November 2017

Fogo Island
Fire Department

Fire Service Review

Developed by:
Emergency Management & Training Inc.
65 Cedar Pointe Drive, Suite 144
Barrie, ON L4N 9R3
**Executive Summary**

Fogo Island has requested a Fire Services Review (FSR) of its fire department. This review is to assess current operations and service levels provided, along with evaluating the adequacy of existing equipment and fire stations. To accomplish these expectations, an analysis of all documentation and data supplied was completed along with a review of any legislation and industry standards related to fire services.

To ensure that they are meeting the needs of the community and its staff, Fogo Island recognizes the need to conduct a Fire Services Review (FSR) for the purposes of providing high-quality fire services to the residents of the Town and its visitors. A current FSR allows for prudent operating and capital budget forecasting, along with identifying efficiencies that may be obtained.

The Town of Fogo Island amalgamated as a regional municipality in 2011, and is governed by one regional Council. Prior to 2011, each community was served by its own fire department. However, with the consolidation of the community, the goal of this FSR is to evaluate the level of service offered by the Fogo Island Fire Department (FIFD) that presently works out of six fire stations, utilizing a force comprised of dedicated volunteer firefighters.

This 2017 FSR for the FIFD has reviewed and identified current and anticipated community fire risks and related needs over the next five to ten years. This review has also examined and researched all aspects of the fire department’s operations, planning, fire prevention, training and education, communications, apparatus and equipment, maintenance, human resources, station suitability (accommodations) and location, budgets, and emergency preparedness. During the review process, it was very apparent to Emergency Management and Training Inc. (EMT) that the residents of Fogo Island are served by a dedicated group of personnel in the FIFD.

Based on the review, EMT is presenting a list of 27 recommendations noted in the following chart for consideration by the Town’s Council, CAO, and Fire Chief(s).

EMT would like to thank those who assisted in the development of this fire services review. We would also like to commend the Chief Officers and Volunteer Firefighters of the Fogo Island Fire Department on their dedication to serving the community and the level of service that they have been providing to the community.
Overview of Recommendations for Fogo Island Fire Department – More detail can be found within each section along with a final reference chat equipped with associated costs and timelines for implementation located in Section 8.

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<thead>
<tr>
<th>Rec #</th>
<th>Recommendation</th>
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</thead>
<tbody>
<tr>
<td><strong>Section 1 Recommendations – Community and Fire Department Overview</strong></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>It is recommended that the Fire Chief/Coordinator (FCC) and Station Chiefs review any formal Town documents and related By-laws that govern the operation of the fire department and based on this review update the existing document with the assistance of the National Fire Protection Association 1201 Standard for “Providing Fire and Emergency Services to the Public”, utilizing and incorporating it as is deemed necessary.</td>
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<tr>
<td><strong>Section 2 Recommendations – Planning and Surveys</strong></td>
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<tr>
<td>2</td>
<td>It is recommended that the FCC track and report on the number of members responding and response time to each fire call or other runs made. This review and tracking of responses will identify any issues that might exist in relation to numbers responding or even time of day that may present a challenge for responses.</td>
</tr>
<tr>
<td>3</td>
<td>It is recommended that the type of calls responded to be tracked and assessed to identify major priorities, what (if anything) is increasing and why. This will help the fire department in its planning for equipment, staffing and training needs.</td>
</tr>
<tr>
<td>4</td>
<td>It is recommended that the FIFD adopted the use of the response time measurement based on response any times obtained through historical data.</td>
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<td><strong>Section 3 Recommendations – Risk Assessment</strong></td>
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<td>5</td>
<td>There appeared to be a lack of formal documentation relating to vehicle inspection records and driver training programs and/or evaluations. As such, it is recommended that both of these programs be put into place.</td>
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<tr>
<td>6</td>
<td>It is recommended that the department install an approved diesel exhaust system to protect the gear from contamination. And that any gear that is at risk of daily exposure of ultraviolet rays and/or diesel fumes be relocated to reduce this ongoing exposure when not being worn by the firefighters.</td>
</tr>
<tr>
<td>7</td>
<td>It is recommended that an Incident Management System and Accountability program be formally adopted. This will entail the creation of related training programs and operating guidelines.</td>
</tr>
<tr>
<td>8</td>
<td>It is advisable that the FIFD develop an annual plan for the amount of inspections and fire prevention related activities that the department would like to complete each year. This type of goal setting will identify required resources and also confirm completion success rates.</td>
</tr>
<tr>
<td>9</td>
<td>It is recommended that Fogo Island Fire Department develop a CRA (community risk assessment) for 2018 to ensure that an inventory of any risk occupancies be maintained and regularly updated as new information becomes available (either from other Town departments or through actions of the Suppression Division). This should</td>
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| include properties such as multi-unit residential, industrial, and commercial properties of concern and public buildings. This also assists the Fire Chief in identifying what training and equipment is required by the fire department to ensure it can offer the noted services in an efficient and effective manner. | The FIFD should move towards the training and certification of its fire officers in the areas of fire prevention and public education trained and certified to at least:  
- NFPA 1031 – Fire Inspector I, and  
- NFPA 1035 – Fire and Life Safety Educator I |
| 10 | Fogo Island should consider having a FUS evaluation of the community’s fire protection services conducted. This will also offer more feedback and options for recommended improvements to the community’s fire services. |
| 11 | There needs to be a more formally recognized annual training plan for all department staff to ensure that training goals and expectations are identified, evaluated and adjusted to ensure that all staff are receiving required training (on an annual basis). Consideration should also be given to greater utilization of available computer technology, combined with hands on training to utilize staff time as effectively as possible. |
| 12 | It is recommended that a review of required skills be conducted. Once this review is completed a more defined training and records retention program can be implemented. |
| 13 | FIFD would be well served by creating a Training Officer’s position to coordinate training at all stations. This would not only ensure a greater focus on the development of training programs, but provide a more accurate evaluation and tracking of them. This position could also be incorporated first as a part-time position and, as needs dictate, be expanded into a full-time position. |
| 14 | The FIFD does not track response times or number of VFF’s responding to page outs. As such, it is strongly recommended that response times are tracked, which is the only means for a fire department to identify if its response times are improving or worsening. |
| 15 | The FCC should investigate opportunities to increase the level of emergency preparedness education within the community. For example, education could be provided to the community through the library, recreation centres, public works, and other departments. |
| 16 | Based on the concerns noted, it is recommended that a radio/communications contractor be contracted to do an assessment of the department’s communications system, along with estimates for necessary repairs and/or upgrades that are required to create a more consistent and dependable system. |
### Section 4 Recommendations – Physical Resources

<table>
<thead>
<tr>
<th></th>
<th>Recommendation</th>
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<tbody>
<tr>
<td>18</td>
<td>It is recommended that all health and safety related concerns (not noted in recommendations 19 through 23) noted in this section be addressed.</td>
</tr>
<tr>
<td>19</td>
<td>It is recommended that the FIFD install shower facilities so that firefighters can decontaminate after a fire or medical call.</td>
</tr>
<tr>
<td>20</td>
<td>The doorway separations from the living/training areas need to be sealed so as to reduce the possibility of vehicle exhaust entering these areas. The access doors should be on spring loaded return systems.</td>
</tr>
<tr>
<td>21</td>
<td>The FIFD should ensure that backup generators are available for the fire stations and that the generators are kept on a regular testing and maintenance program to ensure that they ready for use, if required. A full load testing on the station should also be conducted on a scheduled basis to confirm that all required electrical services are operational when on generator power.</td>
</tr>
<tr>
<td>22</td>
<td>It is recommended that the replacing of an older pumper truck with a pre-owned aerial/elevated device (for cost savings) be investigated to provide the fire department with more operational flexibility in dealing with structure fires that are larger than the average single-family home.</td>
</tr>
<tr>
<td>23</td>
<td>It is recommended that the Town of Fogo Island reduce the number for fire stations to three, to be located at Seldom-Little Seldom, Joe Batt’s Arm and Fogo. These stations are presently well equipped and have room for additional equipment or at the very least, space to add onto the fire station to accommodate for more storage. These communities also have or are in close proximity to the highest levels of fire risk.</td>
</tr>
<tr>
<td>24</td>
<td>It is recommended that pump testing be completed and certified on all apparatus on an annual basis.</td>
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### Section 5 Recommendations – Staffing Considerations

Based on many of the recommendations made within this document, it is further recommended that Fogo Island Council approve the hiring of a full-time or contract Fire Chief. This position would be charged with the following tasks:

- Directly reporting to the CAO and Council on such things as:
  - Overall administration of the fire department, which includes development and management of budgets
  - Overview and development of department wide training programs
  - To be trained and certified to conduct fire prevention and education related duties
  - Monitoring and updating of the Town’s emergency preparedness program
  - Acting as the point of contact when dealing with the Province’s Fire Commissioners Office
  - Implementation of the recommendations presented in this Fire Service Review document
To ensure consistency with department operations, a full set of guidelines must be in place. Having the guidelines will not only inform staff in relation to procedures and expectations; they also offer a level of standardization for how to address a myriad of situations, both from an emergency and non-emergency standpoint. A process to review these guidelines annually should be put in place.

Section 7 Recommendations – Finance

It is recommended that attention be given to the development and implementation of a capital replacement budget for vehicles and equipment replacement based on industry standards.

More detail outlining the recommendations, which include related timelines for implementation and approximate costing, can be found within the body of this document. The final overview chart of recommendations can be found in Section 8 – Recommendations.
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Overview

Purpose

The key purpose of this Fire Services Review (FSR) process is to evaluate the status of the Fogo Island Fire Department (FIFD) in relation to current operations and fire protection levels provided by the fire department. The assessment also included a review of industry related standards, legislation and best practices to identify what has been accomplished and what still needs to be addressed.

To properly conduct a FSR, a review of past and present services supplied is required, along with assessing the success of the delivery of those services to the community. Once this baseline review has been completed, the next step is to look at anticipated future growth of the community and how this might affect service demands and expectations. The final step is the FSR and its gap analysis, which is accomplished by comparing the initial baseline findings with anticipated future expectations.

Therefore, the overall goal of the FSR is to offer guidance to the department in the form of recommendations that will give direction in relation to present and future community and fire service needs.

Review Process and Scope

Emergency Management and Training Inc. (EMT) has based its review process on the Town’s initial Request for Proposal (RFP) along with information from the response document submitted by EMT.

Within the initial RFP, there were seven specific areas that were to be reviewed by utilizing best practices, current industry standards, and applicable legislation as the foundation for all work undertaken. EMT also incorporated both quantitative and qualitative research methodologies to develop a strong understanding of current and future needs and circumstances of the community, as well as customer service expectations of the public.

As noted in the Town’s RFP, the review was to include, but not be limited to, the development of a fire service plan that will assess the current and future needs of fire protection and emergency services within Town limits. The report takes into consideration current Canadian national standards and practices including NFPA and any other provincial standards or requirements that are in place at the time the review is conducted.

The plan is to include (but is not limited to) the following;

1. Assessment of the current operation and service investigation including review of any reports and or other studies as prepared by the Town, etc.
2. Examine the current fire protection provisions, including service levels currently provided, examine current response capacity, examine response time based on NFPA Standards, staffing levels, training programs and capabilities, existing equipment adequacy, fire hall adequacy and suitability (including but not limited to adequacy of the location and building condition).

3. Review the current fire protection provisions, provide a base line for the existing service provisions, which can then be assessed and rated for adequacy and suitability, as it exists now.

4. Prepare background information (vision, mission, community description and their risks, history of fire loss, tasks assigned to the Fire Department and their capabilities), data analysis, recommendations, alternatives, and financial projections.

5. Examines future needs based on development plans and projected growth. Provide recommendations to make improvements or changes to the service currently provided, based upon the changing demographics within the community and surrounding area. All recommendations should include future planning and assess all future needs.

6. Conduct a Risk Assessment and gathering risk reduction strategies.


To ensure an all-inclusive review was accomplished, the process included meetings and survey with the chief fire officers and volunteer firefighters. Meetings with the Chief Administrative Officer, Mayor, and Council were also completed to ensure input from all levels of the Town and Fire Department.

Along with the interviews, both internal and external surveys were conducted to seek input from the firefighters and members of the community. All the input received was collated and incorporated into this FSR document. Based on input received, the consulting team was able to complete a thorough review identifying efficiencies and highlighting areas requiring improvement within the FIFD.

Performance Measures and Standards

This FSR review 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 Service Act (for Newfoundland and Labrador)
- The National Fire Protection Association (NFPA) standards:
  - 1201 – standard for providing of fire and emergency services to the public
  - 1221 – standard for communications/dispatching
  - 1500 – standard for occupational safety and health program
  - 1561 – standard for emergency services incident management system
- 1581 – standard for selection, care and maintenance of protective clothing
- 1720 - standards for volunteer fire departments

- General excerpts have been utilized from the Ontario Office of the Fire Marshal and Emergency Management’s (OFMEM) Integrated Risk Management program, as it provides a foundation for building a fire risk management program, and the

- Fire Underwriters Survey

As a result of the review process, EMT is submitting a total of 27 recommendations that can be implemented in whole or in part by the Town as it sees fit. These recommendations have time and cost related estimates associated with them as noted in the recommendations chart located in Section 8 of this document.

These recommendations (presented by EMT) form the basis of an overall risk assessment of the Community and the FIFD. By incorporating these recommendations, the Fire Chief will be able to address many of the operational issues and community challenges identified within this document.

**Project Consultants**

Although several staff at Emergency Management and Training were involved in the collaboration and completion of this plan, the overall review was conducted by:

- Darryl Culley, President, Emergency Management and Training Inc.
- Lyle Quan, Fire & Emergency Services Consultant

Together, Darryl and Lyle have amassed a considerable amount of experience in all areas of fire and emergency services program development, review, and training. The EMT team has worked on projects that range from fire service reviews, creation of strategic and Fire Service Reviews and development of emergency response programs for clients.
Section 1:
Community and Fire Department Overview

1.1 Current Fire Protection Provisions – Governance and Administration
1.2 Response Time and Capability Evaluation
1.3 Industry Standards and Legislation
Section 1: Community and Fire Department Overview

As previously noted, the Town of Fogo Island is an island community, consisting of 10 communities: Stag Harbour, Little Seldom, Seldom, Cape Cove, Tilting, Joe Batt’s Arm, Barr’d Islands, Fogo, Deep Bay and Island Harbour. The Town of Fogo Island was officially created on March 1st, 2011 by the amalgamation of four exiting Towns (of Fogo, Joe Batt's Arm-Barr’d Islands-Shoal Bay, Seldom-Little Seldom, and Tilting) and one Regional Council. The island has a population of approximately 2,400 permanent residents. The main employer is primarily the fishing industry that is concentrated around the perimeter of the Island. During the summer months, it is a popular place for tourism.

FIGURE 1: Fogo Island Fire

Map provided by the Shorefast Foundation
The Fogo Island Fire Department presently consists of a dedicated group of volunteer firefighters that work out of six fire stations located in: Stag Harbour, Seldom-Little Seldom, Tilting, Joe Batt’s Arm, Fogo, and Island Harbour. There is a fire station located in Deep Bay, but it is not presently operational.

FIGURE 2: Location of the Fogo Island Fire Stations

Note: Fire station locations are approximate only to demonstrate where the stations exist in relation to the Island’s geography.

Note: The Deep Bay fire station is not an active facility at the time of the site visit.

The Fogo Island fire stations are set up in the centres of each community’s main population. Based on this set up, there is the perception that the stations are well situated to meet the emergency response needs of the community. However, based on the level of call volumes and the cost of sustaining each fire station and its equipment, options do exist to create a more streamlined fire department. These options will be discussed more within this document.

When evaluating fire station locations, the National Fire Protection Association (NFPA) recommends that, due to the rapid spread of fire within a structure, municipalities should
endeavour to place its fire stations in such a manner that allows for as great a level of coverage as possible to the community in relation to response times. Based on this noted NFPA recommendation, there is the perception that the Fogo Island fire stations are well situated timewise. However, there is more to consider in relation to fire station placement; such as availability of volunteer firefighters (and the number of volunteer firefighters that respond), and the equipment available to them to create an effective response force for a given situation. Consideration must also be given to the location and availability of a fire department’s vehicles and equipment. For example, not all of the FIFD stations have pumper trucks, which means that these stations without pumper trucks must rely on support from other stations in the case of a structure or other large fire.

There is also the financial viability of the fire station and its proximity to calls. For example, if a fire station is in the centre of a community, but the bulk of calls are in an outlying area, is the station in an ideal location?

Options such as consolidating services and equipment into fewer fire stations may create a better equipped fire department that is more able to effectively and efficiently meet the overall needs of the consolidated community of Fogo Island.

1.1 Current Fire Protection Provisions – Fire Department Governance and Administration

The present governance structure of the Town has the Volunteer Fire Chief/Coordinator (FCC) reporting to the Town’s CAO in a Council-Manager style of government. The Fire Chief/Coordinator serves as the head of the Fire Department.

The FCC with the assistance of the Station Chiefs direct the overall operations of the department, providing a joint style of leadership to ensure that the department and its stations are delivering the required services to the community. The FCC with the input from the Station Chiefs is responsible for the administration functions of the fire department including budget preparation, and overseeing any fire prevention/public education responsibilities and emergency management.

During the interviews, it was not clear as to the formal goals and expectations of the fire department in relation to present official governance documents. Further, there was an impression that each station chief appears to operate independently, not as a single fire service coordinating service across the island. As such, it is recommended that the FCC and Station Chiefs review any formal Town documents and related by-laws that govern the operation of the fire department and based on this review update the existing document with the assistance of the National Fire Protection Association 1201 Standard for “Providing Fire and Emergency Services to the Public”, utilizing and incorporating it as deemed necessary.
The organizational chart illustrated in Figure #3 reflects the general reporting structure within the Fire Department and that of the FCC to the CAO and Town Council. This reporting arrangement allows for ample involvement by the FCC (and Station Chiefs) within the senior management structure of the Town and also allows for a high-level of administrative oversight of the day-to-day operations of the Department. It is important that the organizational chart be adhered to by the Station Chiefs.

**FIGURE 3: Fire Department Organizational Chart**
### Section 1 Recommendations – Community and Fire Department Overview

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<thead>
<tr>
<th>Rec #</th>
<th>Recommendation</th>
<th>Estimated Costs</th>
<th>Suggested Timeline</th>
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<tbody>
<tr>
<td>1</td>
<td>It is recommended that the FCC and Station Chiefs review any formal Town documents and related by-laws that govern the operation of the fire department and based on this review update the existing document with the assistance of the National Fire Protection Association 1201 Standard for “Providing Fire and Emergency Services to the Public”, utilizing and incorporating it as deemed necessary.</td>
<td>There is no initial cost associated with this recommendation</td>
<td>Short-term (1-3 years) and ongoing</td>
</tr>
</tbody>
</table>
Section 2: Planning and Surveys

2.1 Planning and Assessment
2.2 Industry Best Practices
2.3 Stakeholder Surveys
Section 2: Planning

Planning is a key function of any organization and should be done with a focus on the present needs of the community, coupled with its future growth and how this will affect the service demands on a fire department. The Town of Fogo Island has clearly demonstrated a proactive approach towards it, planning initiatives through the development of this fire service review. By accomplishing the review, the Town is ensuring that the fire and emergency service needs for the community, along with planning for future training and equipment requirements, are being addressed.

2.1 Planning and Assessment Based on Community Growth

When evaluating a community’s risk profile, there are many points that must be considered, including population and demographics. Although there is no definite correlation between population growth and anticipated call volumes, it can safely be assumed that as population increases and ages, call volumes will increase. The type of calls need to tracked and assessed to identify the major priorities, what (if anything) is increasing and why. This will help the fire department in its planning for equipment, staffing and training needs.

As such, the FIFD needs to identify where any growth is expected to occur (within the community), and what type of growth (residential, commercial, industrial) is planned. Would this growth create the expansion of the Town’s road network?

All of this aforementioned information must be kept in mind when planning for future response needs for Fogo Island, such as a possible increase in medical related calls.

2.1.1 Three Lines of Defence

In keeping with forecasting community growth, related trends, and future needs, fire services throughout North America have identified and embraced the concept of “Three Lines of Defence” to be utilized.

These three lines consist of:

1. **Education** – Fire safety education is the key to mitigating fire and life hazards before they start, and educating the community on smoke detectors and home escape plans. With the growth of the community, or even a change in the demographics, such as an increase in aging or perhaps even a younger population. Therefore, how will FIFD continue to meet the fire safety educational needs of the community?
2. **Inspections and Enforcement** – If the public education program does not prove effective, then the next step is for the fire department to enforce fire safety requirements through inspections and possible charges. Inspections and related enforcement initiatives are an ongoing program to ensure compliance with fire code regulations.

3. **Emergency Response** – If the first two lines of defence fail for whatever reason, the community, through its fire department, should be prepared to respond in an efficient and effective manner to put the fire out and/or mitigate the emergency itself.

Based on these three lines of defence, the following strengths, weaknesses, opportunities and threats were identified:

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

This entire FSR document is the result of conducting a SWOT (strengths, weaknesses, opportunities and threats/challenges) analysis on the community, which has resulted in a list of recommendations for the Town’s Council, CAO and Chief Fire Officers to consider and implement.

The strengths and weaknesses portion of a SWOT analysis are based on an internal review that identifies areas of strength along with recognizing areas for improvement. Whereas, the opportunities and threats portion are related to external influences and how these influences affect the operations and response capabilities of a fire department. As a starting point, this review has identified the following key SWOT themes:

#### Strengths

All responses are accomplished through a group of dedicated volunteer firefighters (VFF’s). In meetings with the volunteer staff, it was clear that their focus is on meeting the needs of the community.

#### Weaknesses

As already noted, the FIFD does have a compliment of VFFs that can respond to calls, but due to other commitments, such as their full-time jobs and family, there is no guarantee of the number of volunteers that will be available to respond, as needed for the situation. As call volumes increase, this dependence on the VFFs could prove to be challenging. However, this cannot be proved or disproved without tracking the of calls and response numbers (of VFFs) to ensure sufficient resources for each call.

As such, it is recommended that the Fire Chief track not only calls volumes but also response times and number of VFFs that respond to the calls.
During meetings with the Fire Chief and District Chief Officers, it was noted that no recent community risk assessment (CRA) document has been completed and presented to Council. A community risk assessment is an ongoing process; subsequently, the CRA document is a living document that forms the basis for what services should be offered to the community (based on the identified risks).

Although this FSR document will give the FIFD a starting place for a community risk assessment, it is still the duty of the Fire Chief to ensure that the CRA is an ongoing process to ensure a level of continuous improvement for the fire department.

As noted above, there was an impression that each station chief appears to operate independently, not as a single fire service coordinating service across the island. There needs to be a focus on working as a single fire organization utilizing the available resources to ensure the most effective fire service in areas of response, training, fire prevention, operational costs, apparatus/equipment, and capital budget.

**Opportunities**

The FIFD has a great resource in its volunteer firefighters. Unlike many other communities who have a very transient group of volunteers. The FIFD’s volunteers have roots in the community along with a solid understanding of what hazards exist and how they can be mitigated.

**Threats/Challenges**

Major emergencies that can exceed the available volunteer firefighter staffing and equipment resources must be considered as the community’s population continues to grow and age (both in the residential and commercial sectors). The best way to deal with such challenges is to plan ahead by using related industry standards and best practices as the department’s baseline for service needs. Another option is to look at other comparable communities and how they have dealt with community growth.

It should be noted that although comparing similar communities (both within Newfoundland and throughout Canada) for comparisons in population and fire services is not necessarily a straightforward process due to the individualization of each community. No two communities are identical and each have their own unique geography, population, road networks, and projected growth rates. However, by reaching out to comparable communities for input, the FIFD can obtain options that they may be able to incorporate to meet the needs of the community and its firefighters.

Fogo Island is unique (from many other communities) in that it is truly an island with no opportunity for mutual aid and support from neighbouring communities. As such, Fogo Island must be able to deal with any emergency that arises on the island. Or at the very least have an option that includes a reliable back up for situations that may exceed the FIFD’s resources. This might mean
waiting for operational support for as much as two hours due to the reliance on the island ferry system to deliver more emergency resources from the mainland.

### 2.2 Industry Best Practices

#### 2.2.1 National Fire Protection Association – 1201, 1720 and 1221

**NFPA Standard 1201 – Standard for Providing Fire and Emergency Services to the Public**

In Section 4.3.5 (of NFPA 1201), the standard notes that the Fire and Emergency Services Organization (FESO) shall provide customer service-oriented programs and procedures to accomplish the following:

1. Prevent fire, injuries and deaths from emergencies and disasters
2. Mitigate fire, injuries, deaths, property damage, and environmental damage from emergencies and disasters
3. Recover from fires, emergencies and disasters
4. Protect critical infrastructure
5. Sustain economic viability
6. Protect cultural resources

To accomplish this, a FESO must ensure open and timely communications with the CAO and governing body (Council); create a master plan for the organization; and ensure there are mutual aid and automatic aid programs in place, along with an asset control system and maintenance program.

