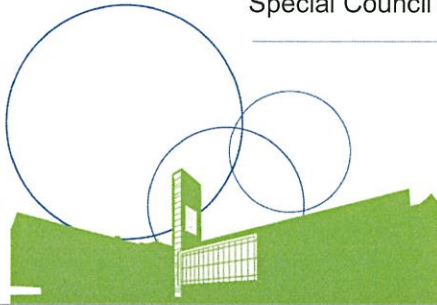


Ice Storm – December 2013

Special Council – January 14, 2014



2



Ice Storm 2013

Purpose of the Presentation

- Overview of Ice Storm
- Report on activities of Emergency Operation Centre (EOC)
 - ✓ Operations First Response – Vaughan Fire and Rescue Services
 - ✓ Operations Community Services
 - ✓ Operations Infrastructure
 - ✓ Public Information
- Ontario Disaster Relief Assistance Program (ODRAP)
- Staff Debrief – Preliminary Comments & Suggestions
- Resolution for Consideration



3

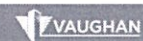


Overview

Precipitation	Freezing Rain from December 20 – 22, 2013
Ice Accumulation (Accretion) in Vaughan	35mm <small>(Source - Environment Canada Weather Summary December 23, 2013)</small>
Power Outages in Vaughan	Approximately 37,700 customers on December 22, 2013 at 11 a.m.
Estimated Trees Damaged	Over 32,500
Assistance from other Municipalities	City of Peterborough, Simcoe County, City Brampton
Estimated Financial Implications (Response & Recovery)	\$21 million (rounded)



4



Overview – December 22 to 31, 2013

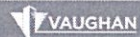
Emergency Operations Centre	136 staff on rotating shifts	462 hours
Warming Centres	19 staff on rotating shifts	144.5 hours
Vaughan Fire and Rescue Service (December 21 – 26, 2013)	Suppression and Communications	1726 telephone inquiries 406 emergencies 42 CO calls
Access Vaughan	2-3 staff alternating shifts	1412 ice storm related calls only 5 voicemails returned 23 emails answered 92 hours total
By-Law and Compliance	27 staff on rotating shifts	371 hours plus 91 management hours

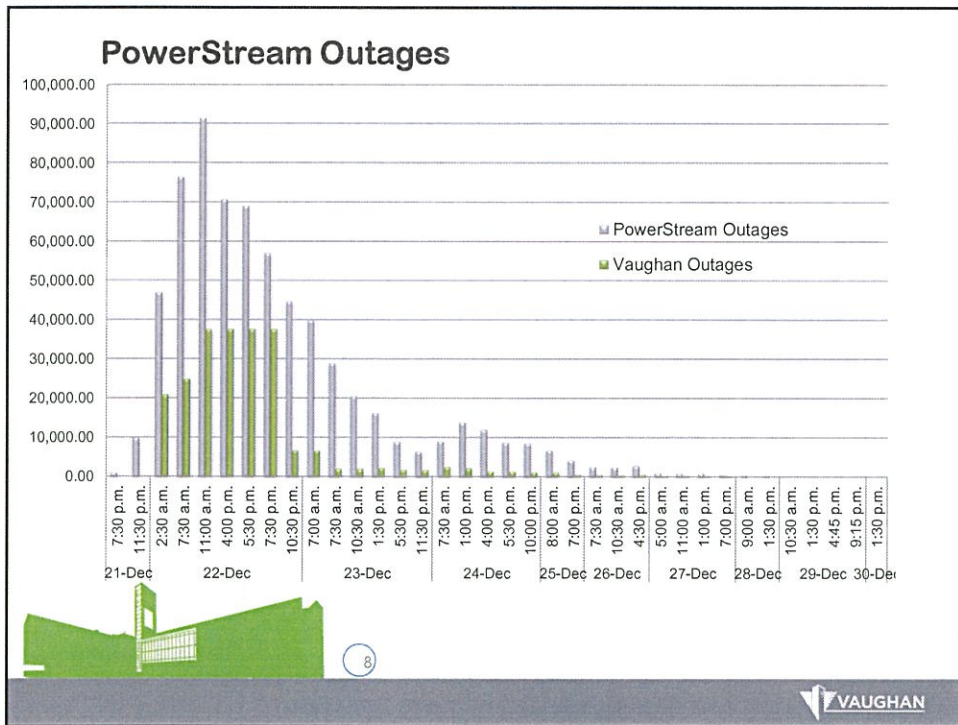
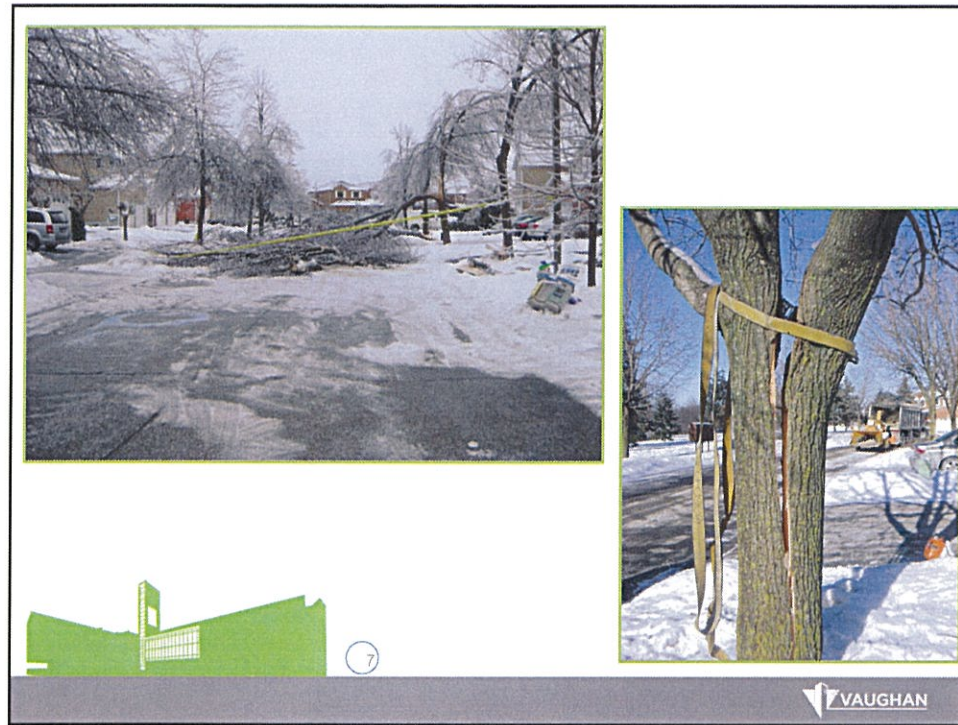


