

Subject: May 2022 Derecho/Severe Weather Event After Action Review

File Number: ACS2023-EPS-PSS-0001

**Report to Emergency Preparedness and Protective Services Committee on 30
March 2023**

**Submitted on March 21, 2023 by Beth Gooding, Director, Public Safety Service,
Emergency and Protective Services**

**Contact Person: Todd Pyper, Program Manager, Office of Emergency
Management, Public Safety Service, Emergency and Protective Services**

613-806-4706, todd.pyper@ottawa.ca

Ward: Citywide

**Objet : Examen post-intervention de l'événement météorologique important
du dérécho de mai 2022**

Dossier : ACS2023-EPS-PSS-0001

**Rapport au Comité des services de protection et de préparation aux situations
d'urgence**

le 30 mars 2023

**Soumis le 21 mars 2023 par Beth Gooding, directrice, Service de sécurité
publique, Services d'urgence et de protection**

**Personne ressource : Todd Pyper, Gestionnaire de programme, Bureau de
gestion des mesures d'urgence, Service de sécurité publique, Services d'urgence
et de protection**

613-806-4706, Todd.Pyper@ottawa.ca

Quartier : À l'échelle de la ville

REPORT RECOMMENDATION(S)

That the Emergency Preparedness and Protective Services Committee receive this report for information.

RECOMMANDATION(S) DU RAPPORT

Que le Comité des services de protection et de préparation aux situations d'urgence prenne connaissance de ce rapport pour information.

EXECUTIVE SUMMARY

On May 21, 2022, the city of Ottawa experienced a powerful thunderstorm with extreme winds, categorized as a Derecho storm, that left extensive damage in the Ottawa community. There were more than 1,000 simultaneous Hydro Ottawa power outages across the city and over 180,000 customers without power. The City of Ottawa mobilized the Emergency Operations Centre that same evening and immediately went into "Enhanced Operations". By the next day (May 22), once the full extent of the damage had been assessed, the City escalated its posture to "Activated Operations", which is one level below a State of Emergency.

As per the City's Municipal Emergency Plan, a formal after-action review is conducted whenever the City enters into "Activated Operations". An after-action review is a post-incident assessment aimed at reviewing, documenting, and evaluating the emergency response. It provides an opportunity to assess the effectiveness of the response, as well as to determine what could be improved, going forward.

This report outlines the high-level after-action review results, lessons learned and next steps.

RÉSUMÉ

Le 21 mai 2022, une puissante tempête accompagnée de vents extrêmes et appartenant à la catégorie des tempêtes de dérécho s'est abattue sur Ottawa et a causé d'importants dommages dans la collectivité. Il s'est produit plus de 1 000 pannes de courant simultanées d'Hydro Ottawa dans toute la ville, et plus de 180 000 clients ont été privés d'électricité. Le soir même, la Ville d'Ottawa a mobilisé le Centre des opérations d'urgence et a aussitôt déclenché l'« intervention accrue ». Le lendemain (soit le 22 mai 2022), après avoir évalué l'étendue complète des dégâts, la Ville a enchaîné avec l'« alerte », soit un niveau en deçà de l'état d'urgence.

Conformément au Plan municipal de mesures d'urgence, un examen post-intervention formel a lieu dans tous les cas où la Ville déclenche l'« alerte ». L'examen post-intervention constitue une expertise postérieure à l'incident et dont l'objectif consiste à revoir, documenter et évaluer l'intervention d'urgence. Cet examen est l'occasion d'évaluer l'efficacité de l'intervention et de déterminer les points qui pourraient être améliorés à terme.

Ce rapport décrit dans ses grandes lignes les résultats de l'ensemble de l'examen post-intervention, les leçons apprises et les prochaines étapes.

