

Impacts from the December 2013 Extreme Winter Storm Event on the City of Toronto

Date:	January 8, 2014
To:	City Council
From:	City Manager
Wards:	All
Reference Number:	

SUMMARY

The City of Toronto experienced an extreme winter storm event in the evening of December 21, 2013 through December 22, 2013. The storm produced freezing rain, ice pellets and wind resulting in wide-spread power outages due to downed power lines from fallen trees and tree limbs.

As a result of the winter storm event, over 300,000 Toronto Hydro customers were without power, which resulted in disruptions to City services. In addition to significant damage to public and private property, thousands of Torontonians were displaced from their homes, or stayed in their homes in uncomfortable circumstances. At the same time, businesses across the City were affected by the hydro outage which impacted the economy of the City over and above direct financial impacts for the City and residents of Toronto.

The scope and magnitude of this extreme winter storm was unprecedented. At the same time, the efforts of staff from City divisions, agencies and corporations in responding to the event were exceptional under difficult conditions. Most especially, Toronto Hydro and Forestry crews worked around the clock to remove damaged trees, to repair electricity transmission equipment and to restore the transportation system. With the assistance of the Canadian Red Cross, City staff quickly mobilized to provide reception centres for those Torontonians who were without power. Toronto Community Housing, the Community Care Access Centres, Toronto Police Service and the Ontario Provincial Police ensured residents of high rise buildings, including those particularly vulnerable, were contacted regularly to ensure their health and safety.

While power and City services have been fully restored, post recovery efforts by Toronto Hydro, Toronto Community Housing, agencies, many City divisions, including Forestry, Transportation & Solid Waste related to debris management, remain on-going.

The purpose of this report is to inform Council on the City's emergency response, the impact on City services, the initial cost estimates of the severe winter storm event and the requirements for the City to request assistance from the Province through the Ontario Disaster Relief Assistance Program (ODRAP) and/or any funding program.

Emergency Response

The initial recovery from the storm took the co-ordinated effort of the City, its Corporations and Agencies with the assistance of the Province and Hydro and Forestry crews from across the Province, Manitoba and Michigan. The Emergency Operations Centre (EOC) co-ordinated the emergency response efforts for the City. Daily activities throughout the storm event are outlined in Attachment 1, *December 2013 Winter Storm – Emergency Operations Centre Event Summary*. Electricity was fully restored in the City as of January 1, 2014.

The City and its residents and businesses continue to deal with the aftermath of the event. Efforts to remove storm debris, address damage to public and private property, the City's tree canopy and electrical system are on-going. Many residents' vehicles and homes as well as businesses were damaged by the storm and repairs in some instances may take many months to complete.

Financial Issues

As of January 7, 2014, the City estimates that the costs of the December 21/22, 2013 winter storm event for City divisions, agencies and corporations is approximately \$106 million, which includes incurred and estimated future 2014 expenses and lost revenue. The City's ability to deal with these significant cost pressures is exacerbated by the financial pressures resulting from the July 8, 2013 storm event that, as reported to Council on November 13, 2013, is estimated to have cost the City \$65.2 million. Thus, the City has incurred an estimated \$171 million of storm damage in 2013.

Given the magnitude of impact of the storm on the City of Toronto, it is recommended that Council request the Provincial and Federal governments to provide additional disaster assistance to the City of Toronto and Toronto Hydro through ODRAP and/or any current relevant programs. Furthermore, it is recommended that the Provincial and Federal governments develop new programs for future disaster mitigation including urban flooding, winter storms and erosion control that reflect the reality of our changing climate.

In 1998, ODRAP funding of approximately \$178 million (the significant portion reimbursed by the Federal Government) was provided to Eastern Ontario municipalities to address their severe winter storm, which is a similar situation to the December 21-22, 2013 winter storm in Southern Ontario.

The financial capacity of a municipality to respond, cope and fully recover from an emergency event is the key criteria used by the Province to determine ODRAP eligibility. In its assessment, the Province looks at the size of the loss relative to the municipality's

total property tax base. Given most large municipalities have reserves and the capacity to raise additional funds through debt; they have had no success with recent ODRAP applications. This is an overly simplistic way to assess the financial burden of disaster recovery costs to municipalities. ODRAP was developed in the 1960s and has not adequately evolved to respond to the emerging critical weather related emergencies experienced today by large urban municipalities throughout the Province.

This report recommends that Council request that the Minister of Municipal Affairs and Housing declare the City of Toronto a "disaster area" as required for the purposes of ODRAP.

Strategic Actions 2013-2018

City Council endorsed 26 Strategic Actions in October 2013 for 2013-18 to advance Council's vision, mission and goals for Toronto as outlined in the Strategic Plan. The directions and recommendations in the report will advance a number of the approved strategic actions as follows:

- Support Environmental Sustainability (Action 6) by integrating environmental and energy policies and plans across City divisions and establishing interdivisional teams and by developing key partnerships at the provincial, regional and local level to leverage and advance shared environmental and energy objectives.
- Improve Emergency Response and Prevention (Action 12) by enhancing City and community collaboration and capacity to effectively respond to critical incidents.
- Ensure State of Good Repair for Infrastructure (Action 23) by leveraging funding from other governments for City State of Good repair.

This report also recommends that City staff be requested to report back to Council through the Executive Committee on January 22, 2014 on the impacts of the storm to the 2014 Operating and Capital budgets and options related to financing the December storm costs.

Finally, this report recommends that staff report to the Executive Committee in the second quarter of 2014 on the City's emergency response to the winter storm event including any recommended improvements for the management of future events, and that future reports related to climate change and weather related emergencies, that impact City Divisions, Agencies and Corporations, be directed to the Executive Committee.

RECOMMENDATIONS

The City Manager recommends that:

1. Given that, in 2013, in excess of \$171 million in storm related costs have been incurred by the City of Toronto, City Council request the Provincial and Federal governments to provide financial assistance to the City of Toronto and Toronto Hydro for 2013 storm events;

2. Since the City of Toronto recently experienced a severe winter storm event weather event on December 21/22, 2013 and has experienced substantial damage to municipal forestry infrastructure and related costs of approximately \$106 million and has received reported losses of private damage, City Council request that the Minister of Municipal Affairs and Housing declare the City of Toronto a "disaster area" for the purposes of the Ontario Disaster Relief Assistance Program;
3. City Council request the Provincial and Federal governments, to establish new programs and expand existing programs addressing disaster mitigation involving urban forestry, erosion control, winter storms, tree canopy, and other severe storm events, that reflect the reality of climate change and such programs to include funding for rehabilitation of municipal infrastructure to mitigate future environmental and storm event impacts;
4. City Council request the City Manager in consultation with the Deputy City Managers, and Chief Financial Officer, to report to the January 22, 2014 meeting of Executive Committee on the financial impacts of the storm event on the 2014 Operating and Capital Budgets, and to provide options to finance the City's share of storm related costs; and
5. City Council request the City Manager to report to Executive Committee no later than the second quarter of 2014 on the City's review of the emergency response to the ice storm, including recommended improvements to the management of future emergencies including the actions to enhance the resiliency of the interdependent infrastructure and services to extreme weather.

Financial Impact

Attachment 2, *City of Toronto Divisions, Agencies & Corporations Preliminary Winter Storm Cost Estimate*, details the preliminary cost estimates of the December 2013 ice storm. These cost estimates are subject to change as staff have not had an opportunity to conduct full assessments of damage at this time.

As of January 6, 2014, the City estimates that the costs of the December 21/22, 2013 winter storm event for City divisions, agencies and corporations is approximately \$106 million, which includes incurred and estimated future expenses and lost revenue. The City's ability to deal with these significant cost pressures is exacerbated by the financial pressures resulting from the July 8, 2013 storm event that, as reported to Council on November 13, 2013, is estimated to have cost the City \$65.2 million. Combined City losses and costs of these two emergency weather events in 2013 exceed \$171 million.

City divisions, agencies, corporations, and the Toronto and Region Conservation Authority (TRCA) costs related to both the summer and winter storm events are detailed below.

Table 1: Summary of 2013 Severe Storm Costs – July 8th & December 21 and 22, 2013

City of Toronto Services	July 8th Final Cost Estimate	Dec. 21st/22nd Preliminary Cost Estimate	Total
Parks, Forestry and Recreation	12,684,085	52,213,000	64,897,085
Solid Waste Management Services	1,665,607	24,474,797	26,140,404
Toronto Employment and Social Services	6,100	1,009,000	1,015,100
Transportation Services	310,445	8,802,961	9,113,406
Toronto Water	8,547,875	1,506,560	10,054,435
Other City Divisions	4,977,365	1,703,477	6,680,842
TOTAL CITY DIVISIONS	28,191,477	89,709,795	117,901,272
Toronto Hydro	1,410,776	13,900,000	14,310,776
Toronto Police Service	114,610	245,000	359,610
Toronto and Region Conservation Authority	36,053,614	0	36,053,614
Toronto Transit Commission	1,318,885	700,000	2,018,885
Toronto Library	2,614,123	53,996	2,668,119
Toronto Community Housing	432,357	2,145,337	2,577,694
Toronto Zoo	0	187,000	187,000
TOTAL AGENCIES, CORPORATIONS, AND TRCA	41,944,365	16,331,333	58,275,698
GRAND TOTAL	70,135,842	106,041,128	176,076,970
Anticipated Insurance Recovery	(4,900,000)	0	(4,900,000)
TOTAL NET OF RECOVERY	65,235,842	106,041,128	171,276,970

A report will be submitted to the January 22, 2014 Executive Committee outlining proposed sources of funding to cover the City's costs of the ice storm and impacts to the City's 2014 Operating and Capital budgets. Given the magnitude of both storm events in 2013, funding is required from the other orders of government to avoid significant tax impacts. The City's 2013 operating surplus, which is forecast at \$92.3 million, is committed, per Council policy, to capital financing (75% or approximately \$69 million) and the balance to fund approximately \$23 million of unfunded liabilities. Any revision to the surplus management policy will result in increased debenture debt financing.

