July 2017

Collingwood Fire Department

Fire Protection Services Master Plan

Developed by:
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Executive Summary

In 2015, the Collingwood Fire Department (CFD) completed a "Town of Collingwood Fire Department Operational Review". At that time, Collingwood Town Council received the plan and recommendations contained within. One of the recommendations noted within the report was to complete a Fire Services Master Plan (FMP), which is what has precipitated this review and report.

Presently, the population of Collingwood is approximately 21,796 people which is served by a dedicated team of full-time and volunteer firefighters, who work out of one fire station that is centrally located within the Town. The population numbers quoted are for the permanent residents and do not capture the tens of thousands of seasonal residents who own vacation properties in the Collingwood area and shop and dine in the Town.

To ensure that they are meeting the needs of the community and its staff, the Fire Chief recognizes the necessity to update and maintain a Fire Services Master Plan (FMP) for the purposes of providing high-quality fire services to the residents of the Town and its visitors. A current FMP allows for prudent operating and capital budget forecasting, and to assist neighbouring municipalities through the provision of Automatic Aid and Fire Service Agreements.

This 2017 FMP for the CFD 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 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 Collingwood are served by a dedicated group of personnel of the CFD.

Based on the review conducted by EMT, a total of 12 recommendations have been made. The following list has been organized, based on the recommended timeline implementation. For a more detailed and chronological overview of the recommendations, which include an approximate costing for each, please refer to the chart found in Section 8.

EMT would like to thank those who assisted in the development of this FMP document. We would also like to commend the Fire Chief and staff of CFD on their dedication to serving the community and the level of service that they have been providing to the community.

Overview of Recommendations for Collingwood Fire Department –
Listed in Order of Recommended Implementation Timelines

Rec #	Recommendations	Estimated Costs	Suggested Timeline
1	It is recommended that an updated version of the Fire Department's Establishing and Regulating By-law be presented to Council for approval. This document should be reviewed annually by the Fire Chief, documenting review dates, to ensure that the By-law is kept current in relation to the needs of the community.	No cost associated with this recommendation	Short-term (1-3 years)
3	Succession planning for Fire Prevention and all other Divisions within CFD should be addressed to ensure trained personnel, who are familiar with the technical requirements, community, and the fire department, are ready to take over when the existing personnel retire. • By ascertaining the roles and responsibilities of all the positions within the Department, a list of required skills and related credentials can be identified and approved. ○ This succession planning can also begin prior to filling a position by bringing someone in several months before the position is vacant. The new person will benefit by learning from the incumbent before they retire.	No cost associated with this recommendation	Short-term (1-3 years)
4	It is recommended that the Collingwood Fire Chief investigate the opportunities for providing enhanced Fire Safety and Public Education services for Collingwood along with shared services to bordering Fire Departments by investigating the opportunity for cost sharing of a Public Education Officer.	Cost for this recommendation can vary due to the level of involvement by other communities	Short-term (1-3 years)
6	Training for the Fire Suppression Division is planned at the beginning of each year. This should also be done more formally for all staff in each of the Divisions to ensure that training goals and expectations are identified and evaluated.	No cost associated with this recommendation	Short-term (1-3 years)

7	Additional administrative support should be provided for all divisions within the CFD to make the most efficient use of staff time and skills. • It is expected that an additional Administrative Assistant will be required in the future. It is recommended that, at present, a part-time Administrative Assistant be hired to work more closely with areas overseen by the Deputy Fire Chief. • Another option is to investigate the opportunity of utilizing administrative support from another Town department during peak workload period to provide relief and to cover for absences (of the Administrative Assistant).	Costs pending an administrative support assessment	Short-term (1-3 years)
9	It is recommended that the Fire Chief present a standard of cover for Council approval. This standard would speak to response time criterion, whether that is the NFPA 1720 – 15 staff in 9 minute, 10 staff in 10-minute rule or the NFPA 1710 standard of four-minute drive time for full-time crews.	No cost associated with this recommendation	Short-term (1-3 years)
12	It is recommended that the Fire Chief investigate the utilization of a private firm as a potential revenue source and report to Council and/or the CAO on this opportunity, along with related next steps.	No cost to this recommendation – revenue potential	Short-term (1-3 years)
2	It is recommended that greater utilization of the on-duty full-time firefighters be incorporated into an annual fire prevention program. To accomplish this, all full-time firefighters and/or officers should be trained and certified to at least: • NFPA 1031 – Fire Inspector I, and • NFPA 1035 – Fire and Life Safety Educator I By having all full-time firefighters and/or officers trained to the above noted levels, CFD will have a greater number of resources to draw upon in its public fire safety education and inspection programs.	Minimal costs through in-house or online training. If training cannot be completed online, staff time and other costs may be incurred for such items as travel and/or an instructor.	Short to mid-term (1-6 years)

5	As a possible revenue generator, and in support of the future need for another Fire Prevention Inspector, it is recommended that the Fire Chief investigate the opportunity of offering fire prevention inspection services, on a fee basis, to other bordering communities and their fire departments.	No associated cost for this recommendation	Short to mid-term (1-6 years)
8	It is recommended that CFD work towards creating a full-time Training Officer's position to more effectively meet the needs of the Department, along with ensuring a more comprehensive development of training programs and tracking of completion rates for all divisions within CFD.	Approximately $80,000.00 to $110,000.00 – dependant on Collective Agreement	Short to mid-term (1-6 years)
10	The Fire Chief should monitor the requirement for paging of firefighters to the station for support or the need for a second response to emergency calls. Along with the number of 'pages outs', the length of time to respond to the station should also be tracked to ensure that response times are within an acceptable timeline. • The timelines to be utilized are those noted in the NFPA 1710 and 1720 standards	No initial cost identified for this recommendation	Ongoing
11	Presently CFD has a compliment of 24 full-time firefighters, which at full strength offers six firefighters per shift (for four shifts). If future needs dictated the opening of a second fire station, CFD may want to consider the option of the incremental hiring of firefighters to allow for up to four firefighters per shift per station or as deemed appropriate by the Fire Chief (based on needs and circumstances).	No immediate cost to this recommendation - future staffing costs will be incurred as level of firefighter staffing increases	Long-term (7-10 years)

More detail outlining the recommendations, which include 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 Master Plan (FMP) process is to evaluate the status of the Collingwood Fire Department (CFD) in relation to emergency response, training, fire prevention, staffing and facilities. The process was also to include a review of pertinent documentation such as fire protection agreements and industry related best practices to identify what has been accomplished and what still needs to be addressed.

A FMP is a document that should offer guidance to the department in relation to next steps based on population growth, local development, and fire service needs to meet these challenges over the next 10 years.

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 RPF, there were 15 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.

The review included, but was not limited to the following key areas:

1. Governance - Review the applicable legislation relative to the Collingwood Fire Department including all relative by-laws such as the following (but not limited to): Establishing and Regulating By-Law, Appointment and Duties By-Law, and the Fees and Services By-Law.
2. Emergency Response - Examine the fire call volume including the following (but not limited to): types of calls, numbers of calls, equipment deployment, manpower, safety, and deployment. Make recommendations where required.
3. Training and Education - Research and make recommendations regarding the Firefighter Training Program.
4. Fire Prevention – Review and make recommendations regarding the Fire Prevention Program including fire inspections, investigations and public education.

5. Human Resources - Review and make recommendations regarding Fire Department staffing including full-time positions and volunteer firefighters. Examine and review firefighter recruitment, retention, promotional policy, succession planning, and demographics. This includes review of the applicable job descriptions.
6. Fire Station / Apparatus and Equipment - Examine the fire station, fire apparatus and major pieces of equipment including the types of vehicles, age, and effectiveness. The provision of fire protection services to other municipalities should be referenced and taken into consideration under the Fire Protection Agreements section.
7. Maintenance Program - Review the maintenance program of the fire apparatus and equipment on a life cycle basis.
8. Dispatch and Radio Systems - Review the current dispatch system, paging, and radio systems. Make recommendations as required.
9. Budgets - Review the Fire Department operating budget, capital budget, reserves (equipment, vehicles), and development charges. Examine revenues and potential revenues, including current fees for service and recommended fee structures.
10. Review and assess the Community Risk Profile and update as appropriate.
11. Review the Fire Protection Agreements in place with other municipalities with respect to best practices and fees for service. Review the coverage with respect to growth and the potential need for expansion of services.
12. The study is to be conducted with best practises, industry standards and current legislation as the foundation for all work undertaken.
13. The study will assess the station, staffing and apparatus implications of NFPA 1710 and 1720, and that of the Ontario Fire Marshal's Public Fire Safety Guidelines.
14. The study will consider the growth in population and employment over the next 5 and 10 years and the potential impact to service delivery, and operations of the Fire Department.
15. The final document will include consideration of the recommendations included in the BMA Operational review and Recommendations from the Strategic Initiatives Plan.

To ensure a more complete review, the process also included a survey with both the volunteer and career firefighters, internal staff from all divisions, as well as meeting with senior fire officials (such as the Fire Chief and Deputy Chief). Meetings were also conducted with the CAO, Mayor, and Council to ensure that opportunities existed to receive input from all levels of the Town and Fire Department.

An external survey was conducted to seek input from members of the community. All the input

received was collated and incorporated into this FMP document. Based on these criteria, through meetings with the stakeholders, the consulting team was able to complete a thorough review identifying efficiencies and highlighting areas requiring improvement within the CFD.

EMT reviewed the CFD 2015 (BMA) which had a total of 10 recommendations. A copy of this report can be found in Appendix "B" of this document. However, as a brief overview, the BMA report noted that CFD needs to focus on the following general concepts, which are also discussed within this present FMP:

- Succession planning
- Tracking of public education initiatives
- Development of performance measures
- A focus on specialized training needs and the unionization of partnering opportunities with other municipalities

Based on the review of the Fire Department's facilities, equipment, programs and related data, EMT is submitting a total of 11 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.

Performance Measures and Standards

This FMP 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 Ontario Fire Marshal's Office and Emergency Management (OFMEM) Public Safety Guidelines
- The *Fire Prevention and Protection Act*
- The National Fire Protection Association (NFPA) standards:
    - 1201 addresses the providing of fire and emergency services to the public
    - 1221 addresses the communications/dispatching component offered by the Collingwood Fire Department
    - 1710 addresses recommended standards for career fire departments
    - 1720 addresses recommended standards for volunteer fire departments
- Office of the Fire Marshal and Emergency Management's (OFMEM) Integrated Risk Management program
- The *Ontario Health and Safety Act*, NIOSH (National Institute for Occupational Safety and Health)
- Ontario Fire Service – Section 21 Committee Guidelines:
    - The Section 21 Committee is based on section 21 of the *Ontario Occupational Health and Safety Act*. This committee is charged with reviewing industry safety concerns and developing recommended guidelines to reduce injuries for the worker.

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
- Richard Hayes, Fire & Emergency Services Consultant

Together, the team has 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 master plans and development of emergency response programs for clients.

Section 1:
Community and Fire Department Overview

1.1 Fire Department Governance and Administration

Section 1: Community and Fire Department Overview

As previously noted, the Town of Collingwood is a community of approximately 21,796 people in the heart of Ontario's Lake Country, on the shores of Nottawasaga Bay. Collingwood is less than 90 minutes from the Greater Toronto Area heading north along Highway 24. The Town's land mass is 33.46 square kilometers.

The population of 21,796 is up from 19,241 in 2011. Over the five year interval, this translates into a growth rate of 13.3%. For the future, it is anticipated that the Town of Collingwood's population will continue to grow. Even though growth and progress have been strong in recent years, the Town has worked hard to retain the small-town charm that has captivated generations. Collingwood has learned to look to the future while celebrating its past. Quality of life is very high in this Town, where outdoor pursuits are available in all seasons and are enjoyed by both visitors and residents.

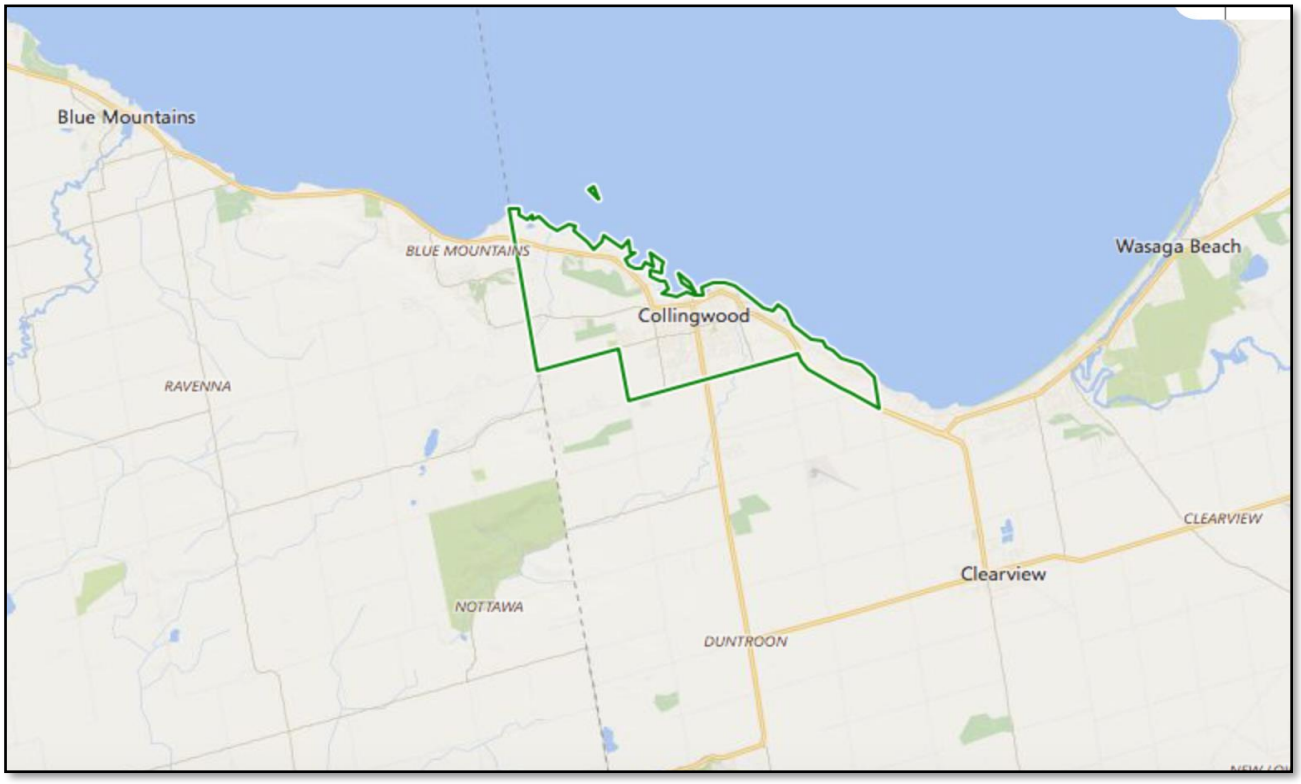
The CFD presently consists of 24 full-time firefighters who are on shift 24-hours a day, seven days a week. In addition, CFD has an approved roster of eight volunteer firefighters to support the full-time firefighters during situations that require additional staffing. The Department has a full-time Fire Chief, Deputy Fire Chief, Administrative Assistant and two Fire Prevention/Public Education Officers.

