



## 022 Fire Master Plan OVERVIEW

## **2022 Fire Master Plan**

Prepared for the Muskoka Lakes Fire Department, Muskoka Ontario

### **FINAL REPORT**

5 July 2022

**Prepared by:**



The Emergency Management Group

## **ACKNOWLEDGEMENTS AND COMMUNITY/FIRE DEPARTMENT OVERVIEW**

The authors would like to thank everyone who contributed their time, ideas, and expertise to the development of this Fire Master Plan. We are deeply appreciative of the many residents, groups, and partners who shared their insight by participating in our public engagement activities. We are also sincerely thankful to Township Council for their continued support and the staff and Volunteer Firefighters from across the Township of Muskoka Lake service area who provided guidance and expertise throughout the development of this Fire Master Plan.

### **Community and Fire Department Overview**

The Township of Muskoka Lakes is located in the heart of the District of Muskoka, situated at the southern tip of the Canadian Shield. The Township encompasses a large geographic area around Lakes Muskoka, Rosseau and Joseph. Within the approximately 775 square kilometers in the township's jurisdiction, lie over 96 lakes and rivers, numerous wetland complexes, bedrock outcrops, islands, all set amongst a mix of vegetation types and natural heritage areas.

The Township's population consists of approximately 7,652 permanent residents (2021 Census<sup>1</sup>) and over 27,000 seasonal residents. While the permanent residency is predominantly located in six un-serviced communities, two serviced urban

centres, and the rural area, the seasonal residents reside primarily in the waterfront area.

The Township owns and operates 10 fire stations, 12 community centres, two arenas, and multiple parks, trails, picnic areas, playgrounds, municipal docks, lake access points, launch ramps and beaches, spread throughout the municipality. To assist with the prioritization of the maintenance, repair, and in some cases the replacement, of this infrastructure, the Township is currently preparing an asset management and other plans. This Master Fire Plan will inform future decision making in the development of a long term sustainable financial strategy.

Based on the Statistics Canada information, the increase in permanent population from 2016 to 2021 is 16.2%, which is greater than the provincial average of 5.8%. If this growth continues within Muskoka Lakes, the population for 2031 could be as much as 10,000 or more. This does not include any increase in the seasonal population with already accounts for more than 27,000.

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<sup>1</sup> Data table, Census Profile, 2021 Census Population-Muskoka Lakes, Retrieved March 30, 2022, <https://census.gc.ca/census-recensement/2021/dp->

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# **Purpose and Foundations of a Fire Master Plan**

## Purpose of a Plan

This Fire Master Plan (FMP) is based on a review of Muskoka Lakes Fire Department (MLFD) facilities, programs, and services. The MLFD Fire Master Plan is being developed to guide the Township of Muskoka Lakes and its Council in the delivery of fire and emergency services over a 10-year period (to the year 2032).

To provide a more defined criteria and guideline for Council and the Fire Chief, the FPPA defines what fire protection services are – FPPA under Part I, Section 1(1) defines fire protection services to include,

- (a) fire suppression, fire prevention and fire safety education,
- (b) mitigation and prevention of the risk created by the presence of unsafe levels of carbon monoxide and safety education related to the presence of those levels,
- (c) rescue and emergency services,
- (d) communication in respect of anything described in clauses (a) to (c),
- (e) training of persons involved in providing anything described in clauses (a) to (d), and

- (f) the delivery of any service described in clauses (a) to (e).

This FMP and a recently completed Community Risk Assessment (CRA) will provide Council with information on the existing conditions, key areas of focus, and recommendations to assist with decisions about future levels of service.

The key driver behind the recommendations in this document is the reduction of risk. The plan relies heavily on the information gathered and compiled through the CRA and the components therein.

## Plan Foundation

### **Community Risk**

The primary goal of this FMP is to provide Council, the Fire Department, and its stakeholders with an understanding of the programming and resources required to reduce, mitigate, or eliminate community risk as it relates to fire and emergency services.

The risk assessment process has become fundamental to the planning and delivery of fire and emergency services that match the “needs and circumstances” of the community as defined by the *Fire Protection and Prevention Act, 1997*, (FPPA) and the Council approved Establishing and Regulating Bylaw. Quantification of risks within Muskoka Lakes will assist MLFD in integrating risk considerations into the planning and

delivery of fire protection services. This includes fire prevention, public education, and emergency response services.



The process of developing a risk assessment is noted in two National Fire Protection Association (NFPA) standards along with an Ontario Regulation.

The Township's CRA (2022) was prepared in line with the guidelines provided by NFPA 1730, NFPA 1300 and Ontario Regulation 378/18. Both the CRA and FMP documents compliment each other and help to create a more fulsome risk assessment. The CRA informs and reinforces this FMP, and the resulting recommendations are reflective of the community risk reduction strategies identified in the assessment.

## Foundation of a Fire Safe Community

To ensure that a community is as fire safe as possible, the Officer of the Fire Marshal and Emergency Management has identified three lines of defence, which are:

1. Fire safety education
2. Fire safety standards and enforcement, and
3. An effective emergency response program.

The authors also include Emergency Preparedness as part of our community risk assessment process. This allows a community to see how their fire safety education and emergency preparedness programs work to ensure a safe community.

## Public Fire Safety Education

Proactive public fire safety education is critical to community safety. The MLFD delivers a variety of public education programs. These programs are delivered by the Fire Prevention Officer (FPO) who specializes in developing and delivering fire safety programs, as well as the Volunteer Firefighters who interact with the community regularly.

Public education programs are designed for everyone, from young children to seniors. The overall objective of these programs is to educate the public on the dangers of fire, provide information to prevent fire, and provide the tools to ensure safe evacuation in the instance that a fire occurs.



Smoke Alarm

### Fire Safety Standards and Enforcement

Enforcement of both the Ontario Fire Code and the Ontario Building Code is highly regarded. It is the responsibility of a property owner to ensure they comply with appropriate regulations and statutes. Property owners who fail to ensure that their properties meet minimum standards of fire and life safety face potential charges under the *Provincial Offences Act* and are subject to penalties as outlined in the *Fire Protection and Prevention Act, 1997*.

The Department's full-time FPO conducts fire safety inspections to ensure buildings are safe and comply with the Ontario Fire Code at the time of inspection. Due to there being only one full-time FPO, these inspections for the most part are currently completed on complaint or request basis. This is not to say that the FPO is not endeavouring to be proactive based on time and resources available. The frequency of inspections

directly impacts the level of fire safety and code compliance of properties.

Of particular concern in the Township are vulnerable occupancies (Group B - retirement homes and care and treatment facilities and hospices). All vulnerable occupancies within Muskoka Lakes are fully inspected annually, as per mandated Provincial legislation, and mock fire drills are conducted annually to ensure compliance.

### Emergency Response

Emergency operations personnel respond to emergency and non-emergency calls. These include fires, medical emergencies, motor vehicle collisions, public hazard situations, water and ice rescues, and hazardous materials incidents.



Firefighter Extinguishing Material

## Risk-Based Planning

Excerpts from the CRA document have been carried over into this FMP because of the similarities of the information that was obtained to complete the two reports. Reviews conducted to complete the CRA assessment have already confirmed that the MLFD is doing a good job in its efforts to protect the community based on its staffing, facilities, and inventory of apparatus and equipment. To ensure that this FMP review was complete in its analysis, the following were undertaken:

- Meetings and/or interviews were held with Township Council, management, the Fire Chief, and the Volunteer Firefighters.
- Volunteer Firefighter and community surveys were also conducted.
- Physical reviews of the apparatus and equipment located at each station.
- Review of any related documentation, such as call volumes and types of calls.
- Review of the vehicle and large equipment replacement schedules along with planned capital expenditures.
- Identification of options for efficiencies and making recommendations, including approximate budgetary implications.

## Medical Response

The MLFD is a partner for medical response within the community responding to incidents that are serious life-threatening situations in conjunction with the primary care provider Muskoka Paramedic Service (MPS).

Over the years, the fire service has become a valuable contributor to pre-hospital care. Response time is critical in medical emergencies. In many cases firefighters are in the best position to respond quickly and provide the critical care needed as fire stations are placed in and throughout a community to provide a faster initial response. The MLFD is part of a tiered response agreement with MPS that defines the type of emergencies the fire department will respond to and to provide the best possible outcomes for patients.

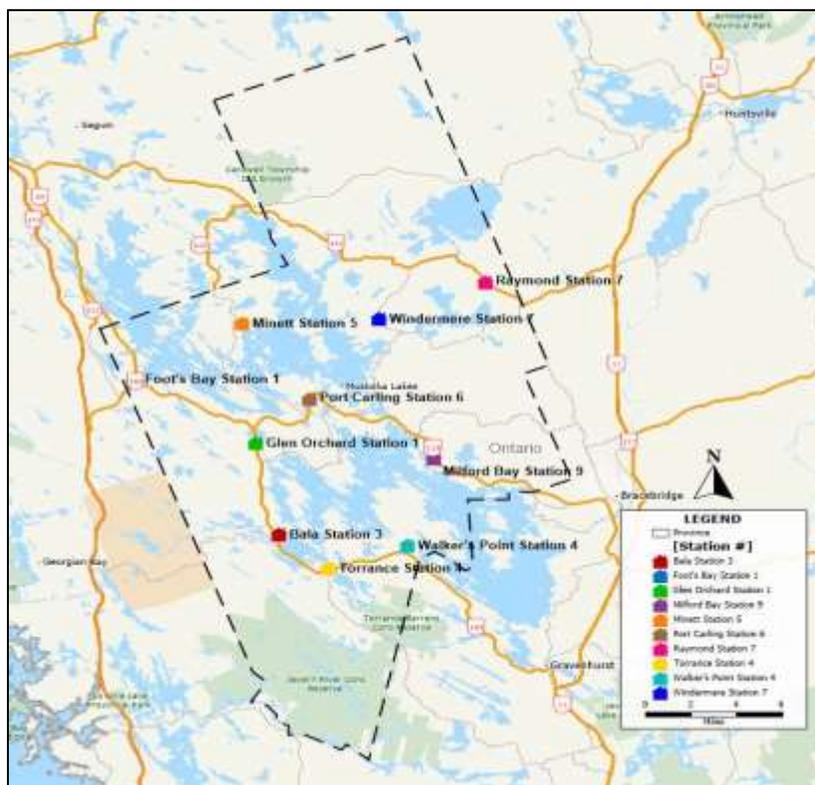


Firefighter Medical and Rescue Training

# Risk Considerations

## Risk Considerations

**Figure #1: Muskoka Lakes Fire Department Fire Station Locations**



In conjunction with the Office of the Fire Marshal and Emergency Management's (OFMEM) expectations, a key industry standard that outlines goals and expectations for a fire department is the National Fire Protection Association (NFPA).

