

Southern Newfoundland Paralysed by a Snowstorm

A heavy snowstorm dumped between

The coldest temperature "monitor-

30 cm and 40 cm of snow on February 11 over southern Newfoundland, closing schools and businesses and paralysing most of the area.

In the British Columbia interior, the drought continues and concern has been expressed about the possibility of higher forest fire hazards and scarcity of water supplies during next summer if the unusually low water table cannot be replenished by above normal precipitation during spring. ed" in Canada this week was recorded in northern Ontario and northern Quebec where the minimum fell to -36° at Geraldton and Poste-de-la-Baleine. In contrast, the mercury jumped to 10° at Edson Lake, Lethbridge and Slave Lake in Alberta while reaching 13° at Cape St. James in British Columbia. Precipitation totals exceeded 50 mm at only two stations this week, namely Prince Rupert (58.4 mm) and Sable Island (54.1 mm).

NOTE: The data shown in this publication are based on unverified reports from approximately 225 Canadian and 115 northern United States Synoptic stations.

YUKON

Temperatures were much above normal again this week, with most stations reporting between 10° and 15° above normal. A maximum temperature of 5° was attained at Dawson, Mayo and Faro on February 5th and 6th. The coldest temperature was -34° at Komakuk Beach on February 5th.

Snowfalls amounted to only a trace at most stations except along the coast of the Gulf of Alaska where heavy snowfalls occurred on February 7th. Mule Creek, on the Haines Highway, reported 15 cm.

Snow depths varied from a low of 11 cm at windswept Burwash to 42 cm at Watson Lake. Average snow depths were between 30 cm and 40 cm. At the higher elevation mining communities of Cassiar and Cantung, snow depths were close to 100 cm.

NORTHWEST TERRITORIES

Unseasonably mild temperatures continued throughout the Northwest Territories this week, reaching levels well above normal. Most stations reported weekly averages which were 10° to 15° above normal, with the exception of the eastern portion of Baffin Island where averages were closer to 6° or 7° above normal. Daily maximum temperatures during the week reached a peak of 7° at Fort Simpson. The lowest daily minimum temperature was -35° at Mould Bay.

Precipitation was very light throughout the Territories. The highest totals only reached a few millimetres.

BRITISH COLUMBIA

Average temperatures for the week varied from much above normal in northeastern districts of the province, to near normal in the southwestern corner. In the north, oil and gas exploration were favoured by the mild temperatures. Fort Nelson had a maximum of 7° on the 7th. Cloudy conditions prevailed but some mountain peaks did have sunshine.

Precipitation was light, except along the coast where it was moderate but below normal.

Snow depths are generally well below normal for this time of the year.



Some concern is being expressed about potential water supply problems and forest fire hazards next summer in central and northern districts as the water table will be low this spring if precipitation continues to be below normal.

ALBERTA

The whole province enjoyed mild weather this week. On the whole, temperatures reached a peak on the 8th, when all synoptic stations reached daily maximum temperatures above freezing, with Edson, Lethbridge and Slave Lake going up to 10°. Minimum temperatures averaged between -10° and -15° for the week at most stations.

Precipitation was very light in Snowmobile fans were all districts. disfavoured as the snow cover has all but disappeared in southern districts of the province and in the Peace River area.

SASKATCHEWAN AND MANITOBA

Temperatures were generally between 4° and 8° above normal except for the southwestern corner of Saskatchewan which was near normal. For the northern regions, this was a continuation of the conditions of last week.

Precipitation was very light in Saskatchewan but Manitoba experienced a storm on the 9th which dumped 8 cm -12 cm of snow and caused poor visibility in blowing snow. Meadow Lake, Moose Jaw and Swift Current reported the highest weekly totals for bright sunshine, near 50 hours. Other sunshine reporting stations reported totals closer to 20 hours.

Snow depths ranged from values near 10 cm in southern Saskatchewan to 25 cm in southern Manitoba, and 50 cm

northwest where snow was recorded almost every day of the week, but totals were generally less than 5 cm for the week.