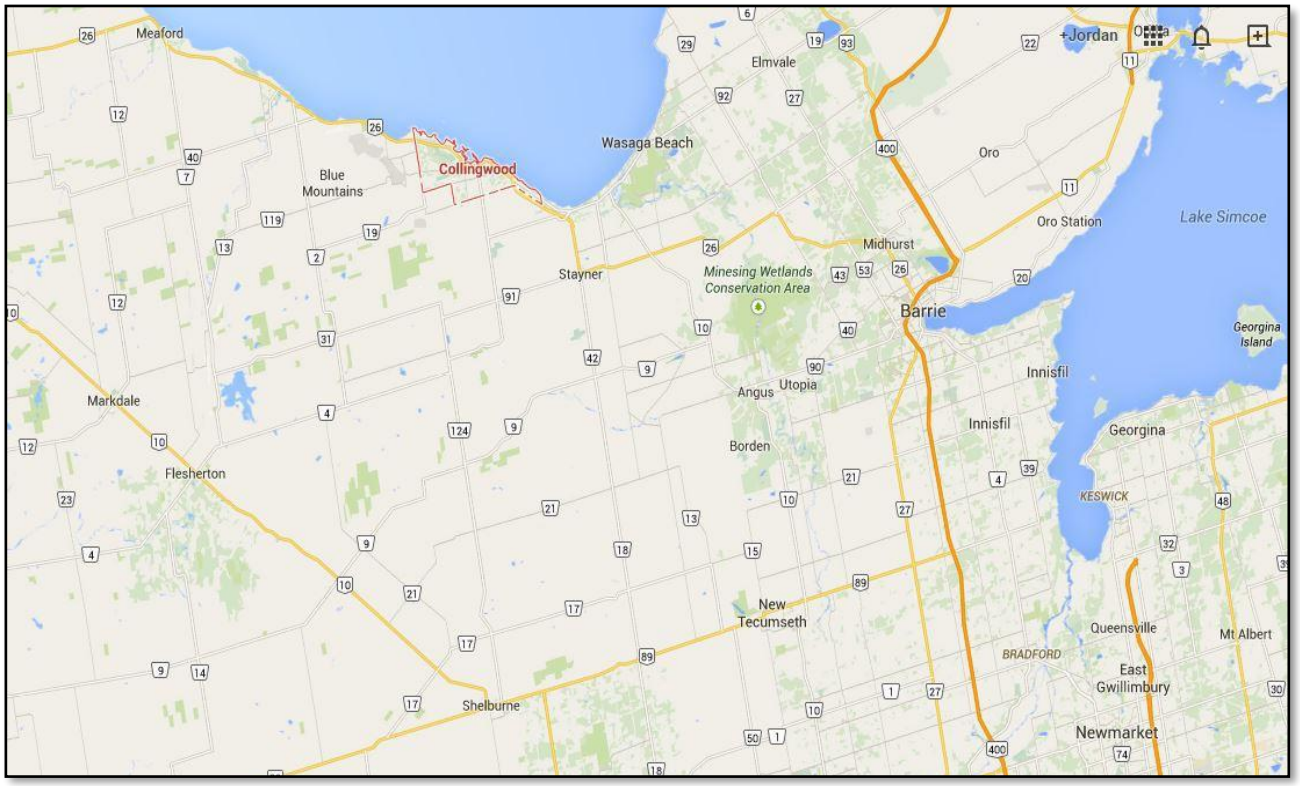
It is the mission of the Collingwood Fire Department to serve the community by providing protection from fire, life threatening emergencies and dangerous conditions through education, prevention, rescue, suppression and basic life support services.

To ensure that they are meeting their mission statement, the Department continually challenges itself to improve on the already high quality of services it provides to the residents and visitors of Collingwood.

The following pages of this document will discuss growth potential coupled with anticipated needs for responding to calls for service by the community.

FIGURE 1: Collingwood – In relation to the surrounding communities

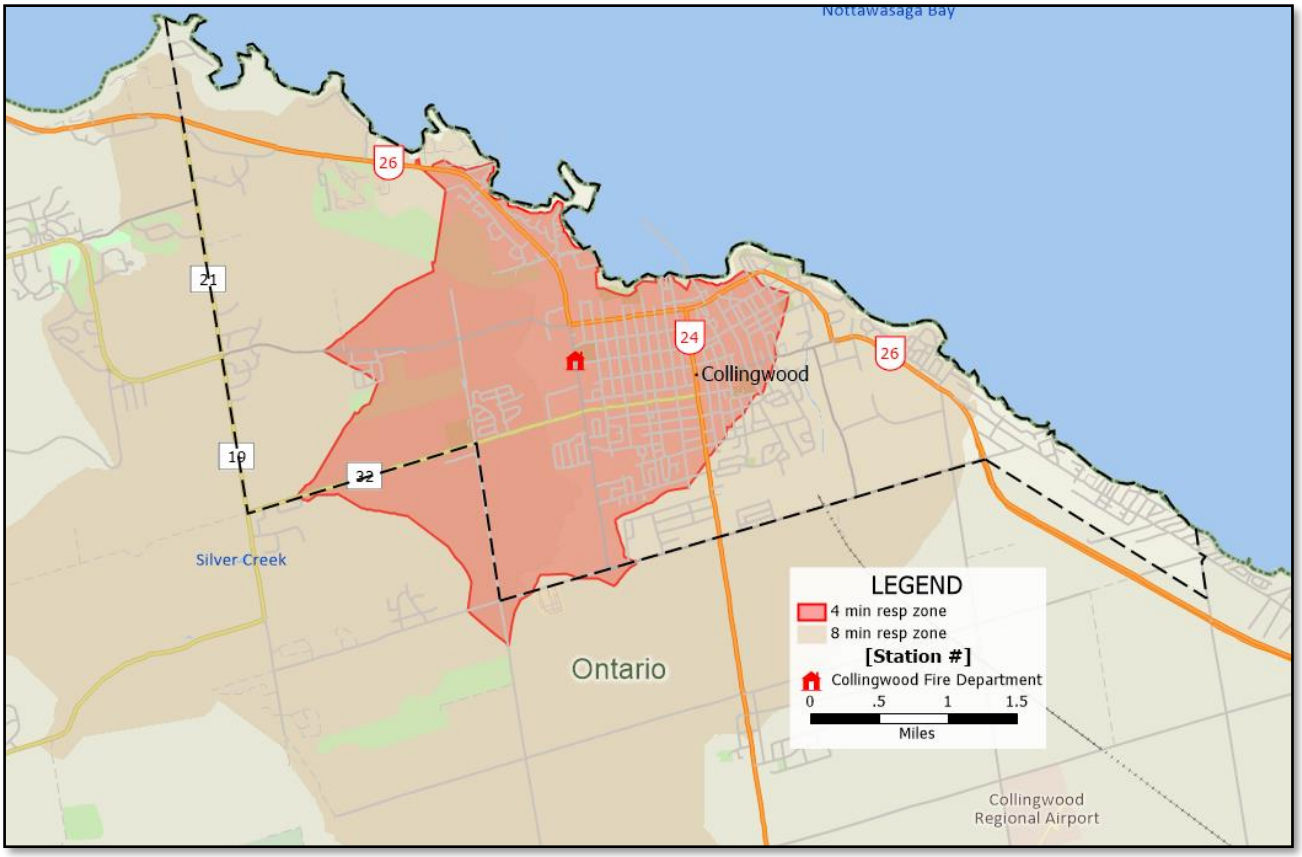




The Town of Collingwood is situated on Nottawasaga Bay at the southern point of Georgian Bay in Simcoe County. Collingwood is located midway between the cities of Barrie and Owen Sound, which provides access to Grey and Bruce Counties in the west, and to Toronto via Highway 400 in the southeast. County Road 124 originates in Collingwood and provides access to the heavily-populated Golden Triangle to the south.

At 33.46 square kilometres of land, Collingwood is one of the smaller municipalities in the area, but it has the largest population. With a full transit system including links to Wasaga Beach and the Town of the Blue Mountains, Collingwood is very well situation for both permanent and seasonal residents.

FIGURE 2: Location of the Collingwood Fire Station



Collingwood Fire Department Headquarters is located at 45 High Street. As noted in Figure 2, the station is centrally located and has access to major road networks, which makes for efficient response within the community.

Figure #2 also denotes a four-minute and eight-minute set of response zones, which is the recommended practice noted by the National Fire Protection Association's (NFPA) 1710 standard for career (full-time) fire departments. The NFPA standards will be further discussed

later in this document. However, it is helpful to note that the four-minute zone is the coverage area that the first responding vehicle should be able to reach (within that timeline), while the eight-minute zone is for the arrival time of when more than one unit is required. Ideally fire departments should endeavour to fall somewhere within these zones.

Due to the rapid spread of fire within a structure, NFPA recommends (for full-time departments) that it 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 the four-minute and eight-minute zones. As such, it would appear that the CFD station is well placed for this noted NFPA recommendation.

1.1 Fire Department Governance and Administration

When reviewing a department's governance and administration, a key document is their Establishing and Regulating By-law (E&R By-law). This by-law not only recognizes the department as a legal entity, it also sets out expectations of the fire department and the level of authority granted to the fire chief.

Collingwood's E&R By-law was last updated and approved by Council in 1995. However, the by-law has recently been updated and is now (in 2017) ready to be presented to Town Council for review and approval. The newly updated by-law better reflects such things as recognition and inclusion of the *Fire Protection and Prevention Act*, which came into legislation in 1997. The new by-law also identifies powers of the fire chief and expectations of the fire department in relation to services to be offered to the community (based on the new FPPA legislation).

Based on the age of the last approved E&R By-law, it is recommended that the Fire Chief submit the Fire Department's updated E&R By-law to Town Council for approval.

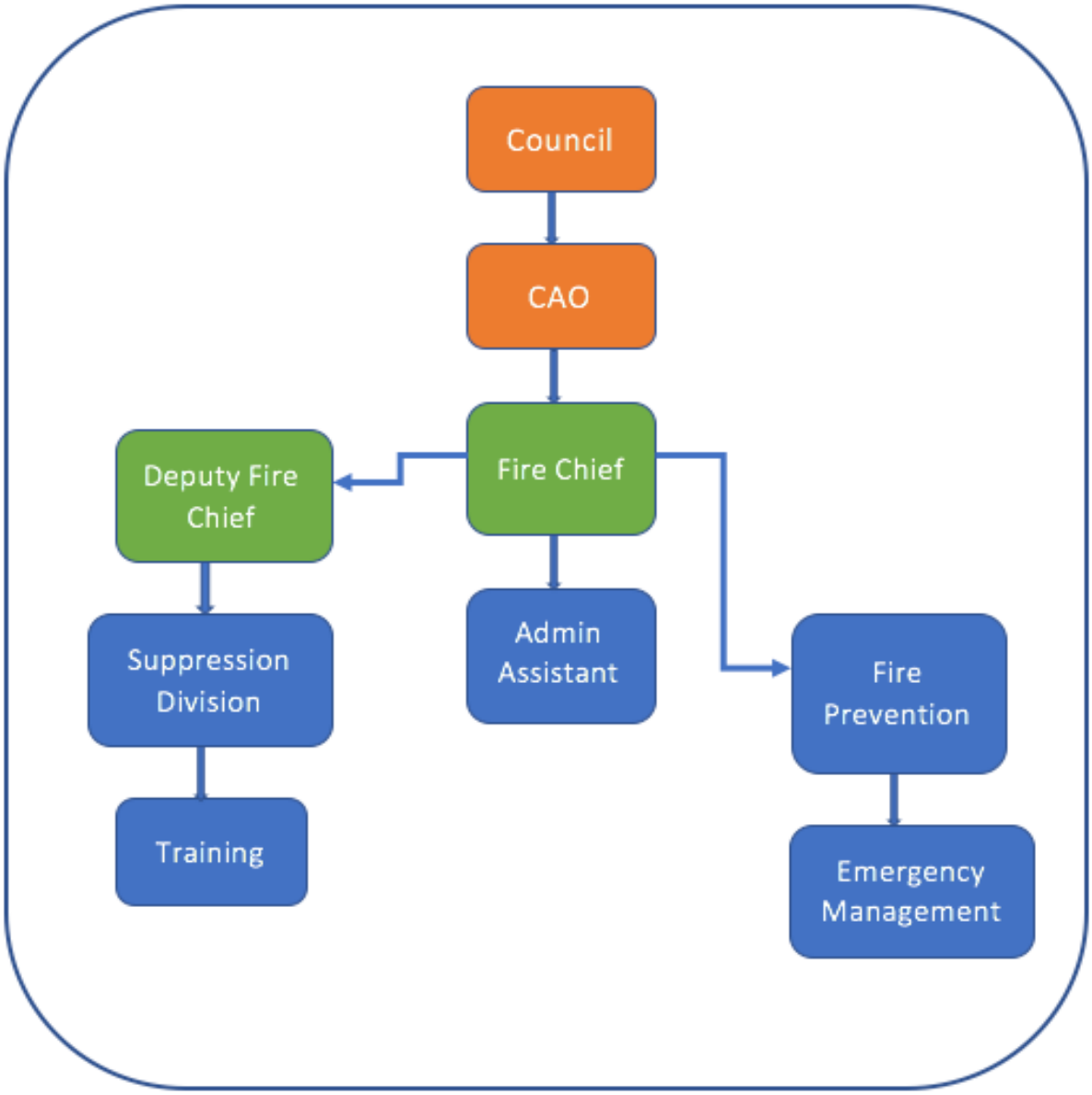
The present governance structure of the Town has the Fire Chief reporting to the Town's Chief Administrative Officer (CAO) in a Council-Manager style of government. The Fire Chief serves as the head of the Fire Department and is supported by a Deputy Fire Chief.

The Fire Chief directs the overall vision of the department, providing leadership to ensure that the department is delivering efficient and high-quality service delivery. The Chief is responsible for the Administration functions of the fire department including reporting to the CAO, budgeting, and overseeing the fire prevention division and emergency management. The Deputy Chief is responsible for managing the suppression division (24 career and an approved roster of eight volunteer firefighters), overseeing the building infrastructure, as well as training, and the maintenance of the apparatus / equipment.

Along with the full-time Fire Chief and Deputy Fire Chief, the Department has a full-time Administrative Assistant, a Fire Prevention Division that is staffed by one Fire Prevention Officer and one Fire Prevention Inspector.

The organizational chart illustrated in Figure #3 reflects the general reporting structure within the Fire Department and that of the Fire Chief to the CAO and Town Council. This reporting arrangement allows for ample involvment by the Fire Chief 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.

FIGURE 3: Fire Department Organizational Chart



Section 2: Planning and Community Risk Assessment

2.1 Planning and Assessment
2.2 Review of 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. Through the work completed on their previous FMP and the implementation of this FMP update process, CFD has clearly demonstrated a proactive approach towards it planning initiatives.

2.1 Planning and Assessment Based on Community Growth

The population of Collingwood is expected to grow steadily with a forecast of approximately 30,000 permanent residents by 2030.

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 CFD can anticipate an increase in call volume from the predicted growth. This increase could also be as a result of more medical responses, false alarm activations or due to an increase in vehicular traffic movements. As such, CFD needs to identify where this growth is expected to occur (within the community), and what type of growth is planned. *Would this be residential in nature, or would it be a combination of residential, commercial, and industrial? Would this growth create the expansion of the Town's road network?*

It was identified by the Town's Planner that age data from the 2016 Census shows that the percentage of Collingwood's population aged 65 and older has increased 26.3%. The increase between 2011 and 2016 in people aged 65 and older was an additional 1,350 people (from 4,390 in 2011 to 5,740 in 2016). This continues an ongoing trend as the previous two censuses indicated that Collingwood's population aged 65 and older was 20.5% in 2006 and 22.8% in 2011.

In contrast, the 2016 census indicated that the percentage of the population 19 years of age and under fell from 20.5% to 19.0%, although the absolute number increased from 3,935 to 4,145.

These trends are in keeping with the general aging of the 'baby boomer' portion of the population, reflecting the desirability of the Collingwood area for retirees, and will continue to be an important consideration for virtually all aspects of the municipality's operations. The average age for a resident of Collingwood in 2016 was 46.3 years whereas for the Province it was 41 years.

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

2.1.1 Office of The Fire Marshal and Emergency Management – Three Lines of Defence

In keeping with forecasting community growth, related trends and future needs, the Office of the Fire Marshal and Emergency Management (OFMEM) have identified "Three Lines of Defence" to be utilized by all fire departments in Ontario when planning to meet the needs of the community. The identified three lines of defence as noted by the OFMEM are:

1. **Education** – Fire safety education is the key to mitigating the fire and life hazards before they start. With the growth of the community, how will CFD 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. Having a full-time Fire Prevention Division goes a long way to addressing these education and enforcement requirements.

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. By evaluating the effectiveness of the fire station, its staff, and equipment, this report will be able to make recommendations for related efficiencies.

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 FMP 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 Fire Chief 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. On the other hand, 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

The Town benefits from having a centrally located fire station that is staffed by full-time firefighters, who are supported by a dedicated group of volunteer firefighters for responding to emergencies. Both the volunteers and the off-duty firefighters carry pagers to ensure that additional resources can be called upon during extreme situations (where the on-duty crew's resources are engaged in another call or require support).

The Collingwood Fire Department has strong relationships with neighbouring departments and a long history of cooperative services. There are mutual aid agreements in place with all the fire departments within Simcoe County.

The OFMEM has placed a high priority on public education, inspection and enforcement to prevent fires and mitigate the impacts, reducing deaths, injuries and property loss. The CFD Fire Prevention Division is very proactive within the community in relation to public education, fire safety inspections, and enforcement. The Department has also completed an update of its Simplified Risk Assessment, which is a requirement of the OFMEM. More discussion on this risk assessment document is noted in Section 3 of this document.

The CFD is presently dispatched by the Barrie Fire Department, which is proving to be an efficient and cost-effective operation, as opposed to CFD having its own dispatch division.

