

COMMITTEE OF THE WHOLE DECEMBER 1, 2009

AFTER ACTION REPORT AUGUST 20, 2009 TORNADO

Recommendation

The Emergency Management Program Committee recommends to Council:

1. That the After Action Report August 20, 2009 Tornado, be received;
2. That the Action Items contained in Attachment 2 of the report be approved;
3. That all Commissioners meet with the City Manager to discuss additional equipment that would be required for the Emergency Operations Centre (EOC) and that the costs of these additional requirements be brought forward through the 2010 Capital budget process;
4. That the inventory and creation of an archival lists of all available City of Vaughan maps, including the printing of necessary maps for use in the Emergency Operations Centre be coordinated by the Commissioner of Planning; and
5. That the Director of Buildings and Facilities report back on the capacity of the generator in the Joint Operations Centre to fully power the Emergency Operations Centre (EOC).

Contribution to Sustainability

Not applicable.

Economic Impact

None at present, however costs of enhancements to the permanent Emergency Operations Centre will be addressed through the budget process.

Communications Plan

On approval of the Emergency Management Program Committee, the After Action Report (attachment 1) and action items will be circulated to the Emergency Management Team and agencies that participated in the response and recovery efforts.

Purpose

To provide the Committee with the evaluation report and recommended actions related to the City's response to the Tornado that occurred on August 20, 2009 damaging sections of Woodbridge and Maple.

Background - Analysis and Options

On Thursday August 20, 2009 at from approximately 6:11 pm to 7:03 pm the City experienced several tornado touchdowns that affected sections of Woodbridge and Maple. The tornado resulted in varying degrees of damage to over 600 structures and approximately 1200 trees were destroyed.

The City's Emergency Response Plan was implemented involving notification and deployment of the Emergency Management Team and activation of Emergency Operations Centre (EOC) for a period of five days. The City's response and recovery efforts were supported by many external agencies, neighbouring municipalities and provincial ministries.

On August 27, 2009 a debriefing of the Emergency Management Team was conducted to analyze the response and recovery efforts to the F2 Tornado Emergency. A post incident analysis provides the opportunity for the City and partnering response agencies to identify successes, lessons learned and make recommendations to enhance our emergency management capabilities to efficiently and effectively deal with future emergencies.

The City's and partnering agencies response to the tornado emergency was exceptional. Emergency Management Team members clearly understood their roles and responsibilities, responded in a calm and collected manner and followed established plans and procedures. The level of communication to the public and in the Emergency Operations Centre was excellent. The value system of the affected communities was a critical component of the success of the response. The Emergency Management Team credited training and exercises that they participating in over the past five years for preparing them to effectively manage the emergency. The willingness of citizens to open their hearts homes and kitchens to help those in need was inspirational and rarely seen in disasters affecting large communities.

It is recognized that no response or Emergency Plan are perfect. Each Emergency will exhibit new or unforeseen issues and challenges that are termed lessons learned. The lessons learned during the tornado emergency that were identified by the Emergency Management Team included the need to ensure active coordination between field inspectors and utilities, the need to have key agencies/staff such as Building Standards, Parks and Forestry, Red Cross and York Region EMS in the Emergency Operations Centre, information needs to be communicated to all staff, ensure that we diversify our telecommunications providers, need to ensure consist documentation of information and additional resources are needed for the Emergency Operations Centre.

The feedback from the Emergency Management Team resulted in the following nine recommendations to enhance our capacity to manage an emergency:

1. *Revise the Emergency Response Plan to include*
 - a. *Building Standards Officer,*
 - b. *Parks and Forestry Officer,*
 - c. *Red Cross Officer*
 - d. *An IT Technician*
 - e. *Enhanced business cycle meeting procedures; and*
 - f. *Other revisions as deemed necessary*
2. *Include copies of the York Region Emergency Response Plan in the Ready Boxes and Plan Appendixes.*
3. *Emergency Planning Working Group members to revise department sub plans to reflect the recommendations in this report.*
4. *In consultation with the local Branch of the Red Cross, York Community and Health Services and appropriate City Departments, develop a procedure to deliver services provided in emergency shelters through outreach.*
5. *Revise the notification procedures to include notification and call back of designated scribes and runners.*
6. *Review, revise and develop Emergency Operations Centre Procedures including but not limited to*
 - a. *Security*
 - b. *Identification*
 - c. *Access control*
 - d. *Leadership transition*

