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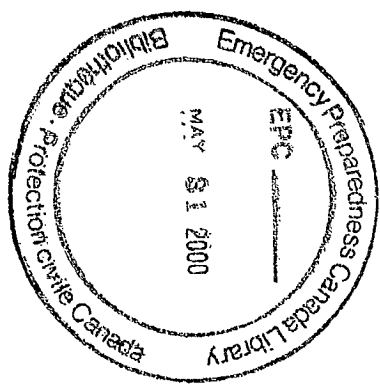
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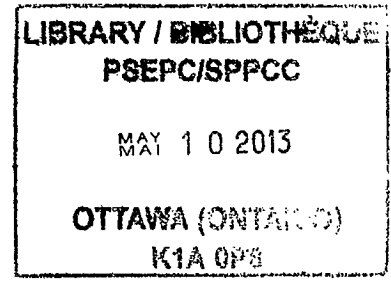
# Emergency Preparedness and Response Issues

## Queen's University Ice Storm '98 Study

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Emergency Preparedness Canada  
November 1998

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# EMERGENCY PREPAREDNESS AND RESPONSE ISSUES

## Queen's Ice Storm '98 Study

### Introduction

In parts of Canada, 1998 will be forever known as the year of the "Great Ice Storm". During the first week of January, an ice storm of unprecedented magnitude descended on eastern Ontario and southern Quebec.

Freezing rain that fell for five days, coating trees and hydro lines with ice, caused massive power outages. Telephone lines came down along with power lines making communication almost impossible in places. Slippery roads impeded travel and gas was in short supply.

*"At the height of the storm more than 200 Quebec communities declared a disaster; 1,291,500 residences (affecting 3,228,750) were without power; and 100,000 people were being accommodated in 454 reception centres. Some people in southern Quebec remained without power for up to four weeks. In Ontario, 57 [the actual number was 66] communities declared a disaster; 250,000 customers (1,500,000 people) were without power in Eastern Ontario."*

The 1998 Ice Storm (as of July 31<sup>st</sup>, 1998), compiled by Jacques Heneault, Office of the Senior Scientific Advisor, Emergency Preparedness Canada, July 31, 1998.

Under Ontario legislation, municipalities are the first line of response during emergencies. (If the local municipality cannot handle the emergency on its own, the provincial government provides assistance; and if the provincial government needs help, it in turn, seeks assistance from the federal government). Local politicians were quick to realize the severity of the situation in their own municipalities and began declaring emergencies and mobilizing a local response. Communities pulled together to help themselves. Volunteers quickly became the backbone of the response, aided by municipal staff and politicians, the provincial police and businesses and industries.

Local efforts were soon bolstered with outside utility and forestry crews and help from the provincial and federal governments. The first response was by local governments, agencies, and citizens, but needs soon exceeded their capacity to respond. Outside help began coming in within 24 hours and continued to build up for over a week. Initially outside help was organized at the local level. Some was initiated by requests from within the affected area to agencies outside. In addition, as word of the extent of the emergency

spread through the media, outside agencies began to send in help. The first help came as a result of previous networking and individual initiative. By the fourth day (January 12th) it was provided on a more organized basis.

The response of the provincial and federal governments can be considered under two headings: 1) that of the emergency measures agencies; and 2) the operational involvement of their various ministries. Emergency Measures Ontario (EMO) – the division of the Ontario Ministry of the Solicitor General and Correctional Services (MSGCC) responsible for emergencies receives the municipal declarations of emergencies, and decides what provincial response is appropriate, including requesting federal assistance. It also co-ordinates the response of provincial agencies and may call on any provincial or other resources considered necessary.

Facing an unprecedented emergency of such a large scale was challenging. EMO normally sends a field officer to any municipality declaring an emergency, but found itself trying to respond to 66 declared emergencies with only four field officers. High demand for supplies such as generators, batteries, candles, kerosene, and other fuels quickly created shortages and resulted in requests for these items from EMO. Unaccustomed to receiving demands for these kinds of supplies and equipment, EMO spent several days getting organized. Supplies were diverted to eastern Ontario early in the week following the storm. A generator working group responsible for locating and distributing generators powerful enough to provide back-up power for large buildings, was formed at the Provincial Operations Centre in Toronto. The Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) co-ordinated the distribution of generators to the farming community.

Locating and distributing generators was also part of the federal government's response. As well, the federal government expedited supplies coming from the United States through customs and deployed over 15,000 soldiers, the largest ever peace-time deployment of Canada's armed forces. The military deserves special mention. Not only did they respond on a huge scale with thorough professionalism, they arrived almost immediately bringing with them much needed equipment, vehicles, skills, and leadership.

Help was also provided by the Municipal Electrical Association, various utility companies from the United States and Canada, the Red Cross, Salvation Army, St. John's Ambulance, and volunteers who travelled hundreds of kilometres to the disaster area.

Soldiers and electrical, telephone and forestry crews worked in bad weather conditions to clear roads and repair damaged poles and lines. Shelters operated 24 hours a day, providing residents with hot meals and a warm place to stay. Door-to-door checks were conducted by various groups including the police, Royal Military College cadets, soldiers, and volunteers.

During the power outage, our society's dependence on electricity became only too clear. Left without heat, running water, and a way to cook food, people struggled to survive. Fortunately, few deaths resulted from the ice storm and overall there was little trauma.

Stresses were enormous however, particularly for the vulnerable: - the young, the elderly, and the sick. Emergency responders themselves were victims of the storm, trying to cope with their home situations and do their jobs at the same time. Millions of people were severely inconvenienced for several weeks.

The effects of the Ice Storm persist as recovery efforts continue. Flickering lights are still a cause for mild panic. Repair and upgrading of the electrical infrastructure is ongoing. If the experience taught anything, it showed that disasters can strike. Coping better next time means being better prepared, both individually and collectively.

## Queen's University Ice Storm '98 Study

Following the Ice Storm, Queen's University obtained funding from Human Resources Development Canada, Kingston Office, to study the local response to the ice storm emergency in 10 municipalities stretching from Kingston to Brockville along the St. Lawrence River.

Included were the Cities of Kingston and Brockville, the Town of Gananoque, the Village of Athens and the Townships of Frontenac Islands (Wolfe Island in particular), Front of Leeds and Lansdowne, Front of Escott, Front of Yonge, Rear of Yonge and Escott, and Elizabethtown. A variety of municipalities are represented ranging from Kingston, the second largest city in eastern Ontario (population: approximately 110,000) to the various Townships, which tend to be rural and sparsely populated (see Map1; Map 2 shows the major urban centres in eastern Ontario).

Approximately 200 interviews were conducted with local politicians, municipal staff, firefighters, police officers, farmers, members of the media, armed forces personnel, Queen's University staff, hospital workers, volunteers, and members of volunteer organizations. A few interviews were also conducted with employees of Ontario Hydro, Bell Canada, and various Ontario Provincial Ministries. The interviews were recorded on audio tape and written summaries are also available.

Information collected for the study includes several dozen post-storm reports, over 500 newspaper clippings, a variety of videos, and a collection of photographs. Some information on events outside the study area is available. There is also background material describing the project, giving a context for the ice storm and an overview of the material to aid in understanding the archives.

The original intent of the Queen's University Ice Storm '98 Study was to simply collect and organize the information in order to capture a piece of history and to provide material for further research and analysis. However, as the project progressed, numerous lessons in emergency preparedness and response emerged which was felt should be made available to emergency planners and responders. Further funding was secured Emergency Preparedness Canada and a report titled "Lessons in Emergency Preparedness and Response -- Queen's University Ice Storm '98 Study" was prepared.

Also arising out of the research were suggested response measures that require legislative change and a number of issues related to the ice storm emergency response that should be explored in some depth as a first step in improving future emergency response in eastern Ontario. This report looks at these issues and lists possible legislative changes.

The points of view expressed here are based only on the information collected and not on a review of available literature. The intent of the project was to record responses before memories faded. The key local players were interviewed along with a sample of others, but there has been no attempt to verify information or undertake a comprehensive study. However, the issues discussed here were raised by many of the interviewees and are

relevant to preparing for and responding to future emergencies of a similar nature. Errors, omissions and contradictions are inevitable. It is left to the reader to draw his/her own conclusions. This report should be read in conjunction with the "Lessons" report.