To provide a fire department clearer focus on what the ultimate goals for emergency response criteria are, the National Fire Protection Association (NFPA) recommends that response times should be used as a primary performance measure in fire departments. This is where NFPA 1720, which refers to the goals and expectations for volunteer fire departments needs to be considered.

**NFPA 1720 – Volunteer Fire Departments**

In relation to volunteer and composite departments, NFPA 1720 chapter 4 notes the following:

4.3.1: “the fire department shall identify minimum staffing requirements to ensure that a sufficient number of members are available to operate safely and effectively.”

4.3.2: “based on the previous section, to accomplish this, the fire department should endeavour to meet the following response standards (based on responding to a 2000 sq. ft. single family dwelling).

   - *In Urban areas (population greater than 1000 per square mile), there should be a minimum response of 15 staff within 9 minutes, 80 percent of the time*
In Suburban areas (population of 500 – 1000 per square mile), there should be a minimum response of 10 staff within 10 minutes, 80 percent of the time.

In Rural areas (population of less than 500 per square mile), there should be a minimum response of 6 staff within 14 minutes, 80 percent of the time.

Based on a population of 2,395 and an area of 237 sq. km (92 sq. miles) Fogo Island has an overall population density of less than 26 people per square mile (10 per square km). Therefore, Fogo Island meets the Rural criteria of 6 staff within 14 minutes 80% of the time. By adopting a 6 staff in 14 minutes response criteria as a benchmark to measure response capabilities, the FIFD will have a set of goals to meet and maintain.

As cost effective as volunteer fire departments are, one of the challenges with a volunteer fire department is that the VFFs also have other jobs, educational, and/or family commitments. This means that the VFFs may not be able to leave work or other commitments to respond to a page out. These situations can diminish the effective and efficient response of the VFFs, thus posing a challenge for communities like Fogo Island. Hence, the need for consistent and ongoing reviews of call volumes and related response numbers to identify if a response issue is present.

If such an issue is identified, then consideration needs to be given to two options; the first is an increase in the VFF roster to offer more volunteers to draw from; the second option is to consider a small contingent of full-time firefighters to ensure a minimum response number (of at least two firefighters and an officer). Three personnel on scene would allow for enough staff to deal with many responses, such as medical, motor vehicle collisions, a defensive fire attack – until more resources arrive on scene. At this time EMT is not recommending that full-time staffing be implemented; only that a full evaluation of response times and level of response expectations be tracked and evaluated. This evaluation would be conducted to ensure that response times and staffing levels are meeting the recommended standard as noted in NFPA 1720.

2.3 Community and Staff Surveys

Surveys were conducted to receive feedback from both internal and external stakeholders. These surveys are an important part of conducting a review of the organization and in offering some future focus based on firefighter/community input.

2.3.1 Internal Surveys

During the FSR process, feedback was gathered from internal staff, which included both the full-time and volunteer firefighters. The questions that were asked of staff were designed to be of a general nature so as not to guide the respondents towards a given reply.

In general, the internal staff shared the following key points as the top services that should be offered to the community:
• Fire and emergency response to the community
• Technical rescue programs such as auto extrication, confined space, and hazardous materials scene management
• Medical assistance
• Fire prevention/public education.

For future expectations and recommendations, internal staff noted:
• The need for better, up to date equipment
• Better training, along with a facility to do the training
• Ensure that equipment is kept in a ready status by an ongoing equipment replacement program

2.3.2 External Stakeholder Surveys

During the FSR process, feedback was also gathered from the community in the form of an online survey.

The top three services preferred by the external stakeholders are:
• Firefighting services
• Response to motor vehicle collisions and rescues
• Emergency preparedness

The following identify the top three priorities noted by the external stakeholders:
• The speed in which the Fire Department responds if there is an emergency
• How well the Fire Department works with other agencies to provide wider community safety services
• Continued and relevant training by attending at resident’s homes to offer safety tips

Overall, both internal and external input (and general comments received) noted a strong level of confidence in the fire department and the management of the service. It was also noted in several replies that the consolidation of the six fire stations into a more condensed and better equipped set of stations would be seen as a positive move.

All the previously noted input has assisted EMT in its review of the fire department. As such, EMT would like to thank all of those who participated in answering the surveys and for attending the public meeting.
### Section 2 Recommendations – Planning and Surveys

<table>
<thead>
<tr>
<th>Rec #</th>
<th>Recommendation</th>
<th>Estimated Costs</th>
<th>Suggested Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>It is recommended that the FCC track and report on the number of members responding and response time to each fire call or other runs made. This review and tracking of responses will identify any issues that might exist in relation to numbers responding or even time of day that may present a challenge for responses.</td>
<td>No cost associated with this recommendation</td>
<td>Short-term (1-3 years) and ongoing</td>
</tr>
<tr>
<td>3</td>
<td>It is recommended that the type of calls responded to be tracked and assessed to identify major priorities, what (if anything) is increasing and why. This will help the fire department in its planning for equipment, staffing and training needs.</td>
<td>There is no initial cost associated with this recommendation</td>
<td>Short-term (1-3 years) and ongoing</td>
</tr>
<tr>
<td>4</td>
<td>It is recommended that the FIFD adopted the use of the response time measurement based on response any times obtained through historical data.</td>
<td>No cost associated with this recommendation</td>
<td>Mid-term (4-6 years) and ongoing. This will allow the fire department to gather at least 3 years of response time data.</td>
</tr>
</tbody>
</table>
Section 3: Programs and Risk Assessment

3.1 Risk Management
3.2 Fire Underwriters Survey
3.3 Training and Education
3.4 Fire Suppression/Emergency Response
3.5 Emergency Preparedness Program
3.6 Emergency Communications
Section 3: Programs and Risk Management

For this Fire Service Review, seven separate programs, each of which is integral to the mission and operations of the Fogo Island Fire Department, are discussed in this section:

- Risk Management
- Fire Prevention
- Fire Underwriters Survey (FUS) Review
- Training and Education
- Fire Suppression/Emergency Response
- Emergency Preparedness Program

3.1 Risk Management

Section 4.2 of NFPA 1500 on Safety and Health Program notes that a fire department shall develop and adopt a comprehensive written risk management plan. The risk management plan shall at least cover risks associated with the following:

1. Administration
2. Facilities
3. Training
4. Vehicle operations, both emergency and non-emergency
5. Protective clothing and equipment
6. Operations at emergency incidents
7. Operations at non-emergency incidents
8. Other related activities

Administration

Presently all administrative work is the responsibility of the volunteer Fire Chief. Being that there is not actual administrative section or facilities for the Fire Chief, no risks were identified by EMT during its review of this section.

Facilities

A general review of station facilities and set up was conducted by EMT. This was a visual inspection only and did not include an engineering assessment or behind the walls assessment of any sort. The findings for each fire station is noted in Section 4 – Physical Resources.
Training

NFPA standards note that a fire department shall adopt or develop training and education curriculums that meet the minimum requirements based on the member’s assigned functions, and that members shall practice assigned skill sets on a regular basis, no less than annually.

The fire department shall also develop and maintain a system to monitor and measure training progress and activities of its members. To accomplish this, the fire department shall provide an annual skill check to verify minimum professional qualifications of its members.

During EMT’s review of this area, there appeared to be a lack of formal documentation relating to scheduled training programs and/or evaluations. The lack of such program or documentation creates a liability for the Town and senior fire officers. As such, it is recommended that these programs be put into place.

Vehicle Operations

Policies and procedures must be in place in relation to vehicle inspection procedures, operations and equipment checks.

Fire apparatus shall be operated only by members who have successfully completed an approved driver training program. The fire department shall be responsible for providing driver training instruction that complies with NFPA 1451 Standard for Fire Service Vehicle Operations Training Program.

During our review of this area, there appeared to be a lack of formal documentation relating to vehicle inspection records and driver training programs and/or evaluations. As such, it is recommended that both of these programs be put into place.

Protective Clothing

The fire department shall provide for care and maintenance of protective ensembles, ensemble elements, and station/work uniforms.

Protective clothing is to be stored in a manner that it is safe from contamination from vehicle exhaust fumes and ultraviolet rays (from the sun), which can compromise the integrity of the firefighters’ gear.

During EMT’s review of the fire stations, it was noted that no diesel exhaust system exists in the fire stations and that the firefighters’ gear is stored on hangers in the apparatus bays the stations. Therefore, it is recommended that the department install an approved diesel exhaust system to protect the gear from contamination. And that any gear that is at risk of daily exposure of ultraviolet rays and/or diesel fumes be relocated to reduce this ongoing exposure when not being worn by the
Operations at Incidents

An incident management system that meets the related NFPA 1561 standard shall be established with written standard operating procedures applying to all members involved in emergency operations.

Along with an incident management system, the fire department shall establish standard operating procedures for a personnel accountability system that is in accordance with NFPA 1561 Standard on Emergency Services Incident Management System. And it shall be the responsibility of all members operating at an emergency incident to actively participate in the personnel accountability system.

Finally, the fire department shall provide personnel for the rescue of members operating at emergency incidents. This means that in the initial stages of an incident where only one crew is operation in the hazardous area at a working structural fire, two members working as a crew in the hazardous area and two standby member present outside this hazardous area available for assistance or rescue at emergency operations where entry into the danger area is required.

Based on the review of the departments’ IMS and Accountability programs; it is recommended that both programs be formally adopted. This will entail the creation of related training programs and operating guidelines.

Community Building/Infrastructure Assessments

The concept of a risk management program can be as focused as conducting a “building by building” assessment, but its overall goal is intended to be a holistic approach that is meant to combine all fire department efforts in relation to evaluating:

- Fire prevention and education initiatives
- Fire station location and ability to respond in an efficient and effective manner
- Identification of hazardous situations/locations within the community
- Training and equipping of the firefighters to execute their duties in a safe and efficient manner

As such, the risk management approach is a combination of all facets of the fire service that is meant to combine a review of building stock, fire safety and prevention related issues to be addressed, ability to effectively and efficiently respond to emergencies and how well equipped and trained the firefighters are to deal with emergencies within the community.

Conducting a review of every building on Fogo Island may not be practical due to present staffing levels. However, utilizing NFPA 1730 definitions of risk categories may guide the Fire Chief and
Council in deciding on the service level within the community. Council should determine (with input from the Fire Chief) an acceptable level of risk to manage within the community based on its needs, balanced with the ability to deliver the services.

NFPA 1730 defines the risks in three categories and provides examples for each. These risk categories are:

**High-Risk Occupancy** – An occupancy that has a history of high frequency of fires, high potential for loss of life or economic loss, or that has a low or moderate history of fire or loss of life, but the occupants have a high dependency on the built-in fire protection features or staff to assist in evacuation during a fire or another emergency.

- Examples of high-risk occupancies are multi-unit residential buildings, hotels, dormitories, lodging and rooming, assembly, child care, detention, educational, and health care.

**Moderate-Risk Occupancy** – An occupancy that has a history of moderate frequency of fires or a moderate potential for loss of life or economic loss.

- Examples of moderate-risk occupancies are ambulatory health care, and industrial.

**Low-Risk** – An occupancy that has a history of low frequency of fires and minimal potential for loss of life or economic loss.

- Examples of low-risk occupancies are storage, mercantile, and business.

**Current Condition**

As previously noted in Section 3.1, based on EMT’s review; FIFD has not completed a recent community risk assessment. However, based on EMT’s review of the community and interviews with the Fire Chief, CAO, Council and firefighters, the issues facing the community are:

- Fogo Island does not have the ability to rely on mutual aid from other community fire departments. As such, it must ensure that the FIFD is capable to deal with most if not all of the hazards that exist on the island.

- A more formalized training program needs to be implemented to ensure that the volunteers have the training required to do their jobs in an efficient and effective manner.

- More in-depth tracking of inspections needs to be conducted to evaluate if the present training program and related staffing levels are adequate for this program or if more resources are required.
Utilizing the risk management process, in conjunction with the guidance from NFPA 1500 and 1730, will help to provide a more fulsome picture of the resources, time, and tools required to keep the fire risk in the community to a manageable level.

To determine the staffing needs, NFPA 1730 outlines a five-step process within Annex “C” of the standard. This sample staffing exercise is not part of the requirements of the standard, but forms a guide for informational purposes. It is important to restate that it is Council that sets the level of service within the community. This level of service must be based off the local needs and circumstances.

*Note: Annex C is not a part of the requirements of the NFPA 1730 document, but is included for informational purposes only.*

The five-step process involves a review of the following items:

**Step 1: Scope of Service, Duties, and Desired Outputs**

Identify the services and duties that are performed within the scope of the organization. Outputs should be specific, measurable, reproducible, and time-limited. Among the elements can be the following:

- Administration
- Data collection, analysis
- Delivery
- Authority/responsibility
- Roles and responsibilities
- Local variables
- Budgetary considerations
- Impact of risk assessment

**Step 2: Time Demand**

Using the worksheets in Table C.2.2(a) through Table C.2.2(d) of Annex C, quantify the time necessary to develop, deliver, and evaluate the various services and duties identified in Step 1, considering the following:

- Local nuances
- Resources that affect personnel needs

**Plan Review** - Refer to Plan Review Services Table A.7.9.2 of the standard to determine Time Demand.
Step 3: Required Personnel Hours

Based on Step 2 and historical performance data, convert the demand for services to annual personnel hours required for each program [see Table C.2.3(a) through Table C.2.3(e)]. Add any necessary and identifiable time not already included in the total performance data, including the following:

- Development/preparation
- Service
- Evaluation
- Commute
- Prioritization

Step 4: Personnel Availability and Adjustment Factor

Average personnel availability should be calculated, considering the following:

- Holiday
- Jury duty
- Military leave
- Annual leave/vacation
- Training
- Sick leave
- Fatigue/delays/other

*Example:* Average personnel availability is calculated for holiday, annual, and sick leave per personnel member (see Table C.2.4).

Step 5: Calculate Total Personnel Required

Division of the unassigned personnel hours by the adjustment factor will determine the amount of personnel (persons/year) required. Any fractional values can be rounded up or down to the next integer value. Rounding up provides potential reserve capability; rounding down means potential overtime or assignment of additional services conducted by personnel (which can include those from other divisions within the entity, community, private companies, or volunteer organizations).

Correct calculations based on the following:

- Budgetary validation
- Rounding up/down
• Determining reserve capability
• Impact of non-personnel resources (materials, equipment, vehicles) on personnel

More information on this staffing equation can be found within the NFPA 1730 standard. The Fire Chief with the assistance of the District Chief Officers should assess the previous five steps and evaluate their present level of activity and the future goals of the fire department and its fire prevention program.

To assist in this process, the Fire Chief should closely track the actual time spent on each of the fire prevention activities (ranging from site plan reviews, routine inspections, licensing, complaints, and requests, to name a few). Further, reporting should also clearly identify the number of public education events including the numbers of adults and children reached at each event. By identifying the time spent on each project and collating this into baseline (approximate) times, the Fire Prevention Division can use those hours spent as a reference figure in applying future initiatives.

**Current Conditions Based on Information Received from FIFD**

With the potential of flashover in a residence in two to three minutes, fire poses a great danger well before any fire service can arrive on a call for assistance. The actions of the residents are what primarily makes a difference in their safety. Therefore, fire prevention programs are key in reducing injuries and deaths to fire.

It is of vital importance that the fire department have a comprehensive fire prevention program. This appears to in need of further development and should be added to the priority list of projects.

To aid in the development of a comprehensive fire prevention program we have included Appendix G as a guideline.

Presently, the FIFD does not have a specific person trained and certified to conduct fire prevention inspections and related programs. It must be noted that fire prevention staff are duty bound to conduct inspection upon request or complaint. However, this requirement is the minimum level of inspections and should be supplemented with a much more progressive fire prevention and public education program. As such, it is advisable that the FIFD develop an annual plan for the amount of inspections and fire prevention related activities that the department would like to complete each year. This type of goal setting will identify required resources and also confirm completion success rates.

Another responsibility of most Fire Prevention Divisions is to complete a Community Risk Assessment (CRA) on their community. FIFD was not able to supply EMT with a recent CRA. To keep on top of any concerns, it is recommended that Fogo Island Fire Department develop a CRA (community risk assessment) for 2018 to ensure that an inventory of any risk occupancies be maintained and regularly updated as new information becomes available (either from other Town departments or through actions of the Suppression Division). This should include properties such as
multi-unit residential, industrial, and commercial properties of concern and public buildings. This also assists the Fire Chief in identifying what training and equipment is required by the fire department to ensure it can offer the noted services in an efficient and effective manner.

Along with the information noted in the previous paragraphs, the utilization of existing resources is a cost-effective option for the promotion of fire prevention and public education programs. To accomplish this, some fire departments have trained most, if not all of their fire suppression staff to be certified to conduct fire prevention/public educations related inspections and programs. This not only brings more resources to the table, it also enhances the level of fire safety awareness by those trained staff.

As such, the FIFD should move towards the training and certification of its fire officers in the areas of fire prevention and public education trained and certified to at least:

- NFPA 1031 – Fire Inspector I, and
- NFPA 1035 – Fire and Life Safety Educator I

Next Steps

The continued utilization of a risk management process will provide an understanding of the community’s fire risks that can be extrapolated to identify the hazards in given areas. This process will aid in the design and formation of the fire prevention inspection and education programs.

A thorough risk assessment can also avoid invalid comparisons between a community’s fire department and others. A municipality with a similar population may have very different fire risks, and therefore very different fire protection needs. A thorough risk assessment will ensure that such comparisons are valid. By providing a valid basis for comparison, a comprehensive risk assessment can also provide confidence that innovations introduced elsewhere can be successfully applied in your municipality.

Succession Planning and Training

Succession planning is a factor that needs to be addressed for all senior (chief officers) and technical positions such as fire prevention and training. As such, a plan should be put in place to promote succession planning to prepare for future retirements or community growth related needs.

EMT concludes that the present number of trained/certified volunteer staff assigned to the fire prevention activities is not appropriate for the size of the municipality and the associated tasks required. The facilities and equipment provided to ensure the delivery of a proper fire prevention/education program needs to be improved so that the fire department is meeting the minimum level of inspection service – complaint and request for inspections.
3.2 Fire Underwriters Survey (FUS) Review

The Fire Underwriters Survey 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 the Fire Underwriters Survey represent approximately 85 percent of the private sector property and casualty insurers in Canada. As such, ensuring that a community (and its fire service) is achieving high ratings and related certifications with the FUS can result in insurance related savings by residents of the community.

Fire Underwriters Survey 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. The results of these surveys are used to establish a Public Fire Protection Classification (PFPC) for each community. While the Fire Underwriters Survey is not involved in the actual determination of the insurance rate, the information provided through the Fire Insurance Grading Index is a key factor used by the insurance companies in the development of commercial property insurance rates. The PFPC is also used by underwriters to determine the capacity 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 occur. This is done through 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 Fire Underwriters Survey also uses PFPC information to develop the Dwelling Protection Grade (DPG), which is utilized by Personal Lines insurers in determining property insurance rates for detached dwellings (with not more than two dwelling units). The Dwelling Protection Grade is a measure of the ability of the protective facilities of a community to prevent and control the structure fires in detached dwellings 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, and underwriting capacities may increase. Every insurance company has its own formula for calculating their 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.
The FIFD was not able to produce any records on file in relation to having a FUS survey completed. As such, Fogo Island should consider having a FUS evaluation of the community’s fire protection services conducted. This will also offer more feedback and options for recommended improvements to the community’s fire services.

### 3.3 Training and Education

A fire service is only capable of providing effective levels of protection to its community if it is kept properly trained to deliver these services. Firefighters must be prepared to apply a diverse and demanding set of different skills to meet the needs of a modern fire service. Whether assigned to fire prevention or fire suppression, all staff must have the knowledge and skills necessary to provide reliable fire protection.

The demands placed on a fire service to ensure the proper training of its staff continues to be more challenging and more complex due to the demands for services (and types of services) placed on a department. Fire prevention staff are expected to be fully conversant in both fire and building codes and all related standards and guidelines as well as being acquainted with effective education and marketing practices. Firefighters must be able to maintain their knowledge and hone their skills in effective firefighting and in other related emergency responses that constantly become more detailed in their requirements, such as special rescues and vehicle extrication, etc. The staff managing and administering the fire service must understand human resources management, budgeting, municipal governance and effective program management. This is a very wide spectrum of required skills and knowledge.

Training for the Fogo Island is presently overseen by the each of the District Chiefs. The training focus is mainly focused on the fire suppression division. Whereas, training for personnel in relation to administrative (records management and report writing) and fire prevention duties is not formally identified or documented. Conducting a formal review of programs delivered by the department will assist in accomplishing the following:

- What level of service is being provided,
- Based on levels of service provided, what training is required to ensure personnel are properly trained to do their jobs,
- What are the related industry standards and/or legislation for these training programs, and
- How can this training be delivered based on local needs and circumstances?

Being that the Fire Chief is also responsible for a variety of tasks, which includes coordination of the Municipality’s Emergency Management Program, there are significant restrictions on the time available to address the department’s training needs. This would also explain why some gaps were noted in relation to the department’s training programs and assessment of levels of completion. As such, there needs to be a more formally recognized annual training plan for all department staff to ensure that training goals and expectations are identified, evaluated and adjusted to ensure that all
staff are receiving required training (on an annual basis). Consideration should also be given to greater utilization of available computer technology, combined with hands on training to utilize staff time as effectively as possible.

Before a formalized training and evaluation program can be developed, a fire department must first establish appropriate levels of knowledge and skills required for each position based on industry standards. Even though the Chief Officers are working diligently to ensure that all staff are receiving required training for their assigned position(s), there still is a lack of formal training records to substantiate what is being accomplished and why. As such, it is recommended that a review of required skills be conducted. Once this review is completed, a more defined training and records retention program can be implemented.

To effectively meet these ongoing challenges, FIFD would be well served by creating a Training Officer’s position to coordinate training at all stations. This would not only ensure a greater focus on the development of training programs, but provide a more accurate evaluation and tracking of them. This position could also be incorporated first as a part-time position and, as needs dictate, be expanded into a full-time position.

Operating Guidelines

A key component to any training program is the development and enforcement of internal operating guidelines (OGs). These guidelines ensure standardized operations, which can assist in providing effective and safe service delivery through the management of how a program and/or service is to be delivered. The FIFD has some OGs in place but much more work is needed in relation the development of OG’s for many of its operations, including training activities. Therefore, the number of OG’s should be expanded to ensure that all tasks, routine operations and programs are provided with up-to-date OGs.

The OGs must include an Incident Command System (ICS) and an accountability system allows the officers to maintain control and ensure the safety of all firefighters at an incident.

Even though several recommendations have been made in relation to training and development of department operating guidelines, it has been reported that the FIFD is working towards meeting the needs of anticipated training requirements, but more work is still needed to ensure that all fire department personnel are receiving the training needed.
3.4 Fire Suppression/Emergency Response

When considering the response times and related needs for a community, the fire response curve (FIG 4) presents the reader with a general understanding of how fire can grow within a structure over a short period of time. This curve is based on a basic, furnished room (in a home) and can vary greatly depending on the size of the room and the type of furnishings within it. Therefore, depending as well on many other additional factors, the rate of growth can be affected, which can increase the burn rate or ability to suppress the fire through fire control measures within the structure.

FIGURE 4: Fire Response/Propagation Curve

![Fire Response/Propagation Curve](image)

Based on fire growth as demonstrated in Figure 4 and the noted timelines presented in the fire curve chart, the overall goal of any fire department is to arrive at the scene of the fire and/or incident as quickly and as effectively as possible. If a fire truck arrives on scene in eight minutes or less, with a recommended crew of four or more firefighters, then there is increased opportunity to contain the fire by reducing further spread to the rest of the structure.

Recent studies by the National Institute of Standards and Technology (NIST), the National Fire Protection Association and Underwriters Laboratories, have identified that due to the construction materials used in a modern house, flashover in an average family home (a very dangerous situation...
due to extreme heat and flame) can occur in as little as three minutes. This is another reason why quick and efficient response to a structure fire is a key goal of any fire department and reinforces the importance of an effective fire prevention and education program.

When we look at the response time of a fire department, it is a function of various factors including, but not limited to:

- The distance between the fire department/station and response location
- The layout of the community
- Impediments such as weather, construction, traffic, 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
  - Assembly time includes dispatch time, turnout time to the fire station and response to the scene. Assembly time can vary greatly due to weather and road conditions, along with the time of day, as many volunteer firefighters are at their full-time jobs and cannot respond to calls during work hours.

It’s important to note that Fogo Island responds to more than just fires. For example, motor vehicle collisions can create a medical or fire emergency that also needs to be addressed immediately. Consequently, another reason to be as efficient and effective as possible in responding to calls for assistance.

