



Township of Greater Madawaska

Master Fire Plan 2023



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EXECUTIVE SUMMARY

This Master Fire Plan (MFP) encompasses a comprehensive review of the Township of Greater Madawaska (the Township) strengths, weaknesses, opportunities, and challenges. This MFP also consists of a review of the community, along with identifying present and future population statistics and anticipated growth of the community. By conducting these reviews along with the projected growth of the community over the next 10 or more years, a plan can be developed for the fire service to grow with the community to meet its fire safety and response needs.

This document encompasses a comprehensive review of the Greater Madawaska Fire Department's (GMFD) strengths, weaknesses, opportunities, and challenges. This MFP also consists of a review of the community (through the development of a separate Community Risk Assessment (CRA) report). Both documents identify and discuss present and future population statistics and the anticipated growth of the community. By conducting these reviews, the Emergency Management Group (EMG) was able to develop this 10-year plan for the GMFD.

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ACRONYMS

AHJ	Authority Having Jurisdiction
ASHER	Active Shooter/Hostile Event Response [Program]
CACC	Central Ambulance Communications Centre
CACF	Canadian Association of Fire Chiefs
CAD	Computer Aided Dispatch
CAO	Chief Administrative Officer
CAR	Canadian Aviation Regulation
CEMC	Community Emergency Management Coordinator
CFAI	Commission on Fire Accreditation International
CISM	Crisis Incident Management System
CRA	Community Risk Assessment
CRRP	Community Risk Reduction Plan
CRTC	Canadian Radio-television and Telecommunications Commission
CSA	Canadian Standards Association
DPG	Dwelling Protection Grade
DRD	Drag rescue device
E&R	Establishing & Regulating By-Law
EAP	Employee Assistance Program
EFAP	Employee and Family Assistance Program
EMPC	Emergency Management Program Committee
EMCPA	Emergency Management and Civil Protection Act

EMG	Emergency Management Group
EOC	Emergency Operation Centre
FESO	Fire and Emergency Services Organization
FPPA	Fire Protection & Prevention Act
FUS	Fire Underwriters Survey
GIS	Geographic Information System
GMFD	Greater Madawaska Fire Department
HAZMAT	Hazardous Materials
HRFP	Health Related Fitness Program
ICS	Incident Command System
IFSTA	International Fire Service Training Association
ILEC	incumbent local exchange carriers
IMS	Incident Management System
PPE	Personal Protective Equipment
MECG	Municipal Emergency Control Group
MEP	Municipal Emergency Plan
MFP	Master Fire Plan
MLFTU	Multi-Live Fire Training Unit
MNRF	Ministry of Natural Resources and Forestry
NFCP	National Fireworks Certification Program
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
NIST	National Institute of Standards and Technology

O AFC	Ontario Association of Fire Chiefs
O FM	Office of the Fire Marshal
O HSA	<i>Occupational Health and Safety Act</i>
O SI	Occupational Stress Injuries
P FLSE	Public Fire and Life Safety Educator
P PE	Personal Protective Equipment
P FPC	Public Fire Protection Classification
P SAP	Public Safety Answering Point
P TSD	Post-Traumatic Stress Disorder
R PAS	Remotely Piloted Aircraft Systems
R PDM	Recognition Primed Decision Making
S WF	Standard Workflow
S CBA	Self-Contained Breathing Apparatus
S OG	Standard Operating Guideline
S OP	Standard Operating Policy
S TI	Shift Training Instructors
T SP	Telecommunications Service Providers
S WOT	Strength, Weakness, Opportunity, Threats
U LC	Underwriters' Laboratories of Canada
W ET T	Wood Energy Technology Transfer

INTRODUCTION



BENEFITS OF PLANNING

The benefits of planning are many, but the key advantages are:

- Having a clearer vision of what future needs are to be implemented and when.
- A guide that includes options and budgetary estimates for implementation.
- Prioritization of each project.
- The ability to communicate with staff and internal and external stakeholders about the future goals of the organization.
- Engaging key stakeholders to help move the GMFD service into the future.

The recommendations within this MFP document have been submitted to provide a set of strategies and goals for implementation that are aimed at assisting the Council in making decisions relating to the efficient allocation of GMFD resources and staffing.

The recommendations provided by EMG have been broken down into the following timelines:

Immediate: urgently requires attention due to legislative or health and safety requirements

Short-term: 1 – 3 years

Mid-term: 4 – 6 years

Long-term: 7 – 10 years

Ultimately, the implementation of the recommendations will depend on the direction that the township Council provides, as well as the allocation of associated resources and the ability to move forward with the associated recommendations contained within the document.



Overview of Master Fire Plan

The following describes the actions carried out by the EMG team in developing the MFP for the Township of Greater Madawaska.

Municipal Hazards

- Development of a Comprehensive CRA as the basis for determining the appropriate level of emergency response deployment to meet the township's legislative responsibilities.

Staffing and Professional Qualifications

- Review of existing staffing levels (full-time and volunteer).
- Personnel training standards, relevant credentials, and ongoing/future training/certification requirements for each rank.
- Retention and recruitment of firefighters, including specific requirements regarding testing and background checks during recruitment drives.

Apparatus, Fire Stations, and Equipment

- Inventory and maintenance best practices, annual equipment testing, the equipment's life span, replacement criteria, and supplies.
- Station locations and related response data analysis.
- Communication systems and equipment.

Legislative Mandate and Contractual Agreements

- Contractual and recommended future agreements between the township and external agencies; mutual aid/automatic aid agreements.
- Dispatch services and contractual agreements.

Administration/ Policies and By-Laws Review

- Staffing, records management, software, and technology.
- Identification of potential gaps and possible duplication of service.
- Department operational guidelines and policies.
- By-law: establishing and regulating, cost recovery, etc.

Water Supply

- Municipal and private water supply, access, and year-round availability.
- Tanker system and Fire Underwriters Tanker Shuttle Accreditation.

Summary Overview of Recommendations

The following is a summary of the recommendations within each of the key categories. Greater detail surrounding each recommendation can be found within the section from which it is derived.

Public Fire Safety Education

- Assessment by GMFD to set realistic fire prevention and public education goals based on available resources.
- Conduct a demands analysis of the fire prevention initiatives with the development of an annual fire prevention program and report on the completion.
- Consider greater utilization of volunteer firefighters for public education efforts.
- Build on partnerships within the community to ensure fire safety education is relevant and delivered based on identified community needs (i.e., school fire safety education, seniors, new Canadians fire safety education).

Emergency Response

- A need for ongoing review of response data to identify possible areas for improvement.
- Dispatching services review to ensure the agreement is meeting the needs of the GMFD.
- Vehicle life cycles and reserve apparatus to ensure an up-to-date and reliable fleet.
- Review the current fleet to meet current needs of GMFD.
- Strategic review of the location of pumpers and tankers

Department Facilities (Fire Stations)

- Recommendations regarding fire station general assessments and staff needs.
- Station locations and suggestions, along with possible reallocation of resources.

Staff/ Personnel Development

- Increase administrative assistance support to GMFD and Fire Chief.
- Feasibility study to evaluate the Fire Chief position as full-time or part-time (25 hours a week).
- Consideration to add primary duties to the Fire Chief position.
- Consideration for part-time pay for District Chiefs, up to ten hours a week.
- Study feasibility for daily on-call volunteer platoon consisting of four firefighters.
- Increase in fire prevention and training-related staffing efforts.
- Knowledge and skills maintenance enhancement improvements to meet the Training and Certification requirements (as announced by the Office of the Fire Marshal).
- Enhanced programming to support health and wellness.

Strategic Priorities

- By-law updates

- Development and utilization of training opportunities with partner agencies and other fire departments (where feasible, due to the distance between fire departments)
- Continued enhanced utilization of the GMFD training facilities by other fire departments as a revenue generator and/or cost recovery mechanism.

Note: A quick reference recommendations chart entailing all the recommendations can be found in Section 9. This chart has also included brief rationale comments to assist the reader with justification for each recommendation.

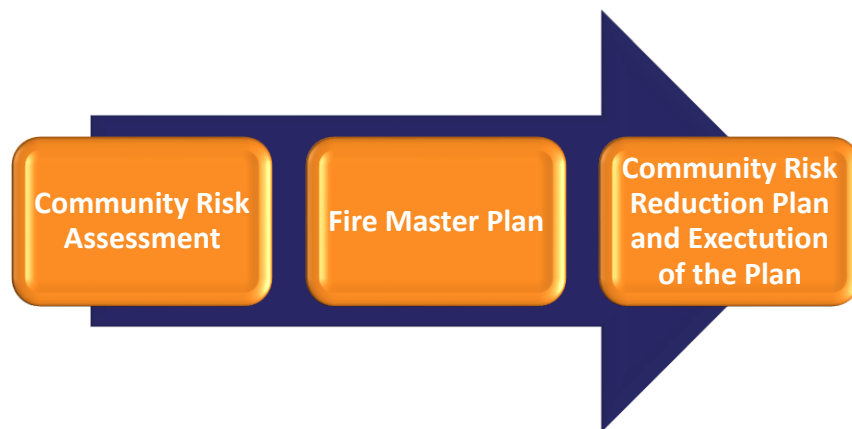
INTRODUCTION

Project Methodology

EMG has based its review process on the Township of Greater Madawaska’s Request for an MFP review. The specific scope of work was reviewed and included into each section of this document. The MFP review was completed by utilizing best practices, current industry standards, and applicable legislation as the foundation for all work undertaken.

EMG also utilized quantitative and qualitative research methodologies to develop a strong understanding of current and future needs and circumstances of the community. Overall, the methodology involves a considerable amount of research, documentation review, and data analysis, along with stakeholder consultation. Next comes the submission of draft reports, and related recommendations. In the end, this MFP and its recommendations coupled with the CRA, will provide a pathway for reducing risk within the community.

The final product is a living document that provides a high-level strategic direction for township’s Council and the GMFD.



Deliverables For the MFP

The MFP will:

- Be conducted using best practices, current industry standards, and applicable legislation as the foundation for all work undertaken.
- Include the identification and evaluations of present and future fire-related risks, prioritization of risks by probability, consequence and impact, and present options and recommendations for Council to consider mitigating those risks in the community.
- The MFP will address applicable legislation and standards, risk versus resource rationalization, existing and potential partnerships, shared services and assistance plans, policies and procedures, best practices, and benchmarking with other similar municipalities.

- Use both quantitative and qualitative research methodologies to develop a strong understanding of current and future needs and circumstances of the community and customer service demand of the public.
- Include, but not be limited to the following key areas:
 - a. **Governance** – Review and make recommendations regarding applicable provincial legislation and regulations, and municipal by-laws relative to the Fire Department.
 - b. **Service Delivery** –
 - i. Review and make recommendations regarding the level and range of services and programs delivered currently, and future requirements considering predicted growth and service delivery expectations.
 - ii. Review current service levels and provide comments on what is considered best practice, industry standard, and legislative requirement.
 - iii. Review and comment on the extent to which GMFD meets or exceeds or fails to meet service level goals.
 - c. **Fire Prevention** – Review and make recommendations regarding the Fire Prevention Program including fire inspections, investigations, and code enforcement.
 - d. **Public Fire Safety Education** – Review and make recommendations regarding Public Education program, including demographics, website, and social media opportunities.
 - e. **Emergency Response** – Review and make recommendations regarding the emergency response call volume and trends, including types of calls, number of calls, apparatus deployment, response staffing, firefighter deployment and safety.
 - f. **Firefighter Training** – Review and make recommendations regarding the Firefighter Training Program, including recruit training, firefighting training, and officer training.
 - g. **Administration** – Review and make recommendations regarding the administration of the Fire Department, including organization, policies and procedures, administrative support, record keeping, information management, purchasing, inventory control, public and media relations, and customer service.
 - h. **Finance** – Review and make recommendations regarding Fire Department budgeting, reserves, development charges, revenues, and potential revenues.
 - i. **Human Resources** – Review and make recommendations regarding Fire Department staffing including full-time positions and volunteer firefighters, organizational structure, ratio of officers to firefighters relative to effective span of control, firefighter recruitment and retention, job descriptions, remuneration of full-time and volunteer staff, promotional policy, succession planning, and health and safety.

- j. **Facilities** – Examine the existing fire stations and administration facilities and make recommendations regarding the appropriate number, location and configuration of Fire Department facilities relative to long-term fire protection service delivery.
 - k. **Apparatus and Equipment** – Review and make recommendations regarding the Fire Department fleet of vehicles, fire apparatus and major pieces of equipment including the types of vehicles, age, replacement cycles, utilization, and suitability.
 - l. **Maintenance Program** -- Review and make recommendations regarding the inspection and maintenance of Fire Department vehicles, apparatus, and equipment.
 - m. **Communications** –
 - i. Develop call volume projections by type of call for each year-to-year 2032.
 - ii. Review and make recommendations regarding Fire Department communications systems, including dispatch, paging, telephony, and radio systems.
 - iii. Identify any reasonable opportunity to reduce call demands.
 - n. **Emergency Management Program** – review and make recommendations regarding the Emergency Management Program as managed by the Community Emergency Management Coordinator (CEMC).
 - o. **Medical First Response**- Review and make recommendations regarding the medical emergency first response call volume and trends, including types of calls, number of calls, apparatus deployment, response staffing, first responder deployment and safety along with program effectiveness.
- Include regular input from members of Council, key Municipal staff, the Fire Chief, volunteer firefighters, and the public.
 - Consider the potential effects of mutual aid and/or automatic aid agreements with neighbouring municipalities.
 - Consider the projected growth in population and development within the township over the next 10 to 20 years and the potential impact on service delivery and operations of the Fire Department.
 - Include recommendations and/or options to meet the presented needs and estimate financial implications of each with consideration given to the current asset management plan.
 - The final MFP to Council will include key findings, consultant analysis and recommendations, identification of implementation issues, financial implications, and recommended implementation timetable.

To accomplish the scope of requirements, EMG has:

- Reviewed the Establishing and Regulating (E&R) By-Law.

- Reviewed applicable municipal, provincial, and federal legislations.
- Reviewed planning department documents regarding community and growth projections.
- Reviewed any previous risk assessment, council's strategic priorities and other pertinent documents.
- Prepared a CRA and considered the Community Risk Profile including community building stock, industry, care occupancies, transportation networks, etc.
- Reviewed current service agreements with neighbouring municipalities and any other current documents.
- Gathered information on operational requirements including past and current response statistics (call volumes/response times) to analyze trends, staff availability/needs and response capabilities, etc.
- Reviewed fire department's administration including staffing, organizational structure, policies and procedures, administrative support, record keeping and information management/technology, purchasing and inventory control, public and media relations and customer service.
- Toured the Township fire stations conducting a location/response analysis.
- Examined fire vehicles, apparatus and equipment including the maintenance program.
- Reviewed fire service policies, procedures and emergency response operational guidelines, training programs and records.
- Collected information on the fire prevention program including education programs, inspection reports/data, enforcement data, and investigations.
- Identified and compared industry best practices relating to fire and emergency services performance measurement.
- Reviewed current job descriptions, staff recruitment and retention practices, promotional policy, succession planning and demographics.
- Reviewed the operational and capital budgets along with reserves and current revenue generation programs within the emergency services and the township (development fees).

Based on the previously noted criteria, through meetings with members of Council, members of the township 's Senior leadership Team, firefighters, and community stakeholders, the consulting team was able to complete a thorough review of elements that are working well and areas requiring improvement within the GMFD. This review culminated in a total of 46 recommendations.

Note: Many of the recommendations noted in this document are operational in nature and can be address through staff time.

Performance Measures and Standards

This MFP has been based upon (but not limited to) key performance indicators that have been identified in national standards and safety regulations such as:

- The *Fire Protection and Prevention Act (FPPA)*
- The Office of the Fire Marshal and Emergency Management (OFM) Communiqués
- The *Ontario Occupational Health and Safety Act (OHSA)*, with reference to the National Institute for Occupational Safety and Health (NIOSH)
- The Ontario Fire Service, Section 21, Advisory Committee Guidance Notes
- The National Fire Protection Association (NFPA) standards, and
- The Fire Underwriters Survey (FUS) technical documents.

Project Consultants

Although several staff at EMG were involved in the collaboration and completion of this MFP, the overall review was conducted by (in order of involvement):

- Lyle Quan, Fire Service Consultant/ VP of Operations - Project Lead
- Guy Degagne, Fire Service Consultant
- Rick Monkman, Fire Service Consultant
- Darryl Culley, President

Together, the team has amassed a considerable amount of experience in all areas of fire and emergency services program development, review, and training. The EMG team has worked on projects that range from the creation of strategic and master fire plans to the development of emergency response programs for clients.



SECTION 1

Community & Fire Department Overview

- 1.1 Community Overview
- 1.2 Fire Service Overview
- 1.3 Assessment of Current Fire Services By-Law
- 1.4 Fire Service Policies, Directives & Standard Operating Guidelines

SECTION 1: COMMUNITY & FIRE DEPARTMENT OVERVIEW

1.1 Community Overview

As described on the home page of their website, the Township of Greater Madawaska has much to offer its citizens and the many visitors each year.¹

“The Township of Greater Madawaska is spread out within the County of Renfrew from Griffith and Matawatchan to Dacre and Mount St. Patrick to Calabogie. The Township of Greater Madawaska offers beautiful rolling hills, mountains, lakes, rivers, and small quaint villages.”

The Township of Greater Madawaska has a relatively recent history, having been created as a political entity in 2001. It is made up of five former townships that had themselves been amalgamated at various times in their history.² According to the Greater Madawaska Growth Plan³ document, *“The Township combines slower-paced lifestyle with a vibrant year-round outdoor recreational lifestyle.”*

A large portion of the land mass in Greater Madawaska is crown-owned land. The township is composed of the geographic townships of Bagot, Blythfield (also spelled Blithfield), Brougham, Griffith, and Matawatchan.

There are approximately 6,443 permanent residents in 2022.⁴ The township’s permanent population has seen insignificant changes between 2006 and 2022. The decrease in population since 2006 is attributed to changes in the seasonal population, which has seen a decline of 670 habitants: representing a 10% decrease in population (Table #1). It is projected that the population will stabilize and regain its 10% loss and growth even further by 2036. The forecasted population growth will be in permanent residents with the seasonal residents’ number to continue to decline. The study suggests that the permanent resident population will increase by approximately 30% from 2,748 in 2022 to 3,553 in 2036.

With the lack of new residential developments, the growth rate will depend upon new residential occupancy builds (houses).

¹ <https://www.greatermadawaska.com/en/play-and-discover/tourism.aspx>, Accessed March 8, 2023

² https://www.greatermadawaska.com/en/play-and-discover/history-and-culture.aspx?_mid_=1666 Accessed March 9, 2023

³ Madawaska Growth Readiness Action Plan Draft Feb 15, 2022, Accessed January 9, 2023, https://www.greatermadawaska.com/en/township-office/resources/Plans,-Reports-and-Studies/_Greater-Madawaska-Growth-Readiness-Action-Plan-2022_FINAL.pdf

⁴ Development Charges Report, Accessed January 3, 2022, <https://www.greatermadawaska.com/en/business-and-development/resources/Planning-and-Development/Greater-Madawaska-DC-Report-2022.pdf>

TABLE #1: 2022 DEVELOPMENT CHARGE STUDY – POPULATION GROWTH

Year	Permanent Population (Including Census Undercount)	Permanent Population	Institutional Population	Permanent Population (Excluding Institutional)	Seasonal Population	Total Permanent & Seasonal Population
2006	2,824	2,751	16	2,735	4,365	7,115
2011	2,551	2,485	15	2,470	3,930	6,415
2016	2,585	2,518	33	2,485	3,550	6,068
2022	2,821	2,748	37	2,711	3,695	6,443
2032	3,428	3,339	44	3,295	4,017	7,354
2036	3,647	3,553	47	3,506	4,164	7,717

Note: Data Source – Development Charges Background Study, Township of Greater Madawaska, Watson & Associates Economists Ltd. February 18, 2022, Page 3-4¹⁶. Population excludes census undercount of approximately 2.7%.

With a land area of 1,018.15 km² (393.11 mi²), it has a population density of 2.8/km²(7.3/mi²) in 2021⁵, the township contains an abundance of agricultural and natural rural areas.⁶

There are four highways that intersect the Township of Greater Madawaska, and they are Highway 41, Highway 132, Highway 508, and Highway 511. Highways 41 and 132 serve the Griffith station area, while highways 508 and 511 serve the Calabogie Station area. Highway 511 also serves as the main street running through Calabogie. A substantial portion of the township population live within the highway corridors. Highways 41 and 132 are of the Provincial King Highway, bringing with them a considerable volume of transport trucks transporting goods across Ontario, including unknown quantities, of dangerous commodities.

Other notables include the Calabogie Motorsport and Ontario Power Generation with three dam infrastructure within the Township of Greater Madawaska.

⁵ https://en.wikipedia.org/wiki/Greater_Madawaska Accessed February 16, 2023.

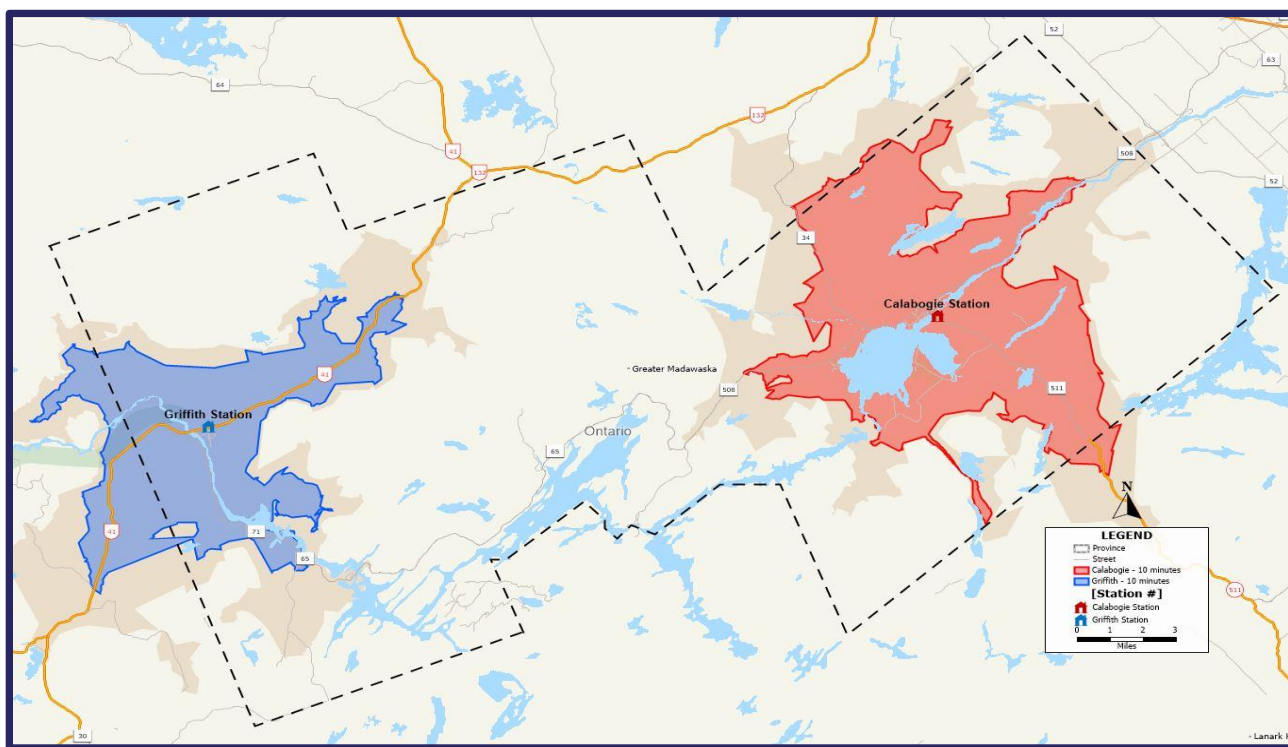
⁶ <https://www.greatermadawaska.com/en/play-and-discover/things-to-do.aspx> Accessed February 28, 2023

The local economy is fueled primarily by the service and tourism industries. Calabogie Peaks, Calabogie Highland Resort, and Calabogie Lodge, as well as Ontario Power Generation are the main employers. There are 25 service industries, 25 tourism industries, 22 commercial industries, and 10 manufacturing industries within the township⁷.

1.2 Fire Service Overview

The GMFD consists of two fire stations (as noted in Figure #1), that are staffed by volunteer firefighters under the direction of a part-time fire chief.

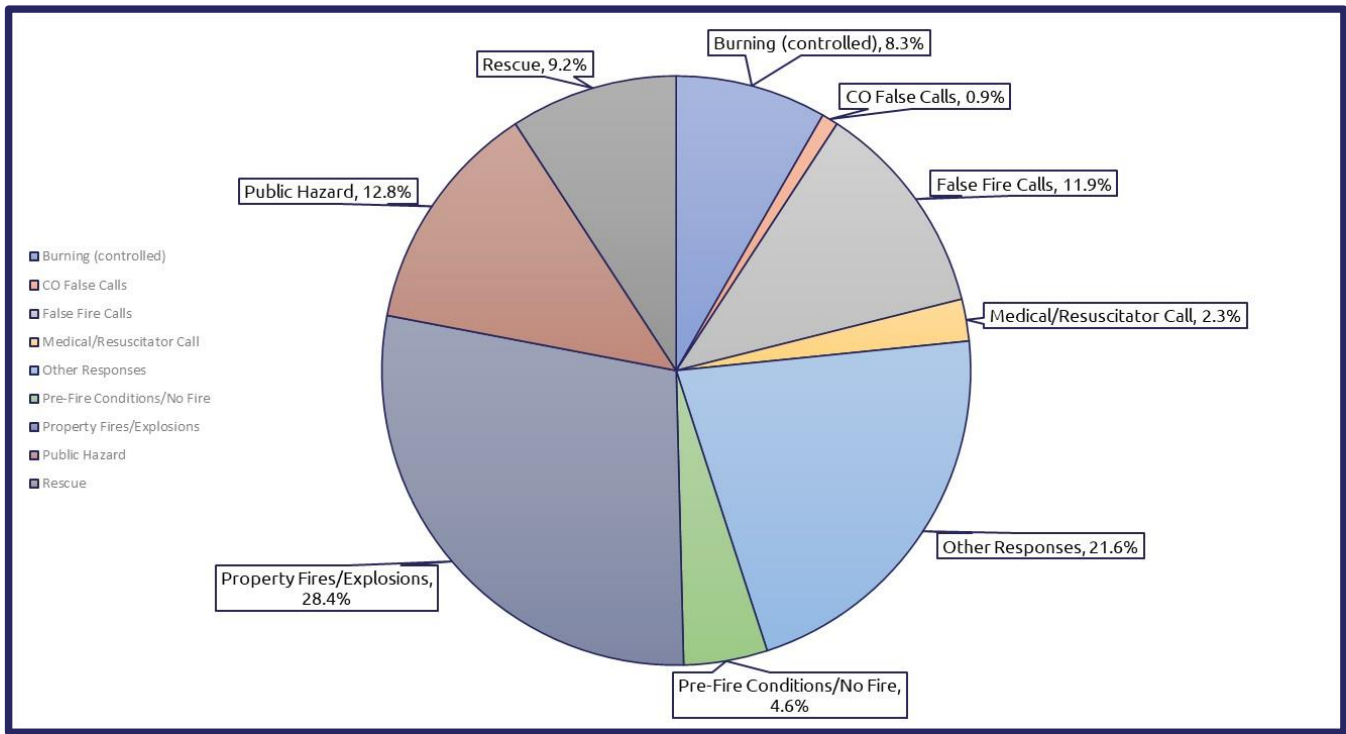
FIGURE #1 – THE TOWNSHIP OF GREATER MADAWASKA AND FIRE STATIONS



The GMFD responds to approximately 55 calls for service per year (average from 2017-2020). These calls include fire-related incidents, CO calls, false alarms, and motor vehicle collisions (Table #2).

⁷ <https://www.greatermadawaska.com/en/business-and-development/community-profile.aspx> Accessed March 3, 2023

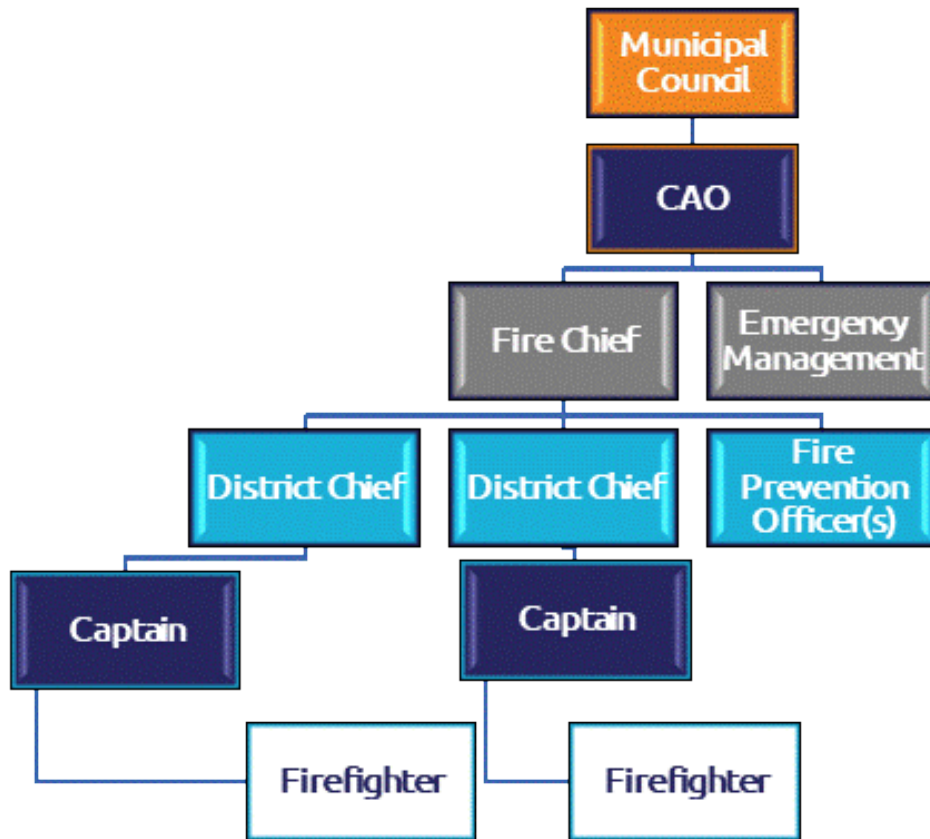
TABLE #2: 2017-2020 MUNICIPAL EMERGENCY CALLS BY RESPONSE TYPE CLASS⁸



The fire chief is presently responsible for the overall operation of the department. He is supported by two of the district chief volunteers that are responsible for the Calabogie and Griffith stations, respectively. The stations have captains, lieutenants, and firefighters forming the staffing complement. There is no dedicated fire prevention or training positions within the GMFD. The organizational chart noted in Figure #2 reflects the reporting structure within the GMFD.

⁸ OFM Data

FIGURE #2 – EMERGENCY SERVICES ORGANIZATIONAL CHART



1.3 Assessment of Current Fire Services By-laws

As part of the master plan process, fire service-related by-laws were reviewed by EMG, and where required, recommendations have been presented.

1.3.1 Governance and Establishing & Regulating By-law

The E&R By-law is council's direction to the GMFD and prescribes what services are to be provided by the fire department. The current E&R Bylaw was updated in 2014, making this a dated document. It is recommended that by-laws affecting fire department operations be reviewed annually or as significant changes occur in the community. Doing so will ensure that the fire chief's noted service levels, expectations, and authority are correctly aligned with the community's needs.

As part of any by-law update process, drafts should be vetted by the township's solicitor before being presented to council.

The fire chief should also consider bringing the E&R by-law forward to newly sitting councils every four years. Doing so will allow new council members to understand the level of service provided to the

community and the council's responsibility to fund this level of service as set by the township's council.

In collaboration with the fire chief, the council should establish an objective, definitive response time to be included in the E&R By-law. The NFPA recommends that some assessments be completed to evaluate a baseline for a department's response time goal. This review will offer an understanding of how the department has been performing, along with identifying areas for possible improvement in station location and vehicle and staffing distribution.

The E&R By-law should reflect new legislation, changes in the types and levels of response, and training expectations. Consideration should also include reference to such guidelines and standards as:

- Section 21 Firefighter Guidance Notes
- OFM Guidelines concerning staffing and response recommendations.
- *FPPA* of 1997.
- Related NFPA and/or OFM Standards that deal with:
 - Training
 - Fire prevention and public safety programs
 - Fire department response goals and objectives
 - Communications and vehicle dispatching
 - Response times
 - Fleet and maintenance

By incorporating these guidelines and standards, GMFD will ensure that staffing, training programs, fire prevention, public education initiatives, and response to the community adhere to industry best practices.

The current by-law does not include the GMFD Mission Statement and Goals. In revising By-law 11-2014, GMFD Policy # OP 503 these should be included in the E&R by-Law. Once council has approved a GMFD Mission Statement and Primary Goals, these should be posted in every fire station to remind the firefighters of their purpose of belonging to the GMFD, which is to serve the residents of the Township of Greater Madawaska.

The updated by-law should reference the OFM, *Regulation 378/18*, requiring CRA, which came into effect on July 1st, 2019.⁹ The Regulation includes the need for an annual review and a new document

⁹ O. Reg. 378/18: COMMUNITY RISK ASSESSMENTS (ontario.ca), Accessed November 27, 2022, <https://www.ontario.ca/laws/regulation/180378>

to be produced every five years, as well as the need to create a Community Risk Reduction Plan that should be initiated as part of the CRA. To Greater Madawaska's credit, this MFP project also included the development of a CRA, which has been completed and presented as a separate document.

Other items not found within the current by-law for consideration include:

- The inclusion of all applicable NFPA standards.
- References made as required to the Ministry of Labour's Section 21 Guidance Notes.
- Identify the level of service provision for each type of technical rescue. Include HAZMAT incidents, including elevator rescue.
 - The inclusion of a mitigation strategy for handling technical rescues would be appropriate.
 - Should include reference to using an outside fire department or third party in mitigating all technical rescues at full cost recovery. This too should be in the Fees and Charges By-law.
- Identify who is responsible for fire investigations and their required qualifications, including certification.
- The current by-law must mention that a Joint Health & Safety Committee is established as required under the *Occupational Health and Safety Act* of Ontario. The clause should also identify training provided to Joint Health & Safety Committee members.
 - This includes Workplace Safety & Insurance Board's Certifications in Part I Basic Certification and Part II Workplace-Specific Hazard Training.

- The current by-law does not mention charging a fee for some services provided by the GMFD, and this should be considered for inclusion in the revised by-law. It should also identify that whoever is assigned the fee is responsible for paying the charge. Some municipalities have changed all by-laws that speak of charges to identify those responsible for the invoice being paid. This should also be considered an addition to the Tariff of Fees By-law.
- The Organizational Chart in Appendix A of the by-law should be updated.
- Fire apparatus maintenance and replacement should be discussed within the by-law. The replacement schedule should be based on FUS-recommended timelines. All apparatus must meet NFPA 1901 and ULC S515-12 specifications.
- The level of training should be compliant with OFM related requirements.
- Identify whether an asset management program is in place for recording equipment that includes the recommended replacement date.
- Include the records management program that may be used by GMFD for fire-related information. Include the Township of Greater Madawaska's record management by-law.
- Mention the Respiratory and PTSD Prevention Plan Policy that fire services in Ontario are required to have in place. To the Township of Greater Madawaska's credit, they have extensive fire safety policies as part of their standard operating guidelines (SOGs).
- Mention that fees may be levied for some services provided by the GMFD.

1.3.2 Assessment of Current Fire Services By-laws

The by-laws reviewed for this MFP include the following:

- By-law No. 34- 2022 - to establish a General Tariff of Fees and Charges for the Township of Greater Madawaska.
- By-Law No. 81-2016 - for Establishing Requirements to Conduct Open Air Burning in the Township of Greater Madawaska.
- By-law No. 35-2016 - to Authorize the Mayor and the Clerk to Sign the Automatic Aid Agreement with the Corporation of the Township of North Frontenac.
- By-law No 19 – 2011 - to Authorize the Mayor and CAO/Clerk Treasurer to enter into an Agreement with the Ministry of Natural Resources Regarding a Municipal Forest Fire Management Agreement.

- County of Renfrew By-law No. 124-21 – Authorizing the Warden and Clerk to enter into an Agreement with Her Majesty the Queen in Right of Ontario, as Represented by the Minister of Health for the Provision of Communication Services to the County of Renfrew Fire Services by the Central Ambulance Communications Centre.

By-law No. 34- 2022 - Being a By-law to establish a General Tariff of Fees and Charges for the Township of Greater Madawaska

- A review of the Fees By-Law 34-2022 for Greater Madawaska identified that enhancements to the fee schedule would assist with offsetting the operating costs of the GMFD. For example, the fire department could be charging for more of the services they provide. Ensure full-cost recovery when any outside party assists the fire department with technical rescues, hazardous materials (HAZMAT) incidents, etc.
- Some municipalities have hired a third party to address the invoicing of all incidents the fire department attends.
- The By-law should state who is responsible for payment of the services provided; other municipalities have been challenged regarding their invoices.
- The By-law should include full cost recovery when external agencies and equipment are brought in for fire extinguishment or investigation.
- Within the auto and structural insurance policies, there are provisions to compensate fire departments for services rendered.

By-Law No. 81-2016 - Being a By-law for Establishing Requirements to Conduct Open Air Burning in the Township of Greater Madawaska

The Open-Air Burning By-Law 81-2016 is not current and, like other by-laws, must be reviewed and updated annually.

The following needs to be considered for inclusion in the revised by-law:

- The amended by-law should reference the Ontario Fire Code Article 2.4.4.4.
- It should also reference O. Reg 256/14, amendments to the Ontario *FPPA*.
- The By-Law should reference Ontario Regulation 207/96, Outdoor Fires, from the *Forest Fires Prevention Act* in the opening section.
- With the increase in residential occupancies and population, expressly prohibit the burning leaves and grass clippings.

- Add a definition for “Solid Fuel Burning Appliance” and include manufacture appliances that are enclosed and have a spark arrester.
- It should also state that manufactured appliances cannot be placed and used on wooden surfaces such as decks and porches.
- Ban the use of Chinese Lanterns.
- Ensure Schedule A is included in the Fees and Charges By-Law and kept current.

By-Law No. 35-2016 - Being a By-law to Authorize the Mayor and the Clerk to Sign the Automatic Aid Agreement with the Corporation of the Township of North Frontenac

The Automatic Aid By-Law 35-2016 is not current and, like other by-laws, must be reviewed and updated annually.

- An agreement extension is in place until June 13, 2023. For administrative purposes, it may be beneficial to have a standing agreement valid until terminated by either party.
- Schedule “A” and Schedule “B” should be reviewed to assure they are up to date.
- Schedule “B” fees should be reviewed to assure fees are up-to-date and adjusted to current operating costs for service.

By-Law No 19 – 2011 - Being a By-law to Authorize the Mayor and CAO/Clerk Treasurer to enter into an Agreement with the Ministry of Natural Resources Regarding a Municipal Forest Fire Management Agreement

The Wildland Fire By-Law 19-2011 is not current and, like other by-laws, must be reviewed and updated annually.

- The Interagency Response Guide is dated 2018.
- Training to SP-103 and SP-230 should be up to date for all staff.

County of Renfrew By-Law No. 124-21 – A By-Law Authorizing the Warden and Clerk to Enter into an Agreement with Her Majesty the Queen in Right of Ontario, as Represented by the minister of Health for the Provision of Communication Services to the County of Renfrew Fire Services by the Central Ambulance Communications Centre

- This is a current By-Law dated October 27, 2021
- GMFD could benefit from being a representative of the Fire Chiefs’ Committee meeting with representatives of the Ministry of Health under this by-law.
- CACC is responsible for providing training and there should be record of training and training should be current for all GMFD staff.

- There should be a clear record keeping of services provided by CACC in relation to Schedule “A” of the by-law.
- Schedule “E” needs to be updated and a medium arrange for input from municipalities/fire departments.

Township of Greater Madawaska does not have a Fireworks By-law

The following needs to be considered for inclusion in a stand-alone Fireworks By-law:

- The by-law should include specifics regarding recreational usage, public high hazard displays, and those released during a show or music concert (pyrotechnics). The municipal authority to control fireworks rests within the Ontario Fire Code O. Reg. 213/07, Division B, Part 5, ss 5.2.
- Referencing the federal regulation regarding the training required to set off commercial and pyrotechnic fireworks should be included in the document. Doing so will direct those who need this training and education and assist them in locating the supporting information. The by-law should list the differentiation between the consumer, display, and pyrotechnic fireworks, as listed in the *Explosives Act, R.S. c. E-15*.
- The by-law should include the importance of fire safety while setting off fireworks. Therefore, it would also be appropriate to have safety information on the proper method of setting off fireworks and the equipment worn by those setting off consumer fireworks. Along with this document, it will also be essential to outline the need for some form of extinguishment that should be readily available such as a pail of water and a fire extinguisher or garden hose.
- List the occasions/holidays that fireworks may only be discharged, such as Victoria Day, Canada Day, Simcoe Day (Civic Holiday), New Year’s Eve, and some religious celebrations (such as the Muslim celebration of the Eid Al Adha).
- Beaches and parklands are a popular and prevalent location for parties in the summer, and there should be a section that speaks to discharging fireworks along the beach and parkland areas year-round.
- Include a requirement that all those involved in discharging high-hazard fireworks have completed the National Fireworks Certification Program (NFCP) on discharge.
- The document should include when fireworks should not be discharged, such as during winds over a pre-determined speed.
- A guide on how to set off "Family Fireworks" be written, i.e., use a pail of sand to place the firework in, have a charged garden hose or a fire extinguisher close by, keep children away from the discharge area, etc.
- For discharging high-hazard ordinances, the GMFD should conduct a pre-event inspection of the site to ensure it complies with the application by a member of GMFD that has completed the NFCP course.

- Include in the by-law that a fire apparatus with four firefighters stands by at the site of high-hazard firework displays.
- There should be at least two post-event inspections of the area adjacent to the discharge zone to look for unexploded ordinances. One takes place the night of the display, and the second the morning of the following day during daylight hours.
- The Fees and Services By-law to include pre-and post-discharge inspections and the stand-by fire crew.

1.4 Fire Service Policies, Directives, & Standard Operating Guidelines

Fire department policies and guidelines have immense value for a department. They are the critical foundation of a fire department's success.

- **Policy** is a high-level statement that expects consistent compliance. It is permitted very little to no flexibility.
- **Guideline** is a standard with an acceptable level of quality or attainment. It provides direction on how to act in each situation with non-mandatory controls.
- **Procedure** is a requirement with an acceptable level of quality or accomplishment in a series of detailed steps to accomplish an end. There are step-by-step instructions for execution and completion.

The GMFD has many SOGs in place, and to ensure all the SOGs are current, they need to be reviewed and revised on an ongoing basis as circumstances change. Many of the GMFD's SOGs are due to be reviewed and updated, as this has not occurred for several years. Some fire departments review a third of their SOGs annually. Adopting this procedure provides the entire set of documents to receive a full review every three years.

Reviewing the SOGs can be an incredibly detailed and very involved process. Writing new SOGs and maintaining existing ones is a daunting task to leave to just the chief officers to look after, even though station officers review them. Establishing a committee that meets regularly to develop new SOGs and review older ones would relieve some of the pressures placed on the chief officers. The development of a structured SOG Committee that creates its Terms of Reference would be a great benefit to the GMFD in several ways:

- Provides for updated and current SOGs.
- Staff would be more involved in the fire department operations.
- Safer environment for members to work by ensuring that current and relevant SOGs are in place.

The Section 21 Committee is part of the *OHSA* initiative for firefighter safety. The Section 21 Guidance notes are kept current by a provincial team of fire service personnel and are a good and current source for reference. The many NFPA Standards are also a good resource for developing SOGs.

The following are suggestions for consideration:

- When developing SOGs, include a Policy Statement. Including this will ensure that GMFD is an effective and efficient operation that provides the best possible work environment for its firefighters. Policy statements clarify intent, describe how GMFD will administer the policy and defines its particulars. Policy statements protect an organization from misunderstandings leading to unauthorized behaviour or lawsuits. Each policy statement should include its purpose, terminology definitions, the statement itself, and the steps to implement it.
- Include a section titled “Reference Material”. Within this section, list all documents that were used in the development of the SOG. These documents may include:
 - Section 21, Guidance Notes
 - NFPA Standards
 - Guidelines from the OFM
 - *OHSA* of Ontario.
 - The *FPPA*, the Ontario Building Code, and Ontario Fire Code.
 - Training material such as International Fire Service Training Association (IFSTA).
 - Municipal policies and by-laws.
 - Other SOGs that are relevant to the SOG.
- Ensure all SOGs are relevant to the current operations of GMFD and remove those that are not.

Section 1: Recommendations

Rec #	Recommendation	Suggested Timeline	Estimated Costs	Rationale
1	<p>The Fire Chief brings forth a revised version of the E&R By-law for the Council's approval and ensures annual review and updates.</p> <ul style="list-style-type: none"> All other by-laws noted in this document should be reviewed and updated as required. All by-laws should be reviewed annually to ensure the currency of the documents. 	Short-term (1-3 years) ongoing	Staff time	Maintaining an up-to-date E&R By-law will guide GMFD's operations and identify response guidelines, fire prevention, and public education programs and levels of training.

Rec #	Recommendation	Suggested Timeline	Estimated Costs	Rationale
2	Establish an SOG Committee representing all divisions of the GMFD that develops new SOGs and reviews current ones regularly.	Short-term (1-3 years) ongoing	Staff time	Establishing an SOG committee will aid in maintaining the information in the database to be current while allowing the participation of GMFD members to determine the fire department's operations.