- e. *Resource tracking*
 - f. *System checks.*
 - g. *Documentation*
7. *Provide annual training to Emergency Management Team, scribes, runners and staff on existing and new emergency management plans and procedures.*
- a. *Annual training for Emergency Management Team and staff*
 - b. *Bi-annual training for scribes.*
8. *Conduct up to three emergency exercises annually for the Emergency Management Team and staff.*
- a. *Notification exercise for Emergency Management Team*
 - b. *Field exercise for staff*
 - c. *Emergency Management Team exercise*
 - d. *Emergency Management Team exercise may be in combination with the staff field exercise*
9. *Incorporate recommendations into the design and equipping of the permanent Emergency Operations Centre with in approved budget.*

Relationship to Vaughan Vision 2020/Strategic Plan

This report is in keeping with the Vaughan Vision specifically

Strategic Goal: Service Excellence

Strategic Objective: Enhance and Ensure Community Safety, Health and Wellness.

This report is consistent with the priorities previously set by Council and the necessary resources have been allocated and approved.

Regional Implications

York Region assisted in the response and recovery activities related to the Tornado emergency. The lessons learned and recommendations contained with in the After Action Report can assist York Region in enhancing their emergency management capabilities.

Conclusion

The City's and partnering agencies response to the Tornado Emergency was exceptional. The Emergency Management Team recognizes that no response or Emergency Response Plan is perfect and that every emergency situation will be a learning experience. From these lessons learned, the City has identified recommendations to enhance our emergency management capabilities.

Attachments

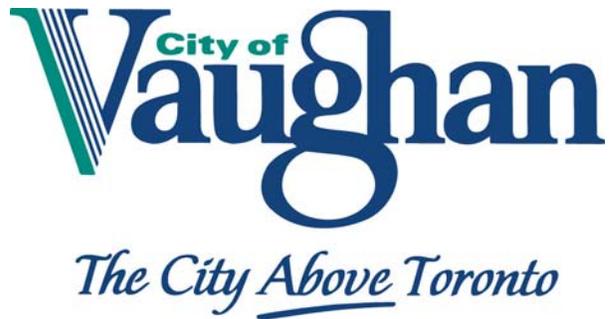
- 1. After Action Report
- 2. Action Items

Report prepared by:

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Respectfully submitted,

Bill Robinson
Acting Chair, Emergency Management Program Committee



AFTER ACTION REPORT

August 20, 2009 Tornado



Table of Contents

Executive Summary	3
Chronology of Events	4
August 20, 2009	4
August 21, 2009	6
August 22, 2009	7
August 24, 2009	8
August 25, 2009	9
August 27, 2009	9
Participating Departments and Agencies	10
Response Analysis	11
Success Factors	11
Coordination	11
Communication	11
Plans and Procedures	12
Community	13
Training	13
Lessons Learned	13
Coordination	13
Communication	14
Information Management	14
Plans and Procedures	14
Resources	15
Recommendations	16
Conclusion	17

Executive Summary

In the aftermath of an extraordinary event it is important that an analysis of the response is conducted. Through such an evaluation, the municipality, partnering agencies and stakeholders can learn something from the event.

Responses and plans can never be perfect. Through training, exercises and experience, lessons are learned and corrective actions taken to enhance our ability to manage future events.

The City of Vaughan and partnering agencies who responded to the Tornado emergency from August 20, 2009 to August 25, 2009 did an exceptional job of managing the situation.

Analysis contained in this report and recommendations are reflective of continuous improvements and program development not indicative of any sort of failure to manage the event and mitigate the affect. It is necessary for a post event analysis to be conducted to ensure that Emergency Plans and Emergency Management Program elements are relevant and proactive.



This document is intended only to enhance and build upon the exceptional effort of the City of Vaughan and its partners in responding to and recovering from the August 20, 2009 Tornado.

This report provides an overview of the emergency situation, response and recovery activities and analysis through self assessment, debriefing and observation related to the response.

This report identifies key factors that led to a highly successful emergency

response, lessons we learned and recommendations to enhance the City's Emergency Management capabilities.

Chronology of Events

August 20, 2009

On August 19, 2009 a large storm system moves through the American Midwest resulting in several tornadoes and severe thunderstorms. Environment Canada issued a special weather statement at 3:30 am on August 20, 2009 that the system had the potential for thunderstorms in south western and central Ontario. Environment Canada issued Severe Thunderstorm and Tornado watches for south western Ontario, that by mid afternoon were upgraded to warnings. At 5:15 pm the leading edge of the system arrives in the City of Vaughan culminating in thunderstorms and high winds.

