Attachment 3

Refreshed Fire Master Plan

Report No. GFRS-2023-0001
February 15, 2023
Total pages - 226

Town of Georgina
Georgina Fire and Rescue Services

Fire Protection Services Master Plan

January 2023 Update

Emergency Services Consulting International

Introduction

ESCI Update: (2022)

In 2022, ESCI was contracted to provide an update to the Town of Georgina's Fire Master Plan (FMP) on elements related to anticipated growth of the Town. During the course of discussions with the Georgina project team, a modernization element was added to suggest organizational adjustments that would assist with maintaining or enhancing the role of GFRS within the community into the future.

The existing FMP outline was used with ESCI adding, when appropriate, colored boxes to provide updated information in applicable sections.

Background

Within the Region of York, the six most northerly local area municipalities (known as "The N6") have a long history of working collectively and cooperatively together. Through this arrangement, many successes have been achieved in the way of shared services and cost efficiencies. The N6 continue to explore alternative and/or ground breaking service delivery options to the mutual benefit of their municipalities.

The Fire Chiefs, representing the five Fire Departments of The N6, over the past several years have combined efforts in order to explore opportunities and determine innovative and cost effective methods for delivering Fire Protection Services.

Last year, a high level assessment was performed to examine potential areas of improvement between N6 Fire Departments. Through this assessment, a number of strategic and operational areas of improvement have been identified. In some cases, opportunities exist that would pertain to all the Fire Departments whereas in other cases opportunities would only apply to two or more of the Fire Departments. From the results of the assessment it was determined that updating the Fire Masterplans, as a coordinated effort, would be the first priority.

At that point in time, Central York Fire Services had already entered into an agreement for the development of a Fire Masterplan. As such, and in light of comparable business practices, the remaining Fire Departments agreed to proceed in a collective fashion representing:

- The Town of Georgina
- The Township of King
- The Town of East Gwillimbury
- The Town of Whitchurch Stouffville

It was agreed that these four municipal Fire Departments would combine efforts for the purposes of:

1) Preparing individual Fire Masterplans for each of the four municipalities, and in conjunction;
2) Analyzing the results of each of the Fire Masterplans to identify opportunities for new operational strategies, innovative and unique approaches to service delivery, shared services, common Key Performance Indicators, alternative work methodologies, etc.

In turn, a "Collaboration Initiatives" Project was established overseen by a Project Steering Committee comprised of the four Fire Chiefs and the Town of Georgina CAO.

Objectives of this Collaboration Initiative Project

The Objectives of the "Collaboration Initiative" Project are summarized below

- Assess the impacts of existing conditions and future growth patterns and project the anticipated community needs in all areas of fire and emergency services in relation to the Ontario Fire Marshals three lines of defence: Education, Enforcement and Response.
- Thoroughly review existing research, information and strategies as well as conduct a detailed trend analysis including issues and best practices regarding fire and emergency services.
- Development of a Comprehensive Community Risk Assessment as the basis for determining the appropriate level of emergency response deployment to meet the municipalities legislative responsibilities, as well as appropriate level of fire prevention to meet the needs of the building stock and risk in the municipality as well as response.
- An analysis of current Office of the Fire Marshal, Ontario Public Fire Safety Guidelines and National Fire Protection Association Standards to determine options for the optimal level of emergency response deployment to meet the needs and circumstances of the community.
- Work with representatives of Fire Underwriters Survey for the purposes of determining opportunities for insurance premium savings within municipalities
- A fulsome consultation program to seek input from Fire Services Staff and other Stakeholders.

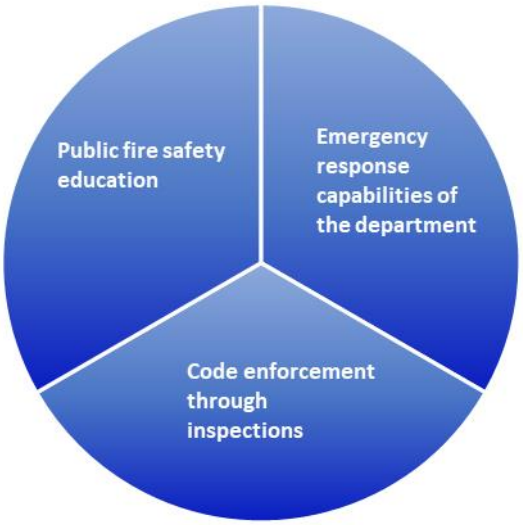
Additional Unique Aspects of the "Collaboration Initiative" Project

The benefits of this Collaboration Initiative project are many, including expanded opportunities for fire services expertise – given that four Fire Chiefs are supporting each other's efforts and providing input on practices that are common to all departments.

This project also incorporates two unique perspectives:

a) **The OFM "Three Lines of Defence"**

Contrary to a single focus on fire suppression activities, a foundational element of this study is that it is based on the Office of the Fire Marshal and Emergency Management (OFMEM), three lines of defence in relation to servicing the community, which include:



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 GFD 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.

b) **Fire Underwriters Survey**

Fire Underwriters Survey (FUS) is a national organization providing data on public fire protection for fire insurance statistical work and underwriting purposes of subscribing insurance companies.

Subscribers of Fire Underwriters Survey represent approximately 85 percent of the private sector property and casualty insurers in Canada.

FUS Certified Fire Protection Specialists conduct detailed field surveys of the fire risks and fire defenses maintained in built up communities and the results of these surveys are used to establish a Public Fire

Protection Classification (PFPC) for each community. The information provided through the Fire Insurance Grading Index is a key factor used in the development of Commercial Lines property insurance rates. The PFPC is also used by underwriters to determine the capacity of risk they are willing to assume in each community or section of a community.

FUS 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. 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 by evaluating the adequacy, reliability, strength and efficiency of the protective facilities and comparing the level of protection against the level of fire risk associated.

The work of FUS was undertaken in parallel with the analysis required for the preparation of the Georgina Fire Masterplan, the results of which have been incorporated into the key Recommendations outlined within this document.

Collaboration Initiatives to Follow

Much reference has been made to the Collaboration Initiatives Project. This report brings forward the first intended deliverable of the project – the Georgina Fire Masterplan. For the final chapter to be written, (i.e. the actual outline of potential new operational strategies/innovative practices) all four individual Fire Masterplans must be completed, and an overarching assessment undertaken. It is anticipated that this work will be finalized by late Spring of 2017.

ESCI Update: (2022)

GFRS continues to submit updated information to potentially improve the PFPC and the DPG.

The updated Fire Master Plans (FMPs) were completed in 2016.

Collaboration Initiative Update
The initiative as a formal project that regularly meets to support the original established objectives no longer exists however the intent and spirit of the project is still active. The Province of Ontario and Office of the Fire Marshal still advocate for greater collaboration amongst local communities and their fire departments. The subsequent updates in this report identify progress on the objectives that were initially established by the project.

Objective #1: "Assess the impacts of existing conditions and future growth patterns and project the anticipated community needs in all areas of fire and emergency services in relation to the Ontario Fire Marshals three lines of defence:

Education, Enforcement and Response."

Objective #2: "Thoroughly review existing research, information, and strategies as well as conduct a detailed trend analysis including issues and best practices regarding fire and emergency services."

Objective #3: "Development of a Comprehensive Community Risk Assessment as the basis for determining the appropriate level of emergency response deployment to meet the municipalities legislative responsibilities, as well as appropriate level of fire prevention and response to meet the needs of the building stock and risk in the municipality."

Objective #4: An analysis of current Office of the Fire Marshal, Ontario Public Fire Safety Guidelines and National Fire Protection Association Standards to determine options for the optimal level of emergency response deployment to meet the needs and circumstances of the community."

Objective #5: "Work with representatives of Fire Underwriters Survey for the purposes of determining opportunities for insurance premium savings within municipalities."

Objective #6: "A comprehensive consultation program to seek input from fire services staff and other stakeholders."

Fire Underwriters Survey

FUS also evaluates and accredits alternative water supplies for public fire protection which GFRS has accomplished. To provide fire protection, most communities across Canada utilize water as the primary extinguishing agent. In areas without pressurized, municipal-type water supply systems, alternative water supplies are used in firefighting operations. When developed and executed with a high level of proficiency, systems of shuttling water to and from alternative water supply sources can be as effective as municipal type water supplies, although typically more labour intensive.

Insurers are advised that Superior Tanker Shuttle Service Accredited areas may be rated as 'hydrant protected'. As a result of this accreditation, residents who own detached dwellings within eight road kilometers from any accredited stations may be eligible to receive a cost reduction in their fire insurance rates.

Table of Contents

Executive Summary

The Town of Georgina is a Municipality located on the South-Eastern shores of Lake Simcoe at the top of the Greater Toronto Area (GTA). Georgina comprises several communities including Keswick, Jackson's Point, Pefferlaw, Port Bolster, Sutton and Udora. It is the most northerly local Municipality within the Region of York. Georgina encompasses a land area of 287sq kms and enjoys 52kms of Lake Simcoe's shores.

Currently the Town of Georgina is serviced by a composite Fire Department that consists of three fire stations. These stations are located in Keswick - Station 1-4, in Sutton - Station 1-6, and in Pefferlaw - Station 1-8. In total, there are 108 personnel; the Fire Chief, Deputy Fire Chief, two Administrative Staff, three Fire Prevention Officers, one Training Officer, along with forty full-time Firefighting staff, and sixty Volunteer Firefighting staff. This is a total of 108 personnel.

The Georgina Fire Department (GFD) responds to over 2,200 calls for service per year. These incidents include, but are not limited to, fire related incidents, medical assist, water/ice rescues and motor vehicle collisions.

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 Master Plan (FMP) for the purposes of providing high quality fire services to the residents and businesses of the community along with its visitors. This FMP for the GFD reviews and identifies current and anticipated community fire risks and needs over the next 10-20 years. This will greatly assist the Fire Department with future planning relating to staffing and response, fire and life safety programming and for asset management.

This review has examined and researched all aspects of the Fire Department operations including, planning, fire prevention, training and education, communications, apparatus and equipment, maintenance, human resources, station suitability (accommodations) and locations, budgets, and large-scale emergency preparedness.

This FMP document is a culmination of three individual reports:

- The Fire Station Review, which contains 14 recommendations
- The Fire Underwriters Survey, which contains 20 recommendations and
- The Fire Master Plan document, which contains a total of 24 recommendations

Between the three, there is a total of 58 recommendations for consideration by the GFD and its Council.

As part of the creation of a new FMP, the Town of Georgina Fire Department is also embarking on a very proactive, collaborative effort with the Township of King, the Town of East Gwillimbury and the Town of Whitchurch Stouffville, which will include:

- The creation of individual FMP's that will evaluate all aspects of each Fire Department's services including the operational costs and capital budgets required to maintain or enhance these services;
- Along with a focus on how each Fire Department can work in a collaborative manner to find efficiencies and possible cost savings.

Some of these collaborative efforts have been noted in this document in relation to training initiatives and community partnerships but more opportunities will be identified with each Fire Department review. These collective opportunities will be discussed and summarized in a final report that was scheduled to be presented in late spring of 2017.

A quick reference chart has been included within this executive summary, along with a more detailed chart that includes timelines for implementation and estimated costs, which can be found in Section 13 of this document.

FMP Recommendations for Georgina Fire Department	
Rec #	
1	The Fire Station Report found in Appendix "F" contains a total of 14 recommendations. All the recommendations can be found in the actual document, all with a brief summary noted in Section 13. • As noted in the associated recommendations (in Section 13), many of the items will require immediate attention.
2	It is recommended that a full review and update of the Establishing and Regulating By-law document be completed to include and update the following items: • Update the document's language to reflect what is noted in the FPPA • Incorporate, where appropriate, any references to NFPA standards that the Fire Department deems necessary to be followed • Measurable service levels that can be reported to Council on an annual basis • Composition to represent the level of service to be provided as outlined throughout the FMP, and • A review to be conducted by the Town's Solicitor
3	It is recommended that this Simplified Risk Assessment/Community Risk Assessment (SRA/CRA) be updated in accordance with NFPA 1730, being every five years or as necessary with changes. In order to aid Council in their decision-making process, there is merit in providing an updated assessment at the beginning of every term of Council so that the sitting Council understands the platform on which the services conducted by the Fire Department are built.

4	It is recommended that the Fire Chief provide Council with an updated review of the Simplified Risk Assessment coupled with the Office of the Fire Marshal and Emergency Management's Integrated Risk Management (IRM) tool of the identified High, Medium, and Low risk occupancies.
5	It is recommended that upon completion of the SRA/CRA and IRM, as noted in recommendation 4, that the Fire Chief provides Council with a draft policy for review and passage that outlines a fire inspection program to address identified needs and expected outcomes of the program. This program should outline the building types and the frequency of inspections.
6	It is recommended that the Fire Department meet with all local community groups to form a partnership in relation to organizing fire safety and public education events that can be tailored to the unique needs and challenges within the community.
7	It is recommended that the Fire Prevention Division review its inspection program to identify levels of desired frequency for these inspections. It should also be noted at this time, that the Fire Underwriters Survey supports and recommends that a level of frequency be identified by the Fire Department in its quest towards ensuring a fire safe community.
8	It is recommended that the GFD work with developers and the public to make the Home Sprinkler Systems initiative a part of their fire prevention and public education program.
9	It is recommended that the present part-time Administrative Assistant position be transitioned into a full-time position.
10	It is recommended that to verify the Training Division is meeting related NFPA (and other) training program recommendations, the Training Officer should identify; • What training programs are required in relation to the services that GFD is providing • The number of hours that are required to meet each of those training needs • Resources required to accomplish this training • Joint partnerships with bordering fire departments and private organizations that can be entered into, to achieve the training requirements identified by the Training Officer, and • To present an annual program outline at the start of each year to the Fire Chief, with noted goals and expectation, which are measured and reported on in relation to completion success rate at the end of each year.
11	It is recommended that GFD continue to search out opportunities to conduct joint training programs with other fire departments by securing/scheduling neighboring training facilities whenever possible.
12	It is recommended that GFD explore the partnership opportunity to build a training facility within the northern group's capture area, which would be a cost-effective measure for all the fire departments.

13	It is recommended that greater utilization of the full-time officer resources be incorporated into an annual fire prevention program on a more formal basis. To accomplish this, all full-time officers should be trained and certified to at least: • NFPA 1031 – Fire Inspector I, and • NFPA 1035 – Fire and Life Safety Educator I By having all full-time officers trained to the noted levels, GFD will have a greater number of resources to draw upon in its public fire safety education and inspection programs.
14	Succession planning for Fire Prevention and Training Division personnel should be addressed to ensure trained personnel are ready to take over when the existing personnel retire.
15	The Fire Chief should investigate opportunities to promote retention of the Volunteer Firefighters (VFF) as noted in the OFMEM document (attached in section 14, Appendix "D"). The Fire Chief should continually recruit for VFF's in areas that are presently understaffed or have issues with response numbers (of VFF's) to calls.
16	The Department should complete certification for staff for each position (that requires or recommends certification) and ensure that certifications are maintained.
17	The Fire Chief should continue to monitor and evaluate call volumes of the Department on an annual basis along with the level of Firefighter's response per station to identify any areas of concern that may result in recommending the implementation of an increase to the full-time response component for the Municipality.
18	It is recommended that the Fire Chief present a Standard of Cover for the approval of Council.
19	It is recommended that when possible the present dispatching agreement with the current dispatch provider be updated to included NFPA related standards for GFD to incorporate the necessary performance measures as per the NFPA 1221 standard.
20	The Town should endeavour to maintain a schedule that compiles with the Fire Underwriters Survey (FUS) recommendations on the replacement of vehicles. 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, maintenance, testing, inspection and replacement and refurbishing be utilized.
21	It is recommended that the Keswick station secondary EOC be relocated in a newer facility so that it is designed and built to better meet the needs of an emergency operations centre.
22	It is recommended that a full review of all mutual aid, automatic aid and Fire protection agreements be completed in the short-term to identify any required revisions.
23	Annual corporate business planning cycles should be more specific in identifying goals and expected outcomes for all Fire Department related programs so as to ensure that adequate funding is secured in relation to the reserve funds for equipment and facilities.
24	Continue updating and completion of any outstanding projects noted in the previous 2010 Fire Master Plan as noted in Section 11.

ESCI Update (2022):

Update to Executive Summary

Complementing the previously mentioned material, according to the *2022 Adopted York Region Official Plan (July 2022),* Georgina continues to be part of a rapidly growing York Region expecting to grow from a 2021 population of 49,000 to a 2051 population of 70,300[1], an average annual growth rate of approximately 1.4%.

In addition, due to several reasons including increased public education, enhanced prevention technologies, improved safety awareness, and efficiency increases in operations, the nature of the fire service is changing. While many elements of fire departments will always be needed, how it approaches its mission is both adapting, and expanding.

In 2021, the Center of Public Safety Excellence (CPSE) and the International City Managers' Association (ICMA) issued a collaborative document with input from the International Association of Firefighters (IAFF) called *21st Century Fire and Emergency Services* outlining initiatives for fire departments to continue to maintain a strong relevance within their communities. Much of ESCI's commentary comes from this document.

The high-level fire service critical issues outlined in the document are:

- Re-Identification
- Culture
- Robust Use of Data
- Health and Wellness
- Partnerships
- Sustainability
- Technology
- Inclusiveness

Updates on the 2016 EMT recommendations are provided as well as updates relative to community growth.

[1] https://www.york.ca/media/107501/download?attachment

Overview

Project Initiation

Early this year, the Town of Georgina took a lead role in overseeing the issuance of an RFP on behalf of the municipalities involved for the preparation of the four Fire Masterplans and the collaboration analysis.

Of note was that in describing the comprehensive collaborative nature of the RFP process it was also made clear that there was no intention to investigate any aspect of fire amalgamation.

Emergency Services Consulting International (ESCI) has worked collaboratively with the Town of Georgina and the Georgina Fire Department in the gathering of data and development of this FMP. ESCI would like to thank all staff and the community for their input into this plan.

Review Process and Scope

Emergency Services Consulting International (ESCI) has based its review process on the Town's initial Request for Proposal (RFP) and the response document submitted by EMT.

The specified areas noted in the project's RFP were reviewed by utilizing best practices, current industry standards, and applicable legislation as the foundation for all work undertaken. EMT also used both quantitative and qualitative research methodologies to develop a strong understanding of current and future needs and circumstances of the community, and customer service demands of the public.

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

a) Staffing needs – review capabilities of existing staffing and identify future needs for each of the following divisions: Suppression, Training, Prevention and Administration.
b) Facilities – review capacity and condition of existing facilities and plan for future needs. Specific attention is required to the facility needs for the Training Division, Prevention Division and Administration.
c) Station location – review of existing locations relative to the current and future demands and consideration of potential needs for relocation or additional stations.
d) Apparatus – review existing vehicles and replacement plans relative to the existing and expected demands as well as the review of how apparatus maintenance is conducted and best practices thereof.
e) Service Level Standards – review established benchmarks to ensure they meet the communities' needs and reflect best practices and establish comparable joint Key Performance Indicators that can/will be used to identify performance of the various fire services.
f) The report is a review of the existing Fire Master Plan and an expansion of that document.
g) Plan outcomes must establish strategic priorities complete with action plans. These shall be expressed

in terms of goals, objectives, action steps, resources (human and financial) and the timelines required to successfully complete the priorities.

The study is to also include an updating of the Fire Underwriters Survey (FUS) rating to identify potential opportunities for insurance premium savings for property owners in the municipality.

The review process included a survey of the Council members, the Chief Administrative Officer (CAO), the community, fire administration, and Firefighters to seek input regarding the project components.

Based on the previously noted seven criteria (a – g), through meetings with, the Fire Chief and other stakeholders, the consulting team was able to complete a thorough review of what is working well and what areas require improvement within the GFD. During the program review, the consulting team conducted an assessment of staffing, fire facilities, vehicles and related operations. Data provided by the fire Department was also reviewed in relation to all of the previously noted items contained in the Town's request for proposal (RFP).

Based on the review of the Fire Department's facilities, equipment, programs and related data, EMT is submitting a total of 24 recommendations (noted in this FMP report) that can be implemented.

Along with the FMP recommendations, there is an additional 14 recommendations presented in the Fire Station Review report, of which a copy can be found in Appendix "F". The Fire Underwriters group also conducted their own review of the GFD and has submitted a total of 20 additional recommendations. The recommendation summary found in the FUS report has been included in Section 12 of this document.

Performance Measures and Standards

This FMP update 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
  - NFPA 1221 addresses recommended standards in relation to communications/dispatching services
  - NFPA 1710 addresses recommended standards for career fire departments
  - NFPA 1720 addresses recommended standards for volunteer fire departments
  - NFPA 1730 addresses recommended standards for fire prevention and education activities
- The Commission on Fire Accreditation International, which is a program that evaluates a Fire Department based on related NFPA standards, local legislation and industry best practices (the parent organization for CFAI is the Centre for Public Safety Excellence (CPSE))
- Office of the Fire Marshal and Emergency Management's (OFMEM) Integrated Risk Management program

- The Ontario Health and Safety Act., National Institute for Occupational Safety and Health (NIOSH)
- Ontario Fire Service – Section 21 Guidelines
    - The Section 21 Committee is based on Section 21 of the Ontario Occupational Health and Safety Act. This committee is charged with reviewing industry safety concerns and developing recommended guidelines to reduce injuries for the worker.

Project Consultants

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

- Darryl Culley, President Emergency Management and Training Inc.
- Lyle Quan, Fire & Emergency Services Consultant
- Richard Hayes, Fire & Emergency Services Consultant, and
- Paul Leslie, 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 have worked on projects that range from fire service reviews, creation of strategic and fire master plans and development of emergency response programs for clients.

ESCI Update: (2022)

In 2022, ESCI was asked to provide an update to the Georgina Master Plan along with suggested modernization ideas. In the time since the 2016 Master Plan was completed, Georgina has continued to grow. In 2022, the town's population will surpass 49,000 people and is projected to increase steadily to more than 70,000 in the next 30 years.

In 2020, a collaborative report was produced by the Center of Public Safety Excellence and the International City/County Management Association that was called the *21st Century Fire and Emergency Services.* The purpose of the report was to recognize the changing dynamics of local government and community, their impact on the local fire and emergency services, and provide strategic initiatives on how to remain aligned with those community changes. More specifically, how does the local fire and emergency services:

- Remain relevant for our jurisdictions
- Have the greatest impact in a rapidly changing environment
- Be sustainable
- Address the needs of the whole community — its residents, businesses, governing body, and the personnel who will be tasked with carrying out the mission.

The report identifies critical issues and initiatives that will require attention to thrive in the future. they are:

Re-identification of the fire and emergency services
Initiative #1: Celebrate the heritage of the fire and emergency services while recognizing that services provided have evolved and will continue to experience significant changes over the next 30 years.

Culture of the profession
Initiative #1: Enhance alignment between community, elected officials, management, labor/volunteer representatives, and overall workforce.
Initiative #2: Promote an organizational environment that is adaptable, open to change, innovative, and focused on continuous improvement.
Initiative #3: Establish organizational expectations for employee education, credentialing, and continued professional development.

The robust use of data

Initiative #1: Utilize quality data for evidence-based decision making to assess and produce the best outcomes.

Initiative #2: Implement advanced data analytics to make informed decisions.

Initiative #3: Develop comprehensive records management systems (RMS) to collect and analyze data effectively.

Initiative #4: Focus on developing outcome-based data for all measurable operations and functions within the organization.

Health and wellness threats

Initiative #1: Champion research on the health impacts specific to the fire and emergency services to evaluate the health risk of consecutive hours worked, sleep disruption, and the impacts on employee health.

Initiative #2: Proactively address the increased mental health challenge(s) facing the fire and emergency services.

Initiative #3: Adopt and support fitness and wellness best practices throughout the whole organization and incorporate this philosophy in every aspect of operations.

Initiative #4: Ensure ongoing physical fitness and wellness requirements are standardized, adopted, and used within every department.

Initiative #5: Continue research toward the development of comprehensive decontamination procedures for the fire and emergency services.

Initiative #6: Urge personal protective equipment (PPE) manufacturers to develop new PPE and bio-metric sensors to ensure effectiveness, reduce equipment weight, and provide for the enhanced ability to monitor the physiologic health and stress markers for personnel during response to an incident.

Opportunities for partnerships

Initiative #1: Acknowledge the need to work with a wide range of partners to serve the community and develop local strategies to create new approaches to providing services more effectively.

Initiative #2: Promote a symbiotic relationship with other internal departments and outside agencies that are routinely allied responders to an incident.

Initiative #3: Continue to expand community emergency response capabilities.

Sustainability challenges

Initiative #1: Address aging fire and emergency services vehicles and building structures.

Initiative #2: Reconsider and revamp current deployment methods.

Initiative #4: Adopt and implement a community risk reduction strategy

Initiative #5: Improve resource allocation by focusing on the outcomes trying to be achieved.

Initiative #6: Examine fixed costs associated with current delivery models and associated contracts.
Initiative #7: Explore public/private partnership opportunities.
Initiative #8: Research strategies to assist communities in sustaining their volunteer fire and emergency services or, if needed, how to transition to a new model.
Initiative #9: Dramatically revamp the fire and emergency services education and training model to provide the needed skill sets, knowledge, and abilities required for the anticipated changes in the future and to remain current with the application of emerging technologies.

Technology advancements and adoptions

Initiative #1: Adapt to and leverage rapidly evolving technology to improve service delivery.
Initiative #2: Develop a change mindset to help anticipate and support appropriate use of emerging technology and encourage the development of new technologies.

Inclusiveness of the fire and emergency services

Initiative #1: Make it an organizational priority to recruit, select, and promote members who reflect the demographic makeup of the community they serve.
Initiative #2: Understand the community characteristics, culture, and diversity that exist and determine the most appropriate way to serve and interact with all community members.

In other words, modernization of the fire service will not only be adopting the latest operational tactics and techniques but also revising how we approach our organizational mission, determine the community risk for which we exist and deliver services to the community that prevent, mitigate and respond to that risk. The following ESCI updates are rooted in these modernization efforts.

GFRS is well on their way to incorporating many of the initiatives such as greater attention to physical and mental fitness programs, use of data, addressing sustainability of the organization, and having a spirit of collaboration with other organizations. Where GFRS's previous FMP addresses the critical issues, ESCI has provided comments on their progress.

The original plan which is much of this document was created in 2016 by Emergency Management and Training Inc. (EMT).

Section 1 - Department & Community Overview

1.1 Fire Department Overview
1.2 Community Overview

Section 1: Department and Community Overview

1.1 Fire Department Composition

The Georgina Fire Department covers an area of approximately 238 square kilometres and serves a population of approximately 49,000, with an anticipated growth to 67,000 people over the next 10 years. Georgina is located in central Ontario at the top of the Greater Toronto Area (GTA) in northern York Region. It is nestled on the south-eastern shores of Lake Simcoe and enjoys a 52 km shoreline.

Presently, the Town of Georgina Fire Department responds to an average of 2,100 calls per year. Full- time administration staff includes:

- Fire Chief
- Deputy Fire Chief
- One full-time and one part-time Administrative Assistant
- A Training Officer, and
- Fire Prevention Division consisting of one Fire Prevention Officer and two Fire Prevention Public Educators

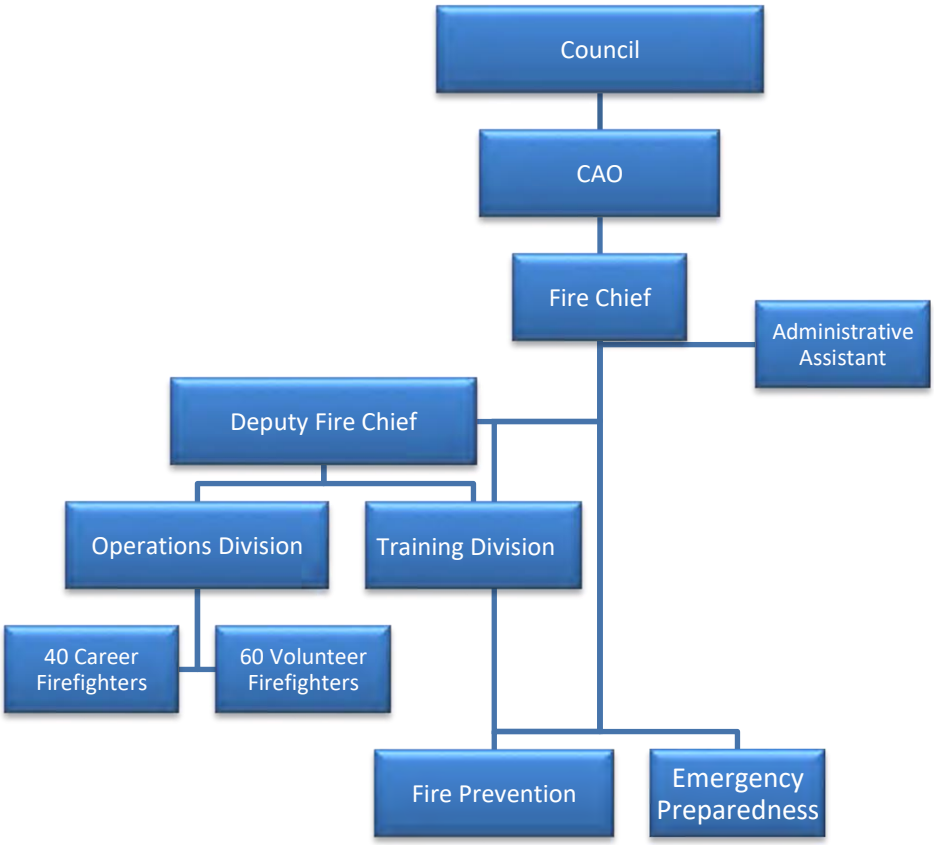
The Department is served by a combination of full-time and Volunteer Firefighters. The Keswick station (1-4) and the Sutton station (1-6) are composite stations; they both have full-time Firefighters on duty to respond 24/7, and are supported by a Volunteer firefighting contingent. The Pefferlaw station (1-8) is a totally Volunteer Firefighter response, but is supported, as required, by the full-time Firefighters from the Sutton station.

The total Firefighting force for the Fire Suppression/Operations Division consists of:

- Full-time firefighting force of 40
- Volunteer firefighting force of 60, which equates to 20 per station.

The organizational chart noted in figure #1.1 reflects the general reporting structure within the Fire Department and also that of the Fire Chief to the CAO and Town Council.

Figure 1: Fire Department Organizational Chart



This current reporting arrangement allows for a sufficient level of involvement by the Fire Chief within the senior management structure of the Town and also allows for a high level of administrative oversight of the day-to-day operations of the Fire Department.

1.2 Community Overview

The Town of Georgina is located in the northern portion of York Region and is comprised of several communities – Keswick, Sutton, Pefferlaw, Port Bolster and Udora. Georgina is made up of mainly residential and commercial properties, with some industrial growth anticipated in the south west portion of the community.

All of these communities are protected by fire stations that are located in Keswick, Sutton and Pefferlaw.

Community Growth

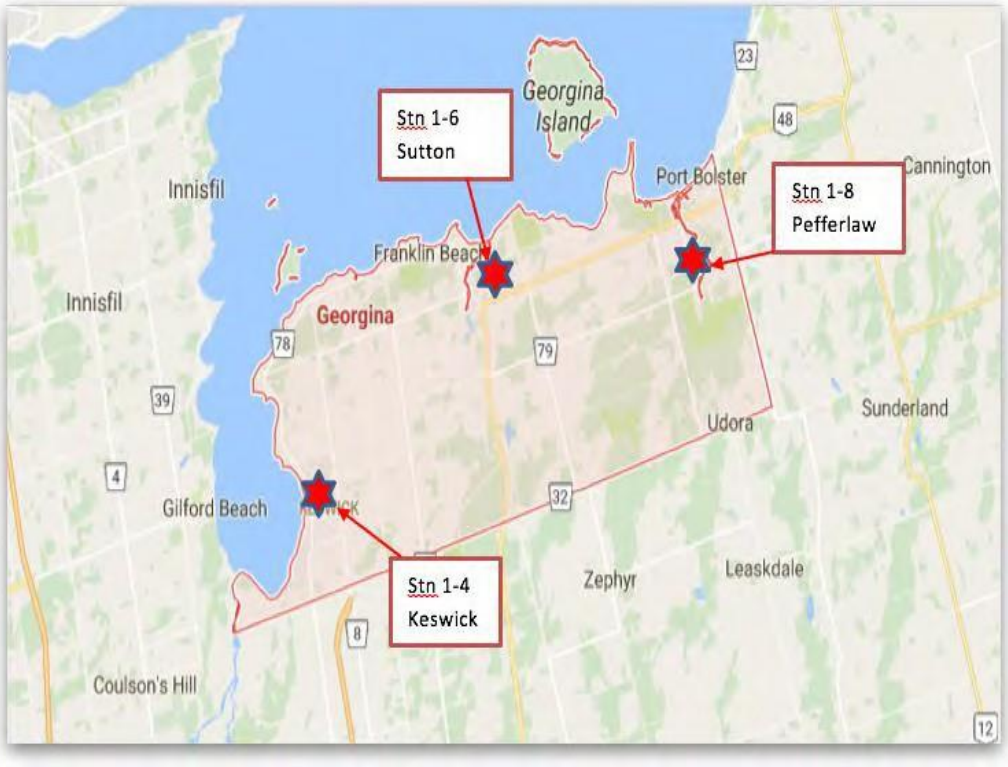
Presently, the population of Georgina is at approximately 49,000 and is forecasted to grow to approximately 67,000 within the next 10 years. This represents an approximate increase of 18,000 population or a 36% increase.

Although there is no actual standard that dictates how many Firefighters are required within a population or whether the fire Department needs to be entirely full-time, composite or Volunteer in nature, there is no doubt that the call volume for the GFD will increase, simply based on the influx of people, traffic, industry and housing over the next 10 years. As such, a careful monitoring of call volumes and response times is critical when it comes to determining if the Fire Department is keeping up with its response expectations or is falling behind in this area. This review of response data is exactly why EMT had requested a full three years of data; this three years of data creates a reliable baseline for identifying how well the Fire Department is meeting any related industry response standards such as those noted in the National Fire Protection Association standards.

Some municipalities have referred to other similar sized municipalities as a guide for staffing numbers and types; i.e. full time and volunteer. But it must be kept in mind that every community is unique in its geographical composition, population demographics and size of residential, commercial and industrial sectors. Therefore, community comparisons should be utilized with all of the aforementioned information in mind.

The community has hired a Fire Chief to manage the Department and to advise on the needs of the organization and, as such, the information received by the Fire Chief should always be taken into consideration when deciding on future fire and emergency service needs of the community.

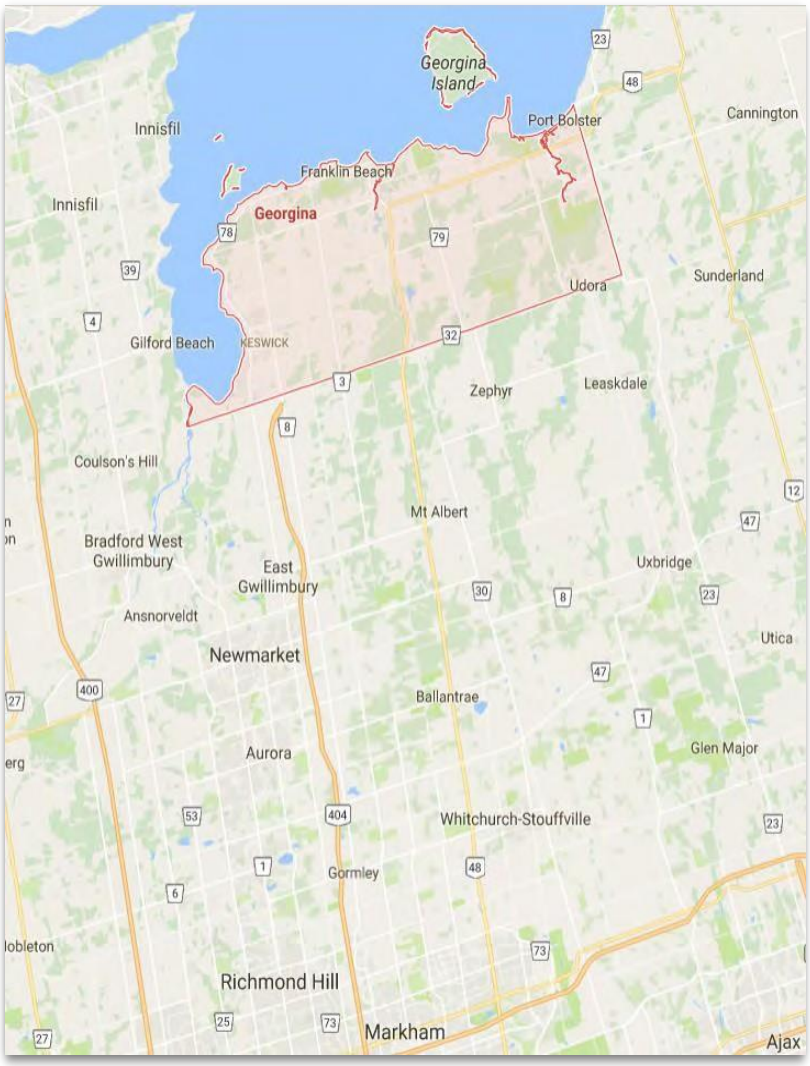
Figure 2: The Town of Georgina Boundaries and Approximate Fire Station Locations



Google maps Aug 20, 2016

FIGURE 3: Georgina Relative to Surrounding Communities

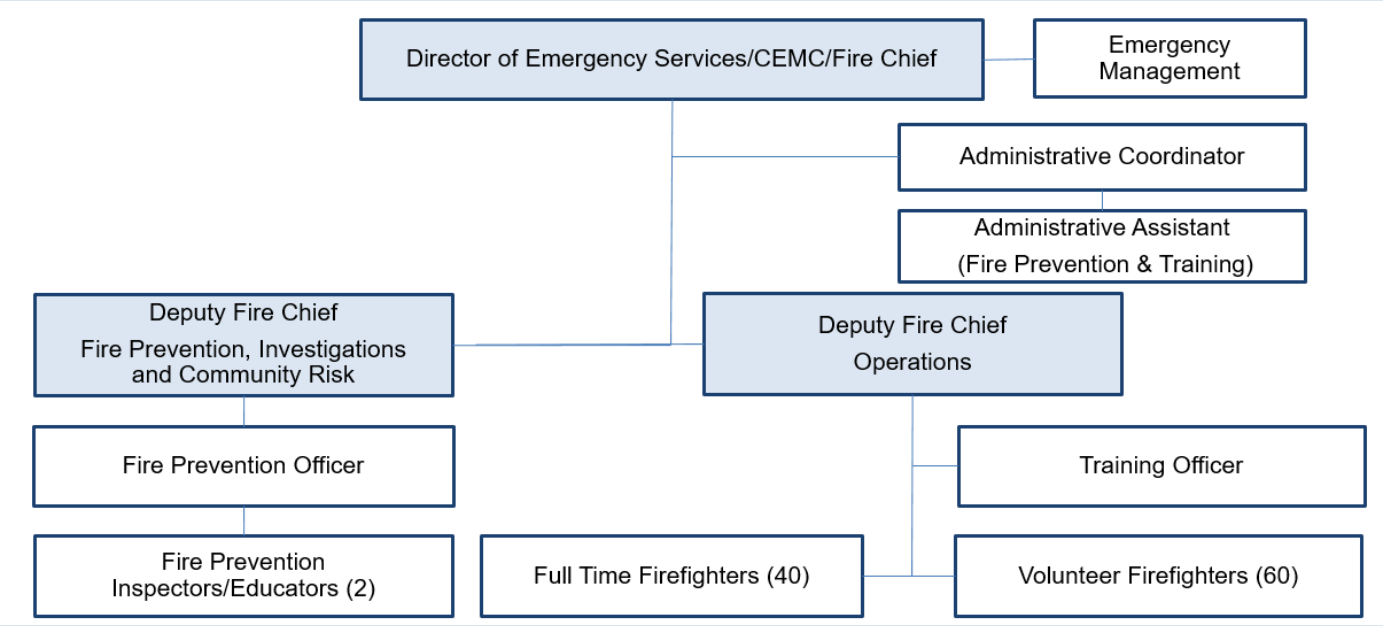
Google maps Aug 20, 2016



ESCI Update (2022):

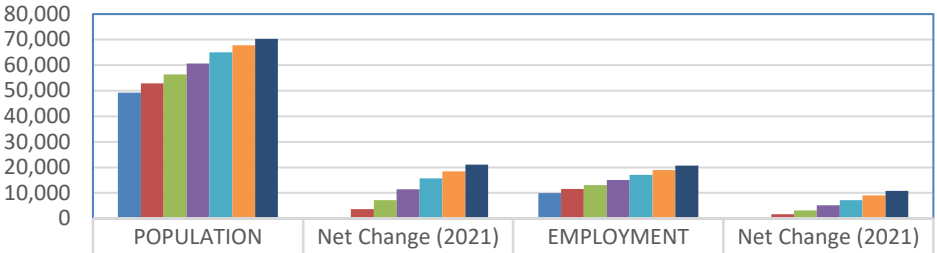
Below is an updated organizational chart for GFRS. This current reporting arrangement allows for a sufficient level of involvement by the Fire Chief within the senior management structure of the Town and also allows for a high level of administrative oversight of the day-to-day operations of the Fire Department.

The organization now has two Deputy Fire Chiefs, one for Operations and one for Fire Prevention, Investigations and Community Risk.



The 2022 latest estimates for Georgina's population growth is 65,000 by 2041 and 70,300 for 2051[2] over the 2021 population of 49,278. Below is a graph of projected population growth and employment.

[2] https://www.york.ca/media/107501/download?attachment



	POPULATION	Net Change (2021)	EMPLOYMENT	Net Change (2021)
2021	49,278		9,900	
2026	52,900	3,622	11,500	1,600
2031	56,400	7,122	13,100	3,200
2036	60,700	11,422	15,100	5,200
2041	65,000	15,722	17,100	7,200
2046	67,750	18,472	18,900	9,000
2051	70,300	21,022	20,700	10,800

GFRS continues to see call volume increase with community growth. In 2021 the Town of Georgina Fire Department responded to 2,245 calls. The volume of emergency calls in the Town of Georgina has increased from 1,520 in 2004 to 1,936 in 2008 to 2,245 in 2021.

In addition to the three existing fire halls, one additional future hall and two replacement halls exist on the 10-year capital plan. These include:

- S. Keswick Station (2024 - New)
- N. Keswick Station and Headquarters (2027 - Replacement)
- Sutton Station (TBD - Replacement)

Presently full- time administration staff includes:

- Director of Emergency Services - Fire Chief
- A Deputy Fire Chief of Operations and Training
- A Deputy Fire Chief of Fire Prevention, Investigations and Community Risk
- One full-time Administrative Coordinator
- One full-time Administrative Assistant

Non-administration staff includes:

- A Training Officer, and
- Fire Prevention Division consisting of one Fire Prevention Officer and two Fire Prevention Public Educators

The total Firefighting force for the Fire Suppression/Operations Division consists of:

- Full-time firefighting force of 40
- Volunteer firefighting force of 60, which equates to 20 per station.
  While Georgina is prescribed 60 volunteer positions, recently they have struggled to

recruit and retain these volunteer ranks. The diminishing pool of available volunteers reflects a trend seen throughout the region and across Canada.

The organizational chart noted in Figure 2 reflects the current updated reporting structure within the Fire Department. In addition, the Director of Emergency Services/CEMC/Fire Chief reports to the CAO and Town Council.

