



March 2021

County of Brant Fire Department



Fire Master Plan



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EXECUTIVE SUMMARY

This Fire Master Plan (FMP) consists of a review of the community and its fire service that culminates into a 10-year plan for future opportunities for organization improvements. The plan assesses present and future population statistics and anticipated growth. It is a plan that also evaluates past and present service levels provided by the County of Brant Fire Department (CBFD), coupled with its service goals and expectations.

The overall goal of this document is to provide the Fire Department and the County of Brant with a comprehensive look at how well the CBFD is meeting the needs of its staff and the community it serves. Once the plan is adopted, the next phase is implementation. The actual implementation of the recommendations noted within the FMP will depend on the County's resources and ability to move forward.

Objectives

To ensure that they are meeting the needs of the community and their staff, CBFD recognizes that it is necessary to conduct this review of the organization for the intention of providing high-quality fire services to the residents and businesses of the community along with its visitors. With the creation of a FMP, the County of Brant is evaluating all aspects of its service including the operational costs and capital budgets required to maintain or enhance the service.

The recommendations of the FMP are presented to guide the fire service for 2020 through to 2030 in maintaining a highly efficient and effective fire service for residents, businesses, and visitors to the County of Brant.

Using the information received during our consultations, review of supplied documentation, reference to industry standards, and best practices, we present a series of recommendations relating to a wide range of items for enhancements/efficiencies for consideration by the Fire Chief, senior management, and Council to guide the CBFD into the future.

The scope of work noted in the County's Request for Proposal has been utilized to guide this review. This includes but is not necessarily limited to the following:

- Develop call volume projections by type of call for each year to 2030.
- Review CBFD response to medical 9-1-1 calls and comment on their utility and effectiveness.

- Identify any reasonable opportunities to reduce call demands.
- Review CBFD current service level goals and provide comment on these goals with respect to what is considered best practice, industry standard, and legislated requirement.
- Review and comment of the extent to which CBFD meets, exceeds, or fails to meet service level goals.
- Review CBFD operations in the areas of suppression, fire prevention and investigation, apparatus and equipment, training, and administration, and provide comment on opportunities to drive efficiencies and/or improve effectiveness.
- Review apparatus and equipment and provide comment on its suitability.
- Review the present fire station locations, undertake analysis, and provide recommendations with respect to future requirements as they relate to services delivery expectations.
- Review and comment on any other facet of service delivery and organizational shape or culture as deemed appropriate.

A quick reference chart of recommendations has been included in this Executive Summary. This chart makes note of the recommendation and suggested implementation timeline.

A more detailed chart including estimated costs can be found in Section 11.

Rec #	Recommendation	Suggested Timeline
1	The E&R By-law document should include a table to identify the dates for review, along with noting whether updates were made. It is also recommended that the Fire Chief either have a response expectation included in the updated By-law, or that at the very least the Fire Chief report to Council on the annual CBFD response comparisons to demonstrate that the Department is either improving or may require additional resources to meet response expectations.	Immediate (0-1 year) and ongoing
2	It is recommended that the Fire Chief and senior staff continue an annual internal survey similar to the HRIR Satellite survey in February 2020 to obtain feedback from firefighters and staff. This information can be useful in identifying and addressing the staff concerns.	Annually
3	The Fire Chief should plan to update the FUS – Tanker Shuttle Accreditation prior to the expiry date in 2024. The County should also maintain and expand the water source infrastructure that may	Every 5 years

Rec #	Recommendation	Suggested Timeline
	be needed to improve the access to water supplies such as dry hydrants and cisterns.	
4	The Cbfd should actively promote/support the installation of residential sprinkler systems.	Short-term (1-3 years)
5	It is recommended that Cbfd give consideration to training the suppression officers on how to conduct fire safety inspections as an alternative means of achieving the FUS recommended frequency of inspections.	Short-term (1-3 years)
6	It is recommended that the Fire Chief review Cbfd's inspection program to identify levels of desired frequency relative to the inspections noted in the FUS Inspection Chart.	Short-term (1-3 years)
7	The Cbfd develop a sustainable pre-incident development and review program.	Short-term (1-3 years)
8	It is recommended that the Fire Chief record and evaluate volunteer firefighter data analytics, assessing when there is an effective firefighting force on scene. This evaluation can assist with identifying possible gaps in staffing and response times.	Immediate (0-1 year) and ongoing
9	Hire three career firefighters to provide day shift staffing Monday to Friday (0700-1700 hrs) at Paris - Station 1. Minimum staffing of two firefighters.	Short-term (1-3 years)
10	Assign the position of Duty Officer to rotate on-call coverage along with the Fire Chief and Deputy Chief.	Short-term (1-3 years)
11	It is recommended to fill the second Administrative Assistant position that has been left vacant.	Short-term (1-3 years)
12	It is recommended that the Cbfd complete an OFMEM SIR after each public education event for statistical purposes.	Short-term (1-3 years)
13	Enhance the training and certification of volunteer officers (Lieutenants and Captains) in the areas of fire prevention and public education so they are trained and certified to at least NFPA 1031 – Fire Inspector I and NFPA 1035 – Fire and Life Safety Educator I.	Short-term (1-3 years)
14	The County of Brant to hire an additional Fire Prevention/Public Fire Life Safety Educator that would be dedicated to conducting public education. This individual may also conduct inspections as required.	Short-term (1-3 years)

Rec #	Recommendation	Suggested Timeline
15	Begin succession planning in Fire Prevention and senior officer positions prior to any retirement announcements to maintain continuity in the office and ensure a seamless transition.	Short-term (1-3 years)
16	Promote a current FPO/PFLSO to the position of Chief Fire Prevention Officer.	Short-term (1-3 years)
17	Assign an FPO to focus solely on Public Education opportunities.	Short-term (1-3 years)
18	It is recommended that CBF D consider the purchase and appropriate placement of a mobile training unit to effectively accommodate live fire training needs of the firefighters.	Mid-term (4-6 years)
19	Hire a full-time Training Officer.	Short-term (1-3 years)
20	Hire a part-time Training Officer position to assist with the implementation and delivery of training programs.	Mid - Long-term (4-10 years)
21	EMT recommends additional hours be allocated for the volunteer firefighter-based training with a needs assessment review of the training program currently established.	Short-term (1-3 years)
22	Fire Chief should conduct a regular review of data analytics to watch for shifts in call locations due to community growth.	Ongoing
23	Develop a platoon response plan for nighttime single unit responses (e.g., medical calls) to limit paging to 4-5 firefighters. This would include reducing the number of volunteer firefighters responding to certain types of calls on prescribed shifts for Station 1, 3 and 7.	Short-term (1-3 years)
24	It is recommended that the CBF D monitor sick time related to PTSD or other mental health illness and the impacts that may be placed upon staffing, shift scheduling/coverage, and any financial implications.	Short-term (1-3 years)
25	CBF D issue a Request for Information to fire dispatch centres to look at capabilities, pricing, and options to meet future requirements of fire communications.	Short-term (1-3 years)
26	Track the percentage of times a station is unable to send a vehicle within its identified response zone.	Short-term (1-3 years)
27	Review 3 rd party technology for responders and Fire Prevention Staff currently used and look to maximize its potential.	Short-term (1-3 years)

Rec #	Recommendation	Suggested Timeline
28	An analysis and revision of the Fire Station Protection Areas be completed by the Fire Chief.	Bi-annually and ongoing
29	Design and construct/lease a north Paris station to be located in the area of Grand River St. N and County Road 52. Purchase a Pumper/Tanker Training and gear for additional firefighters.	Mid-term (4-6 years)
30	Design and construct a new Station 1 Headquarters and Training Centre in the vicinity of Rest Acres Road and Hwy 403 – dispose of the current Station 1 and 2.	Long-term (7-10 years)
31	Exposure to diesel exhaust can be reduced through engineering controls at the source. The installation of direct capture exhaust system extractors is recommended in all stations. Stations 4, 6 & 8 will be outfitted in the new fire stations.	Short-term (1-3 years)
32	Driveway replacement should be considered in the short-term for Burford - Station 3.	Short-term (1-3 years)
33	Back-up power generators should be installed for stations 2, 3 & 7.	Short-term (1-3 years)
34	Bunker gear storage rooms should be provided for stations 1, 3, 5 & 7.	Short-term (1-3 years)
35	It is recommended that the Fire Chief review potential options of an in-house service/share with County Operations for mechanical services, maintenance of generators, gas powered equipment, apparatus and service vehicle maintenance.	Short-term (1-3 years)
36	It is recommended that when considering procurement of new SCBA, there should be consideration into the interoperability with fire service partners when the selection process has commenced.	Short-term (1-3 years)
37	It is recommended that a Master Equipment Life-Cycle plan be established.	Short-term (1-3 years)
38	It is recommended that County of Brant and the Six Nations of the Grand River develop a fire services agreement including cost recovery mechanisms for assistance provided.	Short-term (1-3 years)
39	It is recommended that the Fire Chief review present automatic and mutual aid agreements and explore future opportunities on an annual basis.	Short-term (1-3 years) and ongoing

Table of Contents

EXECUTIVE SUMMARY	1
OBJECTIVES	1
ACRONYMS.....	0
INTRODUCTION	2
REVIEW PROCESS AND SCOPE.....	2
DELIVERABLES	2
PERFORMANCE MEASURES AND STANDARDS.....	4
PROJECT CONSULTANTS	6
SECTION 1: FIRE DEPARTMENT AND COMMUNITY OVERVIEW	8
1.1 COMMUNITY OVERVIEW	8
1.1.1 <i>Community Growth</i>	9
1.2 FIRE DEPARTMENT COMPOSITION.....	10
1.2.1 <i>Staffing Level Considerations</i>	14
1.3 COMPARABLE FIRE DEPARTMENTS.....	15
RECOMMENDATION(S).....	18
SECTION 2: PLANNING AND STAKEHOLDER SURVEYS	20
2.1 THREE LINES OF DEFENCE	20
2.2 STRENGTHS, WEAKNESSES, OPPORTUNITIES, AND THREATS (SWOT).....	21
2.2.1 <i>Strengths</i>	21
2.2.2 <i>Weaknesses</i>	22
2.2.3 <i>Opportunities</i>	24
2.2.4 <i>Threats/ Challenges</i>	26
2.3 NATIONAL FIRE PROTECTION ASSOCIATION STANDARDS (NFPA)	28
2.4 FIRE UNDERWRITERS SURVEY (FUS)	28
2.5 ESTABLISHING & REGULATING BY-LAW	30
2.6 STAKEHOLDER SURVEYS	31
2.6.1 <i>Internal Surveys</i>	31
2.6.2 <i>External Surveys and Stakeholder Meeting Results</i>	35
RECOMMENDATION(S).....	37
SECTION 3: RISK ASSESSMENT	39
3.1 COMMUNITY RISK ASSESSMENT PROFILE.....	39
3.2 INTEGRATED RISK MANAGEMENT APPROACH	46
3.3 HOME FIRE SPRINKLERS.....	49
RECOMMENDATION(S).....	52
SECTION 4: DEPARTMENT STAFFING AND PROGRAMS	54
4.1 ORGANIZATIONAL OVERVIEW	54
4.1.1 <i>NFPA 1201 – Standard for Providing Fire and Emergency Services to the Public</i>	56
4.1.2 <i>NFPA 1720 – Volunteer Fire Departments</i>	56
4.2 RECOMMENDATIONS FOR FUTURE STAFFING	59

4.2.1	<i>Outcome of Hiring Career Firefighters</i>	63
4.3	ADMINISTRATION DIVISION	63
4.3.1	<i>Commission on Fire Accreditation International</i>	63
4.4	FIRE PREVENTION AND PUBLIC EDUCATION DIVISION	64
4.4.1	<i>Code Enforcement/Inspections</i>	66
4.4.2	<i>Origin and Cause</i>	66
4.4.3	<i>Determination of Current Fire Prevention Staffing Requirements</i>	67
4.4.4	<i>Public Education</i>	71
4.4.5	<i>Fire Prevention Officer/Public Fire Life Safety Educator</i>	73
4.4.6	<i>Retirements and Succession Planning</i>	74
4.5	TRAINING AND EDUCATION DIVISION	74
4.5.1	<i>Commission on Fire Accreditation International</i>	77
4.6	RECRUITMENT AND RETENTION OF VOLUNTEER FIREFIGHTERS.....	78
	RECOMMENDATION(S).....	79
SECTION 5: FIRE SUPPRESSION/DISPATCHING		82
5.1	FIRE SUPPRESSION/EMERGENCY RESPONSE	82
5.1.2	<i>National Fire Protection Association (1710 and 1720)</i>	82
5.2	SERVICE LEVEL STANDARDS – DISPATCHING SERVICES.....	90
5.2.1	<i>NFPA 1221, Section 7.4 Operating Procedures</i>	91
5.3	RELIABILITY AND VEHICLE MOVEMENTS	93
	RECOMMENDATION(S).....	95
SECTION 6: FACILITIES		97
6.1	STATION LOCATIONS	97
6.2	FIRE STATION CONDITION ASSESSMENT	100
6.2.1	<i>Fire Station – 1</i>	100
6.2.2	<i>Fire Station – 2</i>	105
6.2.3	<i>Fire Station – 3</i>	109
6.2.4	<i>Fire Station – 4</i>	110
6.2.5	<i>Fire Station – 5</i>	111
6.2.6	<i>Fire Station – 6</i>	113
6.2.7	<i>Fire Station – 7</i>	114
6.2.8	<i>Fire Station – 8</i>	115
	RECOMMENDATION(S).....	116
SECTION 7: APPARATUS AND EQUIPMENT		118
7.1	FIRE APPARATUS – NEW AND REPLACEMENT SCHEDULES.....	118
7.2	MAINTENANCE	123
7.3	FIRE DEPARTMENT EQUIPMENT & PPE	123
	RECOMMENDATION(S).....	125
SECTION 8: EMERGENCY MANAGEMENT		127
8.1	EMERGENCY MANAGEMENT PROGRAM	127
	RECOMMENDATION(S).....	128
SECTION 9: MUTUAL AND AUTOMATIC AID		130

9.1	MUTUAL AID AND AUTOMATIC AID AGREEMENTS	130
	RECOMMENDATION(S).....	132
SECTION 10: FINANCE, BUDGETING, AND CAPITAL INVESTMENT PLAN		134
10.1	OPERATING AND CAPITAL BUDGETS	134
10.1.1	<i>Operating Budget</i>	135
10.1.2	<i>Capital Forecasts</i>	135
	RECOMMENDATION(S).....	136
SECTION 11: CONCLUSION AND RECOMMENDATIONS		138
11.1	CONCLUSION	138
SECTION 12: APPENDICES		145
	APPENDIX A – DEFINITIONS AND REFERENCES	145
	APPENDIX B – OFMEM GUIDELINE ON RECRUITMENT AND RETENTION	147
	APPENDIX C – RESPONSE DATA FOR 2018 AND 2017	153
	APPENDIX D – FUS – SUPERIOR TANKER SERVICE – ACCREDITED.....	159
FIGURE #1: COUNTY OF BRANT RELATIVE TO SURROUNDING COMMUNITIES		8
FIGURE #2: THE COUNTY OF BRANT STATION LOCATIONS		11
FIGURE #3: FIRE DEPARTMENT ORGANIZATIONAL CHART		13
FIGURE #4: COMMUNITY RISK ASSESSMENT FLOW CHART		42
FIGURE #5: 2019 TOTAL CALLS PER STATION.....		59
FIGURE #6: FUTURE GROWTH AREAS.....		60
FIGURE #7: 2019 CALL TYPES.....		62
FIGURE #8: FIRE PREVENTION DIVISION RECOMMENDED STRUCTURE		74
FIGURE #9: FIRE RESPONSE/PROPAGATION CURVE		83
FIGURE #10: 2019 CALL TYPES.....		85
FIGURE #11: CALL CLUSTERING MAP 2019		87
FIGURE #12: STATION LOCATIONS AND 2019 CALL LOCATIONS WITH 10-MINUTE DRIVE TIME		89
FIGURE #13A: CBFDF FIRE STATION LOCATIONS AND 10-MINUTE DRIVE TIMES		98
FIGURE #13B: STATION LOCATIONS WITH 2019 INCIDENT LOCATIONS		99
FIGURE #14: 5-MINUTE DRIVE TIME FROM PARIS - STATION 1		102
FIGURE #15: 5-MINUTE DRIVE TIME FROM STATION 1 AND NEW SUBSTATION.....		103
FIGURE #16: NEW HEADQUARTERS AND SUBSTATION WITH 10-MINUTE DRIVE TIME		107
FIGURE #17: ALL STATION LOCATIONS WITH NEW STATION 1 AND NEW SUBSTATION		108

TABLE #1: POPULATION DATA	10
TABLE #2: FIREFIGHTING COMPLEMENT	12
TABLE #3: FIRE DEPARTMENT COMPARABLES AND POPULATION RATIO	16
TABLE #4: CRA FINDINGS SUMMATION	45
TABLE #5: FUS SUGGESTED INSPECTION FREQUENCY CHART	68
TABLE #6: NUMBER OF FIRE INSPECTIONS 2013 TO 2019.....	69
TABLE #7: YEARLY PUBLIC EDUCATION TOTALS	72
TABLE #8: COMMUNICATION CENTRE COMPARISONS.....	93
TABLE #9: FUS – VEHICLE REPLACEMENT RECOMMENDATIONS	118
TABLE #10: APPARATUS REPLACEMENT SCHEDULE.....	121

ACRONYMS

AED	Automatic External Defibrillator
CAO	Chief Administrative Officer
CAD	Computer Aided Dispatch
CBFD	County of Brant Fire Department
CEMC	Community Emergency Management Coordinator
CFAI	Commission on Fire Accreditation International
CISM	Critical Incident Stress Management
CO	Communications Operator
CRA	Community Risk Assessment
CRTC	Canadian Radio-television and Telecommunications Commission
CSA	Canadian Standards Association
E&R	Establishing & Regulating (By-law)
EMCPA	Emergency Management & Civil Protection Act
EMS	Emergency Medical Services
EOC	Emergency Operations Centre
ERP	Emergency Response Plan
EVT	Emergency Vehicle Technician
FMP	Fire Master Plan
FESO	Fire and Emergency Services Organization
FPPA	Fire Protection and Prevention Act
FUS	Fire Underwriter's Survey
HFSCC	Home Fire Sprinkler Coalition Canada
HQ	Headquarters
IRM	Integrated Risk Management
MPAC	Municipal Property Assessment Corporation
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
NIST	National Institute of Standards and Technology
OFC	Ontario Fire College
OFMEM	Office of the Fire Marshal and Emergency Management
PFSG	Public Fire Safety Guidelines
PPE	Personal Protective Equipment
PTSD	Post Traumatic Stress Disorder
SCBA	Self-Contained Breathing Apparatus
SIR	Standard Incident Report

SOG	Standard Operating Guidelines
SWOT	Strengths, Weaknesses, Opportunities, and Threats
TSSA	Technical Standards & Safety Authority
ULC	Underwriters Laboratories of Canada

INTRODUCTION

Review Process and Scope

Emergency Management & Training Inc. (EMT) has based its review process on the County of Brant's initial Request for Proposal and the response document submitted by Emergency Management & Training Inc. The specific scope of work identified in the Request for Proposal was reviewed. The Fire Master Plan (FMP) review was completed by utilizing best practices, current industry standards, and applicable legislation as the foundation for all work undertaken. Emergency Management & Training Inc. also used both quantitative and qualitative research methodologies to develop a strong understanding of current and future needs and circumstances of the community.