More information in a CD-ROM format is available from the Queen's University Archives. The CD contains written statements of all the interviews, a copy of this report, the "Lessons" report, a listing of all the material collected for the project, and summaries of how the emergency response was conducted in several of the municipalities studied.

For those wishing to delve deeply, all the material collected for the Queen's University Ice Storm '98 Study is deposited in the Queen's University Archives.

## **Issue #1 -Understanding the Consequences of a Prolonged Power Outage**

Unless one has lived through a long power outage, it is difficult to appreciate how life changes when electricity is not available. Coping without power during the 1998 Ice Storm revealed only too clearly how dependent we are on electricity. Homes were suddenly left without heat, lights, television, radio, stoves, microwaves, and hairdryers. In rural areas, where water is obtained from wells with electric pumps, there was no running water to bathe or flush toilets. At the beginning of the emergency, people melted snow and ice to get water (a slow process) and purchased drinking water from stores. Later, water was often obtained from local fire halls where generators had been installed. Basements flooded when sump pumps did not work. Many exhausting hours were spent baling water. When the water did rise, it damaged floors, walls, and furniture. The potential for damage to furnaces with long-term loss of heat in winter raises frightening possibilities. Food spoiled when it could not be kept frozen; and refrigerated medications and vaccines were ruined.

Communications were almost non-existent in some places, and disrupted in most of the study area. Finding out what was going on was difficult: televisions and electric radios were useless; telephones did not work when lines fell or when back-up batteries at switching stations were depleted; some newspapers were not publishing; and cellular phone and radio towers without back-up power could not transmit signals. Sitting in the car with the engine running became a way to get warm and listen to news reports.

Farmers without generators could not water livestock or milk dairy cows. Milk processing plants could not accept milk and over 10,000,000 litres were dumped in Ontario alone. Some farm animals died of exposure when barns could not be heated.

Driving became difficult when streetlights were not operating; rail lines were shut down when crossing signals, operating signals, and switches were no longer working; and fuel became a scarce commodity as gas could not be pumped without back-up power.

Banks and automated teller machines were shut down and there was a shortage of cash. Direct debit systems were not always operational and some stores began to accept I.O.U.'s. In areas where drug stores were closed, it became difficult to obtain prescription drugs.

Without computers, it was impossible to access vital information including phone numbers and addresses of emergency responders and vulnerable people, civic address lists, maps, and prescription information. Remote monitoring equipment was not transmitting data, requiring physical visits to crucial sites. Many schools, businesses, offices, and industries were shut down. A way of life we take for granted ceased to exist.

Inconveniences were severe (as one interviewee put it, "*it was the mother of all inconveniences*"). People experienced many stresses including:

- a) trying to stay warm;
- b) trying to cook and eat nourishing food;
- c) trying to do dishes and get clean;
- d) fatigue;
- e) long work hours;
- f) harsh working conditions;
- g) disruption of normal routine;
- h) coping with children home from school;
- i) coping with additional people in one's house;
- j) living in someone else's home;
- k) looking after neighbors, friends and relatives;
- l) isolation;
- m) dealing with uncertainty and lack of information (radio, television, newspapers, telephones, cell phones, and mobile radios were all affected to varying degrees);
- n) loss of income; and
- o) unanticipated expenses.

For a period, many essential items were difficult or impossible to find. Generators were in high demand and soon could not be found in stores within hundreds of miles of the disaster area. Also in short supply were batteries, flashlights, candles, kerosene, naphtha, lamp oil, wicks, propane, firewood, drinking water and fresh food such as milk, bread, eggs, vegetables and fruit.

Still, at the end of the emergency, people were buoyed by the acts of courage and generosity they had seen and experienced; and by the sense of community that was so strongly felt throughout the crisis.

## **Issue #2 – Assessing the Situation**

Responding to an emergency requires knowing what kind of a situation exists. When the circumstances are known, decisions regarding actions, resources and personnel can be made: who needs to be called into work; what supplies and equipment are required; should shelters be set up; will evacuations be necessary; is help from neighboring municipalities required; does the provincial government need to become involved; should an emergency be declared.

During the first few days of the ice storm, assessing what was happening was very difficult, both for those inside the affected area and those outside. For those inside the disaster area, there was little information available. A lack of communication with the outside world and the need to respond quickly meant that local response began in isolation. Reeves and mayors met with key municipal staff to decide how to handle the crisis in their own municipalities. It was not until several days after the worst of the ice storm hit that municipal officials began to know and think about what was happening beyond their own boundaries.

Deciding how to respond became more difficult as time went on. As the ice continued to accumulate, the situation became worse and worse. During the first few days, reconnaissance efforts were hindered by icy roads and weather conditions that precluded helicopter fly-overs. The unprecedented nature of the event prevented even those familiar with other emergencies, from truly understanding the implications of the situation for emergency response. The most crucial information- “When would power be restored?” -was also the most difficult to get. Information from Ontario Hydro was sometimes non-existent and often confusing, particularly at the beginning of the crisis. Hydro’s toll-free information line became known as 1-800-NO RESPONSE.

*“Identifying the scope and nature of the emergency was the most difficult [thing].”*  
Bill Leggett, Principal  
Queens University

*[The biggest problem was] “not knowing the extent of the damage and the length of time it [power] was going to be out.”*

Tom Smith, Ontario Hydro,  
Brockville

*"I talked to a number of people that... Thursday; they didn't recognize the damage. Friday they didn't recognize the extent of the damage... Saturday, same thing... and then when they got right into downtown Kingston... driving around the municipality you really recognized the extent... and I don't think that anybody probably recognized the extent of the emergency response if they weren't actually involved in the emergency response..."*

Bill Bishop, Commissioner,  
Human Resources, City of  
Kingston

*"... in this particular case there was virtually no warning to the event. It wasn't as though we all sat around waiting for generators to arrive before the first bit of ice hit our community. I mean, all the weather reports and all the indications suggested we were going to be fine, it wasn't an issue, that it would miss us. In fact, that evening, Wednesday night I sat there watching The National and looking at the situation in Montreal and just counting my blessings that our community wasn't having to cope with that, and kind of thinking 'Gee, I wonder if there isn't anything we as a municipality or as a province can be doing to kind of assist our municipal colleagues in Quebec' ... three hours later, I had a tree stuck in my roof."*

From the interviews with  
Gary Bennett, Mayor of City  
of Kingston

Some organizations were slower to ask for or accept help than they should have been, in hindsight. Electrical utility crews are used to dealing with emergencies and generally handle them on their own. For Nancy Taylor, Operations Manager for Utilities Kingston, the biggest problem was *"accepting the fact that it was more than we could handle ourselves. And asking for help."*

Outside the affected area, the response was often "What ice storm?" and "It can't be that bad." Persuading others that this was not an ordinary ice storm or an ordinary situation required some convincing.

*"Being farther away in Toronto, they didn't realize – they couldn't believe that this was possibly happening".*

Tom Smith, Ontario Hydro,  
Brockville

*"It was difficult for people who didn't live through it to really understand."*

Brian Ward, Ministry of  
Environment

The fact that it was a weekend two days after the worst of the storm, also slowed response from outside the disaster area. It was not until the Monday or Tuesday following the major power outages that occurred the previous Thursday (January 8<sup>th</sup>) that assistance started to become fully mobilized.

*"In Guelph [at OMAFRA's Head Office] the enormity of the disaster became evident on Monday January 12<sup>th</sup>.*

John Finlay, Ontario Ministry  
of Agriculture, Food, and  
Rural Affairs

*"EMO did not have a complete feel for the total impact of the storm from January 7<sup>th</sup> – 11<sup>th</sup>. Throughout the disaster it was difficult to track the precise situation throughout eastern Ontario from Toronto. Only someone there could be sure of the local situation."*

Joe Scanlon, Ottawa-Carleton  
and the 1998 Ice Storm:  
Sharing the Lessons Learned,  
Draft Report, pg. 27

The media and politicians played a crucial role in getting information out to places where the storm had not hit. A barrage of media coverage was generated when Prime Minister Chretien visited Wolfe Island with federal several cabinet ministers. Provincial politicians were also visible in the disaster area throughout the emergency.