Unless included or referenced within an Act or Regulation, adherence to NFPA standards is not mandated; however, NFPA professional qualifications are the recognized provincial standard for training qualifications and certifications. NFPA standards are also used by organizations such as the Fire Underwriters Survey (FUS) group to conduct their assessments of a fire department and the community. The OFMEM and provincial fire schools also use NFPA standards to form the foundation of their evaluation and training programs.

### 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 Muskoka Lakes. It is a means of measuring the probability and consequence of an adverse effect to health, property, organization, environment, or community, as a result of an event, activity, or operation.

Council has the authority and responsibility to establish the level of fire protection within their community. According to *FPPA 6(3)*, a Fire Chief is the person who is ultimately responsible to the Council of a municipality that appointed them for the delivery of fire protection services. It is not possible to know and report all risks. The Fire Chief is responsible for informing Council of all known risks existing within the community. It is based on this information that

Council can make an informed decision on the level of service to be achieved and maintained.



There are two basic risk categories associated with the fire service – **operational risk** and **organizational risk**. Operational risk is the responsibility of the Muskoka Lakes Fire Department to determine the risks within its community and plan strategic, tactical, and task-orientated plans to mitigate incidents. Organizational risk is a function and responsibility of Council to determine the types of services, level of service, staffing, stations, and approval of the department business plans based on the overall risk assessment of the municipality.

It is the accumulation and analysis of these factors that will assist in applying this information to identify potential risk scenarios that may be encountered. 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 is it to happen?*
- *How bad would it be if it happened?*
- *What can be done to mitigate or prevent any or all of the above?*

With these questions answered, they will frame the basis for formulating and prioritizing risk management decisions to reduce the likelihood of these incidents from occurring and to mitigate the impact when they do occur.

This information will assist in the completion of the CRA, which may identify gaps and areas where actual conditions vary from the desired outcomes.

The probability or likelihood of a fire occurring within a community is estimated based on previous occurrences and the frequency of such events. It is this review of previous events, including the fire loss data, learning from what may have occurred in other jurisdictions, and discussions with

those who may have been in attendance of the event, that will assist in establishing a baseline for evaluation. Judgement of professionals with such experiences must not be missed during this process and may paint a more in-depth picture of what occurred in the past.

We must consider the consequences of an event, whether minor or major in intensity. The use of professional judgement and reviews of past events are important for establishing the quantification levels. To establish this level, four components are to be considered:

1. Life Safety – any injuries or loss of life to anyone involved, public and firefighters (includes actual or potential situations).
2. Property Loss – the fire loss relating to public and private buildings, contents, irreplaceable assets, significant/ symbolic landmarks, and critical infrastructure. This is most often measured in dollar value lost although some loss cannot be valued.
3. Economic Impact – monetary losses associated with income, business closures, downturn in tourism, tax assessment value, loss of employment.
4. Environmental Impact – harm to humans, vegetation, and animals; the decline in quality of life due to air/water/soil contamination as a result of either the fire or fire suppression operations.



Impacts of a fire

During the development of the CRA document, all this information was taken into consideration which culminated into EMG presenting the following summary of risks within the community.

More detailed information can be found in the full CRA document.

### **Risk Summary**

The following summary is a general outline of the risks to life safety and property (identified within the community) along with the suggested options of reducing or mitigating the risks. By adopting the suggested options, strategies can be developed to address the risks. These strategies can include such things as a greater focus on public education and OFC

enforcement. These implemented strategies will form the basis of the TML community risk mitigation strategies.

***NOTE: The following features are not identified in the order of their level of risk.***

### **Bodies of water**

There are many lakes found in the Township. While the MLFD has, the ability to mitigate an ice rescue, to the operations level with the equipment and training on hand, there is no means of mitigating ice rescues that are a further distance out from where they are based. Even though the fire department has snowmobiles and patient transport sleds, they require a unit that will float and can be used when ice conditions are at their worst. An example of these craft is either an airboat or hovercraft.

There are several swing bridges over waterways that open to allow marine traffic to traverse from one body of water to another. When these bridges are open, they may impede fire department response for a period until closing again. The bridges are operated by the District of Muskoka and MLFD should establish a means of notification to the bridge's operator that the fire department is traveling in their direction and to give fire apparatus priority crossing the bridge.

### **Building Stock**

- There are many large resorts in TML that require fire inspections. In some cases, these can take days to complete including the paperwork afterward. MLFD

should review the time it takes to complete these inspections, which may identify the need for additional resources to be deployed in the completion of these inspections.

- The OFMEM has identified the risks associated with occupancies in which light weight construction practices have been used. Municipalities are to inventory all building stock that includes the use of LWC practices. MLFD and the building department should work in collaboration in developing an ongoing list of all building stock, based on the OBC Occupancy Classifications.
- There are also an estimated 450 and 500 short-term accommodations in the township. Should TML seek to address short-term accommodations at some point, conversions should meet OBC, and OFC requirements and these uses registered with the township, so that they can be and inspected by MLFD fire prevention personnel.

### **Development of New Buildings and Structures**

New development includes an increase both permanent and seasonal building stock. With a need for attainable housing in the township, second suites are permitted by way of the Zoning By-Law and subject to appropriate inspection. However, it is unclear as to the number of second units and apartments that have been constructed without the

appropriate approvals. Should the trend of significant amount of new development continue, it will continue to place an increase in demand for fire inspections and public education events. The MLFD should review time spent by the fire prevention staff which may require additional resources to meet the demand and industry standards.

### **Technical Rescues**

Trench/ Confined Space/ High & Low Angle/ Ice Water. No formal agreement with any outside agencies to mitigate technical rescues. Options for response to these types of incidents need to be addressed by MLFD.

### **Hazardous Material Incidents**

The closest Provincial HAZMAT team is in North Bay and will take a long duration of time to respond. MLFD should review options and availability of other third parties that may be closer and capable of arriving sooner.

### **Weather Events**

The Township and surrounding areas have experienced, a number, of severe storms and tornadoes over the past decade. Communities in the Province are now installing storm sirens such as seen in the United States. The District of Muskoka (DOM) and the Muskoka Emergency Response Committee has launched the “#AlertMuskoka” app, which has had a low number of registrants. TML and DOM should conduct public education and promote this service.

In addition, review and update emergency plan as necessary with a view to climate change.

### **Domestic Terrorism**

Can occur in any community and include anything from an active shooter to sabotage of municipal infrastructure such as water treatment plants and cyber attacks, that some Ontario municipalities experienced a few years ago. Use *NFPA 3000, Standard for an Active Shooter/Hostile Event Response (ASHER) Program*, as reference in conducting any public education on the subject. Provide training in co-operation with the OPP Detachment.

There are many recreation-based resorts and camps in TML. These include camps that are faith based. There is always a risk of an attack on any one of them. TML should work with each camp in developing, implementing, and practicing an emergency plan in the event of an attack, based on NFPA 3000.

### **Industries**

There are industries that could be of risk to the community. The main ones are the lumber industry, which may have dust bins on site for wood shavings to be stored, which present a dust explosion risk. The high fire load, in the event of a fire present a high level of risk to multiple buildings, on site or even the risk of spreading outside of the property involved.

## Demographics

Even though there are no seniors' buildings at this time, there could be in the future as the senior's population increases. These buildings require annual inspections and fire drills.

# **People Planning and Departmental Operations**

## PEOPLE and RESOURCE PLANNING

Within the scope of work noted in the original Request for Proposal document is a review of the overall operations of Muskoka Lakes Fire Department (MLFD) to identify service improvements and enhancements. To complete this requirement, staffing of each division was reviewed through meetings with internal personnel. EMG reviewed the present level and capabilities of staffing and identified future needs.

Recommendations relating to assessing future needs were also provided for each of the following MLFD operational divisions:

- Administration
- Training
- Fire Prevention
- Emergency Management Operations
- Fire Service Agreements
- Communications
- Fire Suppression

**Administration Division** – This division is comprised of senior and administrative staff. In Muskoka Lakes this includes the Fire Chief, a Deputy Fire Chief, Fire Prevention Officer, part-time Training Officer, and an Administrative Assistant. Although this team is doing an admirable job at managing the day-to-day operations of the department there are challenges in relation to data entry and updating of the Department’s policies and operating procedures. This is where the utilization

of the Volunteer Firefighters in the development of a committee to assist the Administration Staff is worth the investment.

**Training** - With the upcoming training and certification requirements to meet NFPA standards for all positions within the Department (being implemented in 2022), the demands on the part-time Training Officer will significantly increase. The additional workload, will most likely require a review of the position and identify the following:

- The part-time Training Officer, will need to become a full-time position, or at the very least, two part-time positions to handle the new legislated training requirements, and
- There will be a need to either increase the administrative support or invest and implement a record management system that all staff can utilize to input their training.
- MLFD also lacks its own training facility. However, they have been working with local partners in an effort to secure as much hands on training for their VFFs as possible.
  - If MLFD is unable to secure this hands-on, live fire training for their VFFs, there is the possibility that MLFD may eventually require funding for their own training trailer.

**Note:** at the time of this report, it was announced by Huntsville Fire that they would be opening their training facility again as a regional facility to be rented/utilized by other fire departments.

**Fire Prevention** – With only one full-time Fire Prevention Officer (FPO), to cover the entire Township, prioritizing inspections, investigations, and public education events has been a challenge. With planned growth in the Township, staff resourcing requirements will increase as residential, resort and commercial businesses grow over the coming years. As such, MLFD should move towards increasing the fire prevention division to two full-time staff. This can be accomplished in increments:

- Start with the hiring of a part-time person for 20 hours a week who can take on the role of public education. As workloads increase,
- The next stage would be to increase the public education position to full time based on the workload and needs of the community.
  - The timeline for this implementation will be based on analysis of the activities of the PFLSE and increased demands as monitored and identified by the Fire Chief.

Another option for increasing fire prevention activities is the greater utilization of the VFFs into fire prevention and public education initiatives.

