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Orillia Fire Department



Fire Protection Services Master Plan

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



**Emergency
Management &
Training Inc.**

Executive Summary

The Orillia Fire Department (OFD) completed a Fire Master Plan review in 2002. At that time, Orillia City Council received, as information, the plan that was presented by the Fire Chief. Since that time, the community has seen marginal growth in population, (2004 population was 30,769, with an estimated 2016 population of 31,000). However, these numbers do not capture the tens of thousands of seasonal residents who own vacation properties in the Orillia area and shop and dine in the City. Coupled with industry and commercial expansion within the City, it was identified that an updated review of the 2002 Fire Master Plan, the community and the services that the Fire Department offers was in order.

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

This updated Master Plan for the OFD has reviewed and identified current and anticipated community fire risks and related needs over the next five to ten years, along with a long-range view on the next 20 years for the asset life cycle planning.

This review has 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 locations, budgets, and large-scale emergency preparedness. During the review process, it was very apparent to Emergency Management and Training Inc. (EMT) that the residents of Orillia are served by a dedicated group of personnel of the OFD.

Based on the review conducted by EMT, a total of 21 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 recommendation, please refer to the chart found in section eight.

EMT would like to thank those who assisted in the development of this Master Plan document. We would also like to note that the Fire Chief and the staff of OFD are to be commended on their dedication to serving the community and the level of service that they have been providing to the community.

**Overview of Recommendations for OFD –
Noted in Order of Recommended Implementation Timelines**

Recommended Timeline	Recommendations for Orillia Fire Department – Placed in Order of Priority	Rec # (in the order noted in the main document)
Immediate (0-1 year)	It is recommended that the Fire Chief present a response time benchmark for the approval of Council, whether that is the present 10 in 10 rule that follows the NFPA 1720 standard relating to Volunteer Services or the NFPA 1710 standard of 240 second drive time for Career Services.	1
Immediate (0-1 year)	Annual business planning cycle for the Fire Prevention Division should be more specific in identifying goals and expected outcomes for property inspections and public education activities and reviewed at least quarterly to assess progress, re-assign resources and/or revise goals as necessary.	3
Immediate (0-1 year)	<p>Formalize the expectations for Fire Department actions and responsibilities regarding Ontario Building Code compliance. This can be accomplished by working closely with the City’s Building Department and comparing what Building Code requirements align with Fire Code requirements and subsequently identifying where the Fire Department requires to conduct joint inspections (with the Building Division) or Fire Department specific inspections.</p> <p>These overall expectations of both departments should be documented along with anticipated dates for action and expected outcomes.</p>	4
Immediate (0-1 year)	Expansion of the use of an integrated records management system (such as CriSys) should be undertaken to make the most effective use of collected information, including enabling better data access between Fire Prevention, Dispatch, and Suppression.	5
Immediate (0-1 year)	Options should be explored to improve the on-duty staffing so that there is a minimum of eight firefighters on-duty 24/7 – four per station.	12
Immediate (0-1 year)	Staffing of the two stations should be revised so that in the event of reduced staffing, both stations continue to maintain the highest level of effectiveness possible. Should the staffing be reduced to six, both stations should be staffed with three firefighters.	13

Immediate (0-1 year)	It is recommended that the Department investigate the implementation of an automatic call back system for staffing related needs.	14
Short-term (1-3 years)	<p>Succession planning for Fire Prevention and all other Divisions within OFD 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.</p> <ul style="list-style-type: none"> 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. 	6
Short-term (1-3 years)	Training expectations for the Fire Prevention Division staff should be more clearly established early in the year. Proper documentation is needed to support and identify what the training expectations are of the Division.	7
Short-term (1-3 years)	Increase efforts to complete pre-planning for all properties that warrant it by working with Suppression Division staff in meeting this pre-planning program, with a focus on such things as high rise buildings, vulnerable occupancies and industrial facilities.	8
Short-term (1-3 years)	To ensure that the Fire Department is being proactive in meeting the three lines of defence as noted by the OFMEM, it is recommended that the Fire Chief meet with other Fire Chiefs within the bordering communities to discuss the opportunity of a Public Education Officer on a shared cost basis. Once discussions with bordering communities have been completed in relation to a shared Public Education Officer, then OFD should recruit for a Public Education Officer position.	10
Short-term (1-3 years)	It is recommended that the Fire Chief investigate the opportunity of offering automatic aid response, for a fee, to the areas of Severn Township due to the proximity of OFD's Station #2.	20
Short-term (1-3 years)	It is recommended that a re-evaluation of the replacement cycle for the fire trucks in relation to usage and maintenance cost should be investigated by the Fire Chief to identify if a reduced cycle should be implemented.	21

<p>Short-term (1-3 years)</p>	<p>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:</p> <ul style="list-style-type: none"> • NFPA 1031 – Fire Inspector I, and • NFPA 1035 – Fire and Life Safety Educator I <p>By having all full-time firefighters trained to the above noted levels, OFD will have a greater number of resources to draw upon in its public fire safety education and inspection programs.</p>	<p>2</p>
<p>Short-term (1-3 years)</p>	<p>Additional administrative support should be provided for all divisions within the OFD to make the most efficient use of staff time and skills.</p> <ul style="list-style-type: none"> • Although it is expected that an additional two Administrative Assistants will be required in the future, it is recommended that one full-time or even a part-time Administrative Assistant be hired immediately to work more closely with areas overseen by the Deputy Fire Chief and the Assistant Fire Chief. • In 2001, when the Office of the Fire Marshal conducted a review of the OFD, there was only one Administrative Assistant (AA) to the Fire Chief. Since that time, the Department has basically doubled in size, but there is still only one AA. When she is off, there is no other AA to fill in, which means that the Department is without an AA to conduct day-to-day duties and to ensure good customer service to the public. Therefore, even a part-time AA would assist with covering for vacations time or other anticipated time off by the present full-time AA. <p>Another option is to investigate the opportunity of seconding administrative support from another city department to cover for absences.</p>	<p>11</p>
<p>Short-term (1-3 years)</p>	<p>Due to the challenges of the OFD Communications Division in relation to being a 9-1-1 call taking centre, along with the dispatching for five other communities, a second on-duty staff member should be considered as this Division manages a critical service to the community and the OFD.</p>	<p>18</p>

Short-term (1-3 years)	<p>If a decision is made to move towards the contracting out of the dispatching services, then a full analysis needs to be conducted in relation to the information provided in this report and in relation to:</p> <ul style="list-style-type: none"> • Accommodation of staff • Cancellation of current contracts to provide dispatch services to neighbouring fire departments <p>A request for proposal and assessment process for dispatch centres bidding to provide the service</p>	19
Short-term (1-3 years)	A full analysis be completed in relation to the training required to have all Communicators meet the NFPA 1061 Standard based on their present level of training provided by the OFD.	17
Mid-term (4-6 years)	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.	9
Mid-term (4-6 years)	An airboat or other all season vessel should be considered for the replacement of the current marine boat to better service the community all year-round.	15
Mid-term (4-6 years)	To ensure that the municipality is prepared for a crisis, the City Centre, municipal computer system, and the emergency reception centres are on emergency power.	16

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 Protection Services Master Plan (Master Plan) process was to evaluate the current status of the Orillia Fire Department (OFD) in relation to emergency response, training, fire prevention, staffing and facilities. The process was also to include a review of the past Master Plan and other related documents to identify what has been accomplished and what still needs to be addressed.

A Master Plan 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 City's initial Request for Proposal (RFP) along with information from the response document submitted by EMT.

Within the initial RFP, 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 and analyze the applicable municipal, provincial and federal legislation relative to the Orillia Fire Department.
2. Emergency Response - Examine the fire call volume including types of calls, numbers of calls, location of calls, equipment deployment, manpower, safety, and deployment. Make recommendations where required.
3. Training and Education - Research and make recommendations regarding the Training Programs for all members of the Fire Department in all four divisions (Administration, Communications, Prevention, Suppression)
4. Fire Prevention - Evaluate and make recommendations regarding the Fire Prevention Program including fire inspections, investigations and enforcement, and public education.
5. Human Resources - Evaluate and make recommendations regarding Fire Department staffing in all four Divisions (Administration, Communications, Prevention, and Suppression) including volunteer firefighters. Examine and review 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 stations, 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. Communications - Evaluate current 9-1-1, fire dispatching and after-hour call answering services including cost analysis to run the Communications Division in house or to outsource.
11. Review and assess the Community Risk Profile and update as appropriate.
12. Review the Automatic Aid and Fire Protection Agreements in place with other municipalities with respect to best practices and fees for service. Also, consider opportunities that may be available through mutual aid and automatic aid agreements with all neighbouring municipalities as part of the total plan.
13. The study will assess the stations 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 - 10 - 20 years and the potential impact to service delivery, and operations of the Fire Department.
15. Include recommendations, financial implications, and an implementation plan including an implementation timetable.

The study was also to reassess the Fire Underwriters Survey (FUS) rating to identify potential opportunities for insurance premium savings for property owners in the municipality.

Our review process also included a survey with both the volunteer and career firefighters, internal staff from all four divisions, as well as meeting with senior fire officials (such as the Fire Chief, Deputy Chief, etc.). Meetings were also conducted with the CAO, Mayor, and Council to ensure that opportunities existed to receive input from all levels of the City 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 Master Plan document. Based on these criteria, through the noted meetings with the stakeholders, the consulting team was able to complete a thorough review of what is working well and what areas require improvement within the OFD.

EMT reviewed the OFD 2002 Master Fire Plan which had four key recommendations:

- addition of 20 career firefighters
- addition of a training officer
- continued replacement of apparatus, and
- addition of a second fire station

The OFD has met these objectives from the 2002 Master Fire Plan.

Based on the review of the Fire Department's facilities, equipment, programs and related data, EMT is submitting a total of 21 recommendations (noted in this report) that can be implemented in whole or in part by the City 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 Master Plan 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 Orillia 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
- Paul Leslie, Fire & Emergency Services Consultant, and
- 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

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The City of Orillia is a community of 31,000 people in the heart of Ontario's Lake Country on the shores of Lake Couchiching and Lake Simcoe. Orillia is less than 90 minutes from the Greater Toronto Area heading north along Highway 11. The City's land mass is 26.5 square kilometers.

Even though growth and progress have been strong in recent years, the Sunshine City has worked hard to retain the small-town charm that has captivated generations. Orillia has learned to look to the future while celebrating its past. Quality of life is unbeatable in this City surrounded by two lakes, where outdoor pursuits are available in all seasons and are enjoyed by both visitors and residents.

For the future, it is anticipated that the City of Orillia's population will grow from its present level of 31,000 people to approximately 37,700 in 2021, 40,000 in 2026 and 42,300 by 2031, which equates to a 36% increase in population by 2031. The population growth will be focused on development in the west portion of the City as well as through intensification of the downtown core. This growth (which will produce an increase in call volume) will create a challenge for the Fire Department in its goal to meet the needs of the community.

The OFD presently consists of 40 full-time firefighters who are on shift 24-hours a day, seven days a week at both fire stations. In addition, there are twenty volunteer firefighters to support the full-time firefighters at situations that require additional staffing. The Department has a full-time Fire Chief, Deputy Fire Chief, Assistant Chief of Training and Emergency Management, Executive Assistant to the Fire Chief, Fire Prevention Officer, two Fire Inspection Officers, four full-time Communicators and three part-time Communicators.

The Fire Chief also holds the position of County of Simcoe Alternate Fire Co-ordinator as well as C.E.M.C. (Community Emergency Management Co-ordinator) for the City of Orillia with the Deputy Fire Chief and the Assistant Chief being the Alternate CEMCs.

It is the mission of the Orillia Fire Department to preserve life and property, and to promote public safety. The Department strives in its efforts to respond rapidly to all emergencies, to provide the appropriate intervention and to provide continuing community fire and safety education. The Department continually challenges itself to improve on the already high quality of services it provides to the residents and visitors of our beautiful "Sunshine City".

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: Orillia – In relation to the surrounding communities



As seen in the map, the City of Orillia is centrally located within the “Lake Country” region of southern Ontario.

FIGURE 2: Location of the Orillia Fire Stations



Station #1 – Fire Department Headquarters is located at 500 Gill Street, as illustrated in Figure 2. Station #2 is located at 1 Commerce Road and is also indicated on the map. The stations are in the southern and northern portions of the City. Highway 11 and the Trans-Canada Highway run through the centre of Orillia, between each station. Having these two major highways running through the City creates a large number of motor vehicle related incidents.

1.1 Fire Department Composition and Administration

The Fire Chief of the OFD reports to the City'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 and an Assistant Fire Chief.

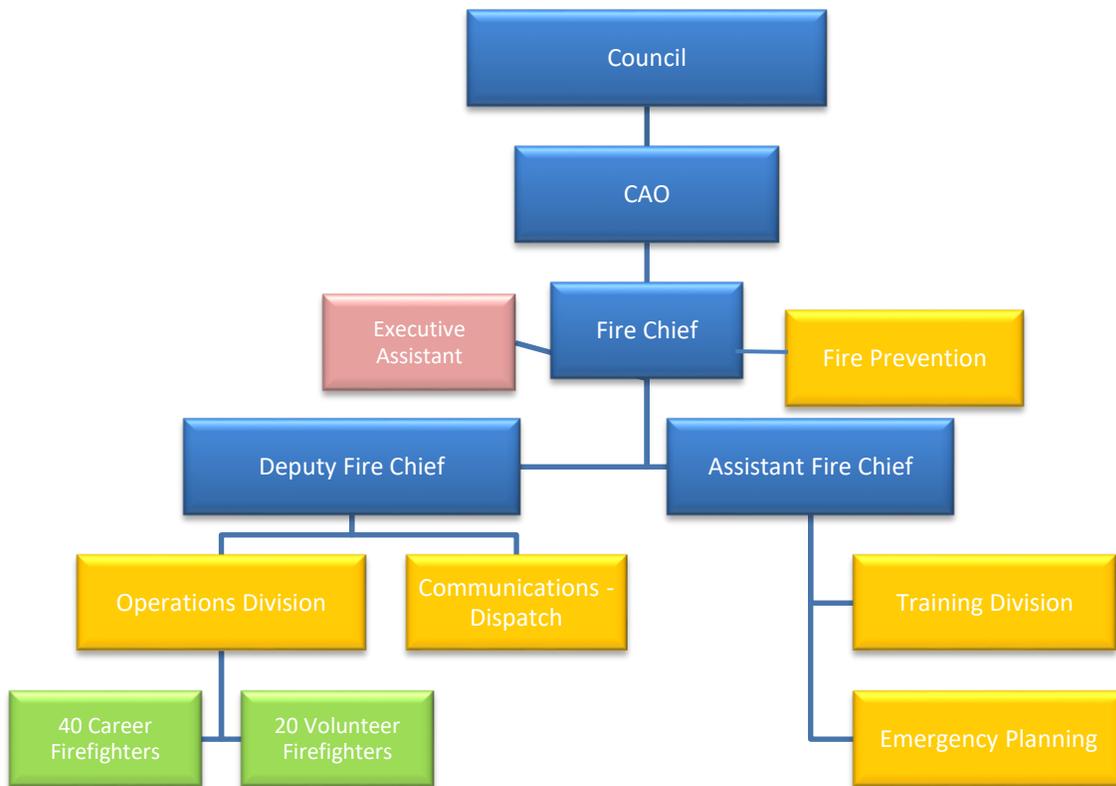
The Fire Chief directs the overall vision of the department, providing leadership to ensure that the department is delivering efficient and high-quality service delivery. The Chief is responsible for the Administration functions of the fire department including reporting to the CAO, budgeting, and overseeing all divisions. The Deputy Chief is responsible for managing the suppression division (40 career and 20 volunteer firefighters), overseeing the building infrastructure as well as communications, and the maintenance of the apparatus / equipment. The Assistant Fire Chief is responsible for the training for all staff including firefighter, both career and volunteer, fire prevention, communications, and administration, as well as overseeing the municipal emergency management program.

Along with the full-time Fire Chief, Deputy Fire Chief, and Assistant Fire Chief, the Department has a full-time Executive Assistant, a Fire Prevention Division that is staffed by a Fire Prevention Officer and two Fire Prevention Inspection Officers, and a Communications (dispatch) Division that is staffed 24/7 by four full-time Communicators (one per shift). The OFD has 40 full-time firefighters who are on shift 24-hours a day, seven days a week at both fire stations. In addition, there are 20 volunteer firefighters to support the full-time firefighters at situations that require additional staffing.

The organizational chart noted in Figure #3 reflects the general reporting structure within the Fire Department and that of the Fire Chief to the CAO and City Council.

This reporting arrangement allows for ample involvement by the Fire Chief within the senior management structure of the City 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 Stakeholder Surveys

Section 2: Planning and Stakeholder Surveys

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 MFP and the implementation of this MFP update process, OFD has clearly demonstrated a proactive approach towards its planning initiatives.

2.1 Community Growth

As previously noted in this document, presently, the population of Orillia is at approximately 31,000 and is forecasted to grow to approximately 37,714 in 2021, 40,029 in 2026 and 42,300 by 2031. This represents an estimated increase of 36% by 2031.

Although there is no hard and fast rule that gives a community a call volume expectation in relation to population growth, an accepted expectation is that OFD should anticipate an increase in call volume from the predicted growth in population, along with an increase in vehicular traffic movements. As such, OFD needs to identify where this growth is expected to occur, and what type of growth is planned. Would this be residential in nature or would it be a combination of residential, commercial, and industrial (for example, the Hydro One development); and would this growth create the expansion of the City's road network?

With the commercial and industrial growth comes the possible need for more specialized response training and equipment. Keeping all of this in mind, the Fire Chief and his staff must plan ahead to prepare for the growth coming to Orillia.

2.2 Three Lines of Defence

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 OFD 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 stations, 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:

2.3 Strengths, Weaknesses, Opportunities and Threats

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

It is worth noting that the strengths and weaknesses portion of a SWOT analysis are based on an internal review that identifies what is working well along with identifying 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 City benefits from having two stations that are staffed by full-time firefighters, who are supported by a dedicated group of volunteer firefighters for responding to emergencies. These stations are well positioned and are mutually supportive (of each other) with sufficient distribution of equipment between the two fire stations.

The Orillia 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 OFD Fire Prevention Division is very proactive within the community in relation to public education, fire safety inspections, and enforcement.

The OFD also has its own emergency communications/dispatch office, which gives the Department a greater level of control on the speed in which it can receive calls, identify what is required for the related situation and dispatch those resources in an efficient and effective manner.

Weaknesses

The Orillia Fire Department has limited full-time suppression division staffing which means that it cannot maintain more than two crews capable of initially responding to any emergency (24-hours per day, 365 days per year). Further, due to absences because of scheduled time off and injury/illness, these crews are often reduced to less than their optimum compliment of four firefighters per station.