The Deputy City Manager and Chief Financial Officer has reviewed this report and agrees with the financial impact information.

DECISION HISTORY

On December 29, 2013, the City Clerk provided public notice that the Mayor has called a special meeting of City Council at 9:30 a.m. on Friday, January 10, 2014 to consider a report from the

City Manager on the ice storm, including a request for Provincial assistance under the Ontario Disaster Relief Assistance Program.

<http://app.toronto.ca/tmmis/decisionBodyProfile.do?function=doViewMeetingNotice&meetingId=8828>

City Council, at its meeting of December 16, 17 and 18, 2013, approved the report entitled, *Resilient City: Preparing for Extreme Weather Events*. The report provided Council with an update on actions the City is taking to assess the adequacy of the City's infrastructure and services to accommodate future extreme weather events.

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2013.PE24.3>

ISSUE BACKGROUND

In the evening of December 21, 2013 through December 22, 2013, the City of Toronto experienced an extreme winter storm event involving freezing rain, ice pellets and snow. The storm resulted in significant ice accumulation which led to downed power lines and widespread power outages. At its peak, over 300,000 Toronto Hydro customers were without power.

In anticipation of extreme weather as forecasted by Environment Canada, the City's Emergency Operation Centre (EOC) was activated at 1:30 p.m. on Saturday, December 21, 2013. The EOC ran continuously for eight days and during regular business hours for three days following the event and co-ordinated the City's emergency response in accordance with the City of Toronto Emergency Plan, which is included as Attachment 3 of this report and available at the following link:

http://www1.toronto.ca/staticfiles/City%20Of%20Toronto/Office%20of%20Emergency%20Management/Files/pdf/E/emergency_plan.pdf

The City, its agencies and corporations responded to the storm event quickly and all efforts were made to restore and/or implement alternative service delivery where normal operations were not possible due to the power outage.

The City also experienced a severe storm on July 8, 2013, during which severe thunderstorms and heavy rains flooded many parts of the City caused damage to public and private property and infrastructure, stranded thousands of commuters, and left tens of thousands of residents and businesses without electricity. The storm resulted in significant costs to City Divisions, Agencies and Corporations and the Toronto and Region Conservation Authority (TRCA). At its peak thousands of customers were without power. Power was restored to most affected residents in the early morning of July 9th, however, a number of residents in Etobicoke were without power for approximately two days. The estimated City of Toronto and TRCA storm related expenditures and revenue loss was approximately \$65 million and generated almost 5,784 insurance claims against the City.

For the July 8th storm, the Insurance Bureau of Canada reported that \$850 million in insurance claims across the GTA were received making the July 8th storm the third most costly weather related event in Canadian history. The most costly severe rainstorm event was the Calgary flood, which happened earlier in 2013.

1. City of Toronto Resiliency – Preparing for Extreme Weather Events

At its meeting on December 16, 17 and 18, 2013 City Council considered the November 22, 2013 report from the Chief Corporate Officer entitled "Resilient City: Preparing for Extreme Weather Events". The report provided an update on the actions being taken to assess:

1. the adequacy of the City's infrastructure and services to accommodate future extreme weather events as predicted in "*Toronto's Future Weather and Climate Drivers Study*";
2. planned activities to enhance the City's assets and services to withstand future weather conditions; and
3. what more may need to be done to ensure the safety and security of assets and services under future extreme weather conditions.

The report also provided a status update about implementation of the City's 2008 Climate Change Adaptation Strategy and the development of the City's Climate Change Adaptation Toolkit.

Tracking and monitoring of record weather events as identified by Environment Canada between 2000 and 2012, suggest that Toronto is and will continue to experience a change in extreme weather events. In less than 12 years Toronto has experienced three one in 100 year rain storms (July 2000; August 2005; and July 2012). Table 2 highlights the increasing occurrence of record weather events between 2000 and 2012.

Table 2: Record Weather Events in Toronto by Year for 2000 to 2012

Year	Record Events
2000	Wettest summer in 53 years, with 13% more precipitation than normal
2001	Driest growing season in 34 years; first ever heat alert; 14 nights with temperature above 20 C (normal is 5 nights)
2002	Driest August at Pearson Airport since 1937; warmest summer in 63 years; 5 th coldest spring
2003	Rare mid-Spring ice storm where Pearson Airport used a month's supply of glycol de-icer in 24 hours
2004	Year without a summer; May rainfall in Hamilton set an all-time record; all-time record 409 mm of rainfall was set at Trent University in July which was the equivalent to 14 billion litres of water in 5 hours (a one in 200 year event)
2005	Warmest January 17 th since 1840; January 22 nd blizzard with whiteouts; warmest June ever; number of Toronto days greater than 30°C was 41 (normal 14); August 19 th rainstorm washed out part of Finch Avenue
2006	23 tornadoes across Ontario (normal is 14); record year for major storms; record one-day power demand of 27,005 MegaWatts due to summer heat
2007	Protracted January thaw; 2 nd least snow cover ever in Toronto (half the normal amount); snowiest Valentine's Day ever; chunks of ice fell from the CN Tower; 2-3 times the number of hot days in the summer; record latest-in-season string of +30°C days around Thanksgiving
2008	Toronto's 3 rd snowiest winter ever; record for highest summer rainfall

Year	Record Events
2009	3 rd rainiest February in 70 years; Hamilton had a 100-year storm; one of the wettest summers on record; tornadoes hit Vaughan-Woodbridge area in late August; an unusually mild and storm-free November in Toronto; first snow-free November at Pearson Airport since 1937
2010	No records
2011	A new all time July record maximum temperature of 37.9°C was set at Pearson airport (previous July record was 37.6°C in 1988)
2012	Toronto's earliest ever official heat wave (June 19-21)

Many City initiatives are collaborations among a number of divisions, agencies and corporations; an illustrative example is the work to mitigate stream erosion control which is being undertaken jointly by Forestry, Parks and Recreation, the TRCA and Toronto Water. The November 22 2013 report and appendix details the on-going collaborations and 'In Place Adaptation Actions and Programs.

As requested by City Council, the Chief Corporate Officer will, by the second quarter of 2014, report back to City Council on a strategy that will define the key interdependencies between the City's infrastructure and services. The strategy can then be used to set priorities and actions to be taken to enhance the resilience of the interdependent infrastructure and services to extreme weather.

2. Ontario Disaster Relief Assistance Program (ODRAP)

The Ontario Disaster Relief Program (ODRAP) is a provincial program initiated in the 1960's and designed to help municipalities, individuals, farmers, small businesses and non-profit organizations to get back on their feet after a natural disaster. The program is geared towards small and typically rural municipalities who do not have the financial capacity to address an emergency situation. ODRAP is administered through regional Municipal Services Offices and coordinated through the Municipal Programs and Education Branch of the Ministry of Municipal Affairs and Housing (MMAH).

ODRAP is intended to assist those whose essential property has been extensively damaged as a result of a sudden, unexpected natural disaster such as severe windstorm, tornado, flood, forest fire. The program contains both a public and private component. The Province of Ontario's ODRAP Guidelines are included as Attachment 4 and can be viewed at the following link: <http://www.mah.gov.on.ca/AssetFactory.aspx?did=6903>.

ODRAP is not a substitute for adequate insurance coverage and does not provide full cost recovery. The program provides financial assistance within the declared disaster area to restore damaged public infrastructure and/or private property to pre-disaster condition, when the cost of restoration exceeds the financial capacity of the affected individuals, municipality and community at large to manage.

Since 1998, there have been a number of ODRAP funding to various municipalities across Ontario, however as noted above, funding has been to smaller municipalities for floods, tornados and winter storms. The largest natural disaster funding was to the 1998 Eastern Ontario ice

storm. This ODRAP funding was approximately \$178 million (the significant portion reimbursed by the Federal Government) which we would argue is a similar situation to December 21/22, 2013 severe winter storm in Southern Ontario.

3. Declaring an Emergency

An emergency is defined under the *Emergency Management and Civil Protection Act* (EMPCA) as "a situation or an impending situation that constitutes a danger of major proportions that could result in serious harm to persons or substantial damage to property and that is caused by the forces of nature, a disease or other health risk, an accident or an act whether intentional or otherwise."