### **Emergency Management**

The latest version of the Emergency Response Plan (ERP) is noted as October 2017. It is a legislative requirement for emergency response plans to be reviewed and updated each year. The plan should be reviewed and updated based on the Community Risk Assessment and this plan, especially from a climate change perspective. Changes could be minor, not requiring a complete document update. To catalog such changes, the CEMC should insert a page at the front of the document to 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.

Both the primary and secondary (including tertiary) Emergency Operations Centre (EOC) locations all have automatic standby generators. The EOCs are reflective of the ERP in that the Incident Management System (IMS) command model has been followed, reflecting the Province of Ontario, and surrounding municipalities model. The township is well positioned with Incident Management System functioning and appropriately resourced EOCs.

***Fire Service Agreements*** – the District of Muskoka Mutual Aid Plan and Program (Bylaw No. 2005-58) provides wide latitude and authorization for the MLFD to deploy beyond the boundaries of the municipality or fire area. It would also seem to provide the basis for the approach noted above to support the Fire Chief in implementing a more unified approach to automatic/mutual aid. Conceptually, this approach provides participating agencies with the discretion to deploy resources in aid of one another in an efficient and effective manner.

Of note, this Bylaw is approaching 17 years of age with no evident notations around expiry dates and/or regular review periods. At the very least, adjustments should be made to the Bylaw No. 2005-58 to set out defined timelines for review, renewal, and/or expiry of the Mutual Aid Plan and Program.

***Communications/Dispatching*** - MLFD receives its dispatching services from the Muskoka Central Ambulance Communications Centre (CACC), located in Bracebridge. As a critical component supporting delivery of all emergency services, communications infrastructure and dispatching service delivery are key features.

An immediate review should be undertaken of the agreement authorized under Bylaw No. 2005-114 - Muskoka Central Ambulance Communications Centre (July 11, 2005). And with the new training and certification standards, there is the possibility that the present ambulance centre may not be

willing to provide the required training and certification for its staff. If this is the case, then the Fire Chief will need to search out opportunities with a fire department that has trained and certified staff.

## **INCIDENT RESPONSES**

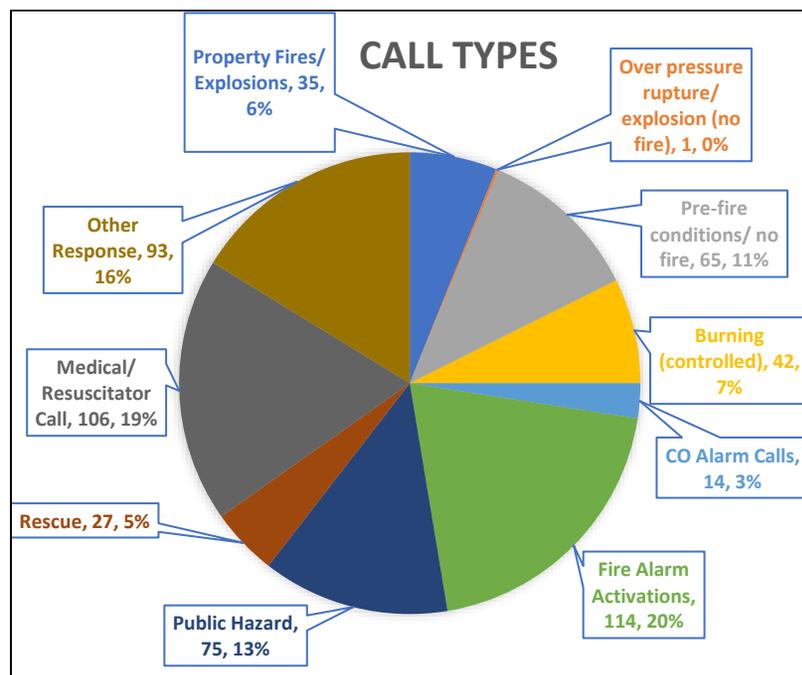
### ***Fire Suppression and Emergency Response***

The Fire Department is composed of 10 fire stations and approximately 110 Volunteer Firefighters. Response to incident is accomplished through the use of the volunteer component. Even though, which is a very cost-effective program, it does come with it challenges such as ensuring an appropriate level of response to incidents 24/7.

Training of the VFFs is also an ongoing challenge and will increase with the new training and certification requirements announced by the province. This new training and certification requirement has been introduced to ensure that all firefighters and officers are training to a specific level of competency. Although this is an admirable endeavour, it may very well create another challenge, which is the recruitment and retention of the VFFs.

The Fire Chief is doing an admirable job in working with his VFFs to ensure a robust level of VFFs, and ensuring support in areas of training, succession planning and wellness support.

**Figure #2: 2021 Response Data**



The top three types of calls are:

- Fire Alarm Activations at 20%
- Medical calls at 19%
- Other responses at 16%

The percentage of call type comparison along with calls per station gives the Fire Chief and staff the ability to monitor where the bulk of their resources are being utilized. This type of information also offers a more defined focus for the Training Division to ensure that the firefighters are receiving training related to the types of responses that will demand a higher skill set. Further, the information provides Fire Prevention and Public Education a focus on prevention activities.

### Residential Fire Sprinklers and Monitored Fire Alarm Systems

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

The NFPA, along with the Ontario Association of Fire Chiefs, are strong supporters of residential sprinkler systems to reduce the risk to life and property from fire. In a recent NFPA on-line article<sup>2</sup>, it was noted that because fire sprinklers react so quickly, they can dramatically reduce the heat, flames, and smoke produced in a fire. Properly installed and maintained

<sup>2</sup> [NFPA report - U.S. Experience with Sprinklers](https://www.nfpa.org/News-and-Research/Data-research-and-tools/Suppression/US-Experience-with-Sprinklers), Accessed April 15, 2022, <https://www.nfpa.org/News-and-Research/Data-research-and-tools/Suppression/US-Experience-with-Sprinklers>

fire sprinklers help save lives, reduce damage, and make it safer for firefighters.

By working with the developers and the public in promoting the installation of home sprinkler systems, the MLFD 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. As such, it is recommended that MLFD investigate this safety initiative as part of their fire prevention and public education initiatives.

### **Succession (People) Planning**

To ensure that all personnel are given the opportunity to advance their career opportunities, these opportunities need to be offered to all that are interested in advancing their careers. At the same time, those who are not interested in moving up the supervisory and/or management ladder also need to be given the tools to support continued professional development within their current roles. This can take the form of being part of technical committees or assisting with the development of training programs and or equipment assessment initiatives.

It is well-known that people move out of organizations that fail to engage them.

Muskoka Lakes Fire Department management should look at each of their internal divisions to identify succession planning programs and opportunities. This is also an area where

personnel can be engaged by being part of the development of succession planning programs.

As part of people planning with overall growth strategies, in support of the recommendation, 'that management investigates strategies to encourage, support and promote ongoing growth and development of all employees' and, as part of the people planning with overall development strategies, in support of the recommendation.

It is recommended that management investigates strategies to encourage, support and promote ongoing growth and development of all employees. EMG is endorsing the need to implement professional development and succession programs for all staff that meets the NFPA prerequisites and corequisites. Other programs such as IMS could be included.

**Fire Stations, Fleet,  
and  
Training Facility**

## Fire Stations, Fleet, & Training Facility

This section will review existing facilities (as part of the operations evaluation) and provide recommendations that may relate to current and future service delivery demands and applicable standards.

### Station Location and Other Considerations

Fire stations represent a substantial municipal investment and should ideally be located and designed to offer many years of service. As a community grows, it may become necessary to replace existing stations or add more stations to meet increasing public demands for emergency responses.

Fire stations should be positioned to offer the most efficient and effective response to the community they serve. Fire station location depends on many factors such as key risks within the response zone, future growth of the community, etc. Another consideration is the geographical layout of the community that can include natural barriers or divides, such as water, that makes it necessary to have some stations located within proximity of each other.

OFMEM Public Fire Safety Guideline – PFSG 04-87-13 on Fire Station Location notes fire stations should be situated to achieve the most effective and safe emergency responses.

**Figure #3 - Present Fire Stations Set Up With 10 Minute Drive Time Zones**

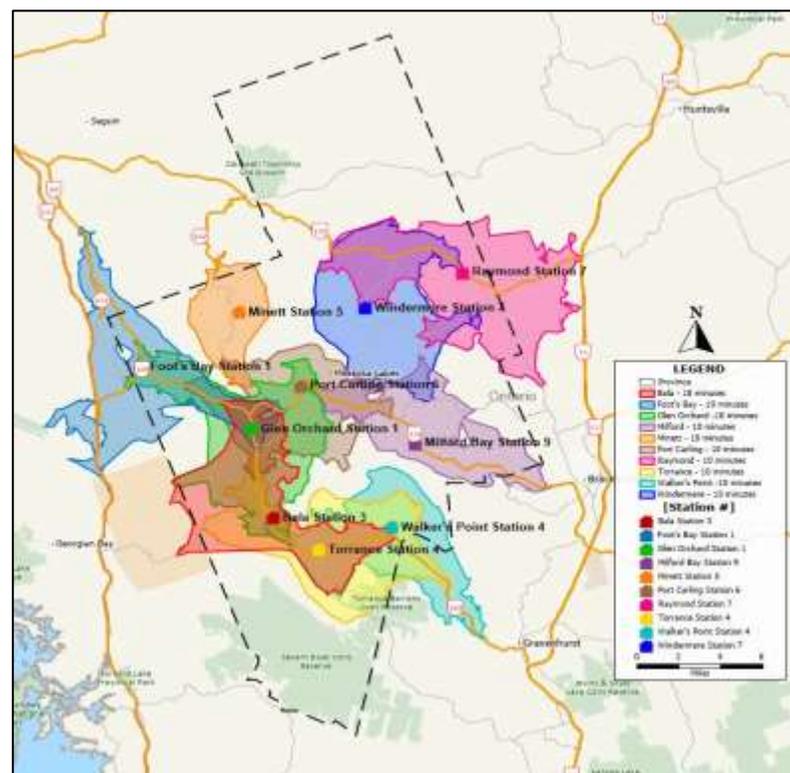


Figure #3 outlines the response polygons of how far crews from each fire station can travel within the NFPA recommended 10-minute drive time, along with the gaps that presently exist.

### **Current Condition**

Muskoka Lakes currently has 10 fire stations located throughout the Township.