Overview – December 22 to 31, 2013

Cont'd

Community Services – Parks and Forestry	Weeks 1-3: 5 in house forestry crews plus 23 contractor crews. 3 staff assisted Access Vaughan on Dec 22. 16 cross-commission staff assisted Dec 22 - 24. 5 Parks Development staff assisting with contract admin.	
Public Works	2 additional Dispatch staff	97.5 additional hours 3,103 calls from Dec 21-Jan 5
Operations Roads	11 Roads staff on pre-set shift (5 east, 6 west) 2 contractors (38 salters, 54 ploughs, 43 windrow clearing units)	





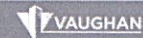
Pre-storm Planning

Tuesday, December 17 to Saturday, December 21

- Weather alerts issued to Severe Weather Alert email group, Emergency Management Team (EMT) and scribes.
- In consultation with Fire Chief, decision was made to place the EMT and scribes on standby, monitoring of weather conditions and alerts issued.
- Red Cross notified and placed on standby.

Parks & Forestry Operations

- Monitored weather reports, mobilized all snow clearing and all Forestry equipment
- Performed inspections to ensure they were ready (Dec 18-20).
- Scheduled overtime hours in anticipation of storm and identified which staff would be available for overtime (Dec 19).
- Placed contractors on stand-by and provided names & numbers to on-call staff (Dec 20).
- Ordered additional salt, ensured that all saltboxes at every location were filled; liaised with facility staff to monitor and use as needed (Dec 20).



Pre-storm Planning Cont'd

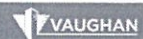
Building and Facilities

- Monitored weather reports (Dec 18-20).
- Facility staff advised to monitor entrances and utilize salt as needed to keep building entrances clear (Dec 20).

Recreation and Culture

Week of December 16:

- For each centre, charted the facility hours, staff assignments and on call staff broken down for each day in the two week holiday period and provided a copy to the management team.
- For City Hall, summarized the authority levels for each business unit (ie programs, registration facility permitting) for the two week period and provided a copy to the management team.
- Provided contact information (ie. Director and key staff) to Commissioner for consolidation in a Community Services memo that was sent to City Manager, Commissioners and senior management in Community Services.