Adequate staffing is also a consideration. For example, if the first arriving fire suppression team arrives with only three responders on board, then it is limited to the operations that it can successfully attempt. Based on NFPA related standard, no interior fire attack should be made by the firefighters until a minimum of three firefighters and one officer arrive on scene to make up the initial response team. This information is a valid reason for a Fire Chief to ensure that the department has an OG in place to confirm the level of firefighters required for an initial full crew response of four firefighters to such incidents, and that these response numbers are tracked to assist in identifying any operational concerns or gaps.

**Response Data**

One area of concern for EMT is the level and quality of response data obtained from the FIFD. We were unable to obtain data on the numbers of calls per station, types of calls, or dates of calls. A process needs to be established where call data is recorded, tracked and analysed.

Presently, the FIFD does not track response times or number of VFF’s responding to page outs. As such, it is strongly recommended that response times are tracked, which is the only means for a fire department to identify if its response times are improving or worsening.
As already noted, the Fogo Island Fire Department relies on their Fire Suppression Division to provide effective emergency response to fires and other public safety hazards. The FIFD provides a range of emergency response types, including reported structure fires, motor vehicle collisions, hazardous material incidents, rescues, carbon monoxide alarms and false alarms calls. These responses are done in coordination with their emergency response partners consisting of the police and emergency medical services.

Response Times

Response times for 2016, 2015 and 2014 were not available for comparison. This was one area noted that requires further work by the fire department.

Industry best practices note that a department should identify what their base line is through evaluation of response times based on three to five years of historical data. From that analysis, the FCC can identify if the department is falling within the expected 90th or 80th percentile recommendations. Or, at the very least, it can be identified what response time gap might exist.

For rural fire departments the 80th percentile criterion is the recommended practice that is endorsed by the National Fire Protection Association (NFPA) and the Commission on Fire Accreditation International (CFAI). This data is considered more accurate since it is evaluating the times based on 80 percent 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 14 minutes or less, meaning that only 20 percent of the time they are above that 14-minute mark
- as opposed to 5 out of 10 times the fire department arrives on scene in 14 minutes or less, meaning 50 percent of the time they are above the 14-minute mark
- travel time is the time tracked from when the fire vehicle has left the station until arrival at the incident location
- response time is the total time from receipt of call (on 9-1-1) to the time the fire vehicle arrives at the incident location

The NFPA along with the Commission on Fire Service Accreditation International both recommend that a fire department track its dispatch, drive times, and total response times in the 80th and 90th percentile format depending on the population density of the community. This format offers a more exact accounting of response times as opposed to assessing it on an average (50th percentile), which is less accurate in reflecting the actual effectiveness of a fire department’s ability to respond within a certain time.

It is recommended that the FIFD adopted the use of the NFPA response time measurement noted. This will allow the FIFD the ability to report to Town Council the level of response effectiveness the department maintains.
3.5 Emergency Preparedness Program

Providing an emergency preparedness program for a community is the responsibility of the Municipality. Most municipalities assign this task to their fire department, while others may designate this responsibility to another individual or division (within the organization). Aside from the major benefit of providing guidance during an emergency, developing the plan has other advantages. Comprehensive emergency management assists in identifying previously unrecognized hazardous conditions that could aggravate an emergency situation, thus allowing the municipality an opportunity to work towards preventing or mitigating a major emergency.

The planning process may bring to light deficiencies, such as the lack of resources (equipment, trained personnel, supplies), or items that can be rectified before an emergency occurs. In addition, an emergency plan promotes community awareness and shows the organization's commitment to the safety of those that live, work, and play in the community. The lack of an emergency plan could lead to severe losses such as multiple casualties, operational disruptions, and possible financial impacts beyond the municipality’s ability to mitigate.

Emergencies are inevitable, and preplanning is necessary. An urgent need for rapid decisions, shortage of time, lack of resources and trained personnel can lead to chaos during an emergency. Time and circumstances in an emergency mean that normal channels of authority and communication cannot be relied upon to function routinely. The stress of the situation can lead to poor judgment resulting in severe losses.

An emergency plan specifies procedures for handling sudden or unexpected situations. The objective is to be prepared to:

- Prevent fatalities and injuries
- Reduce damage to buildings, stock, and equipment
- Protect the environment and the community
- Accelerate the resumption of normal operations

Development of the plan begins with a Hazard Risk and Vulnerability Assessment (HRVA). The results of the study will show:

- How likely a situation is to occur
- What means are available to prevent or mitigate the situation
- What resources may be necessary for a given situation

From this analysis, appropriate emergency procedures can be established.
During interviews with the Chief Officers, it was noted that the Town’s Emergency Preparedness Program is in need of review and updating although no formal documentation was available. It does not appear that annual exercises are conducted and evaluated to assess the effectiveness of the Town’s emergency preparedness program.

The FCC should investigate opportunities to increase the level of emergency preparedness education within the community. For example, education could be provided to the community through the library, recreation centres, public works, and other departments.

### 3.6 Emergency Communications – Radios and Paging Systems

During interviews with the chief officers and firefighters, it was noted that there is some concern with the variety of radios and pagers presently being utilized by the fire department. One of the concerns was the level of viable signal for radio communications and consistency. Another concern noted was that there is a variety of pagers being utilized and the dependability of some of the pagers is in question.

Based on the concerns noted, it is recommended that a radio/communications contractor be contracted to do an assessment of the department’s communications system, along with estimates for necessary repairs and/or upgrades that are required to create a more consistent and dependable system.

### Section 3 Recommendations

<table>
<thead>
<tr>
<th>Rec #</th>
<th>Recommendation</th>
<th>Estimated Costs</th>
<th>Suggested Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>There appeared to be a lack of formal documentation relating to vehicle inspection records and driver training programs and/or evaluations. As such, it is recommended that both of these programs be put into place.</td>
<td>No cost associated with this recommendation – staff time only</td>
<td>Short-term (1-3 years)</td>
</tr>
<tr>
<td>6</td>
<td>It is recommended that the department install an approved diesel exhaust system to protect the gear from contamination. And that any gear that is at risk of daily exposure of ultraviolet rays and/or diesel fumes be relocated to reduce this ongoing exposure when not being worn by the firefighters.</td>
<td>Cost of type of system. Could range from $10,000 - $30,000</td>
<td>Mid-term (4-6 years)</td>
</tr>
<tr>
<td>7</td>
<td>It is recommended that an Incident Management System and Accountability program be formally</td>
<td>Estimated cost of Accountability program $6,000-</td>
<td>Short-term (1-3 years)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>adopted. This will entail the creation of related training programs and operating guidelines.</td>
<td>$10,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>It is advisable that the FIFD develop an annual plan for the amount of inspections and fire prevention related activities that the department would like to complete each year. This type of goal setting will identify required resources and also confirm completion success rates.</td>
<td>No cost associated with this recommendation – staff time only</td>
<td>Short-term (1-3 years)</td>
<td></td>
</tr>
<tr>
<td>It is recommended that FIFD develop a CRA (community risk assessment) for 2018 to ensure that an inventory of any risk occupancies be maintained and regularly updated as new information becomes available (either from other Town departments or through actions of the Suppression Division). This should include properties such as multi-unit residential, industrial, and commercial properties of concern and public buildings. This also assists the Fire Chief in identifying what training and equipment is required by the fire department to ensure it can offer the noted services in an efficient and effective manner.</td>
<td>No cost associated with this recommendation – staff time only</td>
<td>Short-term (1-3 years)</td>
<td></td>
</tr>
<tr>
<td>The FIFD should move towards the training and certification of its fire officers in the areas of fire prevention and public education trained and certified to at least:  - NFPA 1031 – Fire Inspector I, and  - NFPA 1035 – Fire and Life Safety Educator</td>
<td>Cost would be related to purchase of the online programs (est. $1,000).</td>
<td>Mid-term (4-6 years)</td>
<td></td>
</tr>
<tr>
<td>Fogo Island should consider having a FUS evaluation of the community’s fire protection services conducted. This will also offer more feedback and options for recommended improvements to the community’s fire services.</td>
<td>$25,000 - $30,000</td>
<td>Short to Mid-term (1-6 years)</td>
<td></td>
</tr>
<tr>
<td>There needs to be a more formally recognized annual training plan for all department staff to ensure that training goals and expectations are identified, evaluated and adjusted to ensure that all staff are receiving required training (on an annual basis). Consideration should also be given to greater utilization of available computer technology, on-line training estimated at $3,000 - $4,000</td>
<td>On-line training estimated at $3,000 - $4,000</td>
<td>Short-term (1-3 years)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fogo Island Fire Service Review</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>--------------------------------</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>13</td>
<td>It is recommended that a review of required skills be conducted. Once this review is completed a more defined training and records retention program can be implemented.</td>
<td>No cost associated with this recommendation – staff time only</td>
<td>Short-term (1-3 years)</td>
</tr>
<tr>
<td>14</td>
<td>FIFD would be well served by creating a Training Officer’s position to coordinate training at all stations. This would not only ensure a greater focus on the development of training programs, but provide a more accurate evaluation and tracking of them. This position could also be incorporated first as a part-time position and, as needs dictate, be expanded into a full-time position.</td>
<td>Initial cost would be for a part-time Training Officer. Approximately $30,000 - $40,000.</td>
<td>Short to Mid-term (1-6 years)</td>
</tr>
<tr>
<td>15</td>
<td>The FIFD does not track response times or number of VFF’s responding to page outs. As such, it is strongly recommended that response times are tracked, which is the only means for a fire department to identify if its response times are improving or worsening.</td>
<td>Staff time only.</td>
<td>Short-term (1-3 years) and ongoing</td>
</tr>
<tr>
<td>16</td>
<td>The FCC should investigate opportunities to increase the level of emergency preparedness education within the community. For example, education could be provided to the community through the library, recreation centres, public works, and other departments.</td>
<td>Minimal cost for educational related materials. Main costs are for staff time.</td>
<td>Short-term (1-3 years) and ongoing</td>
</tr>
<tr>
<td>17</td>
<td>Based on the concerns noted, it is recommended that a radio/communications contractor be contracted to do an assessment of the department’s communications system, along with estimates for necessary repairs and/or upgrades that are required to create a more consistent and dependable system.</td>
<td>Unknown cost at this time. Will be based on assessment conducted by radio contractor</td>
<td>Short-term (1-3 years)</td>
</tr>
</tbody>
</table>
Section 4 – Physical Resources

4.1 Fire Station Locations and Physical Evaluations
4.2 Fire Station Evaluations
4.3 Health and Safety Related Comments
4.4 Generators and Emergency Power
4.5 Fire Vehicles
Section 4: Physical Resources

This section will review the general layout and condition of the Fogo Island fire station.

4.1 Fire Station Location and Other Considerations

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 always 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 firefighter composition (e.g. where volunteer firefighters live and work). 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 close proximity of each other.

Industry best practices support that fire stations should be situated to achieve the most effective and safe emergency responses. 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 and fire station location criteria can be identified.

The FIFD presently responds from six fire stations that are located in Stag Harbour, Seldom-Little Seldom, Tilting, Joe Batt’s Arm, Fogo and Island Harbour. There is a seventh fire station located in Deep Bay, but this station is not being utilized at this time.
FIGURE 6: Fogo Island Fire Station Locations

FIGURE 7: Fogo Island Fire Response Clusters Without call data we were unable to plot where the fire calls were occurring and their proximity to the fire stations.
FIGURE 8: 14 Minute Travel Time Map from the Fire Stations

The map above demonstrates that the currently fire stations cover the major communities of the island within a 14-minute response time with overlapping coverage. Unfortunately, we do not have any data to demonstrate how quickly the firefighters assemble at the fire stations prior to their response in the apparatus.
4.2 Fire Stations Evaluation

Please note:

- The station reviews in this report are of a general nature, conducted by a visual walk-through by EMT staff. Non-destructive testing was conducted during the fire station visits.
- If any health and safety related items were identified, they have been bolded and italicized.

Stag Harbour Fire Station

The Stag Harbour fire station is a one-bay facility, which does not have drive-through capability. The station houses one pumper truck. However, due to the age of the truck it would not meet the recommended replacement/life cycle as noted in the FUS chart on page 74, which is a 20 year replacement cycle to receive full marks through the FUS review process. Even if the truck’s age met the recommended FUS replacement cycle, the pump system has not be tested and certified on an annual basis. All pump testing should be completed and certified on an annual basis.
Observations

- The station apparatus area is full and lacking storage space for equipment.
- *The fire station does not have a diesel exhaust capture systems to reduce exposure to exhaust contaminates.*
  - Some type of exhaust containment system should be considered, along with having the firefighters gear moved to an area where it will not be exposed to diesel fumes.
- As for the work quarters, there is very little meeting room space for training unless the vehicles are moved out and the apparatus bays are utilized for training. During the summer months, this is achievable but not in the winter months due to cold and inclement weather.
Seldom – Little Seldom Fire Station

The Seldom – Little Seldom fire station is a three-bay facility, which does not have drive-through capability. The station houses one cube van rescue truck and one conventional truck chassis with pumping ability. Due to the age and design of the pumper truck it would not meet the recommended replacement/life cycle as noted in the FUS chart on page 74, which is a 20 year replacement cycle. Even if the truck’s age met the recommended FUS replacement cycle, the pump system has not been tested and certified on an annual basis. All pump testing should be completed and certified on an annual basis. Vehicles such as cube vans and pick-up trucks are not identified on the FUS recommended replacement chart because they do not perform fire suppression tasks such as pumping water.
Other Observations

- *The fire station does not have a diesel exhaust capture systems to reduce exposure to these contaminants.* Some type of exhaust containment system should be considered, along with having the firefighters gear moved to an area where it will not be exposed to diesel fumes.
  - An exhaust system should be a future consideration to install in present fire stations or into new or upgrade facilities.
- There is a full meeting room space located on the second floor that can be used for training
Fogo Fire Station

The Fogo fire station is a two-bay facility, which does not have drive-through capability. The station houses one pumper truck and one cube van that is equipped with various types of equipment for rescue and vehicle extrication. Even if the truck’s age met the recommended FUS replacement cycle, the pump system has not been tested and certified on an annual basis. All pump testing should be completed and certified on an annual basis.
Observations

- The station apparatus area is full and lacking storage space for equipment.

- The fire station does not have a diesel exhaust capture systems to reduce exposure to these contaminants. Some type of exhaust containment system should be considered, along with having the firefighters gear moved to an area where it will not be exposed to diesel fumes.
  - An exhaust system should be a future consideration to install in present fire stations or into new or upgrade facilities.

- There is very little meeting room space for training unless the vehicles are moved out and the apparatus bays are utilized for training. During the summer months, this is achievable, but not in the winter months due to cold and inclement weather.
**Joe Batt’s Arm Fire Station**

The Joe Batt’s Arm fire station is a two-bay facility, which does not have drive-through capability. The fire station is located in the front portion of the building, with the back being a community facility. This station is equipped with a self contained breathing apparatus filling station.

The station houses one pumper truck, one pick-up truck and one cube van. Even if the pumper truck’s age met the recommended FUS replacement cycle, the pump system has not been tested and certified on an annual basis. All pump testing should be completed and certified on an annual basis.
Other Observations

- The station apparatus area is well set up and appears to have storage space for equipment.

- **The fire station does not have a diesel exhaust capture systems to reduce exposure to these contaminates.** Some type of exhaust containment system should be considered, along with having the firefighters gear moved to an area where it will not be exposed to diesel fumes.
  - An exhaust system should be a future consideration to install in present fire stations or into new or upgrade facilities.

- The firefighters have access to a community centre area (at the facility) for meetings and training.

- Although the community centre area, which is attached to the fire station, is not part of the study, it was reported that the fire department pays for the utilities and maintenance of this part of the building and that this was a concern. Therefore, the town should separate the utility and maintenance costs for the community centre portion of the building, or as some firefighters suggested, demolish the community centre as it is reported to be under utilized.
**Tilting Fire Station**

The Tilting fire station is a two-bay facility, which does not have drive-through capability. The station houses one pumper truck and two pick-up trucks. Due to the age of the pumper truck it would not meet the recommended replacement/life cycle as noted in the FUS chart on page 74, which is a 20 year replacement cycle. Even if the truck’s age met the recommended FUS replacement cycle, the pump system has not be tested and certified on an annual basis. All pump testing should be completed and certified on an annual basis.
Other Observations

- The station is relatively well set up and contains storage space for equipment.
• The fire station does not have a diesel exhaust capture systems to reduce exposure to these contaminants. Some type of exhaust containment system should be considered, along with having the firefighters gear moved to an area where it will not be exposed to diesel fumes.
  o An exhaust system should be a future consideration to install in present fire stations or into new or upgrade facilities.
• As for the living and work quarters, there is some meeting room space for training.
Island Harbour Fire Station

The Island Harbour fire station is a one-bay facility, which does not have drive-through capability. The station houses a pick-up truck with some hoses and portable pumps for drafting and application of water.
Other Observations

- The station apparatus area is full and lacking storage space for equipment.

- *The fire station does not have a diesel exhaust capture systems to reduce exposure to these contaminants.* Some type of exhaust containment system should be considered, along with having the firefighters gear moved to an area where it will not be exposed to diesel fumes.
  - An exhaust system should be a future consideration to install in present fire stations or into new or upgrade facilities.

- As for the work areas, there is very little meeting room space within the station for training unless the vehicles are moved out and the apparatus bays are utilized for training. During the
summer months, this is achievable but not in the winter months due to cold and inclement weather. However, access to the rest of facility can be obtained to accommodate meetings and training.
Deep Bay Fire Station

The Deep Bay fire station is a one-bay facility, that is presently not in active use.
Other Observations

The station is not operational at this time.

- *The fire station does not have a diesel exhaust capture systems to reduce exposure to these contaminates.* Some type of exhaust containment system should be considered, along with having the firefighters gear moved to an area where it will not be exposed to diesel fumes.
  - An exhaust system should be a future consideration to install in present fire stations or into new or upgrade facilities.
- As for the work areas, there is very little meeting room space for training unless the vehicles are moved out and the apparatus bays are utilized for training. During the summer months, this is achievable but not in the winter months due to cold and inclement weather.
4.3 Generators/Emergency Power

As an emergency response facility and a possible gathering place for emergency responders and other assisting agencies, all stations should have a backup power source or at the very least, access to a portable backup source in the event of a community power failure. It was noted that none of the fire stations have dedicated backup power systems.

The FIFD should ensure that backup generators are available for the fire stations and that the generators are kept on a regular testing and maintenance program to ensure that they are ready for use, if required. A full load testing on the station should also be conducted on a scheduled basis to confirm that all required electrical services are operational when on generator power.

- There is also the option to identify which of the operational stations will become the key emergency facilities. This will reduce the overall need and cost of backup generators.

4.4 Review of General Health and Safety Items Considered During Station Evaluation

While conducting the walk-through of each fire station, EMT staff were looking for many of the items noted below. These areas reviewed are noted in most Health and Safety Regulations, along with also being noted in NFPA 1500 – Standard on Fire Department Occupational Safety and Health Program.

PREMISES

A floor or other surface used by any worker shall,

(a) be kept free of obstructions, hazards, and accumulations of refuse, snow or ice; and
(b) not have any finish or protective material used on it that is likely to make the surface slippery.

Clearances between a moving part of any machine or any material carried by the moving part of the machine and any other machine, structure or thing shall be adequate to ensure that the safety of any worker in the area is not endangered.

Concern Noted:

It was noted that in most of the stations, there is limited space between the vehicles and the interior walls. This could create a safety issue if the vehicles are being moved while the firefighters are walking between the moving vehicle and wall areas.

It was also noted that many of the stations have limited storage space. As such, equipment is stored wherever possible creating some trip and fall hazards.
PART III – INDUSTRIAL HYGIENE

Where a worker is exposed to a potential hazard of injury to the skin due to contact with a substance, a quick-acting deluge shower shall be provided.

An industrial establishment shall be adequately ventilated by either natural or mechanical means such that the atmosphere does not endanger the health and safety of workers.

Where workers are exposed to a substance that,

(a) is poisonous by ingestion; and

(b) can contaminate the skin,

Shower rooms and individual lockers for street and work clothes shall be provided.

Concerns Noted:

There are no shower rooms for cleaning up after a call, whether that is from the contaminates from a fire or biohazards from a medical call. It is recommended that the FIFD install shower facilities so that firefighters can decontaminate after a fire or medical call.

There is no “at source” exhaust system to capture vehicle exhaust. Ensuring natural ventilation is supplied and maintained whenever a vehicle is started and moved can be a problem with stations that have no back bay or doorway. As such, no cross flow of natural ventilation can be obtained.

Also, the doorway separations from the living/training areas need to be sealed so as to reduce the possibility of vehicle exhaust entering these areas. The access doors should be on spring loaded return systems.

4.4 Discussion Relating to Fire Station Locations

Desirable Fire Station Site Criteria

During the review of the FIFD, it was noted to EMT that a possible consolidation of resources might be the better option as opposed to continuing with the upkeep of the present seven fire stations. Once of which (Deep Bay) is not operational due to lack of equipment and volunteers to respond.

When looking at the possibility of building a new fire station or utilizing present facilities many aspects should be taken into consideration such as the community’s size, call volumes of the area, staffing, and equipment.

The following criteria should be utilized as a basic checklist for the selection of any fire station site:

- Assembly time for volunteer firefighters must not be negatively impacted
• Reasonable access to a major street(s) or road(s)
• Appropriate sight lines (no hills, physical obstacles)
• No traffic impediments at any time of day
• Ability to have a second access to the site
• Maintained access (snow clearance, etc.)
• Impact on adjacent properties needs to be considered
• Size of site must accommodate all expected activities of the fire service and allow for future expansion (parking, training, apparatus maintenance and equipment testing, etc.)
• Proximity to municipal services and required utilities (water, sewer, hydro, telephone, gas, etc.)
• Costs
• Acquisition of land
• Site preparation
• Building (leasing/renting may also be a consideration)

It is a fact of fire station location that it is not always possible to have a fire station in the best location for every potential emergency. It is a balanced decision to be made as to how many stations can be supported (number of qualified firefighters, operational costs, and capital costs) and where they should be located to provide the best service with the limited resources available.

**Building Attributes for a Fire Station**

In developing the plans for a new fire station, the following “building attributes” and information should be considered, taking into consideration major fire station functional areas such as:

• The apparatus bay: this is where the firefighting and emergency response vehicles are stored.
• Apparatus bay support and vehicle maintenance: these industrial spaces are where the vehicles and other firefighting equipment are cleaned, maintained, and stored.
• Administrative and training areas: these include offices, dispatch facilities, and training and conference rooms.
• Residential areas: these include the dayroom/kitchen, and other areas such as showers and bathrooms.

The primary consideration for a fire station layout and work space is to separate the functions such as industrial maintenance spaces from the residential/office spaces. These spaces need to be separated to eliminate the transmission of vehicle exhaust and other possible contaminants (such as dust and water) into the residential/office spaces.
The estimated cost consideration:

- If a fire station is required, an approximate building cost of $4500 - $5000 per square meter plus taxes and fees should be expected – for example if a two-bay 650 sq. meter building is constructed, the cost would be approximately $2,925,000 - $3,250,000 plus taxes and fees with a build timeline of approximately 16-24 months. The noted cost would be for the building expenses only. It does not include specific amenities that may be identified by Fogo Island.
  - This estimate is totally dependent on materials used in the construction of the fire station.
  - An additional fire truck and related equipment for the station is estimated at $500,000 - $800,000 dependant on level of customization and equipment. However, in the case of Fogo Island, much of this equipment would come from the consolidation of equipment and resources into (possibly) fewer fire stations.
4.5 Fire Department Vehicles

When assessing a fire department’s ability to respond and meet the needs of the community, the Fire Underwriters Survey utilizes the age of a fire truck as one of its guidelines.

Fire Underwriters Survey – Vehicle Replacement Recommendations

In the chart below, the recommendations for vehicle replacement for the Town of Fogo Island fall under both the highlighted column for Communities and Small Communities and Rural Centres. This allows for up to a 20-year replacement cycle.

<table>
<thead>
<tr>
<th>Apparatus Age</th>
<th>Major Cities ³</th>
<th>Medium Sized Cities ⁴ or Communities Where Risk is Significant</th>
<th>Small Communities ⁵ and Rural Centres</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 – 15 Years</td>
<td>First Line</td>
<td>First Line</td>
<td>First Line</td>
</tr>
<tr>
<td>16 – 20 Years</td>
<td>Reserve</td>
<td>Second Line</td>
<td>First Line</td>
</tr>
<tr>
<td>20 – 25 Years</td>
<td>No Credit in Grading</td>
<td>No Credit in Grading Or Reserve ²</td>
<td>No Credit in Grading Or Reserve ²</td>
</tr>
<tr>
<td>26 – 29 Years</td>
<td>No Credit in Grading</td>
<td>No Credit in Grading Or Reserve ²</td>
<td>No Credit in Grading Or Reserve ²</td>
</tr>
<tr>
<td>30 Years ¹</td>
<td>No Credit in Grading</td>
<td>No Credit in Grading</td>
<td>No Credit in Grading</td>
</tr>
</tbody>
</table>

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. a populated area (or multiple areas) with a density of at least 400 people per square kilometre; AND
   b. a total population of 100,000 or greater.
4. Medium Communities are defined as an incorporated or unincorporated community that has:
   a. a populated area (or multiple areas) with a density of at least 200 people per square kilometre; AND
   b. a total population of 1,000 or greater.
5. Small Communities are defined as an incorporated or unincorporated community that has:
   a. no populated areas with densities that exceed 200 people per square kilometre; AND
   b. does not have a total population in excess of 1,000.