Under section 4(1) of the EMPCA, the Mayor has the authority to declare that an emergency exists in the municipality or in any part of it and take such action and make such orders as he or she considers necessary, and are not contrary to law, to implement the emergency plan of the municipality and to protect property and the health, safety and welfare of the inhabitants of the emergency area. The Mayor is not obligated to make such a declaration and the absence of a declaration doesn't mean that an emergency situation doesn't exist. This authority is reflected and also included in the Municipal Code Chapter 59 dealing with the City's emergency management.

While the declaration of an emergency is available and may serve to focus a response to an emergency, a declaration is not required to allow for an operational response to the emergency and to seek assistance from the provincial government with the response and recovery. In fact, section 9(a) of the EMPCA provides that a municipality's emergency plan formulated under the statute must authorize employees of the municipality to take action under the emergency plan where an emergency exists, but has not yet been declared to exist.

Code Chapter 59 reflects this requirement and recognizes that a declaration of an emergency is not required in order for the City to respond to the emergency and for extraordinary powers to be available. Article VII of the Code Chapter provides that, whether or not an emergency as been declared, the Control Group (established by the Chapter to manage the emergency response) is authorized to:

- initiate, co-ordinate, direct and otherwise bring about the implementation of the emergency plan and undertake such other activities as considered necessary to address the emergency;
- expend funds for the purposes of responding to and recovering from the emergency, including obtaining and distributing emergency materials, equipment and supplies, notwithstanding the requirements of any by-law governing the commitment of funds and the payment of accounts; and
- obtain volunteer support from public agencies and other persons as considered necessary and to indemnify such agencies, their personnel, and other persons engaged in work that has been authorized pursuant to this chapter or any other law, from liability for any acts or omissions resulting from any actions taken pursuant to the Codes Chapter or any other law.

The Article further provides that, despite any other provision of the Code Chapter, City employees are authorized to take such action under the emergency plan consistent with their usual duties as is reasonable and necessary where an emergency exists but has not yet been declared to exist.

In respect to provincial assistance, as a general rule such assistance is not dependent on a formal declaration of emergency by the municipality, except where prior agreements to that effect are in place. In the specific instance of the ice storm, the Province repeatedly indicated that its assistance was not dependent on the declaration of an emergency.

COMMENTS

This section of the report will provide details on the City's response to the storm, additional financial information and identify future staff reports to Council as outlined below:

1. City of Toronto Emergency Response
 - a) Co-ordination
 - b) Emergency Service Response
 - c) Community Assistance
 - d) Recovery
2. Financial Information
3. Post-Mortem – Emergency Response Review

1. City of Toronto Emergency Response

Identified below is a summary of the actions taken or to be taken by the City division, agencies and corporations, and partners in response to the winter storm event on December 21 and 22, 2013.

a) Co-ordination

The Toronto Emergency Management Planning Group (TEMPC) provides the City with an effective vehicle for developing and maintaining a comprehensive Emergency Plan as well as providing the overall strategic management of the City's response to an emergency. In accordance with the City's Emergency Plan, TEMPC is chaired by the Deputy Mayor and includes senior civil servants including the City Manager, Deputy City Managers, and key Division Heads and representatives from City agencies and corporations including Toronto Hydro.

The EOC provides the operational capability for TEMPC to meet their core functions under the Emergency Plan through the co-ordination of the emergency response including resource management, providing information to the public and maintaining the business continuity of City operations. The EOC is co-ordinated under the direction of the Incident Commander and includes staff representatives from City divisions, Agencies and Corporations.

i) Emergency Operations Centre (EOC)

Outlined below is a summary of activities that were led and co-ordinated through the EOC in response to the extreme winter storm event:

Hours of Operation:

- Activated 1:30 p.m. December 21, 2013 to co-ordinate the City response
- Ran continuously for 8 days until December 29, 2013 8 p.m. (195 hours)
- Stood down at noon on January 2, 2014 – 220 hour activation and 58 hours standby

Activities:

- 2 formal TEMPC Meetings
- 15 conference calls

Provincial Liaison:

- Coordination with the Provincial Emergency Operations Centre, which manages emergencies for the Province, including
 - Mutual aid request for assistance with debris removal
 - Fuel for generators
 - OPP assistance in wellness checks
 - Arranging accommodation for visiting repair crews

Emergency Co-ordination:

- The EOC gathered information about the impact of the storm and co-ordinated the efforts of City divisions, agencies, corporations, the Province of Ontario and other organizations to ensure an effective emergency response including:
 - Communications
 - Power Restoration
 - Assistance to Residents
 - Support to Vulnerable Populations
 - Emergency Response Support

ii) Communications

As in all emergencies, communications with the public and media is of vital importance. EOC Communications, co-ordinated through Strategic Communications and 311, responded to inquiries and provided information to the City's residents and businesses.

Strategic Communications

- During the storm event, the Strategic Communications Division played a key role in supporting the City of Toronto's efforts to assist Toronto residents and businesses in coping with and recovering from this significant emergency incident.
- Strategic Communications staff responded immediately to the EOC and provided communications coverage throughout the activation.
- Strategic Communications Division led the City's internal and external communications, along with issues management and media relations activities

including collecting and disseminating accurate, timely, consistent and clear information to Toronto residents and businesses, 311, City staff and Councillors, and key stakeholders, including the media.

- Efforts were co-ordinated in consultation with first responders from Toronto Fire Services and Emergency Medical Services, the EOC, Toronto Hydro, Toronto Community Housing, the Toronto Transit Commission, Toronto Police Services, other City agencies and stakeholders to address communications needs and establish linkages for exchanges of information.
- Storm-related communications activities from December 21 to December 31 included the following:
 - 18 news releases and 10 media advisories
 - 1 Extreme Cold Weather Alert (Dec 24 to 25)
 - 9 news conferences at City Hall
 - Approximately 200 individual media enquiries and coordinated interviews in addition to a number of media interviews and contacts managed by City divisions
 - 210 tweets from the City's main Twitter feed @TorontoComms
 - Ongoing/daily updates to the website (14,787 unique views / 40,506 page visits)
 - Established and responded to 50 to 60 calls on the Councillors' hotline
 - 2 updates to City staff.
 - EOC briefings and daily briefings with Mayor's office

311

- Call volume to 311 increased significantly during and following the storm December 21/22 storm event and peaking at 5,800 calls on December 24th.
- Average call volume per day during the period December 21st through December 24th was 3,623 and during the period December 25th through December 29th was 2,375.
- Increased call volume was primarily due to hydro outages, downed trees and fallen tree limbs, debris removal, warming/reception centres, food vouchers and most recently calls related to frozen pipes.
- Call volumes continue to be high as compared to last year and are expected to remain high through early 2014 as clean-up efforts continue

b) Emergency Service Response

i) Emergency Services (Police, Fire and EMS)

The increased volume of emergency calls between December 22nd and 30th directly and indirectly created significant impacts for City of Toronto first responders.

Toronto Police Services:

- For eight days, the Toronto Police Service's Major Incident Command Centre was activated to deal with the severe winter storm and related policing activities.
- During this period, there was an increase in the number of calls for police services from citizens of Toronto.

- Toronto police cordoned off areas with a significant public safety risk due to downed power lines and traffic point duty at major intersections where traffic signals were not functioning
- Many officers also performed door-to-door wellness checks in high rise residential buildings and staff were also utilized at warming centres at division headquarters.

Fire Services:

- Call volume from December 21st through December 30th was approximately four to five times higher than normal and included a mix of emergency requests:
 - 2,351 "wires down" calls, compared to 7 last year;
 - 668 fire calls, compared to 91 in the same period last year;
 - 316 carbon monoxide calls, compared to 53 last year; and
 - 813 medical calls, compared to 644 last year.
- Included were nine second alarm (or higher) fires many of these were caused by actions of residents dealing with electricity and heat loss.
- Total Fire responses for the 36 hour period from the afternoon on Saturday December 21 to the early morning on Monday December 23 were 3,630 or 101 per hour, which is seven times the normal call volume. In the same period, the total number of 911 phone calls answered by our Communications Centre was 5,637 or 156 per hour.
- At the height of the storm 19 fire stations were without power for extended periods. Two had back-up generators and the remainder were provided with portable heaters and generators from the HUSAR cache (Heavy Urban Search and Rescue).