Deliverables

Through a strategic planning process and by building upon the 2012 Master Fire Plan, EMT has developed a new FMP for 2020 - 2030. The following section lists the major project submissions. The proponent should note that other deliverables are also required, as specified within this document.

1. Governance – Assess all aspects of the fire department and fire protection service delivery for legislative compliance with: *Fire Protection and Prevention Act*, Section 21 Guidelines, *Occupational Health and Safety Act*, *Emergency Management and Civil Protection Act*, and municipal policies and bylaws.
2. Service Delivery – Assess all aspects of the levels and range of services and programs currently delivered, including future requirements that will be influenced by predicted growth and future service delivery expectations.
3. Fire Prevention and Public Education – Assess all aspects of the levels and range of services for the delivery of the legislated fire prevention program including inspections, investigations, complaint and request services, code enforcement, and public education programs.
4. Emergency Response – Assess all aspects of emergency response including call volume, trends, and types of responses, apparatus deployment, response staffing, firefighter deployment and safety.
5. Fire Department Training – Assess all firefighter training programs, including recruit, firefighter, and officer positions. Review training of Communications personnel, Fire

Prevention Officers, administration staff and Critical Incident Stress Management (CISM)
- Peer to Peer program.

6. Administration – Assess the administration of the Fire Department for staffing, organizational structure, policies, and procedures (departmental and corporate), administrative support, record keeping, information management, purchasing, inventory control, public and media relations, and customer service.
7. Human Resources – Assess Fire Department staffing, organizational structure, ratio of officers to firefighters relative to effective span of control, firefighter recruitment and retention, promotional policy, succession planning, health and safety, firefighter wellness.
8. Communications – Assess all aspects of communications in consideration of *NFPA 1221 Standard for Installation, Maintenance and Use of Emergency Services Communications Systems* but not limited to communications technology, public safety radio spectrum, NG 911, cell phones, and future optimization and infrastructure requirements.
9. Apparatus, Vehicles, and Equipment – Assess existing vehicles and equipment condition, maintenance programs, replacement schedules and plans relative to existing and expected service demands, budget process, and preventative maintenance requirements.
10. Mutual Aid/Automatic Aid Agreements – Assess existing and potential mutual aid/automatic aid agreements with neighbouring municipalities for partnership opportunities.
11. Risk Assessment – Develop a comprehensive Community Risk Assessment in accordance with current FPPA Legislative changes as the basis for determining the appropriate level of fire protection services and response capabilities to meet the municipality's needs, circumstances, and legislative responsibilities.
12. Facilities – Assess the capacity of existing facilities and plan for future needs. A review of training facilities, fleet and facility maintenance, storage requirements, fire prevention administrative space, decontamination and hygiene provisions, and emergency management.
13. Input – Include input from members of Council, senior municipal staff, senior Fire Department Officers, firefighters, and the community.
14. Comparators – Assess and identify municipal comparators for benchmarking purposes to compile a list of municipal comparators with similar population, population density, land area, number of staff, number of stations, fire prevention/public education, and operating budget.

15. Outcomes – The plan outcomes must establish strategic priorities complete with action plans. These shall be expressed in terms of clear and concise goals, objectives, action steps, resources (financial and human), and the timelines required to successfully complete the priorities detailed in the implementation plan.

Based on these criteria and through meetings with the Fire Chief, fire staff, Council and other stakeholders, the consulting team was able to complete a thorough review of elements that are working well and areas requiring improvement within the CBFD.

Through a review of the Department's facilities, equipment, programs, and related data, (and as noted in the Executive Summary) Emergency Management & Training Inc. is submitting 37 recommendations relating to future staffing and station opportunities for enhancements/efficiencies for consideration by the Fire Chief, senior management, and Council to guide the CBFD into the future.

Performance Measures and Standards

This FMP has been based upon (but not limited to) key performance indicators that have been identified in national standards and safety regulations such as:

- Office of the Fire Marshal and Emergency Management's (OFMEM) Public Fire Safety Guidelines.
- *The Fire Prevention and Protection Act* and its subordinate regulations, including the Ontario Fire Code O. Reg 213/07, Mandatory Assessment of Complaints and Requests for Approval O. Reg. 365/13, and Mandatory Inspection – Fire Drill in Vulnerable Occupancy O. Reg. 364/13. And O. Reg. 378/18 Community Risk Assessment.
- Office of the Fire Marshal and Emergency Management's (OFMEM) Integrated Risk Management program.
- The *Ontario Health and Safety Act*, with reference to the 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* (OHSA). This committee is charged with reviewing industry safety concerns and developing recommended guidelines to reduce injuries for the worker.
- The National Fire Protection Association (NFPA) standards:

- NFPA 1001 – Standard for Fire Fighter Professional Qualifications
- NFPA 1002 – Standard for Fire Apparatus Driver/Operator Professional Qualifications
- NFPA 1006 – Standard for Technical Rescue Professional Qualifications
- NFPA 1021 – Standard for Fire Officer Professional Qualifications
- NFPA 1031 – Standard for Professional Qualifications for Fire Inspector and Plan Examiner
- NFPA 1033 – Standard for Professional Qualifications for Fire Investigator
- NFPA 1035 – Standard on Fire and Life Safety Educator, Public Information Officer, Youth Fire Setter Intervention Specialist and Youth Fire Setter Program Manager Professional Qualifications
- NFPA 1041 – Standard for Fire Service Instructor Professional Qualifications
- NFPA 1061 – Professional Qualifications for Public Safety Telecommunications Personnel
- NFPA 1072 – Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications
- NFPA 1201 – Standard for Providing Fire and Emergency Services to the Public
- NFPA 1221 – Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems
- NFPA 1500 – Standard on Fire Department Occupational Safety, Health, and Wellness Program
- NFPA 1521 – Standard for Fire Department Safety Officer Professional Qualifications
- NFPA 1710 – Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations and Special Operations to the Public by Career Fire 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
- NFPA 1730 – Standard on Organization and Deployment of Fire Prevention Inspection and Code Enforcement, Plan Review, Investigation, and Public Education Operations

- NFPA 1901 – Standard for Automotive Fire Apparatus
- NFPA 1911 – Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Emergency Vehicles
- The Commission on Fire Accreditation International (CFAI), which is a program that promotes fire service excellence by evaluating a fire department based on related National Fire Protection Association standards, local legislation, and industry best practices (the parent organization for CFAI is the Centre for Public Safety Excellence).
 - This program has been adopted by many fire departments in Canada as a measure of best practices. Within Ontario, Guelph, Kitchener, Toronto, and Ottawa are just a few fire departments that have obtained accreditation from the CFAI.
 - This program comes with a fee of \$580 for application plus an additional \$6,000 submission to the Commission once the department decides to move to the next stage of the program, which includes a site visit and assessment of the Department by peer assessors.
 - It is estimated that approximately 2,000 hours is required to prepare and submit the documents for assessment.
 - A Department can invest upwards of 13,000 hours to address and rectify requirements noted by the peer assessment team to meet CFAI accreditation.
- Fire Underwriters Survey (FUS) technical documents

Project Consultants

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

- Darryl Culley, President, Emergency Management & Training Inc.
- Gary Mosburger, Fire Service Consultant
- Rick Monkman, Fire Service 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 Emergency Management & Training Inc. team has worked on projects that range from fire service reviews, creation of strategic and master plans, and development of emergency response programs for clients.

SECTION 1- Community and Fire Department Overview

- 1.1 Community Overview
- 1.2 Fire Department Overview
- 1.3 Comparable Fire Departments

SECTION 1: Fire Department and Community Overview

1.1 Community Overview

The County of Brant is in southern Ontario and encompasses an area of approximately 843.25 km², with a population of approximately 36,707 residents as per the 2016 population census. The County of Brant consists of several distinct communities and the intermediary countryside. The largest urban area is the community of Paris. Other communities within the County of Brant include, Burford, Onondaga, St. George, Mt. Pleasant, Cainsville, and Scotland.¹

The County consists of several growing urban areas and villages. These urban areas are separated from each other by farms, forests, countryside residences and recreational areas which all add to the overall character of the County. The communities are protected by eight fire stations that are in Paris, Highway 53 – Airport Station, Burford, Cainsville, Mt. Pleasant, Onondaga, St. George, and Scotland.

FIGURE #1: County of Brant Relative to Surrounding Communities



¹ https://en.wikipedia.org/wiki/County_of_Brant

As illustrated in Figure #1, the County of Brant covers a wide area. The fact that the City of Brantford is situated in the centre of the County poses a response challenge for County stations that are located on the opposite side of the City to an emergency incident.

The County of Brant is well served by a network of roads linking the communities within the municipality to each other and to markets beyond. The County also has a major rail line providing connections to Toronto and southwestern Ontario. All these transportation factors, along with the proximity to Greater Toronto Area, make the County of Brant an ideal location for residential, commercial, and industrial growth. This growth, along with increases in noted traffic and transportation modes, can present an increased need for emergency response by the County of Brant Fire Department.

1.1.1 Community Growth

The population in the County of Brant increased by 2.99% between 2011 and 2016. In the years to come, the County of Brant is expected to continue with steady growth towards 45,000+ people by 2031, which will equate to a 12.3% increase in population from 2020 to 2031.² This type of growth will continue to put a strain on the Fire Department in its efforts to meet the increase in call volumes that will definitely occur as the population and traffic flows increase.

With this population growth will come intensification, along with more low and high-rise buildings. This will create another challenge regarding response capabilities of the Fire Department. As such, this document contains information and recommendations that will guide CBFD in its efforts to continue to meet the future demands that come with the projected growth.

² <https://www.brant.ca/en/invest-in-brant/community-profile.aspx#>

TABLE #1: Population Data*Retrieved from the County of Brant & Statistics Canada*

Population	County of Brant
Projected Population in 2025	45,000
Population in 2011 (Statistics Canada)	35,638
Population in 2016 (Statistics Canada)	36,707
Population change (%) from 2011-2016	3.0%

1.2 Fire Department Composition

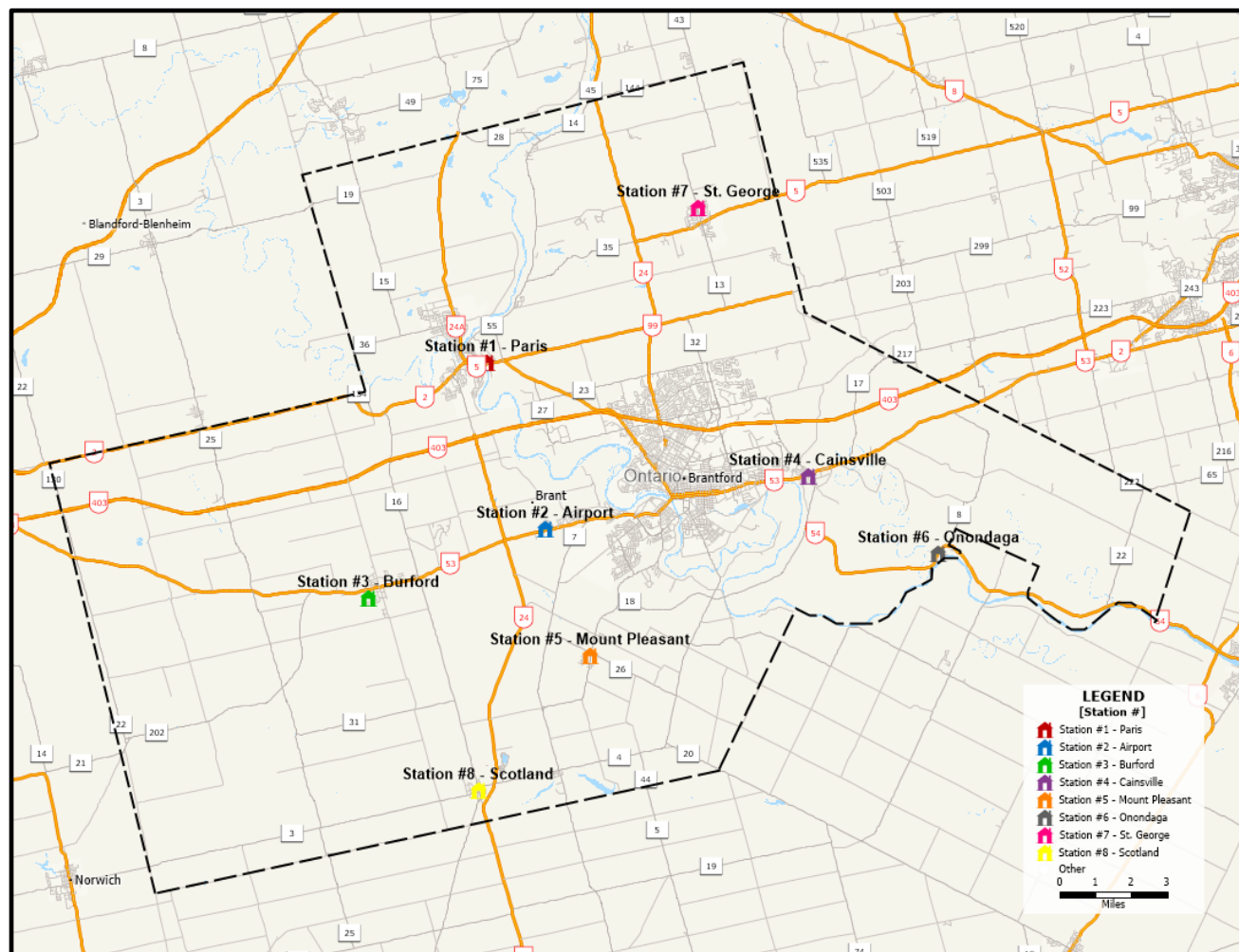
As previously noted, the County of Brant covers an area of approximately 843.25 km² and serves a population of approximately 36,707 residents. The Fire Department responds to an average of 1,330 calls per year.

Full-time administration and support staff include:

- Fire Chief
- Deputy Fire Chief
- Administrative Assistant
- Fire Prevention Division consisting of three personnel

The Department is served by a team of dedicated volunteer firefighters that respond from the eight fire stations.