GREATER MADAWASKA

SECTION 2

Risk Assessment & Stakeholder Surveys

2.1 SWOT

2.2 Stakeholder Surveys

2.3 CRA Profile

2.4 CRA

2.5 CRRP

2.6 Next Steps

2.7 Fire Sprinklers & Monitoring Fire Alarm Systems

SECTION 2: RISK ASSESSMENT & STAKEHOLDER SURVEYS

2.1 Strengths, Weaknesses, Opportunities, and Threats (SWOT)

The strengths and weaknesses portion of a SWOT analysis are based on an internal review that identifies what is working well, along with recognizing areas for improvement. The opportunities and threats portion of the SWOT are related to external influences and how these influences affect the operations and response capabilities of an emergency service.

During EMG's development of the CRA and review and assessment of the stakeholder surveys, along with the development of the MFP document, the following (high-level) SWOT was identified.

2.1.1 Strengths

- Greater Madawaska benefits from a county-wide telecommunication agreement for calls for service dispatching with the Ministry of Health - Central Ambulance Communication Centre (CACC).
- The GMFD has strong relationships with its partner emergency services (police and EMS), along with automatic aid agreements in place with other fire services to assist with general response needs.
- Most importantly, GMFD has a team of dedicated volunteer firefighters that continue to share their valuable time to ensure the safety of its community.

2.1.1 Weaknesses

- The GMFD, as well as other volunteer fire services, depends on its team of dedicated volunteer firefighters for response to calls. This can be a challenge when it comes to having sufficient volunteer firefighters for responses.
 - Due to other commitments, such as full-time jobs and family obligations, there is no guarantee the volunteer firefighters will be available or accessible to respond as required, which in turn can potentially result in low staffing levels on-scene.
- The fire stations need upgrades to ensure they continue to meet the requirements in relation to equipment storage, shower facilities, and removal of firefighters' gear from diesel exhaust contamination.
- The OFM has implemented training standards and certification requirements for all positions within the fire service; therefore, more training will be required by all fire departments in Ontario.

- There is limited interoperability between the Calabogie Fire Station and the Griffith Fire Station. The “silo mentality” phenomenon is noticeable in relation to training, equipment, and fleet, where there is an unwillingness to share information, training, or knowledge across the two fire stations.
- The first two lines of defence (Public Fire Safety Education and Fire Safety Standards and Enforcement) are lacking operational support, even though identified in By-Law 11-2014: Being a By-Law to Establish a Fire Department.

2.1.2 Opportunities

- GMFD should continue engaging in partnerships with the bordering departments for such things as joint training, operational support to inspection and fire investigation services, cross border responses, mutual aid, and fire service agreements that benefit all stakeholders.
 - Continuing to build on these partnerships will improve available options in relation to meeting future training and certifications requirements.
- Recommendations are being made in this report to consider the relocation of Griffith Fire Station to reduce service delivery gap in Ward 2, while continuing to provide a good level of service to the community.

2.1.3 Threats/Challenges

- As the community’s population continues to grow and faces an aging demographic trend, any major emergencies stressing the availability and the dependency on volunteer suppression staffing resources, as well as equipment, must be considered.
- A key challenge for the department is the age of the fleet. Some of the vehicles have exceeded the industry standards relating to suggested life cycles.
- The threat of climate change and impact on weather patterns is an increasing challenge for communities to handle inclement weather incidents, such as freezing rain/ice storms. With inclement weather becoming more common, they need to be part of the emergency response program for each community.
 - These changes in climate conditions, along with subsequent frequency and severity, has established the need for a larger response component to these emergencies.

All the noted weaknesses and challenges will be addressed in this document (within the related section).

2.2 Stakeholder Surveys

To get a complete understanding of how well GMFD is meeting the needs of the community and its volunteer force, both community and staff input were requested in the form of an anonymous survey, via SurveyMonkey. This input was helpful in developing recommendations to assist the Township of Greater Madawaska council with future strategic decision making as it relates to the fire department.

Methodology

The external survey consisted of nine questions. The types of survey questions included open-end questions, ordinal scale questions, and interval scale questions. Different types of questions were used because each type of question collects a different kind of data to inform a more comprehensive understanding of GMFD level of service delivery to its constituents.

The internal survey consisted of seven questions. All questions, except for one, were open-ended questions providing opinions, feelings, impressions, and/or suggestions to evaluate the state of mind of staff and attitude towards the GMFD. One question was an ordinal scale question ranking the seventeen core services from most important to least important on a personal scale to evaluate their importance for each staff.

The council members survey consisted of nine questions. All questions were in the style of open-ended questions. The open-ended question type allows EMG to gather valuable insight and gain detailed, valued, and descriptive information given the target group's knowledge and understanding of the GMFD, the township, and their constituents.

2.2.1 External Surveys

Responses to all the external survey questions consistently indicated a positive review of the GMFD by the respondents.

General impression of the Greater Madawaska Fire Department in relation to its level of professionalism, community safety, education, and fire prevention awareness programs.

Question one asked respondents to express their general impression of the GMFD. There was a total of 38 external surveys completed. There was a unanimous expression of contentment with the GMFD.

There was no expression of dissatisfaction with the GMFD. Overall, the survey results suggested that residents are satisfied (generally impressed) with the fire protection services provided by GMFD. It can be inferred that the township is seen as providing adequate fire protection services to the community and that the GMFD is a valued service to its residents.

Have you been approached by the Greater Madawaska Fire Department staff in relation to their Smoke Alarm Program and, if so, how did you find this interaction?

Question number 2 pertained to community engagement with respect to public fire safety education related to the responsibility of the township to provide public education to the municipality under the *FPPA*, 1997. Eighty-four percent of the respondents have not been approached by the GMFD regarding their Smoke Alarm program. In this review, EMG noted that the GMFD is suppression centric in its approach to fire protection services with limited resources supporting the first two lines of defence – public fire safety education and fire safety standards and enforcement.

An overarching theme transpiring from the results of the stakeholders’ survey is a need for more visibility and engagement of the GMFD with respect to public fire safety education. This theme resonates in the opinions expressed throughout.

How important are the following statements to you?

On a scale from 1 to 5 from "Extremely Important" to "Not Important at All", question #3 rates the respondents’ feelings about what duties performed by the GMFD are most important to the community. The results suggests that overwhelmingly the sentiment is that response time in case of emergency is the priority. Associated with the response time, is the quality of service provided. The results show that quality and frequency of training is important to ensure the quality of service in case of emergency. These two factors received the highest rating with significant separation from the rest of the statements regarding functions performed by GMFD.

	EXTREMELY IMPORTANT	VERY IMPORTANT	IMPORTANT	NOT VERY IMPORTANT	NOT IMPORTANT AT ALL	TOTAL	WEIGHTED AVERAGE
How quickly the GMFD gets to me if I have an emergency	84.21% 32	15.79% 6	0.00% 0	0.00% 0	0.00% 0	38	1.16
Continued and relevant training	60.53% 23	28.95% 11	10.53% 4	0.00% 0	0.00% 0	38	1.50

Based on your knowledge/ understanding of the Greater Madawaska Fire Department, what do you think are the top three issues facing our fire service today (i.e., barriers to providing service)?

The fourth question looked at the respondents' perceptions of what the top three issues are facing the GMFD today. The survey identified staffing, funding, and training, respectively, as the first, second, and third top issues facing the GMFD. These three issues relate to the respondents' concern regarding response time and quality of response to calls for service. Throughout the stakeholder's survey, service delivery is at the forefront of respondents' minds. Appropriate staffing and retention of volunteer, proper funding for the GMFD to perform their duties, and adequate training are factors contributing to timely and quality of responses to emergencies.

Also, worth noting were aging and maintenance of equipment, size of the township, and lack of public fire safety education (a recurring theme throughout the survey). Given the land area of the Township of Greater Madawaska, it is understandable that the size of the township would be seen as an issue. Concerns were expressed regarding coverage. This theme was consistent with what in a previous question respondents felt was the most important performance indicator in GMFD response time to calls for service.

There are seventeen core services delivered by the Greater Madawaska Fire Department. Which services are most important to you?

When asked to rank GMFD core fire protection services in order of priority from "Extremely Important" to "Not Important at All", respondents prioritized firefighting (1.16), wildland fire (1.53), motor vehicle accidents (1.55), and water & ice rescue (1.61) as the most important core services provided by GMFD. By far the most important core service identified was suppression activities. Again, given the vast wildland encompassing the township and the sizeable seasonal occupancies, it is not surprising to see wildland firefighting as the second most important core service provided by the Township.

The response trend suggests that emergency response services are more important to the community than public education and prevention. This is consistent with the suppression-centric approach to fire protection services promoted by the GMFD. The township would benefit from a change in paradigm from emphasis on suppression activities to public fire safety education to influence a culture shift for a more sustainable service delivery in the long run.

	EXTREMELY IMPORTANT	VERY IMPORTANT	IMPORTANT	NOT VERY IMPORTANT	NOT IMPORTANT AT ALL	TOTAL	WEIGHTED AVERAGE
Structural firefighting including rescue	84.21% 32	15.79% 6	0.00% 0	0.00% 0	0.00% 0	38	1.16
Vehicle fire fighting	47.37% 18	36.84% 14	13.16% 5	2.63% 1	0.00% 0	38	1.71
Grass, bush, forestry fire fighting	60.53% 23	28.95% 11	7.89% 3	2.63% 1	0.00% 0	38	1.53
Awareness level hazardous materials	13.16% 5	44.74% 17	36.84% 14	5.26% 2	0.00% 0	38	2.34
Vehicle accidents	47.37% 18	42.11% 16	10.53% 4	0.00% 0	0.00% 0	38	1.63
Vehicle extrication (basic)	63.16% 24	21.05% 8	13.16% 5	2.63% 1	0.00% 0	38	1.55
Vehicle extrication (heavy)	55.56% 20	30.56% 11	11.11% 4	2.78% 1	0.00% 0	36	1.61
Water and ice rescue – shore based ambulance - assist only	52.63% 20	34.21% 13	13.16% 5	0.00% 0	0.00% 0	38	1.61
Ambulance assistance	36.84% 14	39.47% 15	23.68% 9	0.00% 0	0.00% 0	38	1.87
Public assistance	21.62% 8	21.62% 8	45.95% 17	10.81% 4	0.00% 0	37	2.46
Police assistance	15.79% 6	23.68% 9	47.37% 18	13.16% 5	0.00% 0	38	2.58
Public utilities assistance	13.16% 5	18.42% 7	57.89% 22	10.53% 4	0.00% 0	38	2.66
Community emergency plan participation	36.84% 14	23.68% 9	39.47% 15	0.00% 0	0.00% 0	38	2.03
Inspection practices	13.16% 5	36.84% 14	42.11% 16	7.89% 3	0.00% 0	38	2.45
Public education practices	13.16% 5	34.21% 13	36.84% 14	15.79% 6	0.00% 0	38	2.55
Fire investigation practices	18.42% 7	23.68% 9	36.84% 14	21.05% 8	0.00% 0	38	2.61
Plans examination and approval practices	10.53% 4	31.58% 12	44.74% 17	10.53% 4	2.63% 1	38	2.63

Additional services to be provided.

The survey questioned respondents to suggest other services that GMFD should be providing; the most common additional service mentioned was water rescue. Other additional services mentioned were:

- Public fire safety education
- Inspection of new dwellings
- Tiered response to medical calls

Three things that would improve the GMFD services over the next ten years.

Respondents were asked what three things would help GMFD improve over the next ten years. Thirty-three respondents answered the question (87%). The following were suggested to improve GMFD services:

- Volunteer recruitment activities targeting young people.
- Keep fire stations up to date with fire and building codes.
- Replacement cycle for fire truck.
- Increasing the numbers of firefighters at each station.
- Effective way to inform community at large about services provided by GMFD.
- More community outreach and involvement.
- Composite department made of full-time and volunteer firefighters.
- Improved equipment
- Improved radio system/equipment
- Strategic plan to address industrial and residential growth.
- More accountability of the Fire Chief to Administration, Council, and the public.
- More funding

Better equipment, staffing model (full-time, part-time, paid on-call), and training, respectively, were identified as the best contributors to improve the GMFD in the next 10 years, with better equipment resonating the most with the respondents.

Have you directly received service from GMFD?

This question from the external survey is to confirm how many of the respondents received direct service from GMFD. This question speaks of the knowledge and experience of the respondents towards GMFD. It infers that respondents with knowledge and experience with services received from GMFD would signify better quality of responses. In addition to the small population sample for this survey, the fact that 13% of the respondents received direct service from the GMFD may impact the validity, reliability, and quality of responses from the external survey.

2.2.2 Internal Surveys

There was a total of eight internal surveys completed (by the firefighters). The number of respondents indicates that 28% of the staff participated in the internal survey (8 out of 29 members of GMFD). This suggests a fair representation of the overall GMFD staff population.

What are the things that make you most proud of being part of the Greater Madawaska Fire Department (GMFD)?

Seven of the eight respondents answered the first question. Serving the community and GMFD kinship were by far what made staff most proud of being part of GMFD. Serving the community was recognized by all respondents. Sense of kinship was recognized by half the respondents. There were no other factors identified by the respondents. The results suggested that the morale of the GMFD is very good, supporting a healthy department. In addition, the emphasis on community service is a representation of volunteerism. This suggests a strong sense of support to volunteerism in the Greater Madawaska community.

In your opinion, what are the duties of the Fire Chief?

The second question asked for the opinion of the respondents regarding their perception of the duties of the Fire Chief. Seven out of eight respondents believed that the duties of the Fire Chief are strategic and tactical with an oversight of the overall management of the department. One statement summarized the opinion of the respondents stating: *"The fire chief is responsible for the operations and administration of the fire department at the macro level."*

One respondent suggested that the position should be full-time, a theme that transpired from the Stakeholders' survey. This issue will be elaborated on in following sections of the MFP.

What are your expectations of the roles and responsibilities of your Fire Chief?

Six of the eight respondents answered question number three. Three elements permeated throughout the answers, including:

- Honesty and fairness
- Have the best interest of the department
- Dedicated to the overall administration of the Department to assure goals and objectives of the Department are met.

Like question # 2, there is a consensus among respondents that the roles and responsibilities of the fire chief are administrative rather than operational in nature. The overall health of the department is central to the role of the fire chief. Operational matters rest with Operations at the station level from district chiefs, to lieutenants, to firefighters.

How can the current roles and responsibilities of your Fire Chief be improved?

Seven out of eight respondents answered question number four. Two ways to improve the current roles and responsibilities of the fire chief prevailed. The first improvement pertained to making the position full-time for the fire chief to dedicate a full work week to the administration of the department. The second mean of improvement pertained to assuring that the fire chief position is supported by the council constructively and without political interference. Respondents expressed a concern about political interference hindering the authority of the fire chief to perform their duties. Respondents recognized the need for council support in constructive ways.

Survey questions regarding duties, roles and responsibilities, and ways to improve the District Chief's position:

Seven out of eight respondents answered question number five. Unanimously, all respondents perceive the duties of the district chief as operational, supervisory, and maintenance of their respective fire hall. The duties are primarily the functioning of their respective fire hall and liaising with the fire chief. The position is seen as functioning at the supervisory and operational levels.

With respect to the roles and responsibilities of the district chief position, six out of eight respondents answered question number six. A common theme throughout the answers is that the roles and responsibilities of the district chief are operational rather than administrative in nature. For instance, it was said that the district chief role was to *"be the I/C at a scene"*.

Also, there is a consensus among respondents that the reporting relationship is supervisory in nature. Following the scalar organizational model of the fire service, their rank is the highest operational rank, and their responsibilities reside with proper functioning and maintenance of the fire station and equipment, as well as training and well-being of firefighters. The direct reporting relationship of the district chiefs is with the officers.

When asked about how to improve the current role of the district chief's position, there was an overall satisfaction with the current role of the district chiefs. Noteworthy was the identification of better access to officer-specific training, and more financial authority to manage fire station specific operational needs.

Questions regarding duties, roles and responsibilities, and ways to improve the captain's position:

Seven out of eight respondents answered questions eight and nine, while only six respondents answered question number 10. The duties of the captains are primarily perceived as supervisory in nature with direct reporting relationship with firefighters. They are the link between management and firefighters. They are the first line of command at scene, managing tasks and supervising firefighters. They are also seen as playing a direct operational role in training delivery.

With respect to the roles and responsibilities of the captains, three roles were highlighted, including liaising between management and firefighters, training delivery, and incident command at emergency calls. The roles and responsibilities of the captains have a direct rapport with firefighters, providing supervision to firefighters with respect to all operational functions of the fire hall.

With respect to how to improve the current roles of the captain position, the fact that the captains have a direct reporting relationship with the firefighters makes them subject to more scrutiny. Hence, the answers to this question are more critical in nature. The overarching theme pertains to the need for the captains to be more accountable and be better trained. Being the lowest supervisory rank, captain position is an entry position in supervisory role which often is lacking managerial knowledge and skills to perform the duties. Therefore, it is a position that requires mentoring, training, and support to acquire supervisory competence to lead firefighters.

How do you feel GMFD is perceived by the community?

The 11th question addressed how staff feel about community support for GMFD. Fire personnel are of the opinion that GMFD is perceived in positive ways (professional, caring, and dedicated) by the community. For the respondents who felt that the community was more critical of the GMFD, their opinions hovered over the perceived lack of knowledge of services offered by GMFD. This is a reciprocal sentiment consistent with the external survey where respondents felt a lack of public engagement between the GMFD and the community.

Top three issues facing fire services today?

There were eight issues identified by the respondents:

- | | |
|---------------------------------|--|
| i. Funding | v. Recruitment & Retention |
| ii. Equipment/Fleet Maintenance | vi. Necessity for a full-time fire chief |
| iii. Political Interference | vii. Fire Hall Upgrade |
| iv. Motivation/Professionalism | viii. Training |

Of the eight issues identified, recruitment and retention, and funding were by far the most often identified by the respondents, at 63% and 50%, respectively. Overall, a trend exists following the eight issues identified. Regrouping the issues addressed, we can identify an overarching issue pertaining to administrative needs rather than operational needs. Further, the administrative needs emphasize staff perception of inadequate staffing levels and inadequate funding for the GMFD.

What core services are most valued by the community?

When asked to rank in order of priority from 1 (extremely important) to 17 (not important at all) what core services are most valued by the community, members of GMFD agreed with the answer from the public at large from the results of the external survey. The most valued services were quick response to emergency and training. Both groups' answers suggest that adequate training is paramount to

quality of response by the GMFD. The weighted average for both groups were less than two points with answers ranging from “extremely important” to “important” and with no answers on the “not important” end of the spectrum.

	EXTREMELY IMPORTANT	VERY IMPORTANT	IMPORTANT	NOT VERY IMPORTANT	NOT IMPORTANT AT ALL	TOTAL	WEIGHTED AVERAGE
How quickly the GMFD gets to me if I have an emergency.	87.50% 7	0.00% 0	12.50% 1	0.00% 0	0.00% 0	8	1.25
GMFD apparatuses and equipment is up-to-date and well maintained	37.50% 3	37.50% 3	25.00% 2	0.00% 0	0.00% 0	8	1.88
GMFD personnel are well trained	37.50% 3	37.50% 3	25.00% 2	0.00% 0	0.00% 0	8	1.88

Other services GMFD should provide?

When members of the GMFD were asked if there are other services GMFD should provide, many of the respondents indicated that the GMFD should have greater involvement in medical calls, given the long response time from Renfrew Ambulance. Members feel that they often are the first to arrive at medical calls and could manage the scene with proper training and within their mandate.

What improvements does the GMFD need to make to its services to be more efficient?

Very few respondents skipped this question. This is a testament of how engaged and empathetic GMFD members are towards their duties as volunteer firefighters; a recurring theme throughout the review and analysis of the survey responses. Input for improvements to the GMFD varied from better training, implementing a pre-planning strategy, and consideration for more fee per service charges pertaining to specific types of repeated emergency calls. One improvement that resonated with many respondents pertained to improving the telecommunication system (portable radios).

What would the Greater Madawaska Fire Department be like 10 years from today and why?

Question 16 asked the GMFD members for their opinion about the future of GMFD. Two common themes identified were 1) younger workforce and 2) better training. Also worth noting was an asset management strategy with replacement schedule for aging fleet and equipment and newer fire halls built to standards.

Are there any other comments/ suggestions that you would like to add that would help to improve the services the GMFD delivers to the community and to the firefighters?

The responses from the last question in the internal (GMFD members) survey re-iterated themes addressed by respondents throughout the survey, including the need for a full-time fire chief and a better training program.

These issues will be addressed in subsequent sections of the MFP. One comment pertaining to training is worth mentioning and addressing. The comment referred to the need for work and life balance in scheduling training. EMG notes that this is a common issue where fire services do not have a dedicated training program. This is an administrative issue associated with services that have limited administrative functions and where operational functions are prioritized over administrative function. This is also a generational phenomenon with younger people preferring a greater work-life balance. This issue adds complexity with volunteer vocations, such as volunteer fire services, with emphasis on weekends, holidays, and after-hours duties, including training.

2.2.3 Council Surveys

The Township of Greater Madawaska is governed by the council, consisting of the mayor, two councillors for Ward 1, and one councillor for each of Wards 2 and 3¹⁰. Of the five members, four members answered the survey.

Do you think the public is getting value for their dollar in relation to fire services?

When asked if the respondents believe that the public is getting value for their dollar from the GMFD, respondents agreed that the public was getting fair value for their dollar.

Do you feel the community is adequately protected by the present fire facilities? Why?

When asked about adequacy of coverage from the GMFD, the respondents felt that the GMFD was adequately protecting the township. However, a common theme from the respondents emphasized that administrative functionality could be improved to meet future demands. The answers suggested that the current funding and asset management plan of the department needed to be revisited for future sustainability.

Based on the probability of future growth within the community do you feel that the fire department can keep up with the demands in its present state?

The respondents expressed concerns about future growth and challenges for the GMFD. Two themes transpired from answers provided. The first theme pertained to what was referred to as additional regulatory demands from the Province of Ontario regarding fire protection services. The respondents did not elaborate. However, the latest regulatory change relates to firefighter certification. Respondents addressed the training certification regulation in other part of the survey. Nevertheless, there is a negative tone to the answer. This negative tone suggests that more information may be needed to properly inform council to assure proper baseline for opinions. Disinformation or

¹⁰ "Mayor and Council, The Township of Greater Madawaska, Retrieved March 13, 2023, <https://www.greatermadawaska.com/en/township-office/mayor-and-council.aspx>

misinformation would not be helpful to inform the development of future strategic plans for GMFD or for proper support from the township's council members involved in decision-making.

The second theme addressed in this question pertains to the need for a comprehensive study to evaluate the impact of future growth against the ability of the fire department to meet demands. EMG believes that the purpose of this MFP will inform a strategic plan based on future growth for the GMFD.

What do you believe are the greatest strengths of the GMFD?

It is the membership of the department being its greatest asset. This compliments the internal survey which affirmed the commitment of the membership to GMFD. Another strength identified pertained to the need for a strong engagement from council to support GMFD. Worth noting is the reference to training as an essential element of strength. Like results from the stakeholders' and staff's surveys, training was identified as a polarizing issue worth further consideration in the MFP.

What do you believe to be the top three risks/ issues facing the fire service (i.e., barriers to response/ delivery of service)?

An overarching risk/issue that dominated question five pertained to growth. More precisely, how the GMFD will keep pace with growth. With new subdivisions being approved or proposed in a geographically challenged township due to its sheer size, respondents felt that future growth was the top risk/ issue facing the GMFD. Factors identifying growth as a risk were associated with recruitment and retention problems, equipment needs concerns, and support to training. These factors are recurring themes throughout all the surveys conducted.

How would you like to see the fire service in the next 10 years in relation to serving the community, keeping in mind the growth of the community?

Full-time staffing resurfaced again – a theme that pervades in all surveys conducted. In this survey, full-time staffing is not limited to the fire chief position but expanded to other staff, including officers and firefighters. The concept of a full-time fire service is proposed. The full-time staffing concept is cautiously addressed through the needs to strategically evaluate analytics and metrics based on the future needs of a growing municipality.

Do you see an opportunity for the Fire Department to develop strategic partnerships with other organizations in relation to cost and service efficiencies? If so, then with whom and why?

Respondents unanimously identified collaboration in fire protection services delivery to improve cost and service efficiencies. Partnerships are perceived as an excellent medium to pursue cost and service efficiencies.

Can you share any input received from your constituents in relation to the fire service, whether they are cost-related, service-related, or fire safety and education related?

How the township's growth will impact fire protection services delivery is at the forefront of concerns from constituents. This concern was also expressed in both the external and internal survey results. As noted by a respondent, "*Constituents are more concerned about the impact of growth on the fire department (than other municipal services) and our ability to maintain and grow with this community.*" Two unspoken but consistent elements that transpired throughout the questions related to community growth are 1) recruitment and retention and 2) proper equipment to effectively perform fire protection services functions.

Interestingly, the overarching tone shows concerns for adequate responses to emergency calls. GMFD is one-dimensionally seen through a response rather than prevention lens. For sustainability and to meet demands imposed by growth, fire services must balance all three lines of defence to optimize fire protection services.

Are there any other aspects or factors that you believe should be considered that we have not touched on already?

In the last question, it became evident that the impact of growth was a major concern for the respondents. One additional element not addressed yet in the survey pertained to the fire stations. The configuration of the current fire stations is not believed to be capable of meeting the anticipated growth of the township. This theme will be addressed further in following sections.

2.2.4 Recommendations Based on Results of The External, Internal, and Council Members Surveys.

There were three themes that consistently arose from the external, internal, and council surveys, including the adequacy of the current staffing model in view of growth and geographical size of the township; the need for a robust asset management strategy to assure efficient and effective emergency response; and the need to emphasize the first two lines of defence, including public fire safety education and fire safety standards and enforcement. Stakeholders, fire personnel, and council see the GMFD through the third line of defence – emergency response. There are limited resources dedicated to public education and prevention. The Township of Greater Madawaska and the GMFD would greatly benefit from improvements in the first two lines of defence. Research has demonstrated the contribution of robust public education and prevention programs to the welfare of a community vis-à-vis fire protection services.

As a result of the survey exercise, EMG recommends the following:

- The Township of Greater Madawaska should conduct a study to investigate if the current fire department staffing model is sustainable given recruitment and retention challenges and

anticipated growth. The township should investigate the feasibility of becoming a composite fire department adding a full-time fire chief and an on-call duty model where adequate staffing are available 24/7/365. It is worth noting that at the time of the preparation of this document, the Township of Greater Madawaska proactively hired a full-time fire chief.

- EMG acknowledges and applauds that the Township of Greater Madawaska has had an asset management plan (AMP) for many years. The AMP should be updated in support of the township working with GMFD to enhance their asset management strategy, emphasizing a robust asset replacement to assure uninterrupted quality of level of service provided, including station maintenance and replacement, equipment maintenance and replacement, and telecommunication system maintenance and replacement.
- The GMFD should develop and implement a public fire safety education program and a prevention program, including fire inspection and fire investigation.

These recommendations will be elaborated in greater detail in subsequent sections of this MFP.

2.3 Community Risk Assessment Profile

Risk assessment is the process used to identify the level of fire protection required within the boundaries of the Township of Greater Madawaska. It measures the probability and consequence of an adverse effect on health, property, organization, environment, or community due to an event, activity, or operation. Council has the authority to establish fire protection within their township. The fire chief is responsible for informing the council of all risks existing within the community. Based on this information, council can make an informed decision on the level of service to be achieved.

The Province of Ontario Regulation 378/18 Community Risk Assessment (CRA) states, "a community risk assessment is a process of identifying, analyzing, evaluating and prioritizing risk to public safety to inform decisions about the provision of fire protection." Effective July 1st, 2019, the regulation states that every municipality shall complete a CRA by 2024, with renewal to occur every five years. Further, each municipality is required to review their CRA document annually.

The accumulation and analysis of the following factors will assist in applying this information in identifying potential risk scenarios. It is during the assessment of the information gathered, which includes the likelihood of these scenarios occurring and subsequent consequences, that will assist in answering the following questions:

- What could happen?
- When could it happen?
- Where could it happen?
- To whom could it happen?
- Why could it happen?

- How likely could it happen?
- How bad would it be if it happened?
- What programs can be developed to mitigate or prevent any or all the above?

Once answered, these questions will frame the basis for formulating and prioritizing risk management decisions to reduce the likelihood of these incidents and mitigate their impact.

The completed CRA may identify gaps and areas where actual conditions vary from the desired outcomes. Data to be reviewed for each mandatory profile include:

Demographics Profile – age, gender, educational attainment, socioeconomic makeup, vulnerable individuals or occupancies, transient population, ethnic and cultural considerations.

Critical Infrastructure Profile – the facilities and services that contribute to the interconnected networks, services and systems that meet vital human needs, sustain the economy, and protect public safety and security.

Geographic Profile – waterways, highways, canyons and other landforms, railroads, wildland-urban interface, bridges, and other specific features of the community.

Building Stock Profile – potential high-risk occupancies, whether residential, commercial, or industrial, building density, building code classifications, age of the structure(s), occupancies that could be a high life safety risk, historic buildings.

Public Safety Response Profile – how are resources distributed within the community, their deployment and usage, types of incidents responded to and the frequency of such incidents, including the seasonal variations and time of day.

Community Service Profile – existing planning and zoning committees, schools, seniors' organizations, ratepayers' associations, mental health organizations, faith-based groups, and cultural/ethnic groups.

Hazard Profile – human, technological, or natural hazards.

Economic Profile – infrastructure, local employers and industries, institutions, community's tax base, local attractions.

Past Loss/Event Profile – consideration of the impact and frequency of an event; identify significant acute events with a low frequency but a high impact or small chronic events with a high frequency with a low impact.

The Township of Greater Madawaska's CRA is a separate document from the master plan. When the fire chief has reviewed its contents and discussed it with council and the CAO, a Community Risk Reduction Plan (CRRP) should be developed and implemented.

2.3.1 Provincial Community Risk Statistics

The fire chief and staff can work with the municipal team to obtain an updated listing of building stock within the community, along with identifying other hazards such as industry and commercial outlets, major highways, and the introduction of any high-rise structures.

The first set of statistics noted is the most recent provincial data provided by the OFM compared with the most recent GMFD statistics.

Note: Unfortunately, 2022 Provincial Statistics are currently not available.

Provincial - Loss fires by Property Class

From 2017 to 2021, 53,339 fires with a dollar loss were reported to the OFM.

- 73% of these fires occurred in Residential occupancies.
- 28% occurred in vehicles.
- 7% of loss fires occurred in Industrial occupancies.
- 5% occurred on structures/properties not classified by the Ontario Building code – this includes many non-structure property types – land, outdoor storage, and some structures ranging from barns to weather stations.
- 3% in Assembly occupancies.
- 3% in Mercantile occupancies
- 3% in Business and personal services occupancies.
- 3% in Occupancies classified under the National Farm Building Code
- 1% in Care and detention occupancies.

The distribution of fire occurrence across property types has been relatively unchanged.

Provincial - Loss Fires Property class: Structures only

- From 2017 to 2021, 34,327 structure fires with losses were reported to the OFM.
- Fires in residential occupancies account for 73% of structure loss fires.
- Properties not classified by the Ontario Building code – 5%
- Industrial occupancies – 7%
- Assembly occupancies – 3%
- Mercantile – 3%
- Business and Personal Services – 3%
- Occupancies classified under the National Farm Building Code – 3%

- Care and Detention Occupancies – 1%

This distribution of fire incidents across structure property types has been consistent over many years.

Provincial - Structure Loss Fires: Ignition sources

Notably, 9% of the structure loss fires were suspected of arson or vandalism (intentionally set).

Between 2017 and 2021, the ignition sources in other (not intentionally set) structure loss fires were:

- 24% Undetermined
- 16% Cooking
- 14% Open flame tools, smoker's articles
- 10% Miscellaneous
- 8% Electrical distribution equipment – wiring
- 7% Heating equipment, chimney, etc.
- 5% Other electrical, mechanical
- 4% Exposure fires
- 4% Appliances
- 3% Lighting - excluding candles
- 1% Processing Equipment
- 0% Unknown, not reported

2.3.2 Township of Greater Madawaska Fire Loss Statistics

The OFM provided the following information and documents received and taken from the past reports supplied to EMG. The following data is an overview of concerns within Greater Madawaska and from the highest to the lowest level for ease of review. This information will assist in formulating and implementing fire prevention and public safety awareness initiatives.

Township of Greater Madawaska Fire Loss by Property Classification

Based on the information received, the following building classifications for property loss are listed based on the number of fires in each occupancy from 2017 to 2021:

- Group C – Residential occupancies (22 with fire losses totaling \$6,230,000)
- Classified under the National Farm Building Code (1 with a fire loss totaling \$100,000)

- Group A – Assembly (1 no-dollar-loss fire)
- Group E – Mercantile (1 no-dollar-loss fire)
- Group F – Industrial (1 no-dollar-loss fire)

Township of Greater Madawaska Reported Fire Cause

Assessing the possible cause of the fires is essential when identifying potential trends or areas to be considered for introducing additional public education on fire prevention initiatives as part of the community fire protection plan.

The leading causes of fires were:

- Unintentional undetermined
- Undetermined
- Misuse of ignition source/materials first ignited.
- Other unintentional
- Design/construction/maintenance deficiency
- Mechanical/electrical failure
- Children playing
- Vandalism

Township of Greater Madawaska Ignition Source Class

The leading causes of ignition sources were:

- Undetermined
- Heating equipment, chimney, etc.
- Lighting equipment
- Other electrical, mechanical
- Miscellaneous
- Open flame tools, smokers' articles
- Appliances

2.4 Community Risk Assessment

The following list outlines risks to life safety and property. With the CRA now completed, the fire chief can put forward strategies to address the risks, including public education and Fire Code enforcement,

within the level of fire service provision. The council will set the level of service. These decisions will form the basis of the Township of Greater Madawaska's community risk mitigation strategies.

A thorough review coupled with sound strategic planning will garner successes in the form of fewer fires, reduced fire-related injuries, and lower dollar property loss through ongoing fire prevention initiatives. These fire prevention initiatives would include early warning detection systems (i.e., smoke alarms), proactive inspections, and public education.

Note: *The following risks are discussed at length in the CRA and not in the order of their level of risk.*

Bodies of Water – With many bodies of water within Greater Madawaska, they present their own risks. These include flooding, vessel incidents such as fires or taking on water and ice/water rescues. There may also be incidents involving aircraft outfitted with pontoons landing on a lake. The GMFD will need its SOGs and SOPs, equipment, and training to align with its level of response to these types of incidents as determined by the council in the Establishing & Regulating By-law.

At present, the GMFD level of response is shore-based only, which means firefighters stay on the land to conduct a rescue. The fire chief should develop mitigation strategies on how best to respond to water-related incidents beforehand so that a predetermined plan has already been established. This may include response agreements with outside fire services or third parties capable of responding at the Operations Level. This would entail their leaving the shore to rescue a person.

Radio System – It is unknown when the radio system was last upgraded. The radio system is transmitted using a repeater but on the analogue platform. Transport Canada is advising fire services that the analogue platform may not be available in the future and suggesting they move to the digital platform, which is a much better platform. When transmitting on the analogue platform, the signal loses strength the further it travels, whereby a digital signal maintains its strength no matter the distance it travels. The County of Renfrew maintains the radio system apart from pagers, portable and mobile radios, and base stations. Those are the responsibility of the host user.

It is suggested that all end users and the County of Renfrew have a radio system audit completed so that GMFD and the other fire departments may begin moving toward the digital platform. Some radio manufacturing companies are no longer supporting their products with older technologies. This changeover will expose the township to a significant investment, and GMFD should begin the budgeting process by placing funds in a reserve account for future use.

The GMFD shares its radio frequency with the Roads Department, and this practice should be terminated, allowing GMFD to have a proprietary radio frequency. Sharing a frequency such as this may lead to missed radio communications that may affect the health and safety of firefighters.

Fire Stations – An assessment of the current and future needs of the fire stations should be conducted. When planning for new fire stations, they should be designed for future growth, including

additional apparatus such as larger capacity tankers, and four-door pumpers so a complete fire crew may respond together. Depending on the land available, an addition to existing fire stations may be all that is required, and in some cases moving the fire station to a new location may improve service response times. The current stations lack post-disaster engineering components, exhaust extraction systems, negative pressure bunker gear storage rooms, and a fitness room. This is discussed at length in Section 4.

Hazardous Material Incidents – Under the E&R By-law, the GMFD responds to HAZMAT incidents to the awareness level, limiting the firefighters' service level. This restricts response levels to HAZMAT incidents as firefighters are not trained to control and mitigate chemical-related incidents. This may delay the incident's control and mitigation, as outside resources may need to be called in.

The GMFD should develop a mitigation strategy for handling HAZMAT incidents in which the fire department does not have the equipment and training for handling such leaks. This strategy may include entering into response agreements with either outside fire service or third parties. The Calabogie Peaks Ski Resort is at risk of having a HAZMAT incident due to the chemicals onsite used in water and waste-water treatment processes.

Technical Rescues –Trench, Confined Space, High and Low Angle, and Elevator. The mitigation of technical rescues requires that SOPs, equipment, and training specific to each discipline are in place. GMFD currently does not respond to these incidents as the firefighters have not received training in any of these. Section 21 Guidance Notes identifies the need for firefighters to be trained to the awareness level in all technical rescues. A response mitigation strategy, that includes response agreements, needs to be developed and receive council's approval. It is suggested that all the municipalities of the County of Renfrew, as a group, enter into a response with the Ottawa Fire Services for the mitigation of both HAZMAT and technical rescue incidents.

Elevator rescues should not be initiated until SOPs, equipment acquisition and training are in place. The firefighters need to be trained to the standards as established by the Technical Standards and Safety Authority (TSSA).

Weather Events – This area of southern Ontario is known to receive severe weather events. These range from snowstorms, namely snow squalls, and wind events, including tornadoes during thunderstorms.

The severity of some weather events may require the Township's Emergency Operations Centre (EOC) to be activated. Preparations in handling such events should include either tabletop or real-time training exercises that include participation by members of the Township's Municipal Emergency Control Group (MECG) and allied agencies.

Domestic Terrorism - The threat of domestic terrorism exists in Canada, with numerous incidents producing havoc and terror among the populace. Situations have occurred in several Canadian cities

with catastrophic consequences. Active shooter incidents may occur in factories, schools, supermarkets, seasonal facilities, and within the family home.

NFPA 3000 – Standard for an Active Shooter/Hostile Event Response (ASHER) Program, defines ASHER as “an incident where one or more individuals are or have been actively engaged in harming, killing, or attempting to kill people in a populated area by means such as firearms, explosives, toxic substances, vehicles, edged weapons, fire, or a combined thereof.

It further describes the ASHER Program as “a community-based approach to preparedness, mitigation, response, and recovery from an ASHER incident, including public or private partnerships, emergency management, the medical community, emergency responders, and the public.”

Too often, communities wait until an event has occurred with catastrophic consequences and loss of life before identifying the need for public education and preparedness to handle such incidents. Terrorism attacks quite often focus on those of religious faith.

Industries – The main industries in Greater Madawaska are tourism and logging. Both have their own specialized risks, such as visitors being unable to fully understand English. Logging is at risk of experiencing a forest fire and their loss of timber.

Resorts require fire inspections to ensure fire safety systems are in place and operational and no violations of the Ontario Fire Code are present.

Demographics - Demographic statistics are constantly growing and forecasted to grow between 0 to 25% in the County of Renfrew between 2021 and 2046¹¹. With this anticipated growth, there will be an increase in call volume, demands placed on fire prevention for inspections, and the need for enhanced levels of public education.

In 2021, approximately 1,325 seniors live in the Township aged 60 and older. That equates to 46.2% of the total population. Forecasts indicate that the County of Renfrew senior population will grow between 35% and 50% between 2021 and 2046¹².

Building Stock - With existing and new residents living in the township, there could be illegal second units and apartments. While permitted, secondary dwelling units and coach houses must be built to OBC and OFC requirements. The township should require every second dwelling unit and coach house to be registered and licensed with the township and inspected by GMFD.

¹¹ Ontario Population Projections, 2020–2046, Accessed January 1, 2023, <https://www.ontario.ca/page/ontario-population-projections>

¹² Ontario population projections | ontario.ca, Accessed December 19, 2022, <https://www.ontario.ca/page/ontario-population-projections>

There is also an unknown number of short-term accommodations in the township. No by-law regulates these accommodations. Owners of these businesses must be aware that they must comply with township by-laws such as Property Standards and Open-Air Burning.

A Short-Term Accommodations By-Law should regulate this industry which also calls for the registry of fire inspections of these locations. A requirement for those with wood-burning appliances the requirement to have a Wood Energy Technology Transfer (WETT) inspection completed to ensure compliance with the Building Department's and manufacturers' installation requirements.

Building Stock – The OFM has identified the risks associated with occupancies using lightweight construction (LWC) practices. Municipalities are to inventory all building stock, including LWC practices. GMFD and the Building Department should collaborate to develop an ongoing list of all building stock based on the OBC Occupancy Classifications. Failure to comply with this requirement is illegal and exposes the municipality to significant fines.

2.5 Community Risk Reduction Plan

Now that the CRA is completed and all risks identified, developing a CRRP should begin. When properly applied, the CRRP coordinates emergency operations with prevention and mitigation efforts throughout the community and at the fire station level. The involvement of fire station personnel is critical for gathering local risk data and performing activities necessary to implement the CRRP.

A CRRP improves firefighters' and emergency responders' safety and occupational health, reducing line-of-duty deaths. Aside from the primary benefits to the community, a CRRP can positively impact the fire department. Due in part to the number of fire inspections and public education events completed, enforcement of the OFC, and the reduction in the number of fires, resulting from these measures.

In addition to firefighter safety, there are several other reasons why departments should begin the process of developing a CRRP, including:

- The presence of new and emerging hazards and managed risks makes the community safer.
- Declining budgets among fire departments and local governments, improving resource allocation.
- Rapidly changing community demographics.
- Community engagement.
- May avoid potential ramifications of ignored or not fully addressed hazards.
- Better defines the fire department's purpose and value within the community beyond just fighting fires.

Completing the CRA and this MFP provides the fire chief with the components needed for the CRRP. Utilizing the information and recommendations found within the CRA and the MFP forms the foundation of the CRRP.

2.5.1 Steps for CRRP Development

Identification and Prioritization – With the completion of the CRA and the risks identified, the priorities are determined, and the results are itemized for use in the remaining planning process. The document does not need to be complex or complicated but in a clear and concise format that enables the reader to understand the risks and those that should have the highest priority.

During this process, consider the following:

- Why and how the risk occurs and, in some cases, when.
- Whom does the risk affect the most, and why?
- How are the community and the fire department affected by the threat?
- What about this risk ranks it higher than others?

Develop Mitigation Strategies & Tactics – This requires input from various individuals involved, including those most affected by the risk. Stakeholder involvement is paramount and should always be in the decision-making process. It will necessitate decisions to determine what tactics and strategies will be necessary to prevent and mitigate those risks with the highest priority.

Five elements to be reviewed during the development of the plan include:

Education: Determining the appropriate type and mix of educational messaging necessary to inform the public and effect behavioural change. More encompassing education through different mediums of social media.

Enforcement: Identifying whether more vigorous enforcement is necessary or if newer codes and standards need adoption. Notification of the public on successful convictions through the justice system.

Engineering: Determine whether there are engineering or technological solutions to address the identified risk(s).

Emergency Response: Changes to the emergency response protocols, SOGs, SOPs, and policies to better meet a specific risk or need. It may require additional resources such as stations, apparatus, equipment, staffing, and enhanced levels of training.

Economic Incentive: Identifying whether financial incentives will improve compliance or help increase awareness of community needs.

Prepare the CRRP – With the risks now identified and prioritized, the strategies and tactics are determined for prevention and mitigation. It will be necessary to develop a written plan.

Implementation of the CRRP – The completed CRRP usually involves several steps. The process should include timelines, which can be quick and focused or slow and methodical. The implementation may rely on the fire department, community partners, or a combination.

Monitor the Progress, Evaluate Your Findings & Modify the CRRP – The final step involves monitoring and evaluating the plan's effectiveness and adjusting, as necessary. This process will enable the organization to determine if they are achieving their desired goals and if the program is or is not impacting them. Ongoing monitoring allows for plan modifications promptly.

The CRRP is a gateway to the reinvention of the fire service culture that requires approval, buy-in from the council, vision, and strong leadership to champion needed change and navigate the process. A successful CRRP will bring additional resources to the effort through partnerships within the fire department and the community it serves. The community-based approach increases public safety because of the collective work within the community to understand, assess, and provide inclusive solutions to community safety issues.

2.6 Next Steps

As the community grows, the frequency of calls and the need for service will grow. Based on this growth, there may be a future need for additional staff in Fire Prevention, the Fire Suppression Division, and Training. Supporting information relating to the staffing needs of each division can be found in the associated sections within this MFP document.

The provincial government has recently introduced updates to the *FPPA*, which outlines the responsibilities of a community and its fire department concerning service level expectations. The updates to the *Act* are:

- Certification for firefighters, fire service instructors (training officers), and fire service inspectors (fire prevention inspectors).
- Mandatory reporting requirements.
- Mandatory CRAs are to be reviewed annually, and a new one is to be completed every five years.
- Mandatory inventory of all building stock, including the identification of those with LWC components.

These four additions will put an even more significant strain on fire departments to ensure proper training, reporting, and completion of CRAs.

2.7 Residential Fire Sprinklers and Monitoring Fire Alarm Systems

The NFPA, along with the Canadian Association of Fire Chiefs (CAFC), and the Ontario Association of Fire Chiefs (OAFC), are strong supporters of residential sprinkler systems to reduce the risk to life and property from fire. Because fire sprinklers react so quickly, they can dramatically reduce the heat, flames, and smoke produced in a fire. Properly installed and maintained fire sprinklers help save lives, reduce damage, and make it safer for firefighters.

Fire sprinklers have been around for more than a century protecting commercial and industrial properties and public buildings. Many people do not realize that the same life-saving technology is also available for homes, where roughly 85% of all civilian fire deaths occur.

2.7.1 Facts About Home Fire Sprinklers

Unfortunately, we must rely on American statistics due to the lack of Canadian statistics available. Since there are so many similarities in building construction, however, the statistics are an accurate reflection of the Canadian experience. Automatic sprinklers are highly effective and reliable elements of total system designs for fire protection in buildings. According to an American Housing Survey, 8% of occupied homes (including multi-unit) had sprinklers in 2010-2014, up from 4.6% in 2009.