The Fire Underwrites Survey (FUS) is reviewed by insurance companies, and as long as the fire department adheres to the recommended replacement timelines through an identified capital replacement schedule, the department will retain its fire rating (in relation to this area).

By ensuring that the vehicles are being replaced on a regular schedule, the Town is also demonstrating due diligence towards ensuring a dependable response fleet for the fire department.
and the community it serves. This in turn will keep the community’s fire rating in good standing, which subsequently reflects on commercial and residential insurance rates.

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

Although there is no national standard that legally mandates the replacement of emergency vehicles, it must be kept in mind that it is critical to replace these and other apparatus before they become unreliable. Over the long-term, delaying the replacement is inadvisable because it will add to the overall maintenance costs of the apparatus and can influence insurance costs based on the fire department’s FUS rating.

As already noted, FIFD has several pumper trucks, cube vans and pickup trucks at their disposal. In many cases this would be an adequate amount of equipment for response to the average house fire (and other calls that the fire department responds to). But in structures that are larger and/or taller than the average family home, an elevated device, such as an aerial truck or tele-squirt would be a great asset to conducting a more effective level of fire extinguishment. FIFD does not have an aerial/elevated device in its fleet.

With no other options available for securing such a vehicle through Mutual Aid or Automatic Aid Agreements. This should be a future consideration in relation to vehicle purchases.

**Fire Underwriters Related Information**

The Fire Underwrites Survey (FUS) is reviewed by insurance companies and as long as the fire department adheres to the recommended replacement timelines through an identified capital replacement schedule, then the department will retain its fire rating (in relation to this area).

Fire departments are also evaluated for the number of engines/pumpers in service relative to the overall fire potential and the area being protected. Engine/pumper apparatus are required to be adequately housed and staffed in order to receive full credit.

Fire apparatus that serve dual purposes are evaluated based on the primary duty it serves on the fire ground. For example, a ladder/aerial apparatus with a fire pump may be credited in one of two ways.

- 100 percent credit as a ladder/aerial apparatus and 50 percent credit as an engine/pumper,
- or
- 100 percent credit as an engine/pumper apparatus and 50 percent credit as a ladder/aerial apparatus.
This depends upon the number of apparatus a department has available and where credit should be distributed properly in the grading depending on the primary use of the fire apparatus.

The maximum acceptable age of apparatus specified in the fire insurance grading index is 20 years to receive maximum credit.

**Ladder/Aerial Service**

As noted in the previous section, fire apparatus that may serve dual purposes are evaluated on the primary duty it serves on the fire scene.

When reviewing ladder/aerial apparatus Fire Underwriters recommends that areas with five buildings that are 3 storeys or 10 m (35ft) or more in height, or districts that have a Basic Fire Flow great than 3,300 Igpm (15,000 liters per minute), or any combination of these criteria should have a ladder/aerial company.

More information on recommendations for aerial apparatus can be found in the FUS Technical Bulletin located in Appendix “D”.

The price for a new aerial/elevated device can be as high as 1.5 million dollars. However, if the FIFD is to consider a more cost-effective opportunity, it can take advantage of replacing an older pumper truck with a pre-owned aerial/elevated device. Council can put a cap on the amount of funds available for purchase, which would give the FIFD the needed parameters to work with. By having such a vehicle in its fleet, the FIFD would be afforded more flexibility in dealing with a wider range of structure fires and even with rescue and easier access to roof tops.

As such, it is recommended that this concept of replacing the older pumper truck with a pre-owned aerial/elevated device (for cost savings) be investigated to provide the fire department with more operational flexibility in dealing with structure fires that are larger than the average single-family home.

In relation to vehicle replacement and refurbish, the industry standard for the design and replacement of vehicles is the National Fire Protection Associations Standard #1901. It is recommended that this and other related NFPA standards relating to vehicle design, replacement and refurbishing be utilized.

During the station and equipment review, it was noted that the vehicles and small engines are on an inspection, repair and replacement cycle, as needed, and that maintenance and repair work is addressed as quickly as possible by the Town or other recommended facilities. This vehicle and small engine maintenance must be documented and monitored to ensure that they inspection, repair and replacement cycles are being adhered to.
4.6  Recommendation for Future Fire Stations Configuration

It is a fact of fire station location that it is not always possible to have a fire station in the best location for every potential emergency. It is a balanced decision to be made as to how many stations can be supported (number of qualified firefighters, operational costs, and capital costs) and where they should be located to provide the best service with the limited resources available.

During the site visit and interviews, discussions were held relating to the future of the fire stations and their arrangement. As noted, there presently are six active fire stations on Fogo Island. However, due to the level of call volumes and related costs consideration should be given to reducing the amount of fire stations.

One of the concepts posed to EMT during our site visit was that of creating a single fire station in the central portion of the island. While the computer model demonstrates that a station located near the town offices would be adequate to provide a 14-minute response to most of the communities on the island, a challenge arises in that none of the firefighters live near the station. This would create a delay in assembly time for the firefighters to respond. As the majority of firefighters are located in the communities of Fogo, Joe Batt’s Arm, and Seldom – Little Seldom, there would likely be a delay of up to 10 minutes to have the apparatus respond. A 10-minute assembly time plus a response time to the community where the emergency was could create extended responses of 20 to 24 minutes. Further, the firefighters would have to leave the community where the call was to get the apparatus, to then respond back to the community.

EMT does not see this option as the best option for the Town based on this assembly time delay and resultant extended delay for the apparatus and equipment to arrive on the scene. The firefighters shared similar concerns, particularly during poor weather.
Another option posed to EMT was to reduce the current 6 fire stations into three locations. These would be Seldom-Little Seldom, Joe Batt’s Arm and Fogo. These stations are presently well equipped and have room for additional equipment or at the very least, space to add onto the fire station to accommodate for more storage. These communities also have or are in close proximity to the highest levels of fire risk.

Based on some feedback received from the firefighters, who are aware of the community’s needs and circumstances, these three stations would also allow for a good level of coverage for the Island. Computer modeling shows that the three stations can cover most of the island’s communities within a 14-minute response time.

Therefore, based on the input received from the firefighters and the evaluation conducted by EMT, it is recommended that a “three-station” configuration be implemented as noted in the following map.
Computer modeling showing a 14-minute response time from three stations.

This would effectively reduce the financial requirements for maintenance and utilities for the seven existing stations down to three stations. The fire department would also evaluate the present state of apparatus and equipment, keeping the most recent and required vehicles and equipment.

Once all of this has been accomplished, future financial plans can be put into place for station, vehicle and equipment needs.

Dispatch OGs should also be updated to include the immediate response of 2 or 3 stations to any reported structure fire to ensure that adequate resources (manpower and equipment) are deployed rapidly.
## Section 4 Recommendations

### Section 4 Recommendations – Physical Resources

<table>
<thead>
<tr>
<th>Rec #</th>
<th>Recommendation</th>
<th>Estimated Costs</th>
<th>Suggested Timeline</th>
</tr>
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<tbody>
<tr>
<td>18</td>
<td>It is recommended that all health and safety related concerns (not noted in recommendations 19 through 23) noted in this section be addressed.</td>
<td>Costing is dependent on amount of work required by a contractor</td>
<td>Immediate (0-1 year)</td>
</tr>
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<td>19</td>
<td>It is recommended that the FIFD install shower facilities so that firefighters can decontaminate after a fire or medical call.</td>
<td>Showering facilities can range from $5,000 - $7,000 per station</td>
<td>Short to Mid-term (1-6 years)</td>
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<td>The doorway separations from the living/training areas need to be sealed so as to reduce the possibility of vehicle exhaust entering these areas. The access doors should be on spring loaded return systems.</td>
<td>Approximate cost for door hardware and replacement is $1,000 per door.</td>
<td>Short-term (1-3 years)</td>
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<td>21</td>
<td>The FIFD should ensure that backup generators are available for the fire stations and that the generators are kept on a regular testing and maintenance program to ensure that they ready for use, if required. A full load testing on the station should also be conducted on a scheduled basis to confirm that all required electrical services are operational when on generator power.</td>
<td>Portable generators may cost between $1,000 - $10,000 per station</td>
<td>Short to (1-3 years)</td>
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<td>22</td>
<td>It is recommended that the replacing of an older pumper truck with a pre-owned aerial/elevated device (for cost savings) be investigated to provide the fire department with more operational flexibility in dealing with structure fires that are larger than the average single-family home.</td>
<td>Depending on age of aerial, cost could range from $100,000 - $500,000</td>
<td>Long-term (7-10 years)</td>
</tr>
<tr>
<td>23</td>
<td>It is recommended that the Town of Fogo Island reduce the number for fire stations to three, to be located at Seldom-Little Seldom, Joe Batt’s Arm and Fogo. These stations are presently well equipped and have room for additional equipment</td>
<td>All stations are in existence, so cost would be minimal as no new stations are</td>
<td>Short to Mid-term (1-6 years)</td>
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or at the very least, space to add onto the fire station to accommodate for more storage. These communities also have or are in close proximity to the highest levels of fire risk.

| 24 | It is recommended that pump testing be completed and certified on all apparatus on an annual basis. | Costs may range from $3,000-$4,000 per pumper plus any associated repairs required. | Immediate (0-1 year) |
Section 5:
Fire Department Staffing Considerations

5.1 Staffing Compliments (career vs. volunteer firefighters)
5.2 Recruitment and Retention of Volunteer Firefighters
Section 5: Fire Department Staffing

As noted in previous sections, the Fogo Island Fire Department organizational is a 100% volunteer fire department.

5.1 Staffing Compliments (career and volunteer firefighters)

A point of consideration for many municipalities with volunteer firefighters is to determine when or if a fire department and its council should choose to move towards a full-time component, which might mean moving away from its mainly volunteer firefighting contingent.

To make an informed decision, an assessment should be based on the following points:

- Does the fire department have an approved response criterion as a baseline?
  - Has Council given direction to the Fire Chief on expected response times that are to be met by the Fire Department?
  - If so, is the department meeting this response criterion or is it falling further and further behind?

- Does the department have issues with getting enough volunteers to respond during specific hours on a consistent basis to the extent that no viable level of response is accomplished?

- What local and national standards and guidelines exist to help steer the fire department in its decisions relating to station location and staffing model?

- What growth or decrease in population and industry is occurring that may precipitate fire stations and staffing?

- What are the associated costs to moving to a full-time only fire service?

Volunteer, Composite or Career Department

Even though the utilization of a volunteer fire service has proven to be the most cost-effective means of supply fire service to the community.

As already noted, a question that is often posed in relation to volunteer fire departments is that of when the department should consider the hiring of contract or full-time staff, subsequently reducing the reliance on volunteer firefighters. There is no document that specifically identifies the tipping point for this type of staffing move. It is based on the level of service set by the community’s Council, coupled with regular reports by the fire chief on how the department is meeting or not meeting these expectations.

There are many factors including the number of volunteers arriving when paged out, how quickly they respond to the page out, the time of the day, and day of the week (e.g. volunteer availability day shift vs. night shift), etc.
Recruitment and retention of volunteers is becoming more of a challenge for many fire departments based on the increase in training time that the volunteers must commit to on an annual basis. There is also the challenge of turnover with many volunteers because of changes in family and career demands.

Some fire departments have identified where to focus the use of career firefighters by identifying call volume, growth of the community, and more specifically, the times of the day that are the most challenging for volunteer responses. For many fire departments, the day-time hours from Monday to Friday are the greatest challenge due to the fact that many volunteer firefighters are either at work, school, or taking care of family. As such, some departments focus a full-time component that works Monday to Friday, 7:00 AM to 5:00 PM.

A fire chief must take all the preceding information into consideration before going forward to Council to recommend a possible hiring of full-time staff. Utilization of full-time firefighters is a large cost to the community and therefore many communities have accomplished this in stages. Continual monitoring and evaluation of call volumes, response times and number of VFF’s responding to calls will assist the fire chief in identify possible areas of concern or in need of up staffing.

### 5.2 Recruitment and Retention of Volunteer Firefighters

Based on discussions with the Fire Chief and VFF’s, it would appear that the Fogo Island Fire Department has a good level of support from its volunteers.

Both Fire and Emergency Services – Newfoundland and Labrador, and the Ontario Office of the Fire Marshal and Emergency Management have put out documents on recruitment and retention to offer some criteria and/or guidelines that departments can utilize. Refer to Appendix “C” and “D” for the document.

Some of these criteria relate to enhancing training and special projects for the volunteers to become more involved in department operations, and looking at other such things as:

- Long service awards in the form of remuneration or a stipend
- Education assistance programs to support them in their professional development
- Implementing an on-call system to have them more engaged in the response/coverage program for the fire department

These concepts are great, but have limited effect if the community is not offering the desired employment, education or housing needs of the firefighters.
For recruitment and retention, the Fire Chief should continue to identify and support opportunities to promote retention of the volunteer firefighters.

5.3 Future Staffing Recommendation

During interviews with the chief officers and VFF’s it was pointed out that there is a need for more direct management of the fire service. Presently all administration and management of the fire department is overseen by the volunteers. They are doing the best they can under the existing circumstance, but much more is required, such as consistent tracking of calls, training, fire prevention related activities, emergency preparedness, budget development and management and annual reports to Council.

Based on many of the recommendations made within this document, it is further recommended that Fogo Island Council approve the hiring of a full-time or contract Fire Chief. This position would be charged with the following tasks:

- Directly reporting to the CAO and Council on such things as:
  - Overall administration of the fire department, which includes development and management of budgets
  - Overview and development of department wide training programs
  - To be trained and certified to conduct fire prevention and education related duties
  - Monitoring and updating of the Town’s emergency preparedness program
  - Acting as the point of contact when dealing with the Province’s Fire Commissioners Office
  - Implementation of the recommendations presented in this FSR document

The cost for such a position could range from $40,000 to $70,000 per year based on the hours or work and assigned duties.
## Section 5 Recommendations

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| 25    | Based on many of the recommendations made within this document, it is further recommended that Fogo Island Council approve the hiring of a full-time or contract Fire Chief. This position would be charged with the following tasks:  
  - Directly reporting to the CAO and Council on such things as:  
    - Overall administration of the fire department, which includes development and management of budgets  
    - Overview and development of department wide training programs  
    - To be trained and certified to conduct fire prevention and education related duties  
    - Monitoring and updating of the Town’s emergency preparedness program  
    - Acting as the point of contact when dealing with the Province’s Fire Commissioners Office  
    - Implementation of the recommendations presented in this Fire Service Review document | Estimated cost for such a position could range from $40,000 - $70,000 per year based on the hours or work and assigned duties. | Short Term (1-3 years)           |
Section 6:
Fire Department Operational Guidelines

6.1 Fire Department Operational Guidelines
Section 6: Operational Guidelines

6.1 Fire Department Operational Guidelines

To ensure consistency with department operations, a full set of guidelines must be in place. Having the guidelines will not only inform staff in relation to procedures and expectations; they also offer a level of standardization for how to address a myriad of situations, both from an emergency and non-emergency standpoint. Provincial Health and Safety Guidelines note that an employer must equip employees with the tools and training to complete their jobs in a safe and efficient manner. Therefore, having a full set of operational guidelines is not only a necessity; it is an obligation of the employer.

6.1.1 Needs Assessment

Fire service managers need to be sure that operating procedures accurately reflect the department’s mission, organizational environment, and regulatory requirements. A good way to make this judgement is by conducting a needs assessment. This type of review focuses on internal and external factors that affect OG’s. These might include changes to laws, regulations, or standards; recent legal precedents; modifications to internal response plans; revisions to mutual-aid agreements; demographic changes in the community; and a variety of other possibilities.

Although major changes in legal or operational requirements will prompt a formal needs assessment, the process should be performed continually to help keep OG’s current and valid. While this may seem like a daunting administrative task, it is really a matter of answering two basic questions:

- **What OG’s do we need?** — The number and type of OG’s required by the department is determined by examining the operating environment, standard of practice, and local needs. Industry standards, accreditation requirements, Federal or Provincial regulations, and many other information sources can be used to help answer this question.

- **Do the current OG’s meet our needs?** — If yes, then update as needed and continue to use them. If no, then modify existing OG’s and/or develop new ones to reflect changes in the operating environment, standard of practice, or local needs. Delete outdated, irrelevant, or conflicting OG’s.

FIFD was not able to supply EMT with copies and a listing of the OG’s that are being used by the fire department. However, there is no question that the VFF’s do understand the expectations placed on them in relation to implementing the duties. None-the-less, for health and safety reasons, guidelines need to be in place to ensure consistency with operations.

Following is an outline of headings that a fire department should have for its OG’s:

- General Administration
• Human Resources
• Operations
• Fire Prevention
• Communications/Dispatching
• Training
• Equipment – Inspection and Maintenance

Along with the development of the OG’s all of these documents should have:

• date guideline was issued,
• section OG is to be assigned to (i.e. administration, training, etc.)
• approved date supporting signature by the Fire Chief
• a section for review and updates to the OG

An OG template example can be seen in Appendix F.

One final document that should be incorporated into the OG program is a sheet for staff to sign or at the very least initial that they have read and understand the guideline.

Based on the review of existing fire department Operational Guidelines, EMT is recommending that the six noted headings be utilized as a starting point for categorizing the department’s OG’s. Fogo Island is to also incorporate the following standard list of headings for each of the OG’s

• date guideline was issued,
• section OG is to be assigned to (i.e. administration, training, etc.)
• approved date supporting signature by the Fire Chief
• a section for review and updates to the OG

And finally, to ensure that all staff have reviewed any of the issued FIFD OG’s, a confirmation sheet listing all fire department staff, along with an area for date reviewed and signature is to be utilized and kept on file.
## Section 6 Recommendations

### Section 6 Recommendations – Operational Guidelines

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<tr>
<td>26</td>
<td>To ensure consistency with department operations, a full set of guidelines must be in place. Having the guidelines will not only inform staff in relation to procedures and expectations; they also offer a level of standardization for how to address a myriad of situation, both from an emergency and non-emergency stand point. A process to review these guidelines annually should be put in place.</td>
<td>Staff time only</td>
<td>Short term (1-3 years) and ongoing process</td>
</tr>
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</table>
Section 7: Finance

7.1 Operating Budgets
7.2 Capital Budgets and Forecasts
Section 7: Finance

For a fire department to ensure delivery of services to its community it must be supported by Council through the approval of Operating and Capital budgets. These two types of budgets identify what funds are required.

During interviews, it was not only confirmed that the Fogo Island Fire Department has an annual operating budget which fluctuates from year to year based on the needs and circumstances of the department (and the community) along with any related equipment that has been identified for replacement. It was also noted that the volunteers actively conduct funding drives to help pay for and sustain their equipment (over and above funding from Council).

Throughout the review of the budget process, it was found that Fogo Island is supported by Council where ever possible in relation to funding for station and equipment needs. This would indicate a strong level of support by Council and the CAO in relation to assisting the fire department is meeting its service goals.

However, it is recommended that attention be given to the development and implementation of a capital replacement budget for vehicles and equipment replacement based on industry standards.
### Section 7 Recommendations

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<tbody>
<tr>
<td>27</td>
<td>It is recommended that attention be given to the development and implementation of a capital replacement budget for vehicles and equipment replacement based on industry standards.</td>
<td>Staff time only for development and monitoring of budgets</td>
<td>Ongoing process (1-10 years)</td>
</tr>
</tbody>
</table>
Conclusion

During the review conducted by Emergency Management and Training Inc., it was demonstrated that the volunteer firefighters are truly dedicated to the community they serve. It was also noted that the Council, CAO, and Chief Officers are sincerely committed to ensuring the safety of the community and the firefighters of Fogo Island.

Based on the present staffing, equipment and fire station location, Fogo Island is endeavoring to offer the most efficient and effective service possible to the community they serve.

As illustrated in the recommendations put forward by Emergency Management & Training Inc., all costs and associated timelines are approximate estimates that can be implemented through prioritization between the Fire Chief, CAO, and Council.

However, no matter what decisions are made in relation to firefighter staffing, the present compliment of volunteer firefighter staffing should be retained and increased if possible, as this would help to ensure a more comprehensive response to incidents until more full-time personnel can be brought on board.

Most Fire Service Reviews are 10-year documents with a review to be conducted at the five-year mark. However, due to the nature of some of the recommendations made in this document, it is advisable that this be seen as a “living document” and more frequent reviews of the recommendations are conducted, and if needed, bring forward updates to Council where required.
Section 8: Final Summary of Recommendations and Estimated Costs
Section 8: Final Summary of Recommendations and Estimated Costs

The following chart provides further overview of the recommendations found throughout this report along with any estimated costs that can be incurred in the associated areas. As already noted, the projected costs are general estimates and further costing from the related contractor or supplier should be confirmed before moving forward.