Between the hours of 6:11 pm and 7:03 pm the City of Vaughan experiences multiple tornado touchdowns resulting in mild to severe damage to approximately 600 structures and 1200 trees. The areas of impact were the neighbourhoods in the vicinity of Andrew Park and Martin Grove Road, Houston Road and Moonstone Place, Islington Avenue and Gamble Road, Cunningham Drive and Jane Street and Teston Road between Jane Street and Keele Street. Doctors Mclean Park and Rainbow Creek Park both sustained substantial damage to trees.

The Fire Chief initiated call back of Senior Fire Officers and the Manager of Emergency Planning. Vaughan Fire and Rescue Services (VFRS) dispatched 12 engine companies, the mobile command post and three Command Chiefs to the affected areas. York Regional Police dispatched 31 units and their mobile command post to the affected areas. Command Posts were established in the four residential neighbourhoods and unified command was implemented. The VFRS rehab unit was deployed to provide food and comfort for emergency services personnel. Fire mutual aid was provided by King Fire and Emergency Services, Richmond Hill Fire Department and Markham Fire and Emergency Services to assist in ensuring public safety in the unaffected areas of the City.

In accordance with sections 3.1 and 3.2 of the City's Emergency Response Plan, the Fire Chief requested the Plan be implemented and the Emergency Operations Centre (EOC) be opened at 6:45 pm. Due to the high volume of calls for assistance being received in the VFRS Communications Centre, the Manager of Emergency Planning implemented the notification procedures



for the Emergency Management Team (EMT) at 6:53 pm. The EOC Director and Section Chiefs were successfully contacted by 7:11 pm; requested to notify the personnel on their contact list and deploy to the Emergency Operations Centre. The Manager of Emergency Planning contacted York Region Emergency Management and the Provincial Emergency Operations Centre Duty Officer to advise them of the situation.

The EOC was populated by 24 of 26 EMT positions occupied by City staff and one external agency position by 8:00 pm. The five other positions of the EMT occupied by external agency representatives were either enroute (PowerStream and Emergency Management Ontario), connected through teleconferencing, (York Region EMS) or were in the process of being notified to deploy (York Region Community and Health Services-two representatives). The Fire Chief provided a briefing of the situation. Three business cycle meetings were conducted throughout the evening at 8:43 pm, 9:24 pm and 10:48 pm. As per the established procedure, the EOC Director, Head of Council and EMT Section Chiefs conducted a situational analysis utilizing the declaration checklist of 21 criteria. The team identified that five criteria did not apply to this type of emergency, seven criteria were not occurring, two criteria were partially occurring and seven criteria were definitely occurring. Section Chiefs were directed to gather more information and a reassessment of the situation would be conducted. At the second business cycle meeting a reassessment of the situation was conducted using the checklist and the two partial criteria were upgraded to occurring. The consensus of the Team was to declare an emergency. The official emergency declaration was made at 9:38 pm. The Provincial Emergency Operations Centre Duty Officer, York Region and the media were advised of the declaration. A media briefing centre was established at York Regional Police District 4 Community Room. Staff were called in to Access Vaughan to respond to calls from citizens.



Two emergency shelters were opened as places of refuge for residents affected by the Tornado. Father Ermmano Bulfon Community Centre and Maple Community Centre were staffed by personnel from Recreation and Culture, Buildings and Facilities and Red Cross. A request was made to York Region Community and

Health Services to deploy staff to the emergency shelters. Contact was made with community centres to determine the affect of the tornado and power outages. Recreation and Buildings and Facilities staff were called in to work the night shift at the emergency shelters. Enforcement Services Staff and Kennel Inn are dispatched to the emergency shelters to provide security and receive pets.

Public Works crews were out checking pumping stations, and loaders and trucks were dispatched to Woodbridge to assist with clearing downed trees. York Region pumps at the Maplewood Reservoir were not on back-up generator power and the water level was low. Public Works cut back power to City pumps to reduce the amount of water being drawn form the reservoir until power could be restored to York Region's pumps. Public Works called in additional staff to manage the Public Works phone line overnight. Flooding was occurring over Rutherford Road between Forest Fountain Drive and Vaughan Mills Road by the storm water management pond.

PowerStream dispatched crews to disconnect power in affected neighbourhoods to unsafe homes. Crews worked on damaged hydro infrastructure on Teston Road to restore power to the Maplewood Reservoir pumps. Power was restored to the Maplewood Reservoir at 11:55 pm. Power would remain out to the industrial park at the southeast side of Teston and Keele until late in the morning on August 21, 2009.

Parks and Forestry dispatched three crews to the Woodbridge locations and two crews to the Maple locations to initiate removal of trees blocking streets and access to homes. Crews inspected tree damage, created a priority list and secured sites with caution tape.