Source: U.S. Experience with Sprinklers¹³

- 85% of all U.S. fire deaths occur in the home.
- The civilian death rate of 1.4 per 1,000 reported fires was 81% lower in homes with sprinklers.
- The civilian injury rate of 25 per 1,000 reported fires was 31% lower in homes with sprinklers. Many injuries occurred in fires too small to activate the sprinkler or in the first moments of a fire before the sprinkler operated.
- The average firefighter injury rate of 13 per 1,000 reported home fires was 89% lower where sprinklers were present.
- Where sprinklers were present, flame damage was confined to the room of origin in 97% of the fires compared to 74% without sprinklers.

In 2021 some fire safety statistics¹⁴ were released, which include:

- 40% of fire deaths happen in homes with no smoke alarm.

¹³NFPA Research - U.S. Experience with Sprinklers, Marty Aherns, October 2021", accessed on December 15, 2022, <https://www.nfpa.org/News-and-Research/Data-research-and-tools/Suppression/US-Experience-with-Sprinklers>

¹⁴ Safeatlast - The Latest Fire Safety Statistics - Stay Safe in 2021, Published January 30, 2021, Accessed December 14, 2022, <https://safeatlast.co/blog/fire-safety/>

- 17% of home fire deaths occur due to a non-functional smoke alarm.
- 25% of smoke alarm failures with a deadly outcome occur due to a dead battery.
- \$235 million per year in property damage is caused by children starting fires.
- Smoke alarms decrease the risk of dying in a home fire by 50%.
- Electric space heaters are the cause of 80% of house fires with a deadly outcome.
- Fire sprinklers can reduce the chance of death in homes by 80%.
- According to the National Fire Protection Association, firefighters in the US respond to a fire every 24 seconds.
- Fire sprinklers use less water than fire hoses.
- Sprinklers activate on an individual basis.
- The risk of property loss is reduced by 70% in homes with sprinklers.

The Home Fire Sprinkler Coalition is a leading resource for accurate non-commercial information and materials about home fire sprinklers for consumers, the fire service, builders, and other professionals.

By working with the developers and the public to promote the installation of home sprinkler systems, the GMFD would be demonstrating a proactive approach to educating the public on another viable option for homeowners to help reduce the fire risk. As such, it is recommended that GMFD investigate this safety initiative as part of its fire prevention and fire and life safety education initiatives.

Section 2: Recommendations

Rec #	Recommendation	Suggested Timeline	Estimated Cost	Rationale
3	<p>The Township should conduct a study to investigate if the current staffing model is sustainable given recruitment and retention challenges and anticipated growth. The Township of Greater Madawaska should investigate the feasibility of becoming a composite fire department adding a full-time fire chief and an on-call duty model where adequate staffing are available 24/7/365.</p>	<p>Immediate (0-1 year)</p>	<p>Staff time and FTE for Fire Chief approximately \$100,000/yr. and On-call wages and salaries approximately \$100,000/yr.</p>	<p>Surveys conducted indicated that the current part-time fire chief model is inadequate to support the capacity of the GMFD to provide effective fire protection services. The systemic recruitment and retention issue should be evaluated through an on-call service delivery model, which may always assure proper staffing.</p> <p>It is worth noting that at the time of the preparation of this document, the Township of Greater Madawaska proactively hired a full-time fire chief.</p> <p>Th Township should continue to investigate the current staffing model to ensure a sustainable recruitment and retention model for the GMFD.</p>

Rec #	Recommendation	Suggested Timeline	Estimated Cost	Rationale
4	EMG acknowledges and applauds that the Township of Greater Madawaska has had an asset management plan (AMP) for many years. The AMP should be updated in support of the township working with GMFD to enhance their asset management strategy, emphasizing a robust asset replacement to assure uninterrupted quality of level of service provided, including station maintenance and replacement, equipment maintenance and replacement, and telecommunication system maintenance and replacement.	Mid-Term (4-6 years)	Staff Time	EMG noted that the Township of Greater Madawaska recently established an Asset Management Plan. It is important that the plan includes equipment, fleet, and infrastructure specific to the GMFD. Fire protection services is a municipal duty mandated through the <i>FPPA</i> , 1997. Requirements to meet the needs and circumstances of the township require specialized equipment that is expansive, and which has suggested replacement and maintenance schedules identified through best practice documents supported by accreditation agencies and Section 21 committee.
5	The GMFD should develop and implement a public fire safety education program and a prevention program, including fire inspection and fire investigation.	Short-term (1 - 3 years)	Staff time and FTE \$20,000 to \$40,000/yr.	Under Section 2 (1) (a) of the <i>FPPA</i> , 1997, it is the responsibility of the municipality to have a public education and prevention program. The requirement is recognized in the Township of Greater Madawaska E&R By-Law 11-2014. However, currently there is no program or staffing for the program.

Rec #	Recommendation	Suggested Timeline	Estimated Cost	Rationale
6	The Township of Greater Madawaska needs to develop a comprehensive CRRP that aligns with the CRA.	Immediate (0-1 year)	Staff time	With the risks to the township identified, the CRRP will aid in prioritizing who, what, when, and how these will be lessened or mitigated.



SECTION 3

Fire Department Divisions

- | | |
|---|--|
| 3.1 Community Safety – Four Lines of Defence | 3.9 Training Documents and Training Records |
| 3.2 Organization Structure | 3.10 Promotional Process |
| 3.3 Fire Inspections, Fire Prevention, Fire Investigations and Public Education | 3.11 Fire Suppression/Emergency Response |
| 3.4 Determination of Current Staffing Requirements | 3.12 Recruitment and Retention of Volunteer Firefighters |
| 3.5 Training and Development | 3.13 Use of Personal Vehicles for Response |
| 3.6 Staffing Levels and Workload | 3.14 Suppression Staffing vs. Call Volumes |
| 3.7 Training Facility | 3.15 Communications |
| 3.8 Training Programs | 3.16 Health, Fitness & Wellness |

SECTION 3: FIRE DEPARTMENT DIVISIONS

Within the scope of work of the MFP, EMG reviewed the capabilities of existing staffing and identified future needs for each of the divisions including Suppression, Training, Prevention, and Administration.

3.1 Community Safety – Lines of Defence

Even though the OFM community safety model revolves around three specific lines of defence - Public Fire Safety Education, Fire Safety Standards and Enforcement, and Emergency Response – EMG views Emergency Management as the fourth inclusive line of defence and have added this into the overall concept of community safety.

1. **Public Fire Safety Education** – educating residents has proven to be the most effective means in reducing and preventing the incidences of fire and property damage. Reducing the number of fires before they start and identifying how the township will continue to meet the fire education needs while the township grows.
2. **Fire Safety Standards and Enforcement** – ensuring that the inspection and enforcement of fire codes occur so buildings meet the required safety standards.
3. **Emergency Response** – the availability of well trained and well-equipped firefighters to respond and effectively mitigate the incident. The staff, equipment and fire station locations impact how the emergency is mitigated.
4. **Emergency Management** – a municipality is legislated to have an emergency preparedness program to ensure the safety of the residents of the community by having a training, education, response, and mitigation plan in place for any possible emergency the community may encounter.



Along with these four lines of defence, the following industry best practices help to inform a fire department of industry expectations. Neither the NFPA nor the FUS are legislated requirements, and do not have to be followed, but utilizing them to improve a community's fire service is highly regarded and encouraged by EMG.

3.1.1 National Fire Protection Association 1201

The NFPA Standard 1201 – *Standard for Providing Fire and Emergency Services to the Public* makes note of the services that should be offered and how they are to be delivered based on the composition of an emergency service.

Section 4.3.5 notes:

The Fire and Emergency Services Organization (FESO) shall provide customer service-oriented programs and procedures to accomplish the following:

- Prevent fire, injuries and deaths from emergencies and disasters
- Mitigate fire, injuries, deaths, property damage, and environmental damage from emergencies and disasters
- Recover from fires, emergencies, and disasters
- Protect critical infrastructure
- Sustain economic viability
- Protect cultural resources

To accomplish this, an FESO must ensure open and timely communications with the Chief Administrative Officer (CAO) and Governing Body (council) to create a masterplan for the organization. The FESO must also ensure there are mutual aid and automatic aid programs in place, along with an asset control system and maintenance program.

To provide an emergency service with a clearer focus on what the ultimate goals for emergency response criteria are, the NFPA suggests that response times should be used as a primary performance measure in emergency services. NFPA 1720 refers to goals and expectations for volunteer emergency services which have been incorporated into the evaluation of the emergency services' response and staffing needs.

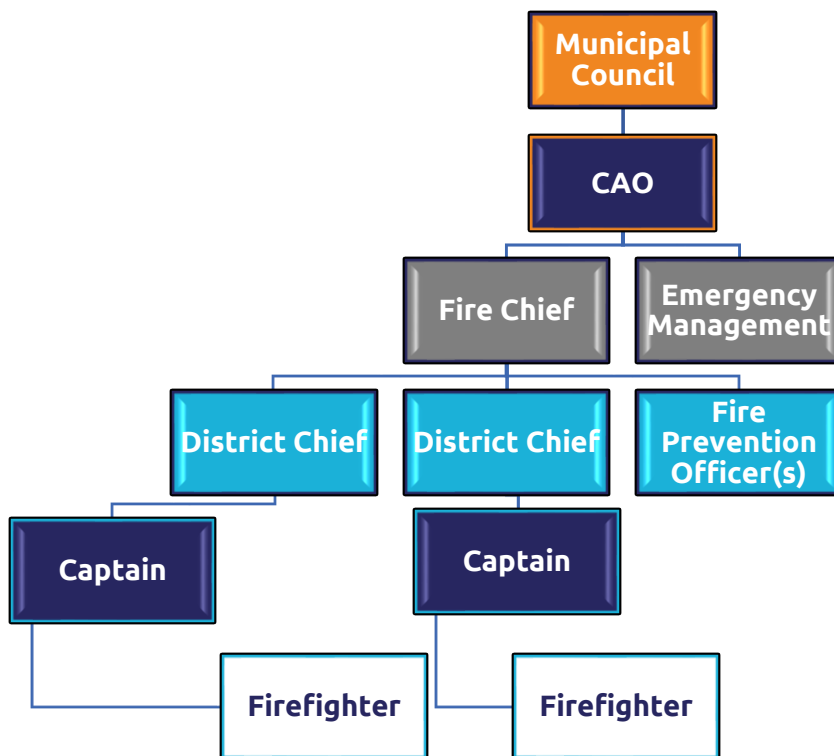
3.2 Organization Structure

Historically, fire department organizational structure has been identified as a scalar organization¹⁵. The structure is based on establishing an unbroken line of authority where orders are issued from the highest levels of management on down through an established chain of command. A scalar organization can be visualized in the form of a pyramid.

¹⁵ Article in Firehouse by Dr. Harry Carter entitled Do You Know What an Organization Is? Accessed from <https://www.firehouse.com/leadership/article/11699296/applying-organization-to-fire-departments>.

The GMFD organizational chart is a good example (copied from Figure #2). At the top, you have the fire chief to whom reports two district chiefs and fire prevention officer(s).

EMERGENCY SERVICES ORGANIZATIONAL CHART



The organizational chart represent the structure and reporting relationships in 2014. EMG’s review of the GMFD’s current organizational structure presents some discrepancies. For instance, although the 2014 organizational chart indicates that fire prevention officer(s) report to the fire chief, there is no current fire prevention officer within the department. Furthermore, the current GMFD structure includes lieutenant positions reporting to captains. The 2014 organizational structure does not show lieutenant positions within the department.

The 2014 organizational structure does not accurately represent the current chain of command, with no references to the two fire stations operated under the GMFD. EMG’s review of the current organizational structure suggests a clearer reporting relationship, where each of the two district chiefs are assigned a fire station with captains, lieutenants, and firefighters under their command. EMG recommends that the GMFD update the 2014 organizational chart.

Also, the 2014 organizational chart does not indicate any administrative support to the fire chief or district chiefs. Many volunteer and composite fire services undervalue the effectiveness and efficiency of administrative support to the fire chief. The technological tools available in the workplace allow

managers and executives to be more autonomous than ever before. Online calendars, mobile devices, and email have all but eliminated the need for letters and day planners.

Leaders at all levels have the tools in their pocket to manage their own schedules and easily respond to clients' and employees' questions. Yet, these are not the tasks top executive leaders are hired to perform. Organizations that employ talented administrative assistants to complete these tasks reap a wide range of benefits. EMG recommends that the Township of Greater Madawaska provides dedicated administrative support to the GMFD.

Another issue noted by EMG pertained to the workload of the fire chief. During interviews with senior management and several supervisory and operational staff within the GMFD, EMG noted that inherent to the position is a wide range of responsibilities, including clerical/administrative duties, executive/managerial duties, as well as operational duties involving suppression, training, and prevention functions. There appears to be a misalignment of the roles and responsibilities, as well as expectations in the fire chief functions, affecting performance of the GMFD.

First, EMG noted that the fire chief is a part-time position. The fire chief position does not have a written job description. Roles and responsibilities of the fire chief are found in section three of the 11-2014 By-Law: *Being a By-Law to Establish a Fire Department*. EMG's review revealed that roles and responsibilities prescribed in the 11-2014 By-Law include:

- The Fire Chief shall report to the CAO for the proper administration and operation of the fire department including all fire department functions and programs.
- The Fire Chief shall implement all approved policies and shall develop such SOPs and guidelines, general orders, and departmental rules as necessary to implement the approved policies, and to ensure the appropriate care and protection of fire department personnel and fire department equipment.
- The Fire Chief shall periodically review policies, orders, rules and operating procedures of the fire department, and may establish an advisory committee consisting of such firefighters as the Fire Chief may determine from time to time to assist in these duties.
- The Fire Chief shall submit to the CAO for Council approval, the annual budget estimates for the fire department, an annual report and any other specific reports requested by the CAO or Council.
- Each division of the fire department is the responsibility of the Fire Chief and under direction of the Fire Chief or the firefighter designated by the Fire Chief. Designated firefighters shall report to the officer in the hierarchy established in the approved Organizational Chart, Appendix A. Firefighters shall carry out all orders of the fire department officers and the Fire Chief.

- The Fire Chief shall take all proper measures for the prevention, control and extinguishment of fires and the protection of life and property, and shall exercise all powers mandated by the *FPPA*, and the Fire Chief shall be specifically empowered to authorize:
 - The pulling down or demolishing any building or structure to prevent the spread of fire.
 - All necessary actions which may include boarding up or barricading of buildings or property to guard against fire or other dangers, risk, or accident, when unable to contact the property owner.
 - The recovery of expenses incurred by such necessary actions for the Corporation in the manner provided through the *Municipal Act* and the *FPPA*.

Under the 11-2014 By-Law, the fire chief is also responsible for all human resources functions with respect to the GMFD staff:

- The Fire Chief may hire any qualified person as a District Chief, fire prevention officer, captain, or firefighter, subject to the approved hiring policies of the Township of Greater Madawaska up to the maximum staffing compliment approved by Council.
- Persons hired as firefighters to provide fire protection services shall be on probation for a period of 12 months, during which period they shall take such training and examinations as may be required by the Fire Chief.
- The employment of a District Chief, fire prevention officer, captain, or firefighter may be terminated without cause by the Fire Chief at any time within the probationary period. The termination of a firefighter within his/her probationary period is not subject to review as described in parts 23 to 26 below.
- The Fire Chief may reprimand, suspend, demote or dismiss any firefighter for an infraction of any provisions of this By-Law, policies, general orders, and departmental rules or for any other conduct that, in the opinion of the Fire Chief, would be detrimental to the discipline, efficiency, operation or reputation of the fire department. A suspension may be with or without pay, and for a period thought to be necessary by the Fire Chief in his/her sole discretion. The Fire Chief may consult the CAO prior to reprimanding, demotion, or dismissal.

It is standard practice in the volunteer fire service structure to have the fire chief holding administrative/clerical/managerial, and operational duties. However, with the growth of a community and the increased demands on a fire chief relating to fire prevention and training requirements, this model has not been proven to be effective. As such, EMG recommends that the Township of Greater Madawaska make the GMFD fire chief position a full-time position. In addition, EMG recommends that the fire chief job description be rewritten to emphasize the executive functions associated with the

position. Furthermore, EMG recommends a review of the district chief position and roles to clearly delineate the responsibilities and expectations of the position within the context of operations.

EMG noted that the district chief position has been assigned an honorarium. EMG suggests that the apparent misunderstanding/ misalignment surrounding the roles and responsibilities of the district chief position may contribute to an ineffective use of an honorarium. By clarifying roles and responsibilities there will be greater value garnered for the monetary value assigned to the district chief position. There should be clear iterations as to performance expectations, including benchmarks to be met and number of working hours to accomplish benchmarks.

Furthermore, during the administrative review, EMG noted that the first two lines of defence, public fire safety education and fire safety standards and enforcement, did not have a clear structure. There is no clear fire prevention policy identifying roles and responsibilities. The reporting structure is somewhat nebulous. The 2014 organizational chart shows a reporting relationship between the fire chief and fire prevention officers. Further, the appendix "B" of the 11-2014 By-Law identifies fire prevention and public education services:

Fire Prevention and Public Education

1. Selection of appropriate programs
2. Role as chief fire official
3. Role of Assistant to the Fire Marshal re prevention
4. Input into fire prevention policy development
5. Code development input
6. Development of fire prevention by-laws
7. Inter-action with building department
8. Inter-action with other government agencies
9. Inspection practices, including:
 - Complaint inspections
 - Conducting routine inspections per fire prevention and public education policy
 - Dealing with code compliance issues (mandated)
 - Enforcing municipal by-laws
 - Conducting inspections, preparing reports, and issuing written responses to requests
10. Public education practices, including:
 - Providing routine education programs as per fire prevention and public education policy

- Facilitating smoke alarm initiatives
- Providing access for media
- Delivery of specialized programs

EMG recommends that GMFD establish a Fire Prevention and Public Education Division. For that purpose, EMG recommends a process mapping exercise to define the roles and responsibilities and the expectations for this division. The process mapping would also be beneficial in informing a robust policy for the section. EMG also recommends a study of the fire prevention related salaries, wages, and benefits to assure a sustainable fire prevention program model.

Some options for the Fire Prevention and Public Education Division are:

- Develop a Fire Prevention and Public Education Division from existing staff.
- Partner with neighbouring fire department to share fire prevention staff through an automatic aid agreement.
- Contract out a certified fire prevention officer from a neighbouring department with a pay for service agreement based on a GMFD developed fire inspection schedule and public education scheduled program approved by the GMFD fire chief.

The current Fire Prevention and Public Education program does not have a supervisory position within its chain of command structure. EMG recommends that consideration be given to the addition of a supervisory position like that of a captain position to make it more effective and efficient in achieving the objectives of the GMFD's Fire Prevention and Public Education program. This position can be a volunteer position supporting either option proposed above as the structure of the GMFD's Fire Prevention and Public Education.

3.3 Fire Inspections, Fire Prevention, Fire Investigations, and Public Education

A review and analysis of the present staffing and deployment model was conducted, keeping in mind industry standards, along with present and expected future service delivery requirements.

With respect to public and life safety education, inspection, and fire investigation, measurable targets and areas for ongoing improvement were developed based on GMFD data between 2017 and 2020 applied against NFPA 1730: *Organization and Deployment of Fire Prevention Inspection and Code Enforcement, Plan Review, Investigation, and Public Education Operations*, 2019 Edition.

3.3.1 Fire Prevention Section

EMG reviewed the GMFD's Fire Prevention and Public Education program, identifying strengths, gaps, and areas for growth and improvement. The Fire Prevention and Public Education program is under

the leadership of the GMFD fire chief responsible for delivery of the program, as well as several other managerial duties. Currently there is no GMFD staff assigned to fire prevention and public education duties. All fire prevention duties are tasked with the GMFD fire chief. However, the current fire chief does not have the training necessary to perform inspection, investigation, or Chief Fire Official's duties outlined in the Ontario Fire Code under the *FPPA*, 1997.

Fire prevention inspections can be categorized by their complexity, and based on the complexity of inspections, there is a requirement of differing levels of technical knowledge. The *NFPA 1031: Standard for Professional Qualifications for Fire Inspector and Plan Examiner* recognizes these different skills required for fire inspectors performing basic or complex inspections. Considering the current building stock¹⁶ (Figure # 3), EMG recommends that the GMFD Fire Prevention policy identifies the level of qualification for a fire inspector to be NFPA 1031 Level 1. This will ensure a competent level of proficiency and ability to conduct fire prevention inspections for the noted building stock identified in Figure #3.

¹⁶ OPFES 2023 Community Risk Assessment document prepared by EMG Inc.

FIGURE #3 – TOTAL NUMBER OF OCCUPANCIES BASED ON 2022 MPAC DATA

Property Code Occupancy Classification	Total Number of Occupancies
100 Series: Vacant Land	0
200 Series: Farm	187
300 Series: Residential	2,023
400 Series: Commercial	6
500 Series: Industrial	0
600 Series: Institutional	0
700 Series: Special & Exempt	0
800 Series: Government	0
Total of All Occupancies	2,216

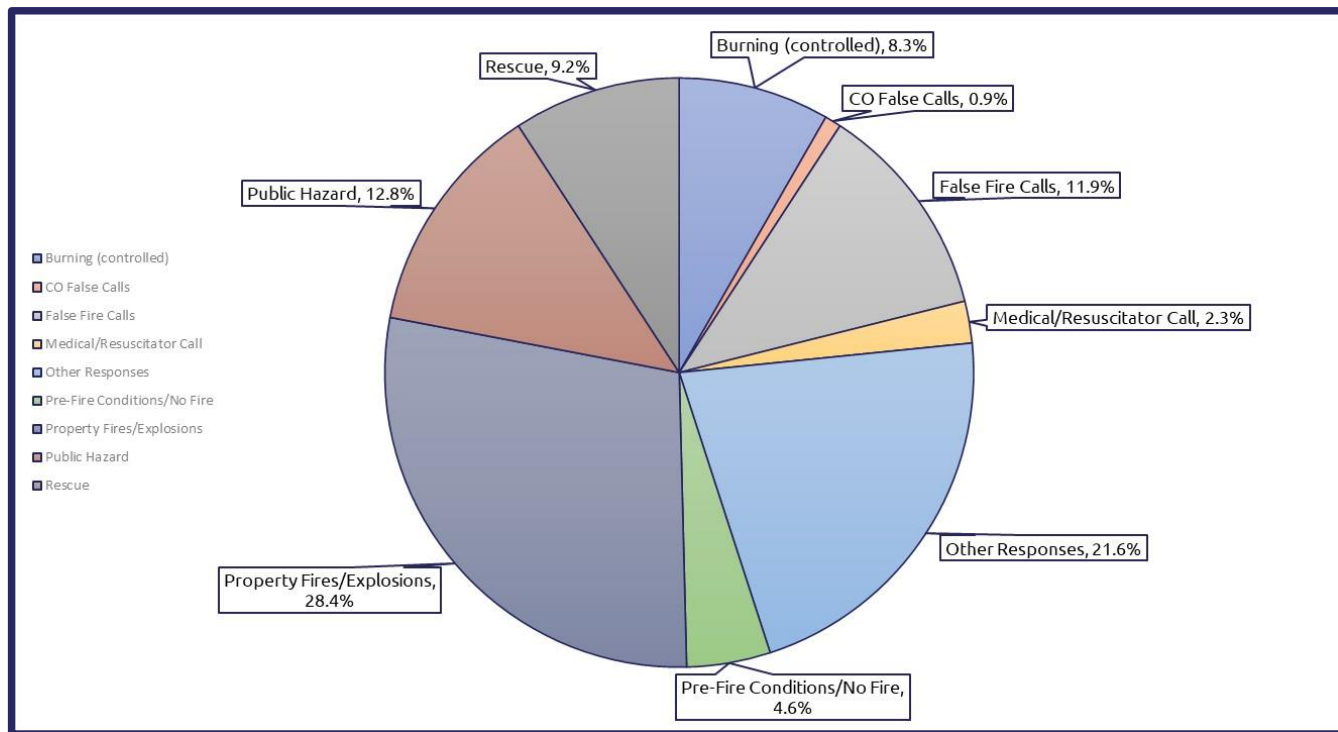
When evaluating the GMFD’s fire prevention endeavours, it was apparent that its strength pertained to public education functions, where duties are divided amongst members of the two fire stations. Although corporate policies, organizational operating guidelines, or procedures, and identified service levels refer to fire investigation as the third pillar of the Fire Prevention and Public Education, fire investigation functions are limited and the responsibility of the fire chief. EMG recommends that fire investigation duties should become responsibilities tasked to GMFD’s Fire Prevention and Public Education Program. It is well known in the fire protection services field that fire investigation contributes to public education and fire prevention; these areas complement each other.

Fire investigation and fire prevention, including public education go hand in hand to developing a successful and wholesome fire prevention/public education program. Currently, it does not appear that fire investigations inform the public education and inspection programs in the successful reduction or elimination of loss of property and/or life in the township. A more heightened level of communication between the fire chief who investigates the fires and the fire station staff would enhance public fire safety education programs.

Within GMFD, property fires/explosions account for 28.4% of all incidents reported to the OFM from 2017-2020. However, other responses should be investigated to provide an informative overview of incidents in the township that would better inform public education and prevention in the reduction

and elimination of emergency calls. For that reason alone, GMFD Fire Prevention and Public Education program should be responsible to investigate, or at the very least, participate in all fire related incidents.

TABLE #3: PERCENTAGE OF FIRE CALLS



With respect to Public Fire and Life Safety Educator (PFLSE), GMFD does not have a dedicated volunteer staff responsible for public education functions. EMG noted that one staff has received specific training in public fire safety education. However, the volunteer is not adequately used in this capacity. Given the importance of the first two lines of defence by the legislated duties conferred to a township under article 2 (1) (a) of the *FPPA*, 1997, EMG recommends that a job description be developed to clarify the roles, responsibilities, and expectations for the GMFD’s PFLSE. Further, EMG recommends that the identified PFLSE position receive an honorarium commensurate to the workload determined by the GMFD.

Furthermore, EMG noted that there is a rudimentary fire prevention policy developed in 2017 (Fire Prevention Policy 8-02) but no SOGs pertaining to functions for fire prevention and public education services. EMG recommends that SOGs be developed pertaining to operability of fire investigation functions, public fire and life safety education, and fire inspection within the framework of the GMFD’s Fire Prevention Policy.

The GMFD’s Fire Prevention and Public Education program is allocated a portion of the budget (cost code 21324). However, EMG noted that the GMFD did not conduct inspections for at least the last

four years. The rationale for the expenditure allocation is unknown. The cost of prevention functions should be reviewed using the assessment tool provided in NFPA 1730. Further, expenditures for fire investigation does not have a dedicated cost code. Hence, EMG could not evaluate the cost of fire investigation.

Fire prevention, including fire inspection is allocated 2.2% of the operating budget (excluding officer honorarium). EMG recommends an accounting review of the operating budget for the GMFD's Fire Prevention and Public Education Program, including a detailed tracking of all costs associated with fire prevention. This exercise would support the long-term sustainability of prevention and public education as the first two lines of defence within the fire protection services.

3.3.2 Public Fire and Life Safety Educator (PFLSE)

The GMFD's Public and Life Safety Education Program is limited to Fire Prevention Week in October of each year. Although one volunteer firefighter is trained as a PFLSE, the GMFD does not utilize their skills in PFLSE functions.

Community events reach out to all demographic groups in the community including race, gender, and age. There are plenty of opportunities for community events, including a variety of activities from farming events to seasonal events such as the ski season. In addition to calendarized community events, there should be an established school program, as well as an organized Fire Prevention Week in October. Furthermore, the GMFD should have a smoke alarm program. EMG noted that a GMFD smoke alarm program was placed in abeyance due to COVID-19; the program should be re-engaged.

The weakness of the PFLSE program is supported by the community survey where respondents valued response to emergency but did not value the public education program. The lack of public education program within GMFD is a contributing factor to the community undervaluing the benefits of a successful PFLSE program.

Social media offers platforms to introduce your community to your fire department and inform residents about how to reduce their risk from fire and life safety hazards. These platforms can also be a great resource to recruit members and tell stories about your accomplishments¹⁷. GMFD utilizes the township's web page in limited capacity. If used creatively, social media can also help introduce the work of the fire department to a younger audience through community risk reduction outreach campaigns¹⁸.

¹⁷ *Using Social Media to Reach Out to Your Community* retrieved from <https://www.usfa.fema.gov/blog/cb-120821.html>

¹⁸ Going live: 'Captain Ben' utilizes social media for station tours, safety education, fire prevention outreach by Rachel Engel Accessed August 10, 2022, from <https://www.firerescue1.com/fire-products/fire-safety-for-children/articles/going-live-captain-ben-utilizes-social-media-for-station-tours-safety-education-fire-prevention-outreach-udwgDXqnesnZcZHR/>.

GMFD should take advantage of the knowledge and skills of their trained volunteer as a PFLSE. The GMFD volunteer firefighter was successfully trained and certified to NFPA 1035: *Standard on Public Fire and Life Safety Educator, Public Information Officer, Youth Firesetter Intervention Specialist, and Youth Firesetter program Manager Professional Qualifications*. The new O. Reg. 343/22: *Firefighter Certification* will require all firefighter performing PFLSE duties to be certified to the NFPA 1035 professional Qualifications Standard as of July 1st,2026.

Another issue with the PFLSE program relates to the lack of senior programs, given the active community halls across the township. Other than request for presentations from local social service organizations, there is no program, to date, offered through the various township's active community centres for the elderly residents.

Another issue pertains to the level of record keeping, tracking all events associated with the PFLSE. A robust record keeping system would assist in identifying weaknesses in the program and justify yearly budget adjustments to assure long-term sustainability of the program. These administrative issues could be avoided through a specific fire prevention policy accompanied with SOGs related to record keeping practices.

3.3.3 Fire Inspections

During the fire prevention review, EMG noted that GMFD did not conduct any inspections for the last several years. GMFD could not provide any inspection reports or inspection orders made under the *FPPA, 1997 (FPPA, 1997)*. According to the distribution of occupancies in the Township of Greater Madawaska, there could be approximately 40 occupancies to inspect. In addition to scheduled inspections, there could be inspections upon complaint or request. However, there is no recordkeeping for the past several years to evaluate the demands. Other prevention duties include fire safety plan reviews required under the *FPPA, 1997*. At the time of EMG's review of the GMFD fire prevention initiatives, there were three outstanding fire safety plan reviews from Ontario Power Generation's three dam facilities within the township.

Currently, the fire inspection and Chief Fire Official duties are the responsibility of the fire chief. The fire inspection functions require specialised competencies identified in the NFPA 1031: *Standard for Professional Qualifications for Fire Inspector and Plan Examiner*. The training and education are of utmost importance given the life safety risks associated with fire inspections. EMG recommends that only qualified fire inspectors should be assigned fire inspection duties. EMG is also recommending that GMFD conduct an audit to identify buildings requiring an inspection and to establish a frequency inspection schedule that would be manageable for GMFD. The best practices for frequency inspection schedule are to arrange occupancy types by level of risk and prioritize the level of risk associated with one-year, two-year, or three-year inspection rotations.

A compounding factor affecting inspection workload pertains to the anticipated population growth and the projected increase in inspectable occupancy buildings. This growth will only amplify the current fire inspection challenge. As suggested, the inspection schedule issue can be mitigated through a robust inspection policy, including a frequency inspection schedule.

A review of fire inspection workload indicated that an inspection requires approximately (on average) 6.5 hours to complete (Table #3), based on NFPA 1730: *Organization and Deployment of Fire Prevention Inspection and Code Enforcement, Plan Review, Investigation, and Public Education Operations*, 2019 Edition.

TABLE #4: FIRE INSPECTION & FIRE INVESTIGATION AVERAGE COMPLETION TIME WORKSHEET

Task	Time to complete Task	Administration Time	Travel Time	Follow up Time	Total Time
Inspection	3 hrs.	1 hr.	1 hr.	1.5 hrs.	6.5 hrs.

Without considering all other duties, the analysis of staff requirement to complete 40 inspections would require one full-time staff. With a frequency inspection schedule in place, EMG estimated the number of annually required inspections to be 40, which would translate to 15% of a full-time staff to effectively meet the inspection needs (Table #4).

*Requirement considerations are based on NFPA 1730 worksheet.

TABLE #5: FIRE INSPECTION TOTAL HOURS & STAFFING WORKSHEET

Task	Average Number Per Year	Average Time to Complete	Total # of Hours Per Year	Number of Days Per Year*	Personnel Required For 32.5 Days of Work (Total Days for Inspections)
Inspection	40	6.5 hrs.	260 hrs.	32.5 days	0.14 staff

* Based on an 8-hour shift.

**Based on personnel working on average 227 days per year (based on 52 weeks, 13 statutory holidays, and an average of 4 weeks vacation [excluding sick time]): 32.5 days divided by 227 days = 0.14 staff/year.

From the staffing analysis conducted, the GMFD fire inspection staffing model supports a part-time fire inspector or contractual certified fire inspector to meet the fire inspection requirements of the Township.

3.3.4 Fire Investigation

With respect to fire investigation services provided by the GMFD, a fire investigation staffing exercise based on the NFPA 1730 was performed. The analysis was based on GMFD data from 2017-2020. The analysis indicated that 28.4% of all emergency call types were for property fire/explosion. Between 2017-2020, the GMFD responded to 62 property fire/explosion fires. Table #5 breaks down the number of fire/explosions per year.

TABLE #6: PROPERTY FIRE/EXPLOSION FROM 2017 THROUGH 2020

	2017	2018	2019	2020
# of Fire Investigations	16	17	12	17

A review of current workload from the GMFD’s Fire Prevention and Public Education Program would suggest that .70 of a staff would effectively and efficiently manage the fire investigation functions (Table #6). However, at this time, EMG noted that fire investigation is done by the GMFD fire chief.

TABLE #7: FIRE INVESTIGATION TOTAL HOURS AND STAFFING WORKSHEET

Task	Average Number Per Year	Average Time to Complete	Total # Of Hours Per Year	Number Of Days Per Year*	Personnel Required For 32.5 Days of Work (Total Days for Inspections)
Inspection	16	80 hrs.	1,280hrs.	160 days	.70 staff

*Based on an 8-hour shift.

**Based on personnel working on average 227 days per year (based on 52 weeks, 13 statutory holidays, and an average of 4 weeks vacation [excluding sick time]): 160 days divided by 227 days = 0.70 staff/year.

Although it is the power of the fire chief under sub-section 6(5) of the *FPPA*, 1997 and rights of entry to investigate the origin, cause, and circumstances of fires under section 14, the fire chief has the

discretion to delegate any of his power under sub-section 6(6) of the *FPPA*, 1997. EMG recommends that fire inspection and fire investigation functions be delegated to a dedicated member of the GMFD or contracted out. The number of inspections and investigations from the Township of Greater Madawaska justifies the hiring of one fire prevention officer or the contractual agreement for the service of one certified fire prevention officer from a surrounding fire department.

It is worth noting that the results of fire investigations assist in identifying trends that are used in the development of building and fire codes, public fire and life safety education, and fire prevention initiatives. Typically, fire investigation is part of the fire prevention officer's role.

Further, EMG recommends that GMFD fire investigator should be trained to NFPA 1031, NFPA 921, and the fire investigation operations should align with the new NFPA 1321: *Standard for Fire Investigation Unit* expected to be released in 2024. Under the Ontario Regulation 343/22 made under the *FPPA*, 1997, as of the 1st of July 2026, fire investigator will have to be trained to the NFPA 1033: *Standard for Professional Qualifications for Fire Investigator*.

3.4 Determination of Current Staffing Requirements

To assist fire departments in determining present and future staffing needs, NFPA 1730: Standard on Organization and Deployment of Fire Prevention Inspection and Code Enforcement, Plan Review, Investigation, and Public Education Operations outlines a five-step process within Annex 'C' of the standard. The five-step process involves a review of the following items:

- Identifying the scope of desired services, duties, and expected outputs.
- Review of the Fire Prevention and Public Education program's overall time demands in its efforts to offer services.
- Review of hours presently documented, coupled with the hours required to meet annual goals of the branch.
- The actual availability of branch personnel factoring in vacation and other absences.
- Estimating the total number of personnel required based on the previous four steps.

By utilizing this five-step process the GMFD would be able to determine the fire prevention level based on the community's local needs and circumstances. EMG recommends that the GMFD revamps their 8-02 Fire Prevention Policy through the lens of the NFPA 1730 and implement the revamped policy with accompanying SOGs, detailing specific functions of fire inspection, fire investigation, and public fire and life safety education.

3.5 Training and Development

A fire service can only provide adequate levels of protection to its community if it is professionally trained (and equipped) to deliver these services. Firefighters must be prepared to apply a diverse and demanding set of skills to meet the needs of a modern fire service. Whether assigned to Operations, Training, Fire Prevention (Community Risk Reduction), or Administration, staff must have the knowledge, skills, and abilities necessary to provide reliable fire protection.

EMG evaluated current educational programs and identified benchmarks and targets including key deliverables based on GMFD fire protection delivery model and community needs. EMG also reviewed the GMFD training model, capacity, and requirements and identified gaps in service and operating needs.

Measurable targets and quantifiable areas for ongoing improvement were developed based on GMFD levels of service applied against NFPA 1201: *Standard for Providing Fire and Emergency Services to the Public*; NFPA 1041: *Standard for Fire and Emergency Services Instructor Professional Qualifications*; NFPA 1006: *Standard for Technical Rescue Personnel Professional Qualifications*; and NFPA 2500: *Standard for Operations and Training for Technical Search and Rescue Incidents and Life Safety Rope and Equipment for Emergency Services*.

The staffing exercise was based on a standard workload flow analysis against the training job performance requirements identified in NFPA 1041.

The *FPPA*, 1997) identifies the responsibilities of a municipality relating to fire protection services:

- 2 (1) Every municipality shall,
- (a) establish a program in the municipality which must include public education with respect to fire safety and certain components of fire prevention; and
- (b) provide such other fire protection services as it determines may be necessary in accordance with its needs and circumstances.

To that end, Ontario municipalities adopt an Establishing and Regulating Fire Department By-Law (E&R By-Law) identifying the level of services to be provided based on needs and circumstances. The E&R By-Law informs the fire department about the type and level of training required. In the summer of 2022, Ontario Regulation 343/22 Firefighter Certification under the *FPPA* came into force, identifying that any firefighter performing a fire protection service is certified, at a minimum, to the corresponding certification standard set out in the regulation:

- 2 (1) Every municipality, and every fire department in a territory without municipal organization, must ensure that its firefighters perform a fire protection service set out in Column #1 of Table #1 only if, on or after the corresponding day specified in Column #3 of that Table,

- (a) the firefighter performing the fire protection service is certified, at a minimum, to the corresponding certification standard set out in Column #2 of that Table.

In addition, Part III of the *OHSA* identifies the duties of employers stating that:

- 25 (2) Without limiting the strict duty imposed by subsection (1), an employer shall,
- (a) provide information, instruction, and supervision to a worker to protect the health or safety of the worker,
- (c) when appointing a supervisor, appoint a competent person; and
- (h) take every precaution reasonable in the circumstances for the protection of a worker.

Complimenting the *OHSA* are the Section 21 Firefighter Guidance Notes that provide best practices for protecting the health and safety of fire service workers in Ontario. Of particular importance to training is Part 7 of the Guidance Notes which focuses on training.

EMG suggests a career path model for all specialized functions/positions within the GMFD. Firefighting is a high-risk profession, and training is essential to enable firefighters to respond more efficiently to emergencies, reducing the property damage caused by fire, loss of life, and public hazards, as well as reducing personnel injuries. The current structure of the GMFD training does not meet their training needs. EMG conducted an analysis of the training model and identified inefficiencies in curriculum development, delivery of training, and trainer competencies.

EMG recommends that all training curricula should align with specific knowledge and skill requisites of the NFPA Professional Qualification standard relevant to the GMFD identified level of services. There are several vendors who provide state-of-the-art instructional kits to assist in the development and delivery of training (e.g., IFSTA or Jones and Bartlett).

3.6.1 Training and Professional Development

Regarding training and professional development, *NFPA 1201 – Providing Fire and Emergency Services to the Public* stipulates:

4.11.1 Purpose. *"The Fire and Emergency Service Organization (FESO) shall have training and education programs and policies to ensure that personnel are trained, and that competency is maintained to effectively, efficiently, and safely execute all responsibilities."*¹⁹

NFPA 1500 Standard on Occupational Safety, Health, and Wellness Program states that:

¹⁹ "Standard for Providing Fire and Emergency Services to the Public," Retrieved January 30, 2022, <https://www.nfpa.org/codes-and-standards/all-codes-and-standards/list-of-codes-and-standards/detail?code=1201>

5.1.1. *"a fire department shall establish and maintain a training, education, and professional development program with a goal of preventing occupational deaths, injuries, and illnesses."*²⁰

NFPA 1500 also states that... *"training programs should include but not be limited to the following: community risk reduction (fire prevention, public education, investigation, etc.), health and safety, fire suppression, emergency medical, human resources (leadership, supervision, interpersonal dynamics, equal employment opportunity, etc.), incident management system, hazardous materials, technical rescue, information systems and computer technology, position-specific development (firefighter, company officer, chief officer, telecommunicator, investigator, inspector, driver/operator, etc.)."*²¹

The Commission on Fire Accreditation International (CFAI) has a specific section that evaluates the training component of a fire department. The CFAI states:

"Training and educational resource programs express the organization's philosophy and are central to its mission. Learning resources should include a library; other collections of materials that support teaching and learning; instructional methodologies and technologies; support services; distribution and maintenance systems for equipment and materials; instructional information systems, such as computers and software, telecommunications, other audio-visual media, and facilities to utilize such equipment and services. If the agency does not have these resources available internally, external resources are identified, and the agency has a plan in place to ensure compliance with training and education requirements."

As previously identified, the OFM has moved towards mandatory NFPA-based training and certification for all firefighters in the province. Adoption of the NFPA Pro-Quals will strengthen and support the GMFD training program as well as ensure that GMFD complies with OFM mandates. According to By-Law 11-2014, NFPA Pro-Quals believed to be aligned with the mandatory training and certification are as follows:

- NFPA 1072: Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications.
- NFPA 1001: Standard for Fire Fighter Professional Standard Qualifications.
- NFPA 1002: Standard for Fire Apparatus Driver/Operator Professional Qualifications.
- NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications.
- NFPA 1021: Standard for Fire officer Professional Qualifications.
- NFPA 1031: Standard for Professional Qualifications for Fire Inspector and Plan Examiner.

²⁰ "Standard on Fire Department Occupational Safety, Health, and Wellness Program," Retrieved January 30, 2022, <https://www.nfpa.org/codes-and-standards/all-codes-and-standards/list-of-codes-and-standards/detail?code=1500>

²¹ NFPA 1500 Annex A.5.1.1

- NFPA 1033: Standard for Professional Qualifications for Fire Investigator.
- NFPA 1035: Standard on Fire and Life Safety Educator, Public Information Officer, Youth Firesetter Intervention Specialist and Youth Firesetter Program Manager Professional Qualifications.
- NFPA 1041: Standard for Fire and Emergency Services Instructor Professional Qualifications.

There are three over-arching factors when delivering training to firefighters:

1. **Initial training:** The training required to meet the competencies identified by the Authority Having Jurisdiction (AHJ).
2. **Refresher (maintenance) training:** Training that is ongoing and keeps firefighters current with their skills. This ongoing training is provided to firefighters and officers to ensure that previously acquired competencies are not lost or diminished with lack of use.
3. **Advanced training:** The training used to develop firefighters for the promotional process and succession planning. Courses and training are offered as part of their developmental process to prepare them and typically requires more time and effort on behalf of the firefighter. This training generally includes formal fire officer, fire prevention, fire investigation and fire education programs.

To verify, in a formal manner, that the delivery of training is meeting the related NFPA Pro-Quals training competency mandated through O. Reg. 343/22 Firefighter Certification, the delivery of training must identify the following:

- What training programs are required in relation to the services that the fire department is providing.
- The number of hours that are required to meet each of the required competencies identified in the regulation.
- Resources required to accomplish this training not limited to adequate curricula and qualified training instructor(s).
- Joint partnerships with bordering fire departments and private organizations that can be entered to achieve the training requirements identified.
- An annual program outline, at the start of each year, to be presented to the Fire Chief, with noted goals and expectations, which are based on current and identified future needs of the fire department, measured and reported-on regarding completion success rate at the end of each year.
- Robust and accessible training records.

With an increase in training requirements, as well as with consideration to future community growth, foreseen increase in call volumes, and implementation of a robust training records management system, restructuring GMFD training program to include a training officer position would ensure that GMFD will be able to meet the current and future training demands.

For the present time the responsibility for overseeing training could also be assigned to the district chiefs responsible for the Griffith and Calabogie fire stations, respectively. This will help the department in meeting the new provincial regulation pertaining to training and certification requirements. Eventually a dedicated training officer position could become a part-time (15-20 hours per week) to a full-time position, if required.

Consideration (for a full-time dedicated training officer position) would have to be given not only to the general hours of work, but also in relation to such things as:

- If expected to respond to calls outside of scheduled hours of work
- Evening training programs and practical evaluations
- Attendance at outside courses

3.6.2 Training Section Organizational Structure

As illustrated in the department organizational chart, GMFD does not have a Training Section. Training is the responsibility of GMFD's fire chief. The training schedule is developed with the assistance of the stations' officers and training is delivered at each station on a weekly basis.

During EMG's review of the GMFD's organizational structure, two issues pertaining to training were identified. The first issue relates to the lack of identification of a training section within the organizational chart. Training is one of the most important components of a fire department. Given that training is now mandated through O. Reg. 343/22: *Firefighter Certification*, makes it even more relevant now. EMG recommends that GMFD establish a Training Section. Stakeholders' Staff and Council's survey all identified training as an important function to assure quality of service delivery to the community. A Training Section would allow for organized training aligning with core services provided by the GMFD. A Training Section would afford curriculum development and implementation, as well as standardization of training. In addition, a Training Section would allow a more robust evaluation system to assure the value of training. Finally, a Training Section would provide adequate record keeping.