It should be expected that demand for services provided by GFRS will increase as a result of community growth. Both residential and business growth will cause increases in:

- Call volume
- Business inspections
- Community education programs
- Home visits

Modernization:

Growth within the community will also mean questions about whether the existing model of service is still adequate. Several larger departments on the east coast of the United States still use a composite department model but the proportion of career versus paid-on-call is significantly weighted on the career side. This is primarily due to the professionalization that is expected when serving a larger population. In addition, population growth is likely going to be dominated by a transient population that moves into the area rather than expansion due to growth of the existing population. This means that civic service will likely shift away from a local fire department to other services within the community that require less time commitment. Since Georgina's mission is to provide a service to the community, indicators of when the service models should be evaluated are when the services show signs of strain. This is identified further in the report where the National Fire Protection Association (NFPA) recommends response times as the primary indicator of reliable service.

Recommendation #1 - Service level monitoring:

ESCI recommends since GFRS's mission is to provide a service to the community, indicators of when the service models should be assessed are when the services show signs of strain. This is identified further in the report where the National Fire Protection Association (NFPA) recommends response times as the primary indicator of reliable service.

Cost:

Dependent on the growth rate but using the population model, a 1% increase, excluding inflationary costs, in annual fire department expenditures should be planned for.

Timeframe: Short term (0 – 2 yrs)

Section 2 – Planning

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 the Fire Department. Through the work completed on their previous FMP (refer to Section 11, page 86 for further information) and the implementation of this FMP update process, GFD has clearly demonstrated a proactive approach towards it planning initiatives.

2.1 Three Lines of Defence:

Even though this review and its recommendations are grounded, in part, on the future configuration and utilization of the fire stations and its staff, it should be noted that the key focus, based on the Office of the Fire Marshal and Emergency Management (OFMEM), revolves around the following three lines of defence in relation to servicing the community i.e. Education, Inspection and Enforcement and Emergency Response (as described earlier in this report)

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

2.2 Strengths, Weaknesses, Opportunities and Threats

This entire FMP 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 Town's Council, CAO and Fire Chief to consider and implement.

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

As a starting point, this review has identified the following key SWOT themes:

Strengths

The Town of Georgina benefits from having three fire stations responding to emergencies. Two of these three stations (Keswick and Sutton) are staffed by full-time Firefighters, 24 hours a day, 7 days a week. The third fire station, located in Pefferlaw, is a 100% Volunteer fire station, which is supported by the full-time staff from the Sutton fire station. Even though Keswick and Sutton fire stations have a full-time compliment of Firefighters, all three stations are supported by a group of dedicated Volunteer Firefighters.

The Georgina Fire Department has strong relationships with neighbouring departments and a long history of cooperative services. The Fire Prevention Division is very proactive within the community in relation to education

and fire safety inspections and enforcement.

During our community survey and stakeholder meeting, it was noted that quick response to emergencies, along with having a well-equipped and trained cadre of staff is expected. These as well as supporting and promoting a robust public education program for the community rank as the top three anticipations of those who completed the surveys.

Weaknesses

The Georgina 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). 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 obligations, there is no guarantee these Volunteer Firefighters will be available to respond, as needed for the situation.

The Fire Department is currently operating out of three older stations that are in serious need of replacement / upgrades. That Pefferlaw station 1-8 is unable to accommodate the size of the apparatus that would be most appropriate for the community. All three stations have numerous issues that have been addressed in the Station Review report.

Opportunities

GFD has a mutual aid program in place in which it can call on neighbouring fire departments for assistance whenever resources are exhausted and there is an inability to handle with the situation in an efficient and effective manner. However, this type of resource is not meant to supplement GFD'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, continued, active planning and cooperation with neighbouring municipalities is a cost- effective option for such things as automatic aid and fire service agreements.

Also, 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.

Threats/Challenges

Major emergencies stressing the available full-time and Volunteer suppression division staffing and equipment must be considered as the community's population continues to grow (both in the residential and commercial sectors) and age. As noted earlier in this document, Georgina can expect to see a 36% increase in population over the next 10 years (or more). This is a challenge 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 look at comparable communities in relation to how they dealt with community growth.

A final challenge that is being seen by all communities is the so called "50 year storms". Due to changes in climate, inclement weather incidents, such as freezing rain/ice storms are becoming more commonplace and need to be part of the response program for each community. This change in climate conditions along with the resulting frequency and severity of incidents had also made the need for a larger response component to these emergencies more common place.

ESCI Update: (2022):

ESCI did not conduct a formal internal SWOT analysis. However, through stakeholder interviews, the following SWOT format presents some of our observations.

Strengths:

GFRS continues to operate from three fire stations. Since the publication of the 2016 FMP, the new Pefferlaw Station 1-8 was opened in 2021. Policy makers have recognized the continued community growth and have added new or renovated stations into the 10 year capital budget for:

- S. Keswick (2024 - New)
- N. Keswick Station and Headquarters (2027 - Replacement)
- Sutton Station (To be determined)

The fire administration reports a positive relationship between paid and volunteer staff. The ability to use volunteers to support full-time staff provides an opportunity to keep expenses down.

GFRS's continued focus on fire prevention is a source of pride for its administration and helps create positive relationships with external stakeholders.

Weaknesses:

Except for Pefferlaw, the remaining stations and facilities are identified as being in poor condition.

Large response areas like Georgina can make incident mitigation and management a challenge. Many incidents required of a fire department require more than one unit (Ideally staffed with 4 firefighters but no less than 3) to successfully and safely mitigate. Long response times, lack of steady response reliability and minimal resources create opportunities for increased risk to community and firefighter safety and increased loss. In addition, the 2010 FMP also identified a migration for the Keswick and Sutton stations to four firefighters per vehicle with funding being allocated for it by a 2017-2019 timeframe. Currently, Operations staffing is four positions short of this goal expected to be requested for 2023.

The ability to recruit and retain active volunteers continues to be a challenge. This mirrors trends seen regionally and throughout the country. Recent legislation has passed to support solutions by allowing firefighters to work and/or volunteer in multiple communities. This potentially increases the available labor pool of experienced firefighters to fill both volunteer and full-time ranks.

Ultimately, a measure of adequate staffing for an emergency is an Effective Response Force (ERF) which identifies standards for the number of resources expected to safely mitigate an incident. 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* recommends an ERF for urban areas (population >385/km^2) of fifteen firefighters to be on scene within nine minutes ninety percent of the time. Questionable staffing puts the ability to achieve this standard at risk and either slows down mitigation of the emergency or puts firefighters at greater risk.

The current staffing level has not increased commensurate with the increase in calls for service. Over the past three years, simultaneous calls have also increased from 10.2% to 13.1%. Increases in simultaneous calls mean longer response times as units from other stations may need to cover for units already on calls. Even in the absence of additional fire hall construction, staffing levels should be monitored and adjusted related to the location and frequency of calls for service.

Opportunities:

The opportunities cited in the 2016 FMP still exists. Automatic aid agreements are widely accepted as a means of communities supporting each other and enhancing service effectiveness without the cost of additional personnel provided there is a mutual and equivalent balance of benefit to all communities involved. Automatic aid is a form of mutual aid where response units of other jurisdictions respond to an incident alongside the initial jurisdiction response creating a heavier and potentially more effective initial attack force.

Also, the opportunity for increased collaboration of services is positive. While local control is usually the main obstacle to regionalization, the willingness to be open to increased collaboration and examine its benefits is by itself, a positive step for the community and organization. Potential long-term cost savings through either immediate savings or future cost-avoidance as well as opportunities for increased professional development via a larger organizational pools can enhance community service and employee well-being.

Threats:

All of the threats cited in the 2016 FMP still exist. These include increased demands for service as well as increased storm frequency related to the changing climate.

Modernization

GFRS staff consistently demonstrate a spirit of desiring to progress. The pace of progress is often a source of tension when engaging in discussions about assuming a proactive or reactive response philosophy to change. GFRS leadership uses a proactive philosophy of change using data and regular staff and community interaction and benchmarks that regularly evaluate its service model. Where in the past a service model that was largely unchanging and incorporating tradition, a culture of change while valuing tradition is being nourished.

Recommendation #2 - Key Performance Standards development:

ESCI recommends that GFRS continue to be proactive in its philosophies of change assuming progressive postures that use data, regular community and staff interaction, and benchmarks that regularly evaluate its service model.

Cost:

GFRS staff to evaluate and budget finances and time accordingly

Timeframe:

Short term (0 – 2 yrs)

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

To assist with EMT's review and related recommendations, reference has been made to National Fire Protection Association Standards, which are seen as the North American benchmark for the fire service.

NFPA Standard 1201 – Standard for Providing Fire and Emergency Services to the Public Section 4.3.5 notes:

- The Fire and Emergency Services Organization (FESO) shall provide customer service-oriented programs and procedures to accomplish the following:
    1. Prevent fire, injuries and deaths from emergencies and disasters
    2. Mitigate fire, injuries, deaths, property damage, and environmental damage from emergencies and disasters
    3. Recover from fires, emergencies and disasters
    4. Protect critical infrastructure
    5. Sustain economic viability
    6. Protect cultural resources

To accomplish this, an 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 the fire department clearer focus on what the ultimate goals for emergency response criteria are, the NFPA suggests that response times should be used as a primary performance measure in 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

The fourth standard noted is NFPA 1221, which addresses the goals and objectives for the taking of calls for service and dispatching of these calls. Georgina Fire Department receives its dispatching services from Richmond Hill Fire Department. GFD has adopted the use of response time measurements as a guide to evaluate their capabilities in relation to the previously noted NFPA standards. However, it should be noted that the GFD's Establishing and Regulating By-law does not actually specify what response time criteria is expected of its Fire Department. This in itself does not restrict GFD from tracking and reporting on its level of service, on a year-to-year basis. In fact, this is seen as a good practice for the Fire Chief, as it allows for a proper assessment of response types, number or responses and a thorough evaluation of response times to assess if the Fire Department is able to keep up to the demands of the community.

Establishing & Regulating By-Law

The current Establishing & Regulating By-Law is a dated document, going back to 2004. Although many parts of the E&R document still line up with the current FPPA, some definitions within the E&R document are no longer to par with the present legislation.

To assist the Fire Chief in meeting the needs and expectations of Council, the E&R By-law does note that the Fire Department shall respond to a variety of incidents (noted below) designed to protect the lives and property of the inhabitants of Georgina. The following list has been extracted from the 2004 Establishing and Regulating By-law #2004-0040:

Fire Suppression and Emergency Response:

1.1 Fire suppression services shall be delivered in both a proactive and reactive mode and shall include search and rescue operations, forcible entry, ventilation, protecting exposures and overhaul.

1.2 Emergency pre-hospital care responses and medical acts such as defibrillation, standard first aid and CPR, shall be maintained to base hospital protocols as agreed.

1.3 Technical rescue services may include confined space rescue and farm rescue incidents, resources permitting. Motor vehicle extrication shall be provided to make accessible and readily removable any trapped patients and to assist with removal and patient care as necessary. Water/ice rescue services as necessary.

1.4 Hazardous material responses shall be conducted to the minimum level to ensure rescues, life safety, evacuation and containment when resources permit.

Even though no actual response time criteria are noted in the Department's E&R By-law, a review of the past three to five years offers a good understanding and baseline for how the Department has been performing, along with identifying areas for improvement.

ESCI Update (2022):

NFPA standards are goals to strive for however it is an imperfect task to try to achieve every national standard. However, even if the objectives identified within the standards are not only unachievable but unrealistic, the models behind NFPA 1710 and 1720 still offer an approach that can be set in place to monitor the efficiency of the organization.

The annual evaluation section of NFPA 1720 (Section 4.4.2) states the following:

"4.4.2.1 The fire department shall evaluate its level of service, deployment delivery, and response time objectives on an annual basis.

4.4.2.2 The evaluations shall be based on data relating to level of service, deployment, and the achievement of each response time objective in each demand zone within the jurisdiction of the fire department. "

Part of the intent of the standard is to have a measurable performance outcome and a standard in which to measure it against. Taking into account community risk, finances, values, operational standards, employee effectiveness and other factors, community leaders choose a level of service to provide to the community. NFPA standards can help direct the discussion if not be the standard chosen. The performance standard then becomes the performance objective and if community leaders decide to increase the level of service, the performance standard gets raised. Community leaders should periodically review the set performance standards along with outcomes to determine if adopted standards are being met.

The most current edition of NFPA 1201 amends sections 4.3.5 to read:

1) *Prevent fires, injuries, and death from emergencies and disasters*
2) *Mitigate fires, 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 and historical items"*

Note: point #6 above was amended to include historical resources.

NFPA 1225 Standard for Emergency Services Communication published its first edition in 2020. As part of the NFPA Emergency Response and Responder Safety Document Consolidation Plan, NFPA 1225 is a combination of Standards NFPA 1061 Standard for Public Safety Telecommunications Personnel and NFPA 1221. The goals and objectives for the taking of calls for service and dispatching of these calls that previously resided in NFPA 1221 now reside in NFPA 1225.

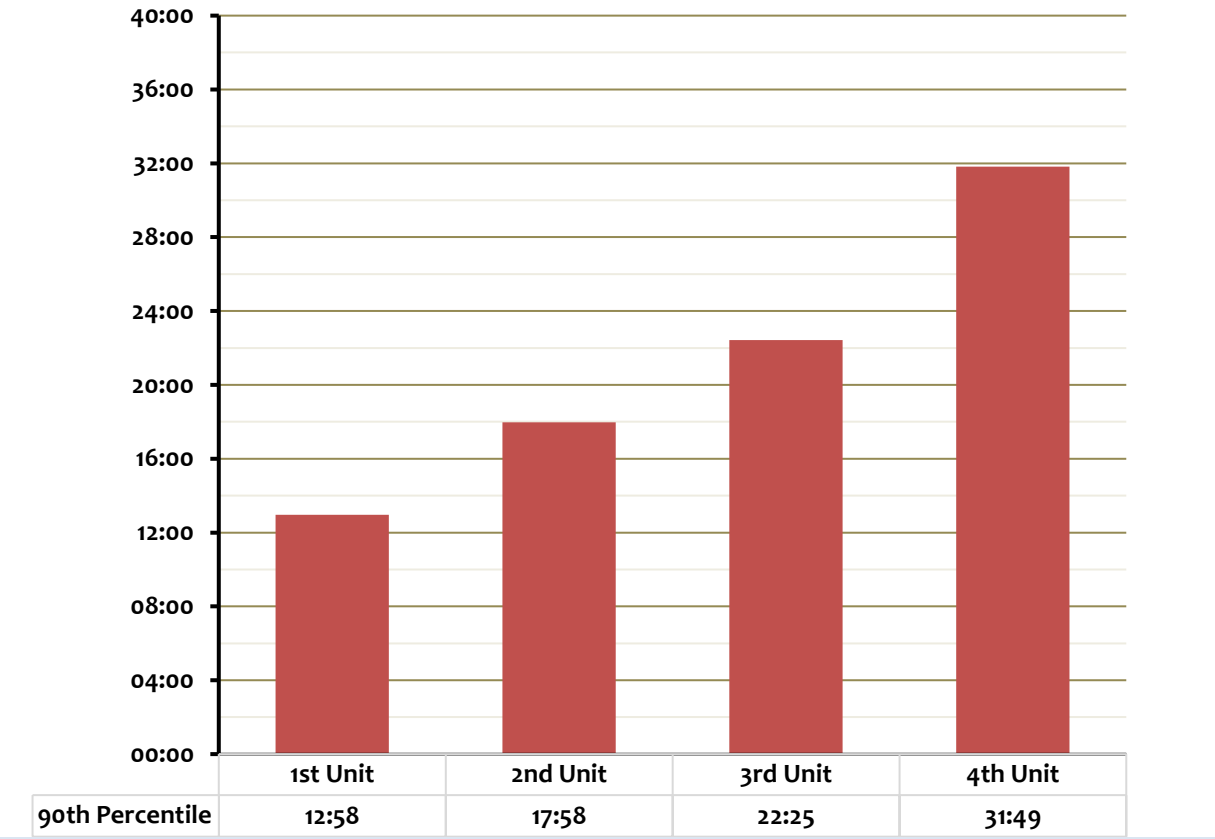
The main establishing and regulating by-law is still the 2004 Establishing and Regulating By-law #2004-0040. In addition to outdated terminology, an antiquated organization chart exists within the by-law. The 2004 by-law should be reviewed and revised as necessary and should be reviewed for revision at regular intervals in the future.

Modernization:

NFPA 1720, Standard on Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments sets a response standard of fifteen firefighters arriving on the scene within nine minutes for ninety per cent of all calls. This can be a starting point for discussion and while this standard may not be achievable, nine minutes to 60% of the calls may be. In addition, having this standard gives the community the opportunity to see where its risks are located which then lead to discussion about possible solutions.

Below is a chart that shows average times of units arriving on scene. Using a staffing of four firefighters per vehicle, one can calculate that the ERF standard will be achieved with the arrival of the fourth vehicle.

Georgina 90% Percentile for Unit arrivals



	1st Unit	2nd Unit	3rd Unit	4th Unit
90th Percentile	12:58	17:58	22:25	31:49

Measurable outcomes and transparency are some of the easiest ways fire department can provide transparency to their stakeholders. If a performance standard is being met, resources are sufficient (or in excess). If a performance standard is not met, additional resourcing is needed or the performance standard must be lowered. Either way, transparency on the state of a local fire department is well-documented.

Lastly, NFPA 1710 and 1720 are undergoing a revision that will be called NFPA 1750 and will combine both standards into one. The Fire Chief should monitor the progress of this change and see if new applicable standards are produced.

Recommendation #3 - Performance standards approval and adoption:

ESCI recommends the Fire Chief, with Town Council approvals, should adopt measurable performance standards for each of the three lines of defence.

Recommendation #4 - NFPA standards monitoring:

ESCI recommends the Fire Chief should monitor the progress of the changing NFPA 1710 and 1720 standards to the new NFPA 1750 and see if new applicable standards are produced.

Recommendation #5 - Establish and Regulate Bylaw update:

ESCI recommends the current bylaw, which is now 18 years old, should be reviewed and updated, as needed. At the least, the organizational structure outlined in Appendix ‘B’ of the bylaw should be updated.

Cost:

GFRS staff to evaluate and budget finances and time accordingly

Timeframe:

Short term (0 – 2 yrs)

2.4 Commission on Fire Accreditation International (CFAI)

"When a Fire Department applies a model of risk assessment to help determine their level of emergency services commitment, they have moved from being reactive to being proactive." – quote from CFAI overview information.

In the Fire service, the NFPA (National Fire Protection Association) standards are seen as the benchmark to strive for. Many of these standards have, to a large degree, been adopted by the Office of the Fire Marshal and Emergency Management. The CFAI is seen as the organization that has incorporated all national and local standards, which becomes the model for best practices for an organization.

Benefits of Accreditation:

- A system for risk assessment, decision making, and continuous improvement.
- A plan for sustainment and self-assessment.
- Agency performance objectives and performance measures.
- Verification by peers.

The CFAI program revolves around 10 categories, which are:

1. **Governance and Administration** – includes such things as organizational reporting structure, establishing and regulating by-law requirements, etc.
2. **Assessment and Planning** – evaluating the organization in relation to future planning
3. **Goals and Objectives** – what are the goals of the fire service; do they have a strategic plan in place
4. **Financial Resources** – does the organization have sufficient funding in place to effectively meet the needs of internal and external stakeholders
5. **Programs** – this includes fire prevention, fire suppression, training, emergency management
6. **Physical Resources** – what is the state of the fire stations and are they located in the best location to respond to the community in a timely manner
7. **Human Resources** – staffing of the organization in all divisions and also how does the fire
8. service work with the municipality's Human Resources Department
9. **Training and Competency** – review of all training programs based on what the Fire Department is mandated to provide
10. **Essential Resources** – this section covers such things as water supply, communications/dispatch and administrative services
11. **External Systems Relations** – includes such topics as mutual aid, automatic aid, third party agreements, etc.

All of these sections will be discussed within each related section of this FMP plan document.

ESCI Update: (2022)

In the latest version of the CFAI model (10th edition), an eleventh category or program discipline has been added, 'Health & Safety', which focuses on organizational practices to reduce employee injury and liability.

Modernization:

The accreditation model is often ignored when there is belief that the achievement of full accreditation status is not a possibility. This belief stems from the amount of organizational change that would be required to become compliant with the accreditation model or the lack of resources necessary to prepare for the evaluation. (Some estimates are it takes at least a year of time for a single individual in a full-time capacity to create/compile the information required not including any organizational changes that would be required to meet accreditation.)

However, even if the accreditation recognition is not feasible, it is still a strong and nationally recognized model for how to shape a fire service organization. Without it, most fire service leaders just perpetuate what they inherited or create their own. The accreditation model is one that leaders can embrace as full of direction that can improve the integrity of the organization amongst community and staff.

The initial steps of building an accreditation model organization is to understand why the fire department exists in the first place and that is accomplished through a Community Risk Assessment which is currently in progress.

Recommendation #6 - Accreditation:

ESCI recommends even without pursuing full accreditation, GFRS should strongly consider adopting the CFAI model standard for fire service excellence. This would require staff time to be allocated to begin working towards the accreditation model.

Cost:

GFRS staff to evaluate and budget finances and time accordingly

Timeframe:

Long term (5 - 10 yrs)

2.6 Stakeholder Surveys

In order to get a fullsome understanding of how well GFD is meeting the needs of its staff and the community, surveys were conducted with both the internal staff of the GFD and external stakeholders.

To assist with the completion of the staff surveys, information meetings were held during the months of June and July, 2016. The community survey was advertised through local media and was set up on the Department's web site (in the form of an electronic survey). Within the community surveys, participants were also offered the opportunity to be part of a focus group meeting. This community stakeholder meeting was held on Tuesday, September 13th at the Town's Council Chambers.

Meetings were also held with members of Council and with the Town's Administrative Officer (CAO); along with a meeting with the past three retired Fire Chief's that was conducted on September 16th.

Internal Surveys

During the FMP process, feedback was gathered from internal staff, which included Firefighters, Administration, Training and Fire Prevention.

- Much of the information received from the internal surveys identified the following:
- The majority of the staff are very proud of the service that they offer to the community and believe that the community feels that they are served by a professional and dedicated group of Firefighters.
- There is an overall desire to not only upgrade the present fire stations, but to also look at the relocation of the stations to more effectively meet the needs of the community in relation to response times. The age of the present fleet was also noted as a concern.
- The top three major challenges for the Fire Department are the rapid growth that is occurring in Georgina; the need for better facilities and newer equipment; and also response times to the more rural areas such as Udora.
- The top three services that they feel are priority to the community are:
    - Firefighting
    - Rescue (i.e. motor vehicle accidents)
    - Technical rescue response (i.e. water rescues) and medical responses
- It was noted that in the future, to look at staffing the Pefferlaw fire station as the community grows.
- Also noted that there are different levels of fire service within the Town of Georgina.

External Surveys and Stakeholder Meeting Results

Input from the community is vital as it gives the Fire Department an accurate indication of how the public perceives the Department and suggests areas for improvement from those with first-hand interaction with the Department.

The following input was received:

- Most respondents see the GFD as a dedicated and professional service
  - The top three concerns noted by external respondents are:
  - That the Fire Department responds in a timely manner to calls for assistance
  - The presence of the Fire Department within the community in relation to public education and related safety training, and
  - The cost of the fire service
- The top three services noted by external respondents are:
  - Firefighting
  - Rescue (i.e. motor vehicle accidents)
  - Technical rescue (i.e. water rescues), and also Medical Assist and Response
- In relation to what is needed over the next 10 years, the top responses were:
  - More full-time staff to meet the growing demands of the community
  - More public safety education and attendance at community events
  - Well-equipped fire stations and equipment to meet the demands of a growing community

Overall, both internal and external surveys, and stakeholder meetings were quite positive about the services being offered by GFD. The primary focus we heard (both internally and externally) was ensuring that the Fire Department continues to expand as the community grows and that GFD can continue to provide a quality service to the community.

Recommendations

1. That a full review of the Fire Station Report recommendations be addressed as noted within Appendix "D" of this document.
2. It recommended that a full review of the Establishing and Regulating By-law document be completed to include the following items:
   - Update the document's language to reflect what is noted in the FPPA
   - Incorporate, where appropriate, any references to NFPA standards that the Fire Department deems necessary
   - Measurable service levels that can be reported to Council on an annual basis
   - Composition to represent the level of service to be provided as outline throughout the FMP, and
   - A review to be conducted by the Town's Solicitor

<u>Associated Costs</u> (all costs are approximate)

- The Fire Station Report has noted an approximate costing of $500,000 for the required repairs/upgrades to the three fire stations
- There is no initial cost associated with the updating of the By-law. However, if changes in service levels are made then some associated costs (or savings) may be realized

<u>Timelines</u>

- As those timelines noted with the Fire Station Report – see attached document for more information
- Short Term (1 – 3 years)

ESCI Update: (2022)

In June and July 2022, Emergency Services Consulting International (ESCI) and the Georgina Fire and Rescue Services (GFRS) created a survey using SurveyMonkey to be completed by community members of the town of Georgina. The survey was made available for members to complete from June 8, 2022 through July 31, 2022. One hundred thirty-seven residents completed the survey although not all one hundred thirty-seven completed all fourteen questions of the survey. The survey had an 83% completion rate.

In June 2022, ESCI conducted interviews with stakeholders to solicit feedback, perspectives and thoughts on the consolidation of the fire departments of Georgina and East Gwillimbury. Stakeholders included elected officials, town administrators, department staff and other external partners.

Internal Interviews Summary

Stakeholders collectively indicated that they supported the investigation of a composite consolidated department. Stakeholders did feel changes in department structure were necessary to address a variety of arising issues including population growth, societal changes, lack of adequate staffing, increasing call volume and increasing service delivery need.

Georgina stakeholders placed emphasis on a more robust, effective response force to mitigate emergencies with on-scene full-time resources quickly.

Department staff indicated they were deeply passionate about the fire service, love working for their communities and appreciate the support of their elected officials. Staff also said that they support the municipality and their commitment to crafting innovative ways to respond to these growth challenges as they strive to meet the societal and economic imperatives of the new public safety environment.

External Survey Results

The survey was divided into five sections:

- Mission, Vision, and Guiding Principles
- Community Planning Priorities
- Community Service Priorities
- Public Education Programs, Inspections/Enforcement, Emergency Response
- Customer/Citizen Input

A majority of the respondents were satisfied with the Mission and Vision of the GFRS and provided suggestions to enhance the principles and values of the department.

The two most important planning elements reported were:

- Ensure adequate fire department response time to emergencies
- Ensure adequate resources and staffing

The four most important services ranked by respondents were:

- Technical rescue
- Fire suppression
- Assess risks within community
- Training for staff to safely and professionally deliver services

Respondents felt that public fire education programs should increase their visibility and were in favor of annual scheduled inspections for code enforcement.

When asked open-ended questions to provide input, respondents expressed their expectation that the fire department had quick response times and delivered adequately trained and professional staff.

Modernization:

GFRS should prepare for not only population growth but a change in population character. In other words, the values of the long-standing Georgina communities may be subject to change with not only an increasing population but a demographically different population. Constant interaction with the community stakeholders through state-of-the-art communication technologies (younger generation will prefer) will be vital for the department to stay ahead of potential challenges and keep abreast on the values of the community.

The workforce in Georgina is also changing. Not only is there a transition to a mostly career force in process but the values of career firefighters are or at least can be different than those of volunteer firefighters. The fire chief has recognized that a diverse workforce contributes ideas to a strong organization and works with them regularly to strengthen the organization and its service to the community.

Recommendation #7 - Communication:

ESCI recommends the fire chief should continue to keep open communication channels with both the community and workforce. When possible, the fire chief should keep all staff up-to-date on strategic objective timetables and implementation progress as well as continuing to involve the workforce in implementation processes.

Cost:

GFRS staff to evaluate and budget finances and time accordingly

Timeframe:

Ongoing

Of the initial Fire Station Report recommendations, nine have been fully completed. These include:

- Complete replacement of Station 1-8 Pefferlaw
- Engineering review of all stations
- Adequate safety features for apparatus bay doors
- Installing fencing around the training tower
- Upgrading and installing gender appropriate showers
- Repairing vehicle exhaust system at Sutton Station 1-6
- Protecting electrical panels on the apparatus floor.

The main establishing and regulating by-law is still 2004 Establishing and Regulating By-law #2004-0040. In addition to outdated terminology, an antiquated organization chart exists within the by-law. The 2004 by-law should be reviewed and revised soon and should be reviewed for revision at regular intervals in the future.

Section 3 – Risk Assessment

Section 3: Risk Assessment

3.1 Community Risk Assessment – Current and Future Needs

The Georgina Fire Department covers an area of approximately 280 square kilometres and serves a population of approximately 48,000. Georgina is located in central Ontario in the most northern portion of York Region and is nestled on the south-eastern shores of Lake Simcoe, with 52 km of shoreline.

Municipal responsibilities

It is important to note that it is Council that sets the level of service within the community. The Fire Protection and Prevention Act, 1997, S.O. 1997, c. 4, outlines the responsibilities of a municipality, providing a framework for protecting citizens from fire:

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.

Further, the Act provides a description for the methods of providing services; Methods of Providing Services

(2) In discharging its responsibilities under subsection (1), a municipality shall:
   (a) Appoint a community fire safety officer or a community fire safety team; or
   (b) Establish a Fire Department.

The Town of Georgina has established a Fire Department as outlined in Section 2.2(b) of the Fire Protection and Prevention Act, 1997, S.O. 1997, c. 4. The level of service that thereby must be provided is further outlined in Section 2.1(b) of the Act. The level of service to be provided is determined by the needs and circumstances of the community and can be derived from conducting a Fire Masterplan for Council. The 'needs' can be defined by the type of buildings, infrastructure, and demographics of the local area which in turn can be extrapolated into the types of services that would be offered and needed. The 'circumstances' are considered as the ability to afford the level of service to be provided.

Together, the needs and circumstances assist in identifying a level of service for the community. This combination meets the expectations of the public for safety and the affordability of this level provided.

The Georgina Fire Department also provides Firefighting assistance to Georgina Island, Fox Island, and Snake Island, through a Fire Protection Agreement.

Georgina is currently experiencing significant growth in the community. While the majority of this growth is residential in design, there are commercial and industrial possibilities. This increase does impact the service

delivery of the Fire Department, and undoubtedly the need and call for service will increase along with the population.

Detailed growth numbers are outlined within *Appendix D – Georgina Fire Stations Review,* along with more detailed information relating to fire station needs.

ESCI UPDATE: (2022)

The Georgina Fire and Rescue Services Department covers an area of approximately 287 square kilometers and serves a population of approximately 49,000, with an anticipated growth to 67,000 people over the next 10 years. This kind of population growth will require significant changes to the fire department when comparing where the fire department is currently to where it will be and it will be driven by a perpetual need to monitor risk and either choose a proactive or reactive posture.

Proactive postures can take the form of preparation before the need exists or while the need is developing. Reactive postures take the form of responding once the need is established and experienced. There are pros and cons to each.

In a proactive stance, the fire department adjusts prior to the need developing establishing a readiness for whatever may develop. The positive for this philosophy is the department continues its mission with little negative effect as a result of the growth. It has anticipated the impact and is ready for it. The negative is that the anticipated growth may not occur or not occur as expected. This could contribute to a structure that is over prepared or out of alignment with the community with an associated cost. While communities may be willing to accept nominal excesses for short periods of time, extended periods of over preparedness contributes to excess costs as well as increased resistance to whatever change may eventually materialize.

The advantage to a reactive stance, is that costs directly fund an existing need. Once a need has been identified, a sensible solution is applied. The disadvantage is that the anticipated need may have a severe consequence that the community is not prepared for causing the community to incur a loss of some form. In addition, if the recognized need grows rapidly, it may outrun the provision for that need creating a situation of always having to catch up.

The fire protection agreement with Fox Island, Georgina Island and Snake Island are also a unique characteristic of Georgina Fire. The possibility of future development on any or all of these islands would change the required level of fire protection. Current and projected development should be monitored and the fire protection agreement should be revaluated on a scheduled basis.

Modernization:

York Region's identification of Georgina as an anticipated area of rapid growth gives community leaders a strong anchor for creating a proactive management strategy. From the fire department's perspective, this should include the anticipation of risk in quantity, quality, and geography. Far from knowing the exact progress of the growth and its timeframes, the fire department can begin by proactively identifying potential risks, either increased existing risk or new risk, and creating trigger points for actions. Some examples can be:

- "once our annual business inspection rate is above one year for two consecutive years, we hire an additional inspector".
- when our 90th percentile call response time exceeds 8 minutes, we consider the use of part-time or career staffing.
- "when our 90th percentile response times increase to 9 minutes, we examine our staffing, response and fire hall location models."

These risks, standards, and triggers should be transparent and regularly shared with the community so when increased resources or model changes are necessary, the community is well-prepared or at least well-informed.

Part of the development of triggers is the consideration of adequate resources to safely and effectively handle the incident. Effective Response Force (ERF) is a term used to identify the appropriate level of resources required to do this and for volunteer departments is outlined in 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.* Fire departments can use this standard to establish appropriate responses to best expect sufficient resources to successfully and safely mitigate an incident.

Recommendation #8 - Growth monitoring:

ESCI recommends the Fire Chief should consider the establishment of organizational change trigger points associated with the growth of the community. When trigger points are met, the fire chief and town council should be aligned as to what the next action steps are.

Cost:

GFRS staff to evaluate and budget finances and time accordingly

Timeframe:

Ongoing

3.2 Simplified Risk Assessment

As noted in the Ontario Fire Marshal's Public Fire Safety Guideline, PFSG 04-40A-03, "The simplified risk assessment (SRA) and ensuing fire concern profile will assist in identifying the degree to which these activities are required in accordance with local needs and circumstances. The simplified risk assessment is made up of the following components:

- Demographic profile
- Building stock profile
- Local and provincial fire loss profiles
- Information analysis and evaluation
- Priority setting for compliance
- Implementing solutions

Conducting a simplified risk assessment is a practical information gathering and analysing 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 Standard on *Organization and Deployment of Fire Prevention Inspection and Code Enforcement, Plan Review, Investigation, and Public Education Operations*, 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:

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

Current Condition

The SRA for the Town of Georgina is dated from 2004 with the last review dated December 2010. Since this time, there has been significant building stock growth in the community (namely residential, but not exclusively). This growth has impacted the demographic profile and consequently, the needs and circumstances for the delivery of services by the Fire Department. It should be noted that the changes from the 2004 SRA will relate to increases in numbers, or frequency, and not necessarily the services that are required to be delivered. One caveat to the

changes in services offered relates to Vulnerable Occupancies. With the inception of the legislation around Vulnerable Occupancies, the Fire Prevention Officers have done an admirable job in maintaining the departmental responsibilities. With the new requirements under the legislation, additional time is necessary for the Fire Prevention staff to adequately ensure compliance. This is time that cannot be spent in conducting other fire prevention inspections and public education.

Future Needs

Understanding the community and its needs allows the Fire Administration to be proactive in education and enforcement programs to the community and to all fire department staff. As noted earlier, detailed growth analysis can be found within *Appendix F – Georgina Fire Stations Review*.

When fires occur within the community, the Firefighters can be ready to battle the Fires because they are trained, not only in the basics of firefighting but, in the special hazards that are found within the community. These hazards are noted in the SRA/CRA so that Fire Administration can ensure programs are in place to deal with them. As the community grows the frequency of, and the need for service will grow. There will be a need for additional staff in the Fire Prevention Office, the Fire Suppression Division, and Training.

ESCI UPDATE: (2022)

Fire departments including Georgina are mandated to replace SRA's (Simplified Risk Assessments) with CRA's (Community Risk Assessments). CRA's and their standards are promoted by the Center for Public Safety Excellence and usually go beyond just identifying risk within the community but then provide the foundation for a Standard of Cover (SOC). In other words, the services that are provided to the community, the SOC or 3 lines of defence, are defined by the risks within the community. Some of those risks are risks that all communities experience such as fire and a need for EMS, other risks are more local such as demographics and geography.

The five steps of developing a CRA/SOC include the following:

1. Documentation of the area characteristics
2. All-hazard risk assessment and response strategies
3. Current deployment and performance
4. The plan for maintaining and improving response capabilities
5. Development of the CRA/SOC.

The most recent SRA was completed in 2004 and updated in 2013. As legislated, all fire departments in Ontario will require a SRA/CRA to be completed prior to 2024. Georgina has currently assigned the task of the CRA to the new Deputy Chief position. This is expected to be completed in 2023.

A HIRA (Hazard Identification Risk Assessment) would be part of a CRA and in Georgina, refers to the larger scale incidents that could be beyond the local management abilities of Georgina staff alone and often involve regional resources. This then makes planning on a regional level the more efficient and effective way of handling large-scale incidents. The HIRA for Georgina is handled locally by the Community Emergency Management Coordinator (fire chief) and is then reviewed by the York Regional Emergency Manager.

Modernization:

CRA's are tools for both the community and the fire department to use. The community learns about the hazards and risks they are exposed to understand the what and the why of their local fire department preparedness needs. The fire department uses the CRA to support the strategies of the organization, determine the requirements to mitigate the risk, and provide reason for the decisions that are made.

Recommendation #9 - Develop and maintain a Community Risk Assessment (CRA):

As directed by the Office of the Fire Marshal, complete the CRA by July 1, 2024 to replace the existing Simplified Risk Assessment (SRA). Maintain a CRA framework.

Cost:

Approximately 20 hrs. or greater staff time annually. GFRS staff to evaluate and budget finances and time accordingly.

Timeframe:

Ongoing

3.3 Integrated Risk Management Web Tool

The Ontario Fire Marshal's Communiqué 2014-12 introduced the Integrated Risk Management Tool 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 Chief s (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 of the Fire Department's efforts in relation to:

- Fire prevention and education initiatives, which includes updated community reviews through the use of 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 also how well equipped and trained the firefighters are to deal with emergencies within the community. It should be realized that conducting a review of every building within the Town of Georgina 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 (with input from the Fire Chief) what is the acceptable risk to manage in the community based on 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– 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 in the built-in fire protection features or staff to assist in evacuation during a fire or other emergency.

Examples: apartment buildings, hotels, dormitories, lodging and rooming, assembly, child care, detention, educational, and health care

Moderate-Risk– an occupancy that has a history of moderate frequency of fires or a moderate potential for loss of life or economic loss

Examples: 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: storage, mercantile, and business

Current Condition

Based on EMT's review of GFD's Simplified Risk Assessment (2004), it would appear that the key fire safety related issues facing the community are within:

- Vulnerable Occupancies – of which there are 14, as per SRA 2004, and more expected within the coming years
- Schools – of which there are 18
- Residences

The building stock of the Town of Georgina as noted within the SRA (2004) is:

- Group A (Assembly) – 176
- Group B (Institutional) – 14
- Group C (Residential) – 12876
- Group D & E (Commercial) – 568
- Group F (Industrial) – 80
- Not Classified in OBC (trailer parks) – 3

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 Georgina and the continual growth that is expected. This current and future building stock put 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 Appendix C of the standard. This sample staffing exercise is not part of the requirements of the standard but forms a guide for informational purposes. It is important to restate that it is Council that sets the level of service within the community. This level of service must be based off the local needs and circumstances.

The activities of the Fire Prevention Division (FPD) for the first quarter of 2016 were 157 Fire Prevention Office activities. These range from site plan reviews, routine inspections, licensing, complaints, and requests, to name a few. There were 13 Public Education events that brought the fire safety message to 157 adults and 460 children. The Fire Prevention Division has done a good job in ensuring ongoing inspections and education programs are being conducted. Fire Prevention Officers are duty-bound to conduct inspections upon request or complaint in accordance with the Fire Prevention and Protection Act.

In review of the Georgina Fire Department Guideline 8-1-G, routine inspections are mentioned; however, it is recommended that the FPD review its inspection program to identify levels of desired frequency for these inspections. It should also be noted at this time, that the Fire Underwriters Survey supports and recommends that a level of frequency be identified by the Fire Department in its quest towards ensuring a fire safe community.

FUS Suggested Frequency Chart:

Occupancy	FUS Benchmark
Assembly (A)	3 to 6 months
Institutional (B)	12 months
Single Family Dwellings (C)	12 months
Multi-Family Dwellings (C)	6 months
Hotel/Motel (C)	6 months
Mobile Homes & Trailers (C)	6 months
Seasonal/Rec. Dwellings (C)	6 months
Commercial (F)	12 months
Industrial (F)	3 to 6 months

Future Needs

The 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 thorough risk assessment will ensure that such comparisons are valid. By providing a valid basisfor comparison, a sufficient risk assessment can also provide confidence that innovations introduced elsewhere can be successfully applied in your municipality.

3.3.1Home Fire Sprinklers

The NFPA, along with the Ontario Association of Fire Chiefs are strong supporters of home sprinkler systems as a way to reduce the risk to life and property from fire.

In a recent NFPA on-line article, it was noted that because fire sprinklers react so quickly, they can dramatically reduce the heat, flames, and smoke produced in a fire. Properly installed and maintained fire sprinklers help save lives.

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

Facts about home fire sprinklers

Automatic sprinklers are highly effective and reliable elements of total system designs for fire protection in buildings. According to an American Housing Survey, 4.6% of occupied homes (including multi-unit) had sprinklers in 2009, up from 3.9% in 2007, and 18.5% of occupied home built in the previous four years had sprinklers.

Source: *U.S. Experience with Sprinklers*

- 85% of all U.S. fire deaths occur in the home.
- Home fire sprinklers can control and may even extinguish a fire in less time than it would take the fire department to arrive on the scene.
- Only the sprinkler closest to the fire will activate, spraying water directly on the fire. In 84% of home fires where the sprinklers operate, just one sprinkler operates.
- If you have a fire in your home, the risk of dying is cut by about one-third when smoke alarms are present (or about half if the smoke alarms are working), while automatic fire sprinkler systems cut the risk of dying by about 80%.
- In a home with sprinklers, the average property loss per fire is cut by about 70% (compared to fires where sprinklers are not present.)
- The cost of installing home fire sprinklers averages $1.35 per sprinklered square foot.

The Home Fire Sprinkler Coalition (HFSC) is a leading resource for accurate, noncommercial information and materials about home fire sprinklers for consumers, the fire service, builders, and other professionals.

By working the developers and the public in promoting the installation of home sprinkler systems, the Georgina Fire Department is demonstrating a pro-active approach in relation to educating the public on another viable option for home owners to help reduce the risk from fire. As such, it is recommended that GFD investigate this safety initiative as part of their fire prevention and public education initiatives.

Recommendations

3. It is recommended that this Simplified Risk Assessment/Community Risk Assessment (SRA/CRA) be updated in accordance with NFPA 1730, being every five years or as necessary with changes. To aid Council in their decision making, there is merit in providing an updated assessment at the beginning of every Council term so that the sitting Council understands the platform on which the services conducted by the Fire Department are built.

4. It is recommended that the Fire Chief provide Council with an updated review of the Simplified Risk Assessment coupled with the Integrated Risk Management tool of the identified High, Medium, and Low risk occupancies.

    - This picture of the community at large will then provide Council with the information to be able to decide what is an acceptable fire risk within the community. It must be understood that this is not the final step in the equation. This first step, as this will provide a look at the needs of the community. Utilizing the data given, the Fire Chief can then provide Council with the staffing levels and resources to manage the identified risks. If these staffing levels and resources are acceptable to Council, then the fire prevention and education programs can be built thereby. These two parts of the equation represent the 'needs' and 'circumstances' as noted in the Fire Prevention and Protection Act 2(1)(b).