Pre-storm Planning Cont'd

Vaughan Fire and Rescue Services

- VFRS prepared by having three senior command officers on alert/standby, weather alerts were reviewed in consultation with the Manager of Emergency Planning and discussed scheduling options and availability around the holiday.
- In constant communication to ensure contingency plans for fuel.
- Ensured all station and portable generators were serviced and functioning.
- Reviewed staffing criteria with senior command team and options for call back availability.



11



Emergency Operation Centre – Partial Activation

Sunday, December 22

- 12 p.m. – Partial activation of EOC initiated with notification of EOC Director, Head of Council, Fire Section Chief, Liaison Officer Operations Community Services, Operations Infrastructure Section Chief, Public Works Officer, Red Cross, Public Information Section, Logistics Section Chief, Purchasing Officer, Administration Section Chief, Clerks Officer, By-Law Officer and scribes.
- 2 p.m. – EOC populated with key EMT members
- Three incident briefings.
- 11 p.m. – December 23 at 7 a.m. – Virtual Operations (response through cell, email and text messaging).



12



Emergency Operation Centre – Partial Activation Cont'd

Monday, December 23

- 7 a.m. to 6 p.m.
- Three incident briefings.
- Dec 23 at 6 p.m. to Dec 26 - Virtual Operations (response through cell, email and text messaging).

Thursday, December 26

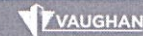
- 1:30 p.m. to 5:00 p.m.
- EOC reactivated from virtual mode due to secondary power loss along Rutherford Road from Jane Street to Highway 27 and north and south on Islington affecting customers. Power restored rapidly.
- Dec 26 at 5 p.m. to Dec 31 - Virtual Operations (response through cell, email and text messaging).

Tuesday, December 31

- 8:30 p.m. – After the latest update from PowerStream the EMT/EOC stood down and warming centres closed.



13



Operations – Vaughan Fire and Rescue Service

- December 21 at 5 p.m. to December 26 at 6 p.m., Vaughan Fire and Rescue Services (VFRS) responded to 406 emergency incidents.
- December 21 at 5 p.m. to December 23 at 6 p.m. VFRS responded to 240 emergency incidents – response time average of one minute longer.
- Incidents included arcing wires, hydro pole fires, CO calls (42), medical aid and automobile accidents.
- Total of six confirmed fires.
- One death due to exposure.
- One serious injury during recovery.

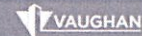


14



Operations Community Services – Forestry

- Cross-commission staff team (Enforcement, Building Standards, Parks Development) mobilized immediately to assess all blocks throughout the city by Dec 24.
- Secured assistance from the City of Peterborough and Simcoe County (Dec 23 & 24).
- Prioritized removals based on imminent hazards.
- With assistance from Human Resources, able to bring on 19 additional hourly staff.
- With assistance from Purchasing, able to secure 11 contractors to date.
- 4 Parks Development Staff assisting with contract admin (weeks 4-9).
- 6 Building Standards and Urban Design staff assisting with woodlot inspections (weeks 4-9).



Operations Community Services – Forestry

Phase 1- (Dec 22-28)

- remove all imminent hazard trees.
- clear all streets for emergency vehicle access (1 lane).

Phase 2 - (Dec 28 – Feb 28 pending available resources)

- remove all hazards over driveways, roadways, sidewalks, walkways (hangers).
- completion of pruning & removals on boulevards.
- remove accessible debris; including private tree debris brought to curbside (Jan 27).

Phase 3 - (Mar 1 – July 31 pending available resources)

- removal of all remaining debris/spring clean-up.
- completion of pruning & removals in parks, woodlots and open space.

Phase 4 - (Dec 2015 pending available resources)

- replanting of replacement trees.

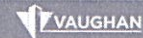


Operations Community Services – Forestry

- Total Number of Trees Impacted: estimated over 32,500.
 - ✓ Damaged Trees Requiring Maintenance: estimate 18,900.
 - ✓ Number of Replacement Trees Due to ice storm: estimate 13,600 (excluding parks and woodlots).
- Total Estimated Woodchip Debris Removal: 21,000m³ chip + 4,300m³ logs.
- Total Crew Compliment:
 - ✓ Weeks 1-3: 5 (In-house) + 23 (Contractors).
 - ✓ Weeks 3-9: 7 (In-house) + 40 (Contractors).
- Estimated Total Percentage of Tree Canopy Loss: Estimate approximately 15%.