The fire stations are located throughout the Township in a manner that appears to offer a good level of coverage for the community. In general, each fire station appears to be meeting the storage demands required for the storage of vehicles and equipment. It should be noted, however, that Muskoka Lakes Fire Department is experiencing issues with the storing of spare apparatus when all front-line vehicles are in service. This storage space is worth considering when designing future fire stations and their apparatus bays to allow for storage of spare apparatus.

During the walk-through by EMG, it was evident that many of the Muskoka Lakes fire stations are nearing, or at maximum capacity for storage of vehicles and equipment. It was also noted that even though some improvements have been made since the 2014 master plan review, there are still quite a few concerns remaining, such as:

- 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. It was

noted by Public Works that this upgrade is not planned but will be installed into any new stations.

- All the stations except for Port Carling 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.
  - Most of the stations need “flammable liquid” cabinets for such things as gas containers and other flammable and/or hazardous liquids storage.
- 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 some of the stations and should be addressed. This can also be accomplished by making the washroom gender neutral.
  - The main concern is the lack of shower/wash up areas that need to be made available at all the stations. 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.

- The Port Carling, Minett, Torrance, Walker's Point and Foot's Bay stations have shower facilities, which leaves the following stations as needing this upgrade.

- i) Glen Orchard
- ii) Milford Bay
- iii) Raymond
- iv) Windermere

**Note:** Based on the Occupational Health and Safety Act, workers who may come in contact with 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. For many of the fire stations space is at a premium, and some type of storage facility should be incorporated at many of the fire stations. Future stations should be built with this space requirement in mind.

### **Status of Fire Stations**

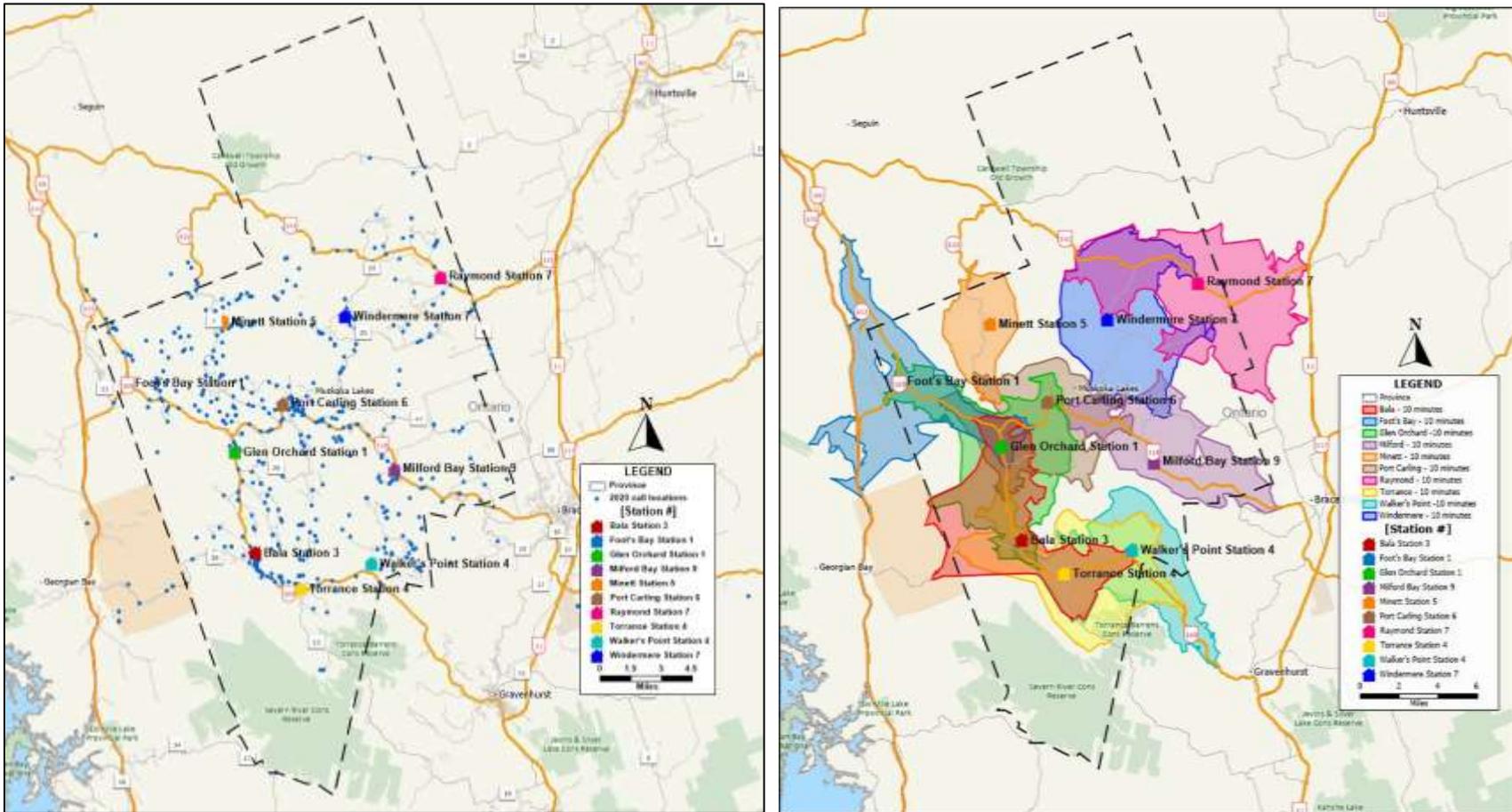
In conversation with the Public Works Director, the following information was confirmed about the status of the 10 fire stations.

- **Port Carling** station in good shape. It is the flag ship of the Fire Department
- **Milford Bay** station needs to be replaced
- **Windermere** station is in good shape
- **Minett** station is too small to continue to meet the present needs of the Fire Department
- **Foots Bay** station is attached to the community centre and is in good condition
- **Glen Orchard** station is too small, just a one-bay garage with no facilities for the firefighters
- **Bala** station is still in relatively good condition
- **Torrance** station is not meeting the needs of the Department and is in poor condition
- **Walkers Point** station is relatively new and in good condition
- **Raymond** station needs to be replaced

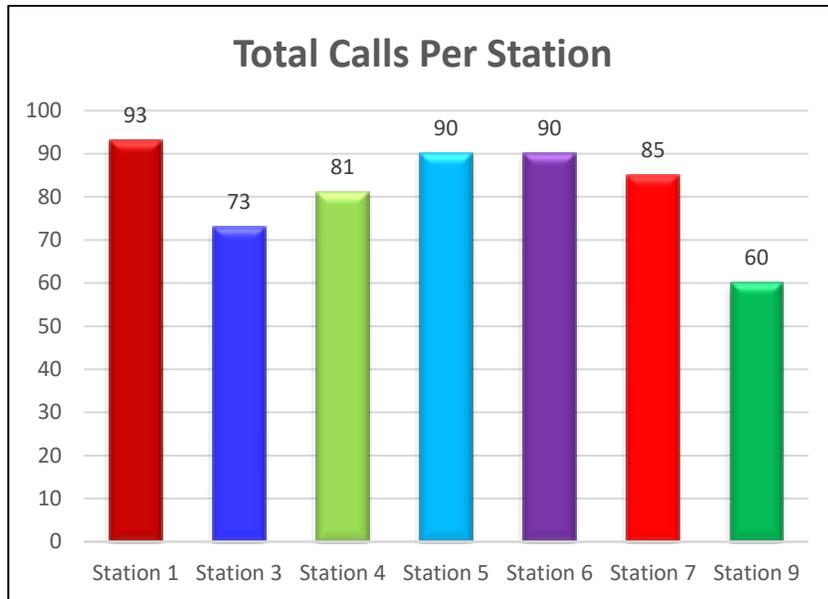
### **Fire Station and Call Locations**

The following call cluster map helps to identify where the bulk of responses occur within the Township. As illustrated in the map, the present fire stations are generally well situated. We can, however, see that there are some gaps where response zones fall outside 10-minute responses.

Figure #4: Call Locations



**Figure #5: Total Calls Per Station**



- The Glen Orchard station is quite simply a one bay garage that houses one vehicle and related firefighting equipment. It has no on-site showers, washrooms, office space or even a proper training room. To renovate this station to bring it up to a more functional level would be cost prohibitive. It is true that this station does supply a service to the community but when the 10-minute map is reviewed, it becomes apparent that the Foot’s Bay, Port Carling and Bala stations are able to cover this area. Also, this facility will not go to waste as the Works Department could take full advantage of having this space made available for them.

As can be seen in the above chart (Figure #6) there is a variation in the number of calls to which the stations respond.

The chart indicates the calls where the station is the primary response vehicle, and does not include the number of calls where the station is responding to support calls in other station areas.

### Fire Station Options

During the review of response data and station facilities in both this 2022 review and the previous 2014 master plan document it was noted that there is an opportunity to close the Glen Orchard and Torrance fire stations and utilize the equipment and staffing by merging them within the Foot’s Bay, Bala and Port Carling stations.

- The Torrance fire station is better equipped than the Glen Orchard fire station to meet the needs of the firefighters but due to its close proximity to the Bala fire station, an opportunity also exists to merge the two stations into one. This merging would still offer a good level of coverage in the area (as noted by the 10-minute response map).

These two closings would equate to a reduction in the cost of fire equipment and fire trucks. By even reducing the fleet by one or two trucks, this could equate to a future savings of almost one million dollars (for future truck purchases). There would also be

savings related to station upkeep and operating costs. The funds identified for fire station upkeep (for Glen Orchard and Torrance) may not seem like a large savings but over time the fact that a fire truck (or two) may be reduced from the rolling stock, and annual maintenance costs for two stations could either be reduced or (even better) redirected back into the fire department's budget for future training and equipment needs would be a benefit.

During a review of the department's budget process, it was identified that that in the long-term capital planning process fire station infrastructure investments are earmarked for the Minett Fire Station #5 in 2027 and the Torrance Fire Station #4 in 2031. If Council does approve the recommendation to close the Torrance fire station, the money that was earmarked for this investment could be applied to upgrades of one of the other fire stations. Or put aside for the building of a new fire station.

## Future Station Options

### *Option #1:*

The maps located on the following page under the heading of **Fire Station Option #1 – Two Station Reduction** outline the present 10 station coverage model and how the response coverage looks with an 8-station model. As can be noted, there is still overlapping coverage in the areas where the Glen Orchard and Torrance stations have been removed. It should also be noted that the two stations combined only respond to approximately

160 calls per year, which could be handled by the four surrounding fire stations.