The Emergency Operations Centre went to monitoring mode from 11:30 pm to 7:00 am and was staffed by five EMT members.

August 21, 2009

The Emergency Management reconvened at the Emergency Operations Centre at 7:00 am. Three business cycle meetings are conducted at 8:18 am, 10:27 am and 3:00 pm to obtain situation updates and plan response actions for the day.

Environment Canada issued a severe thunderstorm watch for the area. They deploy two assessment teams to evaluate damage in Woodbridge and Maple. The assessment teams confirmed that the tornado was an F2 on the Fujita Scale, meaning the winds were 181-252 km/hr.

The Command Posts and York Regional Police units remain in the affected neighbourhoods. Vaughan Fire and Rescue Service scales back their presence to periodic checks. Building Standards Inspectors prioritize damaged buildings and complete hundreds of inspections. Orders are posted on 44 homes and one school deeming them unsafe for occupancy and owners are encouraged to begin securing their homes. Power is completely restored by 10:15 am to all affected areas except for damaged homes.

Parks and Forestry Crews and Public Works Crews continue clean up efforts of tree removal and street sweeping. Public Works established barricades on the affected streets on the request of York Regional Police. A storage area for wood debris was established at the Woodbridge Works Yard. Markham Forestry crews provided assistance with clean up of downed trees. Waste collection planned for affected areas. York Region extended the hours of the McLeary Court Community Environmental Centre and Asian Long Horned Beetle Waste Drop Off facility to aid in clean up efforts.



The Emergency Management Ontario (EMO) representative arranged for crews from the Ministry of Natural Resources to provide assistance to Parks and Forestry in removing

downed trees. The EMO representative arranged for use of the Ontario Provincial Police (OPP) helicopter for city officials to perform an aerial survey of the impacted areas. Representatives from the Ministry of Municipal Affairs and Housing performed an assessment of the damaged areas as a component of the Ontario Disaster Relief Assistance Program (ODRAP). The Insurance Bureau of Canada sends representatives to the impacted areas to provide assistance to residents making claims to their insurance companies. The Premier of Ontario, Dalton McGuinty visits the Andrew Park impact zone.

The two emergency shelters remain open, but largely unused. Nine residents attended the shelters to register only. City of Vaughan Recreation, Buildings and Facilities and Enforcement Services, Red Cross, York Region Community and Health Services, St. John Ambulance and Salvation Army personnel were staffing the shelters. Red Cross, York Region Community and Health Services and City Recreation staff are positioned at the command posts to register residents and respond to inquiries. Access Vaughan extended their hours of operations to 7:00 pm to respond to inquiries from residents.

RONA provides four truckloads of clean up supplies for residents affected by the Tornado. The City receives several offers of donations and assistance from the public. The Red Cross was asked to take on managing offers of donations. The Red Cross initiated a fundraising appeal for the Tornado Response.

By 3:00 pm the response is transitioning into recovery and the situation is under control. The EMT scales back the Emergency Operations Centre activities. Overnight staffing is no longer required.

August 22, 2009

The Minister of Public Safety Canada, Peter Van Loan visited the tornado damaged neighbourhoods accompanied by the Mayor.



The Emergency Management Team reconvened at the EOC at 11:00 am for a business cycle meeting. Briefings provided by the Section Chiefs indicated that recovery is well underway. Debris clean up was estimated to be completed by 6:00 pm. York Regional Police would have a continued but scaled back presence in the affected neighbourhoods through out the weekend. A situational assessment was completed utilizing the declaration checklist. There was consensus amongst the Section Chiefs

and EOC Director that the declaration criteria were no longer occurring. On the recommendation of the EMT, the Mayor terminated the emergency effective 6:00 pm.

The Provincial Emergency Operations Centre, York Region and the media were notified of the termination of the emergency.

The Operations Community Services Section met with York Region Community and Health Services and Red Cross to plan the transition of the Emergency Shelters to information and needs assessment centres. The two emergency shelters would remain in place until August 24, 2009.

The Emergency Management Team decided that the Emergency Operations Centre would not be staffed on August 23 and would be covered remotely by a Duty Officer, the Manager of Emergency Planning. Field staff were advised of the contact number should any issues arise.