17



Operations Community Services – Forestry

- Estimated Time to Complete:
 - ✓ Full Cleanup Operations: 9 weeks (prune & remove) + 4 weeks in Spring (clean-up).
 - ✓ Stumping & Replacements: Dec 2015 (pending budget approval).
- Estimated Total Costs: \$18.9 million.
 - ✓ (based on current resource & 13 weeks timeline).
 - ✓ Includes: all labour (contract, in-house, admin), equipment, re-planting.
- Estimated Total Costs: \$22.7 million.
 - ✓ (based on accelerated timelines).
 - ✓ Additional resource required to shorten timeline will reflect a 20% increase to total noted above.



18

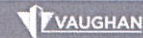


Operations– Warming Centres

- Three Warming Centres, supervised by Recreation and Culture and Building and Facilities Staff, were mobilized by 4 p.m. on Sunday, December 22
 - ✓ Dufferin Clark Community Centre (24/7 until December 28th, Pet Friendly)
 - ✓ Maple Community Centre
 - ✓ Vellore Village Community Centre
- City provided access to the Youth Rooms that had TV's, couches, pool tables and games and to the gym for basketball. City also provided meals, beverages and refreshments.
- Red Cross provided cots and blankets.
- By-law and Compliance Officers/private security was onsite to respond if needed; Animal Services Staff was on call to respond to pet matters.
- All Community Centres were well used for a place to stay warm, shower and for technical connections (re-charging phones/laptops).



19



Operations– Warming Centre Usage

Date	Attendance Day	Attendance Overnight – Dufferin Clark Only
Sunday, December 22	45	11
Monday, December 23	55	6
Tuesday, December 24	62	15
Wednesday, December 25	12	8
Thursday, December 26	8	0
Friday, December 27	0	0
Saturday, December 28	0	0



20

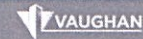


Infrastructure – Public Works

- Dec 20th, first full-scale salting operation started at 1:45 a.m.
- Dec 20th, second full-scale salting operation started at 4:00 p.m.
- Dec 21st, first full-scale salting operation started at 1:30 a.m.
- Dec 21st, second full-scale salting operation started at 7:00 p.m.
- Dec 22nd, full-scale salting operation started at 4:00 a.m.
- Dec 22nd, full-scale plowing operation started at 2:30 p.m.
- Dec 23rd, full-scale salting operation started at 1:30 a.m.
- Dec 25th, full-scale salting operation started at 4:00 p.m.
- Dec 26th, full-scale salting operation started at 4:00 a.m.
- Dec 31st, full-scale salting operation started at 7:45 a.m.



21



Administration – By-Law and Compliance

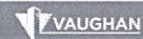
On duty officers (including Animal Control) were re-deployed to alternate duties to:

- Assisted Public Works & Parks & Forestry to conduct street surveys of conditions (ie. unsafe trees, blocked sidewalks, etc.).
- Were available to assist any Commission as required (ie. public outreach, door knocking, etc.)
- Assisted at Community Centres, providing security and assistance as needed.
- Animal control officers ensured shelter remained open on extended hours and respond to any field calls
- Animal Shelter staff, worked additional hours to assist in operating the shelter on extended hours (open to the public in case of need).

NOTE: Off duty officers were placed on stand-by, scheduled and called in accordingly to ensure additional coverage as needed (ie. community centres).



22

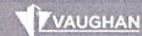


Public Information – Access Vaughan

- Access Vaughan was open:
 - ✓ Sunday, Dec 22, 2013 at 9:30 a.m. to midnight;
 - ✓ Monday, Dec 23, 2013 from 8:30 a.m. to 4:30 p.m.;
 - ✓ Tuesday, Dec 24, 2013 from 8:30 a.m. to 12:00 p.m. noon.
- Utilized the 'Emergency Broadcast Messaging System' to communicate pertinent Ice Storm information to all inbound callers.
- Updated the Snow Hotline to keep residents updated on Winter Maintenance concerns occurring simultaneously.
- Tuesday, Dec 24, 2013 at 12:00 p.m. to Thursday, Jan 2, 2014 at 8:30 a.m. inclusive Access Vaughan Management continued to check emails/voicemails; available Access Vaughan agents remained on standby where applicable.
- Access Vaughan staff worked a total of 92 hours from Sunday, Dec. 22, 2013 to Monday, Dec. 30, 2013.
- Stayed in regular communication with EOC members to determine staffing needs and ongoing support.
- Stayed in regular communications with Public Works Dispatch to assess call volumes and determine whether additional staffing support was required.



