Perth County
Cultivating Opportunity

PERTH COUNTY EMERGENCY MANAGEMENT SERVICE MODERNIZATION REVIEW

January 2023

GTA Emergency Management Consultants, Inc

An engagement with 7 municipalities in Perth to review their emergency management plans and to analyze and make recommendations so there are clear roles and responsibilities, decision making, standardization and cohesion in the responses across Perth. Also, to assess the marketplace for emergency management tools for use in the Emergency Operations Centre.

Table of Contents

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APPRECIATION

GTA-EMCI is especially grateful for the trust and cooperation afforded by the 7 municipalities in Perth. All participants in this engagement were generous with their time and candid with their comments, both of which were necessary for the analysis that led to the recommendations in this report. The participants actively contributed to comprehensive discussions about emergency management in the 7 municipalities in Perth, and the consulting team was impressed with the obvious dedication and commitment of all participants. To all of them, we express our sincere thanks.

GTA-EMCI acknowledges and appreciates the support of ETHOS Research and Development in the development of this report, and Consilium Public Sector Services in the administration of this project and the editing of this report.

DEFINITIONS

The definitions on this page are taken from the Government of Ontario's website, "Emergency management glossary of terms". The terms below and several others can be found at https://www.ontario.ca/page/emergency-management-glossary-terms.

Emergency Control Group (EGC)

"A group composed of senior staff and employees of an organization, and others that may be involved in directing that organization's response to an emergency including, *[sic]* the implementation of its emergency response plans and procedures."

Emergency Operations Centre (EOC)

"A designated and appropriately equipped facility where officials from an organization(s) assemble to manage the response to an emergency or disaster."

Incident Management System (IMS)

"A standardized approach to emergency management encompassing personnel, facilities, equipment, procedures, and communications operating within a common organizational structure. The IMS is predicated on the understanding that in any and every incident there are certain management functions that must be carried out regardless of the number of persons who are available or involved in the emergency response."

Interoperability

"The ability of organizations and systems to exchange information, communicate effectively and work well together. This applies to technological and functional interoperability."

GLOSSARY

ALT. CEMC	Alternate Community Emergency Management Coordinator
CAO	Chief Administrative Officer
CBRNE	Chemical, Biological, Radiological, Nuclear and Explosive
CEMC	Community Emergency Management Coordinator
ECG	Emergency Control Group
EIO	Emergency Information Officer
EMP	Emergency Management Plan
EMS	Emergency Medical Services
EOC	Emergency Operations Centre
FT	Full Time
GTA-EMCI	GTA Emergency Management Consultants Inc.
HIRA	Hazard Identification and Risk Assessment
IC	Incident Commander
ICS	Incident Command System
IMS	Incident Management System
LMS	Learning Management System
MOHLTC	Ministry of Health and Long-Term Care
MOU	Memorandum of Understanding
MTO	Ministry of Transportation of Ontario
NGO	Non-Government Organization
OFMEM	Office of the Fire Marshal and Emergency Management
PEOC	Provincial Emergency Operations Centre
PERP	Provincial Emergency Response Plan
RFP	Request for Proposal
ROI	Return on Investment
SLA	Service Level Agreement
USAR	Urban Search and Rescue

EXECUTIVE SUMMARY

Provincial legislation requires that municipalities, including the 7 municipalities in Perth, have an emergency-management plan, and that the plan be maintained and exercised regularly. The Province of Ontario also recognizes the Incident Management System (IMS) as the standard on which such plans should be based, and by which planned and unplanned events should be managed by municipal and provincial authorities and their partners, including non-governmental organizations (NGOs).

The Emergency Management Plan for the 7 municipalities in Perth should be crafted to reflect the IMS, and all involved municipal staff should be trained and practiced to operationalize the plan.

A number of steps need to be taken to ensure the 7 municipalities in Perth are ready to work independently or with the province, other municipalities and community partners to function efficiently and effectively when significant incidents occur, whether they are planned or unplanned, local or wider in scope.

The Incident Management System (IMS): Emergency management across the 7 municipalities in Perth should be based on the provincial IMS, and not the Incident Command System (ICS), on which much current planning and training is based. This is important to enhance effectiveness and interoperability.

Documents, Resources and Information: While some existing emergency-management documents remain useful, others require modification either because they are dated or because they do not reflect the IMS. Many documents should be merged, combined or redesigned to reduce confusion and promote understanding among staff and partners. The documents, whether digital or in hard copy, would also benefit from linkages or references among them.

Training: Some municipal staff lack sufficient foundational emergency-management training to participate effectively in incident response or training exercises. All staff who will have a role in emergency response require comprehensive IMS and related training that is appropriate for their assigned role during an incident. Ongoing training must also be conducted so that staff members and partners become and remain competent and comfortable in their roles. We recognize there is a new multi-year training plan in place to ensure all staff are properly trained to appropriate levels.

The Emergency Management Plan (EMP): The EMPs for the 7 municipalities in Perth should reflect the IMS. They should be interoperable, and should differ only by reflecting unique details within each municipality. They should be reviewed regularly and practiced through ongoing training, drills and tabletop exercises involving all key players.

Hazard Identification and Risk Assessment (HIRA): The list of hazards and risks should remain a separate and confidential document, however the EMP should be based on the HIRA. Both HIRA and EMP should be reviewed annually as part of the process of maintaining the EMP.

Emergency Operations Centres (EOCs), Roles & Responsibilities and Reporting Structures: Various options exist for EOCs in the 7 municipalities in Perth, but they should all align with the IMS and follow its processes consistently. The regular municipal hierarchy should work within the Emergency Control Group (ECG) structure, and the reporting structure of the IMS, with its defined roles and reporting methods, should become the leadership model following the activation of an Emergency Operations Centre (EOC). There should also be a standard process across the municipalities for internal notification of a local event or incident, including who is informed when a local event or incident occurs.

Service-Level Agreements: SLAs should be in place to ensure that all municipalities are clear on the resources and support that municipalities and their partners can provide to one another during serious incidents, particularly those that transcend boundaries or last for an extended period of time.

Electronic Tools to Support Emergency Management: Various electronic tools exist to support the management of emergencies in the community. Any tool selected should be intuitive, be able to use real-time photos and videos, facilitate virtual meetings and function as repositories for required documentation. Because some municipalities have already invested in elements of the Esri ArcGIS system, it is recommended that the preferred option for an electronic tool is continued investment in the Esri ArcGIS system.

Next Steps: Moving forward, the 7 municipalities in Perth should undertake three broad activities:

- *Define the roles and responsibilities of the Chief Administrative Officers (CAOs) and the Community Emergency Management Coordinators (CEMCs)/Alternate Community Emergency Management Coordinators (Alt. CEMCs):*
    - The CAO group across the municipalities should act as sponsors of the emergency-management programs, ensuring that the process is initiated and followed through, choosing a model by which incidents will be managed across the 7 municipalities in Perth (see below), and ensuring that municipal leaders are consulted and comfortable with decisions and processes.
    - The CEMC's/Alt. CEMC's should define the roles of the CEMC's/Alt. CEMC's during incidents, develop a decision tree and trigger points by which elements of the model selected is activated, lead the development of a revised EMP, ensure that all players are clear on their roles, and obtain or provide initial and ongoing training to ensure all key staff are prepared for incidents.
- *Choose a model (from among three possibilities, each of which has advantages and disadvantages) by which an effective emergency-management process can be put into place:*
    - A County-led (top-down) model, in which a single EOC is used during incidents and the Perth CEMC supports the Emergency Response Team, responded to by appropriate municipal staff

  - A municipality-led (bottom-up) model, in which each municipality would have its own CEMC and Alternative CEMC, each of whom takes responsibility for updating and maintaining plans appropriately. Each municipality in this model is responsible for setting up and operating its own EOC
  - A hybrid model (recommended), in which all local incidents are managed by each municipality's CEMC or Alt. CEMC and local emergency-management staff, supported by the County CEMC when needed

- *Implement a step-by-step roadmap for the process moving forward*
  - Under the leadership and sponsorship of the municipal CAO group, choose a model for emergency management across Perth, ensuring that emergency management is on each of their quarterly agendas
  - The CEMC's/Alt. CEMC's should agree on their roles and responsibilities based on the model chosen
  - The CEMC's/Alt. CEMC's should ensure that all appropriate staff are trained in a manner appropriate to their various IMS roles, and should lead the development and regular updating of the EMP
    - All involved staff must be trained ideally before proceeding with the EMP or its exercises
    - As there is a multi-year training plan for all staff in emergency management, it is understood that training will take an extended period of time. As such, the consultants recommend the 7 municipalities create a team of fully trained individuals, for position-specific roles (e.g., Operations Chief), and ensure there is redundancy (3-5 trained people/position) for incidents that extend beyond one operational period (8 hrs). This will provide skilled individuals to react to any and all incidents during the multi-year training plan.
  - When the electronic IT tool is chosen, it should be implemented and used in tabletop exercises, drills and live incidents to ensure that all staff are capable of using it and comfortable in its use
  - Training and practice exercises and drills should be updated and performed regularly to ensure continued competence among all staff with the emergency-management process and all related tools

The report on the following pages provides more detail on how to realize these important goals and to make the changes that are necessary to ensure that Perth can address substantial occurrences, both locally and as part of the provincial emergency-management community.

INTRODUCTION & BACKGROUND

Purpose of this Document

This report makes several suggestions which we believe will contribute to forming a roadmap to enhance the effectiveness of the emergency management plan for the 7 municipalities in Perth as they continue their important work.