The timelines noted in the recommendations are:

- Immediate: indicates an issue that requires instant attention (whether that be for structural, legal or health and safety related items)
- Short-term: 1 – 3 years
- Mid-term: 4 – 6 years
- Long-term: 7 – 10 years
- Ongoing

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<tr>
<td>1</td>
<td><strong>Section 1 Recommendations – Community and Fire Department Overview</strong>&lt;br&gt;it is recommended that the FCC and Station Chiefs review any formal Town documents and related by-laws that govern the operation of the fire department and based on this review update the existing document with the assistance of the National Fire Protection Association 1201 Standard for “Providing Fire and Emergency Services to the Public”, utilizing and incorporating it as deemed necessary.</td>
<td>There is no initial cost associated with this recommendation</td>
<td>Short-term (1-3 years) and ongoing</td>
</tr>
<tr>
<td>2</td>
<td><strong>Section 2 Recommendations – Planning and Surveys</strong>&lt;br&gt;It is recommended that the FCC track and report on the number of members responding and response time to each fire call or other runs made. This review and tracking of responses will identify any issues that might exist in relation to numbers responding or even time of day that may present a challenge for responses.</td>
<td>No cost associated with this recommendation</td>
<td>Short-term (1-3 years) and ongoing</td>
</tr>
<tr>
<td></td>
<td>It is recommended that the type of calls responded to be tracked and assessed to identify major priorities, what (if anything) is increasing and why. This will help the fire department in its planning for equipment, staffing and training needs.</td>
<td>There is no initial cost associated with this recommendation</td>
<td>Short-term (1-3 years) and ongoing</td>
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<tr>
<td>4</td>
<td>It is recommended that the FIFD adopted the use of the response time measurement based on response any times obtained through historical data.</td>
<td>No cost associated with this recommendation</td>
<td>Mid-term (4-6 years) and ongoing. This will allow the fire department to gather at least 3 years of response time data.</td>
</tr>
</tbody>
</table>

### Section 3 Recommendations – Risk Assessment

<table>
<thead>
<tr>
<th></th>
<th>There appeared to be a lack of formal documentation relating to vehicle inspection records and driver training programs and/or evaluations. As such, it is recommended that both of these programs be put into place.</th>
<th>No cost associated with this recommendation – staff time only</th>
<th>Short-term (1-3 years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>It is recommended that the department install an approved diesel exhaust system to protect the gear from contamination. And that any gear that is at risk of daily exposure of ultraviolet rays and/or diesel fumes be relocated to reduce this ongoing exposure when not being worn by the firefighters.</td>
<td>Cost of type of system. Could range from $10,000 - $30,000</td>
<td>Mid-term (4-6 years)</td>
</tr>
<tr>
<td>7</td>
<td>It is recommended that an Incident Management System and Accountability program be formally adopted. This will entail the creation of related training programs and operating guidelines.</td>
<td>Estimated cost of Accountability program $6,000-$10,000</td>
<td>Short-term (1-3 years)</td>
</tr>
<tr>
<td>8</td>
<td>It is advisable that the FIFD develop an annual plan for the amount of inspections and fire prevention related activities that the department would like to complete each year. This type of goal setting will identify required resources and also confirm completion success rates.</td>
<td>No cost associated with this recommendation – staff time only</td>
<td>Short-term (1-3 years)</td>
</tr>
<tr>
<td>9</td>
<td>It is recommended that FIFD develop a CRA (community risk assessment) for 2018 to ensure that an inventory of any risk occupancies be maintained</td>
<td>No cost associated with this</td>
<td>Short-term (1-3 years)</td>
</tr>
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<td></td>
<td>and regularly updated as new information becomes available (either from other Town departments or through actions of the Suppression Division). This should include properties such as multi-unit residential, industrial, and commercial properties of concern and public buildings. This also assists the Fire Chief in identifying what training and equipment is required by the fire department to ensure it can offer the noted services in an efficient and effective manner.</td>
<td>recommendation – staff time only</td>
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| 10 | The FIFD should move towards the training and certification of its fire officers in the areas of fire prevention and public education trained and certified to at least:  
  - NFPA 1031 – Fire Inspector I, and  
  - NFPA 1035 – Fire and Life Safety Educator I | Cost would be related to purchase of the online programs (est. $1,000). Mid-term (4-6 years) |
<p>| 11 | Fogo Island should consider having a FUS evaluation of the community’s fire protection services conducted. This will also offer more feedback and options for recommended improvements to the community’s fire services. | This type of review can be covered by FUS or may incur costs depending on when last review was completed. Short to Mid-term (1-6 years) |
| 12 | There needs to be a more formally recognized annual training plan for all department staff to ensure that training goals and expectations are identified, evaluated and adjusted to ensure that all staff are receiving required training (on an annual basis). Consideration should also be given to greater utilization of available computer technology, combined with hands on training to utilize staff time as effectively as possible. | On-line training estimated at $3,000 - $4,000 Short-term (1-3 years) |
| 13 | It is recommended that a review of required skills be conducted. Once this review is completed a more defined training and records retention program can be implemented. | No cost associated with this recommendation – staff time only Short to Mid-term (1-6 years) |</p>
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<tr>
<td>14</td>
<td>FIFD would be well served by creating a Training Officer’s position to coordinate training at all stations. This would not only ensure a greater focus on the development of training programs, but provide a more accurate evaluation and tracking of them. This position could also be incorporated first as a part-time position and, as needs dictate, be expanded into a full-time position.</td>
</tr>
<tr>
<td>15</td>
<td>The FIFD does not track response times or number of VFF’s responding to page outs. As such, it is strongly recommended that response times are tracked, which is the only means for a fire department to identify if its response times are improving or worsening.</td>
</tr>
<tr>
<td>16</td>
<td>The FCC should investigate opportunities to increase the level of emergency preparedness education within the community. For example, education could be provided to the community through the library, recreation centres, public works, and other departments.</td>
</tr>
<tr>
<td>17</td>
<td>Based on the concerns noted, it is recommended that a radio/communications contractor be contracted to do an assessment of the department’s communications system, along with estimates for necessary repairs and/or upgrades that are required to create a more consistent and dependable system.</td>
</tr>
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**Section 4 Recommendations – Physical Resources**

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<td>The FIFD should ensure that backup generators are available for the fire stations and that the generators are kept on a regular testing and maintenance program to ensure that they ready for use, if required. A full load testing on the station should also be conducted on a scheduled basis to confirm that all required electrical services are operational when on generator power. There is also the option to identify which of the six operational stations will become the key emergency facilities. This will reduce the overall need and cost of backup generators.</td>
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<td>22</td>
<td>It is recommended that the replacing of an older pumper truck with a pre-owned aerial/elevated device (for cost savings) be investigated to provide the fire department with more operational flexibility in dealing with structure fires that are larger than the average single-family home.</td>
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<tr>
<td>23</td>
<td>It is recommended that the Town of Fogo Island reduce the number for fire stations to three, to be located at Seldom-Little Seldom, Joe Batt’s Arm and Fogo. These stations are presently well equipped and have room for additional equipment or at the very least, space to add onto the fire station to accommodate for more storage. These communities also have or are in close proximity to the highest levels of fire risk.</td>
</tr>
<tr>
<td>24</td>
<td>It is recommended that pump testing be completed and certified on all apparatus on an annual basis.</td>
</tr>
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</table>

**Section 5 Recommendations – Staffing Considerations**

<table>
<thead>
<tr>
<th></th>
<th>Recommendations</th>
<th>Cost</th>
<th>Timeframe</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>Based on many of the recommendations made within this document, it is further recommended that Fogo Island Council approve the hiring of a full-time or contract Fire Chief. This position would be charged with the following tasks:</td>
<td>Estimated cost for such a position could range from $40,000 - $70,000 per year</td>
<td>Short Term (1-3 years)</td>
</tr>
</tbody>
</table>
- Directly reporting to the CAO and Council on such things as:
  - Overall administration of the fire department, which includes development and management of budgets
  - Overview and development of department wide training programs
  - To be trained and certified to conduct fire prevention and education related duties
  - Monitoring and updating of the Town’s emergency preparedness program
  - Acting as the point of contact when dealing with the Province’s Fire Commissioners Office
  - Implementation of the recommendations presented in this FSR document

<table>
<thead>
<tr>
<th>Section 6 Recommendations – Operational Guidelines</th>
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<td>26</td>
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<th>Section 7 Recommendations – Finance</th>
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<tr>
<td>27</td>
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Section 9: Appendices
Appendix A: Definitions and References
Appendix B: Response Data for 2015 and 2014
Appendix C: Recruitment and Retention – FES NL
Appendix D: Recruitment and Retention - Ontario
Appendix E: Fire Underwriters Information
Appendix F: Fire Underwriters Technical Bulletin
Appendix G: Operating Guideline Template
Appendix H: Fire Safety Effectiveness Model
Appendix “A”: Definitions and References
Automatic Aid Agreements

4. An automatic aid agreement means any agreement under which,

a) a municipality agrees to ensure the provision of an initial response to fires, rescues and emergencies that may occur in a part of another municipality where a fire department in the municipality is capable of responding more quickly than any fire department situated in the other municipality; or

b) a municipality agrees to ensure the provision of a supplemental response to fires, rescues and emergencies that may occur in a part of another municipality where a fire department situated in the municipality is capable of providing the quickest supplemental response to fires, rescues and emergencies occurring in the part of the other municipality.

Automatic aid is generally considered in other jurisdictions as a program designed to provide and/or receive assistance from the closest available resource, irrespective of municipal boundaries, on a day-to-day basis.

Commission of Fire Accreditation International Community Definitions:

- Suburban – an incorporated or unincorporated area with a total population of 10,000 to 29,999 and/or any area with a population density of 1,000 to 2,000 people per square mile

- Rural – an incorporated or unincorporated area with a total population of 10,000 people, or with a population density of less than 1,000 people per square mile.

National Fire Protection Association (NFPA) Documents:

- NFPA 1201 - Standard for Providing Fire and Emergency Services to the Public

- NFPA 1500 – Standard on Fire Department Occupational Safety and Health Program, 2013 editions


Mutual Aid

a) Mutual aid plans allow a participating fire department to request assistance from a neighbouring fire department authorized to participate in a plan approved by the Fire Marshal.

b) Mutual aid is not immediately available for areas that receive fire protection under an agreement. The municipality purchasing fire protection is responsible for arranging an acceptable response for back-up fire protection services. In those cases, where the
emergency requirements exceed those available through the purchase agreement and the backup service provider, the mutual aid plan can be activated for the agreement area.

**Volunteer Firefighter**
- Means a firefighter who provides fire protection services either voluntarily or for a nominal consideration, honorarium, training or activity allowance. ("pompier volontaire").
Appendix “B”: 2016, 2015 and 2014, Response Data
No Data Available
Appendix “C”: Recruitment and Retention – FES-NL
Recruitment & Retention of Volunteer Firefighters
Recruitment & Retention of Volunteer Firefighters

July 1, 2009

2009

“With more than 6000 volunteer firefighters serving the people of this province, it was clear from the start we were in the presence of valiant individuals, who through sheer determination and commitment want to make the fire protection services throughout this great province better for generations to come.”

Committee Finding on How Best to Enhance Recruitment and Retention Within the Volunteer Fire Service
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Preamble
Over the past 12 months, Fire and Emergency Services – Newfoundland and Labrador, the Newfoundland and Labrador Association of Fire Services, Municipalities Newfoundland and Labrador and the Professional Municipal Administrators have been engaged in a very valuable dialogue with stakeholders surrounding the issue and concerns with recruitment and retention in the volunteer fire service.

Throughout this period of time, members of the Volunteer Recruitment and Retention Committee have been blessed with the opportunity to interact and speak with some of Newfoundland’s and Labrador’s finest community leaders. When we consider the sheer number of volunteer firefighters our province employs in over 400 municipalities and local service districts, it was not hard to be humbled by the commitment to family, friends and community present everywhere throughout Newfoundland and Labrador. Very few people take every opportunity they can to save lives, property and the environment, but these individuals do just that each and every day they are called into action, both directly and indirectly.

With more than 6000 volunteer firefighters serving the people of this province, it was clear from the start we were in the presence of valiant individuals, who through sheer determination and commitment want to make the fire protection services throughout this great province better for generations to come.

On behalf of the committee comprising of representatives from Fire and Emergency Services—Newfoundland and Labrador, the Newfoundland and Labrador Association of Fire Services, Municipalities Newfoundland and Labrador and the Professional Municipal Administrators, we want to thank each and every firefighter, mayor, deputy mayor, councilor and municipal administrator that have contributed to our report by way of their knowledge and expertise.

Newfoundland and Labrador would not be the safe and secure place to live that it is without their continued support and commitment. Our sincerest thanks.
Introduction
Throughout Newfoundland and Labrador, there are approximately 300 fire departments comprising over 6000 volunteer firefighters. The capabilities of each department may vary, but their role and responsibilities are the same – to save lives, property and the environment.

In 2008, members of the Newfoundland and Labrador Association of Fire Services approached the provincial Fire Commissioner and requested that a working group/committee be established to research and report on what many considered a serious emerging issue – recruitment and retention. While the terms of reference for the committee’s work was not immediately defined, it was soon clear that all stakeholders needed to be brought to the table before a report of any kind could be developed. Shortly thereafter, officials from Fire and Emergency Services-Newfoundland and Labrador (FESNL), the Newfoundland and Labrador Association of Fire Services (NLAFS), along with members of the board of directors of Municipalities Newfoundland and Labrador (MNL) and the Professional Municipal Administrators (PMA) began drafting a terms of reference in anticipation of a report to be submitted to each organization for consideration.

Committee members include Mr. Bradley Power (Chair) and Mr. Tony Rose from Fire and Emergency Services-Newfoundland and Labrador, Mr. Melvin Harmum and Mr. John Paul from the Newfoundland and Labrador Association of Fire Services, Mr. Larry Hall and Mr. Keith Keating of Municipalities Newfoundland and Labrador, and Mr. Derek Bragg of the Professional Municipal Administrators Association. Each member has a vested interest or affiliation with the provincial fire protection services sector.
Terms of Reference
The Volunteer Recruitment and Retention Committee was bound by the following terms of reference:

1. The Volunteer Recruitment and Retention Committee (the Committee), will consult with regional municipal councils and fire chiefs/departments to identify and outline current recruitment and retention policies and procedures/programs that may be in place, and furthermore evaluate the success of these programs based upon the current membership numbers within the specific municipality/region;

2. The Committee will identify any positive or negative aspects of the recruitment and retention program in place within municipalities throughout the province;

3. The Committee will explore and identify the reason(s) for low recruitment numbers in the volunteer fire service;

4. The Committee will explore and identify the reason(s) for low retention within the volunteer fire service;

5. The Committee will provide stakeholders with a report outlining the issues associated with recruitment and retention in the volunteer fire service;

6. The Committee will provide suggestions as to how stakeholders may rectify and/or reverse the declining membership within the province’s volunteer fire services;

7. Further to approval, the Committee may devise a comprehensive recruitment and retention program to institute throughout the province, if recommended.
What Are Recruitment and Retention?

To determine if a recruitment and retention problem exists within a fire department, the administrators or chief must ask him or herself much more than whether or not there are enough firefighters to ride the truck, they must ask themselves do they have sufficient human resources for: suppression, prevention, public education, administration, inspections, support and logistics, apparatus and other tasks. Although many departments can function safely with 10 members, a fully operation department able to tackle any and all situations requires resources related to all of the above. However, in Newfoundland and Labrador, many departments lack some aspects of the required criteria.

Recruitment for the purpose of this report can be defined as the active solicitation of human resources for the purpose of providing safe and adequate fire protection within a city or town. Retention relates directly to the ability to keep or sustain members for the long-term.

Recruitment and retention relates directly to motivation. Motivation can be categorized as an individuals choice to initiate a certain action or task (such as joining a department), expend certain amounts of effort on that task (participation through training, social activities, etc.), and his/her persistence in expending effort over a period of time. The committee observed a volunteer firefighters’ motivation to expend effort on a given task is determined by three sets of perceptions: expectancies, instrumentalities, and the valence for rewards.
In relation to expectancies, firefighters who spend numerous hours on training and enhancing their skills as firefighters believe that the more effort they put in the greater effect they will have on their department. As an example, they expect a higher level of fire protection because of their contribution. Instrumentalities relate directly to the belief that improved performance/services deserve greater rewards. Finally, valence for rewards is the perceived attractiveness that a firefighter may have toward the reward such as knowing they will receive compensation for their effort or knowing they saved a life.

It was evident throughout our consultation with fire departments, municipalities and local service districts that recruitment and indeed retention can be clearly identified as a barrier to providing effective fire service in many Newfoundland and Labrador communities. Our committee agreed that we must ask the difficult question, why?
History of Fire Protection Services and Municipal Government

Throughout Newfoundland and Labrador, there are many examples of fire departments that were incorporated long before a municipality was established. Our group has observed on many occasions that there is an unclear delineation between roles and responsibilities related to the operation of fire protection - essentially “who should be doing what.” We concluded this has a direct effect on recruitment and retention efforts. The concept of a long established department not being attractive to younger individuals is ever present. Bridging this gap and receiving support from local elected officials through open dialogue is where success can be found.

However, it is just as important to note that many municipalities support their local fire department through great effort. By providing strong support throughout the budgeting process, allocating essential funding for equipment and training, and by fostering an open dialogue with departmental officers, a municipality and its fire department can operate in complete synergy.

Our committee found that this “ideal” scenario is indeed present in many communities, and we deem it important enough to stress at the early states of this report that many other communities have the ability and willingness to foster such a strong relationship, it is just a matter of opening communication and realizing each member of both a town council and a fire department play an essential role in the daily operation of a municipality.
Secondary Research on Recruitment and Retention

During the inaugural months, the committee reviewed a number of reports developed by other national and international groups pertaining to volunteer recruitment and retention. Although the reports were from different regions with different needs and outlooks, there are many similarities that were of importance to our research. These reports include:


Some of the key points extracted from these reports that correlate and/or are consistent with the finding of our group include:

1. First and foremost, no one wants to join a sinking ship. A fire department must be organized, respected, and credible and have a good public image in order to attract good people.

2. In many jurisdictions, no one single entity is holding fire departments accountable for the way in which they are operating.

3. Support from local councils is important. There must be direct relations with the Fire Department. Mandatory fire protection fees should be implemented and a budget line specifically for the fire department should be implemented.

4. Fire departments must send the correct recruitment message and screen applicants. The process must be fair and transparent.

5. Departments should appoint an individual within their department responsible for recruitment and retention, similar to fire prevention and inspections.

6. Getting something for nothing is no longer acceptable in the volunteer service. Volunteers need to be compensated in some way.

7. Tax payers who expect a certain level of service, should be the ones to pay for it.

Each point extracted from external reports was intriguing to our group to say the least. This is because on many occasions, our stakeholders expressed the same sentiments and concerns. Our
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committee will incorporate many of these points in the recommendations section further throughout this report.

Primary Research
From the beginning, it was evident that feedback and the opinions of individuals within our province’s municipalities were to be the most important aspect of our committee’s research. We utilized four opportunities to gather said information and feedback.

Newfoundland and Labrador Association of Fire Services
Between July 4 and 7 of 2008, members of our committee held a workshop with over 150 members of the Newfoundland and Labrador Association of Fire Services (NLAFS) 44th Annual Convention. This session provided deep insight into the perception of recruitment and retention by provincial fire protection personnel.

This valuable dialogue shaped many suggestions pertaining to the causes for recruitment and retention issues in some of our provincial fire departments, and also provided the committee with a number of suggestions and recommendations to be discussed within this report.

Municipalities Newfoundland and Labrador
During the Annual Municipalities Newfoundland and Labrador (MNL) convention in Corner Brook on October 8-11, 2008, over 120 members of various municipalities convened on an early morning session to discuss volunteer firefighter recruitment and retention. The turnout for this session was spectacular and it was said that it was one of the most interesting discussions of the entire weekend.

The outcome included many of the same suggestions derived from the NLAFS AGM, but with a municipal twist. It is important to note that many municipal councilors and mayors advocated to their colleagues how to begin taking fire protection more seriously, (more funding, more discussion, etc.). There was also significant discussion surrounding municipal taxing related to fire protection. It was obvious that the vast membership of MNL do consider fire protection as a vital and very important service within their cities and towns. Many of their suggestions and comments have shaped our recommendations further in this report.

Professional Municipal Administrators
The Annual General Meeting of the Professional Municipal Administrators (PMA - Formerly the Newfoundland and Labrador Association of Municipal Administrators) was held on April 23-26, 2008 in Corner Brook. Again, this was another opportunity to solicit feedback from another facet of fire protection administration – the town administrators themselves.

Feedback was similar to that of the MNL conference, with many in attendance promoting the importance of regular communication between a town/city and their fire department. Many of
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these individuals work with the fire departments daily, and it was refreshing to see how everyone agreed that fire protection was an essential municipal service, and furthermore there was a keen interest to make it better for the future. Many of the suggestions attained from this conference will be discussed in recommendations section of this report.

M.H.A. CONSULTATIONS
The Member for the House of Assembly in the District of Lewisporte, Mr. Wade Verge, was kind enough to undertake a number of consultations with his fellow colleagues for the purpose of our report. His focus remained on M.H.A.s from districts that were classified as “rural districts” and had at least one volunteer fire department within. His consultations were presented in a report to our committee.

There was no question that Mr. Verge’s research tapped a valuable group of individuals who advocate and work on behalf of many of their local fire departments, municipalities and local service districts regularly. His contribution was very valuable, and much appreciated.

His recommendations include:

1. Involvement in a fire department needs to be an enjoyable and an engaging activity. There were no reported problems with recruitment or retention in fire departments that are vibrant, active and socially healthy. Getting together for social activities helps to build camaraderie and commitment to the department. Local departments and communities should not underestimate the importance of “the social aspect” of fire fighting.

2. Firefighters need more recognition for the good work that they perform. Towns or regions that sponsor recognition dinners and other events that recognize Firefighters for their work seem to have fewer problems with recruitment and retention.

3. Plan to involve youth. Those departments that have made a deliberate effort to involve youth have had great success in attracting them to the force.

4. Participation of females needs to be more widely encouraged.

5. Provide all departments with full uniforms. When firefighters attend community events representing their department they need to be in full uniform. Having a well kept and fitting uniform will enhance the feeling of pride within the individual as they represent their fire department.

6. A plan needs to be put in place to support regionalization of departments and services. This should not be forced on communities but it should be fully supported and encouraged when the request comes from the grassroots.
7. Some communities offer complimentary snow clearing for firefighters. This initiative seems to be well received.

8. Complimentary licensing of one vehicle for firefighters was also recommended.

9. Enhance the provincial award program. It was generally felt that more recognition at the local level and the provincial level is needed.

10. Have a fitness room available for members at no personal cost to them. This will promote wellness and also encourage more social interaction with other members.

11. Training needs to be available regularly and at no cost to members.

12. Introduce a fire department fee at the municipal level to ensure funds are available for departments to carry out their duties.

Our committee completely agrees with all of Mr. Verge’s recommendations and we have incorporated some of his points within our own set of recommendations for this reason. A copy of Mr. Verge’s report in its entirety is available in the Appendix of this document.
SURVEYS
Another aspect of our research that provided the statistics we required to form recommendations came from a survey submitted to the members of the Newfoundland and Labrador Association of Fire Services, Municipalities Newfoundland and Labrador and the Professional Municipal Administrators. A copy of the survey can be found in the report Appendix.

In total, 60 fire departments (including 278 firefighters) and 12 municipalities* took part in our survey. The following communities were represented:

<table>
<thead>
<tr>
<th>Avondale</th>
<th>Gambo</th>
<th>Peterview</th>
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<tr>
<td>Badger</td>
<td>Gander</td>
<td>Placentia</td>
</tr>
<tr>
<td>Bay Roberts</td>
<td>Glovertown</td>
<td>Port Aux Choix</td>
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<tr>
<td>Bishops Falls</td>
<td>Goulds</td>
<td>Port Blandford</td>
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<tr>
<td>Bonavista</td>
<td>Grand Bank</td>
<td>Portugal Cove - St. Philips</td>
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<tr>
<td>Botwood</td>
<td>Grand Falls-Windsor</td>
<td>Ramea</td>
</tr>
<tr>
<td>Buchans</td>
<td>Harbour Grace</td>
<td>Southwest Arm</td>
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<tr>
<td>Burgeo</td>
<td>Heart's Delight – Islington</td>
<td>Springdale</td>
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<td>Burin</td>
<td>IOCC</td>
<td>St. Anthony</td>
</tr>
<tr>
<td>Campbellton</td>
<td>JBS</td>
<td>St. George's</td>
</tr>
<tr>
<td>Channel Port-Aux-Basque</td>
<td>Kippins</td>
<td>St. Lawrence</td>
</tr>
<tr>
<td>Churchill Falls</td>
<td>La Scie</td>
<td>Stephenville Crossing</td>
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<tr>
<td>Clarenville</td>
<td>Labrador City</td>
<td>Straights - Flowers Cove</td>
</tr>
<tr>
<td>Conception Bay South</td>
<td>Lewisport</td>
<td>Terra Nova</td>
</tr>
<tr>
<td>Cormack</td>
<td>Long Harbour - Mount Arlington Heights</td>
<td>Torbay</td>
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<tr>
<td>CPUM</td>
<td>Marystown</td>
<td>Triton</td>
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<tr>
<td>Deer Lake</td>
<td>Norman's Cove - Long Cove</td>
<td>Twillingate</td>
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<table>
<thead>
<tr>
<th>Eastport</th>
<th>Northern Bight</th>
<th>Victoria</th>
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<tbody>
<tr>
<td>Fogo</td>
<td>Old Perlican</td>
<td>Wabush</td>
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<tr>
<td>Fortune</td>
<td>Pasedena</td>
<td>Whitbourne</td>
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*Some surveys did not indicate a specific municipality and therefore may not be represented in the list above.

The survey asked various questions related to annual budgets, fire department administration, and most importantly, the causes related to low recruitment and retention.
Recruitment & Retention of Volunteer Firefighters 2009

Causes of Low Recruitment and Retention

The following table outlines our survey results reflecting the causes of low recruitment and retention in the fire protection service. The corresponding pie chart outlines the number of respondents who used one or more of the noted choices in their.

In alphabetical order, there were 18 identified causes associated with low recruitment and retention based on survey results.

<table>
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<tr>
<th>Commitment</th>
<th>Policy</th>
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<tr>
<td>Deceased</td>
<td>Relocation</td>
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<tr>
<td>Disagreements with councils and fire department</td>
<td>Relocation for work</td>
</tr>
<tr>
<td>Disciplinary-related</td>
<td>Resigned in protest</td>
</tr>
<tr>
<td>Family</td>
<td>Retirement</td>
</tr>
<tr>
<td>Full Time Firefighter</td>
<td>Retirement (age)</td>
</tr>
<tr>
<td>Fundraising</td>
<td>School-related</td>
</tr>
<tr>
<td>Health-related</td>
<td>Training</td>
</tr>
<tr>
<td>Isolation</td>
<td>Unknown</td>
</tr>
<tr>
<td>Personal</td>
<td>Work</td>
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Chart 1.0 – Responses
The pie chart below shows the vast number of responses related to individual causes attributed to low recruitment and retention.

Response Related to Cause

[Diagram showing responses]

Recruitment and Retention Efforts in Clarenville and Marystown
Our committee felt it was important to recognize the efforts by the Towns of Clarenville and Marystown to promote and encourage recruitment and retention of volunteer firefighters within their communities.

The town and local fire departments developed a recruitment strategy which included a week long promotional campaign which included distributing posters and brochures to the surrounding region and soliciting support for their fire department. The campaign concluded with an open house where prospective members could visit under a no pressure (to join) environment.

This promotional campaign was a huge success with many new members being recruited in a short period of time. The campaign focused on the positive image of a fire department and its members and how one can attain great personal satisfaction being a firefighter. Our committee was pleased to see such a valiant effort by these fire departments and towns, and will recommend later in this report that other communities to do the same type of campaign.
Committee Recommendations

The following recommendations were compiled based upon primary and secondary research, as well as through significant discussion with stakeholders throughout the 12 months period this committee has been working together. All recommendations have been agreed upon by all representatives and reflect only some of the recommended solutions to recruitment and retention of volunteer firefighters.

It is important to note that these recommendations relate to a small number of key points of concepts which include fire department operation, administration, training and communication. The recommendations have been generalized for a specific purpose as they may not reflect issues that affect each and every community. However, they do relate to and address the vast majority of the fire protection services, municipalities and local service districts throughout Newfoundland and Labrador.