There have been times when Station 2 has only two full-time firefighters on duty to respond to calls for assistance. 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 numbers of volunteers that will be available to respond, as needed for the situation. As such, having fewer full-time firefighters on duty at Station 2 can be a challenge when it comes to having the required resources on scene to affect a proper response on a structure fire or other large scale (resource requirement) situation.

As already noted, OFD 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.

Opportunities

The mutual aid program in place allows OFD to call on neighbouring fire departments for assistance whenever an incident exhausts its own resources and ability to deal with the situation in an efficient and effective manner. However, this type of resource is not meant to supplement OFD's resources; it 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. OFD 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.

Annual business planning and reporting on objective based results is another proactive approach utilized by the Fire Chief and his staff to update Council on how the Fire Department is meeting the needs of the community along with what future factors need to be considered by Council. By utilizing the recommendations noted in this document, the Fire Chief and his staff will have both short and long range recommendations to implement and prepare for in its effort to ensuring a safe community for those who live, work and play in the City of Orillia.

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 in relation to service needs. Another option is to look at other comparable communities in relation to how they have dealt with community growth.

It should be noted that utilizing comparable communities serves for a limited solution due to the uniqueness of each community. No two communities are identical and have individualized geography, population, road networks, and overall anticipated growth of the community. However, by reaching out to similar communities for input, the OFD can obtain options that they may be able to incorporate to meet the needs of the community and its firefighters.

2.4 National Fire Protection Association (1201, 1221, 1710 and 1720)

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

This standard notes in Section 4.3.5 – 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; ensure there are mutual aid and automatic aid programs in place, along with an asset control system and maintenance program.

Also, 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 expectation 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

With regard for the 1710 and 1720 standards, NFPA 1720, in chapter 4, notes the following for the deployment of volunteer firefighters:

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.

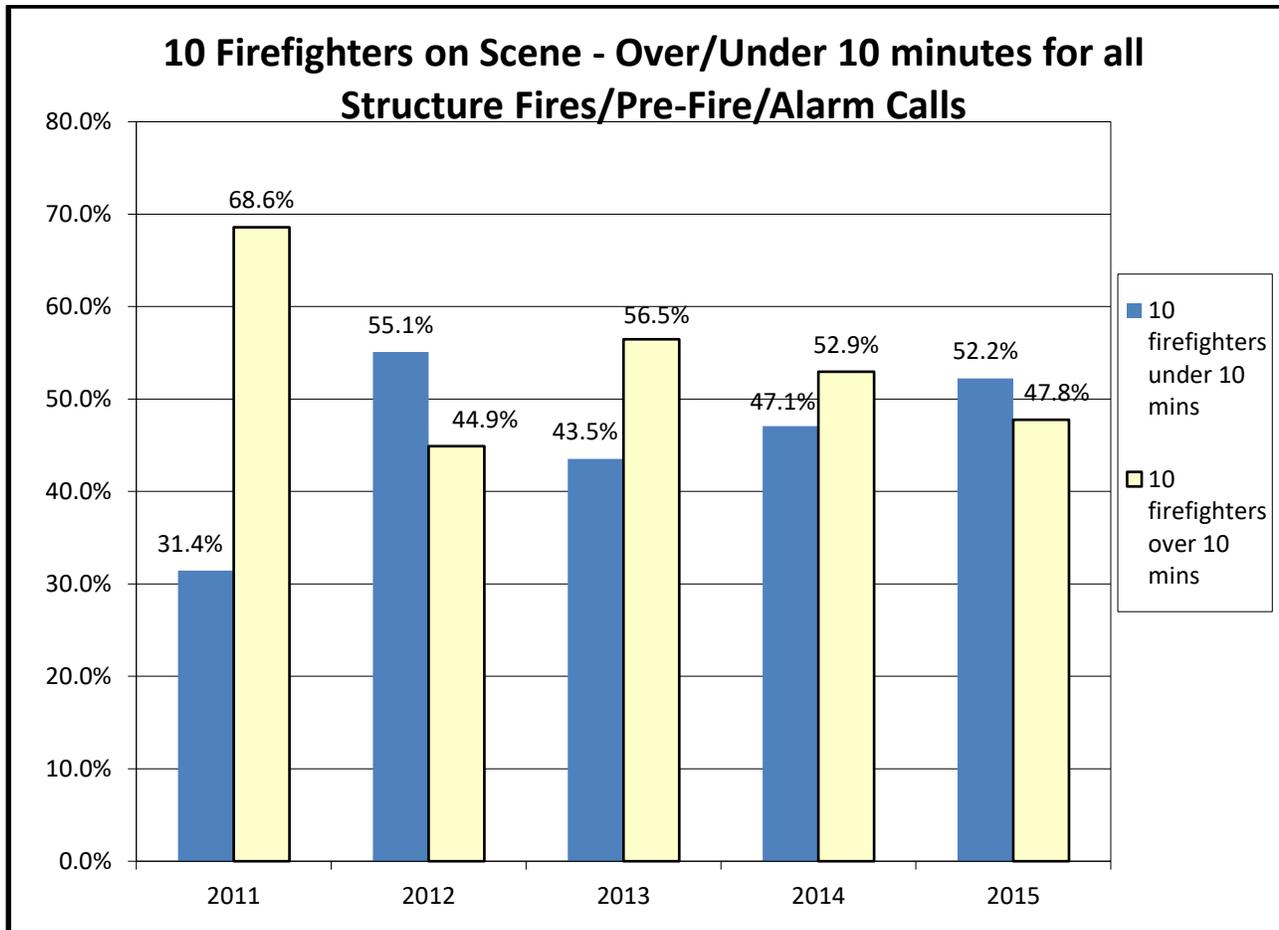
single family dwelling).

- *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.”*

Presently, OFD is diligently working at meeting this standard in relation to population verses staff/response times; in particular, the focus is on the “10 staff in 10 minutes” criterion. Based on response data review and discussions with the Fire Chief, OFD is demonstrating a strong level of success in meeting the response criteria. It should also be noted that with its compliment of dedicated full-time and volunteer staff, they are also doing an admirable job at meeting the needs and expectations of the community, as noted by the input received through the community surveys and stakeholder meeting.

The following chart is an overview of how well OFD is meeting the “10 in 10” response goal. At present, it appears that (on the average) OFD is meeting this goal more than 50 percent of the time and has seen a dramatic improvement over the past 5 years. In fact, in 2001 when the Office of the Fire Marshal conducted a review of the Fire Department, OFD was meeting this “10 in 10” response goal just seven percent of the time. This is without a doubt a very positive increase in service levels, which has confirmed the City’s and Fire Department’s commitment in meeting the needs of the community.

FIGURE 4: Response for 10 Firefighters on Scene in 10 Minutes



As a final comment, it should be noted that the NFPA standard recommends this response goal be met on an 80th percentile level. There is still room for improvement, but the key point here is that the Fire Department is making very good progress in its response goal efforts.

In relation to the career (full-time) component of the Fire Department, there is another set of response time goal expectations in chapter 4 of the NFPA 1710 standard that notes the expectation is that the crew can:

- turnout from the station within 80 seconds, 90 percent of the time
- with 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
- and a travel time of 480 seconds (8 minutes) for the remainder of the response contingent, 90 percent of the time

Response data supplied by OFD 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”.

One of the challenges for the volunteer firefighters (VFF) responding to the fire station for a call is that as the City continues to grow so does traffic volumes adding to the overall time it takes the VFF to get to the fire station. Another issue is that employers often do not allow the VFFs the opportunity to leave work and respond to a page out for firefighters. Both situations diminish the effective and efficient response of the VFFs, which is a challenge for communities as large as the City of Orillia.

During the data review of OFD responses, it was noted that the average response time for the VFFs, inclusive of responding to the hall and the response to the scene, is approximately 10 minutes. As such, the City is reliant on the full-time personnel to minimize the initial response times to an emergency scene. More information on these response times for OFD can be found in section 3.5 – Fire Suppression/Emergency Response.

Establishing and Regulating By-law

In relation to the previously noted response time expectations, it should be mentioned that the OFD's Establishing and Regulating By-law does not actually specify what response time criteria is expected of its Fire Department. This does not restrict OFD from tracking and reporting on its level of service, based on a year-to-year basis. At this time, OFD has adopted the use of the response time measurement of "10 staff on scene within 10 minutes" as a guide to evaluate their capabilities in relation to the previously noted NFPA staffing/response standards.

NFPA 1221 – Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems

The fourth standard noted in this document is NFPA 1221, which addresses the goals and objectives for the taking of 9-1-1 calls for service and dispatching of these calls. Orillia Fire Department is very fortunate in having its own 9-1-1 call taking and dispatch centre. Having such a facility allows for a more direct response to the needs of the community as opposed to that of having to depend on a third party for call taking/dispatching services.

However, along with having this in-house service comes the cost of staffing and maintaining such a service. Once a department has this type of in-house service, it should explore all opportunities in relation to cost recovery. Full cost recovery may not be a realistic goal, but the more a fire department can utilize its resources, the more effective this dispatching service becomes for all communities involved. For example, the more communities that are on the same system, the more efficient the inter-departmental communications and dispatching of resource becomes. Therefore, the Fire Chief and his staff should continue to search out opportunities for offering the call taking/dispatch services of OFD on a cost recovery basis. This may include marketing the call taking/dispatching service to fire services more distant than the current communities that are presently being served. Today's technology now enables OFD to offer its call taking and dispatching service outside of the County. For example, the Owen Sound Police Service is now providing dispatching functions for police services in eastern Ontario. Orillia Fire could actively market fire dispatch services to communities across southern Ontario.

More information in relation to the 9-1-1 call taking and dispatching services offered by OFD will be discussed later in this document.

To assist the Fire Chief in meeting the needs and expectation of Council, the Establishing and Regulating By-law does note that the Fire Department shall respond to a range of programs designed to protect the lives and property of the inhabitants of the Department's response area from:

- The adverse effects of fire, sudden medical emergency or exposure to dangerous conditions created by man or nature and include fire suppression, fire prevention, fire safety education, communication, training of persons involved in the provision of fire protection services, rescue and emergency services and the delivery of all those services.

A review of the past three years of OFD response times to emergency calls offers an understanding (and baseline) for how the Department has been performing, along with identifying areas for improvement.

One of the benefits to operating the dispatch centre is that the Department has greater control over what is being monitored and measured, along with what improvements can be made to the Communications Division.

More information in relation to response times will be noted in Section 3 of this document.

Recommendation(s)

1. It is recommended that the Fire Chief present a response time benchmark for the approval of Council, whether that is the present 10 in 10 rule that follows the NFPA 1720 standard relating to Volunteer Services or the NFPA 1710 standard of 240 second drive time for Career Services.

Associated Costs *(all costs are approximate)*

- There is no actual cost to the response time benchmark as it is simply to set a goal for the Fire Department. As such, there is no cost assigned to this recommendation.

Timeline

- Immediate

Note: In Canada, both NFPA standards are recognized as industry guidelines (and benchmarks) for the fire service and are not mandated.

2.5 Stakeholder 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 customer input.

Internal Surveys

During the MFP process, feedback was gathered from internal staff, which included firefighters, administration, training, fire prevention and communications (dispatch). 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:

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

For future expectations and recommendations, internal staff noted:

1. The need for more full-time staff to ensure a more fulsome response
2. More specialized training, along with ongoing training to keep skills up
3. A third fire station to assist with calls to the west end of the community and on Highway 11
4. Ensure that equipment is kept in a ready status by an ongoing equipment replacement program

External Stakeholder Surveys

During the MFP process, feedback was gathered from the community in the form of an online survey as well as a meeting with participant volunteers from the community consisting of individuals who have utilized the services of the OFD.

The following are the top four services identified as being preferred by the external stakeholders:

1. Firefighting services
2. Response to motor vehicle collisions
3. Fire and Arson investigation
4. Fire prevention and safety inspections

The following identify the top four areas noted by the external stakeholders as being extremely important to be offered by the Fire Department:

1. The speed in which the Fire Department responds if there is an emergency
2. Continued and relevant training
3. Timeliness to any requests for service or assistance from the Fire Department
4. How well the Fire Department works with other agencies to provide wider community safety services

Some comments received as a concern 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?
- They hope that this Master Plan review is not meant to reduce the service levels to the community.

Overall, both internal and external input noted a strong level of confidence in the Fire Department and senior management. However, both internal and external surveys did make note of a desire to hear more from the senior staff in relation to future goals and objectives of the Fire Department.

External Stakeholder Public Meeting

On September 7th, an open meeting was held at the Orillia Fire Department Headquarters. This meeting was the result of asking survey respondents if they wanted to provide more direct input through this open forum.

The information received from those who attended was of great value and added to the previous list of information noted.

The following comments were received:

- They would like to see more public fire safety education for all sectors of the community.
- Overall, the contact with the Fire Department has been very positive; they are presenting themselves in a professional manner.
- Is the County looking at why the Fire Department seems to be running so many medical calls? Why aren't there more ambulances to address these matters?
- As citizens of the community, they want the fastest, most well trained and equipped service that the City can afford.

All the previously noted input has assisted EMT in its review of the Fire Department and, as such, EMT would like to thank all of those who participated in answering the surveys and for attending the September 7th public meeting.

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 Master Plan, seven separate programs, each of which is integral to the mission and operations of the Orillia 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 risks 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 an 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 fire prevention programs is essential to ensure the most appropriate use of the community's resources and to also identify the needs 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 every five (5) 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 (7) 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

OFD completed their most recent SRA in 2016. The document did make note of specific data on the individual risks found within the community. Notwithstanding that, it is known that there are occupancies that have been identified as being of significant risk warranting regular prevention actions, including:

- care occupancies
- hotels and motels
- group homes

It is recommended that OFD continue with its SRA reviews to ensure that inventory of any risk occupancies be maintained by the OFD and regularly updated as new information becomes available (either from other city 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.

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

Public education activities include:

- public service announcements on radio
- school children education program targeting grades 3, 4, and 5
- Safe Student Housing program
- maintenance of fire department website
- 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 that runs from May to September

With a city the size of Orillia, along with the fact that the Fire Department does have a full-time contingent of firefighters on duty 24/7, utilizing these available resources will allow for greater implementation of fire prevention and safety education programs.

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 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, OFD 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 to the noted levels can be done in-house or online.

Timeline

- Short-term (1 – 3 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 was 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 City of Orillia may not be practical. Utilizing NFPA 1730 definitions of risk categories may guide Council in deciding the focus and service level within the community. Council should decide what the acceptable risk to manage in the community is, based off the needs of the community 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

Based on EMT's review of OFD's Simplified Risk Assessment, the key fire safety related issues facing the community are:

- Single family dwellings and multi-unit residential buildings have the highest risk to life and injury due to fire.
- Health care occupancies and group homes are also significant risks due to the nature of these occupancies and the fact that the occupants may require assistance to protect themselves in the event of a fire.
- Commercial and industrial properties pose a risk due to the potential effect on the local economy of any significant losses.
- Public buildings, such as the Ontario Provincial Police headquarters are significant due to the public and community (or Provincial) reliance on these properties for the order and good governance of the community.

Utilizing the IRM tool, in conjunction with the guidance from NFPA 1730, will 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 Orillia and the continual growth that is expected. This current and future building stock adds pressure on the Fire Prevention Officers 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 capacity; rounding down means potential overtime or assignment of additional services conducted by personnel (personnel can include personnel from other agencies within the entity, community, private companies, or volunteer

organizations).

Correct calculations based on the following:

- Budgetary validation
- Rounding up/down
- Determining reserve capacity
- 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, then the Fire Prevention Division can now use those hours spent as a baseline figure in applying future initiatives.

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

Remembering that it is Council that sets the level of service, there is no Council direction as to what buildings or building types are required to have routine inspections. Fire Prevention Officers 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.

Future Needs

The continued utilization of the IRM tool will provide an understanding of a fire risk building by building that can be extrapolated to show the risk in given areas. Along with the Simplified Risk Assessment, this tool will aid in the building and providing for 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 proper risk assessment will ensure that such comparisons are valid. By providing a valid basis for comparison, a fulsome 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.

Record keeping for division activities is primarily done in paper copy. Although the Department and the Division has access to a records management computer program (CriSys) it is used for event logging and notes only, at this time. Future incorporation of the CriSys program for records management is recommended.

Succession Planning and Training

Succession planning is a factor that needs to be addressed for the Fire Prevention Division (and the other divisions within OFD) as Fire Prevention Officers and other staff 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 (OMFPOA) seminars and the Fire Prevention Officers seminars at the Ontario Fire College. The Fire Prevention Officers also are 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 FPOs 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.

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 be expected to occur by evaluating, in detail, the adequacy, reliability, strength and efficiency of the protective facilities and comparing the level of protection against the level of fire risk in the built environment.

The 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.

Orillia Fire Department received its last FUS rating in 2010. Due to the significant improvements to fire protection provided to the City of Orillia since the previous Fire Underwriters Survey done in 1997, there was a substantial improvement in the 2010 FUS rating.

Specifically, the Commercial Classification moved from a 6 to a 4 – this on a scale of 1 – 10, with 1 being highest. The Residential Dwelling Protection Grade remained at the highest rating of 1 – on a scale of 1-5, with 1 being highest. Much of this improvement is contributed to the construction and staffing of fire Station #2, along with the hiring of more full-time firefighters.

3.3.1 Other Fire Prevention Opportunities for Consideration

The Orillia Fire Department is part of Simcoe County and, as such, has an opportunity to investigate and possibly offer the following services to other smaller communities:

Inspection Services

Some of the Fire Departments within Simcoe County are almost 100 percent volunteer based. As such, they are challenged to meet the goals and expectation placed upon them by the Office of the Fire Marshal and Emergency Management. This expectation states that 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. After addressing the previously noted requirements, there is little (or no) time left to conduct fire prevention inspections in a pro-active manner.

OFD should meet with bordering communities to investigate the opportunity of utilizing the Fire Prevention resources in place with OFD. These inspections or other contracted services can be based on an hourly rate or on a per-inspection costing. Either way, this would assist OFD in its efforts for revenue generation, and at the same time, it would go a long way to assisting other bordering Fire Departments in their quest to meet the needs of their communities.

Shared Public Education Officer for OFD and Bordering Communities

Again, some of the Fire Departments within Simcoe County have a person assigned to conduct Fire Safety and Public Education within their community, but on many occasions this person is a volunteer firefighter assigned to Public Education.

OFD presently has the resources and facilities to consider bringing in a full-time person who would focus on Public Education initiatives for Orillia and bordering communities through a cost sharing initiative. This would accomplish two things; first, it would standardize the Public Education program amongst the partner communities which would be a positive initiative by each community because the Fire Departments are promoting the same messages. Second, it would be a very efficient utilization of a single resource by all the partner communities.

Each community requires the services of such an individual, but most cannot afford the related cost of a full-time wage. In this case, cost sharing is a viable option.

Based on the previously noted points, it is recommended that the Orillia Fire Chief investigate the opportunities for providing Fire Safety and Public Education services for Orillia and bordering Fire Departments and investigate the opportunity for cost sharing of a Public Education Officer.