23



Public Information - Communications Storm Response Metrics

Date	Tweets	Facebook posts	Media updates Sent	Media Interviews with Mayor	Automated call to residents from Mayor	Website homepage alert updates	Website homepage hits	Website news updates	Council updates from City Manager
Dec. 19-21	4	3							
Dec. 22	108	17	2	680 News		2	5,480	2	2
Dec. 23	78	10	4	680 News CP24 CFRB 1010 OMNI TV Liberal Citizen	1	3	3,755	4	3
Dec. 24	28	4	1	CP24 680 News CFRB 1010 Vaughan Weekly		1	1,216	1	4
Dec. 25	6	1					827		2
Dec. 26	15	3	1			1	1,254	1	3
Dec. 27	22	1	2		1	1	1,328	2	2
Dec. 28	7	1				2	864		1
Dec. 29	2	1				1	819		
Dec. 30	3	1	1			1	1,311	1	
Dec. 31	2	1					939		1
Jan. 1-10	36	9	1		1	Alert down Jan. 1	Alert down Jan. 1	1	
Total	311	52	12		3	12	17,793	12	18



24



Public Information - Communications

Storm Response

Website

- Alert on homepage with updates from Dec 22 - Jan 1; **17,793** hits during that time
- 12 news items posted; 3,883 hits from Dec 22 - Jan 10

Twitter

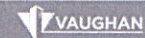
- City ice storm tweets, retweets and responses = 311
- Retweets of City messages = 259
- Potential reach = 451,090

Facebook

- City ice storm posts and responses = 52
- Likes/shares = 440
- Post clicks = 842
- Potential reach = 13,357



25



Estimated Financial Implications Response & Recovery – Parks and Forestry

- Forestry: **\$1,637,500** - Includes: labour (contract + in-house, inspections and admin), equipment for removal as it related to initial response period (week 1-3).
- Sidewalk Operations: **\$181,000** (labour, equipment and contractor services).
- Facility Snow Operations: **\$151,200** (additional salt required for city owned facilities).
- Forestry Cleanup Operations: **\$17,300,200** Includes: labour (contract + in-house, inspections and admin), equipment, re-planting as it relates to the storm recovery period (weeks 4-13 + replanting in 2015).

Total estimated costs of **\$19,269,900**; Forestry Operations (\$18,937,700) and Parks Operations (\$332,200).



26

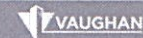


Estimated Financial Implications Recovery – Recreation and Culture

- Additional Recreation and Culture staffing costs incurred approximately \$2,300.
- Rental permit revenue losses at community centres for December 22 total approximately \$18,205.
- Recreation Program revenue losses (including point-of-sale) for swimming, skating & other drop-in programs for Dec 22 total approximately \$1,214.
- Food costs at Warming Shelters total \$662.
- Total Recreation and Culture: Approximately **\$22,381**.



27



Estimated Financial Implications Recovery – Building and Facilities

- Additional Building and Facilities staffing costs incurred: approximately \$17,174.
- Approximately \$80,000 in costs to external service providers for the following:
 - ✓ Restoring power to City facilities
 - ✓ Providing additional security services
 - ✓ Inspections and repairs
- Cost of additional utilities usage as a result of opening warming shelters for extended hours: approximately \$2,247.
- Total estimated cost to Building and Facilities: **\$100,000**.
- Total estimated Cost to Fleet Services: **\$31,285**.



28

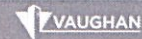


Estimated Financial Implications Response and Recovery – Public Works

- Additional Salt Purchases - \$257,000
- Winter Maintenance Contractor Costs - \$236,000
- Additional Fuel Costs - \$30,000
- Other costs - \$23,000
- **Total Estimated Costs for Public Works - \$546,000**



29



Ontario Disaster Relief Assistance Program

The Ontario Disaster Relief Assistance Program (ODRAP) is intended to assist those whose essential property has been extensively damaged as a result of a sudden, unexpected natural disaster such as a severe windstorm, tornado or flood. ODRAP contains:

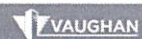
- Private component: Individuals, homeowners, farmers, small business enterprises and non-profit organizations. Funds are raised by the community and may be matched up to 2:1 by the province;
- Public component: Financial assistance may be provided by the province to affected municipalities for disaster response and 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.

ODRAP is not a substitute for adequate insurance coverage and does not provide full cost recovery.