*"Having our [OMAFRA's] Minister on television at a farm with the Premier and other high-ranking ministers was a boost and got the message through outside the area."*

John Finlay, Ontario Ministry  
of Agriculture, Food, Rural  
Affairs

### **Issue #3 – Levels of Response**

In Ontario, legislation and practice dictate that emergency response begins at the individual or household level and then moves outward to the local municipality, neighbouring municipalities, the provincial government, and finally to the federal government.

#### **Local Municipalities**

Official response to the ice storm emergency began at the local municipal level, as it should. Under emergency legislation, only the Head of Council (Reeve or Mayor) may declare a municipal emergency. Municipal staff cannot declare municipal emergencies, nor can the province of Ontario. During the 1998 Ice Storm, 66 emergencies were declared in Ontario, the highest number ever for any one event, and a number which would have been considerably higher had municipal amalgamations not taken place just days before the storm began. Ontario averages about 30 emergencies per year.

Most municipalities rose to the challenge of dealing with the consequences of the ice storm and took measures to keep their residents safe, warm, and fed. Previous training proved to be very helpful, but even politicians and staff with no formal training responded intuitively and did what needed to be done. Money was not an issue: those in charge simply said to their staff “if you need something, get it”. However, municipal employees, accustomed to working with tight budgets, continued to be fiscally responsible. The authority to act was also not an issue. Many interviewees reported not thinking about what authority they had; they knew a response was necessary and just did what needed to be done. The regular chain of command broke down. Staff who would not normally be making decisions, found themselves spending money and supervising various activities. Superiors trusted their employees to do what was required in a responsible way. There was also a shortage of workers as many staff were not available for various reasons. Some were away, and many were housebound with driveways blocked by branches, increased domestic responsibilities, coping with no power and flooding basements, or dangerous roads.

Municipal emergency plans had not contemplated an emergency on the scale of the 1998 Ice Storm. Plans were largely based on single-point emergencies where the geographic area and the number of people affected are much smaller and getting outside help is far less crucial. In some plans, the names, telephone numbers and addresses listed were out-of-date. Or even if contact information was up-to-date, telephones were not working and personal contact was difficult, if not impossible. Consequently, many plans were of little value and were therefore not used extensively during the ice storm emergency. Emergency plans should be revised to deal with widespread emergencies affecting whole municipalities and regions.

## Local Volunteers

That the residents of eastern Ontario coped as well as they did throughout the crisis is due to many acts of human kindness, courage and generosity. Emergency responders and volunteers alike gave their time and strength. Bob Crawford of the City of Toronto Fire Service sums it up this way:

*“The people of Kingston (where Bob Crawford was located during the emergency) should congratulate themselves for rising to meet the occasion. It was very reassuring, when I came back to Toronto and looked at our municipality here. It made me feel good to think that people are capable of responding in that kind of way to adversity.”*

Neighbours helped neighbours, friends helped friends and strangers helped strangers.

Volunteers became the backbone of the response. However, the sheer numbers of volunteers in some communities created the need to develop systems to manage them. In some cases, volunteers were screened (the police did background checks and social services staff asked questions). In smaller communities, where people are well known to each other, this was unnecessary. Some municipalities set up databases with volunteers' names, phone numbers and skills and called people when they were needed. Neighbours looked after one another during the emergency and were instrumental in identifying people who were in high-risk situations. In one case a neighbor kept a house from burning down:

*“Neighbours were generally very supportive of each other, Glenn Gow adds. Many people phoned the fire service when something seemed wrong on their street. He recalled a fire in the Crystal Springs area near the end of the ice storm. A doctor had emptied his fireplace, put the ashes in a cardboard box and put them in his shed. At some point during the night, the shed caught fire. An old woman living nearby phoned the fire service, and they were able to keep the fire contained to the shed. “Had it not been for that senior citizen taking the initiative to phone us about it, there’s no doubt in my mind that he would have lost that end of his house, at least his kitchen anyway, along with that shed,” Glenn Gow said. “We were able to get there because of her call. So the neighbourhood watch increases I think, during these kinds of incidents, it just increases. People really look out for other people.”*

Glenn Gow, Fire Chief, City  
of Kingston

People helped total strangers. For example, people with power at their homes went to shelters and offered others a place to stay. *“This happened about three times, that somebody would come [to the shelter] and take a whole family away to shelter them in their home.”*

Tilly Nelson, Administrative  
Head, Loyalist Collegiate  
and Vocational Institute,  
Kingston

Many interviewees pointed out the need to create a database of volunteers and their skills as part of the municipality's emergency plan, so the right people can be contacted quickly should another emergency occur.

### **Outside Assistance**

Help from outside the disaster area came via the "front door" and the "back door." Front door help was co-ordinated by various ministries of the federal and provincial governments. Back door help was both offered and sought. Municipal employees contacted colleagues inside the disaster area to offer assistance and municipal staff facing the emergency called their contacts in other municipalities to request help. Previous networking proved valuable in securing aid from municipalities outside the disaster area. Help was generously provided, with many municipalities charging little or nothing at all. Municipalities that provided aid will, however, be expecting a reciprocal response from those they helped, if there is a future emergency.

### **Generators**

The ice storm emergency was first and foremost a power emergency. With no electricity, finding alternate power sources became the top priority. Generators were the most sought-after commodity. Generator working groups, which did nothing but track down and distribute generators, were formed at both the provincial and federal levels. During the emergency, installing a generator or using one already in place meant many facilities did not have to be evacuated that otherwise might have been (i.e., hospitals, seniors' homes and jails). Fortunately, only a few evacuations were necessary. Generators were also used at shelters, stores, gas stations and Bell telephone switching stations. Farmers used generators to water livestock and milk dairy cows. Generators were employed to keep signals transmitting from radio towers. At private homes, generators provided heat, light, and water, and were used to pump out flooded basements.

A related problem was trees. As the ice accumulated, branches came down and trees were uprooted. In the process, they took down power and telephone lines, particularly at the street and individual household level. The result was streets and rural roads blocked with live wires and fallen branches. The danger of hanging branches coming down unannounced at any time created another safety hazard. This added to the difficulty of identifying problems and mobilizing resources. Fire engines could not get to all places and delivering messages by foot or vehicle was time consuming. In many areas, the power grid was turned off and roads were cleared of branches with snowploughs. Incredibly, there were very few injuries but calls to the police and fire departments were many times above normal, straining their resources.

## **Shelters**

The next priority was setting up shelters where people could get warm, eat a hot meal, and stay overnight. Generators had to be acquired for many of the shelters. Other shelters were located in facilities that already had generators such as Brockville and Kingston Psychiatric Hospitals and some schools.

Health Canada had a large supply of cots in Ottawa, which were transported to shelters all over eastern Ontario. The shelters tended to be heavily used during the day but most had only a few overnight guests.

The large number of shelters that were set up in the United Counties of Leeds and Grenville created some problems. The OPP did not have the manpower to position an officer at each shelter 24 hours per day; Health Unit officials had difficulty inspecting them all; and County officials had trouble keeping track of where they all were and what services were being provided at each one.

The emergency plan for the Regional Municipality of Ottawa-Carleton calls for the Region to set up and run shelters during an emergency. During the 1998 Ice Storm emergency, the Region's plan was not followed and individual municipalities instinctively set up their own shelters. Some emergency responders have suggested trying to reduce the number of shelters during the next emergency or designating fewer for overnight accommodations. (Kingston used city buses as mobile shelters where people could get warm, have a bite to eat, drink something warm, and be informed of the latest developments.) However, the shelters became important community gathering places, helping to relieve feelings of isolation and reduce anxiety. People met friends and neighbors at the shelters and their children played together. The shelters were also heavily used to disseminate information. Reducing the number of shelters may make the response easier for emergency officials, but could make life more difficult for residents who are reluctant to travel further to get to a shelter, or who are hesitant to go to a place they are not familiar with.