Emergency Medical Services (EMS):

- Emergency call volume increased significantly, peaking on December 23rd with approximately 1100 calls, which is 63% more calls than normal.
- Increased call volume was largely due to medical calls but there was also an increase in slips, trips, falls and carbon monoxide exposures.
- EMS increased staffing for frontline staff to address the sustained increase in demand and triaged the most life-threatening calls and responded to those first.
- Toronto Police Service lost power in the afternoon of December 22nd. To ensure uninterrupted services, all 911 calls were rerouted through EMS who triaged calls for both Police and Fire Services for a period of two hours until back-up power was restored.

iii) Transportation System Restoration

Toronto Transit Commission (TTC)

- In anticipating of severe winter weather, on December 21st TTC implemented its inclement weather program and began applying deicer to third rail and ice cutters on streetcar poles.
- On December 22nd, the entire streetcar system disabled due to icing on overhead conductors with many streetcars stranded, blocking streets and intersections. The Scarborough Rapid Transit disabled due to loss of traction power and extensive debris in the guideway, and due to a lack of power various stations throughout the system were bypassed and the Sheppard subway service was suspended

- Bus shuttles put in place for Lawrence to Finch, SRT, Sheppard and Woodbine to Victoria Park
- After the freezing rain ended the streetcar overhead conductor system was manually scraped to clear the ice and service was restored by 11 p.m.
- TTC also responded to requests for shelter buses in various locations to aid vulnerable populations.
- Shuttle bus service continued on December 23rd due to lack of service on Sheppard, SRT and Bloor-Danforth east of Woodbine. SRT and Bloor-Danforth service was restored in the afternoon and Sheppard resumed normal operations on December 24th.
- TTC worked closely with the City to identify debris on roadway and traffic light issues and establish priorities for clearance and restoration.

Transportation Services

- In response to the severe weather event on December 21/22, 2013, Transportation services initiated multiple rounds of winter maintenance to roadways as follows:
 - 10 rounds of salt on expressways & arterials roads (12,970 km)
 - 6 rounds of salt on collector roads (4,626 km)
 - 4 rounds of salt (1 per day) on local roads (13,164 km)
 - 3 rounds of salt (1 per day) on sidewalks & bus stops (18,000 km)
 - Hand crews maintaining steps and priority locations / seniors sidewalks cleared
- The Transportation Divisional Operation Centre (DOC) was activated and field staff reports of fallen trees, power outages and traffic control signal failures were reported to the DOC and EOC.
- On December 23rd, Transportation Services in co-ordination with Urban Forestry, Solid Waste and Toronto Water commenced debris management work. Transportation Services' initial focus was on TTC Priority Routes and Arterial Roads.
- In response to an additional winter weather event on December 25/26, 2013, Transportation initiated additional rounds of winter maintenance to roadways as follows:
 - 3 rounds of salt on expressways & arterials roads (3,891 km)
 - 2 rounds of salt on collector roads (1,542 km)
 - 1 round of salt on local roads (3,291 km)
 - 1 round of salt on sidewalks & bus stops (6,000 km)
 - Hand crews maintaining steps and priority locations / seniors sidewalks cleared

iv) Hydro Restoration

Toronto Hydro

Event Summary

- Toronto Hydro began tracking the storm on December 18th through its weather monitoring systems in its control centre. On Friday, December 20th, in accordance with its emergency preparedness plans, Toronto Hydro heightened its readiness and put power restoration crews and supervisory personnel on standby.
- On Saturday, December 21st emergency preparedness messages were delivered through the news media and a Level 2 emergency status was declared as the ice began

to build by mid-evening. Management and supervisory staff were on duty in our emergency centre at midnight.

- At 2:00 a.m. on Sunday, December 22nd Toronto Hydro went into full emergency response. At that time, approximately 36 percent of the total electricity load on the grid had been lost, with approximately 10 percent of the grid out of service:
 - 168 transformer station feeder lines offline
 - 49 municipal station feeder lines were offline
 - Approximately 50,000 individual service lines were down
- At 4:00 a.m. a Level 3 emergency was declared (a Level 3 emergency is the highest emergency level for Toronto Hydro). Other utilities in the GTA also started reporting widespread power outages. The declaration of Level 3 resulted in the following:
 - All vacations were cancelled
 - Special terms in the Collective Agreement were invoked
 - Our external contractors were brought in to work alongside our crews
 - Emergency repair crews were rostered for round the clock, 12 hour shifts
 - Full back office support staff were assembled to ensure warehouse, logistics, call centre and dispatch support were in place
 - The Emergency Operations Centre was opened
 - Local Incident Command Centres were opened in two districts; east and west
 - Emergency communications protocols were enacted
- At 4:00 a.m. on December 22nd Toronto Hydro began coordinating its activities with the Toronto Emergency Management Planning Committee (TEMPC) to determine which essential loads should be restored on a priority basis.
- Immediate public safety situations (live wires down on the street) were identified. Priority loads included city water treatment plants, Sunnybrook Hospital and East General Hospital, the TTC and some shopping malls that could serve as warming centres.
- When widespread power outages occur, Toronto Hydro implements utility best practice procedures to restore electricity service as safely and quickly to as many customers as possible. Dictated by the design of the urban electricity grid, the following restoration sequence was established and adhered to:
 - Public Safety First - Respond to 911 police, fire and ambulance calls
 - Restore power to the city's Emergency Operating Centre, water treatment plants, hospitals and public transportation. Two water pumping stations were down, one was operating on 50 percent power.
 - Stabilize the main grid power supply points by bringing transformer stations back online as soon as possible delivering power to neighbourhoods (1,000-3,000 customers at a time)
 - Restore municipal stations and feeder lines (200-1000 customers at a time), main lateral circuits (30 or more customers at a time) and secondary services (single dwellings)
 - Restore isolated residential customer outages caused by tree damage
- At this time, Toronto Hydro also requested other utilities to send power line crews as part of the industry's Mutual Aid partnership protocol.

- By December 25th, Toronto Hydro had restored the main trunk electricity feeders that enabled it to deliver power to the priority loads and approximately 250,000 customers, or approximately 80 percent of those affected by the original events.
- Toronto Hydro also rostered powerline repair crews for 12 hour shifts for the next seven days. At this time it was unclear as to how long complete restoration would take, as the damage was so extensive in many neighbourhoods that progress was slowed. Mutual Aid crews had arrived and were being oriented to Toronto Hydro's grid, and housed in hotels.
- On December 26th, Toronto Hydro had all main feeder lines from municipal substations repaired and commenced the repair of localized "branch lines", which service smaller areas.
- Repair crews also repaired individual house connections where they could, although many homes had suffered serious damage to their service entry standpipes that are connected to their homes.
- Where possible, crews made temporary repairs in order to restore power to the house, but in many cases this was not possible and would have caused serious fire hazard had the home been connected to the grid. In these cases, homeowners were advised to have repairs made by an Electrical Safety Authority (ESA) certified electrician, and Toronto Hydro would then safely reconnect the service following ESA inspection process.
- From December 27th to January 2nd, the arduous process of connecting individual house services continued, and Toronto Hydro added additional Mutual Aid powerline crews to assist. This process was slow as crews worked to clear tree limbs at individual homes and accessed backyard power lines on foot, carrying ladders, cables and hardware by hand as bucket trucks could not be used. In many cases it took crews hours to reconnect single homes. Crews also attended to ESA approved standpipe repairs – there were in excess of 3,000 of these.

Communications

- On December 22nd, calls to our call centre peaked at approximately 128,000, which overwhelmed the systems for the next several days. The normal call centre capability is to handle 3,000 to 5,000 calls per day, for a utility of our size.
- Communications officers were on call 24/7 from December 21st through January 2nd. Toronto Hydro used mainstream news media, social media (Twitter and Facebook) and calls and emails to City Councillors. Twenty-eight news releases were issued from December 19th through January 2nd; 1,027 tweets were sent providing updates that were available, and in response to customer tweets. Approximately 24,000 new followers signed on to Toronto Hydro on Twitter as a result of the proactive use of Twitter by the utility, and online mentions reached 88,667 during the duration of the storm.
- Toronto Hydro spokespersons conducted approximately 1,500 interviews with mainstream media from December 19th to January 2nd.
- All emails (approximately 7,000 emails) received through City Councillor were responded to individually by communications staff.

Costs

- Preliminary cost estimates total approximately \$13.0 million as follows:
 - \$8.0 million for internal and external labour
 - \$2.5 million for mutual aid costs
 - \$1.5 million in materials
 - \$1.0 million in lost revenue

Post Mortem

- Toronto Hydro intends to do a fulsome review of its response to the ice storm. Future actions will consider safety, risk for the City of Toronto and its residents and rate impacts for customers.
- As a first step, Toronto Hydro is assembling an expert, third party independent panel to oversee a full review of the utility's planning and power restoration response to catastrophic storms; customer communications in the wake of damaging storms; the impact of the urban forest on the grid; vegetation management procedures and grid design options that may be appropriate, including the consideration of burying power lines on residential streets.
- The panel will be chaired by David J. McFadden Q.C. who is recognized for his leadership in the energy sector and who has served on the Ontario Distribution Sector Review Panel, the U.S.-Canada Power System Outage Task Force that investigated the 2003 blackout, and his work on the deployment of smart grid technology in Ontario. The City Manager has also agreed to be a member of the panel, along with other industry experts to be named shortly.
- The panel will present its report to Toronto Hydro's Board of Directors in the next few months.