Snow cover is remaining steady in the 30 cm - 70 cm range in all locations in the far north and northwest, while south of Timmins to the "southern Ontario snowbelt", values are in the 20 cm - 30 cm range. Southwestern Ontario, the Lake Erie and Lake Ontario stations generally reported only a trace to 10 cm on the ground at week's end.

The ice cover grew significantly in Lake Superior this week, reaching about 60%. Georgian Bay and Lake Erie are 90% covered. Conditions on eastern Lake Erie proved treacherous on the weekend as a number of ice fishermen had to be rescued from an ice floe that had drifted into open water. Lake Ontario has some thin ice cover at the eastern end.

QUEBEC

This week has been rather sunny over Quebec with 85% of possible sunshine being recorded at Sept-Iles and more than 50% at all other stations north of the St. Lawrence River. Mean temperatures were back to near normal at most stations. Temperatures remained below freezing for the entire week, reaching only -1° at Sainte Agathe on February 7th. In contrast, the mercury dipped to -36° at Poste-de-la-Baleine on February 5th.

Precipitation was light or zero at most stations. The largest weekly total was only 3.3 mm at Fort Chimo.

MARITIME PROVINCES

in northern Manitoba.

ONTARIO

The weather was predominantly cold but bright in Ontario this week. Average temperatures varied from 8° above normal in the northwest to 3° below normal in the southwest. The highest daily maximum for the week was 0° at Trenton, and the lowest minimum -36° at Geraldton.

In all regions snowfall was confined to a few flurries except in the

As in the previous week, no major storms touched the Maritimes this week, although two storms did come close. Precipitation was very light, with amounts reaching but a few millimetres, except at Sable Island where 54.1 mm was recorded. Sable Island had maximum winds exceeding 100 km/h on the 8th and the llth in association with the storms that produced the precipitation.

Temperatures remained slightly below normal: they have not exceeded the freezing point since January 25th except at Fredericton and Sable Island.

To date, snowfalls have been low this winter and it is reported that many municipalities have saved money on snow removal.

NEWFOUNDLAND AND LABRADOR

An intense storm on the lith brought heavy snow and caused schools and businesses to close as road conditions became poor in eastern Newfoundland. It brought snowfalls as high as 40 cm at St. Lawrence and 30 cm at St. John's; wind gusts reaching 135 km/h at Cape Race and 100 km/h at St. John's. Labrador was not affected and had little precipiation this week.

Temperature averages for the week

were close to normal in all districts, with most stations attaining daily maxima just under the freezing point except Deer Lake where the mercury reached 3° on February 7th. The coldest stations were Churchill Falls and Wabush Lake, with daily maximum temperatures near -15° and minimum temperatures near -30° .

The Gulf of St. Lawrence is 70% ice-covered but the ice is thin along shipping lanes. Along the Labrador coast the ice is confined to a narrow band about 100 km in width. The band is up to 120 km wide along the Newfoundland coast, extending as far south as the latitude of St. John's.





15 DAY TEMPERATURE ANOMALY FORECAST



Forecast Method

Analogue technique based on point prediction at 70 Canadian stations.

Temperature Scale

Each temperature class is designed to contain 20% of the historically observed 15 day means pertinent to specific location and time of year:

Station	Current Temperature Anomaly (AT) Forecas								
Whitehorse	Near Normal $(-1.5^{\circ}C < \Delta T < +1.5^{\circ}C)$								
Victoria	Near Normal $(-0.5^{\circ}C < \Delta T < +1.5^{\circ}C)$								
Vancouver	Near Normal $(-0.5^{\circ}C < \Delta T < +0.5^{\circ}C)$								
Edmonton	Near Normal $(-1.3^{\circ}C < \Delta T < +1.3^{\circ}C)$								
Regina	Near Normal $(-1.2^{\circ}C < \Delta T < +1.2^{\circ}C)$								
Winnipeg	Below Normal (-3.7°C < AT <-1.1°C)								

Thunder Bay Toronto Ottawa Montreal Quebec Fredericton Halifax Charlottetown St. John's Goose Bay Frobisher Bay Inuvik Below Normal Netow Normal Near Normal Near Normal Near Normal Note: Anomaly denotes departure from the 1949-73 mean.