## **Urban vs. Rural Municipalities**

The emergency response was somewhat uneven across municipalities, partly due to the state of preparedness of individual municipalities, but also due in part to the differences between urban and rural areas. Urban areas, which are more densely populated, were a priority for Ontario Hydro and had power restored sooner than rural areas. Urban municipalities with more staff, greater administrative capacity, and better resources and facilities were better equipped to handle the ice storm emergency. Rural areas are not only sparsely populated, but have fewer economic and public services, and consequently, the effects of the ice storm were different. The capacity of small municipalities to respond was limited. It was not a matter of competence but rather having a less sophisticated and smaller public sector with fewer resources. The larger geographic area of rural municipalities was also a factor in the emergency response. Greater traveling

distances in rural areas made response more difficult and time consuming. Door-to-door checks took longer; and there was more road per house to clear and maintain. Rural residents also had to contend with having no running water, unlike urban residents whose water is supplied under pressure. On the other hand, more rural residents had an alternate heat source in their homes. Urban residents would be well advised to consider installing an alternate source of heat in their own homes in the future.

These differences were not always well understood by urban-based response agencies and emergency responders unfamiliar with the nature of rural areas. This partially explains why rural needs were not always well understood during the emergency, resulting in a delay in developing appropriate responses.

As already discussed, emergency legislation encourages municipalities to look after themselves before considering the circumstances their neighbours. As a result, assistance did not always get where it needed to go most during the ice storm. In the Kingston area, the military started doing door-to-door checks in the City and worked its way out to the rural areas. Military officials indicated that their assistance was needed more in the rural areas and that is where they should have started, working their way in towards the City. Quite understandably, Kingston officials felt some ownership over the troops at CFB Kingston (since the base is located in their municipality), and attempted to commandeer soldiers from the base and cadets from the Royal Military College (also located in Kingston), for themselves. (A Signals Regiment from CFB Kingston initially worked in Kingston and then was re-deployed to Quebec). However, in actuality, military troops are a national resource and should therefore be available equally to all municipalities and distributed according to need.

In other instances, urban municipalities, including the City of Kingston, did look beyond their boundaries, offering help to their neighbours and welcoming residents from other municipalities into their shelters. Some urban areas, such as Gananoque, kept their shelters open longer than would otherwise have been necessary, to specifically accommodate the needs of rural residents.

*“Local governments wish to make their own decisions about how their resources are deployed. They are inclined to look after their own needs before they devote resources to another municipality – even if others are in greater need.”*

Joe Scanlon, Ottawa-Carleton and the 1998 Ice Storm: Sharing the Lessons Learned. Draft Report, pg. 71

## **County and Regional Response**

Some problems were experienced in the United Counties of Leeds and Grenville. Individual municipalities were running their own emergency response, as they are

supposed to under the legislation, but some services (such as social services and policing) are provided by or are co-ordinated at the County level. Further complicating this situation was the fact that municipal amalgamations had taken place just days before the storm and no county Warden had yet been elected. Bonnie McIsaac, Ontario Ministry of Community and Social Services, described the situation this way:

*“In Leeds-Grenville there is the separated City of Brockville and the United Counties of Leeds and Grenville which had just amalgamated from 22 to 14 townships on January 1, 1998. There was a leadership vacuum in the United Counties and the response to the ice storm suffered. The election for warden had not yet taken place. There was a definite power struggle between the individual townships and the United Counties. This resulted in duplication in staffing and equipping the emergency shelters, in the collection of food and the distribution of food vouchers and in accountability. It became such a disorganized mess that the Provincial Operations Centre in Toronto assigned one of their coordinators to the United Counties of Leeds-Grenville. Subsequent to that, an interim Warden was assigned to try and deal with the chaos. It did get somewhat better. There were also long standing struggles between the United Counties and the City of Brockville with respect to where the donations of food would come from, who could access the food donations, who would man the control centre. That was the downside. The upside was, at the end of it all it seemed to have forged stronger political relationships and relationships between the two social services departments. The responses of Lanark County and the City of Brockville were very smooth. Both had plans in place and strong leadership.”*

Howard French, Reeve of the Township of Rideau Lakes, who was elected interim Warden (and eventually Warden) of Leeds-Grenville had the following to say:

*“I certainly would not have left Rideau Lakes to take on the other position of responsibility [Warden] had I not felt that first off that there was somebody that could be left in charge and secondly that I thought we had things well in hand.”* Reeve French clearly felt his first responsibility was to his own municipality, but the widespread nature of the ice storm emergency required a co-ordinated response from the local municipalities and the County.

Some of these problems go back to the nature of the County as a municipality. Counties differ from other municipalities in being a rather loose confederation of local municipalities, with limited responsibilities. They exist to provide a limited range of services where economies of scale require a larger area than is afforded by any of the smaller local municipalities. In the case of Leeds and Grenville, secondary but not local roads and streets, social welfare and two homes for the aged are the responsibility of the County. The head of council, the Warden, is chosen annually by the county council that is composed of the reeves and deputy reeves of the townships, villages and towns making up the county. The county has limited administrative and professional resources, and no county council is likely to act contrary to strongly held views of a constituent municipality. The City of Brockville and the Town of Gananoque are not part of the County, although there are some joint service arrangements.

In the Kingston area, the County of Frontenac had been dissolved as of January 1, 1998. As a result of amalgamation, the adjoining Townships of Kingston and Pittsburgh had merged with the City of Kingston to form a new City of Kingston. The other thirteen townships had amalgamated to form four new townships: -North, Central, and South Frontenac Townships, and the Township of Frontenac Islands-, and the county functions were transferred to the townships.

Regional governments are somewhat like counties in having an extensive geographic area of jurisdiction. They are however much more powerful having more responsibilities and direct election to regional council of at least some members. Regions include cities, unlike most counties. Tension between local and regional governments is an ongoing problem. The local municipalities are not subordinate to the region, although in some respects they must conform to regional policies. In the case of the ice storm, two of the key activities, -shelters and electrical power-, were looked after locally and the Regional Municipality of Ottawa-Carleton had only a minor role.

There were also reports of municipalities "hoarding" resources, again as a result of people looking inward instead of outward. Being at the edge of the disaster area, Kingston received many of the shipments of donated goods coming from points further west. Kingston kept what it needed and tried to distribute the rest, becoming a *de facto* regional supply center. Kingston had not planned for this role and had trouble finding warehousing space. Eventually the local armouries was used, not the best place according to local military officials, who felt the armouries should have been left available to house troops. Not having planned to play a regional role, and busy responding to the needs of its own residents, Kingston became a bottleneck in the staging point for deliveries of supplies to points further east. There was no alternative found in the circumstances.

Again, this situation resulted from the widespread nature of the ice storm emergency, a circumstance not anticipated by local municipal emergency plans or by provincial emergency planning organizations.

### **Emergency Measures Ontario**

In general, people interviewed for this study indicated they had little or no contact with EMO, particularly at the beginning of the emergency. Some interviewees tried to contact EMO officials during the first stages of the emergency but could not get through on the phone lines (e.g., Howard French, Reeve of the Township of Rideau Lakes). Aware they probably had their hands full, he set about seeing to the immediate needs of his community. French's experience was typical and similar to that of Gary Bennett, Mayor of the City of Kingston:

*"Q: In your first interview you pointed out that they (EMO) were three days late. Were they effective once they got to Kingston?"*

*"I think they played an important role once they got here. The difficulty for EMO, once again, is they have limited resources and they were dealing with ... normally they deal with 20 or 30 emergencies a year, and this year they've dealt with something like 200 already, because there were so many communities across Ontario that declared emergencies. In fact ... they said the number of municipalities that declared emergencies was actually three times that [if you think of them in their old, unamalgamated state]. So I think [Emergency Measures Ontario] was no different than anyone else in the province, they were just absolutely overwhelmed with the magnitude of it. In fairness to them I think they were in the same situation as someone like Ontario Hydro, the cable companies, Bell Telephone or whoever. Nobody has those kind of resources just sitting on a shelf, ready to pull off."*

