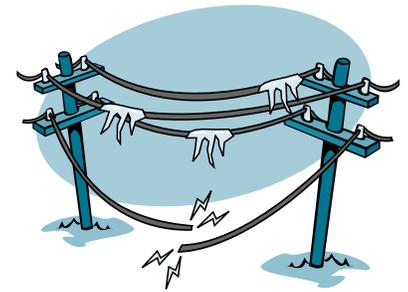


Ice Storm '98 !

by François Soulard, Doug Trant, Joe Filoso
and Peter Van Wesenbeeck



From January 4 to 10, 1998, three successive storm fronts dropped as much as 100 millimetres of freezing rain on central and eastern Canada. At the height of the storm, the area covered by freezing precipitation stretched from Kitchener and Muskoka in southern Ontario to the Eastern Townships of Quebec and to the Fundy coasts of New Brunswick and Nova Scotia. In the United States, the storm hit parts of New England and northern New York state. This study concentrates on Canada's St. Lawrence River Valley where total precipitation exceeded 73 mm in Kingston, Ontario, 85 mm in Ottawa and 100 mm in areas south of Montreal. By comparison, the largest previously recorded ice storms left some 30 to 40 mm of ice.¹



DEALING WITH THE STORM

- Over 18% of Canada's population, including 56% of Quebec's and 11% of Ontario's, were affected by the storm. More than one in ten Quebecers (11%) were subjected to precipitation exceeding 80 mm.
- Over 1,000 power transmission towers were toppled and more than 30,000 wooden utility poles were brought down.
- At the height of the storm, close to 1.4 million customers in Quebec and over 230,000 in Ontario were left without electricity.²
- More than 2.6 million people (19% of Canada's labour force) either had difficulty getting to work or were not able to get there at all. About 135,000 of these workers lived in municipalities where power was not fully restored for at least a week.
- Approximately 100,000 people had to take refuge in shelters.
- Nearly 16,000 Armed Forces personnel (almost 11,000 in Quebec and 5,000 in Ontario) assisted with emergency measures and the restoration of the power grid, the largest peace-time deployment of Canadian troops ever.

In comparison, 8,700 Canadian soldiers participated in the Red River flood relief effort in Manitoba in 1997, and about 450 in the Saguenay flood relief operation in Quebec in 1996.

- Soldiers teamed up with workers from 14 utility companies from six provinces and eight American states.
- The Canadian Red Cross Ice Storm relief fund had raised over \$10 million by mid-February 1998.³

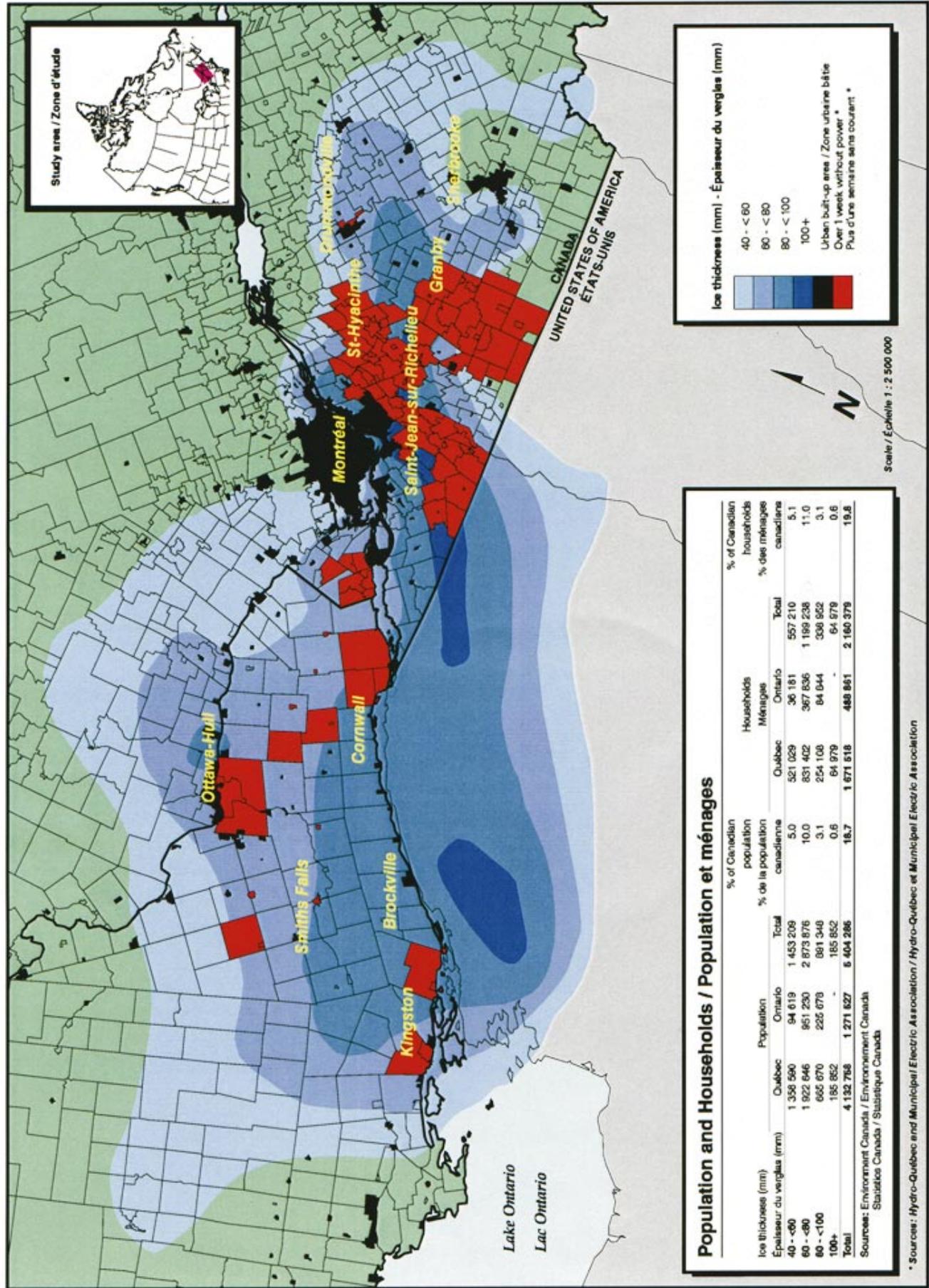
The map, **Population and Power Failure**, uses census sub-division boundaries and population figures from the 1996 Census. The legend displays the hierarchical classification scheme: the colour red (over 1 week without power) overlays the colour black (urban areas), which in turn overlays the ice-thickness (in shades of blue).