5. It is recommended that upon completion of the SRA/CRA and IRM, as noted in recommendation 4, that the Fire Chief provides Council with a draft policy for review and passage that outlines a fire inspection program to address identified needs and expected outcomes of the program. This program should outline the building types and the frequency of inspections.

6. It is recommended that the Fire Department meet with all local community groups to form a partnership in relation to organizing fire safety and public education events that can be tailored to the unique needs and challenges within the community.

7. It is recommended that the Fire Prevention Division review its inspection program to identify levels of desired frequency for these inspections. It should also be noted at this time, that the Fire Underwriters Survey supports and recommends that a level of frequency be identified by the Fire Department in its quest towards ensuring a fire safe community.

8. It is recommended that the GFD work with developers and the public to make the Home Sprinkler Systems initiative a part of their fire prevention and public education program.

Associated Costs (all costs are approximate)

- No cost associated with the initial development of these recommendations – staff time only. But once approved then new/updated programs that may evolve from the recommendations could incur some associated costs
- FUS chart recommendation will incur more Fire Prevention staff related time

Timelines

- Short-Term (1-3 years), and ongoing for all other recommendations
- Immediate (0-1 year) for recommendations 6 and 8

ESCI UPDATE: (2022):

The IRM tool is an excellent tool to help fire departments manage their occupancy risk. Unfortunately, currently, it appears this tool is no longer available. Most fire department management software packages now include this type of occupancy tracking module. Georgina uses both Firehouse software and Target Solutions as RMS. A transition to ESO is expected as Firehouse Software reaches the end of its service life. All these software packages offer some level of occupancy tracking module.

Georgina regularly uses fire suppression crews to supplement fire prevention personnel although it was paused during the pandemic. At various times suppression crews have been tasked with initial compliance inspections in commercial occupancies, however as of 2022 their primary function is Safe Home inspections of residential occupancies. In 2016 and 2017 all officers received training in in-service inspections and are currently in the process of NFPA 1031 certification training (*Standard for Professional Qualifications for Fire Inspector and Plan Examiner*).

GFRS administration reports that an updated fire inspection program for commercial occupancies is a goal for 2024.

Modernization:

The next practical step to enhance the application of the data collection would be to make the data available to responders. Some fire departments refer to this as pre-planning where suppression crews perform tactical planning on properties using various type of fire and hazard possibilities, developing strategies ahead of time, and practice them ahead of an actual emergency. Sometimes this is at an actual location and other times it is classroom. Either way, knowledge of building construction, layout, and content contributes to tactic selection and execution. Fire departments are now taking the gathered data, including floor plans if they are available or have internal graphic expertise, and making them available to suppression forces so that while enroute to a call, personnel can educate themselves on the building they are responding to and be ready to execute any pre-decided tactics. This makes an emergency safer, managed more efficiently and consequently greatly reduces loss potential.

In order to accomplish this, all responding units require laptops or an equivalent technology with access to the database collection which can be done real-time through a wireless connection or through data that is periodically loaded and updated on each computer. Georgina has the hardware technology in all the vehicles and is in the process of developing the appropriate data processes.

Recommendation #10 - Preplanning:

ESCI recommends GFRS should continue to strive for including building and preplan data vehicle tablets in pre-fire operations.

Cost:

$5,000 for software technology that provides preplan data to apparatus.

Timeframe:

Medium term (2 – 5 yrs)

Update to the NFPA US Experience with Sprinklers Report – (Oct 2021):

- 5% of homes contain home sprinklers

In sprinklered properties

- Civilian fatality rate 88% lower
- Civilian Injury rate 28% lower
- Property loss 62% lower
- Fire spread confined to room of origin – 97%
- Fire controlled – 96%
- 89% fires managed by 1 sprinkler, 99.5% by 5 or fewer

With sprinklered residential fires,

- 1% of fatalities
- 5% of injuries
- 3% of total property loss

Where smoke detectors are present, the statistics are:

- 28 percent lower when battery-powered smoke alarms were present, but AES protection was not
- 46 percent lower when smoke alarms with any power source were present but AES protection was not
- 66 percent lower when hardwired smoke alarms were present but AES protection was not
- 89 percent lower when sprinklers and hardwired smoke alarms were present

Modernization:

Mandatory residential sprinkler systems are a value point of debate between the fire service and the building construction industry. The Canadian Association of Fire Chiefs, estimates for the average cost of home sprinkler installation in new construction is $2.50 - $4.19 per ft^2 or $6,250-$10,475 for a 2,500 ft^2 home. Other sources report costs lower and higher depending on the state of the home and the sprinkler configuration. The building industry projects higher costs and of such nature that it can affect home-purchasing ability.

While the value comparison is sometimes like comparing apples and oranges, i.e. risk of less certain fire/death to the housing costs, a reasonable middle-of-the-road solution is for local communities to mandate with new single-family residential development, the offering of residential sprinkler systems complete with statistical supports and costs. The fire department should validate (or provide) the statistical support and costs for sprinkler systems with input from the builder on necessary costs.

A second option is to move away from the all/nothing concept of home sprinkler protection by having legislation that allows partial home sprinkler installation in those areas that are identified as have the highest potential of fires starting, i.e. the kitchen and furnace area.

Recommendation #11 - Residential sprinklers:

ESCI recommends GFRS should continue collaboration with builders to offer residential sprinkler installation as a part of new construction.

Cost:

GFRS staff to evaluate and budget finances and time accordingly

Timeframe:

Ongoing

Section 4 – Department Staffing & Related Programs

Section 4: Department Staffing

Within the scope of work noted in the original Request for Proposal document, staffing needs was identified as a priority in which EMT is to review the capabilities of existing staffing and identify future needs for each of the following divisions: Suppression, Training, Prevention and Administration.

When considering the overall staffing needs for the Department, some of the key questions that should be considered are:

- Is there a proper level of senior staff to manage the Department and its divisions?
- Is there adequate administrative support staff to assist with such things as records management and addressing day-to-day operations of the Department?
- Is there a need for other support staff in relation to vehicle and facility maintenance?
- When does a Fire Department switch to a full-time fire service, no longer dependent on response support from Volunteer Firefighters?

This section will discuss the following divisions:

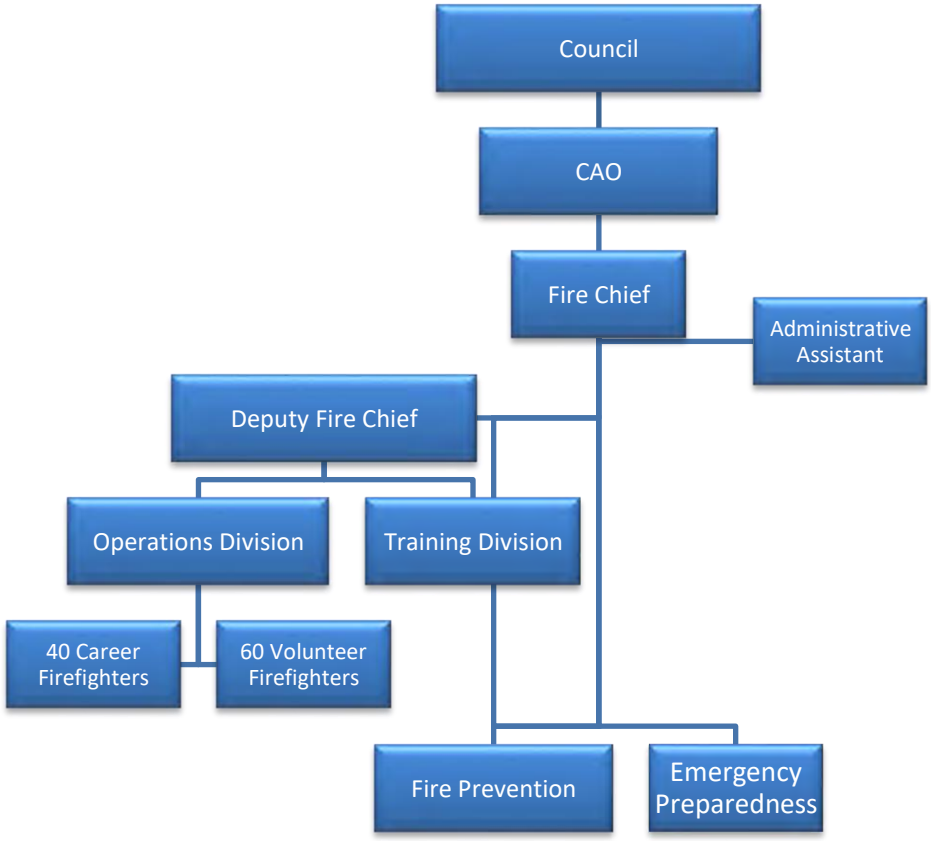
- Administration
- Training
- Fire Prevention, and
- Fire Suppression

Fire Department Organizational Overview

The Fire Chief of the Georgina Fire Department reports to the Town's Chief Administrative Officer (CAO) in a council-manager style of government. The Fire Chief serves as the head of the Fire Department and is supported by:

- Deputy Chief
- One Full Time and one Part Time Administrative Assistant
- A Training Officer, and
- Fire Prevention Division consisting of one Fire Prevention Office and two Fire Prevention Public Educators

FIGURE 4: Fire Department Organizational Chart - Administration



As previously noted, the Georgina Fire Department organizational chart identifies a present strength of 40 full-time Firefighters, 60 Volunteer Firefighters, and eight Administrative Staff (which includes the Fire Chief, Deputy Fire Chief, Administrative Assistant, Fire Prevention and Training Division).

To make an informed decision on staffing requirements, consideration is dependent on the following points:

- Does the Fire Department have an approved response criterion as a baseline?
    - Has Council given direction to the Fire Chief (based on his recommendations) on expected response times that are to be met by the Fire Department?
    - If so, then is the Department meeting this response criterion on a consistent basis or is it struggling to meet the response times and perhaps falling behind?
- Does the Department have issues/concerns with getting enough Volunteer Firefighters to respond during day time hours (or other times) on a consistent basis to ensure a viable level of response (this is a key question for the Pefferlaw fire station as it is dependent on Volunteer Firefighters for response to this area)?
    - Even though the Sutton station can send a full-time crew to the Pefferlaw area in most cases, what are the response times and Volunteer compliment when Sutton is not available to respond?
- What local and national standards and guidelines exist to help direct the Fire Department in its decisions relating to station location and staffing models?

- Specifically, NFPA 1710 and 1720 along with reference to the CFAI "industry best practices" recommendations.

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

For Fire Departments in Ontario, there are the Public Safety Guidelines that are created and distributed by the Office of the Fire Marshal and Emergency Management. These Guidelines advise fire services in relation to all aspects of delivering Fire Prevention, Fire Suppression and fire station location programs.

There are also industry best practices in the form of the National Fire Protection Association's 1201, 1710 and 1720 standards, which guide:

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

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

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

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

NFPA 1710 and 1720 – Career and Volunteer Fire Departments

As for the 1710 and 1720 standards;

- NFPA 1710 In relation to the career Firefighter component, chapter 4 notes, the expectation is that the crew is able to:
  - turnout (respond) from the station within 80 seconds, 90 percent of the time;
  - 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.
- NFPA 1720 for Volunteer Fire Departments, chapter 4, notes the following for the deployment of Volunteer Firefighters:
  - 4.3.1 notes the following; "the Fire Department shall identify minimum staffing requirements to ensure that a sufficient number of members are available to operate

safely and effectively.

- *In Urban areas (population greater than 1000 per square mile), there should be a minimum response of **15 staff within 9 minutes**, 80 percent of the time*
- *In Suburban areas (population of 500 – 1000 per square mile), there should be a minimum response of **10 staff within 10 minutes,** 80 percent of the time*
- *In Rural areas (population of less than 500 per square mile), there should be a minimum response of **6 staff within 14 minutes,** 80 percent of the time."*

To accomplish this, as noted in the NFPA Standards, the Fire Department should endeavour to meet the stated minimum response standards based on responding to a 2000 sq. ft. single family dwelling. The dwelling (noted in the Standard) does not have a basement or other exposures (buildings close enough to each other to create a greater possibility for fire spread). However, most homes in Georgina have basements and are built close enough to each other to create that "exposure" for potential fire spread, which must be considered by the Fire Department in its response efforts.

Presently, GFD is diligently working at meeting this standard in relation to population verses staff/response times. Based on response data review and discussions with the Fire Chief, GFD 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.

So, one question that is posed in situations like GFD, who are a composite mix of full time and volunteers, 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, what the turnout is based on the time of the day and day of the week (e.g. Volunteer availability day shift vs. night shift), etc. Volunteers must be provided with the same minimum training certifications and equipment. Recruitment and retention of Volunteers is becoming more of a challenge with the increasing training that they must commit to on an annual basis and high staff turnover with many younger Volunteers actively looking for full-time Firefighting careers.

Some composite Fire Departments have identified where to focus additional career Firefighters by identifying call volume, growth of the community, and, more specifically, what times of the day were the most challenging for Volunteer Firefighter responses. As with most Fire Departments, the day time hours from Monday to Friday are the greatest challenge for the volunteer component due to fact that most Volunteer Firefighters are either at work, school or taking care of family during the day time hours. As such, some departments initially focus a full-time component that works Monday to Friday. However, as noted, GFD has 24/7 coverage at two of its fire stations – Keswick and Sutton. It is the Pefferlaw fire station that is in need of this regular review and

consideration.

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 Volunteer Firefighters must arrive at the station before the fire truck can respond, then this should be monitored along with how many times, a station is not able to muster up the needed personnel to have an effective response force. This type of monitoring would be more suitable to the Pefferlaw fire station as this is a fully Volunteer station.

In summary, going to a completely full-time service is a large cost to the community and this is why many communities have accomplished this in stages to meet the present needs of the community. Georgina's model of a composite fire department is a very cost-effective form of fire protection for a community of its size.

4.1 Administration Division

During EMT's evaluation of GFD, it was identified within the previous Fire Master Plan that more administrative staff were recommended, over and above the one Administrative Assistant that was presently on staff. Since that time (of the previous FMP) a part time Administrative Assistant has be brought onto the staff roster. However, with the growth of the Department, along with the ongoing demands for more accurate records management, fire prevention programs and internal training needs, it would appear that transitioning this part time position into a full time Administrative Assistant position is needed.

4.1.1 Commission on Fire Accreditation International

The CFAI Accreditation program has a specific section that evaluates the administration component of a Fire Department. In this section the following points are noted:

Category 9C: Administrative Support and Office Systems

Administrative support services and general office systems are in place with adequate staff to efficiently and effectively conduct and manage the agency's administrative functions, such as organizational planning and assessment, resource coordination, data analysis/research, records keeping, reporting, business communications, public interaction, and purchasing.

With all this in mind, it was noted during creating of the FMP that there is a total of 3 full-time administrative staff, which include the Fire Chief, Deputy Fire Chief and one full-time Administrative Assistant. There is also one part-time Administrative Assistant. Due to the size of the GFD, it was discovered that the administrative staff are challenged to meet the daily demands of the Department, along with ensuring that all Departmental data and documents are kept up to date. As such, it is recommended that for the immediate future, the part-time Administrative Assistant hours be increased to full-time status.

ESCI UPDATE: (2022):

Presently full- time administration staff includes:

- Director of Emergency Services - Fire Chief
- A Deputy Fire Chief of Operations
- A Deputy Fire Chief of Fire Prevention, Investigations and Community Risk
- One full-time Administrative Coordinator
- One full-time Administrative Assistant

Non-Operational staff include:

- A Training Officer, and
- Fire Prevention Division consisting of one Fire Prevention Officer and two Fire Prevention Public Educators

The total Firefighting force for the Fire Suppression/Operations Division consists of:

- Full-time firefighting force of forty
- Volunteer firefighting force of sixty, which equates to twenty per station. While Georgina is authorized sixty volunteer positions, recently they have struggled to recruit and retain these volunteer ranks. The diminishing pool of available volunteers reflects a trend seen throughout the region and nation.

With a ratio of forty career to sixty paid-on-call firefighters, GFRS does not comply with the definition of a volunteer fire department and is considered a composite fire department which it will remain at until career staff makes up eighty-five percent of the total workforce. With this new definition, elements of the NFPA 1710 standard can be considered as viable performance standards.

Modernization:

In composite fire departments, there are two approaches to performance standards. The first is to have a single standard that takes into consideration that part of the firefighting force will be coming as a paid-on-call force and consequently that is factored into a performance standard. For example, if the national standard for an ERF (effective response force) is to completely arrive within eight minutes, then including a composite factor may change that to ten minutes.

The second approach is to have a performance standard that applies to the career portion of the department and a separate performance standard that applies to the paid-on-call portion of the department with both being routinely evaluated. An example here would be that turnout

times for career staff must be within ninety seconds of the dispatched call. Turnout times for the volunteer staff could be a vehicle staffed with 2 firefighters must be responding within five minutes of dispatch.

A challenge that often occurs is that capabilities become the exclusive driver of response model selection rather than multiple drivers that include risk. In other words, rather than consider a response model change, it can be easier to just reduce performance standards to meet what is currently capable of being providing. The problem is not in having performance standards meet capabilities but in the lack of considering alternate response models before the performance standard is reduced.

Recommendation #12 - Performance standards:

ESCI recommends GFRS should adopt performance standards that are consistent with community expectations and costs that would require incremental improvements of service delivery.

Cost:

GFRS staff to evaluate and budget finances and time accordingly

Timeframe:

Short term (0 – 2 yrs)

Following the 2016 FMP, Georgina's training officer and administration completed its internal review of its training program. Georgina provides a robust training program to its members. Training ranges from online, to classroom to manipulative. Topics include various sub-disciplines within suppression, rescue, EMS, and administration. Full-time members receive on average 324 hours of training each year. Volunteer members receive approximately seventy-two hours of training per individual annually. Training includes multi-company drills, night drills, and multi-agency drills. An annual training plan is developed and presented to the Fire Chief for approval.

The most challenging area for training is the lack of training facilities. Station bays and classrooms are the only regularly available locations. Only two of the three stations have classroom space. Live fire props must be rented, and no dedicated training ground is provided.

Part of the Joint Fire Services review is to continue the 2016 recommendation of exploring a partnership opportunity to build a training facility within the capture area, which would be a cost effective measure for regional fire departments.

4.2 Training and Education Division

A fire service is only capable of providing effective levels of protection to its community if it is properly trained (and equipped) to deliver these services. Firefighters must be prepared to apply a diverse and demanding set of skills to meet the needs of a modern fire service. Whether assigned to Communication, Administration, Fire Prevention or Fire Suppression, Firefighters must have the knowledge and skills necessary to provide reliable fire protection.

GFD has one full-time Training Officer who is responsible for identifying the training needs of the suppression staff based on industry requirements. The Training Officer is responsible for planning and tracking the training of both full time and volunteer Firefighters.

During EMT's review of the Training and Education Division it was noted that the Training Officer is very active in relation to ensuring that all required training programs are being addressed to the best of the Department's ability. However, it was noted that the Department does lack a proper training facility to conduct regular hands-on programs such as live fire training and other specialized programs that require more training props outside of those available at the fire station. The Sutton fire station does have an area out back of the building where some auto extrication training can take place but since this area is part of a public parking lot and not secured within a fenced off area, there is a safety concern for the public.

NFPA 1201 – Providing Fire and Emergency Services to the Public notes in relation to training and professional development that:

4.2.1 Purpose.

The Fire & Emergency Services Organization shall have training and education programs and policies to ensure that personnel are trained and that competency is maintained in order to effectively, efficiently, and safely execute all responsibilities.

Presently, the Training Officer is aware of the program needs and facility requirements and has indicted that he is tracking much of this. However, to verify in a more formal manner that the Training Division is meeting the related NFPA program recommendations, the Training Officer should identify;

What training programs are required in relation to the services that GFD is providing

The number of hours that are required to meet each of those training needs

Resources required to accomplish this training

Joint partnerships with bordering fire departments and private organizations that can be entered into to achieve the training requirements identified by the Training Officer, and

To present an annual program outline at the start of each year to the Fire Chief, with noted goals and expectation, which are measured and reported on in relation to completion success rate at the end of each year.

4.2.2 Commission on Fire Accreditation International

The CFAI Accreditation program has a specific section that evaluates the training component of a Fire Department. In this section the following points are noted:

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

Based on EMT's review, it is recommended that GFD continue to search out opportunities to conduct joint training programs with other fire departments by securing/scheduling neighboring training facilities. It is also recommended that GFD explore the opportunity to build a training facility within the capture area, which would be a cost-effective measure for all of the departments.

4.3 Fire Prevention and Public Education

Fire prevention and public education are number one in relation to the three lines of defence as noted by the Office of the Fire Marshal and Emergency Management. As such, fire prevention and public education should be seen as a priority.

NFPA 1730 is the standard relating to Fire Prevention and Public Education. This document makes note of the expectations of the division and also offers offer a formula for the head of fire prevention to utilize.

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

- Demographics
- Geographic overview
- Building stock
- Fire experience
- Responses
- Hazards
- Economic profile

4.3.1 Determination of Current Staffing Requirements

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, taking into account 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 include clearly identifying the number of public education events including the numbers of adults and children reached. 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.

Further to what has already been noted by the NFPA, the CFAI outlines the following in relation to fire prevention and public education:

- A public education program is in place and directed toward reducing specific risks in a manner consistent with the agency's mission and as identified within the community risk assessment and standards of cover. The agency should conduct a thorough risk-analysis as part of activities in Category 2 to determine the

need for specific public education programs.

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

As such, at this time, GFD should move towards the training and certification of its Fire Officers in the areas of fire prevention and public education trained and certified to at least:

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

4.4 Recruitment and Retention of Volunteer Firefighters

Georgina 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, it is simply a reflection of the need for many of these Firefighters to move to other communities for work, educational 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 in an effort 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 staff to become more involved in; such things as:

- Long service awards in the form of remuneration or a stipend
- Education assistance programs to support the in their professional development
- Increased training opportunities

All of these concepts are great, but have limited effect if the community is not offering the desired employment, education or housing needs of the Firefighters.

Recommendations

9. It is recommended that the present part-time Administrative Assistant position be transitioned into a full-time position.
10. It is recommended that to verify the Training Division is meeting related NFPA (and other) training program recommendations, the Training Officer should identify;
    - What training programs are required in relation to the services that GFD is providing
    - The number of hours that are required to meet each of those training needs
    - Resources required to accomplish this training

- Joint partnerships with bordering fire departments and private organizations that can be entered into to achieve the training requirements identified by the Training Officer, and
- To present an annual program outline at the start of each year to the Fire Chief, with noted goals and expectation, which are measured and reported on in relation to completion success rate at the end of each year.

11. It is recommended that GFD continue to search out opportunities to conduct joint training programs with other fire departments by securing/scheduling neighboring training facilities whenever possible.
12. It is recommended that GFD explore the partnership opportunity to build a training facility within the capture area, which would be a cost-effective measure for all of the fire departments.
13. It is recommended that greater utilization of the full-time Fire Officer resources be incorporated into an annual fire prevention program on a more formal basis. To accomplish this, all full-time officers should be trained and certified to at least:

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

    By having all full-time Officers trained to the noted levels, GFD will have a greater number of resources to draw upon in its public fire safety education and inspection programs.
14. Succession planning for Fire Prevention and Training Division personnel should be addressed to ensure trained personnel are ready to take over when the existing personnel retire.
15. The Fire Chief should investigate opportunities to promote retention of the Volunteer Firefighters as noted in the OFMEM document. The Fire Chief should continually recruit for Volunteer Firefighters in areas that are presently understaffed or have issues with response numbers to calls.
16. The Department should complete certification for staff for each position (that requires or recommends certification) and ensure that certifications are maintained.

Associated Costs *(all costs are approximate)*

- For the Administrative recommendation, the cost would be in relation to the increase in staffing hours from the part-time to full-time level – estimated to be approximately $30,000
- Regarding the training related recommendations, the costs are mostly related to staff hours unless outside facilities or trainers need to be accounted for
- No identified costs at this time in relation to the retention of Volunteer Firefighters. Costing would be based on what is recommended by the Fire Chief, costs could be incurred.

Timelines

- Short Term (1-3 years) – ongoing for all of the noted recommendations within this section except for 16
- Mid-Term (4-6 years) for recommendation 16.

ESCI UPDATE: (2022)

There are some additional questions that an organization can ask internally as to whether or not resources are adequate. It begins with identifying the appropriate levels of service to be provided to the community. These items should be reviewed on an annual basis.

- Is there a proper level of senior staff to manage the Department and its divisions?
- Is there adequate administrative support staff to assist with such things as records management and addressing day-to-day operations of the Department?
- Is there a need for other support staff in relation to vehicle and facility maintenance?
- When does a Fire Department switch to a full-time fire service, no longer dependent on response support from volunteer firefighters?
- Does the Fire Department have an approved response criterion as a baseline?
- Has Council given direction to the Fire Chief (based on his recommendations) on expected response times that are to be met by the Fire Department?
- If so, is the Department meeting this response criterion on a consistent basis or is it struggling to meet the response times and perhaps falling behind?
- Does the Department have issues/concerns with getting enough volunteer firefighters to respond during daytime hours (or other times) on a consistent basis to ensure a viable level of response?
- What local and national standards and guidelines exist to help direct the Fire Department in its decisions relating to station location and staffing models - specifically, NFPA 1710 and 1720 along with reference to the CFAI “industry best practices” recommendations?
- What growth or decrease in population and industry is occurring that may precipitate more or less fire stations and staffing?

ESCI calculates that an appropriate number of non-operational staff is ten to fifteen percent of the total Operational force. For example, if a fire department has one hundred career line firefighters, the department should have a non-operations force of ten to fifteen people.

In the case of Georgina, GFRS reports an operational staffing of 40 career firefighters, 60 volunteer firefighters, five administration staff, one training officer and three fire prevention staff. For the purpose of resource calculations only, various studies have reported a volunteer ratio equivalence to career firefighter of anywhere from 3:1 to 5:1 meaning three to five non-career firefighters count for one career firefighter. Using the middle of 4:1 puts the total operational force at 55 firefighters (40 + (60/4)) = 55. 10-15% of 55 is 6 to 8 non-operations staff. This shows that GFRS could have room for expansion in the administrative ranks provided the need is displayed.

A second calculation option is to use the methodology in outlined in the Fire Prevention part of this section but substitute administrative elements rather than fire prevention in steps 2 and 3 of the process. This calculation yields a personnel demand independent of operations staffing but more tied to exact workloads.

Recommendation #13 - Annual service review:

ESCI recommends GFRS should continue annual reviews of service provision involving all stakeholders.

Cost:

GFRS staff to evaluate and budget finances and time accordingly

Timeframe:

Ongoing

Section 5 – Fire Suppression/Dispatching

Section 5: Fire Suppression/Dispatching

5.1 Fire Suppression/Emergency Response

National Fire Protection Association (1710 and 1720)

To provide the Fire Department clearer focus on what the ultimate goals for emergency response criteria are, the National Fire Protection Association (NFPA) suggests that response times should be used as a primary performance measure in Fire Departments.

When considering the response times and related needs for a community, the fire response curve (FIGURE 3) presents the reader with a general understanding of how fire can grow within a furnished residential structure over a short period of time.

Depending on many other factors, the rate of growth can be affected in many different ways, which can increase the burn rate or suppress it through fire control measures within the structure.

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

- The distance between the Fire Department and response location
- The layout of the community
- Impediments such as weather, construction, traffic jams, lack of direct routes (rural roads)
- Notification time
- Assembly time of the Firefighters, both at the fire station and at the scene of the incident
    - Assembly time includes dispatch time, turnout time to the fire station and response to the scene. It should be noted that assembly time can vary greatly due to weather and road conditions, along with the time of day as many Firefighters are at their fulltime jobs and cannot respond to calls during work hours.

As noted in the following fire propagation diagram (or any other related diagram or fire spread data), the need for initiating fire suppression activities as soon as possible is critical.

It must also be noted that GFD responds to more than just fires; for example, motor vehicle collisions can create a medical or fire emergency that needs to be dealt as soon as possible. Hence the reason to be as efficient and effective as possible in responding to calls for assistance.

Figure 4: Fire Response/Propagation Curve

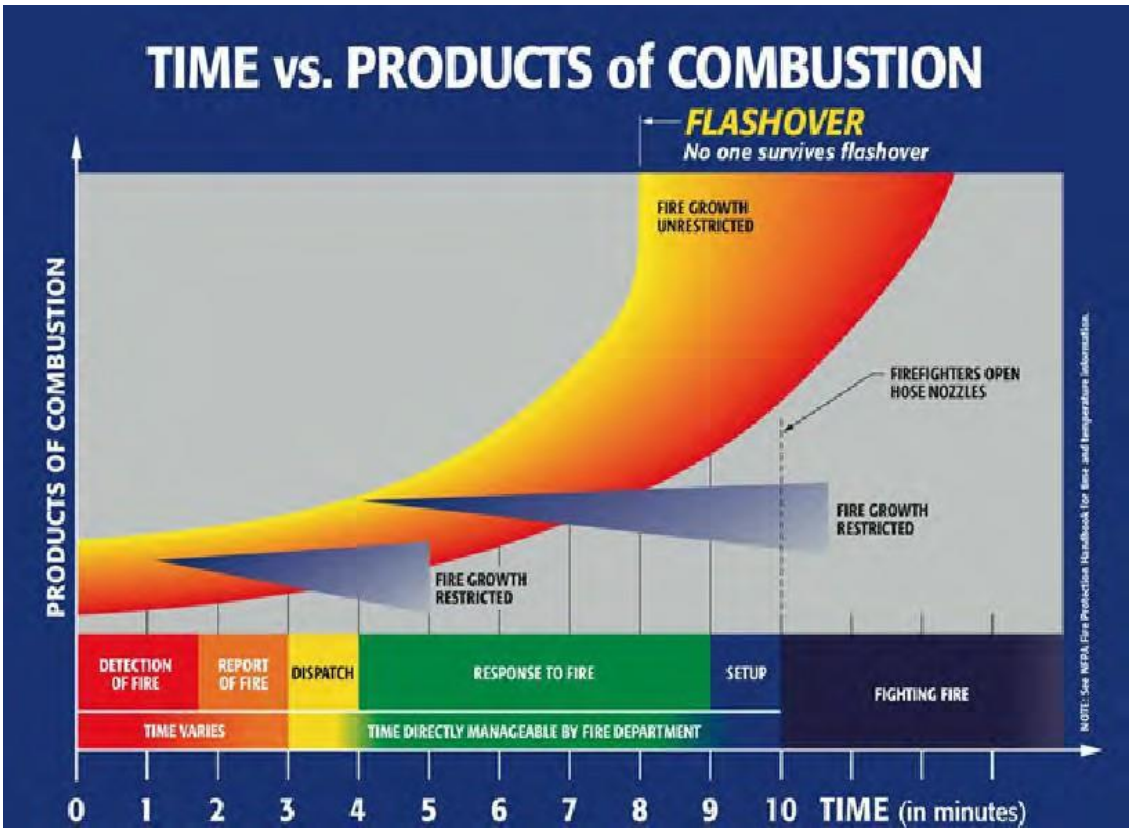


Figure 4 notes the following time variables,

- Detection of fire – this is when the occupant discovers that there is a fire. The fire may be in a very early stage or could have been burning for quite some time before being detected
- Report of fire – this is when someone has identified the fire and is calling 911 for help
- Dispatch – the time it takes the dispatcher to receive the information and dispatch the appropriate resources
- Response to the fire – response time is a combination of the following:
    - Turnout time – how long it takes the career Firefighters to get to the fire truck and respond or how long it takes the Volunteer Firefighters to get to the fire station to respond on the fire truck
    - Drive time – the time from when the crew advises dispatch that they are responding, until the time that they report on scene
    - Setup time – which is the time it takes for the fire crews to get ready to fight the fire, and
    - Fighting the fire – actual time on scene it takes to extinguish the fire.

Based on fire growth as demonstrated in figure 4, and the previously noted associate timelines, the overall goal of any fire department is to arrive at the scene of the fire and/or incident as quickly and as effectively as possible. In other words, if a fire truck arrives on scene in eight minutes or less, with a recommended crew of four or more Firefighters then there is increased opportunity to contain the fire by reducing further spread of the fire to the rest of the structure.

However, if the first arriving fire attack team arrives with only three Firefighters on board, then it is limited to what operations it can successfully attempt. Based on studies and evaluations conducted by the National Institute of Standards and Technology (NIST), the NFPA and Ontario Firefighter Health and Safety Section 21 Guidelines, no interior attack should 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 team of 4 can effectively do an assessment of the scene, secure a water source (fire hydrant), ensure the fire truck is ready to receive the water and get the fire pump in gear, and finally to unload and advance the fire hose in preparation for entry into the structure. A team of four also allows for adherence to the recommended "two-in, two-out" rule. Which means that when two Firefighters go into the structure, there are two outside ready to go in as back up.

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 to such incidents. To accomplish this, a response protocol is in effect that ensures whenever a station and its Firefighters are dispatched to any type of call where back-up may be required, another station is automatically dispatched to the same incident.

Response Data

The following charts identify a comparison of response types and the response breakdown among the three fire stations for 2015. *To view the 2013 and 2014 data, refer to Appendix "E".*

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.

The Georgina Fire Department response times are calculated based on the OFMEM definition which is from "dispatch time, to time of arrival at the incident". In other words, from the time the fire station or pager tones activate, to the time it takes to get to the fire station, get on the fire truck and drive to the emergency scene location. This response time does not include the time it takes to receive and dispatch the actual call.

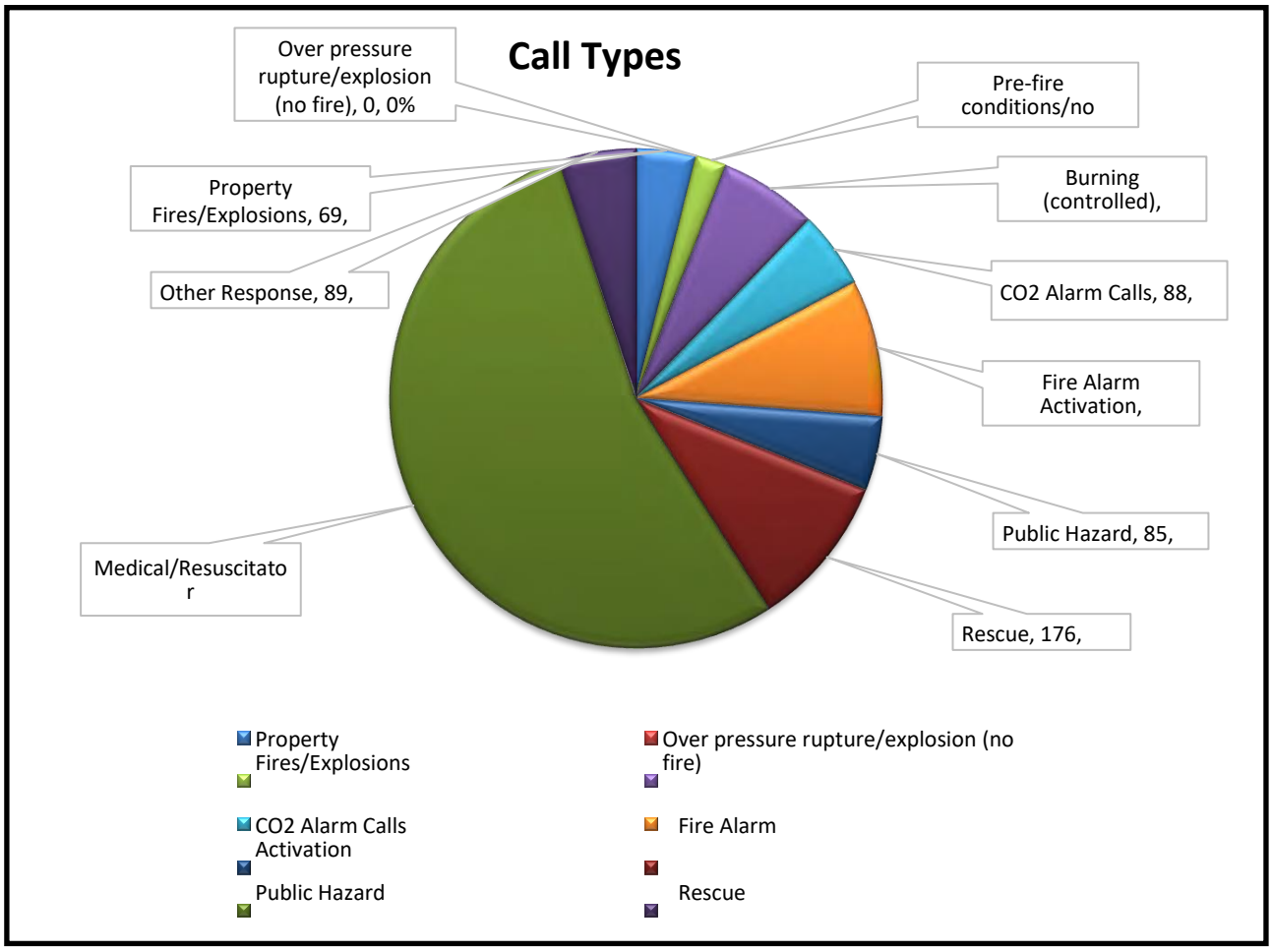
As already noted, fire department response time is a function of various factors including, but not limited to:

- The distance between the Fire Department and response location
- The layout of the community
- Impediments such as weather, construction, traffic, road networks
- Notification time
- Assembly time of the Firefighters, both at the fire station and at the scene of the incident
- The following set of charts (through the use of 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: The following charts may not reflect the full amount of calls that the Fire Chief has noted to Council in a report. This is due to the following points:

- ***In order to get a more accurate accounting of response times, some of the calls were removed from the data analysis due to identified anomalies in time stamping. For example, if an emergency response time was noted as taking hours, then it was removed based on the assumption of a data entry error***
- ***Also, only the emergency responses were measured, which is the recommended practice noted by the NFPA and the Commission of Fire Accreditation International(CFAI)***
    - ***For example, a Department may have noted a total of 2,500 calls for service for the noted year. However, only 2,000 of those calls were emergency responses.***

FIGURE(S) 5: Comparison of Calls and Response Data between Fire Stations



As can be seen in the above chart, the top three types of calls that GFD responds to are:

- Medical/resuscitator, which accounts for 54% of the Department's overall responses
- Rescue related calls, which account for 10% of the Department's overall responses, and
- Fire alarm activations, which account for 9% of the Department's overall response.

Based on this information, the percentage comparison gives the Fire Chief and his staff the ability to monitor where the bulk of their resources are being utilized. This also offers greater focus for the Training Division to ensure that the Firefighters are receiving training related to the types of responses that will demand a higher skill set.