FIGURE #2: The County of Brant Station Locations



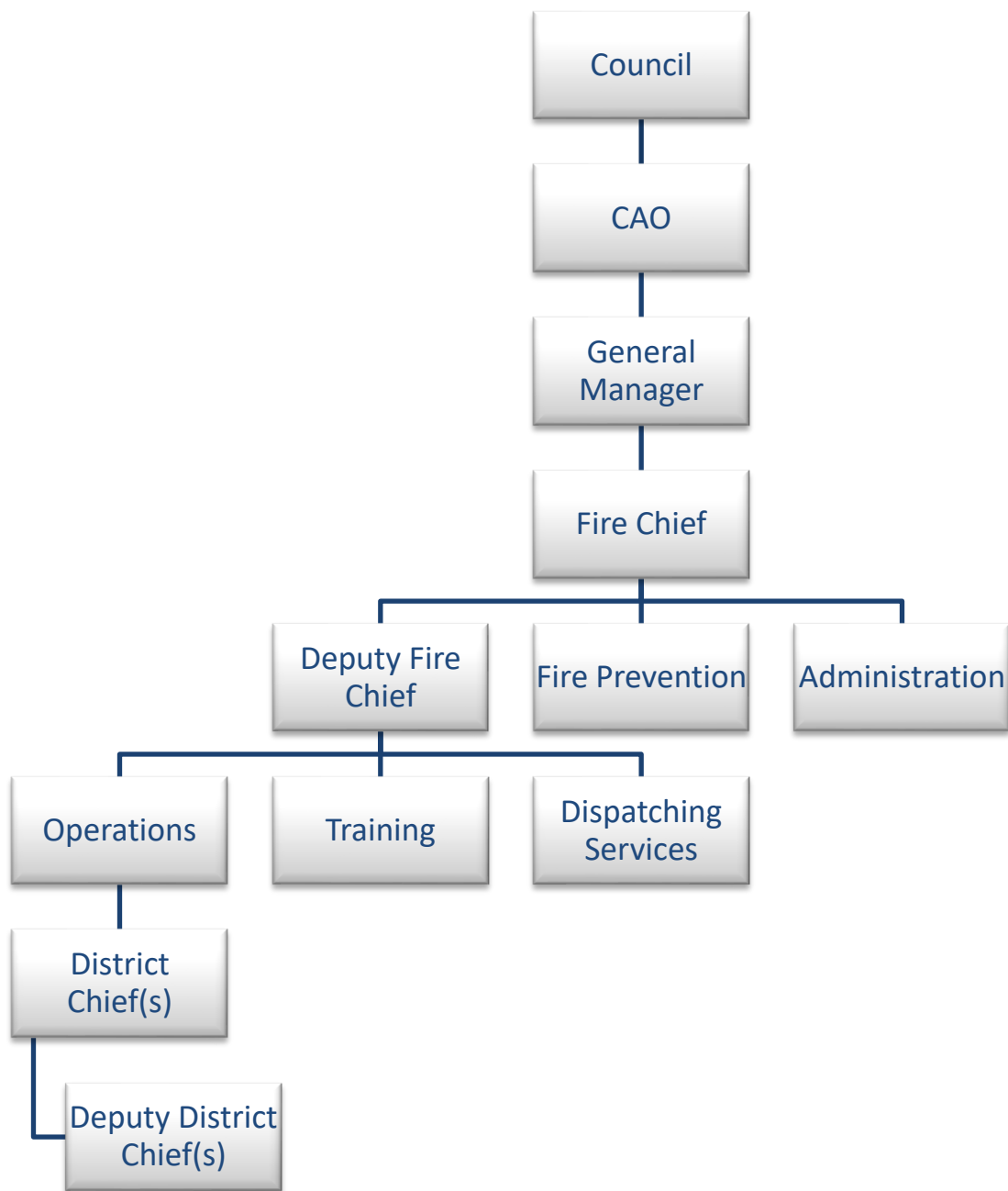
The overall firefighting complement for the Fire Suppression/Operations Division across the eight stations is outlined in the following table:

TABLE #2: Firefighting Complement

Station	# of Personnel
Station 1 – Paris	30
Station 2 – Airport	20
Station 3 – Burford	24
Station 4 – Cainsville	24
Station 5 – Mt. Pleasant	20
Station 6 – Onondaga	20
Station 7 – St. George	24
Station 8 – Scotland	20

The County of Brant has an approved volunteer firefighting force of 182.

The organizational chart noted in Figure #2 reflects the general reporting structure within the Fire Department and that of the Fire Chief to the General Manager, CAO, and County Council.

FIGURE #3: 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 County and also allows for a good level of administrative oversight of the day-to-day operations of the Fire Department.

As shown in the organizational chart, the areas of responsibility presently identify that the Fire Chief is responsible for the overall management of the Cbfd. The divisional oversight duties have been split so that the Deputy Chief manages the Operations Division, the Dispatching Services, and Training Division, whereas the Fire Chief focuses on Administration, and Fire Prevention & Public Education.

1.2.1 Staffing Level Considerations

There is no 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 its service delivery format. Some municipalities have referred to other similar sized municipalities as a guide for firefighter staffing numbers and types (i.e., full-time or volunteer). It must be kept in mind, however, 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 the aforementioned information in mind.

Having noted that there is no standard that recommends a firefighter per population quota, there is the National Fire Protection Association (NFPA) 1710 and 1720 standards on Career and Volunteer Fire Departments that identifies a staffing level per responding unit. These recommendations note that three firefighters and one officer (for a total of four) should be on the initial responding fire truck.

There is no doubt that the call volume for the Cbfd 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 Cbfd is keeping up with its response expectations or is falling behind in this area. This review of response data is why EMT had requested a full three years of data. The three years of data creates a reliable baseline for identifying how well the Department is meeting related industry response standards such as those noted in the NFPA standards.

Cbfd, as with many volunteer fire departments, is challenged when it comes to having sufficient volunteer firefighter numbers for daytime (weekday) response. This is an area that needs to be monitored on a constant basis to identify how many volunteers respond, or if there are times that the Fire Department was unable to muster the appropriate number of personnel for large-scale incidents such as house fires or rescue situations.

Due to other commitments, such as their full-time jobs and family obligations, there is no guarantee the volunteer firefighters will be able to respond as needed, which in turn can create a condition where possible low numbers of on-scene staffing levels may occur.

By identifying the gaps in response times and staffing levels, CBFD can identify possible solutions to the closing of those gaps.

The community has hired a Fire Chief to manage the Department and to advise on the needs of the organization. As such, the information and recommendations provided by the Fire Chief should be taken into consideration when deciding on future fire and emergency service staffing and equipment needs to effectively serve the community.

1.3 Comparable Fire Departments

A review of similar municipal fire services (based on input from CBFD) was conducted for benchmarking purposes. This type of review can offer a snapshot of comparable communities and what their fire departments look like.

In completing this type of review, the Fire Chief and Council must be aware that no two communities are identical; each community has its own unique challenges due to demographics, topography, percentage of residential, commercial, and industrial areas, along with transportation and road network challenges.

The following chart identifies the comparable communities reviewed and their fire department staffing system.

TABLE #3: Fire Department Comparables and Population Ratio

Municipality	Population	Stations	Full-time Firefighters	Volunteer Firefighters	FFs per 1,000 pop	Annual Incidents	Area per Fire Station
County of Brant	36,707	8	0	182	4.95	1,330	105.4 km ²
Norfolk	64,044	11	0	254	3.96	1050	146.1 km ²
Haldimand	45,876	11	0	274	5.98	980	104.3 km ²
Central Elgin	12,607	4	0	100	7.93	800	70.1 km ²
Township of Norwich	11,001	4	0	100	9.09	209	107.8 km ²
Kawartha Lakes	75,423	20	30	350	5.04	2,500	3,059 km ²
Chatham Kent	102,042	2 FT, 1 Comp, 17 Volunteer	73	440	5.03	Not available	122.9 km ²

Taking into consideration the growth that the County of Brant is witnessing and will continue to see in the upcoming years, the staffing of the fire service must be reviewed regularly by the Chief and Council to ensure that CBFD will be able to meet the needs of this growing community.

As illustrated in Table #3, there is a range of population versus fire department staffing between the communities surveyed. No definitive conclusion or recommendation can be drawn from this comparison alone. This data does, however, offer a glimpse of information which can be used to identify whether the County of Brant Fire Department is functioning similarly in relation to call volumes, population versus staffing, and composition of the service.

Recommendation(s)

No recommendations for this section.

SECTION 2 – Planning and Stakeholder Surveys

- 2.1 Three Lines of Defence
- 2.2 Strengths, Weaknesses, Opportunities, and Threats (SWOT)
- 2.3 National Fire Protection Association Standards (NFPA)
- 2.4 Fire Underwriters Survey (FUS)
- 2.5 Establishing and Regulating By-Law
- 2.6 Stakeholder Surveys

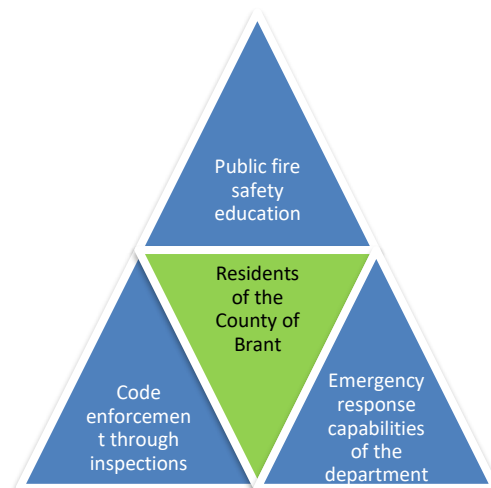
SECTION 2: Planning and Stakeholder Surveys

2.1 Three Lines of Defence

The Office of the Fire Marshal and Emergency Management (OFMEM) have identified “Three Lines of Defence” to be utilized by all fire departments in Ontario when planning to meet the needs of the community.

The identified three lines of defence, as noted by the OFMEM, are:

1. **Education** – Fire safety education is the key to mitigating the fire and life hazards before they start. With the growth of the community, how will the municipality 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 leading to possible charges under the *Act*.
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, staff, and equipment, this report will be able to make recommendations for related efficiencies.



In conjunction with the Three Lines of Defence, a key industry standard that outlines goals and expectations for a fire department is the National Fire Protection Association (NFPA). These standards are not mandated but form the foundation of the fire services recommended best practices. These NFPA standards are also utilized by organizations such as the Fire Underwriters Survey (FUS) group to conduct their assessments of a fire department and the community. The provincial Fire Marshal Offices and provincial fire schools also use them to form the foundation of their evaluation and training programs.

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

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

2.2.1 Strengths

Administration:

- knowledgeable and dedicated staff who are willing to make changes when they benefit the fire service
- experienced leaders that are respected by the firefighters

Training:

- dedicated members with lots of knowledge and experience
- a good library of training aids supports local delivery of NFPA courses
- support for continuing education
- development of future training personnel
- implementation of standardized curriculum

Fire Suppression:

- enthusiastic members
- good equipment
- tanker shuttle training and deployment
- current apparatus
- portable radios for every firefighter

Communications:

- flexibility with service provisions
- continuing improvements for training of staff

Fire Prevention and Public Education:

- experience and knowledge
- well trained and certified
- good public education programs in place
- vulnerable occupancies meet legislative requirements
- good rapport with local media

Mechanical:

- good service through Emergency Vehicle Technician (EVT) Carrier (third party service centre)

Fire Stations:

- moving to standardize designs and capabilities to meet current Health & Safety requirements
- fire station locations are near residential communities where volunteers live or can be recruited from

Equipment/Fleet/Apparatus:

- standardizing capabilities and layouts
- standardized medical and auto extrication equipment
- similar apparatus capabilities at all stations (some enhanced)

2.2.2 Weaknesses**Administration:**

- Reduced to one Administrative Assistant who also assists with technical support for tracking and inventory, incident reporting to OFM and maintenance of various sensors, defibs, gas detection, and equipment.

Training:

- poor radio usage training
 - supplier of new radios was to provide all staff with training but did not fully occur
- lack of live fire training facility
- data and training records limited
- need to provide movable training props for use at all fire stations
- technology missing at several stations due to lack of infrastructure
 - examples of this would include:
 - adequate internet access and computer workstations (other than units in offices for Deputy Chief, Captains)
 - display and interactive capabilities (e.g., large touch screen for example)

- modern computer training and records management program
- Firefighters are limited to 56 hours of training per year which is low compared to other municipalities.
- The lack of a dedicated Training Officer position is creating a challenge to meet the required responsibilities and should be re-evaluated. This is an important position due to training needs and expectations outlined in such documents as the NFPA and the *Occupational Health and Safety Act*.

Fire Suppression:

- increase Incident Command training is required
- adequate firefighter staffing is not available for all incidents, particularly during day shift hours Monday to Friday
- Ensure adequately trained officers

Communications:

- Unknown implications and therefore lack of preparation for Next-generation 9-1-1 telecommunications

Fire Prevention and Public Education:

- limited current deployment of technology
- lack of adequate office space
- decreasing number of inspections and public education events

Mechanical:

- no dedicated or trained in-house mechanic
- department relies on three repair facilities to conduct chassis service, annual inspections, and non-EVT work
- paying shop rates for non-specialized work
- inspections are not being completed within the required time frame

Fire Stations:

- Some older stations will require upgrades to include provisions for separation of bunker gear and necessities for modern technology on apparatus.

- Could have improved use of technology for pre-planning, inspections, and on the apparatus.
- Two stations are approximately 50% through their expected life cycle; some infrastructure needs upgrading (e.g., water heaters, furnaces, air conditioning, requirements for standby power).

Equipment/Fleet/Apparatus:

- requirement for identified replacement schedule for thermal imaging cameras, automatic external defibrillators, self contained breathing apparatus, auto extrication heavy hydraulics, ice/water equipment
- one aerial truck
- use of reserve funding not in place for large value assets (current 20-year cycle)

2.2.3 Opportunities

Administration:

- continuing education
- streamline purchasing
- implement inventory control
- planning processes for future purchases
- communication technology
- improved data analysis will assist in performance evaluation and future planning
- apply for grants, funds, and donations from outside sources
- improve communication to the public and to Council on Departmental achievements
- increase social media presence and keep website updated with current information

Training:

- development of a training facility within the municipality for live fire training
- implementation of train-the-trainer programs
- NFPA 1006 Technical Rescue courses in-house
- support for additional training nights

Fire Suppression:

- look at sharing resources/specialized services with the City of Brantford (ice/water rescue)

- improvement of training
- new tactics and equipment to keep up with technology (fire scene and apparatus)
- improved level of service for technical rescue such as:
 - rope rescue (low slope for majority of stations)
 - confined space – operations vs awareness (e.g., silo)
 - water rescue – basic skills and equipment for stations not designated as water entry
 - high rise fires - depending on future construction
- CBFDF has a region-wide mutual aid agreement and fire service agreements in place in which it can call on neighbouring fire departments for assistance whenever resources are exhausted and/or there is an inability to handle the situation in an efficient and effective manner.

Communications:

- new facilities
- potential partnership with Brantford
- training to *NFPA 1221 Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems* and *NFPA 1225 Standards for Emergency Services Communications*

Fire Prevention and Public Education:

- use of station level personnel at community events
- training of suppression officers who can assist with inspections
- improved presence and media usage

Mechanical:

- engage with County to share with Operations a mechanic to conduct repairs, maintenance on small engines, regular maintenance
- use Emergency Vehicle Technician service to conduct specialized work on pumps, electrical, fire specific

Fire Stations:

- Airport station needs reconstruction or new build (now 56 years old)

Equipment/Fleet/Apparatus:

- development of sustainable replacement schedules for all equipment

2.2.4 Threats/ Challenges**Administration:**

- two chief officers to cover daytime duties plus on-call 24/7/365
- inadequate staffing for all administrative support tasks

Training:

- volunteer firefighter assigned as training officer for the whole department
- loss of knowledge base with retirements
- limited training budget for specialized rescue training and equipment
- Provincial legislation requirements for training certification standards to be met

Note: During the initial update of the FPPA a specific regulation of firefighter certification was presented but has been put into abeyance for review to make this regulation more achievable by both career and volunteer fire departments. It is anticipated that this firefighter certification regulation will be reintroduced sometime in the near future. As such, all fire departments should continue to identify this type of training as part of their present and future training programs.

Fire Suppression:

- increased service, training and time demands on the volunteers
- change in industry and building stock
- retention and recruitment challenge
- Major emergencies stressing the available volunteer suppression staffing and equipment must be considered as the community's population continues to grow and age. This is a challenge that needs to be considered by most communities in the Province.
- The threat of weather patterns is a challenge for communities to deal with the so called "100-year storm". Due to changes in climate, inclement weather incidents such as freezing rain/ice storms, high wind events, and flash floods due to heavy rain are becoming more commonplace and need to be part of the emergency response program for each community. This change in climate conditions, along with the resulting frequency and severity of incidents, has also predicated the need for a larger response component to these emergencies.

- Daytime response by the volunteer firefighters is a challenge due to their other commitments, such as full-time jobs within or outside of the community. This is a challenge for most fire departments that depend on responses from the volunteer firefighters.

Communications:

- Cost effectiveness can become a concern, current cost per capita is \$11.50.
- large value upgrades to meet Next-generation 9-1-1 requirements

Fire Prevention and Public Education:

- requires succession planning and training
- increased demands on inspection and other functions

Mechanical:

- lack of flexibility with third party
- lack of availability during off-work hours for response

Fire Stations:

- failure to maintain or keep current with respect to health and safety and technology
- consider whether the Department is prepared for composite stations and related planning changes
- maintenance of station exterior (snow removal – salting) should be a health and safety priority

Equipment/Fleet/Apparatus:

- funding for updates, replacements, and upgrades may be impacted by financial challenges

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

2.3 National Fire Protection Association Standards (NFPA)

In 2013, the Province of Ontario adopted a move to the NFPA Standards and away from the Ontario Fire Service Standards. To assist with Emergency Management & Training Inc.'s review, reference has been made to a key NFPA standard that identifies the services that should be offered and how they are to be delivered based on the composition of a fire department.