1. GUIDANCE DOCUMENT

It is recommended that committee stakeholders develop a guidebook/handbook identifying the roles and responsibilities of a fire department and municipality and/or local service district.

RATIONALE: Our committee has found that effective fire protection within our cities and towns requires an easy to read document that outlines (in great detail) the role and responsibilities of each stakeholder. Clear delineation of these roles and responsibilities relate back to the operation and administration of a department which can potentially make joining easier and less confusing for potential new members. If they know what their role is in the various positions within a fire department; and furthermore know who will provide what (such as budgeting, training, etc.), they will be more likely to transition into a department more easily.

RESPONSIBILITY: There is no question that all stakeholders must participate in the development of this document. It must be mandated as an essential piece of any fire department by both the associations and FESNL. The committee envisions that as communities come on board and see the benefit this type of document and seminar provides, other will come on board too. The committee recommends another working group of the same representation be developed immediately for this purpose. All stakeholders must be at the table for it to be effective.
2. Regionalization Template

It is recommended that a template be devised that promotes regionalization of fire protection services in many areas of the province.

RATIONALE: On many occasions this concept was raised. Regionalization encompasses the pooling of resources whether specific to human resources or equipment availability. Knowing what we know today, and observing the successes some regions have had with this, our committee recommends that any opportunity to regionalize fire services be considered.

Essentially, two fire departments with low membership can easily become one fire department with just the right number of firefighters. This concept can provide various other benefits including larger financial resources, better use of current resources, joint funding applications, etc. This concept will require the support of all stakeholders and may require significant work on the part of FESNL and the Department of Municipal Affairs.

RESPONSIBILITY: It is recommended that a working group of all stakeholders begin to develop this template in consultation with the Municipalities Newfoundland and Labrador Community Cooperation Resource Centre, as well as the Regional Cooperation Division of the Department of Municipal Affairs. This solution has proved effective in many parts of the province, and more opportunities are certainly available based on our research.
3. **IMPROVING PUBLIC IMAGE**

It is recommended that all stakeholders individually begin the process of developing opportunities where fire departments may enhance their public image.

**RATIONALE:** This concept was common throughout our research. The value of a fire department, in the eyes of the public and potential new recruits, is often times measured by how organized and reputable a department is, and furthermore, how credible their operation is. These concepts are solved through enhanced funding for the upkeep of buildings and equipment. Promoting a healthy image makes it more appealing to new members as they will feel as they are becoming part of something they can be proud of. The image of a poorly maintained fire hall, vehicle or equipment has in many cases prevented departments from attaining new members.

Similarly, we believe it is important for a municipality to hold its fire department accountable in respect of operation and image. If a department is to be attractive to new members, current members must be dedicated, must respond to calls, and have a visible conviction toward the services they offer. All aspects of fire protection must be taken seriously at all times. It is indeed a matter of life and death.

Accountability and pride in the department can enhance public image, and has the ability to make potential new members want to be part of the fire department.

**RESPONSIBILITY:** This recommendation will require the support of all stakeholders, including FESNL, NLAFS, MNL, PMA, fire departments, municipalities and local service districts.

4. **ENHANCED TRAINING**

It is recommended that more training opportunities be developed for new and current members of volunteer fire departments and more funding be allocated for this purpose.

**Rationale:** It is impossible for all people to know all things. This is why regular training is essential. This issue has been raised in many instances by various organizations over the past number of years. There is no question that when you empower an individual with the skills they need to do a job they are more likely to stick with it. In relation to retention, the more engaged an individual is from the beginning and the more opportunity he or she is given to advance their knowledge, the more likely they are to carry it through their own lives, and pass it on to others.
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To elaborate, there are a number of key issues related to the provision of training to new recruits. Specifically, minimum standards are required for the protection and safety of new firefighters. Effective leave provisions must be developed in consultation with employers for this purpose or wage recovery must be offered (it is not acceptable to expect an individual to give up annual leave or holidays to take part in training as is the current practice). There must be sound cost recovery associated with expenses for training such as gas, accommodations and meals. Training should be targeted to those departments in greatest need, as well.

Opportunities for fire departments to train their members are offered at the FESNL Training School. The real problem that exists (noting that the training itself is free), is firefighters who provide this essential service to their communities should not be expected to pay for it themselves. While the Municipal Training and Development Corporation (MTDC) offers a 50/50 cost recovery on training related to fire protection, very few communities get the opportunity to avail of it. This committee recommends that additional funding be allocated for this specific purpose to the MTDC, and municipalities and local service districts should recognize the need for training more actively.

Training provides the essential skills required to save lives. It is hard to believe that it is not readily available to all those willing to participate and learn, simply because of funding restraints. Our committee recommends that all stakeholders undertake a review of how training is provided in their area and to make every possible effort to send more firefighters to the FESNL Training Schools.

RESPONSIBILITY: FESNL, MNL, PMA, MTDC and municipalities and local service districts.
5. **PUBLIC SUPPORT**

*It is recommended that municipalities, local service districts and all stakeholders solicit public support for recruitment and retention initiatives for their fire department by way of promoting the importance of fire protection services.*

**RATIONALE:** A resounding sentiment heard by our committee from coast to coast was that residents expect their roads to be cleared of snow, and when a fire breaks out they expect it to be extinguished. There are always expectations when addressing essential services. Our committee believes that in many cases, the importance of fire protection is not recognized.

Stemming from what many consider a societal norm, as an example, snow storms occur often times weekly in Newfoundland and Labrador, while fire strike less frequently. But the question must be considered, does this make fire protection any less important that snow clearing? There is no doubt residents expect firefighters to respond when they call. To ensure this happens, public support must be garnered to approve the purchase of essential equipment and the various other needs of a fire department.

**RESPONSIBILITY:** FESNL, municipalities and local service districts.

6. **PROVINCIAL FIRE PROTECTION AWARENESS DAY**

*It is recommended that all stakeholders observe a specific day/campaign geared toward public awareness and recruitment for fire protection services.*

**RATIONALE:** To solicit the required public support need to establish strong fire departments our committee recommends a provincial campaign centred on an awareness day for recruitment and retention. This day can raise awareness about how tax dollars are spent within the fire protection services. It can give residents the ability to see where their money is going, and furthermore it can act as an essential recruiting tool by showing individuals the benefit of becoming involved. This awareness day must reach out to women and youth specifically and express the value of the skills gained as a volunteer firefighter.

Similar to the annual Municipal Awareness Day, municipalities and local service districts can outline some of the services different fire departments provide, including high angle rescue, ice/cold water rescue, medical response, vehicle extrication, etc. It should showcase the fire hall, equipment and current members. This concept will require the support of all stakeholders and be empowered by generic promotional materials such as a standard brochure, poster and provincial advertising. Again, this can relate to fostering a positive image of the local fire department as well.
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RESPONSIBILITY: This recommendation will require the support of all stakeholders, including FESNL, NLAFS, MNL, PMA, fire departments, municipalities and local service districts.

7. EQUIPMENT

*It is recommended that all stakeholders support the purchase of equipment necessary to sustain current memberships and purchases that allow for new members to have the essential equipment they need.*

RATIONALE: There is no point recruiting new members if there are no tools or equipment for them to utilize. This is an issue within many fire departments through the province. On many occasions, new members have entered a fire department having to share bunker suits and other personal protective equipment. How can a fire department promote inclusion and retention of its members if individuals have to wait until a firefighter doesn’t show up and only then can they use the spare equipment to respond to a fire? Notably, many new recruits do it.

The provision of essential equipment is important to any fire department. No extra equipment means no extra capacity. Recruitment and retention is all about capacity building and sustainability, and without the required gear, this is impossible. Many fire departments respond to this by only recruiting as many individuals as the number of bunker suits they own, when in actual fact, they may need more members to be effective in their duties. Departments must complete appropriate assessments in this regard before ever considering recruiting. There is a risk that bringing on a new recruit knowing in advance that no equipment is available may turn that individual for serving in the capacity in the future. This can be detrimental to a department.

Our committee recommends that stakeholders support the purchase of the required equipment for new members, and furthermore enact a replacement policy so that firefighters remain safe and have the tools they need to do their job at all times.

RESPONSIBILITY: FESNL, municipalities and local service districts.

8. COMMUNICATION

*It is recommended that fire departments, municipalities and local service districts open the lines of communication between their respective members.*

RATIONALE: All stakeholders need to remember they are on the same team. Strong collaboration between elected officials and volunteer firefighters is extremely important.
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We have found that the most well organized and functioning fire departments have regular communication with their city/town specific to activities, needs, calls, training and staffing requirements. From our consultations we can conclude there is no doubt that fire protection is an essential service. Understanding how to best go about providing it may be the only hurdle to overcome, but it seems as though all involved see the need to enhance communication for the safety and security of residents. All outcomes related to better communication can help the recruitment and retention efforts when firefighters and departments are seen as a valued member of the team.

RESPONSIBILITY: This recommendation will require the support of all stakeholders, including FESNL, NLAFS, MNL, PMA, fire departments, municipalities and local service districts.
Conclusion

When our committee began the monumental task of researching and making recommendations on volunteer firefighter recruitment and retention, we knew there would be no quick fix. We knew a collaborative effort from all stakeholders was required throughout our committee’s process, and that the same approach is imperative in the future to make the aforementioned recommendations successful. The committee believes strongly that motivation and its various aspects are vital to the process of recruiting for the future. As well we agree communication is the other key to success. By working together - for one another - we can undoubtedly strengthen the fire protection services of Newfoundland and Labrador.

In conclusion, M.H.A. Wade Verge said it best in his consultation report when he says the key to recruitment and retention in our volunteer fire departments rests with volunteers taking pride in the work they perform. If an individual is proud of the work they do and they are proud of their Fire Department they’ve joined, they will take ownership of their department and be more committed to the cause. While monetary incentives may help attract and retain some members, it is recognized that this alone will not solve the recruitment and retention problem throughout Newfoundland and Labrador. Fire departments need equipment, the firefighters need proper training, and all people involved need to know their communities, the Provincial Government and their residents appreciate the work they perform. This is the motivation that will drive volunteerism successfully into future generations.
Appendix A – Survey
Recruitment & Retention of Volunteer Firefighters | 2009

Volunteer Firefighter Recruitment and Retention Committee
Survey

Committee Members: Bradley Power, Chair (FES-NL), Tony Rose (FES-NL), Melvin Harmum (NLAFS), John Paul (NLAFS), Derrick Bragg (NLAMA), Keith Keating (MNL), and Larry Hall (MNL).

Instructions:
Please fill out the following survey for the purpose to collect research about our province’s volunteer fire departments directly from our municipal officials. Your contribution will provide very worthwhile information that may be used to strengthen this committee’s report to the Newfoundland and Labrador Association of Fire Services and the Government of Newfoundland and Labrador. Please utilize the envelope with pre-paid postage to send back your response if you are unable to attend the Volunteer Recruitment and Retention Session, this weekend. If you require more space to write your answers, please staple additional pages to the survey. Thank you in advance.

1. What is the annual budget of your Fire Department? ________________________________

2. Do you: (pertaining to your Fire Department)
   a. Hold regular annual meetings or financial planning meetings? YES or NO
   b. Have a fire services committee? YES or NO

   Does your council receive monthly reports regarding:
   a. Activities YES or NO
   b. Equipment Needs YES or NO
   c. Calls YES or NO
   d. Training YES or NO
   e. Staffing YES or NO

3. Do you feel the regionalization of fire services in your area would be beneficial? Why or why not? ________________________________

4. What level of protection does your council provide for Firefighters (Insurances, loss of income, etc.)? ________________________________

5. Are you having a recruitment or retention problem in your municipality? YES or NO
Recruitment & Retention of Volunteer Firefighters | 2009

6. What do you feel the citizens of your town expect from their fire department? ____________________________________________________________________________________________
__________________________________________________________________________________________________________________________________________________________

7. What do you think are the causes of a lack of recruitment and retention of volunteer firefighters? ____________________________________________________________________________________________
__________________________________________________________________________________________________________________________________________________________

8. What suggestions do you have from a council point of view for solving a recruitment or retention problem? ____________________________________________________________________________________________
__________________________________________________________________________________________________________________________________________________________
__________________________________________________________________________________________________________________________________________________________

Thank you very much for your contribution to our committee!
Appendix B – M.H.A. Consultation
Volunteer Fire Departments

Input From M.H.A.'s

Recruitment Issues

Retention Issues

Recommendations for Future Growth.

Prepared by: Wade Verge
M.H.A. Lewisporte District

Prepared for: Honorable Dave Denine
Minister Municipal Affairs
Recruitment & Retention of Volunteer Firefighters | 2009

Introduction

On April 19, 2008 at the request of Honorable Dave Denine, Minister of Municipal Affairs, I attended a committee meeting of the Working Group on Recruitment and Retention of Volunteer Firefighters in Gander, NL. At this meeting I advised members that, to complement the work they were doing, and at the request of the Minister of Municipal Affairs I would be consulting with a number of M.H.A.’s to gather their input as it pertains to recruitment and retention of Firefighters in their respective districts. Bradley Power of FESNL, Chair of the Working Group was assigned to be my contact and liaise in this regard.

Dates and Attendees

All meetings were conducted at the Executive Boardroom in Department of Municipal Affairs. See table below for Dates and List of Attendees:

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<th>May 6, 2008</th>
<th>May 8, 2008</th>
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<tr>
<td>Wade Verge Lewisporte</td>
<td>Brad Power</td>
<td>Brad Power</td>
<td>Brad Power</td>
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<tr>
<td>Brad Power Dept. of M.A.</td>
<td>Ray Hunter GFW Green B. South</td>
<td>Clayton Forsey Exploits</td>
<td>Darryl Kelley Humber Valley</td>
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<tr>
<td>Tony Comact Port Au Port</td>
<td>Elizabeth Marshall Topsail</td>
<td>Susan Sullivan GFW Buchans</td>
<td>Keith Hutchings Ferryland</td>
</tr>
<tr>
<td>James Baker Labrador West</td>
<td>Terry Loder Bay of Islands</td>
<td>Wallace Young St. Barbe</td>
<td>Darin King Grand Bank</td>
</tr>
<tr>
<td>Harry Harding Bonavista North</td>
<td>John Dinn Kilbride</td>
<td>Calvin Peach Bellevue</td>
<td>Derrick Dalley Isles of Notre Dame</td>
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</tbody>
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Findings

1. A number of M.H.A.’s reported that their Fire Departments were having trouble recruiting and retaining volunteers. However, an equal number reported no problems with recruitment or retention.

2. Some Fire Departments have an aging group of volunteers. However, in some cases Fire Departments had many youth involved.
3. Seasonal Workers affect numbers. Numbers are reported as being low in the summer season while many of the seasonal workers are employed. As well, many communities are experiencing lower numbers due to the fact that an increasing number of residents are employed in Western Canada and commuting back and forth to their work locations for varying amounts of time.

4. M.H.A.’s report positive experiences in cases where Fire departments have regionalized services. Important to remember that regionalization has occurred with support of and input from communities affected.

5. Some volunteers decide not to get involved because of the expectation they have to be involved in fund raising efforts.

6. Most M.H.A.’s felt that aging and poorly functioning equipment frustrated many volunteers. This frustration negatively affected morale and also impacted the willingness of residents to get involved and to stay involved.

7. Lack of important training opportunities was mentioned by several members as another possible reason for some volunteers leaving the force.

Recommendations

A number of recommendations were presented by M.H.A.’s as possible solutions to the recruitment and retention problem. All participants could easily point to specific examples of very vibrant and successful Fire Departments within their districts. However, most participants also cited examples of departments that were encountering problems with recruitment and retention of volunteers.

1. Involvement in a Fire Department needs to be an enjoyable and an engaging activity. There were no reported problems with recruitment or retention in Fire Departments that are vibrant, active and socially healthy. Getting together for social activities helps to build camaraderie and commitment to the department. Local Departments and communities should not underestimate the importance of “the social aspect” of Fire Departments.

2. Firefighters need more recognition for the good work that they perform. Towns or regions that sponsor recognition dinners and other events that recognize Firefighters for their work seem to have fewer problems with recruitment and retention.

3. Plan to involve youth. Those departments that have made a deliberate effort to involve youth have had great success in attracting them to the force.

4. Participation of females needs to be more widely encouraged.

5. Provide all Departments with full uniforms. When Firefighters attend community events representing their department they need to be in full uniform. Having a well kept and
Recruitment & Retention of Volunteer Firefighters | 2009

fitting uniform will enhance the feeling of pride within the individual as they represent their Fire Department.

6. A plan needs to be put in place to support regionalization of departments and services. This should not be forced on communities but it should be fully supported and encouraged when the request comes from the grassroots.

7. Some communities offer complimentary snow clearing for Firefighters. This initiative seems to be well received.

8. Complimentary licensing of one vehicle for firefighters was also recommended.

9. Enhance the provincial award program. It was generally felt that more recognition at the local level and the provincial level is needed.

10. Have a fitness room available for members at no personal cost to them. This will promote wellness and also encourage more social interaction with other members.

11. Training needs to be available regularly and at no cost to members.

12. Introduce a Fire Department fee at the municipal level to ensure funds are available for departments to carry out their duties.

Conclusion

All members agreed that the key to recruitment and retention in our volunteer Fire departments rests with volunteers taking pride in the work they perform. If an individual is proud of the work they do and they are proud of their Fire Department they will take ownership of their Department and they will also be more committed to the cause. While monetary incentives may help attract and retain some members it is recognized that this alone will not solve the recruitment and retention problem. Fire departments need good equipment, the Firefighters need proper training and all people involved need to know their communities and their provincial government appreciate the work they perform.
Appendix “D”: Recruitment and Retention - Ontario

Public Fire Safety Guideline - Recruitment and Retention of Volunteer Firefighters
Volunteer Fire Service Personnel Recruitment and Retention

Scope and Application:
This guideline provides municipal officials and fire chiefs of volunteer and composite fire services with a general overview of principles to consider in the recruitment and retention of volunteers.

There are many factors that contribute to the success of a volunteer recruitment and retention program. These include implementing organized marketing, recruitment, selection, hiring, training and retention plans.

Establishing and following a formal recruitment and retention program offers fire services the opportunity to increase the likelihood of finding, and keeping, the right people, doing the right tasks, at the right time.

Definition of Volunteer:
According to the Fire Protection and Prevention Act 1997, a volunteer firefighter is defined as “a Firefighter who provides fire protection services either voluntarily or for a nominal consideration, honorarium, training or activity allowance. (‘pompier volontaire’) 1997, c. 4, s. 1 (1); 2001, c. 25, s. 475 (1).”

The majority of fire departments in Ontario (450 out of 478) utilize the services of volunteer fire service personnel. Recognized for their commitment and generosity, saving residents in Ontario more than an estimated one billion dollars annually, these professionals strive to provide skilled, competent and caring service.

Fire services that rely on volunteers to comprise, or enhance, their staffing capability continue to face the challenge of recruiting and retaining a sufficient number of capable and experienced personnel. This impacts on the effective, efficient, safe and timely delivery of fire protection services.

Recruitment and Retention Program:

The Benefits
A coordinated, organized program demonstrates:
• how seriously the leadership takes the services provided and the individuals who provide that service,
• sound risk management principles,
• proactive vs. reactive leadership within the Department, and
• leadership’s commitment to recognize volunteers, families and employers who support volunteerism.

It identifies:
• shortfalls and availability of volunteers in the community and,
• the number, type and quality of volunteers required to meet current or future needs.

It allows planning for:
• recruitment and selection,
• retention and succession, and
• training and development of volunteers.

**Responsibility for Recruitment**

Recruiting and retaining volunteers does take effort. Creating a committee within the municipality and assigning specific tasks can create opportunities for others besides the leadership to contribute to the growth of the fire service and allows for a more concentrated effort.

**Annual Recruitment and Retention Plan**

An annual recruitment and retention plan is a cyclic, ongoing process that will assist the fire service in planning and focusing its efforts. It should be a logical consideration of the time of the year, changing commitments throughout the seasons, weather, and psychological impact of seasons, milestones in the Department, annual events and other trends. This will prevent the Department from coming up short in membership by not having good candidates to replace those leaving.

**Policies and Guidelines**

Fire service leaders benefit from having the necessary policies and procedures to ensure a safe, lawful, organized, empowering, non-discriminatory environment for their volunteers. No matter
how large or small a Department, policies and operating guidelines are essential management tools that set the standard for conduct and provide guidance for action. It is suggested that existing municipal policies, if available, be referenced.

**Evaluation**

Evaluation of the recruitment and retention program is necessary to identify strengths and areas to improve. It is an ongoing process that is built into all the components of the program.

**Components in the Recruitment and Retention Cycle:**

**Pre-Recruitment**

Prior to recruiting, it would be beneficial to conduct a needs assessment to determine the role and number of volunteers required. Completing a Community Profile will determine community members who may best fit those roles. Answering these questions prior to recruiting enables the fire services to target specific individuals for specific roles and may increase the chance of success.

**Recruitment**

To promote diversity and involve volunteers with different skill sets, knowledge and perspectives, more than one recruitment method is necessary. Regardless of the method and knowing the Department is seeking the best possible candidates, effective marketing and communication strategies are necessary to draw the interest of potential volunteers.

**Selection and Hiring**

Once received and acknowledged, all applicants require screening to determine those who will move on to the next step in the hiring process.

The Fire Service takes great pride in service to communities. A screening process is essential to demonstrate that the volunteers serve in the community’s best interest. The leadership will have to decide which screening methods and tools are appropriate for their Department and should ensure that they reflect human rights and privacy legislation and existing municipal policies.

Upon selection, a written agreement between the volunteer and the fire department will ensure that expectations and responsibilities for each side are clearly identified and agreed to.

**Orientation and Probation**

Fire Departments and their volunteers will benefit from having an organized system to orient, train and advance recruits. One of the most successful and safe approaches for developing volunteers and establishing a commitment is to initially offer specific tasks that allow them to become involved in a limited way, followed by opportunities to grow into a role with more responsibilities.
**Ongoing Recruitment Efforts**

Successful recruitment efforts should be ongoing throughout the year to ensure that there is a waiting list of interested individuals to draw from.

**Ongoing Retention Efforts**

Recruiting and training new volunteers is just the beginning. The long-term challenge is to create an environment in which individuals continue to be motivated, interested, challenged, supported and satisfied with the work they’ve accomplished. Factors that contribute to this environment include leadership practices, operating guidelines, recognition initiatives, support efforts, teamwork and fellowship.

**Exit Processes**

When an individual leaves the fire department, it is a good opportunity to solicit input to determine the department’s strengths and opportunities for improvement. Exit processes should reflect understanding that, whether leaving on a positive or negative note, the volunteer and the fire department deserve fair and respectful treatment.

**Resource Book:**

The Application of Recruitment and Retention Principles:

The Volunteer Recruitment and Retention Resource Book that supports this guideline, was developed by the Ontario Fire Marshal’s Office, in collaboration with representatives from the Ontario Fire Service.

This resource describes effective practices and strategies for recruitment and retention of Volunteer Fire Service personnel. It also provides a compilation of tools and templates that can be used to support the best practice or strategy. These may be photocopied or edited to meet the needs of the individual Fire Service.

A CD-ROM and printed copy of this resource has been made available to all Fire Services that maintain a Volunteer complement. It can also be accessed and downloaded from the Ontario Fire Marshal’s public access website [http://www.mcscs.jus.gov.on.ca/](http://www.mcscs.jus.gov.on.ca/).

**Codes, Standards & Best Practices:**

Codes, standards and best practices resources are available to assist in establishing local policy. All are available at [http://www.mcscs.jus.gov.on.ca/](http://www.mcscs.jus.gov.on.ca/).

**Volunteer Resource Management:**
The following resources and links describe effective practices and strategies for Volunteer Resource Management. The principles and topics can be applied to the fire service.

HR Council for the Voluntary and Non-Profit Sector [http://www.hrvs-rhsbc.ca](http://www.hrvs-rhsbc.ca)
Knowledge Development Centre, Canada Volunteerism Initiative [http://www.kdc-cdc.ca](http://www.kdc-cdc.ca)

Please feel free to copy and distribute this document. We ask that the document not be altered in any way, that the Office of the Fire Marshal be credited and that the documents be used for non-commercial purposes only.

**Additional References:**

See also:

Office of the Fire Marshal’s Public Fire Safety Guidelines

The following guidelines can be referenced when conducting a needs assessment to determine the role, quantity and characteristics of volunteers required by the fire service.

[04-08A-03](http://example.com) Optimizing Rural Emergency Response

[04-12-13](http://example.com) Core Services (Response and Support) and Associated Guidelines

[04-40A-03](http://example.com) Simplified Risk Assessment
Appendix “E”: Fire Underwriters Information

Information relating to grading of vehicles used for more than one purpose
Fire Underwriters Grading System and Replacement Schedule

Engine/Pumper Service

The Fire Underwrites Survey (FUS) is reviewed by insurance companies and as long as the fire department adheres to the recommended replacement timelines through an identified capital replacement schedule, then the department will retain its fire rating (in relation to this area).