The following chats are a comparison of calls for service by fire stations 1-4, 1-6 and 1-8. The charts will note:

- Total calls per year by fire station
- An overview of the 2015 call breakdown
- The 90th percentile numbers for travel times and total response times

Note:

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

- ***9 out of 10 times the fire department arrives on scene in 8 minutes or less. Which means that only 10 percent of the time they are above that 8-minute mark,***
- ***as opposed to 5 out of 10 times the fire department arrives on scene in 8 minutes or less. Which means that 50 percent of the time they are above the 8-minute mark.***
- ***Travel Time is the time tracked from when the fire vehicle has left the station until arrival at the incident location.***
- ***Response time is the total time from receipt of call (on 911) to the time the fire vehicle arrives at the incident location.***

Yearly Comparisons of Calls for Stations 1-4, 1-6 and 1-8 for the years of 2013, 2014 and 2015

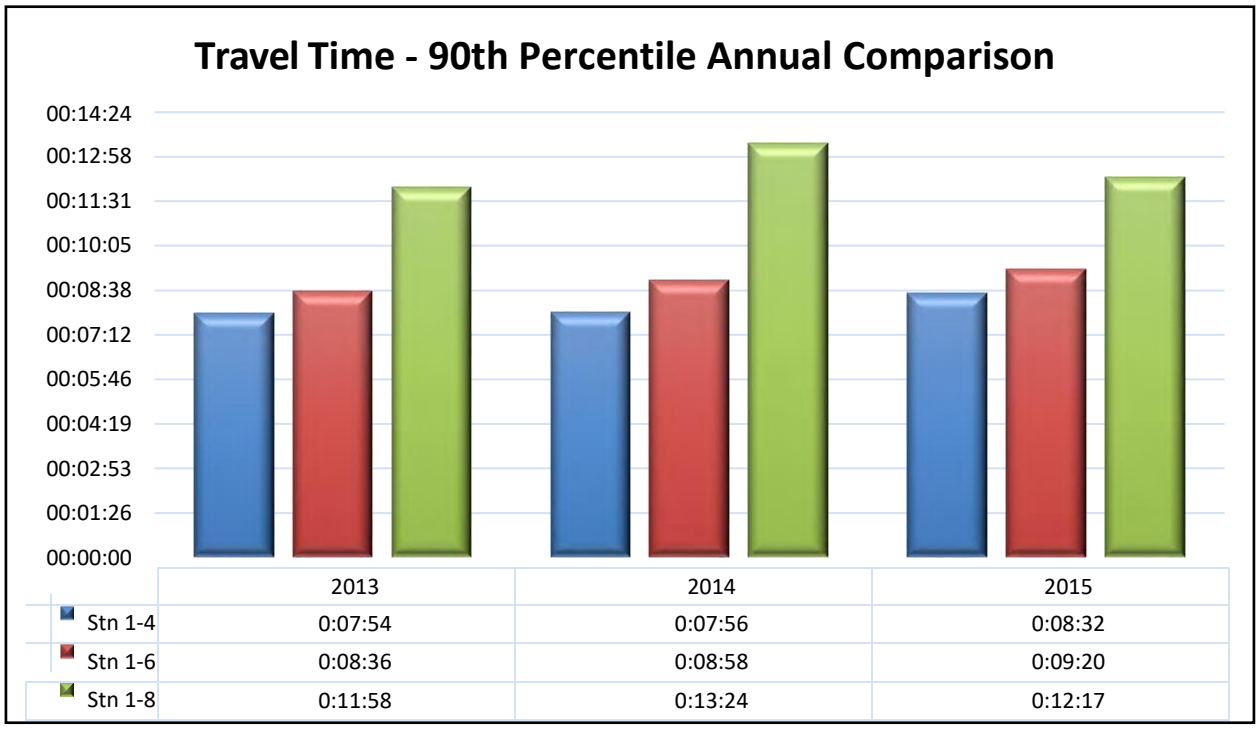
	2013		2014		2015	
	Stn 1-4	% of Calls	Stn 1-4	% of Calls	Stn 1-4	% of Calls
Property Fires/Explosions	34	3.43%	29	3.15%	29	2.93%
Over pressure rupture/explosion (no fire)	0	0.00%	0	0.00%	0	0.00%
Pre-fire conditions/no fire	23	2.32%	26	2.83%	19	1.92%
Burning (controlled)	35	3.53%	40	4.35%	53	5.35%
CO2 Alarm Calls	45	4.54%	47	5.11%	57	5.75%
Fire Alarm Calls	86	8.67%	80	8.70%	87	8.78%
Public Hazard	41	4.13%	44	4.78%	52	5.25%
Rescue	62	6.25%	85	9.24%	100	10.09%
Medical/Resuscitator Call	599	60%	513	55.76%	547	55.20%
Other Response	67	7%	56	6.09%	47	4.74%
Total Emergency Calls	992	100.00%	920	100.00%	991	100.00%

	2013		2014		2015	
	Stn 1-6	% of Calls	Stn 1-6	% of Calls	Stn 1-6	% of Calls
Property Fires/Explosions	27	3.88%	12	1.93%	30	4.67%
Over pressure rupture/explosion (no fire)	0	0.00%	0	0.00%	0	0.00%
Pre-fire conditions/no fire	15	2.16%	7	1.13%	15	2.34%
Burning (controlled)	28	4.02%	52	8.37%	49	7.63%
CO2 Alarm Calls	22	3.16%	17	2.74%	28	4.36%
Fire Alarm Calls	60	8.62%	75	12.08%	64	9.97%
Public Hazard	28	4.02%	32	5.15%	20	3.12%
Rescue	76	10.92%	44	7.09%	60	9.35%
Medical/Resuscitator Call	408	59%	357	57.49%	339	52.80%
Other Response	32	5%	25	4.03%	37	5.76%
Total Emergency Calls	696	100.00%	621	100.00%	642	100.00%

	2013		2014		2015	
	Stn 1-8	% of Calls	Stn 1-8	% of Calls	Stn 1-8	% of Calls
Property Fires/Explosions	6	4.58%	8	6.45%	10	7.52%
Over pressure rupture/explosion (no fire)	0	0.00%	0	0.00%	0	0.00%
Pre-fire conditions/no fire	10	7.63%	2	1.61%	2	1.50%
Burning (controlled)	4	3.05%	2	1.61%	11	8.27%
CO2 Alarm Calls	4	3.05%	4	3.23%	3	2.26%
Fire Alarm Calls	1	0.76%	9	7.26%	5	3.76%
Public Hazard	11	8.40%	3	2.42%	13	9.77%
Rescue	25	19.08%	10	8.06%	16	12.03%
Medical/Resuscitator Call	62	47%	76	61.29%	68	51.13%
Other Response	8	6%	10	8.06%	5	3.76%
Total Emergency Calls	131	100.00%	124	100.00%	133	100.00%

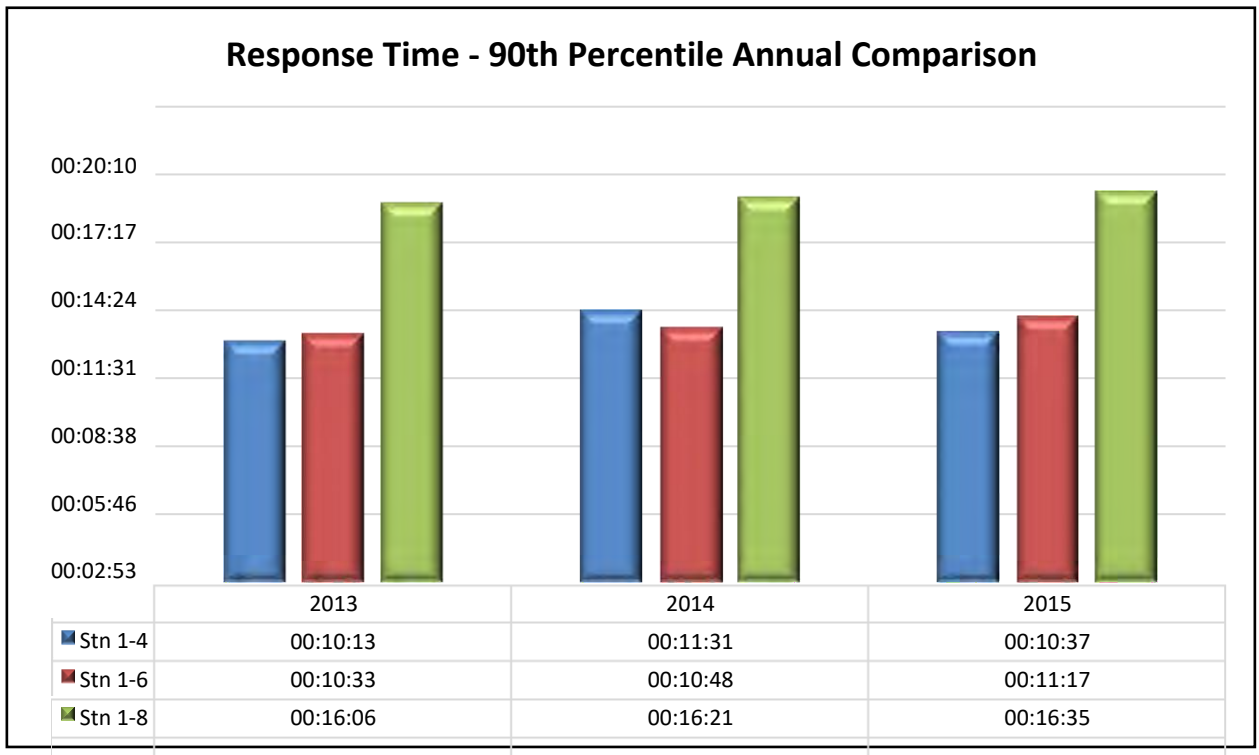
Emergency Calls	1819	88.82%	1665	85.43%	1766	86.44%
Non-Emergency Calls	229	11.18%	284	14.57%	277	13.56%
Total Combined Calls	2048	100.00%	1949	100.00%	2043	100.00%

Yearly Comparisons of 90th Percentile Travel Times for Stations 1-4, 1-6 and 1-8 for the years of 2013, 2014 and 2015

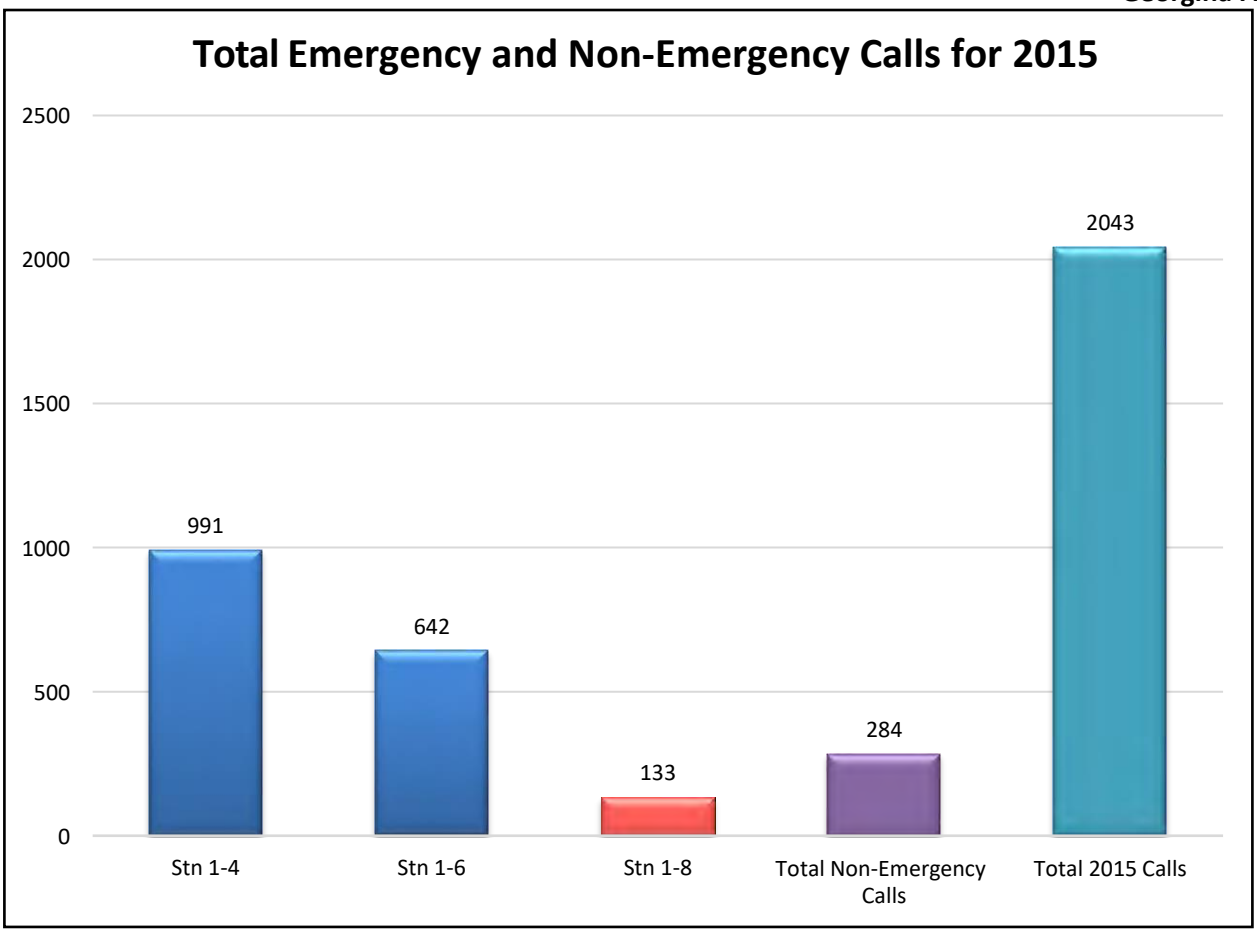


	2013	2014	2015
Stn 1-4	0:07:54	0:07:56	0:08:32
Stn 1-6	0:08:36	0:08:58	0:09:20
Stn 1-8	0:11:58	0:13:24	0:12:17

Yearly Comparisons of 90th Percentile Response Times for Stations 1-4, 1-6 and 1-8 for the years of 2013, 2014 and 2015



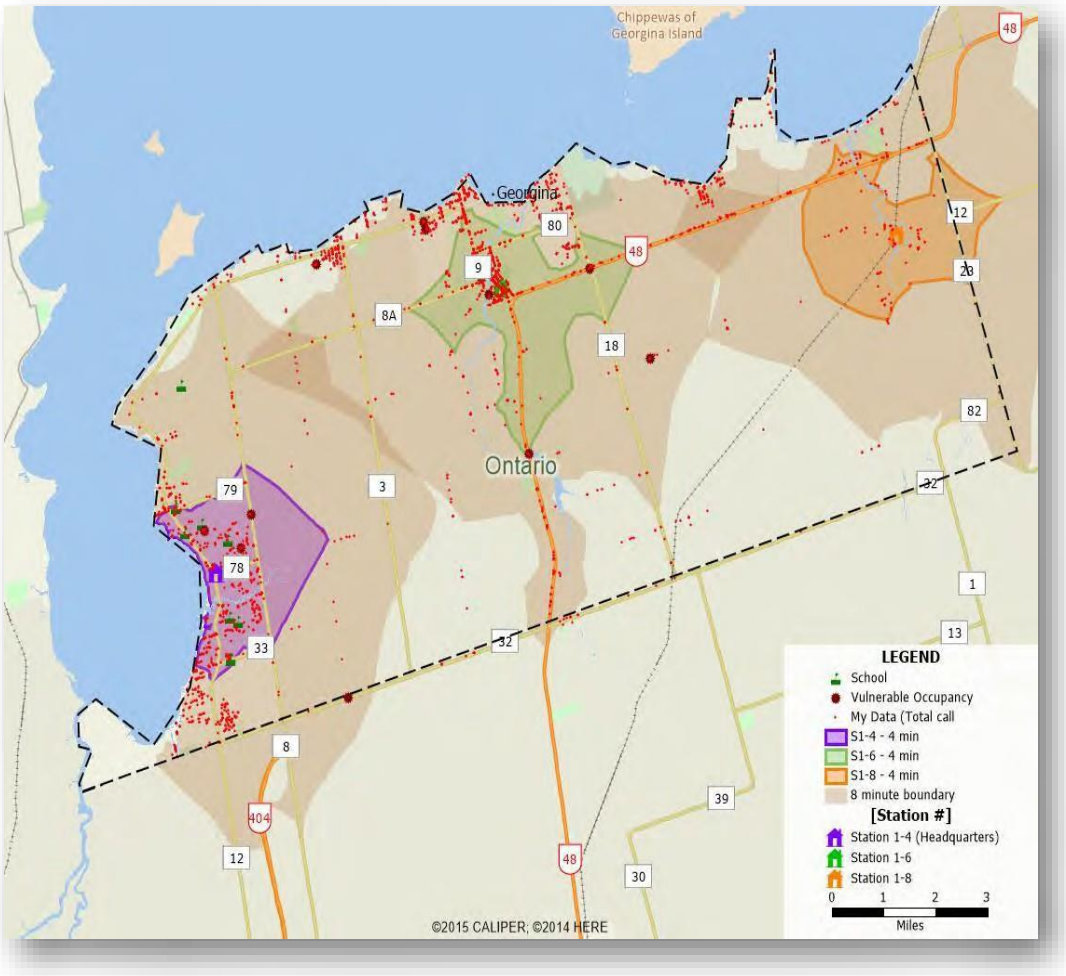
	2013	2014	2015
Stn 1-4	00:10:13	00:11:31	00:10:37
Stn 1-6	00:10:33	00:10:48	00:11:17
Stn 1-8	00:16:06	00:16:21	00:16:35



Note: Similar data and charts for 2013 and 2014 can be found Appendix "E"

Another useful tool is to pinpoint where the bulk of the emergency responses are occurring. This 'clustering' of responses will help to identify where the majority of calls are occurring, which will indicate if the present fire station locations are properly positioned, or is there a shift in call locations that would suggest the possible need for the relocation of a fire station.

Figure 6: Call Clustering Map



This call cluster map plots the location of the fire calls. The map shows a number of calls in the north and south end of Keswick that are outside of the four (4) minute response zone. With planned residential, commercial, and industrial development in the south end, the demand for fire responses will continue to grow in this area. The map also identifies that there is a larger density of calls along the waterfront area in the Sutton region.

5.2 Service Level Standards – Dispatching Services

Georgina Fire Department receives its dispatching services from the Richmond Hill Fire & Emergency Services (RHFES). Based on information received, along with a review of the dispatching data, it would appear that GFD is receiving adequate aid from the RHFES. However, the dispatching agreement has not recently been updated and, as such, a recommendation to review the working agreement is being made.

It was noted that the dispatching agreement was renewed in 2014. However, it is recommended that at the first available opportunity that GFD incorporate the necessary performance measures as per the NFPA 1221 as noted below to ensure a more consistent measure of the dispatching service (in relation to meeting all associated NFPA Standards):

NFPA 1221, Section 7.4 Operating Procedures

7.4.1 Ninety-five percent of alarms received on emergency lines shall be answered within 15 seconds, and 99 percent of alarms shall be answered within 40 seconds. *(For documentation requirements, see 12.5.2.)*

7.4.1.1 Compliance with 7.4.1 shall be evaluated monthly using data from the previous month.

Recommendations

17. The Fire Chief should continue to monitor and evaluate call volumes of the Department on an annual basis along with the level of Firefighter's response per station to identify any areas of concern that may result in recommending the implementation of a partial full-time response component for the municipality.
18. It is recommended that the Fire Chief present a response time criterion for the approval of Council, whether that is the NFPA 1720 – 15 staff in 9-minute rule or the NFPA 1710 standard of four-minute drive time for full-time crews.
19. It is recommended that when possible, the present dispatching agreement with the current dispatch provider be updated to included NFPA related standards for GFD to incorporate the necessary performance measures as per the NFPA 1221 standard.

Associated Costs (all costs are approximate)

- No cost to the monitoring, but staffing costs will increase based on any possible recommendations made by the Fire Chief.
- Based on noted performance measure incorporation into the revised dispatching agreement, some cost may be associated with these changes, but no amount is offered at this time.

Timeline

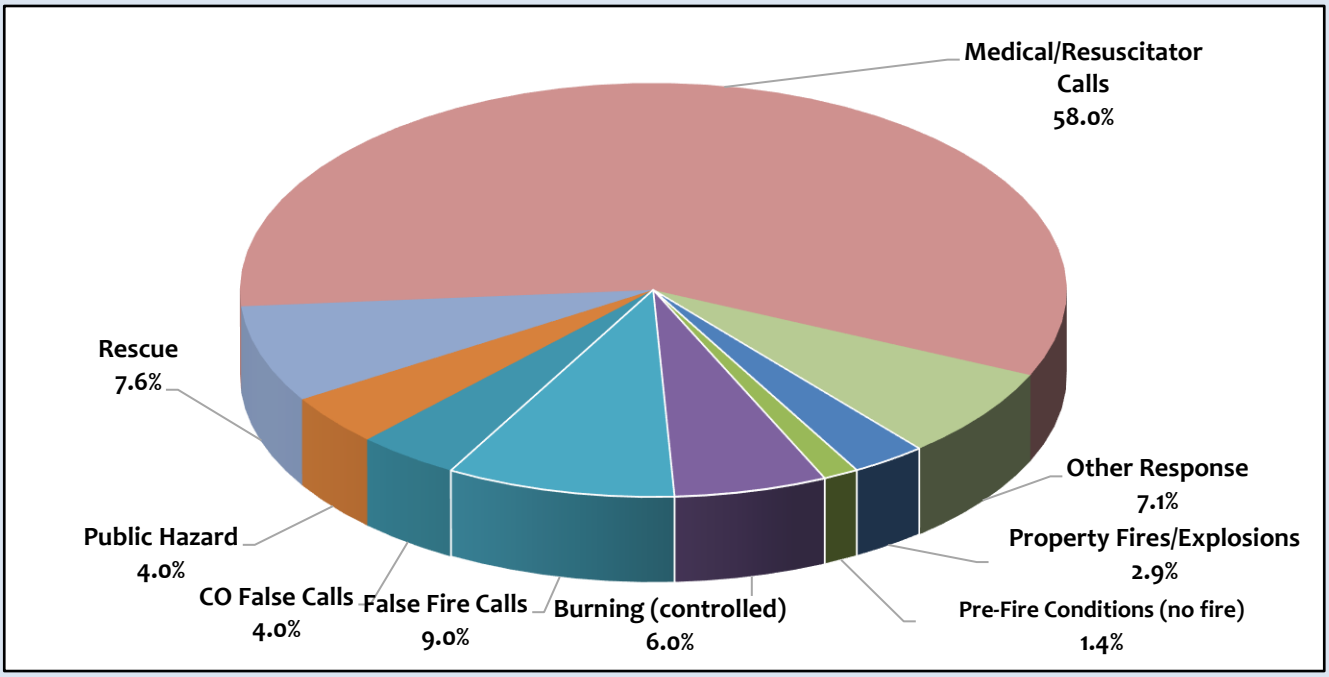
- Immediate and ongoing for response assessments
- Immediate for the presentation and recommendation for a response time criterion
- Immediate with ongoing review of the services provided by RHFD.

ESCI UPDATE: (2022)

Overall, 2019-2021 call data points to a consistent call volume that has 2021 EMS responses at 58.1% of total call volume. Call volume in 2021 was 2,245 versus a call volume in 2015 of 2,043, a 9.9% increase over the 6 yrs. or just over 1% per year. However, as of the time of this report, Georgina was experiencing a 14% increase in call volume from 2021 to 2022. Given the 2015 call volume, it is too early to tell whether this 2022 increase will be a regular rate of change for call volume or if either 2021 or 2022 are aberrant years to be evaluated over a longer period. With a population projection of approximately 75,000 in 2050 (up from 50,000 in 2022), this would be a 25% increase over a roughly 30 year period supporting the concept that, on average, Georgina will continue at a 1% annual population growth rate. While it is unlikely that it will have that predictable growth rate each year, over the larger span of time, this is the rate that can be expected.

Below are updated statistics for the period 2019-2021.

Call Types (2019-2021)



As can be seen in the above chart, the top three types of calls that GFRS responds to are:

1. Medical/Resuscitator Calls, which accounts for 58.0% of the Department's overall responses
2. False Fire Calls which account for 9.0% of the Department's overall responses, and
3. Rescue calls which account for 7.6% of the Department's overall response.

Based on this information, the percentage comparison gives the Fire Chief and his staff the ability to monitor where the bulk of their resources are being utilized. This also offers greater focus for the Training Division to ensure that the firefighters are receiving training related to the types of responses that will demand a higher skill set.

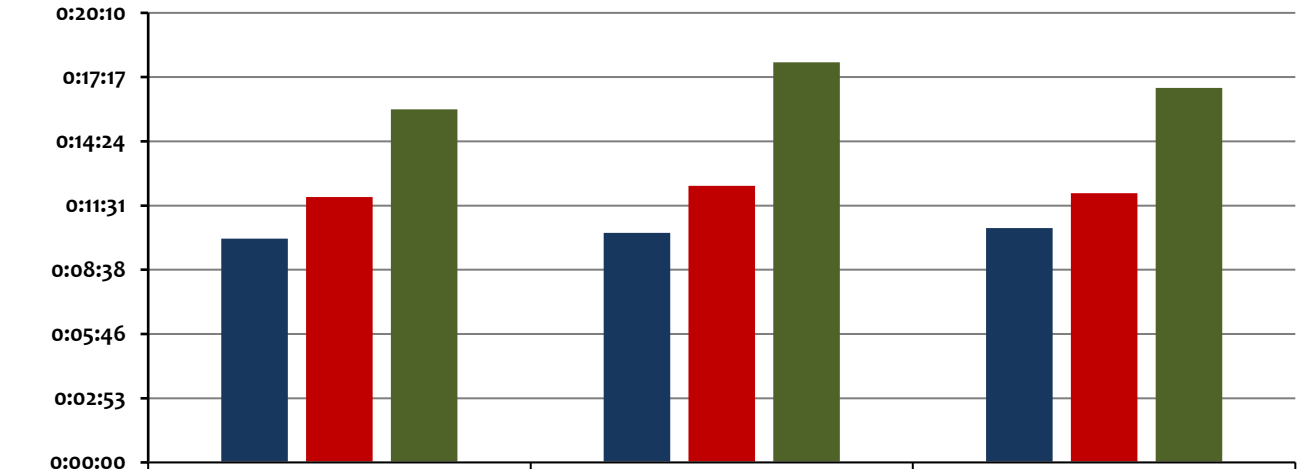
Yearly Comparisons of Station Responses for 2019-2021

	2019		2020		2021	
	1-4	% of Calls	1-4	% of Calls	1-4	% of Calls
Property Fires/Explosions	49	3.72%	44	3.58%	53	3.97%
Over pressure rupture/explosion (no fire)	0	0.00%	0	0.00%	0	0.00%
Pre-fire conditions/no fire	19	1.44%	21	1.71%	16	1.20%
Burning (controlled)	61	4.64%	90	7.32%	69	5.16%
CO Alarm Calls	126	9.57%	95	7.73%	113	8.46%
Fire Alarm Activations	67	5.09%	40	3.25%	60	4.49%
Public Hazard	51	3.88%	48	3.91%	51	3.82%
Rescue	118	8.97%	91	7.40%	97	7.26%
Medical/Resuscitator Call	735	55.85%	716	58.26%	786	58.83%
Other Response	90	6.84%	84	6.83%	91	6.81%
Total Responses	1,316	100.00%	1,229	100.00%	1,336	100.00%

	2019		2020		2021	
	1-6	% of Calls	1-6	% of Calls	1-6	% of Calls
Property Fires/Explosions	44	4.81%	50	5.60%	56	6.13%
Over pressure rupture/explosion (no fire)	0	0.00%	0	0.00%	0	0.00%
Pre-fire conditions/no fire	16	1.75%	25	2.80%	21	2.30%
Burning (controlled)	43	4.70%	66	7.39%	63	6.89%
CO Alarm Calls	121	13.24%	113	12.65%	90	9.85%
Fire Alarm Activations	37	4.05%	34	3.81%	19	2.08%
Public Hazard	43	4.70%	46	5.15%	44	4.81%
Rescue	102	11.16%	87	9.74%	103	11.27%
Medical/Resuscitator Call	449	49.12%	423	47.37%	454	49.67%
Other Response	59	6.46%	49	5.49%	64	7.00%
Total Responses	914	100.00%	893	100.00%	914	100.00%

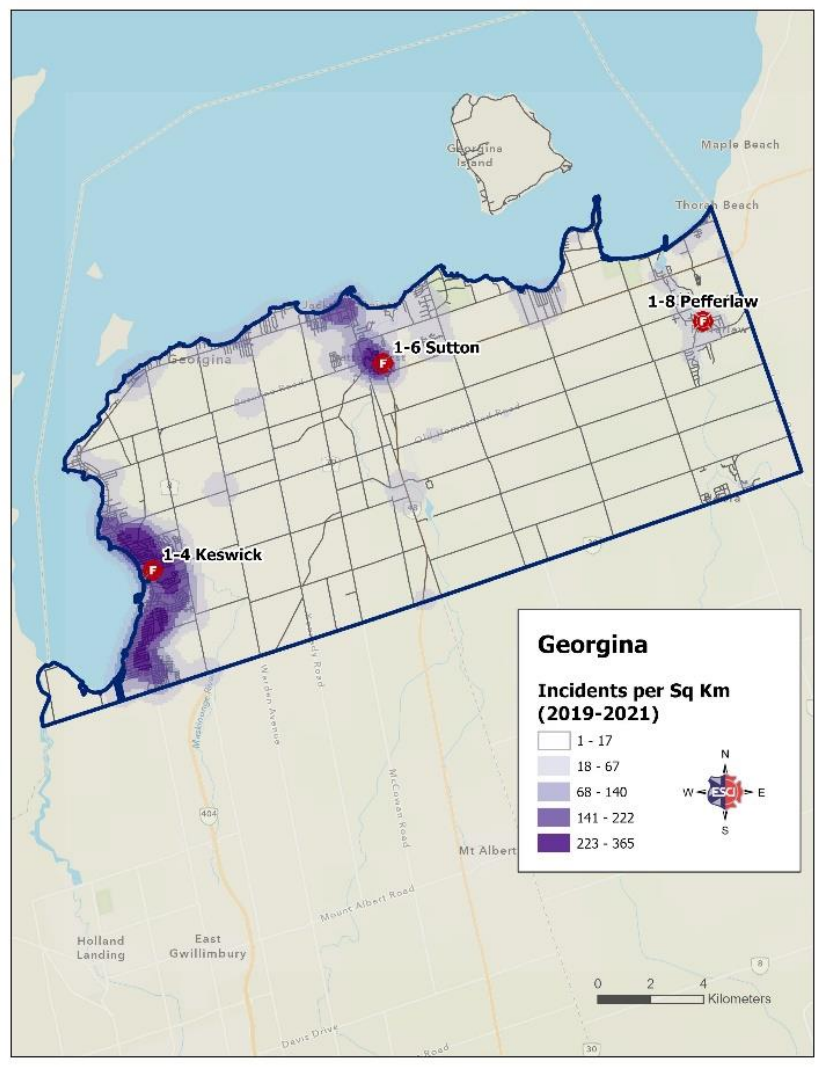
	2019		2020		2021	
	Stn 1-8	% of Calls	Stn 1-8	% of Calls	Stn 1-8	% of Calls
Property Fires/Explosions	8	6.90%	15	11.90%	14	9.86%
Over pressure rupture/explosion (no fire)	0	0.00%	0	0.00%	0	0.00%
Pre-fire conditions/no fire	2	1.72%	8	6.35%	3	2.11%
Burning (controlled)	0	0.00%	1	0.79%	3	2.11%
CO Alarm Calls	9	7.76%	7	5.56%	11	7.75%
Fire Alarm Activations	2	1.72%	0	0.00%	0	0.00%
Public Hazard	8	6.90%	7	5.56%	6	4.23%
Rescue	16	13.79%	16	12.70%	21	14.79%
Medical/Resuscitator Call	66	56.90%	61	48.41%	75	52.82%
Other Response	5	4.31%	11	8.73%	9	6.34%
Total Responses	116	100.00%	126	100.00%	142	100.00%

90th Percentile Response Times for 2019 – 2021



	2019	2020	2021
Station 1-4	0:10:02	0:10:18	0:10:30
Station 1-6	0:11:54	0:12:24	0:12:04
Station 1-8	0:15:50	0:17:56	0:16:48

The following map is an updated version of the call cluster map that shows where all calls occur across the jurisdiction.



Modernization:

A persistent annual growth rate of 1% means that any service level changes that come to the GFRS will likely not be rapid and should able to be adequately planned for. Rather change will likely come from other factors such as cultural, provincial imposed rules, or changes in the nature of the fire service model.

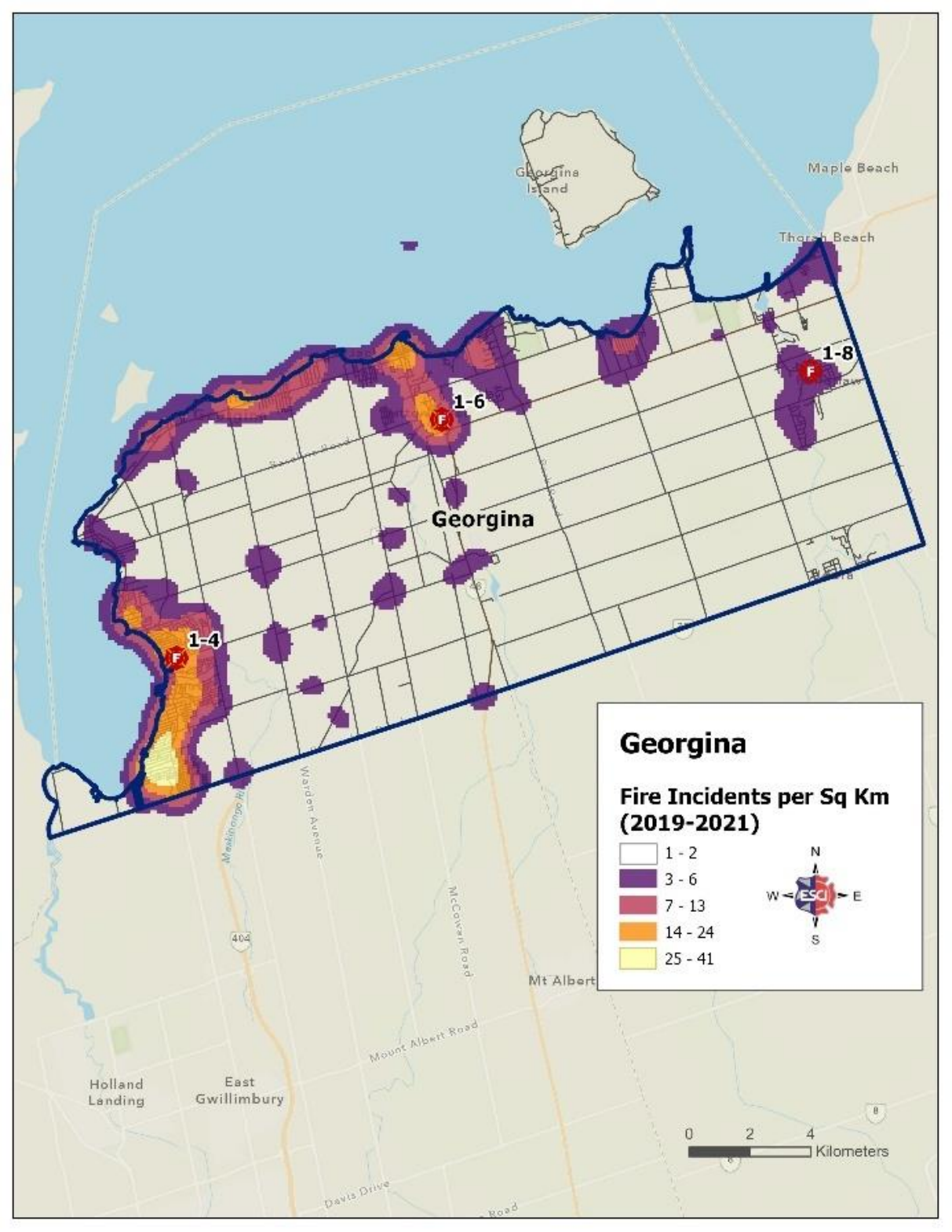
Fire stations are located in the highest population centers where highest incident densities also reside. However, there is a high incident density that is outside the 4-minute response time at the south end of Keswick. In an effort to address this situation as well as provide quicker response depths to the north and east sides of the town, the Fire Chief has suggested that the Keswick Station 1-4 be replaced with two fire stations, one located near the north end of Keswick and one

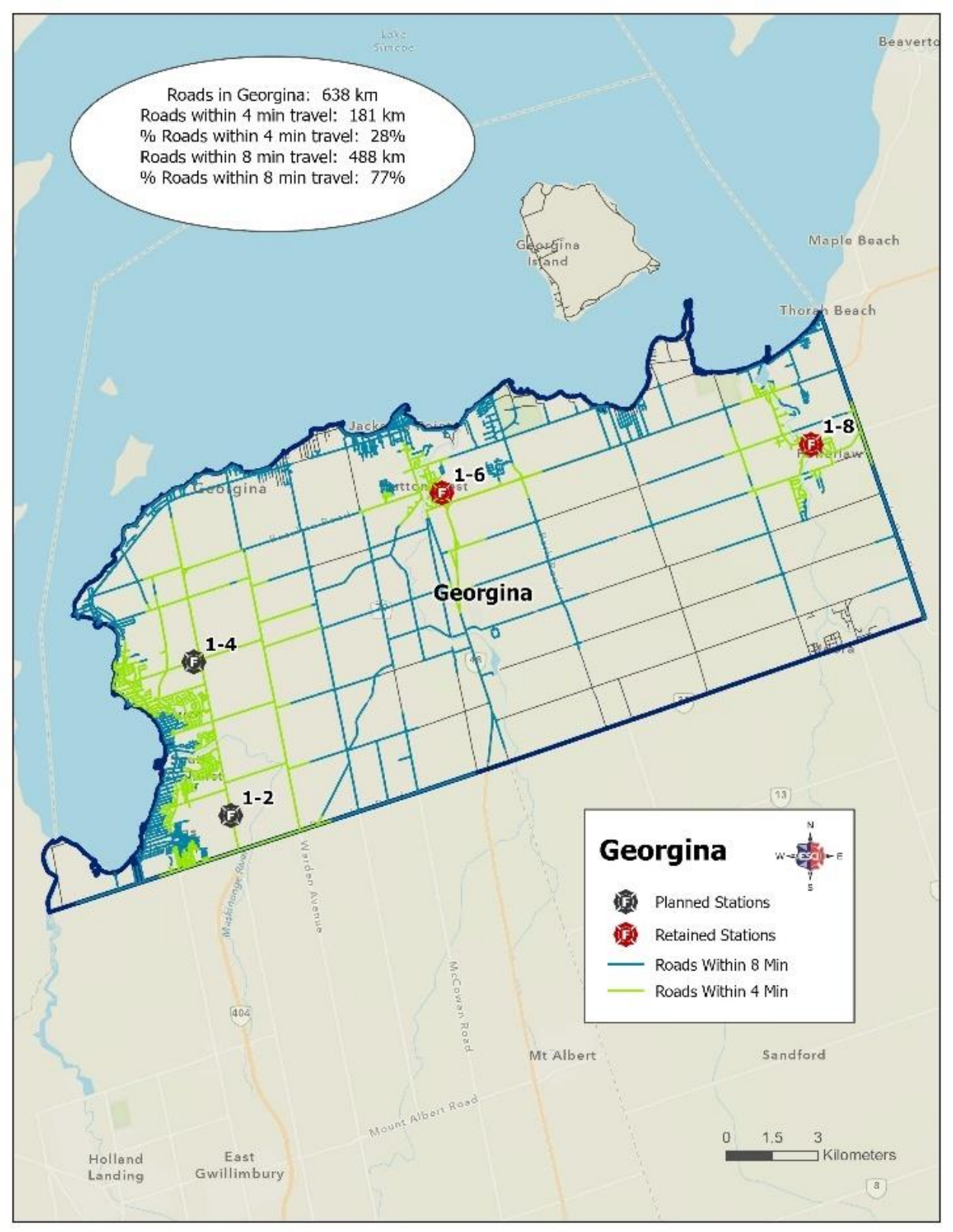
near the south end. ESCI agrees the south station would decrease response times to the south end of Keswick while providing a quick response depth to the east via Ravenshoe Rd or Glenwoods Ave. An ideal location for this station would be located on Woodbine Ave south of Glenwoods Ave.

For the north station, coverage to the north end of Keswick as well as response depth to the beach areas between Keswick and Sutton would be the objective. Fire incident densities along the north shore west of Sutton are elevated and could benefit from quicker response times. Lastly, ESCI agrees that a north Keswick station would provide quicker response depth to Sutton and Pefferlaw via Baseline Rd and Hwy 48. An ideal location for this station would be Woodbine Rd, north of Old Homestead Rd.

Both of these station location recommendations are consistent with the 2016 EMT station location recommendations.

Below is a map showing current fire call densities and 4-min response time projections with new station locations.




Roads in Georgina: 638 km
Roads within 4 min travel: 181 km
% Roads within 4 min travel: 28%
Roads within 8 min travel: 488 km
% Roads within 8 min travel: 77%
Lake Simcoe
Beaverton
Georgina Island
Maple Beach
Thorah Beach
Jackson's Point
Sutton West
Georgina
Keswick
1-8
1-6
1-4
1-2
Georgina
Planned Stations
Retained Stations
Roads Within 8 Min
Roads Within 4 Min
Maskinonge River
Warden Avenue
McCowan Road
404
Mt Albert
Sandford
Mount Albert Road
Holland Landing
East Gwillimbury
0 1.5 3
Kilometers

As a part of modernization of the fire service, EMS continues to be the main alternative responsibility of the traditional fire department. While the York Region has its own EMS system, paramedic stations are not as centrally located throughout the community as fire stations are with the north and east portions of the town having the longest response times. While this report is not addressing EMS within the community and a more comprehensive analysis of EMS response times should include York Region EMS data, fire stations are generally situated to have faster response times to some areas of the community. Just as in fire where minutes count, so does EMS intervention. GFRS should consider not taking EMS from the York Region but being able to supplement their care with quicker response times with Advanced Life Support apparatus.

Response times are the primary mechanism for evaluating fire department performance. This is due to

- It is tied to a fire department's traditional mission which is reactive
- It is the primary expectation of the community
- It is more easily measurable while measuring the prevention of emergencies is more challenging

Recommendation #14 - Tiered response:

ESCI recommends GFRS should do a joint engagement with the York Region EMS and the community to discuss EMS response expectations.

Recommendation #15 - Monitor growth and service levels (station 1-8):

ESCI recommends GFRS should establish trigger points in alignment with response performance standards to determine when the Pefferlaw station should consider transitioning to some degree of career response models.

Costs:

GFRS staff to evaluate and budget finances and time accordingly

Timeframe:

Long term (5 – 10yrs)

Section 6 – Facilities

6.1 Fire Station Review, Locations and Suitability for Future Growth

Section 6: Facilities

6.1 Fire Station Review, Locations, and Suitability for Future Growth

A review of the existing fire station facilities was separately conducted for the Fire Chief to utilize for the municipal Development Charges Review. This report is set in whole within Appendix "D" of the Fire Master Plan.

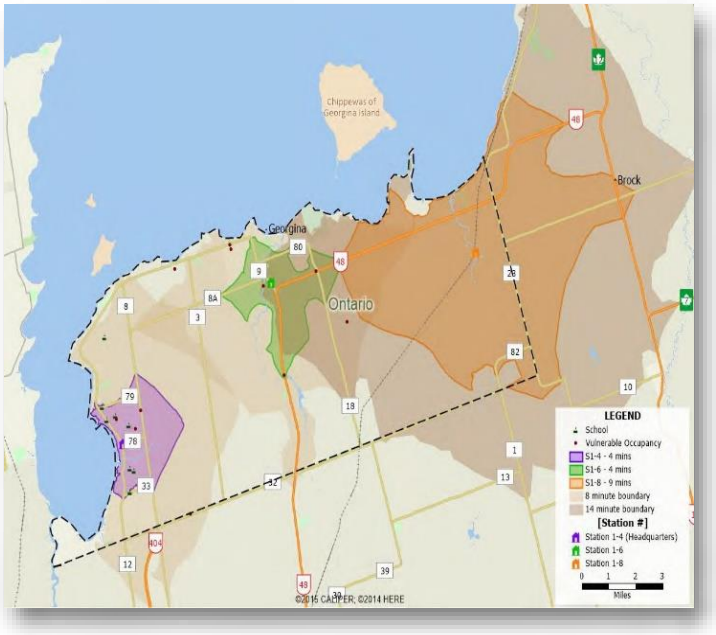
Fire Station Location and Other Considerations:

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 whether or not this will be a station that is 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.

Figure 7: Present Fire Station Locations with NFPA Related Response Zones Noted

In Appendix "F", there is a copy of a report submitted by EMT in relation to the fire station study that was conducted prior to the completion of this FMP. This report goes into more detail relating to station status, needs and viability of their present locations in relation to meeting future needs of staff and the community.



In the above noted map, the Keswick fire station, Station 1-4, is seen in purple; the Sutton fire station, Station 1-6, is seen in green, and the Pefferlaw fire station, Station 1-8, is seen in orange. The shaded areas around each fire station area denote a response time zone:

- For Keswick and Sutton stations, this is based on the NFPA 1710 standard of 4 and 8-minute response time recommendations for full-time fire stations.
- For the Pefferlaw station, this is based on the NFPA 1720 standard of 9 and 14-minute response time zones.

***Note:* These response times depict the coverage area by travel time as if the crews were actually in the station and immediately ready to respond. In fact, there are many times when the crews and/or the Volunteers are not in the fire station and may (or may not) be either engaged on another call or at a far end of their response zone. These factors can create a longer response time by the crews to the incident location.**

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

The fire station review found in Appendix "F" contains a total of 14 related recommendations that have also been included into the overall total of recommendations contained in this report.

Recommendations

As noted in recommendation #1, The Fire Station Report found in Appendix "F" contains a total of 14 recommendations. All of the recommendations along with full explanations can be found in the actual document located in Section 13. The recommendations chart can also be seen on the following two pages.

Brown & Beattie Fire Station Audits:

The Engineer group of Brown and Beattie of Richmond Hill, Ontario were also contracted by the Town of Georgina to conduct facility audits on all Town owned buildings. The three fire stations of GFD were included in this review. The overall findings of Brown and Beattie were quite similar in associated costs and related needs for each of the fire stations.

Being that their report was only in draft form at the time of the submission of this FMP, no approved document could be added at that time. However, reference to these engineer reports will be available in the near future.