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

Section 4.3.5 notes:

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

To accomplish this, a Fire and Emergency Services Organization (FESO) must ensure open and timely communications with the Chief Administrative Officer and governing body (Council), create a masterplan for the organization, and ensure there are mutual aid and automatic aid programs in place, along with an asset control system and maintenance program.

To provide a fire department clearer focus on what the ultimate goals for emergency response criteria are, the NFPA suggests that response times should be used as a primary performance measure. NFPA 1720 refers to goals and expectations for Volunteer Fire Departments; it has been incorporated into the evaluation of the fire department's response and staffing needs. More discussion in relation to these two standards will be presented in Sections 4 and 5.

2.4 Fire Underwriters Survey (FUS)

The Fire Underwriters Survey (FUS) 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 defenses maintained in built up communities (including incorporated and unincorporated communities of all types) across Canada and the results of these surveys are used to establish a Public Fire Protection Classification (PFPC) for each community. While 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 capacity 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.

The County of Brant has a good FUS rating due to hydrant protection in the area of the fire stations and also due to having the Tanker Shuttle Accreditation.

Retention of such ratings should continue to be a key focus for the Fire Chief and the County as this is utilized for setting insurance rates. This insurance rating not only has an effect on the residents in relation to savings on their home and business insurance rates but can also affect the County in relation to properties that they own and insure.

The current FUS – Superior Tanker Shuttle Service - accreditation period is for 5 years and will expire on September 20th, 2024. The Fire Chief should plan to update this accreditation prior to the expiry date in 2024. The County should also maintain and expand the water source infrastructure that may be needed to improve the access to water supplies such as dry hydrants and cisterns.

See Appendix D – FUS – Superior Tanker Shuttle Service – Accredited.

2.5 Establishing & Regulating By-Law

The current Establishing & Regulating (E&R) By-Law was last updated in 2006, making this a 14-year-old document. While many parts of the E&R document may still line up with the expectation of the *Fire Protection and Prevention Act*, based on its age, a full review of the goals and expectations of the Fire Department needs to be conducted.

Having noted this, the Fire Chief did supply EMT with a draft version of the recommended updates to be implemented into the 2006 By-law. After a review of the draft update version, the following points were noted:

- The updated wording does reflect inclusion of more recently enacted Provincial legislation.
- The updating of the Core Services by CBFD is reflective of what the Department can accomplish, along with identifying what needs to be sourced externally. By outsourcing such things as operation and technician level hazardous materials response, the Fire Chief is demonstrating fiscal responsibility; expenses for such training and equipment needs can run into the tens of thousands of dollars.
- It was also noted in the Core Services Appendix that Administration, Training, Communications, Fire Prevention, and Support Services are also included in the service expectations.

To assist the Fire Chief in meeting the needs and expectations of Council, the E&R By-law notes that the Fire Department shall respond to a variety of incidents designed to protect the lives and property of the inhabitants of County of Brant.

Through meetings with CBFD staff and a review of documentation supplied, it was evident that CBFD is doing an admirable job in meeting the expectations of the present 2006 E&R By-law. Although no actual response time expectations are noted in the Department's E&R By-law, a review of the past three to five years by the Fire Chief can offer a solid understanding of

response capabilities along with creating a baseline for how the Department has been performing and identifying areas for improvement.

This evaluation will be invaluable to measure population growth versus call volumes and response times, along with any challenges that the Department might be encountering regarding such things as increasing response times and/or number of volunteer firefighters responding to the calls.

Once updated, the document is to be presented to Council for approval. It is recommended that this document also includes a table to identify the dates for review, along with noting whether any updates were made to document.

2.6 Stakeholder Surveys

To get a clear understanding of how well CBFD is meeting the needs of its staff and the community, surveys were conducted with both the internal staff of the CBFD and external stakeholders of the County.

To assist with the completion of the staff surveys, information meetings were held at several fire stations to provide an overview of the project and allow time for questions. The community survey was advertised through local media and was set up on the Department's website (in the form of an electronic survey).

Meetings were also held with members of Council and with the County's CAO.

2.6.1 Internal Surveys

During the FMP process, feedback was gathered from internal staff, which included firefighters, Administration, Training, and Fire Prevention. There were 65 internal surveys completed and the following is a brief synopsis of the respondents' comments, supplied for review and consideration by the Fire Chief and senior staff.

Response Times and Staffing:

- Daytime firefighter availability, response times, and inadequate numbers responding is a concern.
- Several respondents remarked that there are some on the CBFD roster that do not attend training or respond to calls and this should be addressed.

- Station response boundaries should be seamless with closest station responding, no longer divide station boundaries down the middle of the road.
- Firefighter retention and loss of experience/training is a concern.
- Some believe morale is low. Comradery between stations could be improved.
- Six Nations calling upon CBFD to cover their area taking CBFD resources out of the County station areas for long durations of time needs to be addressed.
- Ensuring all firefighters meet standard competencies.
- Need to develop pre-incident plan.

Occupational Health and Safety:

- CBFD move forward with onsite decontamination program.
- The turnaround time for bunker gear to be cleaned and returned to service is a concern. Purchase additional sets of bunker gear so each member has two sets.
- Some stations are less focused on fire ground Health & Safety procedures and a lack of accountability on those that do not follow procedures.

Communications:

- Radio communications coverage throughout the County seems to be inconsistent. Respondents noted that they often cannot contact the Communications Centre due to poor reception.
- Some firefighters do not feel notification of fire calls via text message meets the needs of the firefighters and would like to see the return of pagers.
- Staff have concerns about what Next-generation 9-1-1 holds in store for them.

Internal Communications:

- When meetings that involve the operations of the Fire Department are held, the minutes should be made available to all members in a timely fashion. This will reduce the rumour mill and ensure accurate information is being presented to the personnel.
- Firefighters would like to see an improvement in the lines of communication between Administration and staff.

Tiered Medical Response:

- Members have become increasingly frustrated for being dispatched to medical calls and not being required upon arrival as the paramedics are already on scene.
- Staff are concerned by the number of medical calls; presently 35 to 40% of the calls are medical related.

- Firefighters are concerned by a perception of a delay in being dispatched on EMS calls.
 - Some fire services in Ontario are part of the simultaneous notification program of which has seen great successes. This program sees that both EMS and fire receive the call simultaneously.

Training:

There are several points that were consistently brought forth and are evidently important to the stakeholders, including:

- There is a need for a full-time Training Officer.
- There is a lack of a consistent level, quality, and content of training across the County, which would be addressed by a dedicated Training Officer.
- There is a lack of live fire training.
- Twenty-six (26) training sessions a year is inadequate to cover all the material expected
- Weekend training sessions presents hardships on those members with young families.
- Some training sessions become apparatus and station cleaning opportunities and lack quality training.
- Require a fire training facility or mobile training unit.
- Wish to be paid for all training sessions.
- Wish to be able to attend outside courses such as those offered at the Ontario Fire College.
- Some remarked it was becoming difficult to maintain their skill sets when only trained on some topics every few years.
- Need to develop a list of core topics to be taught each year, based on seasonal requirements.

Apparatus and Ancillary Equipment:

- The firefighters are satisfied with the equipment and apparatus available but would like to see the standardization of apparatus and the equipment. There are too many different chassis, pumps, body configurations, and manufacturers of various tools. Staff wish to see stations have the same make and models.
- Apparatus placement should be reviewed (i.e., some stations that have/had two tankers, are now losing one of them, and not all stations have a rescue).
- Apparatus not being serviced in a timely manner when required repairs have been noted and submitted.

Rank Structure:

- Staff wish to see it reviewed, organized, and consistently identified for those who hold identifiable rank within the organization.
- Acting Captains need more opportunity to be in a command role to be prepared for Captain selections. More consideration relating to timeline and/or level of experience needs to be considered. Should have a competition for permanent positions.

Fire Prevention & Public Education:

- The firefighters are willing to assist in fire prevention and public education initiatives as they see the Fire Prevention Branch is becoming taxed. Smoke and CO alarm and home inspections were raised as topics to be reviewed for future opportunities to meet the residents.

Technical Rescues:

- Presently the Establishing and regulating bylaw allows for the CBFD to function at the awareness level for many technical rescue and hazardous materials incidents. Some believe that the Department should become more involved with other aspects of rope rescue, confined space, hazmat, and trench rescues.

Facilities:

- It is believed that some stations either need to be replaced at their existing location or relocated. The need for an additional station was identified by many as being required at the north end of Paris.
- Appears to be delays getting station repair requisitions processed and subsequent requests may be required before repairs are completed.

Promotions:

- Many believe the promotional process should be reviewed and changed. Too often promotions appear to be based on who you know and not merit based. Promotions should be conducted by the Fire Chief and Deputy Chief only.

Chain of Command:

- Members would like to see this followed from the bottom up and the top down. Too often a member will circumvent the Fire Chief and Deputy Chief and go directly to the CAO, a Council member, or the mayor.

- Some officers operate their stations the way they believe they should be operated, not necessarily by what Administration directs.

Salary Compensation:

- The respondents want to see an increase in their remuneration for all time spent with fire department activities. They also believe they are underpaid compared to other fire services.

What Does the Future Hold?

- A station with full-time firefighters, at least during the day, Monday to Friday.
- A second aerial device in the southern portion of the County.
- Increased call volume as the population grows in the coming years.
- More hours required of firefighter training to meet the growing demands.
- Increase in the required amount and topics of training.
- Increase in the number of part-time (volunteer) firefighters.
- Increase demands for fire inspections and public education.
- CBFD's own training facility.
- CBFD needs to become one fire department; at present, some stations operate as if they are independent.
- Develop a recruitment and retention plan that is sustainable.
- Increase in the number of fire stations.
- Weekly training sessions.

2.6.2 External Surveys and Stakeholder Meeting Results

Input from the community is vital, giving the Fire Department an accurate indication of how the public perceives the Department and suggesting areas for improvement from those with first-hand interaction with the Department.

The following input was received:

- Most respondents see the CBFD as a dedicated and professional service.
- The top three priorities 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

- People are unsure of the cost of the fire service or value for their tax dollars.
- The top three services noted by external respondents are:
 - Firefighting, emergency preparedness
 - Rescue (i.e., motor vehicle accidents)
 - Medical assist and response
- In relation to what is needed over the next 10 years, the top responses were:
 - More staff to meet the growing demands of the community
 - Would like to see more public safety education programs and attendance at community events.
 - Well-equipped and trained firefighters to meet the demands of a growing community.

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

Recommendation(s)

Rec #	Recommendation	Estimated Costs	Suggested Timeline
1	The E&R By-law document should include a table to identify the dates for review, along with noting whether updates were made. It is also recommended that the Fire Chief either have a response expectation included in the updated By-law, or that at the very least the Fire Chief report to Council on the annual CBFD response comparisons to demonstrate that the Department is either improving or may require additional resources to meet response expectations.	Staff time	Immediate (0-1 year) and ongoing
2	It is recommended that the Fire Chief and senior staff continue an annual internal survey similar to the HRIR Satellite survey in February 2020 to obtain feedback from firefighters and staff. This information can be useful in identifying and addressing the staff concerns.	Staff time	Annually
3	The Fire Chief should plan to update the FUS – Tanker Shuttle Accreditation prior to the expiry date in 2024. The County should also maintain and expand the water source infrastructure that may be needed to improve the access to water supplies such as dry hydrants and cisterns.	\$10,000 plus staff time. Water source improvement costs to be determined.	Every 5 years

SECTION 3 – Risk Assessment

- 3.1 Community Risk Assessment Profile
- 3.2 Integrated Risk Management Approach
- 3.3 Home Fire Sprinklers

SECTION 3: Risk Assessment

The first and most effective way to reduce injuries, death, and property damage due to fire is through public education, inspections, and enforcement. The Fire Prevention Program addresses these key components of fire safety starting with conducting a community risk assessment (CRA).

3.1 Community Risk Assessment Profile

Risk assessment is the process utilized to identify the level of fire protection required within the boundary of the County of Brant. It is a means of measuring the probability and consequence of an adverse effect to health, property, organization, environment, or community as a result of an event, activity, or operation.

Council has the authority to establish the level of fire protection within their municipality. The Fire Chief is responsible for informing Council of all risks existing within the County of Brant. It is based on this information that Council will be able to make an informed decision on the level of service to be achieved.

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 of the methods of providing services.

2. (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 County of Brant 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 therefore must be

provided is further outlined in Section 2.1(b) of the *Act*. The needs analysis, once conducted, will assist in determining the level of service to be established for the municipality.

The Province of Ontario Regulation 378/18 Community Risk Assessment (CRA) states, “a community risk assessment is a process of identifying, analyzing, evaluating and prioritizing risk to public safety to inform decisions about the provision of fire protection.” The regulation states that every municipality shall complete a CRA by 2024 with renewal to occur every 5 years, thereafter. The municipality is required to review the document annually.

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

The accumulation and analyzation of these factors that will assist in applying this information to identify potential risk scenarios that may be encountered. It is during the assessment of the information gathered, which includes the likelihood of these scenarios occurring and subsequent consequences, that will assist in answering the following questions:

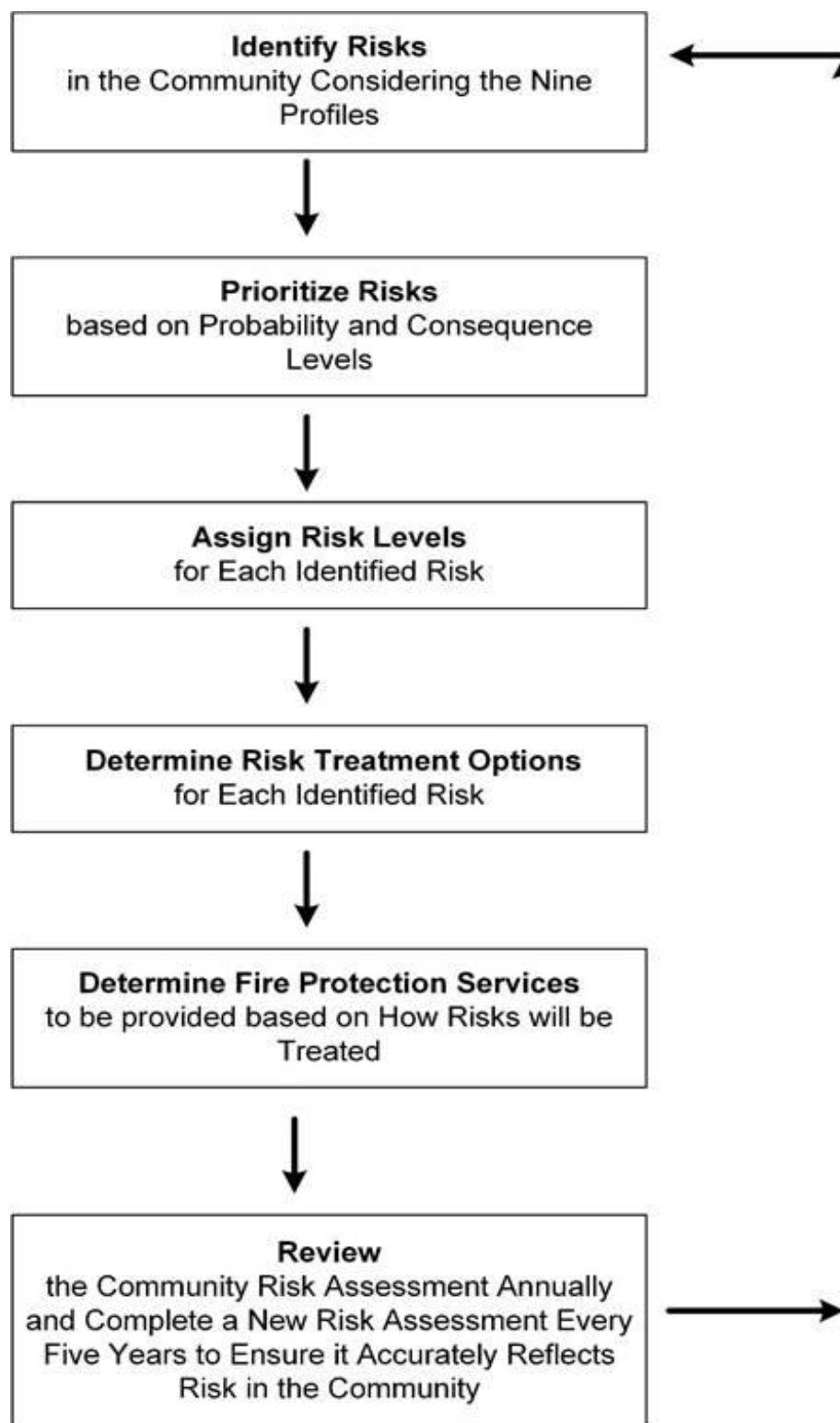
- What could happen?
- When could it happen?
- Where could it happen?
- Who could it happen to?
- Why could it happen?
- How likely could it happen?
- How bad would it be if it happened?
- What can be done to mitigate or prevent any or all the above?