August, 24, 2009

The Emergency Management Team convened at the EOC at 10:00 am for a business cycle meeting to discuss the status of the recovery efforts. York Regional Police reported no security issues and would be removing their command post later in the day. Police units would remain at Houston Road and Moonstone Place and on Burnhaven. Roving patrols would be monitoring Andrew Park, Gladstone Avenue and Haymar Avenue. Public Works crews would be erecting Local Traffic Only barricades at Andrew Park and Martin Grove Road, Moonstone Place and Woodbridge Avenue, Burnhaven Avenue at Gladstone Avenue and Haymar Avenue.

The two emergency shelters were transitioned into information and needs assessment centres that would be staffed by Red Cross and York Region Community and Health Services personnel and a City staff would act in a liaison role. Each centre was open on a rotational basis from 12:00 to 8:00 pm Monday to Friday and half day on Saturday.



The Building Standards Department implemented a system to fast track permits for repairs to tornado damaged structures. An updated list of Order to Remedy an Unsafe Building is posted on the City's website and provided to Access Vaughan. Access Vaughan also handled inquiries related to property tax relief.

The Emergency Management Team determined that the resolution requesting the Minister of Municipal Affairs and Housing to declare the impacted areas of the City of Vaughan as a disaster area would go to a special Council meeting on September 3, 2009. The EMT members compiled the necessary data to support the resolution.

August 25, 2009

The Emergency Management Team convened at the Emergency Operations Centre at 10:00 am. A briefing was provided by the Section Chiefs on the status of the clean up efforts. All command posts are now closed and removed from the neighbourhoods. Barricades have been erected at the identified sites for Local Traffic Only. Clean-up in parks and open spaces is ongoing.



The Emergency Management Ontario representative reported that the Insurance Bureau of Canada is not able to give an estimate of the damage costs to private structures as the claims process has just begun. It will be several months before the private costs are available. The EMO representative advised that the application for the Ontario Disaster Relief Assistance Program would be delivered today.

The information centres at Father Ermmano Bulfon and Maple Community Centres are now in operation on a rotating basis. The Red Cross, York Region Community and Health Services and Recreation personnel are staffing the centres. The Red Cross went door to door to advise residents in the tornado affected areas of the types of assistance available.

The Emergency Operations Centre and Emergency Management Team are demobilized.

August 27, 2009

A debriefing session was conducted for all members of the Emergency Management Team including scribes and security staff. The debriefing questions were issued in advance of the sessions. Feedback was provided both in written and verbal formats.



Participating Departments and Agencies

City of Vaughan

- Mayor and Members of Council
- City Manager
- Vaughan Fire and Rescue Service
- Deputy City Manager/Commissioner of Finance and Corporate Services
- Reserves and Investments
- Information Technology Management
- Access Vaughan
- Clerks Department
- Legal Services
- Enforcement Services
- Public Works Department
- Development and Transportation Engineering
- Commissioner of Community Services
- Buildings and Facilities
- Fleet Services
- Mayor's Administrative Assistants
- City Manager's Administrative Assistants
- Emergency Planning Program
- Finance Department
- Purchasing Department
- Building Standards
- Commissioner of Legal and Administrative Services
- Human Resources
- Commissioner of Engineering and Public Works
- Engineering Services
- Corporate Communications
- Recreation and Culture
- Parks and Forestry

External

- York Regional Police
- York Region Community and Health Services
- York Region Transit
- York Region Transportation Services
- PowerStream
- Ministry of Municipal Affairs and Housing
- Canadian Red Cross
- Toronto Region Conservation Authority
- K-Line Services
- King Fire and Emergency Services
- Markham Fire and Emergency Services
- Markham Parks Department
- Insurance Bureau of Canada
- York Region Emergency Medical Services
- York Region Emergency Management
- York Region Environmental Services
- Emergency Management Ontario
- Ministry of Natural Resources
- Ontario Provincial Police
- Salvation Army
- St. John Ambulance
- Enbridge Gas
- Electrical Safety Authority
- Richmond Hill Fire Department
- Richmond Hill Parks Department
- Kennel Inn

ANALYSIS OF THE RESPONSE

The analysis of the Tornado response is based on data provided from different sources. The sources of data includes verbal feedback provided during the debriefing session for the Emergency Management Team; written evaluations, documents generated throughout the response and observation. The analysis is focused on three themes; success factors, lessons learned and recommendations.

Success Factors

The success factors have been categorized under the following headings: coordination, communications, plans and procedures, training and community.

Coordination

The level of coordination amongst the Emergency Management Team Sections, frontline staff and external agencies was exceptional. No silo-effect occurred during the response to the Tornado. A key factor in successfully coordinating the emergency response was having most of the Section Chiefs in one location. This allowed for high-level coordination and rapid decision making that translated to efficiency at the front line.