Weaknesses

The Collingwood Fire Department has limited full-time suppression division staffing which means that it cannot maintain more than one crew of four to six firefighters to respond to any emergency (24-hours per day, 365 days per year).

As already noted, the Department does have a compliment of volunteer firefighters 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.

CFD does have a strong mutual aid system in place, but this program is not meant to supplement the Department's resources on a regular basis. In fact, the design of a mutual aid system is to offer more resources to the host community when its own resources are exhausted in exceptional situations. Therefore, dependence on mutual aid is not recommended.

The fire station is centrally located, but there are future plans for development that will fall

outside of the four and eight-minute response zones. As such, the Fire Chief will need to monitor this growth and report (to CAO and Council) any identified response concerns that this growth may create.

Opportunities

The mutual aid program in place allows CFD to call on neighbouring fire departments for assistance whenever an incident exhausts its own resources, thus allowing CFD to deal with the situation in an efficient and effective manner. However, this type of resource is not meant to supplement CFD's resources. Mutual aid is to be used when no other options are available, such as automatic aid and fire services agreements. These two types of agreements offer the community a more consistent level of response to areas not properly covered by the local fire department. As such, taking advantage of the automatic aid and fire service agreements can offer a cost-effective option for covering areas of the community without having to increase staffing (in certain circumstances).

Continued active planning and cooperation with neighbouring municipalities is a cost-effective option for such things as arrangements for automatic aid and fire service agreements. CFD does have automatic aid agreements in place, which demonstrates a proactive approach to ensuring a suitable level of response to incidents around the bordering communities.

Threats/Challenges

Major emergencies that can exceed the available full-time and volunteer suppression division staffing and equipment resources must be considered as the community's population continues to grow and age (both in the residential and commercial sectors). This is a threat that needs to be considered by most communities in the Province of Ontario.

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.

Referencing similar communities 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 CFD can obtain options that they may be able to incorporate to meet the needs of the community and its firefighters.

2.2 Industry Best Practices

2.2.1 National Fire Protection Association – 1201, 1710, 1720 and 1221

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

In Section 4.3.5, this standard notes – 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 1710 and 1720 need to be considered. These two standards are utilized for the following:

- NFPA 1710 refers to goals and expectations for career fire departments
- NFPA 1720 refers to goals and expectations for volunteer fire departments

Note: In Canada, the NFPA Standards are not legislated, but viewed as industry best practices and guidelines that all fire departments should strive to meet.

NFPA 1710 and 1720 – Career and Volunteer Fire Departments

Chapter 4 of the NFPA 1710 standard notes that the expectation is that a full-time crew can:

- turnout from the station within 80 seconds, 90 percent of the time
- accomplish a travel time of 240 seconds (4 minutes) for the first unit to arrive on scene, 90 percent of the time in the primary response area
- accomplish a travel time of 480 seconds (8 minutes) for the remainder of the response contingent, 90 percent of the time

Response data supplied by CFD was collated and broken down into the 90th percentile data charts for review. These charts can be seen in section 3.5 and in Appendix "C".

In relation to the volunteer firefighting component, NFPA 1720 chapter 4:

> 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."*

Collingwood's population meets the criteria for **15 staff within 9 minutes**. With an approved strength of eight volunteer firefighters, of which, at present there are only five active volunteer firefighters, along with the maximum of six firefighters on duty per shift, the best that CFD can do (without creating overtime) is to muster up a total of 11 firefighters at any time. CFD utilized a call out of both full-time and volunteer staff to ensure that additional apparatus can be staffed and respond to assist the on-duty crew as quickly as possible.

CFD is doing an admirable job at meeting the needs and expectations of the community, however, they should formally track, monitor and report to Council on the frequency of which volunteer firefighters are called upon, as well as the number of responding firefighters and the length of response time. This will allow the Department to identify if a larger volunteer roster is required or, alternatively, if more full-time firefighters might be the preferred option.

As the Town expands, traffic volumes rise with it, causing an increased challenge to the volunteer firefighters when responding to a call. Where volunteers have other job commitments, they are also challenged with the inability to leave work to respond to a page out. Both situations diminish the effective and efficient response of the volunteer firefighters, posing a challenge for communities as large as the Town of Collingwood.

Establishing and Regulating By-law

Collingwood Fire Department's Establishing and Regulating By-law #95-43 does not actually specify what response time criteria is expected of its Fire Department. However, this does not restrict the Department from tracking and reporting on its level of service, based on a year-to-year basis. As such, CFD has adopted the use of the response time measurement based on average response times, which are tracked and reported to Council.

As previously noted, CFD does have an updated By-law ready for presentation to Council, but at the time of this review, the updated E&R By-law has not been submitted and approved by Council. As such, CFD is working off a by-law that is more than 20 years old.

NFPA 1201 – *Standard for Providing Fire and Emergency Service to the Public* recommends that the policy document be reviewed periodically. Although this statement does not quantify what "periodic" means, the Commission on Fire Service Accreditation International would suggest a review be done annually.

It is therefore recommended that the Fire Department's Establishing and Regulating By-law be updated to reflect the present status of the Fire Department and its services to be approved by Council. This document should then be reviewed annually by the Fire Chief, documenting review dates, to ensure that the By-law is kept current in relation to the needs of the community.

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 FMP process, feedback was gathered from internal staff, which included firefighters, administration, training and fire prevention. 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. A copy of the questions asked can be found in the appendices.

In general, the internal staff shared the following key points as their top three services that should be offered to the community:

- Fire and Emergency Response to the community
- Fire Prevention and Public Education
- Technical rescue programs such as auto extrications, confined space and hazardous materials scene management

For future expectations and recommendations, internal staff noted:

- The need for more full-time staff to ensure a more comprehensive response
- More specialized training, along with ongoing training to keep skills up
- Ensure that equipment is kept in a ready status by an ongoing equipment replacement program

2.3.2 External Stakeholder Surveys

During the FMP process, feedback was gathered from the community in the form of an online survey. The following are the top three services preferred by the external stakeholders:

- Firefighting services
- Response to motor vehicle collisions
- Medical response

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
- Continued and relevant training by attending at resident's homes to offer safety tips
- How well the Fire Department works with other agencies to provide wider community safety services

Concerns made by the external respondents:

- Try to keep control over the cost of the fire service – which includes wages
- Is our fire staff getting the training they need to meet the demands of the community?
- Planning for future growth and related service needs of the community

Overall, both internal and external input noted a strong level of confidence in the Fire Department and senior management.

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.

Recommendation(s)

1. It is recommended that an updated version of the Fire Department's Establishing and Regulating By-law be presented to Council for approval. This document should be reviewed annually by the Fire Chief, documenting review dates, to ensure that the By-law is kept current in relation to the needs of the community.

Associated Costs *(all costs are approximate)*

- There is no cost for this recommendation.

Timeline

- Short-term (1 – 3 years) for presentation and approval and ongoing for annual review by the Fire Chief.

Section 3:
Programs

3.1 Fire Prevention
3.2 Integrated Risk Management Web Tool
3.3 Fire Underwriters Survey
3.4 Training and Education
3.5 Fire Suppression/Emergency Response
3.6 Emergency Preparedness Program
3.7 Emergency Communications/Dispatch Centre

Section 3: Programs

For this FMP, seven separate programs, each of which is integral to the mission and operations of the Collingwood Fire Department, are discussed in this section:

1. Fire Prevention
2. Integrated Risk Management Web Tool
3. Fire Underwriters Survey (FUS) Review
4. Training and Education
5. Fire Suppression/Emergency Response
6. Emergency Preparedness Program
7. Emergency Communications/Dispatch Centre

3.1 Fire Prevention

For fire prevention initiatives to be effective, an organization needs to accomplish three distinct tasks:

1. Complete a needs analysis to identify the significant fire risks to the community
2. The selection, development and implementation of appropriate programs to address the identified risks
3. An evaluation of the effectiveness of the fire prevention programs

To assist with a review of this section, reference will be made to the:

- *Fire Protection and Prevention Act*, and
- The NFPA 1730 Standard on Organization and Deployment of Fire Prevention Inspection and Code Enforcement, Plan Review, Investigation, and Public Education Operations

Municipal responsibilities (FPPA 1997)

2. (1) Every municipality shall,

a) establish a program in the municipality which must include public education with respect to fire safety and certain components of fire prevention; and

b) provide such other fire protection services as it determines may be necessary in accordance with its needs and circumstances.

Needs Analysis:

Needs analysis for fire prevention programming involves assessing the relative fire risks in a community and identifying the significant hazards which should be addressed. It also involves compiling adequate information to conduct the analysis and for appropriate program selection, development and implementation.

Information including fire losses, implications of fire occurrence, such as any types of building losses, the overall building stock and demographics of the community must be gathered and assessed by the Department to identify areas of high risk and prioritization for the Fire Prevention Division.

Program Selection:

There are minimum fire prevention programs required for a community under the *Fire Protection and Prevention Act*. The minimum acceptable level that a municipality must provide includes the following:

- Simplified Risk Assessment
- Smoke Alarm Program
- Fire Safety Education materials distributed to residents / occupants
- Inspections upon complaint or Request to Assist with code compliance (including any necessary code enforcement)

Additional programs may also be required based upon the risks identified by the needs analysis, with consideration for available resources.

Program Evaluation:

Evaluation of the effectiveness of a department's fire prevention programs is essential to ensure the most appropriate use of the community's resources and to also identify the need for more staffing as a community grows in population. Regular evaluation is an ongoing function for the fire service managers and should incorporate a regular application of the model's process of Needs Analysis, Program Selection, and Program Evaluation.

To accomplish these three components, an organization needs to conduct a Simplified Risk Assessment to recognize the risks and identify programs required to address these risks.

Simplified Risk Assessment

Public Fire Safety Guideline, PFSG 04-40-12A, states that a Simplified Risk Assessment (SRA) must be completed for the community to determine the needs and circumstances of the municipality along with establishing 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 threat to 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.

As already noted, the *Fire Protection and Prevention Act* (FPPA) requires each municipality to provide public education and fire prevention services to its population. The minimum acceptable level that a municipality must provide includes the following:

- Simplified Risk Assessment
- Smoke Alarm Program
- Fire Safety Education materials distributed to residents / occupants
- Inspections upon complaint or Request to Assist with code compliance (including any necessary code enforcement)

As an accepted practice, an SRA should be completed every three to five years. However, if there is significant growth or change in the community, an annual update should also be conducted to present a more realistic review and set of program upgrades/changes that are required to meet the needs of the community.

Since each community is different, the SRA and the ensuing fire concern profile will assist in identifying the degree to which these activities are required in accordance with local needs and circumstances. The SRA 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

Conducting a SRA 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.

The SRA is an integral building block in the data gathering process to understand the community that is served by the fire department. As the community continues to change, the document should not remain stagnant, as the results are only accurate to the time of which the review was conducted.

NFPA 1730 (relating to fire prevention) notes that this review should be conducted at a minimum of every five years or after significant change. This standard also establishes a process to identify and analyze community fire risks. This standard refers to the process as a Community Risk Assessment. There are seven components of a Community Risk Assessment outlined in NFPA 1730. These components are very similar in nature to that of the OFMEM Simplified Risk criteria:

1. Demographics
2. Geographic overview
3. Building stock
4. Fire experience
5. Responses
6. Hazards
7. Economic profile

Current Conditions Based on CFD's 2017 Simplified Risk Assessment (SRA)

The CFD's Fire Prevention Division consists of a Fire Prevention Officer and a Fire Prevention Inspector. The division provides a full range of prevention activities including public fire safety education, code enforcement inspections and fire investigations.

Public education activities include, but are not necessarily limited, to the following:

- public service announcements on radio
- school children education program
- utilization of the fire station public awareness bulletin boards
- portable fire extinguisher training
- coordination of Suppression crew participation in:
    - station tours
    - public festivals
    - smoke alarm program

Another responsibility of the Fire Prevention Division is to complete a SRA on their community. CFD completed their most recent SRA in 2017, which is mandated by the OFMEM. The document

makes note of specific data on the risks found within the community and identifies ways to address them through preventative measures. Under the heading of Community Risk Profile Concerns, the Department has noted the following:

- There is a high increase in number of seniors and retirees living in Group C (residential) occupancies and growing as more retire and relocate from the GTA.
- Tourist related activities and special events easily triple our population. As the tourism industry continues to grow with facilities, so does support staffing.
- Collingwood's geographical boundaries have increased through municipal re-alignment which also affects emergency response.
- Commercial growth also continues to grow as demands for more business and personal services increases.

To keep on top of any community concerns, it is recommended that CFD continue with its SRA reviews to ensure that inventory of any risk occupancies be maintained by the CFD 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.

To assist with ongoing fire prevention inspections and education initiatives, CFD has a full-time contingent of firefighters on duty 24/7. Training and utilizing these available resources to further promote fire prevention will allow for greater implementation of fire prevention and safety education programs for the community. This also embraces the first line of fire safety defence as noted by the OFMEM.

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 Collingwood Fire Department should move towards the training and certification of its firefighters and/or 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

Recommendation(s)

2. It is recommended that greater utilization of the on-duty full-time firefighters be incorporated into an annual fire prevention program. To accomplish this, all full-time firefighters and/or officers should be trained and certified to at least:
    - NFPA 1031 – Fire Inspector I, and
    - NFPA 1035 – Fire and Life Safety Educator I

    By having all full-time firefighters and/or officers trained to the above noted levels, CFD will have a greater number of resources to draw upon in its public fire safety education and inspection programs.

Associated Costs *(all costs are approximate)*

- The costs for this recommendation are minimal as the training and certification of the firefighters and/or officers to the noted levels can be done in-house or online.
    - However, if the training cannot be completed online, then staff time and other costs may be incurred for such items as travel and/or having an instructor attend on site to deliver the required courses.

Timeline

- Short to mid-term (1 – 6 years)

3.2 Integrated Risk Management Web Tool

The Ontario Fire Marshal's Communiqué 2014-12 introduced the Integrated Risk Management Tool (IRM) to the Fire Service. The document notes:

> *The IRM Web Tool was developed as part of a commitment made by the OFMEM to the Ontario Association of Fire Chiefs (OAFC) and other stakeholders. The IRM Web Tool can be used by all Ontario's municipalities and fire departments to determine building fire risks in their respective communities by taking into account building characteristics (Building Factors) and the three lines of defence against fire (Three Lines of Defence):*
>
> *Line one: Public fire safety education*
> *Line two: Fire safety standards and enforcement*
> *Line three: Emergency response*

The Integrated Risk Management Web Tool is built around the three lines of defence and intended for municipal and fire service decision-makers. The tool was designed to assist municipalities in fulfilling the responsibilities prescribed in Section 2 of the *Fire Protection and Prevention Act*, 1997 (FPPA).

The concept of the IRM is a "building by building" assessment, but its goal is to go beyond simply taking stock of buildings within the community; it is intended to be a holistic approach that is meant to combine all fire department efforts in relation to:

- Fire prevention and education initiatives, which includes updated community reviews using the OFMEM Simplified Risk Assessment
- Fire station locations 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 IRM 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.

It should be realized that conducting a review of every building within the Town of Collingwood may not be practical due to present staffing levels. However, utilizing NFPA 1730 definitions of risk categories may guide Council in deciding the focus and 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 and balanced with the circumstances 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 of CFD 's 2017 Simplified Risk Assessment, along with interviews held with Fire Prevention staff, the key fire safety related issues facing the community are:

- The high increase in number of seniors and retirees living in residential occupancies. This number continues to grow as more retirees are relocating from the GTA.
- Tourist related activities and special events can see the population triple. Therefore, the tourism industry continues to grow with related facilities such as hotels and resorts and so does the number of support staff required for these facilities.
- Collingwood's geographical boundaries have increased through municipal re-alignment which also affects emergency response times.
- Commercial growth also continues to increase as demand for more business and personal services increases. This in itself can pose a challenge to the fire department in its ability to fight fires in larger facilities with limited resources.

Utilizing the IRM tool, in conjunction with the guidance from NFPA 1730, will help to provide a picture of the resources, time, and tools required to keep the fire risk in the community to a manageable level, as defined by Council. It is important to note the number of buildings within Collingwood and the continual growth that is expected. This current and future building stock adds pressure on the Fire Prevention Division to accomplish an adequate amount of inspections to ensure fire code compliance within the community.

To determine the current staffing needs, NFPA 1730 outlines a five-step process within Annex "C" of the standards. 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 this NFPA 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), 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 Prevention Division should assess the previous five steps and evaluate their present level of activity and the future goals of the Divisions.

To assist in this process, the Fire Prevention Division should more closely track the actual time spent on each of the Fire Prevention Office activities (ranging from site plan reviews, routine inspections, licensing, complaints, and requests, to name a few). Further, reporting should also include clearly identifying 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.