Recommendation(s)

3. Annual business planning cycle for the Fire Prevention Division should be more specific in identifying goals and expected outcomes for property inspections and public education activities and reviewed at least quarterly to assess progress, re-assign resources and/or revise goals as necessary.
4. Formalize the expectations for Fire Department actions and responsibilities regarding Ontario Building Code compliance. This can be accomplished by working closely with the City's Building Department and comparing what Building Code requirements align with Fire Code requirements and subsequently identifying where the Fire Department requires to conduct joint inspections (with the Building Division) or Fire Department specific inspections.
 - These overall expectations of both departments should be documented along with anticipated dates for action and expected outcomes.
5. Expansion of the use of an integrated records management system (such as CriSys) should be undertaken to make the most effective use of collected information, including enabling better data access between Fire Prevention, Dispatch, and Suppression.
6. Succession planning for Fire Prevention and all other Divisions within OFD 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.
7. Training expectations for the Fire Prevention Division staff should be more clearly established early in the year. Proper documentation is needed to support and identify what the training expectations are of the Division.

8. Increase efforts to complete pre-planning for all properties that warrant it by working with Suppression Division staff in meeting the pre-planning program, with a focus on such things as high rise buildings, vulnerable occupancies and industrial facilities.
9. 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.
10. To ensure that the Fire Department is being proactive in meeting the three lines of defence as noted by the OFMEM, it is recommended that the Fire Chief meet with other Fire Chiefs within the bordering communities to discuss the opportunity of a Public Education Officer on a shared cost basis. Once discussions with bordering communities have been completed in relation to a shared Public Education Officer, then OFD should recruit for a Public Education Officer position.

Associated Costs *(all costs are approximate)*

- Except for recommendations 6 and 11, no additional monetary costs are projected. However, there would be considerable staff time involved.
- Recommendation 6 would be a modest monetary cost – anticipated <\$1,000 – but would also involve staff time.
- Recommendation #10 costing would depend on how many bordering communities partner on the shared Public Education Officer (a full-time position is approximately \$60,000.00 to start with and can increase with annual increments).

Timeline

- Recommendations 3, 4, 5, 6, 7 and 10 could begin implementation immediately with completion expected within 12 months.
- Recommendation #8 would be short-term, 1-3 years
- Recommendation #9 is a mid-term recommendation (4-6 years)
- Recommendation #10 timeline would be based on discussions with bordering communities.

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 Communications, Administration, Fire Prevention or Fire Suppression, firefighters, communications, and support 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 fire service. Communications Divisions continuously evolve to make the best use of developing technology and to meet the increasing public expectations. 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 OFD is supervised and coordinated by the Assistant Fire Chief (AFC). The AFC is responsible for the training status of all staff; however, the Fire Prevention Division and Executive Assistant are not directly supervised in their training plans and records. Since the inclusion of the Assistant Fire Chief position, the Department has made extensive progress towards meeting its training needs. Notwithstanding this, the AFC is not provided with full-time administrative support for ensuring timely and accurate records, policy and training programs management.

The AFC is responsible for a variety of tasks including Emergency Management and, therefore, there are significant restrictions on the time available to address the Department's training needs. Specifically, the Department would benefit from more direct operational skills training with the AFC more involved in practical training sessions. As an example of the type of training that would be of merit, it is noted that although only recently initiated in 2015, live fire training for all crews is expected to be completed in 2016.

Training for the Fire Suppression Division is planned at the beginning of each year. This should also be done more formally for all other department staff in each of the Divisions to ensure that training goals and expectations are identified and evaluated.

The Department has undertaken to make more effective use of information technology to improve training, specifically for the Fire Suppression Division, by implementing a Learning Management System and by equipping a classroom with several computer work stations. The use of Learning

Management System software can be a very effective and a practical way to both ensuring appropriate training and education in a wide variety of required topics. The Learning Management Systems also have the capability to record and post individual training sessions, which allows for a more efficient and useable application for staff to catch up on training sessions due to missing them because of scheduling conflicts. Although implemented, there is much work that is required to fully optimize the system to meet Orillia Fire Department's needs.

The Department has established appropriate levels of knowledge and skills certification for each position and is working diligently to ensure that all staff have achieved the identified certification for their assigned position. With few exceptions, staff have achieved the appropriate certifications for their position.

Training records indicate significant time and effort spent on both practical and theory training for staff in Fire Suppression, Fire Prevention, and Communications. This should continue to be closely monitored by the AFC to ensure that all staff are meeting their needed training goals and that training is effective and all required topics are addressed.

Operating Guidelines (OGs) ensure standardized operations, which can assist in providing effective and reasonably safe service delivery through the management of how a program and/or service is to delivered. Orillia Fire Department 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 AFC and the Training Division are doing an admirable job at identifying and meeting the needs of each Division training requirements, but more work is still needed to ensure that all Divisions, which would include Suppression, Fire Prevention, Administration, Communication and even Training, are receiving the training needed. To better accomplish this, administrative support is required to allow the AFC to focus on key tasks.

Recommendation(s)

11. Additional administrative support should be provided for all divisions within the OFD to make the most efficient use of staff time and skills.
 - Although it is expected that an additional two Administrative Assistants will be required in the future, it is recommended that one full-time or even a part-time Administrative Assistant be hired immediately to work more closely with areas overseen by the Deputy Fire Chief and the Assistant Fire Chief.
 - In 2001, when the Office of the Fire Marshal conducted a review of the OFD, there was only one Administrative Assistant (AA) to the Fire Chief. Since that time, the Department has basically doubled in size, but there is still only one AA. When she is off, there is no other AA to fill in, which means that the Department is without an AA

to conduct day-to-day duties and to ensure good customer service to the public. Therefore, even a part-time AA would assist with covering for vacations time or other anticipated time off by the present full-time AA.

- Another option is to investigate the opportunity of seconding administrative support from another city department to cover for absences.

Associated Costs *(all costs are approximate)*

- An assessment of the administrative support available within the workload of the existing executive assistant will identify how many additional full or part-time administrative support positions are warranted. Reference to the City's Customer Service Guideline document will ensure that OFD is meeting the expectations of this Guideline. This will have related staffing costs.

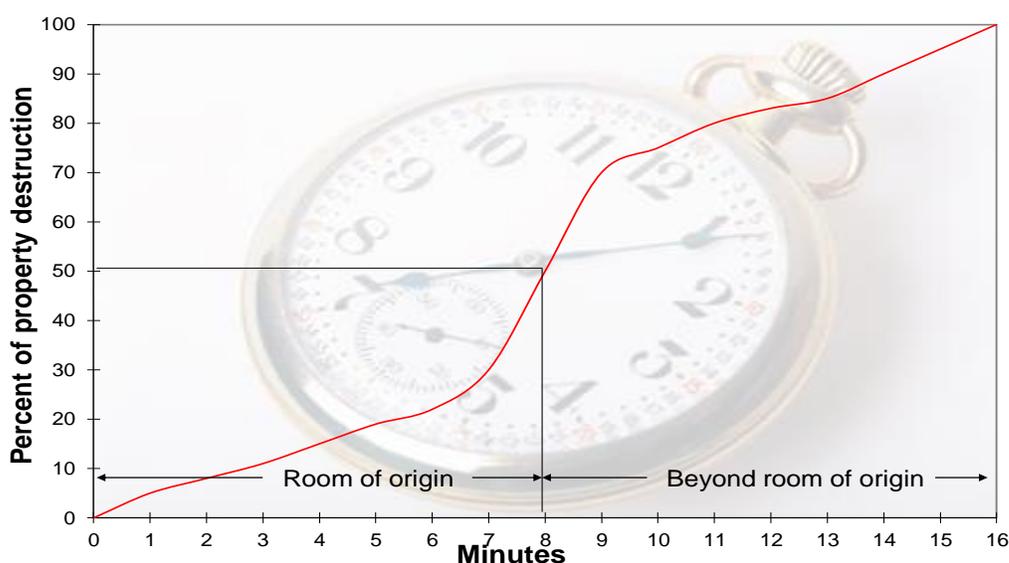
Timeline

- Short-term – the Fire Chief needs to complete a review of the Department's needs in relation to administrative workload.

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 room with furnishings and can vary greatly depending on the size of the room and the type of furnishings within it. Therefore, depending on many other factors, the rate of growth can be affected in many ways, 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 this fire response curve information, 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. In other words, if a fire truck arrives on scene in eight minutes or less (from when the fire starts), with a sufficient number of firefighters to launch effective suppression efforts, then there is an increased opportunity to contain the fire to the room of origin by reducing further spread of the fire to the rest of the structure.

Another point to note is that in recent studies through the National Institute of Standards and Technology (NIST), the National Fire Protection Association and Underwriters Laboratories, it was identified that based on the construction type of a present day average family home, flashover, which is a very dangerous situation due to extreme heat and flame can occur in as little as three minutes. This is another reason why quick and efficient response to a structure fire is a key goal of any fire department.

And finally, when looking 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

A criterion not represented in the Fire Response/Propagation chart is Detection Time. This is when the fire is detected by the occupant. Although this is an area that has no actual timeline noted in any response time chart, it is a consideration that emphasizes the need for quick response by a fire department because it is unknown how long the fire has been burning and to what degree it has extended within the structure.

The previous paragraphs are focused on a fire situation, but OFD responds to more than just fires. For example, motor vehicle collisions, medical emergencies, and other risks need to be dealt with as soon as possible – again, another reason to be as efficient and effective as possible in responding to calls for assistance.

Adequate staffing is also a consideration. For example, if the first arriving fire suppression team arrives with only three responders on board, then it is limited to 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 (in OFD) that ensures whenever a station and its firefighters are dispatched to any type of call where back-up (or more firefighters) may be required, another station is automatically dispatched, along with the volunteer firefighters, to the same incident.

Response Data

The following charts identify a comparison of response types and the response breakdown among the two fire stations from 2013 to 2015 – only the 2015 data is shown here. For the 2013 and 2014 data, refer to Appendix “B”.

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 Orillia 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:

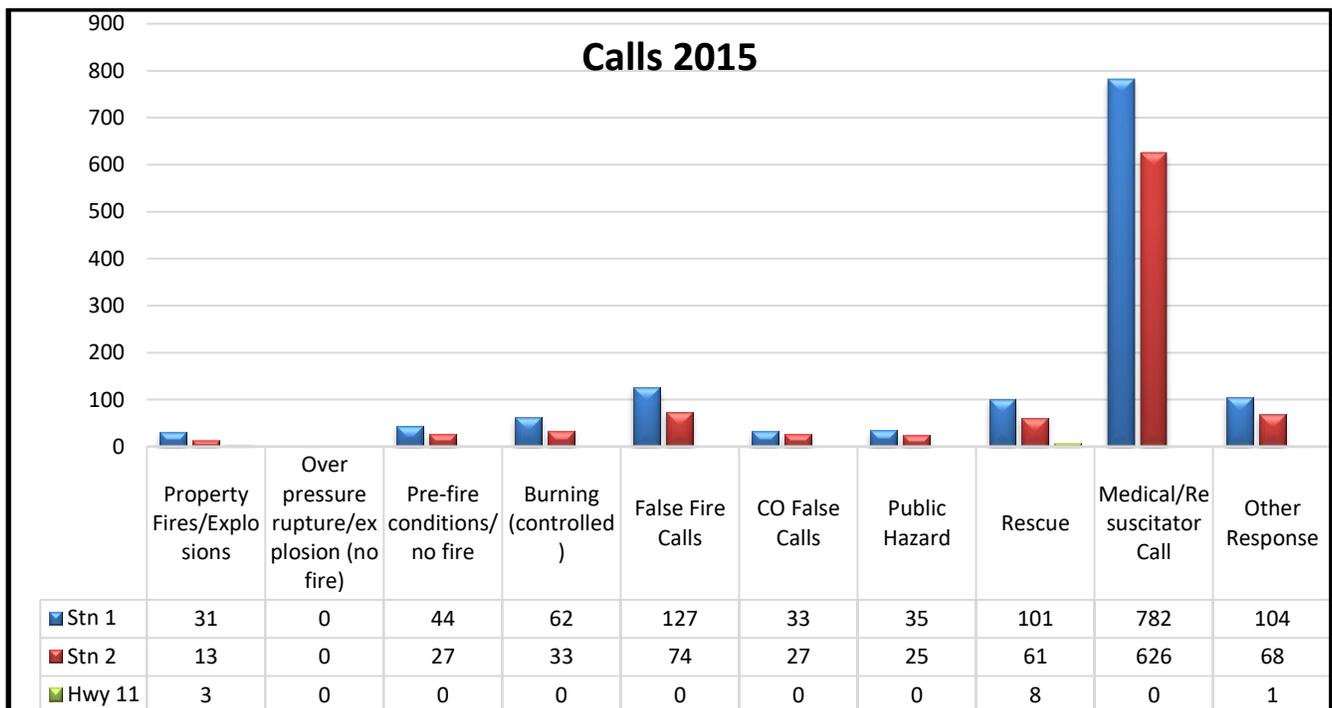
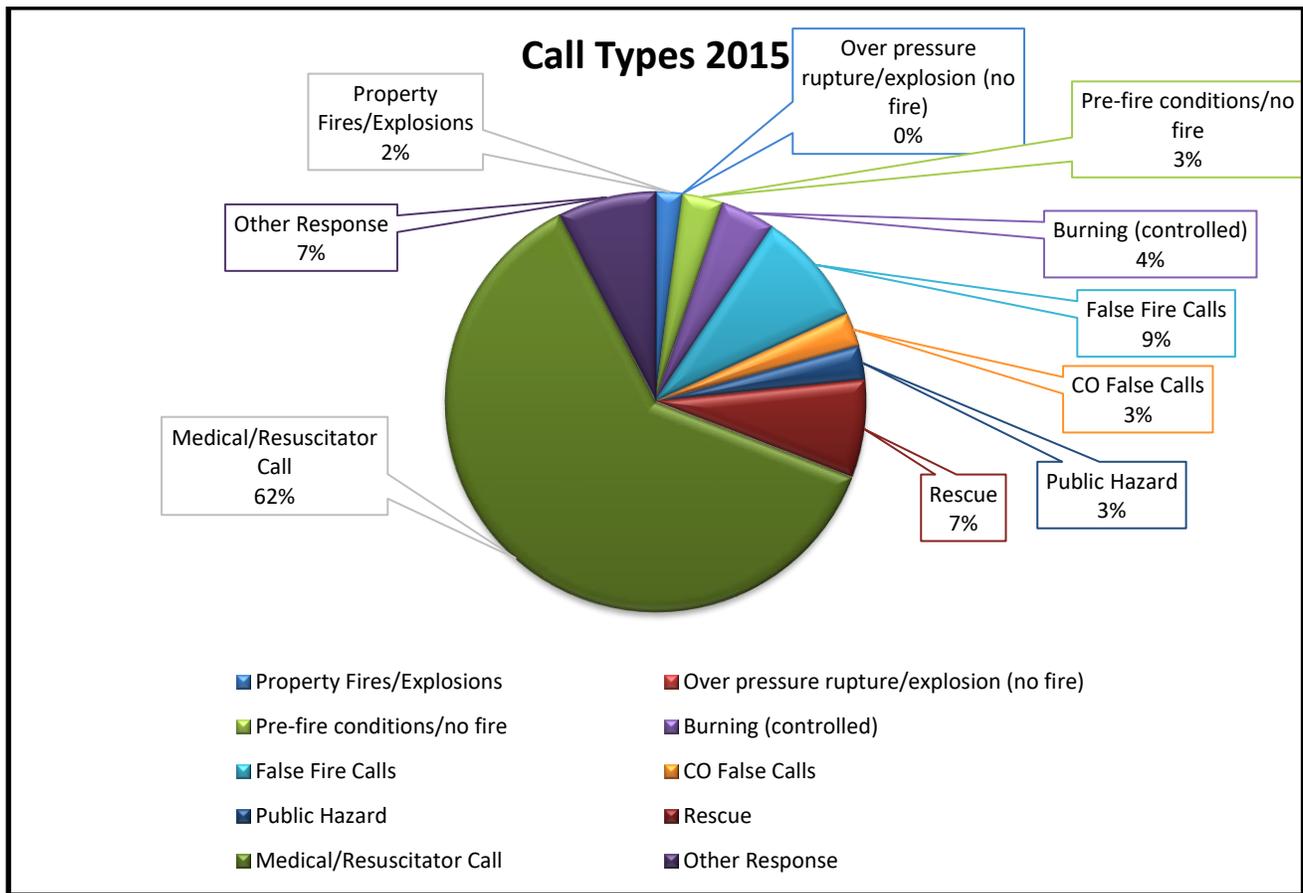
- The distance between the fire station and response location
- The layout of the community (i.e. road ways, bridges, railway crossovers, etc.)
- Impediments such as weather, construction, traffic jams, lack of roads
- Notification time
- Assembly time of the firefighters, both at the fire station and 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 and which station(s) are called upon the most for these responses.

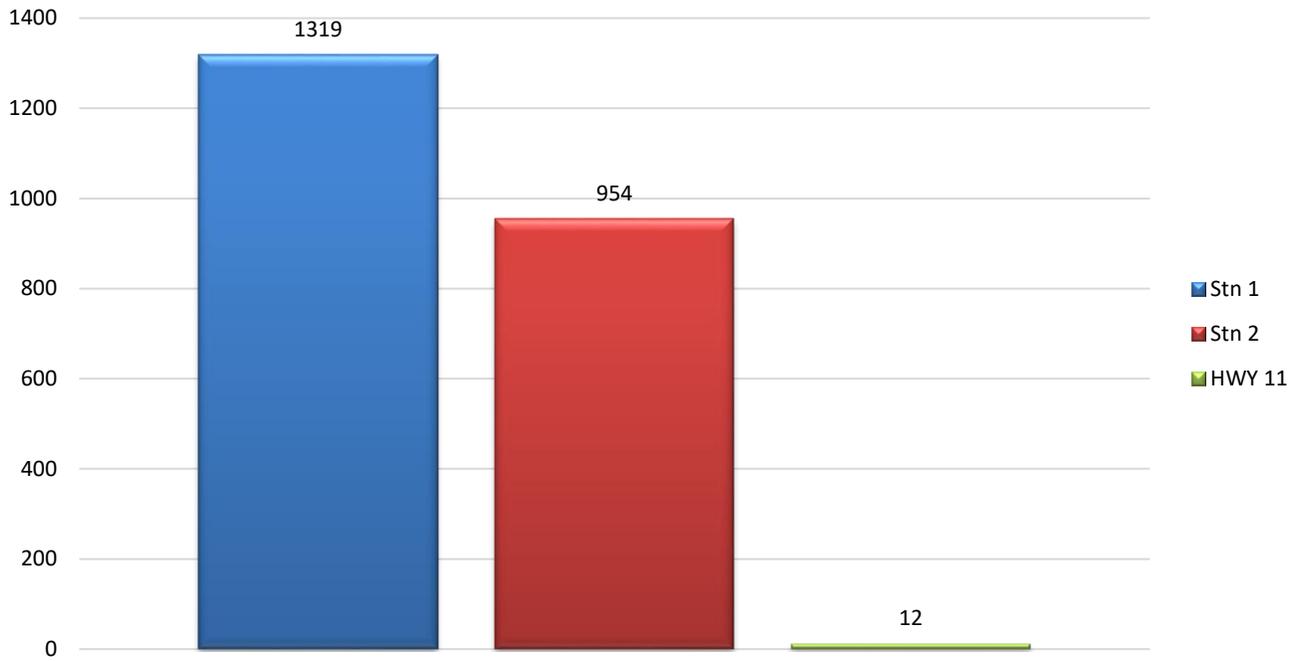
Note: During the collating of the response data, some anomalies were noted such as overly long or zero turnout or response times. These anomalies were seen as inputting (human) errors and to ensure a more accurate evaluation of times, any identified anomaly was removed from the data set. Also, EMT is only looking at the emergency call types to compare OFD response times with that of the related NFPA Standard.