Under Ontario's *Emergency Management and Civil Protection Act (EMCPA),* R.S.O. 1990, the 7 municipalities in Perth are required to have an emergency management plan, and to maintain and exercise that plan on a regular basis. Recognizing the need to update, improve and coordinate their emergency management plans, Perth County commissioned a Request for Proposal (RFP) on May 5, 2022, entitled *"Emergency Management Service Modernization Review."* GTA Emergency Management Consultants Inc. (GTA-EMCI) was awarded the project.

This document brings forward the findings, observations, recommendations and roadmap of the GTA-EMCI consulting team, following a comprehensive review of the emergency management plans and other related materials provided by the 7 municipalities in Perth. This report represents GTA-EMCI's fulfillment of its engagement and contract with Perth County in response to the County's original RFP.

The following municipalities are included in the Scope of Work:

- *Perth County*
- *North Perth*
- *West Perth*
- *Perth East*
- *Perth South*
- *Stratford*
- *St. Marys*

In-Scope

The following activities were within the scope of this project:

- Review and recommend any changes to the current seven emergency-response plans so that the 7 municipalities in Perth can be effective in all incidents and align with the provincial Incident Management System (IMS) / Incident Command System (ICS) standards, guidelines, and best practices.

- Make site visits to all seven municipalities

- Make recommendations to ensure that all 7 municipalities in Perth have emergency management plans that align to ensure that there are clear roles and responsibilities, consistent decision making, standardization and cohesion in the responses across the region.

- Make recommendations for Perth County to operate an Emergency Operations Centre (EOC) to support simple or complex emergencies that affect multiple municipalities, and to do so as efficiently as possible using available technology.

- Assess the marketplace for emergency-management tools that are intuitive, that are able to utilize real-time photos and videos, that provide a documentation repository and that allow for virtual meetings.

- Review and analyze relevant documents, plans, and reports to gain insight into past efforts that are consistent with the current emergency plans.

- Identify opportunities for potential cost savings.

Out Of Scope

The following was not within the scope of the project:

- Production of revised emergency management plans.

METHODOLOGY

The consultants undertook the project in six distinct phases.

Analysis of Client Need

The GTA-EMCI consulting team held virtual meetings and exchanged ongoing correspondence with the Perth County Chief Administrative Officer (CAO) and Community Emergency Management Coordinator (CEMC).

These exchanges led to the development of the project plan, established context, and articulated anticipated outcomes. Throughout the project, the project manager provided monthly updates to Perth County leadership.

Research

All existing emergency management plans from the 7 municipalities in Perth were reviewed in detail. GTA-EMCI used its own resources to research appropriate software and technologies that could enhance the incident response and oversight provided by the Emergency Operations Centre (EOC).

Site Visits

The consulting team physically visited all seven stakeholder sites and held consultations with representatives from each of the municipalities. Those meetings resulted in information, observations, and participant opinions, all of which provided valuable context for use by the team in its analysis and findings.

Document Review

The team conducted a thorough review of all documents provided by the 7 municipalities in Perth. This included about 150 documents in total. The documents were catalogued by date of creation, and their content examined for successes, challenges, misses and opportunities. This led to recommendations for change and to the roadmap for the next phase of the development of a comprehensive Emergency Management Plan (EMP).

Follow-up Questions

During the analysis process the team communicated continually with the County CEMC and on occasion the County CAO to obtain clarification as required, engage in an ongoing dialogue related to issues of concern, establish context for issues, and develop recommendations.

Reporting

The project manager sent monthly progress reports covering a broad range of project issues to the Perth County CAO and CEMC, all to keep the client informed of progress and of any issues of concern as they arose.

On November 9, 2022, the GTA-EMCI consulting team provided an executive briefing to the Perth County CAO and Perth County CEMC to provide a general overview of findings, recommendations, and the roadmap for the next phase. Collectively, we confirmed that the recommendations and roadmap were well-rooted in the context of the findings, and ensured they were reasonable and practicable for the client. That process led to this final report.

Final report

This Final Report is intended to inform the future decisions made by the leadership of the 7 municipalities in Perth. We believe this information will enable the client to choose the best path forward with respect to the future emergency management program and the activities connected with it, including the involvement of stakeholders and partners as well as training and practical exercises.

GTA-EMCI will remain available to be consulted and would be pleased to support the 7 municipalities in Perth for any future engagements in their emergency planning or related initiatives.

FINDINGS AND OBSERVATIONS

Overview

Through its on-site reviews, examination of about 150 documents from all seven municipalities, consultation interviews and internal collaboration, the GTA-EMCI consulting team determined that there were "successes" on which the municipalities should continue to build. However, there were also many "challenges" and "misses" that could put the 7 municipalities in Perth at risk in the event of a complex incident or significant emergency.

As such, GTA-EMCI has clustered the "successes, challenges, and misses" from hundreds of data points into eight themes in order to define the issues clearly.

1. Incident Management System (IMS) as opposed to Incident Command System (ICS)

Background

The province of Ontario uses the Incident Management System (IMS) to give organizations a common framework to cooperate, communicate, and coordinate their work during an incident. IMS is a standardized and coordinated approach to managing incidents that provides functional interoperability at all levels of emergency management.

IMS is the established provincial system and is used by the Provincial Emergency Operations Centre (PEOC).

IMS Doctrine (2009)

The Incident management System (IMS) was developed in Ontario to provide a single, province-wide incident management system that is capable of ensuring an effective, coordinated response to large-scale and complex incidents, whether planned or unplanned, by Ontario's various response organizations and communities.

The IMS Doctrine was developed for use in Ontario by Emergency Management Ontario (EMO), with stakeholder input through IMS Steering Committee representatives. It was sponsored and approved in January 2009 by the Deputy Minister of Community Safety and the Office of the Chief, Emergency Management Ontario.

The Incident Management System allows response organizations and communities to utilize only those elements of the system that are practically suited to a given incident. This approach is referred to in the doctrine as the "toolbox concept".

This publication is made available by EMO for the use of all within the emergency management community. Copies of the IMS doctrine are available through EMO's website at http://www.ontario.ca/emo, or through email at information.emo@ontario.ca.

The following paragraphs are quoted from the Executive Summary of the IMS Doctrine document.

> *The Incident Management System (IMS) is used to manage many types of incidents, whether they evolve from planned or unplanned events. In this guidance document (doctrine) the focus is on using IMS to manage incidents, i.e., those requiring an emergency response.*
>
> *IMS presents standardized organizational structure, functions, processes, and terminology. The standardized organizational structure outlines the command-and-control chains. The standardized functions under IMS are Command, Operations, Planning, Logistics, and Finance & Administration. Standardized processes allow all who respond to the same incident to formulate a unified plan to manage the incident. The use of standardized IMS plain-language terminology reduces the risk of miscommunication among the many responders.*
>
> *Ontario has developed an IMS for use in Ontario for several reasons. First and foremost is to provide a single, province-wide incident management system that can ensure the effective, coordinated response to large-scale and complex incidents by Ontario's various response organizations. Lessons from previous complex emergencies have demonstrated the need for such a standardized incident management system to avoid confusion and enhance response. It was also decided to develop an Ontario-specific IMS in order to respect and incorporate the unique structures and relationships that exist within Ontario, while ensuring that the system would also be consistent with other systems practiced in contiguous states, and provinces.*
>
> *IMS is recommended for managing all incidents. The system allows response organizations to utilize only those aspects that are practically suited to a given incident, an approach referred to in the doctrine as the 'toolbox concept'. While the full expansion of the IMS structure may appear complex, this would occur only during complex incidents, and would serve to maintain the optimum span of control by injecting appropriate supervisory levels.*
>
> *Wide-scale stakeholder implementation of the IMS in Ontario is the desired outcome. Even though there has previously been no standardized province-wide system, there is recognition that many organizations have already been using versions [such as ICS] or aspects of IMS. In view of the different levels and sizes of stakeholder organizations, the guidance document must recognize that implementation must be done in a manner best suited to each organization. That is why this IMS doctrine was developed with the input of a wide cross-section of the public, and private sectors and Non-Governmental Organization (NGO) stakeholders, who represent the views of associations, service organizations, and the three levels of government. Their participation has helped to ensure that the doctrine addresses their organizational interests, and should lead to broad stakeholder implementation, as organizations reference IMS in appropriate policies, plans, and procedures. Adopting the principles of IMS, and implementing them in a consistent manner, will contribute towards more effective & efficient incident management, hence making Ontario safer and more disaster resilient.*

For all the reasons identified above, GTA-EMCI recommends that the 7 municipalities in Perth follow the provincial IMS model instead of the Incident Command System (ICS) model.

Findings

- Over the past year, Perth County has done an excellent job of bringing emergency management to the forefront. It has undertaken numerous tabletop exercises and made extensive training programs available.
- The 7 municipalities in Perth have opted to train its staff in the Incident Command System (ICS). Using ICS has the potential to create confusion; when staff are working with first-responder and other agencies which are trained in IMS, there is a strong potential for communication gaps and decreased interoperability.
- It is important to note that ICS is primarily site-specific. In contrast, Ontario's IMS is designed to meet the needs of all levels of response, ranging from the site(s) to EOCs to the complex network coordination within all levels of government and agencies (e.g., NGO's, Red Cross, Salvation Army, public and private sector organizations).
- The Government of Ontario has ensured that IMS is interoperable with incident management systems in other provinces and territories in Canada (referencing ICS) and the bordering states in the USA. It also reflects needs specific to Ontario, including governance structures and legislative processes.
- IMS is in line with a shift in incident response that is intended to develop ways to help communities and organizations work together more effectively and efficiently during an incident.
- Training in ICS has added cost to the municipalities, as firefighters are regulated to be trained in IMS and now need to be trained in ICS. During the consultants' site visits, many municipalities expressed resistance to sending their staff for ICS training as they have limited budgets and recognize they may be training their staff twice, in ICS and IMS. The province in the past month is now accepting ICS training as a prerequisite for some IMS courses.
- The province supports, maintains, and continues to develop additional position-specific courses in IMS.
- Some documents, such as *Municipal Human Health Outbreak Response Plan Rev.3*, state the (PEOC) which may create confusion for the 7 municipalities in Perth in the event of a complex incident or significant emergency, as OFMEM uses IMS and not ICS.
- In any emergency response, it is essential for all the stakeholders to work as seamlessly as possible with other response agencies by using the same terminology, the same processes, and the same principles of emergency management.
- Interoperability is critical for the 7 municipalities in Perth, as municipalities will often engage with multiple agencies during an emergency. Communication conflicts and gaps can lead to a high risk of miscommunication or delays in decision-making, and to potential liabilities.