### *Option #2:*

As a second option, EMG, working with the Fire Chief have also identified another model in which the 10-station model is now reorganized as a five-station model. As can be seen in the maps under the heading of **Fire Station Option #2 – Five Station Arrangement**, the coverage for the community is quite good. However, the issue with this option is the overall cost of building five new fire stations at an approximate cost of 1.5 million to 3.5 million per fire station (depending on size and overall design). This could theoretically be an overall cost of 7.5 to 17.5 million. If this option were to be considered, it would be a long-term implementation over the course of 10 to 20 years.

### *Option #3:*

A third and final option, **Fire Station Option #3 – Three Super Stations**. EMG also evaluated the possibility of making three of the fire stations as key stations with the remaining stations being more of a satellite set up.

This issue with this super station concept is that all the stations are already at maximum capacity, which means that none of the fire trucks can be moved to another location without over stressing an already maximum capacity arrangement.

In this option, the Bala, Port Carling and Windermere fire stations would become the super stations to house the larger equipment. With the following stations being assigned a single

pumper/tanker truck – Walkers Point, Milford, Foot’s Bay and Minett. Part of the reasoning here is that Milford, Minett and Foot’s Bay are also responsible for the marine units.

## Feasibility Study

There is a great deal of information to be considered with the three options noted here. Before any decision is made, a full feasibility study is recommended to understand 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.

This study could be the deciding factor in what stations may in fact need to be rebuilt or even relocated.

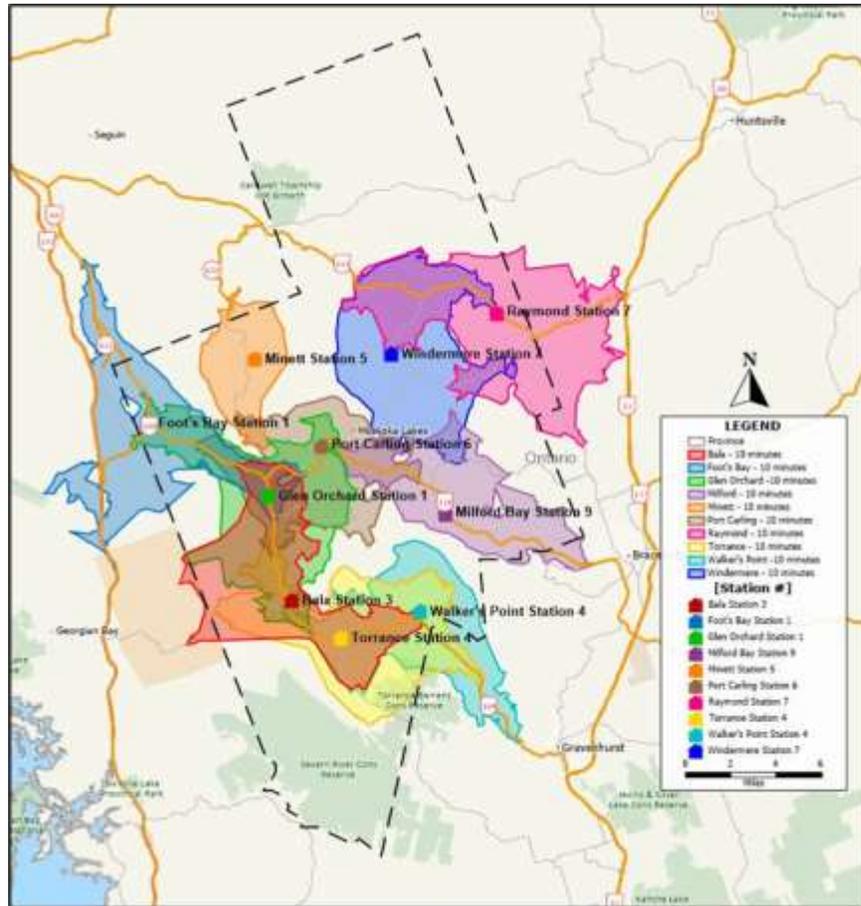
The decision by Council on what option is approved, will be the starting point for this feasibility study. As noted, for Option #1 – this recommends the closing of two stations, which may not require a large study.

For Option #2 – the questions here revolve around the cost of building new fire stations over the long term and the land availability for each site.

For Option #3 – this is where, the upgrading of the three key stations would need to be evaluated, along with the cost of the possible upgrades.

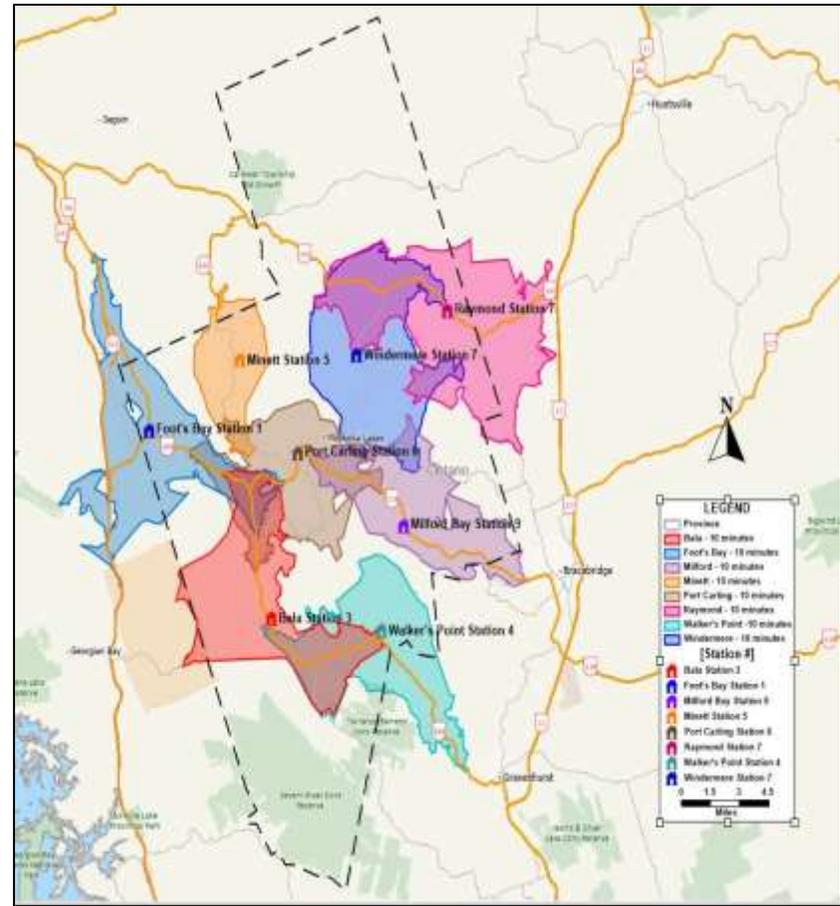
**Figure #6: Fire Station Option #1 – Two Station Reduction**

**Present Fire Station Set Up – 10 Stations**



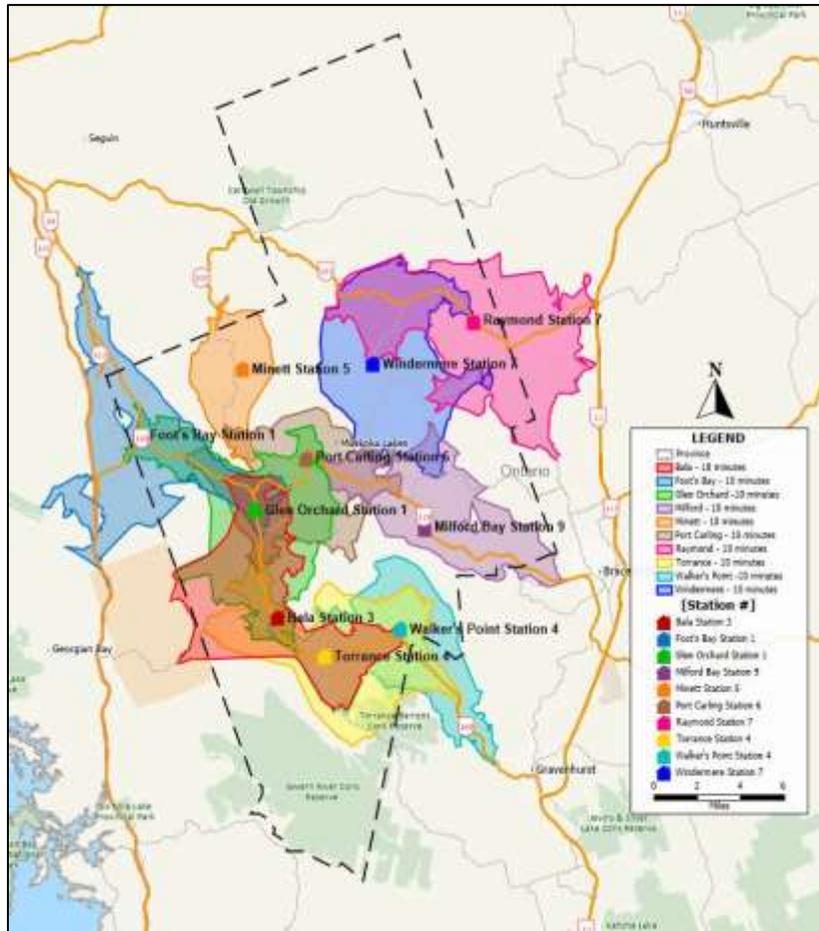
**Recommended 8 Station Set Up**

This 8-station set up still offers good coverage to the community based on the noted all locations (as noted in the previous map).



