriculture Canada

STATION	Temperature C				Snowfall (cm)	Total Precipitation (mm)	% of Normal Precipitation	Snow on ground at end of month (cm)	No. of days with Precip 1.0 mm or more	Bright Sunshine (hours)	Degree days above 5 C	
	Mean	Difference from Normal	Maximum	Minimum							This month	Since Jan. 1st
QUEBEC												
LA POCAIERE	-8.6	2.7	9.5	-31.0	61.0	107.0	136	11	18	72	**	.0
L'ASSOMPTION	-7.5	4.4	11.1	-33.2	**	120.0	161	1	5	68	**	.6
NORMANDIN	-15.5	2.5	1.6	-41.2	**	36.3	57	27	9	101	**	.0
NEW BRUNSWICK												
FREDERICTON	-6.8	2.3	12.5	-33.5	93.2	165.9	161	4	14	83	**	.2
NOVA SCOTIA												
KENTVILLE	-2.7	2.3	16.0	-21.5	66.7	138.2	102	6	19	52	**	16.6
NAPPAN	-4.6	2.2	12.0	-24.0	54.4	131.8	116	9	15	56	**	3.8
PRINCE EDWARD ISLAND												
CHARLOTTE TOWN	**	**	**	**	**	**	**	***	***	**	**	**
NEWFOUNDLAND												
ST. JOHN'S WEST	-3.5	.3	9.0	-16.5	131.1	215.2	119	150	17	48	**	.0

Courtesy of Agriculture Canada

Above-normal temperatures for January 1995 contrasted sharply with the cold of January 1994. At Montréal, for comparison, the January 1995 mean was -6.3°C (normal -10.3°C) compared to -16.6°C (January 1994): there were eight consecutive days (January 14-21) that the maximum temperature exceeded 0°C . Saint-Hubert recorded 13.9°C on the 15th (old record 12.2°C , 1932). Val-d'Or experienced temperature extremes during the week of the 9th: on the 10th, a minimum of -38.7°C (old record -38.3°C) contrasted with record maximums of 9.5°C on the 14th (old record 3.5°C , 1980) and 9.7°C on the 15th (old record 5.0°C , 1953). Chibougamau had a record-mild monthly mean of -15.4°C (old record -16.3°C , 1990).

The precipitation total at Montréal was 49 mm above normal: rainfall totalled 61.9 mm (normal 20.8 mm) and freezing rain was accompanied by thunder, on the 13th. On the 15th, Québec City received 26.0 mm of rain (old record 19.8 mm, 1962). Record-January precipitation fell at Maniwaki (154.0 mm, old record 90.9 mm 1976). The abundant rainfall caused flooding in some areas of southwestern Quebec as rivers overflowed their banks. At Montréal, a record was set of 14 consecutive days of cloud, from January 11-24. Record-low sunshine values were recorded at Montréal-Mirabel (77.2 hours, old record 87.4 hours, 1990) and at Val-d'Or (57.4 hours, old record 58.1 hours, 1983).

Maritimes

For the most part, the month was very mild and wet, with a lack of sunshine. Charlottetown recorded 26 hours less sunshine than normal, the lowest since 1972. New Brunswick totals were 23 to 45 hours less than normal while Nova Scotia ranged from 14 to 34 hours less than normal. Mean temperatures were well above normal. Precipitation was inconsistent with New Brunswick well above normal for total precipitation. Snowfall in New Brunswick was well-above normal except below normal in

the southwest. In Nova Scotia, precipitation was below normal with a few exceptions but snowfall was below normal everywhere. Prince Edward Island was close to normal for precipitation and snowfall. Sunshine hours were below normal throughout the Maritimes.

Across the region, the mean-monthly temperature averaged -4.1°C (2.5 degrees above the normal of -6.6°C). Yarmouth and Greenwood, Nova Scotia, had the greatest anomaly (3.1 degrees). There were many daily-maximum temperature records broken. On the 15th, Greenwood, Nova Scotia, recorded 15.6°C (old record 12.4°C , 1978). Sydney, N.S., recorded 16.9°C , on the 16th, a record for January (old record, 14.4°C , January 2, 1886/January 3, 1913). In contrast, near-record cold air covered the Maritimes on the 11th as St. Leonard, New Brunswick, recorded -35.8°C and on the 27th as Bathurst, N.B., shivered at -26.5°C . Precipitation totals varied from 69% of normal at Sable Island, Nova Scotia, to 186% of normal at Charlo, New Brunswick. All stations in New Brunswick and P.E.I. had above-normal total precipitation amounts. In New Brunswick, precipitation totals ranged from 121% of normal at Saint John to 186% at Charlo. Snowfall totals in New Brunswick ranged from 64% at Saint John to 166% at Charlo. Charlottetown, P.E.I., recorded 110% of normal precipitation and snowfall was 98% of normal. Nova Scotia's range of precipitation was 69% at Sable Island to 124% at Greenwood. Below-normal snowfall in Nova Scotia ranged from 32% at Sable Island to 92% at Kentville.

On the 7th, Halifax Int'l Airport recorded 11.7°C (old record 9.4°C , 1962) as winds gusted near 100 km/h. The storm halted ferry operations between New Brunswick and Prince Edward Island and between Saint John, N.B., and Digby, N.S. Rainfall totals with this storm included 40 mm at Hart Island (near Canso) and 42 mm at Saint John, New Brunswick. Melting snow and ice and rain put areas of New Brunswick on flood watch, the week of

January 16 as Fredericton recorded 89.2 mm of precipitation for the week.

Newfoundland and Labrador

The most prominent feature for January 1995 was the high snowfall amounts received by parts of central and eastern Newfoundland. Gander set an all-time-high January total of 196.2 cm (old record 180.6 cm, 1966) - the normal for Gander is 90 cm. St. John's recorded 152.3 cm (normal 83 cm) and Bonaville, 138.6 cm (normal 55.6 cm). A couple of major disturbances gave record snowfalls - one on the 17th dropped 35.6 cm of snow on Gander (a daily record). A three-day snowfall (January 23-25) gave 78 cm to Gander, 59 cm to La Scie and 56 cm to St. John's. At the end of the month, well over 100 cm of snow was reported on the ground, at some locations. A disturbance that gave 57.4 mm of rain to St. Lawrence, January 7-8, caused road washouts and flooded basements along the south coast and Avalon Peninsula.

Temperatures were within one degree of normal but sunshine totals varied across the Island. St. John's recorded 52.0 hours (22.7 hours below the normal of 74.7 hours); Daniel's Harbour, 40.9 hours of sunshine (15.1 hours below the normal of 56.0 hours) but Gander recorded 92.7 hours (7.6 hours above the normal of 85.1 hours).

In contrast to the island portion of the province, Labrador was cold, with less than normal snowfall. On the southeast coast, Mary's Harbour was 4.4 degrees below normal. Negative temperature anomalies were less to the west - Goose was 3.3 degrees below normal and Wabush, 1.5 degrees below normal. Below-normal snowfall totals included Goose (40.6 cm, 50% of normal), Cartwright (54.5 cm) and Nain (47.8 cm), both 65% of normal. Cartwright had 77.0 hours of sunshine (normal, 90.2 hours) whereas Wabush had 8.0 hours above the normal of 80.6 hours.