Associated Costs *(all costs are approximate)*

Approximate renovation costs for all three fire stations noted in the Fire Station Review is $500,000.00. Refer to the Fire Station Review document for more detail

Timeline

As noted in the following excerpt from the Fire Station Review, the timelines for the repairs range from immediate to long-term. See Fire Station Review document for more detail

Excerpt of Recommendations from the Fire Station Review				ESCI Update (2022)
Rec #	Recommended Solution	Estimated Costs	Suggested Time Line	
	See notes for each station as many items were identified as requiring repairs – only the immediate and key recommendations have been identified in this chart.	***Estimated costs for all visual repairs identified would exceed $500,000***		
1.	Remove the mezzanine in the apparatus bay in Station 1-4, Keswick.	Approximate cost for removal -$1,000	Immediate	**Completed**
2.	Remove any items being stored in the overhead storage (apparatus bay) in Station 1-8, Pefferlaw.	No cost for removal, but new storage area needs to be built	Immediate	**Completed**
3.	Electrical panels on the apparatus floor should be protected from the potential of water spray at all three of the stations.	Proper water proof covers for these panels to be installed - $1,000	Immediate	**Completed**
4.	Have the vehicle exhaust system evaluated / repaired at Station 1-6, Sutton.	Costing unknown based on amount of repairs required	Immediate	**Completed**
5.	Upgrade or install proper male and female showers at Station 1-4, Keswick; 1-6, Sutton and 1-8 Pefferlaw.	Estimated costs of approx. $10,000 per washroom	Immediate	**Completed**
6.	Install fencing around the training tower at Station 1- 6, Sutton.	Costing would depend on type of fencing installed	Immediate	**Completed**
7.	Ensure safety features are adequate for apparatus bay doors.	Costing unknown based on amount of repairs and parts required	Immediate	**Completed**
8.	Conduct an engineering review of all fire stations for an in-depth structural assessment, repairs / upgrades required, and estimate the cost of the work to address the issues. EMT's assessments are from a visual perspective only; no engineering review was performed on the buildings.	Engineering review estimated at approx. $5,000 - $7,000.	Short Term (1-3 years)	**Completed during 2021 Building Audits**

9.	Replace Station 1-8, Pefferlaw. Station 1-8 is in a good location for response to the community, however, it is the size and available space with the present station that is a concern.	Construction costs estimate $390 per square foot. (e.g. 10,000sq ft. building = $3,900,000)	Immediate (0–1 year)	**Completed**
10.	Construct a new fire station to the northeast of the current Station 1-4, Keswick, to provide a larger response coverage area. This station will be the new fire headquarters. The station should be designed so that it has the capacity to accommodate, in the future, two full-time crews along with a Volunteer force, plus a spare apparatus (or be designed to be easily expanded).	Construction costs estimate $390 - per square foot. (e.g. 20,000sq ft. building = $7,800,000)	Long Term (7-10 years)	**This is currently in the Capital Budget for a 2026 design with a 2027 build.**
11.	Consider an additional station in the south of Keswick shortly after the new headquarters is built or even simultaneously. With the fairly rapid growth in the community along with the existing call locations, this new additional fire station is warranted. It has been identified that the Town has property and is planning a community centre in the area of Woodbine Avenue and Glenwood Avenue. This location, as plotted above (in Map #4), provides an enhanced four (4) minute response time to the south end of Keswick.	Construction costs estimate $390 per square foot. (e.g. 10,000 sq. ft. building = $3,900,000)	Short Term (1-3 years)	**This is currently in the Capital Budget for a 2023 design with a 2024-25 build.**
12.	The fire service currently does not have an appropriate fire training centre. EMT would recommend that one of the locations include a Firefighter training centre including a training tower, live burn building, space for auto extrication, and a classroom.	Construction costs estimate $390 per square foot. (e.g. 10,000 sq. ft. building = $3,900,000)	Mid Term (4-6 years)	**This station remains part of the ongoing Joint Fire Services Review.**
13.	Replace or renovate Station 1-6, Sutton. Relocating this station to an area such as Dalton Road and Black River would offer a quicker response to the Greater Sutton Area and also for a more efficient response time when backing up (response support to) the Keswick or Pefferlaw stations.	Construction costs estimate $390 per square foot. (e.g. 10,000 sq. ft. building = $3,900,000)	Mid Term (4-6 years)	**Update: This remains under consideration but no action has been taken.**
14.	During all noted replacements or renovations to the fire stations, any related AODA requirements must be incorporated.	As Required	As Required	**This remains ongoing and is being completed during renovations and build-outs.**

Section 7 – Vehicles and Equipment

7.1 New and Replacement Schedules
7.2 Maintenance

Section 7: Vehicles and Equipment

7.1 Fire Apparatus - New and Replacement Schedules

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

The fire vehicles are on a 15-year 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

The Medium Sized Cities section (outlined in blue) is the recommendation for vehicle replacement for a town the size of Georgina. This allows for up to a 20-year replacement cycle, in which the fire vehicle can be utilized as 2nd Line response status. However, it is recommended that all First Line units should still be replaced by a new or younger unit when it reaches 15 years of age.

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	2nd 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.

FUS definition of 1st line, 2nd line and Reserve is:

- 1st line is the first fire truck utilized for response at the fire station
- 2nd line is the next truck to be used if the 1st line unit is tied up at a call, and

Reserve is the vehicle kept in the fleet to be put into service if a 1st line or 2nd line vehicle is out of service.

The Fire Underwriters Survey (FUS) is reviewed by insurance companies, and as long as the Fire Department adheres to the recommended replacement timelines through an approved capital replacement schedule, the Department will retain its fire rating for vehicle replacement.

By ensuring that the vehicles are being replaced on a regular schedule, the Town is also demonstrating due diligence towards ensuring a dependable response fleet for the Fire Department and the community it serves. This in turn will keep the community's fire rating in good stance, which can also reflect on commercial and residential insurance rates.

A 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 have an effect on insurance costs based on the Fire Department's FUS rating.

For the most part, the GFD is well-equipped with pumper trucks, rescues and tankers. There also appears to be a sufficient level of support vehicles and equipment to meet the general needs of the Department. However, with the projected growth of the community, there needs to be consideration given to the need for elevated devices such as an aerial and/or tele-squirt in the Keswick area.

Replacement schedules are identified in the capital forecast for the fire trucks and large cost items.

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

During the station and equipment review, it was noted that the vehicles and small engines (pumps, generators, boat motors, etc.) are on a standard replacement cycle and that maintenance and repair work is addressed as quickly as possible by the Town or other recommended facilities.

7.2 Maintenance

GFD does not have its own mechanical division to complete all related repairs and testing to its vehicles and equipment. This is handled in the following manner:

Full-time Firefighting staff are expected to complete all daily, weekly and monthly (general) inspections and testing of vehicles and equipment.

If any mechanical repairs are required for a vehicle, it is then decided as to whether or not this repair can be accomplished by the Town's Works Department or if this is a specialized repair that needs to be contracted out to a third-party facility/mechanic.

Recommendations

20. The Town should endeavour to maintain a schedule that compiles with the Fire Underwriters Survey (FUS) recommendations on the replacement of vehicles from a first line to a 2nd line unit.

    - 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.

Associated Costs (all costs are approximate)

- Continued financial forecasting of equipment replacement

Timeline

- Long term (7 – 10 years) – ongoing for fire vehicle replacement and future forecasting – see NFPA 1901

ESCI UPDATE (2022):

Since the publication of the 2016 FMP a 104' HME platform was acquired and placed into service at station 1-4. Aerial 146 is approaching the 15 year life span benchmark.

Tankers 184, 185 and Engine 182 are approaching the 20 years life span benchmark where they may not receive any credit in grading or reserve status for Georgina's medium sized community.

Current production costs and timelines for new apparatus purchases have increased drastically with some fleet purchases now being estimated at a two year delivery. This should be accounted for during the capital budgeting process as previous estimated costs may need adjustment.

The ability to have an on-site either light or heavy duty dedicated fire department mechanic should be evaluated. When considering this item, the cost of in-house vs outsourcing repair should be considered. Apparatus downtime awaiting maintenance can also be impacted by more preventive maintenance and in house repairs.

As regionalization and shared services talks are ongoing, fleet and equipment maintenance should be considered as an opportunity for multiple communities to combine efforts.

Modernization:

The decision on whether to contract for services or to take on a service almost always comes down to one of control and expense. Using contractual services for work is often cheaper than hiring when work is intermittent and/or unpredictable and more costly in time when reliably consistent work is needed and a contractor has multiple clients that can affect immediate work ability. GFRS can use the work determination processes outlined in Section 4 of this report (NFPA 1730) to assist in determining when to make transition to employed mechanics. Consideration should also be given to initial equipment and resource investment that will be needed but will pay for itself over time.

When regionalization is discussed, these issues become decision-factors for other organizations and should GFRS decide to advocate hosting these shared services, they should be aware that, while expenses are shared, so are time-obligations and commitments. An expense that can be shared but that Georgina has already incurred is having an Emergency Vehicle Technician mechanic. This is a certification that qualifies a mechanic to perform maintenance on the unique intricacies of emergency vehicles including fire apparatus, ambulances and law enforcement vehicles.

Recommendation #16 - Fleet services:

ESCI recommends GFRS should continue previous report recommendations to determine feasibility of expanding fleet service depth or participating in a joint fleet services arrangement with another community or organization.

Costs:

GFRS staff to evaluate and budget finances and time accordingly

Timeframe:

To be evaluated annually

Section 8 – Emergency Management

Section 8: Emergency Management

8.1 Emergency Management Program

As mandated by the Emergency Management and Civil Protection Act (EMCPA), all municipalities in Ontario must have an emergency response plan and an emergency planning program. For every community in Ontario, there must also be an identified Community Emergency Management Coordinator (CEMC); currently this duty falls to the Fire Chief of the Town.

Georgina's Emergency Response Plan was recently updated in 2014 and complies with all required legislation.

Current Condition

The primary Emergency Operations Centre (EOC) is located at the Town offices at 26557 Civic Centre Road. The secondary (back up) EOC is located on the second floor at the front of the Keswick fire station 1-4.

Future Needs

Specific challenges regarding the current secondary EOC were noted during the Fire Station Review project, and within that noted report, recommendations were made for a more appropriate location for this secondary EOC. Please see Appendix D for more information.

Recommendations

21. It is recommended that the Keswick station secondary EOC be relocated in a newer facility so that it is designed and built to better meet the needs of an emergency operations centre.

Associated Costs (all costs are approximate)

- No identified costs to this recommendation at this time, as a full review of the program needs should be identified and incorporated into a newer facility. Once a full review is completed, projected costs can be determined.

Timeline

- Mid-term (4 – 6 years)

ESCI UPDATE: (2022)

The *Emergency Management and Civil Protection Act* (*EMCPA*), requires each municipality in Ontario to develop and establish, by By-law, an Emergency Management Program that consists of:

- An emergency plan;
- Training programs and exercises for employees of the municipality and other persons with respect to the provision of necessary services and the procedures to be followed in emergency response and recovery activities;
- Public education on risks to public safety and emergency preparedness;
- Hazard Identification and Risk Assessment (referred to as the "HIRA");
- Critical Infrastructure Review; and
- Any other elements required by the standards for emergency management programs.

The Town of Georgina consistently maintains compliance with the above legislation.

The Emergency Management Program is the responsibility of the Community Emergency Management Coordinator (CEMC), who is also the fire chief.

Whenever a larger scale emergency occurs, which affects the lives and property of citizens, the prime responsibility for providing immediate assistance and bringing the situation under control as quickly as possible, rests with the municipal government. Larger scale emergencies are typically coordinated in collaboration with local municipal partners and may escalate up to the provincial and federal governments, if necessary.

In the event of a significant emergency impacting the Town, the CEMC will conduct operations in the Emergency Operations Centre (EOC). EOC is the central facility or headquarters, from which appropriate staff will direct, coordinate, communicate and support operations within the municipality's jurisdiction.

A provincial standard Incident Management System (IMS) is currently being utilized in EOCs across York Region as a means of effectively managing the incident.

IMS consists of five key functions:

1. Command
2. Operations
3. Planning
4. Logistics
5. Finance/Administration

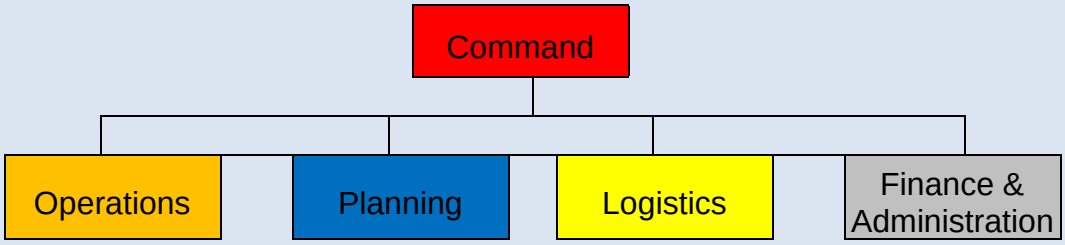


Figure 1: The five functions of the Incident Management System.

The N6 municipal CEMCs, in collaboration with York Region, have established a Memorandum of Understanding (MOU) to retain a shared Program Manager position that would ensure annual compliance with the EMCPA for all six municipalities.

The terms of the MOU have expanded over the years as required and the program continues to be successful. In addition to the annual program, in 2019 this Program Manager position assisted greatly with the COVID-19 response. There could be opportunities to expand the terms of the MOU further to assist municipalities with their Emergency Management Programs.

Progress on the secondary EOC relocation is intertwined with potential station deployment and relocation. The construction of a new headquarters building could provide the opportunity to place either the primary or secondary EOC into a state-of-the-art building with the proper infrastructure in place. EOC activities are also part of the new Civic Centre project.

In 2019 Georgina passed By Law 2019-0034 which further codified the "*emergency management program for protecting property, the environment, and the health safety and welfare of the inhabitants of Georgina".* This includes information on the Emergency Plan, training programs and exercises and the roles of various officials and staff during an emergency.

MODERNIZATION:

The world of emergency management is rapidly expanding as communities prepare for large scale events and disasters that have the potential of affecting a significant portion of the populace. Changes in our culture and environment have increased the possibility of a community experiencing an event of this magnitude. The management and resources required for events of this scale can easily exceed a local community's capabilities and require a large, flexible and coordinated action that includes responders from a distance. Planning for these events has become an increasing priority and includes identifying the community vulnerabilities. In the spirit of risk assessment, the larger and regional scale of HIRAs (Hazard Identified Risk Assessment) can now become extensions of the smaller scale CRAs (Community Risk Assessment).

Recommendation #17 - Emergency management:

Continue working with York Region on expanding the Emergency Management Program to address specific contingency plans for various hazards, technology improvements and expanding collaborative processes.

Cost:

GFRS staff to evaluate and budget finances and time accordingly

Timeframe:

Ongoing

Section 9 – Mutual and Automatic Aid

9.1 Mutual Aid, Automatic Aid & Fire Protection Agreements

Section 9: Mutual and Automatic Aid

9.1 Mutual Aid, Automatic Aid & Fire Protection Agreements

Mutual and Automatic Aid

Georgina Fire Department is a member of the Region's Mutual Aid group and has good working relationships with the other Fire Departments in the surrounding jurisdictions. As such, mutual aid and automatic aid agreements, which provide aid to Brock Town and East Gwillimbury when requested, are in place. The Georgina Fire Department is also member of the York Region Mutual Aid Agreement Plan and Program, which includes Town of East Gwillimbury, Town of King, Central York (Aurora/New Market), Town of Whitchurch-Stouffville, City of Vaughan, Town of Richmond Hill, and the City of Markham.

At this time, it would appear that these agreements are working well, but it has been a while since they were all updated. As such, a full review of all mutual aid, automatic aid and Fire protection agreements are to be completed in the short term to identify any required revisions.

Recommendations

22. It is recommended that a full review of all mutual aid, automatic aid and fire protection agreements be completed in the short-term to identify any required revisions.

Associated Costs (all costs are approximate)

- No identified costs to this recommendation. But based on what is recommended by the Fire Chief, costs could be incurred.

Timeline

- Short term (1 – 3 years) and on an annual review basis

ESCI UPDATE: (2022)

Mutual and automatic aid continue to be the primary methods that communities assist each other when insufficient local resources exist to handle an incident or provide other coverage to a community that is experiencing an incident.

Automatic aid is a form of mutual aid where units from one jurisdiction assist another jurisdiction on the initial response to an incident. The 2018 Ontario Mutual Aid Plan defines automatic aid agreements as:

For the purposes of the Fire Protection and Prevention Act, 1997 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

MODERNIZATION:

Mutual and Automatic aid are gaining favor as municipalities are seeking solutions to scale emergency response to address day to day issues, as well as worst case scenarios. More and more, communities are adopting response philosophies that minimize “the name on the side of the truck” when providing emergency services believing a call for help should go to whomever is closest provided levels of service are comparable.

Offsetting this is making sure that one community’s resources do not support or subsidize shortcomings of another community. In other words, there must be equivalent benefit to both communities participating however the benefits do not have to be equal. For example, one community could offer a response benefit to another community while the second community offers an administrative benefit in return. This form of arrangement allows for a more nuanced approach to receiving efficiency assistance from other communities.

RECOMMENDATION #18 - Automatic Aid:

ESCI recommends GFRS should expand its automatic aid agreements with the objective of creating an ERF (effective response force) that is compliant with NFPA standards.

COSTS:

GFRS staff to evaluate and budget finances and time accordingly

TIMEFRAME:

Short/Medium term (0 – 5 yrs)

Section 10 – Finance, Budgeting, and Capital Investment Plan

Section 10: Finance, Budgeting, and Capital Investment Plan

The Georgina Fire Department has an annual operating budget of approximately $7,000,000.00 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 GFD is well set up in both areas. This would also indicate a good level of support by Council and the Towns' senior management team in relation to assisting the Fire Department is meeting its service goals.

When reviewing this section, the key areas EMT looks for are whether or not actual operating expenditures are identified and tracked. During the review of the operating budget, it was noted that all key accounts operating sections are identified, such as:

Operating Budget Line Items:

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

Capital Budget Line Items:

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

Operating Budget

A review of the operating budget for Georgina Fire Department shows that all general expenses and related revenues are accounted for.

Capital Forecasts

It would appear that there is a 15-year replacement cycle for the fire trucks that is based on the FUS recommendations for front line vehicles. This replacement cycle mirrors the industry standards of 15 and 20 years, depending on the vehicle's function. As such, the Town of Georgina and its Fire Department should be commended for its efforts in endeavouring to adhere to this industry standard.

Along with the replacement schedule, FUS recommends that there should be at least one spare fire truck for every eight related units. For example:

- One pumper truck for every eight,
- One spare aerial truck for every eight,
- One spare tanker truck for every eight, etc.

This would mean that if you have even eight or less of a certain type of vehicle, you should have a replacement unit in reserve, should one of those units go out of service.

A final area that should be reviewed by the Fire Chief is in relation to the reserve funds for equipment to ensure that adequate annual contributions for small equipment along with apparatus repairs, and contributions for future infrastructure (fire stations) are identified. There does appear to be some shortfalls in relation to small equipment and fire stations reserves.

Recommendations

23. Annual corporate business planning cycles should be more specific in identifying goals and expected outcomes for all Fire Department related programs so as to ensure that adequate funding is secured in relation to the reserve funds for equipment and facilities.

Associated Costs (all costs are approximate)

- No identified costs to conducting the annual business planning cycles. However, costing could be associated with items that are identified as requiring insertion into a related budget line.

Timeline

- Short Term – 1 – 3 years, and ongoing

ESCI Update (2022):

Modernization:

Other than labor costs, capital expenditures are frequently the largest expenditure a community incurs. Identifying what these are and when the expenditure will be incurred ahead of time is good planning. Sudden and unplanned large expenses can be detrimental to other parts of a budget or to minimize impact to the remaining part of a budget, capital expenses can be delayed. The potential for either of these to exist becomes more complicated when other factors begin to alter future finance projections and adjustments need to be made.

To balance this risk, reserve funds for capital expenditures can be established. Setting funds aside annually to handle capital expenditures is a way to minimize this risk and while not completely eliminating the risk from unplanned events, it can limit how much adjustment is needed for future planning.

Fleet replacement is the most significant routine capital expenditure fire departments can plan for. Because of the large budgetary expenditures required as well as being seen as an investment, they can frequently take backseats to more immediate needs especially if the immediate needs are in such quantities that multiple needs can be satisfied at the expense of a single vehicle purchase.

Fleet capital planning, by identifying when a future purchase will need to be made, is a good first step towards keeping an eye on the future as to when resources will need to be replaced. A next step for future planning is to identify whether the financial philosophy of capital expenditures is to be a purchase or a lease, both common ways of accommodating these types of expenditures. They each have their pros and cons.

In a purchase arrangement, the buyer has the funds in hand and can pay the full cost of the vehicle at purchase time. Often, sellers will offer discounts in this arrangement.

Pros: Possible discounts, no debt carried, no interest payments, earned interest on set-aside funds

Cons: Funds must be set aside, sometimes years in advance, and not expended. Funds cannot be used for other more immediate expenditures

In a leasing-style arrangement, buyers take a loan to pay for the vehicle for a period of several years and accept vehicle ownership at the end of the loan period.

Pros: No advanced funding needed, expenditure only occurs when vehicle is in possession.

Cons: Fewer discounts, debt must be carried, added expense through interest payments.

If the form of capital expenditure philosophy to be used is the first, annual budgeted allocations are made so that when capital purchases need to be made, funds have already been allocated. For example, if it is known that a firetruck will need to be replaced ten years from now, rather than just acknowledging the need for replacement in a future expenditure plan, proportional funds, in this example ten percent are set aside annually, so that when the vehicle needs to be purchased, funding is already present. (The amount to be set aside is recalculated every year to adjust for inflationary and other cost changes.)

There are two possible ways to approach this. The first approach is to budget for proportional fund contributions annually. As in the previous example, a purchase expected to be made ten years in the future can have ten percent of the anticipated cost budgeted annually. This is done for every vehicle in the fleet that is expected to be replaced.

	Proj Cost	Yr 1 Budget	Yr 2 Budget	Yr 3 Budget	Y4 Budget	Purch Yr Budget
Veh 1	$100	$20	$20	$20	$20	$20
Veh 2	$60	*	$15	$15	$15	$15
Veh 3	$75	*	*	$25	$25	$25
Total Ann Budget		$20	$35	$60	$60	$60

The second approach is to identify all fleet purchases to be made over a period of time, such as 20 years, and the years the purchases are anticipated. Annual budget allocations are calculated based on having the needed funds in the replacement fund at the time of purchase. This uses the fund balance of the fleet replacement fund as the basis for contribution rather than an annual percentage of the fleet. This approach costs less than the first as funds are allocated when needed rather than having funds sitting in a reserve account but not available cause they are allocated for another vehicle. It also provides stability in capital planning as annual calculations on projections over the next 20 years are tweaked in smaller amounts rather than the potential for significant year-to-year capital adjustments.

	Proj Cost	Yr 1 Budget	Yr 2 Budget	Yr 3 Budget	Y4 Budget	Purch Yr Budget
Veh 1	$100	*	*	*	*	$100
Veh 2	$60	*	*	*	*	$60
Veh 3	$75	*	*	*	*	$75
Total Ann Expenditure		$0	$0	$0	$0	$235
Total Ann Budget		$47	$47	$47	$47	$47
Total Res Balance		$47	$94	$141	$188	$0

According to Georgina's Finance Director, the Town practices the second philosophy but has its reserve fund set aside for the town's entire fleet and not department specific. They then make fleet purchases based on the priorities of the town.

Section 11 – Review of Previous FMP

Section 11: Review of Previous FMP

11.1 Building from the Existing Fire Master Plan of 2010

Listed below are the recommendations for the 2010 Fire Master Plan. Most of the recommendations have been, or are in the process of being actioned by the Fire Chief, as appropriate.

Recommendations

24. Continue with the updating and completion of any open projects noted in the previous 2010 Fire Master Plan.

Associated Costs (all costs are approximate)

- No identified costs to this recommendation.

Timeline

- Short Term – 1 – 3 years, and ongoing

Following is the excerpt from the 2010 Georgina Fire Department FMP document. This information can be found on pages IV to X of the original document.

The 2010 FMP Report includes the detailed analysis, results, findings, conclusions and recommendations summarized above. The report provides a detailed assessment of each Division of the Georgina Fire Department.

The 2010 FMP document noted a total of 38 recommendations to be addressed by GFD. Of these 38 recommendations, 19 have been completed, 11 are still in progress by the Department, and 8 will be reviewed as part of this 2016 Fire Master Plan, being conducted by Emergency Management and Training Inc.

Conclusions and Recommendations

The conclusions and recommendations contained within this report are summarized below, by division.

11.1.2 Administration

Under the leadership of the Fire Chief, the Department is achieving the goals and objectives of this division. Through this leadership and positive working relationship with the Deputy Fire Chief,

Association Executive and Volunteer Leadership the Department has achieved provincial accreditation through the Municipal Fire Protection Information Survey (MIFPIS). The Department also takes a leadership role in maintaining the Town of Georgina Emergency Management Plan which is also up to date and compliant with the relative legislation.

Recommendations for this division include:

Short-term:

1. Introduce a second Administrative Assistant position to provide back up to the current Administrative Assistant and administrative support to the other divisions within the Department.
    - Completed – a second, part-time Administrative Assistant has been hired.
2. Establish a second alternate Emergency Management Coordinator (EMC) position using a staff member from outside of the Fire Department (the Clerks Department is a recommended alternative). The Deputy Chief is currently the EMC with the Fire Chief as alternate.
    - To be part of the final project review – final overview to be presented in 2017
3. Develop an annual rotating “on call” schedule for the Fire Chief and Deputy Fire Chief for emergency response coverage. This should be coordinated with scheduling of the third EMC position (the new second alternate EMC).
    - Will incorporate once the FMP is completed
4. Initiate a space needs assessment to include all Fire Department facilities to determine opportunities for work space efficiency and long-term space needs for the Department.
    - Part of the Fire station review being conducted by EMT – refer to the EMT Fire Station
    - Review document found in Appendix “F” for more information.
5. Continue to implement the Firehouse Software as the Department records management technology program and continue to provide staff training and support to further develop the Department’s electronic records management capabilities.
    - Ongoing

Long-term:

6. Upon completion of the space needs assessment, identify and include relevant facility costs within the 10-year capital budget process.

    - To be part of the fire station review being conducted by EMT – Refer to the EMT Fire
    - Station Review document found in Appendix "F" for more information.

11.1.3 Fire Prevention and Public Education

Based on our review, it is evident that the Georgina Fire Department recognizes the importance of public education and prevention programs and is committed to improving and expanding their programs and activities. Completion of the Municipal Fire Protection Information Survey and the Department Simplified Risk Assessment in 2004, including receipt of the "*Certificate of Compliance,*" are recognition of the commitment in this area.

As indicated above, greater use of fire prevention/education programs and activities as the "first line of defence" is an effective strategy for the Town of Georgina to pursue as the community continues to grow. The following recommendations have been developed to assist the Town of Georgina in further developing the core fire prevention and education programs that the Fire Department provides.

Short-term:

1. The Town of Georgina should consider an assessment of opportunities for further collaboration between the building and Fire Departments. This assessment should include a review of responsibilities, such as site plan review, plans examination, and inspection. Cost analysis including opportunities for cost recovery by the Fire Department should also be considered.

    - Completed

2. Complete a risk assessment of the marinas and trailer parks within the community to identify fire and life safety risks. Based on the assessment, identify responsive prevention and public education programs, including the development of fire suppression pre-plans for all facilities.

    - Completed

3. Continue to support certification of Fire Prevention/Public Education Officers including the Fire Service Certification Programs provided by the Office of the Fire Marshal, Ontario. Develop a comprehensive career path and training program for new and existing employees within the division to attain and maintain the certification qualifications.

    - Completed

4. Conduct a review of the Department Home Smoke Alarm Program. The review should include an assessment of current emergency response statistics and emphasize the delivery of the Home Smoke Alarm Program as the "first line of defence", particularly in areas of the community where extended emergency response times are present due to factors such as travel time for emergency response personnel.

    - In progress and ongoing by GFD

5. Utilizing the Firehouse Software program, implement a process to track all prevention and education activities. This should include core programs such as the Home Smoke Alarm Program, distribution of fire safety education materials, and inspections.

    - Completed

6. Further develop the integrated in-service fire prevention and education activities that utilize emergency response staff, including staff that may be available within other programs (such as staff on return-to-work modified duty). This could include activities such as pre-planning high risk occupancies, Home Smoke Alarm Program and supporting the Fire Prevention/Public Education Officers.

    - Completed

7. Identify additional operating funds, for consideration by Council, to support and expand the core prevention and education activities such as the Home Smoke Alarm Program, and education programs specifically targeted at the high-risk demographics of seniors and children.

    - Completed

8. The Town of Georgina should consider further enhancements to the current level of fire prevention and public education programming and service delivery particularly to areas of the community where the OFM 10-in-10 guideline is not being achieved.

    - No longer applicable as this guideline has been rescinded. Now utilizing NFPA standards as guide for responses.

9. Conduct a comprehensive review of the policies and procedures within the division to update existing practices and, where necessary, implement additional policies and/or procedures to assist staff in prioritizing work, sustain certification, and to ensure all programs and activities are delivered to customers in a consistent manner.

    - More work to be done on this item by GFD.

Long-term:

10. Implement a process to regularly update the Department's simplified risk assessment and adjust the prevention and education programs, as required, to respond to the findings of the assessment.

    - GFD presently working on this.

11.1.4 Fire Suppression

The following conclusions and recommendations are based on the analysis of the existing and future operations and requirements of the Fire Suppression Division of the Georgina Fire Department. The composite model Fire Department, including both full-time and Volunteer Firefighters, has proven to be a cost effective and efficient model for Town of Georgina. Sustaining this model and the Volunteer Firefighter component through an effective recruitment and retention strategy should be considered a priority.

Based on current fire suppression resources, the Georgina Fire Department is challenged to meet the emergency response objectives of the *Public Fire Safety Guideline (PFSG) 04-08-12* (also referred to as the OFM "10-in-10" guideline) in areas of the community with fire hydrant protection. In areas without fire hydrant protection, emergency response times are directly related to extended travel times required to respond to these rural areas of the community.

In response to this challenge, the Department has a pro-active fire prevention and education program

that is utilized as the "first line of defence," as defined by the Office of the Fire Marshal, Ontario.

In response to the challenges of recruiting and retaining Volunteer Firefighters and managing the projected growth within the community, the Town of Georgina will need to consider a plan to initiate a gradual increase in full-time Firefighting resources. This plan should be flexible and adaptable to the ability to sustain the composite model and the speed at which growth occurs. Moving towards a full- time Firefighter staffing model that provides four full-time Firefighters on each of the current vehicles at the Keswick and Sutton stations should be considered as a priority.

The current fire stations are located appropriately to address both current service delivery requirements and future projected growth within the 10-year horizon.

The following recommendations have been developed to assist the Town of Georgina in further developing the core fire suppression services that the Fire Department provides.

Short-term:

1. As recommended within the Fire Prevention and Public Education section of this review, the Town of Georgina should consider further enhancements to the current level of fire prevention and public education programming and service delivery, particularly to areas of the community where the OFM 10-in-10 guideline is not being achieved, to further improve the first line of defence.

    - The OFM guideline is no longer applicable, but some information can be offered as a result of this present FMP project – refer to the EMT Fire Station Review document found in

    - Appendix "F" for more information.

2. Moving towards a staffing model that can support four full-time Firefighters on duty at all times, on each of the first response vehicles at the Keswick and Sutton Stations should be considered. In order of priority, the Keswick Station should be considered as the first station for career staffing, based on the history of emergency response calls and risk.

    - Completed

3. The Department should consider implementation of a process to track the arrival time and number of Firefighters responding to emergency calls on an ongoing basis. This would be an effective tool for Council and staff in order to continue monitoring current conditions and the effects of adding additional full-time Firefighters in moving towards the objectives of the OFM 10-in-10 guideline.

    - Completed

4. In consultation with the Volunteer Firefighters, a comprehensive recruitment and retention strategy should be developed and implemented with the objective of maintaining the complement of Volunteer Firefighters at 60 at all times.

    - This is an ongoing challenge but also looking for input from EMT – more information can be found on this item in section "4" and Appendix "D" of the FMP document.

5. The Department should initiate a space needs assessment that looks at the current and future space needs within the Department, including infrastructure replacement and the addition of amenities such as appropriate living and exercise space for both the Volunteer and full-time staff. Attention should be given to the storage of Firefighters' bunker gear and the provision of diesel emissions equipment in the vehicle storage areas. Funding requirements should be identified and then included within the 10-year capital budget to accommodate the recommendations.

    - Part of EMT Fire station review – refer to Appendix "F" – EMT Fire Station Review for more information.

6. The Department should conduct a review of the Ministry of Labour Section 21 guidance notes with regard to Firefighter safety and recommendations in regards to the position of Safety Officer at emergency scenes. This review should be conducted as part of an overall update of the Department's current standard operating guidelines and policies and procedures.

    - Looking for input from EMT on this item.

Long-term:

7. Initiate a process to update the Department's Simplified Risk Assessment to provide ongoing analysis of the community, with regard to risk, as projected growth begins to impact current conditions. This process should include an update to the Fire Master Plan at the five-year benchmark.

    - More information for this item found in section "3" of this FMP document.

8. The Town of Georgina should consider developing a staffing plan to increase the complement of full-time Firefighters required to provide the first response and depth of response objectives of the OFM 10-in-10 guideline. Within the staffing plan, consideration may be given to incremental or phased implementation that is aligned with the projected growth targets of the community and the associated economic conditions.

    - OFM guideline no longer in effect – refer to Appendix "F" – EMT Fire Station Review for more information.

11.1.5 Training

The Georgina Fire Department utilizes a number of strategies to deliver the required training to both full-time and Volunteer Firefighters. These include direct delivery of programs by the Training Officer, Train the Trainer Programs, participation in regional training programs, and attendance at the Ontario Fire College.

The current Training Officer is required to maintain a high degree of qualification and certification, requiring annual renewals and ongoing refresher programs. The Department supports these requirements through attendance at the Ontario Fire College (OFC) and other related conferences. This enables the Training Officer to stay current with changing legislation and industry best practices.

The Department utilizes the Ontario Firefighters Standard and curriculum, developed by the Office of the Fire Marshal, Ontario (OFM) as the basic Firefighter training program for both Volunteers and full- time Firefighters.

The Department utilizes the OFM Trainer Facilitator Program, whereby Company Officers and Firefighters are certified by the OFM to deliver specialty training such as vehicle extrication, pump operations and first aid.

The following recommendations have been developed to assist the Town of Georgina in further developing the training that the Fire Department provides.

Short-term:

1. The Department should consider options to re-assign tasks not specifically related to Firefighter training that are currently completed by the Training Officer, such as;
    - Completed
2. Maintenance of the breathing air compressor (including scheduling bi-annual air sampling and testing);
    - Completed
3. Scheduling bi-weekly testing of the M40 gas detectors;
    - Completed
4. Self-Contained Breathing Apparatus (SCBA) maintenance and minor repairs (including warranty claims and record keeping);
    - Completed
5. Portable radio battery recycling.
    - Completed
6. The Department should consider extending the OFM Trainer Facilitator Program, where possible, to support the "hands on delivery" of training to both full-time and Volunteer Firefighters. This may require additional ongoing costs to support the initial accreditation for trainers and the ongoing costs to maintain accreditation.
    - GFD is updating to NFPA standards
7. Initiate a process to ensure that operating guidelines, procedures, and policies are developed, reviewed, and maintained by the training division.
    - Ongoing

8. Consider the long-term space needs of the Training Division as part of the fire station space needs review, including continued short-term use of the Baseline Road facility for pump training, practical evolutions, and in-class training.

    - Part of Emergency Management and Training Inc. station review – see Fire Station
    - Review Report found in Appendix "F".

9. As part of the Volunteer Firefighter recruitment and retention strategy, the Department should consider revisions to the recruit training program. A review of the recruit training program should be conducted to identify the components of training required for completion, including basic Firefighting, first aid, driver training, and health and safety. From this review, the Department should determine the number of mandatory hours required to complete the Volunteer recruit training program and ongoing training program.

    - Completed

Long-term

10. The Town of Georgina should investigate the potential of forming strategic training partnerships with other area municipalities. Areas to be considered should include hazardous materials response, ice/water rescue and other services requiring a high degree of training and certification where partnering and/or developing reciprocal response protocols would provide cost effective service-delivery alternatives.

    - GFD is still working on this project

11. The Town of Georgina should investigate the potential of forming strategic training partnerships with adjacent municipalities to consider a shared training centre with facilities for live fire training and other equipment/resources to support the ongoing training needs of the Department.

    - GFD is still working on this project

11.1.6 Fleet Review

Based on the review and assessment of the fleet, apparatus, and equipment of the Georgina Fire Department, the following conclusions are noted and actions are recommended:

Short-term:

1. It is recommended that the practice of joint purchasing with other municipalities be given consideration, where possible, using common specifications for the purchasing of major front-line apparatus through strategic alliances with other municipalities.

   - Completed

2. The Town of Georgina should consider a capital budget pre-approval process for major front-line apparatus as a strategy to reduce delivery times as part of developing a reserve fleet.

   - Outstanding

3. The Department should consider implementing strategies to develop a reserve fleet of two heavy apparatus to include one reserve engine and one reserve tanker.

   - Outstanding

Long-term:

4. The Department should consider implementing the revised vehicle replacement schedule for apparatus as part of the 10-year capital budget.

   - Completed

11.1.7 Communication & Technology

The Department is currently investigating opportunities to streamline the dispatch system so it will distinguish between a full-time response and a Volunteer response, and send the correct message to the right cellphone users. This may reduce dependency on the old paging system, potentially reducing pager replacement costs.

The Town of Georgina has a service agreement with the Richmond Hill Fire Department for receiving and dispatching emergency calls and for paging Volunteer Firefighters. The Department's computer hardware and software are supported by the Town Information Technology Department.

The following is a summary of recommendations resulting from the review and assessment of the Communications and Technology Division of the Georgina Fire Department.

Short-term:

1. The Department should consider implementing a process for regularly reviewing the service agreement with the Town of Richmond Hill and consider referencing and/or including the NFPA Standard as a performance measure.

    - Needs to be implemented by GFD

2. The Department should consider the purchase of some additional VHF radios as a backup to the regional 800 MHz system.

    - Outstanding

3. The Department should investigate opportunities to provide a larger photocopier at the Keswick Station to provide more efficient and effective reproduction of materials for training, public education and fire prevention.

    - Completed

11.1.8 Next Steps

As noted in the 2010 FMP review, there were a total of 38 recommendations. Of these 38 recommendations, 19 have been completed, 11 are in progress, and 8 are included in the 2016 Fire Master Plan review, being conducted by Emergency Management & Training Inc.

Section 12 – Fire Underwriters Survey

Section 12: Fire Underwriters Survey

During this Fire Master Plan project, EMT worked with a representative from the Fire Underwriters group. This team effort was to complete a review of the Department from two different perspectives.

Overview

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 Fire Underwriters Survey represent approximately 85 percent of the private sector property and casualty insurers in Canada.

Fire Underwriters Survey Certified Fire Protection Specialists conduct detailed field surveys of the fire risks and fire defences maintained in built up communities (including incorporated and unincorporated communities of all types) across Canada. The results of these surveys are used to establish a Public Fire Protection Classification (PFPC) for each community. While Fire Underwriters Survey is not involved in rate making matters, the information provided through the Fire Insurance Grading Index is a key factor used in the development of Commercial Lines property insurance rates. The PFPC is also used by underwriters to determine the amount of risk they are willing to assume in a given 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 by evaluating the adequacy, reliability, strength and efficiency of the protective facilities and comparing the level of protection against the level of fire risk associated with a typical dwelling.

The Fire insurance grading system used does not consider past fire loss records but, rather, fire potential based on the physical structure and makeup of the built environment.

When a community improves its PFPC or DPG, insurance rates may be reduced, 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.

2016 Fire Underwriters Survey Report

The original document contains over 200 pages of information and has not been attached to this report in its entirety – only the recommendations have been included.

NOTE: When Fire Underwriters makes a recommendation, it is to identify where the Fire Department presently is, and then what does it need to do to get "FULL" marks for the classification status. Their recommendations do not imply that the Department is not meeting the local needs, only that to obtain a perfect score or rating, then the Fire Department will need to implement the noted recommendations.

Overview of the 2016 FUS Recommendations

Recommendation	Fire Insurance Grading Weighting	Grading Items
Recommendation 8.2-1 Provide Additional Engine Apparatus	Medium	PFPC - FD-1/FD-4
Recommendation 8.2-2 Provide a Reserve Engine Apparatus	Low	PFPC - FD-1/FD-4
Recommendation 8.2-3 Provide a Reserve Ladder Apparatus	Low	PFPC - FD-2/FD-4
Recommendation 8.2-4 Improve First Due Engine Coverage	High	PFPC - FD-3/FD-1/FD-4
Recommendation 8.2-5 Apparatus Replacement Program	Medium	PFPC - FD-1/FD-4/FD-5
Recommendation 8.2-6 Train and Qualify Additional Firefighters to Officer Positions	Low	PFPC - FD-6/FD-8
Recommendation 8.2-7 Improve Total Available Fire Force	High	PFPC - FD-7
Recommendation 8.2-8 Improve In Service Apparatus Company Staffing	Medium	PFPC - FD-8
Recommendation 8.2-9 Continue to Develop Officer Training Program	Medium	PFPC - FD-6/FD-13
Recommendation 8.2-10 Improve Training Facilities	Medium	PFPC - FD-13
Recommendation 8.2-11 Fire Station Replacement Plan	Medium	PFPC - FD-17
Recommendation 8.2-12 Continual Development of Pre-Incident Plan Program	High	PFPC - FD-18
Recommendation 9.2-1 Improve Hydrant Distribution	High	PFPC - WS-11
Recommendation 9.2 2 Frequency of Available Fire Flow Testing	Medium	PFPC - WS-13
Recommendation 9.2-3 Private Hydrants should be Properly Identified	Low	PFPC - WS-13
Recommendation 10.1-1 Qualifications for Fire Prevention Education Providers	Medium	PFPC - FSC-1/FSC-2
Recommendation 10.1-2 Improve Qualifications for Fire Prevention Inspectors	Medium	PFPC - FSC-1/FSC-2
Recommendation 10.1-3 Review NFPA 1730 to aid in the development of the Town's Fire Prevention Program	Low	PFPC - FSC-1/FSC-2
Recommendation 10.1-4 Continue to Develop In-Service Inspection Program	Medium	PFPC - FSC-1/FSC-2
Recommendation 10.1-5 Improve Fire Prevention Inspection Program	High	PFPC - FSC-1/FSC-2
Recommendation 12.2-1 Superior Tanker Shuttle Service Accreditation	Medium	DPG
Recommendation 12.2-2 Develop Formal Water Supply Plan for Non-Hydrant Protected Areas; Consider Dry Hydrants	Medium	DPG

Summary of Recommendations

Recommendation 8.2-1 Provide Additional Engine Apparatus

The engine service requirements for fire insurance grading have not been fully met with the Georgina Fire Department's existing fire apparatus fleet. The Georgina Fire Department may wish to improve its Firefighting capabilities by acquiring additional apparatus. Fire apparatus should be ULC listed, be of an appropriate age, have an adequate pumping capacity, and be proven reliable.

The Georgina Fire Department received credit for 5.33 Engine Companies. Credit up to the maximum amount of 3.7 can still be awarded for this grading item.

Acquiring additional fire apparatus is a serious matter that requires careful consideration. There are many factors to consider and fire insurance grading is only one such factor.

Recommendation 8.2-2 Provide a Reserve Engine Apparatus

To ensure an adequate response when a Fire Department has an engine apparatus out for repair, a Fire Department should have a reserve engine apparatus equipped, maintained and ready for replacement purposes if its primary pumper is out of service. At a minimum, one engine apparatus should be kept in reserve for each eight engine apparatus, which would include a single engine apparatus having a replacement.

For the Georgina Fire Department to receive maximum credit in this portion of the engine service grading item, a reserve engine would be required.

Recommendation 8.2-3 Provide a Reserve Ladder Apparatus

To ensure an adequate response when a Fire Department has a ladder apparatus out for repair, a Fire Department should have a reserve ladder apparatus equipped, maintained and ready for replacement purposes if its primary ladder is out of service. At a minimum, one ladder apparatus should be kept in reserve for each eight ladder apparatus which would include a single ladder apparatus having a replacement.

For the Georgina Fire Department to receive maximum credit in this portion of the ladder service grading item, a reserve ladder would be required.

Recommendation 8.2-4 Improve First Due Engine Coverage

First due coverage for engines could be improved to receive additional credit for fire insurance grading purposes. First due engine response credit only received 43 percent credit and it was determined that an additional five engine companies would be required to receive maximum credit within this grading item for fire insurance grading purposes.

Credit up to the maximum can be received if additional fire stations and engine companies were developed within the municipality to improve first due coverage.

Recommendation 8.2-5 Apparatus Replacement Program

The Georgina Fire Department received full credit for apparatus in 2016. However, numerous apparatus such as Engine 141, Tanker 144, Aerial 163, Engine 181 and Tanker 184 have reached and/or are approaching their maximum age of acceptance, and could result in decreased credit as it pertains to fire insurance grading. Careful and strategic alignment of replacement funding of apparatus will need to be developed to ensure that, as a minimum, front line apparatus do not exceed the 15-year replacement cycle for front line pumpers and ladder companies, as well as the 20-year maximum replacement schedule for mobile water supply apparatus.