HEATING DEGREE-DAY SUMMARY TO FEBRUARY 9, 1980

	MONTHLY	MONTHLY DIFF.	SEASONAL	SEASONAL	SEASONAL
CITY	CUMULATIVE	FROM 1941-70	TOTAL	DIFF. FROM	PERCENT
	TOTAL	NORMAL		1941-70 NORMAL	OF NORMAL
Resolute	362.0	-106.0	7388.5	24.5	100
Inuvik	361.5	-79.5	5262.5	-901.5	85
Whitehorse	201.0	-103.0	4132.5	-319.5	93
Vancouver	111.0	-18.0	1782.0	-63.0	97
Edmonton	189.5	-77.5	3103.5	-467.5	87
Calgary	168.0	-79.0	3029.0	-295.0	91
Regina	248.5	-59.5	3420.0	-305.0	92
Winnipeg	283.5	-38.5	3635.0	-60.0	98
Thunder Bay	299.5	5.5	3435.0	-78.0	98
Windsor	225.5	20.5	2151.0	-53.0	98
Toronto	258.5	33.5	2445.0	-21.0	99
Ottawa	273.5	14.5	2800.5	-103.5	96
Montreal	269.0	13.0	2725.0	-34.0	99
Quebec	276.0	3.0	3113.5	11.5	100
Saint John, N.B.	254.5	11.5	2663.5	-121.5	96
Halifax	220.5	13.5	2328.5	38.5	102
Charlottetown	239.0	0.0	2595.0	-8.0	100
St. John's, Nfld.	211.0	-2.0	2688.5	57.5	102

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Atmospheric Circulation Features

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The major mean upper air circulation features affecting Canada this week were a strong ridge over the Arctic Islands, and deep troughs in the Bering Sea and along the east coast. Over the continental United States, the mean pattern was close to normal.

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The northern and especially the northwestern regions of Canada were favoured by southwesterly air trajectories from the Pacific Ocean bringing in relatively mild air. The ridge on the west coast was west of its normal position, and thus the precipitation along the coast was less than normal.

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February 4 to 10, 1980



50KPa Height Map(decametres) 7 day mean from February 4 to 10, 1980

Central regions of the country also experienced milder than normal temperatures, as the ridge in the Arctic Islands disrupted the normal trajectory from the Arctic Ocean through central Canada.

Storms which developed along the east coast stayed farther away from the coast than usual. This is reflected in

7 day Mean 50kPa Height Anomaly

the position of the east coast trough which is east of its normal position.

The province of Quebec and eastern Ontario had sunny skies as they were well away from storm tracks and experienced weak advection of cold dry air from the north.

Canadian Climate Program - Forestry Workshop

The Canadian Cimate Program (CCP) was established on November 23, 1978 under the initiative of the Department of the Environment. The Program has since grown from its departmental conception to a truly national program. A series of sectoral workshops are currently being held to help provide input for the design of the Program by providing recommendations relating to climate services, research and institutional requirements.

The CCP Forestry Workshop was held at AES, Downsview on January 29-30, 1980 and was hosted by the Canadian Forestry Service. Over 40 participants from federal and provincial agencies, universities and the forest industry actively interchanged ideas and, through a series of working groups, ultimately presented a series of recommendations for consideration by the Climate Planning Board in the design of the CCP.

The workshop included an overview by Mr. M.K. Thomas, Director-General of the Canadian Climate Centre (CCC) followed by a discussion of Climate Data Availability by Mr. D.W. Phillips. An important phase of the CCP has been the inventory of climate-related programs. Results of this survey, particularly these relating to suggested improvements in climate services or research needs, were summarized. The results were based on over 45 replies from federal, provincial, and university personnel and on more than 40 replies from forest companies throughout Canada. Specific user group programs using climate information were identified by selected representatives from federal and

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data, and research needs for these specific sectors evolved from these discussions, but space limits their inclusion here. They will be available in the Proceedings of the Workshop.