Fire Prevention staff are duty bound to conduct inspection upon request or complaint in accordance with the *Fire Prevention and Protection Act* (FPPA). However, this requirement is the minimum level of inspections mandated by the FPPA. Council has the authority to set the level of service as to what buildings or building types are required to have routine inspections. The Chief may make a recommendation to council to establish council mandated inspection standards.

Based on the data received along with input from community stakeholders, the Fire Prevention Division has done an efficient job in ensuring ongoing inspections and education programs are being conducted.

Future Needs

The continued utilization of the IRM tool will provide an understanding of the community's fire risk (building by building) that can be extrapolated to show the hazard(s) in given areas. Along with the Simplified Risk Assessment, this tool will aid in the design and formation of the fire prevention inspection and education programs.

Upon updating the Simplified Risk Assessment, the IRM tool could be used to begin the process of measuring the community for fire risk. A thorough risk assessment can also avoid invalid comparisons between your 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.

The Fire Prevention Division responds in a timely manner to any complaints brought to their attention regarding fire safety matters. They also provide inspections upon request and, where appropriate, charge fees for this service. Property inspections are routinely done on properties that are identified as significant risk, including care occupancies, group homes and motels/hotels. The Fire Prevention Division also assists the Building Department with Ontario Building Code compliance. This is an effective means of ensuring that newly constructed properties are provided with the required fire safety features. There is no written understanding in relation to division of responsibility between the two departments for relative building code provisions, but at this time, the joint program appears to be working well.

Succession Planning and Training

Succession planning is a factor that needs to be addressed for the Fire Prevention Division (and the other divisions within CFD as identified) as Fire Prevention Officers and Inspectors have a highly technical function requiring specific education and skill sets. As such, a plan should be put in place to promote succession planning to prepare for upcoming retirements.

Training for the Fire Prevention Division staff includes attendance at educational symposiums such as the Ontario Municipal Fire Prevention Officers Association (OMFPOA) seminars and the Fire Prevention Officers seminars at the Ontario Fire College. The Fire Prevention Officer and Inspector are also part of the Simcoe County Fire Prevention Officer's Association that discuss and identify needs of the County along with offering training sessions for the FPO/FPI's wherever possible.

The Department should continue to investigate other training opportunities for its Fire Prevention staff to ensure they are current with related standards and codes within the industry. It is also recommended that all Fire Prevention staff (present and new) are certified to related NFPA and Ontario Fire College standards.

EMT concludes that the number of staff assigned to the Fire Prevention Division is appropriate for the size of the municipality and the associated risks and tasks required. The facilities and equipment provided to ensure the Division has the means to deliver an appropriate level of service

effectively meets the Division's needs. However, as the community grows, the challenges on the present Fire Prevention staff will increase and an assessment of staffing needs should be re-evaluated based on the goals and expectations of Fire Prevention Division.

3.3 Fire Underwriters Survey (FUS) Review

Overview of Fire Underwriters Survey

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 rates 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 and 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.

Collingwood Fire Department received its last FUS rating in 2011. The updated review noted no rating changes based on the previous FUS report. Specifically, the Commercial Classification and the Residential Dwelling Protection Grades remained the same. A full review of this 2011 (and past) assessment should be completed and reported to Council, along with what would be required to incorporate identified recommendations made by the FUS group.

3.3.1 Other Fire Prevention Opportunities for Consideration

One area that EMT was asked to look at is opportunities for revenue generation. With this in mind, the Collingwood Fire Department, as part of Simcoe County, has an opportunity to investigate and possibly offer the following services to other smaller communities:

Shared Inspection Services and Public Education Officer for CFD and Bordering Communities

Some of the fire departments within Simcoe County are run almost entirely by volunteer personnel. According to the OFMEM, each community must complete a Simplified Risk Assessment every three to five years or as major changes occur within the community. They must also conduct fire prevention inspections based on requests and complaints. With various other responsibilities to consider, these departments are challenged to meet the fire prevention goals and expectations placed upon them by the Office of the Fire Marshal and Emergency Management in in a pro-active manner.

With this in mind, CFD should meet with bordering communities to investigate the opportunity of utilizing new Fire Prevention resources in the form of a third fire prevention officer/inspector. These contracted services can be sourced on an hourly rate or on a per-inspection costing. This would assist CFD in its efforts for increased revenue generation, while assisting other bordering fire departments in their quest to meet the needs of their communities at the same time as cost sharing this position.

By hiring a third fire prevention inspector, CFD would have the resources and facilities to offer greater focus on public education initiatives for Collingwood along with sharing this resource with bordering communities through a cost sharing initiative. This could assist to standardize the public education programs amongst the partner communities and be an efficient utilization of a single resource by all the partner communities.

It is recommended that the Collingwood Fire Chief investigate the opportunities for providing enhanced Fire Safety and Public Education services for Collingwood along with shared services to bordering Fire Departments by investigating the opportunity for cost sharing of a Fire Prevention/Public Education Officer.

Recommendation(s)

3. Succession planning for Fire Prevention and all other Divisions within CFD should be addressed to ensure trained personnel, who are familiar with the technical requirements, community, and the fire department, are ready to take over when the existing personnel retire.
    - By ascertaining the roles and responsibilities of all the positions within the Department, a list of required skills and related credentials can be identified and approved.
    - This succession planning can also begin prior to filling a position by bringing someone in several months before the position is vacant. The new person will benefit by learning from the incumbent before they retire.
4. It is recommended that the Collingwood Fire Chief investigate the opportunities for providing enhanced Fire Safety and Public Education services for Collingwood along with shared services to bordering Fire Departments by investigating the opportunity for cost sharing of a Public Education Officer.
5. As a possible revenue generator, and in support of the future need for another Fire Prevention Inspector it is recommended that the Fire Chief investigate the opportunity of offering fire prevention inspection services, on a fee basis, to other bordering communities and their fire departments.

Associated Costs *(all costs are approximate)*

- Recommendation #3, 4 and 5: no immediate costs.

Timeline

- Recommendations #3 and #4: Short-term (1 – 3 years)
- Recommendation #5: Short to mid-term (1 – 6 years)

3.4 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 Administration, 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 Divisions are expected to be fully knowledgeable in both fire and building codes and all related standards and guidelines as well as being conversant 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 CFD is supervised and coordinated by the Deputy Fire Chief. The training focus has traditionally been on the fire suppression and the fire prevention divisions. However, training for personnel in the Administrative Assistant position do not have formal training plans and records. This is an area that needs to be addressed to ensure that Administration staff are receiving any required training to effectively meet the needs of the position.

The Deputy Fire Chief is also responsible for a variety of tasks, which includes the position of Alternate Community Emergency Management Coordinator for the Town's Emergency Management Program. Therefore, 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. For example, training for the Fire Suppression and Prevention Divisions are planned at the beginning of each year. However, there still needs to be a more formally recognized plan for all department staff in each of the Divisions to ensure that training goals and expectations are identified, evaluated and adjusted to ensure that all staff are receiving all required training (on an annual basis).

To this end, the Department has also endeavoured to make more effective use of information technology to improve training where ever possible. The use of available computer technology, coupled with hands on training is combined to utilize staff time as effectively as possible.

The Department has identified and established appropriate levels of knowledge and skills

certification for each position based on industry standards and is working diligently to ensure that all staff are achieving the identified certification for their assigned position.

Training records indicate that a substantial amount of time and effort is spent on both practical and theory training for staff in Fire Suppression. It was also noted that both members of the Fire Prevention are certified to related NFPA standards. The Deputy Fire Chief should continue to monitor the present training and certification programs to ensure that all staff are meeting their needed training goals and that training is effective by addressing all required topics for each division.

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. CFD has OGs for many of its operations, including training activities. This should be expanded so that all appropriate tasks are provided with up-to-date OGs.

Overall, the Deputy Fire Chief is doing an admirable job at identifying and meeting the needs of each division's training requirements, but more work is still needed to ensure that all divisions, which would include Suppression, Fire Prevention and Administration, are receiving the training needed. To more effectively meet these ongoing challenges, CFD would be much better served by creating a full-time Training Officer's position. This would not only ensure a greater focus on the development of training programs, but also allow for more accurate evaluation and tracking of them.

Recommendation(s)

6. Training for the Fire Suppression Division is planned at the beginning of each year. This should also be done more formally for all staff in each of the Divisions to ensure that training goals and expectations are identified and evaluated.
7. Additional administrative support should be provided for all divisions within the CFD to make the most efficient use of staff time and skills.
    - It is expected that an additional Administrative Assistant will be required in the future. It is recommended that, at present, a part-time Administrative Assistant be hired to work more closely with areas overseen by the Deputy Fire Chief.
    - Another option is to investigate the opportunity of utilizing administrative support from another Town department during peak workload period to provide relief and to cover for absences (of the Administrative Assistant).
8. It is recommended that CFD work towards creating a full-time Training Officer's position to more effectively meet the needs of the Department., along with ensuring a more

comprehensive development of training programs and tracking of completion rates for all divisions within CFD.

Associated Costs *(all costs are approximate)*

- Recommendation #6 – This recommendation is more associated with staff time. Overall cost would depend on identified training programs by the Fire Chief.

- Recommendation #7 – An assessment of the current Administrative Assistant's workload will identify how many additional full or part-time administrative support positions are warranted, which will in turn identify any related costs.

- Recommendation #8 – Approximate cost of Training Officer is dependent on Collective Agreements. However, an expected rate could range from $80,000.00 to $110,000.00

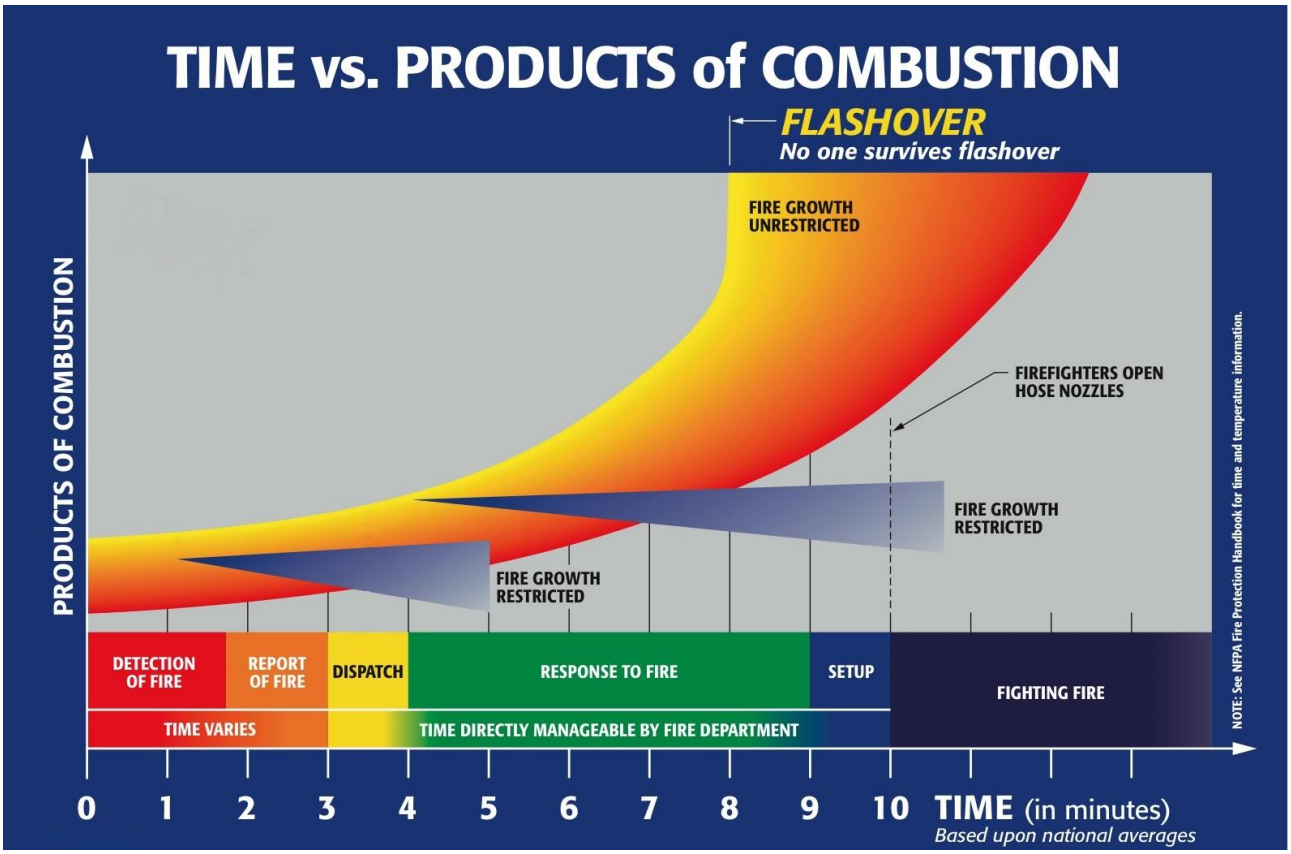
Timeline

- Recommendation #6 – Short-term (1-3 years)
- Recommendation #7 – Short-term (1-3 years)
- Recommendation #8 – Short to mid-term (1-6 years)

3.5 Fire Suppression/Emergency Response

When considering the response times and related needs for a community, the fire response curve (FIG 5) 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 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 5: Fire Response/Propagation Curve



Based on fire growth as demonstrated in figure 5 and the previously noted associated timelines, 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.

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 and response location
- The layout of the community
- Impediments such as weather, construction, traffic jams, lack of direct routes (rural roads)
- Notification time
- Assembly time of the firefighters, both at the fire station and at the scene of the incident
    - 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 firefighters are at their full-time jobs and cannot respond to calls during work hours.

It's important to consider that CFD responds to more than just fires. For example, motor vehicle collisions can create a medical or fire emergency that also needs to be addressed urgently. Hence, a 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 what operations it can successfully attempt. Based on NFPA and Fire Health and Safety Section 21 Guidelines, no interior fire attack can be made by the firefighters until more staff arrive on scene. The initial expectation is that 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 the Fire Chief to ensure that each station has a compliment that allows for an initial full crew response of four firefighters to such incidents.

To accomplish this, a response protocol is in effect that ensures a page out is conducted to bring in the off-duty/volunteer firefighters whenever more suppression personnel may be required. Depending on the situation, the CFD collective agreement requires the Department to call in the off-duty, full-time firefighters first, contacting the volunteers as backup.

During the years of 2013 to 2016, the volunteer firefighters were called out accordingly:

- 2013 – 9 times
- 2014 – 7 times
- 2015 – 7 times

- 2016 – 8 times

By tracking these numbers, the Department is not only demonstrating the need for this "call out" system, it is also monitoring a need for increased staff.

Response Data

The following charts identify a comparison of response types and the response breakdown for 2016. For the 2014 and 2015 data, refer to Appendix "D".

As noted earlier in this document, there also needs to be a review of the future growth statistics and demographics of the community to understand where the potential future needs will be and where some efficiencies can be made in relation to:

- Present and future fire station locations
- Opportunities for automatic aid agreements with neighbouring fire departments

The Collingwood Fire Department response times are calculated based on the OFMEM definition which is from "receipt of the call, to time of arrival at the incident". Response time is a function of various factors including, but not limited to:

- The distance between the fire station and response location
- The layout of the community (i.e. road ways, bridges, railway crossovers, etc.)
- Impediments such as weather, construction, traffic jams, lack of roads
- Notification time
- Assembly time of the firefighters, both at the fire station and at the scene of the incident

The following set of charts (using the supplied data) help to identify the types of calls that are creating the bulk of response demands.

Note: During the collating of the response data, some anomalies were noted such as overly long or zero turnout of response times; such anomalies were considered data entry errors. To ensure a more accurate evaluation of times, any identified anomaly was removed from the data set. EMT is only looking at the emergency call types to compare CFD response times with that of the related NFPA Standard.

As such, the overall response numbers may not coincide with what CFD has reported as their total response numbers.

FIGURE(S) 6: Comparison of Responses Data for 2014, 2015 and 2016

	2014		2015		2016	
		% of Calls		% of Calls		% of Calls
Property Fires/Explosions	26	4.26%	13	1.79%	22	2.99%
Over pressure rupture/explosion (no fire)	0	0.00%	1	0.14%	0	0.00%
Pre-fire conditions/no fire	22	3.60%	29	3.99%	33	4.48%
Burning (controlled)	31	5.07%	25	3.44%	15	2.04%
CO Alarm Calls	65	10.64%	65	8.95%	67	9.09%
Fire Alarm Activations	168	27.50%	189	26.03%	182	24.69%
Public Hazard	60	9.82%	62	8.54%	70	9.50%
Rescue	51	8.35%	74	10.19%	74	10.04%
Medical/Resuscitator Call	160	26%	195	26.86%	206	27.95%
Other Response	28	5%	73	10.06%	68	9.23%
Total Emergency Calls	611	100.00%	726	100.00%	737	100.00%

The following two charts offer an at-a glance-overview of the call types and frequencies for 2016, along with average response times as well as response times based on the 90th percent comparison.