Recommendation 8.2-6 Train and Qualify Additional Firefighters to Officer Positions

The Georgina Fire Department received a limited amount credit for career officers when measured against the 44 career officers needed based on a shift factor of 4. The Georgina Fire Department can receive additional credit up to the maximum if it increases the total number of Company Officers on the Fire Department. Credit can be received through a combination of career and auxiliary officers.

A Fire Department should have sufficient Company Officers available and assigned to provide one on- duty response with each required engine or ladder company.

The Company Officers should be adequately trained, preferably in accordance with NFPA 1021: Standard for Fire Officer Professional Qualifications, 2009 Edition or recent edition to receive full credit for fire insurance grading purposes.

Recommendation 8.2-7 Improve Total Available Fire Force

The Georgina Fire Department is credited with 16.17 Fire-fighter equivalent units in its available fire force out of the maximum it can receive of 66. The Georgina Fire Department can receive additional credit up to the maximum if it improves its available fire force. Credit can be obtained through career and auxiliary members.

Note that the available fire forces can be improved through additional auxiliaries up to 50% of the required fire force (in the case of Georgina Fire Department, the required force is 66 Firefighter equivalent units (FFEU), so the maximum available fire force that can be provided through auxiliary Firefighters (Volunteers) and other FFEU sources is 33). Providing additional staffing, through either career or auxiliary Firefighters, is a serious matter that requires careful consideration. There are many factors to consider and the fire insurance grading is only one such factor.

Recommendation 8.2-8 Improve In-Service Apparatus Company Staffing

The Georgina Fire Department can receive additional credit, up to the maximum, in this grading item if it improves its staffing of in-service fire apparatus. It should be noted that this grading item is connected with other fire insurance grading items. They include engine service, ladder service, and total available fire force. Changes in those grading items may affect the amount of credit received in this grading item.

Recommendation 8.2-9 Continue to Develop Officer Training Program

To improve the overall effectiveness of the personnel holding officer positions and personnel working towards an officer's position, it is recommended that an official officer training program with attainable goals be developed for members. The curriculum should include qualitative and quantitative goals and benchmarks that each Fire fighter can work towards.

A standard that should be considered as reference material for developing an officers training program is NFPA 1021: Standard for Fire Officer Professional Qualifications. NFPA 1021 identifies the performance requirements necessary to perform the duties of a Fire officer and specifically identifies four levels of progression.

Recommendation 8.2-10 Improve Training Facilities

The Georgina Fire Department does not have a developed training grounds or facilities. Additional training facilities should be acquired. The following props and facilities are recommended to be developed within the Town of Georgina:

- Wet drill facilities
- Smoke facilities
- Additional training prop for scenario based training
    - Fuel spill fire
    - Vehicle fire
    - LP tank fire
    - Gas main break fire
    - Industrial fire

Training facilities should be developed by the Fire Department in relation to the level of fire risk within the community so that realistic Firefighting training can be conducted.

It is recommended that facilities for drill and training be readily available for purposes that include necessary

buildings or structures for ladder work, smoke and breathing apparatus training, use of pumper and hose lines, lecture space, etc. If the Fire Department were to develop its own training facilities it is recommended NFPA 1402: Guide to Building Fire Service Centres, recent edition be used for development.

Ideally for fire insurance grading purposes, training props and facilities should be located within the municipality of the Fire Department. Credit can be received for the use of training facilities and props in neighbouring communities if the Fire Department has access to use them. To receive full or partial credit, training facilities and props should be within 8 km of the municipal boundary. If training facilities and props are beyond 8 km, credit can still be achieved, but sufficient Fire Department coverage must be maintained within the municipality when Fire Department resources are outside of the community for training purposes.

Recommendation 8.2-11 Fire Station Replacement Plan

The current status of Georgina Fire Stations is they are not effectively serving their purpose. Fire Stations are old and lack modern design features and facilities that aid in the Fire Department programs such as training, proper equipment storage, and the ability to house modern fire apparatus. Each building being used as a fire station has a number of issues as well as health and safety concerns. The stations do not incorporate modern features and best practices for fire stations and have less than desirable living and dormitory area for on-shift crews. The facilities have limited space for administration, training and exercise and are considered inadequate in most respects with regards to meeting the needs of the members of the Department. The poor condition of the buildings adversely affects the morale of the Department and the capacity of the Department to remain in a state of readiness.

Serious consideration should be given to the development of a plan to replace the existing fire stations with modern facilities designed to meet the needs of the Department and community, while at the same time minimizing response times.

Recommendation 8.2-12 Continual Development of Pre-Incident Plan Program

Additional Credit within this grading item can be achieved as a greater number of high occupancy and high fire risk buildings are pre-planned. Regular updating and use in training of pre-incidents plans should occur to ensure credit for fire insurance grading is achieved in the future. This may involve classroom discussions or visiting the site and performing Firefighting or rescue scenarios. Increasing the inventory of pre-incident plans will be paramount in receiving additional credit points.

Credit awarded in this area of the fire insurance grading may help to improve the overall fire insurance grade of the community.

Recommendation 9.2-1 Improve Hydrant Distribution

Hydrant distribution can be improved within the Town of Georgina. Additional credit up to the maximum can be received if hydrant distribution is improved. It is recommended that additional hydrants be installed to allow for a sufficient volume of water being available to buildings. It should be noted that for additional hydrants to be effective, a sufficient amount of water must be available within the water system.

Effective hydrant distribution will help provide a greater level of fire protection throughout commercial and residential areas by allowing for greater volumes of water to be used during fire ground operations, provided that the system has been designed, installed and capable of meeting such demands.

Recommendation 9.2-2 Frequency of Available Fire Flow Testing

Routine available fire flow testing should be completed on water supply systems that provide public Fire protection. At a minimum, available fire flow testing should be conducted every 5 years in accordance with NFPA 25: Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems, recent edition and NFPA 291: Recommended Practice for Fire Flow Testing and Marking of Hydrants, recent edition.

NFPA 25 Reference 7.3.1 Tests

7.3.1 * Underground and Exposed Piping Flow Tests. Underground and exposed piping shall be flow tested to determine the internal condition of the piping at minimum 5-year intervals.

7.3.1.1 Flow tests shall be made at flows representative of those expected during a fire, for the purpose of comparing the friction loss characteristics of the pipe with those expected for the particular type of pipe involved, with due consideration given to the age of the pipe and to the results of previous flow tests.

7.3.1.2 Any flow test results that indicate deterioration of available water flow and pressure shall be investigated to the complete satisfaction of the authority having jurisdiction to ensure that the required flow and pressure are available for fire protection.

NFPA 291 Reference 4.13 Public Hydrant Testing and Flushing

4.13.1 * Public Fire hydrants should be flow tested every 5 years to verify capacity and marking of the hydrant.

4.13.2 Public Fire hydrants should be flushed at least annually to verify operation, address repairs, and verify reliability.

Recommendation 9.2-3 Private Hydrants should be Properly Identified

Private hydrants are encouraged to be colour coded differently than public hydrants. NFPA 291: Recommended Practice for Fire Flow Testing and Marking of Hydrants, recent edition recommends the following:

5.2.5.1 Marking on private hydrants within private enclosures is to be at the owner's discretion.

5.2.5.2 When private hydrants are located on public streets, they should be painted red or some other color to distinguish them from public hydrants.

Recommendation 10.1-1 Qualifications for Fire Prevention Education Providers

To ensure that individuals have the necessary skills and knowledge to provide fire prevention education programs and services, should be certified as a Public Fire and Life Safety Educator in accordance with NFPA 1035: Standard for Professional Qualifications for Fire and Life Safety Educator, Public Information Officer, and Juvenile Fire Setter Intervention.

Additional credit up to the maximum can be achieved if/when members of the Fire Department that are providing fire prevention education are certified to Level 1 and Level 2 as a Public Fire and Life Safety Educator.

At minimum, the most senior member of the Fire Department providing fire prevention education should be certified to Public Fire and Life Safety Educator Level 2 and additional educators should be certified, at minimum, to Level 1.

Recommendation 10.1-2 Improve Qualifications for Fire Prevention Inspectors

To ensure that individuals have the necessary skills and knowledge to provide fire prevention inspections, they should be certified as a Public Fire and Life Safety Educator in accordance with NFPA 1031: Standard for Professional Qualifications for Fire Inspector and Plan Examiner.

At minimum, individuals conducting Fire prevention inspections should be certified to NFPA 1031: Level 1 and strive to achieve Level 2 for conducting inspections in occupancies with a higher risk factor.

Recommendation 10.1-3 Review NFPA 1730 to aid in the development of the Town's Fire Prevention Program

As NFPA has recently released NFPA 1730: Standard on Organization and Deployment of Fire Prevention Inspection and Code Enforcement, Plan Review, Investigation, and Public Education

Operations, the Georgina Fire Department is encouraged to review the document to see how they may incorporate aspects of the Standard into development programs in the future as the fire prevention division of the Department grows.

Recommendation 10.1-4 Continue to Develop In-service Inspection Program

Increasing the frequency of inspections can be aided by the addition of in-service companies completing Life Safety and Hazard Identification Occupancy Inspections related to smaller and less technical occupancies (provided adequate training is administered). This will allow Fire Inspectors to focus on larger risks such as vulnerable occupancies, multi-unit residential, industrial, commercial, and institutional as well as assembly occupancies. A critical process to in-service inspections will include appropriate training and a firm quality assurance program.

Recommendation 10.1-5 Improve Fire Prevention Inspection Program

Increasing the frequency of inspections while continuing to meet legislative requirements of the Fire Protection and Prevention Act 1997, The Ontario Fire Code and OFMEM Public Safety Guidelines should be a priority of the Fire Prevention/Public Education division of the Georgina Fire Department. In order to improve the frequency of inspections, additional resources in the form of Fire Prevention Inspectors will likely be necessary.

The amount of inspections should be improved if the Fire Department desires to receive additional credit within this grading item for fire insurance grading purposes. Incorporating a routine inspection program will be necessary to achieve better scoring under this item. The Department should develop an inspection frequency that meets the needs of the community while maximizing fire insurance credit. The development of a plan that includes at a minimum annual inspection frequency of all properties should be investigated as it pertains to the needed resources and functions that will support the objective of annual inspections.

Two documents are recommended to be used as guides for developing an inspection program that goes beyond providing inspections on complaint and requests only.

- NFPA 1730: Standard on Organization and Deployment of Fire Prevention Inspection and Code Enforcement, Plan Review, Investigation, and Public Education Operations, Chapter 6 Fire Prevention Inspection and Code Enforcement

- Fire Underwriters Survey – Technical Bulletin – Recommended Frequency of Fire Prevention Inspections, Appendix G

Recommendation 12.2-1 Superior Tanker Shuttle Service Accreditation

In areas without hydrant water supplies, it may be possible to achieve improved insurance rates reductions for Personal Lines and Commercial Lines insured dwellings. A Fire Department must be capable of providing a minimum continuous flow rate that is equivalent to hydrant protection as per the guidelines indicated below.

Essentially, the Fire Department must show, through physical site testing, that it can provide a minimum of 200 Igpm for a period of 2 hours at a limiting distance of 5 km from a recognized water supply point and 8 km

from a recognized fire hall (or lesser distance limited by the Fire Protection Area boundary). For Commercial Lines, 400 Igpm must be provided for a period of 1 hour at a limiting distance of 2.5 km from a recognized water supply point and 5 km from a recognized Fire hall (or lesser distance limited by the Fire Protection Area boundary).

Complete details of the accreditation testing process are provided in Appendix H – Alternative Water Supplies for Public Fire Protection.

A Fire Department should aim to achieve as close as feasible to the Required Fire Flow for a building using a shuttle operation as any future adjustments to the Fire Insurance Grading methodology will likely be based on this measurable. Furthermore, the main reason to maximize water through shuttle operations is to aid Firefighting, as noted in NFPA 1142: Annex C Mobile Water Supply Apparatus.

Additional mobile water supply apparatus would be required to reliably and consistently provide STSS service from each of the fire stations in the Town of Georgina. Annex C of NFPA 1142 should be reviewed to aid a Fire Department in determining flow rates based on desired mobile water supply tank capacities and available water supply points.

Recommendation 12.2-2 Develop Formal Water Supply Plan for Non-Hydrant Protected Areas; Consider Dry Hydrants

The Georgina Fire Department provides structural fire protection to areas in the municipality that are without hydrant water supplies. In these areas, the Fire Department responds utilizing the onboard water storage of the fire apparatus. Plans should be developed to improve continuous flow rates from the Fire Department in areas that do not have hydrants.

Consideration should be given to installing dry hydrants or water tanks connected to a dry hydrant in strategic locations to minimize travel times during shuttling operations. Dry hydrants should be installed and designed in accordance with NFPA 1142: Standard on Water Supplies for Suburban and Rural Fire Fighting, current edition.

Any improvements made to water supplies should be reviewed/approved by Fire Underwriters Survey if they are intended to be credited for fire insurance grading purposes.

ESCI Update (2022):

GFRS conducted its last FUS survey in 2017. FUS has a goal to reevaluate fire departments every five years.

Modernization:

FUS was recently purchased by the Verisk company which is the parent company of the United State's Insurance Services Organization (ISO) and provides a similar rating system to FUS. The main difference in the two rating system is FUS provides several ratings that are fire station based and shaped by occupancy. In the ISO system, a single PPC (Property Protection Classification or ISO rating) is provided for a fire department independent of the number of fire stations and occupancy classifications. This rating system is based on four primary elements: distance from fire station, fire department capabilities, water supply systems, and dispatch communications, and one secondary fire prevention processes.

Recommendation #19 - Fire Underwriters Survey (FUS):

ESCI recommends GFRS should have an updated FUS survey performed.

Costs:

GFRS staff to evaluate and budget finances and time accordingly

Timeframe:

Short term (0 – 2 yrs)

Section 13 – Collaboration and Innovation

13.1 Key Performance Indicators
13.2 Station Location Considerations
13.3 Training Facilities
13.4 Canadian and International Fire Services Examples

Section 13: Collaboration and Innovation

The Collaboration & Innovation Review is ongoing; the Report will be completed by the end of March 2017.

ESCI Update (2022):
This Collaboration and Innovation Review report is now complete.

The purpose of the 2016 report conducted by EMT was to identify potential opportunities for the communities of the N6 fire departments to collaborate on along with innovative service ideas. These ideas were not confined to solely to one department but rather ideas that all the departments could possibly share in.

The report identifies the following areas for potential areas of collaboration among the five organizations (six communities):

1) Staffing
2) Joint Service Level Standards that include operations, dispatch, fire prevention and training
3) Fire Stations and Response Times
4) Vehicles and Equipment

The report identifies the following opportunities for the incorporation of emergency services innovation:

1) Drones
2) Mobile Training Units
3) Fire Prevention Initiatives
4) Home Fire Sprinklers
5) Joint Emergency Management Position

Modernization:
The concept of sharing resources between institutions is a growing application of limited government resources. It is not confined to the sharing of resources solely between fire departments but across all elements of government. Siloism, or the belief that service provision is most effective and efficient in isolation, is giving way to collaboration as not the preferred method of service provision but one that can have value and should not be excluded.

A method of expanding on this concept is to take a traditional way of doing business and seeing if a collaborative approach is more effective but also adopting a posture of whether a new idea can be shared across multiple organizations.

Recommendation #20 - Collaboration:
Continue exploring collaborative services with municipal partners.

Cost:
GFRS staff to evaluate and budget finances and time accordingly

Timeframe:
Ongoing

Section 14 – Summary of Recommendations Final Summary of Recommendations, Solutions and Estimated Costs

Section 14: Summary of Recommendations

Conclusion

During the review conducted by Emergency Management and Training Inc., it was demonstrated that the full-time staff and the Firefighters are truly dedicated to the community they serve. Council, CAO and Fire Chief are sincerely committed to ensuring the safety of the community and the Firefighters of Georgina. Based on the present staffing, equipment and Fire station locations, Georgina Fire Department is endeavoring to offer the most efficient and effective service possible.

All costs and associated times are approximate estimates that can be implemented through prioritization between the Fire Chief, CAO and Council.

Most fire master plans are 10-year documents with a review to be conducted at the five-year point. Due to some of the specific 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 bring forward updates to Council, as required.

Recommendations and Estimated Costs

The following chart provides further overview of the recommendations found throughout this report along with any estimated costs that can be incurred in the associated areas.

This Fire Master Plan document is a culmination of three individual reports:

- The Fire Station Review, which contains 14 recommendations
- The Fire Underwriters review, which contains 20 recommendations and
- The overarching Fire Master Plan document, which contains a total of 24 recommendations

Between the three documents there is a total of 58 recommendations for consideration by the Georgina Fire Department and its Council.

FMP Recommendations for Georgina Fire Department			
Rec #	Recommendation and Solution	Estimated Costs	Suggested Timeline
1	The Fire Station Report found in Appendix "F" contains a total of 14 recommendations. All of the recommendations can be found in the actual document, all with a brief summary noted in Section 13. As noted in the associated recommendations (in Section 13), many of the items will require immediate attention.	Approximate cost of recommendations is $500,000.	To be dealt with as noted in the report
2	It is recommended that a full review of the Establishing and Regulating By-law document be completed to include the following items: • Update the document's language to reflect what • is noted in the FPPA • Incorporate, where appropriate, any references to NFPA standards that the Fire Department deems necessary to be followed • Measurable service levels that can be reported to council on an annual basis, and • Composition to represent the level of service to be provided as outlined throughout the FMP, and • A review to be conducted by the Town's Solicitor	No cost associated with this recommendation	Short-Term (1-3 years)
3	It is recommended that the Simplified Risk Assessment/Community Risk Assessment (SRA/CRA) be updated in accordance with NFPA 1730, being every five years or as necessary with changes. In order to aid Council in their decision-making process, there is merit in providing an updated assessment at the beginning of every term of Council so that the sitting Council understands the platform on which the services conducted by the Fire Department are built.	No cost associated with this recommendation – staff time only	Short-Term (1-3 years)
4	It is recommended that the Fire Chief provide Council with an updated review of the Simplified Risk Assessment coupled with the Office of the Fire Marshal and Emergency Management's Integrated Risk Management (IRM) tool of the identified High, Medium, and Low risk occupancies.	No cost associated with this recommendation – staff time only	Short-Term (1-3 years)

5	It is recommended that upon completion of the SRA/CRA and IRM, as noted in recommendation 4, that the Fire Chief provides Council with a draft policy for review and passage that outlines a fire inspection program to address identified needs and expected outcomes of the program. This program should outline the building types and the frequency of inspections.	No cost associated with this recommendation – staff time only	Short-Term (1-3 years)
6	It is recommended that the Fire Department meet with all local community groups to form a partnership in relation to organizing fire safety and public education events that can be tailored to the unique needs and challenges within the community	Staff related time – no other costs noted at this time	Immediate (0-1 year)
7	It is recommended that the Fire Prevention Division review its inspection program to identify levels of desired frequency for these inspections. It should also be noted at this time, that the Fire Underwriters Survey supports and recommends that a level of frequency be identified by the Fire Department in its quest towards ensuring a fire safe community.	Staff related time – no other costs noted at this time	Short-Term (1-3 years)
8	It is recommended that the GFD work with developers and the public to make the Home Sprinkler Systems initiative a part of their fire prevention and public education program.	Staff related time – no other costs noted at this time	Immediate (0-1 year)
9	It is recommended that the present part-time Administrative Assistant position be transitioned into a full-time position.	Cost would be related to the number of hours to be increased to make the position full-time	Short-Term (1-3 years)
10	It is recommended that to verify the Training Division is meeting related NFPA (and other) training program recommendations, the Training Officer should identify; • What training programs are required in relation to the services that GFD is providing • The number of hours that are required to meet each of those training needs • Resources required to accomplish this training • Joint partnerships with bordering fire departments and private organizations that can be entered into to achieve the training requirements identified by the Training Officer, and • To present an annual program outline at the start of each year to the Fire Chief, with noted goals and expectation, which are measured and reported on in relation to completion success rate at the end of each year.	Staff related time for the evaluation – no other costs noted at this time, but depending on recommendation s made by the Training Division, costs will be incurred	Short-Term (1-3 years)

11	It is recommended that GFD continue to search out opportunities to conduct joint training programs with other fire departments by securing/scheduling neighboring training facilities whenever possible.	Not identified costs at this time	Short-Term (1-3 years)
12	It is recommended that GFD explore the partnership opportunity to build a training facility within the capture area, which would be a cost-effective measure for all of the fire departments.	Not identified costs at this time	Short-Term (1-3 years)
13	It is recommended that greater utilization of the full- time officer resources be incorporated into an annual fire prevention program on a more formal basis. To accomplish this, all full-time officers should be trained and certified to at least: • NFPA 1031 – Fire Inspector I, and • NFPA 1035 – Fire and Life Safety Educator I By having all full-time officers trained to the noted levels, GFD will have a greater number of resources to draw upon in its public fire safety education and inspection programs.	There is not actual cost to this recommendation other than the training and certification of the Firefighters to the noted levels.	Short-Term (1-3 years)
14	Succession planning for Fire Prevention and Training Division personnel should be addressed to ensure trained personnel are ready to take over when the existing personnel retire.	Recommendation 6 would be a modest monetary cost – anticipated <$1,000 – but would also involve staff time.	Short-Term (1-3 years)
15	The Fire Chief should investigate opportunities to promote retention of the Volunteer Firefighters (VFF) as noted in the OFMEM document (attached in section 14, Appendix “D”). The Fire Chief should continually recruit for VFF’s in areas that are presently understaffed or have issues with response numbers (of VFF’s) to calls.	No Immediate cost for this recommendation	Short-Term and ongoing (1-3 years)
16	The Department should complete certification for staff for each position (that requires or recommends certification) and ensure that certifications are maintained.	Staff time based on training program	Mid-Term (4-6 years)
17	The Fire Chief should continue to monitor and evaluate call volumes of the Department on an annual basis along with the level of Firefighter’s response per station to identify any areas of concern that may result in recommending the implementation of a partial full- time response component for the municipality.	No cost associated with this recommendation	Long Term (7-10 years)
18	It is recommended that the Fire Chief present a Standard of Cover for the approval of Council.	No cost associated with this recommendation	Immediate (0-1 year) and ongoing

19	It is recommended that when possible the present dispatching agreement with the current dispatch provider be updated to included NFPA related standards for GFD to incorporate the necessary performance measures as per the NFPA 1221 standard.	No cost associated with this recommendation	Immediate, (0-1 year) with ongoing review
20	The Town should endeavour to maintain a schedule that compiles with the Fire Underwriters Survey (FUS) recommendations on the replacement of vehicles. 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, maintenance, testing, inspection and replacement and refurbishing be utilized.	Continued financial forecasting	Long-Term and ongoing (7-10 years)
21	It is recommended that the Keswick Station secondary EOC be relocated in a newer facility so that it is designed and built to better meet the needs of an emergency operations centre.	Cost would be part of the newer facility design and build	Mid Term (4-6 years)
22	It is recommended that a full review of all mutual aid, automatic aid and fire protection agreements be completed in the short-term to identify any required revisions.	No cost associated with this review and updating of agreements	Short-Term (1-3 years)
23	Annual corporate business planning cycles should be more specific in identifying goals and expected outcomes for all Fire Department related programs so as to ensure that adequate funding is secured in relation to the reserve funds for equipment and facilities.	No cost associated with this planning cycle recommendation. However, results of the planning may incur costs	Short-Term (1-3 years) And on an ongoing basis
24	Continue updating and completion of any open projects noted in the previous 2010 Fire Master Plan.	Costs to be identified with each related incomplete project	Short-Term (1-3 years)

Recommendations Contained in the Fire Station Review Document

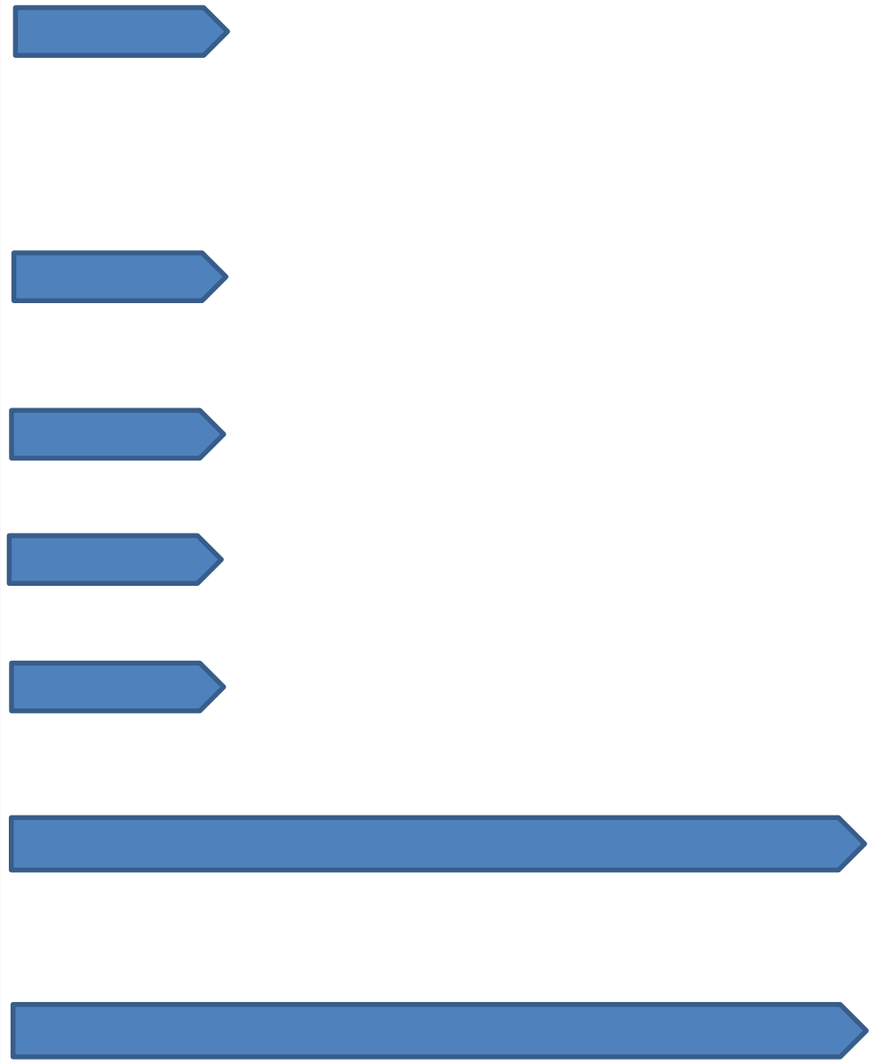
Recommendations for Georgina Fire Department - Fire Station Review			
Rec #	Recommended Solution	Estimated Costs	Suggested Time Line
	See notes for each station as many items were identified as requiring repairs – only the immediate and key recommendations have been identified in this chart.	Estimated costs for all visual repairs identified would exceed $500,000	---------
1.	Remove the mezzanine in the apparatus bay in Station 1-4, Keswick.	Approximate cost for removal - $1,000	Immediate
2.	Remove any items being stored in the overhead storage (apparatus bay) in Station 1-8, Pefferlaw.	No cost for removal, but new storage area needs to be built	Immediate
3.	Electrical panels on the apparatus floor should be protected from the potential of water spray at all three of the stations.	Proper water proof covers for these panels to be installed - $1,000	Immediate
4.	Have the vehicle exhaust system evaluated / repaired at Station 1-6, Sutton.	Costing unknown based on amount of repairs required	Immediate
5.	Upgrade or install proper male and female showers at Station 1-4, Keswick; 1-6, Sutton and 1-8 Pefferlaw.	Estimated costs of approx. $10,000 per washroom	Immediate
6.	Install fencing around the training tower at Station 1- 6, Sutton.	Costing would depend on type of fencing installed	Immediate
7.	Ensure safety features are adequate for apparatus bay doors.	Costing unknown based on amount of repairs and parts required	Immediate
8.	Conduct an engineering review of all Fire stations for an in-depth structural assessment, repairs / upgrades required, and estimate the cost of the work to address the issues. EMT's assessments are from a visual perspective only; no engineering review was performed on the buildings.	Engineering review estimated at approx. $5,000 - $7,000.	Short Term (1-3 years)
9.	Replace Station 1-8, Pefferlaw. Station 1-8 is in a good location for response to the community, however, it is the size and available space with the present station that is a concern.	Construction costs estimate $390 per square foot. (e.g. 10,000sq ft. building = $3,900,000)	Immediate (0–1 year)

10.	Construct a new Fire station to the northeast of the current Station 1-4, Keswick, to provide a larger response coverage area. This station will be the new Fire Headquarters. The station should be designed so that it has the capacity to accommodate, in the future, two full-time crews along with a Volunteer force, plus a spare apparatus (or be designed to be easily expanded).	Construction costs estimate $390 - per square foot. (e.g. 20,000sq ft. building = $7,800,000)	Long Term (7-10 years)
11.	Consider an additional station in the south of Keswick shortly after the new Headquarters is built or even simultaneously. With the fairly rapid growth in the community along with the existing call locations, this new additional Fire station is warranted. It has been identified that the Town has property and is planning a community centre in the area of Woodbine Avenue and Glenwood Avenue. This location, as plotted above (in Map #4), provides an enhanced four (4) minute response time to the south end of Keswick.	Construction costs estimate $390 per square foot. (e.g. 10,000sq ft. building = $3,900,000)	Short Term (1-3 years)
12.	The Fire service currently does not have an appropriate Fire training centre. EMT would recommend that one of the locations include a Firefighter training centre including a training tower, live burn building, space for auto extrication, and a classroom.	Construction costs estimate $390 per square foot. (e.g. 10,000sq ft. building = $3,900,000)	Mid Term (4-6 years)
13.	Replace or renovate Station 1-6, Sutton. Relocating this station to an area such as Dalton Road and Black River would offer a quicker response to the Greater Sutton Area and also for a more efficient response time when backing up (response support to) the Keswick or Pefferlaw stations.	Construction costs estimate $390 per square foot. (e.g. 10,000sq ft. building = $3,900,000)	Mid Term (4-6 years)
14.	During all noted replacements or renovations to the Fire stations, any related AODA requirements must be incorporated.	As Required	As Required

ESCI Update (2022):

The following are the recommendations that ESCI has made:

#	Pg. #	Recommendation	Cost	Timeframe	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
1	29	**Service level monitoring:** ESCI recommends since GFRS's mission is to provide a service to the community, indicators of when the service models should be assessed are when the services show signs of strain. This is identified further in the report where the National Fire Protection Association (NFPA) recommends response times as the primary indicator of reliable service.	Dependent on the growth rate but using the population model, a 1% increase, excluding inflationary costs, in annual fire department expenditures should be planned for.	Short term (0 – 2 yrs)										
2	35	**Key Performance Standards development:** ESCI recommends that GFRS continue to be proactive in its philosophies of change assuming progressive postures that use data, regular community and staff interaction, and benchmarks that regularly evaluate its service model.	GFRS staff to evaluate and budget finances and time accordingly	Short term (0 – 2 yrs)										
3	40	**Performance standards approval and adoption:** ESCI recommends the Fire Chief, with Town Council approvals, should adopt measurable performance standards for each of the three lines of defence.	GFRS staff to evaluate and budget finances and time accordingly	Short term (0 – 2 yrs)										
4	40	**NFPA standards monitoring:** ESCI recommends the Fire Chief should monitor the progress of the changing NFPA 1710 and 1720 standards to the new NFPA 1750 and see if new applicable standards are produced.	GFRS staff to evaluate and action accordingly	Short term (0 – 2 yrs)										
5	40	**Establish and Regulate Bylaw update:** ESCI recommends the current bylaw, which is now 18 years old, should be reviewed and updated, as needed. At the least, the organizational structure outlined in Appendix 'B' of the bylaw should be updated.	GFRS staff to evaluate and budget finances and time accordingly	Short term (0 – 2 yrs)										
6	40	**Accreditation:** ESCI recommends even without pursuing full accreditation, GFRS should strongly consider adopting the CFAI model standard for fire service excellence. This would require staff time to be allocated to begin working towards the accreditation model.	GFRS staff to evaluate and budget finances and time accordingly	Long term (5 - 10 yrs)										
7	42	**Communication:** ESCI recommends the fire chief should continue to keep open communication channels with both the community and workforce. When possible, the fire chief should keep all staff up-to-date on strategic objective timetables and implementation progress as well as continuing to involve the workforce in implementation processes.	GFRS staff to evaluate and budget finances and time accordingly	Ongoing										



#	Pg. #	Recommendation	Cost	Timeframe	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
8	46	**Growth monitoring:** ESCI recommends the Fire Chief should consider the establishment of organizational change trigger points associated with the growth of the community. When trigger points are met, the fire chief and town council should be aligned as to what the next action steps are.	GFRS staff to evaluate and budget finances and time accordingly	Ongoing										
9	51	**Develop and maintain a Community Risk Assessment (CRA):** As directed by the Office of the Fire Marshal, complete the CRA by July 1, 2024 to replace the existing Simplified Risk Assessment (SRA). Maintain a CRA framework.	Approximately 20 hrs or greater staff time annually GFRS staff to evaluate and budget finances and time accordingly	Ongoing										
10	55	**Preplanning:** ESCI recommends GFRS should continue to strive for including building and preplan data vehicle tablets in pre-fire operations.	$5,000 for software technology that provides preplan data to apparatus	Medium term (2 – 5 yrs)										
11	63	**Residential sprinklers:** ESCI recommends GFRS should continue collaboration with builders to offer residential sprinkler installation as a part of new construction.	GFRS staff to evaluate and budget finances and time accordingly	Ongoing										
12	64	**Performance standards:** ESCI recommends GFRS should adopt performance standards that are consistent with community expectations and costs that would require incremental improvements of service delivery.	GFRS staff to evaluate and budget finances and time accordingly	Short term (0 – 2 yrs)										
13	72	**Annual service review:** ESCI recommends GFRS should continue annual reviews of service provision involving all stakeholders.	GFRS staff to evaluate and budget finances and time accordingly	Ongoing										
14	80	**Tiered response:** ESCI recommends GFRS should do a joint engagement with the York Region EMS and the community to discuss EMS response expectations.	GFRS staff to evaluate and budget finances and time accordingly	Short term (0 – 2 yrs)										
15	99	**Monitor growth and service levels (station 1-8):** ESCI recommends GFRS should establish trigger points in alignment with response performance standards to determine when the Pefferlaw station should consider transitioning to some degree of career response models.	GFRS staff to evaluate and budget finances and time accordingly	Long term (5 - 10 yrs)										

#	Pg. #	Recommendation	Cost	Timeframe	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
16	110	**Fleet services:** ESCI recommends GFRS should continue previous report recommendations to determine feasibility of expanding fleet service depth or participating in a joint fleet services arrangement with another community or organization.	GFRS staff to evaluate and budget finances and time accordingly	To be evaluated annually										
17	115	**Emergency management:** Continue working with York Region on expanding the Emergency Management Program to address specific contingency plans for various hazards, technology improvements and expanding collaborative processes.	GFRS staff to evaluate and budget finances and time accordingly	Ongoing										
18	119	**Automatic Aid:** ESCI recommends GFRS should expand its automatic aid agreements with the objective of creating an ERF (effective response force) that is compliant with NFPA standards.	GFRS staff to evaluate and budget finances and time accordingly	Short or Medium term (0 – 5 yrs)										
19	149	**Fire Underwriters Survey (FUS):** ESCI recommends GFRS should have an updated FUS survey performed.	GFRS staff to evaluate and budget finances and time accordingly	Short term (0 – 2 yrs)										
20	152	**Collaboration:** Continue exploring collaborative services with municipal partners.	GFRS staff to evaluate and budget finances and time accordingly	Ongoing										

Section 15 – Appendices

Appendix A	Definitions and References
Appendix B	Staff Surveys
Appendix C	Community Surveys
Appendix D	Public Fire Safety Guideline - Recruitment and Retention of Volunteer Firefighters
Appendix E	Call and Response Data for 2013 and 2014
Appendix F	Georgina Fire Station Review

Section 15: Appendices

Appendix A – Definitions and References

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

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 1720 – Standard for the Organization and Deployment of Fire Suppression Operations, 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)

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.

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 – Staff Surveys

The following survey was presented to internal stakeholders:

Town of Georgina Fire Masterplan - Internal Survey

Emergency Management & Training Inc. (EMT) have been hired to prepare a Fire Master Plan for the Georgina 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.

Questions:

1. Are you a…:

□ Career/full-time member

□ Volunteer Firefighter

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

_____

_____

_____

3. How do you think most people living in Georgina perceive the Fire Department?

_____

_____

_____

4. What would you say are the top three issues facing the Georgina Fire Department today?

_____

_____

_____

5. There are nine core services that the Georgina 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

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

_____

_____

_____

_____

7. What improvements does the Georgina 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?

_____

_____

_____

_____

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

_____

_____

_____

9. Are there any other comments/suggestions that you would like to add that would help to improve the services the Georgina Fire Department delivers to the community and to the Firefighters?
   For example: more public education, more training for staff, succession planning, equipment upgrades, etc.

_____

_____

_____

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

If you have any questions, please contact:

Lyle Quan lquan@emergencymgt.com

Appendix C – Community Surveys

During the FMP process, feedback was gathered from both the community in the form or an online survey and also a meeting with those from the community who have utilized the services of the GFD.

The following survey was presented to the external stakeholders:

Georgina Fire Department Fire Master Plan - External Survey

About Us

The Georgina Fire Department has a proud tradition of assisting residents and businesses by effectively responding to emergencies.

We are comprised of both full-time and Volunteer Fire fighters, plus an administrative staff complement that includes training and fire prevention officers. Our Department responds to approximately 2,100 emergency calls annually from our three fire stations for medical assists, motor vehicle collisions and structural fires.

Georgina Fire Department Fire Master Plan

In our ongoing efforts to ensure that we continue to meet the growing needs of the community we serve, we are creating a 10-year Fire Master Plan to help guide operational improvements and enhance our service.

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 to develop their Fire Master Plans, station assessments, and fire service reviews.

Your Input Is Important to Us

As part of this initiative, we are asking Georgina residents and businesses to fill out our online survey. The survey will take approximately ten minutes to complete. Your identity and responses are confidential. It will be available until midnight on Wednesday, September 7.

Please feel free to contact Lyle Quan with EMT with any questions regarding the survey at lquan@emergencymgt.com

Public Meeting

A public meeting will be held on Tuesday, September 13 at 7 p.m. in the Council Chambers of the Georgina Civic Centre, which is located at 26557 Civic Centre Drive.

This meeting will allow members of the public to discuss the proposed Fire master plan as well as the survey.

We wish to thank you for your assistance in this very important process.

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

   _____
   _____
   _____

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

   _____
   _____
   _____

3. 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					
Whether the Fire Department will visit my home to give me safety advice and/or fit smoke alarms					
How much the Fire services costs me as a tax payer					
How well the Fire Department works with other agencies to provide wider community safety services					
How often the Fire Department consults me about their services					

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)	☐	☐	☐	☐	☐
How visible the Fire Department is at local community events	☐	☐	☐	☐	☐
Contacting assistance services after an emergency, as required	☐	☐	☐	☐	☐
Timeliness to any request for services or assistance from the Fire Department	☐	☐	☐	☐	☐
Purchasing and maintaining new and applicable equipment	☐	☐	☐	☐	☐
Continued and relevant training	☐	☐	☐	☐	☐

4. What do you think are the top three issues facing our Fire service today?

_____

_____

_____

5. There are nine core services delivered by the Georgina 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

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

_____
_____
_____

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

_____
_____
_____

8. Have you directly received service from the Georgina Fire Department? (If no, skip to question 10)

- ☐ Yes
- ☐ No

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

_____
_____

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

- ☐ Yes
- ☐ No

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

_____
_____

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

Scope and Application:

This guideline provides municipal officials and Fire Chief s of Volunteer and composite fire services with a general overview of principles to consider in the recruitment and retention of Volunteers.

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

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

Definition of Volunteer:

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

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

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

Recruitment and Retention Program: The Benefits

A coordinated, organized program demonstrates:

a. how seriously the leadership takes the services provided and the individuals who provide that service,
b. sound risk management principles,
c. proactive vs. reactive leadership within the Department, and
d. leadership's commitment to recognize Volunteers, families and employers who support Volunteerism.

It identifies:

a. shortfalls and availability of Volunteers in the community and,
b. the number, type and quality of Volunteers required to meet current or future needs.

It allows planning for:

a. recruitment and selection,
b. retention and succession, and
c. 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 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

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

Additional References:

See also:

Office of the Fire Marshal's Public Fire Safety Guidelines

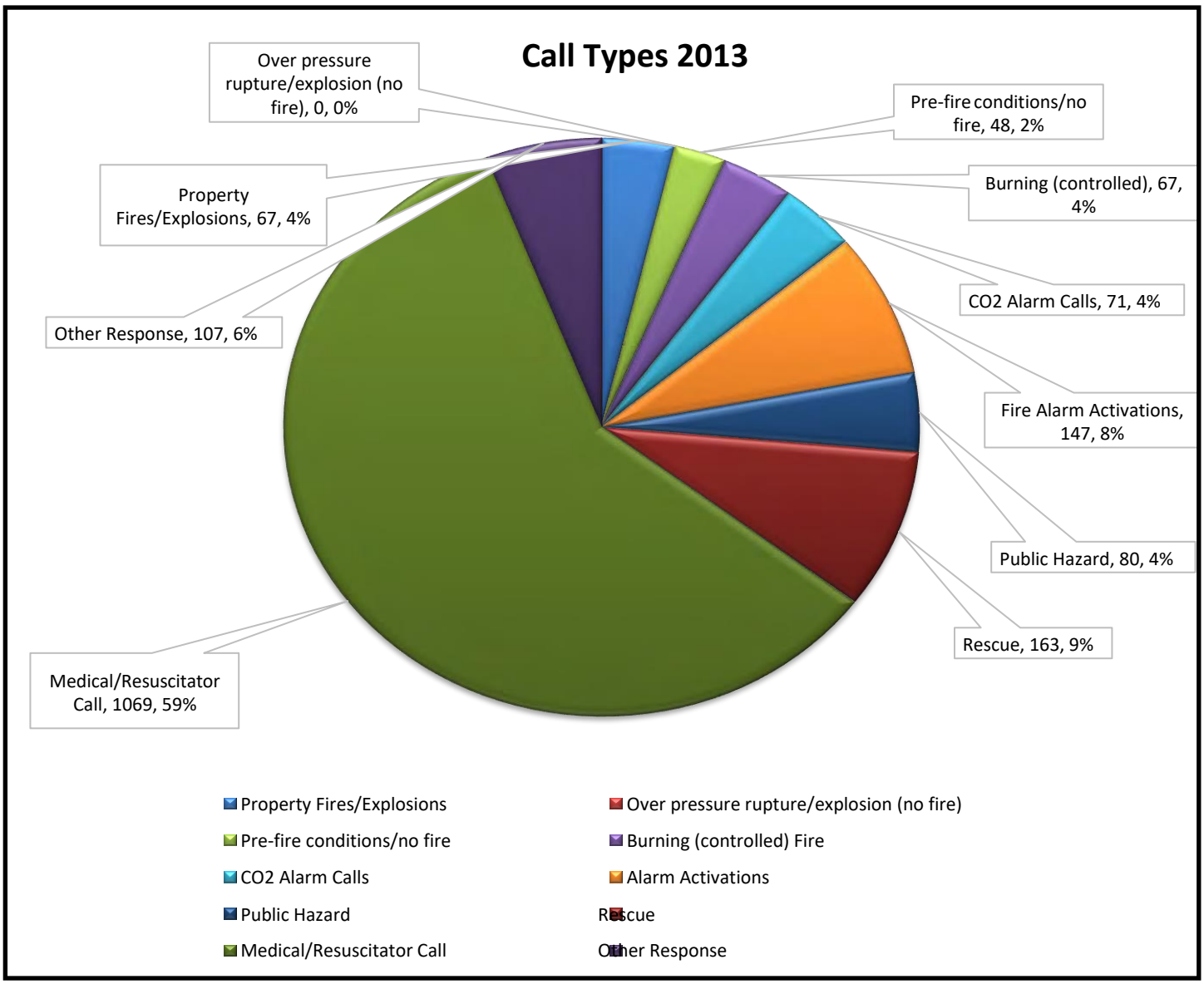
The following guidelines can be referenced when conducting a needs assessment to determine the role, quantity and characteristics of Volunteers required by the fire service.