The second issue identified pertained to the delivery of training. More specifically, the lack of standardization created by a "silo" effect due to training being delivered at each fire station with limited cross-training available. EMG noted that, although there is a standardized training schedule developed and implemented by the fire chief, training level is different from one station to the other. The content or training delivery is also different. This model reinforces a "silo mentality" behaviour

and division between the Calabogie and Griffith fire stations. The township was created through the amalgamation of several townships; there is still residual feelings of protectionism from the amalgamation that is reinforced by a fire station centric training model.

When reviewing the training structure, EMG noted that there is limited cross-training between the two fire stations and a strong sense of belonging or identity to a specific station rather than to the GMFD. The current training model is reinforcing the sense of belonging to the Calabogie or Griffith station creating unhealthy competition or protectionism. GMFD would benefit from changes to the training model where training would be done in unison for all staff. There should be one training night attended by all staff from both stations to promote cooperation and a sense of belonging to one department instead of two stations.

In reviewing the current training model, EMG also noted that there is a lack of cross-training on equipment and fleet. Staff are training and develop familiarity to the equipment and fleet at their station with limited familiarity with equipment and fleet from the other station. This is somewhat alarming and creates a risk for the municipality and for adequate response to calls for service.

EMG recommends that the GMFD eliminates the individual training night at both stations in favour of a combined training night for all staff to promote unity and teamwork, as well as a sense of belonging to one fire service – GMFD. Training night should alternate from one station to the other to improve cross-training and familiarisation with all equipment and fleet within GMFD.

3.6 Staffing Levels and Workload

There are seventeen core fire protection services delivered by the GMFD, including but not limited to firefighting, vehicle extrication, HAZMAT, water and ice rescue, inspection, fire investigation, and public education. As mentioned earlier, the fire chief is responsible for the training with the assistance of officers and volunteer firefighters willing to be trainers. The training program is almost exclusive to firefighter training with limited training in other core operational services, such as pump operations, rescue, auto extrication (heavy), and HAZMAT.

Furthermore, there is no in-house training for specialty functions, such as public education, inspections, or fire investigations.

Training record keeping is the responsibility of officers for each station and the fire chief. However, coordination for record keeping and retention is the responsibility of the fire chief alone. GMFD invested into a valuable management software, known as Vector Solutions. This software allows for multi-users and sharing of documents. GMFD should take advantage of the capabilities of the software with respect to its record keeping functionalities and decentralize record keeping duties to allow coordination at the station level and monitoring functions at the chief level.

A Training Officer' job description identifies the following duties and responsibilities²²:

- Direct supervision of all fire, recruit, and officer development training sessions.
- Ensure all training sessions are done in a safe and effective manner, following all relevant safety regulations, including departmental and municipal guidelines and Occupational Health and Safety guidelines.
- Develop, coordinate, review and maintain training programs, manuals, lessons, and syllabus for fire personnel, personnel, recruits, and officer development.
- Develop, with the assistance of officers, an effective annual training schedule.
- Communicate with the department membership, to ensure all members are informed of training schedules, training updates, and special training opportunities.
- Monitors individual training records to ensure all members are maintaining minimum training requirements. Develops corrective action plans, and with the assistance of the officer group implements the action plans.
- Ensure all legally required training, as outlined in such legislation as the *OHSA*, including Section 21, and the Ontario Fire Code is completed in a timely manner with all fire department personnel.
- Research and develop effective training programs to address new or developing hazards within the fire service.
- Deliver or coordinate the delivery of fire service, recruit and officer training sessions.
- Ensure all required documentation related to training is maintained and submitted as per established protocols.
- Ensure training session preparation work is completed before scheduled training sessions to allow for effective use of training time.
- Monitor all fire department activities to identify potential training deficiencies and develop effective training programs to address these deficiencies.
- Assists the Fire Chief to ensure Fire Department systems and programs are developed and implemented.
- Ensuring firefighters and officers have the proper training and certification to provide department services and work in a safe manner adhering to the *OHSA*, and its regulations and the township's health and safety policies and procedures.

²² NFPA 1041: Standard for Fire and Emergency Services Instructor Professional Qualifications

- Assists the Fire Chief with creating, updating, and implementing policies, procedures, guidelines or protocols.
- Creates and maintains detailed records on all functions consistent with the requirements for giving evidence.
- Attends officer meetings.
- Assists the Fire Chief with the Fire Department's operating and capital budgets.
- Purchases materials, supplies and equipment in accordance with municipal policy.
- Communicates with members of the public in a professional and responsive manner.
- Other related duties as assigned by the Fire Chief or Deputy Fire Chief.

When considering all the roles and responsibilities of a Training Section to meet the training goals and objectives of the GMFD, EMG conducted a Standard Workflow analysis (SWF) to evaluate the appropriate staffing level for the GMFD training program. The SWF was based on the NFPA 1041: *Standard for Fire and Emergency Services Instructor Professional Qualifications* (NFPA 1041).

According to the NFPA 1041, the management of fire service training programs requires a manager, regardless of fire service affiliation or instructor level, who can accomplish the following tasks²³:

- Budgeting
- Resource management
- Management of personnel
- Management of instruction
- Program evaluation
- Training needs analysis
- Scheduling
- Goal setting
- Networking with other training agencies
- Technical writing
- Effective verbal and written communication

These tasks fall under the responsibility of the GMFD fire chief. According to the EMG's review of the GMFD training program, the GMFD training program includes one main training program/focus, which

²³ NFPA 1041: Standard for Fire and Emergency Services Instructor professional qualifications, 2019 Edition section E2 p.1041-25

is firefighting. It is worth noting that there is limited training in auto extrication and pump operation, as well as driver's training.

There is an annual training schedule prepared by the fire chief in collaboration with the station officers. Specific sections of firefighting knowledge and skills are delivered using a hybrid training methodology. The hybrid modal consists of a self-directed online training method for the knowledge component of the training requirements and an in-class training delivery for the physical or skills requisite component of the specific firefighting training sections. Firefighters are accountable to complete the self-directed online learning specific to a section prior to the weekly training night, where the corresponding skill requisite components are taught.

The current training program does not meet the requirements that are coming into force in 2026 and 2028 under the O. Reg. 343/22 made under the *FPPA*, 1997. Internally or externally, the GMFD will have to provide training for firefighters, officers, HAZMAT, pump operations, rescue (water and Ice), public education, inspection, and fire investigation.

Assuming that specialty training, such as public education, inspection, and fire investigation would be provided externally, the GMFD would still be responsible for the coordination, support, and training records management. Hence, the estimated number of days to properly manage 10 training programs a year would require 230 days (Table #7). Given that one person works on average 227 days a year (based on 52 weeks, 13 Statutory Holidays, and an average of 4 weeks vacation), to properly manage the current training program, the GMFD would require one full-time (workload divided by one-person work year [230 divided by 227 = 1.01 persons]) person.

TABLE #8: TRAINING STANDARD WORKFLOW CALCULATION IN DAYS

Topic	Criteria	Timeline
Administration	Include all aspect of managing the program, including budgeting, recordkeeping, and reporting.	Administrative duties: 30 days
Scheduling	Preparation and posting of annual, weekly, and/or daily schedule	Scheduling: 25 days
Direct Delivery	Several programs are the direct responsibility of the training officer to deliver, such as Recruit Orientation	40 days
Marking	Review and grading of exams/tests.	25 days
On-Shift Trainer Support	Support to four platoons at four stations	20 days
Program Evaluation	Review and update of programs to assure currency of learning materials	10 days
Training Needs Analysis	Evaluation of new programs to meet the needs of the GMFD	10 days
Coordination with External Training Providers	Several programs are offered by external training providers and require coordination with external agencies for smooth delivery	20 days
Curriculum Development	Development of lesson plans for all training programs	40 days
Training Facility	Maintenance of training facility to assure constant operational availability	5 days
Equipment & Training Prop Maintenance	Maintenance of equipment in proper working order	5 days

To adequately meet the current and future training needs of the GMFD, EMG recommends that GMFD creates a Training Section staffed with one training officer. There are options for the creation of the training officer complement:

1. Hire a full-time training officer.
2. Designate one volunteer position as a training officer with commensurate honorarium with the rank of captain.
3. If hiring a full-time Fire Chief, the role of training would also be part of that job description.

3.7 Training Facility

While a great deal of training can be accomplished through video training, in-class training, and even some hands-on training at the fire station, there is a need for actual live fire training by all the suppression staff. Unfortunately, GMFD lacks a full sized/comprehensive training facility to conduct regular hands-on programs, such as live fire training and other specialized programs that require more training props outside of those available at the fire station.

While GMFD does not have a training centre within its municipal boundaries, EMG noted that sharing of resources and partnering in training with surrounding fire departments is not a common practice. The opportunity to share training costs and resources, not to mention the opportunity to standardize training and equipment through the local mutual association is an unfortunate loss. The option to share training costs and resources would ensure that GMFD continues to be successful at ensuring NFPA-based training and certification is met.

As an alternative to the cost of designing, developing, and maintaining a training centre (which can be cost prohibitive for a community like the Township of Greater Madawaska) EMG suggests that GMFD take the opportunity provided by the OFM in booking their free service of the provincial Multi-Live Fire Training Unit (MLFTU). This is a mobile training unit that has multi-training capabilities (as noted in the following figure). The advantage of having access to such a unit is that it can be parked at a fire station and does not require a full site-specific yard/compound to use. Another advantage of such a unit is that it can be moved between fire stations. There are minimal operating costs associated with the use of the provincial MLFTU.

As an alternative, GMFD may consider purchasing such a training unit. The cost of these units can range greatly based on if it is purchased through a vendor or is an in-house design. The advantage of purchasing from a vendor is that all structural and engineering approvals have been addressed. The unit noted in the following photo is approximately \$500,000.

The cost of building such a unit can range from approximately \$100,000 to \$500,000. Brant County Fire Department recently purchased a used unit for less than \$100,000 and may be a good resource for the GMFD fire chief to contact. Whether it is a used, rented, or wholly purchased unit, the overall goal is to ensure that the firefighters are provided with live fire training annually.

FIGURE #4 – OFM MULTI-LIVE FIRE TRAINING UNIT



3.6.1 Small-Scale Training Facility

There is also the possibility of a public-private partnership where funding is secured between the township and third-party agencies that have a vested interest in fire suppression training.

A growing trend for training facilities is the use of shipping containers (also called sea-cans) due to the ease and flexibility of modifying the shipping container to design a facility that meets the NFPA 1402: *Standard on Facilities for Fire Training and Associated Props*. The use of shipping containers allows a fire department to custom design a facility that specifically meets their needs and allows expansion at a low cost in the future (Figure #5).

A two or three-storey structure for ladder training and firefighter emergency exiting such as bail out procedures from a second storey window can easily be accommodated with a shipping container training structure. A propane fed system can provide environmentally friendly fires for suppression and advanced training in fire behaviour. The designs are limitless in terms of what a department wants to incorporate into the facility. An analysis of what the fire department requires must be made to ensure that taxpayers' dollars are spent in the most efficient and cost-effective manner. While considering the possibility of new fire station locations, it may be cost-effective to build a small-scale training facility at the same time while ensuring the necessary space is considered for this new facility.

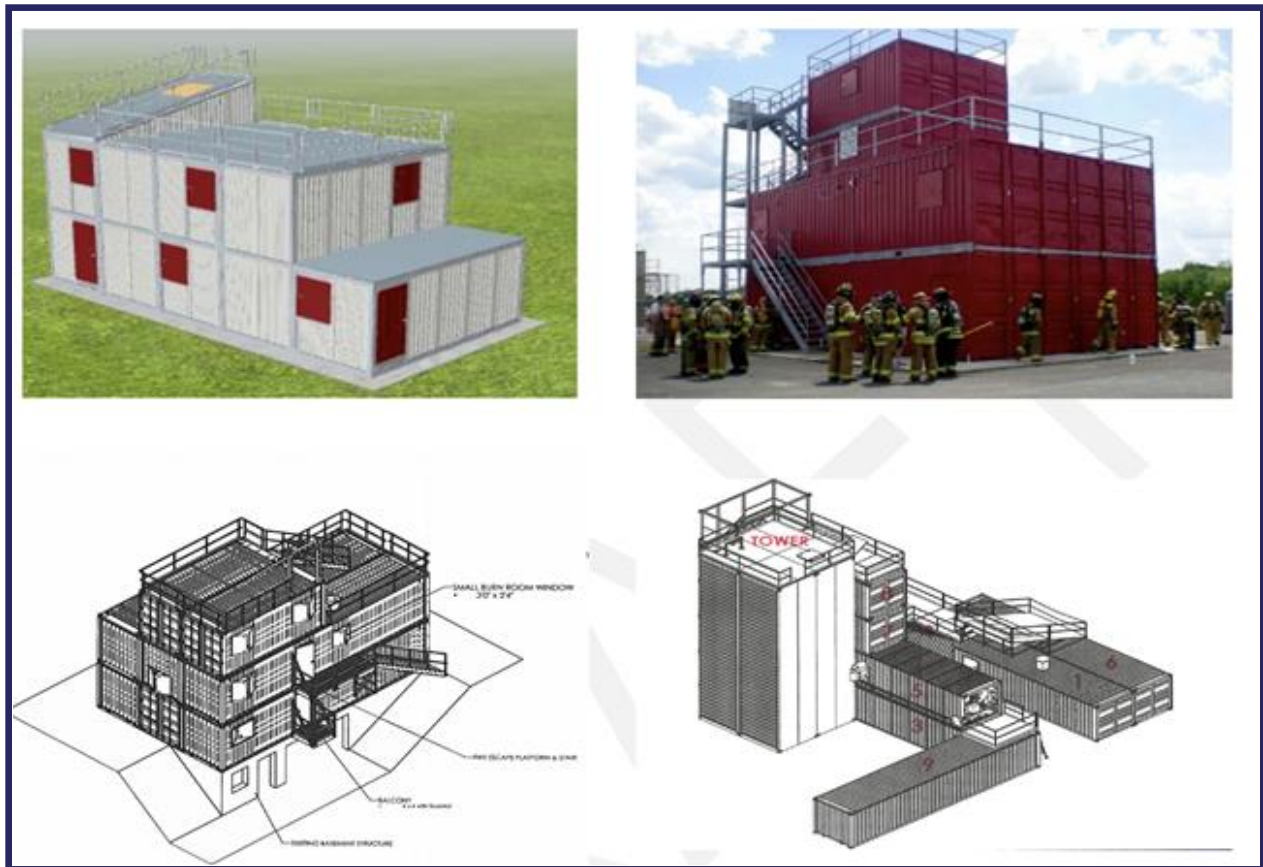
Note: *Prior to the building of such a facility, the fire chief would need to ensure that all environmental requirements are met by the contract. This could include the installation of proper run-off, catchment systems for contaminated water, and a properly engineered foundation for the facility.*

The benefits of the hands-on practical component of a small-scale training facility are numerous as firefighters can develop new skills, maintain existing skill sets, and gain confidence in equipment and tactical strategies. The practical training improves firefighter safety and reduces work related injuries. Live fire training is an invaluable training tool to improve a firefighter's skills and confidence. This is especially valuable for smaller fire departments that have a limited number of structure fires which maintain their skills to ensure adequate responses and reduce or eliminate loss of life and property damage.

An often-overlooked aspect of a training facility is building situational awareness in fire officers. The fire officer is responsible to minimize the loss of life and property and to ensure that firefighters on scene are safe. A fire officer must conduct a rapid assessment of the situation during times of stress and while countless bits of information are bombarding the officer. The ability to make good decisions is based upon Recognition Primed Decision Making (RPDM) process. As indicated above, these factors are of key importance for the fire department as the number of structure fires is (thankfully) low, which reduces regular exposure to live fires; thus, live fire training ensures that firefighters and officers can maintain their skills.

A new small-scale training facility will vary in price from \$200,000-\$700,000 depending upon the options that meet the needs of the fire department.

FIGURE #5 – TRAINING FACILITY EXAMPLES



A well-designed small-scale training facility that meets the needs of the fire department will have many benefits that include:

- A satellite centre that can offer certified NFPA 1001 firefighter related training, as well as all other mandated training under O. Reg. 343/22 as per GMFD levels of service prescribed in By-Law 11-2014.
- A significant cost savings for the fire department as they can provide improved training for all volunteer firefighters without having to travel.

Such a facility could also be rented out to other fire departments, which could create a revenue investment for the municipality.

3.8 Training Programs

3.8.1 HAZMAT Training

Appendix “B” of the Township of Greater Madawaska By-law 11-2014 identifies the core services provided to the community. With respect to HAZMAT incident calls, the level of service provided is at

the Awareness Level. NFPA 1072: *Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications* defines Awareness Level personnel as:

Personnel who, in the course of their normal duties, could encounter an emergency involving hazardous materials/weapons of mass destruction (WMD) and who are expected to recognize the presence of the hazardous materials/WMD, protect themselves, call for trained personnel, and secure the scene²⁴.

GMFD's HAZMAT curriculum meets the knowledge and skill requisites identified in NFPA 1001 and NFPA 1072. However, EMG noted a discrepancy between the level of service identified in the By-Law 11-2014 and the service provided by the GMFD.

The GMFD performs some competencies attributed to the Operations Level Responders, such as product control to mitigate chemical spills, for instance. EMG recommends that By-Law 11-2014 be updated to more accurately identify the level of service provided. Given the new firefighter certification regulation made under *FPPA, 1997* (O. Reg. 343/22: Firefighter Certification), the level of service would require first responders to be trained to NFPA 1072 Operations Level Responders by July 1st, 2026. The township and GMFD are at risk unless firefighters are trained to the knowledge and skills required to appropriately engage in response activity at a higher level of competencies.

EMG recommends that GMFD firefighters be trained to HAZMAT Operations Level of Responders at the Mission Specific Product Control and that the municipal By-Law 11-2014 be amended accordingly.

3.8.2 Technical Rescue Training

GMFD identified water and ice rescue as a core service provided. The water and ice rescue are important given the geography of the township with many bodies of water and the importance accorded to tourism. However, the training ought to adhere to the NFPA 1006: *Standard for Technical Rescue Personnel Professional Qualifications* and in accordance with O. Reg. 343/22: *Firefighter Certification*.

EMG recommends that the GMFD aligns its technical operations and training to NFPA 2500: *Standard for Operations and Training for Technical Search and Rescue Incidents and Life Safety Rope and Equipment for Emergency Services*. This standard specifies the minimum requirements for the GMFD identified levels of functional capability for conducting operations at technical search and rescue incidents while minimizing threats to rescuers.²⁵

²⁴ NFPA 1072: *Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications, 2017 Edition*

²⁵ 1.2 (1) of NFPA 2500: *Standard for Operations and Training for Technical Search and Rescue Incidents and Life Safety Rope and Equipment for Emergency Services* retrieved from NFPA Link.

In addition, EMG recommends that GMFD train the fire personnel for wilderness search and rescue as per the knowledge and requisite skills identified in the NFPA 1006: *Standard for Technical Rescue Personnel Professional Qualifications*. Given the anticipated growth and the reliance on tourism, EMG anticipates the emergency calls for service to increase within the next 10 years. The geographical size of the township and natural beauty, including rolling hills, mountains, lakes, and rivers, makes the Township of Greater Madawaska a tourist attraction for outdoor enthusiasts²⁶. Wilderness search and rescue qualifications would allow members of the GMFD to respond to incidents and effect professional rescues in wilderness incidents through proper identification of terrain and hazards with required equipment to match the terrain and the environment.

3.8.3 Recruit Training

A review of the GMFD recruit program indicated that the GMFD does not have an official onboarding program leading to positive experiences for recruits. EMG suggests that a recruit onboarding program would provide for a stress-free and welcoming experience, easing the new recruits' transition to an unfamiliar environment, and facilitating the development of a relationship with the recruits.

EMG recommends that the GMFD develop a recruit training policy and training program to support recruits and promote retention within the department.

3.8.4 Fire Suppression Training

Firefighting training adheres to NFPA 1001: *Standard for Fire Fighter Professional Qualifications*. The training curriculum follows the IFSTA Essentials of Fire Fighting manual. This is one of the authoritative training manuals with respect to firefighting training. The GMFD fire chief is responsible for creating the annual training schedule for skill maintenance. Using IFSTA training materials, the knowledge and skill requisites are then delivered in-house by the shift training instructors (STIs). The basic firefighting skills training curriculum meets the needs of the GMFD.

The GMFD has a robust firefighting training and firefighting maintenance training program. However, EMG noted that STIs do not have formal techniques of instruction training. The GMFD STIs should be qualified to level 1 of the NFPA 1041: *Standard for Fire and Emergency Services Instructor Professional Qualifications*. The benefits include improved teaching expertise and experience, improved delivery of program objectives, better trained personnel, as well as benefiting the training resource capacity of the GMFD.

²⁶ <https://www.greatermadawaska.com/en/play-and-discover/tourism.aspx> retrieved on March 10, 2023

3.8.5 Fire Prevention and Fire and Life Safety Education Training

The GMFD Training Program has limited involvement with fire prevention and public fire and life safety education training delivered to staff. Most related training is provided externally, and the fire chief's role involves some coordination of the external training.

The Township of Greater Madawaska By-Law 11-2014 addresses the importance of public fire and life safety education, but the training is dependent on availability of external training opportunities. Consideration should be given to develop internal capacity to train to NFPA 1035: *Standard on Fire and Life Safety Educator, Public Information Officer, Youth Firesetter Intervention Specialist and Youth Firesetter Program Manager Professional Qualifications*.

The department's public fire and life safety education training should align with NFPA 1035. Public education should be the responsibility of all fire personnel within GMFD. Public fire and life safety education training is available through the Ontario Fire College via self-directed online delivery.

EMG recommends that GMFD firefighters be trained to Fire and Life Safety Educator Level 1 and that captains, in addition to NFPA 1035 Level 1 training, also be trained as Public Information Officer, under the NFPA 1035.

With respect to fire inspection, there is no program or trained personnel to perform the functions. The responsibilities rest on the fire chief and this practice is not recommended. Due to legislative mandate of the municipality to provide fire prevention, the GMFD should have a Fire Prevention and Public Education Program with a strong policy and accompanying SOGs. Either through development of internal personnel or obtainment of prevention services through a contractual agreement, GMFD must ensure that fire prevention personnel are trained and certified to NFPA 1031 as of July 1st, 2026, in accordance with O. Reg. 343/22.

Given the occupancy types and anticipated growth, EMG recommends that any fire prevention officer (fire inspector) should be trained to NFPA 1031 Level 1. There is no need for an inspector to be trained to NFPA 1031 Level 2, as inspection complexities do not require that level of training.

EMG already recommended that the GMFD Fire Prevention Policy (8-02) be revamped and adopted. Furthermore, EMG recommends that the policy addresses training requirements and that the training requirements for fire prevention be set at Level 1 of NFPA 1031: *Standard for Professional Qualifications for Fire Inspector and Plan Examiner*.

3.8.6 Fire Investigation Training

Like other specialty functions within the GMFD, fire investigation training relies on external training, where coordination is supported by the GMFD fire chief. The fire investigation duties should be delegated to dedicated personnel from the GMFD. EMG recommends that captains should be trained as fire investigators. Under O. Reg. 343/22, a fire investigator will need to be certified to NFPA 1033.

Therefore, training will need to align to the job performance requirements of NFPA 1033. Furthermore, EMG noted that there is no specific training to NFPA 921: *Guide for Fire and Explosion Investigations*. Qualification for NFPA 921 is essential because it is the companion guide to the NFPA 1033. Hence, EMG recommends that GMFD dedicated fire investigator(s) be certified to both NFPA 1033 and NFPA 921.

3.8.8 GMFD Training Program

Currently, the GMFD training program involves formal and informal training adhering to NFPA Professional Qualifications standards. Consideration should be given for all training curricula to align with specific knowledge and skill requisites of the NFPA Professional Qualifications standard relevant to the GMFD identified level of services. The suggested training is summarized in the following table.

TABLE #9: LEVEL OF SERVICE SUGGESTED TRAINING

Level of Service	NFPA Pro-Quals Standard	Qualification Level
Firefighting Training	NFPA 1001	O. Reg. 343/22
Fire Officers	NFPA 1021	O. Reg. 343/22
Technical Rescue Training	NFPA 1006	Technician Level
HAZMAT Training	NFPA 1072	Operations Level Responder & O. Reg. 343/22
Fire Inspection	NFPA 1031	Level 1 & O. Reg. 343/22
Public & Life Safety Education Training	NFPA 1035	Level 1 & PIO & O. Reg. 343/22
Fire Investigation Training	NFPA 1033 and NFPA 921	O. Reg. 343/22
Shift Training Instructors Training	NFPA 1041	Level 2 & O. Reg. 343/22

3.9 Training Documents and Training Records

GMFD training reports and records should align with NFPA 1401: *Recommended Practice for Fire Service Training Reports and Records*. The GMFD utilizes a SaaS (software as a service) Fire Department Management System, named Vector Solutions. Vector Solutions has several modules, including asset management, training, learning management, and record keeping. GMFD utilizes the training module, record keeping module, and aspects of asset management, such as Check It. The GMFD could benefit from improved utilisation of the Vector Solutions Learning Management System.

EMG noted that GMFD does not currently utilise Vector Solutions to its capacity. This can be attributed to a training issue. Currently, GMFD uses both analog and digital media to keep records and manage the fire department. EMG recommends that GMFD invest in a process mapping study to evaluate its record keeping practice to reduce or eliminate current deficiencies, such as outstanding reports and manual records from training sessions (Figure # 6).

FIGURE #6 – SAMPLE TRAINING RECORD

GMFD Training Report			
Date:		Meeting Coordinator	
Training Description:			Location:
Name	Initial	Hours	Training/Signoff/Maintenance
DC Chris Peters			
Cap Sean Tohivsky			
Cap Zack Hewitt			
Cap David Van Iderstine			
Lt Darrell Hewitt			
Lt Riley Scott			
SO&IC Marg O'Hara			
Luke Holtzhauer			

3.10 Promotional Process

NFPA 1021: Standard for Fire Officer Professional Qualifications defines promotion as: “*the advancement of a member from one rank to a higher rank by a method such as election, appointment, merit, or examination.*”²⁷

Interviews with staff and management highlighted the importance given to the promotional process from the point of view of management seeking the best person to promote to supervisory rank and personnel in the context of their career advancement²⁸.

A solid job description is a first step, as well as an essential component of a successful promotion process. The job description at the very least should include the necessary skills, the necessary work performance requisites, the necessary qualifications, and who is eligible²⁹. As a result of a review of the various GMFD job descriptions, EMG noted that the various job descriptions as part of Section 5: Fire Services Administration are incomplete.

Another vital component is a written SOP. EMG could not locate a Promotional Process SOG.

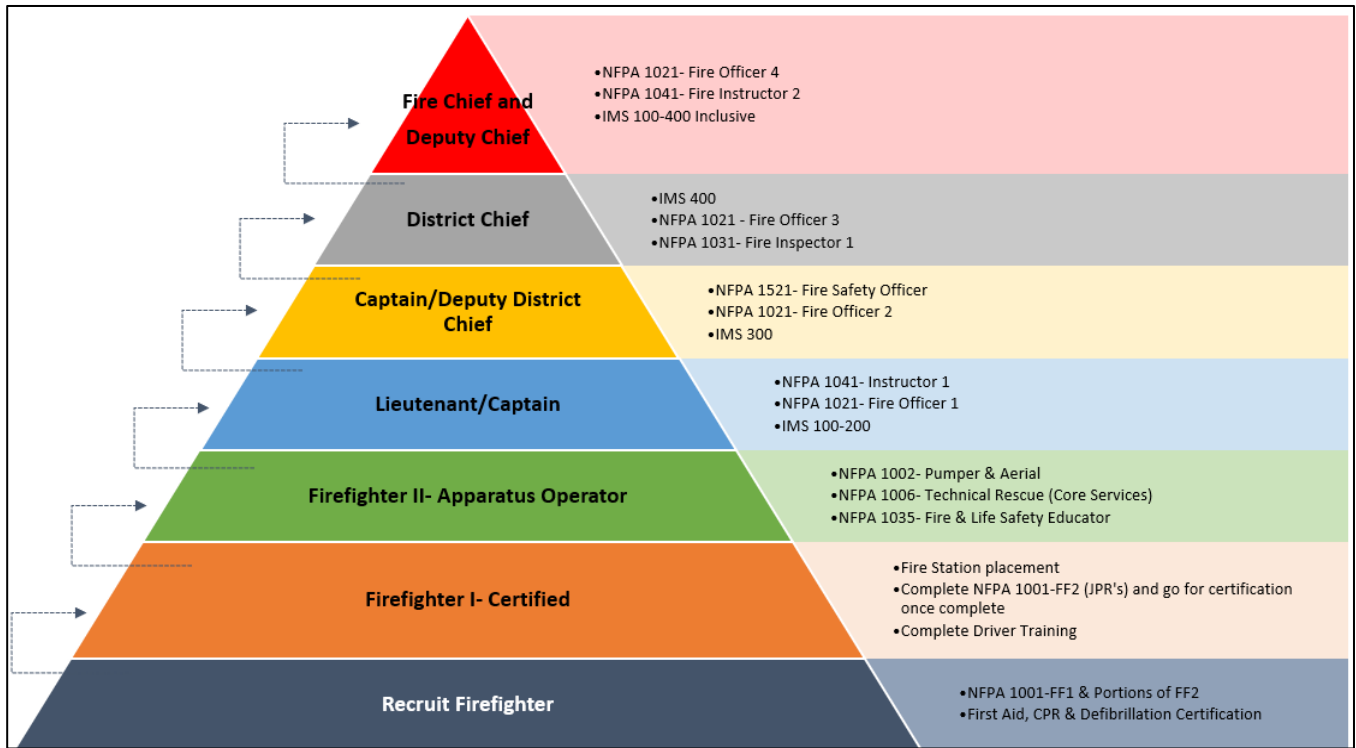
There are several types of promotion processes including by appointment, seniority, résumés, performance evaluations, interviews, assessment centers, and written tests. The best practice in the Human Resources business has been to combine one or more of the promotion processes. In addition, the design of the promotion process should be based on subjective and objective decision-making approaches for best results in selecting candidates for promotion. For instance, pre-screening of résumés against job functions from the job description with a weighted rubric is an excellent example of a subjective and objective decision-making approach. The weighted rubric is measurable and allows for the ranking of scores by candidates. In contrast, the weight attributed to each function is the opinion of management or an advisory committee of subject-matter experts.

²⁷ NFPA 1021: Standard for Fire Officer Professional Qualifications, 2020 Edition, p.1021-8

²⁸ What is the Best Fire Service Promotional Process? by Jack Abraham in FireRescue1 Accessed from <https://www.firerescue1.com/fire-products/fire-department-management/articles/what-is-the-best-fire-service-promotion-process-QtgE4bROggmDxwNB/> accessed on March 03, 2023.

²⁹ What is the Best Fire Service Promotional Process? by Jack Abraham in FireRescue1 Accessed from <https://www.firerescue1.com/fire-products/fire-department-management/articles/what-is-the-best-fire-service-promotion-process-QtgE4bROggmDxwNB/>

FIGURE #7 – TRAINING CONTINUUM



3.11 Fire Suppression/ Emergency Response

Based on the OFM’s definitions, the GMFD is a volunteer fire department with a part-time fire chief and volunteer firefighter. The fire suppression division consists of volunteer firefighters dispersed amongst the two fire stations. For GMFD, the NFPA standard that relates to the emergency response of the department is 1720 - *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments*. This NFPA standard notes the following operational goals:

- Staffing and Deployment
- 4.3.1 The fire department shall identify minimum staffing requirements to ensure that the number of members that are available to operate are able to meet the needs of the department.
- 4.3.2* Table 4.3.2 (noted here on page 76) shall be used by the AHJ to determine staffing and response time objectives for structural firefighting, based on a low-hazard occupancy such as a 2000 ft² (186 m²), two-story, single-family home without basement and exposures and the percentage accomplishment of those objectives for reporting purposes as required in 4.4.2.
- 4.6 Initial Firefighting Operations

- 4.6.1 Initial firefighting operations shall be organized to ensure that at least four members are assembled before interior fire suppression operations are initiated in a hazardous area.
- 4.6.2 In the hazardous area, a minimum of two members shall work as a team.
- 4.6.3* Outside the hazardous area, a minimum of two members shall be present for assistance or rescue of the team operating in the hazardous area.

NFPA 1720 section 4.10.3 identifies other types of companies that are utilizing specialized equipment and apparatus, to assist as per the fire departments SOGs. "Special operations shall be organized to ensure that the fire department's special operations capability includes the personnel, equipment, and resources to deploy the initial arriving company and additional alarm assignments providing such services."

The overall goal of any fire department is to arrive at the scene of the incident as quickly and as effectively as possible. If a fire truck arrives on scene in 10 minutes or less with a recommended crew of four or more firefighters, there is increased opportunity to contain the fire by reducing further spread to the rest of the structure. Alternatively, if the first fire attack team arrives with fewer than four firefighters on board, it is limited to what operations it can successfully attempt.

Based on studies and evaluations conducted by the National Institute of Standards and Technology (NIST) and the NFPA, no interior attack is to be made by the firefighters until sufficient personnel arrive on scene. The expectation is that a minimum of three firefighters and one officer arrive on scene to make up the initial fire suppression team. This team of four can effectively do an assessment of the scene, secure a water source (e.g., fire hydrant), ensure the fire truck is ready to receive the water and get the fire pump in gear, as well as unload and advance the fire hose in preparation for entry into the structure.

In 2010 and 2020, the NIST in the United States conducted a study on fire crew efficiencies and the tasks that may be completed during a residential structure fire with different sized crews.

The following research questions guided the experimental design of the low-hazard residential fireground experiments documented in this report:

- How does crew size and stagger affect overall start-to-completion response timing?
- How does crew size and stagger affect the timings of task initiation, task duration and task completion for each of the 22 critical fireground tasks?
- How does crew size affect elapsed times to achieve three critical events that are known to change fire behavior or tenability within the structure?
- Entry into structure?
- Water on the fire?

- Ventilation through windows (three upstairs and one back downstairs window and the burn room window).
- How does the elapsed time to achieve the national standard of assembling 16 firefighters at the scene vary between crew sizes?

The experiments were conducted in a burn prop designed to simulate a low-hazard fire in a residential structure described as typical in NFPA 1710. A low-hazard occupancy is defined in the NFPA Standard as a one, two, or three-family dwelling and some small businesses. Medium hazard occupancies include apartments, offices, mercantile and industrial occupancies not normally requiring extensive rescue or firefighting forces. High-hazard occupancies include schools, hospitals, nursing homes, explosive plants, refineries, high-rise buildings and other high life hazard or large fire potential occupancies.

The study found that four-person crews were able to complete 22 essential firefighting and rescue tasks in a typical residential structure fire 30% faster than a two-person crew and 25% faster than a three-person crew.³⁰ Having crews of four firefighters lessens the risk of injury as more personnel are available to complete assignments.

3.12.1 National Fire Protection Association (1720)

Chapter 4 of the NFPA 1720 (2020) Standard identifies the number of response personnel for the deployment of volunteer firefighters:

- Section 4.3.1: “the Fire Department shall identify minimum staffing requirements to ensure that the number of members that area available to operate are able to meet the needs of the department.
- In Urban areas with a population greater than 1,000 per mi² or 2.6 km², there should be a minimum response of 15 staff within 9 minutes, 90% of the time.
- In Suburban areas with a population of 500 – 1,000 per mi² or 2.6 km², there should be a minimum response of 10 staff within 10 minutes, 80% of the time.
- In Rural areas with a population of less than 500 per mi² or 2.6 km², there should be a minimum response of 6 staff within 14 minutes, 80% of the time.
- In Remote areas with a travel distance of greater than or equal to 8 mi or 12.87 km, there should be a minimum response of 4 staff directly dependent on travel distance, 90% of the time.”

With a current population of approximately 2,485 (2021) within approximately 1,018.15 km²(393.11 mi²), GMFD’s community falls into the rural standard with approximately three people per

³⁰ “Report on Residential Fireground Field Experiments,” Averill, Jason D. et al, April 2010, https://tsapps.nist.gov/publication/get_pdf.cfm?pub_id=904607

km²(2.8/km²(7.3/mi²))³¹. This would require six firefighters on scene within 14 minutes 80% of the time. Therefore, the key is to have six firefighters on scene within the 14 minutes response time or as soon as practicable³². This is an important response time to track to assist the GMFD in identifying if the GMFD is meeting the NFPA recommendation regularly. These response times are worth reporting to Council, so they have a firm understanding of the abilities of the fire service.

TABLE #10: STAFFING AND RESPONSE TIME

Demand Zone ^a	Demographics	Minimum Staff to Respond ^b	Response Time (minutes) ^c	Meets Objective (%)
Urban Area	>1000 people/mi ² (2.6 km ²)	15	9	90
Suburban Area	500-1000 people/mi ² (2.6 km ²)	10	10	80
Rural Area	<500 people/mi ² (2.6 km ²)	6	14	80
Remote Area	Travel distance ≥ 8 mi (12.87 km)	4	Directly dependent on travel distance	90
Special Risks	Determined by AHJ	Determined by AHJ based on risk	Determined by AHJ	90

^a A jurisdiction can have more than one demand zone.

^b Minimum staffing includes members responding from the AHJ’s department and automatic aid.

^c Response time begins upon completion of the dispatch notification and ends at the time interval in the table.

Note: To accomplish the NFPA Standard, a fire department should endeavour to meet the stated minimum response standards based on responding to a 2,000-ft² single family dwelling. The dwelling (noted in the Standard) does not have a basement or other exposures (buildings close enough to each other to create a greater possibility for fire spread). Most homes have basements, however, and these homes are often built close enough to each other to create that “exposure” for potential fire spread, which must be considered by the fire department in its response efforts.

³¹ https://en.wikipedia.org/wiki/Greater_Madawaska Canada Census 2021 retrieved on March 18, 2023

³² NFPA 1720: Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments 2020 Edition

Fire Response Curve

When considering the response times and needs of a community, the fire response curve (Figure #8) noted in the following diagram presents the reader with a general understanding of how fire can grow within a furnished residential structure over a short period of time. Depending on many factors, the rate of growth can be affected in several different ways, which can increase or suppress the burn rate through fire control measures within the structure. As an example, some older legacy homes, fire spread, and flashover may progress slower than newer homes due to the type of construction and contents. Some older homes may not witness flashover for up to 25 minutes, whereas newer homes could incur flashover in as little as four minutes within the room or origin.

Note: *Flashover is a situation in which the entire contents of a room ignite due to the extreme high heat conditions. This situation is not survivable by unprotected occupants. Even firefighters are at great risk of severe injury and/or death due to the extreme fire and heat conditions within the area of the flashover.*

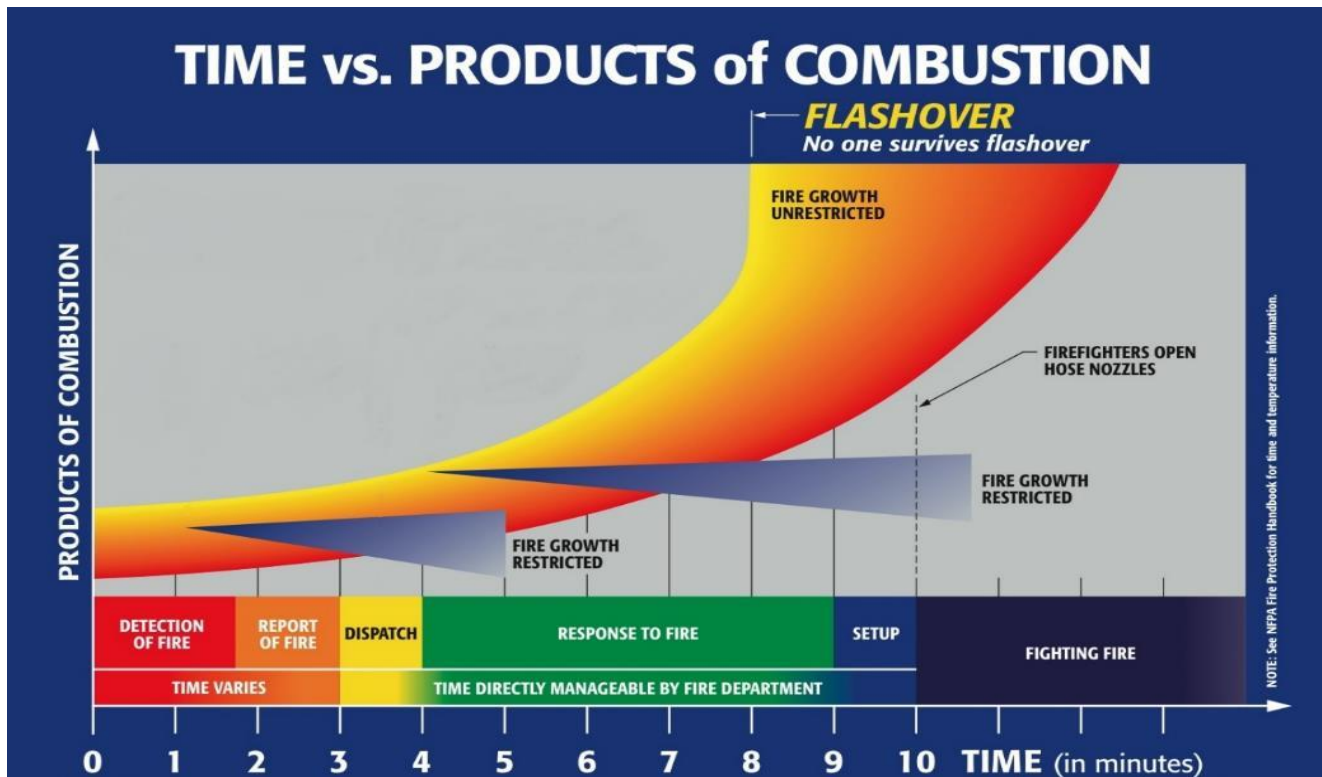
The response time of a fire department is a function of various factors including, but not limited to:

- The distance between the fire stations and response location
- The layout of the community
- Impediments such as weather, construction, traffic jams, lack of direct routes (rural roads)
- Notification time
- Assembly time of the firefighters, both at the fire station and at the scene of the incident.

Note: *Assembly time includes dispatch time, turnout time to the fire station, and response to the scene. It should be noted that assembly time can vary greatly due to weather and road conditions along with the time of day.*

As illustrated in the following fire propagation diagram, the need for immediate initiation of fire suppression activities is critical. GMFD responds to more than just fires; motor vehicle collisions can create a medical or fire emergency that also needs immediate response. Thus, it is imperative to be as efficient and effective as possible in responding to calls for assistance.

FIGURE #8 – FIRE RESPONSE/ PROPOGATION CURVE



The Response Time Curve notes the following time variables:

- **Detection of fire** – this is when the occupant discovers that there is a fire. For the purposes of this chart, detection time is noted as being within one to one and a half minutes – this could in fact be shorter or longer. The fire may be in a very early stage or could have been burning for quite some time before being detected.
- **Report of fire** – this is when someone has identified the fire and is calling GMFD for help.
- **Dispatch** – the time it takes the dispatcher to receive the information and dispatch the appropriate resources.
- **Response to the fire** – response time is a combination of the following:
 - **Turnout time** – how long it takes the career firefighters to get to the fire truck and respond or how long it takes the volunteer firefighters to get to the fire station to respond on the fire truck.
 - **Drive time** – the time from when the crew advises dispatch that they are responding until the time that they report on scene.
- **Setup time** – the time it takes for the fire crews to get ready to fight the fire.
- **Fighting the fire** – actual time it takes to extinguish the fire on scene.

The fire chief does ensure (where possible) that each station has either a complement that allows for an initial full crew response to incidents or that both stations are dispatched. To accomplish this, a

response protocol is in effect that ensures whenever a station and its firefighters are dispatched to any type of call where back-up may be required, a two-station response is automatically dispatched to the incident.

3.12.2 Response Data

Based on discussions with the fire chief, GMFD is achieving a varying level of success in meeting the NFPA response criteria. By utilizing the response maps created by EMG, we can see the effect of road networks on response times by emergency responders (Figure #9).

GMFD response times should be monitored based on the NFPA 1720 standards which is from “dispatch time to time of arrival at the incident”, from the time the call is received, to when the fire station tones activate, to when the firefighters get on the fire trucks and arrive at the emergency scene location.