Recommendations

The police, paramedics, and fire services are provincially regulated and trained in the provincial IMS model. It is essential for the municipalities to work collaboratively with first responders and other agencies (e.g., NGO's) using common communication and processes, similar roles, consistent training, and similar documents.

As such, GTA-EMCI recommends the 7 municipalities in Perth use IMS to avoid potential miscommunication or confusion when working with other agencies during an incident. The 7 municipalities in Perth have the option of supplementing IMS training with ICS training materials that enhance staff members' knowledge as required.

In the new IMS Level 200 training, the province recently added a "scribe" position (like ICS). The province is also exploring and has commenced additional specialized position training courses.

It is important for the 7 municipalities in Perth to consider the impact of the entire region being affected by a major incident (e.g., severe weather, power outage etc.). If and when such an incident occurs, the 7 municipalities may not have sufficiently trained staff available to run the County or municipal EOC. This may result in the need to contact neighbouring counties or municipalities to assist and/or contact the Provincial Emergency Operations Centre (PEOC) for provincial assistance.

This section demonstrates that it is a critical requirement for the 7 municipalities in Perth to utilize the IMS model to align with other municipalities and the Provincial Emergency Response Plan (PERP).

2. Documents

- More is not always better. The consulting team reviewed about 150 documents, and concluded that there are too many emergency-management documents across the County to be practical. Also, the documents are often insufficiently specific; there is little information that would answer the basic question, "Who does what, and when?"
    - In addition, the documents do not contain references to related materials; there are few links to other sources and resources that could be relevant to the management of an emergency incident.
    - All this is likely to cause confusion and to overwhelm staff who are responsible for reviewing and understanding the materials so they can perform to the best of their ability during an incident. The tremendous amount of detail in the documents also creates the potential for legal issues. There must be enough detail to aid in the process of managing incidents, but not so much information that confusion will result.
- The Emergency Management Plan (EMP) structure is confusing as it uses multiple annexes and appendices. Consider just using one approach (i.e., appendices or annexes).

- Some documents should be reviewed to ensure the use of Canadian instead of American language. An important example is the *Perth County Training and Exercise Program* document.
- Some documents that reference IMS have the wrong colours associated with each functional position. Command should be green, Operations should be red, Planning should be blue, Logistics should be yellow, and Finance/Admin should be grey.
- The reporting structure for the CAO and first responders should be the same for any incident, not different for specific incidents as is the case in the document *Municipal Human Health Outbreak Response Plan Rev.3*.
- In *Municipal Human Health Outbreak Response Plan Rev.3* and *EOC Notification Workflow – DRAFT*, the notification process needs to be reassessed based on the authority level of the CAO. There is confusion between the roles and responsibility of the CAO and CEMCs during an incident.
    - As well, the roles and responsibilities of the County CEMC and the municipalities' CEMCs or Alt. CEMCs should be made clearer.
- Many documents are not clear on who is responsible for what actions. Policies and procedures should answer the "who, what, when, where, why, and how" of each incident.
- Procedures should start with action words, so staff know what is expected.
- There is often confusion between the use of roles within the municipal hierarchy, as opposed to the IMS roles. During any incident or event, the approval signature should be the Incident Commander, and not the senior municipal official for an emergency event. For non-emergency events, it can remain the senior municipal official.
- Many of the media checklists and documents (such as *Media Release Checklist*; *Maximizing Your Media Opportunities*; *Media Conference Checklist*; and *Media Conference Sign-in Sheet*) are very well done. They provide good information, especially if someone is new to communications. These documents are also a valuable tool for an Emergency Information Officer (EIO) position checklist.
- In *Appendix Z – Building Marking System Rev.0*, Perth County should update the search identification markers to current practice by adapting the Urban Search and Rescue (USAR) standard, or simplify the "stop sign" and ensure that the 7 municipalities and first responders are using the same. Consider providing proper training to ensure proper use of the "stop sign". This initiative could be led by the fire service.
- The document *Appendix X Emergency Site Set-up rev.1* needs to be modified to include the roles and responsibility of the Incident Commander as the responsible person ("in charge") for the emergency site (known as the "hot zone") and the inner perimeter (the "warm zone"). Currently the document is silent on the hot and warm zone responsibilities. Also, the document uses confusing language for the ECG's responsibility, as there is no visible reference to the area outside the outer perimeter (known as the "cold zone"). This document should be updated to the current standards.

- The *Perth County Emergency Preparedness Guide* is a great guide for emergency management for all seven locations. The continuous update of this guide should be included when updating the EMP(s).
- As some documents are very old, the language needs to be modified to meet current standards. For example, it may be necessary to eliminate language that might be offensive to some.

Recommendations

As many of these documents are dated (2006-2022), the consultants recommend they be updated, streamlined, and consolidated with related policies and procedures, eliminating unnecessary information. For example, use the term “severe weather” rather than using particular documents for specific weather-related incidents such as hurricanes or tornados. Separate policies and procedures for different types of severe weather are not recommended. Instead, create sub-headings for specific responsibilities for different weather events, if necessary.

Details of specific roles and responsibilities could appear on checklists which support policies and procedures, rather than listing those details in the procedures themselves. Ensure there is a link to each checklist in the appendix.

Processes should be standardized and consistent across all seven municipalities, so when neighbouring regions support one another, they use the same processes and work from the same documents (allowing for necessary local differences).

To enhance the IMS program and align the EMP with IMS, the 7 municipalities in Perth should transition to IMS forms. For example, replace the “Situation Reports” with IMS Form 1001.

Municipalities should deal with planned and unplanned events the same way.

3. Missing Information

- Several documents lack appropriate references and/or information, which may cause confusion for untrained staff and/or responders.
- The EMP for the 7 municipalities should be expanded to include policies and procedures for all types of internal emergencies, such as violence and aggression, bomb threats or suspicious packages, medical emergencies, evacuation, missing persons, or any types of infrastructure events (loss of power, elevator mishaps, gas, or chemical leaks etc.). These processes are missing from the documentation, but are important for all employees to ensure they are familiar with, and comfortable responding to, any such events.

- The document "*Evacuation Procedures Feb'15*" and the arial photo of the courthouse should identify a meeting place following an evacuation. Also, there is no mention of fire wardens in the document, which is contrary to the provincial fire regulations.

Recommendations

GTA-EMCI recommends that the 7 municipalities include the three Provincial Response Levels (see chart in Appendix A) into their respective EMPs to help coordinate and guide how to ramp up the response with multiple municipalities, neighbouring municipalities, first responders, allied agencies, etc.

If the missing internal policies and procedures are in another area within the 7 municipalities' documentation, there should be a reference in the EMP to the appropriate documents, so staff know where to find them in the case of an incident, and to ensure they are consistent to avoid any issues.

4. Training

- It is good to see that the County has approved a multi-year training matrix to ensure all appropriate staff are trained in emergency management.

- Although it was great to see multiple tabletop exercises conducted, it was evident that many participants from the municipalities did not have sufficient foundational emergency management training or knowledge to understand their roles and responsibilities in order to participate effectively. As well, these individuals were not able to participate fully in the discussion of "lessons learned" and "identification of improvements" for the EOC tabletop exercise. The after-action report identified this gap, and training was provided after the fact. The key message here is to train first, then practice, where possible.

- There is inconstancy in training among the CEMCs/Alternate (Alt.) CEMCs. Not all CEMCs/Alt. CEMCs have been fully trained from the basic level of emergency management to the EOC level. Comprehensive training is necessary to respond and support properly to an incident.

- The Provincial CEMC Handbook states "Alternate CEMCs are strongly encouraged to take these courses as it is likely they will have an important role to play during the emergency life cycle … Courses include Emergency Management 200, Basic Emergency Management (BEM), Emergency Management 300 (Community Emergency Management Coordinator (CEMC) Course), IMS 100 Introduction to Emergency Management System, IMS 200 Basic Incident Management System course."

Recommendations

The 7 municipalities in Perth should systematically implement the same level of training for identified staff in emergency management starting at the lowest level of training and ending with EOC training for appropriate staff (such as CEMCs/Alt. CEMCs and other appropriate municipal staff), prior to running any tabletop exercises, if possible. This will enhance the learning processes and make changes that are required for better emergency response.

GTA-EMCI recommends that the 7 municipalities ensure all individuals with specific roles and responsibilities are fully trained to perform their functions. (See the "Step-by-Step Roadmap for Next Phase" section.)

The consultants also recommend that anyone who may be involved in an EOC (e.g., CAO, mayor, etc.) be trained in IMS 250 (EOC) so they are clear on their roles and responsibilities. We recognize some individuals may have received this EOC training in ICS.

Consistent training of all municipal support staff, CEMCs/Alt. CEMCs is critical for any incident. Incidents can, and often do, run over multiple days (operational periods) and continue throughout the day and night. They may involve multiple municipalities, emergency responder organizations, public or private sector organizations and provincial ministries. Having fully trained staff across all municipalities provides the benefit of interoperability. This means municipalities can support each other with fully trained staff.