*"And actually a lot of the [EMO] relief effort was further east from here. There were parts of Ontario that had already felt the effects of the storm, so a lot of EMO's resources had already been dedicated further east, and I'm sure they were probably co-operating with the province of Quebec too ... So the Ontario Emergency Operations Centre was an important participant in the process. It's just that initially at that table there wasn't anybody there with us. And I guess that was my comment, that in an emergency you have to recognize that you have to be prepared to deal with the situation, probably at least for the first 24 or 48 hours, on your own, so you're going to be in some ways isolated, and you're going to have to be resourceful and just rely on yourself, your wits and your own resources, initially, because it takes time to bring resources to bear on an emergency situation ... It's not a criticism; it's just a recognition that that's the way the system works."*

*If it had been a train derailment or a plane crash, the situation with EMO might have been very different, Gary Bennett notes, but the ice storm was unique.*

*Q: It's just a little ironic that one of Kingston's councillors is a full-time employee with Emergency Measures Ontario, and here we are unable to get their attention during the first two or three days.*

*"Isn't it. Actually he [Randy Reid] had been sent on to some community further east from here. He'd already been sequestered and gone. So I couldn't even call him. He'd already been resourced out of the community."*

From the interviews with  
Gary Bennett, Mayor City of  
Kingston

Frustration with EMO was also felt in the Regional Municipality of Ottawa-Carleton.

*"One of the first calls the original generator person made was to provincial EMO. Five hours later, an officer called back to say the province could not supply generators. Some days later, EMO wanted to know what generators were available and where they were*

*going. Annoyed by the initial refusal, the generator team ignored the requests from Toronto and insisted on running its own show.”*

Joe Scanlon, Ottawa-Carleton  
and the 1998 Ice Storm:  
Sharing the Lessons Learned.  
Draft Report, pg. 56

EMO was not prepared to handle such a large-scale emergency particularly at the outset. Typically, EMO sends a field officer to any municipality that declares an emergency. During the ice storm EMO found itself dealing with 66 declared emergencies and just 4 field officers. Greater demands than ever before were placed on the Provincial Operations Center (POC) and staff who had never worked an emergency were pulled in from other divisions of the Ontario Ministry of the Solicitor General and Correctional Services.

EMO found itself in another unusual situation, receiving many requests each day for generators and other commodities in short supply such as batteries, flashlights, candles and various types of fuel. The POC also received calls from municipalities offering assistance and calls from other municipalities requesting help.

In response, EMO set up a special working group to locate and distribute generators. It was decided that existing networks would be used to get the other supplies to eastern Ontario. Suppliers such as Canadian Tire were contacted and asked to divert supplies to the disaster area. This approach worked, but stores ran out of many items before the system was put in place.

The concept of “twinning” was born at EMO, during the first weekend of the ice storm emergency. Municipalities offering assistance were matched with municipalities asking for help. The first match was made between Toronto and Ottawa, but when it was realized that the situation in Ottawa was well in hand, Toronto was twinned with Kingston and Smiths Falls. The twinning between Toronto and Kingston had already been arranged directly between the two mayors on Thursday evening. Toronto Mayor Mel Lastman gave the go-ahead for City staff to travel to Kingston and give whatever assistance was required. Hydro and forestry crews came, along with experts in emergency planning and response. Benefits flowed both ways. Kingston staff got much needed help, saw different work practices in action and learned about emergency response command systems. On the other hand, Toronto staff gained valuable experience and insight:

*“[from an emergency management experience point of view] it was great. It was fabulous. It’s the only way to go. There’s nothing like being a part of it...to be in that, you can’t buy that kind of experience. You can’t go to enough courses to learn that.”*

Warren Leonard, Toronto  
Police Services, City of  
Toronto

## Provincial Ministries

Various provincial ministries set up their own head office response units in addition to being present at the POC. Two such Ministries were the Ontario Ministry of Transportation (MTO) (St. Catharines) and the Ontario Ministry of Agriculture, Food, and Rural Affairs (OMAFRA) (Guelph). Local Ministry officials in eastern Ontario praised the efforts of their head offices but felt some frustration that they were not free to set their own priorities:

*"Sometimes there was frustration that they [head office] didn't sense the emergency because they weren't here on the front line. My #1 priority might be #10 on their list because they were responding to a bigger area. They were hearing the need but we were left to direct the operation pretty much ourselves. They really didn't interfere with us a lot. They were quite helpful actually. I don't know of any issue that was left undone."*

Wayne Brydges, Head of  
Engineer Services, Ontario  
Ministry of Transportation

*"This debriefing [EMO's Postmortem of Ice Storm '98] was a fresh reminder for Kathy [Moore-Regional Director of Eastern Ontario, Ontario Ministry of Transportation], of the frustrations that she and so many other MTO employees had experienced during the storm as they were not authorized to use ministry resources to help locally unless EMO or municipal officials requested it."*

*As a result, the Kemptville luncheon was a good opportunity to reinforce to staff why it is so important during a crisis to follow the process set out in the ministry's and the province's emergency plans.*

*Using a hospital analogy, Kathy talked about the one doctor who takes charge during a disaster so that limited medical resources are used to deal with the most critically injured first. A similar system of centralized authority was put in place during January's Ice Storm when EMO's provincial operations centre took control of all activities in eastern Ontario. MTO was not allowed to act on its own, but had to wait and follow specific directions from Toronto."*

From "MTO Eastern Region  
Staff Reminisce at Ice Storm  
Luncheon"

The Provincial ministries have emergency plans, but were not prepared for this type of widespread emergency:

*"[Ontario] Ministry of Community and Social Services were not prepared for this emergency. I am off to Toronto tomorrow and Friday and part of what will be discussed with us will be the Ministry Plan, what should be in place, a nuclear plan, but also probably the expectations and requirements for each area office to have a plan in place."*

Marvin Valensky, Ontario  
Ministry of Community and  
Social Services

*“Twice a year preparedness exercises hypothesize separate problems but did not anticipate they would happen all at once. Nor had they anticipated the inability to pump fuel and warm and feed staff.”*

Wayne Brydges, Ontario  
Ministry of Transportation

Emergency plans did not contemplate the loss of communications systems that occurred. Plans were predicated on being able to use telephones, computers, fax machines and photocopiers. In addition to now planning for widespread emergencies, emergency planners will need to put systems in place to deal with severe breakdowns in communication.

### **Federal Response**

*At the federal level the “coordinating effort involved the identification, procurement and movement of a number of key resources from across Canada and from throughout the United States. These included generators, transformers, cots, medical supplies, telephone poles, etc. In addition, the federal assistance was able to facilitate the cross border movement of emergency supplies and personnel through Canada and United States customs and to arrange a waiver on restrictions on the movement of heavy loads on some state highways on weekends. Federal agencies provided information and assistance in the areas of critical incident stress management, the management of emergency shelters, disposal of dead animals, etc...”*

Michael Braham, Director,  
Emergency Programs and  
Exercises, Emergency  
Preparedness Canada, from a  
letter to the Ice Storm '98  
project dated April 23, 1998.

The federal government also provided troops via the Ontario and Quebec emergency measures organizations. Over 15,000 troops from across Canada were deployed, the largest ever peacetime deployment of Canadian soldiers. The military proved to be invaluable to emergency response and their efforts were highly praised by many interviewees.

During the ice storm, federal troops in Ontario were under EMO's command. The role the military was permitted to play was dictated by EMO. Restrictions on troop activities created a problem: some troops felt hampered in their efforts to provide assistance because medical personnel were unable to use their skills to assist those in need. (Joe Scanlon, Ottawa-Carleton and the 1998 Ice Storm: Sharing the Lessons Learned, Draft

Report). Legislative restrictions prevented military personnel from directing traffic, a role that would have been useful during the ice storm. One military officer interviewed felt that the military's mandate should have been broader from the beginning, with the military left to decide how best to fulfill that mandate, rather than EMO changing that mandate during the emergency.