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

Once gathered, this information will assist in the completion of the CRA, which may identify gaps and areas where actual conditions vary from the desired outcomes. Data to be reviewed for each mandatory profile include:

- Demographics Profile – age, gender, educational attainment, socioeconomic makeup, vulnerable individuals or occupancies, transient population, ethnic and cultural considerations.
- Critical Infrastructure Profile – the facilities and services that contribute to the interconnected networks, services and systems that meet vital human needs, sustain the economy, and protect public safety and security.
- Geographic Profile – waterways, highways, canyons and other landforms, railroads, wildland-urban interface, bridges, and other specific features of the community.
- Building Stock Profile – potential high-risk occupancies, whether residential, commercial, or industrial, building density, building code classifications, age of the structure(s), occupancies that could be a high life safety risk, historic buildings.
- Public Safety Response Profile – how resources are distributed within the community, their deployment and usage, types of incidents responded to and the frequency of such incidents including the seasonal variations and time of day.
- Community Service Profile – existing planning and zoning committees, schools, seniors' organizations, ratepayers' associations, mental-health organizations, faith-based groups, cultural/ethnic groups.
- Hazard Profile – hazards may be human, technological, or natural in nature.
- Economic Profile – infrastructure, local employers and industries, institutions, community's tax base, local attractions.
- Past Loss/Event Profile – consideration to the impact and frequency of an event; identify large acute events which have a low frequency but a high impact, or small chronic events which have a high frequency with a low impact.

In the interpretation phase of the data collected for the nine profiles, only matters that are relevant to fire protection services are considered. The following flow chart, as outlined in OFMEM Regulation 378/18, outlines the process whereby risks are to be identified from past events while also reviewing future growth trends within the municipality relating to demographics and building stock.

FIGURE #4: Community Risk Assessment Flow Chart

The probability or likelihood of a fire occurring within a community is estimated based on previous occurrences and the frequency of such events. It is this review of previous events, including the fire loss data, learning from what may have occurred in other jurisdictions, and discussions with those who may have been in attendance of the event, that will assist in laying a baseline for evaluation. The judgement of professionals with such experiences must not be missed during this process and may paint a more in-depth picture of what may have occurred.

These evaluations are based on five levels of probability as outlined in the Ontario Fire Marshals Comprehensive Fire Safety Effective Model:

Rare – Level 1

- May occur in exceptional circumstances
- No incidents in the past 15 years

Unlikely – Level 2

- Could occur at some time, especially if circumstances change
- 5 to 15 years since last incident

Possible – Level 3

- Might occur under current circumstances
- 1 incident in the past 5 years

Likely – Level 4

- Will probably occur at some time under current circumstances
- Multiple or recurring incidents in the past 5 years

Almost Certain – Level 5

- Expected to occur in most circumstances unless circumstances change
- Multiple or recurring incidents in the past year

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

1. Life Safety – any injuries or loss of life to anyone involved, public and firefighters (includes actual or potential situations).
2. Property Loss – the dollar loss relating to public and private buildings, contents, irreplaceable assets, significant/symbolic landmarks, and critical infrastructure.

3. Economic Impact – monetary losses associated with income, business closures, downturn in tourism, tax assessment value, loss of employment.
4. Environmental Impact – harm to humans, vegetation, and animals; the decline in quality of life due to air/water/soil contamination as a result of either the fire or fire suppression operations.

The consequences are categorized according to five severity levels:

- Level 1 – Insignificant – no or insignificant consequences to life safety, value of property loss, impact on the local economy, or the general living conditions.
- Level 2 – Minor – potential life safety risk to occupants is low, minor property loss or disruption to business or general living conditions.
- Level 3 – Moderate – a threat to life safety of occupants, a moderate loss of property, the threat to loss of business, or could pose a threat to the environment.
- Level 4 – Major – large dollar loss with significant property loss, large threat to local commerce and tourism, impacts the environment that would result in short-term evacuations.
- Level 5 – Catastrophic – significant loss of life, multiple properties with significant damage, long-term disruption of business, employment, and tourism along with environmental damage resulting in long-term evacuations of residents and businesses.

The different levels of treatment risks are:

- **Avoid the Risk** – *implementation of programs to prevent fires or emergencies from occurring.*
- **Mitigate the Risk** - *programs and initiatives implemented to reduce the probability and/or consequences of a fire or emergency.*
- **Accept the Risk** – *after identifying and prioritizing a risk, it is determined that there are no specific programs or initiatives to be implemented to address this risk.*
- **Transfer the Risk** – *the fire department has chosen to transfer the impact and/or management of the risk to another organization or body or outside the agency*

Table #4 is a summation of the CRA findings and suggested means of handling certain types of incidents. This table does not illustrate all the risks identified but those of life safety and high property loss. The CRA, in its entirety, has been completed as a separate document and should be referred to for more detailed information.

TABLE #4: CRA Findings Summation

Top Risk or Issues/Concerns	Preferred Treatment Option(s)
Community Services	• Currently the CBFD is partnered with a couple of service clubs or community groups to assist with promoting Fire Prevention and Public Education initiatives. • The CBFD should investigate opportunities with other service groups to promote fire safety. • This may be done by financial support, provision of a facility for the delivery of a program or assist by service in kind. • This should go further to include their participation in assisting those affected by a fire and not able to live in their residence. This may be in the provision of food, clothing, or temporary housing.
Flooding <i>This is an ongoing concern each spring due to the river overflowing its banks.</i> <i>Displaces citizens from residences, places of employment, and creates interruptions in daily living including commerce within the community.</i>	• The County does not have its own Flood Response Plan and one should be included in the Emergency Response Plan. • After a flood has subsided the County should review their response to the situation and make changes accordingly for future responses. • Arrange for joint training on flood response protocols with the Grand River Conservation Authority. • The CBFD does have water vessels to aid during water rescues or evacuations during flooding.
Emergency Response Plan	• This shall be reviewed and updated yearly • Training and exercises are being scheduled in accordance with the Provincial Act. • Require the completion of a community Hazard Identification & Risk Assessment (HIRA) to be included in the ERP.
County of Brant Fire Department	• Continue to monitor the causes for fires • Arson is one of the causes and CBFD should work with the OPP and OFMEM on fire cause determination.

Top Risk or Issues/Concerns	Preferred Treatment Option(s)
	• Most common cause over the past 3 years was the misuse of ignition sources/materials first ignited. A common cause is candles left unattended, smokers articles placed in flowerpots with peat moss in them or chimney fires. • Within the residence both kitchen and electrical fires are common. • Majority of the fires occurred in assembly and residential occupancies. • Fire Prevention should focus on the causes and occupancy types and make those a priority in teaching fire safety to those citizens living in those occupancies. • Fire department should promote the advantages to the installation of residential sprinkler systems by partnering with developers that are building new subdivisions.
County of Brant Fire Department – Communications Branch	• Investigate the financial impact on the County with the implementation of the Next Generation 9-1-1. • Early estimates indicate a \$250,000 to \$500,000 financial exposure. • Other estimates are \$80K/seat (+/- 25%) • Annual operating costs of 25% of the capital expenses • Some costs will be part of current or shared services operations

The legislated requirements to complete a CRA every five years and review it annually will require a significant amount of staff time and should be planned for.

3.2 Integrated Risk Management Approach

The Ontario Fire Marshal's Communiqué 2014-12 introduced the Integrated Risk Management (IRM) 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 Chiefs (O AFC) 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 a 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

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 issues to be addressed, ability to effectively and efficiently respond to emergencies, and how well equipped and trained the firefighters are to deal with emergencies within the community.

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

- **High-Risk Occupancy** – An occupancy that has a history of high frequency of fires, or high potential for loss of life or economic loss. Alternatively, an occupancy that has a low or moderate history of fire or loss of life, but the occupants have an increased dependency in the built-in fire protection features or staff to assist in evacuation during a fire or other emergency (e.g., apartment buildings, hotels, dormitories, lodging and rooming, assembly, childcare, detention, educational, and health care).

- **Moderate-Risk Occupancy** – An occupancy that has a history of moderate frequency of fires or a moderate potential for loss of life or economic loss (e.g., 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 (e.g., storage, mercantile, and business).

Conducting a review of every building within the County of Brant 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 and the CAO should determine, with input from the Fire Chief, an acceptable level of risk to manage within the community based on its needs and balanced with the circumstances to deliver the services.

In both NFPA Standards, Public Education is a key component of having a successful Community Risk Reduction Plan. The Fire Prevention Officers have attended all the schools within the County, instructing many students. Topics discussed include Stop, Drop & Roll, Learn Not to Burn, What's Cooking for Teens, smoke alarms and carbon monoxide awareness, and fire escape planning.

Seniors are another demographic that have been identified as being vulnerable during fires due to their age, cognitive impairment, and mobility issues. Presentations should be made to seniors' groups discussing topics such as smoke/CO alarms, home escape planning, in-home assessments for fire safety, safe cooking practises, and the use of fire extinguishers. Events such as fall fairs and street festivals have been a great opportunity for the CBFd to interact with the citizens of the County to promote fire safety and for the citizens to have the opportunity to meet their firefighters.

To its credit, CBFd is committed to the safety of its residents to the point whereby spare smoke and carbon monoxide detectors are kept on front line apparatus in the event they attend a residence where they are missing or inoperable; members of the Department ensure working alarms are in place prior to departing the scene. This is a very active fire safety initiative and should continue.

As with most volunteer rural fire services, it takes time upon receipt of a call to amass the firefighters and travel to the scene. If the incident is in the furthest reaches of the County, time is not in favour of the fire service. It is not uncommon for crews to travel 20 minutes or greater to arrive at the scene. It is inherent upon the fire service to thereby educate those in the outer rural area on how to prevent fires, the legislated requirements for working smoke and carbon

monoxide alarms, a home escape plan, and how to use a fire extinguisher if they are able to do so.

The best methods of reaching such individuals are either at public events or home safety visits upon request. As such, an effective means of public education is for the CBFDD to distribute a package of informative fire safety literature for homeowners to review, to assist in protecting themselves from a fire if one were to occur.

3.3 Home Fire Sprinklers

The NFPA, along with the Canadian Automatic Sprinkler Association and the Ontario Association of Fire Chiefs, are strong supporters of residential sprinkler systems to reduce the risk to life and property from fire.

Due to the rapid reaction of fire sprinklers, they can dramatically reduce the heat, flames, and smoke produced in a fire. Properly installed and maintained fire sprinklers help save lives, reduce damage, and make it safer for firefighters.

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

Facts about home fire sprinklers

Unfortunately, due to the lack of Canadian statistics, we must rely on American statistics; however, since there are so many similarities in building construction, the statistics are an accurate reflection of the Canadian experience.

Automatic sprinklers are highly effective and reliable elements of total system designs for fire protection in buildings. According to an American Housing Survey, 8% of occupied homes (including multi-unit) had sprinklers in 2010-2014, up from 4.6% in 2009.³

- 85% of all U.S. fire deaths occur in the home.
- The death rate per 1,000 reported fires was 87% lower in properties with sprinklers.
- The civilian injury rate per 1,000 reported fires was 27% lower in properties with sprinklers.

³ <https://www.nfpa.org/News-and-Research/Data-research-and-tools/Suppression/US-Experience-with-Sprinklers>

- The fire fighter fire ground injury rate per 1,000 reported fires was 67% lower when sprinklers were present.
- 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 Home Fire Sprinkler Coalition Canada (HFSCC)⁴ is a leading resource for accurate, non-commercial information and materials about home fire sprinklers for consumers, the fire service, builders, and other professionals.

Their information highlights that:

- Home fire sprinklers can contain and may even extinguish a fire in less time than it would take the fire department to arrive on the scene.
- Nationwide, more than 300 people die in fires each year.
- Fire sprinklers save lives, reduce property loss, and can even help cut homeowners insurance premiums.
- Installing both smoke alarms and fire sprinkler systems reduces the risk of death in a home by 82%.
- Only the sprinkler closest to the fire will activate, spraying water directly on the fire. Ninety percent of fires are contained by the operation of just one sprinkler.
- Nationally, on average, residential fire sprinkler systems add 1% to 1.5% of the total building cost in new construction. That equates to \$10,000 to \$20,000 on a new home costing \$1 million or more.

⁴ <https://homefiresprinklercanada.ca/>

- The cost of installing home fire sprinklers averages \$1.35 per sprinklered square foot.

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

The second line of defence is Fire Safety Standards and Enforcement. The Department should be more proactive in training the suppression officers on how to conduct fire safety inspections. By accomplishing this endeavour, the Department will become more efficient and effective in the utilization of its personnel – its greatest resource. This training will also provide a more enhanced knowledge base for the officers regarding the identification of possible hazards and rectifying them before they become a serious concern.

Due to the increase in population that is forecasted for the County, it is recommended that the County of Brant employ a Public Fire Life Safety Educator who will be primarily responsible for the delivery of public education initiatives, while at the same time working with the fire suppression for related public education initiatives.

Recommendation(s)

Rec #	Recommendations	Estimated Costs	Suggested Timeline
4	The CBFD should actively promote/support the installation of residential sprinkler systems.	Staff time	Short-term (1-3 years)
5	It is recommended that CBFD give consideration to training the suppression officers on how to conduct fire safety inspections as an alternative means of achieving the FUS recommended frequency of inspections.	Staff time	Short-term (1-3 years)
6	It is recommended that the Fire Chief review CBFD's inspection program to identify levels of desired frequency relative to the inspections noted in the FUS Inspection Chart.	Staff time	Short-term (1-3 years)
7	The CBFD develop a sustainable pre-incident development and review program.	Staff time	Short-term (1-3 years)

SECTION 4 – Department Staffing and Programs

- 4.1 Organizational Overview
- 4.2 Recommendations for Future Staffing and Station Locations
- 4.3 Administration Division
- 4.4 Fire Prevention and Public Education
- 4.5 Training & Education Division
- 4.6 Recruitment and Retention of Volunteer Firefighters

SECTION 4: Department Staffing and Programs

Within the scope of work noted in the original Request for Proposal document, staffing needs was identified as a priority in which EMT was 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 CBFD, 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 Composite fire service, no longer dependent on response support from solely volunteer firefighters?*

This section will discuss the following divisions:

- Administration
- Fire Prevention and Education
- Training
- Fire Suppression

4.1 Organizational Overview

As previously noted, the Fire Chief of the CBFD reports to the General Manager of Community and Protective Services who 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:

- A Deputy Chief
- An Administrative Assistant
- Fire Prevention Division consisting of three Fire Prevention/Public Educators

The CBFD has a present strength of 182 volunteer firefighters, three administrative staff including the Fire Chief, Deputy Fire Chief, Administrative Assistant, and three Fire Prevention Officers.

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

- Does the Cbfd have an approved response criterion as a baseline?
 - Has Council given direction to the Fire Chief (based on 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 or 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? This is a key question for a number of stations, specific to the time frames of 9:00am to 7:00pm (Monday-Friday).
 - The Cbfd can send multiple station responses, in most cases, but are the response times adequate by those volunteers into other communities during those times?
- 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 the CFAI “industry best practices”.
- What growth or decline in population and industry is occurring that may precipitate more or less fire stations and staffing?

For fire departments in Ontario, there are three main standards and industry best practices that are considered. First, there is the Public Safety Guidelines that are created and distributed by the Office of the Fire Marshal and Emergency Management (OFMEM). These Guidelines advise fire services in all aspects of delivering Fire Prevention, Fire Suppression, and fire station location programs.

Second, there are industry best practices in the form of the NFPA’s 1201, 1710, 1720, and 1730 standards, which offer guidance regarding:

- 1201 – Standard for Providing Fire and Emergency Services to the Public
- 1710 – Standard for Career Fire Departments
- 1720 – Standard for Volunteer Fire Departments
- 1730 – Standard on Fire Prevention, Code Enforcement and Public Education

Third, there is the Fire Underwriters Survey. This FMP project enlisted the services of the FUS group to conduct a review and make recommendations based on their own proprietary formulas and expected industry criteria for community fire protection.

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

Based on this standard, 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

4.1.2 NFPA 1720 – Volunteer Fire Departments

When a fire department has a level of volunteer emergency personnel comprising 85% or greater, it is considered a Volunteer Fire Department. Presently, the ratio of volunteer to full-time staffing of CBFD is just above the 96% mark. As such, based on the NFPA standard, CBFD is a Volunteer Fire Department. However, when looking at how the OFMEM identifies volunteer vs. composite, if a fire department has at least one full-time staff, it is a composite fire department.

Either way, because CBFD has a fully volunteer suppression division, it should be evaluating its response services based on the 1720 standard (volunteer firefighter component). The key consideration here is the initial response component and how that initial response team is meeting the goals and expectations of the Fire Department.

NFPA 1720 for volunteer fire departments, chapter 4, notes the following for the deployment of volunteer firefighters:

- *“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 1,000 per square mile), there should be a minimum response of **15 staff within 9 minutes**, 90 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 2,000-ft² 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). Most homes in the County of Brant, however, 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, the Cbfd is diligently working towards meeting the related NFPA standards regarding population verses staff/response times. Based on a response data review and discussions with the Fire Chief, the Cbfd is witnessing a varying level of success in meeting the response criteria.