5. Maintenance of The Emergency Management Plan (EMP)

- Many of the EMP documents are significantly dated. We note that some have not been updated since 2006.

- The EMP needs a proper process established within the plan to ensure that all data are reviewed and updated annually. This includes names, contact info, inventory change, service-level agreements, etc.

- Some data points, such as staff contact names and numbers, vendor names and numbers may need to be updated quarterly as staff leave organizations and vendors are occasionally changed.

- The role and responsibility of updating the EMP needs to be assigned to a specific position, such as the CEMCs/Alt, CEMCs, who can then ensure that appropriate people across the 7 municipalities update their site-specific documents and checklists, and that they follow up appropriately.

- It is evident that some of the municipalities have unique EMPs. This causes challenges should another municipality or County require assistance during an incident. Not having a similar EMP can cause confusion, miscommunication, breakdowns in service, unclear responsibilities, and weakened response.

- It is evident that there are many outdated areas in *Host Community Plan rev.2*. The language in this document may also need to be reconsidered and reworded.

    - In the same document, to ensure continuity of service, it is important to validate annually that funding will be available through a contract or memorandum of understanding (MOU). For example, "All reasonable expenses related to the evacuation response will be reimbursed by Aboriginal Affairs and Northern Development Canada (AANDC)."

- During the site visits, many municipalities expressed an interest in moving to a digital EMP with a paper back-up.

- During the site visits, the consulting team shared a field operation reference booklet with some municipalities that outlined quick references to roles, responsibilities, and specific tasks during an incident. This tool is often used at the early stages of an incident. The municipalities that saw the reference booklet would like something similar for their site.

Recommendations

The EMPs for the 7 municipalities should be very similar. Only site-specific details should differ across the seven plans.

The EMPs should be updated annually or more frequently as required, especially changeable information such as staff and vendor contact information.

There should be a process in place to identify all documents which require updating, including when to update each one, and who is responsible for doing so.

We recommend that there be *one* person or group (e.g., CEMCs/Alt. CEMCs) with the responsibility of ensuring that changes are implemented and documents updated regularly.

6. Hazard Identification and Risk Assessment (HIRA)

- Perth County recently received an updated version of the HIRA, created in collaboration with the University of Toronto.

    - As stated in the introductory section, the HIRA is grounded in the requirement to follow the provincial emergency management program which currently is the Incident Management System (IMS). Section 1.2, Project Brief, says that the “Province of Ontario requires the creation and submission of a HIRA for compliance within the provincial emergency management program, per the provincial *Emergency Management and Civil Protection Act*, R.S.O. 1990, C. E.9”. From Section 1.6, Approach: “The approach for this project follows the Methodology Guidelines from the [Ontario] Office of the Fire Marshall and Emergency Management (OFMEM)”.

- The EMP should be based on the hazards and risks and reviewed annually, however it is important to keep the HIRA and EMP as separate documents. As stated in Section 4.3 of the HIRA, under Governance: “In future iterations of the HIRA an internal governance structure would allow for the HIRA to be completed internally and become a living document that is useful to business units across the county and remains current to changing data".

Recommendation

Just as it is recommended that the confidential HIRA documents be compliant with the provincial emergency management program, it is GTA-EMCI's recommendation that the 7 municipalities all ensure their emergency management documents and plans, training and tabletop exercises comply with the provincial emergency management program following the Incident Management System (IMS) model.

7. Reporting Structures in Emergency Operations Centre (EOC)

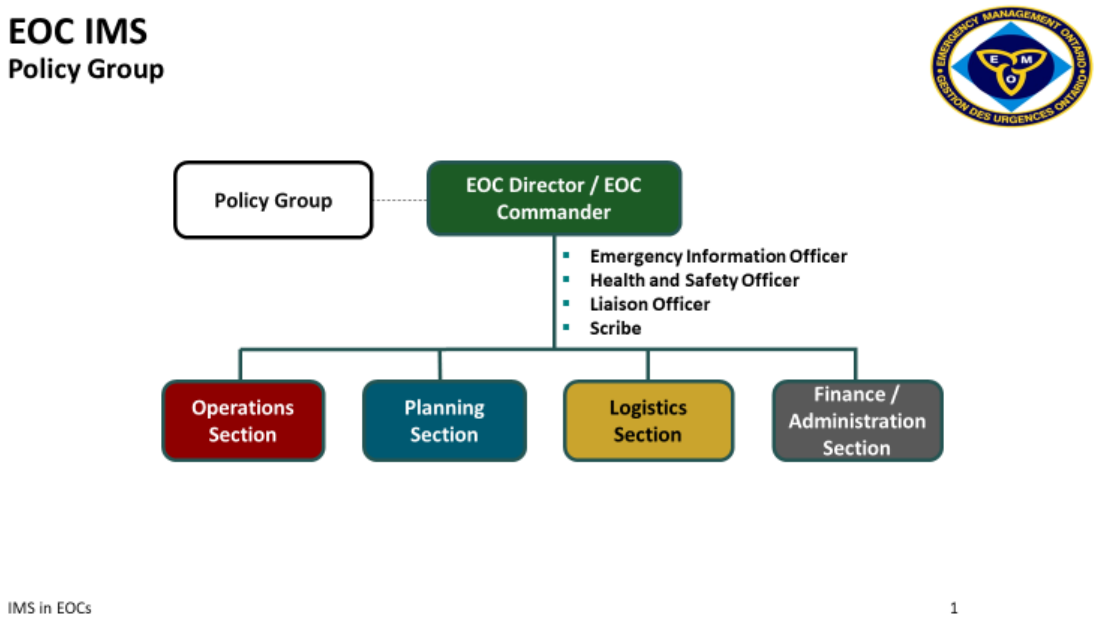
- The reporting structure articulated in numerous documents needs to be reviewed and corrected, as there are areas that are likely to cause significant miscommunication by bypassing the EOC Director/Commander. For example, the senior OPP member and other agencies should advise the EOC Director/Commander and *not* the ECG Group/Policy Group, as the ECG Group/Policy Group should receive its updates and communication directly from the EOC Director/Commander.

- The document *Radio Interoperability Protocol rev.2* is a success, as it includes a process for interoperability. Although the document needs to be updated as there are many areas that are no longer accurate (e.g., the Ministry of Health and Long-Term Care (MOHLTC) no longer exists, and the Emergency Medical Services (EMS) communication system is now under the County).

- The *Interoperability Continuum* document needs to be reviewed, validated, and updated to determine if some of the concepts are still current. Although there have been many discussions over the years, some aspects have not yet been established, such as “a common emergency responder radio frequency”. Also, this common radio frequency may not be accessible by municipalities.

    - In the same document, the sentence, “In situations where an Emergency Operations Centre has been established, or an Incident Commander appointed, dedicated talk groups will be utilized to control the flow of information to and from the Incident Commander to the Emergency Control Group” is inaccurate, as the ECG Group/Policy Group can monitor the information on the radio but should not interfere with the communication. The Operations Chief monitors the radio in the EOC.

- Roles and awareness of the ECG is not consistent throughout the documents. The ECG is not clearly defined, and as such it appears that the emergency management plans on occasion follow the hierarchy of the 7 municipalities rather than the IMS model.



NOTE The ECG Group is within the Policy Group

Recommendations

The EMP should follow the IMS process. Municipal hierarchical roles and responsibilities should not be used during an incident in which the IMS is invoked.

The role of the ECG Group/Policy Group should align with the IMS model to ensure consistency and clarity of processes during an incident.

8. Clarity of Roles and Responsibilities

- In section 3.2.1.2 of the document titled *Analysis – Perth County Interim*, it states, “There may be different spokespersons on different occasions, but typically there will only be one spokesperson at a time.” In fact, there should only be one spokesperson under unified command (IMS), the Emergency Information Officer (EIO) or designate.

- In the IMS chart within the same document, under the “Operations Chief” section, Perth County has added an interim position called "Emergency Response Lead" to be the intermediary between emergency first responders (police, paramedics, fire) and the Operations Chief. This can lead to delays in communication and misinformation. First responders normally report directly to the Operations Chief.
- In section 3.2.2 of the same document, entitled “Transfer of Command”, there should be a reference to transferring command for the next operational period (e.g., 8 hours later). The reference should be specific about how to transfer command to the incoming Incident Commander (IC).
- In the same section there is reference to the “Second in Command”, which appears to be the incoming Incident Commander for the next operational period. In fact, the Second in Command should be the individual that covers for the current Incident Commander, in the same operational period, when the Incident Commander is in meetings or otherwise unavailable.
- In the document *Power Outage ER Checklist rev.0*, there must be separation of the roles and responsibility for Site Incident Command and EOC Incident Command. This is necessary in order to define who is responsible for which action item following the IMS process. For example, under “Timely and accurate media and public information”, there are multiple groups identified as being sources for necessary messaging, including positions such as the ECG, Emergency Information Officer (EIO), OPP Communications Officer, and Health Unit Communications Manager. Following the IMS process, the messaging would come from the EIO or designate after approval by the Incident Commander.
- Documents *Emergency Information rev.3* and *Media Relations rev.2* identify the “Media Spokesperson” and “Citizen Inquiry Supervisor”, which references the County or municipal hierarchy rather than the IMS model. The EIO is the media spokesperson and citizen inquiry source. If the mayor or other leaders are inclined to speak, the message should be supplied by the EIO, as approved by the EOC Director/Commander or Site Incident Commander.
- The 7 municipalities, on occasion, use the municipal hierarchy rather than following the IMS model. It is best to use IMS leadership roles during an incident or event.
- In the document *EOC Notification Workflow – DRAFT*, the chart is unclear and will create confusion due to the notification process at both the county and municipality levels. The flowchart needs to be corrected and updated based on the model chosen (see “Choose a Model”, below).
- In document *Hazmat rev.2*, the Hazmat/CBRNE definition needs to be updated to state that the police would become the lead agency if the incident were determined to be, or to result from, a criminal act.
- In relation to demobilization (returning to business as usual), some municipalities revert to hierarchical roles and responsibilities rather than following the IMS model. For example, municipalities create committees for post-incident clean-up, rather than having

the Planning Section plan the demobilization, during the incident, for implementation by the Operations Section.