Other disagreements arose between the military and EMO:

*"The military's disagreements with EMO stemmed from a difference in philosophy. EMO's approach, -as explained earlier-, is that municipalities must take care of their own needs, asking for help only when that was impossible. That is what might be called the "pull" approach. The military operates on a completely different philosophy - what it calls a "push" theory. It keeps pumping in supplies until it is clear that all needs are met. Then it starts making decisions about what is appropriate. Its view is that when people are in need there is no point in waiting until they make up their mind about exactly what they want. Later, any unneeded supplies can be reallocated."*

Joe Scanlon, Ottawa-Carleton  
and the 1998 Ice Storm:  
Sharing the Lessons Learned.  
Draft Report, pg. 60

A further difference was management style. EMO tended on occasion to micro-manage even though it had neither the knowledge nor the resources to do so effectively. The military style is much more to define problems and assign responsibility, expecting the individual on the spot to use his/her initiative and judgment. At the operational level, they act on the request of local officials.

## Summary

In summary, municipal response to the ice storm emergency was swift and vigorous, if somewhat uneven and disorganized. To fare better in future emergencies, municipalities need to do more planning and preparing ahead of time: -municipalities with plans coped better than those without plans, and previous training proved helpful. New plans need to deal with widespread emergencies as well as single-point emergencies.

Provincial and federal responses were invaluable and functioned at two levels. The field operational bodies acted quickly and effectively. However, the central offices took longer to comprehend the problem and to act. Three exceptions were OMAFRA, which has a long tradition of keeping in touch with the local farming community, MNR with long experience in dealing with emergencies in the form of forest fires, and MTO with generations of responsibility for maintaining and clearing major roads. To reduce the delay of central response during future emergencies, senior levels of government need to prepare plans for responding to widespread emergencies that can affect millions of people. In addition to fulfilling their traditional roles of providing advice and mobilizing

their own resources, provincial and federal governments need to be prepared to procure needed supplies and equipment during some emergencies. They should also review the way in which they are organized to make decisions in an emergency.

The legal role regional governments and counties are permitted to play during emergencies needs to be clarified and their roles accounted for in local emergency plans. The role urban municipalities should play in assisting their rural neighbors also needs to be explored, as emergencies do not conform to political boundaries. This is particularly true of the urban-rural relationship.

### **Recommended Changes at the Provincial Level**

Interviewees identified the following issues that should be considered by the Province:

1. Change legislation to require gas stations along Highway 401 to have back-up power for their fuel pumps.
2. Change legislation to require seniors' homes and facilities that house other groups of vulnerable people to have back-up power.
3. Change legislation to require radio stations to have back-up power at their broadcasting offices and their towers.
4. Change legislation to allow members of the military to direct traffic.
5. Clarify authority to remove people from their homes.
6. Clarify authority to commandeer facilities for use in an emergency.
7. Clarify liability and workers' compensation issues for volunteers and municipal staff working within and outside municipal boundaries during an emergency.
8. Prepare public service announcements (PSA's) ahead of time for use during emergencies. Having PSA's prepared in advance of emergencies was mentioned by a number of interviewees. If EMO prepares generic PSA's local municipalities can adapt them for their own use. This is more efficient than each municipality preparing its own.
9. EMO should use a web site and/or e-mail to distribute information during emergencies.
10. Clarify who should request a psycho-social response if it is required during or after emergencies.

11. Stress individual and household preparedness in planning and education efforts. Consider combining Fire Prevention Week with Emergency Preparedness Week.
12. Consider building code changes to require both battery and direct-wired smoke and carbon monoxide detectors in homes.
13. Consider building code changes that would reduce basement flooding during power outages.
14. Educate municipalities regarding the role of the military during an emergency and how their help is to be requested.
15. Consider cross-training staff in other divisions of the Ministry of the Solicitor General and Correctional Services, especially the Fire Marshal's Office, to assist EMO during emergencies.
16. Use the Ice Storm as a new standard for emergency planning, similar to the way Hurricane Hazel is used as a standard for flooding.
17. Examine how the concept of "twinning" should be used in emergency planning and how twinning can be co-ordinated with mutual aid arrangements used by Fire Departments.
18. Examine the feasibility of instituting an emergency broadcast system such as the one that exists in the United States.

## **Issue #4 – Our Increasing Vulnerability**

### **Technology**

More and more, we are dependent on electricity and on a constant supply of electricity. Electrical power is vital to equipment and processes new technology has made available to us.

“Just-in-time” delivery systems have streamlined manufacturing operations and reduced the need for warehouse space. However, if the supply of raw materials is disrupted operations must be shut down almost immediately because there is no stock on hand.

Computers are used to store vital information – maps; names, addresses, and phone numbers of employees and clients. How will employees and clients be contacted during an emergency if phone numbers and addresses are unavailable? The Kingston Community Care Access Center which provides home care to the elderly, the infirm and patients recently released from hospital, found itself without a client list during the ice storm and had to gather whatever information it could from rolodexes on employees’ desks. Eventually all clients were contacted, but the process took longer than it should have.

In the ice storm emergency, maps and civic address lists were needed to call in staff and to ensure that everyone was accounted for during the door-to-door checks that were conducted. Maps were also needed to keep track of the location of downed wires and transformers, which hydro lines had been repaired and the emergency access routes that were open. Out-of-town crews needed maps to get where they were supposed to be going. Up-to-date hard copies and back-up copies of information that is vital to emergency response should be kept at all times.

### **Hospital Restructuring**

Patients are being released from hospital earlier than ever before and along with the chronically ill and the elderly are often dependent on electricity to run equipment that helps keep them alive and well. Without the use of the equipment they required, many people had to be hospitalized during the 1998 Ice Storm, creating a shortage of hospital beds. A shortage of hospital beds will continue to be a problem during some emergencies as more and more beds continue to be closed across the Province. It was fortunate that there were few injuries requiring hospitalization during the emergency or the shortage of hospital beds would have been even more acute.

Both Brockville and Kingston Psychiatric Hospitals were used extensively during the emergency as shelters. These facilities had full back-up power and extra space, which was created when former patients were moved into the community. The two hospitals

are slated to close which would leave Kingston and Brockville without these valuable facilities when another emergency occurs.

Along with psychiatric patients, vulnerable people such as those with developmental and physical problems are being de-institutionalized and moved into the community. During emergencies, they are generally less able to look after themselves and often have special needs which must be looked after by emergency responders, putting more pressure on the response effort.

Thus the day-to-day operations of businesses and our health care system are becoming more and more efficient, but are leaving society without the redundancy of resources that proved valuable during the response to the ice storm emergency.

### **The Elderly**

Many of the elderly, who are particularly vulnerable to cold temperatures, were reluctant to leave their homes during the ice storm crisis. Some did not want to leave their pets, an issue that clearly needs addressing; others were frightened, unwilling to leave familiar surroundings and unsure of the situation that awaited them at the shelters.

On the other hand, some older people were better equipped to handle the ice storm emergency than their younger neighbours. Howard French, Reeve of Rideau Lakes Township, noted that one of his disappointments was that *"people under 30 ... didn't cope as well as the ones over 65, -who could remember when they didn't have power... and they knew how to look after themselves"*. Yet, this also presented a problem. Because they felt they were coping well, the elderly became even more reluctant to leave their homes, a situation that could have led to more deaths from hypothermia (since one symptom of hypothermia is impaired judgment) if the weather had turned colder. As our population ages, developing strategies to help the elderly deal with emergencies will become more important than ever before.

## Issue #5 – Responders

The pervasive and long-lasting nature of the Ice Storm emergency taxed people's ability to cope. Individual, private, and public resources were stressed and massive amounts of outside aid were required. *"The nature of the emergency was such that it affected everyone and many who could have helped were in crisis themselves. Some simply could not cope and got out of town."* (Marvin Valensky, MCSS). For others, it was a very exciting experience and many people rose to the challenge before them, taking on far more responsibility than their jobs demanded.