Urban Forestry

- The ice storm and the resulting accumulation of ice caused major tree failures and damage to trees.
- Immediately after the storm Urban Forestry mobilized forces to assist Toronto Hydro to restore power and enable access on roads for emergency vehicles and other vehicular traffic.
- Priority work included:
 - Removing trees and limbs that were affecting power lines to facilitate power restoration and
 - Clearing trees blocking major intersections and roads to facilitate vehicular traffic, including access for emergency vehicles, and
 - Removing overhead hazards – i.e., broken or split limbs caught up in the tree and that could fall (failure is imminent) and damage hydro lines or will block roads, sidewalk, access, or damage properties, etc)
- Costs for the initial emergency response are estimated at - \$1.83 million.

c) Community Assistance

Through the co-ordinated efforts of City divisions, the Canadian Red Cross, Toronto Community Housing, the Community Care Access Centre (CCAC), Toronto Police Service,

and others, the City was able to respond to the needs of residents who were displaced from their home due to the wide-spread power outage or who stayed in their homes in uncomfortable conditions.

i) **Emergency Reception Centres**

- 13 Emergency Reception Centres were opened at the height of the response and provided displaced residents with:
 - Overnight accommodation
 - Meals
 - Personal hygiene kits
 - Power for charging equipment
 - Security
- Parks, Forestry and Recreation Division co-ordinated the operations of Reception Centres:
 - Staff from five City divisions completed 287 shifts,
 - Staff also provided Public Health inspection services and Security services
 - 1,000 cots and towels mustered to support reception centre operation
 - Coordinated purchases of supplies to support the response

Canadian Red Cross

- Delivered over 1,000 cots and blankets
- Distributed over 2,000 hygiene kits
- Arranged 18,000 meals at Reception centres (end of day December 29, 2013)
- Registered 3,167 residents in need of support
- Deployed more than 300 volunteers, who contributed over 4,700 hours of service

ii) **Emergency Response Support**

Toronto Community Housing (TCH)

- At the height of the event some 168 TCH buildings were without power due to the winter storm event representing 19,400 housing units and roughly 50,000 TCH residents.
- In response to the event, TCH called in extra staff to deal with an estimated 3,000 calls from residents, to address critical building maintenance issues due to loss of power, and to ensure the safety and necessities of life for those residents affected.
- TCH staff and volunteers
 - Provided 24-hour coverage for buildings without power
 - Completed door-to-door visits and ensured identified vulnerable individuals were assisted with medical needs through co-ordination with CCAC
 - Coordinated emergency supplies for residents in buildings with no power
 - Arranged 5,900 hot meals for residents in buildings with no power
 - Arranged for shuttle bus transportation to City Reception Centres as required
- By December 28th, power restored to all high-rise buildings and by December 31st all buildings have had power restored.

Support to Vulnerable Populations

- The Community Care Access Centres (CCAC) arranged assistance to vulnerable residents at reception centres, including relocation to locations to provide a higher level of support.
- Toronto Police Service and Ontario Provincial Police completed door-to-door checks in multi-residential high rise buildings without power
- The Homemakers & Nurses Services program contacted all vulnerable clients providing direction and support.
- Long-term Care Homes and Services (LTCHS) provided meals and linens to seniors homes that had lost power and accepted vulnerable residents from a homeless shelter for senior men and accepted residents from the community through CCAC.
- LTCHS staff prevented evacuation at City owned Long-Term Care facilities by arranging for generator and other supports.
- In response to the storm event, Shelter, Support and Housing Administration (SSHA) activated its emergency responses and co-ordinated with the EOC to provide emergency assistance to emergency shelters and social housing buildings affected by the power outage.
- A total of 12 emergency shelter locations with approximately 600 shelter clients were impacted by the power outage. SSHA staff worked closely with shelter operators to assess client needs and prioritize evacuation plans accordingly.
- SSHA co-ordinated with the CCAC to ensure for the high need care of displaced and vulnerable clients. Red Cross provided cots, blankets and food for clients who were evacuated to other shelter locations.
- On December 24th, in response to cold temperatures, SSHA called an Extreme Cold Weather Alert and activated temporary flex beds in the shelter system.
- Shelters and most social housing buildings were fully operational and had power restored by December 26, 2013.

Fleet Services

- Co-ordinated efforts to secure diesel fuel for generators providing emergency power to City facilities and multi-residential buildings with the City's supplier, Suncor, and TCH, and Toronto Hydro.

iii) Additional Emergency Human Service Activations

- Four Emergency Human Services Activations occurred during the period of the City's response to the winter storm event: 301 Prudential Drive (Condominium), 164 Isabella, Eglinton Avenue East, and 11 ½ Aberdeen.
- The response for 301 Prudential Drive remains on-going:
 - Suffered a building wide power failure as a result of the initial ice storm
 - On December 21st and residents used the reception centre at McGregor Community Centre as temporary shelter.
 - Power was restored using a temporary generator but the heating system had failed. Some residents were able to maintain heat using space heaters but approximately 20 -25 people were forced to sleep at the McGregor reception centre.

- As of January 7th, the reception centre remained open and serving clients overnight.

d) Recovery

i) Provincial Food Card Distribution

- On Monday, December 30th, the Province announced the Grocery Gift Card program to assist Toronto residents affected by the power outage replace food that was lost.
- The eligibility criteria for the program was as follows:
 - Toronto residents must have experienced a power outage of 48 hours or more
 - Toronto residents must provide confirmation of their address and declare the number of people in their household
 - Families in need were eligible to receive a \$100 gift card
 - Individuals in needs were eligible to receive a \$50 gift card
- The co-ordination and distribution of grocery gift cards was managed through Toronto Employment and Social Services (TESS) and cards were distributed at 15 TESS locations.
- In total, 21,664 gift cards of varying denominations (\$25, \$50, \$100) were delivered in ten separate shipments, over the course of three days to a central TESS location.
- Close to \$840,000 of grocery gift cards were issued to approximately 9,300 households from the beginning of the program Tuesday, December 31st to the end of the program on Friday 3, 2014.
- Ontario Works and Ontario Disability Support Program clients were able to access approximately \$735,000 in additional supports. Clients who contacted their caseworkers and were deemed to be in a crisis situation were assessed and, if eligible, issued additional financial benefits (up to a maximum of one week's social assistance)

ii) Debris Management Plan

- Solid Waste Management Services is leading the city-wide Debris Management Plan.
- The Plan is a coordinated approach by Solid Waste Management Services, Transportation Services, Parks, Forestry & Recreation (PF&R) and Toronto Water to address the after affects of the December 21st and 22nd storm.
- For up to eight weeks, it is expected that work crews will facilitate the removal of ice storm related debris from the City of Toronto.
- Beginning January 3, the debris will be collected, removed and processed at 15 Temporary Debris Storage and Reduction (TDSR) sites. In most cases, wood debris material will be chipped curbside. Material too large to be chipped on site will be removed and processed at the TDSR sites using tub grinders.

- The 15 TDSR sites include City works yards, transfer stations, parking lots in parks and Crown properties, all in non-residential areas to receive the collected material from City crews. The material will be delivered, stored and processed through tub grinders and hauled away for recycling purposes. The sites will operate seven days a week from 7:00 a.m. – 7:00 p.m. until all material stored has been processed.
- Cost for Debris Management cleanup are estimated at \$25 million

iii) Tree Canopy Management

Hazard Abatement

- While many of the immediate threats posed by trees were addressed in the initial days of response there still remain significant numbers of overhead hazards and broken branches which must be addressed.
- The inspection and removal of overhead hazards that pose an immediate risk of falling and causing personal injury or damage to property is ongoing.
- This work will mitigate public liability and also make safe those trees that have had entire crowns broken or main stems (trunks) split.
- Weather permitting, over an 8-10 week period, 240 crews, double the city's existing resources, would be needed to work within the public right-of-ways and perform hazard abatement in parklands along pathways and roadways. This timeframe is dependent upon securing additional resources to bolster the City's existing complement of City and contracted crews.
- Should adequate resources not be available the time frame will extend to 16-20 weeks using current resources.
- Costs for Hazard Abatement are estimated at \$30.32 million.

Post Clean Up Measures

- Remedial work for trees will be performed over a 6-7 month to assess and confirm the structural integrity of trees and to undertake the arboriculture and forest management work that will be required to restore trees.
- Trees which were made safe as part of hazard abatement efforts will be reassessed:
 - Where trees are to be retained, crown restoration pruning will be done to repair branch stubs and balance the crowns
 - Where the tops of trees were removed previously, complete removal of standing stems and stumps will be performed followed by site restoration which includes application of topsoil and grass seed
 - Replacement tree planting will also be planned and implementation will commence.
- As the necessary remedial work is performed to ensure public safety, Parks and Urban Forestry will begin to have a better understanding of the impact the storm has had on the street and park tree population.
- Costs for Post Clean-up Measures are estimated at \$16.56 million.

2. Financial Information

Table 3, below, provides a summary of the preliminary cost estimates from City divisions, agencies and corporations, including Toronto Hydro as at January 6, 2014. As a full assessment of damages is ongoing, these costs are preliminary and will change as assessments and remediation work continues.