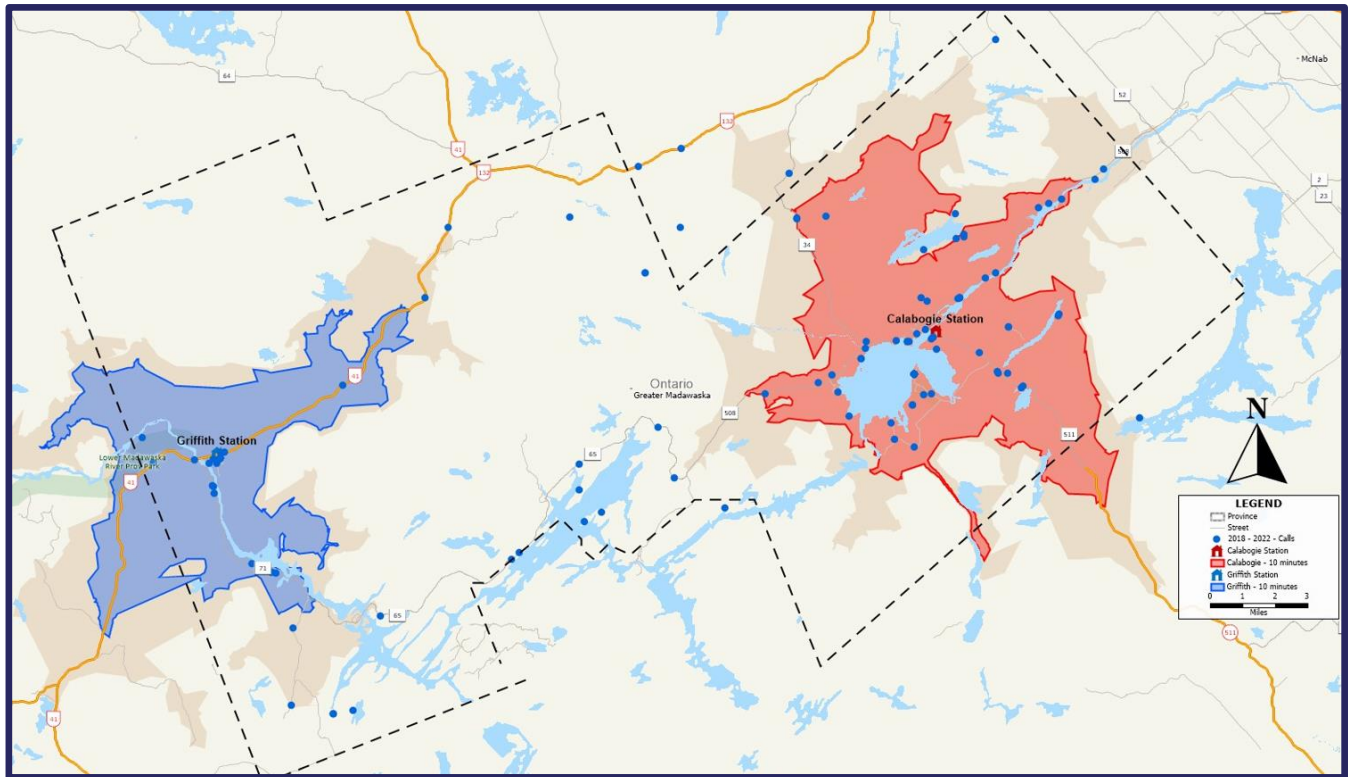
***Note:** In monitoring time measurements, the 80th percentile criterion is the recommended practice that is endorsed by the NFPA. This data is more accurate since it is evaluating the times based on 80% of the calls as opposed to averaging the times at the 50th percentile.*

- For example: 8 out of 10 times the fire department arrives on scene in 10 minutes or less, which means that only 10% of the time they take longer than 10 minutes, as opposed to 5 out of 10 times (average) the fire department arrives on scene in 10 minutes or less, which means that 50% of the time they take longer than 10 minutes.

The travel time grids, highlighted in Figure #9, are calculated using the GIS software Caliper Maptitude, which uses the road network with the posted speed limits, factoring in direction of travel, traffic lights, and stop lights. While the posted speed limit is used, it is understood that at times fire apparatus responding to calls may exceed the speed limit if it is safe to do so, thus reducing the response time. In contrast, there will be times due to weather conditions, construction, and traffic congestion that the fire apparatus will be travelling at speeds lower than the posted speed limit (even using emergency lights and sirens). Therefore, using the posted limit is a reasonable calculation in determining travel distance.

***Note:** through data received, EMG was able to produce where the general call locations occurred in the past year. This information assists the fire chief in identifying if the fire stations are properly situated to respond to where the bulk of the calls occur effectively and efficiently.*

FIGURE #9 – LOCATION OF FIRE STATIONS – OUTLINING 10- & 14-MINUTE DRIVE TIME GRIDS



Deciding on where a fire station is located varies upon several factors:

- Relative fire risk values for various areas, occupancies, or properties
- Desired response times for each identified fire risk
- Identification of calls within the community
- Information regarding the road network in the community including reasonable travel speeds, one-way streets, rail crossings, etc.
- Emergency vehicles and personnel necessary to assemble fire attack teams.

With the program tailored to the specific needs of a community, many fire response factors may be analyzed including:

- Existing and proposed station locations based on desired response times.
- Best and alternate emergency response routes to specific locations
- Ability of pumper, aerial, rescue, and support crews to cover all parts of the community based on desired response times.

- Emergency response times for first, second, and additional vehicles and personnel
- Areas for potential automatic aid responses

Fire stations should be located where they can serve the community in a timely manner by meeting NFPA Standards for response times. Although the NFPA response times are not mandated, it would be beneficial for the fire chief to have a response time goal supported by council as a benchmark. It is recommended that the fire chief present a response time goal for the approval of council, which may reference NFPA 1720 (2020 Edition) – the expectation of 6 staff in 14 minutes, 80% of the time, as a start.

Actual response times are not available from the statistics currently collected. EMG recommends that response time statistics need to be captured and recorded to provide a key performance indicator of service delivery. When EMG surveyed the community, the most important aspect of the GMFD was the adequate response to emergency calls. Monitoring response time is an important parameter in the evaluation of the adequacy of the level of service of a fire department. At this time, EMG cannot confirm that the GMFD is meeting the recommended NFPA response of 14 minutes.

3.12 Recruitment and Retention of Volunteer Firefighters

Recruitment and retention of volunteers is becoming more of a challenge within the fire service, throughout Canada. As with many volunteer fire departments, the daytime hours from Monday to Friday are the greatest challenge for volunteer responses due to fact that many volunteer firefighters are either at work, school, or taking care of family. In some instances, members have had to leave the department to move closer to their work location, education facilities, or family needs.

As of July 2026, all firefighters and officers will be required to meet the training/certification requirements and related timelines noted in the new regulation. Based on this, fire departments will need to conduct a full evaluation of their present training programs and implement whatever improvements are necessary to meet the new training and certification requirements. This increase in training will also add to the recruitment and training of new recruits, along with the retention of present volunteers.

In a nationwide survey³³, the leading reasons why people stopped volunteering include the following:

- No time to volunteer.
- Conflicts within the organization.
- Organizational leadership created an adverse atmosphere.

³³ "Volunteer Retention Research Report," August 2020, <https://www.nvfc.org/wp-content/uploads/2020/08/20Aug-NVFC-Retention-Research-Report-FINAL.pdf>

- Too much training
- Attitude of existing personnel towards newcomers
- Criticism received from officers/ older members.
- Lack of camaraderie

While some issues may be uncontrollable, other issues can be mitigated such as conflicts within the organization, leadership, training, attitudes, criticism, and camaraderie.

Note: the previously listed items are not a direct reflection on the status of the GMFD; they have only been listed for consideration in the department's recruitment and retention initiatives.

Retention Issues

The issue of retention has been identified as a challenge with just about every volunteer fire service throughout Canada. Opportunities to increase retention may include:

- Family nights at the fire station that would include a movie and activities for the children.
- Assign a seasoned member to mentor each rookie when a new member joins the department.
- Conduct firefighter appreciation events (e.g., dinner, BBQ) where members are recognised by council for their long term, outstanding service, or something exceptional they did at a call.
- Council take time to acknowledge the employers of the firefighters for permitting their participation in the fire department and/or permitting them to leave work to attend fire calls.
- Survey other fire services to compare pay rates and adjust the honorarium accordingly.
- Implement a service recognition pay incentive. This might include paying extra in the form of a 5% to 10% pay increase for every 5 years they have been on the department; this would prevent the loss of years of experience.
- Performance Pay for those who reach high percentages of attendance at training sessions and fire calls.
- Offer benefit packages as many may not have benefits at their full-time place of employment, and some are self employed. Such packages would include basic dental, drug, and eyewear coverage.
- Purchase a wellness benefit package for the firefighters such as mental, financial, and family counseling.
- Engage in treating Post-Traumatic Stress Disorder (PTSD), which is a common illness among fire responders.
- Offer a RRSP/pension savings plan with contributions from the Township after they have been a member of the department for a predetermined length of time.

- Provide excellent training opportunities to make them want to remain a member of the fire department. Make the training sessions fun and memorable.
- Recognition and support of those who want to attend Fire College or regional courses, which sometimes requires firefighters using their vacation time from their full-time employers.
- The implementation of an on call or platoon program that would pay a week or weekend stipend to the volunteer firefighters who commit to being available by signing up for weekdays and/or weekends.
- Education assistance programs to support staff in their professional development.
- Maintain and improve morale by providing modern trucks, equipment, and stations.
- Endorse that each station designs their own logo for their station promoting their region of the municipality or the services they provide. They could include a tasteful mascot character. These could be placed on t-shirts and perhaps the apparatus as a sense of pride.
- Provide strong leadership that focusses on the Mission, Vision and Values of the department while resolving conflict resolution in a timely manner.
- Conduct exit interviews with those that leave the department to understand their reasons for leaving. While there may be simple reasons, there could be a deep-rooted issue that administration may not be aware was occurring such as taunting, bullying, harassment, a feeling of not being welcome, etc.
- Foster the history of each fire station by creating displays of pictures of past members, events, apparatus, to instill a sense of pride on how far the department has grown.

The GMFD is already implementing some of these recommendations and as such, they should be commended for their retention efforts. This list is merely intended for the fire chief to review and confirm what is being done and what may still be required. Some of these suggestions may imply an expense, but the value of keeping trained personnel longer, which in the end saves on the ongoing training of new firefighters, is worth the effort.

It costs the township a large sum of money to train and equip new firefighters, therefore it is important that a means to retain their investment is developed and supported by council.

The CAFC have published a program – “Answer the Call” – that is available on their website www.answerthecall.ca. It uses messaging and imagery to reflect the local challenges. Free of charge, there is a set of images that can be used as well as documentation that can be personalized to the organization. The “canned” images can, and do, reflect volunteers across all demographics, and the local community could add additional ones specific to their department. It has received significant support, and it does not require considerable time or monetary investment.

Volunteer firefighter recruitment is a challenge in virtually every jurisdiction of Canada and utilizing resources available to promote recruitment and retention is always advisable.

3.13 Use of Personal Vehicles for Response:

Firefighters can respond to an emergency scene in their own vehicles, which means that some of the firefighters may be carrying their firefighting gear in their vehicles (most of the gear is located on the rescue van at each station). If the gear has not been properly cleaned, this can pose a health risk to the firefighters and any other occupants of their personal vehicle. Many fire departments in Ontario have ceased the practice of allowing firefighters to respond to an emergency scene in their personal vehicles. In many cases, all firefighters are required to attend at the fire station, don their gear, and leave as a team.

Due to a small contingent of volunteer firefighters, some departments required that all must still attend at the fire station, but if the pumper truck has left the station with a full crew, then those who have arrived (later) to the station can radio the site incident commander to get permission to proceed to the scene in their own vehicle, if required. Another option that is being implemented by some fire departments is to allow the officers (captains) to attend the fire/emergency scene (in their personal vehicles) to assess the situation and to advise the firefighters who are responding to the fire station, what equipment will be required to mitigate the incident.

By adopting either option, the department accomplishes three key things; the first being that little to no contaminated gear is transported in a private vehicle. The second, that an emergency scene is not impeded with firefighters' personal vehicles. Third, it ensures full accountability of who is responding and how many firefighters are on the scene. When firefighters respond in their personal vehicles, there is an opportunity for "freelancing", which means that firefighters are working without direct supervision and support (of other firefighters and emergency vehicles).

Having all firefighters respond to the fire station first creates full accountability and supervision of staff. It is true that there are advantages of having firefighters go to the scene as opposed to passing the scene to get to the fire station, but personal vehicles are not emergency vehicles and should not be used in such a manner.

The fire trucks used by GMFD do not have crew cabs and cannot accommodate more than two firefighters in the cab. A replacement strategy for the GMFD fleet must consider crew cab chassis to reduce the practice of responding to the emergency scene with personal vehicles.

GMFD should develop policies and procedures that "soiled" structural firefighting gear (PPE) is not to be:

- Transported inside the cabs of fire department vehicles
- Transported inside personal vehicles

- Taken into living/shared quarters of a fire station (this should include any areas of the fire station other than the apparatus bays)
- Taken into the firefighter's home

3.14 Suppression Staffing vs Call Volumes

The staffing that GMFD is comprised of is a volunteer system. This type of system has proven to be a very cost-effective model for the township. At present, the Department responds to an acceptable level of calls for a volunteer fire department the size of GMFD.

Research has identified that volunteer stations that respond to more than 350-400 calls (per station) per year are on the verge of moving towards a part-time or full-time type of staffing (within a specific area or station). The current call volume and the anticipated call volume growth do not warrant the GMFD to move toward part-time or full-time staffing. However, as indicated before, it is strategically advantageous for a fire department to have specific full-time positions including fire chief, fire prevention officer, and training officer.

The GMFD is not at this level of call volume per fire response ward, but this does not mean that the fire chief should not be monitoring call volumes, response times, and number of volunteer firefighters that are responding to these calls (as they are presently attempting to do). An increase in response times and/or decrease in the numbers of volunteer firefighters that are responding to the calls could be an indication of possible burnout of the volunteers. As such, this is something that the fire chief should continue to monitor and report to council annually.

3.15 Communications

The GMFD receives its dispatching services from the Ministry of Health – Renfrew Central Ambulance Communications Centre (Renfrew CACC). The Renfrew CACC provides communication services to eighteen fire services and all Renfrew County ambulance stations, the Whitney Ambulance Base, and the Algonquin Park Ministry of Natural Resources and Forestry (MNRF).

The Renfrew CACC has a back up location at the Renfrew Ambulance base. In case of major disruption, the fire calls are funnelled through the North Bay CACC. All sites are equipped with backup power.

The dispatching agreement is part of the County of Renfrew By-Law 124-21. Renfrew CACC dispatch is responsible for activating the pagers that alert the firefighters to respond to an incident; tracking responses up to the scene; and fire apparatuses back to the fire hall. The GMFD also uses the app "Who's Responding" to communicate with firefighters. However, the app use is not mandated and is used on a voluntary basis. The app identifies the firefighters who are responding to the fire station/call.

Under the CACC Fire Communications Services Agreement, Schedule “B” stipulates the County’s and Fire Chiefs’ responsibilities. Schedule “B” from By-law 124-21 states:

This County will:

- Coordinate collection and dissemination of local fire dispatch zone data for incorporation into MOH dispatch system for the purpose of the contract.
- Facilitate, through the Joint Steering Committee, the development of policies and procedures relating to fire call taking, call altering and/or dispatching.

Fire Chiefs will:

- Identify issues.
- Make recommendations.
- Make available information and services to improve the provision of fire services within Renfrew County.

The Renfrew CACC does not have a dedicated fire dispatch. Communicators are not trained to NFPA 1061: *Standard for Public Safety Telecommunications Personnel Professional Qualifications* (NFPA 1061). However, they receive extensive telecommunication training from the Ministry of Health, including six weeks of theory and practical training followed by four months of in-service training (shadow program).

During the EMG audit of the communication services provided by the Renfrew CACC, it was noted that the fire dispatch duties pertain to basic dispatching and tracking of the communications, given their minimal knowledge of fire specific matters. According to the schedule “B” of the CACC Fire Communications Services Agreement, the fire chiefs are responsible for making recommendations. This provides GMFD with an opportunity to provide input with respect to training the Renfrew CACC staff to NFPA 1061.

EMG recommends that GMFD work with the Fire Chief Steering Committee and CACC to develop a training program for CACC staff that conforms to NFPA 1061.

Dispatch service is provided 24/7/365. The CACC is generally staffed with four telecommunicators, including one supervisor and three dispatchers. The dispatching processes include call taking, dispatching, and overflow. Two staff are assigned to the dispatching duties, one staff is assigned the call-taking duties. If needed, one dispatcher is tasked with the overflow. During non- peak times, the CACC is staffed with three telecommunicators, including two call takers and one dispatcher. In times of staff shortage, the supervisor acts as the second call taker.

Dispatch is supported by the CAD (computer aided dispatch) software that assists with dispatch. Reports of each incident’s dispatch log are forwarded, when requested, to the GMFD for review and

records are maintained for future reference. The CAD data is not able to transfer dispatch files directly into the Fire Pro computer program that GMFD uses for its fire response reports to the OFM.

The agreement does not identify that Renfrew CACC is or should be working towards meeting the requirements of NFPA 1225 *Standard for Emergency Services Communications* which is used to identify dispatching service criteria. EMG recommends that future agreements include clauses identifying requirements to conform to the evaluation of the CACC against NFPA 1225.

Overall, EMG's review of the GMFD dispatching services (from CACC) was found to be adequate and well supported with a sound agreement.

3.16.1 Next-Generation Communications (NG 9-1-1)

Emergency 9-1-1 calls are directed to the answering service and then directed to the emergency service that is required by the caller (i.e., police, ambulance, or fire). The Public Safety Answering Point is the North Bay OPP. With respect to NG9-1-1, the Renfrew CACC will be fully compatible in 2025.

In June of 2017, the Canadian Radio-television and Telecommunications Commission (CRTC) created regulations regarding the next-generation communications for 9-1-1 centres. This modern technology will:

*"...enable Canadians to access new, enhanced, and innovative 9-1-1 services with Internet Protocol-based capabilities, referred to as next-generation 9-1-1 (NG9-1-1) services. For example, Canadians could stream video from an emergency incident, send photos of accident damage or a fleeing suspect, or send personal medical information, including accessibility needs, which could greatly aid emergency responders."*³⁴

The following is an excerpt from the CRTC website regarding the program and its benefits for enhancement to public safety communications.

Establishment Of New Deadlines for Canada's Transition to Next-Generation 9-1-1

The Commission sets out determinations in relation to new deadlines and other matters for the implementation and provision of Next-Generation 9-1-1 (NG9-1-1) networks and services in Canada, so that Canadians can access new, improved, and innovative emergency services with Internet Protocol-based capabilities. The Commission aims to maintain the NG9-1-1 framework roadmap for the establishment of NG9-1-1 networks and the introduction of NG9-1-1 Voice, albeit with new, extended deadlines.

³⁴ Government of Canada, Canadian Radio-television, and Telecommunications Commission, "Telecom Regulatory Policy CRTC 2017-182, Next-generation 9-1-1 – Modernizing 9-1-1 networks to meet the public safety needs of Canadians", last modified June 1, 2017, <https://crtc.gc.ca/eng/archive/2017/2017-182.htm>

Specifically, the Commission directs NG9-1-1 network providers, by 1 March 2022, to, among other things, establish their NG9-1-1 networks, complete all NG9-1-1 production onboarding activities, and be ready to provide NG9-1-1 Voice, wherever public safety answering points (PSAPs) have been established in a particular region.

The Commission also directs telecommunications service providers (TSPs) to make the necessary changes to support NG9-1-1 Voice in their originating networks that are technically capable of supporting NG9-1-1 Voice, including completing all NG9-1-1 production onboarding activities and testing activities, by 1 March 2022; and to begin providing, by 1 March 2022, NG9-1-1 Voice to their customers served by networks that are technically capable of supporting NG9-1-1 Voice, wherever PSAPs have been established in a particular region.

With respect to the implementation and provision of real-time text (RTT)-based NG9-1-1 Text Messaging (NG9-1-1 Text Messaging), the Commission is not establishing new deadlines as part of this decision. Instead, the Commission requests that, once standards are sufficiently advanced with respect to RTT callback and bridging, the CRTC Interconnection Steering Committee file a report with the Commission with recommendations related to the provision of NG9-1-1 Text Messaging for all stakeholders.

Further, the Commission directs, among other things, incumbent local exchange carriers (ILECs) to decommission their current 9-1-1 network components that will not form part of their NG 9-1-1 networks by **4 March 2025** or earlier if all the TSPs and PSAPs in an ILEC's operating territory have completed their transition to NG9-1-1.³⁵

3.16.2 NG 9-1-1 Considerations

As noted in the CRTC excerpt, March 4, 2025, is the revised key date to work with. The fire chief must ensure that GMFD is a stakeholder at the steering committee table through direct involvement or as part of the regional committee for this implementation plan.

The municipalities must understand that there will be significant expenses for the fire dispatch to implement NG 9-1-1 and it is likely that fees will increase for all fire departments to cover these additional costs.

Currently there is no firm understanding as to the expenses to be incurred with the implementation and annual costs of NG 9-1-1. However, the township should prepare for the financial implications of the NG 9-1-1 and its effects on the fire service by budgeting each year in a reserve account until

³⁵ Government of Canada, Canadian Radio-television, and Telecommunications Commission, "Telecom Decision CRTC, Establishment of new deadlines for Canada's transition to next-generation 9-1-1", last modified June 4, 2021, <https://crtc.gc.ca/eng/archive/2021/2021-199.htm>

required. The fire chief should keep up to date with the Ontario Fire Chiefs Association (O AFC) to monitor the NG 9-1-1 process and estimated costs.

3.16.3 Radio System

GMFD radio system is operating on analogue technology, with repeater sites, and a radio transmission tower. The township has not updated its radio system for many years, and it is in deteriorating condition. There are no redundancies in the radio system in the event of radio failure at the main transmission site.

The topography and land mass of the Township of Greater Madawaska creates poor to no radio communications depending on the location of the incident. In some cases, firefighters have had to resort to using cell phones. Radio communication is a paramount lifeline for firefighters and complete coverage is a must for firefighter safety. Ensuring adequate coverage may require additional transmission towers be installed, or the purchase of several mobile repeaters.

As previously mentioned, GMFD has implemented the “Who’s Responding” program; many volunteer fire departments have implemented such a program because it helps to improve overall response, while at the same time, the program can track who is available, who is responding, and even who is not available. EMG’s review indicated that at this time, not all features of the Who’s Responding App are being utilized by GMFD firefighters. As members of GMFD become more familiar with the functionalities of Who’s Responding, EMG believes that the app will gain popularity. GMFD should consider a more robust policy regarding the use of Who’s Responding App by all GMFD’ firefighters.

It is unknown when the last radio system and coverage audits were completed. The township should consider completing a radio audit and budget funds for upgrading the radio system to the digital platform, which includes new mobile and portable radios, pagers, transmission towers and transmitters, generators at each transmission tower, and possibly mobile repeaters if the audit warrants their purchase.

3.16 Health, Fitness, & Wellness

Health and wellness of staff should always be at the forefront of any organization, and the Township is no exception. The inherent nature of firefighting is both stressful and physically demanding. As all the firefighters maintain a separate primary vocation, a focus on fitness can be overlooked.

During the review by EMG, it was noted that there is no fitness equipment at the fire stations to ensure that staff can keep fit, which helps to reduce work related injuries. As such, the fire department should work towards purchasing a standardized set of the fitness equipment at both stations. The department should further have a fitness instructor work with the volunteers to set up a proper workout program and/or demonstrate the appropriate way to use the exercise equipment.

The department should also have SOGs relating to the proper use of the fitness equipment (where available).

Many fire departments routinely test their firefighters to meet occupational fitness tests delivered internally or by a third party. NFPA 1582 *Standard on Comprehensive Occupational Medical Program for Fire Departments* details basic expectations placed upon firefighters. GMFD is encouraged to review these and incorporate them into both candidate testing and firefighter fitness and functionality. It is recommended that, GMFD review the physical expectations of a firefighter for use in training and recruiting.

NFPA 1582 identifies 14 essential job tasks that detail the physical and physiological strains placed on firefighters. The standard outlines the requirements for a department's medical program including certain conditions that may pose a risk to firefighting. As the core determination for the physicality of firefighting, it is important for GMFD to understand the expectations they are placing on their personnel.

The 14 essential job tasks explained in NFPA 1582 lay the groundwork for NFPA 1583 *Standard on Health-Related Fitness Programs (HRFP) for Fire Department Members*. NFPA states that "this standard outlines a complete HRFP for members of fire department involved in emergency operations to enhance their ability to perform occupational activities and reduce the risk of injury, disease, and premature death". The applicable portion of the standard comes from section 4.1 wherein it states:

The fire department shall establish and provide an HRFP that enables members to develop and maintain a level of health and fitness to safely perform their assigned functions.

The occupational health and safety program provides direction on performing assigned functions in a safe manner. The HRFP allows members to enhance and maintain their optimum level of health and fitness throughout their tenure with the fire department. Education, one provision of a health-related fitness program, allows a means for improving health and fitness throughout the organization. The organization needs to provide the recognition and support to ensure the promotion and success of this process. Health and fitness need to become a value within the organization just as safety is a value.

Data suggests a correlation between a proactive approach to health and fitness and a decrease in debilitating occupational injuries, and a reduction in workers compensation claims and a decrease in acute and chronic health problems of firefighters.

Combining the health-related fitness program with a proactive occupational safety and health program provides a fire department with the level of quality needed for its members. It is suggested that, as part of a larger commitment to firefighter health and wellness, GMFD review the 14 essential job tasks from NFPA 1582 as they pertain to their recruitment and testing process and seek options for offering personnel the ability to exercise and maintain fitness levels as explained in NFPA 1583.

3.17.1 Post-Traumatic Stress Disorder (PTSD)

In 2017, emergency services organizations were required by the Ontario Ministry of Labour to submit a PTSD Prevention Plan. PTSD and Occupational Stress Injuries (OSI) were to be considered workplace injuries and be compensable through the Workplace Safety & Insurance Board.

The GMFD does not have a PTSD package available to its members; a package should be compiled outlining what PTSD is, the dangers it presents, training, on-going support, early intervention, WSIB claims management, recovery, and return to work.

The Township of Greater Madawaska has included its fire department staff in the Employee and Family Assistance Program (EFAP). The EFAP is provided by Valley Mental Health. A copy of the brochure provided to the Township of Greater Madawaska is available in Appendix C. Ensuring that the firefighters have full EFAP coverage for all related needs is an important piece of employee wellness. EMG's investigation discovered that as a Crisis Incident Management System (CIMS), GMFD utilizes Renfrew County Victim Crisis and Referral Service. The fire chief should meet with municipal staff who oversee EFAP and related programs to agree on a common employee assistance program as an opportunity to improve mental health support services to their volunteer firefighters.

3.17.2 Cancer Prevention

In recent years there has been a more intensive review of cancer prevention and a correlation of the disease to firefighting. The focus has been on contamination control surrounding fire incidents. From pre-fire, incident duration, to cleaning and decontamination post-fire, all aspects of prevention are currently under review by all levels of fire service management.

The GMFD stations do not have any decontamination equipment, such as showers (for both male and female firefighters), but there is one bunker gear cleaning (extractor) machine at the Griffith Station.

It is suggested that GMFD begin work on a cancer prevention program. This may include items such as, but not limited to:

- Post-fire decontamination of PPE
- Firefighter hygiene at fire scenes
- PPE during handling of contaminated gear/equipment
- Documenting potential exposures
- Reducing exposures to diesel exhaust
- Installation of proper shower facilities at each fire station, or at least implementing an operating guideline on decontaminating

Section 21 Guidance Note – Firefighters Cancer Prevention Checklist, could be referenced for developing such a program along with Section 21 Guidance Note on Hygiene and Decontamination.

As noted, the fire stations are not equipped with at source diesel exhaust extraction systems (that attach to a vehicle's exhaust pipe) to reduce exposure to vehicle exhaust. Diesel exhaust has been contributed to health issues when people are exposed to it over long duration. Having these systems in the stations greatly reduces health concerns. Section 21 Guidance note GN 3-1 should be referenced regarding reducing exposure to diesel exhaust.

In reviewing the PPE program, it was noted a plan has been established to review PPE inventories and identify forecasted replacements so that budgetary submissions are effectively managed. This is important to note as NFPA 1851 Standard on *Selection, Care and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting* states in Chapter 10:

Structural fire fighting ensembles and ensemble elements shall be retired in accordance with 10.2.1 or 10.2.2, no more than 10 years from the date the ensembles or ensemble elements were manufactured.

The appendix to that section also references that “...it is imperative that the protective elements be routinely inspected to ensure that they are clean, well maintained, and still safe”. GMFD has a program that PPE is inspected and cleaned by a third-party contractor, and that there is a cache of used gear.

Cancer prevention may begin at the scene of a structure fire. The bunker gear becomes laden with contaminants and smoke, and off-gas for some time after a fire. Decontaminating the firefighters at the scene of the fire and ensuring they do not wear their dirty gear back to the station or transporting it in the cab of the truck, are steps in the right direction of cancer prevention. The Department should also invest in some decontamination bags for transporting the bunker gear back to the station.

Cancer prevention does not stop at just taking off and bagging the bunker gear for cleaning at the fire station; the individuals clothing may also contain cancerous contaminants. The hygiene and decontamination program should also address the firefighters personal clothing or uniform worn in the fire. This clothing should also be washed at the fire station (with the extractor) and not taken to the residence to be washed as they are then introducing the contaminants to members of their family.

A fire department exposure report should be completed each time a firefighter is exposed to the products of combustion.

3.17.3 *Mental Well-Being*

Like law enforcement, paramedics, and military personnel, firefighters are regularly exposed to critical incidents. A critical incident can be described as:

- A near miss that threatened the health and safety of a member of the department. This can include a situation where a member of the department experienced an event that could have resulted in significant harm or was a close call where they escaped significant harm.
- The suicide or attempted suicide of a co-worker.
- The sudden death of a fellow firefighter.
- The loss of a patient after a rescue attempt.
- The death or a critical incident involving a child.
- A prolonged rescue or incident with excessive media coverage.

Being regularly exposed to horrific events can lead to critical incident stress. A critical incident is a normal reaction to an abnormal traumatic incident. Exposures to critical incidents can impact firefighters later in life and it is essential to have a formal record of critical incidents to assist a firefighter for a workplace injury if they are struggling due to PTSD.

Mental health crucially important in high-stress, high-risk work settings, such as those in which first responders operate, where their own functioning has serious implications for the health, safety, and security of the public they serve. A mental health well-being plan should include:

- An introduction about the plan.
- Goals and objectives
- Prevention and education focus areas.
- Screening and initial intervention focus areas.
- Support, WSIB claims management, recovery and return to work focus area.
- An overview of PTSD, risk factors, signs, and symptoms.
- Legal requirements of the township under the OH&S Regulations.
- Organizational PTSD practices (promoting good mental health).
- Organizational anti-stigma practices.
- Roles and responsibilities for prevention, intervention, recovery, and return to work.
- Training on awareness and anti-stigma, recognising the signs and symptoms, and responding to signs of PTSD, post-exposure education and awareness.
- Develop a handbook that identifies what PTSD is and the signs and symptoms for family members to reference which also includes agencies, EFAP program, or peer support groups that may be of assistance.

- Consider initiating a chaplaincy program for the department as another form of support for members and their families, not only for situations involving PTSD, but everyday life and the situations that may arise.

Section 3: Recommendations

Rec #	Recommendation	Suggested Timeline	Estimated Cost	Rationale
7	EMG recommends that the GMFD update the 2014 organizational chart.	Immediate (0-1 year)	Staff Time	The organizational chart needs to represent the lieutenant positions and considerations should be given to prevention and training. A structured organizational chart provides morale support and promotes a sense of pride and belonging for the personnel.
8	The Township of Greater Madawaska provides dedicated administrative support to the GMFD.	Short-Term (1-3 years)	Wages and Salaries and Benefit for one additional FTE: \$47,000	<p>There is a systemic sentiment of undervalue attributed to clerical/administrative support in the volunteer fire service culture. Given that most management is promoted from the rank, the benefits of administrative supports are often not understood as new management comes from a strong operational background with limited exposure to administrative functions. The lack of administrative support leads to inefficiencies.</p> <p>The Township of Greater Madawaska should investigate the possibility of sharing clerical services with other department as a cost saving initiative that would benefit both the GNFD and the Township.</p>
9	The Township of Greater Madawaska make the GMFD fire chief position a full-time position.	Immediate (0-1 year)	Wages and Salaries and Benefit for one	It is worth noting that at the time of the preparation of this document, the Township of

Rec #	Recommendation	Suggested Timeline	Estimated Cost	Rationale
			additional FTE: \$\$87,000 - \$105,000	<p>Greater Madawaska proactively hired a full-time fire chief.</p> <p>The fire chief manages two stations, 30 staff, 9 fleet vehicles, and a large inventory of assets. Functions of a fire chief include:</p> <ul style="list-style-type: none"> • Planning • Structuring • Directing • Coordinating • Conducting Programs • Evaluating <p>In addition, there are committee meetings. The functions are managerial and extremely important in support of operational duties associated with reducing and elimination loss of life and loss of property.</p> <p>Volunteerism is a misnomer with respect to fire protection services. The size of the GMFD requires full-time management.</p>

Rec #	Recommendation	Suggested Timeline	Estimated Cost	Rationale
10	Rewrite the fire chief job description to emphasize the executive functions associated with the position	Immediate (0-1 year)	Staff Time	<p>As a result of the proactive hiring of a full-time fire chief, the Township updated the Fire Chief job description.</p> <p>The current job description is incorporated into the E&R By-Law. There should be a proper job description commensurate with the managerial level of responsibilities with the position to benefit the Township administration.</p>
11	Review the district chief position and roles to clearly delineate the responsibilities and expectations of the position within the context of Operations.	Immediate (0-1 year)	Staff Time	The roles and responsibilities are found in the E&R By-Law and should inform updates to the current job description to ensure clarity and accountability inherent of the positions.
12	<p>GMFD establish a Fire Prevention and Public Education program.</p> <p>EMG recommends a process mapping exercise to define the roles and responsibilities and the expectations for the Fire Prevention section.</p> <p>Complete a study of the Fire Prevention section salaries, wages, and benefits to assure a sustainable fire prevention program model.</p>	Immediate (0-1 year)	Staff time	<p>Fire Prevention and Public Education is mandated by the <i>FPPA</i>, 1997. A division should be established and recognized in the GMFD organizational chart. Formalizing the division will assure adequate funding and budget allocation in support of responsibility of the municipality with respect to section 2 (1)(a) of the <i>FPPA</i>, 1997. The process mapping would be beneficial in informing a robust policy for the section.</p> <p>Some options for the Fire Prevention and Public Education division are:</p>

Rec #	Recommendation	Suggested Timeline	Estimated Cost	Rationale
	<p>Consider the addition of a supervisory position like that of a captain position to make it more effective and efficient in achieving the objectives of the Fire Prevention Division.</p>			<ul style="list-style-type: none"> • Develop a Fire Prevention and Public Education division from existing staff. • Partner with neighbouring fire department to share Fire Prevention staff through an automatic aid agreement. • Contract out a certified fire prevention officer from a neighbouring department with a pay for service agreement based on a GMFD developed fire inspection schedule and public education scheduled program approved by the GMFD fire chief. <p>The supervisory position can be a volunteer position supporting any options proposed to fill the fire prevention officer for the structure of the Fire Prevention and Public Education Division.</p>
13	<p>The GMFD Fire Prevention policy identifies the level of qualification for a fire inspector to be NFPA 1031 Level 1.</p>	<p>Immediate (0-1 year)</p>	<p>Staff Time</p>	<p>This will ensure a competent level of proficiency and ability to conduct fire prevention inspections for the Township building stock identified in the CRA.</p>

Rec #	Recommendation	Suggested Timeline	Estimated Cost	Rationale
14	Fire investigation duties should be the responsibilities of the Fire Prevention.	Short-Term (1-3 years)	Staff Time	<p>Although the responsibility to conduct origin and cause of fires falls onto the Fire Chief under the <i>FPPA</i>, 1997, the Fire Chief under sub-section 6 (6) can delegate. Fire investigation duties should be delegated to members of the Fire Prevention Division/Section.</p> <p>It is well known in the fire protection services field that fire investigation contributes to public education and fire prevention. These areas complement each other.</p> <p>Fire investigation and fire prevention, including public education go hand in hand to developing a successful and wholesome fire prevention/public education program.</p>

Rec #	Recommendation	Suggested Timeline	Estimated Cost	Rationale
15	EMG recommends that GMFD fire investigator should be trained to NFPA 1031, NFPA 921, and the fire investigation operations should align with the new NFPA 1321: <i>Standard for Fire Investigation Unit</i> expected to be released in 2024. Under the O. Reg. 343/22 made under the <i>FPPA</i> , 1997, as of the 1 st of July 2026, fire investigator will have to be trained to the NFPA 1033: <i>Standard for Professional Qualifications for Fire Investigator</i> .	Immediate (0-1 year)	Staff Time	<p>Under the O. Reg. 343/22 made under the <i>FPPA</i>, 1997, as of the 1st of July 2026, fire investigator will have to be trained to the NFPA 1033: <i>Standard for Professional Qualifications for Fire Investigator</i>.</p> <p>The new NFPA 1321 is a peer document assisting fire department with establishment and operations of a fire investigation unit.</p>
16	The GMFD revamps their 8-02 Fire Prevention Policy through the lens of the NFPA 1730 and implement the revamped policy with accompanying SOGs, detailing specific functions of fire inspection, fire investigation, and public fire and life safety education.	Immediate (0-1 year)	Staff Time	<p>The current policy does not adequately meet the needs and responsibilities of the Township under the <i>FPPA</i>, 1997.</p> <p>A robust policy with accompanying SOGs will support effective and efficient operability of the first two lines of defence within GMFD.</p>
17	GMFD investigate the promotion of home sprinkler systems as part of their fire prevention and public education initiatives.	Short-Term (1-3 years)	Staff Time	By working with the developers and the public in promoting the installation of home sprinkler systems, the GMFD would be demonstrating a pro-active approach to educating the public on another viable option for homeowners to help reduce the risk in the event of a fire.

Rec #	Recommendation	Suggested Timeline	Estimated Cost	Rationale
18	EMG recommends that all training curricula should align with specific knowledge and skill requisites of the NFPA Professional Qualification standard relevant to the GMFD identified level of services.	Short-Term (1-3 years)	Cost of Instructional kits would require an investment of \$5,000	Vendors like IFSTA and Jones & Bartlett provide excellent instructional kits developed from NFPA Professional Qualifications Standards.
19	GMFD establish a Training Section.	Mid-Term (4-6 years)	If capacity exists within the township, there will be minimal cost. If services must be outsourced, the exercise may cost up to \$5,000	<p>Training is one of the most important components of a fire department. Given that training is now mandated through O.Reg.343/22: Firefighter Certification, makes it even more relevant.</p> <p>A training unit would afford curriculum development and implementation, as well as standardization of training. In addition, a training unit would allow a more robust evaluation system to assure its value Finally, a training unit would provide adequate record keeping.</p> <p>Stakeholders' Staff's, and Council's survey all identified training as an important function to assure quality of service delivery to the community. A Training Unit would allow for organized training aligning with core services provided by the GMFD.</p>

Rec #	Recommendation	Suggested Timeline	Estimated Cost	Rationale
20	GMFD eliminate the individual training night at both stations in favour of a combined training night for all staff to promote unity and teamwork, as well as a sense of belonging to a single fire service.	Immediate (0-1 year)	Staff Time	<p>Elimination of the “silo” and competitive sentiment between the stations will unify the GMFD.</p> <p>This will standardize training and eliminate risk associated with unfamiliarity with equipment at emergency calls that could jeopardize time and quality of response.</p>
21	Create a training section staffed with one training officer.	Immediate (0-1 year)	<p>Staff Time</p> <p>Full-time Training Officer (Approximate cost of \$65,000)</p> <p>Volunteer Training Officer (Approximate cost Captain yearly Honorarium)</p>	<p>The creation of a training unit to adequately meet the current and future training needs of the GMFD is essential.</p> <p>There are options for the creation of the training officer complement:</p> <p>Hire a full-time training officer, designate one volunteer position as a training officer with commensurate honorarium with the rank of Captain, or assigning the Training Officer duties to the full-time chief position as part of the Fire Chief job description.</p>

Rec #	Recommendation	Suggested Timeline	Estimated Cost	Rationale
22	EMG recommends that GMFD firefighters be trained to HAZMAT Operations Level of Responders at the Mission Specific Product Control and that the municipal by-law 11-2014 be amended accordingly.	Immediate (0-1 year)	Staff Time	The GMFD, when responding to some calls for service, performs functions associated with Operations Level for HAZMAT. However, the E&R states that their level of service is at Awareness Level. Hence, training and service delivery are not at the same level and presents a risk for the Township.
23	GMFD aligns its technical operations and training to NFPA 2500: <i>Standard for Operations and Training for Technical Search and Rescue Incidents and Life Safety Rope and Equipment for Emergency Services.</i>	Short-Term (1-3 years)	Staff Time	This standard specifies the minimum requirements for the GMFD identified levels of functional capability for conducting operations at technical search and rescue incidents while minimizing threats to rescuers

Rec #	Recommendation	Suggested Timeline	Estimated Cost	Rationale
24	<p>GMFD train the fire personnel for wilderness search and rescue as per the knowledge and requisite skills identified in the NFPA 1006: <i>Standard for Technical Rescue Personnel Professional Qualifications</i>.</p>	<p>Mid-Term (4-6 years)</p>	<p>External Training cost can be supported by the OFC.</p>	<p>Given the anticipated growth and the reliance on tourism, EMG anticipates the emergency calls for service to increase within the next ten years. The geographical size of the township and natural beauty, makes the Township of Greater Madawaska a touristic attraction for outdoor enthusiasts.</p> <p>Wilderness search and rescue qualifications would allow members of the GMFD to respond to incidents and effect professional rescues in wilderness incidents through proper identification of terrain and hazards with required equipment to match the environment.</p>
25	<p>EMG recommends that the GMFD develop a recruit training policy and training program to support recruits and promote retention within the department.</p>	<p>Immediate (0-1 year)</p>	<p>Staff Time</p>	<p>A review of the GMFD recruit program indicated that the GMFD does not have an official onboarding program leading to positive experiences for recruits. EMG suggests that a recruit onboarding program would provide for a stress-free and welcoming experience, easing the new recruits' transition to an unfamiliar environment, and facilitating the development of a relationship with the recruits.</p>

Rec #	Recommendation	Suggested Timeline	Estimated Cost	Rationale
26	Invest in a process mapping study to evaluate the GMFD's record keeping practice to reduce or eliminate current deficiencies, such as outstanding reports and manual records from training sessions	Short-Term (1-3 years)	Staff Time or external vendor (\$5,000)	Currently GMFD utilizes Vector Solutions as a SaaS product for record keeping practices. The product's capabilities are underused. This could be a training issue where there is a lack of clerical skills. Nevertheless, the record keeping process is ineffective and a process mapping would allow to identify areas for improvement.
27	Capture and record response time statistics to provide a key performance indicator of service delivery.	Immediate (0-1 year)	Staff Time	Response to emergency calls has been identified as an important factor by stakeholders. It is also a recognized key performance indicator for the evaluation of the quality of service provided. Unfortunately, statistics with respect to response time are not adequately captured to assist the GMFD in evaluating its performance.
28	GMFD work with the Renfrew fire chiefs Steering Committee and CACC to develop a training program for CACC staff that conforms to NFPA 1061.	Short-term (1-3 years)	Staff Time	The current communication By-Law and Agreement identifies that making recommendations is the responsibility of the fire chiefs. GMFD should work with the Renfrew fire chiefs to ensure that training for CAAC staff aligns with NFPA 1061.

Rec #	Recommendation	Suggested Timeline	Estimated Cost	Rationale
29	<p>Future CACC Fire Communications Services Agreements should include clauses identifying evaluation of the CACC against NFPA 1225 <i>Standard for Emergency Services Communications</i>.</p>	<p>Short-term (1-3 years)</p>	<p>Staff Time</p>	<p>The township's representative can propose amendments to the agreement to improve the services. Evaluating the Renfrew CACC against the NFPA 1225 would allow better fire services representation, as part of CACC service to fire department clients.</p>

SECTION 4



Facilities, Vehicles, Equipment & Water Supply

- 4.1 Fire Stations Review
- 4.2 Fire Station Concerns
- 4.3 Fire Station Options
- 4.4 Feasibility Review
- 4.5 Types of Buildings and Options for Fire Stations
- 4.6 Fire Apparatus – New and Replacement Schedules
- 4.7 Maintenance, Technology, & Firefighting Gear
- 4.8 New Technologies
- 4.9 Elevated Device

SECTION 4: FACILITIES, VEHICLES, EQUIPMENT & WATER SUPPLY

4.1 Fire Station Review

A review of the existing fire stations was conducted by EMG and will be addressed in this section. The assessment of the stations was visual in nature; no destructive testing or engineering assessment was conducted.

Fire stations should be positioned to offer the most efficient and effective response to the community they serve. Centering them within a determined response zone that is simply based on “timed” responses is not necessarily the best option to implement. Fire station location depends on many factors such as key risks within the response zone, future growth of the community, and the response team composition (full-time vs. volunteer firefighters). Another consideration is the geographical layout of the community that can include natural barriers or divides (such as water), that may make it necessary to have some stations located within proximity of each other.

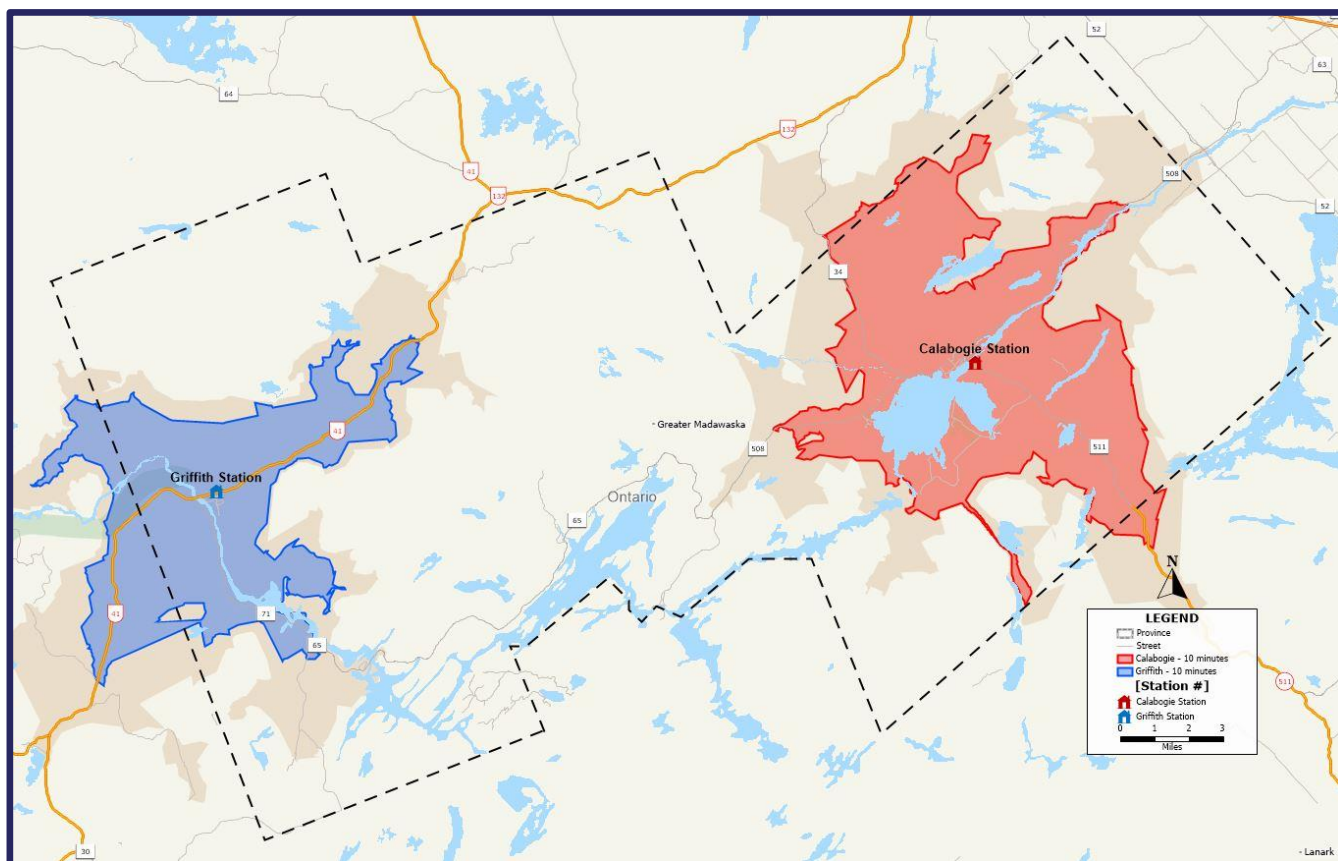
Distance and travel time may be a primary consideration; however, if a basic expectation of response time is set by the community’s decision makers, then a more realistic level of service can be identified.