The key to providing a successful response was making sure the right person was doing the right job, and having enough people and supplies. A massive operational response was called for, not a high tech or technical response and not a policy and process driven response. Responders needed to be adaptable, able to work in teams, and have the ability to make decisions. *"The value of generic, multi-skilled knowledge workers was demonstrated by the Ice Storm."*

Wayne Barnett,  
Administrator, Kingston  
Psychiatric Hospital

Knowledge of the local area and knowing where to locate resources also proved to be a valuable skill for responders. *"It was one of those situations where I found myself a couple of people who knew where things were in Kingston, and I latched onto them and basically said 'you're mine.' ... I don't need a whole lot of high-level commanders. What I need is a couple of Radar O'Reillys. They don't have to be in charge of anything. But you need the people who know where the resources are. They're the ones who really come in handy."*

From the interview with Scott  
Cowden, Toronto Fire  
Service, City of Toronto

Fortunately, there was little trauma during the emergency and little need for critical incident response teams. But many workers became fatigued, and were still feeling the effects of coping with the ice storm many months afterwards. This fatigue factor should be recognized by employers and work practices adjusted accordingly.

Another issue that should not be ignored is that of compensation for workers, both staff and volunteers. Compensation tended to be very uneven, with electrical workers receiving overtime pay and some other employees receiving nothing beyond a regular day's wages, despite working very long hours. In some cases, volunteer firefighters were paid but other volunteers, such as those who operated the shelters, were given no compensation at all. Municipalities and other organizations should be aware of this issue and attempt to resolve any lingering feelings of resentment, to ensure that staff and volunteers will be willing to give as generously of their time during the next emergency.

One complication was that responders in many areas had to leave their homes and families in the midst of the emergency and give priority to the needs of others.

### **Local Responders vs. Outside Responders**

Because the ice storm was so geographically widespread, most of the responders in eastern Ontario understood the nature of the emergency and could act appropriately. Even if they were not in a severely damaged area, they had a basic understanding of what it was like elsewhere.

In contrast, those outside the affected area were slow to grasp even that there was an emergency, to say nothing of the nature of it and what responses were appropriate. This explains in part why offices located in Toronto were slow to act, and when they did act, why they tried to follow the normal rules for a storm that broke all the rules.

All Canadians have a familiarity with winter emergencies if only on a small scale. Neighbours help neighbours and strangers help one another, if only by pushing a car out of a snow bank or shovelling a driveway. Similarly winter snow and ice storms occur frequently enough that local bodies such as fire, police, public works, and schools have some experience and capacity to deal with them.

During the 1998 Ice Storm, an enormous amount of work was done by individuals: - removing branches, checking on neighbours, and volunteering at local shelters. At another level, local organizations were effective because they were basically operational. Their normal responsibilities were delivering services to the community and its citizens. They know the area, and their organization is what is known in administrative terms as "flat", (i.e., there were few layers of organization between the front line worker and the ultimate decision maker). Their style was entrepreneurial, to find a solution, rather than bureaucratic (i.e., to develop policies and rules and ensure conformity). Central offices are accused of trying to follow standard procedures and wanted to direct and approve. Micro-management was not the appropriate style in the circumstances.

This was also true of those provincial and federal services that responded most effectively: -MNR, MTO, OMAFRA, and the military. All were more results than process oriented even though they are part of a larger bureaucracy.

It should be noted that politicians do not figure in the story. Except for municipal politicians, elected representatives largely stayed out of the response, leaving decisions to staff. Visits by the Prime Minister, the Premier, and various ministers heightened awareness of the ice storm emergency, but were only made after the response had been underway for several days. The MP's and MPP's who were contacted stated that they kept themselves informed but almost consciously kept out of the way.

## **Issue #6 – Informing the Public**

In an emergency, the public wants information and people want to know the truth. During the Ice Storm emergency, the question everyone wanted an answer to was: - “When will my power be back on?”. Yet this was difficult information to get, especially at the beginning of the crisis. Circumstances dictated some uncertainty at the outset because of the unprecedented nature of the storm and the fact that power lines were coming down faster than they were being put back up. But the lack of information was also partly due to Ontario Hydro’s poor communication with the public and government officials. This situation did improve over time and Ontario Hydro has recognized this as an area where improvement is needed:

*“Ontario Hydro’s communications with its customers, media and stakeholders were inadequate primarily due to lack of specific information needed by these entities, especially customers who needed information on when their electricity supply would be restored, and the media for publication and broadcasting.*

Ice Storm ’98 – A Report on  
the Electricity supply Impacts  
of the January, 1998 Ice  
Storm in Eastern Ontario,  
Ontario Hydro, May 1, 1998

People wanted to know how long power was going to be out so they could make informed decisions (i.e., -whether to tough it out at home, go to a shelter, close down the house, get out of town, stay at a hotel, or bunk in with friends).

For example, most people staying at a shelter near Montreal decided to make other arrangements and moved out when told their power was going to be out for several more weeks. During an emergency, most people will look after themselves if they can, but in order to do this they need accurate information. The uncertainty- hoping something would happen tomorrow and then having it not happen, was itself tiring.

Involving the media in getting information out to residents is crucial. Treat the media as a partner and make their job easy. Throughout this emergency, the media showed themselves to be a willing partner and reporting was responsible. One reporter interviewed for the study stated that the normal reporter – interviewee relationship broke down and he was not sure it could be re-established. The message from the media is: give them a chance to help during a crisis and they will respond appropriately.

## Issue #7 -What Ifs

Given the scale of the ice storm emergency, the response was extraordinarily effective. Demands on resources exceeded any foreseeable expectations and somehow answers were found.

However, one should also look beyond this particular event and speculate as to what might have happened if events had evolved differently in order to plan for circumstances more dire than those that occurred during the 1998 Ice Storm. If the situation had been just a little bit different, what was a major inconvenience could have turned into a full-scale catastrophe with large increases in the number of deaths.

1. What if the temperature had been slightly different and glare ice on the ground had been widespread (as commonly happens in ice storms)? Vehicle movement would have been slower, accident emergencies more numerous, and the process of identifying the emergency and responding to it slowed. Being able to transport people and goods proved to be absolutely critical to the ice storm emergency response. What if helicopters and planes had to be relied upon for transportation?
2. What if there had been more ice, or more severe ice extended over a larger area? What if it had not warmed up on Saturday, January the 10th, melting ice and reducing the stress on utility lines and trees?
3. What if temperatures had not remained above normal for several days? Heat loss in homes would have been higher, and more people would have had to find alternate accommodations, increasing the demands on shelters. Hypothermia would have been a particular concern, especially for the elderly. Ben TeKamp, Mayor of the City of Brockville expressed his concerns this way:  
  
*“The overlying concern I had through the entire ice storm was fatality... you feel so helpless in terms of what conditions could provoke a massive disaster, and that being to my mind was the elderly ... who would succumb to the cold temperatures...”*
4. What if Kingston had had a total loss of power similar to Brockville and Cornwall? How would the city have coped and how would the regional role that Kingston played during the ice storm emergency have suffered?
5. What if there had not been a Kingston amalgamation on January 1<sup>st</sup>, 1998? How would the response have been co-ordinated including such aspects as the organization and deployment of outside resources?
6. What if there had been fewer hospital beds and what if psychiatric hospitals had been closed, as is currently being proposed?

That there was excess space in the Hotel Dieu Hospital in Kingston and at the Brockville and Kingston Psychiatric Hospitals made the shelter problem for specialized needs much more manageable. According to the plans for both health

care and social services, this capacity will be gone in less than five years. Provisions for emergencies are not included in the planning of these services. Relying on facilities outside the affected area is a very limited alternative as there is no centre large enough to meet potential needs within a reasonable distance, nor are there resources for an evacuation on any scale.

7. What if a large city such as Toronto were hit with a total power outage in the middle of winter, as experienced during the 1998 Ice Storm?
8. What if large-scale evacuations of homes, hospitals, jails, and special care facilities had been required? Where would the resources have been found to transport people? What would have been the effects on people who were already in a poor state of health? Would there have been the resources to accommodate people in other hospitals or jails. How would responders have coped if faced with setting up shelters for many more thousands of people?
9. What if power had not been restored to the water treatment plants? The emergency generator at the water treatment plant in the old City of Kingston had enough power to pump water but not enough to backwash the filters that render the water, which comes from Lake Ontario, potable.
10. What if power had not been restored to sewage pumping stations?
11. What if municipalities had done less emergency planning, training and exercising? What if they had done more?
12. What if the military had not been available, or available in fewer numbers?
13. What if the staff and resources of the federal (EPC) and provincial (EMO) emergency organizations continue to be reduced? How will the capacity of these governments to respond to future emergencies be affected? How will training and planning at the municipal level be affected? There is growing evidence that more frequent and more severe weather events are a consequence of global warming. This would suggest that more, rather than less, priority should be given to emergency mitigation, preparedness and response.
14. What if the entire Ottawa area, eastern Ontario's largest urban center, had been without power for several days, as were many other areas in eastern Ontario?
15. What if large-scale evacuations had been necessary due to flooding?
16. What if the computer microchip problem known as the Year 2000 or Y2K problem creates massive power outages January 1, 2000? Are you and your organization prepared?