30



Request for a Disaster Declaration

Some examples of "Disaster Areas" not declared

Markham flood in 2005

Vaughan tornado in 2009

Some examples of "Disaster Areas" declared

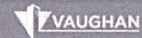
Eastern Ontario Ice Storm of 1998

Peterborough flood in 2004

Goderich tornado in 2011



31



Request for a Disaster Declaration

Making a request for a disaster declaration for assistance

- The Minister is authorized to declare a "disaster area" for the purposes of ODRAP.
- To make a request, municipal council must adopt a resolution and forward it to the Minister within 14 working days of the onset of the disaster - January 14, 2014.



32



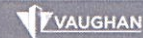
Eligible Public Losses and Costs

Examples of eligible public losses and costs under ODRAP include:

- Food/water for volunteers and disaster relief workers; Emergency response supplies;
- Municipal owned equipment costs (at 50 per cent of MTO Rate) or equipment rental costs (prorated);
- Activation of the municipal emergency operations centre;
- Clearing and removal of debris and wreckage, including removal of buildings and removal of trees and limbs if public safety is endangered;
- Overtime for employees and those hired for disaster response/relief effort, or to backfill for regular employees deployed for disaster response/relief efforts;
- Incremental administrative costs related to disaster relief committee;
- Emergency communications; Additional security costs;
- Repair and restoration to pre-disaster condition of uninsured public facilities (e.g. buildings, libraries, recreational facilities including parks, roads and drains, infrastructure); and
- Evacuation and shelter of people and animals, including incremental operating expenses.



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Ineligible Public Losses and Costs under ODRAP

Examples of ineligible public losses and costs under ODRAP:

- Regular salary;
- Insurance deductibles;
- Municipal equipment costs (other than as described on the previous slide);
- Additional costs to repair or improve structures of infrastructure beyond pre-disaster condition; and
- Lost revenues.



34



Preliminary Eligibility Analysis

- Ministry staff advised that general rule for minimum damage in eligible costs required in order to qualify for ODRAP funding is 4% of tax revenues
- In Vaughan's case, this would be approximately \$6.2 to \$6.3 million
- Estimated City of Vaughan costs are \$21 million
- Additional labour, additional contracts, overtime, communication and general supply costs estimated at \$10 million
- Tree canopy replacement conservatively estimated at \$11 million



35



Financial Information – Emergency Response Review

- As a full assessment of damages is ongoing, these costs are preliminary and will change as assessment and remediation work continues.
- In follow-up to the December ice storm event and the subsequent co-ordinated emergency response, the Interim City Manager in consultation with the Emergency Management Team will prepare a review report for Council. The review report will provide more fulsome details on the activities of City departments.
- This will identify positive aspects of the emergency response, lessons learned and will identify and make recommendations to improve the co-ordination of the City's response for future emergency events.



36



Staff Debrief January 10, 2014 Sample Comments and Suggestions

- Possibility of having a City staff representative at PowerStream's business cycle meetings during major and prolonged outages.
- Develop a partial activation procedure and a list of positions to be deployed.
- Create a list of "quick" Standard Operating Procedures for emergencies ie. Flood, ice storm, etc.
- Maintain own supply of items ie. Cots, blankets, hygiene kits, etc. for widespread emergencies.
- Evaluate permanent, full back-up power for strategic City assets ie. Community Centres – North, east, west.
- Develop reciprocal aid agreements for assistance during emergencies.
- Include electronic sign boards and outreach calling to emergency communications process.
- Lean staff resources become stretched during a prolonged emergency
- Staff concern regarding impact of extended recovery on 2014 workplans



37



Resolution for Consideration

Whereas the City of Vaughan recently experienced a severe ice storm commencing on Sunday December 22, 2013, the effects of which continued until late December 2013, and has experienced substantial damage to municipal property and infrastructure; and

Whereas other municipalities in the Greater Toronto and Hamilton Area ("GTHA") similarly experienced the effects of the severe ice storm on municipal property and infrastructure.

It Is Therefore Recommended:

1. That the Minister of Municipal Affairs and Housing be requested to declare the entire City of Vaughan a disaster area for the purposes of the public component of the Ontario Disaster Relief Assistance Program (ODRAP); and
2. That given the magnitude of the damage experienced in the City of Vaughan, and notwithstanding any decision that may be made with respect to declaring the City of Vaughan a disaster area for the purposes of ODRAP, should any program be established by the Province of Ontario and/or the Government of Canada to provide funding related to the recent severe ice storm from sources other than the Ontario Disaster Relief Assistance Program, that this resolution be deemed to be an application under such program for such funding.



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