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

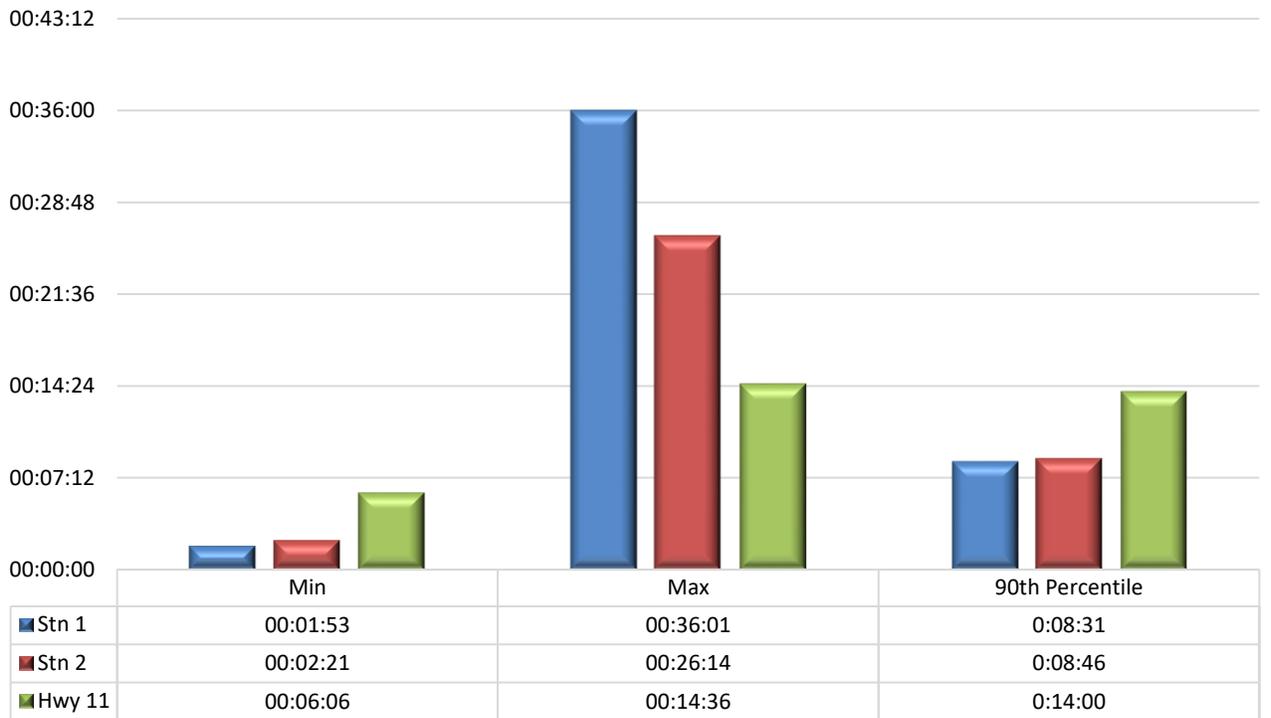
FIGURE(S) 6: Comparison of Responses Data between Fire Stations – Based on Response Data Supplied



2015 Total Calls Per Station

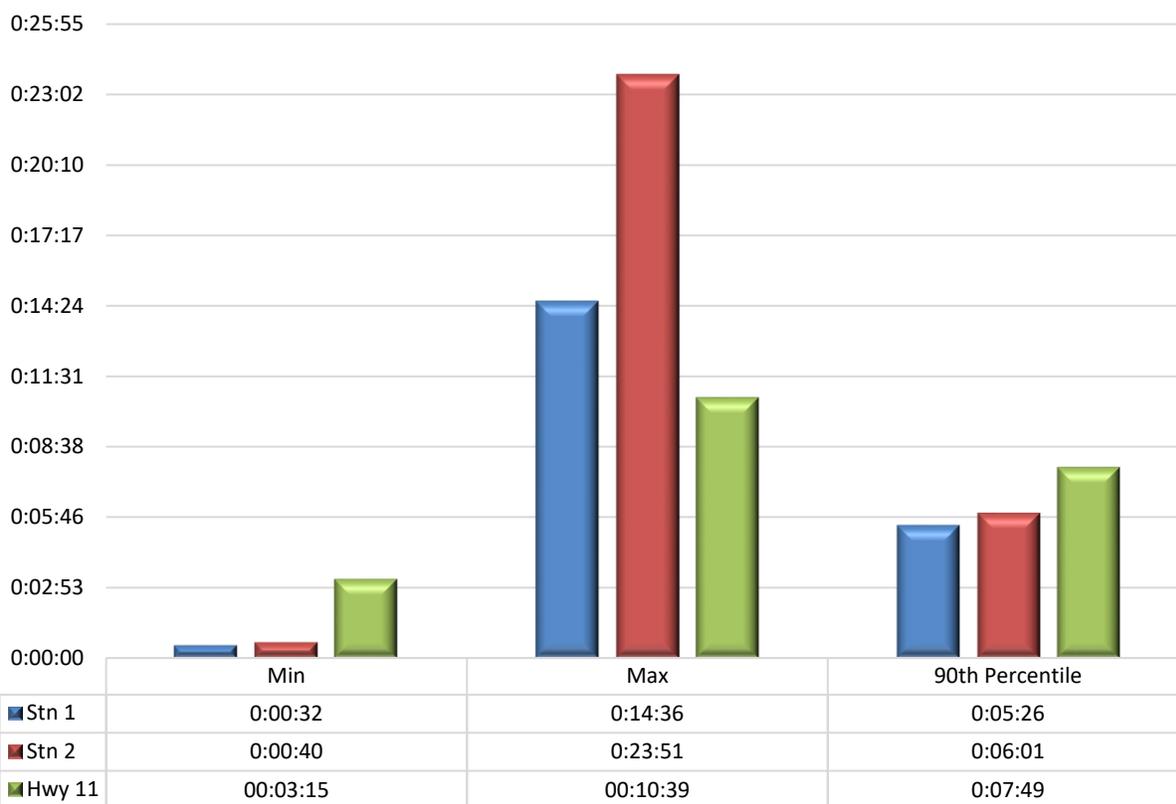


2015 Total Response Times



Note: maximum response times include calls such as marine and ice rescue, where it may take an extended period of time to locate and/or reach the site of the emergency.

2015 Travel Times



Note: maximum response times include calls such as marine and ice rescue, where it may take an extended period of time to locate and/or reach the site of the emergency.

The Orillia 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 40 full-time firefighters and officers divided amongst four platoons, supported by 20 volunteer firefighters divided into two platoons that are on-call 24/7.

The Department maintains two on-duty crews, 24-hours per day, 365 days per year. These crews are housed in two separate fire stations. This is an effective way of providing relatively quick first response to an emergency while providing assistance to the first responding crews in a timely manner.

Established response time goals (including assembly time and travel time only) are to have first vehicle response to downtown parts of the City within four (4) minutes and to provide first vehicle response to the whole City within six (6) minutes. These established goals are not set out in policy or approved by City Council in a formal manner.

The volunteer firefighters are called out to emergencies that warrant their assistance. The volunteers are divided into two platoons in which (typically) on the average, two/three volunteers arrive directly at an incident and two/three respond to the station and are then ready

to respond with additional equipment.

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.

Given the current staffing of the Fire Department, it is difficult to ensure enough firefighters are on scene in a timely manner to provide comprehensive and relatively safe emergency scene operations. The total possible complement on duty to staff the two stations is ten (10) Firefighters, including Officers.

- However, this number is not normally achieved (less than 5% of the time). More typically, there are eight Firefighters or less on duty. The latest data provided indicates that there are eight or more Firefighters on duty 56% of the time. Which means that 44% of the time there are seven or even six Firefighters on duty. Presently, the Department strives to maintain at least seven Firefighters on duty by calling in off-duty Firefighters on overtime as there does not appear to be adequate finances budgeted to ensure that the preferred eight full-time staff per shift can be achieved throughout the year.

The operational capability of the Fire Suppression Division is diminished when fewer Firefighters are available. This is further reduced when a crew is reduced below three Firefighters. Currently, when the number of on-duty Firefighters is reduced below eight, one crew is maintained at four. However, this can mean that the other crew has as few as two Firefighters which dramatically reduces operational effectiveness.

Absence rates due to illness or injury does not seem to be a significant concern at this time with an average of 5.01 days per suppression division firefighter in 2015. The cumulative effect, however, was 266 absences in the year resulting in decreased firefighters on shift. Having an effective absence management program that is timely and thorough helps to ensure that the limited human resources available to the Department are used to the best effect.

The costs associated with ensuring that there is a minimum of eight firefighters on duty would be considerable. Only marginal improvement can be anticipated with absence management and vacation scheduling controls. To make significant improvement in relation to meeting the minimum staffing levels would require the implementation of one of the following three options:

1. An increase in overtime expenditures based on the need to up staff 44% of the time. This would offer more flexibility to the Fire Chief to keep staffing at a minimum of eight per shift, and allow for staffing adjustments based on daily requirements. Incurring overtime costs 44% of the time (at time and one half) would equate to approximately \$60,000.00

to \$100,000.00 in total, which would be less than the cost of one full time Firefighter.

2. An increase in staffing, which would equate to approximately \$120,000.00 per year, per firefighter (based on a first-class firefighter's wages and benefits). If this is required for each shift the overall cost could amount to approximately \$500,000.00.
3. The third and final option would be making use of part-time firefighters to supplement the staffing levels (as required). But this third option would require negotiations and an adjustment to the Collective Agreement.

One final point that needs to be confirmed and approved is what is the minimum staffing levels to be achieved per shift. As already noted, the preferred goal is eight Firefighters per shift, but this has fallen as low as six per shift. Once a decision is made on minimum staffing levels, more direction can be provided as to which of the previous three options is appropriate.

The OFD can call on the assistance of the neighbouring municipalities of Ramara Township, Severn Township, the Township of Oro-Medonte, and the Chippewas of Rama First Nation to ensure that more significant emergency incidents have an adequate number of firefighters on scene. But 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.

Having noted all the previous points, it must be reiterated that as the City grows and call volumes increase, the need for a larger full-time component of Firefighters may be required to ensure both stations have a staffing compliment of four firefighters per station on a consistent basis.

Volunteer firefighters play a vital role in any community, but due to other commitments, such as work, family life, etc., there is no guarantee that these firefighters will be able to respond with adequate numbers or in a timely manner.

Call Back

When staffing shortages occur due to illness or other situations, a need often arises for more staff. Presently, the call out for replacement staff is done manually (one call at a time), which is very time consuming. To expedite the process, the utilization of an automated call back system should be considered as this would free up resources for other required duties. Many departments utilize these call out systems as they are more efficient for the Department and staff as a recorded message can be used and the person answering the phone can simply accept or deny the opportunity by inputting a 'key' response. Once a person has accepted the request, the system stops and will continue from that point when the next need for staff is identified.

Fire Department Marine Unit

The Orillia Fire Department operates a boat for marine calls and responding to Grape Island. Grape Island is within the City of Orillia boundaries and has approximately 42 homes/cottages, 13 of which are used year-round. Lake Simcoe, Lake Couchiching, and the Trent Severn waterways see approximately 25,000 vessels annually, to which the City and the Chamber of Commerce actively market Orillia as a destination.

While the Fire Department is not mandated to provide marine service and Council has the authority to dictate the level of service it provides, the City is a waterfront community with extensive shoreline and an island with year-round residences. Under the Establishing By-law Council has already authorized Water and Ice Rescue. The boat is a valuable tool serving both the residents as well as the many visitors of the community.

As the replacement plan deadline for the boat approaches, we would recommend that an all-season vessel, such as an airboat, be considered. Approximate cost is \$175,000.

Emergency Medical Responses

The Orillia Fire Department responds to potentially life threatening medical emergencies, under agreement with the Georgian Central Ambulance Communications Centre and the Simcoe County Paramedic Service, as the firefighters are trained and equipped to provide initial emergency medical assistance. These responses constituted approximately 1,408 calls in 2015; that's 62% of the total emergency call volume of the Fire Department.

The Simcoe County tiered 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, and in particular, ensures a timely response, 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 at this time. As 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) regardless if the vehicles respond to medical calls. Therefore, the actual vehicles costs associated with medical first response would be a small portion of the budget.

A 2014 Simcoe County Paramedic Service report to County Council indicated that the Orillia Fire Department arrived on scene 91% of the time (2012 data) prior to the paramedic service. This indicated that the Fire Department was only not required in approximately 12% (177) of the tiered response calls, indicating that 88% of the tiered response calls were appropriate for fire department assistance.

Medical Assist Calls - City of Orillia							
Year	Med Assist Calls	FD First	%	EMS first	%	Resp Time FD	Resp Time - EMS
2012	1498	1369	91%	129	9%	5:33	9:19
2013	1488	1341	90%	147	10%	5:17	9:02
2014	1331	1179	88%	152	11%	5:44	8:59

In 2015 OFD statistics indicate that the OFD average response time to medical calls was 4 minutes and 44 seconds with the paramedics having an average response time of 7 minutes and 53 seconds. The firefighters were at the medical call an average of 3 minutes and 9 seconds faster than the paramedics. In 2015 firefighters applied oxygen on 466 calls prior to paramedic intervention in 2015.

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. Only the fire department can reliably meet that target time in the City of Orillia.

The Orillia Fire Department is a key component in the provision of rapid emergency care on medical calls.

Recommendation(s)

- Options should be explored to improve the on-duty staffing so that there is a minimum of eight firefighters on-duty 24/7 – four per station.
- Staffing of the two stations should be revised so that in the event of reduced staffing, both

stations continue to maintain the highest level of effectiveness possible. Should the staffing be reduced to six, both stations should be staffed with at least three firefighters per station.

14. It is recommended that the Department investigate the implementation of an automatic call back system for staffing related needs.
15. An airboat or other all season vessel should be considered for the replacement of the current marine boat to better service the community all year-round.

Associated Costs *(all costs are approximate)*

- The costs associated with ensuring that there is a minimum of eight firefighters on duty would be considerable. Only marginal improvement can be anticipated with absence management and vacation scheduling controls. To make significant improvement requires an increase in overtime expenditure, an increase in staffing, or the difficult and controversial proposal of making use of part-time firefighters. However, costs could range from approximately \$60,000.00 to as much as \$500,000.00 including an increase in overtime expenditure and staffing, or the difficult and controversial proposal of making use of part-time firefighters.
- No costs are associated for Recommendation 13.
- For Recommendation 14, software that utilizes an app on smartphones is available estimated at \$1,000- 1,500 per year plus \$4,000 in start-up costs.
- The cost of an airboat is approximately \$175,000, however, this cost would be offset by the normally anticipated replacement costs of the current boat which is estimated at \$175,000, which, depending on related market costs, would be similar outlays for replacement.

Timeline

- Mid-term (4 – 6 years) – for Recommendation 15
- Immediate (0 – 1 year) – for all other recommendations in relation to investing and identifying implementation plans

3.6 Emergency Preparedness Program

Providing an emergency preparedness program for a community is the responsibility of the municipality. The majority of municipalities assign this task to their fire department, while others may designate this responsibility to another individual or division (within the organization). Besides 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 would aggravate an emergency situation and the municipality can work to prevent or mitigate 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.

Since emergencies will occur, 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 is necessary for a given situation

From this analysis, appropriate emergency procedures can be established.

The City of Orillia Emergency Preparedness Program is presently managed by the Assistant Fire Chief and supported by the Fire Chief and Deputy Fire Chief. The Fire Chief is designated as the Community Emergency Management Coordinator (CEMC) and the Deputy Fire Chief and the AFC are the Alternate CEMC's for the City of Orillia.

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

As the AFC is primarily responsible for training, emergency management is a secondary role that has a half day a week dedicated to it. The AFC 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 City works closely with the County of Simcoe emergency management team and the surrounding municipalities.

While the City of Orillia is meeting the minimum required expectations of the OFMEM annual compliance standards, there has not been an ability to address the hazard specific planning needs due to the lack of time available.

If the AFC receives additional administrative support as recommended in this report, this would also aid with the emergency management program and may free up additional time for the AFC to also focus on the incident specific requirements.

Based on the information received from the Assistant Fire Chief, Fire Chief, and Deputy Fire Chief, the program is well managed and supported 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, EM education could be provided to the community through the library, recreation centres, public works, and other departments. The HR and health and safety team could assist in educating municipal staff.

Other areas of need include ensuring the municipality is prepared for a crisis itself, including ensuring the City Centre, municipal computer system, and the emergency reception centres are on emergency power.

At this time, it appears that the Orillia Fire Department and the City of Orillia 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 City.

Recommendation(s)

16. To ensure that the municipality is prepared for a crisis, the City Centre, municipal computer system, and the emergency reception centres are on emergency power.

Associated Costs *(all costs are approximate)*

- A back-up generator can cost \$250,000 or more depending on size and general power expectations of the unit.

Timeline

- Mid-term (4-6 years).

3.7 Emergency Communications – 9-1-1 and Dispatch Centre

Orillia Fire Department operates its own dedicated dispatching services to the City of Orillia. This communications centre is presently staffed 24/7 with one staff member on duty at all times and consists of two elements – call taking/dispatching and technology (which includes records) management.

This Division is responsible for:

- The answering of all 9-1-1 calls
- All fire related dispatch procedures
- Incident related dispatching procedures and ongoing communications with the scene commander
- Coordination of Mutual Aid support, as required
- Contacting and initial dispatching of other agencies, such as Police, Ambulance, Hydro, Gas, etc.
- Fire dispatching service for other contracted agencies
- Documenting of related data required by the Office of the Fire Marshal and Emergency Management, such as time of call, turnout of firefighters, drive time, etc.
- After hours call reception for Orillia Power and the Public Works Department

During the review of this centre and meetings with some of the staff, it was determined that the dispatch centre is well equipped with the most up-to-date technology. However, with dispatching for Orillia Fire and five other departments, there are occasions when having one staff member on duty can be challenging, so the Department has a policy where other staff in the building will be called into assist. Further, during busier periods, a second dispatcher can be called in (e.g. severe storms, large working fire).