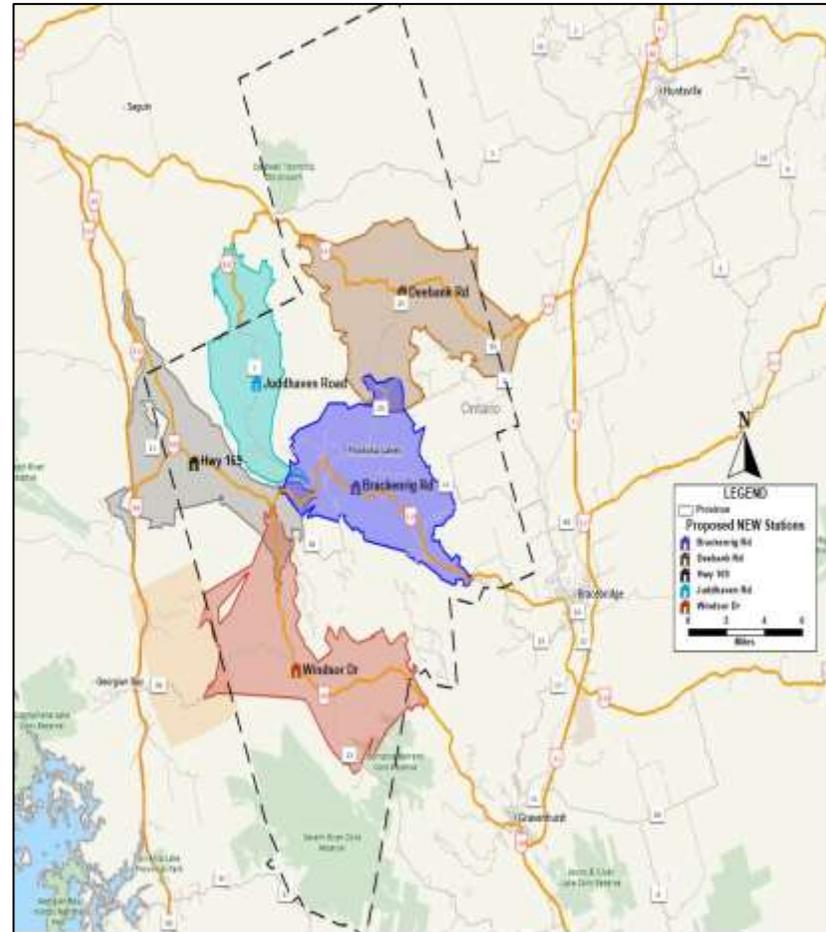
**Figure #7: Fire Station Option #2 – Five Station Arrangement**

**Present Fire Station Set Up – 10 Stations**



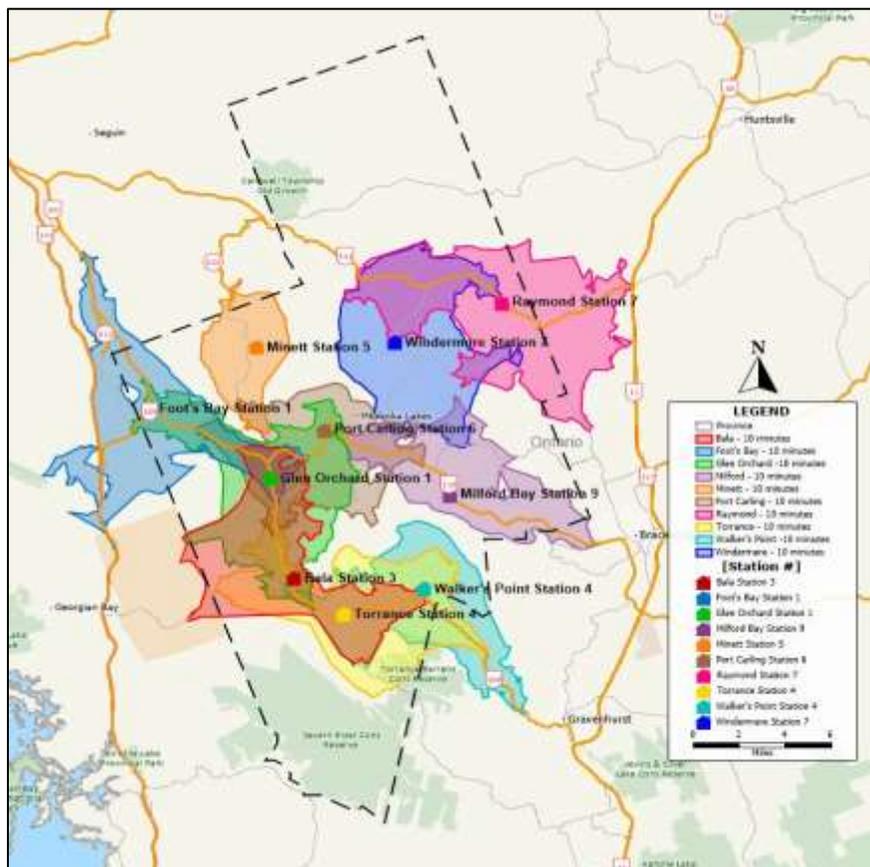
**Five Station Set Up**

This 5-station model also offers good coverage in the areas where the bulk of the Fire Department responses.



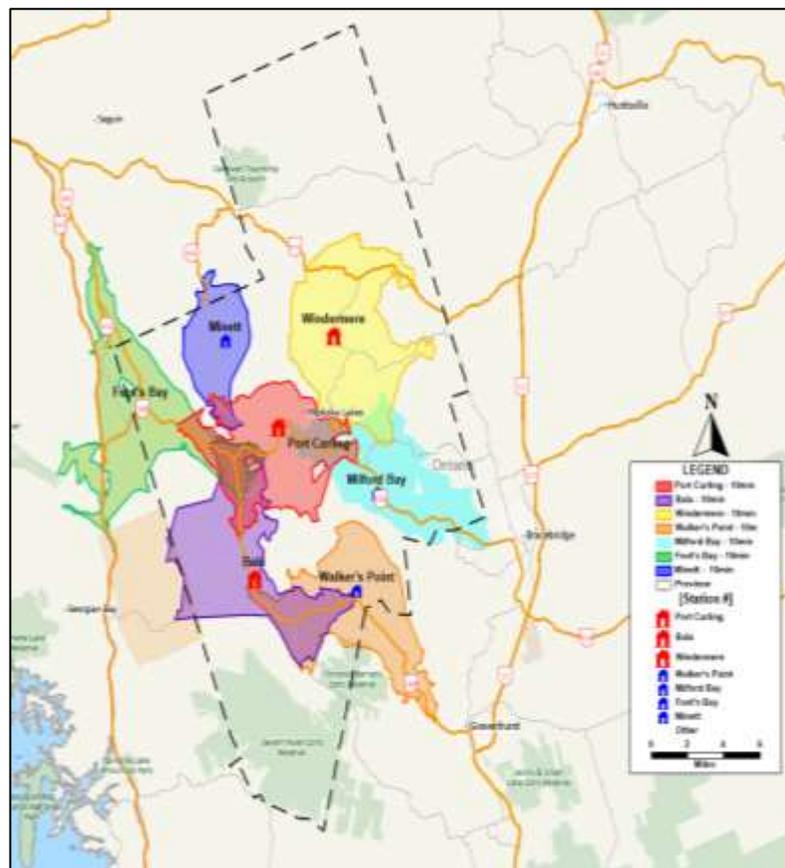
**Figure #8: Fire Station Option # – Super Station plus Sub-Stations**

**Present Fire Station Set Up – 10 Stations**



**Super Stations plus Sub-Stations**

This super station model does not change response areas, but it does help to reduce the space needs of the sub-stations which could increase these stations life expectancy.



## Fire Underwriters Survey – Vehicle Replacement Recommendations

When assessing a fire department’s ability to meet the needs of the community, the Fire Underwriters Survey (FUS) as an example of one assessment agency, considers the age of a fire truck as one of its guidelines. For a Medium Cities, a 15-year replacement cycle is recommended for front-line vehicles.

**Table 1 Service Schedule for Fire Apparatus For Fire Insurance Grading Purposes**

Apparatus Age	Major Cities <sup>3</sup>	Medium Sized Cities <sup>4</sup>	Small Communities <sup>5</sup> and Rural Centres
0 – 15 Years	First Line Duty	First Line Duty	First Line Duty
16 – 20 Years	Reserve	2 <sup>nd</sup> Line Duty	First Line Duty
20 – 25 Years <sup>1</sup>	No Credit in Grading	No Credit in Grading or Reserve <sup>2</sup>	No Credit in Grading or 2 <sup>nd</sup> Line Duty <sup>2</sup>
26 – 29 Years <sup>1</sup>	No Credit in Grading	No Credit in Grading or Reserve <sup>2</sup>	No Credit in Grading or Reserve <sup>2</sup>
30 Years +	No Credit in Grading	No Credit in Grading	No Credit in Grading

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

<sup>2</sup> Exceptions to age status may be considered in a small to medium sized communities and rural centres conditionally, when apparatus condition is acceptable and apparatus successfully passes required testing.

<sup>3</sup> 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.

<sup>4</sup> 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/OR
- a total population of 1,000 or greater.

<sup>5</sup> 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.

3

<sup>3</sup> Fire Underwriters Survey, Technical Document Downloads: Insurance Grading Recognition of Used or Rebuilt Fire Apparatus,”

<https://fireunderwriters.ca/Downloads>

### ***NFPA – 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 for fire vehicles. This standard includes guidance on retirement criteria for fire apparatus. Much like the FUS, NFPA 1911 recommends that all front-run vehicles are replaced on a 15-year cycle for larger cities.

It must be kept in mind that it is critical to replace apparatus before they become unreliable. Over the long-term, delaying the replacement of a vehicle is inadvisable as it will add to the overall maintenance costs of the apparatus. Failure to keep an adequate response fleet can influence insurance costs based on the fire department's FUS rating.

As the trucks accumulate mileage, engine hours, and pump use, the maintenance costs and down time for repairs can increase dramatically in the later years of the apparatus' life.

It can often be more economical to replace the truck at an earlier age, when resale values are higher, and before the wear and tear starts to result in expensive repairs, potential failure at a scene, and long downtime.

### ***Mechanical Repairs***

The Fire Department is very fortunate to have a qualified Emergency Vehicle Technician (EVT) working out of the Township's works yard. This provided MLFD with an in-house mechanic to work on their fire vehicles and equipment as need.

### ***Purchase of an Elevated (Aerial) Device***

In view of the planned growth in Minett, that will include some larger structures, there will be need for an elevated device. As the buildout of this community occurs, EMG is recommending the acquisition of an aerial device as it will enhance the emergency service's ability to battle 'above ground' fires that are out of the reach of conventional ground ladders.

Aerials or any type of elevated device truck plays a vital role at the scene of a structure fire; securing building access to upper floors, rescue, assisting with rooftop ventilation, and suppression can be achieved from an aerial ladder. These factors are especially important when dealing with apartment buildings and/or other structures of two storeys or more, such as commercial buildings and industrial facilities.