A matter often posed in relation to volunteer fire departments is when the department should consider moving to a composite model. 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 service level expectations. There are many factors including the number of volunteers arriving when paged out, how quickly they respond to the page, minimum staffing for apparatus turnout, the time of the day, and day of the week (e.g., volunteer availability during 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 volunteer fire departments must determine where to focus additional firefighters by identifying call volume, growth of the community, and, more specifically, the times of the day that are most challenging for volunteer firefighter responses. As with most volunteer fire departments, the daytime hours from Monday to Friday are the greatest challenge. Many departments start off by incorporating a full-time component that works Monday to Friday, 9:00 am to 7:00 pm, 50 hours per week. Alternatively, work hours are identified by the Fire Chief to offer the greatest amount of efficiency and response coverage, based on low turnout by the firefighters.

If reliability of quick and effective response by the volunteer fire stations is in question during these daytime hours, then the Fire Chief, CAO, and Council will need to consider moving to a composite, Monday to Friday (7:00 am-5:00 pm) component. This must be part of an ongoing review conducted by the Fire Chief to ensure that all expectations of Council and the community are being met.

Another indicator for making this decision is tracking the number of firefighters that arrive at the fire station to respond. If, for example, the standard set for the Department is that three or more volunteer firefighters must arrive at the station before the fire truck can respond (or in the case of Cbfd, that a volunteer officer must also be part of that response), then this should be monitored along with how many times a station is unable to muster up the needed personnel to effectively respond.

Currently, there is no data being tracked to identify when an adequate number of firefighters are on scene, based on the type of call. As such, it is recommended that the data analytics be recorded and evaluated by the Fire Chief to help with assessing where any service gaps or challenges may exist.

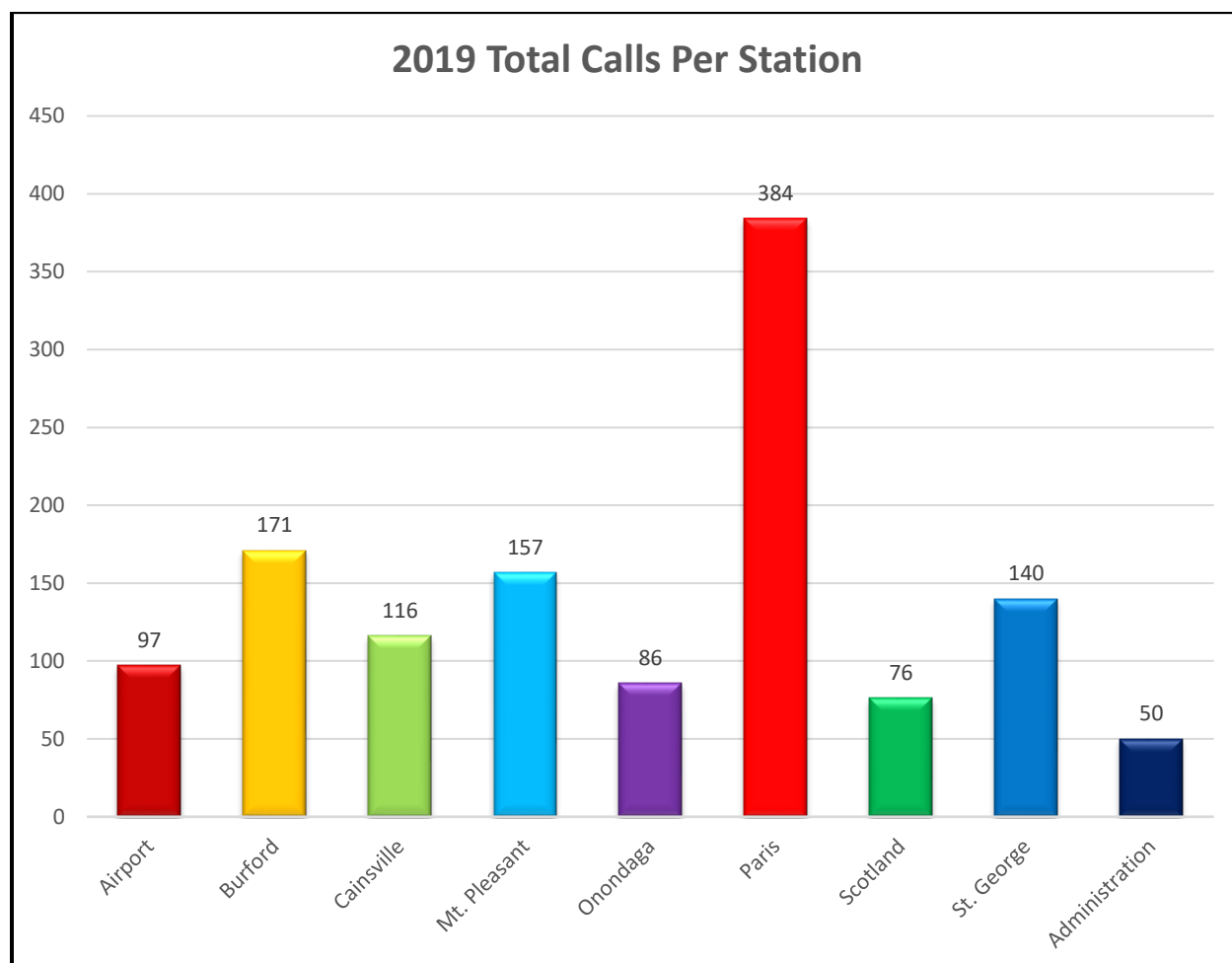
There is no doubt that transitioning to a composite fire service is a large cost to the community and therefore many communities have accomplished this in stages to meet the present and future needs of the community. The County of Brant model of a volunteer fire department is a very cost-effective form of fire protection for a community of its size. It must be emphasized, however, that the anticipated growth of the community will create pressures that force it to move towards having a full-time, daytime response. This evolving response must be strategically located based on call data from the past three years. This model will be partnered with volunteer firefighters as a support component.

Fire Departments, such as Clarington (near Oshawa) have started to evaluate hiring daytime career firefighters when the call volume of a station exceeds one or more calls per day (on average) as this puts a strain on the volunteers to leave work, home, or school on a daily basis. As such, some Fire Departments use a call volume of around 350 to 500 calls per a station to go to Council to approve a full-time component. Presently, the Paris Station is averaging near this number and further increases should be expected in the future as the population grows with the expected development plans.

Other departments such as the Whitchurch-Stouffville Fire Department accomplished this move by first identifying call volume, growth of the community, and more specifically, what times of the day were the most challenging for responses.

As can be seen in Figure #5, the Paris Station already exceeds 380 calls per year.

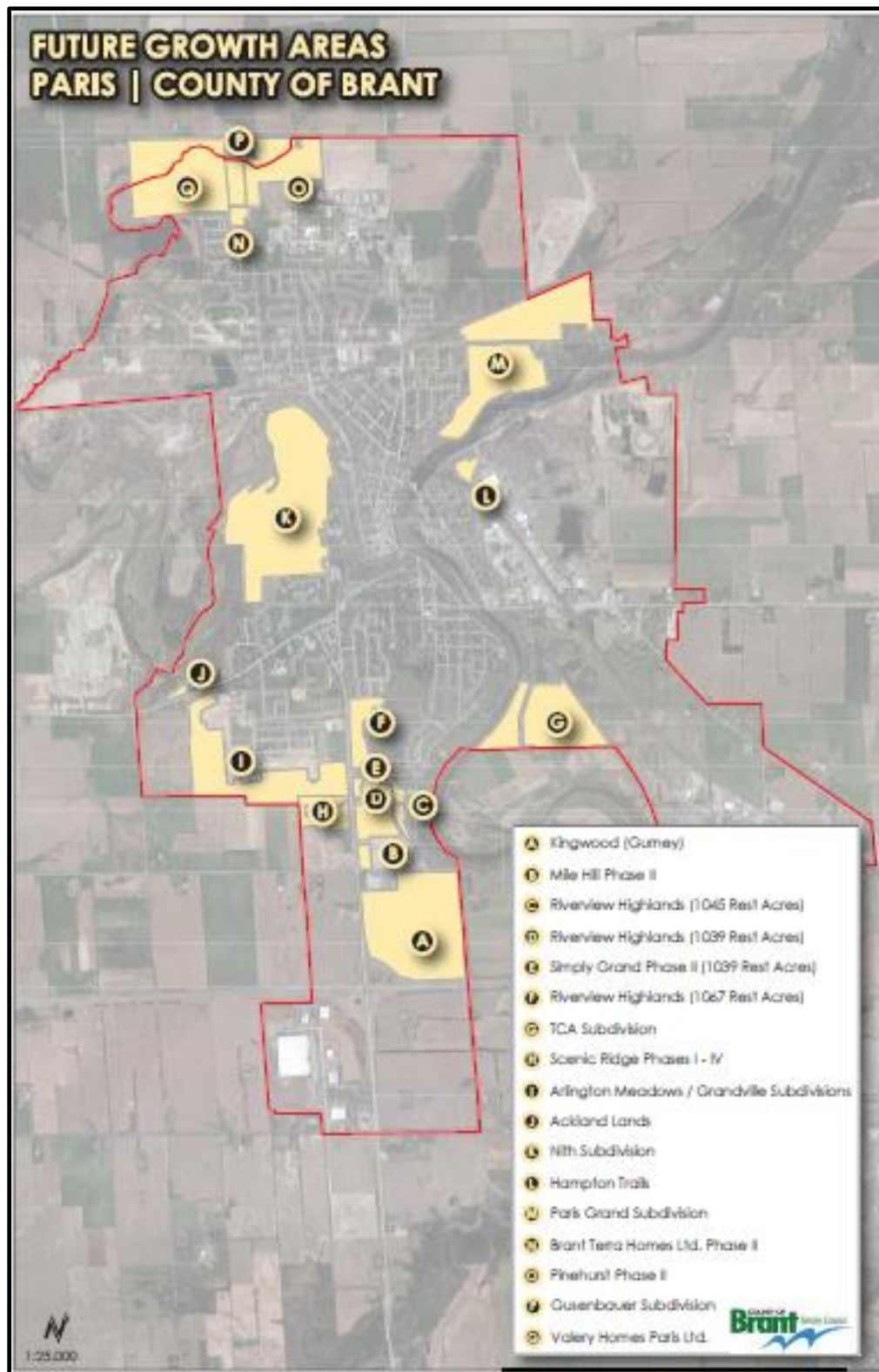
Using Kawartha Lakes Fire Rescue Service as an example, the career firefighters in Lindsay respond to all calls within a 14-minute response time of the Lindsay Station, covering many calls in neighbouring station areas.

FIGURE #5: 2019 Total Calls Per Station

4.2 Recommendations for Future Staffing

The County has identified two significant areas of growth within the County of Brant that requires attention to ensure that the Department can continue to meet the response needs of fire and emergency service delivery to the community. The high growth areas are in the northern portion of Paris and south of Paris in the Highway 403 corridor, primarily around Rest Acres Road. This development will continue to increase pressure on the volunteers, primarily at Paris - Station 1. These developments are illustrated in Figure #6.

FIGURE #6: Future Growth Areas



It is in the northern and southern development areas that composite staffing would assist in reducing pressure during the day shift hours, Monday to Friday. Some communities start with a minimum staffing of two career firefighters on a truck to handle EMS and other calls where only limited personnel are required. This would require a staff of three career firefighters (two firefighters plus a captain) to cover Monday to Friday for 10-hour days. Some communities utilize volunteers to fill in vacancies (e.g., vacation, sick time) that would reduce the staffing below the minimum of two. The estimated cost to hire three full-time firefighters would be \$300,000 to \$330,000 per annum.

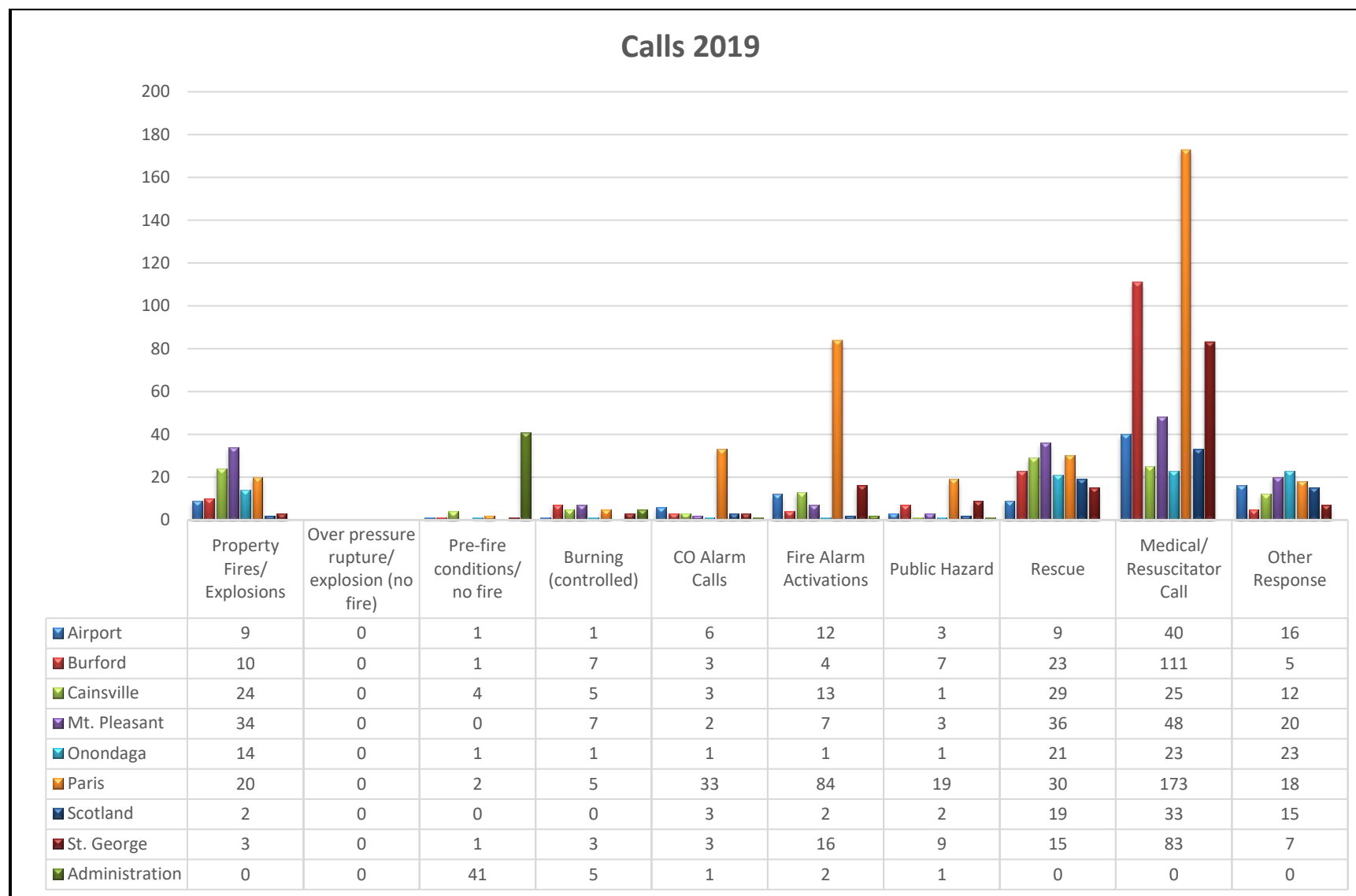
The bulk of the daytime EMS emergencies in Paris and area (Stations 2 and 3) could be handled by this staffing, backed up by volunteers, on an as needed basis. While the full-time staffing has a significant cost attached to it, there will be some offsetting of costs by reducing the number of EMS responses by volunteers. Based on the 2019 daytime (9:00 am-7:00 pm) call data of Station 1 (Paris), Station 2 (Airport), and Station 3 (Burford), there was a total of 324 EMS responses that this new staffing would handle. This equates to an estimated \$103,000 in operational savings if the average alarm cost averages \$317.53. In addition, the Fire Chief should consider other emergent (i.e., CO calls without symptoms) and non-emergent types of alarms (i.e., burn complaints) that should be added to the overall response capability providing additional offset savings.

The full-time firefighters could further assist with the training division and the fire prevention division, as well as conducting basic equipment maintenance.

The addition of full-time staffing requires a number of implementation processes and timeline including development of appropriate SOGs, response criteria, providing appropriate accommodations, recruitment and selection protocol, etc. These processes will require a well thought out and timed implementation map.

Note: COVID-19 protocols implemented in 2020 have reduced the number of medicals calls the fire department is responding to. These numbers need to be monitored to identify the changes in call volume for the Paris area and how this may impact the timing of the introduction of career firefighters.

Figure #7 identifies the type of calls and call volumes by station, clearly demonstrating the high number of medical calls associated with Paris - Station 1 and Burford – Station 3.

FIGURE #7: 2019 Call Types

4.2.1 Outcome of Hiring Career Firefighters

The outcome of hiring career firefighters to cover Monday to Friday, 10-hour day shifts, would include:

- Provides a more robust immediate response.
- Improved response times to all calls in the area.
- Can provide greater capacity and consistent response ability during the day when resources are at their lowest.
- May provide improved patient outcome with improved response capabilities.
- Full-time capacity could fill volunteer firefighter skill gaps and assist in ensuring a more robust volunteer response capability.
- Reduction of daytime calls for volunteers thereby reducing stress/fatigue on the firefighters and freeing up personal time.
- Assistance for the Training Division.
- Assistance for the Fire Prevention Division.
- Assistance in basic equipment maintenance.
- Additional costs incurred by full-time staff (wages)
- May require modifications to facility to meet the needs of this full-time, daytime staff
- Formation of a unionized work force.