Priorised recommendations on climate service needs and on forestry research activities that will aid in understanding climate and climate change were formulated by the working groups and are highlighted below.

A. Service

1. Enhancement of the climatological data base for forestry users (plus 6 methods of doing this).

2. Improvement of access to climatological data.

3. Conversion, through appropriate analytical techniques, of climatological data into information that can be used by forestry sector users.

B. Research

1. Conduct of micrometeorological research within the CCP with the goal of modelling water and energy budgets in time and space and in determining the representativeness and transposability of observations taken in forest zones.

2. Conduct of appropriate statistical climatological research to meet specific needs: e.g. identifying fire weather types, in terms of synoptic climatology, for Canada.

3. Development of methodologies for environmental impact studies.

Institutional

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Recommendations directed at development of formal and informal arrangements between the CCC and forestry sector agencies, either governmental, industrial or academic, to transfer technology and improve co-operation.

The recommendations are, of course, spelled out in more detail, and

provincial agencies, industry and university.

Working group discussions to identify climate needs of forestry programs (forest fire protection, forestry operations, insect and disease protection and research) followed. Forest hydrology and water management will be included at the Water Workshop on February 28-29 in Edmonton. A series of recommendations on climate service they will be in the Workshop Proceedings. Anyone who did not attend the Workshop and who would like a copy of the Proceedings when they are available should contact Mr. P.Scholefield of the Canadian Climate Centre, AES, Downsview, ([416]-667-4525).

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CLIMATIC PERSPECTIVES

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TEMPERATURE AND PRECIPITATION DATA FOR THE WEEK ENDING OGOD G.M.T. FEBRUARY 12, 1980