In summary, it is recommended that an elevated device (new or used) be incorporated into the fleet's future replacement plan. This elevated device could be a replacement one of the present fleet vehicles.

# **Strengths, Weaknesses, Opportunities and Threats (Challenges)**

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

Based on the review conducted by EMG, the following set of strengths, weaknesses, opportunities, and threats (challenges) were identified. This SWOT considers the information provided in this report, as well as the Community Risk Assessment, has been the basis for the 38 recommendations being presented for consideration by Council.

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.

### **Strengths**

- Muskoka Lakes benefits from having 10 fire stations that are arranged into six response zones, which has worked well for the Fire Department in relation to responding to calls for service within the community.
  - However, EMG has noted three options for station consolidation in Section #6. These options are presented for Council's consideration regarding response improvements.
- The department does have a full-time Fire Prevention Officer to ensure that the majority of mandated fire safety inspections and public education needs are

being met.

- The MLFD has strong relationships with its partner emergency services (police and EMS, along with mutual and automatic aid agreements in place with other fire services to assist with general response needs.

### **Weaknesses**

- MLFD, as with many composite emergency services, depends on its team of dedicated Volunteer Firefighters (VFF) (for response to calls). But at times it can be challenged when it comes to having enough Volunteer Firefighters for these responses.
  - Due to other commitments, such as their full-time jobs and family obligations, there is no guarantee these volunteers will be available to respond as needed, which in turn can create a condition where possible low numbers of on-scene staffing levels may occur.
- Many of the fire stations are in need of upgrades to ensure they continue to meet the needs of the service in relation to equipment storage, shower facilities, and removal of firefighters' gear from diesel exhaust contamination.
- There is a part-time Training Officer. However, with 10 fire stations and over 120 VFFs, it is a struggle to

ensure that training needs and expectations outlined in such documents as the NFPA, and the Occupational Health and Safety Act are being delivered and documented on a consistent basis.

- And with the OFMEM implement training standards and certification requirements for all positions within the fire service, even more training will be required (by all fire departments in Ontario).

### **Opportunities**

- MLFD has a history of engaging in partnerships with bordering departments for such things as joint training, cross border responses, mutual aid and fire service agreements that benefit both communities.
  - 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 consolidation of fire stations to reduce costs, while continuing to provide the same or even an improved level of service to the community.
  - No one likes to see a fire station close, but if such a recommendation has its merits, then it needs to be considered and implemented.

### **Threats/Challenges**

- Major emergencies stressing the availability and perhaps even greater dependence on volunteer

suppression staffing resources and equipment must be considered as the community's population continues to grow and age.

- Response by the VFFs is a challenge due to their other commitments, such as full-time jobs within or outside of the community. This is a challenge for most emergency services that may need to depend on responses from the volunteer firefighters.
  - The level of response should be monitored for both daytime (with a focus on the workweek) and evenings to identify if any issues exist.
- The threat of climate change and its impact on weather patterns is an increasing challenge for communities to deal with inclement weather incidents, such as freezing rain/ice storms. As they are becoming more commonplace, they need to be part of the emergency response program for each community.
  - These changes in climate conditions, along with the resulting frequency and severity of incidents, has also predicated the need for a larger response component to these emergencies. A review and update of the emergency response plan is appropriate in view of climate change.

All these noted challenges need to be monitored, evaluated, and reported to Council by the Fire Chief to ensure that MLFD is meeting the needs and expectations of the community.

# Conclusion

## CONCLUSION

### Summary

During the review conducted by EMG, it was demonstrated that the Muskoka Lakes Fire Department staff are truly dedicated to the community they serve. Council, the Township's Strategic Leadership Team, which includes the Fire Chief, are sincerely committed to ensuring the safety of the community and all personnel of the Fire Department. Based on the present staffing, equipment, and fire station's locations, Muskoka Lakes Fire Department is endeavoring to offer the most efficient and effective service possible. But there is still room for improvement.

All costs and associated timelines are approximate estimates that can be implemented through prioritization between Council and the Township's Administration.

Due to some of the specific recommendations made in this document, it is advisable that the Fire Chief view this plan as a "living document", conducting frequent reviews of the recommendations, and bringing forward updates to Council annually, or sooner if required.

It is the responsibility of the Muskoka Lakes Fire Department management to ensure that all recommendations contained within this FMP, and CRA document are noted, captured, and set up in a format that allows Muskoka Lakes Fire Department to continually monitor, evaluate and update each recommendation as needed. Part of a risk reduction plan is to ensure that the loop is closed on recommendations.

Whether a recommendation is implemented, deferred, or rejected, all recommendations need to be addressed. By doing this, Muskoka Lakes Fire Department management is ensuring that all opportunities to reduce risk within the community have been explored.

# Recommendations

## RECOMMENDATIONS

Rec #	Recommendation	Estimated Costs	Suggested Timeline	Rationale
	<b>Section 2 – Planning</b>			
1	That the Fire Chief bring forth a revised version of the Establishing & Regulating By-Law for Council’s approval and going forward the Fire Chief annually review and update, the By-Law as necessary.	Staff time	Short-term (1-3 years) and ongoing	Having an up-to-date E&R By-Law will guide the operations of the MLFD and identifies response guidelines, fire prevention and public education programs and levels of training.
2	That a Standard Operating Guideline Committee be established with representation of all divisions of the fire department. It is further recommended that the department’s SOGs be reviewed and regularly.	Staff time	Short-term (1-3 years)	Establishing an SOG committee will aid in maintaining current guidelines while allowing participation of members of MLFD in the operations of the department.
3	That Muskoka Lakes develops a comprehensive Community Risk Reduction Plan that falls in line with the Community Risk Assessment and the Fire Master Plan recommendations.	Staff time	Short-term (1-3 years) and ongoing	With the risks to the township identified, the CRRP will aid in prioritizing the who, what, when and how these will be lessened or mitigated.
4	The Fire Prevention Officer position focus on inspection, enforcement, and review matters specifically. <ul style="list-style-type: none"> <li>• A subsequent plan should be developed to identify what other</li> </ul>	Staff time	Short-term (1-3 years) and ongoing	The Fire Protection & Prevention Act., specifically mandates public education and fire prevention inspections based on requests and demands. With only one Fire Prevention Officer for the township,

Rec #	Recommendation	Estimated Costs	Suggested Timeline	Rationale
	inspections can be reasonably accomplished by the one full-time FPO, and what options are needed to address the other fire prevention related concerns.			prioritization of these required duties needs to be the focus.
5	All firefighters be offered the opportunity to become trained and qualified to the NFPA 1035 Public Fire & Life Safety Educator Level I as well NFPA 1031 Fire Prevention Officer, Level I. <ul style="list-style-type: none"> <li>• And that consideration be given to resourcing Public Education with a part-time dedicated, fully trained and qualified staff position.</li> </ul>	Staff time	Short-term (1-3 years) and ongoing	Greater utilization of department resources to support the fire prevention and public education initiatives will ensure that MLFD is meeting the FPPA mandated requirements.
6	MLFD to work in conjunction with residential developers in promoting the advantages of installing residential fire sprinklers.	Staff time	Short-term (1-3 years) and ongoing	Sprinkler systems have been proven to save lives and property, by promoting this initiative the MLFD is demonstrating a proactive, life saving program.
7	Full-Time Chief of Training/Training Officer position be developed and staffed	\$115,000 - \$125,000	Short-term (1-3 years)	With the growth of the Department, along with the new Training/Certification Regulation, this position will be needed more than ever.
8	A more robust and efficient process of training records entry is required. This	Staff Time	Immediate (0-1 year)	With the introduction of the new Training and Certification Regulation,

Rec #	Recommendation	Estimated Costs	Suggested Timeline	Rationale
	<p>should involve the officer inputting the training.</p> <ul style="list-style-type: none"> <li>Officers to provide initial training records entry.</li> </ul> <p>This may include research and training records management system demonstrations to determine which records management system(s) would work best for MLFD.</p>			<p>more accurate training records will be required.</p>
9	<p>The Fire Chief to provide a business case to senior administration (only if no other options for live fire training exist) supporting either:</p> <ul style="list-style-type: none"> <li>a fixed training facility, or</li> <li>the purchase of a mobile training unit or a fixed site unit for the purposes of Live Fire Training</li> </ul>	<p>\$200,000 - \$700,000 (Mobile training unit)</p>	<p>Short-term (1-3 years)</p>	<p>This is an option that the Fire Chief needs to evaluate if no other facility is available for the firefighters to receive regular and ongoing hands-on training. <b>Note:</b> at the time of this report, it was announced by Huntsville Fire that they would be opening their training facility again as a regional facility to be rented/utilized by other fire departments.</p>
10	<p>All firefighters receive live fire training annually.</p>	<p>Dependent on facility costs and/or the purchase of a</p>	<p>Short-term (1-3 years) and ongoing</p>	<p>With the introduction of the new Training and Certification Regulation, more ongoing and relevant training will be required and documented.</p>

Rec #	Recommendation	Estimated Costs	Suggested Timeline	Rationale
		live fire training unit.		
11	<p>MLFD adopts an educational progression plan. The proposed training programs and succession path should be supported for current and proposed positions with the following suggested training:</p> <ul style="list-style-type: none"> <li>The position of captain, emergency management training should start with IMS-100 Introduction to the Incident Management System (IMS) for Ontario and IMS-200 Basic Incident Management System for Ontario.</li> </ul> <p>The position of district chief, emergency management training continues with IMS 250 – IMS in EOCs.</p>	Staff time	Short-term (1-3 years) and ongoing	Succession/educational planning is paramount to the future success of any organization.
12	Create a formal organization development program that identifies technical and core competencies for Fire Chief, Deputy Fire Chief, district chief, captain, and firefighter and be formally implemented.	Staff time	Short-term (1-3 years)	Succession/educational planning is paramount to the future success of any organization.