- Definitions for pandemics should be from Health Canada or the Local Medical Officer of Health, not the Fire Marshal's Office (OFMEM).

Recommendations

There should be a standard process across all municipalities for internal notification of a local event or incident. Currently there is no consistency as to who gets called when an incident occurs (e.g., CEMCs/Alt. CEMCs, CAOs, mayors etc.).

It is recommended and important to follow the IMS leadership model, rather than any organizations' hierarchical structure, during an incident or event.

9. Service-Level Agreements (SLA)

- The seven municipalities have varying readiness and preparedness processes in their respective emergency management programs, as stated in their service-level agreements (SLAs).

- Most municipalities do not have sufficient resources to set up and run extended hours for an incident or event, or to help neighbouring municipalities in such situations.

- The SLAs are silent on what would take place should an incident last for an extended period of time (i.e., over days or weeks). This could cause substantial challenges when a significant emergency occurs.

- The current service-level agreements do not indicate the "trigger points" at which the 7 municipalities in Perth would step in to help during an incident or event. This may lead to inconsistency of support for the affected municipalities.

Recommendations

GTA-EMCI recommends that there be continuity across the 7 municipalities' readiness and preparedness processes within the emergency management plans. This includes the service-level agreements.

Most municipalities do not have sufficient resources to support extended incidents over many days or weeks. It is therefore critically important for the 7 municipalities to train as many staff as possible within each municipality, in order to provide more trained resources in the event of an extended incident.

GTA-EMCI therefore recommends that the SLAs include language for support and/or resources during extended incidents.

It is highly recommended that “trigger points” for initiating the opening of the EOC (County or Municipal) be defined clearly for all parties.

MARKETPLACE ASSESSMENT FOR EOC ELECTRONIC TOOL

The Perth County RFP included a request to assess available emergency-management tools that are intuitive and able to utilize real-time photos and videos. These tools should also function as a repository for documentation and facilitate virtual meetings.

GTA-EMCI commissioned a separate study of the related IT landscape to recommend an effective and efficient technological tool to satisfy the County’s needs.

Our IT specialist, ETHOS Research and Development, initially recommended the Noggin 2.0 system, as it is the most comprehensive IT package. However, considering some municipalities’ prior investment in the Esri ArcGIS system, the GTA-EMCI team suggests that the 7 municipalities in Perth purchase the Esri ArcGIS system. While this was our IT specialist’s second recommendation, the Esri ArcGIS system will be more cost-effective in light of the earlier investments.

GTA-EMIC suggests a full examination of the expanded Esri package to meet the needs of the EOC. As well as building on the investment some municipalities have already made with Esri ArcGIS, this choice minimizes the initial investment and reduces the need for potentially expensive training for staff.

GTA-EMCI discussed our recommendation for Esri ArcGIS with the IT Specialist who, in consideration of the earlier investment, was quite supportive of our choice.

Three documents accompany this Final Report. One is an information and recommendation report from ETHOS Research and Development, and the second and third are supporting information reports for Noggin and Esri products mentioned within the ETHOS report.

COST SAVINGS

In the early stages of implementing the recommendations in this report, there will be few, if any, cost-saving opportunities for the 7 municipalities. There are too many existing inconsistencies in the foundational pieces for emergency management that must now be remediated, such as inconsistent training, inconsistent technology across municipalities, and the need to build an updated, standard EMP, to name a few.

However, the return on investment (ROI) will be realized once the 7 municipalities invest in standard training for key positions, update the EMP, establish processes to maintain the EMP

and emergency management program (which will help to avoid extensive future costs), and purchase the electronic EOC tool.

There will eventually be ROI as money is saved through efficiencies, recovery, community satisfaction, and business continuity.

The ROI will come from:

- Improved response times to events
- Clarity in the roles and responsibilities of teams
- Preparation and training to enhance responses to expected events and incidents
- Ability for staff to "think on their feet" in unexpected incidents
- Concise documentation of events
- Improved crisis communication
- Demobilization
- Faster recovery to normal operations (business continuity)

NEXT STEPS

The following are the next steps in the development of effective incident management for the 7 municipalities in Perth:

1. Define the roles and responsibilities of the Chief Administrative Officer and the CEMCs/Alt. CEMCs.

2. Choose a model by which an effective emergency-management process can be put into place.

3. Implement a step-by-step roadmap for the process moving forward.

1. DEFINE ROLES AND RESPONSIBILITIES (CAO AND CEMCs/ALT. CEMCs)

Within every organization there must be both a sponsor and gatekeeper for the emergency management process and plan. In the case of the 7 municipalities in Perth, it makes sense to enlist the CAO group across all seven municipalities to be the sponsors of the emergency management process, and to have the CEMCs/Alt. CEMCs be the gatekeepers of the EMP and drive the requirements of the process across all locations.

The CAOs will have to elicit buy-in across the municipalities from multiple levels of leadership and staff to ensure that the process is followed up – and followed through.

The following are the recommended roles and responsibilities of the CAOs, CEMCs/Alt. CEMCs with respect to emergency management:

- The CAOs need to understand the importance of emergency management, agree to drive the emergency management program, and add emergency management to their quarterly meeting agendas.
- The CAOs, following discussion with the CEMCs/Alt. CEMCs, should determine which recommended model the 7 municipalities will follow in accordance with this report (see models below).
- To begin the process, all CAOs need to have the same base knowledge of emergency management, and the knowledge to be able to provide guidance in the EOC. Hence the consultants suggest the CAO's be trained in IMS 100, 200, 250, and, ideally, 300.
- The CAOs should oversee the process undertaken by the CEMCs/Alt. CEMCs. They should identify the current training levels of all emergency management staff in all municipalities, and then provide the necessary training, in accordance with the function of each, to establish consistency across the 7 municipalities.
    - Training for the CEMCs/Alt. CEMCs should follow the CEMC Handbook, which includes EM200, EM300, IMS100, IMS200, and ideally IMS 250 (EOC), and IMS 300.
    - It is ideal that critical training happen first. There has not been a significant incident in the last several years in the 7 municipalities in Perth, and it is evident that some of the CEMCs/Alt. CEMCs are uncertain of their roles and responsibilities should an incident occur. The emergency management teams in each municipality need a clear understanding of what emergency management is and how they fit in to it. Ensuring they are all trained to the same level of IMS (ideally IMS 300) will provide the confidence, knowledge, skill, and ability they need.
    - Consistent training will also allow for coverage and facilitate the transfer of command during an incident that lasts beyond an eight-hour day, or if someone is absent.
        - The desirable coverage would be three people cross-trained for each critical position, if possible.
    - If possible, any staff that may be called upon to deal with an incident or occupying an emergency management position in the 7 municipalities, or an EOC, should be trained in IMS 100 and IMS 200, and it is strongly recommended that they also be trained in IMS 250 (EOC) and IMS 300.
    - Additional trained staff can support and step up to command staff positions, if required, during an incident, if and when the incident expands to several hours or days. It is recommended that potential command staff be trained in IMS 100, IMS 200, IMS 250 and IMS 300.
        - As there is a multi-year training plan for all staff in emergency management, it is understood that training will take an extended period of time. As such, the consultants recommend the 7 municipalities create a team of fully trained individuals, for position-specific roles (e.g., Operations Chief), and ensure there is redundancy (3-5 trained

people/position) for incidents that extend beyond one operational period (8 hrs). This will provide skilled individuals to react to any and all incidents during the multi-year training plan.

- It is important during an incident that everyone uses the IMS organizational chart, and not the municipal hierarchy, for decision making. Sufficient training will help to explain the importance of this concept.
- The CAOs should meet with political leaders (mayors etc.) and ensure they understand their role and responsibility during an incident or when the EOC is activated. (For example, they don't run the show but can push the agenda through the ECG/Policy Group.)
- The consultants strongly recommend that the CEMCs/Alt. CEMCs work together to clearly define their roles and responsibilities during all types of incidents. These roles and responsibilities should be added to the job descriptions for these positions.
- The CEMCs/Alt. CEMCs should develop a decision tree to determine the trigger points when the municipal EOC is activated, and the trigger points at which the County EOC is activated. See "Trigger Points", below.
- The consultants recommend the 7 municipalities identify one lead coordinator for the development of the updated common EMP.
    - The CEMCs/Alt. CEMCs to ensure the seven sites have similar EMPs, taking into account any necessary site-specific information.
    - The CEMCs/Alt. CEMCs should be the gatekeepers to keep the EMP up to date in all seven sites and update their respective EMPs on an annual basis.
- The CEMCs/Alt. CEMCs should continue to conduct tabletop exercises and drills to ensure improvements are identified and success is enhanced during an incident.
- The CAOs will manage the ECG (as part of the Policy Group), activate the ECG when require in accordance with agreed trigger points, receive information from the EOC Director/Commander, and provide strategic oversight along with other members of the ECG Group/Policy Group (such as the mayor).

Trigger Points – When to Open the EOC

"Trigger Points" are agreed decision points to determine when an EOC (County and/or municipal) is activated.

The following are merely examples and must be discussed and agreed upon by the 7 municipalities. Trigger points could include situations in which:

- A complex incident outside of normal operations occurs
- A potentially high-risk incident is about to occur
- An Incident Commander believes an incident could grow rapidly with the potential to cause a chain of effects

- The EOC Director/Commander and/or a senior or elected official requests the opening of an EOC
- An incident occurs that is not site-specific
- It is prudent to prepare for a significant planned event

2. CHOOSE A MODEL

It is important for the 7 municipalities to choose a model by which the recommendations in this report can be implemented most effectively, and by which an effective emergency-management process can be put into place, maintained and operationalized.