BACKGROUND

On May 21, 2022, at approximately 3:30 pm, the city of Ottawa experienced a powerful thunderstorm with extreme winds that collapsed trees and hydro poles, damaged facilities and homes, and disrupted power to more than 180,000 Hydro Ottawa customers. It was later described by meteorologists as a historic 'derecho' and one of the most impactful thunderstorms in Canadian history that tracked through southeastern Ontario and into parts of southern Quebec. Most of the weather stations along the path of the storm recorded wind gusts near or above 100 km/h, with several severe downbursts that had windspeeds reach up to 190 km/h. Although the storm included hail and torrential downpour, most of the damage caused was from wind.

On June 8, 2022, Inquiry OCC 22-07 (Emergency Preparedness) was submitted at Council, seeking additional information on the process used and/or developed following the weather event based on lessons learned, regarding communication and outreach with residents. The inquiry also sought information on when a debrief would be completed for this weather event, and how the lessons learned would be captured and used to augment Emergency Operations Centre practices in the future. The response to [Inquiry OCC 22-07](#) was tabled at Council on November 9, 2022, which indicated that an after-action review was being conducted in accordance with the City's Municipal Emergency Plan, and that a report would be brought back to Council with findings, lessons learned, and recommendations.

DISCUSSION

After-Action Reviews

An after-action review is a post-incident assessment aimed at reviewing, documenting, and evaluating the emergency response. It provides an opportunity to assess the effectiveness of the response, as well as what could be improved, going forward. The Public Safety Service conducts operational debriefings after every emergency. As per the City's Municipal Emergency Plan, a formal after-action review is conducted whenever the City enters into "Activated Operations".

Overview of the City's After-Action Review Activities for the May 2022 Severe Weather Event

The City began its work on the after-action review when the Public Works Department

Command Centre demobilized in September 2022, which represented the City's final response activities related to the May 2022 storm. A third-party consultant was engaged to provide support with data collection and analysis.

The after-action review was focused on the following three areas:

- **Preparedness:** The City's actions and activities prior to the situation, to ensure an effective response.
- **Response:** The City's ability to manage and coordinate actions and activities, through the EOC, during and after the situation.
- **Communications:** External and internal communications during and after the situation.

The after-action review examined the City's Emergency Operations Centre and Emergency Operations Centre Control Group activities and actions. The following topics or activities were outside the scope of this after-action review report:

- Review of Hydro Ottawa activities and actions
- Review of Hydro One activities and actions
- Review of telecommunications companies' activities and actions
- Survey and interview of individuals outside of the Emergency Operations Centre or Emergency Operations Centre Control Group

What We Heard Went Well

- The City's Emergency Management Program has comprehensive and detailed documents (Municipal Emergency Plan, Recovery Guide, etc.) that provided a solid foundation for responding to this severe weather event.
- Roles and responsibilities are well documented and clearly understood by those individuals involved in the response.
- Some City staff possess a high-level of expertise in emergency response. This experience was evident in the Emergency Operations Centre for this storm and can be tied to the overall successful coordination of the response.
- Considering the size and scope of the event, the City conducted a well-coordinated response that aligned with the guidance of the Municipal Emergency Plan.
- The rapid and skilled response from first responders helped to save lives.

- The Human Needs Task Force was still supporting pandemic response and was quickly able to transition to support broader community needs associated with the City's storm recovery efforts.
- Volunteer agencies were a valuable partner that provided support and subject matter expertise, where needed.
- The level of dedication and commitment by communications staff to provide timely and accurate information greatly increased public confidence in the response and recovery efforts.
- Staff observed that the Emergency Operations Centre had appropriately and quickly engaged with hydro agencies and telecommunications providers (e.g., through Emergency Operations Centre liaisons). These relationships assisted with understanding challenges and coordinating recovery activities.