Environment Canada's Atmospheric Environment Service provided the preliminary ice accumulation map, last updated March 4, 1998.

1. In December 1986 in Ottawa and February 1961 in Montreal. David Phillips. Atmospheric Environment Service of Environment Canada. The Worst Storm in Canadian History? http://www.tor.ec.gc.ca/events/icestorm98/icestorm98_the_worst_e.html.

2. *Canadian Geographic*, March/April 1998, pp. 36-37; David Phillips, *loc. cit.*

3. Compare with \$30 million collected for victims of the Saguenay floods, and \$22 million collected for people affected in the Red River floods. <http://www.redcross.ca>; *CP/Edmonton Journal*, March 17, 1998.



Reproduced from The St. Lawrence River Valley 1998 Ice Storm: Maps and Facts, at <http://www.statcan.ca/cgi-bin/downpub/freepub.cgi>.



THE AFTERMATH

- Fifty-seven percent of urban areas in Quebec and 15% in Ontario, accounting for 19% of Canada's total urban space, were subjected to the storm.
- Over one-third (36%) of cropland in Quebec and almost one-quarter (22%) in Ontario were located in the 40 mm accumulation zone. In the worst-hit areas, the ice storm has translated into substantial losses for most farmers.
- Almost 5 million sugar maple taps in Quebec (23% of the total) and 285,000 (25%) in Ontario were located in the affected areas. (Quebec's maple syrup producers account for 70% of the world supply.) The Ontario Maple Syrup Producers Association estimates that it could take 30 to 40 years before production in eastern Ontario is back to normal.
- Nearly one-quarter of all dairy cows (274,000) were located in the affected areas, the majority in Quebec. Dairy farms are thoroughly dependent on mechanized milking, and cows that are not milked regularly become vulnerable to mastitis, an infection of the udder. Dairy cows that survived the power outages may never attain their pre-storm level of productivity.
- Milk processing plants were shut down and over 10 million litres of milk had to be dumped. However, 1.5 million litres were processed in American facilities and returned to Canada for consumption.

- Close to one-third of the 0.7% drop in Gross Domestic Product (from December 1997 to January 1998) was due to downturns in the electric power and construction industries. Some manufacturers benefited directly from the storm, including makers of telephone poles, batteries and specialized electrical equipment.⁴
- As of June 1998, over 600,000 insurance claims totalling over \$1 billion had been filed by Canadian households and businesses.⁵

For more information, see *The St. Lawrence River Valley 1998 Ice Storm: Maps and Facts*, at <http://www.statcan.ca/cgi-bin/downpub/freepub.cgi>.



François Soulard, Doug Trant, Joe Filoso and Peter Van Wesenbeeck are analysts with the Environment Statistics Program, Statistics Canada.

4. According to The Conference Board of Canada, the Ice storm resulted in a short-term loss of \$1.6 billion for Canada's economic output, of which \$1.4 billion originated in Quebec and \$200 million in Ontario. Economic losses for Montreal and Ottawa were estimated at \$585 million and \$114 million respectively. The Conference Board of Canada, *Economic Impact of the 1998 Ice Storm*.
5. Kovacs, P. *Now is the Winter of Our Discontent. Perspective*. Insurance Bureau of Canada: 4.2. June 1998.

STATISTICS CANADA NEW RELEASES

- ❑ Catalogue no. 11-402-XPE
1999 Canada Year Book
\$54.95 / \$54.95 US
- ❑ Catalogue no. 93F0020XCB96004
**The Nation Series:
Complete Edition**
\$60 / \$60 US

To order publications, dial toll-free
1-800-267-6677

Do you enjoy reading

CANADIAN SOCIAL TRENDS?

*Do you use our publication in your business?
How long have you been a reader?*

WE WOULD LIKE TO HEAR FROM YOU.

Send your comments to:

Editor-in-Chief,
CANADIAN SOCIAL TRENDS,
7th floor, Jean Talon Bldg.,
Statistics Canada,
Ottawa, Ontario,
K1A 0T6.

FAX number (613) 951-0387.

Internet e-mail: cstsc@statcan.ca.