Temperature (°C		(°C)	Precip. (mm)			Ten	Temperature (°C)			Precip. (mm)				Temperature (°C).				Precip. (mm)		
Station	Average	Departure from Normal	Extreme Moximum	Extreme Minimum	Total	Departure from Normal	Station	Average	Departure from Normal	Extreme Maximum	Extreme Minimum	Total	Departure from Normal	Station	Average	Departure, from Normal.	Extreme Maximum	Extreme Minimum	Total .	Departure from Normal
Elitish Columbia Abbotsford A Alert Bay Blue River Bull Harbour Burns Lake Cape Scott Cape St. James Castlegar A Comox A Cranbrook A Dease Lake Estevan Point Fort Nelson A Fort St. John A Camloops A Angara -ytton Kackenzie A Cinnes Island Penticton A Port Hardy A Prince George A Prince Rupert A Quesnel A Levelstoke A Landspit A Mathers A Pring Island tewart A Pring Island tewart A Corrace A Ofino A ancouver Int'l A Littoria Int'l A Littoria Int'l A A Littoria Sate A A Masson A Omakuk Beach A Ayo A A hitehorse A Diron Bay A A ambridge Bay A A abtehorse A DirthWEST TERRITORIES Lert aker Lake roughton Island yron Bay A A ambridge Bay A A ape Dorset ape Parry A ape Young A hesterfield Inlet Linton Point Lyde ontwoyto Lake Oppermine Dral Harbour evar Lakes Inadai Ireka Drt Reliance Drt Smith A cobisher Bay A Ladman Point A All Beach A Virk A Ingarif Bluff ickar Inlet Wid Bay A A All Beach A Virk A Man Point A A A Disher A A Man Point A A A Disher Bay A A A Disher A A A Disher Bay A A A Disher A A Disher A A Disher A A Dish	4 6 M 6 M M 7 0 3 4 8 M 7 0 3 4 M 7 0	O1X1XM32O35M111M2MXM125134M6MX31001 91491215410 M361515X7810121218MM18MM131412M16151614471311M1515XX	11 10 10 10 10 10 10 10 10 10	- 2 2 - 7 2 - 14P 2P 3 0 -11 -21 3 -17 -9 -2 -12 -12 -12 -2 -12 -12 -2 -12 -1	26.2 8.4 M 16.2 M 25.2 5.4 15.6 5.3 1.3 M 0.0 0.0 2.4 47.2 M 4.3 11.7 1.8 58.4 0.4 5.4 24.6 0.4 5.4 24.6 0.4 12.4 9.1 1.8 0.0 0.0 25.4 1.8 5.4 1.8 5.4 0.4 5.4 24.6 0.4 12.4 9.1 1.8 0.0 0.0 2.4 47.2 M 1.8 58.4 0.4 5.4 24.6 0.4 12.4 9.1 1.8 0.0 0.0 2.0 4 1.8 0.0 0.0 1.8 1.8 0.0 0.0 0.0 1.8 1.8 0.0 0.0 0.0 0.0 0.0 1.8 1.8 0.0 0.0 0.0 1.8 1.8 0.0 0.0 1.8 1.