GTA-EMCI sees three options, or models, by which this can take place:

- County-led model (top-down)
- Municipality-led model (bottom up)
- Hybrid model

This section describes the options, and recommends one as the most appropriate for the 7 municipalities in Perth.

A. COUNTY-LED MODEL (top down)

Overview

The Emergency Response Team will be supported by the Perth County CEMC, and run by Perth County staff and available trained municipal staff. Municipal staff participation may be either virtual or physical. The County EOC replaces all other municipal EOCs (municipal EOCs are not required, and may cause confusion, in this model).

County-led Triggers for County EOC Opening

- See “Trigger Points – When to Open an EOC”, page 28
- In this model, any time an EOC is required it will be set up in the County EOC.
- Municipalities/ECG members can participate physically or virtually.
- Assistance from other municipalities may be required at the EOC or at the site, depending on the resources of the affected municipality(s) and the nature of the incident(s).

Assumptions

- In the case of incidents that extend beyond the eight-hour day or that occur after hours, there is a need to establish an “on-call” process between the CEMCs/Alt. CEMCs. If there is only one CEMC, then someone else in the municipality must take on the after-hours “on call” requirement and must be trained accordingly.
- Should an incident occur, the CEMCs/Alt. CEMCs (or other staff member) would modify their hours to ensure 24/7 coverage.
- All emergency management positions would also have several trained individuals in case of absenteeism or after-hour incidents. Each municipality would have more than one person to act as the Incident Commander, Operations Chief, Planning Chief, Logistics Chief, and Finance/Admin, as an example. (Municipalities may have to provide support to each other where resources are limited).
    - Create a team of fully trained individuals, for position-specific roles (e.g., Operations Chief), and ensure there is redundancy (3-5 trained people/position) for incidents that extend beyond one operational period (8 hrs).
- Shared service-level agreements would be in place for all municipalities to reflect this model
- Virtual IT infrastructure would be needed for all municipalities to communicate virtually as required.

Operations

- During local municipal incidents, the first trained municipal individual on the scene would become the Site Incident Commander (IC), unless emergency responders or another relevant agency has taken over the Site Incident Command.
- If the incident requires an EOC activation via the County, whether for one municipality or more than one, depending on the incident, the municipal CEMCs/Alt. CEMCs would first contact their CAO to update them on the incident. The CAO would communicate with the mayor and other relevant stakeholders.
- The County EOC will utilize the chosen EOC electronic tool in order to have real-time visibility of the common operating picture of the incident, in its entirety.
- The municipality should support the County EOC with locally trained municipal staff, as available.
- If the Site Incident Commander leaves the Site and attends the County EOC (virtually or physically), it is important to ensure that a trained individual (Deputy Incident Commander or designate) is present at the Site.
- If the Site Incident Commander is unable to leave the scene, they would provide information to the County EOC as required.
- If the incident is after-hours, the first on-scene trained municipal staff person would follow the same process above. The Incident Commander at the scene at this point may be a first responder.

County EOC

- The County CEMC is a support to the County EOC Director/Commander (who is appointed by the ECG Group/Policy Group).
- It is important that the County CEMC has two fully trained CEMCs/Alt. CEMCs backups from other municipalities to operate the County EOC, as needed. If this is not feasible, then a fully trained individual from one of the unaffected municipalities can step in. This will become a problem if an incident affects all seven locations.
- The municipalities would send a representative (in person or virtually) to the County EOC.
- The County ECG/Policy Group would consist of the relevant municipal CAOs, mayor(s), public works, legal, police, fire, and paramedic services or designates, to provide critical advice.
- County EOC Director/Commander would need to establish Operations, Planning, Logistics and Finance/Admin Officers.
- The County EOC would utilize the EOC's electronic tool to have real-time visibility of the common operating picture of the incident in its entirety.
- In this model, the County EOC should have sufficient trained staff to assume the Operations, Planning, Logistics and Finance/Admin roles for the County EOC over multiple operational periods.
    - If this is not possible, the County EOC could be supported by municipal staff who are not impacted by the incident.
    - A challenge arises if all municipalities are impacted, and sufficiently trained staff are not available to run the County EOC.
        - If this occurs, it is suggested to have appropriate SLAs with neighbouring counties and/or municipalities to assist.
        - A request may also be made to the PEOC for assistance as needed.

Benefits

- This model simplifies emergency-response operations using a single EOC in Perth County (with support from municipal staff, if required) any time there is an incident.
- No other municipal EOC will be required, eliminating duplication and affording cost savings.
- The Perth County CEMC and/or their back-up CEMCs/Alt. CEMCs will coordinate everything, regardless of which municipality or municipalities are affected.
- Fully trained staff in the EOC (from both the County and one or more municipalities) would be available to cover 24/7.
- The model provides consistent responses to single and multi-jurisdictional events.

- This model can be supported by consistent practice sessions, tabletop exercises and drills.

Drawbacks

- Municipalities may not have sufficient human resources to attend the County EOC.
- Multiple events occurring at the same time could result in limited resources for response and/or conflict among municipalities if they feel the support from the County is not meeting their needs.
- Individual municipalities may want to run their own EOCs.
- Policy and procedure protocols would need to be established and agreed to by all 7 municipalities, which could be challenging.

B. MUNICIPAL-LED MODEL (bottom up)

Overview

In this model, each municipality would have its own CEMC and a back-up Alt. CEMC. These coordinators would carry emergency management responsibilities (such as updating the EMP, HIRA review, oversight for all things emergency management and EMP-related functions), as well as other municipal responsibilities such as occupational health and safety, training, exercises, accessibility, maintaining the coordinated Emergency Management Plan (EMP) and working collaboratively with other municipalities.

Under this model, all local municipal incidents would be managed by a full-time municipal CEMC, an Alt. Municipal CEMC, and emergency management staff (including support staff, utility lead, clerk, etc.).

The FT and Alt. CEMCs from all municipalities must work together to develop one EMP (with site specific differences) and follow the process the same way, so there is consistency across municipalities. This is important when municipalities help each other during incidents and when the County EOC is activated. It is best to have alignment across all municipalities.

Every municipality would be responsible to set up, supply, and make ready its own Emergency Operations Centre (EOC), which would be activated according to the agreed Trigger Points (see “Trigger Points – When to open an EOC”, page 28).

Municipal-led Triggers for Municipal EOC Opening

The Incident Commander of the incident would ask for the municipal EOC to be open based on “Trigger Points – When to Open an EOC”. Trigger points could include the following situations:

- Where the Incident Commander or ECG/Policy Group can authorize the opening of the EOC to CEMCs/Alt. CEMCs.
- If one municipality is asked to support another based on their incident or a shared incident.
- If there is a sustained incident (multiple operational periods and/or 24/7 needs).

Municipal-led Triggers for County EOC Opening

At the county EOC level, trigger points (again based on "Trigger Points – When to Open an EOC") could include the following situations:

- When shared agreements with other municipalities can't be met (e.g., the municipality is also involved in the incident), and further support is needed from the County EOC.
- If there is a sustained incident (multiple operational periods involving 24/7 operational needs).
- This can work either way; either a municipality can ask for help from the County EOC, or the County EOC can open to help one or more municipalities.

Assumptions

- Create a team of fully trained individuals, for position-specific roles (e.g., Operations Chief), and ensure there is redundancy (3-5 trained people/position) for incidents that extend beyond one operational period (8 hrs).
- This model would require a FT CEMC and Alt. CEMC in each municipality to provide the necessary emergency management program duties, as required.
    - If there is only one CEMC in a municipality, another fully trained staff member would be required to take on the CEMC roles and responsibilities when the FT CEMC is absent.
- All FT CEMC and Alt. CEMCs would be fully trained in EM 200, EM 300, IMS 100, IMS 200, and ideally IMS 250 and IMS 300.
- Each municipality would need to establish an 'on call' process between the FT CEMC and Alt. CEMC (or other trained individual).
- The FT CEMC and Alt. CEMC would modify their hours to provide 24/7 coverage, should an incident occur.
- Municipal emergency management support staff would be trained in IMS 100, IMS 200, and IMS 250.

- Sufficient municipal support staff would need to be trained to cover 24/7 emergency incidents so that all identified positions are filled by trained designates to ensure continuity.
- Each municipality would have staff trained on all roles, including Operations, Planning, Logistics, Finance/Admin and Scribe, along with alternates for each role, in case of absenteeism.
- Each municipality would have sufficient logistical resources (e.g., equipment, contracts,) etc.) in place.
- Trigger points would be clearly identified and understood to set up municipal EOC(s) and/or the County EOC.
- Shared service-level agreements would be in place for all municipalities, modified to the new model.
- Virtual IT infrastructure would be set up for all municipalities to communicate virtually.

Operations

- During local municipal incidents, the first trained municipal individual on the scene would become the Site Incident Commander (IC), unless emergency responders or another relevant agency has taken over the Site Incident Command.
- If the incident requires an EOC activation, the municipal CEMC/Alt. CEMC would first contact their CAO to update them on the incident. The CAO would communicate with the mayor and other relevant stakeholders.
- The FT CEMC or Alt. CEMC in the municipality(s) would set up the municipal EOC in accordance with the trigger points and assist the EOC Director/Commander, who would assign the Operations, Planning, Logistics, Finance/Admin. Officers, as required.
    - The Finance/Admin Officer is probably the easiest position to assign as there are staff in municipalities to cover finance and the clerk (Admin) role (e.g., Scribe).
- The municipal EOC will utilize the chosen electronic EOC tool in order to have real-time visibility of the common operating picture of the incident in its entirety. If the County EOC is activated it, too, it should use the EOC electronic tool to monitor the incident across the region.
- If the Site Incident Commander leaves the Site and attends the municipal EOC (virtually or physically), it is important to ensure that a trained individual (a Deputy Incident Commander or designate) is present at the Site.
- If the Site Incident Commander is unable to leave the scene, they would provide information to the municipal EOC, as required.
- If the incident is after hours, the first trained municipal staff person on scene would follow the same process as above. The Incident Commander at the scene may be a first responder.