OFD is contracted to do dispatching services for:

1. Severn Township
2. Chippewas of Rama – First Nation
3. Oro-Medonte
4. Ramara
5. Gravenhurst

National Fire Protection Association (NFPA) Standard 1221 recommends the following in relation to staffing of an Emergency Services Communications System:

7.2.1 – Telecommunicators shall meet the qualification requirements of NFPA 1061 – Professional Qualifications for Public Safety Telecommunications Personnel, as appropriate for their position.

- As such, all training and certification records of the division’s staff should be reviewed to confirm if all staff have been trained to this recognized standard.

7.3.1 – There shall be a minimum of two Telecommunicators on duty and present in the communications centre at all times.

- Presently, there is only one Communicator on duty at all times, however, other staff members who are trained in the dispatch function are available in the building most of the time to provide assistance if there is a sudden influx of calls. The Communicators are permitted to call in an off-duty staff member to help when they are busy (e.g. severe storms, structure fires).

Having an in-house 9-1-1 call taking and dispatch program permits the fire service to have greater internal control of response times and deployment of apparatus, which in turn offers a greater level of customer service to the residents of Orillia.

There are two primary options to the current dispatch operation: contracting with another fire dispatch operation, or contracting with a non-fire organization for dispatch services (e.g. security company, ambulance service, or police service). These options would have a reduced cost to the fire service, but are offset by the loss in revenue from the municipalities currently obtained through providing dispatch services, as well as lost 9-1-1 revenue.

A common concern of fire services dispatched by a non-fire service is that the host organization’s staff are more ‘host recognized’, whether that is police or EMS based. This may result in slower dispatch times or radio monitoring if the host service is busy with their own agency calls.

Contracting 9-1-1 and Dispatching Services

Dispatch System Pricing for Barrie Fire

When evaluating the costs of contracting dispatch services to another agency (e.g. fire, police service) there are a number of costs that must be factored in, including one time start-up costs, as well as the ongoing annual fees. We have done an estimation based on moving the dispatch functions to the Barrie Fire Service, who are dispatching the fire departments in Simcoe County with the exception of those dispatched by Orillia.

Estimated Start-up Costs

One time start up fees will include a CAD system fee of \$1.50 per capita to Barrie Fire, switching to a compatible records management system, having telephone and radio communications directed to the new dispatch centre, etc. The one-time fees are estimated at \$122,000.

Start Up Estimates for Barrie Fire Dispatch Services	
Start up costs	Estimates
Radio system transfer (\$20-40,000)	\$40,000
Telephone system transfer	\$10,000
CAD system fee / \$1.50 per capita	\$48,000
Records Management System	\$8,000
Records Management System Training	\$5,000
Fax Machines for trip tickets	\$1,000
Miscellaneous	\$10,000
Start up cost estimate	\$122,000

Annual Costs / Savings

There are a number of annual operational fees in contracting out the dispatch services. The fees listed below were provided by the Barrie Fire Service with the caveat that they are under review, as the Barrie Fire Service states that they do not cover the true costs of the service. New pricing is anticipated to be introduced in 2017.

Under the current fee structure, the annual costs for the City of Barrie to provide this service would be estimated at \$93,760 for 2016.

Current Annual Fee Structure - Barrie Fire Dispatch Services		
Item	Per capita cost	Estimate for population of 32,000
Base price	\$1.85	\$59,200
Critical infrastructure	\$0.75	\$24,000
Digital Radio Signaling	\$0.03	\$960
GIS services	\$0.10	\$3,200
Records Management System	\$0.10	\$3,200
Mobile Data Terminals	\$0.05	\$1,600
Simultaneous EMS dispatch	\$0.05	\$1,600
Total operational costs	\$2.93	\$93,760

In addition, the City of Orillia would require a contract to provide a 9-1-1 answering point also known as CERB (Central Emergency Reporting Bureau). The OPP provides this service for many communities (not dispatch service) at \$0.561 per capita. These costs are estimated at \$17,952 for the City of Orillia.

The Orillia Fire Department dispatch costs for 2016 were \$427,096. This is offset by \$148,431 in dispatch fees to other fire services and Orillia Power, as well as \$34,080 in 9-1-1 CERB fees to other municipalities, reducing the total dispatch costs to the City to \$244,585.

If the dispatch function was outsourced, an additional clerical staff member (estimated at \$50,000 inclusive of benefits) would be required to answer administration telephone lines, complete statistical reporting, file OFM reports, complete false alarm reports, and generate revenue reports for motor vehicle collisions. This would be in addition to the clerical needs identified in recommendation #11 found in section 3 of this report.

Two budget line items, currently attributed to dispatch, would continue to be required by the Fire Service including \$1,850 for the telephone system and \$700 in advertising.

The Public Works department would require the contracting out of their after-hours telephone service which is estimated at \$24,000.

When the current costs of the City and the costs of outsourcing are calculated, the estimated annual savings gained by moving the dispatch centre to the Barrie Fire Service would be approximately \$56,323.

The chart below compares the current costs to the City with the costs of outsourcing:

Current Orillia Fire dispatch budget	\$ 427,096
Dispatch revenue	\$ (148,431)
9-1-1 CERB revenue	\$ (34,080)
Current costs to the City	\$ 244,585
Estimate to outsource dispatch	\$ 93,760
Estimate to outsource 9-1-1 CERB	\$ 17,952
Addition of clerical support	\$ 50,000
After hours telephone service - Public Works	\$ 24,000
Telephone costs budgeted to dispatch	\$ 1,850
Advertising currently budgeted to dispatch	\$ 700
Estimated Outsourcing Costs to City	\$ 188,262
Potential annual savings*	\$ 56,323

*Does not include start-up costs

Note: These savings will be reduced when the Barrie Fire Service increases their fee structure.

As the start up costs are estimated at \$122,000, this would offset the first year savings of \$56,323 resulting in an estimated additional cost to the City of \$65,677 in the first year.

The Orillia Fire dispatch serves as the 9-1-1 CERB for the City and several surrounding communities. The main benefit to this is that it reduces the amount of time for the dispatcher to alert the fire apparatus. This time may range from 10 to 30 seconds, however, the OPP Provincial Communications Centre answers 98% of the calls within 12 seconds. As Barrie Fire does not function as a 9-1-1 CERB arrangements would be required to be made with another agency that functions as the 9-1-1 answering point, such as the OPP Provincial Communications Centre in North Bay. The 9-1-1 CERB would answer the 9-1-1 calls and then transfer the fire calls to the Barrie Fire Department, which would then in-turn dispatch the Orillia firefighters.

Currently in Orillia, if the caller is requesting the fire department, the call does not have to be transferred, saving the time 9-1-1 reception and transfer time. If the request is for ambulance or police, it is transferred to the appropriate agency's dispatch centre.

Recommendation(s)

17. A full analysis be completed in relation to the training required to have all Communicators meet the NFPA 1061 Standard based on their present level of training provided by the OFD.
18. Due to the challenges of the OFD Communications Division in relation to being a 9-1-1 call taking centre, along with the dispatching for five other communities, a second on-duty staff member should be considered as this Division manages a critical service to the community and the OFD.
19. If a decision is made to move towards the contracting out of the dispatching services, then a full analysis needs to be conducted in relation to the information provided in this report and in relation to:
 - Accommodation of staff
 - Cancellation of current contracts to provide dispatch services to neighbouring fire departments
 - A request for proposal and assessment process for dispatch centres bidding to provide the service
 - Hiring an administrative support position to cover the administrative functions currently provided by the fire communicators.

Associated Costs *(all costs are approximate)*

- No expense related to the training analysis
- Recommendation #18 costs could amount to four new dispatchers for the division, which would be based on present wage rates (approximately \$260,000 to \$300,000)
- No costs associated to the analysis

Timeline

- Short-term (1 – 3 years) for Recommendation 17
- Short to Mid-term for Recommendation 18 based on workload of the Communications Division
- Short-term (1 – 3 years) for Recommendation 19

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 existing two fire stations.

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 even if the station will be staffed by full-time or by volunteer firefighters. Another consideration is the geographical layout of the community that can include natural barriers or divides, such as water, that makes it necessary to have some stations located within 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.

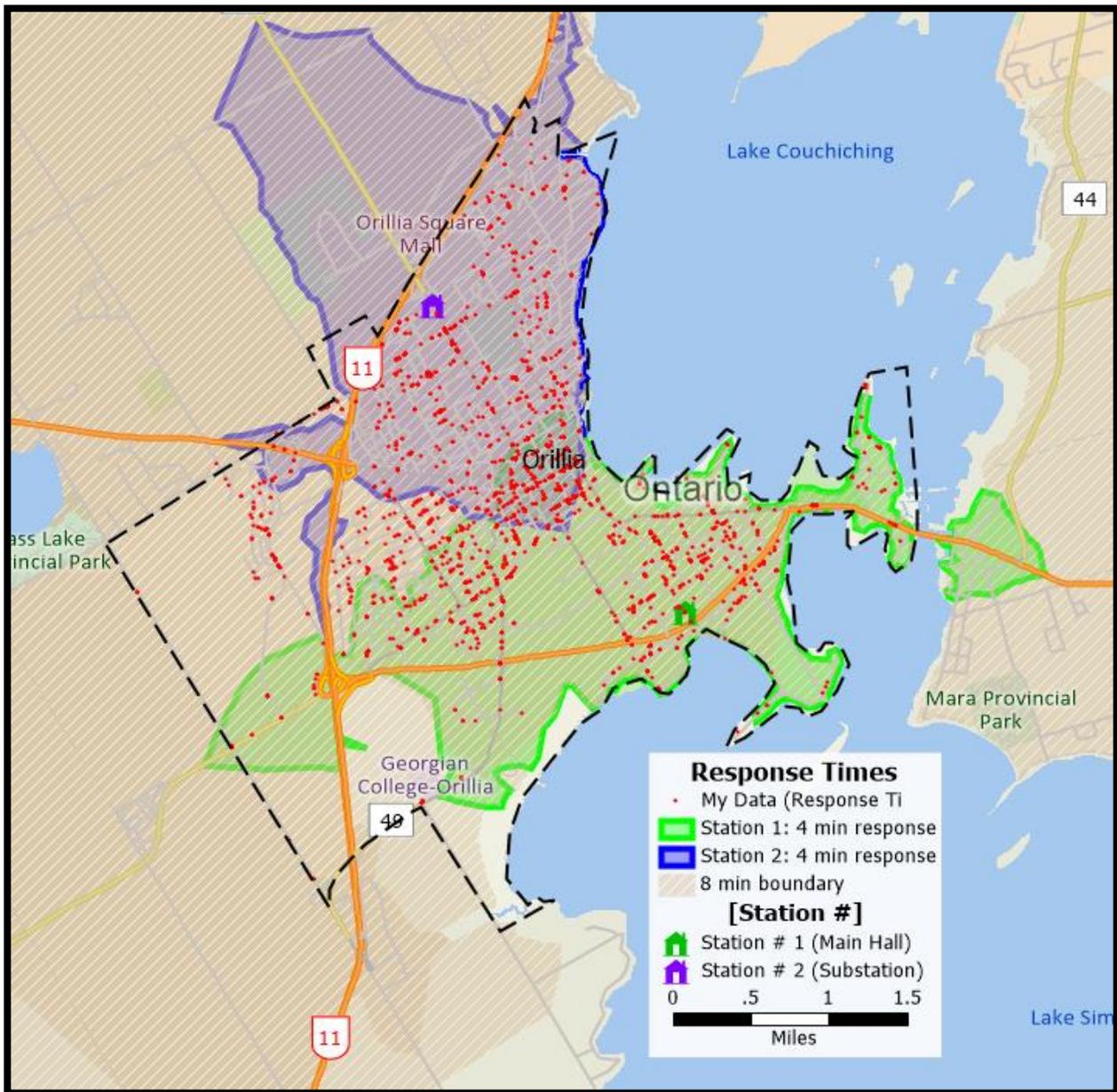
The Orillia Fire Department presently responds from two fire stations that are located at the following addresses:

- Station #1 – 500 Gill Street
- Station #2 – 1 Commerce Road

Both fire stations are staffed with full-time firefighters that are supported by volunteer firefighters, as required. The minimum staffing for Station # 1 is four (which includes a full-time Officer). Whereas, Station #2 staffing can go down to a minimum of 2, which usually includes a fire fighter qualified to the Acting Captain role, but in his/her absence that role is covered by the Senior Fire Fighter on the shift to fulfill that role.

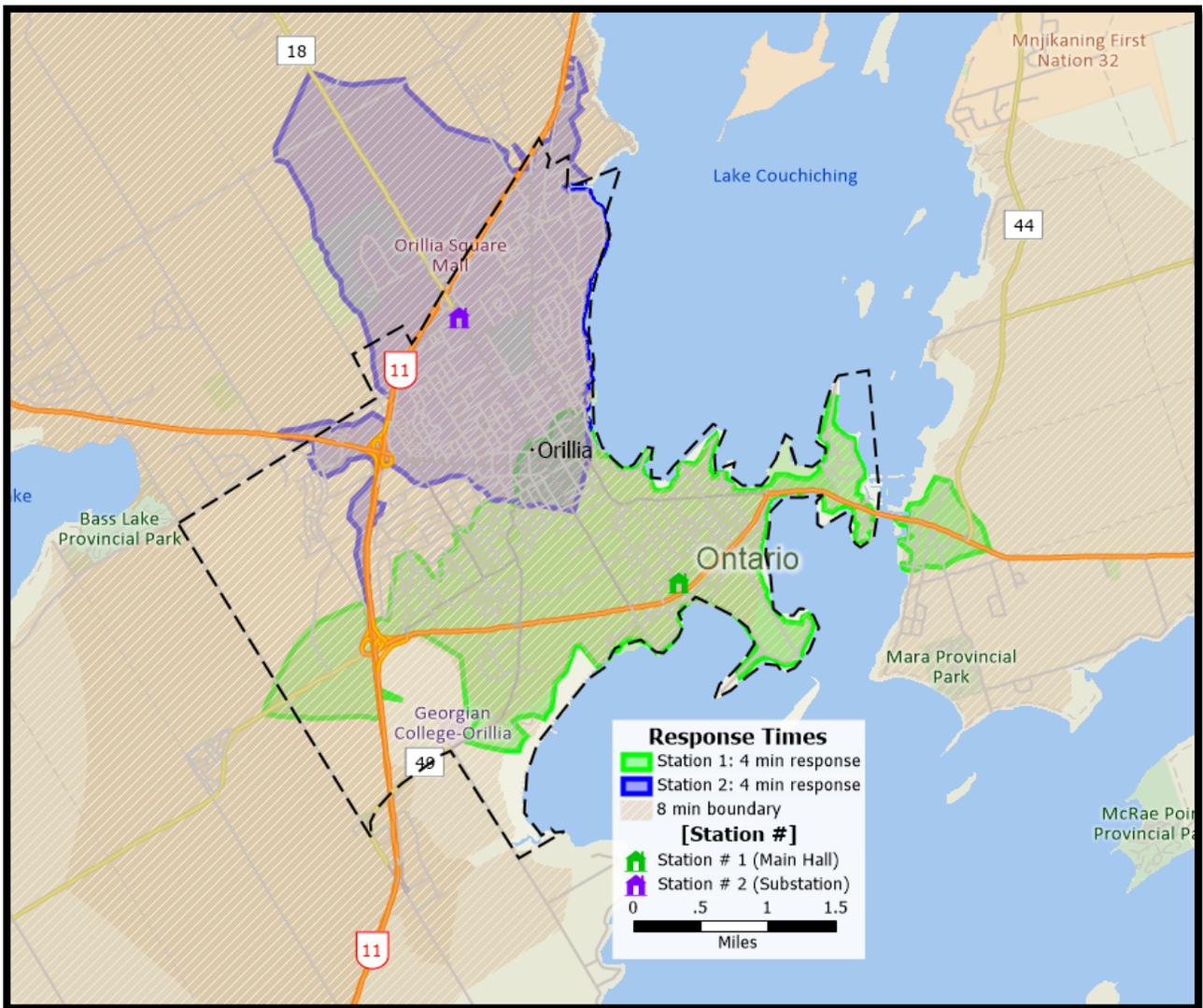
As noted in FIGURE 7, the fire stations are located throughout Orillia in a manner that appears to offer an effective level of coverage for the community.

FIGURE 7: Orillia Fire Response Clusters (for 2014, 2015)



In FIGURE 7, the reader will note that the bulk of the responses are along highways and the more populated areas of the City. The majority of the calls can be reached in four minutes or less with the entire City being covered in an 8-minute response time.

FIGURE 8: Four (4) and Eight (8) Minute Travel Time Map for Each Fire Station



4.1.1 Discussion Relating to Fire Station Locations

Desirable Fire Station Site Criteria

As Orillia's population continues to grow, a third fire station may be required to meet the needs of the community. When considering a fire station along with existing and potential future locations, many aspects should be taken into consideration such as the size of community the Fire Department would serve, 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 or road
- 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, the City and OFD should continue to monitor call volumes on an annual basis to identify if a third fire station be considered in the western portion of the City.

Associated Costs (all costs are approximate)

- The estimated cost consideration:
 - If a fire station is relocated then 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 OFD.
 - 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 - \$625,000.
 - 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 4 firefighters 24/7. With current salary and benefit costs, the annual expenditures would be approximately \$2 million.

Having noted the above information for equipment and staffing of the fire station, this can be done in increments. For example, OFD 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 7am to 5pm, and from there the station is covered by the volunteer firefighters. Another option may be for the spreading of staff to have 3 full-time Firefighters per station 24/7.

Other departments such as Whitchurch/Stouffville and Clarington '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 the 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 City of Orillia 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.

Take 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 day room/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 Stations Evaluations

Orillia Fire Department provides emergency service response from two fire stations. Based on visits to the stations, the buildings appear to be in solid condition.