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	-14.5 -23.9 X -30.5 X M - 8.2 -5.9 -21.4 1.4 - 3.5 M - 4.8 -5.1 -3.4 11.5 M X M - 1.7 -28.4 - 3.5 -10.2 -12.6 - 8.5 -10.2 -6.0 -6.3 M X -20.3 -49.7 -17.6 -15.2 -2.2 -1.4 -1.4 -4.4 - 8.2 -20.7 -7.7 -7.7 -3.9 2.9 -0.7 -6.1 1.4 -4.4 -3.5 -10.2 -2.2 -1.4 -1.5 M X M -1.7 -28.4 -1.7 -2.2 -1.4 -1.7 -2.2 -1.4 -1.7 -2.5 -1.7 -1.7 -2.2 -2.2 -1.4 -1.5 -1.5 -2.2 -2.2 -1.4 -1.5 -1.5 -2.2 -2.2 -1.4 -1.5 -1.5 -2.2 -2.2 -1.4 -1.5 -2.2 -2.2 -1.4 -1.5 -2.2 -2.2 -1.4 -1.5 -2.2 -2.2 -1.4 -1.5 -2.2 -2.2 -1.4 -1.5 -2.2 -2.2 -1.4 -1.5 -2.2 -2.2 -2.2 -1.4 -1.5 -2.2 -2.2 -3.6 -0.7 -0.2 -2.2 -3.6 -0.7 -0.2 -2.2 -3.6 -0.7 -0.2 -2.2 -3.6 -0.7 -0.2 -2.2 -3.5 -1.9 -1.5 -2 -2.2 -3.6 -0.7 -0.2 -2.2 -3.5 -1.5 -2 -2.2 -3.6 -0.7 -0.2 -2.2 -2.2 -2.2 -3.6 -0.7 -0.2 -2.2 -2.2 -2.2 -2.2 -2.2 -1.4 -1.1 -2.2 -2.2 -3.5 -2.2 -2.2 -3.5 -2.2 -2.2 -3.5 -2.2 -2.2 -3.5 -2.2 -2.2 -2.2 -3.5 -2.2 -2.2 -3.5 -2.2 -2.2 -3.5 -2.2 -2.2 -2.2 -3.5 -2.2 -2.2 -3.5 -2.2 -2.2 -3.5 -2.2 -2.2 -3.5 -2.2 -2.2 -3.5 -2.2 -2.2 -3.5 -2.2 -2.2 -2.2 -2.2 -2.2 -2.2 -2.2 -2	Resolute A Sachs Harbour Shepherd Bay A Tuktoyaktuk Yellowknife A ALBERTA Banff Brooks Calgary Int'l A Cold Lake A Coronation A Edmonton Int'l. A Edmonton Namao A Edmonton House Slave Lake A North Battleford A Prince Albert A Regina A Saskatoon A Swift Current A Uranium City Wynyard Yorkton A MANITOBA Bissett Brandon A Churchill A Dauphin A Gillam A Gimli Island Lake Lynn Lake Norway House Pilot Mound Portage la Prairie The Pas A Thompson A Winnipeg Int'l A ONTARIO Armstrong A Atikokan Earlton A Geraldton Gore Bay A Kapusca Sa Ka Notha Bay A Ottawa Int'l A Petawawa A		15 917 12 13 3 M 5 4 2 1 M 4 M 9 9 8 5 3 4 3 8 3 1 5 5 7 3 5 X 2 7 1 7 X 1 X 6 5 3 5 0 7 2 5 M 3 10 5 X 3 X 7 X 4 4 7 6 5 4 8 1 0 M 2 4 M 4 4 1 M 4 1 0 X	-13 -14 2 -8 -1 6 M 9 7 3 8 7 6 10 1 6 7 2 6 10 5 7 4 6 10 5 7 6 5 7 7 6 5 6 5 7 6 5 7 6 5 7 6 5 7 6 5 7 6 5 7 6 5 7 6 5 7 6 5 6 5 7 6 5 7 6 5 7 6 5 7 6 5 7 6 5 7 6 5 7 6 5 7 6 5 7 7 6 7 7 6 7 7 6 7 7 6 7 6 7 7 6 7 7 6 7 7 7 7 7 7 7 7 7 7 7 7 7	-26 -33 -30 -32 -26 -14 M -13 -20 -21 -18 -13P -16 -24 -16 -24 -15 -15 -15 -15 -15 -15 -15 -15 -15 -15	1.4 0.0 3.6 0.0 0.3 0.0 0.3 0.0 0.3 0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.4 0.5 0.6 0.7 0.6 0.7 0.6 1.7 1	0.4 0.5 2.9 2.3 3.5 7.1 M 4.8 3.6 3.8 3.7 M 3.8 3.7 1.2 4.8 0.7 1.2 4.8 0.3 3.7 5.0 3.8 4.2 3.8 2.6 4.6 0.7 3.8 2.8 3.7 5.0 3.8 2.3 M 2.0 3.8 2.6 4.6 0.7 3.8 2.8 3.7 5.0 3.8 2.6 4.6 0.7 3.8 2.8 3.7 5.0 3.8 2.6 4.6 0.7 3.8 2.6 4.6 0.7 3.8 2.6 4.6 0.7 3.8 2.6 4.6 0.7 3.8 2.6 4.6 0.7 3.8 2.6 4.6 0.7 3.8 2.6 4.6 0.7 3.8 2.8 0.7 1.2 4.8 0.3 3.7 5.0 3.8 2.6 4.6 0.7 3.8 2.8 0.7 1.1 1.8 3.7 2.8 2.8 0.7 1.1 1.8 3.7 3.6 3.5 5.7 2.8 2.8 0.7 1.1 1.8 3.7 5.0 