- The local CAO would be in the ECG/Policy Group, along with the mayor and other political leads, as well as the fire, paramedic and police services, or designates.
- Resource issues (shortages) are likely in this model, so emergency personnel and others may need to assume more than one role.

County EOC, if required

- The County EOC is established based on trigger points.
- The County CEMC/Alt. CEMC is a support to the County EOC Director/Commander (who is appointed by the ECG Group/Policy Group).
- It is important that there is a fully trained backup individual in the County to assume the County CEMC role during an absence. If this is not feasible, then a fully trained individual from one of the unaffected municipalities should step in. This will become a problem if an incident affects all seven locations.
    - The challenge arises if *all* municipalities are impacted, and sufficiently trained staff are not available to run the County EOC.
        - If this occurs, it is suggested to have appropriate SLAs with neighbouring counties and/or municipalities to assist.
        - A request may also be made to the PEOC for assistance as needed.
- The municipalities would send a representative (either in person or virtually) to the County EOC.
- The County EOC Director/Commander must establish Operations, Planning, Logistics and Finance/Admin Officers.
- The County EOC would provide support to all affected municipal EOCs, as required.
- The County ECG/Policy Group would consist of the relevant municipal CAOs, mayor(s), and representatives or designates from the public works, legal, police, fire, and paramedic services, to provide critical advice.
- Under this model the respective CAOs and mayors would move from their own municipal ECG Groups (leaving a representative on the municipal ECG for communication purposes) and join the County ECG.
- The County EOC should have trained staff (ideally to the IMS 300 level) to become the Operations, Planning, Logistics, Finance/Admin Officers for the County EOC over multiple operational periods.
    - If the above option is not achievable, the County EOC can be supported by trained municipal staff who are not impacted by the incident.
    - Again, a challenge arises if *all* municipalities are impacted, and sufficiently trained staff are not available to run the County EOC.
        - If this occurs, it is suggested to have appropriate SLAs with neighbouring counties and/or municipalities to assist.

- A request may also be made to the PEOC for assistance as needed.

Benefits

- The municipalities have the knowledge, skills, ability, and resources to manage their own incidents locally, whether simple or complex, planned or unplanned. They are more self-sufficient.
- The municipalities will utilize public funds more locally with a (potentially) smaller transfer of funds to the County for emergency management support. This makes the municipality more accountable to its residents.
- Decisions can be made more independently, enhancing the speed of those decisions.
- Because the municipalities have fully trained resources who work together daily and practice emergency management more frequently, they will be able to respond to an incident more effectively and return to business-as-usual more quickly. The return on investment (ROI) will be higher.
- As municipal residents are more likely to volunteer to their local municipality, the municipality will benefit from their support during and/or after the incident. There tends to be more buy-in to the local municipality.
- More than one municipality may work together if they are mutually impacted or interested in helping each other, without requiring the activation of the County EOC.
- The County will receive more lead-in and preparation time to gather information and resources (logistics, human resources etc.) if a municipality requires support or if there is a multi-jurisdiction event, as it will have the time to monitor and learn more about the event and ongoing responses to it.

Drawbacks

- This model is the most expensive model. It is likely cost-prohibitive for most municipalities.
    - The setup of a municipality-led emergency-management program will require a more robust program so that each municipality can operate on its own.
    - More dedicated resources will be required to respond to an emergency at any time, 24 hours a day, seven days a week, 365 days a year.
    - There is a need to ensure that there are resources for multi-day events and after-hour responses.
    - The cost of hardware and set up for an EOC will be more than the municipalities currently have purchased.
- As this is a municipality-led model, there is a risk of some municipalities working independently and not collaboratively with other municipalities.
    - This could lead to different responses to the same incident.

- This could also lead, eventually, to different EMPs, resource decisions and logistical requirements, and could lead to competing interests that could impact a coordinated response to an event or incident.
- This could cause more problems for the County as it strives to support municipalities.

- This model goes against the current attempt to coordinate emergency management across the the 7 municipalities in Perth, as the need for a coordinated response is much smaller.

C. HYBRID APPROACH (The Model Recommended by GTA-EMCI)

Overview

This option is considered the most favoured model by the GTA-EMCI consulting team. It represents a collaborative approach across the 7 municipalities in Perth and enables strong support to (and among) the municipalities when they need added assistance.

Under this model, all local municipal incidents will be supported by the CEMCs/Alt. CEMCs and emergency-management staff in the affected municipality or municipalities, including trained support staff, a utility lead, clerical support, etc.

The County CEMC/Alt. CEMC will provide support to local municipalities when requested, and will assist in the event of a complex incident that requires the activation of the County EOC (see “Trigger Points – when to Open an EOC” page 28).

For this model to be effective, it is important to ensure the following:

- The CEMCs/Alt. CEMCs should be the coordinators and overseer of all the criteria listed here.
- All staff must be trained consistently across all municipalities.
- Standard processes must be in place across all municipalities for consistent interoperability. For example, standard policies and procedures, flow charts, forms, facility set ups, EOC set ups and guided response to all types of incidents, etc., must be in place. This leads to a common EMP.
    - The 7 municipalities must use a common EMP (site-specific to each municipality but consistent across the region).
- The EMP should include incidents within a municipality and not just external complex municipal issues. For example, the EMP should include medical emergencies, violence and aggression, infrastructure issues such as elevator incidents, carbon monoxide leaks etc.
    - If these policies and procedures are found somewhere else then the EMP should make references and link those documents to ensure that a comprehensive EMP is available.

- Each municipality must assign one position (such as the CEMC/Alt. CEMC) to update the EMP regularly at the same time each year, or as per the EMP requirements. Staff contact information and vendor contacts may need to be updated more frequently.
- All 7 municipalities must practice together by conducting events such as (but not limited to) tabletop exercises, drills, and functional exercises.

Hybrid Triggers for Municipal EOC Opening

- Municipalities can open their own EOC if they have the resources available.
- The operation of the EOC must be sustainable in order to be able to manage multiple operational periods (24/7), as required.
- If this is not viable, then the municipality must ask the County to open its EOC.

Hybrid Triggers for County EOC Opening

- The EOC opening would be triggered if a municipality asks for assistance of the County EOC.
- A trigger point could be reached as the County monitors the situation and deems it necessary to open the County EOC to support the municipalities.

Assumptions

- Create a team of fully trained individuals, for position-specific roles (e.g., Operations Chief), and ensure there is redundancy (3-5 trained people/position) for incidents that extend beyond one operational period (8 hrs).
- The CEMCs/Alt. CEMCs would modify their hours to provide service on a 24/7 basis should an incident occur.
    - If there is only one CEMC or Alt. CEMC in a municipality, other fully-trained individuals would modify their hours to cover all shifts should an incident occur.
- The municipalities would establish an “on call” process for the CEMC/Alt. CEMC or other trained staff, if applicable.
    - If municipalities have only one CEMC or Alt. CEMC, then other trained municipal staff would take on the after-hours “on call” requirement.
- Trigger points would be clearly identified to set up municipal EOCs and the County EOC.
- Shared service level agreements would be in place for all 7 municipalities as per the chosen model.

- Virtual IT infrastructure would be set up for all 7 municipalities to communicate virtually.

Operations

- During local municipal incident(s), the first trained municipal individual on the scene would become the Site Incident Commander (IC), unless emergency responders or another relevant agency has taken over the Site Incident Command.
- If the incident requires activation of a municipal EOC, the municipal CEMC/Alt. CEMC would first contact the CAO to update them on the incident. The CAO would communicate with the mayor and other relevant stakeholders.
    - The Municipal ECG/Policy Group would be established prior to the Municipal EOC being activated.
- The CEMCs/Alt. CEMCs in the municipality(s) would set up the municipal EOC in accordance with the trigger points and assist the EOC Director/Commander, who would assign the Operations, Planning, Logistics and Finance/Admin. Officers, as required.
    - The Finance/Admin Officer is probably the easiest position to assign as there are staff in municipalities qualified to cover finance and the clerk (Admin) roles (e.g., Scribe).
- The municipal EOC would utilize the chosen electronic EOC tool in order to have real-time visibility of the common operating picture of the incident in its entirety. If the County EOC is activated, it too should use the EOC electronic tool to monitor the incident across the region.
- The County CEMC/Alt. CEMC would monitor the incident but would not initiate the County EOC unless the triggers are hit, or setup of the EOC is requested.
- The municipality may ask for assistance from a neighbouring municipality prior to asking for County EOC support, or the County CEMC/Alt. CEMC may decide to set up the County EOC should there be more than one municipality impacted. This could be done independently of any specific request.
- If the Site Incident Commander leaves the Site and attends the municipal EOC (virtually or physically), it is important to ensure a trained individual (Deputy Incident Commander or designate) is present at the Site.
- If the Site Incident Commander is unable to leave the scene, they would provide information to the municipal EOC, as required.
- If the incident is after-hours, the first trained municipal staff person on scene would follow the process above. The Incident Commander at the scene may be a first responder.
- The local CAO would be in the ECG/Policy Group, along with the mayor(s) and other political leads as well as leaders of the fire, paramedic and police services, or their designates.