Table 3: Summary of Preliminary Winter Storm Cost Estimates

City of Toronto Services	Emergency Response	Immediate Clean-up	Post Clean-up	Revenue losses	Total Costs
Parks, Forestry and Recreation (1)	2,963,000	30,400,000	18,500,000	350,000	52,213,000
Employment and Social Services	1,009,000				1,009,000
Transportation Services (2)	3,326,735	1,549,349	3,926,877		8,802,961
Toronto Water		604,610	901,950		1,506,560
Solid Waste Management Services (3)	15,890	24,452,907		6,000	24,474,797
Other city Divisions	1,414,054	31,500	211,566	46,357	1,703,477
TOTAL CITY DIVISIONS	8,728,679	57,038,366	23,540,393	402,357	89,709,795
Toronto Hydro (4)	12,900,000			1,000,000	13,900,000
Toronto Police Service	245,000				245,000
TRCA					0
Toronto Transit Commission	700,000				700,000
Toronto Library	15,829	8,000	12,000	18,167	53,996
Toronto Community Housing	1,084,337	441,000	620,000		2,145,337
Toronto Zoo	3,000	23,500	91,000	69,500	187,000
TOTAL AGENCIES, CORPORATIONS AND TRCA	14,048,166	472,500	723,000	1,087,667	16,331,333
GRAND TOTAL	22,776,845	57,510,866	24,263,393	1,490,024	106,041,128

- (1) Parks, Forestry and Recreation total costs related to the storm is \$52.2M. Forestry costs consist mainly of emergency response including removal of tree limbs affecting hydro wires (\$1.8M), inspection and elimination of hazards on streets, parks, sidewalks, roads, entrances to centres (\$30.4M), inspect and assess remedial work, canopy repair, stump removal and tree replacement (\$16.6M). As well, estimated damage to Parks assets (\$2.1M) and loss of revenue for recreation centres and costs for staffing and supplies at warming centres (\$1.3M)
- (2) Transportation Services costs consist mainly of clean up of road hazards (\$7.1M), and emergency responses (\$1.2M)
- (3) Solid Waste Management costs consist mainly of chipping wood (\$6.2M), haulage of wood from curbside (\$16.2M), creation of temporary storage sites (\$1.5M), and miscellaneous (\$0.5).
- (4) Toronto Hydro costs consist mainly of costs to restore power (\$12.9M), and lost revenues (\$1M).
- (5) TTC estimated costs do not include revenue losses. These estimates are currently under development.

A detailed summary of these cost estimates is provided in Attachment 2, *City of Toronto Divisions, Agencies & Corporations Preliminary Ice Storm Cost Estimate*. Similar to the July 8th storm which caused substantial damage to the City's infrastructure, the December storm resulted in significant

damage to the City's tree canopy (forestry infrastructure) that will need to be rehabilitated over the next year. The December storm also created public safety hazards that have largely been addressed by City divisions and Toronto Hydro.

The City's ability to deal with these significant cost pressures is exacerbated by the financial pressures resulting from the July 8, 2013 storm event which is estimated to have cost the City \$65.2 million. Combined the two extreme weather events in 2013 are estimated to have cost the City in excess of \$171 million.

Given the magnitude of both storms, this report recommends that City Council request the Provincial and Federal governments to consider additional disaster assistance to the City of Toronto and Toronto Hydro through the Ontario Disaster Relief Assistance Program (ODRAP) or any other relevant Provincial programs. Also, this report recommends that they develop new programs for future disaster mitigation that would include urban flooding, winter storms and erosion control that reflect the reality of our changing climate. Extreme weather events adversely affect municipal governments to a much larger degree than the other two orders of government.

In addition, the length of the winter storm has had an economic impact on businesses in the City of Toronto. This economic impact will be detrimental to Provincial and Federal tax revenues. A tri-level partnership to manage and fund extreme weather and other disaster events, with each order of government funding a one-third share of costs, is a reasonable approach in mitigating the damage caused by extreme weather events, including investment for municipal and regional infrastructure to mitigate future impacts.

This report recommends that City staff report to the January 22, 2014 Executive Committee on any impacts to the 2014 Operating and Capital budgets and on proposed sources of funding to cover the City's cost of the ice storm. As summarized in Table 4 below, the City has funds of just over \$30 million in two extreme weather reserves (\$19.1 million in the Transportation Services Extreme Weather Reserve, and \$11 million in the Corporate Extreme Weather Reserve). There is no operational / stabilization reserve for Solid Waste. The two extreme weather reserves could be utilized to fund a portion of the City's ice storm costs. However, the winter maintenance Transportation Extreme Weather Reserve is already insufficiently funded to meet 2014 forecasts and should not be depleted or re-allocated for other purposes.

Table 4: Reserves and Reserves Funds

Reserves and Reserve Funds	Uncommitted, Projected Balance as at Dec. 31, 2013 (\$ millions)
Transportation Services Extreme Weather Reserve (includes Winter Maintenance reserve)	\$19.1
Corporate Extreme Weather Reserve	\$11.0
Total: Extreme Weather Reserves	\$30.1

Although the City is projecting an annual operating surplus of approximately \$92.3 million, the projected surplus is committed, in accordance with Council's Surplus Management Policy: 75% or \$69 million to capital financing and \$23 million to partially fund unfunded liabilities, which exceed \$3 billion. The 2014 Capital Budget and Financing Plan already assumes approximately \$75 million from the 2013 surplus will be used to fund 2014 projects. Accordingly there is no flexibility to use the 2013 surplus to cover ice storm costs without impacting City debt.

The report to the January 22, 2014 Executive Committee will also consider long-term sustainable funding options for extreme weather events and the rehabilitation and /or enhancement of the City's infrastructure. Options may include a special property tax levy and a tri-government partnership approach.

Insurance Claims & City Recoveries

City staff have confirmed with the Insurance Bureau of Canada, Consumer Information Centre that insurance policies written for private residential and commercial property will respond to ice storm damage claims. Estimates of insured damages will not be available until mid January at the earliest. Damages such as falling trees/limbs striking an insured dwelling or vehicle are insurable as is the cost to remove the fallen tree debris. However, claims for additional living expenses due to abandoning a home with no hydro when no damage resulted to the insured dwelling, might not be covered. As well, private insurance may not cover the expense of removing fallen trees/limbs unless it caused damage to insured property. Residents should consult with their own private insurance for advice on the extent of coverage available for their particular circumstances.

Generally, the City is not legally responsible for property damage that results from the failure of a tree/limb that occurred as a result of a storm event. However, if the public believes that the City has been negligent in its maintenance of City trees, which has caused bodily injury or damage to property, they can file a claim against the City of Toronto. Instructions for the public are available at www.toronto.ca/makingaclaim.

Private property owners have two years from the storm event date to make a property damage liability claim against the City. As of January 7th, the City has received 81 property damage claims directly from residents and three from insurers. In addition, two bodily injury claims have been made in relation to the ice storm. City insurance adjusters do not anticipate receiving a high quantity of liability claims because the ice storm was a weather event and damage did not emanate from City infrastructure as was the case on July 8, 2013 when sewer systems backed up due to heavy rains.

Subject to the insurance policy deductible of \$5 million, the City and its divisions, agencies and corporations are insured for physical loss or damage to insured property that results from the hydro interruption. This includes coverage for spoilage and freeze damage. In addition, City property insurance covers damage to City facilities caused by falling ice and falling trees/limbs. City insurance does not cover the cost to remove fallen tree/limb debris where there is not resultant damage to an insured City building. The cost to remove fallen trees/limbs in City parks is not insured.

As of January 7th one City operated long-term care facility has reported damage due to a faulty sprinkler, which shorted out an air conditioning unit that result in a small fire in a training area. The fire was quickly extinguished and no injuries to residents or City staff were sustained. No other insured damage has been reported to date from City divisions.

The City's estimated costs for the ice storm do not include any insurance recovery. As at January 7th the only City property damage claim reporting is the long-term care facility which has an estimated repair cost of \$50,000. Insurable damages sustained by the City are not expected to exceed the \$5 million deductible.

Requesting ODRAP Assistance

Municipalities are not automatically entitled to receive financial assistance from the Province when responding to, or declaring, a local emergency under the Emergency Management and Civil Protection Act. For a municipality to be eligible for ODRAP, the Minister of Municipal Affairs and Housing (Minister) must make a declaration of a disaster area. To make a request, City Council must adopt a resolution and forward it to the Minister within 14 working days of the date of the disaster. The City Manager has confirmation from MMAH that due to the severe weather that occurred on December 21/22, 2013, that a request from the City is required by January 14, 2014.

Recommendation 2 of this report contains the necessary components to support the City's request to the Province for assistance under the public component of ODRAP. As detailed below, the City is not recommending seeking assistance through the private component of ODRAP.

In determining whether a disaster has occurred, the Minister will consider both the cause of the damages, the extent of the damages relative to the financial resources of the City, and its ability to cope and fully recover. The municipality will be notified as to whether or not a disaster declaration has been made.