The following map depicts where each station is located within the township. The zones around each station represents 10-minute drive time, not including the four-minutes for volunteers to arrive at the station and then respond in an emergency services vehicle. Even though the firefighters are allowed to respond directly to the location in their personal vehicles, actual firefighting procedures (such as extinguishment) will not occur until the fire trucks arrive. The four-minute response to the fire station is used in overall averaging.

The response mapping and related response data supplied in this document should not be taken in isolation. A full in-depth study along with an annual report submitted to Council by the Fire Chief with an update on the key performance measures and expectations is required.

The GMFD responds out of two fire stations as identified in the following figure.

FIGURE #10 – 10- AND 14-MINUTE RESPONSE MAP



4.1.1 GMFD Fire Stations

GMFD has two fire stations in its inventory. Based on the visit to these stations, the buildings range from good condition to needing varying levels of repair and/or updating. Each station will be addressed individually.

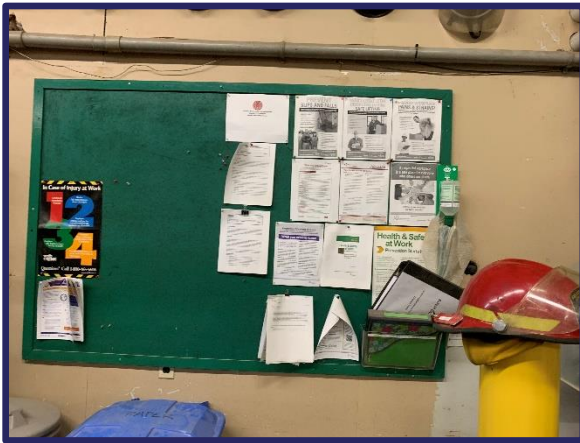
***Note** The station reviews conducted in this report are high-level. Therefore, if more in-depth structural analysis is desired by the township, then a comprehensive station/facility review should be undertaken. Any health and safety related items have been bolded and italicized and a further overview of general health and safety related issues is also included at the end of this section.*

Calabogie Fire Hall



Calabogie Fire Hall has two bays for fire apparatus. This is not a drive through station. This station has a total of fourteen volunteer firefighters.

Apparatus Bays



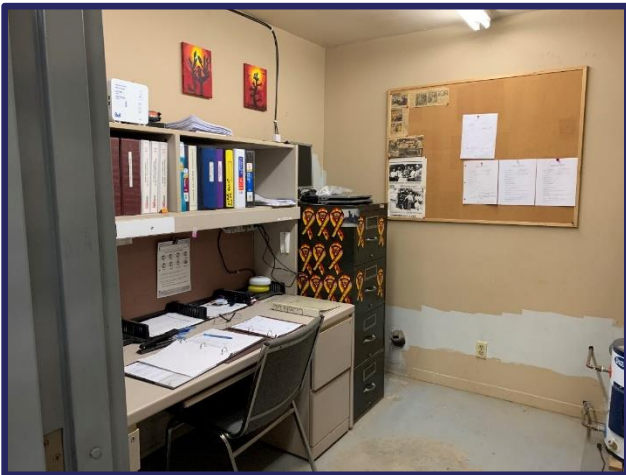
Apparatus



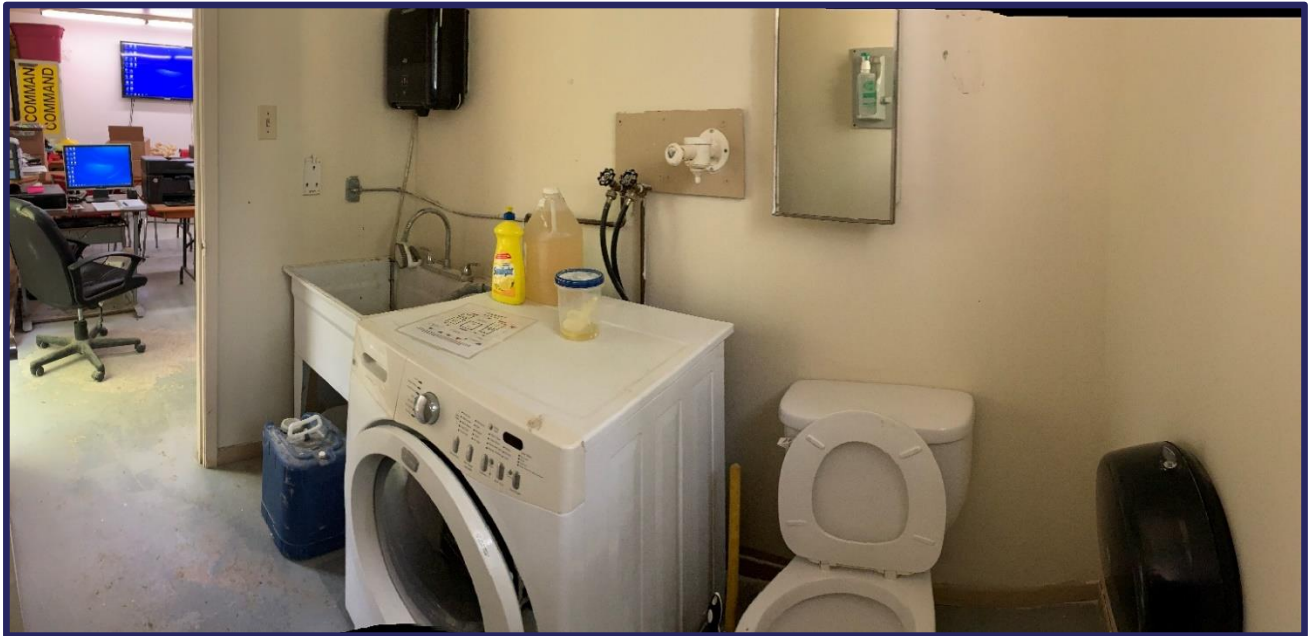
General Storage and Bunker Gear Area



Training Room and Office Area



Washroom



Fill Station



Calabogie Fire Hall - Concerns

- While the station space is well utilized, there is a lack of proper storage for equipment.
- Office/workstations are located on the apparatus floor, exposed to diesel exhaust.
- There is no diesel exhaust removal system in the station.
- Firefighting gear and other equipment are exposed to diesel exhaust contamination.
- Floor drains do not have oil separators in them.
- There is an absence of showers for firefighter decontamination.
- No automatic emergency back up power supply for station. However, the station is wired-ready for use with a portable generator.

Griffith Fire Hall

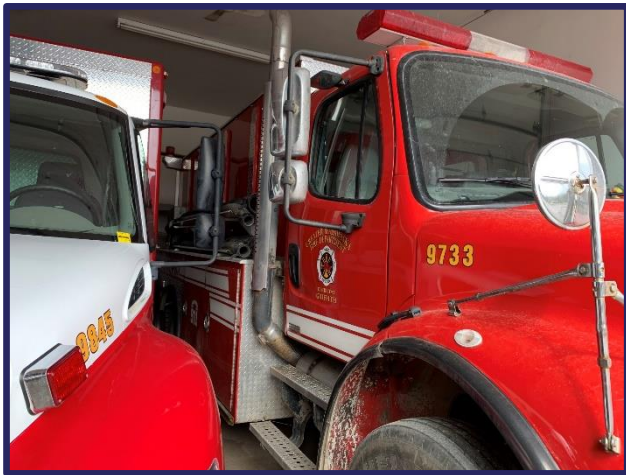


Griffith Fire Hall has two bays for fire apparatus. This is not a drive through station. This station has a total of 15 volunteer firefighters.

Apparatus Bays



Apparatus



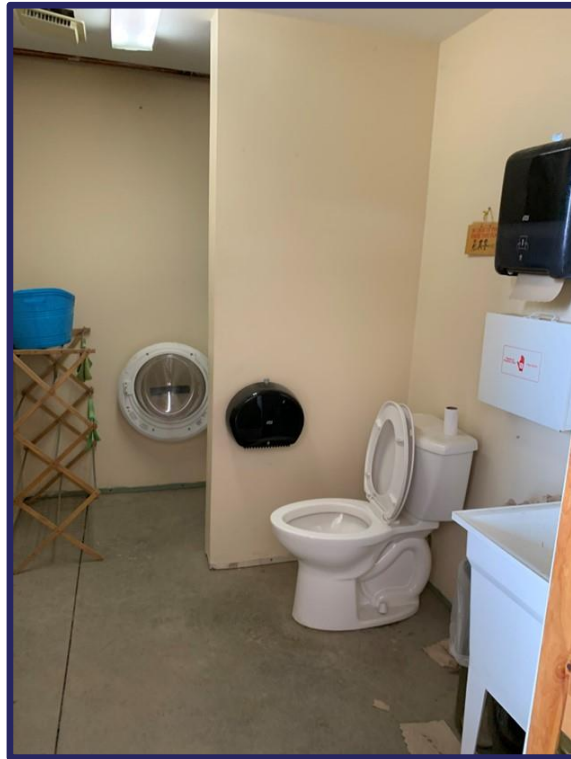
General Storage and Bunker Gear Area



Office/Training Room



Washroom



Griffith Fire Hall - Concerns

- Lack of storage for equipment.
- Kitchen used for storage on bay floor and exposed to diesel exhaust.
- Washroom but no shower facilities in station.
- Desks/workspaces located on apparatus floor. Exposed to diesel exhaust.
- Firefighting gear and other equipment are exposed to diesel exhaust contamination.
- There is no diesel exhaust removal system in the station.
- No automatic emergency back up power supply for station. However, the station is wired-ready for use with a portable generator .

4.2 Fire Station Concerns

Both fire halls are nearing, or at maximum capacity for storage of vehicles and equipment. Overall, the concerns noted during the station visits include:

- No diesel exhaust catchment system at either of the fire stations.
- The proximity of the firefighter's gear in relation to the vehicle exhaust could create an exhaust contamination issue. Firefighters' gear should be stored in a separate room that is negative pressurized, away from any exhaust contamination.
- None of the fire stations' apparatus bays have floor drains with oil separator (catchment) systems.
- Both the stations appear to be at maximum capacity for vehicles and equipment storage.
- There was a notable lack of proper storage areas/facilities for the equipment. This creates a tripping/safety hazard to the staff.
- Permanent emergency back up power is not available at either of the fire stations. However, they are both wired to utilize portable generators for power if needed.
- Separations from the apparatus floor and the training/living areas of the station need to be installed and maintained – officer offices at both fire halls are located on the apparatus floor. These areas are susceptible to exhaust contamination.
- There are no showers available at either station. Firefighters must be able to decontaminate themselves from exposures to smoke, toxic gasses, chemicals, blood, and pathogens as soon as possible after a call and before going home.

Based on the OHSA

- Workers who may encounter hazardous chemicals are to be afforded proper washing and clean up facilities.
- Space between vehicles must allow for safe and easy access between vehicles to reduce the possibility of persons becoming trapped between vehicles as they are being driven in and out of the fire station.
- The fire stations space is limited. Some type of storage facility should be incorporated. Future stations should be built with this space requirement in mind.
- As a note for consideration, all new emergency services facilities are to be built to "post disaster" standards due to the important nature of the facilities. This will add costs to the construction of future fire stations.

4.3 Fire Station Options

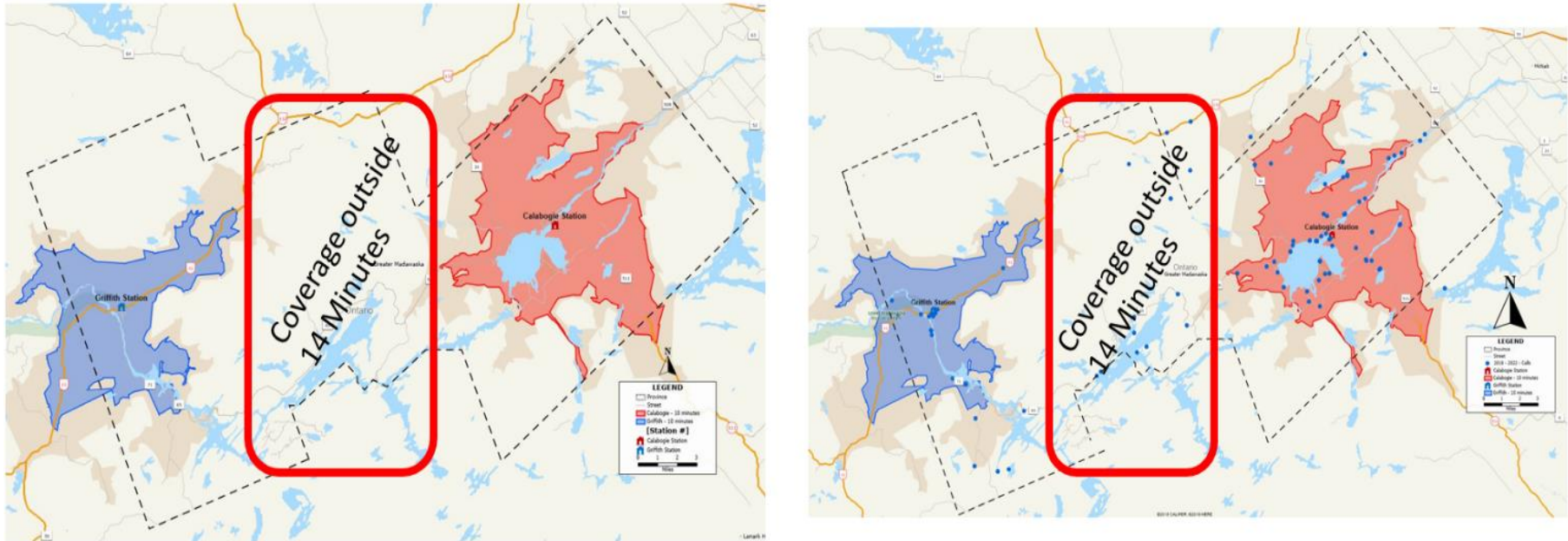
In an effort to identify opportunities for the enhancement of service to the community, while being fiscally responsible, EMG has looked at station location options for consideration by the township. During amalgamation in 2001, the fire stations were selected based on current location of Roads Department garages, which had bay areas for storage of fire apparatus. Although strategically located in Griffith and Calabogie, Ward 1 and 3 respectively, Ward 2 was left with minimal coverage. Since 2001, the Black Donald area has experienced a housing development growth favoured for the sought-after waterfront access. With future anticipated growth and proposed sub-divisions in Ward 2, the lack of response zone/coverage is problematic as noted in Figure #11.

As noted in the map on the right (of Figure #11), the blue dots represent actual call locations based on the 2018-2022 emergency calls for service data received. Using EMG GIS software, we calculated the response time geographical distance from each fire hall based on the recommended NFPA 1720 response times (10 and 14 minutes) associated with the Rural and Suburban demand zones that would represent the GMFD's demand zones. The GIS analytics study evaluates GMFD response performance as a key indicator of the quality of emergency call responses against the physical location of fire stations.

This type of information helps to identify where the bulk of the calls are occurring, if the location(s) of a fire station is adequate for response coverage or if another fire station is needed, or if the present fire station(s) needs to be relocated.

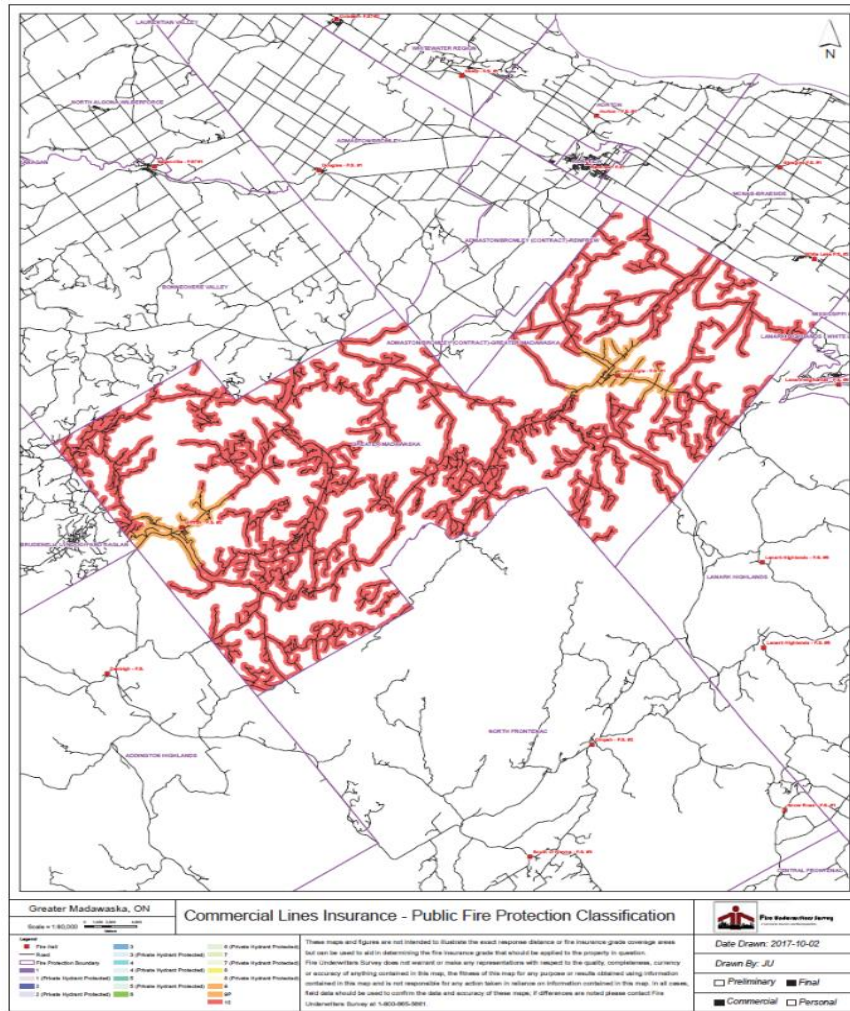
Currently, Ward 2 is covered by the Calabogie Fire Hall. Geospatial analysis indicates that response time for Ward 2 is beyond the recommended 14 minutes in accordance with NFPA 1720. EMG geospatial analysis is consistent with the FUS study completed in 2017 that gave a low-grade rating of **3B** on their Dwelling Protection Grading (DPG) scale (Figure #12).

FIGURE #11 – PRESENT FIRE STATION SET-UP WITH 10- AND 14-MINUTE RESPONSE ZONES AND CALL LOCATIONS



NFPA 1720 – Suggested Response: **6 Firefighters in 14 Minutes**

FIGURE # 12 – 2017 FUS DPG



An analysis of the calls for service distribution amongst the three wards indicates that in the past five years (2018-2022) 60% of the emergencies came from Ward 1, while Ward 2 and Ward 3 accounted for 20% of the emergency calls each (Table #11). Considering that currently, the Calabogie Fire Hall responds to emergency calls for both Ward 1 and 2, this means that Calabogie Fire Hall responds to 80% of all calls for service in the past five-year span. The Griffith Fire Hall responded to 20% of all calls in the last five-year span.

TABLE #11: 2018-2022 EMERGENCY CALLS PER WARD

Year	Ward 1	Ward 2	Ward 3	Totals
2018	48	4	13	65
2019	23	18	13	54
2020	34	10	10	54
2021	39	8	14	61
2022	39	19	13	71
Average	60%	20%	20%	

Considering that the GMFD does not meet the established best practice response time of 14 minutes and anticipating an increase of emergency calls in Ward 2 due to future growth, a feasibility study may be beneficial to evaluate relocation of the Griffith Station. Re-location would allow a better distribution of calls for service for both fire halls, where the Calabogie Station would respond to 60% of the calls and the Griffith Station would respond to 40% of the calls for service. In addition, relocation of the Griffith Station would improve response time for Ward 2.

EMG’s investigation revealed that the Township of Greater Madawaska is planning to relocate the Roads Department garage in Griffith to a township owned property at 3568 Matawatchan Road. GMFD and Roads Department share the township property in Griffith. Township plans are to move the Roads Department to a new location and renovate the shared space to accommodate the GMFD. Geospatial analysis suggests that the township should consider moving the GMFD Griffith Station at the new location rather than moving the Roads Department (Figure #13).

FIGURE #13 – MOVING THE GRIFFITH FIRE STATION TO 3568 MATAWACHAN ROAD

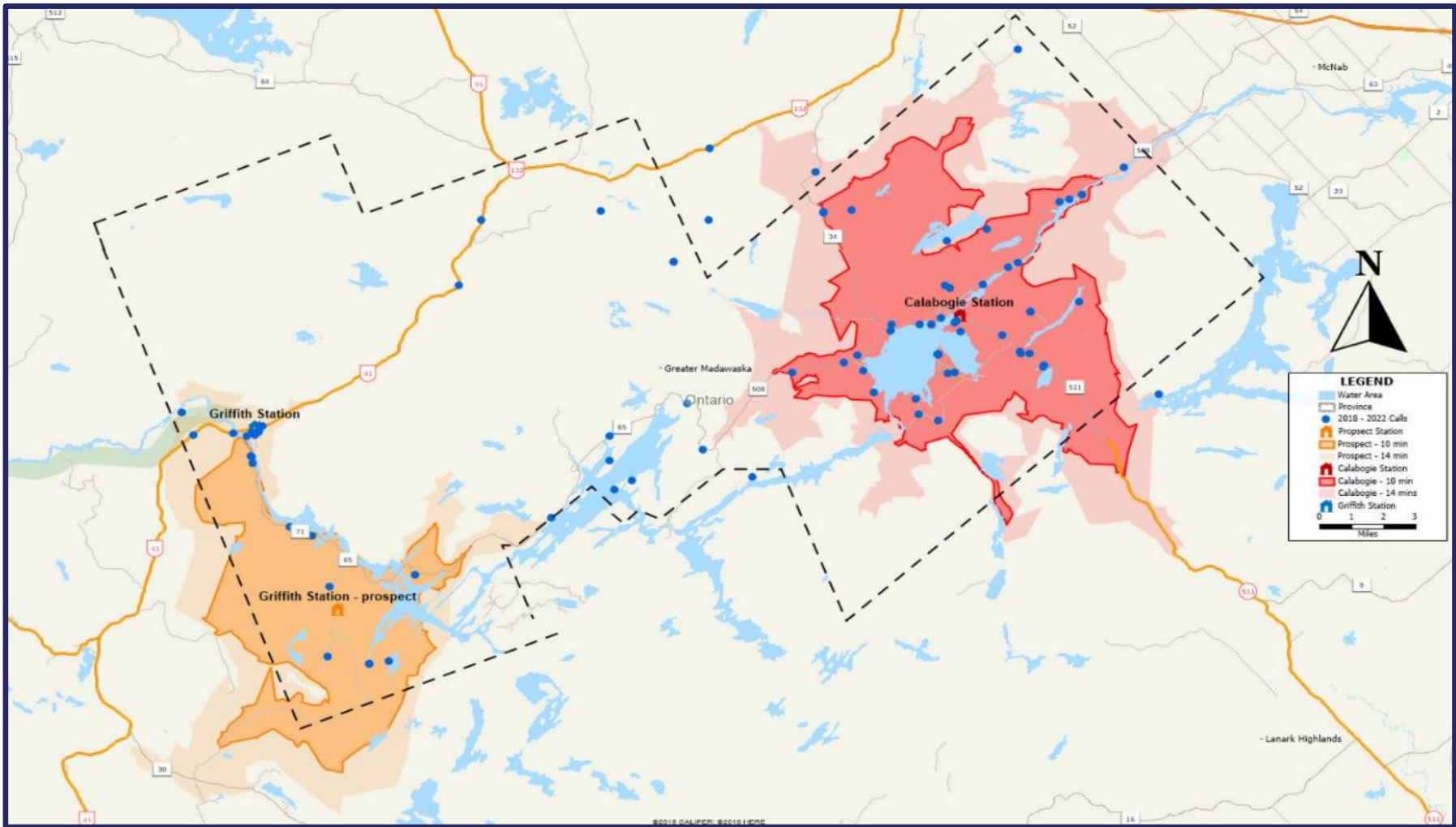
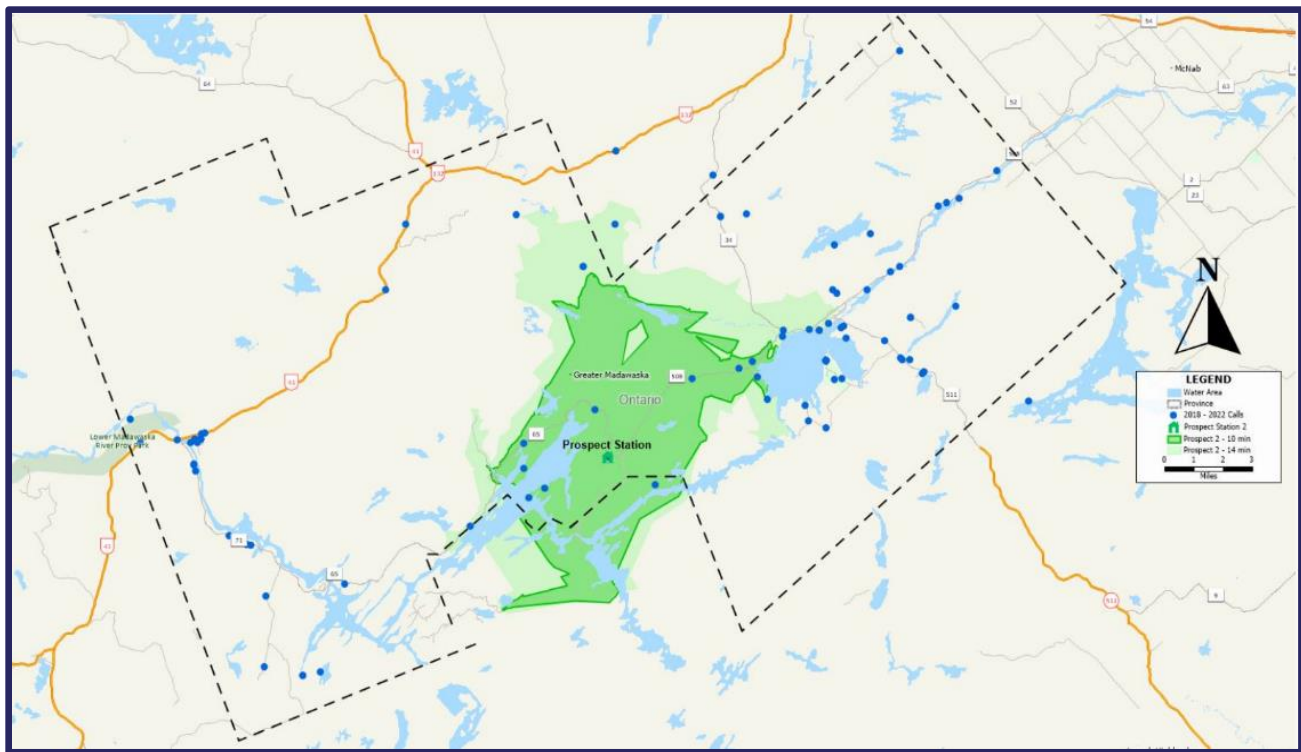


Figure #13 shows that moving the fire hall would improve response time and service delivery to the township in the Black Donald area. The new location would allow the Griffith station to respond within the NFPA 1720 response time for the Griffith area and the Black Donald area. In addition to improve response time and service delivery, moving the Griffith station would provide the township an opportunity to build a proper fire station. Originally, at the time of amalgamation in 2001, the fire stations were conveniently located at established Roads Department garages, which had bay areas to park fire apparatuses but without proper fire hall specifications and size to properly accommodate fleet and personnel.

EMG investigated the option of GMFD consolidating the Griffith and Calabogie stations into one strategic location in Black Donald. However, the geospatial analysis shows that a one-station option would not benefit the GMFD as response time would be grossly affected, leading to a decrease in service delivery and fire protection services to the community (Figure #14).

FIGURE #14 – PROPOSED STATION IN BLACK DONALD AREA



4.4 Feasibility Review

There is a great deal of information to consider regarding relocation of the Griffith fire station. Before any decision is made, a full review by the fire chief and the township is recommended to consider the following:

- What will be required to bring any of the noted stations (that will be kept) up to a state that will allow them to continue to serve the community for the next 10 to 20 years.
- How will the new station configuration affect the distribution of available volunteer firefighters to the remaining fire stations, which will hopefully create larger pools of available resources for each fire station.

As previously stated, EMG recommends relocation of the Griffith fire station to 3568 Matawatchan Road. **Alternatively, consider relocating the fire station to a central area, in the vicinity of Matawatchan Road, on Township-owned property.**

The GMFD fire stations review considered NFPA 1720 and the high level of coverage throughout the township, given its sheer size. In addition, EMG considered the most cost-effective options, with the smallest amount of capital investment by the township. A new fire station (that must be built to post disaster specifications) can cost anywhere between \$2 – \$5 million.

4.5 Type of Buildings and Options for Fire Stations

Traditionally, fire stations have been stand-alone structures. Municipalities have been shifting to integrating services into shared-use buildings with emergency service response stations being built into community centres, libraries, public works buildings, etc. This partnership with other community buildings is a cost-effective measure in the use of an existing/new facility but also sensible use of available lands.

It is common across Canada to have different emergency services co-located; this has included fire and police, fire and paramedics, or all three in the same building. These stations normally have separate quarters within the same building, with separate entrances and facilities. This permits each service to operate independently while taking advantage of the efficiencies of a single structure.

As technology, community demographics, and operational requirements evolve, maintaining an ability to be flexible in the station design, construction, and location will benefit the community in the long-term. Leasing a facility reduces the initial capital outlay, placing building maintenance responsibility on the landlord and allows the township the flexibility to move, should there be a change in community development.

The City of Barrie has leased the end unit of a commercial strip mall as a fire station (*pictured below*). The unit was constructed by the landlord to meet the city's requirements.



EXTREME fire stations are a new concept that is a Canadian built product out of Lethbridge, Alberta. It is a modular-based building, built to seismic and building code standards, using high efficiency, energy code compliant HVAC systems and fire suppression systems; these are standard on **EXTREME** stations.

The positive aspects about **EXTREME** fire stations are that they are custom built at a factory and transported where they are quickly placed onsite and ready for occupancy.

EXTREME Fire Station Assembly (On-Site)



A typical fire station has a life expectancy of approximately 50 years before the cost/benefit ratio starts to work against the township in terms of maintenance, basic function, and design. The **EXTREME** fire stations can meet that life cycle because they are made from steel and aluminum and additional modules can be added if the station needs to expand its footprint.

Calgary Fire Department Waldon Station



Prior to March 2021, a two-bay **EXTREME** fire station with appliances, diesel extraction system, exercise room and administration space was estimated to be \$2.4 million. Unfortunately, the construction industry is experiencing unprecedented spikes in building materials like wood, cement, and steel which creates challenges in projecting final price.

4.6 Fire Apparatus - New and Replacement Schedules

Reliability of fire apparatus is critical to the successful operation of a fire service. Over the long-term, delaying the replacement of a vehicle is inadvisable as it will add to the overall maintenance costs of the apparatus and can influence insurance costs based on the emergency service's FUS rating.

The GMFD is well-equipped with pumper trucks, tankers and support vehicles required for primary response to calls within the township. There are very few vehicles nearing or past the 20-year replacement cycle as recommended by both the NFPA and FUS.

It appears that although the GMFD does not adhere to the FUS recommended replacement schedule for fire apparatus, the Fire Chief does put forth recommendations for vehicle replacements.

As a consideration, many fire departments in the United States lease their fire apparatus and trade them in after ten years, at which time they are sold at a fraction of the cost of a new vehicle. As such, the purchase of a used vehicle might be a viable option for GMFD to bring the older vehicles in line with the 20-year recommendation.

For future considerations, all replacement vehicles should have a crew cab capable of transporting at least four firefighters. As discussed earlier, volunteer firefighters should respond from the fire hall in departmental apparatuses rather than using their own vehicle.

With respect to rescue vehicles, the units' specifications should include a crew-forward configuration to allow a safe area to warm up, as well as an area to change or to be used as a command post to maximize response ability and on-scene effectiveness.

With respect to pumper tanker trucks, the units should meet the requirements of chapters 5, 7, and 18 of the NFPA 1901: *Standard for Automotive Fire Apparatus*.

With respect to pumper trucks and tanker trucks, when replacing them, GMFD should consider pumper tanker trucks with tank capacity of 3,000 gallons (11,500 litres). Pumper tankers allow the department to carry all the required equipment in compliance with NFPA 1901, while transporting and delivering water. The dual functions are ideal for rural departments like GMFD.

With respect to tanker trucks, the current GMFD trucks are single axle trucks and gallonage does not meet the NFPA recommended gallonage. Tanker truck specifications should adhere to NFPA 1901.

With respect to the wildland fire trucks, the current pick ups are undersized for the equipment they carry. Using the crew cab to store equipment is in violation of the *OHS*A and best practice under the Section 21 Guidance Notes. Wildland fire apparatuses should adhere to NFPA 1906: *Standards for Wildland Fire Apparatus*.

The following items should be considered regarding vehicle replacement:

- When an apparatus is 15 years old, the budgeting process for replacement should be implemented so that the new apparatus is built, delivered and in service when the apparatus being replaced reaches 25 years of service.
- It can take up to one year to develop the specifications, begin the bidding process, complete the evaluation process of the bids, and then issue the purchase order.
- It takes a minimum of two years for an apparatus to have the specifications developed, tendered, ordered, built, and delivered.

4.6.1 Fire Underwriters Survey – Vehicle Replacement Recommendations

When assessing an emergency service’s ability to respond and meet the needs of the community, the FUS considers the age of a fire truck as one of its guidelines (Table #12).

The Small Communities and Rural Centres section (outlined in blue) is the recommendation for vehicle replacement for a township the size of Greater Madawaska. This allows for up to a 20-year replacement cycle, in which the fire vehicle can be utilized as 2nd Line response status. It is, however, recommended that all 1st Line units be replaced by a new or younger unit when it reaches 15 years of age.

TABLE #12: FUS VEHICLE REPLACEMENT RECOMMENDATIONS³⁶

Apparatus Age	Major Cities ³	Medium Sized Cities ⁴ or Communities Where Risk is Significant	Small Communities ⁵ and Rural Centres
0 – 15 Years	First Line Duty	First Line Duty	First Line Duty
16 – 20 Years	Reserve	2 nd Line Duty	First Line Duty
20 – 25 Years ¹	No Credit in Grading	No Credit in Grading Or Reserve ²	No Credit in Grading Or 2nd Line Duty²
26 – 29 Years ¹	No Credit in Grading	No Credit in Grading Or Reserve ²	No Credit in Grading Or Reserve²
30 Years +	No Credit in Grading	No Credit in Grading	No Credit in Grading

¹ All listed fire apparatus 20 years of age and older are required to be service tested by a recognized testing agency on an annual basis to be eligible for grading recognition (NFPA 1071).

² Exceptions to age status may be considered in small to medium sized communities and rural centre conditionally, when apparatus condition is acceptable, and apparatus successfully passes required testing.

³ Major cities are defined as an incorporated or unincorporated community that has:

- a populated area (or multiple areas) with a density of at least 400 people per square kilometre; AND
- a total population of 100,000 or greater.

⁴ Medium Communities are defined as an incorporated or unincorporated community that has:

- a populated area (or multiple areas) with a density of at least 200 people per square kilometre; AND
- a total population of 1,000 or greater.

⁵ Small Communities are defined as an incorporated or unincorporated community that has:

- no populated areas with densities that exceed 200 people per square kilometre; AND
- does not have a total population in excess of 1,000.

³⁶ TECHNICAL BULLETIN, FIRE UNDERWRITERS SURVEY™, A Service to Insurers and Municipalities, INSURANCE GRADING RECOGNITION OF USED OR REBUILT FIRE APPARATUS, accessed January 31, 2022, file:///C:/Users/EmergencyLT/Downloads/FUS-TechnicalBulletin-InsuranceGradingRecognitionofUsedorRebuilt%20(1).pdf

FUS definition of First Line Duty, 2nd Line Duty, and Reserve is:

- 1st line is the first fire truck utilized for response at the fire station.
- 2nd line is the next truck to be used if the 1st line unit is tied up at a call.
- Reserve is the vehicle kept in the fleet to be put into service if a 1st line or 2nd line vehicle is out of service.

The FUS is reviewed by insurance companies. Provided that the emergency service adheres to the recommended replacement timelines, through an approved capital replacement schedule, the department will retain its fire rating for vehicle replacement. By guaranteeing that the vehicles are being replaced on a regular schedule, the township would be demonstrating due diligence towards ensuring a dependable response fleet for the emergency services and the community it serves.

4.6.2 National Fire Protection Association – Vehicle Replacement Recommendations

The NFPA 1911, *Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire Apparatus* also supports a regular replacement schedule of fire vehicles. This standard includes guidance on retirement criteria for fire apparatus. NFPA 1911 recommends that all front-run vehicles be replaced on a 15- to 20-year cycle, depending on the community size.

For emergency services that are considering refurbishing their vehicles to extend the in-service life, reference can be made to the NFPA 1912, *Standard for Apparatus Refurbishing*. It should be noted that although the FUS do take refurbishment of vehicles into consideration, a credit rating is not assigned to vehicles over 30 years of age.

4.7 Maintenance, Technology, and Firefighting Gear

GMFD does not have its own mechanical division; all work is handled by the Township Roads Department's mechanics. Standardization of what workshops are to be used by the department along with proper SOGs in place to address repairs and other maintenance processes needs to be developed and implemented. Roads Department mechanics should attempt to have at least one of their mechanics be an Emergency Vehicle Technician certified under NFPA 1071: *Standards for Emergency Vehicle Technician Professional Qualifications*.

4.7.1 Vehicle Technology

The GMFD should strive to advance the technological perspective on the fire apparatus through the acquisition of tablets. These units are data-enabled and will allow the responding crews to obtain information about the incident they are responding to directly from the Communications Centre. This

information includes mapping, responding apparatus, pre-incident plans, hydrant locations, and access to the internet.

The tablets will have the capability to provide any pre-incident plans that are completed for a particular location. These plans will provide information such as a footprint of the structure, public and overhead doors, electrical panels, gas valves, hazardous materials storage area, sprinkler and fire hose connections, fire hose cabinets, etc. The incident command will use this information to direct their crews to specific areas of a structure to perform an assigned task and improve the situational data. Some data terminals can also open the overhead doors of the fire stations rather than a small remote control that can become lost.

GMFD should initiate and develop a pre-incident plan program with the completion of plans. GMFD currently has no pre-incident plans completed. Resources should be allocated that enable the quality and quantity required of the plans developed to be consistent and current.

Focus should be on industry, main streets with commonly joint buildings, marinas, assembly occupancies, campgrounds, fuel storage and retail such as propane and gasoline, and any structures with known hazardous materials. It would aid in the completion of additional plans if an individual were to be the co-ordinator of the program and direct crews on which structures to complete. They would also be responsible for drawing the diagrams and uploading information into the computer system. All pre-incident plans should be completed in compliance with NFPA 1620, *Standard for Pre-Incident Planning*. The township's Information Technology Division would be responsible for supporting the operating systems.

4.7.2 Bunker Gear

Every year, more and more firefighters are being diagnosed with cancer. A contributing factor to their illness has been proven to be the contaminants that adhere to the structural firefighting gear during fire fighting operations. After a fire, the structural firefighting gear should be packaged and sent for cleaning to reduce this risk. The GMFD Griffith Fire Hall has a commercial extraction washing machine made specifically for this type of cleaning.

Assuring gear is clean is a high-ranking priority after fires. To ensure that firefighters are always properly equipped, replacement gear is required while their structural firefighting gear is being cleaned. Firefighters need to have access to proper fitting bunker gear during the cleaning process as this will assist the department in meeting its Decontamination and Hygiene Program. When used for interior structural firefighting, bunker gear has a life span of 10 years as stated in NFPA 1851, *Standard on Selection, Care and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting*. GMFD requires a policy and accompanying SOG pertaining to replacement when the gear is compromised in any way.

Further to contaminating the bunker gear, toxins also contaminate the firefighter's uniform/personal clothing. Each firefighter should have a clean uniform/personal clothing available to wear so that the clothing they wore into a fire is cleaned and the contaminants are not taken home with them, where others could potentially become exposed to toxins.

GMFD should ensure that SOGs pertaining to the cleaning, inspection of, and maintenance of bunker gear is current and meets manufacturer's requirements. Special attention should be taken when reinstalling the drag rescue device (DRD) if equipped, which may also require an SOG to provide guidance on the procedure.

4.8 New Technologies

Technology is ever evolving within the fire service, with new pieces of equipment being added to the resources used by an incident commander. One such technology which has proven to be a valuable tool is the use of drones (Transport Canada refers to these as Remotely Piloted Aircraft Systems (RPAS)). Police services have been using them for some time to locate missing persons or document accidents and crime scenes.

The use of drones in the fire service is growing as a multi-purpose tool that can assist with large scale assessments of fireground and hazardous material incidents, enhance search and rescue functions, and be used in pre-incident planning.

Drones can cover a lot of ground, thus allowing valuable fire services personnel to be utilized elsewhere. They have proven beneficial for hazardous materials incidents, forest fires, and large-scale emergencies as the drone can be quickly deployed and give the incident commander a live view of the incident. The reduction of risk to firefighting personnel is a significant benefit of drone technology along with the live view capabilities that provides invaluable information to the incident commander.

Drone pilots must follow the Canadian Aviation Regulations (CARs) Part IX-Remotely Piloted Aircraft Systems that contain the rules for drones up to 25 kg. Advanced operations include flying in a controlled airspace, flying over bystanders, or flying within 30 m of bystanders.

New technologies are being developed each year to protect the firefighters; these include the use of robotics to fight fires, which are being actively used in Europe and Asia.

New self-contained breathing apparatus (SCBA) have built-in telemetry systems that, like some portable radios, identify the location of the firefighter. New technology SCBAs can transmit GPS data, the amount of air in the SCBA cylinder, monitor the heart rate, level of exertion the firefighter is being exposed to, and body temperature.

As the technology progresses, it is important to monitor the benefits and opportunities to integrate these devices into the fire service.

4.9 Elevated Device

Although the GMFD would benefit from having an elevated device (aerial or tele-squirt) within its fleet, EMG is not recommending one be purchased at this time as there are too many other high-priority concerns. One will, however, be required to meet the needs of the community and to conform to the FUS recommendations for elevated devices.

Appendix B has some information on the FUS recommendations relating to the need for an elevated device. The township does have a high-profile tourist attraction within Calabogie Peaks, Calabogie Lodge, and the Calabogie Motorsport, as well as the OPG facilities and other structures that do exceed the reach of the average ground ladder of 7 m (approximately 24'). Thankfully, it has not recorded a recent fire in one of the large structures. As apparatus is replaced, at least two should be equipped with 10 m (35') extensions ladders.

At this time, EMG is suggesting that future consideration be given to the purchase of an aerial device. There is also the option of requesting one through an agreement with a bordering fire department. However, due to the extreme distance between the township and its closest neighbouring fire department, this may not be a viable option.

Section 4: Recommendations

Rec #	Recommendations	Timeline	Estimated Cost	Rationale
30	<p>Address the list of station concerns noted in section 4.2 of the report.</p> <p>Note: an overview of concerns is also noted in the adjoining rationale section.</p>	Short to Mid-term (1-6 years)	<p>Due to the number of upgrades required, a full assessment by the facilities department is needed to obtain an estimate of costs.</p> <p>These repairs could be anywhere from \$100,000 up to over \$1 million.</p>	<p>During the walk-through by EMG, it was evident that the GMFD fire stations are nearing, or at maximum capacity for storage of vehicles and equipment. Overall, the concerns noted during the station visits include:</p> <ul style="list-style-type: none"> • The proximity of the firefighter’s gear in relation to the vehicle exhaust. This could create an exhaust contamination issue. Firefighters’ gear should be stored in a separate room away from any exhaust contamination. • None of the fire stations’ apparatus bays have floor drains with oil separator (catchment) systems. • All the stations appear to be at maximum capacity for vehicles and equipment storage. • There was a notable lack of proper storage areas/facilities for the equipment. This creates a tripping/safety hazard to the staff. • No diesel exhaust catchment system at any of the fire stations.