County EOC, if required

- The County CEMC/Alt. CEMC is a support to the municipal EOC and ECG/Policy Group, as required.
- If the County EOC is established, the municipal ECG/Policy Group members would transition from their municipal ECG/Policy Group to the County ECG/Policy Group (made up of relevant additional municipal CAOs or mayors, provincial representatives etc.) and ensure an ongoing communication (liaison) back to their municipal EOCs.
- The municipalities would also send a representative (either in person or virtually) to the County EOC to ensure effective communication between the County EOC and municipal EOC.
- The County EOC Director/Commander will appoint Operations, Planning, Logistics, Finance/Admin Officers.
- The County EOC should have trained staff available (ideally trained to IMS 300) to become the Operations, Planning, Logistics, Finance/Admin Officers for the County EOC for multiple operational periods.
    - If the above option is not achievable, the County EOC can be supported by trained municipal staff that are otherwise not impacted by the incident.
    - A challenge arises if *all* municipalities are impacted, and sufficiently trained staff are not available to run the County EOC.
        - If this occurs, it is suggested to have appropriate SLAs with neighbouring Counties or municipalities to assist.
        - A request may also be made to the PEOC for assistance as needed.

Benefits

- This is the ideal model as it is collaborative, cooperative, efficient, and effective.
- This model is cost efficient with respect to the deployment of human resources, logistics, and shared service agreements, to name a few.
- This model provides integrated communication, both internally and externally.
- Although there are costs associated with this model (including training and the development of the EMP) the return on investment (ROI) is significant (see “Cost Savings” on page 24).
    - The initial costs are one-time.
    - Ongoing costs would only include training for new employees and the cost of exercises, drills, travel, etc.

  - Cost savings are realized when organizations have the knowledge, skills, and ability to respond to an incident (simple or complex; planned or unplanned) in an efficient and effective manner.

- This model provides consistent, collaborative, interoperability that will produce efficient and effective recovery for the 7 municipalities.

Drawbacks

- This model creates a duplication of tools, equipment, and resources (human and material) across the 7 municipalities (e.g., multiple EOCs, logistical equipment etc.).
- There will be added cost for the IT system that has been recommended across all 7 municipalities.
  - In some locations there may be additional costs to retrofit the current IT system to communicate with the chosen IT tool, as well as additional cost for more cloud space. (See Emergency Management Software Recommendations.)

3. STEP-BY-STEP ROADMAP FOR NEXT PHASE

Oversight

- CAOs should be the sponsors and drivers of the emergency management process across the 7 municipalities.
  - CAOs will determine which model they prefer for the 7 municipalities.
  - CAOs should ensure emergency management is a regular action item on their quarterly agenda.
- The CEMCs/Alt. CEMCs should discuss and agree upon their respective roles and responsibilities, based on the model chosen by the CAOs.
- The CEMCs/Alt. CEMCs should identify one lead coordinator for the delivery of the emergency management program with the support of all CEMCs/Alt. CEMCs. The emergency management program will include:
  - Ensuring all appropriate staff are first trained to their appropriate levels, where possible.
  - Development of the updated common EMP.
  - Keeping the EMP updated annually, or more frequently as needed (e.g., staff contact info, vendor info, etc.).
  - Running tabletop exercises and drills as frequently as required.

Training

- All involved staff must be trained before proceeding with the EMP or exercises, if possible.
    - As there is a multi-year training plan for all staff in emergency management, it is understood that training will take an extended period of time. As such, the consultants recommend the 7 municipalities create a team of fully trained individuals, for position-specific roles (e.g., Operations Chief), and ensure there is redundancy (3-5 trained people/position) for incidents that extend beyond one operational period (8 hrs). This will provide skilled individuals to react to any and all incidents during the multi-year training plan.
- The CAOs should be trained in IMS 100, IMS 200, IMS 250 and ideally IMS 300.
- As recommended in the CEMC handbook, all CEMCs/Alt. CEMCs should be trained, at a minimum, in EM 200, EM 300, IMS 100, and IMS 200. We recommend that they also be trained in IMS 250 (EOC) and IMS 300.
    - The recommendation is to have three people cross-trained for each critical position.
- All staff who may be assigned to work in an EOC should be trained in IMS 100 and IMS 200, and we recommend that they also be trained in IMS 250 (EOC).
- If time and resources permit, the ideal would be for all municipal staff be trained in IMS 100.
    - Supervisors and managers in all departments should be trained in IMS 100 and IMS 200.

EMP Process

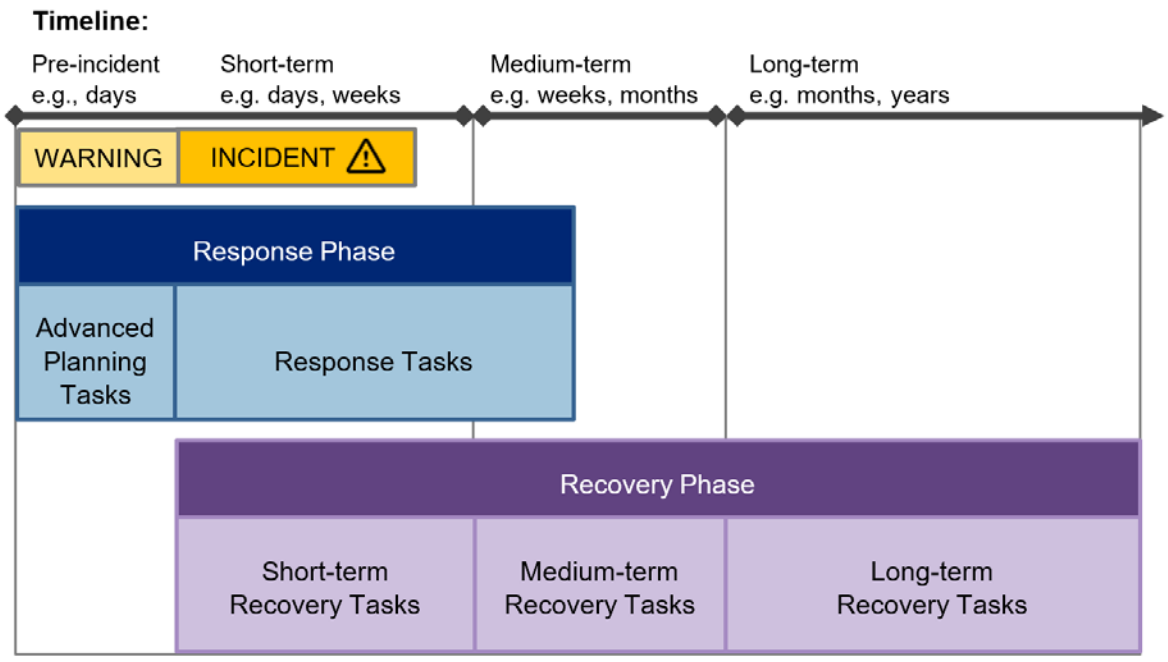
- The identified lead coordinator from the CEMC/Alt. CEMC group will lead the coordinated development of a standard comprehensive EMP across all municipalities, with the support of the CEMCs/Alt. CEMCs.
- We recommend that the comprehensive EMP be properly maintained and updated on a regular basis (annually or more often as needed, which may be the case especially with respect to contact information).
    - Identify one position to have full oversight of the EMP for updates annually (e.g., the CEMC/Alt. CEMC lead coordinator).
    - Keep a “record of change” document with the EMP to ensure all appropriate documents are kept up to date with recorded changes and modifications.

- The CEMCs/Alt. CEMCs should ensure the 7 municipalities are updated and maintained annually or more frequently as needed (again, more frequent attention may be required for contact information of staff, vendors etc.).

IT EOC Software

- Once the electronic EOC tool is chosen and all appropriate staff are trained, the tool should be used in tabletop exercises, drills, and live incidents to keep participants familiar and comfortable with the system.

Appendix A: Provincial Response Levels



Appendix B: About the Consultant

GTA Emergency Management Consultants, Inc. (GTA-EMCI)

www.gta-emci.com

GTA Emergency Management Consultants Inc. (GTA-EMCI) was established in 2013. It is made up of emergency-management specialists with a total of over one hundred years of experience. We provide a broad range of consulting services to public and private sector companies including but not limited to risk assessments, emergency plans, response plans, fire plans, major event plans and business-continuity plans to mitigate your risk. We have templated emergency response plans, policies and procedures, checklists, training matrices, hazard identification and risk assessment tools, exercises, and drill guidelines, to name a few. We also provide customized electronic emergency preparedness plans and a learning management system (LMS) including policies and procedures customized to your organization and covering topics from onboarding, training, and drills to multiple types of emergency responses and ending with recovery to ensure company emergency preparedness plans are aligned with the Incident Management System (IMS) for an efficient and effective response.

We are accredited to offer a full complement of the provincially approved Incident Management System (IMS), Incident Command System (ICS), Emergency Operations Centre (EOC), and Incident Command training courses. We consult on recommendations for planning, mitigation, preparedness, and response that will speed recovery with after-action reports.

Our organization has decades of experience with managing and implementing IMS training and supporting documents for emergency preparedness plans to ensure meaningful change in organizations, such as the introduction and implementation of IMS into the business continuity of organizations, which can help organizations to respond to any incident such as medical emergencies, power outages, fires, floods, weather-related incidents, and other planned or unplanned emergencies.

GTA-EMCI has led change-management projects for small and medium-sized organizations, multi-site regional organizations, multi-site provincial organizations and large national organizations. GTA-EMCI has worked with long-term care organizations to provide emergency-preparedness plans that align with provincial legislation and regulations pertaining to emergency management programs and continuity planning.

The company draws upon the knowledge and experience of its considerable talent pool. GTA-EMCI is committed to bringing the best consulting team forward to meet our client's needs.