The financial capacity of a municipality to respond, cope and fully recover from an emergency event is the key criteria used by the Province to determine ODRAP eligibility. In its assessment, the Province looks at the size of the loss relative to the municipality's total property tax base. Given most large municipalities have reserves and the capacity to raise additional funds through debt; they have had no success with recent ODRAP applications. This is an overly simplistic way to assess the financial burden of disaster recovery costs to municipalities. ODRAP was developed in the 1960s and has not adequately evolved to respond to the emerging critical weather related emergencies experienced today by large urban municipalities throughout the Province.

Examples of larger, urban municipalities not receiving ODRAP funding despite significant and heavy damage include:

- During a major storm in July of 2009, the City of Hamilton experienced severe flooding to over 7,000 homes yet were denied ODRAP funding;

- The Cities of Mississauga and Toronto both endured significant and very damaging flooding this past July, yet received no assistance.

In the event that Toronto is not successful in receiving ODRAP funding, despite experiencing over \$171 million in damages during two severe storm events in 2013, staff also recommend the Provincial and Federal governments provide assistance through any relevant funding.

Public Damage Component

The public component of ODRAP provides assistance to municipalities when damage is so extensive that it exceeds the capacity of the affected area to manage. Municipalities within the declared disaster area may receive repayment/reimbursement of up to 100 per cent of eligible costs for uninsured municipal damage associated with the disaster.

Examples of eligible losses and costs under the public component include:

- repair and restoration to pre-disaster condition of uninsured public facilities,
- evacuation and shelter of people and animals, overtime for employees and those hired for disaster response/relief efforts,
- emergency operations centre, and
- clearing and removal of debris and wreckage, including removal of trees and limbs if public safety is endangered.

Regular salaries, insurance deductibles, equipment costs and lost revenue are not eligible costs under ODRAP.

In addition to the municipal council resolution, municipalities must submit a municipal disaster information report containing at least a preliminary estimate of public damage losses within 14 working days of the disaster. Additional updates can be submitted to MMAH as more accurate damage assessment information becomes available.

Private Damage Component

The private component of ODRAP provides the "necessities of life" to help those impacted by the disaster to recover. Individuals are expected to bear the initial responsibility for their losses. If the uninsured losses are extensive that individuals cannot cope on their own, the municipality and the community at large are expected to assist. If the Minister declares a disaster area which includes private damages, the municipality must establish a disaster relief committee to implement the program locally. The Province may match funds up to 2 to 1 ratio to settle the claims, up to 90 per cent of the estimated eligible amount.

Examples of eligible losses and costs under the private component include:

- restoration, repair or replacement to pre-disaster condition of a principal year-round residence and principal business enterprise building,
- restoration, repair or replacement to pre-disaster condition of churches, cemeteries, and other facilities of not-for-profit organizations, charities, service clubs,
- essential furnishings of a private residence (i.e. refrigerator, freezer, furnace, stove, clothes washer/dryer),
- replacement of inventory (at cost) for business enterprises

- emergency expenses, and
- perishable food.

Losses covered by insurance, insurance deductibles, non-essential furnishing, landscaping, fencing, and retaining walls, recreational vehicles, and loss of revenue or regular salaries and wages are not eligible costs under ODRAP.

In addition to the municipal council resolution, municipalities must submit a municipal disaster information report containing at least a preliminary estimate of private damage losses within 14 working days of the disaster. Additional updates can be submitted to MMAH as more accurate damage assessment information becomes available.

The Insurance Bureau of Canada (IBC) is the national industry association representing Canada's private home, car and business insurers. The IBC Ontario Regional Office and Consumer Information Centre in Toronto will be the point of contact for information on insured and uninsured losses sustained by private property owners. At the writing of this report, the IBC is of the view that private insurance will respond to ice storm damages. However, private expenses relating to hydro interruption that are not associated with insured physical damage might not be covered by private insurance. For example, expenses to move out of an otherwise undamaged home and expenses to remove fallen tree/limb debris that itself has not caused building damage, may not be recoverable from private insurance. City staff will monitor this matter with the IBC's Toronto Consumer Information Centre.

ODRAP is not a substitute for adequate insurance coverage. It does not provide full cost recovery and it will not reimburse insurance deductibles. IBC advises that they will not have private insurance damage dollar estimates until mid January, after the January 14th ODRAP submission date. Further, IBC confirms that private insurance covers ice storm damage. Therefore, this report does not recommend including a private component in the City's ODRAP request.

3. Post Mortem - Emergency Response Review

In follow-up to the December 21st and 22nd storm event and the subsequent co-ordinated emergency response, the City Manager in consultation with TEMPC, will prepare a Post Mortem report for the Executive Committee. The Post Mortem report will provide more fulsome details on the activities of City divisions, Agencies and Corporations and other partners, will identify positives aspects of the emergency response and will identify and make recommendations to improve the co-ordination of the City's response for future emergency events.

As recommended in this report, the City Manager will report to the Executive Committee no later than the second quarter of 2014.

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ATTACHMENTS

Attachment 1, *December 2013 Winter Storm – Emergency Operation Centre Event Summary*

Attachment 2, *City of Toronto (Division, Agencies and Corporations) Extreme Winter Storm Related Expenditures & Revenue Loss*

Attachment 3, *City of Toronto Emergency Plan*

Attachment 4, *Ontario Disaster Relief Assistance Program – Program Guidelines*

December 2013 Winter Storm Emergency Operations Centre Event Summary

Saturday Dec. 21

- Hydro Outages: Toronto Hydro reports 4,000 customers without power at 9:30 PM. The number increases to 8,500 by 10:47 PM.
- Key Decisions/Issues:
 - Deputy City Manager 'B', John Livey requests OEM to monitor approach of storm and potential impacts.
 - OEM Begins storm monitoring at 10:30 AM.
 - By 11:57 AM OEM develops staffing plan for EOC.
 - At 12:30 PM TEMPC was notified that OEM was assembling at City's EOC.
 - By 1:00 PM the EOC is activated, notice sent to TEMPC and EMWG members that the EOC is activated and receiving divisional impact updates from City Divisions.
- EOC Updates #1 to #6.

Sunday Dec. 22

- Reception Centres: at 4:30 AM Red Cross put on standby to assist with staffing reception centres if required. By 1:50 PM 7 Reception Centres operational, increased to 10 Reception Centres by 5:45 PM.
- CCAC: at 4:00 AM CCAC put on standby. By 5:30 AM CCAC notified of all available reception centres.
- Wellness Checks: TCH initiated wellness checks.
- Debris Management: information coming in to 311 and Toronto Police of downed trees and tree limbs causing safety hazards. City Forestry dispatching crews.
- Hydro Outages: at 5:00 PM Toronto Hydro reports approx. 300,000 customers without power (1,000,000 people). Number drops to 265,000 by 11:00 PM
- Key Decisions/Issues:
 - At 2:20 AM 703 Don Mills and the EOC lost all power and relocated to Metro Hall.
 - 911 Dispatch relocated to backup site at 4330 Dufferin Headquarters.
 - EOC Day Shift reported to Metro Hall starting at 4:00 AM.

- Toronto Police activate the Major Incident Command Centre.
- EOC Updates #7 to #11.

Monday Dec. 23

- Reception Centres: Police Service reports opening 13 Warming Centres at Stations. EOC Director e-mails Provincial PEOC requesting provincial sites for Reception Centres, fuel for generators and forestry crews. 12 Reception Centres now operational.
- CCAC: Two centres established for Vulnerable Persons via CCAC and EMS. One Long Term Care Facility reported without power. Province and City provide generator power.
- Wellness Checks: TCHC reports continuing wellness checks at 9:30 AM (estimated 15,000 individuals affected). TCH teams triaged and connected residents with CCAC and family members.
- Debris Management: City dispatched 60 forestry crews to aid in tree and limb removal. City requests provincial aid from PEOC for Forestry resources to aid in tree limb removal.
- Hydro Outages: Toronto Hydro reports 225,000 customers without power at 7:00 AM. Number drops to 213,000 by 4:00 PM.
- Key Decisions/Issues:
 - 311 Toronto reports, 59 calls in the queue, 13 minute wait time, 4,307 calls answered since midnight (last 21 hours). Calls primarily regarding power outages.
 - Fire Services discontinued severe weather protocol to normal dispatch. Summary of last 36 hours: 3,630 Incidents (normal is 500), 5,637 Communication calls.
 - EOC Director deputized to work with Toronto Hydro to determine City restoration.
- EOC Updates #12 to #19 released.

Tuesday Dec. 24

- Reception Centres: 13 Reception Centres now operational.
- CCAC: Ongoing monitoring and coordination with EOC on wellness checks.
- Wellness Checks: Ongoing monitoring and coordination with EOC on wellness checks.
- Fuel Distribution: Decision at 9:20 AM that all emergency fuel requests are to be routed through the EOC. TCH faced critical fuel shortages. Chief Corporate Officer notified the PEOC to request Provincial fuel carriers. EOC monitoring fuel requests for public and private facilities.