4.3 Administration Division

The Administrative Division consists of the Fire Chief, the Deputy Fire Chief, and a full-time Administrative Assistant.

4.3.1 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 is noted:

Category 9C: Administrative Support and Office Systems

Administrative support services and general office systems are in place with adequate staff to modestly 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.

The Department currently has a very heavy administrative workload that cannot be maintained with one Administrative Assistant. The Department had two Administrative Assistant positions but was reduced to one. The additional workload created has been a challenge as has been seen in areas such as call data entry. It is recommended to fill the second Administrative Assistant position that has been left vacant to share the workload within the administrative division with a focus on asset management and equipment life cycle planning.

Another area that requires support is in the management ranks. The Fire Chief and Deputy Chief are on a rotating on-call system. As such, they are expected to work their normal 35-hour work week, attend any evening related work meetings, and be available to respond to calls after hours. Having an Duty Officer position would help to spread out the on-call workload responding to calls after hours and allow for a better work/life balance. The position of Duty Officer would be filled on a rotational basis by qualified personnel, with the Fire Chief having the flexibility of modifying this assignment at any time. There would not be a determined number of hours for this acting position but rather it would be determined by the Fire Chief based on special projects and management priorities. The Fire Chief will also determine the minimum qualifications to fill this position.

Having qualified personnel fill the Duty Officer role also provides them additional leadership experience and assists in succession planning.

To recognize the extra time and responsibility required for the “on-call” rotation, some communities provide a stipend for the Fire Chief, Deputy Chief, and Duty Officers. Presently, the Fire Chief and Deputy Chief do not receive a stipend for this extra duty time.

4.4 Fire Prevention and Public Education Division

Emergency Management & Training Inc. has conducted a review of the existing fire prevention program, identifying strengths, gaps, and areas for growth and improvement. Fire prevention and public education are the foundation to creating a safe community and this should be the initial focus of a fire service to create an effective, manageable program.

NFPA 1035 (3.3.11) identifies fire and life safety education as a “comprehensive community fire and injury prevention program designed to eliminate or mitigate situations that endangers lives, health, property, or the environment.”

The County of Brant Fire Department has three Fire Prevention Officer/Public Fire Life Safety Educators.

Fire Prevention and Public Education rank number one in relation to the Three Lines of Defence presented by the OFMEM. Fire prevention and public education should therefore be considered a priority. *The Fire Protection and Prevention Act* of Ontario 1997, states in Section 2.2(a) that a community must supply fire safety education and fire prevention programs to its community through the appointment of a public safety officer or a community fire safety team, *or* through the establishment of a fire department.

Inspection and Enforcement is the number two line of the Three Lines of Defence, in preventing fires before they begin. Fire Prevention and Education, combined with Inspection and Enforcement, are the most effective methods of reducing injuries and death associated with fires and associated emergencies.

Within NFPA 1730, Standard on Organization and Deployment of Fire Prevention Inspection and Code Enforcement, Plan Review, Investigation, and Public Education Operations, *Article 4.2 Organizational Structure*:

4.2.1. The FPO shall have a leader and an organizational structure that facilitates efficient and effective management of its resources to carry out its mandate.

4.2.2. The FPO shall have an organizational structure of the size and complexity required to accomplish its mission.

Article 4.3 Management Information System (MIS)

4.3.1 The FPO shall develop a MIS.

4.3.2. A MIS shall be maintained to support the management of the FPO by providing the leaders with data that indicate the effectiveness of the organization in its programs and procedures.

4.3.3. Incident reports shall be reviewed each year.

4.3.4. The MIS shall maintain a history of services delivered and performance outcomes as measured against goals established through the organizational statement.

One of the best means to effectively maintain records is through the OFMEM Standard Incident Report (SIR). Each time an FPO or fire crew attend a public function to deliver a public education message, an SIR should be completed noting the approximate number of participants and the topics discussed. It is recommended that the CBFD complete an OFMEM SIR after each public education event for statistical purposes. Although this is not a requirement of the OFMEM, it is an effective way to gather statistical data.

Other responsibilities that fall under the Fire Prevention Branch include the completion of a Community Risk Assessment and Fire Investigations. For the most part, the Fire Prevention Branch of the Department is divided into three intertwined disciplines: code enforcement/inspections, origin and cause investigation, and public education. All of these are legislated by the FPPA.

4.4.1 Code Enforcement/Inspections

The Fire Prevention Office is responsible for community life safety issues concerning fire code inspections and enforcement of the Fire Code. Fire inspections of all types of occupancies in the municipality, with the intent of compliance with the Fire Code, is crucial to the protection of persons and property from the hazards of fire. The reduction of risks from fire and other life safety hazards with detection and reporting through the inspection process is necessary for the creation of a fire safe community, occupant safety, and building preservation. Inspections also provide assurances that fire detection equipment in buildings meet code standards, are present and operational, and that firefighting equipment in buildings have been tested to the standards.

The number of required inspections will only increase in time as changes to care facilities, increased population in the municipality, and the continuation of the smoke alarm and carbon monoxide detector programs has increased the demands on the office.

4.4.2 Origin and Cause

The FPPA requires the CBFD to investigate and determine the origin and cause of all fires. For a member to be successful, the office requires inspectors to have successfully completed NFPA 1033, the standard for Fire Investigation, and become a certified fire investigator. The three FPOs of the CBFD have successfully completed this standard. Knowledge from determining origin and cause assist in targeting groups or causes to better educate the public on fire safety. Another purpose is to ensure fire code compliance (i.e., were there working smoke alarms).

The OFMEM has an established criteria in which they are to be notified of a fire that is being investigated. In the past, an investigator from the office would attend to assist local authorities in the investigation. Due to their increased workload, the OFMEM has reduced attending a fire scene which in turn reduces the level of expertise investigating the incident and may increase the number of investigations in which the cause is deemed as being “undetermined”.

4.4.3 Determination of Current Fire Prevention Staffing Requirements

To assess staffing and program requirements for the Fire Prevention Division, the NFPA 1730 standard outlines a process (within Annex “C” of the Standard) that provides an assessment tool. Ultimately, Council determines the level of Fire Prevention service based off the local needs and circumstances of the community. By conducting this evaluation, the Fire Chief would be better able to advise Council on future program and staffing needs.

Note: Annex C is not a part of the requirements of the National Fire Protection Association document but is included for informational purposes only.

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

1. Identifying the scope of desired services, duties, and desired outputs.
2. Review of the Fire Prevention’s overall time demands in its efforts to offer services.
3. Review of hours presently documented, coupled with the hours required to meet annual goals of the branch.
4. Actual availability of branch personnel, factoring in vacation and other absences.
5. Estimating total number of personnel required based on the previous four steps.

CBFD has identified the vulnerable occupancies and schools within the community that are a high priority for annual inspection. CBFD has been as proactive as possible based on present staffing and available resources. To continue to build upon this, CBFD should endeavour to keep more accurate and up-to-date records of the following building stock within the County of Brant.

EMT was supplied with data on fire prevention activities, however, the need was identified for the Fire Chief to conduct a review on time spent on inspections. By completing this process in a more formal manner, it will assist the Department in identifying what services it not only wants to offer, but what can be delivered based on present staffing. The Fire Chief should assess the *five-step process* and evaluate the Department’s present level of activity and the future goals for fire prevention activities.

The OFMEM and FUS are very supportive of fire prevention programs as a first line of fire safety defence within a community and support the concept of having dedicated Fire Prevention Officers.

Further to what has already been noted by the NFPA and the FUS, 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 to determine the need for specific public education programs.

TABLE #5: FUS Suggested Inspection Frequency Chart

Occupancy Type	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

As previously acknowledged, Table #5 sets a high level of inspection frequency. As a benchmark, however, it offers the Department an industry standard to aim for. For now, the priority should be on the vulnerable occupancies (e.g., nursing homes, retirement homes, group homes, etc.), institutional buildings, assemblies, multi-residential, and industrial buildings.

As a benchmark, the FUS chart provides an optimal set of goals for CBFDF to strive for. Priority should be given to vulnerable occupancies, multi-family dwellings (including basement apartments), and assemblies. While the FUS suggested inspection frequencies are beyond the reach of most fire departments, CBFDF should develop strategies to aid in reaching reasonable targets based on the highest priorities and staffing resources. The addition of personnel to the Fire Prevention Branch would assist in attaining a higher percentage of completed inspections.

The Fire Prevention Branch of the CBFDF has a proactive inspection program that works towards some of the recommendations of the FUS suggested frequency of inspections for the many occupancies. They inspect all vulnerable occupancies along with the public, private, and separate schools annually. Any requests for inspections or complaints are handled in a timely manner and significant efforts are put forth to ensure seniors homes and daycares are inspected.

When a structure fire occurs in a residential area, the FPOs conduct a blitz of the immediate areas advising the residents on the importance of having working smoke and CO alarms. The Fire Prevention Branch should be commended on the number of inspections and public education events they attend during the year.

Table #6 lists the number of inspections completed each year over the past seven years in each occupancy. It should be noted that in addition to the inspections identified in the chart, the Fire Prevention Officers are involved in fire investigations, public education events, fire extinguisher training sessions, inter-departmental meetings, TAPP-C (The Arson Prevention Program for Children) meetings, and other training sessions.

TABLE #6: Number of Fire Inspections 2013 to 2019

Occupancy	2013	2014	2015	2016	2017	2018	2019
Assembly	554	439	409	324	303	240	217
Commercial	262	240	224	165	149	95	102
Industrial	184	108	145	233	155	101	90
Institutional	69	55	35	54	34	55	67
Residential	329	172	306	344	383	245	168
Care Facility	N/R	84	68	69	29	26	25
Agricultural/Other	N/R	N/R	N/R	N/R	N/R	N/R	10
Total	1,398	1,098	1,187	1,189	1,053	762	679

N/R – Not Recorded

With the growth planned for the County of Brant and the influx of new residents, this will place a strain on the Fire Prevention Branch and their abilities to maintain their current number of inspections and public education commitments. The FPOs presently report to the Fire Chief; with the Fire Chief's ever-increasing workload, it is recommended that the County of Brant Fire Department create a Chief Fire Prevention Officer position to oversee the daily operations of the branch. This individual would also conduct inspections and be the direct report for the Fire Prevention Officers. This position, which could be filled by a current FPO/PFLSO, would permit the Fire Chief to focus his attention on other requirements of the position.

The 2016 census indicated that there were approximately 9,500 residents above the age of 60, out of a total population of 36,707⁵. That indicates that almost one-third of the County of Brant's population are seniors. Many reside in the current seven dedicated buildings for the vulnerable sector. Some of those residents suffer mobility and cognitive impairment issues making it difficult for them to leave the building in an emergency. In time, the number of seniors will only increase as the baby boomers retire and this too will add an increased dimension to the duties of the Fire Prevention Officers. The Fire Prevention Branch ensures they visit these occupancies at least annually.

The County of Brant has high-risk structures that require constant monitoring by the FPOs. These include Praxair Canada, the Willet Hospital, Scotland Argomart, Sparling Propane, PNE Propane, Home Hardware Paint Division, and Pinty's Fine Foods, to name just a few.

Partially due to the success of the Fire Prevention Officers, between 2016 and 2018, the County saw nearly a 50% drop in the number of structure fires. Between 2017 and 2018, it experienced a reduction of approximately \$1.6 million in property loss.

In a review of 12 structure fires, 9 (or 75%) were deemed as undetermined in cause, which is a high percentage. If the Department's investigators are challenged in determining a cause, they should reach out to other agencies that might be able to assist such as the OPP, Technical Standards & Safety Authority (TSSA), OFMEM, Underwriters Laboratories of Canada (ULC), or Canadian Standards Association (CSA).

Utilizing the Integrated Risk Management approach in conjunction with the guidance from NFPA 1730 standard will provide an overall picture of the resources, time, and tools required to keep the fire risks in the community to a manageable level (as defined by the Fire Chief, supported by Council). A key process to ensuring an efficient and effective level of Fire Prevention staffing is the NFPA 1730 Standard. This standard outlines a process (found in Appendix C of the NFPA standard) to assist Council (with recommendations from the Fire Chief) in setting the level of fire prevention service within the community based on the local needs and circumstances.

It is recommended that the Fire Chief review CBFDF's inspection program to identify levels of desired frequency relative to the inspections noted in Table #5. The FUS strongly recommends

⁵ <https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/details/page.cfm?Lang=E&Geo1=CSD&Code1=3529005&Geo2=PR&Code2=35&SearchText=Brant&SearchType=Begins&SearchPR=01&B1=All&GeoLevel=PR&GeoCode=3529005&TABID=1&type=0>

that a level of frequency be identified by the Fire Service in its quest towards ensuring a fire-safe community. The Fire Chief of the County of Brant Fire Department may not be able to meet the FUS recommendations at present, but a set of goals and expectations should be outlined to identify staffing hours required to strive towards achievement.

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

In relation to Fire Prevention staffing hour requirements, an initial assessment needs to be completed by the Fire Chief to identify hours presently being spent on inspections along with identification of the annual goal. By doing this assessment, future hourly requirements can be consolidated into a report to the CAO and Council. A sustainable pre-incident plan development program would aid in identifying risks to the community. Currently the CBFD's plan development program is inconsistent and should be evaluated as a means of improving the quantity and quality of those completed.

4.4.4 Public Education

The County of Brant Fire Department's ability to reach numerous residents for public education surpasses many others in the province. The Fire Prevention Branch has a very successful program that teaches fire safety to all ages and in a variety of formats and settings.

The following table outlines the number of residents in which Fire Prevention Officers have been able to deliver some form of fire safety messaging.

TABLE #7: Yearly Public Education Totals

Year	Total Number of People	Ages 0 to 14	Ages 15 to 65	Ages 65+
2013	8,088	4,966	2,583	436
2014	6,451	5,153	1,984	124
2015	5,676	4,104	1,323	246
2016	7,605	4,789	2,156	115
2017	3,026	1,823	1,018	185
2018	2,915	2,192	679	45

While the number of residents receiving instruction has been high in the past, there is a steady decline, which can be attributed, in part, to an increased workload in other areas of fire prevention.

The primary focus of groups to receive public education continues to be those up to the age of 14 when their minds are most impressionable and will retain what they have been taught throughout their lives.

While they have the ability of teaching in classroom settings, they have also had the opportunity to use the Safety Village in Brantford, which is shared with neighbouring municipalities and the Ontario Provincial Police. Topics discussed with youth at public education events range from Stop-Drop and Roll, babysitter's courses, Learn Not to Burn, fire extinguisher training, What's Cooking for Teens, fire drills at schools, and the always favourite fire station tours for toddlers.

Unfortunately, while the population demographic of those over 65 continues to increase and be a high-risk group, the programs for this group have been limited.

As noted in the charts, the Public Education Officers are seeing a steady decline in both inspections and public education programs, indicating the need for assistance in the future. As time goes on and the County's population increases as forecasted, the demands for Public Education will increase. CBFDF should review its PE program and identify areas in which crews of the fire stations could be trained on PE and relieve some of the demand being presented on the Fire Prevention Branch.

The utilization of existing resources is a cost-effective option for the promotion of fire prevention and public education programs. To accomplish this, some fire departments have trained most, if not all, of their fire officers (e.g., Lieutenants and Captains) to be certified to conduct fire prevention/public education inspections and programs. This not only brings more resources to the table; it also enhances the level of fire safety awareness by trained staff.

To assist the FPOs, the County of Brant Fire Department should enhance the training and certification of its volunteer officers (Lieutenants and Captains) in the areas of fire prevention and public education, so they are trained and certified to at least National Fire Protection Association 1031 – Fire Inspector I and National Fire Protection Association 1035 – Fire and Life Safety Educator I.

4.4.5 Fire Prevention Officer/Public Fire Life Safety Educator

For a Community Risk Reduction Plan to be successful, ongoing fire inspections are a necessity. It is the inspections that will identify deficiencies and contraventions of either the Fire Code or Building Code of Ontario before they cause a fire. At present the workload being placed on the three current FPO/PFLSEs will prevent them from fulfilling the duties and responsibilities to the same level of effectiveness in the future.

The three FPOs are struggling to maintain the number of inspections and public education events they tend to and are quickly becoming overwhelmed by the increasing workload. Over the next 10 years it is projected that the population of the County of Brant could increase by 10,000 or more new residents, and up to 8,400 new housing units. With a population increase such as this, there will be a significant increase in the number fire inspections and public education events required. In time, the demands of the position will stretch current resources even further and may require an increase in staffing.

It is recommended that the County of Brant Fire Department assign one of the current Fire Prevention Officers to the position of Public Fire Life Safety Educator (PFLSO) to focus solely on Public Education. Over the coming years data should be collected on the number of inspections and public education events conducted to assist with completing a staffing level review.

Figure #8 illustrates the recommendations on the Fire Prevention Division staffing.