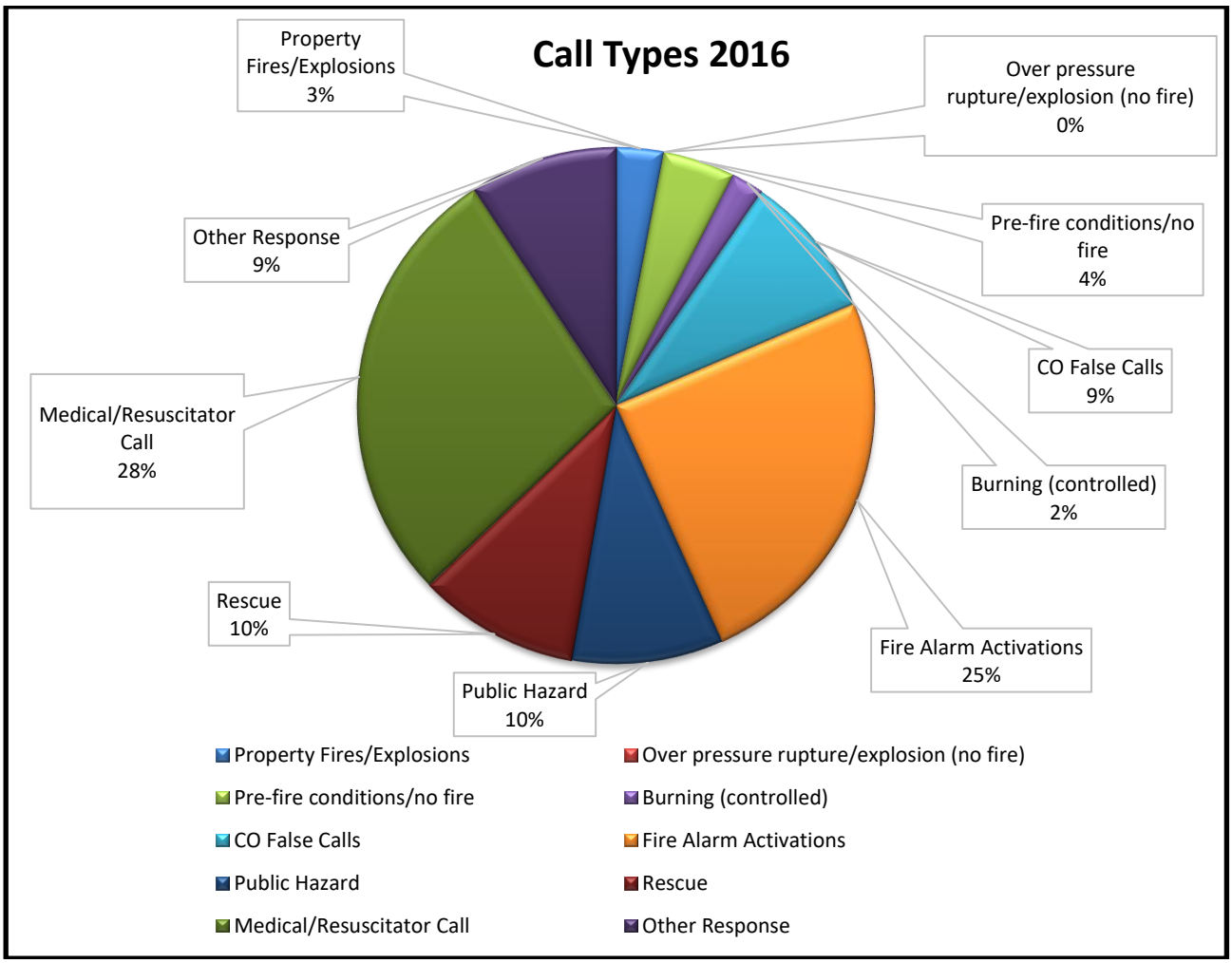
The 90th percentile criterion is the recommended practice that is endorsed by the National Fire Protection Association (NFPA) and the Commission on Fire Accreditation International (CFAI). This data is considered more accurate since it is evaluating the times based on 90 percent of the calls, as opposed to averaging the times at the 50th percentile. For example:

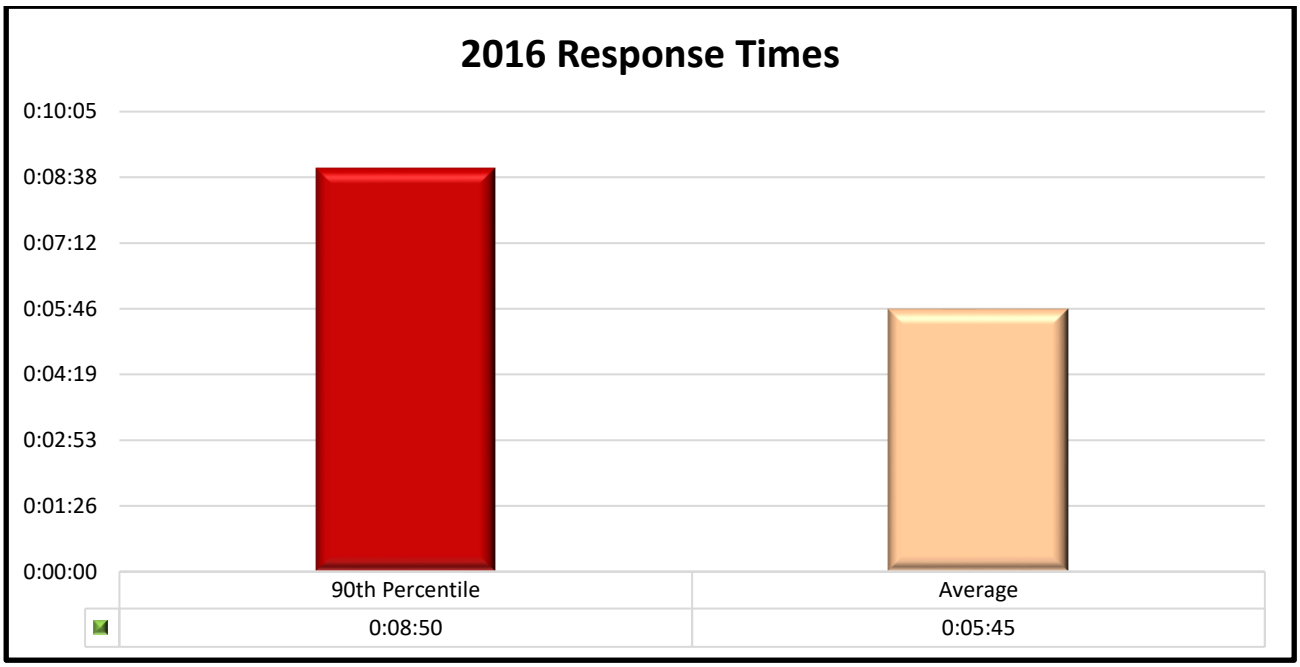
- 9 out of 10 times the fire department arrives on scene in 8 minutes or less, meaning that only 10 percent of the time they are above that 8-minute mark
- as opposed to 5 out of 10 times the fire department arrives on scene in 8 minutes or less, meaning 50 percent of the time they are above the 8-minute 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 90th percentile format. 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.

Similar charts for 2015 and 2014 can be found in Appendix "D" of this report.





As already noted, the Collingwood Fire Department relies on their Fire Suppression Division to provide effective emergency response to fires and other public safety hazards. This Division is comprised of 24 full-time firefighters and officers divided amongst four platoons, supported by an approved roster of eight volunteer firefighters.

The Department provides a range of emergency response types, including not only reported structure fires, but motor vehicle collisions, hazardous material exposures, rescues, carbon monoxide alarms and medical emergencies. These responses are done in coordination with their emergency response partners consisting of the police, emergency medical services and neighbouring fire services.

The fire department staffs with six firefighters who make up the initial response. Should there be a structural fire or incident that requires additional firefighters, off-duty firefighters are called in to provide additional support. This has been working well for the vast majority of emergency calls. Where the on-duty crew is tied up, off-duty firefighters are brought in to staff another apparatus to stand by at the fire station for other calls, or to respond to the scene if required. For a residential structural fire, a standard response is 10 firefighters, which therefore requires an immediate call back of off-duty firefighters.

In extreme situations, CFD can call on the assistance of the neighbouring municipalities to ensure that more significant emergency incidents have an adequate number of firefighters on scene. However, this type of assistance is not a guarantee that other firefighters and equipment will be sent when needed. Mutual aid is not meant to augment staffing shortages; it is meant to assist a fire department when all their local resources have been exhausted.

As the Town grows, an increase in call volumes may necessitate the need for a larger full-time component of firefighters to ensure that the station has a staffing compliment of three to four firefighters per responding unit on a consistent basis.

Emergency Medical Responses

The Collingwood Fire Department responds to potentially life threatening medical emergencies, under agreement with the Central Ambulance Communications Centre and the Simcoe County Paramedic Service. These responses constituted approximately 206 calls in 2016, which equates to 28% of the total emergency call volume of the Fire Department.

The Simcoe County level "B" response agreement is for the following types of calls which are potentially life threatening:

- Non-responsive/not awake
- Choking – not breathing
- Profuse bleeding
- Cardiac chest pain
- Acute shortness of breath
- Convulsion/seizure > 30yr. with no or unknown history

Having fire crews respond provides several benefits:

- ensures that trained emergency responders are on scene in a timely manner, should EMS be delayed
- provides additional resources at an incident to assist with patient care, patient movement and transport, and emergency scene management

Although medical response does constitute a large proportion of the Fire Department's responses, it does not task their capacity nor does it detract from their ability to provide fire response or other emergency services. Since the firefighters are already present and available, the actual additional costs to the Department to provide this service are primarily vehicle expenses (additional fuel, maintenance) and medical supplies. Much of the vehicle maintenance budget is required for annual vehicle maintenance, including for firefighting equipment (pump and aerial certifications) whether or not the vehicles respond to medical calls. Therefore, the actual vehicle costs associated with medical first response would be a small portion of the budget.

The Ontario Ministry of Health and Long-Term Care has set a target time of less than 6 minutes for first responders arriving at a cardiac arrest to provide the highest chance of survival through early intervention. Presently, the CFD can reliably meet that target time in the Town of Collingwood, which makes CFD a key component in the provision of rapid emergency care on medical calls.

Recommendation(s)

9. It is recommended that the Fire Chief present a standard of cover for Council approval. This standard would speak to response time criterion, whether that is the NFPA 1720 – 15 staff in 9-minutes, 10 staff in 10-minutes rule or the NFPA 1710 standard of four-minute drive time for full-time crews.

10. The Fire Chief should monitor the requirement for paging of firefighters to the station for support or the need for a second response to emergency calls. Along with the number of 'pages outs', the length of time to respond to the station should also be tracked to ensure that response times are within an acceptable timeline.
    - The timelines to be utilized are those noted in the NFPA 1710 and 1720 standards

Associated Costs *(all costs are approximate)*

- No associated cost to either recommendation.

Timeline

- Recommendation #9 – Short-term (1-3 years)
- Recommendation #10 – Ongoing

3.6 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.

Emergencies are inevitable and preplanning is necessary. An urgent need for rapid decisions, shortage of time, and 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 vulnerability assessment. The results of the study will show:

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

From this analysis, appropriate emergency procedures can be established.
The Town of Collingwood Emergency Preparedness Program is presently managed by the Fire

Chief and supported by the Deputy Fire Chief. The Fire Chief is designated as the Community Emergency Management Coordinator (CEMC) and the Deputy Fire Chief is the Alternate CEMC for the Town of Collingwood.

The Fire Department headquarters is set up with a room that functions as the municipal Emergency Operations Centre (EOC).

The Fire Chief, as the CEMC, is responsible for updating the emergency plan, ensuring all members of the Emergency Control Group (ECG) are familiar with their roles, coordinating ECG meetings, organizing an annual exercise, reviewing hazard specific prevention and mitigation strategies, and developing hazard-based incident action plans. The Town works closely with the County of Simcoe emergency management team and the surrounding municipalities.

Based on the information received from the Fire Chief, the program is working well and supported by the Town to ensure that annual training and related exercises are completed on a yearly basis and that the program will meet the needs of the community.

Opportunities for improvement include increasing the emergency preparedness education by working with other municipal departments to educate the public through their public relations programs. For example, education could be provided to the community through the library, recreation centres, public works, and other departments.

However, having noted the other opportunities, it appears that the CFD and the Town of Collingwood have a strong Emergency Preparedness Program in place. As such, no recommendations are being made to any changes for this program, however, a recommendation is being made in relation to the emergency backup power needs for the Town.

3.7 Emergency Communications – Dispatching Services

CFD receives its dispatching services from the Barrie Fire & Emergency Services (BFES). Based on information received, along with a review of the dispatching data, it would appear that CFD is receiving adequate aid from the BFES. This agreement was updated in 2016 for a three-year period.

During conversations with the Fire Chief, along with the evaluation (by EMT) of the dispatching data, is was confirmed that the dispatching agreement with BFES is working well and no changes are recommended at this time.

Recommendation(s)

No recommendations for Sections 3.6 and 3.7.

Associated Costs *(all costs are approximate)*

- N/A

Timeline

- N/A

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 Collingwood fire station.

4.1 Fire Station Location and Other Considerations

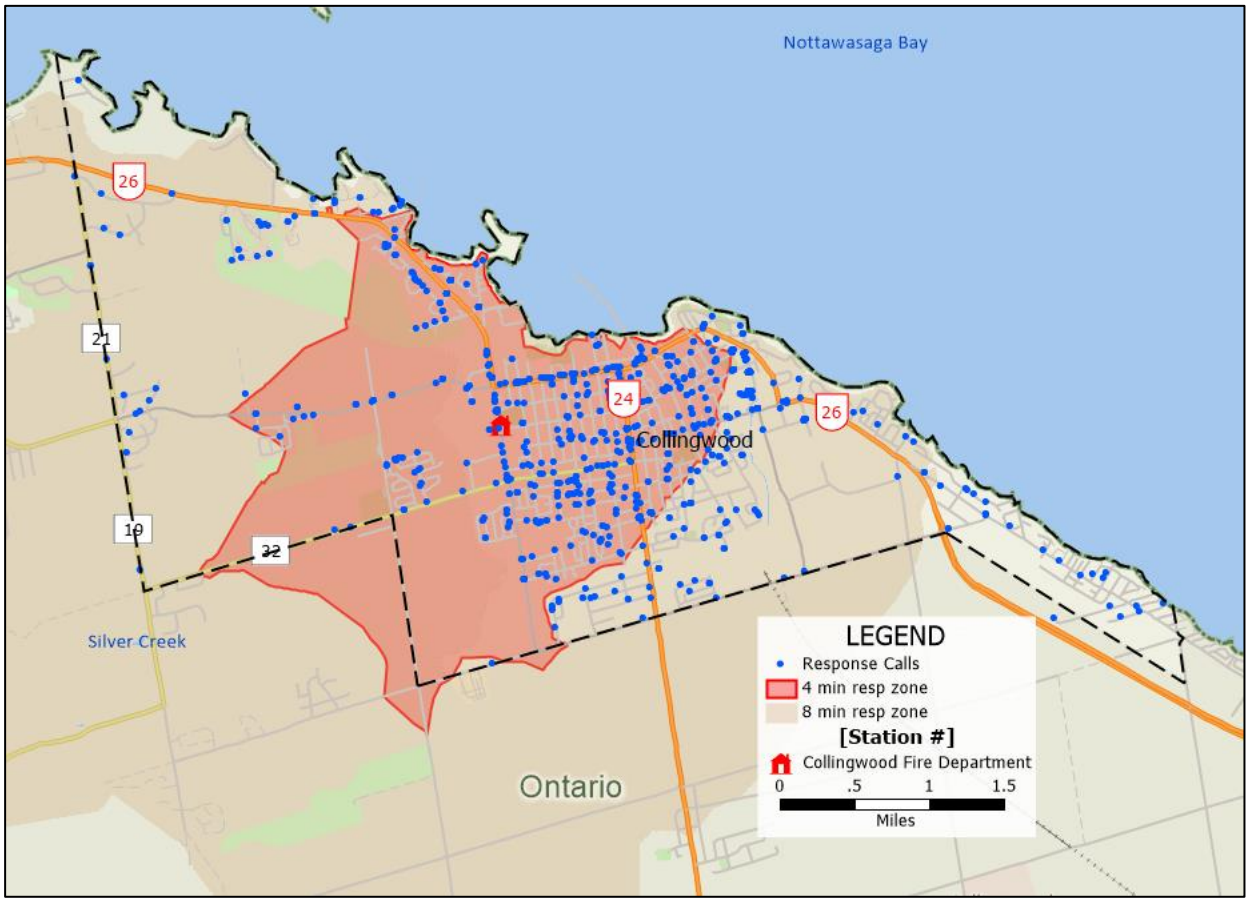
Fire stations should be positioned to offer the most efficient and effective response to the community they serve. Centering them within a determined response zone that is simply based on "timed" responses is not always the best option to implement. Fire station location depends on many factors such as key risks within the response zone, future growth of the community, and firefighter composition (career or volunteer). 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.