Fire departments are evaluated for the number of engines/pumpers in service relative to the overall fire potential and the area being protected. Engine/pumper apparatus are required to be adequately housed and staffed in order to receive full credit.

Fire apparatus that serve dual purposes are evaluated based on the primary duty it serves on the fire ground. For example, a ladder/aerial apparatus with a fire pump may be credited in one of two ways.

- 100 percent credit as a ladder/aerial apparatus and 50 percent credit as an engine/pumper, or
- 100 percent credit as an engine/pumper apparatus and 50 percent credit as a ladder/aerial apparatus.

This depends upon the number of apparatus a department has available and where credit should be distributed properly in the grading depending on the primary use of the fire apparatus.

The maximum acceptable age of apparatus specified in the fire insurance grading index is 20 years to receive maximum credit.

Ladder/Aerial Service

As noted in the previous section, fire apparatus that may serve dual purposes are evaluated on the primary duty it serves on the fire scene.

When reviewing ladder/aerial apparatus Fire Underwriters recommends that areas with five buildings that are 3 storeys or 10 m (35ft) or more in height, or districts that have a Basic Fire Flow great than 3,300 Igpm (15,000 liters per minute), or any combination of these criteria should have a ladder/aerial company.
Appendix “F”: FUS Aerial Bulletin

Fire Underwriters Survey Technical Bulletin on “Ladders and Aerials: Where are They Required or Needed”
LADDERS AND AERIALS: WHEN ARE THEY REQUIRED OR NEEDED?

Numerous standards are used to determine the need for aerial apparatus and ladder equipment within communities. This type of apparatus is typically needed to provide a reasonable level of response within a community when buildings of an increased risk profile (fire) are permitted to be constructed within the community.

Please find the following information regarding the requirements for aerial apparatus/ladder companies from the Fire Underwriters Survey Classification Standard for Public Fire Protection.

Fire Underwriters Survey

Ladder/Service company operations are normally intended to provide primary property protection operations of
1.) Forcible entry;
2.) Utility shut-off;
3.) Ladder placement;
4.) Ventilation;
5.) Salvage and Overhaut;
6.) Lighting.

Response areas with 5 buildings that are 5 stories or 10.7 metres (35 feet) or more in height, or districts that have a Basic Fire Flow greater than 15,000 LPM (3,300 IGPML), or any combination of these criteria, should have a ladder company. The height of all buildings in the community, including those protected by automatic sprinklers, is considered when determining the number of needed ladder companies.
When no individual response area/district alone needs a ladder company, at least one ladder company is needed if the sum of buildings in the fire protection area meets the above criteria.”

The needed length of an aerial ladder, an elevating platform and an elevating stream device shall be determined by the height of the tallest building in the ladder/service district (fire protection area) used to determine the need for a ladder company. One storey normally equals at least 3 metres (10 feet). Building setback is not to be considered in the height determination. An allowance is built into the ladder design for normal access. The maximum height needed for grading purposes shall be 30.5 metres (100 feet).
Exception: When the height of the tallest building is 15.2 metres (50 feet) or less no credit shall be given for an aerial ladder, elevating platform or elevating stream device that has a length less than 15.2 metres (50 feet). This provision is necessary to ensure that the water stream from an elevating stream device has additional "reach" for large area, low height buildings, and the aerial ladder or elevating platform may be extended to compensate for possible topographical conditions that may exist. See Fire Underwriters Survey - Table of Effective Response (attached).

Furthermore, please find the following information regarding communities' need for aerial apparatus/ladder companies within the National Fire Protection Association.

**NFPA**

**Response Capabilities:** The fire department should be prepared to provide the necessary response of apparatus, equipment and staffing to control the anticipated routine fire load for its community.

**NFPA Fire Protection Handbook, 20th Edition** cites the following apparatus response for each designated condition:

**HIGH-HAZARD OCCUPANCIES** (schools, hospitals, nursing homes, explosive plants, refineries, high-rise buildings, and other high-risk or large fire potential occupancies):

*At least four pumers, two ladder trucks (or combination apparatus with equivalent capabilities), two chief officers, and other specialized apparatus as may be needed to cope with the combustible involved; not fewer than 24 firefighters and two chief officers.*

**MEDIUM-HAZARD OCCUPANCIES** (apartments, offices, mercantile and industrial occupancies not normally requiring extensive rescue or firefighting forces):

*At least three pumers, one ladder truck (or combination apparatus with equivalent capabilities), one chief officer, and other specialized apparatus as may be needed or available; not fewer than 16 firefighters and one chief officer.*

**LOW-HAZARD OCCUPANCIES** (one-, two-, or three-family dwellings and scattered small businesses and industrial occupancies):
At least two pumper(s), one ladder truck (or combination apparatus with equivalent capabilities), one chief officer, and other specialized apparatus as may be needed or available: not fewer than 12 firefighters and one chief officer.

In addition to the previous references, the following excerpt from the 2006 BC Building Code is also important to consider when selecting the appropriate level of fire department response capacity and building design requirements with regard to built-in protection levels (passive and active fire protection systems).


A-3 Application of Part 3.

In applying the requirements of this Part, it is intended that they be applied with discretion to buildings of unusual configuration that do not clearly conform to the specific requirements, or to buildings in which processes are carried out which make compliance with particular requirements in this Part impracticable. The definition of “building” as it applies to this Code is general and encompasses most structures, including those which would not normally be considered as buildings in the layman’s sense. This occurs more often in industrial uses, particularly those involving manufacturing facilities and equipment that require specialized design that may make it impracticable to follow the specific requirements of this Part. Steel mills, aluminum plants, refining, power generation and liquid storage facilities are examples. A water tank or an oil refinery, for example, has no floor area, so it is obvious that requirements for exits from floor areas would not apply. Requirements for structural fire protection in large steel mills and pulp and paper mills, particularly in certain portions, may not be practicable to achieve in terms of the construction normally used and the operations for which the space is to be used. In other portions of the same building, however, it may be quite reasonable to require that the provisions of this Part be applied (e.g., the office portions). Similarly, areas of industrial occupancy which may be occupied only periodically by service staff, such as equipment penthouses, normally would not need to have the same type of exit facility as floor areas occupied on a continuing basis. It is expected that judgment will be exercised in evaluating the application of a requirement in those cases when extenuating circumstances require special consideration, provided the occupants’ safety is not endangered.

The provisions in this Part for fire protection features installed in buildings are intended to provide a minimum acceptable level of public safety. It is intended that all fire protection features of a building, whether required or not, will be designed in conformance with good fire protection engineering practice and will meet the appropriate installation requirements in relevant standards. Good design is necessary to ensure that the level of public safety established by the Code requirements will not be reduced by a voluntary installation.
Firefighting Assumptions

The requirements of this Part are based on the assumption that firefighting capabilities are available in the event of a fire emergency. These firefighting capabilities may take the form of a paid or volunteer public fire department or in some cases a private fire brigade. If these firefighting capabilities are not available, additional fire safety measures may be required.

Firefighting capability can vary from municipality to municipality. Generally, larger municipalities have greater firefighting capability than smaller ones. Similarly, older, well established municipalities may have better firefighting facilities than newly formed or rapidly growing ones. The level of municipal fire protection considered to be adequate will normally depend on both the size of the municipality (i.e., the number of buildings to be protected) and the size of buildings within that municipality. Since larger buildings tend to be located in larger municipalities, they are generally, but not always, favoured with a higher level of municipal protection.

Although it is reasonable to consider that some level of municipal firefighting capability was assumed in developing the fire safety provisions in Part 3, this was not done on a consistent or defined basis. The requirements in the Code, while developed in the light of commonly prevailing municipal fire protection levels, do not attempt to relate the size of building to the level of municipal protection. The responsibility for controlling the maximum size of building to be permitted in a municipality in relation to local firefighting capability rests with the municipality. If a proposed building is too large, either in terms of floor area or building height, to receive reasonable protection from the municipal fire department, fire protection requirements in addition to those prescribed in this Code, may be necessary to compensate for this deficiency. Automatic sprinkler protection may be one option to be considered.

Alternatively, the municipality may, in light of its firefighting capability, elect to introduce zoning restrictions to ensure that the maximum building size is related to available municipal fire protection facilities. This is, by necessity, a somewhat arbitrary decision and should be made in consultation with the local firefighting service, who should have an appreciation of their capability to fight fires.

The requirements of Subsection 3.2.3. are intended to prevent fire spread from thermal radiation assuming there is adequate firefighting available. It has been found that periods of from 10 to 30 minutes usually elapse between the outbreak of fire in a building that is not protected with an automatic sprinkler system and the attainment of high radiation levels. During this period, the specified spatial separations should prove adequate to inhibit ignition of an exposed building face or the interior of an adjacent building by radiation. Subsequently, however, reduction of the fire intensity by firefighting and the protective wetting of the exposed building face will often be necessary as supplementary measures to inhibit fire spread.
In the case of a building that is sprinklered throughout, the automatic sprinkler system should control the fire to an extent that radiation to neighbouring buildings should be minimal. Although there will be some radiation effect on a sprinklered building from a fire in a neighbouring building, the internal sprinkler system should control any fires that might be ignited in the building and thereby minimize the possibility of the fire spreading into the exposed building. NFPA 80A, “Protection of Buildings from Exterior Fire Exposures,” provides additional information on the possibility of fire spread at building exteriors.

The water supply requirements for fire protection installations depend on the requirements of any automatic sprinkler installations and also on the number of fire streams that may be needed at any fire, having regard to the length of time the streams will have to be used. Both these factors are largely influenced by the conditions at the building to be equipped, and the quantity and pressure of water needed for the protection of both the interior and exterior of the building must be ascertained before the water supply is decided upon. Acceptable water supplies may be a public waterworks system that has adequate pressure and discharge capacity, automatic fire pumps, pressure tanks, manually controlled fire pumps in combination with pressure tanks, gravity tanks, and manually controlled fire pumps operated by remote control devices at each hose station.

For further information regarding the acceptability of emergency apparatus for fire insurance grading purposes, please contact:

<table>
<thead>
<tr>
<th>Western Canada</th>
<th>Quebec</th>
<th>Ontario</th>
<th>Atlantic Canada</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire Underwriters Survey 3999 Henning Drive Burnaby, BC V5C 6P9</td>
<td>Fire Underwriters Survey 235, boul. Crémazie E Montreal, Quebec H2M 1M2</td>
<td>Fire Underwriters Survey 175 Commerce Valley Drive, West Markham, Ontario L3T 7R6</td>
<td>Fire Underwriters Survey 230 Brownlow Avenue, Suite 300 Dartmouth, Nova Scotia B3B 1L2</td>
</tr>
<tr>
<td>1-800-665-5661</td>
<td>1-800-763-5361</td>
<td>1-800-766-8080</td>
<td>1-877-634-9564</td>
</tr>
</tbody>
</table>

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Fogo Island Fire Service Review 155
Appendix “G”: Operational Guideline Template

Basic Template for the development of Departmental Operating Guidelines
Fire Department Operating Guideline

1. Purpose
Describe the process for (official name of OG).

Describe relevant background information.

2. Scope
Identify the intended audience and/or activities where the OG may be relevant.

3. Prerequisites
Outline information required before proceeding with the listed procedure; for example, worksheets, documents, IFAS reports, etc.

4. Responsibilities
Identify the personnel that have a primary role in the OG and describe how their responsibilities relate to this OG. If necessary, include contact information.

5. Procedure
Provide the steps required to perform this procedure (who, what, when, where, why, how). Include a process flowchart.

6. References
List resources that may be useful when performing the procedure; for example, Admin policies, Municipal Code, government standards and other SOPs.

7. Definitions
Identify and define frequently used terms or acronyms. Provide additional and/or relevant information needed to understand this OG
Appendix “H”: Comprehensive Fire Safety Effectiveness Model

Considerations for Fire Protection & Prevention In Your Community
The following document is taken from a compilation of documents and information from various sources including the Office of the Fire Marshal (Ontario). It is to provide some guidelines and resources in developing a fire prevention strategy for your community.

**Fire Protection & Prevention In Your Community**

Every day, local elected leaders, managers and fire chiefs are faced with decisions relating to the provision of fire and other related emergency services for their community. Now, more than ever there are constant pressures of doing "more with less". Many government officials are hard-pressed to justify any increase in expenditures unless they can be attributed directly to improved or expanded service delivery in the community. This effort has often been hampered by the lack of criteria by which a community can determine the level and quality of fire and other related emergency services it provides to its residents. The *Comprehensive Fire Safety Effectiveness Model* is a document which can assist communities in evaluating their level of fire safety.

The level and amount of fire protection provided is determined by the residents of the community through decisions made by and support provided by the local municipal council. Due to a wide variety of factors, the fire service finds itself in a period of change. Increased community expectations coupled with reduced financial resources are forcing all communities to critically assess their fire protection needs and to develop new and innovative ways of providing the most cost effective level of service. A refocus on fire protection priorities is providing progressive fire departments and communities with an exciting opportunity to enhance community fire safety. There is more to providing fire protection than trucks, stations, firefighters and equipment.

The *Comprehensive Fire Safety Effectiveness Strategy* can be used as a basis for evaluating fire safety effectiveness in your community. This model looks at community fire protection as the sum of eight key components, all of which impact on the fire safety of the community. Deficiencies in one of the components can be offset by enhancements in another component or components.

**Community Master Fire Protection Plan**

Every fire department should be guided by a master or strategic plan. This *Community Master Fire Protection Plan* traditionally focused on the identification of fire hazards and planning an appropriate suppression force response. Today, hazard or risk assessment has expanded well beyond the fire problem in the community to include emergency medical incidents, hazardous materials incidents and many other emergency situations. Paradigms are being shifted to emphasize the concept of fire prevention and control systems as communities attempt to effectively reduce losses experienced.
This document should include plans for human resources and program financial support as well as the many external influences that impact on the fire service. The information contained with the *Community Master Fire Protection Plan* should provide a clear and concise overview of the most recently adopted organizational goals and objectives, budgetary commitments, mission statements and assessments of organizational activity. The document should cover a long range planning period of five to ten years.

This chart shows each of the factors which make up the comprehensive model. Although the chart is divided equally, each factor will in reality contribute differently to the total level of protection provided to a community.
This chart shows how the comprehensive model can be applied to a typical fire department. The "gap" depicts the difference between the existing level of protection and the ideal.
It is critical that the fire department be guided by a written philosophy, general goals and specific objectives which are consistent with the legal mission of the department and are appropriate for the community it serves. These should all be integral components of the Community Master Fire Protection Plan.

Application of the Comprehensive Fire Safety Effectiveness Model will enable municipalities to make informed choices by providing an objective and innovative approach to public fire protection - a new way of thinking. Communities are able to determine if the level of service provided matches the risk in the community.

1. **Impact Of Fire**:

The impact of fire in any community can be significant with far reaching consequences. Not only do fires result in deaths and personal injuries but they also cause substantial property and environmental loss. Often overlooked are factors such as the historical value of unique local properties as well as the potential for lost tax assessment. There are many communities where the loss of a particular occupancy will have a serious impact on the local economy. Involvement in fire often has a negative psychological impact on those affected.

Every community should carefully assess the total impact of fire. This assessment should be used as a basis for a Community Master Fire Protection Plan that addresses all areas of community fire safety including fire prevention and life safety as well as the delivery of suppression and rescue services.

- Does your community have a property whose loss would result in a significant financial burden to the community?
- Does your community have a property whose loss would result in a significant impact of local employment?
- Does your community have a property which if involved in fire would pose a significant environment risk?
- Does the master fire protection plan adequately consider the impact of a major fire?
2. **Fire Prevention Program Effectiveness:**

- Perhaps the most important component of and community's fire protection services is the effectiveness of its fire prevention program. Legislation, regulations and standards pertaining to fire safety focus primarily on fire prevention. Enforcement of these codes is one of the most effective ways of reducing the loss of life and property due to fire. In addition, public fire safety education programs have the potential to substantially reduce the loss of life and property due to fire.

Every community should strive to provide an adequate, effective and efficient program directed toward fire prevention, life safety, risk reduction of hazards, the detection, reporting of fire and other emergencies, the provision of occupant safety and exiting and the provisions for first aid firefighting equipment.

- Does your community have a fire prevention and public education policy that adequately addresses:
  - inspections?
  - public education?
  - code enforcement?
  - investigation?

3. **Public Attitude:**

North Americans tend to be more complacent about fires and the resulting losses than other parts of the industrialized world. Communities often accept the consequences of fire and provide community support. Comprehensive insurance packages are available to mitigate damages.

Communities need to assess the resident's attitudes toward fire to determine what role it plays in determining the extent of fire losses. Properly designed public fire safety education programs will significantly improve public attitudes toward the prevention of fire. This will result in lower fire losses.

Every community should assess public attitudes toward fire and life safety issues. This assessment should be used to develop and deliver public fire safety education programs to enhance community fire safety.

- Do the residents of your community demonstrate an interest in public fire safety?
- Is there a general awareness of fire safety in your community?
- Is there a sense of personal responsibility for one's own safety within the community?

4. **Fire Risk:**
The characteristics of your community affect the level of fire risk that needs to be protected against. Older buildings pose a different set of problems than newer buildings constructed to current construction codes. High rise, commercial and industrial occupancies each present unique factors which must be considered. Construction, occupancy type, water supply, exposure risks, furnishings and the risk which the combination of these factors pose to the occupants must be assessed. The presence of effective built-in suppression and/or protection measures can reduce the fire risk.

Statistics in most jurisdictions show that most structural fire deaths are in single family, detached, residential occupancies.

Every community should carefully assess its fire risk. The results of this risk assessment should be used as a basis for determining the level, type and amount of fire protection provided and should be a critical factor in the development of the community master fire protection plan.

- Has your community assessed the fire risk?
- Does your community have a master fire protection plan which takes into account the results of your fire risk analysis?
- Has the fire department identified all the possible actions it could take to reduce the number of fire incidents that occur in the community?
- Does your community planning process consider the impact of new developments and industries on the fire department?

5. Detection Capabilities:

The presence of early warning detection capabilities notifies occupants and allows them sufficient time to escape. It also allows for earlier notification of the fire department. Communities who encourage the widespread use of early warning detection systems have the potential of significantly reducing notification time, which, when coupled with effective fire department suppression, results in a corresponding reduction of loss of life, injuries and damage to property from fire.

Every community should develop and implement programs that promote the use of early warning detection systems in all occupancies. These programs should be a fire protection priority.

- Does your community have a program to ensure that all occupancies are provided with adequate early warning detection devices?
- Does your community have a program to ensure that residents are familiar with the importance and proper maintenance of early warning detection devices?
- Does your community promote the use of direct connect early warning detection devices in residential as well as commercial, industrial and assembly occupancies.

6. Built-In Suppression Capabilities:

Traditionally, the use of built-in suppression has been limited to fixed fire protection systems associated with assembly, commercial, industrial and manufacturing occupancies. Application of this concept has been limited in the residential environment. These systems, particularly the use of automatic sprinkler systems play an important role in minimizing the effects of fire by
controlling its spread and growth. This enables the fire department to extinguish the fire more quickly and easily.

Although effective in newer buildings, it is often difficult if not impossible to provide for built-in suppression systems that effectively control fires in wall cavities and concealed spaces associated with certain older types of construction or reconstruction.

The use of built-in suppression systems should be a fire safety priority in all communities. Programs should be developed and delivered that promote the advantages of built-in suppression systems for residential, commercial, industrial and assembly occupancies.

- Does your community promote the use of built-in suppression devices in all types of occupancies
  - residential?
  - commercial?
  - industrial?
  - assembly?
  - institutional?

- Does your community consider built-in suppression devices and early warning detection as an alternative to traditional concepts of fire protection?

7. **Intervention Time:**

This is the time from ignition until effective firefighting streams can be applied to the fire. There are many factors influencing this component of the model:

- the time required to detect the fire
- notification time from the public
- notification time to the firefighters
- preparation time for the firefighters to leave the station
- the distance between the fire station and the response location
- the layout of the community
- impediments such as weather, construction, traffic jams, lack of roads, etc.
- set-up time

Fire department intervention time is crucial in determining the consequences of a fire in terms of deaths, injuries and loss of property and damage to the environment. Effective fire prevention and public education programs can reduce intervention time which will result in increased fire department effectiveness.
Every community should develop and implement a range of programs and initiatives that reduce intervention time. These programs and initiatives should address all aspects of intervention time from the time required to detect the fire to the set-up time of the fire department.

- Are all occupancies in your community equipped with suitable smoke alarms and provided with fire emergency escape plans?
- Do all residents in your community know how to report a fire or other emergency?
- Does your community have a common fire emergency reporting number?
- Is the fire department dispatched by an appropriate dispatch facility?
- Does the community's master fire protection plan consider the different turn-out times for volunteer and/or full-time firefighters?
- Has the department instituted an appropriate fire department training and education program?
- Are all structures within the community clearly identified using an accepted numbering system?
- Has the department instituted a policy of having the closest fire department respond even though that fire department may be from another municipality?

8. Fireground Effectiveness:

The fireground effectiveness of the fire department has a wide range of benefits for your community. Not only does the fire department's performance affect the degree of damage to the environment and property, it also has a direct relationship to personal injury and death from fire. Many factors influence the effectiveness of any fire department. Included in these factors are:

- fire department organization
- community support of fire department
- firefighter availability
- firefighter and fire officer training
- adequate resources which are properly maintained
- time effective response to emergency incidents
The fire department should strive to provide an adequate, effective and efficient fire suppression program designed to control/extinguish fires for the purpose of protecting people from injury, death or property loss.

- Does your fire department have a comprehensive training program and evaluation system for all positions?
- Does the fire department have a system to ensure that an adequate number of trained personnel respond to all emergencies within a reasonable time period?
- Is your fire department provided with adequate resources to safely and effectively handle the risks it will be called upon to mitigate?
- Does the fire department use standard operating guidelines to define expected fire department actions for the wide variety of situations it might encounter?
- Does your fire department have automatic response agreements to guarantee an adequate level of personnel at all times?

The answers to the questions in this document will provide you with some indication of the level of fire safety in your community, however this is only the start. Application of the Comprehensive Fire Safety Effectiveness Model will permit you to develop a plan for the safe, effective and economical delivery of fire protection services in your community.
**Simplified Risk Assessment**

**Purpose:**
Municipalities have a responsibility to provide public education with respect to fire safety and certain components of fire prevention. Conducting a simplified risk assessment is the first step towards compliance with these requirements and is intended to identify information required by a municipality to make informed decisions about the programs and activities necessary to effectively manage the community fire risk based upon local needs and circumstances.

**Process:**
In general terms, needs and circumstances relate to a municipality's economic situation, geography, population, building profiles and service delivery system, e.g., volunteer fire department.

Conducting a simplified risk assessment is a practical information gathering and analyzing exercise intended to create a community fire profile that will aid in identifying appropriate programs or activities that can be implemented to effectively address the community's fire safety needs.

At a minimum, a community fire safety program should include:

- a simplified risk assessment
- a smoke alarm program
- distribution of fire safety education materials, and
- participating in inspections upon complaint or when requested to assist with Fire Code compliance.

As each community is different, the simplified risk assessment and ensuing fire concern profile will assist in identifying the degree to which these activities are required in accordance with local needs and circumstances. The simplified risk assessment is made up of the following components:

- demographic profile
- building stock profile
- local and provincial fire loss profiles
- information analysis and evaluation
- priority setting for compliance
- implementing solutions

**Assessment Components and Risk Considerations:**
The following categories of information are important to consider when gathering data and developing a community fire profile through a simplified risk assessment.

**Community Demographic Profile**
• Population makeup, based on age groupings
• Vulnerable individuals or occupancies
• Cultural differences, such as language and customs
• Seasonal population shifts in tourist areas, mobile homes, trailer parks, university/college locales, etc.
• Other considerations specific to certain municipalities

**Building Stock Profile**
• Breakdown by Building Code occupancy classification
• Building density (core areas)
• Age of building stock
• Potential high fire risk occupancies (industrial, commercial, residential)
• Potential high life safety risk occupancies (hospitals, nursing homes, detention centres, group homes, residential care, retirement homes)
• Potential economic/employment/environmental impact

**Municipal Fire Loss Profile**
• Deaths/injuries
• Dollar loss
• Breakdown by occupancy classification
• The information gathered in each of the 3 categories must be examined, evaluated and analysed to identify the community fire profile and to identify potential fire concerns.