Rec #	Recommendations	Timeline	Estimated Cost	Rationale
				<ul style="list-style-type: none"> • Separations from the apparatus floor and the training/living areas of the station need to be installed and maintained – some of the fire stations have either desks/workstation or kitchen facilities on the apparatus floor. These areas are susceptible to exhaust contamination. • Lack of shower/wash-up areas that need to be made available at both stations. Firefighters must be able to decontaminate themselves from exposure to smoke, toxic gasses, chemicals, blood, and pathogens as soon as possible after a call and before going home.
31	<p>The Fire Chief, CAO, and Council should consider relocation of the GMFD Griffith station to Matawatchan Rd.</p> <ul style="list-style-type: none"> • Alternatively, consider relocating the fire station to a central area, in the vicinity of Matawatchan Road, on Township owned property. 	<p>Short-term for decision (1-3 years)</p> <p>Mid to Long Term for implementation (4-10 years)</p>	<p>Assessment to occur first before costing/saving can be determined. A new fire station can range from \$2 to \$5 million.</p>	<p>Given the anticipated development and growth, the lack of adequate response time under NFPA 1720 in Ward 2, and current opportunity from planned facility capital investment for relocation of the Roads Department Griffith location, the Township should consider relocating the Griffith station rather than relocating the Road Department Griffith garage.</p>



SECTION

5

Emergency Management

5.1 Emergency Management Program Overview

5.2 Emergency Management Program Opportunities

SECTION 5: EMERGENCY MANAGEMENT

5.1 Emergency Management Program Overview

The Emergency Management and Civil Protection Act (EMCPA) prescribes responsibilities to municipalities to develop and implement an emergency management program, which must be adopted by the council of the township as a by-law. An assessment of the township vis-à-vis their responsibilities under the *EMPCA* can be found in Appendix A. Under the *EMCPA*, the township is required to formulate an emergency plan governing the provision of necessary services during an emergency and is required to establish the procedures detailing how employees of the township and other persons will respond to the emergency. The council of the township shall by by-law adopt the emergency plan.³⁷

In the spirit of the *EMCPA*, EMG notes that the Township of Greater Madawaska adopted By-Law 60-2021 on the 15th of November 2021, repealing the previous By-Law No. 09-2020. EMG assessed the township's emergency management program against the requirement of the *EMCPA*. It was confirmed that the By-Law meets the requirements of the *EMCPA* with respect to an emergency management program, an emergency plan, and ERP, as well as the requirement for the Emergency Plan to be reviewed annually.

The *EMCPA* also stipulates that municipalities are to conduct training programs and exercises. To date, the Township did not conduct exercises, which keeps it in line with program expectations.

The CEMC duties have been assigned to the CAO/Clerk, and Treasurer as the alternate. EMG noted that the training requirements for the alternate CEMC, as well as members of the MECC and Emergency Management Program Committee (EMPC) are outstanding. EMG recommends proactive scheduling of required training to staff involved in the municipal emergency management program.

EMG also assessed the Township of Greater Madawaska's ERP against O. Reg. 380/04 made under the *EMCPA*. An assessment of the township vis-à-vis their responsibilities under the O. Reg. 380/04, made under the *EMPCA* can be found in Appendix B. EMG noted that there is no record of the existence of an emergency management program committee; members of the MECC are identified as per the regulation, an emergency information officer has been designated as per the regulation, and the township's Municipal Emergency Plan (MEP) consists of an ERP that assigns responsibilities and sets out the procedures for notifying the members of the MECC of the emergency, as per the regulation.

O. Reg. 380/04 set some reporting standards for the CEMC and EMPC. EMG recommends that a robust record keeping system be implemented for reporting requirements from the CEMC and EMPC.

³⁷ Emergency Management and Civil Protection Act

The latest version of the MEP is dated January 2022. It is a legislative requirement for ERPs to be reviewed and updated each year. Changes could be minor, not requiring a complete document update. Although the current ERP encompasses an Amendment Record page, EMG recommends that the Amendment page should include the following:

- The date changes were completed.
- A brief outline of the changes and the sections involved.
- Name of individual completing the updates.
- Whether the revised document requires council approval.

The MEP does identify a primary and two alternates municipal EOCs. The primary EOC has the required technological and telecommunication systems in accordance with O. Reg. 380/04. However, EMG's audit of the alternate facilities indicated that technological and telecommunications systems requirements are not met. All EOCs need to have adequate and backup generators.

Overall, the EMG review and audit of the township's emergency management program indicated that the program is well administered and resourced. Considerations to the assessments in appendices A & B would substantially improve the emergency management program.

5.1.1 Incident Management System

Interagency, multi-jurisdictional, multi-government, and multi-disciplinary are terms used when operating in a large-scale emergency environment. The Incident Command System (ICS) is based upon best practices in Canada and the United States and is used for both small or large emergency and non-emergency planned events. It identifies roles and responsibilities to improve resource and interagency communications for a common purpose. In the Province of Ontario, the ICS is known as the Incident Management System (IMS).

During some emergencies, there is a likelihood of the IMS being expanded into a Unified Command. The type of incident, complexity, and location of an incident may require a Unified Command structure. The Unified Command "is a management structure that brings together the 'Incident Commanders' of all major agencies and organizations involved in the incident to coordinate an effective response while at the same time carrying out their own jurisdictional or functional responsibilities."³⁸

The EOC is critical for providing coordination, resource management, communications, and critical assessments of the event with the Incident Commander. The strength of the IMS is in ensuring the safety of responders and other personnel are a priority and an effective use of resources or elimination

³⁸ Deal, Bettercour, Deal, et al, (2010) Beyond Initial Response, ICS, p.I-33.

of the duplication of services is achieved. Individuals that are expected to be part of the EOC, including designated alternates, should have training in IMS.

There is no minimum training identified for the municipal EOC, however, the IMS is identified in the township's ERP. Most incidents are routinely dealt with without activating the municipal EOC and it must be noted that the municipal EOC is activated when an event is expected to expand in complexity and duration, requiring an efficient coordination among departments or responding agencies.

The IMS doctrine from the MEP is designed to be consistent with the Canadian Standards Association (CSA) Z1600 – *Canadian Emergency Management and Business Continuity Program Standard*.

5.2 Emergency Management Program Opportunities

Due to the importance of staff understanding their roles and responsibilities in the EOC, EMG notes that all staff have been trained to IMS 100. In addition, EMG recommends that a policy be implemented that identifies IMS 200 as the minimum standard for staff required to be in the EOC, and IMS 300 being the minimum for all department heads.

With so many acts of domestic terrorism taking place each year throughout the world, including Canada, a township must plan for the possibility of such events within their own community. As such, EMG recommends that the MEP should have a section dedicated to domestic terrorism. The section should include an integrated response program comparable to NFPA 3000, *Standard for an Active Shooter/Hostile Event Response (ASHER) Program*. Partnerships could be achieved with outside agencies such the OPP and EMS to develop and deliver a presentation to the public and include local businesses as sponsors to assist in offsetting any expenses.

Section 5: Recommendations

Rec #	Recommendation	Suggested Timeline	Estimated Cost	Rationale
32	EMG recommends proactive scheduling of required training to staff involved in the municipal emergency management program.	Immediate (0-1 year)	Staff Time	Requirement of O. Reg. 380/04 of the <i>EMCPA</i> .
33	EMG recommends that a robust record keeping system be implemented for reporting requirements from the CEMC and EMPC.	Immediate (0-1 year)	Staff Time	
34	EMG recommends that the Amendment page should include the following: <ul style="list-style-type: none"> • The date changes were completed. • A brief outline of the changes and the sections involved. • Name of individual completing the updates. • Whether the revised document requires council approval. 	Immediate (0-1 year)	Staff Time	

Rec #	Recommendation	Suggested Timeline	Estimated Cost	Rationale
35	EMG recommends that a policy be implemented that identifies IMS 200 as the minimum standard for staff required to be in the EOC, and IMS 300 being the minimum for all department heads.	Immediate (0-1 year)	Staff Time for Training	IMS is an integral part of a successful emergency management response. It is critical that all staff assigned roles and responsibilities can maneuver effectively within the complex organizational structure to avoid miscommunication and catastrophic consequences. IMS training is essential to alleviate task mismanagement.
36	EMG recommends that the MEP should have a section dedicated to domestic terrorism.	Immediate (0-1 year)	Staff time	With so many acts of domestic terrorism taking place each year throughout the world, including Canada, a township must plan for the possibility of such events within their own community. The section should include an integrated response program comparable to NFPA 3000.



SECTION 6

Mutual Aid, Automatic Aid and Fire Service

6.1 Mutual and Automatic Aid

SECTION 6: MUTUAL AID, AUTOMATIC AID AND FIRE SERVICE AGREEMENTS

Mutual aid, automatic aid, and fire protection agreements are programs used to:

- Support a community's fire department at times when local resources are exhausted.
- Offer quicker response coverage to areas that may be closer to a bordering fire department's response area than that of the host department.
- Create an automatic response by bordering fire departments to properties that are closer to their fire stations than that of the host fire department.

6.1 Mutual and Automatic Aid

Mutual aid is meant as a reciprocal agreement whereby one department aids another at a major incident. Mutual aid should not be used as a means of supplementing short comings in fire protection. The council of the responding fire service may serve notice that the township of which they are responding to has identified an exposure risk and should take appropriate action to make corrections.

Automatic aid agreements allow for fire stations from other jurisdictions, that may be closer to an emergency event, to respond either first or in conjunction with the local municipal fire department. Automatic aid is generally considered a program designed to provide and/or receive assistance from the closest available resource, regardless of municipal boundaries, allowing for a level of service that is manageable and sustainable.

Automatic Aid and Response Agreements are an appropriate means of identifying areas of the home department's response capabilities and fill in any gaps that exist. This may include responses to remote areas of a municipality or the provision of a hazardous material and/or technical rescue teams.

These agreements are like the mutual aid plan but differ as there is an expectation that a call for service will occur regularly. It is also established within the agreement to what level of service will be provided. Some examples are strictly for structure fires, whereas others may be an all-encompassing service. These are written agreements and enacted through council in the form of a by-law.

The GMFD currently has two automatic aid agreement in place with the Corporation of the Township of North Frontenac, known as By-Law 35-2016, and with the Township of Admaston/Bromley, known as By-Law 07-2022.

With respect to By-Law 35-2016, the response area and map are identified in Schedule A. Schedule B sets the fee structure. The most recent agreement was adopted as a by-law on June 30th, 2016.

The agreement was extended on June 21st, 2021, and is valid until June 13th, 2023, under the same terms and conditions. EMG recommends that the fee structure be reviewed and adjusted to current prices.

By-Law 07-2022 is valid until the 31st of December 2024. The response area is identified in Schedule B of the By-Law. The agreement set an annual flat fee with a projected increase of 2% every year starting in the year 2022. EMG recommends that the fee structure be reviewed and adjusted to current prices.

The GMFD is a member of the Renfrew County Mutual Aid Plan and Program which includes all the fire services of the county and was updated in June 2021. While a generic document, it should better reflect the needs of the fire departments comprising the Renfrew County Mutual Aid Plan and Program. The Township adopted By-Law 20-01: *Being a By-Law to Provide for the Participation of the Members of the Township of Greater Madawaska Fire Department in the Renfrew County Mutual Aid Plan* in 2001 in support of the provincial mutual aid program.

The Renfrew County Mutual Aid Plan is established to aid in the mitigation of any emergency that may arise and identify and provide the resources available to respond to the situation. It is reviewed and updated on a predetermined schedule, with the updated version forwarded to the OFM.

EMG notes that in support of mutual aid efforts across the Province of Ontario, the OFM requires fire departments to update their equipment lists as to what apparatus they have and could be available for mutual aid purposes. However, it is incumbent upon each participating fire department to also have a clear understanding of what resources are available from its neighbouring fire department(s) and how to access these during times of need. This list should be an appendix of the Renfrew County Mutual Aid Plan and Program, along with a list of the contact information of the participating fire departments.

When developing these automatic aid or response agreements, consideration should be given to the following before formalizing:

- The agreement should identify the resources that each fire department can provide.
- The agreement should identify and authorize the fire department to leave their jurisdiction for automatic aid purposes.
- Identify the Incident Command procedures by all parties.
- Fire departments must be suitably equipped to meet the functions they are expected to perform at an emergency.
- All fire departments have the legal obligation to serve and protect their own community prior to engaging in mutual aid activities and this must be clearly stated in the plan.
- Liability coverage and indemnification provisions.

- Any stand-by or response fees associated with the agreement.
- Ensure that hazardous material and technical rescue responses are included in the Tariff of Fees By-Law at full cost recovery.

The effort that goes into maintaining these relationships has a direct benefit to the citizens being served, to protecting lives, homes, and infrastructure, and to keeping firefighters safe.

The standard review process seeks to identify considerations for improvements that support and strengthen the provision of fire protection services. With that said, a greater level of clarity is generally achieved for all parties by following a standard template around wording and structure for the various agreements.

Additionally, it is also in the best interest that fire departments in a fire protection agreement, automatic aid agreement, or mutual aid plan identify annual training sessions where firefighters get acquainted with the equipment of other departments. These combined training sessions also build the working relationship and morale between fire departments. Automatic aid and protection agreements bring fire departments together to work as a team for the benefit of the public, but without combined training sessions to practice as a team, the team cannot effectively function, and breakdowns can occur.

Another benefit of the mutual training session is the identification of gaps in equipment, communications, or training prior to a real emergency. EMG recommends that when the current agreements are revised and updated, that a defined commitment to regular training be included that designates the position accountable for completion of this task. In addition, the agreements should lay out a commitment to ongoing meetings with senior fire department leadership. These mutual aid/automatic aid meetings allow fire chiefs and chief officers from the participating departments to discuss issues or gaps in response protocols and to identify a collaborative path forward that enhances fire protection for all participating agencies and communities.

EMG recommends that all Automatic Aid, Mutual Aid and Fire Protection/Service Agreements continue to be annually reviewed and revised if necessary. Particular attention should be paid to adhere to regular defined review periods and/or expiry dates identified. Also, a page listing the dates of review and areas revised should be an addendum to any of the revised agreements and associated by-laws.

Section 6: Recommendations

Rec #	Recommendation	Suggested Timelines	Estimated Cost	Rationale
37	With respect to By-Law 35-2016 and By-Law 07-2022, EMG recommends that the fee structure be reviewed and adjusted to current prices.	Immediate	Staff Time	By having a current By-Law in place, competitive pricing will better reflect enhanced service levels in the provision of fire protection services.
38	EMG recommends that when the current agreements are revised and updated, that a defined commitment to regular training be included that designates the position accountable for completion of this task. In addition, the agreements should lay out a commitment to ongoing meetings with senior fire department leadership	Short-Term (1-3 years)	Staff Time	Having joint training sessions and Fire Chief meetings will create a harmonious working relationship while promoting teamwork between the fire departments. It will prevent issues from becoming major problems beforehand while enhancing the health and safety of the firefighters.

SECTION

7



Finance, Budgeting, Fees, and Cost Recovery Mechanisms

7.1 Operational Budget

7.2 Capital Budget

7.3 Reserve Fund

7.4 Revenues

7.5 Fees By-Law

SECTION 7: FINANCE, BUDGETING, FEES, & COST RECOVERY MECHANISMS

The costs associated with supporting public safety and operating a fire department can make up a large part of municipal finances. The Township of Greater Madawaska Finance Department provides a wide variety of administrative and financial services to all departments of the township and to the public. The treasurer is responsible for handling all the financial affairs of the township on behalf of and in the manner directed by the council of the township.

While the Township of Greater Madawaska Finance Department is the primary stakeholder in managing the budget process, the GMFD is engaged and involved in this process through participation of the fire chief. This level of engagement ensures that management and elected officials are cognizant of the public safety needs of the community and its fire department.

As is the case with the GMFD, their operating and capital budgets should be devised to meet the public safety needs of the community served in a sustainable manner. Research has demonstrated that if fire department resources are deployed to match the risks inherent to hazards in the community, then the community will be far less vulnerable to negative outcomes.

A review of the budget allocation to Fire Protection Services indicated that on average the GMFD received 5.86 % of total Operating expenditure allocations based on 2018-2022 projections (Table #13). The trend over the past five years shows a decline in the GMFD’s allocated Operating budget from the Township’s total budget.

TABLE #13: 2018-2022 OPERATING EXPENDITURES

2018	2019	2020	2021	2022
\$279,150	\$282,890	\$268,930	\$269,930	\$278,000
6.5%	6.46%	6%	4.89%	5.45%

It is worth noting that providing direct comparisons to other local jurisdictions regarding the fire department’s budget as a percentage of the municipal budget can be challenging. This is primarily due to the geographically distributed nature of the township and the need to deploy and support disbursed resources for efficient and effective incident response.

EMG notes that upon a review of GMFD operating and capital budgets, there are three account codes for the Revenues account under the fire protection cost centre and several account codes under two separate cost centres, including Fire Protection and Fire Vehicle for the

Expense account³⁹. Overall, the accounts, cost centres, and cost codes represent the true operational functions of the GMFD effectively and efficiently. However, the current coding makes it difficult to evaluate fiscal performance of different aspects of the fire department, such as honorarium, stations, etc. Further, it is unclear if fees for service revenue are entered in a general revenue ledger or recovered by the GMFD.

During municipal budget deliberations, internal departments are competing against each other for scarce budget resources. The job of the fire chief is to educate administration and elected officials explaining why these costs are necessary for the fire department to provide the service levels identified in the Emergency Services By-law and for the safety of staff and citizens in the community. EMG notes that the current operating budget accounts and expenditure codes are not tracked with sufficient detail to support both transparency and accountability.

EMG recommends that the revenue and expenditure accounts be categorized to better represent the different revenue and/or operating areas to assist in more efficiently and effectively evaluate fiscal performance of the GMFD.

7.1 Operating Budget

With respect to the Revenues account, there is no recording of MTO fees collected or other fees under the Fee Service By-Law. Therefore, it is difficult to evaluate the benefits of these types of revenue generation for the Township or as part of key performance indicators for the GMFD. The current revenue cost codes do not represent an accurate forecasting of potential revenue generation (Table #14).

TABLE #14: 2023 GMFD REVENUES ACCOUNT CENTRE

Township of Greater Madawaska				
Protection Services				
Revenues	2023 Budget	2022 Budget	2022 Actual	Variance to Last Year
06020 – Other Municipal – Fire AB Agreement	4,803	4,500	4,708	303
06021 – Other Municipal – Fire NF Agreement	4,100	4,000	4,050	100
08014 – Fire – Burning Permit	4,000	3,000	4,379	1,000
Total Fire Protection	12,903	11,500	13,137	1,403
Total Revenues	12,903	11,500	13,137	1,403

³⁹ Township of Greater Madawaska Protective Services Budget for the Year 2023 Report Date 2023-01-04 12:14 PM

Some of the revenue generated by GMFD are allocated to the GMFD Operating Budget, such as the fees associated with the automatic aid agreements. The Charges and Fees By-Law 34-2022 identifies other potential revenues (Table #15).

TABLE #15: BY-LAW 34-2022 - FIRE PROTECTIONS FEES FOR SERVICE

Services – Fire	Fee for Service
Burn Permit – Valid Two Days	\$5.00
Burn Permit – Valid 30 Days	\$25.00
Burn Permit – Valid One Year	\$50.00
Commercial Fire Code Inspections (on request/complaint basis)	Site Inspection Fee – Follow up at \$30 per hour
Incinerator Permit	\$25.00
Fire Prevention Inspections (group homes, day cares, insurance purposes, etc.)	Site Inspection Fee – Follow up Cost Recovery

The issue is that the revenue codes represent an estimation of a fraction of the forecasted revenue added to the operating budget. This accounting practice leaves the GMFD operating budget vulnerable to potential funding deficits. EMG suggests that revenue generated by the GMFD be allocated to the township general revenue account and that the township assign a fixed amount from the estimated revenue directly into the operating budget. GMFD would still be expected to generate revenues, but the revenue generation would not have a direct impact on the GMFD operating budget but rather an impact on the township general revenue projections.

For instance, if the GMFD is expected to generate \$15,000 in revenue each year, the Finance Department would allocate a fixed amount to the GMFD yearly operating budget. Where the funds are allocated would be subject to discussion between the council, treasurer, and the fire chief. It would then be incumbent on the fire chief to aim to achieve the expected revenue generation for the township. This model makes the township and the GMFD less fiscally vulnerable. In addition, it assures consistent funding that is more manageable for the fire chief to operate the GMFD within a known fiscal reality.

EMG recommends that the revenue stream from the GMFD be replaced with a fixed increase in the GMFD Operating budget, with accountability with the fire chief, for expectation of revenue generation to the township general revenue account.

With respect to the operating budget expenses, the Fire Protection cost centre does not have a cost code for the training functions. Generally, the cost codes represent the different functions of the GMFD, such as suppression, public education, and prevention. However, there is no cost code dedicated to training. This is a compounding effect as to the lack of emphasis or priority given to the importance of training.

EMG recommends that a training cost code be added to the Fire Protection cost centre to accurately budget and monitor training expenses by the GMFD.

Further, the “Fire-Wages” cost code represent salaries paid to all fire personnel up to district chief position. The cost code is allocated \$145,500.00 for the 2023 Operating budget year. This amount represents salaries paid for response to calls, training, meetings, etc. A breakdown of wages for response to calls and training is not captured in the operation budget statement. This makes it difficult to properly evaluate the true cost of training and response to calls. The true picture of wages and salaries is blurred. The Operating Budget should show at the very least alignment with the township’s By-Law 09-2022’s Township of Greater Madawaska Salary Grid 2022 (Table #16).

TABLE #16: BY-LAW 09-2022'S TOWNSHIP OF GREATER MADAWASKA SALARY GRID 2022

Township of Greater Madawaska Salary Grid							
Proposed Pay Level	Job Title	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6
		85%	88%	91%	94%	97%	100%
12	CAO/Clerk-Deputy Treasurer	\$ 107,131	\$ 110,912	\$ 114,693	\$ 118,475	\$ 122,256	\$ 126,037
11		\$ 98,560	\$ 102,039	\$ 105,517	\$ 108,996	\$ 112,475	\$ 115,953
10	Treasurer/Deputy CAO	\$ 90,418	\$ 93,610	\$ 96,801	\$ 99,992	\$ 103,183	\$ 106,375
9	Manager, Planning & Development	\$ 83,185	\$ 86,120	\$ 89,056	\$ 91,992	\$ 94,928	\$ 97,864
8		\$ 76,523	\$ 79,224	\$ 81,925	\$ 84,626	\$ 97,327	\$ 90,027
7	Facilities/Envmt Manager	\$ 67,723	\$ 70,113	\$ 72,504	\$ 74,894	\$ 77,284	\$ 79,674
	Fire Chief/Chief Building Official						
	Mechanic						
	Public Works Supervisor						
6	Deputy Fire Chief	\$ 59,935	\$ 62,050	\$ 64,166	\$ 66,281	\$ 68,396	\$ 70,512
5	Chief Librarian	\$ 53,043	\$ 54,915	\$ 56,787	\$ 58,659	\$ 60,531	\$ 62,403
	Deputy Clerk						
	District Fire Chief						
	Planning and Development Technician						
4	Fire Captain	\$ 46,943	\$ 48,600	\$ 50,256	\$ 51,913	\$ 53,570	\$ 55,227
	Junior Accountant						
	Machine Operator						
	Machine Operator - Environment						
	Maintenance Repair						
	Operations Administrator						
3	Finance and Reception Clerk	\$ 41,544	\$ 430,011	\$ 44,477	\$ 45,943	\$ 47,409	\$ 48,876
	Firefighter/Lieutenant						
2	Facilities Attendant	\$ 36,767	\$ 38,064	\$ 39,362	\$ 40,660	\$ 41,957	\$ 43,255
	Library Assistant						
	Transfer Site Attendant						

Without budgetary details, it is difficult for the fire chief to monitor expenditures or review operational needs leveraging budget allocation for budgetary prudence to meet the safety needs of the community. The Operating budget to Fire- Wages does not portray a true year-to-year evaluation of the cost of calls for service or training.

The question can be asked regarding equipment replacement if this should be captured within Operating Budget or Capital Budget. Discussions with the treasurer will provide insight and direction as to what they deem appropriate. In some jurisdictions, the replacement of equipment such as Bunker Gear, Fire Hose, and Tools are captured within the Capital Budget. Replacement of consumables such as Defib Pads, Absorbent, Gowns, and Masks, are generally captured within the Operating Budget.

Some of the following general observations regarding the Operating Budget are shared for consideration.

- The importance of training cannot be overstated. All training costs should be under one expenditure cost. Expenditures pertaining to training wages and salaries should be accounted separately.
- Provisions for mental health and resilience programs are necessary. Funding for initial and ongoing programming is necessary. PTSD and occupational stress are highly increased in the firefighting occupation. Initial and ongoing training for all fire department personnel, a peer support group, psychologist/psychiatrist support, chaplaincy program, focused EFAP, health, and nutritional programming, to name a few, are all components of health and resilience programs. A committee of stakeholders within the GMFD and Human Resources would be beneficial to produce mental health and resiliency programs.

7.2 Capital Budget

The township's capital budget identified capital funding for the township broken down into specific projects. EMG recommends that the project cost code be categorized under Fire Capital Trucks, Fire Capital PPE, and Fire Capital Equipment. These categories are prominent capital expenditures associated with fire service management and deserve consideration for efficient and effective long-term asset management planning.

EMG's review of the finances of the GMFD has indicated that the fire chief had limited involvement in their annual capital budget contribution. During the budget process the fire chief prepares a capital budget report and should work closely with the Finance Department to review, revise, and update, as necessary. A minimum percentage of the municipal capital budget

should be attributed to fire protection services. The financial review suggested that this is not always the case.

7.3 Reserve Fund

It is important to ensure that adequate annual contributions are in place for continuance of service for the replacement of vehicles and equipment. While there are other avenues to fund a lifecycle plan, there are times where this funding requires augmentation. This can come in the form of a reserve fund. Often this can be funded from the operating budget. Once a full lifecycle plan is in place with the funding sources and amounts it will become evident what additional reserve funds will be necessary.

EMG recommends a more robust fiscal use of reserve fund strategies to support an asset management strategy associated with replacement of apparatuses and equipment.

7.4 Revenue

The GMFD operating budget identifies several sources of revenue. EMG noted that potential fees collected from By-Law 34-2022: *Being a By-Law to establish a General Tariff of Fees and Charges for The Township of Greater Madawaska* do not have an associated revenue code in the GMFD operating budget. It is assumed that revenues are processed through a general revenues account and not generated specifically for the fire department. EMG recommends that user fees from GMFD as per By-Law 34-2022 be reflected in the GMFD Operating budget.

7.5 Fees By-Law

A means of generating revenue to offset the operating costs of the GMFD is through a Fees By-Law for services provided. The township is allowed to charge for services provided, as outlined in the *Municipal Act* of Ontario (2001), Part XII.

As mentioned in section 7.4, the township has a comprehensive tariff of fees payable to the Corporation of the Township of Greater Madawaska for costs incurred (By-Law 34-2022). During this review, EMG noted that the list of fees for service currently charged is limited. There are opportunities to capture more revenues for the services provided by the GMFD.

The following are fire related services that can be prescribed in a fee-for-service by-law:

Commercial Permits & Inspection Fees

- Single occupancy less than 20,000 ft²
- Single occupancy greater than 20,000 ft²

- Multi-tenant building. Fee covers the first three units. A fee of ½ of the current hourly rate will be charged for each additional unit.
- Fireworks & Pyrotechnics Display Inspections

Residential Permits & Inspection Fees

- Multi-tenant (up to and including 12 units)
- Two-unit House Registration Ontario Fire Code Inspection - The fee covers the cost of the initial inspection and follow-up inspection to a maximum of two working hours. If subsequent inspections are required, the current hourly rate will be billed to the applicant.

Fire Apparatus Standby

- Shows, Exhibitions, Demonstrations - Current overtime rates per hour for the entire time fire department is in attendance and includes all assigned apparatus at the scene. \$200 per apparatus per hour. Full cost recovery for 1 Captain & 3 Firefighters, minimum of 3 hours per apparatus.
- Fire Watch - Current rates per hour for the entire time fire department is in attendance and includes all assigned apparatus at the scene. \$200 per apparatus per hour. Full cost recovery for 1 Captain & 3 Firefighters, minimum of 3 hours per apparatus.

Additional Expenses

- If it is necessary to retain a private contractor, rent special equipment not normally available on a fire apparatus to determine origin and cause, suppress, or extinguish a fire, preserve property, prevent fire spread, make safe or otherwise eliminate an emergency (actual costs).
- Fees for responding to motor vehicle collisions for non-residents.
- Cost recovery for any technical rescues that are provided by the fire service or a third party.

By exploring additional opportunities for revenue generation/cost recovery, the GMFD can ensure resources required to support effective and efficient fire service delivery remain available. From the review completed by EMG, the GMFD currently employs a sound approach to budget management, and the recommendation to investigate alternative funding sources, along with the other recommendations within this section, will simply support the growth and development of this critical community service.

Section 7: Recommendations

Rec #	Recommendation	Suggested Timeline	Estimated Timeline	Rationale
39	EMG recommends that the revenue and expenditure accounts be categorized to better represent the different revenue and/or operating areas to assist in more efficiently and effectively evaluating fiscal performance of the GMFD.	Immediate (0-1 year)	Staff Time	Breaking down the different cost code into fire related functions will allow for an improved fiscal management strategy toward a more accurate portrayal of operating and capital budget itemization.

Rec #	Recommendation	Suggested Timeline	Estimated Timeline	Rationale
40	EMG recommends that the revenue stream from the GMFD be replaced with a fixed increase in the GMFD Operating budget, with accountability for the Fire Chief for expectation of revenue generation to the township general revenue account.	Short-term (1-3 years)	Staff Time	Revenue generated by the GMFD is applied directly to the GMFD Operating budget. The issue is that the itemized revenue in the Operating budget is an estimate. The estimated value is compounded in the total allocated Operation budget for the GMFD. Because the value is an estimate, the GMFD is vulnerable if the estimated value is overestimated, negatively affecting the overall Operating budget. The township should absorb the risk from the estimated value of the revenue and factorize a fixed value in the GMFD Operating budget to eliminate possible vulnerability that may negatively affect the GMFD annual budget.
41	Add a Training cost code to the Fire Protection cost centre to accurately budget and monitor training expenses by the GMFD.	Immediate (0-1 year)	Staff Time	Although these costs are separated as training and incidents in the payroll system and allows the Township to evaluate the true cost of training versus incidents, a breakdown of wages for response to calls and training is not captured in the GMFD operation budget statement. This makes it difficult to properly evaluate the true cost of training and response to calls.

Rec #	Recommendation	Suggested Timeline	Estimated Timeline	Rationale
				This information should be at the fingertip of the GMFD fire chief to enhance fiscal responsibility of the GMFD.
42	Categorize the project cost code under Fire Capital Trucks, Fire Capital PPE, and Fire Capital Equipment.	Immediate (0-1 year)	Staff Time	EMG recognizes that the Township of Greater Madawaska has cost codes for trucks, PPE, and equipment. EMG suggests that the cost codes be re-grouped into themes to improve management and planning of major improvements. Organizing the projects will also assist with the development of long-term strategies for the municipal asset management plan.
43	EMG recommends a more robust fiscal use of reserve fund strategies to support the asset management strategy associated with replacement of apparatuses and equipment.	Short-term (1-3 years)	Staff Time	EMG acknowledges that the Township of Greater Madawaska adopted a reserve fund policy in 2021 to allow one reserve fund capital as per the AMP. EMG suggests that coding to the reserve funds be elaborated with specific capital budget elements related to the GMFD, such as Fire Capital Truck, Fire Capital PPE, and Fire Capital Equipment. These represent major capital investments for the GMFD. Long-term planning for these major improvements will benefit the township and taxpayers.
44	EMG recommends that user fees from GMFD as per By-Law 34-2022 be reflected in the GMFD Operating budget.	Short-term (1-3 years)	Staff time	Not all fees collected from the By-Law 34-2022 are reflected in the GMFD Operating budget. For consistency, fees and tariffs from fire services

Rec #	Recommendation	Suggested Timeline	Estimated Timeline	Rationale
				should be reflected in the revenue allocated to the GMFD, like all other revenue generated by the GMFD.

SECTION

8



Review of Previous Plans and Reports

8.1 Review of Previous FUS Report

SECTION 8: REVIEW OF PREVIOUS PLANS & REPORTS

8.1 Review of Previous FUS Report

The FUS is a national organization that provides data on public fire protection for fire insurance statistical work and underwriting purposes of subscribing insurance companies. Subscribers of FUS represent approximately 90% of the private sector property and casualty insurers in Canada⁴⁰.

FUS Certified Fire Protection Specialists conduct detailed field surveys of the fire risks and fire defences maintained in built up communities including incorporated and unincorporated communities of all types across Canada. To complete this task, the specialists at FUS perform a detailed analysis of the overall fire protection by assessing four key areas – fire department, water supplies, fire prevention, and emergency communications.

The results of these surveys are used to establish a Public Fire Protection Classification (PFPC) for each community. While the FUS is not involved in setting rates, the information provided through the Fire Insurance Grading Index is a key factor used in the development of commercial lines property insurance rates. The PFPC is also used by underwriters to determine the amount of risk they are willing to assume in each community or section of a community.

The overall intent of the PFPC system is to provide a standardized measure of the ability of the protective facilities of a community to prevent and control the major fires that may be expected to occur. This is done by evaluating, in detail, the adequacy, reliability, strength, and efficiency of the protective facilities and comparing the level of protection against the level of fire risk in the built environment.

The FUS also uses PFPC information to develop the DPG, which is used by personal lines insurers in determining property insurance rates for detached dwellings, with not more than two dwelling units. The DPG is a measure of the ability of the protective facilities of a community to prevent and control the structure fires in detached dwellings by evaluating the adequacy, reliability, strength, and efficiency of the protective facilities and comparing the level of protection against the level of fire risk associated with a typical dwelling.

The fire insurance grading system used does not consider past fire loss records, but rather fire potential based on the physical structure and makeup of the built environment. When a community improves its PFPC or DPG, insurance rates may be reduced while the underwriting capacities may increase. Every insurance company has its own formula for calculating their

⁴⁰ Fire Underwriters Survey <https://fireunderwriters.ca/index.html>.

underwriting capacities and insurance rates; however, the PFPC and DPG classifications are extremely useful to insurers in determining the level of insurable risk present within a community.

FUS described its grading process as follows:

The Public Fire Protection Classification (PFPC) is a numerical grading system scaled from 1 to 10 that is used by Commercial Lines¹ insurers. Class 1 represents the highest grading possible, and Class 10 indicates that little to no fire protection is in place.

Fire Underwriters Survey also assigns a second grade for fire protection. The second grading system, entitled Dwelling Protection Grade (DPG), assesses the protection available for small buildings such as single-family dwellings and is used by Personal Lines² insurers.

The DPG is a numerical grading system scaled from 1 to 5. One (1) is the highest grading possible and five (5) indicates little or no fire protection is present.

The minimum level of achievement is DOG 3B for volunteer fire departments. To achieve this level, the following requirements must be met.

Minimum criteria for Dwelling Protection Grade 3B42:

Alternative Water Supply

A public municipal-type water supply is not required for DPG 3B; however, fire departments must have adequate equipment, training, and access to approved alternative water supplies to deliver standard shuttle service in accordance with NFPA 1142, *Standard on Water Supplies for Suburban and Rural Fire Fighting*. A formal plan for use of alternative water supplies must be in place and available for review detailing the alternative water supply points and characteristics. To be credited for this, fire department access to alternative water supplies must be 24 hours per day and 365 days per year. Refill capacity from alternative water supplies using drafting techniques requires a pump that has a minimum capacity of 450 LPM (100 gpm) at 275-415 kPa (40-60 psi).

Fire Department Apparatus

For each fire station with a DPG 3B, fire apparatus must include:

- a minimum of one triple combination pumper rated at not less than 3000 LPM (625 GPM at 150 psi), AND
- a minimum of one mobile water supply apparatus with:
 - a minimum rated water carrying capacity of 4,000 L (880 gallons), AND

For full credit apparatus must be designed in accordance with:

- Underwriters' Laboratories of Canada (ULC) S515 Automobile Fire Fighting Apparatus, or
- NFPA 1901 Standard for Automotive Fire Apparatus

In addition, the combined water carrying capacity of the two units (noted above) must be at least 6,800 Litres (1,500 gallons) total and the fire department must have a transfer system capable of supplying the pumper with water as needed. This may be accomplished by pump or dump valve to a portable tank of at least 4,550 Litres (1,000 gallons) capacity.

Credit for fire apparatus will be based on evidence of reliability indicators including the listing of apparatus by ULC, design specifications, fire pump service test records, age, maintenance history, etc. Apparatus is evaluated from the perspective of the capacity to provide structural fire protection.

To be credited, apparatus must be stored in a suitably constructed and arranged fire hall.

Fire Force

For each fire station with a DPG 3B, the credited available responding fire force will include at a minimum:

- 1 Fire Chief (required to respond but not required to be on-duty)
- 15 auxiliary fire fighters scheduled to respond in addition to the number of personnel required to conduct mobile water supply shuttle operations.

Emergency Communications

An adequate and reliable means of receiving alarms of fire and dispatching firefighters is necessary (ex. public fire number, pagers etc.).

Fire Protection Service Area

The boundary of the protected area must be clearly established and registered with the Provincial Government.

The fire insurance grading system does not consider past fire loss records but rather fire potential based on the physical structure and makeup of the built environment. Every insurance company has a formula for calculating its underwriting capacities and insurance rates; however, the PFPC and DPG classifications are extremely useful to insurers in determining the level of insurable risk in a community. When a community improves its PFPC or DPG, property owners may see a reduction in their insurance rates, while their underwriting capacities may increase.

Historically, community assessments were conducted by FUS on a predetermined basis, varying from 10 to 25 years. Best practice and changing industry standards suggest that moving to a grade update every five years would better reflect ongoing changes to fire protection and communities at large. The FUS has also introduced the FUS Municipal Fire Portal that would provide GMFD the ability to access and update data relevant to GMFD and forward updates in a timely fashion. By accessing this system regularly, the GMFD can provide frequent updates from which FUS Specialists will analyze and publish grade updates as deemed necessary. It is recommended that once a FUS assessment is complete, that the Fire Chief regularly access and provide input to the FUS Municipal Fire Portal.

EMG's investigation revealed that GMFD did not have a FUS completed in the last five years; the last FUS was completed in 2017. EMG recommends that the township acquire the service of the FUS to conduct an updated field survey by a FUS Certified Fire Protection Specialist to be informed of their PFPC to determine the amount of risk they are willing to assume in their community.

As part of the FUS field survey, EMG also recommends that the Township of Greater Madawaska apply for a Superior Tanker Shuttle Accreditation.

Section 8: Recommendations

Rec #	Recommendation	Suggested Timeline	Estimated Cost	Rationale
45	The Township of Greater Madawaska acquire the service of the FUS to conduct a field survey by a FUS Certified Fire Protection Specialist to be informed of their PFPC to determine the amount of risk they are willing to assume in their community.	Short Term (1 - 3 years)	Staff Time and FUS Fee for service	FUS field survey is a valuable tool for the township to measure its capability to provide adequate fire protection services and prevent significant fires. The information will help prioritizing actions and recommendations from the MFP.

Rec #	Recommendation	Suggested Timeline	Estimated Cost	Rationale
46	The Township of Greater Madawaska apply for a Superior Tanker Shuttle Accreditation	Short Term (1 - 3 years)	Staff Time and FUS fee for service	<p>An adequate water supply is required to be readily available and of sufficient volume and pressure to allow firefighters to control fire growth, conduct search and rescue operations, and prevent fire spread between buildings⁴¹.</p> <p>Accredited Superior Tanker Shuttle Service is a recognized equivalency to hydrant protection. To be accredited, fire departments must commit to maintaining a high standard of organization, and practice delivering the service regularly.</p> <p>The fire department must be able to show through testing and documentation that it can continuously provide water supplies more than the minimum required for hydrated municipal-type water supplies.</p> <p>To be recognized for Accredited Superior Tanker Shuttle Service, the system of delivery of water supplies must be well-designed and well-documented⁴².</p>

⁴¹https://plcfire.com/water_supplies_for_rural_firefighting/#:~:text=An%20adequate%20water%20supply%20is,prevent%20fire%20spread%20between%20buildings retrieved on February 7, 2023.

⁴²<https://fireunderwriters.ca/grading/superior-tanker-shuttle-service.html> retrieved on February 7, 2023

SECTION 9

Recommendations, Timelines & Associated Costs

9.1 Conclusion

9.2 Recommendations, Estimated Costs & Rationale

SECTION 9: RECOMMENDATIONS, TIMELINES, & ASSOCIATED COSTS

9.1 Conclusion

During the review conducted by EMG, it was demonstrated that the GMFD firefighters are truly dedicated to the community they serve. The council, CAO, and fire chief are sincerely committed to ensuring the safety of the community and the firefighters.

Based on the present staffing, equipment, and fire station locations, GMFD is endeavoring to offer the most efficient and effective service possible; recommendations presented in this document are intended to assist the department in meeting its goals for service excellence.

All costs and associated timelines noted in this report are estimates that can be implemented through prioritization between the fire chief, CAO, and Council. This MFP is a long-range planning document; however, it is recommended that annual updates be completed, along with a full review to be conducted at the five-year mark.

9.2 Recommendations, Estimated Costs & Rationale

The following chart provides a detailed overview of the recommendations with rationale found throughout this report along with any estimated costs and suggested timelines for implementation. The recommendation chart is also organized by sections of the report for convenience purposes.

This MFP document is a culmination of 46 recommendations.

GMFD Recommendations Chart

Rec #	Recommendation	Suggested Timeline	Estimated Cost	Rationale
Section 1 – Community and Fire Department Overview				
1	<p>The Fire Chief brings forth a revised version of the E&R Bylaw for the Council's approval and ensures its annual review and updates.</p> <ul style="list-style-type: none"> • And that all other By-Laws noted in this document be reviewed and updated as required. • All by-laws should be reviewed annually to ensure the currency of the documents. 	Short-term (1-3 years) ongoing	Staff time	Maintaining an up-to-date E&R Bylaw will guide GMFD's operations and identify response guidelines, fire prevention, and public education programs and levels of training.
2	<p>Establish an SOG Committee representing all divisions of the GMFD that develops new SOGs and reviews current ones regularly.</p>	Short-term (1-3 years) ongoing	Staff time	Establishing an SOG committee will aid in maintaining the information in the database to be current while allowing the participation of GMFD members to determine the fire department's operations.

Rec #	Recommendation	Suggested Timeline	Estimated Cost	Rationale
Section 2 – Risk Assessment				
3	The Township should conduct a study to investigate if the current staffing model is sustainable given recruitment and retention challenges and anticipated growth. The Township of Greater Madawaska should investigate the feasibility of becoming a composite fire department adding a full-time fire chief and an on-call duty model where adequate staffing are available 24/7/365.	Immediate (0-1 year)	Staff time and FTE for Fire Chief \$100,000/yr. and On-call wages and salaries \$100,000/yr.	<p>Surveys conducted indicated that the current part-time fire chief model is inadequate to support the capacity of the GMFD to provide effective fire protection services. The systemic recruitment and retention issue should be evaluated through an on-call service delivery model, which may always assure proper staffing.</p> <p>It is worth noting that at the time of the preparation of this document, the Township of Greater Madawaska proactively hired a full-time fire chief.</p> <p>Th Township should continue to investigate the current staffing model to ensure a sustainable recruitment and retention model for the GMFD.</p>
4	EMG acknowledges and applauds that the Township of Greater Madawaska has had an asset management plan (AMP) for many years. The AMP should be updated in support of the township working with	Mid-Term (4-6 years)	Staff Time	EMG noted that the Township of Greater Madawaska recently established an Asset Management Plan. It is important that the plan includes

Rec #	Recommendation	Suggested Timeline	Estimated Cost	Rationale
	<p>GMFD to enhance their asset management strategy, emphasizing a robust asset replacement to assure uninterrupted quality of level of service provided, including station maintenance and replacement, equipment maintenance and replacement, and telecommunication system maintenance and replacement.</p>			<p>equipment, fleet, and infrastructure specific to the GMFD. Fire protection services is a municipal duty mandated through the <i>FPPA</i>, 1997. Requirements to meet the needs and circumstances of the township require specialized equipment that is expansive, and which has suggested replacement and maintenance schedules identified through best practice documents supported by accreditation agencies and Section 21 committee.</p>
5	<p>The GMFD should develop and implement a public fire safety education program and a prevention program, including fire inspection and fire investigation.</p>	<p>Short-term (1 - 3 years)</p>	<p>Staff time and FTE \$20,000 to \$40,000/yr.</p>	<p>Under Section 2 (1) (a) of the <i>FPPA</i>, 1997, it is the responsibility of the municipality to have a public education and prevention program. The requirement is recognized in the Township of Greater Madawaska E&R By-Law 11-2014. However, currently there is no program or staffing for the program.</p>

Rec #	Recommendation	Suggested Timeline	Estimated Cost	Rationale
6	The Township of Greater Madawaska needs to develop a comprehensive CRRP that aligns with the CRA.	Immediate (0-1 year)	Staff time	With the risks to the township identified, the CRRP will aid in prioritizing who, what, when, and how these will be lessened or mitigated.
Section 3 – Fire Department Divisions				
7	EMG recommends that the GMFD update the 2014 organizational chart	Immediate (0-1 year)	Staff Time	The organizational chart needs to represent the lieutenant positions and considerations should be given to prevention and training. A structured organizational chart provides morale support and promotes a sense of pride and belonging for the personnel.
8	The Township of Greater Madawaska provides dedicated administrative support to the GMFD.	Short-Term (1-3 years)	Wages and Salaries and Benefit for one additional FTE: \$47,000	There is a systemic sentiment of undervalue attributed to clerical/administrative support in the volunteer fire service culture. Given that most management is promoted from the rank, the benefits of administrative supports are often not understood as new management comes from a strong operational background with limited

Rec #	Recommendation	Suggested Timeline	Estimated Cost	Rationale
				<p>exposure to administrative functions. The lack of administrative support leads to inefficiencies.</p> <p>The Township of Greater Madawaska should investigate the possibility of sharing clerical services with other department as a cost saving initiative that would benefit both the GNFD and the Township.</p>
9	The Township of Greater Madawaska make the GMFD fire chief position a full-time position.	Immediate (0-1 year)	Wages and Salaries and Benefit for one additional FTE: \$87,000 - \$105,000	<p>At the time of the preparation of this document, the Township of Greater Madawaska proactively hired a full-time fire chief.</p> <p>The fire chief manages two stations, 30 staff, 9 fleet vehicles, and a large inventory of assets. Functions of a fire chief include:</p> <ul style="list-style-type: none"> • Planning • Structuring • Directing • Coordinating • Conducting Programs • Evaluating

Rec #	Recommendation	Suggested Timeline	Estimated Cost	Rationale
				<p>In addition, there are committee meetings. The functions are managerial and extremely important in support of operational duties associated with reducing and elimination loss of life and loss of property. Volunteerism is a misnomer with respect to fire protection services. The size of the GMFD requires full-time management.</p>
10	<p>Rewrite the fire chief job description to emphasize the executive functions associated with the position</p>	<p>Immediate (0-1 year)</p>	<p>Staff Time</p>	<p>As a result of the proactive hiring of a full-time fire chief, the Township updated the Fire Chief job description.</p> <p>The current job description is incorporated into the E&R By-Law. There should be a proper job description commensurate with the managerial level of responsibilities with the position to benefit the Township administration.</p>
11	<p>Review the district chief position and roles to clearly delineate the responsibilities and expectations of the position within the context of Operations.</p>	<p>Immediate (0-1 year)</p>	<p>Staff Time</p>	<p>The roles and responsibilities are found in the E&R By-Law and should inform updates to the current job description to ensure</p>

Rec #	Recommendation	Suggested Timeline	Estimated Cost	Rationale
				clarity and accountability inherent of the positions.