Notes:

- *The station reviews in this report are of a general nature, conducted by a visual walk-through by EMT staff.*
- *Any health and safety related items have been **bolded and italicized**.*
- *A further overview of general health and safety related issues is also included at the end of this station review section.*

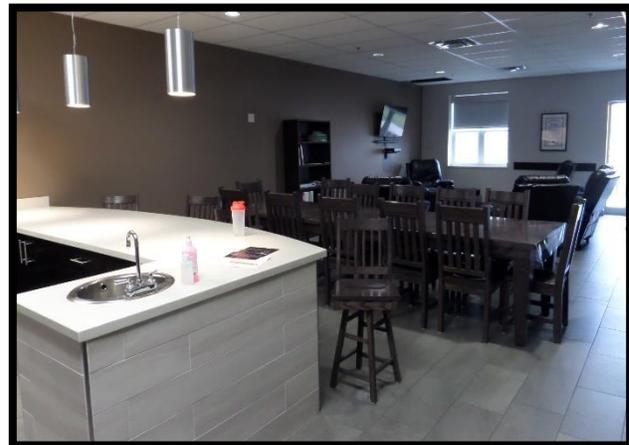
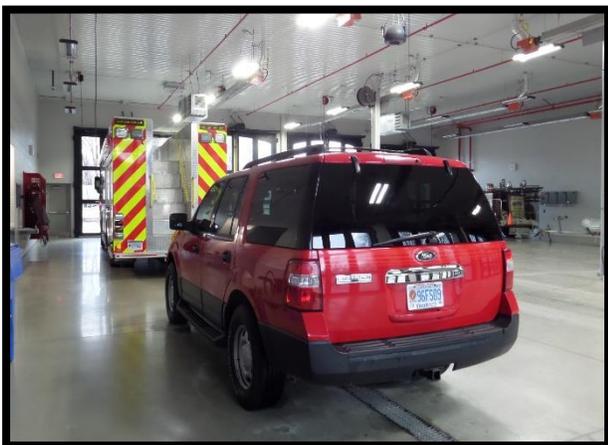
Station #1 – Headquarters



Station #1 is the headquarters for the Orillia Fire Department. It is located at 500 Gill Street. The station was built in 2014 and houses Administration, Training, Fire Prevention, Fire Suppression (full-time and volunteer firefighters), and Communications (dispatch office) and is the location for the primary Emergency Operations Centre.

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 15 years old or newer.

Another safety feature to this new facility is that all of the firefighters' gear is stored in a separate room, which 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 at this time.

Recommendation(s)

- None

Associated Costs *(All costs are approximate)*

- N/A

Timeline

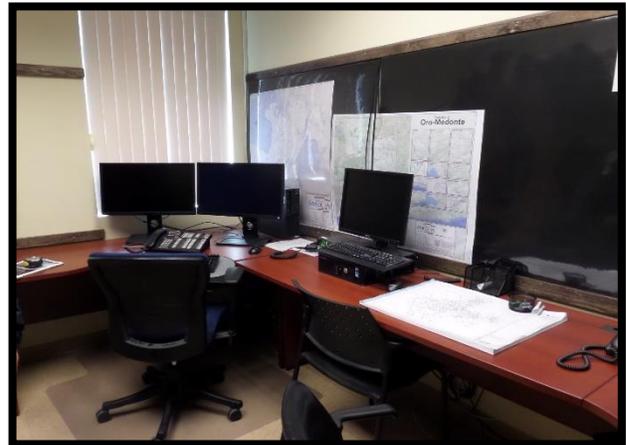
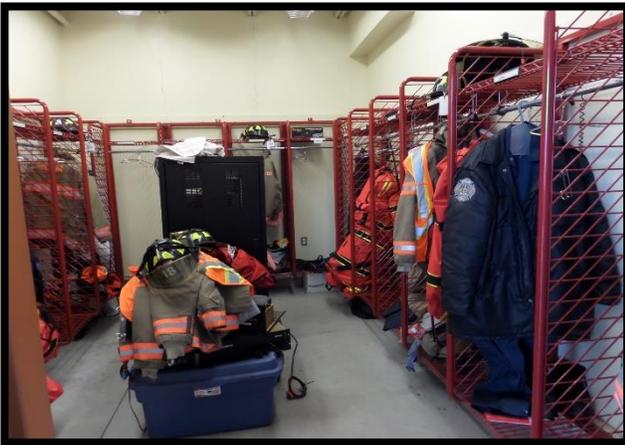
- N/A

Station #2



Station #2 is located at 1 Commerce Road. It was built in 2007.

It is a two-bay, drive-through station that houses facilities for both full-time and volunteer firefighters. No other divisions work out of this station.



Observations

The station is well set up for both operations staff that work at this facility. 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 at this time. However, some of the operating systems within the fire station (such as the HVAC) are nearing the 10-year mark and coming due for service repairs and upgrades. Therefore, funds should be put aside to prepare for future repairs and upgrades over the next 5 to 10 years.

Recommendation(s)

No recommendations for this section

Associated Costs *(all costs are approximate)*

- N/A

Timeline

- N/A

4.3 Review of General Health and Safety Items

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 both fire stations are equipped with an emergency back-up power source in the form of a generator.

No further discussion is required for this section, other than the department is to ensure the generators are kept on a regular testing and maintenance program to ensure that they are ready for use, if required.

Recommendation(s)

No recommendations

Associated Costs *(all costs are approximate)*

N/A

Timeline

N/A

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 Orillia, 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 City of Orillia 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 City 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 stance, 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. This standard 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 OFD 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 City or other recommended facilities.

Recommendation(s)

No recommendations

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

The Orillia Fire Department organizational chart identifies a present strength of approximately 40 career firefighters and 20 volunteer firefighters. There is also full-time staff in the Administrative, Fire Prevention, and Communications Divisions.

5.1 Staffing Compliments (career vs. volunteer firefighters)

One of the key considerations posed in this review is the question of when a fire department should choose to switch to a solely full-time service, where it is not dependant on response from volunteer firefighters.

This possible movement is dependent on the following points:

- Does the fire department have an approved response criterion as a baseline?
 - 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 day time (or other times) on a consistent basis to the extent that no viable level of response is accomplished (from the volunteer firefighters)?
- 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 there is the National Fire Protection Association's 1201, 1710 and 1720 standards, which are for:

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

There is 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.

In relation to the NFPA 1201 standard, the key points are that the fire and emergency service organization shall provide customer service-oriented programs and procedures to accomplish the following:

1. Prevent fires, injuries, and deaths from emergencies and disasters
2. Mitigate fires, injuries, deaths, property damage, and environmental damages 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 OFD is doing an efficient job at addressing these six points.

In relation to NFPA 1710, the expectation is that the crew can: turnout from the station within 80 seconds, with 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.

NFPA 1720, chapter 4 of the standard is the focus of this volunteer response discussion.

Chapter 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.”

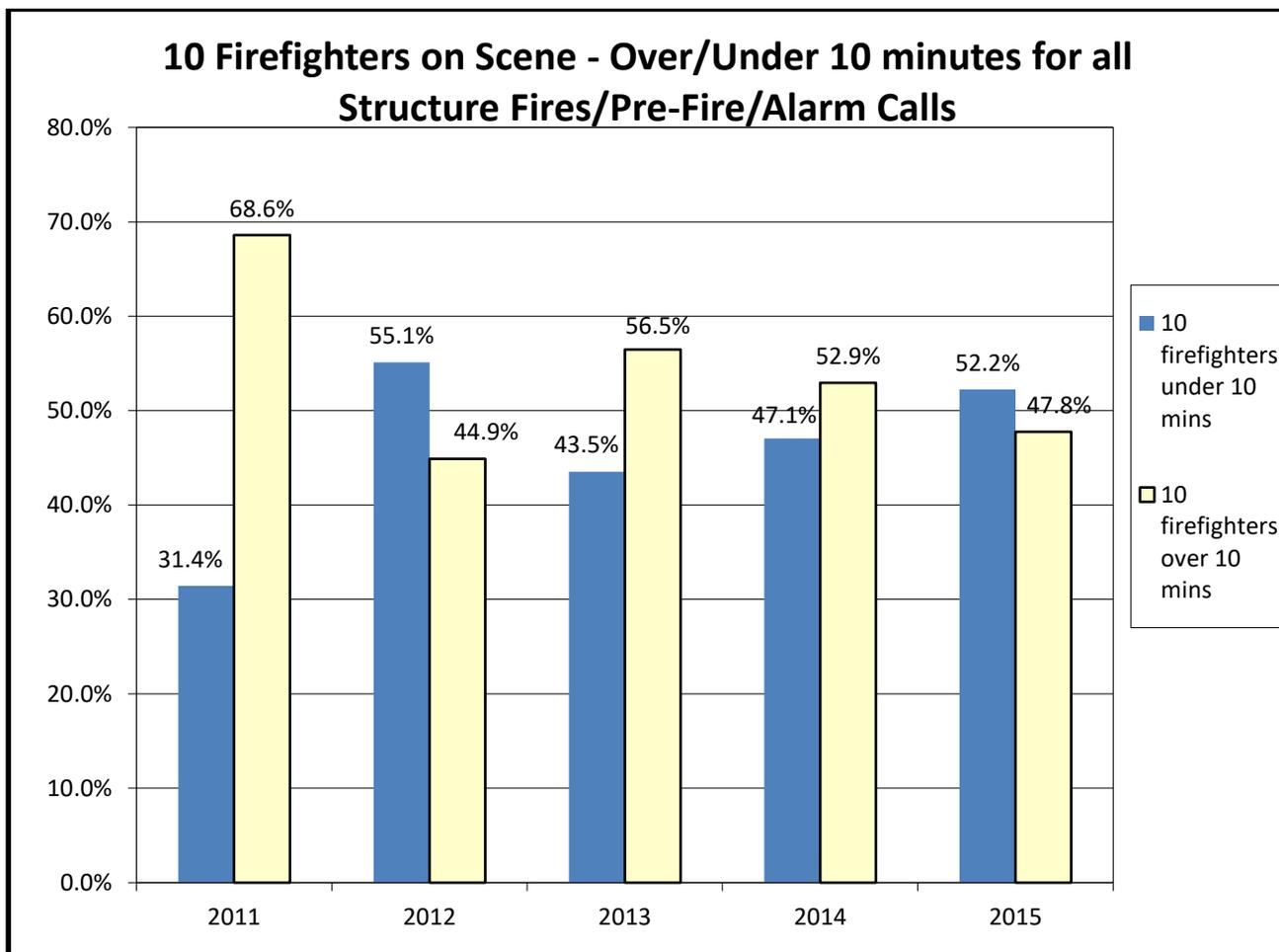
4.3.2 notes that based on the previous section, to accomplish this, “The fire department should endeavour to meet the following response standards (based on responding to a 2000 sq. ft. single family dwelling).

- *In Urban areas (population of more 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 OFD is actively working to comply with both standards in relation to meeting the community’s needs and the 10-minute response criteria (as noted by the response data supplied and presented within this document). OFD is having a reasonable level of success in meeting the “10 staff in 10 minutes” response criteria with its dedicated full-time and volunteer firefighters. The statistics show a consistent improvement between 2011 and 2015 in meeting this target.

The following chart (FIGURE #9) identifies the level of success that OFD has had in achieving the operation of 10 staff within 10 minutes, 80 percent of the time. The chart notes that between 2011 to 2015, the Fire Department has ranged from 31.4% to 52.2% success rate of achieving 10 firefighters on scene within 10 minutes.

FIGURE #9 – 10 in 10 Percentages



Note: this chart totals ALL firefighters reporting to the scene – both career and volunteer

The big question is, when does a fire department move from a composite service to fully career? 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, such as Whitchurch-Stouffville, 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 firefighters are either at work, school, or taking care of family during the day time hours. As such, some departments focus a full-time component that works Monday to Friday, 7am to 5pm.

Another indicator for making this decision is tracking the number of firefighters that arrive at the fire station to respond. 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.

In summary, 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 to meet the present needs of the community.

Recommendation(s)

No recommendation

Associated Costs *(all costs are approximate)*

- N/A

Timeline

- N/A

5.2 Recruitment and Retention of Volunteer Firefighters

Orillia Fire Department, as with many other fire departments, is always challenged when it comes to retention of volunteer firefighters. In many cases, this is not a reflection of the fire department, but is simply a reflection of the need for many of these firefighters 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 recommendation is 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.

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 are the mutual aid, automatic aid, and fire service agreements that are presently in place.

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

OFD 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 the Chippewas of Rama First Nation, the Townships of Ramara, Oro-Medonte, and Severn, and the Orillia Fire Department. Each can rely on the others to provide assistance as necessary in the event of emergencies beyond what can be managed individually.

6.2 Fire Service Agreements

In addition to participation in Mutual Aid, the City of Orillia has the following agreements in place:

- Automatic Aid agreement for the provision of a marine airboat from the Township of Ramara
- Automatic Aid agreement for mutual simultaneous response to ice rescue with the Chippewas of Rama - First Nation
- Ice/Water Rescue agreement to provide responses for these classes of rescue to the Township of Severn

And is presently working on the following Automatic Aid Agreement:

- Automatic Aid agreement for the provision of an aerial apparatus to the Township of Oro-Medonte as well as to provide response to Notre Dame Catholic School and for Oro-Medonte to provide assistance with emergencies on Grape Island

These present agreements are working well and no changes are recommended. However, even though the present agreements appear to be working well, there is also the opportunity to investigate automatic aid response to the areas of Severn Township due to the proximity of OFD's Station #2. And with the possible construction and staffing of a new station #3 in the west end of Orillia, there is the opportunity to offer an automatic aid agreement to Oro-Medonte.

Recommendation(s)

20. It is recommended that the Fire Chief investigate the opportunities of offering automatic aid response, for a fee, to the areas of Severn Township due to the proximity of OFD's Station #2.

Associated Costs *(all costs are approximate)*

- A positive revenue should be realized with the incorporation of automatic aid

Timeline

- Immediate

Section 7: Finance

7.1 Operating Budgets

7.2 Capital Budgets and Forecasts

Section 7: Finance

The Orillia Fire Department has an annual operating budget of approximately 6.4 million dollars and a capital forecast that fluctuates based on the equipment that has been identified for replacement. During the review of the budget process for both operating and capital, it was found that OFD is well set up in both areas.

This would also indicate a strong level of support by Council and the City's senior management team in relation to assisting the Fire Department in 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 the 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 relation to 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. As such, the City of Orillia and its Fire Department should be commended for its efforts in endeavouring to adhere to this industry standard.

However, having noted this, a further review of the mileage put on each vehicle should be considered in relation to the cost of servicing the vehicle and the related dependability of the unit. A good example is OFD's pumper #2. It was built in 2004 and, based on the 15 to 20-year replacement cycle, should be either replaced in 2019 or be put into the position as a reserve unit from 2019 until 2024. Nevertheless, this unit has over 200,000 kilometers on it and is costing the Department quite a bit in relation to maintenance. In fact, it was noted that OFD overspends on their vehicle maintenance budget by more than 100 percent each year. This should be a concern because it indicates that the present usage of the vehicles in relation to age may need to be re-evaluated.

Some fire departments, such as Markham Fire, have their fire trucks on a 12-year replacement cycle due to the usage and accumulation of mileage put onto the units, coupled with the associated maintenance costs.

Recommendation(s)

21. It is recommended that a re-evaluation of the replacement cycle for the fire trucks in relation to usage and maintenance cost should be investigated by the Fire Chief to identify if a reduced cycle should be implemented.

Associated Costs *(all costs are approximate)*

- Costs to be based on periodic reviews and assessments of the noted recommendations.

Timeline

- Immediate

Conclusion

During the review conducted by Emergency Management and Training Inc., it was noted that both the career firefighters and the volunteer firefighters are truly dedicated to the community they serve. It was further noted that the Council, CAO, and Fire Chief are sincerely committed to ensuring the safety of the community and the firefighters of Orillia. Based on the present staffing, equipment and fire stations locations, Orillia Fire Department is endeavoring to offer the most efficient and effective service possible.

As illustrated in the 21 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 fulsome response to incidents until more full-time personnel can be brought on board.

Finally, as noted in the start of this document, most fire master plans are 10 year documents with a review to be conducted at the five-year mark. However, due to 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 as required.

Section 8: Final Summary of Recommendations, Solutions and Estimated Costs

Section 8: Final Summary of Recommendations, Solutions & 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 should be confirmed before moving forward.

The timelines noted in the recommendations are:

- Immediate, which 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

Recommendations for Orillia Fire Department			
Rec #	Recommendation and Solution	Estimated Costs	Suggested Timeline
	Section 2 – Planning and Stakeholder Surveys		
1	It is recommended that the Fire Chief present a response time benchmark for the approval of Council, whether that is the present 10 in 10 rule that follows the NFPA 1720 standard relating to Volunteer Services or the NFPA 1710 standard of 240 second drive time for Career Services.	No cost associated with this recommendation	Immediate (0-1 year)
	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: <ul style="list-style-type: none"> • 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, OFD will have a greater number of resources to draw upon in its public fire safety education and inspection programs.	There is no actual cost to this recommendation other than the training and certification of the Firefighters to the noted levels.	Short-term (1-3 years)

3	<p>Annual business planning cycle for the Fire Prevention Division should be more specific in identifying goals and expected outcomes for property inspections and public education activities and reviewed at least quarterly to assess progress, re-assign resources and/or revise goals as necessary.</p>	No cost associated with this recommendation	Immediate (0-1 year)
4	<p>Formalize the expectations for Fire Department actions and responsibilities regarding Ontario Building Code compliance. This can be accomplished by working closely with the City's Building Department and comparing what Building Code requirements align with Fire Code requirements and subsequently identifying where the Fire Department requires to conduct joint inspections (with the Building Division) or Fire Department specific inspections.</p> <ul style="list-style-type: none"> • These overall expectations of both departments should be documented along with anticipated dates for action and expected outcomes. 	No cost associated with this recommendation	Immediate (0-1 year)
5	<p>Expansion of the use of an integrated records management system (such as CriSys) should be undertaken to make the most effective use of collected information, including enabling better data access between Fire Prevention, Dispatch, and Suppression.</p>	Would be a modest monetary cost – anticipated <\$1,000 – but would also involve staff time	Immediate (0-1 year)
6	<p>Succession planning for Fire Prevention and all other Divisions within OFD 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.</p> <ul style="list-style-type: none"> • 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. 	Anticipated <\$1,000 – but would also involve staff time.	Short-term (1-3 years)
7	<p>Training expectations for the Fire Prevention Division staff should be more clearly established early in the year. Proper documentation is needed to support and identify what the training expectations are of the Division.</p>	No cost associated with this recommendation	Immediate (0-1 year)

8	Increase efforts to complete pre-planning for all properties that warrant it by working in coordination with Suppression Division staff in meeting this pre-planning program with a focus on such things as high rise buildings, vulnerable occupancies and industrial facilities.	No cost associated with this recommendation	Short-term (1-3 years)
9	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.	Possible revenue generator for OFD	Mid-term (4-6 years)
10	To ensure that the Fire Department is being proactive in meeting the three lines of defence as noted by the OFMEM, it is recommended that the Fire Chief meet with other Fire Chiefs within the bordering communities to discuss the opportunity of a Public Education Officer on a shared cost basis. Once discussions with bordering communities have been completed in relation to a shared Public Education Officer, then OFD should recruit for a Public Education Officer position.	No cost associated with this recommendation	Short-term (1-3 years)