Public Fire Safety Guideline – PFSG 04-08-13 on Fire Station Location notes 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 Collingwood Fire Department presently responds from one fire station that is located at 45 High Street, in Collingwood. The fire station is staffed with full-time firefighters that are supported by volunteer firefighters, as required. The minimum staffing for the station is four per shift (which includes a full-time Officer).

As noted in Figure 7, the fire station is located in a manner that appears to offer an effective level of coverage for the community.

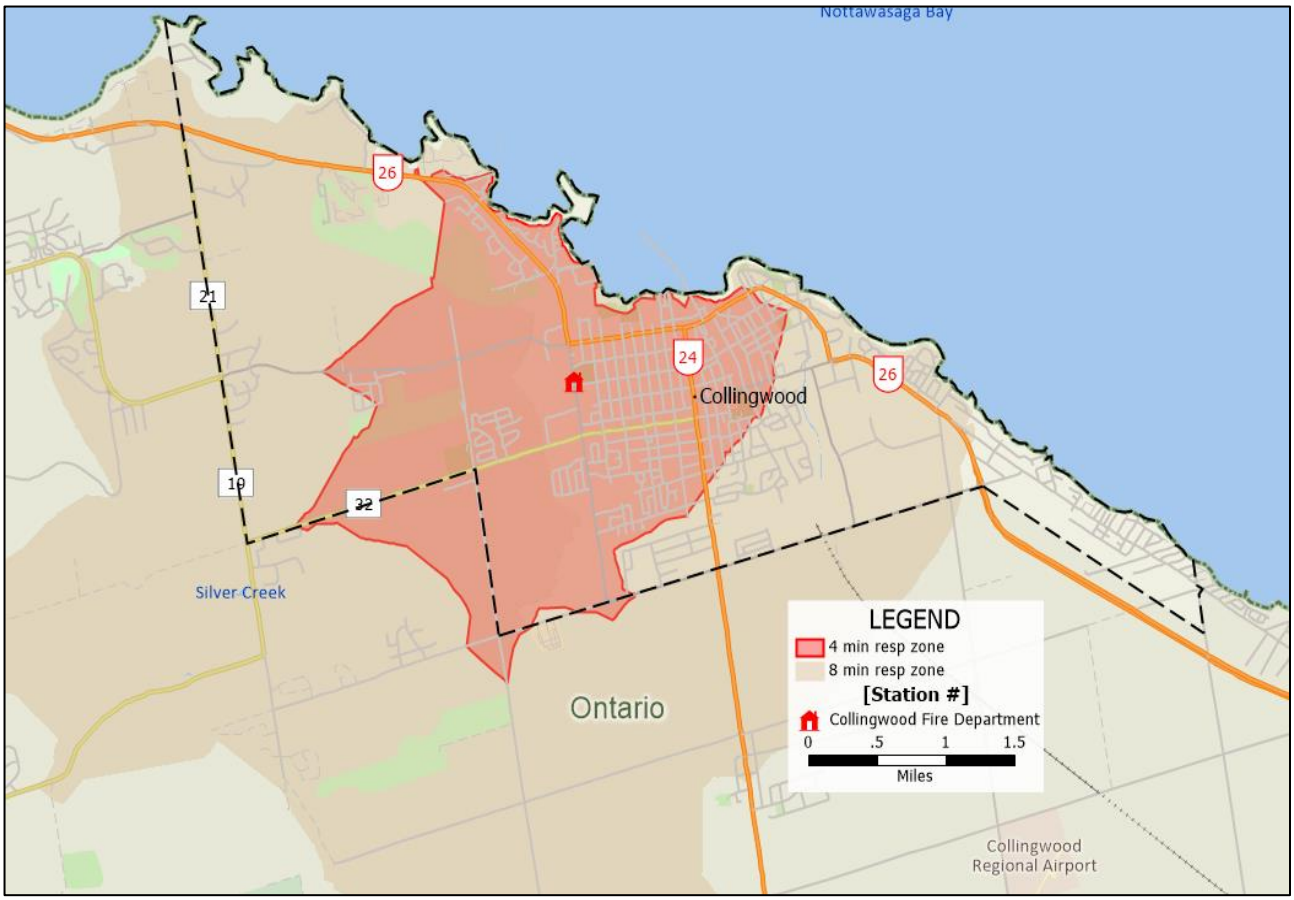
FIGURE 7: Collingwood Fire Response Clusters (for 2015, 2016)



In Figure 7, the reader will note that the bulk of the responses (denoted by blue dots) are within the four-minute response portion of the map and most fall well within the eight-minute zone. However, the Fire Chief should continue to monitor the amount of calls that fall outside of the eight-minute response zone, which appear to be concentrated in the far eastern portion of the Town.

Ongoing analyses of call locations and future planned growth within the Town will assist in identifying when, where and if another fire station will be required. As such, the Fire Chief should continue to monitor these calls and keep Council appraised of the findings. More of this station location criteria is discussed in the Section 4.1.1.

FIGURE 8: Four (4) and Eight (8) Minute Travel Time Map from the Fire Station (Without response clustering)



4.1.1 Discussion Relating to Fire Station Locations

Desirable Fire Station Site Criteria

As Collingwood's population continues to grow, a second fire station may be required to meet the needs of the community. When evaluating a station's existing and potential locations, 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:

- 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.)
- Assembly time for volunteer firefighters must not be negatively impacted
- 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)

Although no recommendation is being made for a new fire station at this time, CFD should continue to monitor call volumes on an annual basis to identify if a second fire station should be considered in the western portion of the Town.

The estimated cost consideration:

- If a fire station is required, an approximate building cost of $250 - $300 per square foot should be expected – for example if a one-bay 7,000 sq. ft. building is constructed, the cost would be approximately $1,750,000 - $2,100,000 with a build timeline of approximately

one year. The noted cost would be for the building expenses only. It does not include specific amenities that may be identified by CFD.

- 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.
- A new station cannot be considered without calculating the staffing costs for the station. To fully staff would require 20 career firefighters to ensure a consistent staffing of four firefighters 24/7. With current salary and benefit costs, the annual expenditures would be approximately $2 million.

Equipping and staffing a new station can be done in increments. For example, CFD could use one of its present fire trucks for this station and conduct a review of the busiest times for call volumes and staff the station accordingly. This might mean starting with a full-time day shift that works from 7:00 AM to 7:00 PM, and from 7:00 PM to 7:00 AM the station is covered by call outs to the off-duty and volunteer firefighters. Another option may be an increase in staff allowing for the spread of personnel to have three full-time firefighters per station 24/7.

Presently CFD has a compliment of 24 full-time firefighters, which at full strength offers six firefighters per shift. With the possible future opening of a second fire station, CFD may want to consider the option of the incremental hiring of firefighters to allow for six full-time firefighters on duty 24/7. This would equate to an increase of two firefighters per shift.

Other departments in Ontario have ‘up staffed’ their stations by looking at the call volumes and associated times in relation to staffing needs. The key point is to realize that although the volunteer firefighters play a very important role in the effective operations for a department (and this should never be undermined), they cannot be depended on 100 percent of the time due to their other commitments. As such, the Town of Collingwood should look at what they require based on the recommendation put forth in this report and those of the Fire Chief.

Note: In relation to staffing of a new fire station, a full evaluation of call volumes and associated times needs to be conducted by the Fire Chief and his staff to determine what amount of staffing coverage needs to be utilized and in what time increments.

Building Attributes for a Fire Station

In developing the plans for a new fire station, should Council approve its construction, 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 functional space is to separate the functions such as industrial maintenance spaces from the residential 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.

4.2 Fire Station Evaluation

Collingwood Fire Department provides emergency service response from one fire station. This is a relatively new fire station, built in 2013.

Notes:

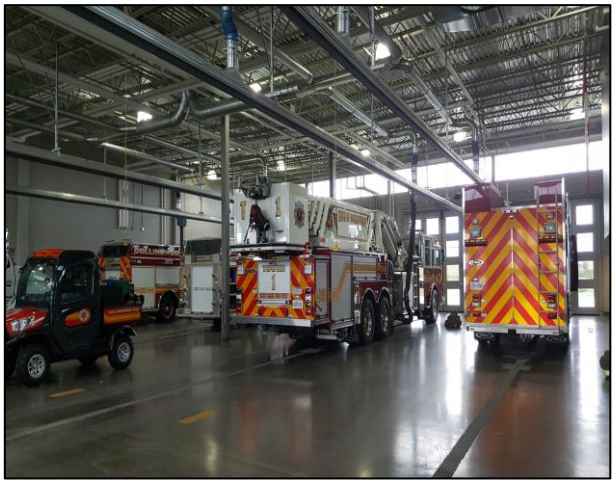
- *The station review in this report is of a general nature, conducted by a visual walk-through by EMT staff.*
- *If any health and safety related items are noted, they have been **bolded and italicized.***

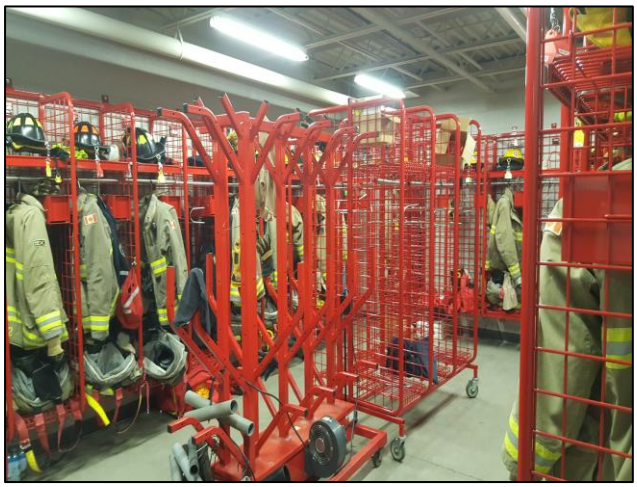
Collingwood Fire Station

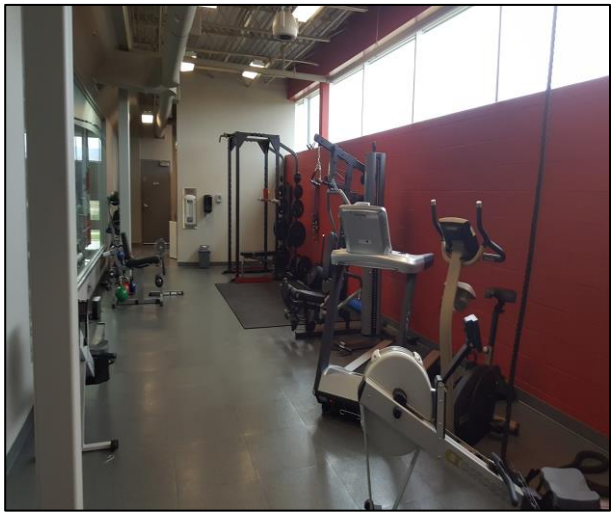
The Collingwood fire station is located at 45 High Street. This is an 18,000 square foot station that was built in 2013. It houses Administration, Training, Fire Prevention, Fire Suppresion (full-time and volunteer firefighters), and is the location for the primary Emergency Operations Centre for the Town.

This is a four-bay, drive-through facility, which is the recommended set up for fire stations as this 'drive-through' capability reduces the chances of backing incidents. The vehicles located at this station are also relatively new in age – all vehicles are 14 years old or newer – which put them well within the replacement cycle noted by the Fire Underwriters Survey recommendations.

Along with diesel exhaust capture systems to reduce exposure to these contaminates, the station is also equipped with a full fitness area for the firefighters. Another health and safety feature of this new facility is that all of the firefighters' gear is stored in a separate room, which again reduces exposure to exhaust fumes and ultraviolet light from the sun. Both of these types of contaminants can reduce the usable life of the firefighters' gear.







Observations

The station is well set up for both operations and administrative staff. All safety features such as emergency back-up power generator and vehicle exhaust systems have been installed at this station.

Based on the conditions noted within the station, there are no recommendations for improvements to the facility.

4.3 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.

R.R.O. 1990, Regulation 851

Industrial Establishments

PART I – SAFETY REGULATIONS

PRE-START HEALTH AND SAFETY REVIEWS

7. (1) In this section

"Apparatus" means equipment or a machine or device

PREMISES

11. A floor or other surface used by any worker shall,

(a) be kept free of,

i. obstructions,

ii. hazards, and

iii. 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. R.R.O. 1990, Reg. 851, s. 11

12. 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. R.R.O. 1990, Reg. 852, s. 12.

PART III – INDUSTRIAL HYGIENE

125. 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. R.R.O. 1990, Reg. 851, s. 125.

127. 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. R.R.O. 1990, Reg. 851, s. 127.

The following are suggested options to help alleviate this exhaust contamination:

- *Ensuring natural ventilation is supplied and maintained whenever a vehicle is started and moved; stations with no back bay or doorway will be challenged to supply this type of natural ventilation,*
- *Separations from the apparatus floor and the training/living areas of the station need to be installed and maintained,*
- *Installation of mechanical ventilation systems designed for fire stations such as "at source" exhaust systems, and*
- *Adequate clothing storage should be provided for personnel.*

134. 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. R.R.O. 1990, Reg. 851, s. 134.

4.4 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.

To the credit of the fire service and the municipality, our station review noted that the fire station is equipped with an emergency back-up power source in the form of a generator.

The department should ensure the generators are kept on a regular testing and maintenance program to ensure that they are ready for use, if required.

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.

To the credit of Collingwood, the fire vehicles are on a replacement cycle which keeps them within the Fire Underwriters recommendations and, more importantly, creates a standard when it comes to forecasting fire truck replacements.

Fire Underwriters Survey – Vehicle Replacement Recommendations

In the chart below, the recommendations for vehicle replacement for the Town of Collingwood fall under the highlighted column for *Medium Sized Cities or Communities*. This allows for up to a 20-year replacement cycle. As the community grows, it should consider moving towards a 15-year replacement cycle.

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

1. *All listed fire apparatus 20 years of age and older are required to be service tested by a recognized testing agency on an annual basis to be eligible for grading recognition (NFPA 1071)*
2. *Exceptions to age status may be considered in small to medium sized communities and rural centre conditionally, when apparatus condition is acceptable and apparatus successfully passes required testing*
3. *Major cities are defined as an incorporated or unincorporated community that has:*
    a. *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.

For the most part, the CFD is well-equipped with pumper trucks, rescues and an aerial truck. There also appears to be a sufficient level of support vehicles and equipment to meet the general needs of the department. Replacement schedules are identified in the capital forecast for the fire trucks and large cost items.

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 (pumps, generators, boat motors, etc.) are on a standard replacement cycle and that maintenance and repair work is addressed as quickly as possible by the Town or other recommended facilities.

Recommendation(s)

- No recommendations for this section

Associated Costs *(All costs are approximate)*

- N/A

Timeline

- N/A

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 Collingwood Fire Department organizational chart identifies a present strength of approximately 24 career firefighters and an approved strength of eight volunteer firefighters. There are also five full-time staff in Administration and Fire Prevention.

5.1 Staffing Compliments (career and volunteer firefighters)

A point of consideration is to determine when a fire department and its council should choose to migrate toward a full-time service, independent of response from volunteer firefighters.

To make an informed decision, this decision is dependent on the following points:

- Does the fire department have an approved response criterion as a baseline?
    - Has Council given direction to the Fire Chief (based on his recommendations) 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?

For fire departments in Ontario, we refer to the National Fire Protection Association's 1201, 1710 and 1720 standards, which guide:

- 1201 – Standard for Providing Fire and Emergency Services to the Public
- 1710 – Standard for Career Fire Departments
- 1720 – Standard for Volunteer Fire Departments

There are also the Office of the Fire Marshal and Emergency Management's Guidelines that advise fire services in relation to all aspects of delivering fire prevention, fire suppression and fire station location programs.