**Provincial Fire Loss Profile**
To assist municipalities in interpreting and understanding the significance of their municipal fire loss data, provincial data is provided in the following areas:
• fires by property type
• fire deaths by property type
• fire deaths by age of victim
• fire loss ($) by property type
• smoke alarm status in fatal fires

**Examining, Evaluating and Analysing the Information:**
Municipalities are encouraged to compare these provincial statistics with their municipal fire loss profile. When insufficient municipal data exists in this regard, it is recommended that the provincial profile data be used to establish program and resource priorities.
Priority Setting for Compliance:
By reviewing the information gathered in the areas of demographics, building stock and fire loss experience, fire safety concerns can be identified and prioritised. No two communities will have the same fire profile, as local needs and circumstances vary.

Selecting and Implementing Options:
Once the community risks have been identified and prioritised, while at the same time taking into consideration resources and other factors, an implementation strategy would be developed. The strategy would involve:

• Council approval of activities
• Resource allocation
• Assignment of responsibilities
• Development of program operational guidelines

Ongoing program assessment

Data Collection Component
Demographic Profile
It is important to examine local demographic data to determine the following:

• population makeup, based on age groupings
• vulnerable individuals or occupancies
• cultural differences such as language and customs
• seasonal population shifts in tourist areas such as cottages, mobile homes, trailer parks, student influx in university/college locales
• other considerations specific to certain municipalities

You may be able to obtain data about your population from your local planning office or town clerk. Other excellent sources of information include: Statistics Canada www.statcan.ca (800) 263-1136.

It may be helpful to obtain provincial demographic data at the same time so you can compare your local data with provincial data.
Demographic Profile

<table>
<thead>
<tr>
<th>Ages of population</th>
<th>Number</th>
<th>% of Total Population</th>
</tr>
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<tbody>
<tr>
<td>0-14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15-64</td>
<td></td>
<td></td>
</tr>
<tr>
<td>65 and over</td>
<td></td>
<td></td>
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<tr>
<td>Total Population</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Vulnerable groups / individuals</th>
<th>Population fluctuation</th>
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Barriers to Public Education

Information Analysis and Evaluation

Demographic Profile Commentary

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</tbody>
</table>
## BUILDING STOCK PROFILE

<table>
<thead>
<tr>
<th>Occupancy Classification</th>
<th># of Occupancies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Group A</strong></td>
<td>Assembly</td>
</tr>
<tr>
<td><strong>Group B</strong></td>
<td>Institutional</td>
</tr>
<tr>
<td><strong>Group C</strong></td>
<td>Single family</td>
</tr>
<tr>
<td></td>
<td>Multi-unit residential</td>
</tr>
<tr>
<td></td>
<td>Hotel / Motel</td>
</tr>
<tr>
<td></td>
<td>Mobile Homes &amp; Trailers</td>
</tr>
<tr>
<td></td>
<td>Other</td>
</tr>
<tr>
<td><strong>Groups D &amp; E</strong></td>
<td>Commercial</td>
</tr>
<tr>
<td><strong>Group F</strong></td>
<td>Industrial</td>
</tr>
<tr>
<td>Other occupancies not classified in OBC such as farm buildings.</td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td></td>
</tr>
<tr>
<td>Total # of mixed occupancy buildings</td>
<td></td>
</tr>
</tbody>
</table>
MUNICIPAL FIRE LOSS PROFILE

TABLE 1 - Municipal Fire Deaths and Injuries

<table>
<thead>
<tr>
<th>Occupancy Classification</th>
<th>year</th>
<th>year</th>
<th>year</th>
<th>Total Deaths+Injuries (years)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Deaths</td>
<td>Injuries</td>
<td>Deaths</td>
<td>Injuries</td>
</tr>
<tr>
<td>Group A</td>
<td>Assembly</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Group B</td>
<td>Institutional</td>
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</tr>
<tr>
<td>Group C</td>
<td>Residential</td>
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<td></td>
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</tr>
<tr>
<td>Groups D &amp; E</td>
<td>Commercial</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Group F</td>
<td>Industrial</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobile Homes &amp; Trailers</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Total Dollar Loss</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
Municipal Property Dollar Loss

TABLE 2 - Municipal Property Dollar Loss

<table>
<thead>
<tr>
<th>Classification Occupancy</th>
<th># of Fires</th>
<th>$</th>
<th># of Fires</th>
<th>$</th>
<th># of Fires</th>
<th>$</th>
<th>% of Total Dollar Loss (year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A Assembly</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Group B Institutional</td>
<td></td>
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<td>Group C Residential</td>
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<tr>
<td>Groups D &amp; E Commercial</td>
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<tr>
<td>Group F Industrial</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobile Homes &amp; Trailers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Dollar Loss</td>
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<td></td>
<td></td>
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</tbody>
</table>
### TABLE 3 - Fire Cause

<table>
<thead>
<tr>
<th>Incident type</th>
<th>year</th>
<th>year</th>
<th>year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoking Articles</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chimney fires/woodstove</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Open air fires/grass/brush</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mischief / Arson</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electrical</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accidental</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other / undetermined</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Information Analysis and Evaluation**

**Municipal Fire Loss Profile Commentary**

**Municipal Fire Loss Profile Concerns**
Fire Risk Assessment

- All municipalities should analyze the what, where, who, why, and when questions about its fires, casualties and losses. Some of the elements to consider are as follows:
  - the type and nature of the local municipality
  - the building stock and occupancy types
  - fire prevention and public education programs
  - public and private fire protection systems
  - political resolve/commitment
  - historical analysis and comparisons
  - comparative analysis with others
  - special hazards
  - major rail lines/waterways

Assess data

Analytical judgement and an understanding of the local community are needed to meaningfully evaluate such data, and create an accurate picture of the community's fire risk.

Ambient Factors of Risk Assessment:

The following factors should be considered in assessing the local fire risk.

- the municipality:
  - urban
  - rural
  - metropolitan
  - other, such as a bedroom community, border community
  - predominantly dependent upon a single employer, business, or institutional operation or activity
  - describe its uniqueness
  - describe its geography
  - describe its demographics
  - outline current development and development trends
  - describe street network and traffic patterns
  - describe traffic barriers
  - consider applicable by-laws
  - labour relations climate and history

- historical
  - indicate emergency call volume last year, last 5 years
  - the number of fire casualties in the past year, past 5 years
  - identify any trends respecting cause and location
- the fire loss for the past year, past 5 years
- indicate trends respecting call types for the past 5 years

- comparisons with other like municipalities should be considered for the following factors:
  - population (static/subject to seasonal or other fluctuations)
  - geographical area and size of municipality
  - type of municipality
  - number of residential dwellings
  - assessment
  - development trends
  - growth history and trends
  - demographics
  - equalized assessment and tax base
    - residential/farming vs industrial/commercial assessment

- building stock
  - identify, as accurately as possible, the number and percentage of the following:
    - single family residences
    - multi-unit residences
    - high-rise buildings
    - large complexes
    - farms/agricultural buildings
    - commercial buildings
    - industrial buildings
    - institutional
    - business buildings
    - storage facilities
    - other special buildings
    - hospitals
    - nursing homes
    - with respect to building type, identify specific problems, such as access, density and age
    - with respect to building type, identify significant and associated outside storage areas

- building occupancies
  - identify, as accurately as possible, the number and percentage of the following occupancies:
    - assembly
    - institutional
    - residential
    - commercial
• industrial
• business
• storage
• vacant
• other

• prevention and public education
  • describe what fire prevention and public education initiatives, if any, are undertaken by the community. Describe the significance and impact, or lack of same, of such initiatives.

• public and political resolve
  • what is the perceived awareness of fire safety by the general public and the corporate sector?
  • what are the expectations for fire protection by the general public, and the corporate sector?
  • what is the general tone of press and media coverage of fire related matters?
  • how are fire prevention, fire safety, and public education programs generally received and accepted by the community at large?
  • what is the local political climate respecting:
    • cost cutting/no budget increases?
    • preserving the status quo?
    • maintaining/improving essential services such as the fire department?

• public and private protection systems
  • independent of the assessment of (Analyzing Local Circumstances - Assessing Existing Fire Protection Services), identify and describe:
    • private fire brigades
    • industrial/commercial fire brigades
    • private water supplies and water supply systems

Economic Circumstances

Purpose
To identify considerations for analyzing municipal economic circumstances.

Introduction
Elected officials are responsible for the economic well-being of the community, and measure this in a number of ways. One such way would be with a balanced budget containing no tax increases. This does not necessarily give a complete or clear picture of the community's economic circumstances. For many years various budgetary systems, approaches, and formats have been developed in the continuing quest for political objectivity by elected officials. By the
very nature of democracy, which is based on representative elections and the "politics" associated with them, mitigates against objectivity in the usual sense. Such budgeting and/or financial planning could be therefore defined as a rational decision making system working within a less than rational political process.

It is therefore essential that the economic circumstances of a community be thoroughly and objectively analyzed, in addition to the assessment of the existing fire protection system, and risk assessment, if an accurate representation is to be made of the community.

**Economic Considerations**

Factors to be considered in assessing the local economic circumstances, include the following:

- **assessment:**
  - residential/farm
  - industrial
  - institutional
  - business/commercial
  - increases (decreases) in past 5 and 10 years

- **tax rates:**
  - show local and regional/county purposes
  - 5 and 10 year history of increases (decreases)
  - urban and rural service areas, if any
  - municipal debt
  - revenues
  - reserve funds
  - other monetary assets
  - such as development charge accounts
  - total fire protection system costs
  - per capita basis
  - assessment basis
  - per household
  - employment, unemployment conditions
  - relationship of all of the above in the general area of the local community
  - effect on the ability of the municipal tax base to fund appropriate fire protection services
  - relationship of all of the above with similar communities
  - past and present political philosophy respecting
  - budget increases/decreases
  - pay as you go
  - debenturing/borrowing service (budget reductions) necessitated by reduced revenues
  - loss impact of single employer, major industry, institution
  - barriers to rebuilding, such as zoning and environmental requirements

**Core Services (Response and Support) and Associated Guidelines**

**Purpose:**
To provide a summary of the core services that a fire department may provide. It is not expected that a fire department would be involved in all levels of service listed under emergency response. For example some fire departments will provide interior structural firefighting with a rescue component while others may be unable to provide rescue components.

**Emergency Response:**

1. basic firefighting - no expected rescue component (exterior attack)
2. structural firefighting including rescue (interior attack)
3. vehicle firefighting
4. grass, brush, forestry firefighting
5. marine firefighting
6. automatic aid
7. mutual aid
8. basic medical assist
9. advanced medical assist with defibrillation
10. awareness level hazardous materials
11. operations level hazardous materials
12. technician level hazardous materials
13. vehicle accidents
14. vehicle extrication
15. transportation incidents involving vehicles, trains, aircraft and watercraft
16. water and ice - shore based
17. water and ice - water entry
18. water and ice - boat
19. public assistance
20. ambulance assistance
21. police assistance
22. public utilities assistance
23. community emergency plan participation
24. urban search and rescue (light and heavy)
25. high angle rescue
26. confined space rescue
27. farm/silo rescue

Fire Prevention and Public Education:

1. selection of appropriate programs
2. role of chief fire official
3. input into fire prevention policy development
4. code development input
5. development of fire prevention by-laws
6. inter-action with building department(s)
7. inter-action with other government agencies
8. inspection practices, including:
   - complaints inspections
   - conducting routine inspections per fire prevention policy
   - dealing with code compliance issues (mandated)
   - enforcing municipal by-laws
   - conducting inspections, preparing reports and issuing written responses to requests
   - issuing permits
9. public education practices, including
   - providing routine education programs as per fire prevention policy
   - facilitating smoke alarm initiatives
   - providing access for media
   - delivery of specialized programs
10. fire investigation practices, including
    - determining cause and origin
• assessing code compliance
• assessing fire suppression effectiveness
• determining compliance with building standards
• determining effectiveness of built-in suppression features
• interacting with provincial investigator
• supporting criminal prosecutions
• consulting with police and other agencies
• providing forensic services

11. plans examination and approval practices, including:
   • examining and approving new construction plans
   • examining and approving renovation plans
   • reviewing and approving sub-division/development agreements
   • reviewing and approving site plans
   • providing on-site inspection of approved plans to determine compliance
   • issuing occupancy permits

12. preparation for and appearances in court

13. systems checking, testing and approval

14. compile, analyze and disseminate functional statistics

15. consultation with architects, engineers, planners, contractors and building trades

Fire Administration:

1. planning & growth practices, including
   • master planning
   • evaluating programs and services
   • projecting station locations and reallocations
   • determining staffing levels and assignments
   • co-ordinating with other emergency services
   • co-ordinating development with other community departments
   • co-ordinating with other Counties/Districts/Regions

2. financial & records analysis practices, including
   • co-ordinating use of information from suppression activities
   • co-ordinating use of information from fire prevention activities
   • transitional adjustments for capital stock
   • input into level of service issues (based on available funding)
   • developing, controlling and monitoring budgets
   • co-ordinating with department divisions
   • identifying alternative sources of revenue and fees for services
   • operating
- capital
- purchasing

3. records management, including
   - note taking
   - records retention
   - freedom of information legislation

4. human resources practices including
   - recruitment, selection and retention
   - promotion
   - performance evaluation
   - career development and higher education
   - job classifications
   - secondary employment

5. client/customer relations practices, including
   - preserving local identity
   - enhancing fire department image
   - marketing
   - environmental scanning, anticipating pressures and developing communication strategies
   - enhancing public perception of access to fire department staff
   - developing inter-agency relationships

6. health and safety practices, including communicable diseases

**Communications/ Resource Centre:**

1. dispatch practices, including
   - liaising with dispatch centres
   - providing access points for operational supervisors
   - receiving emergency calls
   - dispatching of appropriate resources
   - providing on-going resources to operation during emergency
   - compiling emergency response data and inputting of information in data bases
   - sharing data with other department divisions
   - sharing data with other municipal departments
   - accessing information from other sources

2. technology issues including,
   - maintaining and repairing communications systems and components (both routine and emergency)
• providing technical support
• developing specifications for radios, pagers, telephones, and computers
• providing interface capability with other data systems, e.g. assessment, building department, roads departments

Training & Education:

1. program development practices, including
   - developing trainer facilitators
   - co-ordinating core curriculum
   - developing specialised staff development programs
   - suppression
   - prevention
   - administration
   - communications
   - maintenance
   - support services
   - developing succession training programs
   - developing self-directed learning programs

2. providing access to training facilities, including
   - co-ordinating access to facility
   - delivering hands-on training to staff

3. station training practices, including
   - delivery of curriculum specific to discipline's needs
   - supervisory training drills
   - providing support and direction

4. development, approval and delivery of incident management and accountability systems and procedures

5. co-ordination, development, approval and distribution of standard operating guidelines for various disciplines

Maintenance:

1. fleet and equipment maintenance practices, including
   - maintaining fleet and equipment (both routine and emergency)
   - providing annual testing programs
   - mechanical worthiness
   - legislative requirements
   - pump capacity and certification
2. facilities maintenance, including

- maintenance of station infrastructure

3. providing input re design and construction considerations for fire stations

Support Services (shared municipal/fire department functions):

1. purchasing practices, including

- bulk purchasing through local and area organizations
- developing standardized specifications for all apparatus and equipment

2. financial practices, including

- financial analysis
- liaising with other area departments
- co-ordinating day to day financial services
- arranging long term funding

3. risk management practices, including

- assessing changing risk
- operationalizing risk management into every function
- providing insurance
- prevention planning
- risk avoidance
- loss control
- loss reduction
- separation and diversification of losses
- risk transfer

4. human resources practices, including

- developing recruitment and retention programs
- specializing in fire service legislation and related issues

5. co-ordination with other agencies for shared infrastructure, including

- municipal water system development
- maintenance and access to water supply
Selection of Appropriate Fire Prevention Programs

Purpose:
To assist fire service managers in identifying the minimum fire prevention and public education activities required to maintain a safe community

Introduction:
Municipalities must develop a fire prevention and fire safety education program that addresses their needs and circumstances.

Every municipality shall,

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

Therefore, as a minimum, acceptable model municipalities must provide the services listed below. The simplified risk assessment should identify the extent to which additional services may be required to meet the local needs and circumstances of specific municipalities. Municipalities may develop a different model for fire prevention and public education services provided they are able to demonstrate that their model meets the requirements of the community's local needs.

1. Simplified risk assessment
2. A smoke alarm program
3. Fire safety education material distributed to residents/occupants
4. Inspections upon complaint or when requested to assist with code compliance

Simplified Risk Assessment:
A simplified risk assessment for the community determines the needs and circumstances of the municipality and to establish the level of fire prevention and public fire safety education required. Any significant risks identified through the analysis should be addressed. For example; if the risk assessment indicates a significant life or fire loss in multi-unit residential buildings, a program that will adequately improve their fire safety - such as routine inspections - would be appropriate to address the specific need of the community.

The scope and extent of the remaining three required programs can be determined by the results of the simplified risk assessment.

Smoke Alarm Program:
The objective of a smoke alarm program is the provision and maintenance of working smoke alarms and home escape planning activities for all residential occupancies in the municipality.
The activities associated with the program may include any combination of the following:

- community surveys
- distribution of pamphlets or other education material
- instruction to residents regarding smoke alarms
- providing smoke alarms at reduced or no cost
- installation of smoke alarms
- inspecting premises to determine compliance with the smoke alarm provisions of the Fire Code.

Fire Safety Material:
Fire safety education material may be distributed to residents and/or occupants consistent with the community's needs and circumstances by any combination of the following activities:

- distribution of pamphlets or other education material
- public service announcements utilizing the available media
- instruction to residents/occupants on fire safety matters
- presentations to resident groups
- attendance at public events

Fire safety education material addresses such issues as preventing fire occurrence, the value of smoke alarms, planning escape from fire, and being prepared to deal with a fire incident.

Public Fire Safety Education:
For public fire safety education, the following should be established:

- the audience to be targeted
- the message that needs to be delivered to improve the fire safety situation must be determined.
- an inventory of the available or required resources and programming.
- the most appropriate method of delivering the message.
- the duration or frequency of the message delivery.

Inspections:
Inspections of properties must be done, or arranged for, by the municipality when:

- a complaint is received regarding the fire safety of a property
- a request is made to assist a property owner or occupant to comply with the Fire Code

Any inspection conducted must include notification of the property owner or responsible person and appropriate follow-up with enforcement, if necessary.
For inspections, the following factors should be considered:

- The type of inspections to be conducted and the buildings to be inspected. For example: routine inspections of all multi-unit residential buildings, new construction inspections of all buildings, smoke alarm checks of single family residential buildings.
- The methods of inspection appropriate for the circumstance. This will have implications for the amount of time required to inspect, as more comprehensive inspections require more time.
- The category of buildings being inspected and the skills and knowledge required to inspect them. The more complicated the building, the more skill and knowledge required.
- The frequency that the properties will be subject to inspection

Program Selection:

In addition to the minimum services outlined above, programs need to be selected, developed and implemented that address any risks identified through needs analysis. Programs being considered need to be effective for the type of concerns identified. For example; a routine inspection program would be effective to address concerns for the fire safety of a group of buildings that demonstrate poor performance during fire incidents. Similarly, a public fire safety education program such as Older and Wiser would be effective where there is a lack of knowledge of fire safety behaviour by the elderly and this lack causes them to suffer significant fire losses.

Each area of program activity has a number of factors which need to be considered.

Service Delivery Options:

The Fire Prevention Effectiveness Model may also assist with informed decision making about fire prevention and public education programs. Once the needs analysis component of the model has been completed, fire department managers can decide what programs are appropriate to address their identified local risks.

There are a number of options for delivery of selected fire prevention programs. They can be provided by fire department staff - personnel dedicated to fire prevention and/or fire suppression staff. Other persons in the community may be used. Agreements with other communities may be made for provision of services.

Policy Requirements and Other Relevant Issues:

Any selected/mandated programs must have sufficient resources, human and others, to be effectively delivered.

Persons assigned responsibility for delivering programs must be adequately trained. Policy decisions must be made with appropriate authority and records made of the level of service decreed.
Appropriate program guidelines must be established for each program to be delivered. Any fees for services should be discussed and decided upon at the policy level (e.g. inspections).
**Fire Prevention Policy**

**Purpose:**

To identify essential considerations for the development of a municipal fire prevention policy.

**Service Delivery Implications:**

- Fire prevention includes public fire safety education. Fire prevention is an integral part of overall fire protection. The fire department establishing and regulating by-law provides direction from council and sets out the principal fire prevention responsibilities.
- Specific policy should be developed to establish:
  - level of service
  - types of activities and programs
  - responsibilities of personnel

**Policy Requirements:**

Policy statement should reflect the following fire prevention activities:

- inspection
- code enforcement
- fire and life safety education
- fire investigation and cause determination
- fire loss statistics
- Fire department operational guidelines will dictate how, when and where activities will be conducted.

**Quality and Performance Measures:**

The policy should:

- encourage the participation of all fire department personnel in prevention and fire and life safety education.
- provide clear direction from council to the chief, members of the department and the public.

**Related Functions/ Considerations:**

The fire prevention policy should describe:

- public fire and life safety education programs such as: *Learn Not To Burn; Older & Wiser; Alarmed For Life; The Arson Prevention Program For Children; and Risk Watch.*
- inspections, code enforcement programs such as: routine inspections; home safety checks; complaint inspections; request inspections; open air burning regulation; new construction inspection; and plans examination
- fire investigation / fire origin and cause determination - liaison with appropriate agencies

**Use of Fire Related Statistics**

**Purpose:**
To provide guidance in the effective compilation, analysis and use of statistics when planning fire prevention and public education services.

Concepts:

Good planning in the management of fire prevention and public education services requires the collection, analysis, and use of statistics. Statistics provide a basis for the systematic identification and management of current and future fire and life safety risks under the jurisdiction of the fire department.

Fire departments should take the following steps to ensure proper needs analysis:

1. Identify the nature and extent of risks.
2. Establish service levels.
3. Identify the most effective use of resources to obtain the desired service level.
4. Implement a management evaluation system to review those desired levels of service.

Decisions on the levels of fire protection services to be delivered and the related activities must be made with as much information as possible. The collection and analysis of data for your community is essential to establish appropriate policies for the delivery of fire protection services.

Fire Service Planning Guidelines

In the planning process, one of the integral procedures is to collect and analyze data that can be developed to identify current and future fire protection or risks within a community. Fire departments must collect and analyze data effectively to determine fire and life safety risks and other emergency problems.

Fire departments are experiencing escalating demands in both fire protection and fire prevention services but at the same time, the resources to provide these services are diminishing.
Data that impacts fire prevention and public education may include:

- building and occupancy data
- demographic data
- financial data
- geographic and physical data
- legislative and legal data
- organizational and functional data

**Building and Occupancy Data:**

It is important to gather data regarding occupancy, age and location of buildings. Other information gathered should include building height and area, as well as requirements for sprinklers and/or fire alarms systems. It is important to measure fire loads, types and density of building gs to determine fire and life safety needs of the community.

**Demographic Data:**

Collecting demographic data from various studies will reflect how factors such as age and socio-economic background can be correlated to incident occurrences and fire loss.

**Financial Data:**
Fire department operating and capital expenditures over the past five years should be considered in the assessment of current expenditure levels and projected costs. Expenditures of other municipal departments should be considered. Examples of financial data related to the provision of fire protection services within the community are:

- Operating budgets - expenditures related to providing fire protection such as salaries, training, equipment and supplies.
- Capital budgets – major expenditures related to fire protection such as buildings and apparatus.

Geographic and Physical Data:

Geographic and physical factors influence fire protection. Station location, response time, transportation networks, water systems, terrain and weather should be considered. Natural factors such as wildland fire potential, earthquakes, tornadoes and floods also need to be considered.

Legislative and Legal Data:

Many legislative and legal decisions affect the provision of fire protection in a community. Data should include information from local, provincial, and federal levels of government.

Organizational and Functional Data:

Data is collected to assess the allocation of current and future resources within a fire department and should include the following:

- Fire Suppression
  - numbers, types of incidents and fire loss over past five years
  - deaths and injuries over past five years
  - communication and incident command system capabilities
  - mutual and automatic aid agreements
  - resource commitment to incidents (personnel, equipment)
  - response time and distances

Pre-Fire Planning

Collecting information at a selected site significantly affects the efficiency and effectiveness of emergency operations. Document how many buildings have pre-fire planning, how recent those plans are, and how many other buildings are targeted for pre-plans.

Investigations

- numbers and types of fire investigations
- standard incident reporting system

Fire Prevention

- occupancies inspected
• fire hazards noted and corrected
• prosecutions

Fire Safety Education

• programs conducted and effectiveness achieved
• people contacted and informed

Non-Fire Incidents

• emergency medical services
• hazardous materials control
• public assistance

Training Data

• training programs implemented
• numbers of firefighters who have received training for each topic
• how recent the firefighters have completed the training
• requirements for promotion, employment and career development

Facilities Inventory

• station location, size, age and the projected changes

Apparatus and Equipment

• vehicle inventory including capacity, age, operating condition, maintenance program and projected changes

Management Information System:

Data collection requires that fire officers, investigators and others who will collect and input data into the management information system (MIS) be trained. Computers and software are an integral component of effective management information systems.