Rec #	Recommendation	Estimated Costs	Suggested Timeline	Rationale
13	MLFD facilitate the experience component required as part of the development of individuals and implement a process for individuals that are interested in Chief Officer positions.	Staff time	Short-term (1-3 years)	Succession/educational planning is paramount to the future success of any organization.
14	Develop job descriptions with a list of the minimum core job responsibilities. Further, the education and experience required for each of those positions should be outlined to chart the path for succession.	Staff time	Short-term (1-3 years)	Succession/educational planning is paramount to the future success of any organization.
15	<p>MLFD monitor its ability to meet effective response times. This includes the following:</p> <ul style="list-style-type: none"> <li>• Achieve a goal of 80 seconds for firefighter turn-out time.</li> <li>• Four firefighters arriving on scene within four minutes of travel time.</li> <li>• Sixteen firefighters arriving on scene within an eight-minute travel time.</li> </ul>	Staff Time	Immediate (0-1 year) and ongoing	By monitoring and measuring the department's response times, the Fire Chief will be better able to report the level of effectiveness of the Department to Council. This type of measurement will also help to identify issues and possible gaps in response coverage.
16	MLFD invest in more decontamination equipment and develop the appropriate policies and SOGs in performing decontamination of firefighters at the scene of a fire.	Approx. cost of \$10,000.00	Short-term (1-3 years)	MLFD does have some decontamination equipment on the vehicles, but more equipment such as showers and catchment equipment are still needed.

Rec #	Recommendation	Estimated Costs	Suggested Timeline	Rationale
17	<p>The present practice of having the volunteers responding to an emergency scene in their personal vehicles should cease.</p> <ul style="list-style-type: none"> <li>This can be done in a practical manner that would see the transition occur gradually as crew carrying vehicles are introduced at each station.</li> </ul>	<p>Staff time and possible vehicle upgrades when being replaced</p>	<p>Transitional time – Short term (1-3 years)</p>	<p>By having the firefighters responding to the station first ensures the following:</p> <ul style="list-style-type: none"> <li>No contaminated equipment is being transported by personal vehicles</li> <li>A full accountability of all responders</li> <li>less congestion of personal vehicles at the site of an emergency.</li> </ul>
18	<p>MLFD develop a formal health and wellness program that includes all facets relating to fitness, cancer prevention, PTSD and peer support.</p>	<p>Staff time</p>	<p>Short-term (1-3 years) and ongoing</p>	<p>The health and wellness of all Township employees is an ongoing requirement to ensure everyone’s well being.</p>
19	<p>Recommendations noted relate to:</p> <ul style="list-style-type: none"> <li>Removal of firefighting gear from apparatus floor to reduce vehicle exhaust contamination</li> <li>Separation of workstations and food preparation stations from the apparatus floor</li> <li>Provide more storage capacity through the implementation of additions to stations and/or the use of sea-cans or storage sheds</li> </ul>	<p>Full station assessment is required before full costing can be determined</p>	<p>Short-term (1-3 years) and ongoing</p>	<p>Facility upgrades are required to meeting the needs of the firefighters.</p>

Rec #	Recommendation	Estimated Costs	Suggested Timeline	Rationale
	<ul style="list-style-type: none"> <li>• Upgrading of washrooms to include proper shower/decontamination facilities</li> <li>• Installation of vehicle exhaust systems to reduce exposure to diesel exhaust by the firefighters</li> <li>• Installation of proper floor drain systems for oil capture.</li> </ul>			
20	<p>Council to consider in consultation with the Fire Chief, a feasibility study of the three options presented in relation to:</p> <ul style="list-style-type: none"> <li>• Option #1 – closing of two fire stations</li> <li>• Option #2 – creation of a new five fire station model, or</li> <li>• Option #3 – creation of three key stations, with four sub-stations</li> </ul> <p>And that a full feasibility study be conducted by either the Director of the Works Department or through a third party.</p>	Depending on Option chosen and Feasibility Study	Long-term (7-10 years) or longer dependent on option	Many of the fire stations are either slated for replacement and/or in need of upgrades. But adopting one of the noted recommendations, this will identify what stations are to remain in the inventory, and what related upgrades or even new builds will be required for the future.
21	Work towards adherence to the NFPA and FUS vehicle replacement cycles.	Replacement costing is dependant on type of vehicle	Long-term (7-10 years)	Meeting the recommended replacement cycles noted by NFPA and FUS will ensure a sustainable fleet for emergency response.

Rec #	Recommendation	Estimated Costs	Suggested Timeline	Rationale
22	Purchase of an elevated device to support MLFD personnel with battling above ground fires.	Approx. cost of 1.5 million dollars	Short to Mid-term (1-6 years)	As the community of Minett builds out, the need for an elevated device to allow the firefighters safe working access to heights at building of more than two-stories is required.
23	Greater utilization of the tablets to incorporate a pre-incident planning program, available on each responding fire truck.	Staff time	Short-term (1-3 years)	Utilizing technology in the record keeping and information availability allows quicker access, along with ability to better collate information.
24	Work with the District of Muskoka water department to have the fire hydrants painted in colours appropriate to their flow rates.	Staff time	Short-term (1-3 years)	Adheres to the NFPA related recommendations.
25	<p>Review and Update ERP from a climate change perspective and insert a page at the front of the document to include the following:</p> <ul style="list-style-type: none"> <li>• The date changes were completed.</li> <li>• A brief outline of the changes and the sections involved.</li> <li>• Name of individual completing the updates.</li> </ul>	Staff time	Immediate (0-1 year)	Keeping this plan up to date is a requirement under the Act.

Rec #	Recommendation	Estimated Costs	Suggested Timeline	Rationale
	<ul style="list-style-type: none"> <li>The emergency response plan should have a section dedicated to domestic terrorism.</li> </ul>			
26	<p>Consideration of a potential partnership with the Fire Marshal’s Office, police, or other bordering communities may be possible as an adequately functional mobile command centre could be utilized for multi-agency deployment.</p>	<p>\$20,000 - \$50,000 (estimate)</p>	<p>Short-term (1-3 years)</p>	<p>Such a partnership would prove to be a cost-effective use of a vehicle at large scale events.</p>
27	<p>Due to the importance of staff understanding their roles and responsibilities in the EOC, it is recommended that a policy be implemented that identifies IMS 100 for all staff, IMS 200 as the minimum standard for staff required to be in the EOC with IMS 300 minimum for all department heads.</p>	<p>Staff time (courses are offered at no charge)</p>	<p>Short-term (1-3 years) and ongoing</p>	<p>More efficient utilization of trained staff resources.</p>
28	<p>All Automatic Aid, Mutual Aid and Fire Protection Agreements organized as Muskoka Lakes Bylaws be reviewed and revised, with regular defined review periods and/or expiry dates identified. A page listing the dates of review and areas revised should</p>	<p>Staff time</p>	<p>Immediate (Reviewed annually)</p>	<p>More of a housekeeping recommendation.</p>

Rec #	Recommendation	Estimated Costs	Suggested Timeline	Rationale
	be an addendum to any of the revised Bylaws.			
29	An immediate review should be undertaken of the agreement authorized under Bylaw No. 2005-114 - Muskoka Central Ambulance Communications Center (July 11, 2005). Opportunities exist to improve the service being delivered by the CACC to MLFD.	Staff time	Immediate (Reviewed annually)	Review recommended to ensure services requirements under this contract.
30	The First Aid Assistance Bylaw No. 2014-76 be reviewed and revised. Efforts should be undertaken to identify true costs and impacts to the MLFD in the delivery of pre-hospital care as outlined in the agreement and re-align the cost-sharing arrangement to ensure sustainability and consistency in the delivery of this service.	Staff time	Short-term (1-3 years)	Review recommended to ensure services requirements under this agreement.
31	A collaborative review process be undertaken on Bylaw No. 2006-59 to assess feasibility of moving from a 'fee for service' model and to a more active partnership model resulting in a pre-defined annual financial contribution from the Wahta Mohawks to MLFD. Consideration should be given to collaboratively reviewing and	Staff time	Short-term (1-3 years)	Review recommended to ensure services requirements under this agreement.

Rec #	Recommendation	Estimated Costs	Suggested Timeline	Rationale
	agreeing upon the full scope of services that MLFD can provide including community risk reduction activities such as Fire Prevention/Public Education.			
32	A review be taken of all Mutual Aid, Automatic Aid, and Fire Protection Agreements to simplify language used, ensure consistent terminology, and where possible increase similarity in content and structure. Consideration should be given to amalgamating these into one over-arching regional document.	Staff time	Short-term (1-3 years)	Review recommended to ensure services requirements under this agreement.
33	A review be undertaken of the extent to which geographic areas currently designated within the Municipal Protection Area (MPA) may be more appropriately allocated within the Crown Protection Area (CPA). The current allotments of geographic areas within the MPA as opposed to CPA could place undue strain on the resources of the MLFD and should be reviewed in a collaborative process with the Ministry of Natural Resources (MNR) related to Bylaw No. 2012-42.	Staff time	Short-term (1-3 years)	Review recommended to ensure services requirements under this agreement.
34	A regional Automatic Aid/Mutual Aid/Shared Services committee be	Staff time	Mid Term (4-6 years)	Review recommended to ensure services requirements under this agreement.

Rec #	Recommendation	Estimated Costs	Suggested Timeline	Rationale
	established to explore the potential for a multi-jurisdictional agreement. A multi-jurisdictional Shared Services Agreement could encompass the different agreements already in-place and bring all stakeholders together to identify areas where enhancements can be made around operational readiness & response, joint training, and equipment/apparatus procurement.			
35	The Muskoka Lakes Fire Department include a review of all fees for services provided as part of the comprehensive review recommended for the fire service agreements and mutual aid plans.	Staff time	Short-term (1-3 years)	Review recommended to ensure services requirements under this requirement.
36	The Township of Muskoka Lakes develop a Bylaw that would require the insurance company or policy holder (property owner) for payment of fire department response fees. If not paid, the municipality in turn would add the amount to the property owner's tax bill.	Staff time	Short-term (1-3 years)	Review recommended to ensure services requirements under this requirement.
37	The MLFD through the Fire Chief, make an application to Fire Underwriters Survey for a review of MLFD's fire protection.	Staff time	Short-term (1-3 years)	Updating of this survey would ensure that the MLFD is current.
38	Once a FUS assessment has been completed that the Fire Chief regularly access and provide input to the FUS Municipal Fire	Staff time	Mid Term (4-6 years)	Updating of this survey would ensure that the MLFD is current.

Rec #	Recommendation	Estimated Costs	Suggested Timeline	Rationale
	Portal to communicate improvements and/or updates. This data could relate to new fire apparatus replacements, new fire stations, new construction, hydrants in new sectors, etc.			

## REFERENCES/HYPERLINKS

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