11	<p>Additional administrative support should be provided for all divisions within the OFD to make the most efficient use of staff time and skills.</p> <ul style="list-style-type: none"> • Although it is expected that an additional two Administrative Assistants will be required in the future, it is recommended that one full-time or even a part-time Administrative Assistant be hired immediately to work more closely with areas overseen by the Deputy Fire Chief and the Assistant Fire Chief. • In 2001, when the Office of the Fire Marshal conducted a review of the OFD, there was only one Administrative Assistant (AA) to the Fire Chief. Since that time, the Department has basically doubled in size, but there is still only one AA. When she is off, there is no other AA to fill in, which means that the Department is without an AA to conduct day-to-day duties and to ensure good customer service to the public. Therefore, even a part-time AA would assist with covering for vacations time or other anticipated time off by the present full-time AA. • Another option is to investigate the opportunity of seconding administrative support from another city department to cover for absences. 	An assessment of the administrative support available within the workload of the existing executive assistant will identify if additional full or part-time administrative support is warranted. This will have related staffing costs.	Short-term (1-3 years)
12	Options should be explored to improve the on-duty staffing so that there is a minimum of eight firefighters on-duty 24/7 – four per station.	Costs could range from approximately \$60,000.00 to as much as \$500,000.00.-	Immediate (0-1 year)

13	Staffing of the two stations should be revised so that in the event of reduced staffing, both stations continue to maintain the highest level of effectiveness possible. Should the staffing be reduced to six, both stations should be staffed with three firefighters.	Not costs related to this recommendation	Immediate (0-1 year)
14	It is recommended that the Department investigate the implementation of an automatic call back system for staffing related needs.	\$1,000- 1,500 per year plus \$4,000 in start-up costs	Immediate (0-1 year)
15	An airboat or other all season vessel should be considered for the replacement of the current marine boat to better service the community all year-round.	Approximately \$175,000	Mid-term (4-6 years)
16	To ensure that the municipality is prepared for a crisis, the City Centre, municipal computer system, and the emergency reception centres are on emergency power.	Approximate cost would range from \$250,000 - \$500,000	Mid-term (4-6 years)
17	A full analysis be completed in relation to the training required to have all Communicators meet the NFPA 1061 Standard based on their present level of training provided by the OFD.	No cost for the initial analysis	Short-term (1-3 years)
18	Due to the challenges of the OFD Communications Division in relation to being a 9-1-1 call taking centre, along with the dispatching for five other communities, a second on-duty staff member should be considered as this Division manages a critical service to the community and the OFD.	Based on present wage structure but could amount to approximately \$260,000 to \$300,000	Short-term (1-3 years)
19	If a decision is made to move towards the contracting out of the dispatching services, then a full analysis needs to be conducted in relation to the information provided in this report and in relation to: <ul style="list-style-type: none"> • Accommodation of staff • Cancellation of current contracts to provide dispatch services to neighbouring fire departments • A request for proposal and assessment process for dispatch centres bidding to provide the service 	No cost for the initial analysis	Short-term (1-3 years)
Section 4 – Physical Resources			
No recommendations made in this section			

	Section 5 – Fire Department Staffing Considerations		
	No recommendations made in this section		
	Section 6 – External Relations and Agreements		
20	It is recommended that the Fire Chief investigate the opportunity of offering automatic aid response, for a fee, to the areas of Severn Township due to the proximity of OFD’s Station #2.	Possible revenue opportunity for OFD	Short-term (1-3 years)
	Section 7 – Finance		
21	It is recommended that a re-evaluation of the replacement cycle for the fire trucks in relation to usage and maintenance cost should be investigated by the Fire Chief to identify if a reduced cycle should be implemented.	Cost based on eventual recommendations from Fire Chief	Short-term (1-3 years)

Section 9: Appendices

- Appendix A: Definitions and References
- Appendix B: Internal and External Survey Question
- Appendix C: Response Data for 2013 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: Internal and External Survey Questions

The following questions were asked of the external stakeholders:



Orillia Fire Department Fire Master Plan – External Survey

Orillia Fire Department has a proud tradition of assisting residents and effectively responding to emergency situations.

The Orillia Fire Department is made up of 40 career fire fighters, 20 volunteer fire fighters, 4 career and 3 part-time dispatchers and 3 Fire Prevention staff. The Department responds to approximately 2,400 emergency incidents each year from two fire stations.

In our ongoing efforts to ensure that we are meeting the needs of our community we are creating a 10-year community-driven fire master plan to guide operational improvements and enhance how the service is provided throughout the community.

To accomplish this, we have engaged Emergency Management & Training Inc. (EMT), to assist us with this initiative. EMT is a local consulting firm that has worked with many fire departments in developing their fire master plans, station assessments and fire service reviews. Therefore, most of all, we need your help. So please take the time to complete this survey. Your confidential responses will help to ensure focused action that continues to meet the diverse needs of all residents.

1. What is your general impression of the Orillia Fire Department in relation to its level of professionalism, community safety, education and fire prevention awareness programs?

- a) Have you been approached by Orillia Fire Department staff in relation to their Smoke Alarm Program, and if so how did you find this interaction?

2. How important are the following statements to you:

	Extremely important	Very important	Important	Not very important	Not important at all
How quickly the Fire Department gets to me if I have an emergency	<input type="checkbox"/>				
Whether the Fire Department will visit my home to give me safety advice and/or fit smoke alarms	<input type="checkbox"/>				
How much the fire services costs me as a tax payer	<input type="checkbox"/>				
How well the Fire Department works with other agencies to provide wider community safety services	<input type="checkbox"/>				
How often the Fire Department consults me about their services	<input type="checkbox"/>				
How often the Fire Department provides community training opportunities (e.g. fire extinguisher training; school safety programs; older and wiser program; smoke alarms; fire escape planning)	<input type="checkbox"/>				
How visible the Fire Department is at local community events	<input type="checkbox"/>				
Contacting assistance services after an emergency, as required	<input type="checkbox"/>				
Timeliness to any request for services or assistance from the Fire Department	<input type="checkbox"/>				
Purchasing and maintaining new and applicable equipment	<input type="checkbox"/>				
Continued and relevant training	<input type="checkbox"/>				

3. What do you think are the top three issues facing our fire service today?

4. There are nine core services delivered by the Orillia Fire Department. Which services are most important to you? Please rank in order of priority from 1 (most important) to 9 (least important). Please use each number **only once** and use all nine numbers.

- ___ Fire fighting
- ___ Rescue (i.e. motor vehicle accidents)
- ___ Fire/Arson investigations
- ___ Fire prevention and safety inspections
- ___ Community outreach / Public education
- ___ Hazardous materials (i.e. gas or chemical spills) and technical rescue response (i.e. water rescues)
- ___ Public assistance requests / Non-emergency responses
- ___ Emergency management and planning
- ___ Medical assist and response

5. Are there any additional services that you believe should be provided? If so, please specify.

6. Over the next 10 years, if you could implement up to three things to improve how the current services are provided by the Orillia Fire Department, what would those things be?

7. Have you directly received service from the Orillia Fire Department?

- Yes
- No (If no, skip to question 9)

8. Could you share some details of your experience and any recommendations for service improvements?

9. Would you be willing to participate in a special focus group to discuss improvements to the fire service?

- Yes
- No

10. Please provide your name and contact information so we can get in touch with you about participating in a focus group.

The following questions were asked of the internal stakeholders:



Orillia Fire Department Fire Master Plan – Internal Firefighter

Emergency Management & Training Inc. (EMT) have been hired to prepare a Fire Master Plan for the City of Orillia Fire Department. Your feedback is necessary in assisting EMT in developing this document for the fire department. The intent of this document is to provide a 10-year community-driven master plan to guide operational improvements and enhance how services are provided throughout the community.

Please take the time to complete this survey. Your confidential responses will help to ensure focused action that continues to meet the diverse needs of our staff and residents. As such, we ask that you complete the survey and seal them in the envelope provided and return to....

Questions:

1. What are the things that make you most proud of the Orillia Fire Department – for example, the level of professionalism, community involvement or making a positive difference within the community?

2. How do you think most people living in Orillia perceive the Orillia Fire Department?

3. What would you say are the top three issues facing the Orillia Fire Department today?

4. There are nine core services that the Orillia Fire Department delivers. Which services do you believe are most valued by the community? Please rank in order of priority from 1 (most important) to 9 (least important). *Please use each number **only once** and use all nine numbers.*

- ___ Fire fighting
- ___ Rescue (motor vehicle)
- ___ Fire origin and cause investigations
- ___ Fire prevention and safety inspections
- ___ Community outreach / Public education
- ___ Hazardous materials and technical rescue response (water/ice rescue)
- ___ Public assist / Non-emergency responses
- ___ Emergency planning
- ___ Medical assist and response

5. Are there any other services that you believe the Orillia Fire Department should provide and why?

6. What improvements does the Orillia Fire Department need to make to its services to be more efficient and what do you believe would be the outcome by implementing these efficiencies?

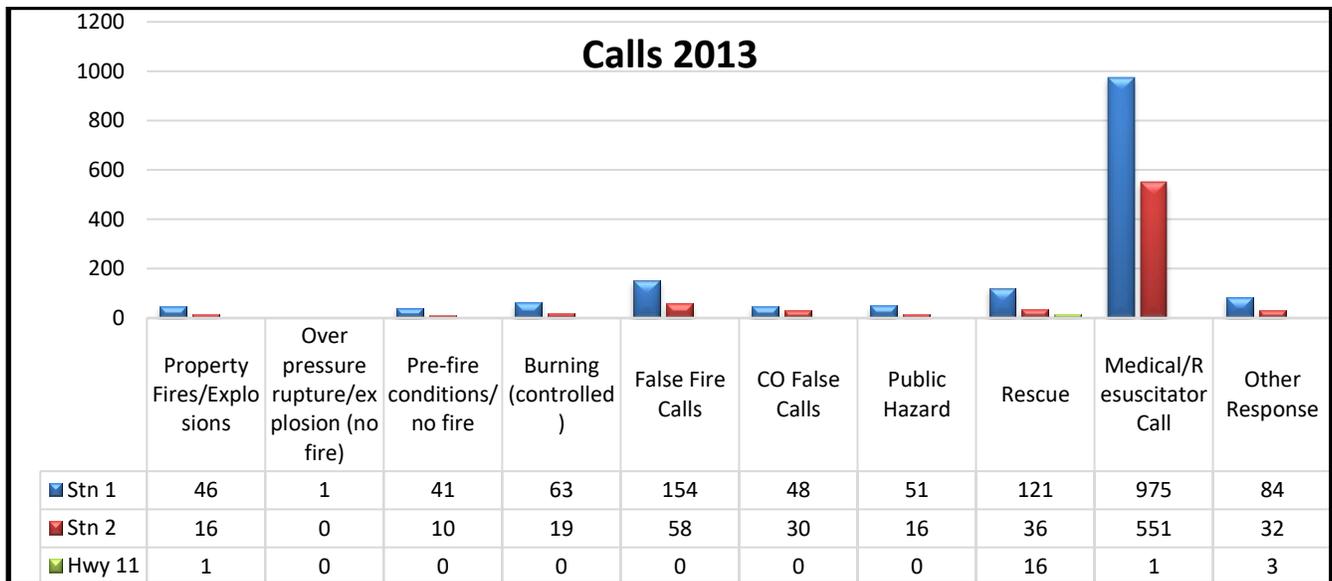
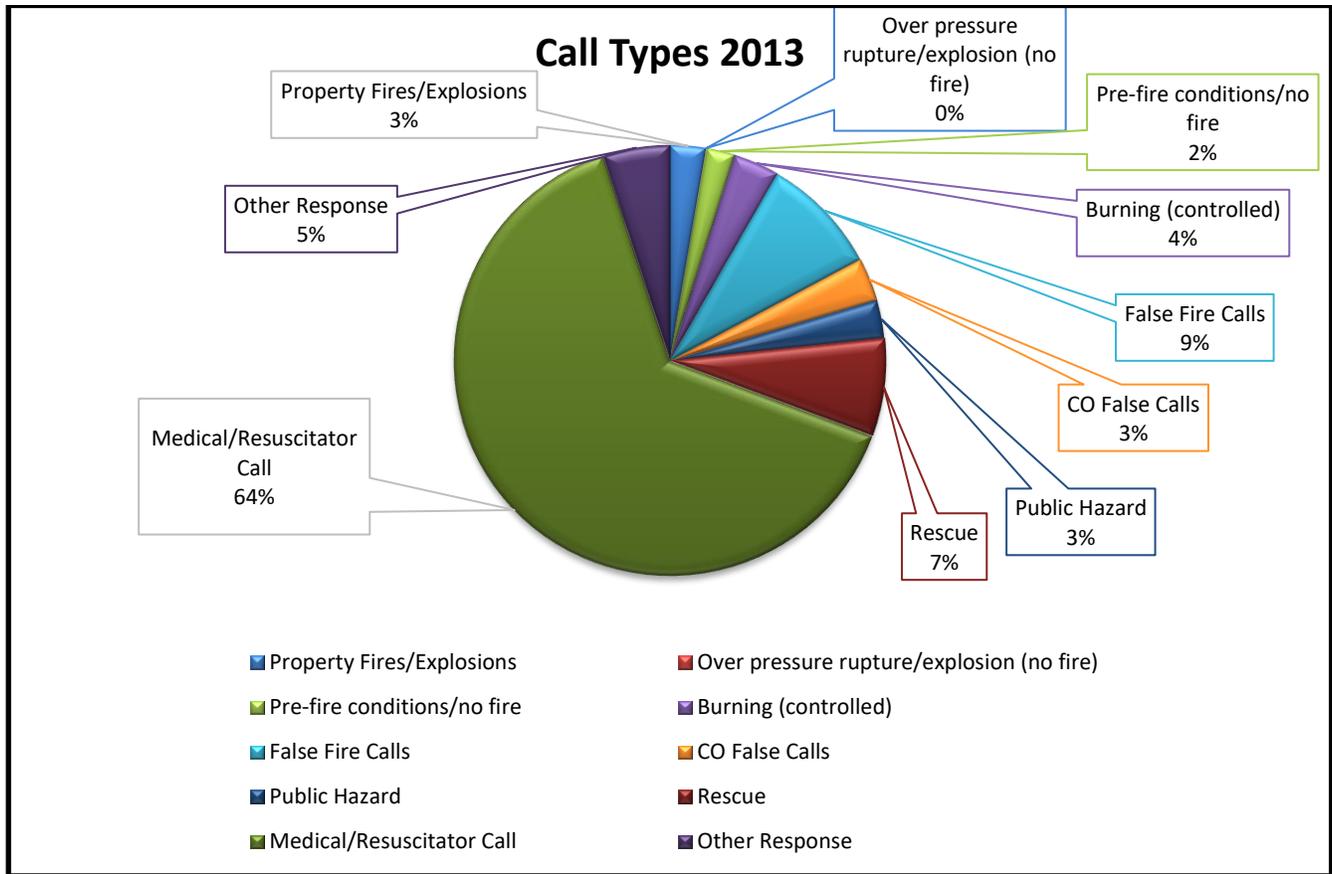
7. If it were up to you, what would the Department be like 10 years from today and why?

8. Are there any other comments/suggestions that you would like to add that would help to improve the services the Orillia Fire Department delivers to the community and to the firefighters?

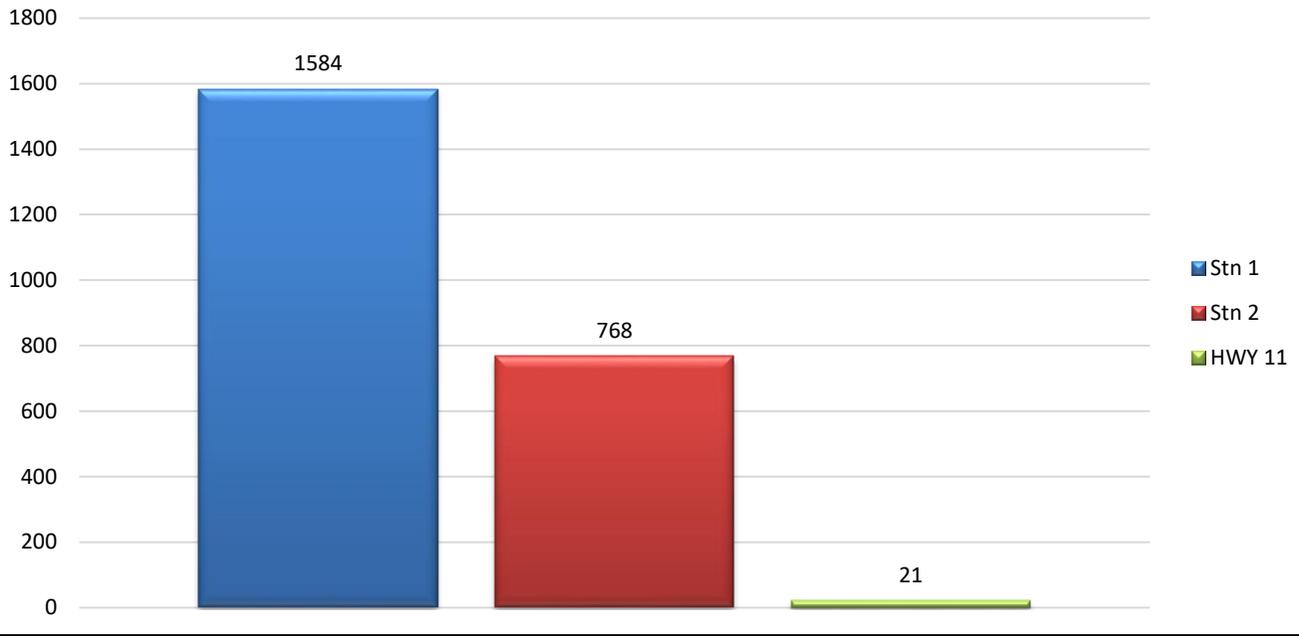
Thank you for completing this survey. Your feedback is greatly appreciated and will help to shape future service delivery efforts.