Communications

Communications within the Emergency Operations Centre, to citizens and to City departments was excellent. The Public Information Section was staffed to manage the volume of telephone calls being received through Access Vaughan and the substantial media coverage of the situation. The Public Information Section ensured there were frequent media releases, media briefings and up-to-date information on the website to inform the public of the response efforts and actions they needed to take. There were over 500 media stories on the Tornado and its impact in Vaughan. A Twitter account was established to provide an additional source of information to the public. Vaughan Fire and Rescue Service Communications increased staffing levels to manage the volume of calls for assistance. The Public Works Line and Access Vaughan both extended their hours of operation to respond to inquiries from citizens.

Plans and Procedures

Feedback from the Emergency Management Team indicated that the roles and responsibilities in the plan are clearly defined. The Plan provided the EMT with the ability to adapt and make changes where necessary. The Fire Chief made the rapid decision to implement the Emergency Plan within 30 minutes of the first tornado touch down. His quick decision was another key element to the successfulness of the response. The EMT followed the established procedures in the Plan, especially the Declaration Checklist. Utilizing the checklist allowed the EMT to make an informed decision on the situation in regards to declaring an emergency. The declaration of an emergency was another key component of the successful response. The declaration instilled confidence in the residents that City officials recognized the seriousness of the situation and were applying all available resources to respond effectively and efficiently.

The notification procedure went smoothly with contact to the EOC Director and Section Chiefs being completed in less than 20 minutes. The EMT positions were notified rapidly and convened at the EOC quickly. Notification of the Red Cross occurred



simultaneously with the notification of the EMT which resulted in them being able to marshal and deploy resources rapidly. The Emergency Management Ontario Duty Officer initiated contact with the Manager of Emergency Planning, which was helpful in reducing the number of phone calls that needed to be made. Key contacts to external agencies were completed within a 45 minute time frame.

The Emergency Operations Centre being in a permanent state of readiness increased the efficiency of the City's response. The EMT did not have to spend time setting up the room before implementing response actions. The size of the EOC provided the opportunity to bring in additional personnel.

Security at the EOC and emergency shelters was excellent and established protocols were followed. Effective control at all of the tornado sites by VFRS and York Regional Police protected the safety of residents.

The business cycle meeting process was very effective. Agendas provided structure to the meetings. Sound strategies were developed in consultation with each of the Sections. The resulting key take-a ways documents provided a strategic direction for every member of the Team. The meetings were well run and kept brief.

The Community

A critical component of the success of the Tornado response was the value system of the citizens of Woodbridge and Maple. Neighbours willingly took in neighbours, families took in family members and provided emotional, moral and physical support. Residents of the affected neighbourhoods worked together and focused on recovery efforts. Citizens opened their hearts, homes and kitchens to help those in need. Citizens in the affected neighbourhoods also kept watch over each other's property to prevent potential looting. Municipalities neighbouring the City of Vaughan and York Region were quick to offer their assistance with our response and recovery efforts. The frontline staff and the Emergency Management Team showed great compassion for the welfare of our citizens and the response was people focused.

Training

In the five years prior to the Tornado emergency, the Emergency Management Team participated in training and up to three exercises annually. Many EMT members credited the training and exercises for preparing them to respond in a calm and collected manner. It was clearly evident that the EMT understood theirs and others' roles and responsibilities.

Lessons Learned

It is recognized that no response or Emergency Plan are perfect. Each emergency will exhibit new or unforeseen issues and challenges. Emergency Management is a living process that grows and adapts to each situation. The Emergency Management Team identified areas for further growth and development that are categorized as coordination, communication, information management, plans and procedures and resources.

Coordination

The Emergency Management Team identified that there is a need to ensure active coordination between the utilities and field inspectors. Coordination with York Region Emergency Medical Services was slow. York Region EMS is notified through York Region Emergency Management which can slow the notification timeframe. Rather than send a representative to the Vaughan EOC, York Region EMS opted to open their own emergency operations centre and liaise with the Vaughan EOC by telephone. This resulted in infrequent communications with York Region EMS.



Communication

Dissemination of information related to the emergency was very well done by the Public Information Team. It was identified that we need to ensure we are sending the same information internally to all of our staff. The EMT identified that Section Chiefs and Access Vaughan should receive copies of media releases before they are issued to the public. We lacked information and pamphlets on sources of financial aid and emergency assistance for the residents. There is also a need to have experts available to answer questions related to compliance orders. The EMT needs to be advised of any travel issues such as non-functioning traffic signals, traffic jams and over road flooding during the notification process if the information is available.