04-08A-03 Optimizing Rural Emergency Response

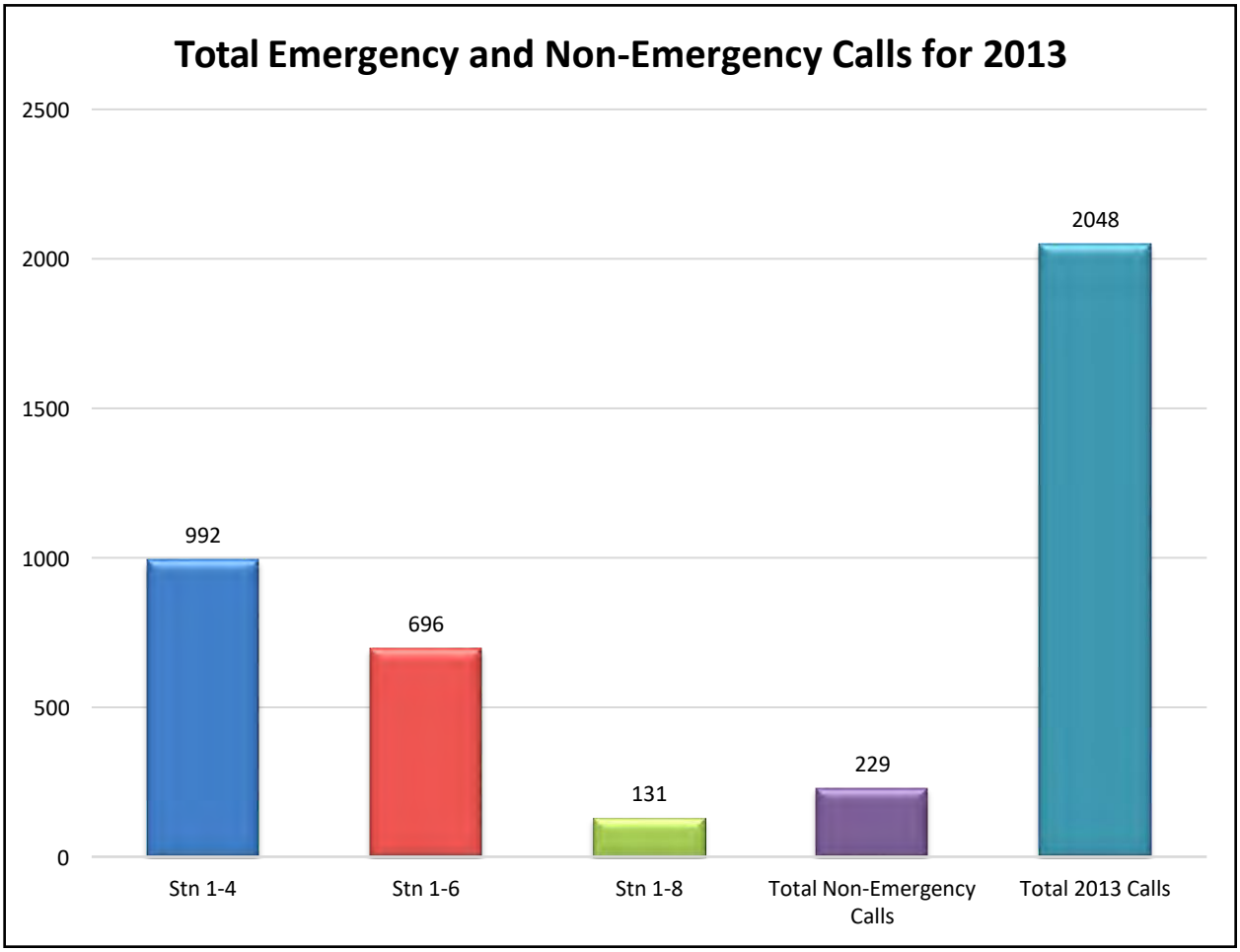
04-12-13 Core Services (Response and Support) and Associated Guidelines

04-40 A-03 Simplified Risk Assessment

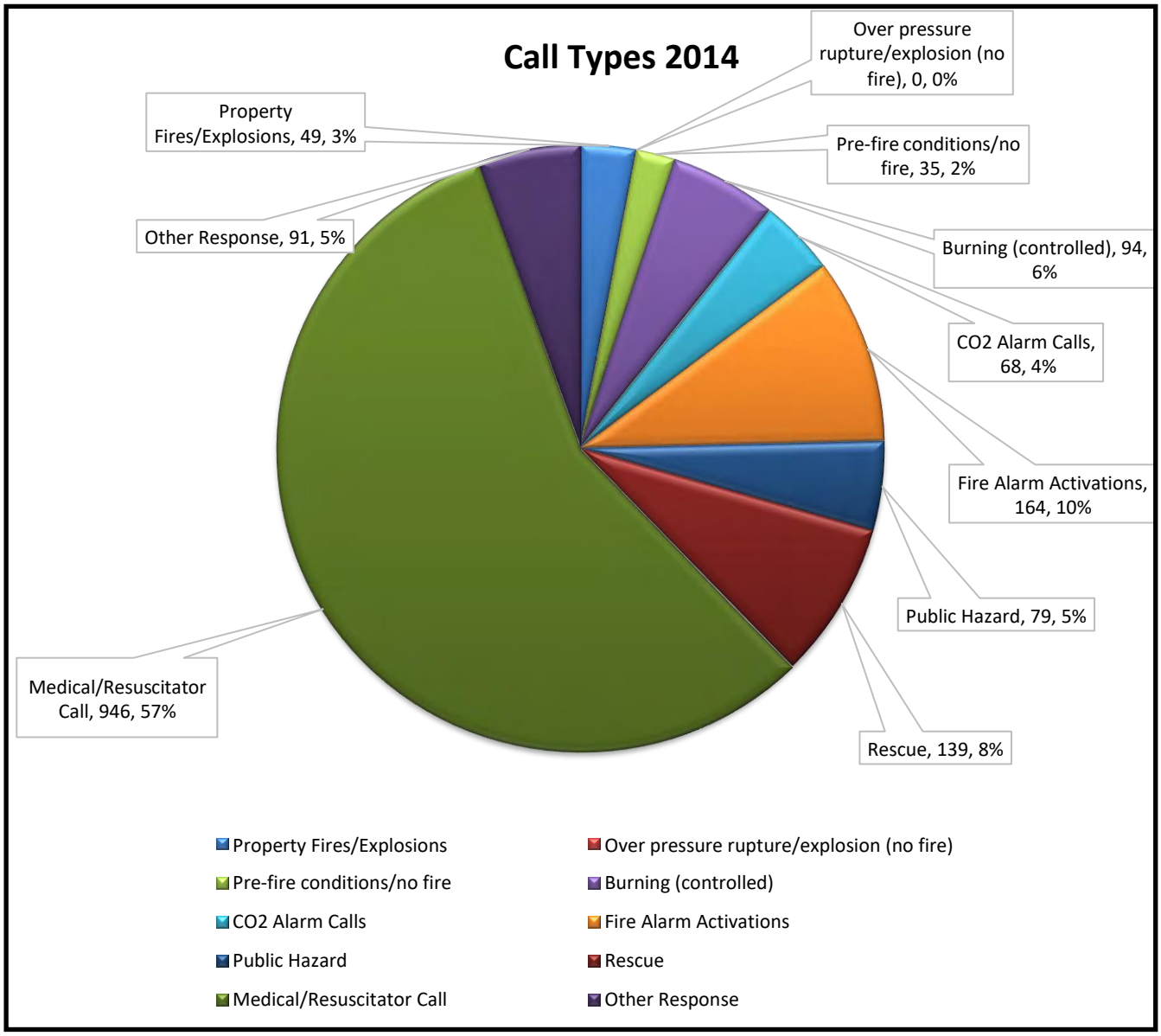
Appendix E – Call and Response Data for 2013 and 2014

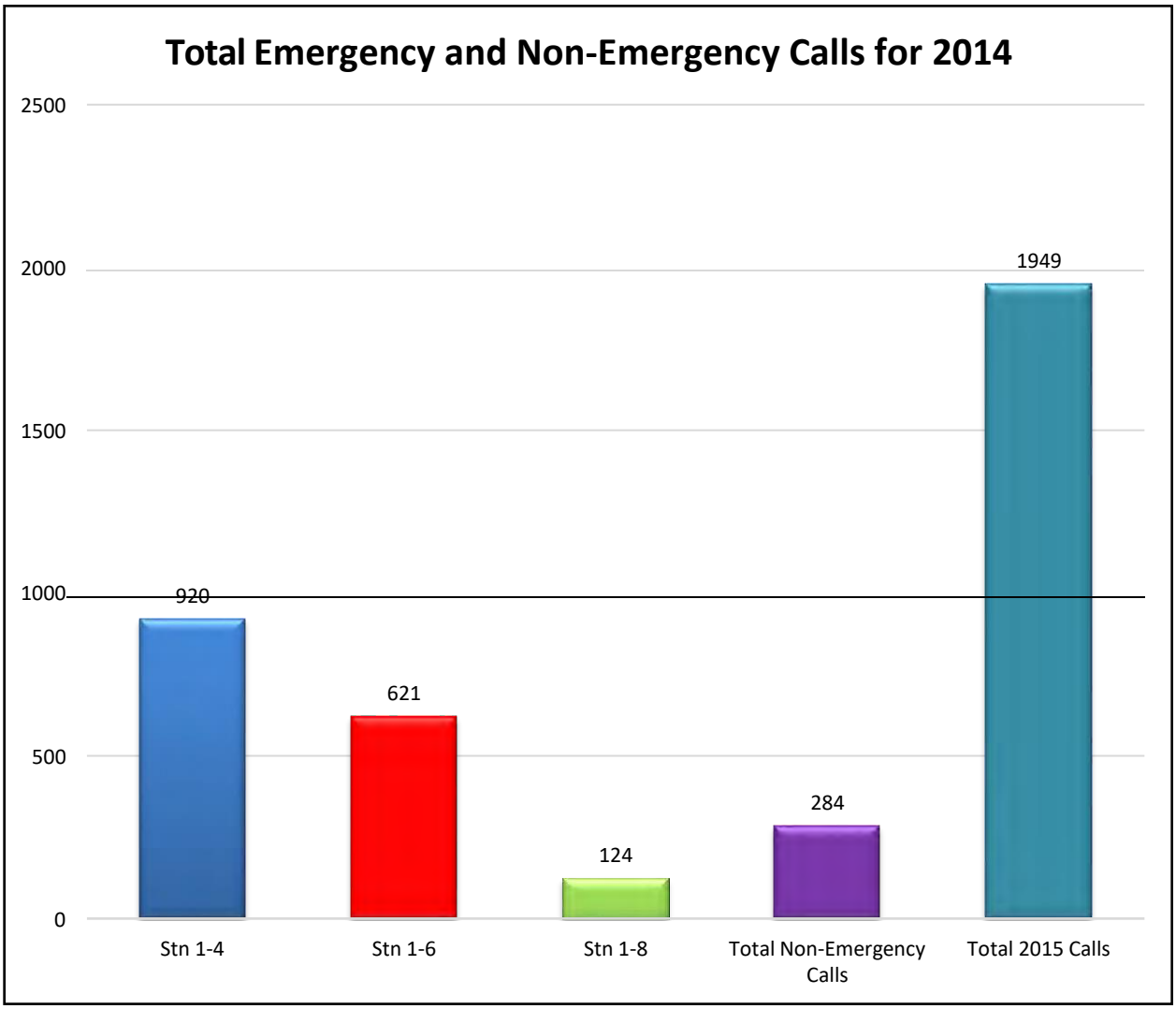


2013 Calls and Response Data



2014 Response Data




Total Emergency and Non-Emergency Calls for 2014
2500
2000
1500
1000
500
0
920
621
124
284
1949
Stn 1-4
Stn 1-6
Stn 1-8
Total Non-Emergency Calls
Total 2015 Calls

Appendix F – Fire Station Review

Discussion Paper Outlining the needs of the Town of Georgina Fire Department Fire Station Infrastructure

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

Executive Summary

The Town of Georgina Fire Department has commissioned a Fire Master Plan utilizing the services of Emergency Management and Training Inc. (EMT). As part of this FMP planning process a review and analysis of the current state of the fire station infrastructure was requested primarily to provide budget requirements and submissions for 2016/2017 and into the future. As such, this document can be used to validate the Town Development Charge By- Law information relating to fire station needs.

In completing this review, EMT was directed to utilize industry best practices to create and support any recommendations within this report and the overall Fire Master Plan document. These best practices included but are not limited to:

- National Fire Protection Association standards;
  - 1710 for career Fire Departments
  - 1720 for Volunteer Fire Departments
  - The Fire Underwriters Survey standards, and
  - Reference to the Commission on Fire Accreditation International (CFAI) which incorporates industry best practices in evaluating if a fire service meets the goals and expectations of a community.

Therefore, this report will review each of the current three fire stations physical status and response time criteria, and will outline the needs and recommendations for each. Along with the needs and recommendations will be budgetary numbers that could be utilized for planning purposes. It is important to note that while EMT strives to ensure these numbers are as accurate as possible by utilizing best practices, there may be local circumstances that could increase or decrease the actual costs of a given project. Proper price comparisons through utilizing the Corporate Purchasing Policy should be applied for figures that are more exact.

The three fire stations within this review are:

Station 1-4 (Headquarters)

165 The Queensway South, Keswick

All administration staff as well as the Fire Prevention Division and Training Division operate from this fire station. The full-time Firefighters are also at this station, 24 hours a day, 7 days per week, complimented by a committed group of Volunteer Firefighters.

Station 1-6

37 Snooks Road, Sutton

This station is staffed with full-time Firefighters 24 hours a day, 7 days per week, and is complimented by a committed group of Volunteer Firefighters.

Station 1-8

270 Pefferlaw Road, Pefferlaw

This station is staffed with a committed group of Volunteer Firefighters. Full-time staff from the Sutton station responds with the Pefferlaw Volunteers to all calls.

After a thorough review of the three fire stations, EMT is presenting a total of 13 recommendations noted within the body of this report. These recommendations are also accompanied with suggested timelines for implementation.

Overview

Georgina Fire Department covers an area of approximately 280 square kilometres and serves a population of approximately 48,000. Presently, the Department responds to an average of 2,100 calls per year.
Full-time administration staff include:

- Fire Chief
- Deputy Chief
- One full-time and one part-time Administrative Assistant
- A Training Officer, and
- Fire Prevention Division consisting of one FPO and two FPI/Public Educators

The Department is served by a combination of full-time and Volunteer Firefighters. The Keswick station (1-4) and the Sutton station (1-6) are composite, with the Pefferlaw station (1-8) being totally Volunteer.
The total Firefighting force for Fire suppression consists of:

- Full-time Firefighting force of 40 (at stations 1-4 and 1-6)
- Volunteer Firefighting force of 60, dispersed throughout the three stations

Although this report does identify a total of 13 recommendations, it is fully recognized that Council sets the level of service within any community. With this in mind, to assist Council in making a decision on the level of fire protection service for the community, the Fire Protection and Prevention Act, (1997, S.O. 1997) needs to be considered as it is a Provincial Act that sets the standard for fire protection and prevention within Ontario communities. Section 2 notes Municipal responsibilities, which are:

Municipal responsibilities

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.

Further, the Act provides further description for the methods of providing services;

Methods of providing services

(2) In discharging its responsibilities under subsection (1), a municipality shall,

(a) appoint a community fire safety officer or a community fire safety team; or

(b) establish a Fire Department.

The Town of Georgina has established a Fire Department as outlined in Section 2(b) of the Fire Protection and Prevention Act, 1997, S.O. 1997, c. 4. The level of service that must be provided is further outlined in Section 1(b) of the Act. This section notes that the level of service is to be based on the needs and circumstances of the community.

The 'needs' portion can be defined by the type of buildings, infrastructure, and demographics of the local area which in turn can be extrapolated into the types of services that would be offered and needed. The 'circumstances' are considered as the ability to afford the level of service to be provided. Together, the needs and circumstances meet to set a level of service for the community. This combination meets the expectations of the public for safety and the affordability of this level provided.

This paper will focus on the needs of the Fire Department in its ongoing challenge to meet the needs of the community and how the fire station locations and physical set up can affect the operational efficiency of the Georgina Fire Department.

As a final point, it should be noted that the two key references to be utilized in this fire station review are the National Fire Protection Association (NFPA) and the Commission on Fire Accreditation International (CFAI).

The two NFPA standards referenced in this document are the NFPA 1710, which focuses on such things as response times and other criteria relating to the career (full time) component of a fire service, and NFPA 1720, which focuses on the same criteria when it comes to the Volunteer component of a fire service.

As for the CFAI, the Commission is in full support of fire services striving to meet the two previously noted NFPA standards, based on the community's circumstances. These circumstances can relate to a number of things such as:

- The anticipated growth of a community
- The ability for the municipality to pay for services due to local economic growth
- The location and physical set up of the fire stations
- The geography of a community, which in the case of Georgina does have a consideration in relation to fire station location – due to the lake, and
- A risk and hazard analysis of the community, coupled with the Fire Department's abilityto effectively and efficiently mitigate the noted hazards.

All of these points have been taken into consideration during the compilation of this report and the associated recommendations present by Emergency Management and Training Inc.

1. Fire Station Evaluations

1.1 Keswick Station 1-4 – Headquarters (165 The Queensway South)

The building was constructed in 1990 as a car dealership and presently serves as the Fire Department headquarters. The Fire Department moved into the service area of the building (but not the showroom area) in 1994. The station hosts both career and Volunteer Firefighters as well as the administrative offices of the Fire Department including the Fire Chief , Deputy Fire Chief , Training, Fire Prevention and support staff.

The current location of the fire station is at the junction of The Queensway South and Morton Avenue and is very close to Lake Simcoe on the west side within the core area of Keswick. This diminishes the stations

potential coverage area geographically by up to a third as the lake is a natural barrier to the west. As such, the present location of the fire station should be evaluated in conjunction with future growth expectations, which would encompass type of growth (residential, commercial, or industrial) and the location(s) of this growth.

1.1.1 Keswick Fire Station Current Considerations:

The building, primarily a two-story structure, is built on multiple levels with stair access from parts of the second floor to other parts of the second floor. The steps are at unequal heights and pose a potential trip hazard. These multiple steps and unequal heights are not Building Code compliant.

The current Keswick fire station has a number of limitations and challenges.

1.1.2 Building and Related Facility Concerns:

- The station's present set up fails to meet AODA requirement.
- On the exterior, the ladders accessing the roof area are in a state of disrepair and are not safe for use.
- This is a Health & Safety concern for any who need to utilize these ladders for roof access. They should be replaced, maintained, and inspected regularly.
- Parking lot lights are of an older, less energy efficient design and should be upgraded when possible.
- Due to the slope of the parking lot, there is an ice build-up issue due to water runoff from the roof area. Additionally, accumulation of water/ice just outside of the main entrance to the administration area was noted.
- This is a Health & Safety concern. Plans to mitigate the water pooling and subsequent ice build-up are required.
- Offices for Administration, Fire Chief, Deputy Chief, Training Division, and Fire Prevention are located at this station, and space is very limited for file and records storage.
- Fire Prevention Division utilize the office space in the rear portion of the main floor which is a shared space. This is inadequate for the inspectors to have private discussions with individuals who they are dealing with.
- The "car showroom" located at the front of the building is not effectively utilized by the Fire Department at this time. There is no direct access from this part of the building to the main area at the rear and the area would require significant renovation.
- The second floor of the "car showroom" was used for Fire Prevention, but Fire Prevention moved

to the first floor in the rear portion of the building due to the disconnect between the other divisions that are located in the rear part of the building. The second floor is now designated as the backup Emergency Operations Centre, however, it lacks the space to be practical and therefore limited to its use. The Fire Department has adopted this backup EOC area as a functional small-scale event or Departmental operations centre which can be rapidly set up and used.

- As recently determined in an annual emergency exercise, the primary EOC, which is located in the Civic Centre, is not ideal for designation as the primary EOC as it lacks the space required to meet the long term needs of the EOC group.
- Consideration for a future new fire station should be to incorporate a primary EOC concept that integrates all of the needs of an EOC.
- Due to the design and layout of the building, it does not meet AODA accessibility standards.

(photo: steps from the second floor Chief's office to the crew/training room)

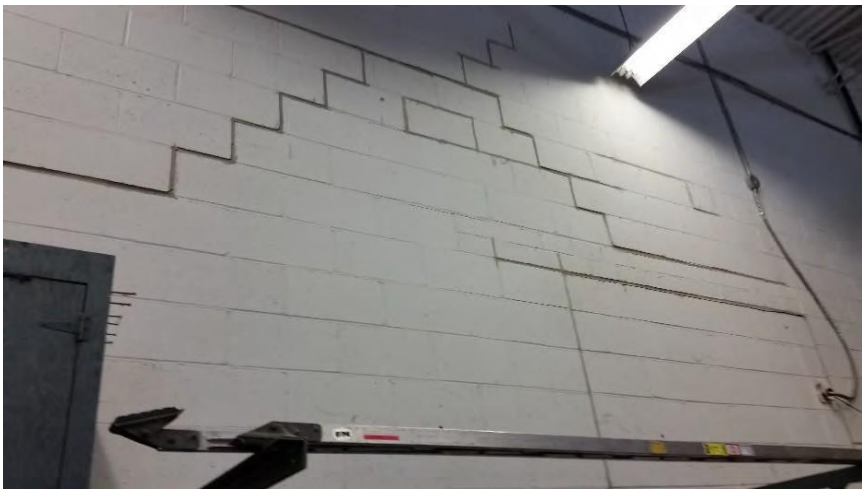
- The multiple levels and areas of the building add increased time to the "turn out time" (time from when a fire call is received until the trucks are responding). This is due to a lack of hallways and stairways leading to the apparatus floor which makes it challenging to meet the NFPA "turn out" standard for career Firefighters of 60 seconds for medical calls and 80 seconds for fire calls (includes the donning of bunker gear).
- Modern fire stations are designed with the crew quarters and training rooms being directly adjacent to the apparatus floor to ensure quick turnout.
- There are signs of "settling cracks" throughout the building.

- An engineering review should be conducted of the building prior to any repairs or renovations being approved as the cost of repairs may be more than the present building value.

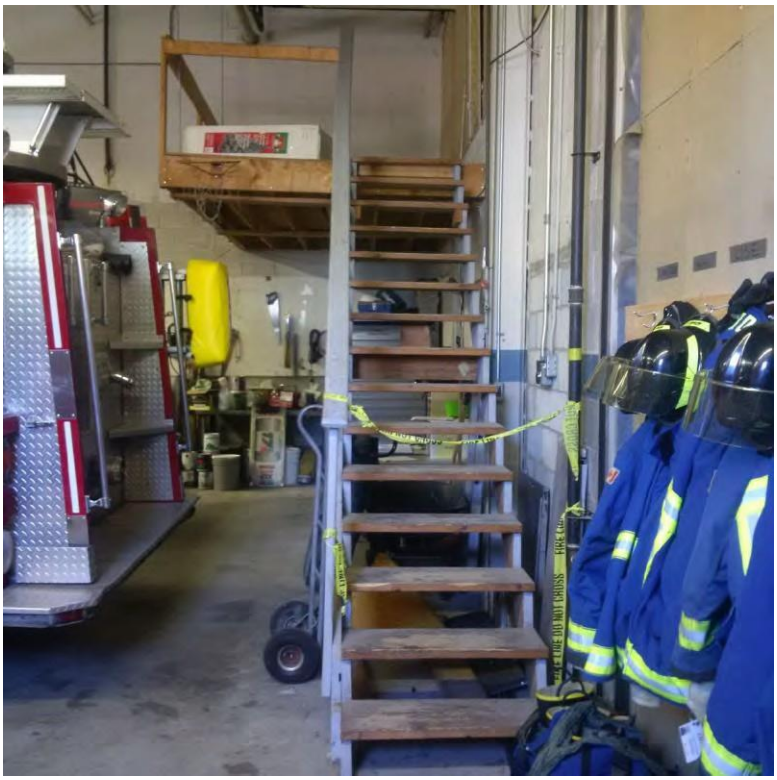
(photo: training room where the floor originally was open for a parts hoist. This area appears to be settling and feels soft when walking on it)

- There are signs of the floor degrading around the floor drains. The Deputy Chief noted that an estimate was obtained a year ago for repairs to the floor drains of which they were quoted at $30,000.00.

- Other signs of floor and wall joint sections are showing signs of degrading due to age and settling of the building.



- The mezzanine area in the apparatus bay does not meet the Ontario Building Code and is unsafe. As such, it has been taped off to discourage use of this area.
- Access into this area is a Health & Safety concern. The area should be rebuilt to comply with the Ontario Building Code or be removed.



- There are numerous building repair and maintenance issues as a result of the age of the building.

1.1.3 Kitchen, Crew Quarters, and Washrooms

- The full-time crew quarters area is located on the second floor behind the kitchen area – it is a sprinklered area but the only exit out of this dorm is through the kitchen. Therefore, if a fire occurs in the kitchen, the crew has no secondary (safe) exit.
- The crew quarters area is on the second floor along with indirect access to the apparatus floor that increases the “turn out” time (which is time from notification to time trucks are responding)
- The kitchen cooking area has no auto shut off in the event the crew has to respond to an emergency call.

- The kitchen is a tight spot for 4 persons at a time. In some cases, during the day there may be up to 13 persons active in the building on weekdays.
- Presently, there is only one female washroom on the second floor. There is no female washroom on the first floor. Furthermore, the door to the female washroom opens into the training room providing little privacy when entering or leaving the washroom.
- There is no female shower area. Firefighters should have the ability to shower following calls to decontaminate from contaminates such as blood, smoke, and chemicals.

1.1.4 Apparatus Area

(photo: only exit from the crew dormitory through the kitchen)

- The north side bay entrance has no room for the passenger side Firefighters to safely enter and exit the vehicle (due to restricted space allotted).
- Three bay doors in the main apparatus area are smaller than normal in size and limit the placement for response for the aerial truck (A146) and the marine airboat. Newer apparatus will have difficulty fitting into the small bay door areas increasing risk of damage and injury.

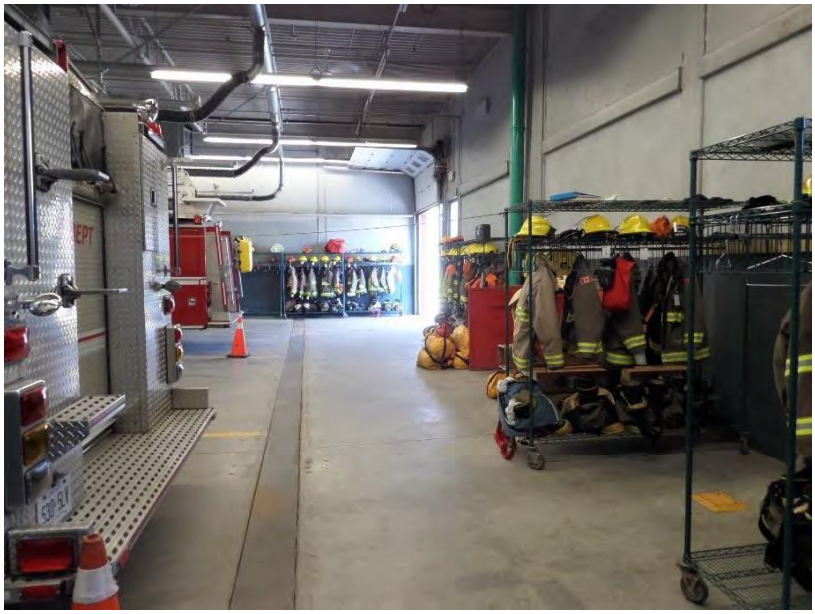
- The station has four (4) primary bays and a secondary bay at the side of the building. Only one (1) of the four (4) primary bays is a drive-through, however, due to the narrow driveway at the rear of the building, the turning radius does not permit large apparatus to use the drive-through.
- New station design includes drive-through bays to eliminate/decrease the safety hazard of reversing apparatus.

(photo: secondary bay on the south side of the building)

- The secondary garage bay is used for the reserve engine, the air boat, and the command (large incident) trailer. To access the airboat, the engine must be removed first. To access the command trailer, both the engine and the airboat must first be removed. Moving the apparatus and trailers is a manual process that is labour intensive and takes time which, consequently, increases response time.
- There is no exhaust capture system in this secondary garage area.
- Bay doors do not have the safety stop pressure bar on the bottom which would stop the door from continuing its downward movement if a person or vehicle is caught under the door. This is a Health & Safety concern that should be addressed.
- Bay doors are also showing wear and may soon require replacement.
- The main station area is equipped with an “at source exhaust capture system”, which helps to reduce contamination of Firefighters’ gear due to vehicle exhaust. The Firefighters’ bunker gear is stored on the apparatus floor, which still exposes the gear to exhaust and ultra violet light contaminates, eventually degrading the efficiency of the equipment and reducing life span. The

storage of the bunker gear in this manner exposes the general area to contaminants obtained from fire responses (and others).

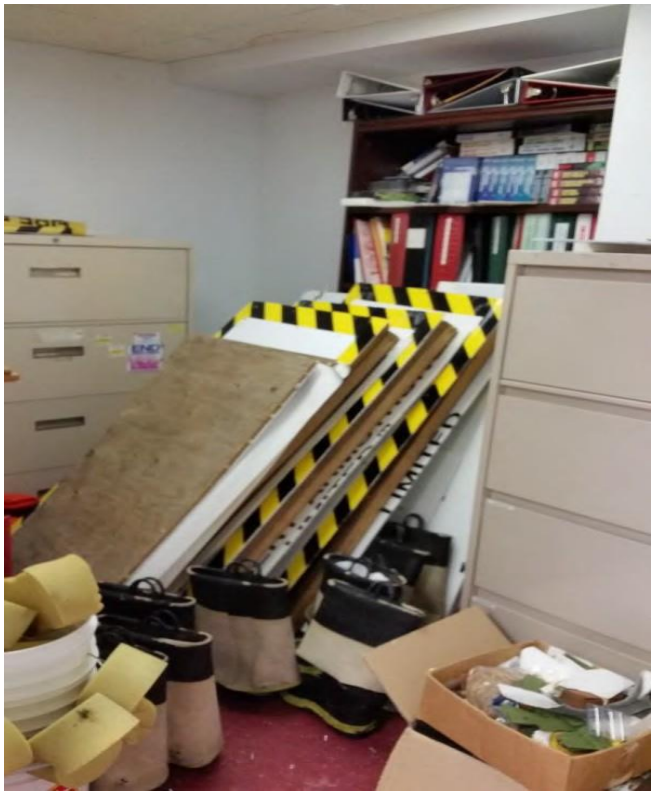
- New station design incorporates a storage room that is properly ventilated whereby bunker gear is able to be laundered, dried, and returned to service which, at all times, limits the exposure of toxic fumes to the gear.

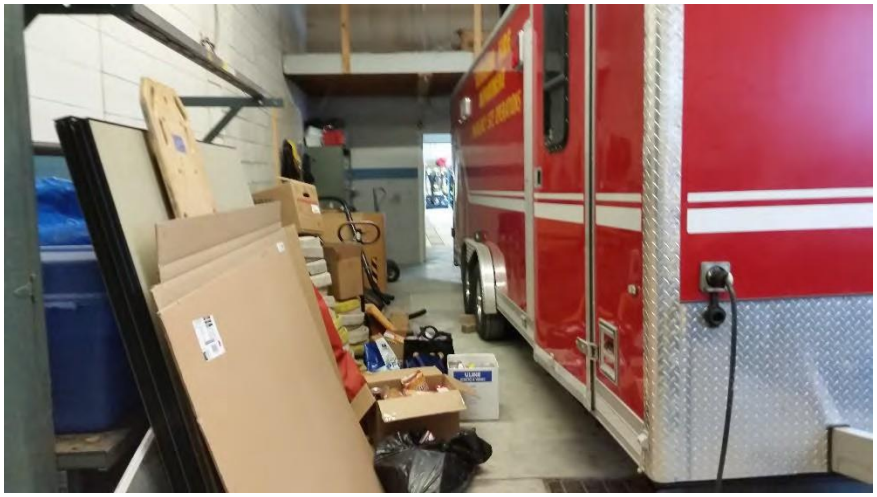


(photo: bunker gear storage)

1.1.5 Storage Space

- Storage is lacking for materials, supplies, and equipment stored throughout the building.
- Incident records are stored with bunker gear and equipment.
- Fire prevention records should be stored in a double locked area (locked cabinet in a locked room).



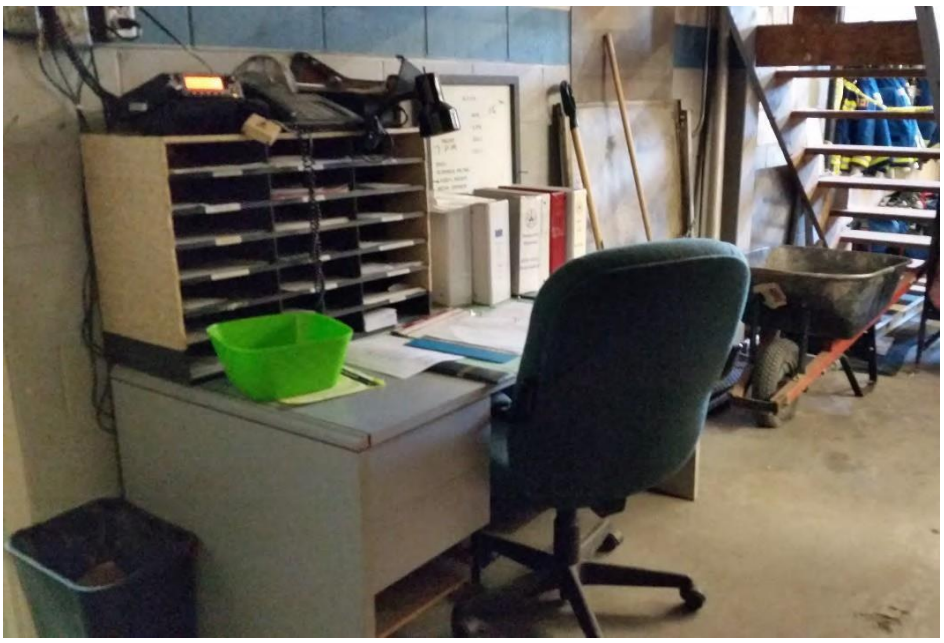


1.1.6 Volunteer Firefighter Accommodations

- Volunteers are still a significant contributor to the Fire Department operations but work in less than ideal conditions.
- A proper meeting place for the Volunteer staff is essential for pride of ownership and professionalism. Having such an area provides a positive motivational factor.
- Adequate office space for the Volunteer staff is essential for them to complete any required

paperwork.

- A place for the Volunteers to come to study, and prepare for training in their off time promotes ownership within the Fire Department.



(photo: Volunteer desk relegated to a space under a stairway at the back of the secondary apparatus bay)

1.1.7 Keswick Fire Station Location Considerations:

Proposed Growth

Currently, proposed plans for subdivisions are in place, or are in the process, for increased commercial/industrial areas in the south of Keswick in addition to increased plans for residential. The commercial/industrial areas are within the east of Woodbine Avenue and Glenwoods Avenue. This is a large section of land that has the potential of attracting many commercial/industrial buildings along with the population for employment. Further, the residential plans in the Queensway/Joe Dales Drive area along with an area off Glenwoods Avenue and Woodbine Avenue have the potential of increasing the combined residential units by up to 1002. The Glenwoods Avenue and Woodbine Avenue subdivision may also see an increase in density.

This will mean a greater number of people in a smaller geographical zone. In the northern area of the urban centre of Keswick, residential subdivisions are planned north of Church Street and south of Old Homestead Road. This subdivision has the potential of increasing the residential units by 436. As noted by the Town Planners, the current plan for the Town indicates that by 2031 it is estimated that there will be a population of 70,300 with employment of 22,000. As of today, the population is 48,000 with an employment number of 7,000.

The Fire Department must be prepared for this community growth and intensification as this increase in population and types of industry will create an increase in call volume for the Fire Department.

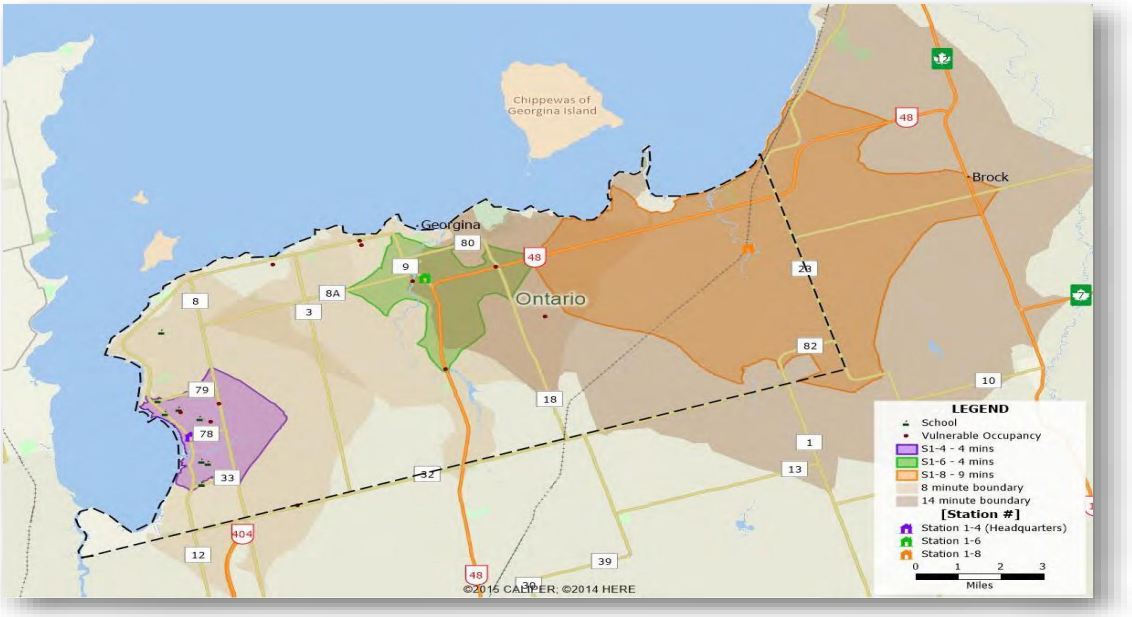
Proposed Station Relocation

In reviewing the NFPA 1710 Standard (for career Fire Departments), it was noted that with the subdivision plans and the estimated population noted in the Official Plan, it is evident that the current location of Station 1-4 would increase the response travel times to over four (4) minutes (drive time) to the future populated areas (this means that it would take over 4 minutes for emergency services to reach the call location after receipt of call). The areas affected by increased response times, should the current station remain, would include the southeastern portion of the commercial/industrial area along with the large residential subdivision south of Glenwoods Avenue consisting of 897 residential units.

The following map displays the current station location and the four (4) and eight (8) minute or nine (9) and fourteen (14) minute response (travel time) zones. The Keswick fire station location four (4) minute travel time zone is highlighted in purple and the eight (8) minute response zone is in brown shading. NFPA 1710 states that the first apparatus should be on scene within 4 minutes (drive time from fire station to the scene of the incident) and additional resources within 8 minutes.

Note:

The response zones for the Pefferlaw fire station (in orange) are noted as nine (9) and fourteen (14) minute zones. This is due to the fact that the Pefferlaw station is a fully Volunteer fire station. However, the full time Firefighters from the Sutton station are also paged out in support of the Volunteers for any emergency calls. As a comparison, map #1 in Appendix "A" on page 45 identifies response zones for all three station if they were based on the NFPA 1710 "full time" criteria.



NFPA 1710 Response Standards

Criterion Topic	Related Response Times
Alarm Handling and Call Processing Times	*This is handled by other agencies outside of GFD control*
Turnout Time (Time for crews to get to the fire trucks and start responding)	80 seconds, except for EMS responses, which is 60 seconds
Travel Time (First due unit)	240 seconds (4 minutes) for the first arriving engine/pumper
Travel Time (Effective response force)	480 Seconds (8 minutes)

Additional considerations for fire station location(s) are the distances recommended by the Fire Underwriters Survey (FUS) in order to achieve premium insurance ratings, and thereby maximum savings for the building owner/tenant. Based on this recommendation by the Fire Underwriters, commercial/industrial buildings must be within five (5) kilometers of the fire station. Residential buildings would receive premium insurance ratings if they are within eight (8) kilometers of the fire station. Being at distances greater than those outlined above could subject the building owner/tenant to higher insurance costs.

The planned commercial/industrial subdivision in the Woodbine Avenue and Glenwoods Avenue area would, for the greater part, be within five (5) kilometers from the current location. There would be portions of the subdivision that would be outside of the five (5) kilometer zone, depending on road access, that would subject the building owners to higher insurance rates.

The southern portion of Keswick, where the larger residential growth is to occur, does lie within the eight (8) kilometer travel zone for the current fire station location. However, there are portions at the north end of the current fire station response zone that are outside of the eight (8) kilometers which subjects the building owners to higher insurance rates.

As already depicted on the previous map, the Pefferlaw fire station (in orange and tan) response zones shows 9 (nine) and fourteen (14) minute travel times from the station – it must be noted that this is travel time only and does not take into consideration how long it takes the Volunteers to respond to the fire station, gear up and their actual response to the location of the incident. Therefore, if the Volunteers were actually in the fire station at the time of the call, then what is noted on the travel time coverage zones would meet the current NFPA 1720 standards, which is in relation to Volunteer Fire Departments. The following chart outlines the expectations for response times for the Volunteer Firefighters. Presently, Georgina would fall into the ranges of 'Urban and Rural' demand zone criteria. This is why nine (9) and fourteen (14) response zones have been depicted for Pefferlaw and not for Keswick and Sutton as they are staffed 24/7 by full time Firefighters, supported by Volunteer Firefighters.