M 1.5 5.7 2.8 2.8 0.7 1.1 1.8 3.7 3.6 3.4 3.5 5.7 2.8 2.8 0.7 1.1 1.8 3.7 3.6 3.4 3.5 5.7 2.8 2.8 0.7 1.1 1.8 3.7 3.6 3.4 3.5 5.7 2.8 2.8 0.7 1.1 1.8 3.7 3.8 2.7 7.7 2.0 M 1.5 5.2 8.7 3.7 3.8 2.7 7.7 2.0 M 1.5 5.2 8.7 3.7 3.8 2.7 7.7 2.0 M 1.5 5.2 8.7 7.7 2.0 M 1.5 5.7 3.8 2.7 7.7 2.0 M 1.5 5.7 3.8 2.7 7.7 2.0 M 1.5 5.7 3.8 1.2 M 3.3 4.8 3.5 5.7 3.8 7.7 5.8 7.8 7.7 5.8 7.8 7.7 5.8 7.8 7.7 5.8 7.7 5.8 7.7 5.8 7.7 5.8 7.7 5.8 7.7 5.8 7.7 5.8 7.7 5.8 7.7 5.8 7.7 5.8 7.7 5.8 7.7 5.8 7.7 5.8 7.7 5.8 7.7 7.8 7.7 7.8 7.7 7.8 7.7 7.8 7.7 7.8 7.8	Pickle Lake Red Lake A Simcoe Sioux Lookout A Sudbury A Thunder Bay A Timmins A Toronto Int'l A Trenton A Trout Lake Wawa A Wiarton A Windsor A QUEBEC Bagotville A Baie Comeau Blanc Sablon Border Chibougamau Fort Chimo A Gaspé A Grindstone Island Inoucdjouac Koartak La Grande Rivière A Maniwaki Matagami A Montréal (A int.) Natashquan A Nitchequon Port Menier Poste-de-la-Baleine Québec A Rivière du Loup Roberval A Schefferville A Sept-Iles Sherbrooke A Ste. Agathe des Monts Val d'Or A NEW BRUNSWICK Charlo A Chatham A Fredericton A Moncton A Saint John A NOVA SCOTIA Eddy Point Greenwood A Sable Island Shearwater A Sydney A Truro Yarmouth A PRINCE EDWARD ISLAND Charlottetown Summerside NEWFOUNDLAND Argentia VTMS Battle Harbour Bonavista Burgeo Cartwright Churchill Falls A Comfort Cove Daniel's Harbour Bonavista Burgeo Cartwright Churchill Falls A Comfort Cove Daniel's Harbour Bonavista Burgeo Cartwright Churchill Falls A Comse A St. Lawrence St. Albanoy St. John's A St. Lawrence St. Jahrsoy St. Jahrsoy St. Jahrens A St. Lawrence St. John's A St. Lawrence St. John's A St. Lawrence St. Jahrens A St.	-12 -12 -12 -12 -13 -10 -17 -9 -9 -14 -16 -17 -9 -9 -14 -14 -6 -16 -11 M -17 M -14 -6 -16 -11 M -17 M -14 -6 -16 -11 M -17 -7 M -18 -12 -12 -12 -12 -12 -12 -12 -12 -12 -12	8 5 6 0 1 2 8 7 2 8 7 2 8 7 2 2 2 2 2 2 2 2 2 3 1 1 1 1 1 1 1	$ \begin{array}{c} - 5 \\ - 4 \\ - 1P \\ - 5 \\ - 4 \\ - 3 \\ - 6 \\ - 1 \\ 0 \\ - 6 \\ - 5P \\ - 5 \\ - 1 \\ - 7 \\ - 2 \\ - 7 $	-19 -27 -15 -17 -22 -24 -32 -17 -17 -24 -30 -25 -13 -27 -20 -20 -31 -31 -30 -22 -12 -27 -21P -28 -21 -21 -20 -30 -20 -31 -31 -30 -22 -12 -27 -21P -28 -21 -21 -23 -31 -20 -30 -20 -31 -31 -30 -22 -12 -27 -21P -28 -21 -21 -21 -21 -21 -21 -20 -30 -20 -31 -31 -30 -22 -17 -21P -28 -21 -21 -21 -21 -21 -21 -20 -30 -20 -30 -20 -31 -31 -30 -22 -17 -21P -28 -21 -21 -21 -20 -30 -20 -36 -21 -21 -21 -21 -21 -20 -30 -20 -36 -21 -21 -21 -21 -21 -22 -17 -20 -30 -20 -36 -21 -21 -21 -22 -17 -20 -30 -20 -36 -21 -21 -21 -23 -31 -21 -22 -17 -20 -30 -20 -36 -21 -21 -21 -22 -27 -21 -21 -23 -31 -21 -22 -27 -20 -36 -21 -21 -22 -27 -21 -21 -23 -31 -21 -22 -27 -21 -21 -21 -23 -31 -21 -22 -26 -21 -21 -22 -27 -21 -21 -22 -27 -21 -21 -22 -26 -21 -21 -22 -26 -21 -21 -25 -22 -26 -21 -21 -25 -22 -26 -21 -27 -20 -20 -20 -36 -21 -21 -25 -22 -26 -21 -21 -25 -22 -26 -21 -27 -20 -20 -21 -21 -25 -22 -20 -21 -21 -25 -22 -26 -21 -27 -27 -21 -27 -27 -29 -20 -21 -27 -27 -27 -27 -27 -27 -27 -27 -27 -27	1.3 7.4 M 4.0 3.4 1.7 0.0 1.0 8.0 1.0 M 4.8 1.5 0.5 0.0 M 0.3 2.8 0.0 3.3 2.8 0.0 3.3 2.8 0.0 3.3 2.8 0.0 1.8 0.2 0.0 1.8 0.2 0.0 1.4 0.2 0.0 0.4 0.2 0.4 1.9 3.2 1.8 0.16 0.2 0.4 1.9 3.2 1.4 0.2 0.4 1.2 0.4 1.2 <th>- 7.4 0.8 M - 4.8 - 6.9 - 7.1 - 9.3 -10.0 - 8.0 - 4.9 x - 9.6 -10.3 - 15.6 -15.5 M x - 5.9 x - 14.0 M x - 12.1 x - 12.1 x - 12.1 x - 12.1 x - 12.1 x - 12.1 x - 12.1 x - 12.1 - 17.7 - 19.9 - 7.5 - 16.4 - 5.9 - 20.1 - 9.7 - 17.3 - 8.6 - 21.3 - 12.8 - 10.7 - 9.9 - 35.7 - 20.9 - 35.7 - 20.0 - 24.2 - 20.9 - 35.7 - 20.7 - 25.9 M - 22.6 - 32.7 - 25.9 M - 22.6 - 32.7 - 25.9 M - 22.6 - 32.7 - 25.9 M - 22.6 - 32.7 - 25.9 M - 24.2 - 20.9 - 35.7 - 25.9 M - 24.2 - 20.9 - 35.7 - 25.9 M - 24.2 - 20.9 - 35.7 - 25.9 M - 24.2 - 35.7 - 25.9 M - 24.2 - 20.9 - 35.7 - 25.9 M - 24.2 - 35.7 - 25.9 M - 21.8 - 11.5 - 14.3 - 0.4 - 18.2 - 12.7 - 5.9 - 20.7 - 25.9 M - 21.3 - 3 - 3 - 3 - 21.8 - 11.5 - 14.3 - 0.4 - 18.2 - 12.5 - 14.3 - 0.4 - 18.2 - 12.8 - 13.3 - 0.4 - 0.4 -</th>	- 7.4 0.8 M - 4.8 - 6.9 - 7.1 - 9.3 -10.0 - 8.0 - 4.9 x - 9.6 -10.3 - 15.6 -15.5 M x - 5.9 x - 14.0 M x - 12.1 x - 12.1 x - 12.1 x - 12.1 x - 12.1 x - 12.1 x - 12.1 x - 12.1 - 17.7 - 19.9 - 7.5 - 16.4 - 5.9 - 20.1 - 9.7 - 17.3 - 8.6 - 21.3 - 12.8 - 10.7 - 9.9 - 35.7 - 20.9 - 35.7 - 20.0 - 24.2 - 20.9 - 35.7 - 20.7 - 25.9 M - 22.6 - 32.7 - 25.9 M - 22.6 - 32.7 - 25.9 M - 22.6 - 32.7 - 25.9 M - 22.6 - 32.7 - 25.9 M - 24.2 - 20.9 - 35.7 - 25.9 M - 24.2 - 20.9 - 35.7 - 25.9 M - 24.2 - 20.9 - 35.7 - 25.9 M - 24.2 - 35.7 - 25.9 M - 24.2 - 20.9 - 35.7 - 25.9 M - 24.2 - 35.7 - 25.9 M - 21.8 - 11.5 - 14.3 - 0.4 - 18.2 - 12.7 - 5.9 - 20.7 - 25.9 M - 21.3 - 3 - 3 - 3 - 21.8 - 11.5 - 14.3 - 0.4 - 18.2 - 12.5 - 14.3 - 0.4 - 18.2 - 12.8 - 13.3 - 0.4 -
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