In the early stages of the Emergency, the Rogers cellular network failed, making notification of some EMT members difficult. In some cases the EMT member was able to switch to the Bell network, but this is not possible for all EMT members. The telephones in the EOC do not have voicemail and do not default back to another number. In some cases the telephones went unanswered for short periods of time.

Information Management

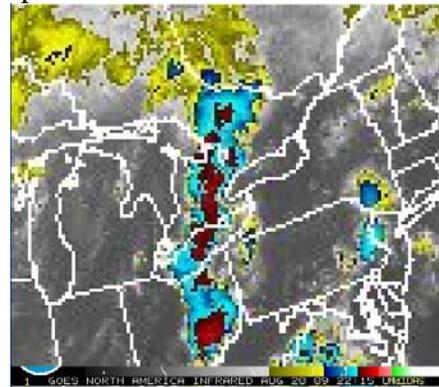
All members of the Emergency Management Team are required to document their actions in the EOC either on their own or through a scribe. Many EMT members indicated that documenting their actions in the log was very difficult. The trained scribes were under utilized during this emergency response and could have provided valuable assistance in posting information on the white boards and documenting actions in the logs. Many EMT members indicated a checklist of information that should be documented would have been helpful.

Plans and Procedures

The EMT identified that revisions are required to emergency plans and procedures to enhance the response capacity of the City. The EMT recognized that there is a need for additional departments and agencies to have a space in the EOC. In particular it was identified that officer positions are required for Building Standards, Parks and Forestry and Red Cross. There is also a need to have an IT Technician in the EOC at all times. The most frequent comments were that the phone lists and department sub plans were out of date. The EMT also identified the need to have copies of York Region's and the Red Cross' Emergency Response Plans.

Due to the incredible response by the community, the standard disaster related assumption that victims would go to an emergency shelter did not occur. The community's response required a new response methodology to be developed on the spot. As a result the EMT identified that plans need to be developed on providing traditional shelter services through outreach. An established procedure for meals for staff and volunteers at emergency shelter and the site needs to be developed.

The EMT identified that EOC procedures need to be revised or developed. One specific procedure is transfer of command and assuming command in a senior staff's absence. During the emergency some senior staff was delayed at another location due to the weather conditions and alternates were fulfilling their role. This procedure is necessary to ensure the situation is being managed and the transition is seamless. The EMT identified that there is a need to implement additional protocols related to the business cycle meeting such as cell phone usage. The EMT identified that the security protocols around identification and card swipe access need to be reviewed and revised. Security lists need to be updated. A system of equipment checks needs to be developed and implemented. Another procedure that needs to be developed is utilizing and tracking resources supplied by other municipalities, Province and community agencies



Resources



An area that poses many challenges in responding to and recovering from an emergency is the availability and functionality of resources. The EMT identified many resources that would enhance future emergency responses. Initially the televisions in the EOC did not have cable hook up; this was corrected during the second night of the response. For the most part the needed resources are specific to the

Emergency Operations Centre with the exception of a back up location for Access Vaughan, more chippers, that photographs of the incident be available to the EOC immediately and a reverse 911 system. The reverse 911 system is already being implemented by York Regional Police. The suggestions for the Emergency Operations Centre are classified as human resources, physical infrastructure, technology and equipment.

Resource Suggestions for the EOC:

Human Resources	Physical Infrastructure	Technology	Equipment
<ul style="list-style-type: none"> • Runners in the EOC • Runners to travel out to the field from EOC • Special identification for EMT members going to site • More scribes • EOC Functions must be covered at all times • Improved communication updates with regular city operations 	<ul style="list-style-type: none"> • Black out film over all windows • Larger EOC • More washrooms in EOC • Card swipe access on storage room door • Larger breakout room 	<ul style="list-style-type: none"> • Universal rechargers and cords for laptops, cell phones and blackberries • Computers • More printers • Copiers • Scanners • Laptops • PVR or DVD recorder • Two way radios for Public Works, VFRS, YRP, Parks and Forestry, Enforcement in EOC. • Generator to power all EOC operations 	<ul style="list-style-type: none"> • Comfortable chairs for rest breaks (recliners) • Umbrellas • City of Vaughan Shirts with logo • Maps • First Aid Kit • Duty Roster Board • Non-perishable food items.

RECOMMENDATIONS

The following are recommendations to enhance the capacity of the City in managing an emergency.