NFPA 1720 Response Standards

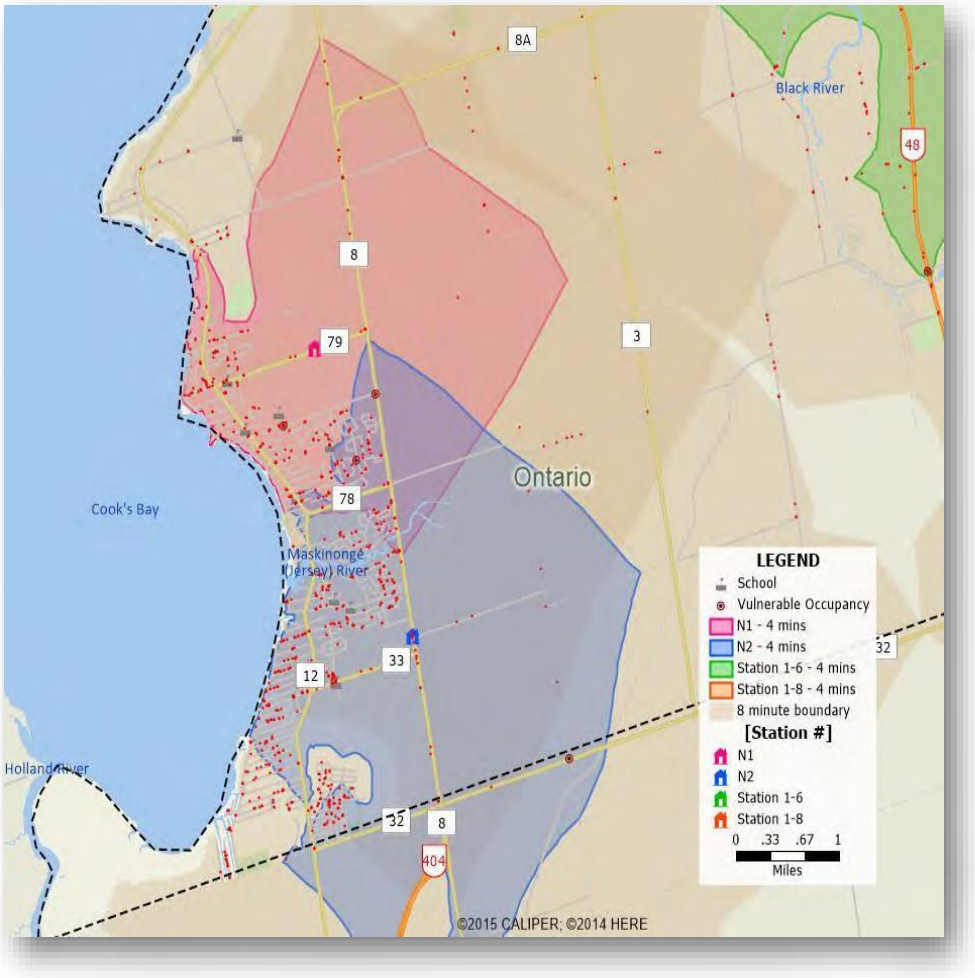
Demand Zone	Demographics	Minimum # of Firefighters responding	Response time (turnout + travel) in minutes	Performance Objective
Urban	>1000 people per square mile	15	9	90%
Suburban	500-1000 people per square mile	10	10	80%
Rural	<500 people per square mile	6	14	80%
Remote	Travel distance + or – 8 miles (12.9 km)	4	Dependent upon travel distance	90%
Special risks	To be determined by Fire Department	To be determined by Fire Department	To be determined by Fire Department	90%

Map #3, seen on page 47 of this document indicates the five (5) kilometer (for industrial) and eight (8) kilometer (for residential) travel zones as prescribed by Fire Underwriters as discussed in relation to travel areas of all three fire stations.

In conclusion, if the Georgina Fire Department is to continue meeting the FUS travel zone expectations and strive to meet the NFPA 1710 four (4) and eight (8) minute response standard, an evaluation of future fire station locations must be considered.

Therefore, based on future growth projections, the Town should consider building a new headquarters to the northeast of the current location and to build a smaller station to the south (as noted in the map below) where future commercial and industrial growth is anticipated. For now, the priority would be to focus on the construction of the south end fire station first, with the new northern location for the fire headquarters to follow.

Proposed locations for the two new Keswick fire stations:



Note: This map has been modified from its original version, which included stations 1-6 and 1-8 as noted in the legend.

The proposed location map identifies four (4) and eight (8) minute response capabilities from two projected stations in Keswick. Vulnerable occupancies and schools are also identified along with a plotting of call locations. To help support the reasoning for the recommended station locations.

When planning for future fire stations, the long term must be taken into consideration. A well- built fire station is a building that will last for 50 – 60 years, or longer. It is therefore critical to look at the long-term implications when designing and pinpointing the appropriate location for future stations.

The planning Department has advised that the south end of Keswick has planned growth of 6,000 new homes bringing 15,000 additional people into the area, plus additional commercial and industrial development. As the density and intensification of Keswick continues, including increased commercial and industrial properties, the fire service must plan ahead to be prepared for this south end growth.

As a final note, the incorporation of a 'safe haven' at each fire station will create a more effective utilization of these public buildings. And the associated cost is minimal compared with the cost of the overall renovations required by each fire station and/or the cost building a new fire station.

The safe haven concept is based on the concept that anyone, at any time can come to the front lobby of the fire station, lock themselves in a small vestibule area and pick up a phone that has a direct connection to the fire dispatch centre to summon help for the individual.

1.2 Sutton Fire Station 1-6 (37 Snooks Road)

Station 1-6, Sutton, was built in 1972 as a Volunteer fire station. With the changes to the fire service over the years, this station now serves as a composite station (both full-time and Volunteer Firefighters work out of the station) and has been renovated as best as possible to accommodate a full-time crew.
It is a three-bay fire station, with the training room now being used as both a crew dormitory for the full-time crew as well as for training.

1.2.1 Sutton Fire Station Current Considerations:

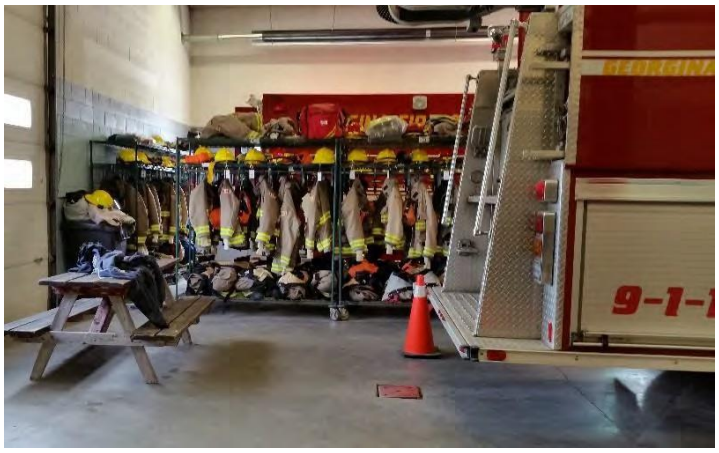
1.2.1.1 Building and Related Facility Concerns:

The current building has a number of limitations and challenges.

- The station's present set up fails to meet AODA requirement.
  - Bay doors do not have the safety stop pressure bar on the bottom, which would stop the door from continuing its downward movement if a person or vehicle is caught under the door.
  - This is a Health & Safety concern that should be addressed.
  - There are no proper showers for the Firefighters if needed, other than one decontamination-style shower that is to be used by any of the Firefighters.
  - Separate shower and related facilities should be installed for male and female Firefighters. Firefighters should have the ability to shower following calls to decontaminate from contaminates such as blood, smoke, and chemicals.

- The fire station does have an "at source" exhaust extractor system but it is very loud and may be in need of repairs. Servicing should be conducted on this piece of equipment to evaluate its status.
- The station is equipped with an "at source exhaust capture system", which helps to reduce contamination of Firefighters' gear due to vehicle exhaust. However, all of the Firefighters' bunker gear is stored on the apparatus floor, which still exposes the gear to exhaust and ultra violet light contaminates, eventually degrading the efficiency of the equipment and reducing life span. The storage of the bunker gear in this manner also exposes the general area to contaminants obtained from fire responses (and others).

- New station design incorporates a storage room that is properly ventilated whereby bunker gear is able to be laundered, dried, and returned to service which, at all times, limits the exposure of toxic fumes to the other areas of the fire station.



- Being that the Sutton station is the central station in the Town of Georgina, hands on training for firefighting activities are done here when required. Space at the back of the fire station is utilized for auto extrication training and other firefighting evolutions. This is not a fenced off area and could pose some liability with children and others in the area who may get injured due to sharp metals and glass.

(photo: minivan parked for extrication training)

Note: this is a shared parking lot with the community arena, recreational facility, apartment building, and the fire station.

- At the rear of the station is a training prop that is utilized for firefighting evolutions. It contains an opening that allows anyone access to the second level and could pose some liability issues with children and others in the area who may get injured if they gain access.

(photo: training structure behind the fire station)

- The station is equipped with a back-up generator should a power failure occur, which would also be a necessity for any new fire station.

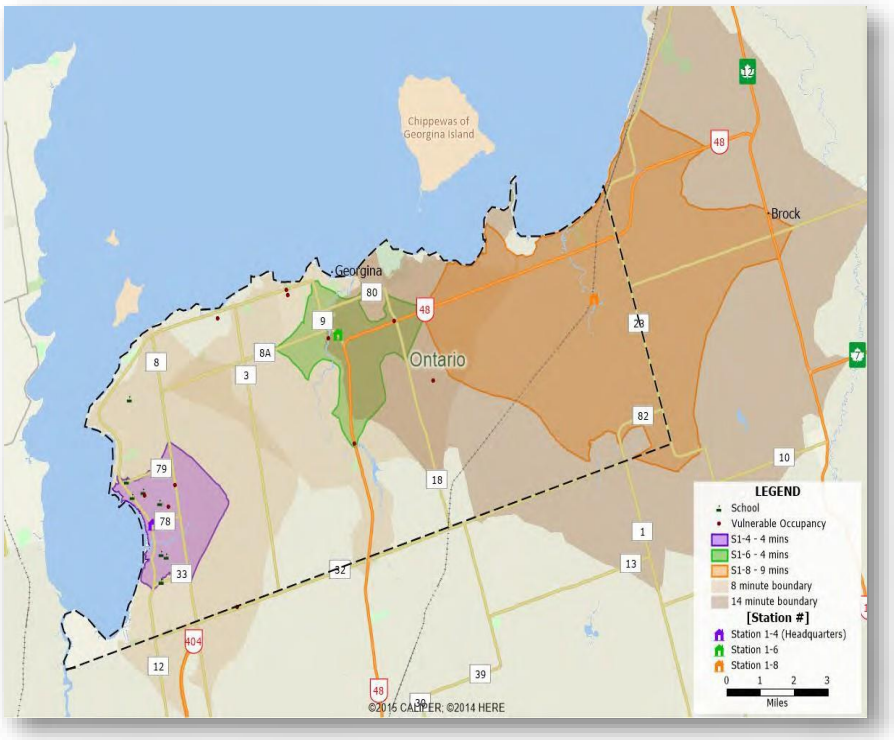
1.2.2 Sutton Fire Station Location Considerations:

Even though the station is located in the centre of the community, it is not well suited for quick response as the Volunteer Firefighters have to drive through the residential area (and side streets) to get to the fire station and must drive through the same areas to respond (from the fire station) to reach the major arterial roads. Due to the response challenges from the station, response times are greater than if the station was on a main street.

Relocating this station to an area such as Dalton Road and Black River would offer a quicker response to the greater Sutton area. It would also allow for a more efficient response times into the Keswick or Pefferlaw areas. Additionally, it would suit the proposed Highway 404 expansion located just under three (3) kilometers away.

Proposed Growth

Currently, proposed plans for subdivisions are in place, or are in the process, for increased residential growth in the Sutton area. In total, subdivisions that are planned for, will equate to an increase of 1,244 residential units.



In reviewing the NFPA 1710 Standard, four (4) minute response time mapping is being presented. It is noted that there are a number of subdivisions that would have a greater response time with the current Sutton fire station location.

These subdivisions are:

- Black River Road/Hedge Road with 320 residential units.
- Catering Road with 183 residential units. Only the westerly portion of this subdivision would be outside of the 4-minute response time.
- Dalton Road/Nasello Avenue 16 residential units

New developments within the current station location 4-minute response zone are:

- Baseline Road with 321 residential units
- High Street/Burke Street with 16 residential units
- Highway 48 with 194 residential units

The following map shows the current Sutton Station location (in green) with the four (4) minute and eight (8) minute response zones.

There are no commercial/industrial subdivisions planned for the Sutton area (in the immediate future). However, there are a number of residential subdivisions that are planned. Within this residential area there are a number of residents that will have a greater than four (4) minute response time but they all fall within the eight (8) kilometer zone of the current fire station location as prescribed by Fire Underwriters Survey. It is

important to note that there is a greater than eight (8) kilometer distance to the southern boundary of the Town of Georgina; it is just over 9 kilometers from the current fire station to the southern border, utilizing Highway 48. Any buildings off this straight road south may increase the response distance over 8 kilometers from the fire station. The most northerly point of this stations' response zone is within the Sibbald Point Provincial Park. This distance is approximately seven (7) kilometers. It is important to keep in mind that the Black River inhibits response times and distances due to the limited accessible road crossings.

Map #3 seen on page 47 of this document indicates the five (5) kilometer and eight (8) kilometer Fire Underwriters travel zones as previously discussed in relation to travel areas of all three fire stations.

In conclusion, relocating the Sutton fire station to the area of Dalton Road and Black River would offer a more efficient response location and also put the fire station in an area that is more accessible by the public. As noted with the Keswick fire station comments, the

incorporation of a 'safe haven' at each fire station creates a more effective utilization of these public buildings, and the associated cost is minimal compared with the cost of the overall renovations required by each fire station or the cost building a new fire station.

1.2.3 Pefferlaw Fire Station 1-8 – (270 Pefferlaw Road)

Current Building and Related Facilities:

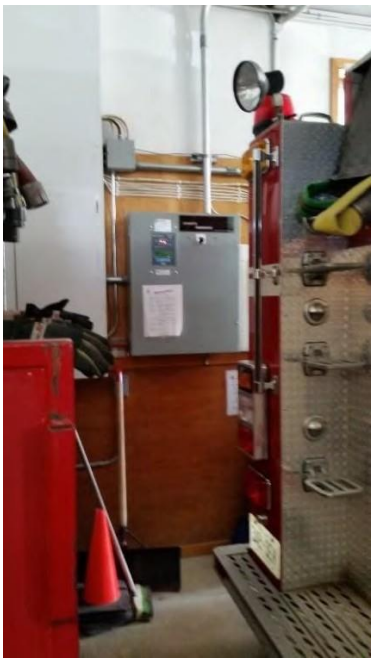
Station 1-8, Pefferlaw was built in 1960 as a Volunteer fire station and continues in the same capacity. The original building consists of a two-bay garage with a meeting / training room that was added at a later date at the rear of the structure. Due to its size and limited ability to accommodate the housing of newer (and larger) fire vehicles, along with its limited storage space available, this station has reached the end of its useful life – it can no longer accommodate any new growth relating to more staff, vehicles, or equipment. Overall, this station location appears to be well situated for responses to the community it serves today. The greater populace is within the 4-minute response time from the current station.

Pefferlaw Fire Station Current Considerations: Building Utilization

- The current building has a number of limitations and challenges.
- The station's present set up fails to meet AODA requirement.
- This is a two-bay station with no drive-through capability
- New station design includes drive-through bays to eliminate/decrease the safety hazard of reversing apparatus.
- When this station was designed and built, fire apparatus were not as large as they are today. Due to its original design, it is not able to house newer and larger fire apparatus.
- Currently space is very limited as stored apparatus do not allow for adequate walking and working space around each truck.

Firefighters have to obtain and put on their bunker gear in very close proximity to the trucks creating a potential Health & Safety issue.

Approximately 6 cm of clearance between tanker bumper and the fire station wall creating a significant crush hazard.



Unprotected electrical panels in the garage bay create a potential hazard when washing the fire apparatus.

- When reviewing the response requirements and water delivery for the rural area around Pefferlaw, larger tankers are more effective in providing for the need for rural areas without fire hydrants.
    - Being able to transport large volumes of water is very important to ensure water supply while fighting a fire. To provide for this need, it can be anticipated that new tanker trucks should be 2,500 to 3,000-gallons. This sized truck could not be housed in the Pefferlaw station, where they are needed most.
- Electrical panels in the garage bay are in close proximity to the vehicles which creates a Health & Safety issue for washing the apparatus inside the station.

- The station is not equipped with an “at source exhaust capture system”, which helps to reduce contamination of Firefighters’ gear due to vehicle exhaust. All of the Firefighters’ bunker gear is stored on the apparatus floor which exposes the gear to exhaust and ultra violet light contaminates resulting in the degrading of the efficiency of the equipment and reduced life span. The storage of the bunker gear in this manner exposes the general area to contaminants obtained from fire responses (and others).
    - New station design incorporates a storage room that is properly ventilated whereby bunker gear is able to be laundered, dried, and returned to service which, at all times, also limits the exposure of toxic fumes to the other areas of the fire station.

- There are no showers available.
    - Firefighters should have the ability to shower following calls to decontaminate from contaminates such as blood, smoke, and chemicals.
- The Town is not on municipal water, therefore there are no fire hydrants on the main street. This means that there is a reliance on water being delivered from tanker shuttles and/or long distance relay pumping from a water source.
- Bay doors do not have the safety stop pressure bar on the bottom which would stop the door from continuing its downward movement if a person or vehicle is caught under the door.
    - This is a Health & Safety concern that should be addressed.
- Some mould issues were present in the rear meeting room area, but do appear to have been remedied for the time being.
- Storage space is lacking and the use of current storage above the garage bays is limiting in terms of weight and size.
    - Lifting items in and out of the storage space while on a ladder is a potential Health & Safety issue.

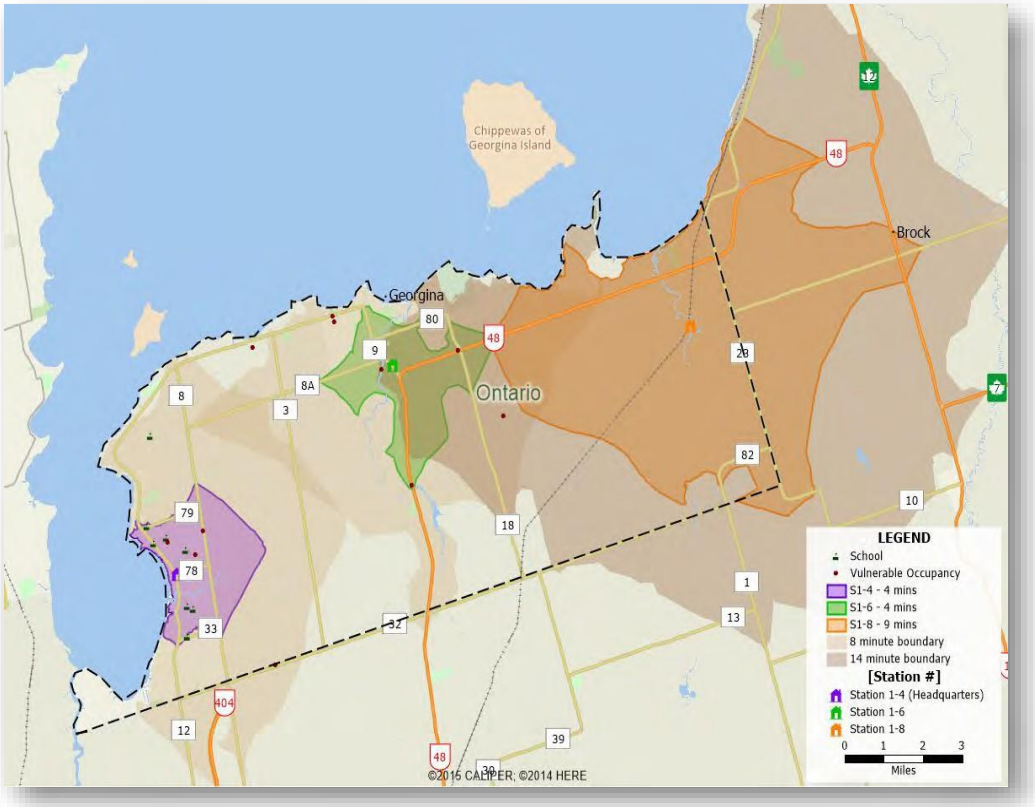
(photo: storage in the garage bay requires ladder access and is limited in storage space and weight limits)

- There is inadequate parking at the fire station.
    - Firefighters must park on the opposite side of the road creating potential risks crossing the road when responding to a fire.
- Although there is a 5,000-gallon cistern at the station, the pump on the cistern takes approximately 20 minutes to fill the 1,500-gallon tanker making it ineffective during a fire. Further, 5,000 gallons would be inadequate in a structure fire.

Pefferlaw Fire Station Location Considerations:

At present, there does not appear to be a need to move the station from its present location. However, consideration should be given to some immediate plans to increase the size of the building to meet the growing needs of the community and its Firefighters.

Again, the map below shows the current Pefferlaw fire station location (in orange) with the nine (9) and fourteen (14) minute response zones based on its Volunteer Firefighter response situation. Again, it needs to be noted that this area is also supported by responses from the full time Sutton fire station.



Map #3 seen on page 47 of this document indicates the five (5) kilometer and eight (8) kilometer Fire Underwriters travel zones as discussed in relation to travel areas of all three fire stations.

The following NFPA 1720 Standards chart outlines response expectations for the related demand zone populations.

NFPA 1720 Standards

Demand Zone	Demographics	Minimum # of Firefighters responding	Response time (turnout + travel) in minutes	Performance Objective
Urban	>1000 people per square mile	15	9	90%
Suburban	500-1000 people per square mile	10	10	80%
Rural	<500 people per square mile	6	14	80%
Remote	Travel distance + or – 8 miles (12.9 km)	4	Dependent upon travel distance	90%
Special risks	To be determined by Fire Department	To be determined by Fire Department	To be determined by Fire Department	90%

As previously noted in this document, additional considerations of fire station location are the distances recommended by the Fire Underwriters Survey. In order to achieve premium insurance ratings and thereby maximum savings for the building owner/tenant, commercial/industrial buildings must be within five (5) kilometers of the fire station.

Residential buildings would receive premium insurance ratings if they are within eight (8) kilometers of the fire station. Being at distances greater than those outlined above would subject the building owner/tenant to higher insurance costs.

There are some areas to the south that are outside of the eight (8) kilometer response distance according to the Fire Underwriters Survey. This includes a distance of 8.5 kilometers to the corner of Lake Ridge Road and Ravenshoe Road at the south eastern corner of the Town from the current Pefferlaw fire station location. Also, in the current developed area off Ravenshoe Road in Udora, there is a maximum distance of over twelve (12) kilometers to the corner of Narva Avenue and Linda Road.

In conclusion, the present location of the Pefferlaw fire station is well suited to meeting the general response needs of the community (with the exception of the two areas previously

noted). However, the actual station needs to be replaced if it going to continue to meet the future needs of the community. This replacement or major upgrade should be a priority and addressed within the short term.

As also noted in the other two fire station comments, the incorporation of a ‘safe haven’ at each fire station would create a more effective utilization of these public buildings, and the associated cost is minimal compared with the cost of the overall renovations required by each fire station or the cost building a new fire station.

2.0 Conclusion

As noted in this report, the fire stations for the most part have been well located and have served the community as best as possible. But with the growth of the community and its Fire Department, along with increase in staffing and equipment, the three fire stations have become less efficient in meeting the growing demands of the fire service.

There have been many recommendations made in this report that range from conducting much needed repairs to the construction and relocation of new fire stations within each of the three communities. These recommendations for new fire stations are made with a focus on the future needs of the Georgina Fire Department.

Council has the choice of spending more money on buildings that are showing their age and will need some major repairs to simply make them livable for the next 5 years or they can look at the long term, coupled with the anticipated growth projections and prepare for this growth by building the new facilities as funding allows.

Emergency Management and Training Inc. would like to recognize and thank all those involved in this fire station review for their assistance and input into this report.

Recommendations for Fire Stations:

Recommendations are noted in immediate, short, mid and long term. These timelines equate to the following:

- Immediate – needs to be addressed immediately due to Health & Safety issues
- Short Term – recommended that these be addressed within 1 – 3 years
- Mid Term – recommended that these be addressed within 4 – 6 years, and
- Long Term – recommended that these be addressed with 7 – 10 years.

Recommendations for Keswick Fire Station 1-4 Locations:

- To begin with, EMT is recommending to relocate the current Station 1-4, further north or northeast, for example, on Old Homestead Road east of The Queensway. This would provide enhanced coverage to the north of the community as well as reaching into the current core along the lake. If there is any extension of this recommendation timeline, renovations should be considered to move the fire prevention and administrative offices into the front (car showroom) portion of the building, moving the firefighter dormitory to the current fire prevention offices located on the ground floor. This would provide a more direct and shorter route for Firefighters to respond to alarms, as well as private offices for fire prevention and potentially additional administrative space. A link between the front and rear portions of the building would be required.

- EMT would also recommend that an additional station in the south of Keswick be considered shortly prior to the new Headquarters being built (or even simultaneously dependent of available funds). With the fairly rapid growth in the community along with the existing call locations, this new additional fire station is warranted. It has been identified that the Town is planning a community centre in the area of Woodbine Avenue and Glenwood Avenue. This location, as plotted above (in Map #4, also seen on page 48), provides an enhanced four (4) minute response time to the south end of Keswick.

These two stations would provide exceptional coverage to the Keswick community as well as providing enhanced response to an extended area.

In developing future plans for the stations, it is important to allocate adequate space for the many functions within the fire service including: adequate dormitories for future firefighter expansion, administration, fire prevention, training, and emergency management (including an Emergency Operations Centre).

Recommendation for Sutton Fire Station 1-6 Location:

Replace or renovate Station 1-6, Sutton. As with any recommendations, Council does have choices. In the case of Station 1-6, Sutton, Council could choose to renovate or replace the building. Relocating this station to an area such as Dalton Road and Black River would offer a quicker response to the Greater Sutton Area and also for a more efficient response time when backing up (response support to) the Keswick or Pefferlaw stations.

In addition, it would suit the proposed Highway 404 expansion being just under three (3) kilometers away.

Recommendation for Pefferlaw Fire Station 1-8 Location:

Replace Station 1-8, Pefferlaw. Station 1-8 is in a good location for response to the community, however, it is the size and available space with the present station that is a concern.

Although the current location is appropriate, the lot appears to be too small to accommodate an appropriately sized station including the accommodating parking and other needs of the Firefighters. We were advised that the vacant building beside the fire station is owned by the town and the combining of the lots should provide appropriate space.

General Recommendations with Timelines for All Fire Stations:

Immediate Repairs Required:

- Ensure that all fire stations are designed/renovated to meet AODA requirements.
- Remove the mezzanine in the apparatus bay in Station 1-4, Keswick.
- Have the vehicle exhaust system installed in the rear of Station 1-4, Keswick.
- Electrical panels on the apparatus floor should be protected from the potential of water spray at all

three of the stations.

- Have the vehicle exhaust system evaluated / repaired at Station 1-6, Sutton.
- Upgrade or install proper male and female showers at Station 1-6, Sutton.
- Install fencing around the training tower at Station 1-6, Sutton.
- Remove any items being stored in the overhead storage (apparatus bay) in Station 1-8, Pefferlaw.
- Ensure safety features are adequate for apparatus bay doors.

Short term (1-3 years)

- Conduct an engineering review of all fire stations for an in-depth structural assessment, repairs / upgrades required, and estimate the cost of the work to address the issues. Our assessments are from a visual perspective only and although we can identify operational and space issues, we have not performed a structural review of the buildings.

Mid Term (4-6 years)

- The fire service currently does not have an appropriate fire training centre. EMT would recommend that one of the locations include a firefighter training centre including a training tower, live burn building, space for auto extrication, and a classroom.

3.0 Chart of Recommendations, Solutions and Estimated Costs

The following chart provides a further overview of the recommendations found throughout this report along with any estimated costs that can be incurred in the associated areas.

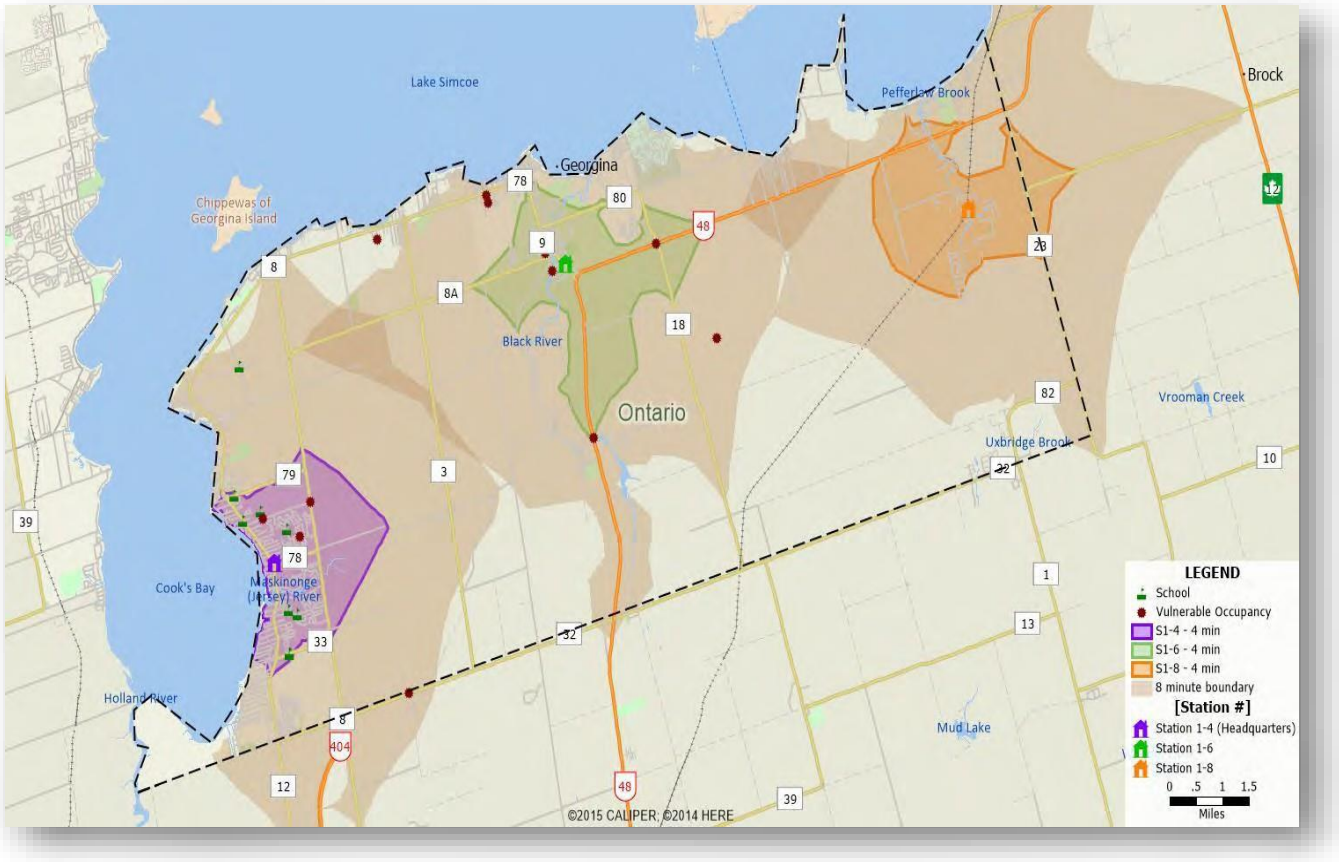
Recommendations for Georgina Fire Department			
Rec #	Recommended Solution	Estimated Costs	Suggested Time Line
	See notes for each station as many items were identified as requiring repairs – only the immediate and key recommendations have been identified in this chart.	**Estimated costs for all visual repairs identified would exceed $500,000**	---------
1.	Remove the mezzanine in the apparatus bay in Station 1-4, Keswick.	Approximate cost for removal - $1,000	Immediate
2.	Remove any items being stored in the overhead storage (apparatus bay) in Station 1-8, Pefferlaw.	No cost for removal, but new storage area needs to be built	Immediate
3.	Electrical panels on the apparatus floor should be protected from the potential of water spray at all three of the stations.	Proper water proof covers for these panels to be installed - $1,000	Immediate
4.	Have the vehicle exhaust system evaluated / repaired at Station 1-6, Sutton.	Costing unknown based on amount of repairs required	Immediate
5.	Upgrade or install proper male and female showers at Station 1-4, Keswick; 1-6, Sutton and 1-8 Pefferlaw.	Estimated costs of approx. $10,000 per washroom	Immediate
6.	Install fencing around the training tower at Station 1-6, Sutton.	Costing would depend on type of fencing installed	Immediate
7.	Ensure safety features are adequate for apparatus bay doors.	Costing unknown based on amount of repairs and parts required	Immediate
8.	Conduct an engineering review of all fire stations for an in-depth structural assessment, repairs / upgrades required, and estimate the cost of the work to address the issues. EMT's assessments are from a visual perspective only; no engineering review was performed on the buildings.	Engineering review estimated at approx. $5,000 - $7,000.	Short Term (1-3 years)
9.	Replace Station 1-8, Pefferlaw. Station 1-8 is in a good location for response to the community, however, it is the size and available space with the present station that is a concern.	Construction costs estimate $390 per square foot. (e.g. 10,000sq ft. building = $3,900,000)	Immediate (0–1 year)

10.	Construct a new fire station to the northeast of the current Station 1-4, Keswick, to provide a larger response coverage area. This station will be the new Fire Headquarters. The station should be designed so that it has the capacity to accommodate, in the future, two full-time crews along with a Volunteer force, plus a spare apparatus (or be designed to be easily expanded).	Construction costs estimate $390 - per square foot. (e.g. 20,000sq ft. building = $7,800,000)	Long Term (7-10 years)
11.	Consider an additional station in the south of Keswick shortly after the new Headquarters is built or even simultaneously. With the fairly rapid growth in the community along with the existing call locations, this new additional fire station is warranted. It has been identified that the Town has property and is planning a community centre in the area of Woodbine Avenue and Glenwood Avenue. This location, as plotted above (in Map #4), provides an enhanced four (4) minute response time to the south end of Keswick.	Construction costs estimate $390 per square foot. (e.g. 10,000sq ft. building = $3,900,000)	Short Term (1-3 years)
12.	The fire service currently does not have an appropriate fire training centre. EMT would recommend that one of the locations include a firefighter training centre including a training tower, live burn building, space for auto extrication, and a classroom.	Construction costs estimate $390 per square foot. (e.g. 10,000sq ft. building = $3,900,000)	Mid Term (4-6 years)
13.	Replace or renovate Station 1-6, Sutton. Relocating this station to an area such as Dalton Road and Black River would offer a quicker response to the Greater Sutton Area and also for a more efficient response time when backing up (response support to) the Keswick or Pefferlaw stations.	Construction costs estimate $390 per square foot. (e.g. 10,000sq ft. building = $3,900,000)	Mid Term (4-6 years)
14.	During all noted replacements or renovations to the fire stations, any related AODA requirements must be incorporated.	As Required	As Required

5.0 Appendix "A" – Maps of Georgina and the Fire Station Locations

Map 1:

Map #1, identifies the current station locations with a four (4) and eight (8) minute travel time from each station based on normal road conditions – **If all stations were staffed by full time Firefighters. However, Pefferlaw is still a fully Volunteer fire station and that is why a nine (9) and fourteen (14) minute response zone was utilized for the maps within the report**.



The Firefighters at the Keswick and Sutton stations would normally be out of the station within 60 seconds for a medical call and 80 seconds for a fire call providing an on-scene time in these noted areas under six (6) and ten (10) minutes respectively. The Pefferlaw Station, being fully Volunteer, would have a turnout time (time from alarm to being on the road) of four (4)

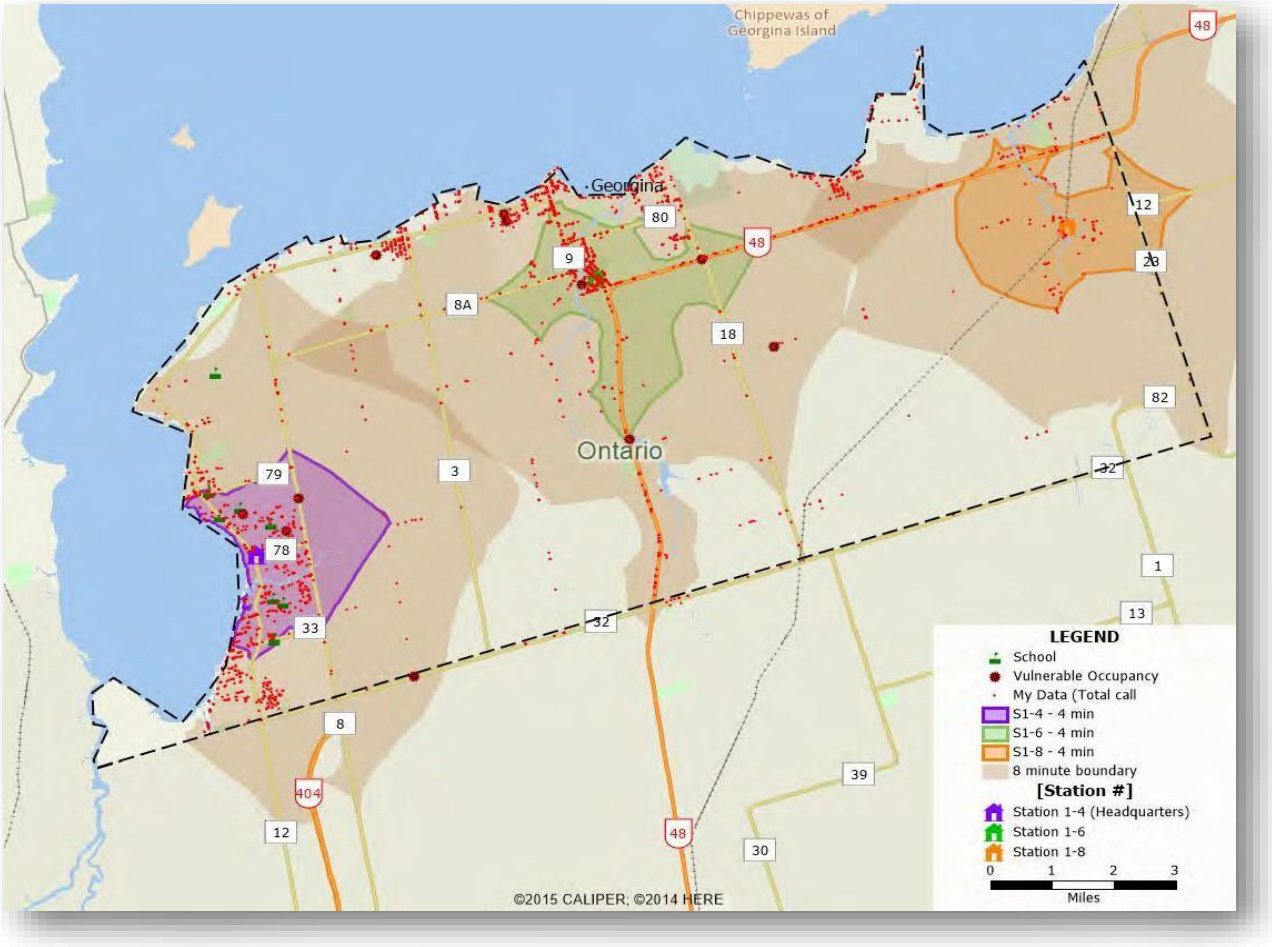
minutes (or longer), giving a response time to the indicated response area of eight (8) and twelve (12) minutes.

The map also indicates the locations of schools and vulnerable occupancies (Long Term Care, retirement

residences, group homes). These are considered high risk occupancies and as such, identifying where they are in respect to the responding fire station is a key component of assessing fire station locations.

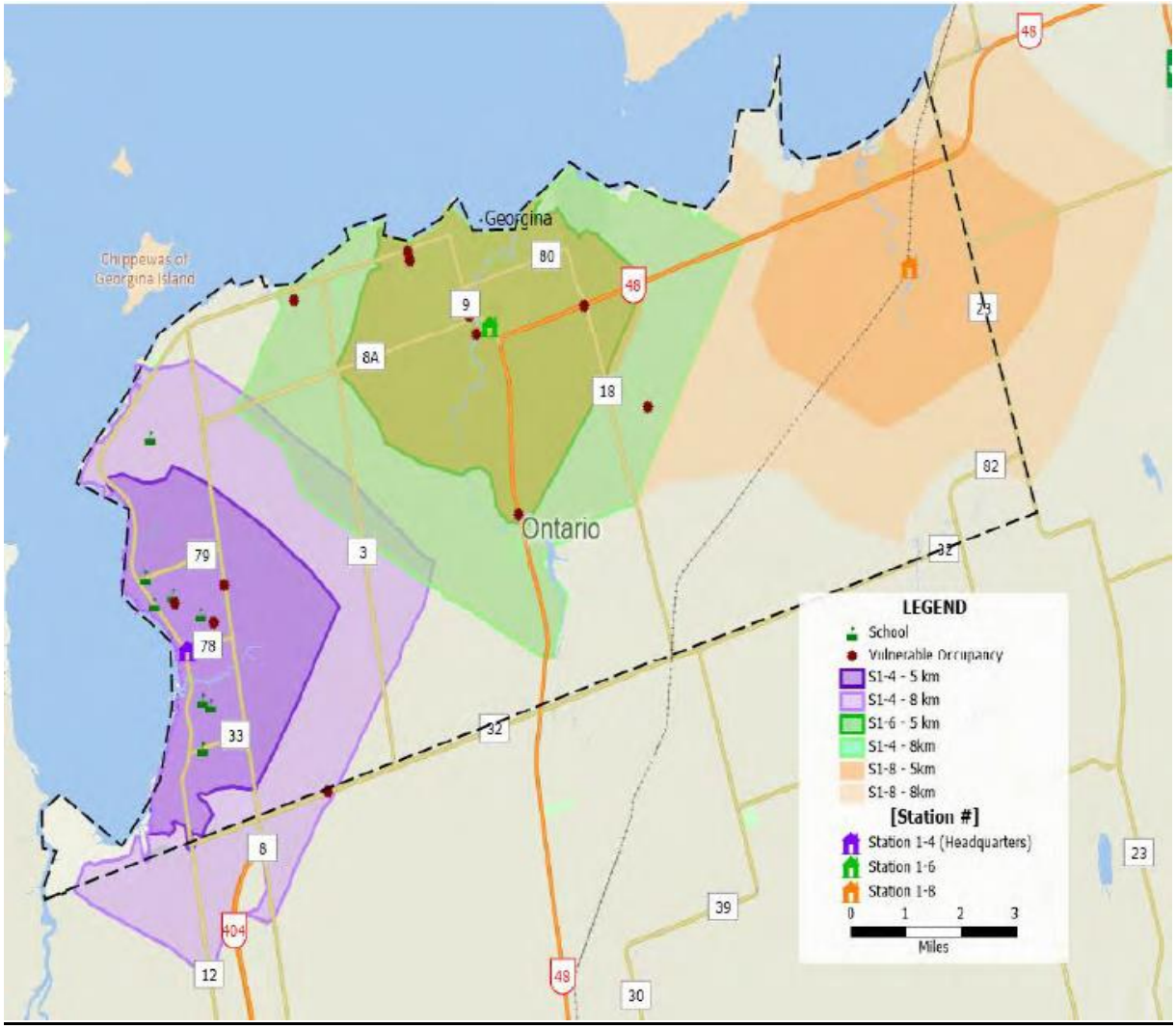
Map 2:

Map #2, plots the location of the fire calls along with the normal fire response times. The maps show a growing number of calls in the north and south end of Keswick that are outside of the four (4) minute response zone. With planned residential, commercial, and industrial development in the south end, the demand for fire responses will continue to grow in this area. The map also identifies that there is a larger density of calls along the waterfront area in the Sutton region.



Map 3:

Map #3 indicates the five (5) kilometer and eight (8) kilometer Fire Underwriters travel zones as discussed in relation to travel areas of all three fire stations.



Map 4:

Map #4 indicates the recommended locations for the two Keswick fire stations in order to meet the growth of the community and in keeping with meeting the recommended NFPA 1710 Standard.