## **Conclusion**

Ice Storm '98 was a particularly difficult emergency to respond to. The geographic extent and the length of the electrical power outage caused by the storm were unprecedented. Such a large power failure had been neither contemplated nor planned for.

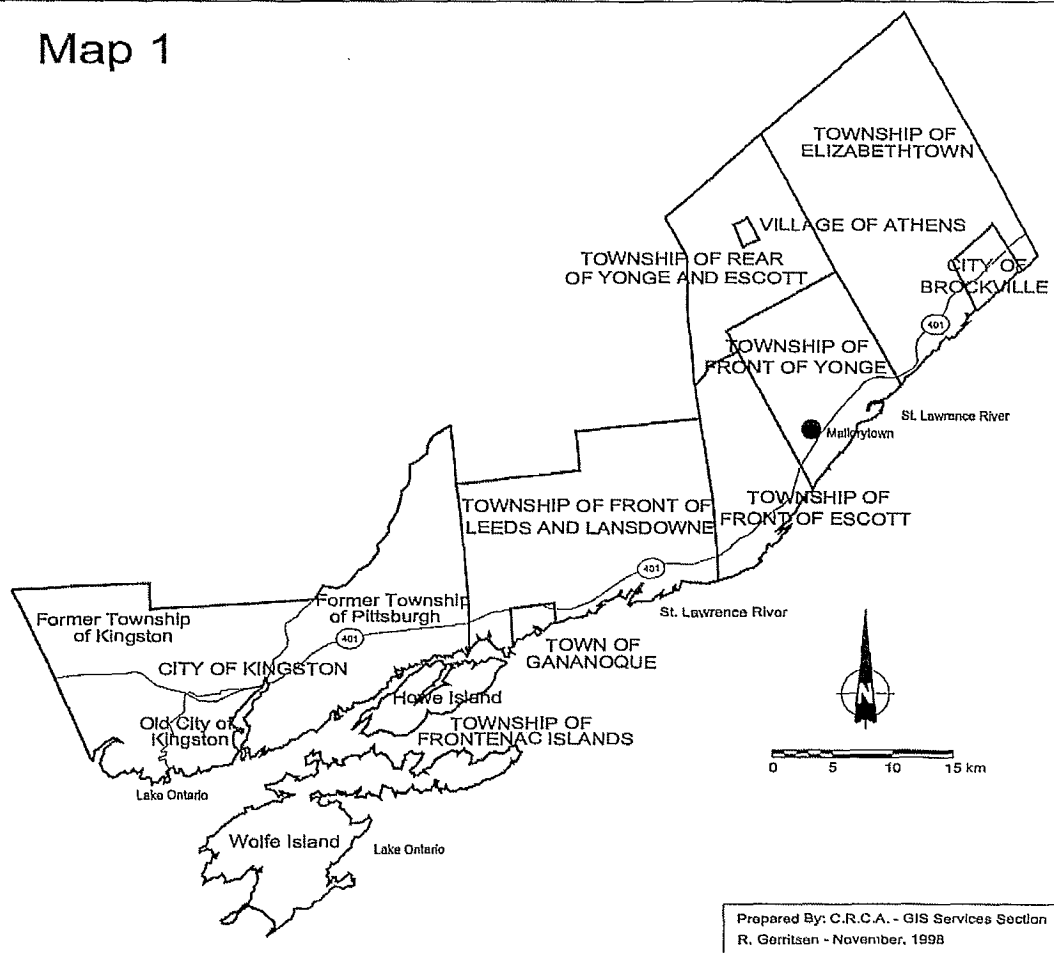
That the response was as successful as it was, with few deaths and injuries, is a testament to the strength of local communities and the commitment of governments to emergency planning and training. Future emergency response can be improved however, by learning from past experiences. The ice storm taught new lessons and reinforced old ones.

The ice storm showed how dependent Canadian society is on a reliable, continuous source of electrical power and how much more vulnerable we have become to power outages. Assessing the emergency situation was especially difficult, due not only to the size of the area affected, but more importantly to the fact so many communications systems were not operating. Building effective communications systems that do not rely on electricity is crucial for responding to power failures.

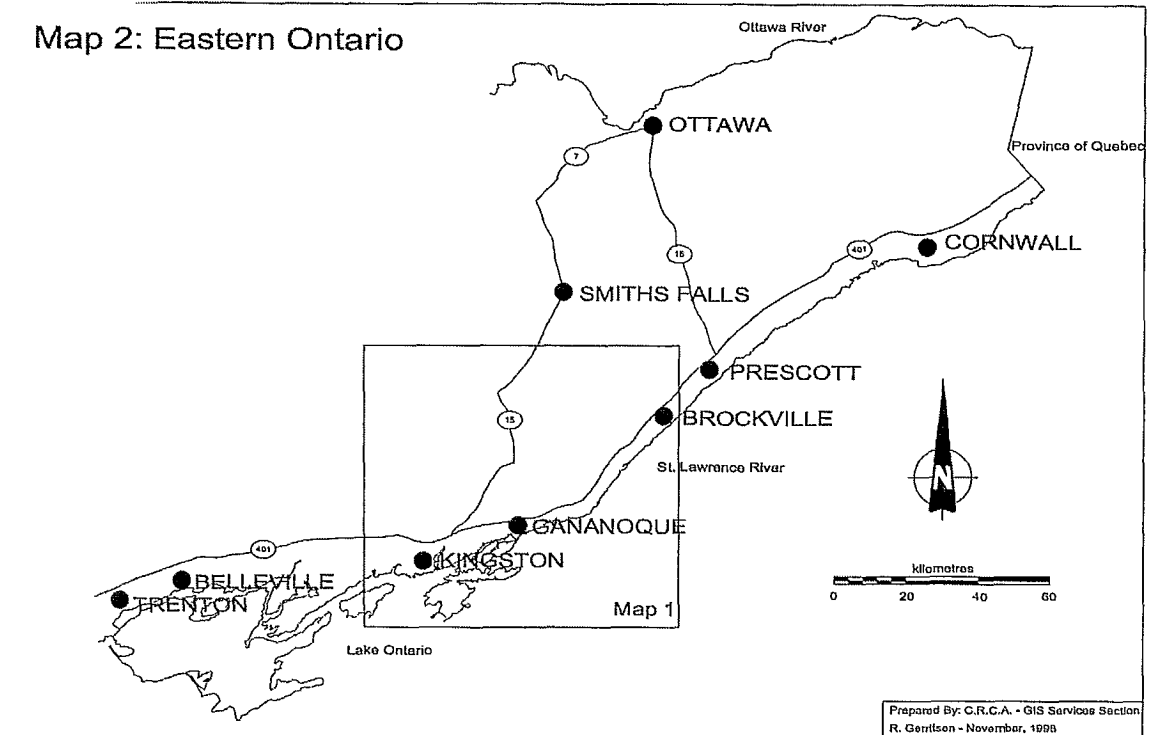
Greater numbers of critical facilities need back-up power and households should install alternate heating systems. Keeping the public informed is critical in emergency situations. Communications plans should be a part of emergency planning not only for governments and emergency responders but also for industries, businesses, and institutions.

If the situation during the ice storm had changed, what was a major inconvenience could have turned into a major disaster. Examining the probable consequences of the "what-ifs", could help us be even better prepared for the next big emergency.

# Map 1



Map 2: Eastern Ontario



To go back, click on the x at the very top right-hand corner of the screen.