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

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

Presently, the CFD is doing an efficient job at addressing these six points noted in NFPA 1201.

NFPA 1710 and 1720 – Career and Volunteer Fire Departments

- NFPA 1710 in relation to the career firefighter component, chapter 4 notes, the expectation is that the crew is able to:
    - turnout (respond) from the station within 80 seconds, 90 percent of the time
    - have a travel time of 240 seconds (4 minutes) for the first unit to arrive on scene, 90 percent of the time in the primary response area
    - have a travel time of 480 seconds (8 minutes) for the remainder of the response contingent, 90 percent of the time

- NFPA 1720 for volunteer fire departments, chapter 4, notes the following for the deployment of volunteer firefighters:
    - 4.3.1 notes the following; "*the Fire Department shall identify minimum staffing requirements to ensure that a sufficient number of members are available to operate safely and effectively.*
        - *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."*

The CFD is actively working to comply with both standards in relation to meeting the community's needs. With its dedicated full-time and volunteer firefighters, the response statistics show a consistent improvement between 2014 and 2016 in meeting these targets. CFD and its staff should be commended for this level of success in meeting the response needs of the community.

Transition from Composite to Fully Career Department

A question that is often posed in relation to composite fire departments is that of when the department should consider moving to a solely career model, eliminating the reliance on volunteer firefighters. There is no document that specifically identifies the tipping point for this 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, what the turnout is based on, the time of the day and day of the week (e.g. volunteer availability day shift vs. night shift), etc. Volunteers must be provided with the same minimum training certifications and equipment. Recruitment and retention of volunteers is becoming more of a challenge with the increasing training that they must commit to on an annual basis and high staff turnover with many younger volunteers actively looking for full-time firefighting careers.

Some composite fire departments have identified where to focus additional career firefighters by identifying call volume, growth of the community, and more specifically, the times of the day that were the most challenging for volunteer responses. As with most fire departments, the day-time hours from Monday to Friday are the greatest challenge due to fact that most 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.

Another indicator for making this decision is tracking the number of volunteer firefighters that arrive at the fire station to respond. For example, if the standard set by the department is that three or more firefighters must arrive at the station before the fire truck can respond, then this should be monitored along with how many times the number of volunteers are not adequately staffed to carry out an effective response force.

The Fire Chief must take all the preceding information into consideration before going forward to Council to recommend a possible increase in full-time service level. Going to a completely full-time status is a large cost to the community and therefore many communities have accomplished this in stages.

As a final note, Collingwood is in a unique position, in that it has only one fire station at this time. Therefore, the addition of more full-time firefighters hinge on the following considerations:

- Has the growth of the community and related call volumes identified the need to create a second on-duty crew?
- Has the growth of the community's population created the need for a second fire station in another part of the Town?

As noted in a previous section, CFD has a compliment of 24 full-time firefighters, which at full strength offers six firefighters per shift. With the possible future opening of a second fire station, it is recommended that CFD should consider the option of the incremental hiring of firefighters to allow for six full-time firefighters on duty 24/7. This would equate to an increase of two firefighters per shift.

5.2 Recruitment and Retention of Volunteer Firefighters

Collingwood Fire Department, as with many other fire departments, faces challenges when it comes to retention of volunteer firefighters. However, having said this, CFD is currently successful in retaining its volunteer numbers, which presently account for five personnel.

Retention of volunteer firefighters, in many cases is not a reflection of the fire department, but simply a reflection of the need for many of these volunteers to move to other communities for work, education, or even family needs. This, however, does put a strain on the department in the areas of recruitment, training, and staffing of the fire stations.

The Office of the Fire Marshal and Emergency Management has put out a document on recruitment and retention (which is presently under review) to offer some criteria and/or guidelines that departments can utilize. Refer to Appendix "D" for the document.

Some of these points 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.

Although no recommendations are noted for this section, the Fire Chief should continue to identify opportunities to promote retention of the volunteer firefighters as noted in the OFMEM document. The Fire Chief should continue the Department's efforts to recruit firefighters in areas that are presently understaffed or have issues with response numbers to calls.

Recommendation(s)

11. Presently CFD has a compliment of 24 full-time firefighters, which at full strength offers six firefighters per shift (for four shifts). If future needs dictated the opening of a second fire station, CFD may want to consider the option of the incremental hiring of firefighters to allow for up to four firefighters per shift per station or as deemed appropriate by the Fire Chief (based on needs and circumstances).

Associated Costs *(all costs are approximate)*

- No immediate cost to this recommendation. Future staffing costs will be incurred as level of firefighter staffing increases. Fire Chief to monitor and report as required.

Timeline

- Long-term 7 – 10 years

Section 6:
External Relations and Agreements

6.1 Mutual and Automatic Aid
6.2 Fire Service Agreements

Section 6: External Relationships and Agreements

When reviewing the external relationships, the three key areas for a fire service utilization are the mutual aid, automatic aid, and fire service agreements. All fire departments in Ontario must have mutual aid agreements as part of a Provincial mandate. However, automatic aid and fire service agreements are at the discretions of each community, based on its needs and circumstances.

As noted in the NFPA Standard 1201 on providing fire and emergency services, section A.4.6.1 notes that Mutual Aid and Automatic Aid agreements should address issues that include, but are not limited to the following:

1. Indemnity
2. Liability for injuries
3. Reimbursement for cost of service
4. Authorization to respond
5. Level of personnel
6. Types of equipment
7. Resources to be made available
8. Designation of the incident commander
9. Workers compensation

6.1 Mutual and Automatic Aid

CFD is a member of the County's Mutual Aid group and has good working relationships with the other fire departments in the surrounding jurisdictions. There is close cooperation and communications between them and no concerns were identified to EMT during out review and interviews.

6.2 Fire Service Agreements

In addition to participation in Mutual Aid, the Town of Collingwood has the following agreements in place:

- Fire Service and Automatic Aid agreement with Clearview Fire Department
- In discussions with Blue Mountain to update a past agreement

CFD should continue with its ongoing efforts to find joint efficiencies through mutual, automatic aid and fire service agreements.

Recommendation(s)

- No recommendations for this section

Associated Costs *(all costs are approximate)*

- N/A

Timeline

- N/A

Section 7:
Finance

7.1 Operating Budgets
7.2 Capital Budgets and Forecasts

Section 7: Finance

The Collingwood Fire Department has an annual operating budget and capital forecast, both of which fluctuate based on the needs and circumstances of the department and any related equipment that has been identified for replacement.

During the review of the budget process for both operating and capital, it was found that CFD is well set up in both areas. This would also indicate a strong level of support by Council and the Town's senior management team in relation to assisting the Fire Department is meeting its service goals.

7.1 Operating Budget

When reviewing this section, the key areas EMT looks for are:

Operating Budget Line Items:

- Staffing related costs
- Training
- Fire Prevention and related Fire Safety Education
- Vehicle and equipment maintenance
- Station maintenance

Based on a general review of the operating budget of 2015 and 2016, the Fire Chief has identified all these noted basic line items.

As noted previously, fire prevention and public education are a key focus of the Ontario Fire Marshal's Office that can pay big dividends in the reduction of fire loss and associated injuries. It is recommended that all fire prevention related activities be tracked to gain a more accurate understanding of how much time is truly being spent on this initiative and if future increases in funding are required.

7.2 Capital Forecasts

For this section, the following items are evaluated:

Capital Budget Line Items:

- Vehicle replacement, and
- Equipment replacement (for large cost items that are not covered in the operating budget)

There is a 15-year replacement cycle for the fire trucks. This replacement cycle mirrors the industry standards of 15 and 20 years depending of the vehicle's function.

It was also noted during the site visit that much of the larger equipment along with the fire station are less than 10 years old. As such, the Town of Collingwood and its Fire Department should be commended for its efforts in endeavouring to adhere to this industry standard.

7.3 Revenue Generation Opportunity

Within this report, an opportunity was identified for assisting in meeting staffing needs in the Fire Prevention Division and creating a form of revenue generation or a cost neutral situation for the hiring and utilization of a third fire prevention inspector.

One other opportunity that other fire departments have utilized is partnering with a private firm that assists in collecting money from insurance policy claims. These companies claim that they can recover additional insurance funds from fire calls.

The Fire Chief should investigate this revenue opportunity further and, where appropriate, report to Council and/or the CAO on this opportunity.

Recommendation(s)

12. It is recommended that the Fire Chief investigate the utilization of a private firm as a potential revenue source and report to Council and/or the CAO on this opportunity, along with related next steps.

Associated Costs *(all costs are approximate)*

- No cost to this, however, possible revenue may be generated.

Timeline

- Short-term (1 – 3 years)

Conclusion

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

Based on the present staffing, equipment and fire station location, CFD 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 master plans 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 the Fire Chief view this as a “living document” and conduct more frequent reviews of the recommendations, 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

Recommendations for Collingwood Fire Department			
Rec #	**Recommendations**	**Estimated Costs**	**Suggested Timeline**
	Section 2 – Planning and Stakeholder Surveys		
1	It is recommended that updated version of the Fire Department's Establishing and Regulating By-law be presented to Council for approval. This document should be reviewed annually by the Fire Chief, documenting review dates, to ensure that the By-law is kept current in relation to the needs of the community.	No cost associated with this recommendation	Short-term (1-3 years)

	Section 3 – Programs		
2	It is recommended that greater utilization of the on duty full-time firefighters be incorporated into an annual Fire Prevention Program. To accomplish this, all full-time firefighters should be trained and certified to at least: • NFPA 1031 – Fire Inspector I, and • NFPA 1035 – Fire and Life Safety Educator I By having all full-time firefighters trained to the above noted levels, CFD will have a greater number of resources to draw upon in its public fire safety education and inspection programs.	No costs with in-house or online training. However, if the training cannot be completed online, staff time and other costs may be incurred for such items as travel and/or having an instructor attend on site to deliver the required courses.	Short to Mid-term (1-6 years)
3	Succession planning for Fire Prevention and all other Divisions within CFD should be addressed to ensure trained personnel who are familiar with the technical requirements, community, and the fire department, are ready to take over when the existing personnel retire. • By ascertaining the roles and responsibilities of all the positions within the Department, a list of required skills and related credentials can be identified and approved. ○ This succession planning can also begin prior to filling a position by bringing someone in several months before the position is vacant. The new person will benefit by learning from the incumbent before they retire.	Cost would be dependent on level of training identified by the Department – but in general would involve staff time.	Short-term (1-3 years)

4	It is recommended that the Collingwood Fire Chief investigate the opportunities for providing enhanced Fire Safety and Public Education services for Collingwood along with shared services to bordering Fire Departments by investigating the opportunity for cost sharing of a Public Education Officer.	Cost for this recommendation can vary due to the level of involvement by other communities	Short-term (1-3 years)
5	As a possible revenue generator, and in support of the future need for another Fire Prevention Inspector, it is recommended that the Fire Chief investigate the opportunity of offering fire prevention inspection services, on a fee basis, to other bordering communities and their fire departments	No associated cost for this recommendation	Short to mid-term (1-6 years)
6	Training for the Fire Suppression Division is planned at the beginning of each year. This should also be done more formally for all staff in each of the Divisions to ensure that training goals and expectations are identified and evaluated.	No cost associated with this recommendation	Short-term (1-3 years)
7	Additional administrative support should be provided for all divisions within the CFD to make the most efficient use of staff time and skills. • It is expected that an additional Administrative Assistant will be required in the future. It is recommended that, at present, part-time Administrative Assistant be hired to work more closely with areas overseen by the Deputy Fire Chief. • Another option is to investigate the opportunity of utilizing administrative support from another Town department during peak workload period to provide relief and cover for absences (of the Administrative Assistant).	Costs pending an administrative support assessment	Short-term (1-3 years)

8	It is recommended that CFD work towards creating a full-time Training Officer's position to more effectively meet the needs of the Department, along with ensuring a more fulsome development of training programs and tracking of completion rates for all divisions within CFD.	Recommendation #8 – Approximate cost of Training Officer is dependent on Collective Agreements. However, an expected rate could range from $80,000.00 to $110,000.00	Short to mid-term (1-6 years)
9	It is recommended that the Fire Chief present a standard of cover for Council approval. This standard would speak to response time criterion, whether that is the NFPA 1720 – 15 staff in 9 minutes, 10 staff in 10 minutes rule or the NFPA 1710 standard of four-minute drive-time for full-time crews.	No initial cost identified for this recommendation	Short-term (1-3 years)
10	The Fire Chief should monitor the requirement for paging of firefighters to the station for support or the need for a second response to emergency calls. Along with the number of 'pages outs', the length of time to respond to the station should also be tracked to ensure that response times are within an acceptable timeline. • The timelines to be utilized are those noted in the NFPA 1710 and 1720 standards	No initial cost identified for this recommendation	Ongoing

	Section 4 – Physical Resources		
	No recommendations made in this section		
	Section 5 – Fire Department Staffing Considerations		
11	Presently CFD has a compliment of 24 full-time firefighters, which at full strength offers six firefighters per shift (for four shifts). If future needs dictated the opening of a second fire station, CFD may want to consider the option of the incremental hiring of firefighters to allow for up to four firefighters per shift per station or as deemed appropriate by the Fire Chief (based on needs and circumstances).	No immediate cost to this recommendation. But future staffing costs will be incurred as level of firefighter staffing increases.	Long-term (7-10 years)
	Section 6 – External Relations and Agreements		
	No recommendations made in this section		
	Section 7 – Finance		
12	It is recommended that the Fire Chief investigate the utilization of a private firm as a potential revenue source and report to Council and/or the CAO on this opportunity, along with related next steps.	No cost to this, but possible revenue could be realized	Short-term (1-3 years)

Section 9:
Appendices

Appendix A: Definitions and References

Appendix B: 2015 Town of Collingwood Fire Department, BMA Report

Appendix C: Response Data for 2015 and 2014

Appendix D: Public Fire Safety Guideline/ Recruitment and Retention of Volunteer Firefighters

Appendix A: Definitions and References

Automatic Aid Agreements – *Fire Prevention and Protection Act*, 1997 (FPPA 1997)

4. For the purposes of this *Act*, 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. 1997, c. 4, s. 1 (4).

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
- NFPA 1710 – Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Departments
- NFPA 1720 – Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments.

Municipal responsibilities (FPPA 1997)

2. (1) Every municipality shall,

c) establish a program in the municipality which must include public education with respect to fire safety and certain components of fire prevention; and

d) provide such other fire protection services as it determines may be necessary in accordance with its needs and circumstances.

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.

Public Fire Safety Guidelines:

- PFSG 04-40A-12, Fire Prevention and Public Safety Education; Simplified Risk Assessment March 2001
- PFSG 04-41-12, Fire Prevention and Public Safety Education; Community Fire Safety Officer/Team, January 1998
- PFSG 04-08-13 on Fire Station Location, September 2004

Shared Responsibilities (FPPA 1997)

FPPA notes that:

1. Two or more municipalities may appoint a community fire safety officer or a community fire safety team or establish a fire department for the purpose of providing fire protection services in those municipalities.

Volunteer Firefighter (FPPA 1997)

- Means 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).

Appendix B: 2015 Town of Collingwood Fire Department, BMA Report

BMA Recommendations Highlights

The BMA document discussed 14 topic headings that ranged from staff and training to emergency management. This section will make note of the areas recommended by the BMA report which are still outstanding.

Staff Training/Development/Succession Planning

- There are opportunities to develop a succession plan as there are several staff in senior positions that are close to retirement.

Analysis of Service Delivery Models

- The Department must balance the quality of the service provided with the cost of the delivery of the service. Maintaining an effective complement of both career and volunteer staff is an effective means to achieve this objective.
- The Town is in the process of undertaking a Master Fire Plan and it is anticipated that any change in the service delivery model will be addressed.

Dispatching Services

- Best practices in Ontario for dispatching reflects the use of National Fire Protection Standard 12221 as a guideline for provision of services. Continuing this agreement is the most practical and cost-effective strategy available.
    - It is recommended that performance standards be incorporated into the agreement.

Medical Calls

- Presently Collingwood Fire Department is at level "B" for response. Some fire department respond as per level "A" which has a broader span of responding to additional issues. If Collingwood moved to a level "A", call volumes would increase.
    - As population ages and medical call volume increases, call volumes should increase substantially.
    - This will be addressed in the Fire Master Plan

Fire Expenditure and Revenue Analysis

- The OFM (now OFMEM) recommends that application of user fees should be considered in light of two main principles;

- User fees should be encouraged if they have the potential to improve public fire/life safety; and
- User fees should not be considered if they have the potential to jeopardize fire/life safety.