Appendix C: 2013 and 2014, Response Data

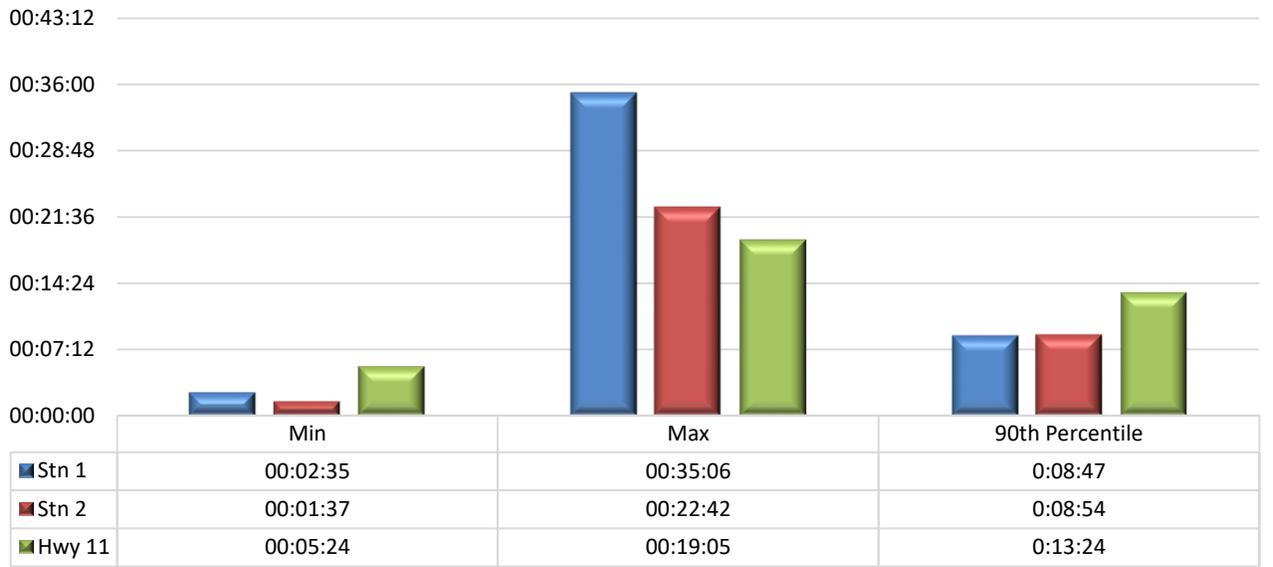
2013 Response Data for ALL Fire Stations



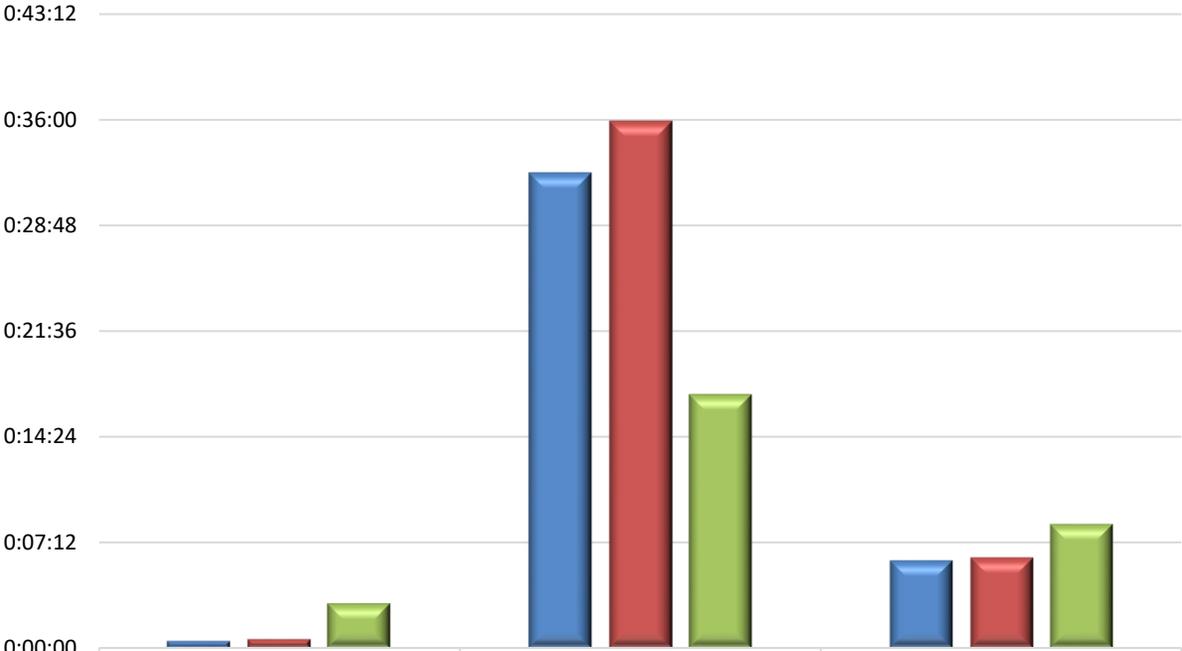
2013 Total Calls Per Station



2013 Total Response Times

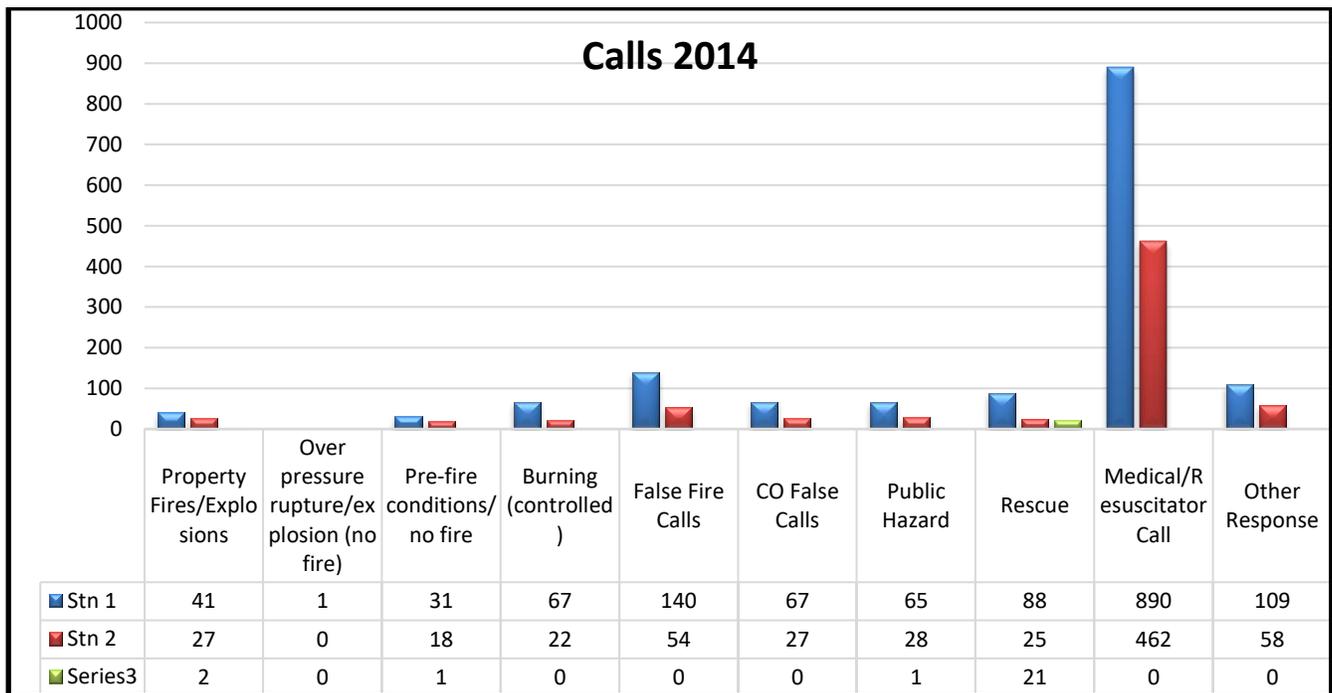
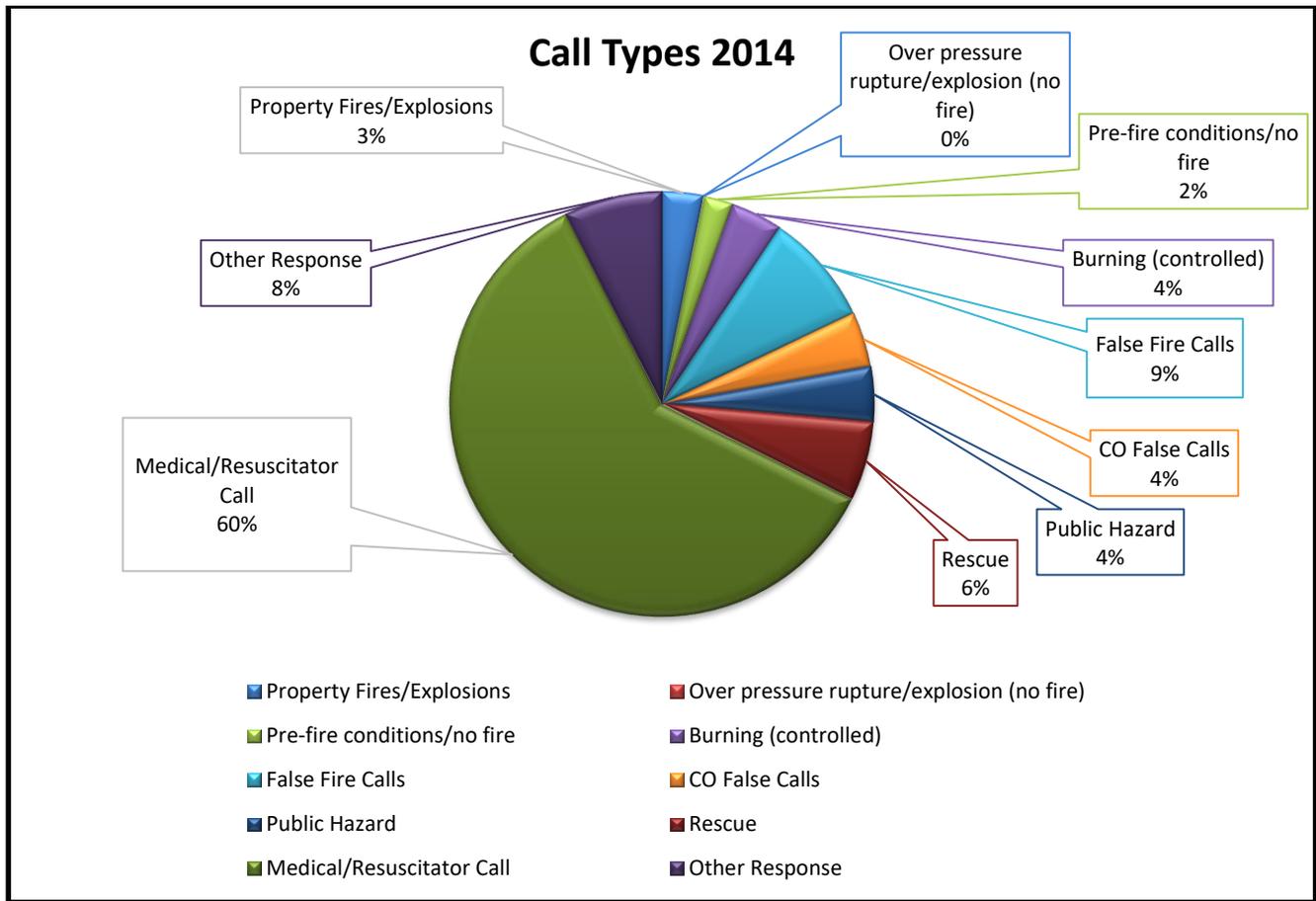


2013 Travel Times

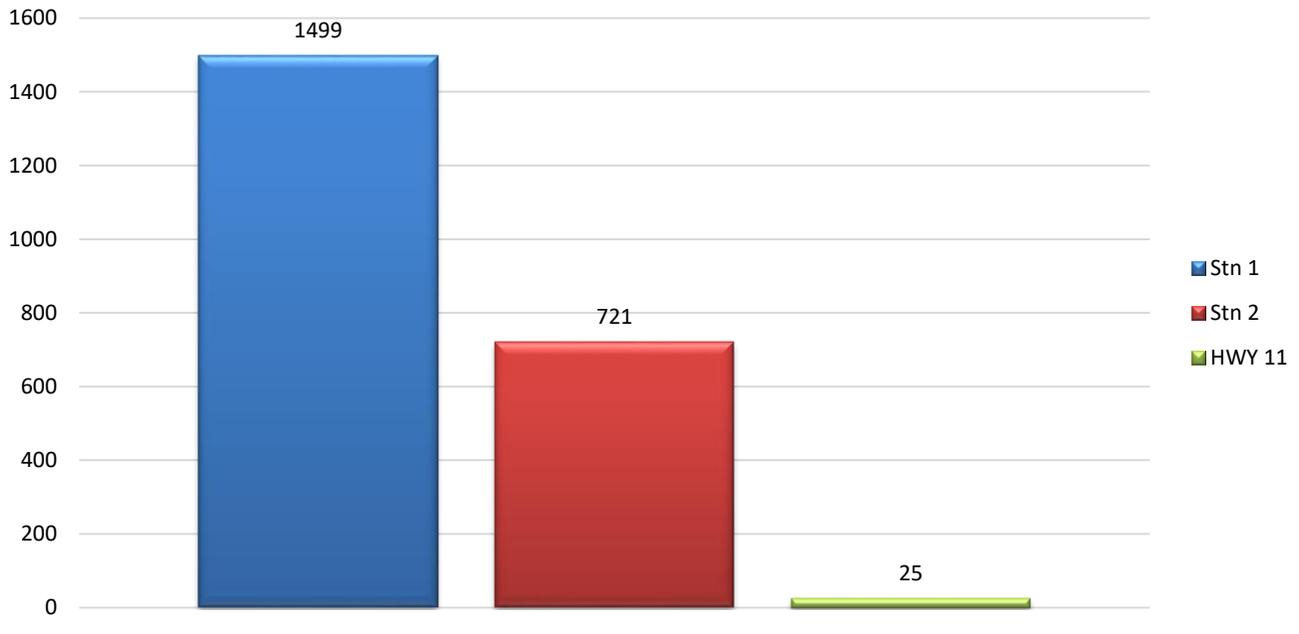


	Min	Max	90th Percentile
Stn 1	0:00:30	0:32:24	0:06:00
Stn 2	0:00:38	0:35:52	0:06:14
Hwy 11	00:03:04	00:17:17	0:08:28

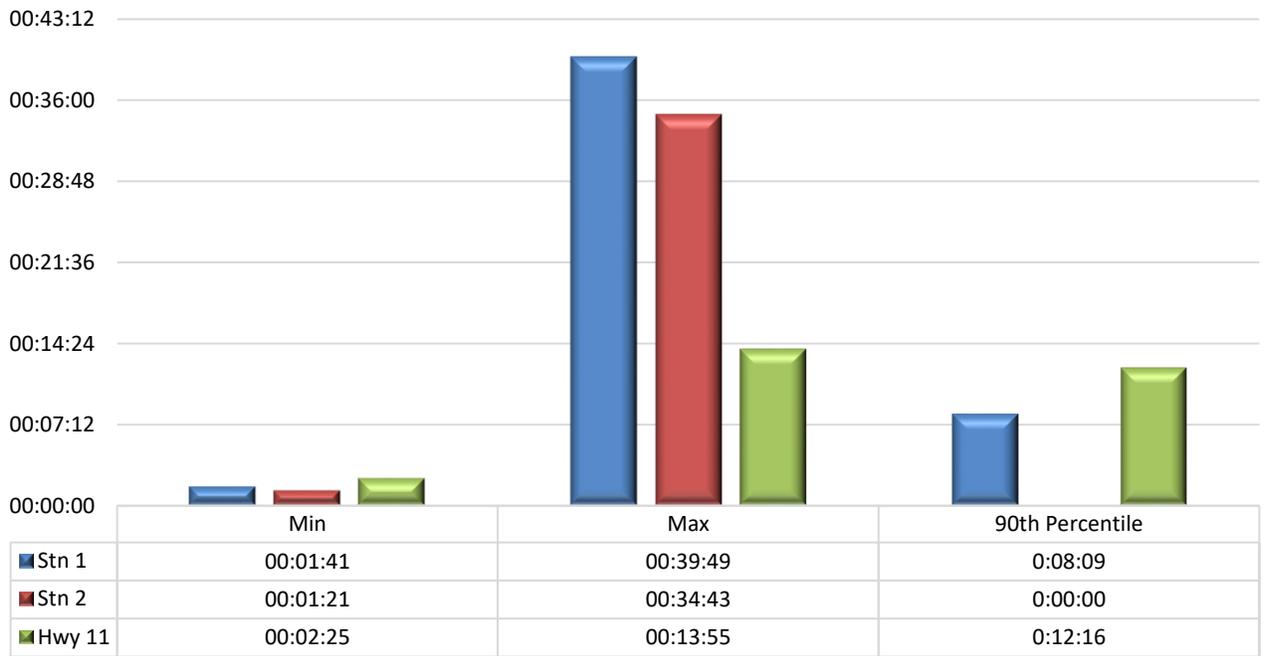
2014 Response Data for ALL Fire Stations



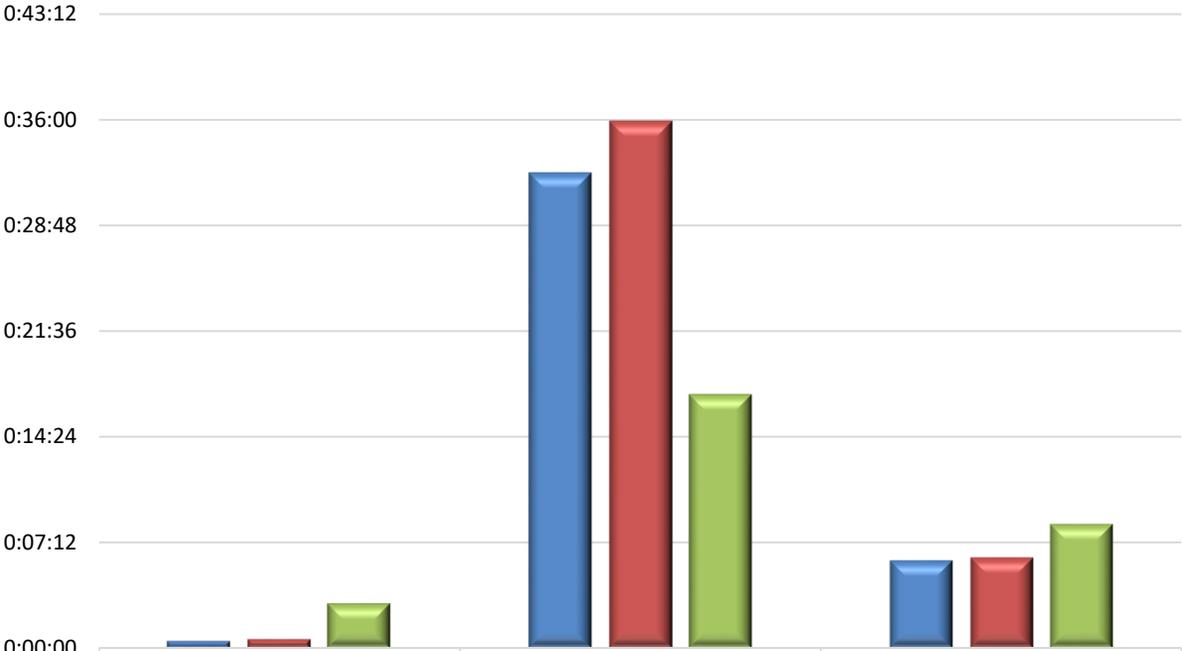
2014 Total Calls Per Station



2014 Total Response Times



2014 Travel Times



	Min	Max	90th Percentile
Stn 1	0:00:30	0:32:24	0:06:00
Stn 2	0:00:38	0:35:52	0:06:14
Hwy 11	00:03:04	00:17:17	0:08:28

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.

Components in the Recruitment and Retention Cycle

Pre-Recruitment

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

Recruitment

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