1. *Revise the Emergency Response Plan to include*
 - a. *Building Standards Officer,*
 - b. *Parks and Forestry Officer,*
 - c. *Red Cross Officer*
 - d. *An IT Technician*
 - e. *Enhanced business cycle meeting procedures; and*
 - f. *Other revisions as deemed necessary*
2. *Include copies of the York Region Emergency Response Plan in the Ready Boxes and Plan Appendixes.*
3. *Emergency Planning Working Group members to revise department sub plans to reflect the recommendations in this report.*

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6. *Review, revise and develop Emergency Operations Centre Procedures including but not limited to*
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 - g. *Documentation*
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 - a. *Annual training for Emergency Management Team and staff*
 - b. *Bi-annual training for scribes.*
8. *Conduct up to three emergency exercises annually for the Emergency Management Team and staff.*
 - a. *Notification exercise for Emergency Management Team*
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 - c. *Emergency Management Team exercise*
 - d. *Emergency Management Team exercise may be in combination with the staff field exercise.*
9. *Incorporate recommendations into the design and equipping of the permanent Emergency Operations Centre with in approved budget.*

CONCLUSION

The Tornado Emergency of August 20, 2009 was an extraordinary event that left a lasting impact on the community. The City of Vaughan Emergency Management Team, frontline staff and partnering agencies rose to the challenge and successfully responded to and recovered from this disaster. The Emergency Management Team recognizes that no response or plan is perfect and through an analysis of the response, identified areas where the City can enhance its capacity to ensure that we can respond efficiently and effectively to future emergency events. Emergency Management is a fluid process that must evolve to meet current and future challenges.



ACTION ITEMS FROM THE AUGUST 20, 2009 TORNADO EMERGENCY

NO	ACTION ITEM	RESPONSIBILITY	TARGET DATE	COMMENTS
1	<i>Revise the Emergency Response Plan to include</i> <ul style="list-style-type: none"> o <i>Building Standards Officer,</i> o <i>Parks and Forestry Officer,</i> o <i>Red Cross Officer</i> o <i>An IT Technician</i> o <i>Enhanced business cycle meeting procedures; and</i> o <i>Other revisions as deemed necessary</i> 	Manager of Emergency Planning, in consultation with Section Chiefs and Emergency Planning Working Group	Q2 - 2010	
2	Include copies of the York Region Emergency Response Plan in Ready Boxes and Plan Appendixes.	Manager of Emergency Planning	Q4 - 2009	
3	Review and Revise Department Sub Plan to reflect recommendations in the After Action Report.	Emergency Planning Working Group	Q4 - 2010	
4	In consultation with Red Cross, York Community and Health Services other community agencies and appropriate City departments develop a procedure to deliver services provide at emergency shelters through outreach.	Manager, Emergency Planning, Recreation, Access Vaughan, Enforcement Services, Building Standards, Red Cross, York Region, other community agencies to be determined	Q2 - 2011	
5	Review and revise notification procedure to include notification and call back of designated scribes and runners	Manager of Emergency Planning in consultation with Emergency Management Team	Q2 - 2010	
6	Review, revise and develop Emergency Operations Centre Procedures including but not limited to <ul style="list-style-type: none"> a. Security b. Identification 	Manager, Emergency Planning, Emergency Planning Working Group	Q2 -2010	

NO	ACTION ITEM	RESPONSIBILITY	TARGET DATE	COMMENTS
	<ul style="list-style-type: none"> c. Access control d. Leadership transition e. Resource tracking f. System checks. g. Documentation 			
7	<p>Annual Training Program for Emergency Management Team, scribes, runners and staff on existing and new emergency management plans and procedures</p> <ul style="list-style-type: none"> a. Annual training for Emergency Management Team and staff b. Bi-annual training for scribes 	<p>Manager, Emergency Planning, Emergency Management Team, Staff</p>	<p>On going</p> <p>Q1/Q3 2010</p>	
8	<p>Conduct up to three emergency exercises annually for Emergency Management Team and staff</p> <ul style="list-style-type: none"> a. Notification exercise for Emergency Management Team b. Field exercise for staff c. Emergency Management Team exercise d. Emergency Management Team exercise may be in combination with the staff field exercise 	<p>Manager Emergency Planning, Emergency Planning Working Group, Emergency Management Team, Staff</p>	<p>On going</p> <p>Q2 2010</p> <p>TBD 2010</p> <p>TBD 2010</p>	
9	<p>Incorporate recommendations into the design and equipping of the permanent Emergency Operations Centre With in approved Budget</p>	<p>Manager, Emergency Planning, Buildings and Facilities, ITM, Purchasing</p>	<p>Q4 2010</p>	<p>Subject to PowerStream moving from JOC.</p>