Rec #	Recommendation	Suggested Timeline	Estimated Cost	Rationale
12	<p>GMFD establish a Fire Prevention and Public Education program.</p> <p>EMG recommends a process mapping exercise to define the roles and responsibilities and the expectations for the Fire Prevention section.</p> <p>Complete a study of the Fire Prevention section salaries, wages, and benefits to assure a sustainable fire prevention program model.</p> <p>Consider the addition of a supervisory position like that of a captain position to make it more effective and efficient in achieving the objectives of the Fire Prevention Division.</p>	Immediate (0-1 year)	Staff time	<p>Fire Prevention and Public Education is mandated by the <i>FPPA</i>, 1997. A division should be established and recognized in the GMFD organizational chart. Formalizing the division will assure adequate funding and budget allocation in support of responsibility of the municipality with respect to section 2 (1)(a) of the <i>FPPA</i>, 1997.</p> <p>The process mapping would be beneficial in informing a robust policy for the section.</p> <p>Some options for the Fire Prevention and Public Education division are:</p> <ul style="list-style-type: none"> • Develop a Fire Prevention and Public Education division from existing staff. • Partner with neighbouring fire department to share Fire Prevention staff through an automatic aid agreement.

Rec #	Recommendation	Suggested Timeline	Estimated Cost	Rationale
				<ul style="list-style-type: none"> Contract out a certified fire prevention officer from a neighbouring department with a pay for service agreement based on a GMFD developed fire inspection schedule and public education scheduled program approved by the GMFD fire chief. <p>The supervisory position can be a volunteer position supporting any options proposed to fill the fire prevention officer for the structure of the Fire Prevention and Public Education Division.</p>
13	The GMFD Fire Prevention policy identifies the level of qualification for a fire inspector to be NFPA 1031 Level 1.	Immediate (0-1 year)	Staff Time	This will ensure a competent level of proficiency and ability to conduct fire prevention inspections for the Township building stock identified in the CRA.
14	Fire investigation duties should be the responsibilities of the Fire Prevention.	Short-Term (1-3 years)	Staff Time	Although the responsibility to conduct origin and cause of fires falls onto the Fire Chief under the <i>FPPA</i> , 1997, the Fire Chief under sub-section 6 (6) can

Rec #	Recommendation	Suggested Timeline	Estimated Cost	Rationale
				<p>delegate. Fire investigation duties should be delegated to members of the Fire Prevention Division/Section.</p> <p>It is well known in the fire protection services field that fire investigation contributes to public education and fire prevention. These areas complement each other.</p> <p>Fire investigation and fire prevention, including public education go hand in hand to developing a successful and wholesome fire prevention/public education program.</p>
15	<p>EMG recommends that GMFD fire investigator should be trained to NFPA 1031, NFPA 921, and the fire investigation operations should align with the new NFPA 1321: <i>Standard for Fire investigation Unit</i> expected to be released in 2024. Under the O. Reg. 343/22 made under the <i>FPPA</i>, 1997, as of the 1st of July 2026, fire investigator will have to be trained to the NFPA 1033:</p>	<p>Immediate (0-1 year)</p>	<p>Staff Time</p>	<p>Under the O. Reg. 343/22 made under the <i>FPPA</i>, 1997, as of the 1st of July 2026, fire investigator will have to be trained to the NFPA 1033: <i>Standard for Professional Qualifications for Fire Investigator</i>.</p> <p>The new NFPA 1321 is a peer document assisting fire department with establishment</p>

Rec #	Recommendation	Suggested Timeline	Estimated Cost	Rationale
	<i>Standard for Professional Qualifications for Fire Investigator.</i>			and operations of a fire investigation unit.
16	The GMFD revamps their 8-02 Fire Prevention Policy through the lens of the NFPA 1730 and implement the revamped policy with accompanying SOGs, detailing specific functions of fire inspection, fire investigation, and public fire and life safety education.	Immediate (0-1 year)	Staff Time	The current policy does not adequately meet the needs and responsibilities of the Township under the <i>FPPA</i> , 1997. A robust policy with accompanying SOGs will support effective and efficient operability of the first two lines of defence within GMFD.
17	GMFD investigate the promotion of home sprinkler systems as part of their fire prevention and public education initiatives.	Short-Term (1-3 years)	Staff Time	By working with the developers and the public in promoting the installation of home sprinkler systems, the GMFD would be demonstrating a pro-active approach to educating the public on another viable option for homeowners to help reduce the risk in the event of a fire.
18	EMG recommends that all training curricula should align with specific knowledge and skill requisites of the NFPA Professional Qualification standard relevant to the GMFD identified level of services.	Short-Term (1-3 years)	Cost of Instructional kits would require an investment of \$5,000	Vendors like IFSTA and Jones & Bartlett provide excellent instructional kits developed from NFPA Professional Qualifications Standards.
19	GMFD establish a Training Section.	Mid-Term (4-6 years)	If capacity exists within the township,	Training is one of the most important components of a fire

Rec #	Recommendation	Suggested Timeline	Estimated Cost	Rationale
			<p>there will be minimal cost. If services must be outsourced, the exercise may cost up to \$5,000</p>	<p>department. Given that training is now mandated through O.Reg.343/22: Firefighter Certification, makes it even more relevant.</p> <p>A training unit would afford curriculum development and implementation, as well as standardization of training. In addition, a training unit would allow a more robust evaluation system to assure its value Finally, a training unit would provide adequate record keeping.</p> <p>Stakeholders' Staff's, and Council's survey all identified training as an important function to assure quality of service delivery to the community. A Training Unit would allow for organized training aligning with core services provided by the GMFD.</p>
20	GMFD eliminate the individual training night at both stations in favour of a combined training night for all staff to promote unity and teamwork, as well as a	Immediate (0-1 year)	Staff Time	Elimination of the "silo" and competitive sentiment between the stations will unify the GMFD.

Rec #	Recommendation	Suggested Timeline	Estimated Cost	Rationale
	sense of belonging to a single fire service.			This will standardize training and eliminate risk associated with unfamiliarity with equipment at emergency calls that could jeopardize time and quality of response.
21	Create a training section staffed with one training officer.	Immediate (0-1 year)	<p style="text-align: center;">Staff Time Full-time Training Officer (Approximate cost of \$65,000) Volunteer Training Officer (Approximate cost Captain yearly Honorarium)</p>	<p>The creation of a training unit to adequately meet the current and future training needs of the GMFD is essential.</p> <p>There are options for the creation of the training officer complement:</p> <p>Hire a full-time training officer, designate one volunteer position as a training officer with commensurate honorarium with the rank of Captain, or assigning the Training Officer duties to the full-time chief position as part of the Fire Chief job description.</p>
22	EMG recommends that GMFD firefighters be trained to HAZMAT Operations Level of Responders at the Mission Specific Product Control and that the municipal by-law 11-2014 be amended accordingly.	Immediate (0-1 year)	Staff Time	The GMFD, when responding to some calls for service, performs functions associated with Operations Level for HAZMAT. However, the E&R states that

Rec #	Recommendation	Suggested Timeline	Estimated Cost	Rationale
				their level of service is at Awareness Level. Hence, training and service delivery are not at the same level and presents a risk for the Township.
23	GMFD aligns its technical operations and training to NFPA 2500: <i>Standard for Operations and Training for Technical Search and Rescue Incidents and Life Safety Rope and Equipment for Emergency Services.</i>	Short-Term (1-3 years)	Staff Time	This standard specifies the minimum requirements for the GMFD identified levels of functional capability for conducting operations at technical search and rescue incidents while minimizing threats to rescuers
24	GMFD train the fire personnel for wilderness search and rescue as per the knowledge and requisite skills identified in the NFPA 1006: <i>Standard for Technical Rescue Personnel Professional Qualifications.</i>	Mid-Term (4-6 years)	External Training cost can be supported by the OFC.	<p>Given the anticipated growth and the reliance on tourism, EMG anticipates the emergency calls for service to increase within the next ten years. The geographical size of the township and natural beauty, makes the Township of Greater Madawaska a touristic attraction for outdoor enthusiasts.</p> <p>Wilderness search and rescue qualifications would allow members of the GMFD to respond to incidents and effect professional rescues in</p>

Rec #	Recommendation	Suggested Timeline	Estimated Cost	Rationale
				wilderness incidents through proper identification of terrain and hazards with required equipment to match the environment.
25	EMG recommends that the GMFD develop a recruit training policy and training program to support recruits and promote retention within the department.	Immediate (0-1 year)	Staff Time	A review of the GMFD recruit program indicated that the GMFD does not have an official onboarding program leading to positive experiences for recruits. EMG suggests that a recruit onboarding program would provide for a stress-free and welcoming experience, easing the new recruits' transition to an unfamiliar environment, and facilitating the development of a relationship with the recruits.
26	Invest in a process mapping study to evaluate the GMFD's record keeping practice to reduce or eliminate current deficiencies, such as outstanding reports and manual records from training sessions	Short-Term (1-3 years)	Staff Time or external vendor (\$5,000)	Currently GMFD utilizes Vector Solutions as a SaaS product for record keeping practices. The product's capabilities are underused. This could be a training issue where there is a lack of clerical skills. Nevertheless, the record keeping process is ineffective and a

Rec #	Recommendation	Suggested Timeline	Estimated Cost	Rationale
				process mapping would allow to identify areas for improvement.
27	Capture and record response time statistics to provide a key performance indicator of service delivery.	Immediate (0-1 year)	Staff Time	Response to emergency calls has been identified as an important factor by stakeholders. It is also a recognized key performance indicator for the evaluation of the quality of service provided. Unfortunately, statistics with respect to response time are not adequately captured to assist the GMFD in evaluating its performance.
28	GMFD work with the Renfrew fire chiefs Steering Committee and CACC to develop a training program for CACC staff that conforms to NFPA 1061.	Short-term (1-3 years)	Staff Time	The current communication By-Law and Agreement identifies that making recommendations is the responsibility of the fire chiefs. GMFD should work with the Renfrew fire chiefs to ensure that training for CAAC staff aligns with NFPA 1061.
29	Future CACC Fire Communications Services Agreements should include clauses identifying evaluation of the CACC against NFPA 1225 <i>Standard for Emergency Services Communications</i> .	Short-term (1-3 years)	Staff Time	The township's representative can propose amendments to the agreement to improve the services. Evaluating the Renfrew CACC against the NFPA 1225 would allow better fire services representation, as part of CACC

Rec #	Recommendation	Suggested Timeline	Estimated Cost	Rationale
				service to fire department clients.

Rec #	Recommendation	Suggested Timeline	Estimated Cost	Rationale
Section 4 – Facilities, Vehicles, Equipment and Water Supply				
30	<p>Address the list of station concerns noted in section 4.2 of the report.</p> <p>Note: an overview of concerns is also noted in the adjoining rationale section.</p>	Short to Mid-term (1-6 years)	<p>Due to the number of upgrades required, a full assessment by the facilities department is needed to obtain an estimate of costs.</p> <p>These repairs could be anywhere from \$100,000 up to over \$1 million.</p>	<p>During the walk-through by EMG, it was evident that the GMFD fire stations are nearing, or at maximum capacity for storage of vehicles and equipment. Overall, the concerns noted during the station visits include:</p> <ul style="list-style-type: none"> • The proximity of the firefighter’s gear in relation to the vehicle exhaust. This could create an exhaust contamination issue. Firefighters’ gear should be stored in a separate room away from any exhaust contamination. • None of the fire stations’ apparatus bays have floor drains with oil separator (catchment) systems. • All the stations appear to be at maximum capacity for vehicles and equipment storage. • There was a notable lack of proper storage

Rec #	Recommendation	Suggested Timeline	Estimated Cost	Rationale
				<p>areas/facilities for the equipment. This creates a tripping/safety hazard to the staff.</p> <ul style="list-style-type: none"> • No diesel exhaust catchment system at any of the fire stations. • Separations from the apparatus floor and the training/living areas of the station need to be installed and maintained – some of the fire stations have either desks/workstation or kitchen facilities on the apparatus floor. These areas are susceptible to exhaust contamination. • Washroom facilities for both male and female firefighters were also an issue at the stations and should be addressed. This can also be accomplished by making the washrooms gender neutral.

Rec #	Recommendation	Suggested Timeline	Estimated Cost	Rationale
				<ul style="list-style-type: none"> Lack of shower/wash-up areas that need to be made available at both stations. Firefighters must be able to decontaminate themselves from exposure to smoke, toxic gasses, chemicals, blood, and pathogens as soon as possible after a call and before going home.
31	<p>The Fire Chief, CAO, and Council should consider relocation of the GMFD Griffith station to Matawatchan Rd.</p> <ul style="list-style-type: none"> Or consider relocating the fire station to a central area, in the vicinity of Matawatchan Road, on Township owned property. 	<p>Short-term for decision (1-3 years)</p> <p>Mid to Long-Term for implementation (4-10 years)</p>	<p>Assessment to occur first before costing/saving can be determined. A new fire station can range from \$2 to \$5 million.</p>	<p>Given the anticipated development and growth, the lack of adequate response time under NFPA 1720 in Ward 2, and current opportunity from planned facility capital investment for relocation of the Roads Department Griffith location, the Township should consider relocating the Griffith station rather than relocating the Road Department Griffith garage.</p>
Section 5 – Emergency Management				
32	<p>EMG recommends proactive scheduling of required training to staff involved in the municipal emergency management program.</p>	<p>Immediate (0-1 year)</p>	<p>Staff Time</p>	<p>Requirement of O. Reg. 380/04 of the <i>EMCPA</i>.</p>

Rec #	Recommendation	Suggested Timeline	Estimated Cost	Rationale
33	EMG recommends that a robust record keeping system be implemented for reporting requirements from the CEMC and EMPC.	Immediate (0-1 year)	Staff Time	
34	<p>EMG recommends that the Amendment page should include the following:</p> <ul style="list-style-type: none"> • The date changes were completed. • A brief outline of the changes and the sections involved. • Name of individual completing the updates. <p>Whether the revised document requires council approval.</p>	Immediate (0-1 year)	Staff Time	
35	EMG recommends that a policy be implemented that identifies IMS 200 as the minimum standard for staff required to be in the EOC, and IMS 300 being the minimum for all department heads.	Immediate (0-1 year)	Staff Time for Training	IMS is an integral part of a successful emergency management response. It is critical that all staff assigned roles and responsibilities can maneuver effectively within the complex organizational structure to avoid miscommunication and catastrophic consequences. IMS training is essential to alleviate task mismanagement.

Rec #	Recommendation	Suggested Timeline	Estimated Cost	Rationale
36	EMG recommends that the MEP should have a section dedicated to domestic terrorism.	Immediate (0-1 year)	Staff time	With so many acts of domestic terrorism taking place each year throughout the world, including Canada, a township must plan for the possibility of such events within their own community. The section should include an integrated response program comparable to NFPA 3000.
Section 6 – Fire Service Agreements				
37	With respect to By-Law 35-2016 and By-Law 07-2022, EMG recommends that the fee structure be reviewed and adjusted to current prices.	Immediate	Staff Time	By having a current By-Law in place, competitive pricing will better reflect enhanced service levels in the provision of fire protection services.
38	EMG recommends that when the current agreements are revised and updated, that a defined commitment to regular training be included that designates the position accountable for completion of this task. In addition, the agreements should lay out a commitment to ongoing meetings with senior fire department leadership	Short-Term (1-3 years)	Staff Time	By having joint training sessions, and Fire Chief meetings will create a harmonious working relationship while promoting teamwork between the fire departments. In the end preventing issues from becoming major problems beforehand while enhancing the health and safety of the firefighters.

Rec #	Recommendation	Suggested Timeline	Estimated Cost	Rationale
Section 7 – Finance, Fees, and Cost Recovery				
39	EMG recommends that the revenue and expenditure accounts be categorized to better represent the different revenue and/or operating areas to assist in more efficiently and effectively evaluate fiscal performance of the GMFD.	Immediate (0-1 year)	Staff Time	Breaking down the different cost code into fire related functions will allow for an improve fiscal management strategy toward a more accurate depiction of operating and capital; budget itemization.

Rec #	Recommendation	Suggested Timeline	Estimated Cost	Rationale
40	EMG recommends that the revenue stream from the GMFD be replaced with a fixed increase in the GMFD Operating budget, with accountability for the Fire Chief for expectation of revenue generation to the township general revenue account.	Short-term (1-3 years)	Staff Time	Revenue generated by the GMFD is applied directly to the GMFD Operating budget. The issue is that the itemized revenue in the Operating budget is an estimate. The estimated value is compounded in the total allocated Operation budget for the GMFD. Due to the value being an estimate, the GMFD is vulnerable if the estimated value is overestimated, negatively affecting the overall Operating budget. The township should absorb the risk from the estimated value of the revenue and factorize a fixed value in the GMFD Operating budget to eliminate possible vulnerability that may negatively affect the GMFD annual budget.

Rec #	Recommendation	Suggested Timeline	Estimated Cost	Rationale
41	Add a Training cost code to the Fire Protection cost centre to accurately budget and monitor training expenses by the GMFD.	Immediate (0-1 year)	Staff Time	<p>Although these costs are separated as training and incidents in the payroll system and allows the Township to evaluate the true cost of training versus incidents, a breakdown of wages for response to calls and training is not captured in the GMFD operation budget statement. This makes it difficult to properly evaluate the true cost of training and response to calls.</p> <p>This information should be at the fingertip of the GMFD fire chief to enhance fiscal responsibility of the GMFD.</p>
42	Categorize the project cost code under Fire Capital Trucks, Fire Capital PPE, and Fire Capital Equipment.	Immediate (0-1 year)	Staff Time	EMG recognizes that the Township of Greater Madawaska has cost codes for trucks, PPE, and equipment. EMG suggests that the cost codes be re-grouped into themes to improve management and planning of major improvements. Organizing the projects will also assist with the development of long-term

Rec #	Recommendation	Suggested Timeline	Estimated Cost	Rationale
				strategies for the municipal asset management plan.
43	EMG recommends a more robust fiscal use of reserve fund strategies to support asset management strategy associated with replacement of apparatuses and equipment.	Short-term (1-3 years)	Staff Time	EMG acknowledges that the Township of Greater Madawaska adopted a reserve fund policy in 2021 to allow one reserve fund capital as per the AMP. EMG suggests that coding to the reserve funds be elaborated with specific capital budget elements related to the GMFD, such as Fire Capital Truck, Fire Capital PPE, and Fire Capital Equipment. These represent major capital investments for the GMFD. Long-term planning for these major improvements will benefit the township and taxpayers.

Rec #	Recommendation	Suggested Timeline	Estimated Cost	Rationale
44	EMG recommends that user fees from GMFD as per By-Law 34-2022 be reflected in the GMFD Operating budget.	Short-term (1-3 years)	Staff time	Not all fees collected from the By-Law 34-2022 are reflected in the GMFD Operating budget. For consistency, fees and tariffs from fire services should be reflected in the revenue allocated to the GMFD, like all other revenue generated by the GMFD.

Rec #	Recommendation	Suggested Timeline	Estimated Cost	Rationale
Section 8 – Review of Previous Plans/Reports				
45	The Township of Greater Madawaska acquire the service of the FUS to conduct a field survey by a FUS Certified Fire Protection Specialist to be informed of their PFPC to determine the amount of risk they are willing to assume in their community.	Short Term (1 to 3 years)	Staff Time & FUS Fee for service	FUS field survey is a valuable tool for the township to measure its capability to provide adequate fire protection services and prevent significant fires. The information will help prioritizing actions and recommendations from the MFP.
46	The Township of Greater Madawaska apply for a Superior Tanker Shuttle Accreditation.	Short Term (1 to 3 years)	Staff Time & FUS fee for service	An adequate water supply is required to be readily available and of sufficient volume and pressure to allow firefighters to control fire growth, conduct search and rescue operations, and prevent fire spread between buildings ⁴³ . Accredited Superior Tanker Shuttle Service is a recognized equivalency to hydrant protection. To be accredited, fire departments must commit to maintaining a high standard of organization, and practice

⁴³https://plcfire.com/water_supplies_for_rural_firefighting/#:~:text=An%20adequate%20water%20supply%20is,prevent%20fire%20spread%20between%20buildings retrieved on February 7, 2023.

Rec #	Recommendation	Suggested Timeline	Estimated Cost	Rationale
				<p>delivering the service regularly. The fire department must be able to show through testing and documentation that it can continuously provide water supplies more than the minimum required for hydrated municipal-type water supplies.</p> <p>To be recognized for Accredited Superior Tanker Shuttle Service, the system of delivery of water supplies must be well-designed and well-documented⁴⁴.</p>

⁴⁴<https://fireunderwriters.ca/grading/superior-tanker-shuttle-service.html> retrieved on February 7, 2023

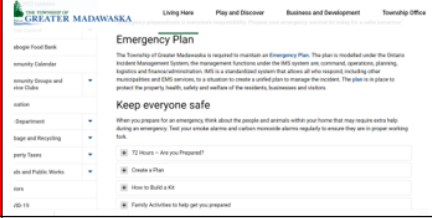
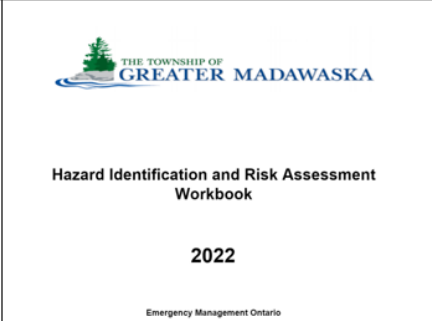
Appendices




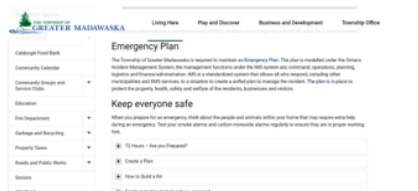
- Appendix 'A' - EMPCA Assessment Tool**
- Appendix 'B' - EMPCA – Ontario Regulation
380/04 – Assessment Tool**
- Appendix 'C' - Valley Mental Health Brochure**



APPENDIX A: EMERGENCY MANAGEMENT AND CIVIL PROTECTION ACT – ASSESSMENT TOOL

EMPCA	Conform	Does not conform	Comments
<p>Municipal emergency management programs</p> <p>2.1 (1) Every municipality shall develop and implement an emergency management program and the council of the municipality shall by by-law adopt the emergency management program. 2002, c. 14, s. 4.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Municipality does have a current 2022 Emergency Response Plan. However, the Org Chart needs to be updated; there is no clear training program and exercises for employees.
<p>Same</p> <p>(2) The emergency management program shall consist of;</p> <p>(a) an emergency plan as required by section 3;</p> <p>(b) training programs and exercises for employees of the municipality and other persons with respect to the provision of necessary services and the procedures to be followed in emergency response and recovery activities;</p> <p>(c) public education on risks to public safety and on public preparedness for emergencies; and</p> <p>(d) any other element required by the standards for emergency management programs set under section 14. 2002, c. 14, s. 4.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>2 (a) is met 2 (b) is not met 2 (c) is met 2 (d) ??</p> 
<p>Hazard and risk assessment and infrastructure identification</p> <p>(3) In developing its emergency management program, every municipality shall identify and assess the various hazards and risks to public safety that could give rise to emergencies and identify the facilities and other elements of the infrastructure that are at risk of being affected by emergencies. 2002, c. 14, s. 4.</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	


<p>Municipal emergency plan</p> <p>3 (1) Every municipality shall formulate an emergency plan governing the provision of necessary services during an emergency and the procedures under and the manner in which employees of the municipality and other persons will respond to the emergency and the council of the municipality shall by by-law adopt the emergency plan. 2002, c. 14, s. 5 (1).</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	 <p style="text-align: center;">EMERGENCY RESPONSE PLAN</p> <p style="text-align: center;">2022</p> <p style="text-align: right; font-size: small;">January 2022</p>																																																												
<p>EMPCA</p>	<p>Conform</p>	<p>Does not conform</p>	<p>Comments</p>																																																												
<p>Training and exercises</p> <p>(5) Every municipality shall conduct training programs and exercises to ensure the readiness of employees of the municipality and other persons to act under the emergency plan. 2002, c. 14, s. 5 (3).</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>CEMC trained to BEM only</p>																																																												
<p>Review of plan</p> <p>(6) Every municipality shall review and, if necessary, revise its emergency plan every year. 2002, c. 14, s. 5 (3).</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p style="text-align: right; font-size: x-small;">Township of Greater Madawaska - Emergency Response Plan - 2022</p> <p style="text-align: center; font-weight: bold; font-size: small;">Update Log</p> <table border="1" style="width: 100%; font-size: x-small;"> <thead> <tr> <th>Date</th> <th>Changes made</th> <th>Made by</th> </tr> </thead> <tbody> <tr><td>February 2008</td><td>Original document</td><td>John Board</td></tr> <tr><td>November 2009</td><td>2009 Update</td><td>Angela Volkowicz</td></tr> <tr><td>April 2010</td><td>2010 update</td><td>Angela Volkowicz</td></tr> <tr><td>August 2010</td><td>2010 update</td><td>Betty Sayers</td></tr> <tr><td>March 2011</td><td>2011 update</td><td>Betty Sayers</td></tr> <tr><td>April 2011</td><td>2011 update v4</td><td>Angela Volkowicz</td></tr> <tr><td>May 2011</td><td>2011 update v5</td><td>Betty Sayers</td></tr> <tr><td>August 2011</td><td>2011 update v6</td><td>Angela Volkowicz</td></tr> <tr><td>November 2011</td><td>2011 final update</td><td>Betty Sayers</td></tr> <tr><td>November 2013</td><td>2013 final update</td><td>Adrian Hultchauer</td></tr> <tr><td>September 2014</td><td>2014 Update Plan</td><td>Adrian Hultchauer</td></tr> <tr><td>December 2015</td><td>2015 Plan Reviewed</td><td>Adrian Hultchauer</td></tr> <tr><td>December 2016</td><td>2016 Plan Updated</td><td>Adrian Hultchauer</td></tr> <tr><td>December 2017</td><td>2017 Plan Update (Model Version 1)</td><td>Adrian Hultchauer</td></tr> <tr><td>December 2018</td><td>2018 Plan Update</td><td>Adrian Hultchauer</td></tr> <tr><td>May 2019</td><td>2019 Plan Reviewed and Updated</td><td>Adrian Hultchauer</td></tr> <tr><td>January 2020</td><td>2020 Plan Reviewed and Updated</td><td>Adrian Hultchauer</td></tr> <tr><td>November 2021</td><td>2021 Plan Reviewed and Updated</td><td>Adrian Hultchauer</td></tr> <tr><td>January 2022</td><td>2022 Plan Reviewed and Updated</td><td>Adrian Hultchauer</td></tr> </tbody> </table>	Date	Changes made	Made by	February 2008	Original document	John Board	November 2009	2009 Update	Angela Volkowicz	April 2010	2010 update	Angela Volkowicz	August 2010	2010 update	Betty Sayers	March 2011	2011 update	Betty Sayers	April 2011	2011 update v4	Angela Volkowicz	May 2011	2011 update v5	Betty Sayers	August 2011	2011 update v6	Angela Volkowicz	November 2011	2011 final update	Betty Sayers	November 2013	2013 final update	Adrian Hultchauer	September 2014	2014 Update Plan	Adrian Hultchauer	December 2015	2015 Plan Reviewed	Adrian Hultchauer	December 2016	2016 Plan Updated	Adrian Hultchauer	December 2017	2017 Plan Update (Model Version 1)	Adrian Hultchauer	December 2018	2018 Plan Update	Adrian Hultchauer	May 2019	2019 Plan Reviewed and Updated	Adrian Hultchauer	January 2020	2020 Plan Reviewed and Updated	Adrian Hultchauer	November 2021	2021 Plan Reviewed and Updated	Adrian Hultchauer	January 2022	2022 Plan Reviewed and Updated	Adrian Hultchauer
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<p>Emergency plans submitted to Chief</p> <p>6.2 (1) Every municipality, minister of the Crown and designated agency, board, commission and other branch of government shall submit a copy of their emergency plans and of any revisions to their emergency plans to the Chief, Emergency Management Ontario, and shall ensure that the Chief, Emergency Management Ontario has, at any time, the most current version of their emergency plans. 2002, c. 14, s. 10.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>The ERP should have a <u>a</u> EMO Log page to record when submitted to EMO, Chief</p>
<p>Public access to plans</p> <p>10 Except for plans respecting continuity of operations or services, an emergency plan formulated under section 3, 6 or 8 shall be made available to the public for inspection and copying during ordinary business hours at an office of the municipality, ministry or branch of government, as the case may be. R.S.O. 1990, c. E.9, s. 10; 2009, c. 33, Sched. 9, s. 4.</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>Online at https://www.greatermadawaska.com/en/living-here/emergency-preparedness.aspx</p> 

APPENDIX B: EMPCA- ONTARIO REGULATION 380/04 – ASSESSMENT TOOL

EMPCA	Conform	Does not conform	Comments
<p>Emergency management program co-ordinator</p> <p>10. (1) Every municipality shall designate an employee of the municipality or a member of the council as its emergency management program co-ordinator. O. Reg. 380/04, s. 10 (1).</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	CEMC – CAO Allison Holtzhauer ALT: Treasurer – Renee Mask
(2) The emergency management program co-ordinator shall complete the training that is required by the Chief, Emergency Management Ontario. O. Reg. 380/04, s. 10 (2).	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Only CEMC trained to BEM
(3) The emergency management program co-ordinator shall co-ordinate the development and implementation of the municipality’s emergency management program within the municipality and shall co-ordinate the municipality’s emergency management program in so far as possible with the emergency management programs of other municipalities, of ministries of the Ontario government and of organizations outside government that are involved in emergency management. O. Reg. 380/04, s. 10 (3).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p style="text-align: center;">THE CORPORATION OF THE TOWNSHIP OF GREATER MADAWASKA</p> <p style="text-align: center;">BY-LAW 59-2021</p> <hr/> <p style="text-align: center;">Being a By-Law to appoint a Community Emergency Management Coordinator and alternate for the Township of Greater Madawaska</p>
(4) The emergency management program co-ordinator shall report to the municipality’s emergency management program committee on his or her work under subsection (3). O. Reg. 380/04, s. 10 (4).	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No record of Emergency Management Program Committee
<p>Emergency management program committee</p> <p>11. (1) Every municipality shall have an emergency management program committee. O. Reg. 380/04, s. 11 (1).</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No record of Emergency Management Program Committee
<p>The committee shall be composed of,</p> <p>(a) the municipality’s emergency management program <u>co-ordinator</u>;</p> <p>(b) a senior municipal official appointed by the <u>council</u>;</p>		<input checked="" type="checkbox"/>	No record of Emergency Management Program Committee
<p>(c) such members of the council, as may be appointed by the council;</p> <p>(d) such municipal employees who are responsible for emergency management functions, as may be appointed by the council; and</p> <p>(e) such other persons as may be appointed by the council. O. Reg. 380/04, s. 11 (2).</p> <p>(3) The persons appointed under clause (2) (e) may only be,</p> <p>(a) officials or employees of any level of government who are involved in emergency management;</p> <p>(b) representatives of organizations outside government who are involved in emergency management; or</p> <p>(c) persons representing industries that may be involved in emergency management. O. Reg. 380/04, s. 11 (3).</p> <p>(4) The council shall appoint one of the members of the committee to be the chair of the committee. O. Reg. 380/04, s. 11 (4).</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
(5) The committee shall advise the council on the development and implementation of the municipality’s emergency management program. O. Reg. 380/04, s. 11 (5).	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No record of Emergency Management Program Committee
(6) The committee shall conduct an annual review of the municipality’s emergency management program and shall make recommendations to the council for its revision if necessary. O. Reg. 380/04, s. 11 (6).	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No record of Emergency Management Program Committee

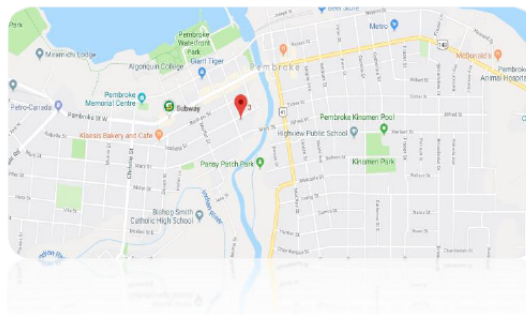
<p>Municipal emergency control group</p> <p>12. (1) Every municipality shall have a municipal emergency control group. O. Reg. 380/04, s. 12 (1).</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p style="text-align: right;"><i>Township of Greater Madawaska – Emergency Response Plan – 2022</i></p> <p>EMERGENCY OPERATIONS AND PROCEDURES Municipal Emergency Control Group (MECG) The Municipal Emergency Control Group is responsible for the direction and control of the overall emergency response at the Township level. In keeping with the elements of an Incident Management System, the Municipal Emergency Control Group assumes the functions of: Command, Operations, Planning and Logistics. The Municipal Emergency Control Group ensures the provision of essential services to minimize the impact of the emergency on the community. The Municipal Emergency Control Group is responsible to implement the Township of Greater Madawaska Emergency Response Plan.</p> <p>Membership The Municipal Emergency Control Group (MECG) is made up of the following members:</p> <ul style="list-style-type: none"> • 1. Mayor (page 14) • 2. EOC Operations Officer⁵ – (CAO) (page 15) • 3. Liaison Officer⁶ – (Community Emergency Management Coordinator) (page16) • 4. Accountability/Safety Officer⁷ (page 17) • 5. Finance/Administration (page 18) • 6. Fire Chief (page 19) • 7. Public Works Manager (page 20) • 8. Logistics Officer⁸ (page 21) • 9. Public Information Officer⁹ (page 22) • 10. Duty Officer (page 23) • 11. Scribe (page 23)
<p>(2) The emergency control group shall be composed of,</p> <p>(a) such officials or employees of the municipality as may be appointed by the council; and</p> <p>(b) such members of council as may be appointed by the council. O. Reg. 380/04, s. 12 (2).</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p style="text-align: right;"><i>Township of Greater Madawaska – Emergency Response Plan – 2022</i></p> <p>EMERGENCY OPERATIONS AND PROCEDURES Municipal Emergency Control Group (MECG) The Municipal Emergency Control Group is responsible for the direction and control of the overall emergency response at the Township level. In keeping with the elements of an Incident Management System, the Municipal Emergency Control Group assumes the functions of: Command, Operations, Planning and Logistics. The Municipal Emergency Control Group ensures the provision of essential services to minimize the impact of the emergency on the community. The Municipal Emergency Control Group is responsible to implement the Township of Greater Madawaska Emergency Response Plan.</p> <p>Membership The Municipal Emergency Control Group (MECG) is made up of the following members:</p> <ul style="list-style-type: none"> • 1. Mayor (page 14) • 2. EOC Operations Officer⁵ – (CAO) (page 15) • 3. Liaison Officer⁶ – (Community Emergency Management Coordinator) (page16) • 4. Accountability/Safety Officer⁷ (page 17) • 5. Finance/Administration (page 18) • 6. Fire Chief (page 19) • 7. Public Works Manager (page 20) • 8. Logistics Officer⁸ (page 21) • 9. Public Information Officer⁹ (page 22) • 10. Duty Officer (page 23) • 11. Scribe (page 23)
<p>(3) The members of the group shall complete the annual training that is required by the Chief, Emergency Management Ontario. O. Reg. 380/04, s. 12 (3).</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>Only CEMC has some training</p>
<p>(4) The group shall direct the municipality's response in an emergency, including the implementation of the municipality's emergency response plan. O. Reg. 380/04, s. 12 (4).</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p style="text-align: right;"><i>Township of Greater Madawaska – Emergency Response Plan – 2022</i></p> <p>EMERGENCY OPERATIONS AND PROCEDURES Municipal Emergency Control Group (MECG) The Municipal Emergency Control Group is responsible for the direction and control of the overall emergency response at the Township level. In keeping with the elements of an Incident Management System, the Municipal Emergency Control Group assumes the functions of: Command, Operations, Planning and Logistics. The Municipal Emergency Control Group ensures the provision of essential services to minimize the impact of the emergency on the community. The Municipal Emergency Control Group is responsible to implement the Township of Greater Madawaska Emergency Response Plan.</p>
<p>(5) The group shall develop procedures to govern its responsibilities in an emergency. O. Reg. 380/04, s. 12 (5).</p>	<input type="checkbox"/>	<input type="checkbox"/>	
<p>(6) The group shall conduct an annual practice exercise for a simulated emergency incident in order to evaluate the municipality's emergency response plan and its own procedures. O. Reg. 380/04, s. 12 (6).</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>No exercises recorded</p>
<p>Emergency operations centre</p> <p>13. (1) Every municipality shall establish an emergency operations centre to be used by the municipal emergency control group in an emergency. O. Reg. 380/04, s. 13 (1).</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>Location of your primary and secondary EOCs Do you have a tertiary EOC site?</p> <div style="border: 1px solid red; padding: 5px; margin-top: 5px;"> <p>Primary – Township Council Chamber location 19 Parnell St. Calabogie, ON K0J 1H0</p> <p>Secondary – Griffith Fire Hall location 2591C Highway 41, Griffiths ON K0J 2H0</p> <p>Tertiary – OMA Centre location 111 Fiat Rd. Dacre, ON K0J 1H0</p> </div>
<p>(2) The emergency operations centre must have appropriate technological and telecommunications systems to ensure effective communication in an emergency. O. Reg. 380/04, s. 13 (2).</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>Alternate EOCs do not meet the technological and telecommunications systems requirements</p>
<p>Emergency information officer</p> <p>14. (1) Every municipality shall designate an employee of the municipality as its emergency information officer. O. Reg. 380/04, s. 14 (1).</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<pre> graph TD A["FINANCE & ADMIN (Section Chief – Allison Holtzhauer, Alternate Renee Mask)"] B["Finance & Admin Officer: ca Schroeder"] C["Public Information Officer, Duty Officer & Scribe: Robin Emon"] D["Alternate: Stephan Kukkonen"] A --- B A --- C C --- D B --- E["support for TO/DO'S"] </pre>

<p>(2) The emergency information officer shall act as the primary media and public contact for the municipality in an emergency. O. Reg. 380/04, s. 14 (2).</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p style="text-align: right;"><i>Township of Greater Madawaska – Emergency Response Plan – 2022</i></p> <p>9. PUBLIC INFORMATION OFFICER (or alternate) The Public Information Officer is responsible for:</p> <ol style="list-style-type: none"> 1. Requesting activation of the Emergency Response Plan to the Mayor, CAO or the CEMC. 2. Upon notification, proceeding to the designated Emergency Operations Centre. 3. Opening the Emergency Public Information and Media Centres. 4. Participating fully in the Operations Cycle Meetings of the MCEG. 5. Apprising the MCEG of any significant information passed on to the public and correcting any misinformation. 6. Liaising with Emergency Information Officers of the County and other agencies to ensure consistency of messaging to the public. 7. Recording and tracking the key messages of the Municipal Emergency Control Group during Operation Cycle meetings. 8. Coordinating interviews and media conferences for Municipal Emergency Control Group members. 9. Preparing public and media releases for review by appropriate officials. 10. Maintaining chronological record of all media releases. 11. Accessing copies of news reports, interviews during and following the emergency. 12. Monitoring news coverage. 13. Maintaining communication and providing information to the Emergency Operations Support Team. 14. Ensuring that the health and safety standards of the emergency information and media centres are maintained. 15. Maintaining a personal log. 16. Participating in the post-emergency de-brief sessions.
<p>Emergency response plan</p> <p>15. (1) The emergency plan that a municipality is required to formulate under subsection 3 (1) of the Act shall consist of an emergency response plan. O. Reg. 380/04, s. 15 (1).</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p style="text-align: right;"><i>Township of Greater Madawaska – Emergency Response Plan – 2022</i></p> <div style="text-align: center;">  <p>EMERGENCY RESPONSE PLAN</p> <p>2022</p> <p>January 2022</p> </div>
<p>(2) An emergency response plan shall,</p> <p>(a) assign responsibilities to municipal employees, by position, respecting implementation of the emergency response plan; and</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p style="text-align: right;"><i>Township of Greater Madawaska – Emergency Response Plan – 2022</i></p> <p>ACTIVATION OF THE EMERGENCY RESPONSE PLAN</p> <p>The activation of the Township of Greater Madawaska Emergency Response Plan will result in the Municipal Emergency Control Group convening in the designated Emergency Operations Centre. Any member of the Municipal Emergency Control Group, or Council member, may request that the plan be activated. The request will be made to the Mayor, or the Chief Administrative Officer, or the Community Emergency Management Coordinator. Only the Mayor, the CAO and the CEMC have the authority to activate the Emergency Response Plan; activation of the plan is not dependent on, nor synonymous with, an official emergency declaration by the Head of Council.</p> <p>Activation of the plan includes:</p> <ul style="list-style-type: none"> • Notification of the Municipal Emergency Control Group • Determination of the appropriate Emergency Operations Centre; • Set up of the Emergency Operations Centre; and • Any other actions required to implement the plan. <p>The Township of Greater Madawaska Emergency Response Plan may be implemented in whole, or in part, based on conditions at the emergency site(s) or the severity of the situation.</p> <p>NOTE: It is not necessary to declare an emergency to activate the plan.</p> <p>Notification of the MCEG and EOC support staff</p> <p>Upon activation of the Emergency Response Plan the Chief Administrative Officer will contact the Mayor and the Community Emergency Management Coordinator. The Community Emergency Management Coordinator is responsible to notify members of the Municipal Emergency Control Group and the Emergency Operations Centre Support Staff and to record this contact. The CEMC will take all necessary methods to contact the MCEG.</p>
<p>(2) An emergency response plan shall,</p> <p>(b) set out the procedures for notifying the members of the municipal emergency control group of the emergency. O. Reg. 380/04, s. 15 (2).</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>Notification of the MCEG and EOC support staff</p> <p>Upon activation of the Emergency Response Plan the Chief Administrative Officer will contact the Mayor and the Community Emergency Management Coordinator. The Community Emergency Management Coordinator is responsible to notify members of the Municipal Emergency Control Group and the Emergency Operations Centre Support Staff and to record this contact. The CEMC will take all necessary methods to contact the MCEG.</p>

APPENDIX C: VALLEY MENTAL HEALTH EMPLOYEE & FAMILY ASSISTANCE PROGRAM INFORMATION BROCHURE

CONFIDENTIALITY

- Clients have direct contact to Valley Mental Health administration and their assigned counsellor.
- Appointments are held at our main office in Pembroke, by phone, or via secure online video chat (OnCall Health).
- Appointments are scheduled using a method that avoids contact between employees from the same worksite.
- Confidentiality is in accordance with the Privacy Act and the Ministry of Community and Social Services along with professional regulatory associations: OCSWSSW, the OAMHP and the CCPA.



Valley Mental Health

84 Isabella Street Unit 3
Pembroke, ON K8A 5S5
(613) 735-2116 or (800) 661-0340
Fax: 613.735.3210
Crisis Line - 1-866-996-0991

info@valleymentalhealth.ca
www.valleymentalhealth.ca

Business Hours:
Monday - Friday 9:00 - 9:00
by appointment

Evening and weekend appointments as scheduled.



Employee and Family
Assistance
Program Information

Valley Mental Health

Valley Mental Health is a local non-profit organization operating under a volunteer Board of Directors in Renfrew County. It was established in 1996 as Valley Employee and Family Assistance Program, and expanded in 2019 to offer additional services to meet the high demands for counselling and mental health support in the community.

There is no limit to the number of sessions per individual or family.

Valley Mental Health is not a crisis service. At times we are able to offer same day appointments; however, if your matter is urgent, please present at the hospital for immediate care or call the Crisis Line at 1-866-996-0991.

**COVID-19 protocols are in place to protect staff and clients from unnecessary exposure.

What type of services do we offer?

Our professional counsellors are local and are readily available to address work and/or life issues affecting emotional and psychological well-being.

Counselling can help increase the quality of a person's life. Common areas of life that benefit from counselling are:

- General Life Stress
- Relationships
- Parenting
- Substance abuse
- Anxiety
- Depression
- Separation/ Divorce
- Grief and loss
- Self esteem
- Decision making
- Coping with change or difficult situation
- Abuse
- Violence
- Harassment
- Conflict resolution
- Trauma information
- Resource seeking

How do I access EAP Services?

Phone

Call **613-735-2116** or **1-800-661-0340**. If you receive our answering machine, please leave a message with your full name, phone number, worksite and the urgency of your call. We will return your call within 2 business days.

Email

Please send an email to **info@valleymentalhealth.ca** with your full name, worksite, and the urgency of your email. We will return your email within 2 business days.

Website

Please visit us at **www.valleymentalhealth.ca**

Who is Covered by EAP Benefits?

Employee, Spouse or common-law partner of employee of Member Worksite

Children of an employee up to the age of 19 who lives at home, unless attending post-secondary studies, then up to the age of 25. Eligibility will cease as of the child's 25th birthday or 4 months post attending school/graduation whichever is first.