Public Education

- Utilizing volunteer firefighters in delivering educational program would potentially be an alternative strategy in optimizing the public education program. This strategy would free up additional time for full-time fire prevention staff to focus on inspections.
    - In future, it is recommended that all public education efforts be tracked with targets developed to ensure that public education is a priority.

Call Activity Levels

- Based on information received from the Fire Chief, the average response time in 2014 was 6 minutes.
- It is recommended that with the implementation of the new software which facilitates reporting and analysis, performance measure should be developed and reported on an annual basis.

Fire Prevention and Code Enforcement

- The last simplified risk assessment was undertaken in November 2004. And update is needed as part of the continuous process where community fire risks are prioritized and resources then allocated to identified risks.
    - The current fire prevention program does not include a recent simplified risk assessment.

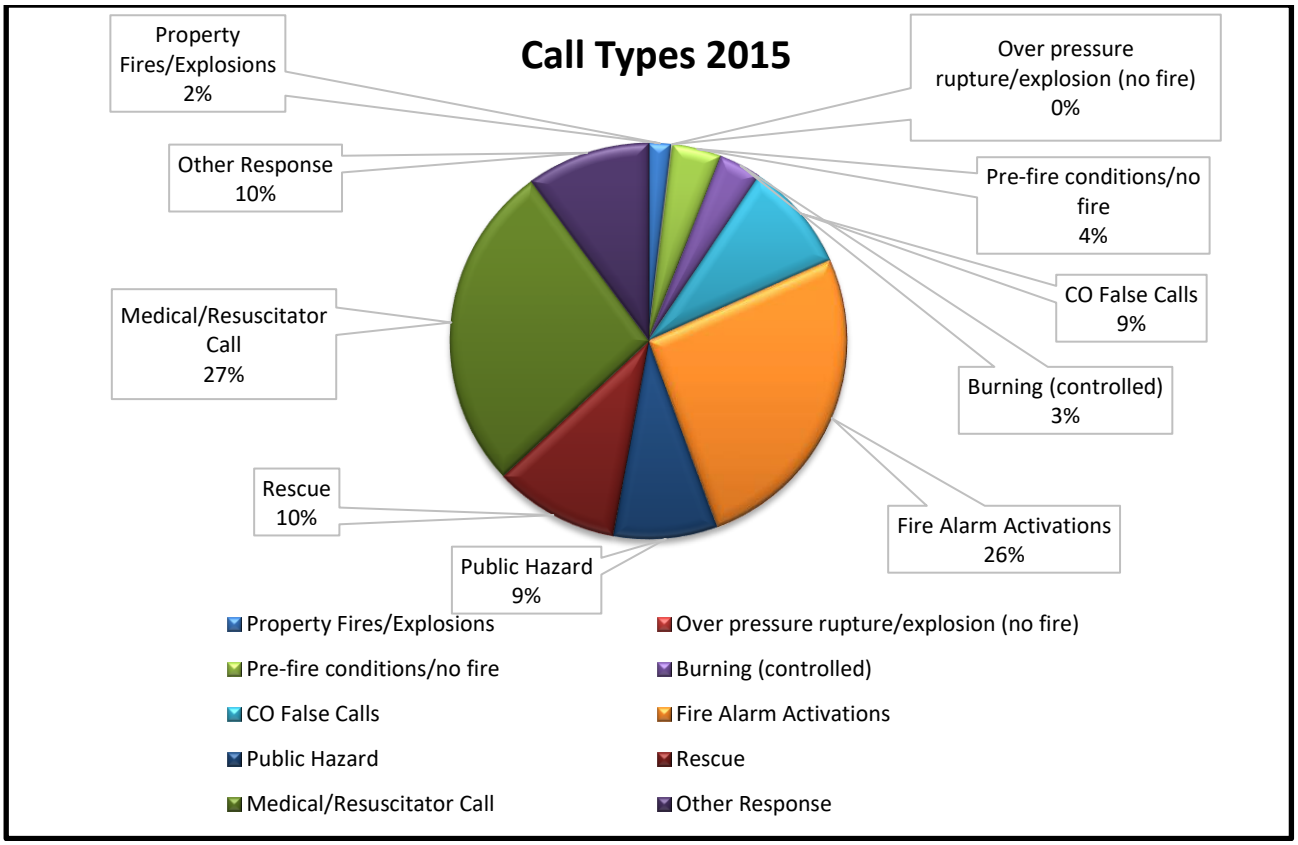
Fire Underwriters Survey

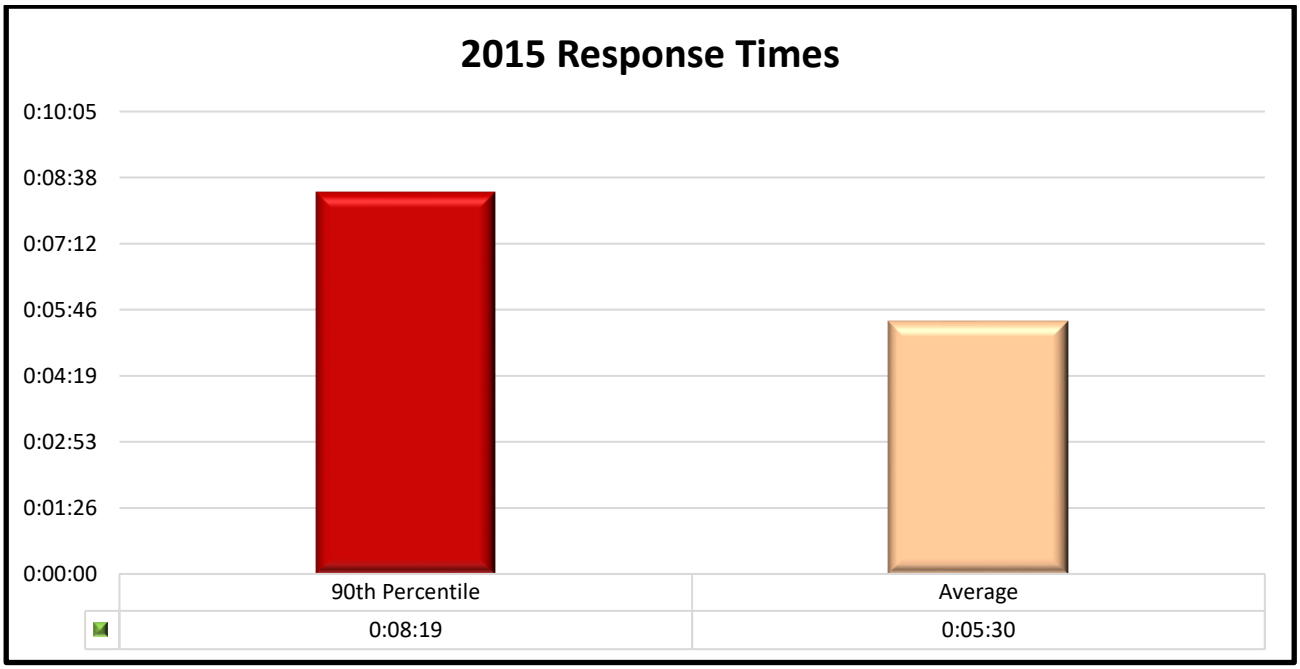
- The last FUS was produced in 2010.
    - At that time CFD received a 4 out of 10 for the Public Fire Protection Classification System, which is a very good grade for a community the size of Collingwood
    - As for the Dwelling Protection Grades, CFD received a 1 out of 5, which is the highest rating possible.
    - The Town should continue to monitor this Survey to ensure that it retains these ratings.

Emergency Management

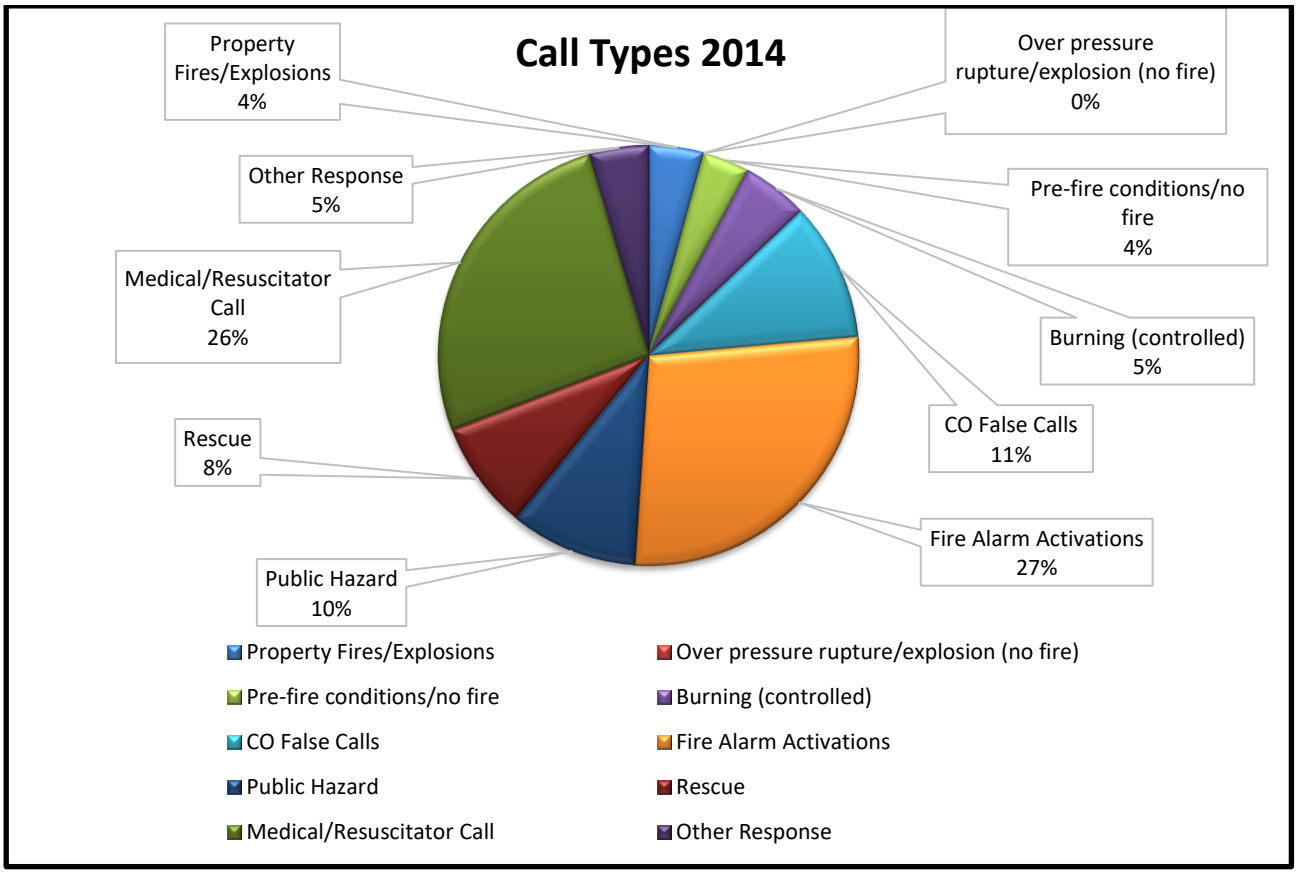
- Based on the review by BMA, there were no recommendations made for this section because BMA found that the Town has a comprehensive program.

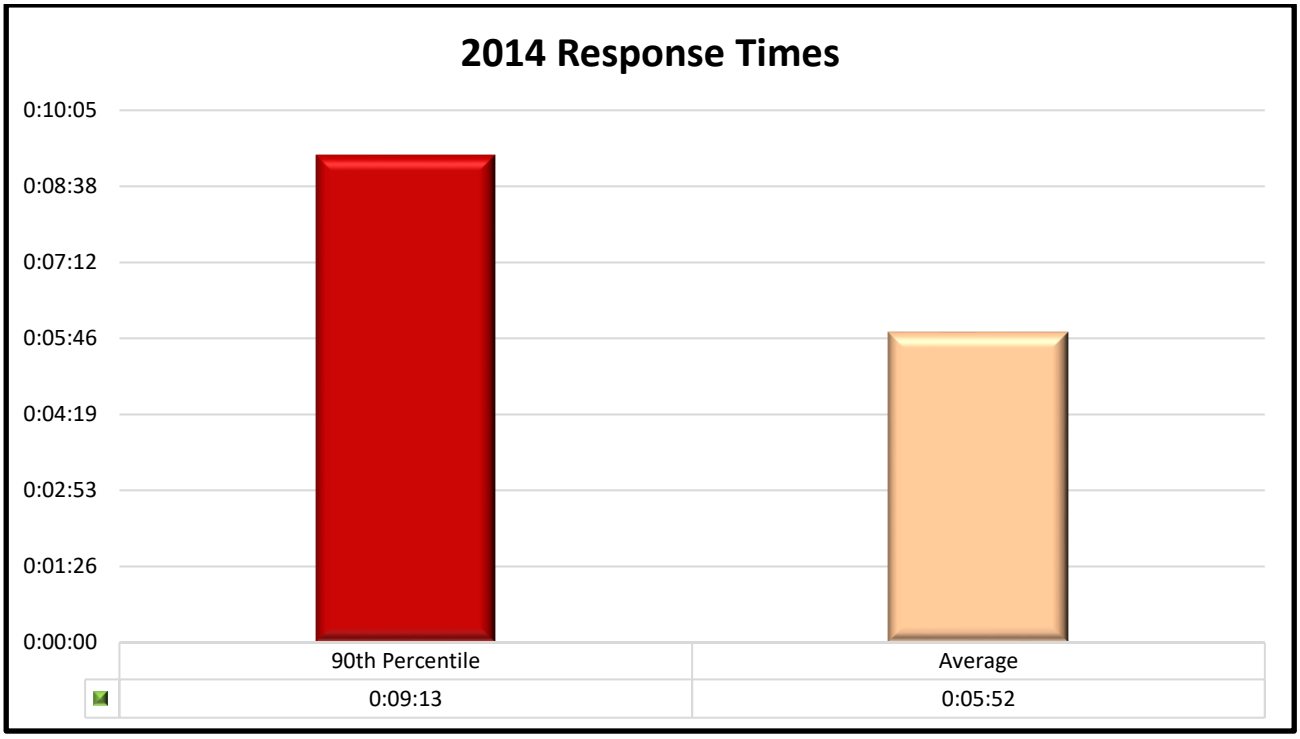
2015 Response Data





2014 Response Data





Appendix D: Public Fire Safety Guideline/Recruitment and Retention of Volunteer Firefighters

Volunteer Fire Service Personnel Recruitment and Retention

Public Fire Safety Guidelines	Subject Coding **PFSG 04-84-13**
Section **Fire Administration**	Date **October 2006**
Subject **Volunteer Fire Service Personnel Recruitment and Retention**	Page

Purpose:

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 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.

Considering that 450 of the 478 municipal fire departments in Ontario rely on volunteers, this effect is felt throughout the entire province.

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:

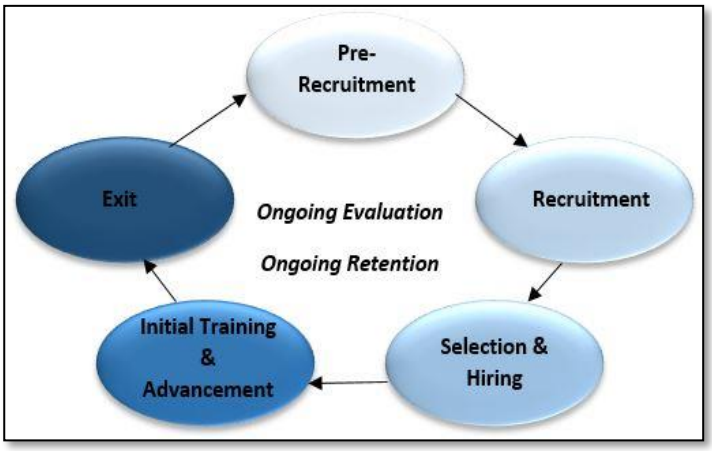
- Recruitment and selection,
- Retention and succession, and
- Training and development of volunteers.

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.

<u>Components in the Recruitment and Retention Cycle</u>

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

In order 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 in order 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 in order 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/.

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/.

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.

The Canadian Code for Volunteer Involvement http://www.volunteer.ca

HR Council for the Voluntary and Non Profit Sector http://www.hrvs-rhsbc.ca

Knowledge Development Centre, Canada Volunteerism Initiative http://www.kdc-cdc.ca

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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 Optimizing Rural Emergency Response

04-12-13 Core Services (Response and Support) and Associated Guidelines

04-40A-03 Simplified Risk Assessment