- Debris Management: call made through the PEOC for Forestry resources from neighbouring municipalities.
- Hydro Outages: 178,000 customers without power at 3:00 AM, drops to 126,000 at 9:00 AM, 90,000 by 3:00 PM.
- Key Decisions/Issues:
 - EOC discussing Mutual Aid and Liability issues with City Legal with respect to Debris Management.
 - Conference call held between EOC, PEOC, and TEMPC regarding mutual aid.
- EOC Updates #20 to #25 released.

Wednesday Dec. 25

- Reception Centres: 11 Reception Centres now operational.
- CCAC: Ongoing monitoring and coordination with EOC on wellness checks.
- Fuel Distribution: EOC monitoring fuel requests for public and private facilities.
- Hydro Outages: 78,000 customers reported without power as of 1:00 AM, drops to 70,000 by 7PM.
- Key Decisions/Issues:
 - 311 Toronto reports, all manually recorded Service Requests now entered in system. As of December 23 almost 3 times the call volumes (same date in 2012) - 2,378 storm, clean-up Service Requests.
- EOC Updates #26 to #28 released.

Thursday Dec. 26

- Reception Centres: 11 Reception Centres now operational.
- CCAC: Ongoing monitoring and coordination with EOC on wellness checks.
- Wellness Checks: Toronto Police assisting in wellness checks as per a critical list provided by Toronto Hydro to the EOC.
- Fuel Distribution: EOC monitoring fuel requests for public and private facilities.
- Debris Management: Chief Operating Officer drafts standing agreement between City and other municipalities for mutual aid rendered for forestry services.
- Hydro Outages: 55,000 customers reported without power as of 7:30 AM, drops to 48,000 by 4:30 PM.
- Key Decisions/Issues:
 - MICC closed at 7:00 PM. Police Service begin assisting with Wellness Checks in identified vulnerable areas.

- EOC Updates #29 & #30 released.

Friday Dec. 27

- Reception Centres: 10 Reception Centres now operational.
- CCAC: Ongoing monitoring and coordination with EOC on wellness checks.
- Fuel Distribution: EOC monitoring fuel requests for public and private facilities.
- Debris Management: ongoing.
- Hydro Outages: 33,000 customers reported without power as of 10:00 AM, drops to 25,750 8:00 PM.
- Key Decisions/Issues:
 - EOC credit limit increased.
 - PEOC arranges for hotel rooms for visiting forestry resource crews.
- Deputy Mayor calls TEMPC Meeting.
- EOC Updates #30 to #33 released.

Saturday Dec. 28

- Reception Centres: 10 Reception Centres now operational.
- CCAC: Ongoing monitoring and coordination with EOC on wellness checks.
- Fuel Distribution: EOC monitoring fuel requests for public and private facilities.
- Debris Management: ongoing.
- Hydro Outages: 18,000 customers reported without power as of 2:00 PM, drops to 16,000 by 8:00 PM.
- EOC Updates #34 to #36 released.

Sunday Dec. 29

- Reception Centres: 7 Reception Centres now operational
- CCAC: Ongoing monitoring and coordination with EOC on wellness checks.
- Debris Management: ongoing.
- Hydro Outages: 7,400 customers reported without power as of 9:00 AM, drops to 6,000 by 2:00 PM.
- Key Decisions/Issues:
 - Solid Waste's Debris Management Briefing Note issued.

- Food Vouchers: EOC contacted by the Province to assist with distribution of Food Vouchers. Referred to City Manager and Deputy City Manager (Cluster A) for follow up and coordinate with TESS and Province
- EOC Updates #37 to #39 released.

Monday Dec. 30

- Reception Centres: 4 Reception Centres now operational.
- CCAC: Ongoing monitoring and coordination with EOC on wellness checks.
- Debris Management: ongoing.
- Hydro Outages: 725 customers reported without power as of 2:00 PM, drops to 400 by 8:00 PM.
- Key Decisions/Issues:
 - Deputy Mayor calls TEMPC Meeting.
 - Updates by all divisions and agencies on status of emergency
 - City Manager discusses Council report (Jan 10/14) information requirements
- EOC Updates #40 & #41 released.
- Province announces food card program.

Tuesday Dec. 31

- Reception Centres: 1 Reception Centre now operational. All 13 Police warming centres shut down.
- CCAC: Ongoing monitoring and coordination with EOC on wellness checks.
- Debris Management: ongoing.
- Hydro Outages: 290 customers reported without power as of 11:00. Last update provided to EOC prior to demobilization.
- Key Decisions/Issues:
 - 2:00 PM – City Manager authorizes EOC transitioning to OEM 'Standby'.
- EOC Update #42 released.
- Distribution of food vouchers begins at TESS.

Thursday Jan. 2

- Key Decisions/Issues:
 - 11:00 AM – EOC Standing down as of 12:00 PM today.
 - EOC mailboxes and phones will cease to be monitored.

- The Office of Emergency Management will continue to support any outstanding issues related to the storm response through its normal business processes.
- EOC Update #43 released.

Thursday Jan. 3

- Food vouchers distribution ends.

CURRENT OPERATIONS:

- The Office of Emergency Management continues to manage an EHS response for residents of 301 Prudential Drive in cooperation with Parks, Forestry and Recreation instructed by City Manager and Deputy City Manager (Cluster A).
- City Divisions continue managing debris removal with assistance from crews from other municipalities and this process is expected to take 6 to 8 weeks with monitoring by Deputy City Manager (Cluster B).

Debris Management Information

- All debris management inquiries should be directed to 311.
- The General Manager of Solid Waste Management Services is the lead for the Debris Management Plan and will take Councillor Inquiries and emails.

City of Toronto Divisions, Agencies & Corporations
Preliminary Winter Storm Cost Estimate

City Services	Emergency Response Costs	Immediate Clean-up Costs	Recovery Costs	Total Costs	Revenue Loss	Grand Total
CITIZEN FOCUSED SERVICES A						
CHILDREN'S SERVICES	46,245	0	0	46,245		46,245
COURT SERVICES	8,600	0	0	8,600		8,600
ECONOMIC DEVELOPMENT & CULTURE	14,300	10,000	0	24,300	42,500	66,800
EMERGENCY MEDICAL SERVICES	266,000	0	8,000	274,000		274,000
LONG TERM CARE HOMES & SERVICES	98,883	0	103,495	202,378	2,789	205,167
PARKS, FORESTRY & RECREATION	2,963,000	30,400,000	18,500,000	51,863,000	350,000	52,213,000
SHELTER, SUPPORT & HOUSING ADMIN.	35,598	500	8,270	44,368		44,368
EMPLOYMENT & SOCIAL SERVICES	1,009,000	0	0	1,009,000		1,009,000
TORONTO PUBLIC HEALTH	105,974	0	13,261	119,235		119,235
CITIZEN FOCUSED SERVICES B						
FIRE SERVICES	41,379	0	0	41,379		41,379
POLICY, PLANNING, FINANCE & ADMIN.	3,214	0	0	3,214		3,214
TRANSPORTATION SERVICES	3,326,735	1,549,349	3,926,877	8,802,961		8,802,961
TORONTO WATER	0	604,610	901,950	1,506,560		1,506,560
OFFICE OF EMERGENCY MANAGEMENT	486,618	0	0	486,618		486,618
SOLID WASTE MGMT	15,890	24,452,907	0	24,468,797	6,000	24,474,797
OTHER CITY DIVISIONS						
PURCHASING & MATERIALS MGMT	3,769	0	0	3,769		3,769
CHIEF CORPORATE OFFICER LED PROGRAMS & SERVICES	212,562	21,000	70,100	303,662	500	304,162
INFORMATION & TECHNOLOGY	54,097	0	0	54,097		54,097
CORPORATE FINANCE	0	0	440	440		440
HUMAN RESOURCES	19,659	0	0	19,659		19,659
STRATEGIC COMMUNICATIONS	13,439	0	0	13,439		13,439

City Services	Emergency Response Costs	Immediate Clean-up Costs	Recovery Costs	Total Costs	Revenue Loss	Grand Total
CITY CLERK's OFFICE	2,262	0	8,000	10,262	568	10,830
LEGAL SERVICES	1,455	0	0	1,455		1,455
TOTAL CITY DIVISIONS	8,728,679	57,038,366	23,540,393	89,307,438	402,357	89,709,795
AGENCIES & CORPORATIONS						
TORONTO HYDRO	12,900,000	0	0	12,900,000	1,000,000	13,900,000
TORONTO POLICE SERVICE	245,000	0	0	245,000		245,000
TORONTO AND REGION CONSERVATION AUTHORITY	0	0	0	0		-
TORONTO TRANSIT COMMISSION	700,000	0	0	700,000		700,000
TORONTO LIBRARY	15,829	8,000	12,000	35,829	18,167	53,996
TORONTO COMMUNITY HOUSING	1,084,337	441,000	620,000	2,145,337	-	2,145,337
TORONTO ZOO	3,000	23,500	91,000	117,500	69,500	187,000
TOTAL AGENCIES & CORPORATIONS	14,048,166	472,500	723,000	15,243,666	1,087,667	16,331,333
GRAND TOTAL	22,776,845	57,510,866	24,263,393	104,551,104	1,490,024	106,041,128