Where We Can Improve

- The City should continue to build greater depth in emergency response capacity such that more staff are capable of fulfilling crucial roles during situations.
- The City should enhance public education and awareness related to emergency preparedness at both the individual and community levels.
- The City should develop formal response protocols in three key areas: 1) Food Security; 2) Wellness Visits; and 3) Volunteer Management.
- The City should review and update its existing agreements with non-governmental organizations, as well as enhance its public-private partnerships – both with a view to working more efficiently with external partners during emergencies.
- The City should continue to seek ways to communicate effectively with the public during prolonged power outages.
- The City should continue to promote usage of the Council Liaison function to facilitate engagement between Members of Council and the Emergency Operations Centre during emergencies.

Next Steps

The Public Safety Service will address all recommendations; progress against which will be reported through the Public Safety Service Annual Report. There are some areas

that are directly aligned with recommendations made in the Office of the Auditor General's Audit of the Governance of the City's Pandemic Response, as well as the Audit of the City of Ottawa's Response to the Convoy Protest. Staff's work in responding to these audit recommendations will be addressed through the follow-up work completed by the Office of the Auditor General.

FINANCIAL IMPLICATIONS

There are no financial implications associated with this report.

LEGAL IMPLICATIONS

There are no legal impediments to receiving the information in this report.

COMMENTS BY THE WARD COUNCILLOR(S)

This is a City-wide report.

ADVISORY COMMITTEE(S) COMMENTS

There are no comments from any Advisory Committee associated with this report.

CONSULTATION

There was no public consultation required as part of this information report.

ACCESSIBILITY IMPACTS

Post-derecho, the City's Office of Emergency Management has been working with the City's Accessibility Office to better understand the experience of people with disabilities during emergencies. This has included two engagement sessions with various Accessibility Advocacy groups, using the derecho as the basis of discussions.

ASSET MANAGEMENT IMPLICATIONS

There are no asset management implications associated with this information report.

CLIMATE IMPLICATIONS

The Public Safety Service is a key stakeholder in the City's Climate Resiliency Strategy. The focus of this report is to assess the effectiveness of the City's response to the derecho storm. Forecasting studies led by the City's Climate Resiliency group indicate that Ottawa is expected to become warmer and wetter over the next several decades. This warming due to climate change favors conditions conducive to extreme weather

such as storms, tornadoes, and wildfires. The Climate Vulnerability and Risk Assessment identifies the additional pressures from the expected increase in frequency, duration or intensity of extreme weather events as a top climate risk. The lessons in this report will help the City prepare for and respond to anticipated future extreme weather events.

ECONOMIC IMPLICATIONS

There are no economic implications associated with this information report.

ENVIRONMENTAL IMPLICATIONS

While there are no environmental implications associated with this information report, the city experienced significant damage to its tree coverage as a result of the storm, with some trees needing to be completely removed. The City is committed to re-establishing the lost tree canopy by replanting lost City trees. The City's Public Works Department established a "Trees in Trust" program whereby residents who would like a tree replacement on the City's right of way can request it. Other options to expand tree planting are also being considered.

INDIGENOUS GENDER AND EQUITY IMPLICATIONS

The Public Safety Service is committed to the Corporate Diversity and Inclusion Plan. Recognizing that vulnerable populations are disproportionately impacted by emergencies, the Public Safety Service is working on formal actions as part of the City's Anti-Racism Strategy and applying the Women and Gender Equity Lens, to incorporate an equity, diversity and inclusion lens into the City's emergency preparedness, response, and recovery work.

RISK MANAGEMENT IMPLICATIONS

The City of Ottawa has a comprehensive [Emergency Management Plan](#) which is all-hazard and multi-departmental/whole-of-City. The City will continue to use this plan to guide its emergency response work.

RURAL IMPLICATIONS

There are no rural implications associated with this report.

TECHNOLOGY IMPLICATIONS

There are no technology implications associated with this report.

TERM OF COUNCIL PRIORITIES

The Public Safety Service fits into the 2019-2022 Thriving Communities Term of Council Priority, as this branch promotes the safety and physical well-being of city residents and visitors.

DISPOSITION

The Public Safety Service will action any direction received as part of consideration of this report.