FIGURE #8: Fire Prevention Division Recommended Structure

4.4.6 Retirements and Succession Planning

Currently CBFD has three Fire Prevention Officers, all of whom will be retiring in the coming years. It is recommended that the Fire Department begin succession planning prior to any retirement announcements to maintain continuity in the office and ensure a seamless transition. This may require the hiring of new personnel before the Department initially planned for.

4.5 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 its 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 services.

The CBFD does not have a dedicated Training Officer responsible for identifying the training needs of the suppression staff based on industry requirements. It is typically the Training Officer's responsibility for planning and tracking the training of all volunteer firefighters.

During EMT's review of the Training and Education Division, it was noted that a part-time firefighter assisting with training is endeavoring to ensure that all required training programs are being addressed for 182 firefighters.

The Department lacks 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. Some fire stations have an area at the back of the building where some auto extrication and other general training can take place, but since these areas are part of the facilities' parking lots and are not secured within a fenced off area, there is a safety concern for the public.

While the CBFDF does not have a training centre within its County boundaries, it does have access to joint training initiatives within the City of Brantford. In the past CBFDF had the option of utilizing the Ontario Fire College's (OFC) training grounds, however, it was a logistical challenge being that the OFC is more than a 2 ½ hours away from Brant. Further the OFMEM has announced the closure of the OFC in March 2021. Another option is the Conestoga College Regional Training Centre (RTC), approximately 45 minutes away, or the Grimsby Training Centre previously utilized by CBFDF for NFPA 1031 Fire Investigator 1. The Six Nations Fire Department Training Facility is another option that the Fire Chief may investigate opportunity to utilize.

The Conestoga RTC offers the CBFDF the ability to train and practice on a wide range of training programs; however, one of the key concerns about going outside of the community to conduct required training is that fire department resources are on a delayed response if a large-scale situation, such as a house fire, were to occur.

The cost of designing, developing, and maintaining a training centre can be cost prohibitive for a community like the County of Brant. Many smaller and mid-size departments have opted to purchase a mobile training unit that has multi-training capabilities. The advantage of having access to such a unit is that it can be parked at a fire station and does not require a full site-specific yard/compound to use. Another advantage of such a unit is that it can be moved between fire stations or even rented out to other communities on a scheduled basis as a method of revenue generation.

The CBFDF should be mindful of environmental impacts such a mobile unit may have; location of use should be carefully selected.



To enhance its training programs, it is recommended that CBFD consider the purchase of a mobile training unit (such as the one in the above) and place it at an appropriate location to more effectively accommodate live fire training needs of the firefighters.

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

- **4.11.1 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 to effectively, efficiently, and safely execute all responsibilities.

Presently, the part-time on-call (volunteer) firefighter assisting with training is aware of the program needs and facility requirements and has indicated that he is tracking much of this but is fulfilling this workload on a casual basis.

To verify, in a more formal manner, that the Training Division is meeting the related NFPA program recommendations, the Training Division must identify the following:

- What training programs are required in relation to the services that the CBFD is providing.
- The number of hours that are required to meet each of those training needs. Are the training hours allocated to the program sufficient to meet the 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 Division.
- An annual program outline, at the start of each year, to be presented to the Deputy Fire Chief and Fire Chief, with noted goals and expectations, which are measured and reported on regarding completion success rate at the end of each year.

EMT's review of the current hours allocated to the annual firefighter training program does not appear to meet the needs of the departments core services provided. With all the previously noted information in mind, it is recommended a full-time Training Officer be hired with dedicated hours to ensure that the CBFD will be able to meet the current and future demands that will come in the form of new regulations and certification standards, community growth, and increase in call volumes. Once a full-time position is established, EMT additionally recommends CBFD hire a second part-time Training Officer position to assist with the implementation and delivery of training programs. EMT recommends the allocation of additional hours be based on an ongoing assessment of the demands on the training program by the Chief to determine the appropriate timing.

4.5.1 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 is 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 training and education requirements.

The CBFD training division should continue to search out opportunities to conduct joint training programs with other regional departments by securing/scheduling neighboring training facilities. It is also recommended that CBFD explore the opportunity to purchase a mobile training unit that can be used by each fire station, on a rotating basis, to meet specific training needs.

4.6 Recruitment and Retention of Volunteer Firefighters

The County of Brant Fire Department, as with many other fire departments, faces challenges when it comes to retention of volunteer firefighters. This is not a reflection of the fire department, but simply a result of the need for many firefighters to move to other communities for work, educational, or family needs. This puts 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, to offer some criteria and/or guidelines that departments can utilize. Refer to Appendix “B” for the document.

Some of these points relate to enhancing training and special projects for the staff to become more involved in, such as:

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

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

Recommendation(s)

Rec #	Recommendation	Estimated Costs	Suggested Timeline
8	It is recommended that the Fire Chief record and evaluate volunteer firefighter data analytics, assessing when there is an effective firefighting force on scene. This evaluation can assist with identifying possible gaps in staffing and response times.	Costs related to staff time, unless the evaluation prompts the need for more VFFs	Immediate (0-1 year) and ongoing
9	Hire three career firefighters to provide day shift staffing Monday to Friday (0700-1700 hrs) at Paris - Station 1. Minimum staffing of two (2) firefighters.	\$300,000-\$330,000 per year	Short-term (1-3 years)
10	Assign the position of Duty Officer to rotate on-call coverage along with the Fire Chief and Deputy Chief.	To be determined	Short-term (1-3 years)
11	It is recommended to fill the second Administrative Assistant position that has been left vacant.	\$50,000 (per annum)	Short-term (1-3 years)
12	It is recommended that the CBFDD complete an OFMEM SIR after each public education event for statistical purposes.	Staff time	Short-term (1-3 years)
13	Enhance the training and certification of volunteer officers (Lieutenants and Captains) in the areas of fire prevention and public education so they are trained and certified to at least NFPA 1031 – Fire Inspector I and NFPA 1035 – Fire and Life Safety Educator I.	Staff time	Short-term (1-3 years)
14	The County of Brant to hire an additional Fire Prevention/Public Fire Life Safety Educator that would be dedicated to conducting public education. This individual may also conduct inspections as required.	\$70,000 to \$105,000	Short-term (1-3 years)

Rec #	Recommendation	Estimated Costs	Suggested Timeline
15	Begin succession planning in Fire Prevention and senior officer positions prior to any retirement announcements to maintain continuity in the office and ensure a seamless transition.	Staff time	Short-term (1-3 years)
16	Promote a current FPO/PFLSO to the position of Chief Fire Prevention Officer.	\$15,000 per annum difference	Short-term (1-3 years)
17	Assign an FPO to focus solely on Public Education opportunities.	No additional cost	Short-term (1-3 years)
18	It is recommended that CBFD consider the purchase and appropriate placement of a mobile training unit to effectively accommodate live fire training needs of the firefighters.	\$250,000 to \$500,000 depending on options chosen	Mid-term (4-6 years)
19	Hire a full-time Training Officer.	\$110,000 for full-time	Short-term (1-3 years)
20	Hire a part-time Training Officer position to assist with the implementation and delivery of training programs.	\$50,000	Mid - Long-term (4-10 years)
21	EMT recommends additional hours be allocated for the volunteer firefighter-based training with a needs assessment review of the training program currently established.	Increases based on the needs assessment	Short-term (1-3 years)

SECTION 5 – Fire Suppression and Dispatching

- 5.1 Fire Suppression/Emergency Response
- 5.2 Service Level Standards - Dispatching Services
- 5.3 Reliability and Vehicle Movements

SECTION 5: Fire Suppression/Dispatching

5.1 Fire Suppression/Emergency Response

5.1.2 National Fire Protection Association (1710 and 1720)

To provide a 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 by fire departments.

When considering the response times and related needs for a community, the fire response curve (Figure #9) 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 factors, the rate of growth can be affected in several ways, which can increase or suppress the burn rate through fire control measures within the structure.

As noted in the following fire propagation diagram, the need for immediately initiating fire suppression activities is critical. It must also be noted that CBFD responds to more than just fires. For example, motor vehicle collisions can create a medical or fire emergency that also needs to be addressed urgently. Hence the reason to be as efficient and effective as possible in responding to calls for assistance.

FIGURE #9: Fire Response/Propagation Curve

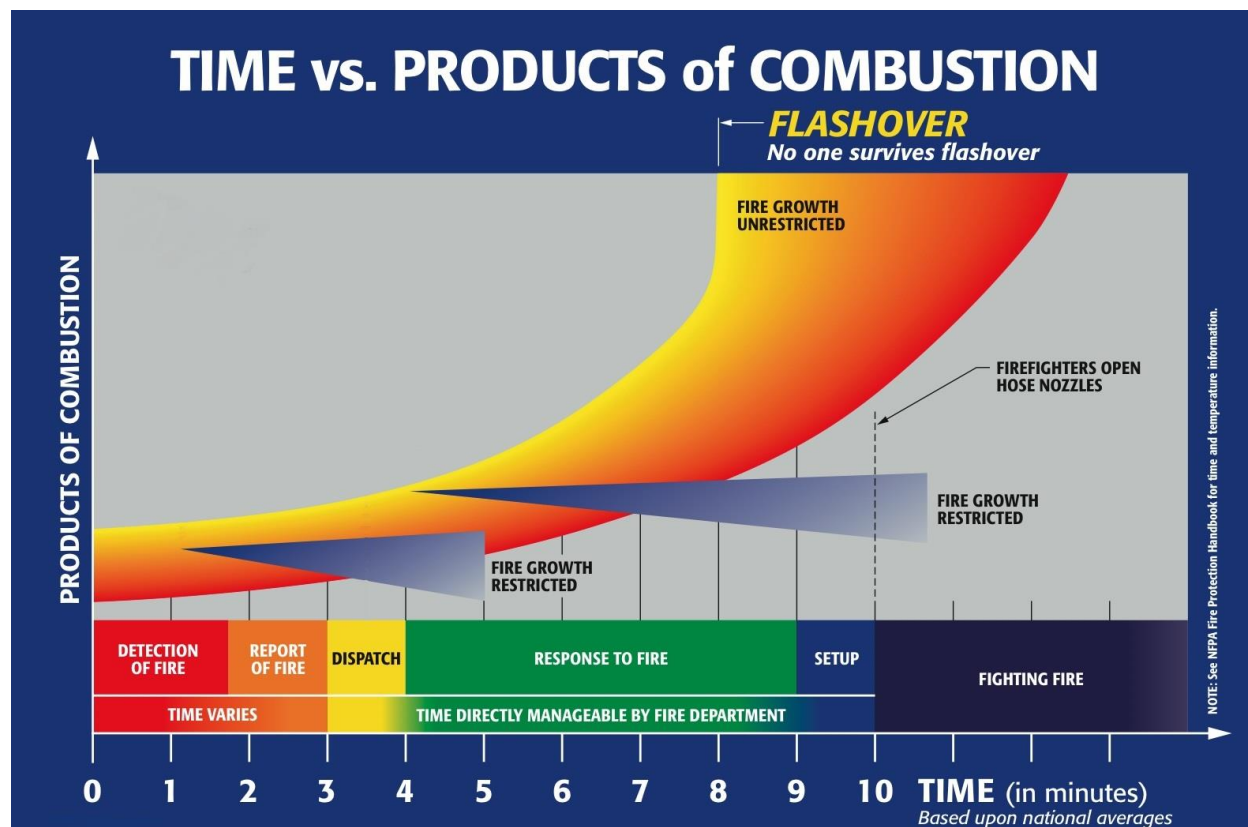


Figure #9 notes the following time variables:

- Detection of fire – 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 – when someone has identified the fire and is calling 9-1-1 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 actually responding, until the time that they report on scene.
- Setup time – the time it takes for the fire crews to get ready to fight the fire (hook up to the fire hydrant, run hoses to the fire, get breathing apparatus on).
- Fighting the fire – actual time on scene extinguishing the fire.

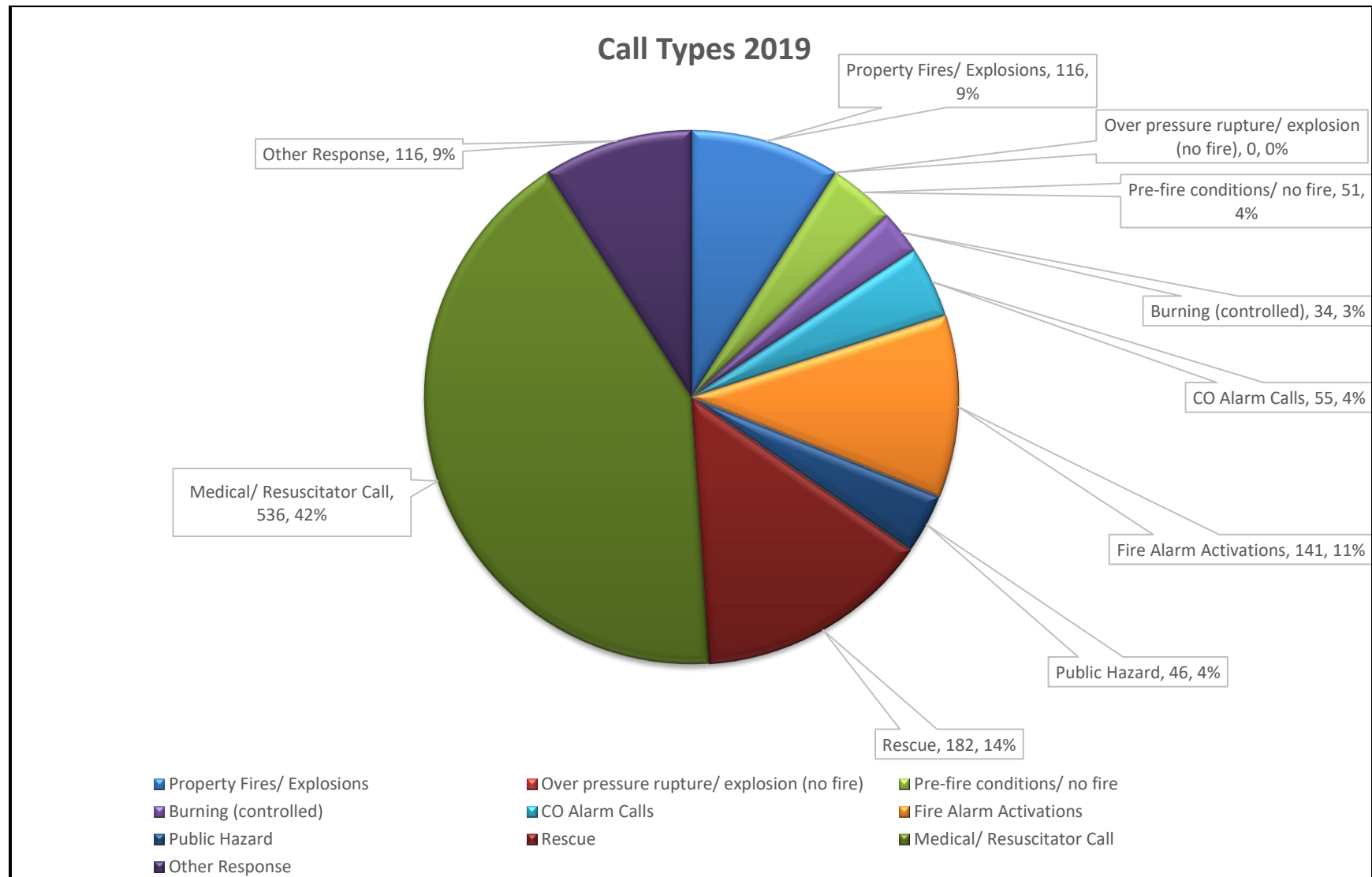
Based on fire growth, as demonstrated in Figure #9 and the associated timelines, the overall goal of any fire department is to arrive at the scene of the fire and/or incident as quickly and as effectively as possible. If a fire truck arrives on scene in eight minutes or less, with a recommended crew of four or more firefighters, there is increased opportunity to contain the fire by reducing further spread to the rest of the structure.

Alternatively, if the first fire attack team arrives with only three firefighters on board, 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 is to be made by the firefighters until the sufficient number of staff arrive on scene. The expectation is that a minimum of three firefighters and one officer arrive on scene to make up the initial fire suppression team. This team of four 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, as well as 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, referring to the presence of two firefighters inside the structure with two outside ready to go in as back up.

It should be noted that the initial hiring of three career firefighters to cover Monday to Friday day shifts would be inadequate for an initial interior fire attack until additional firefighters arrive on scene. Therefore, the volunteers would be paged immediately for any call that could be a structure fire, including fire alarms. It would be the goal to add additional firefighters as funding is available until a minimum staffing of four career firefighters were available to cover this staffing.

To be sure a complement of four firefighters is always in effect, a response protocol should be in place that ensures an additional station or crew is automatically dispatched to the same incident to any type of call requiring backup (e.g., reported structure fire). Not having enough firefighters at an emergency scene can create an unsafe situation for the firefighters or and causes a delay in conducting fire suppression, lifesaving and/or rescue operations.

The following chart indicates the types of calls with medical calls comprising 42% of the total call volume of over 500 calls. Rescue calls make up 14% of calls with 182 incidents, and property fires/explosions make up 10% with 108 per year.

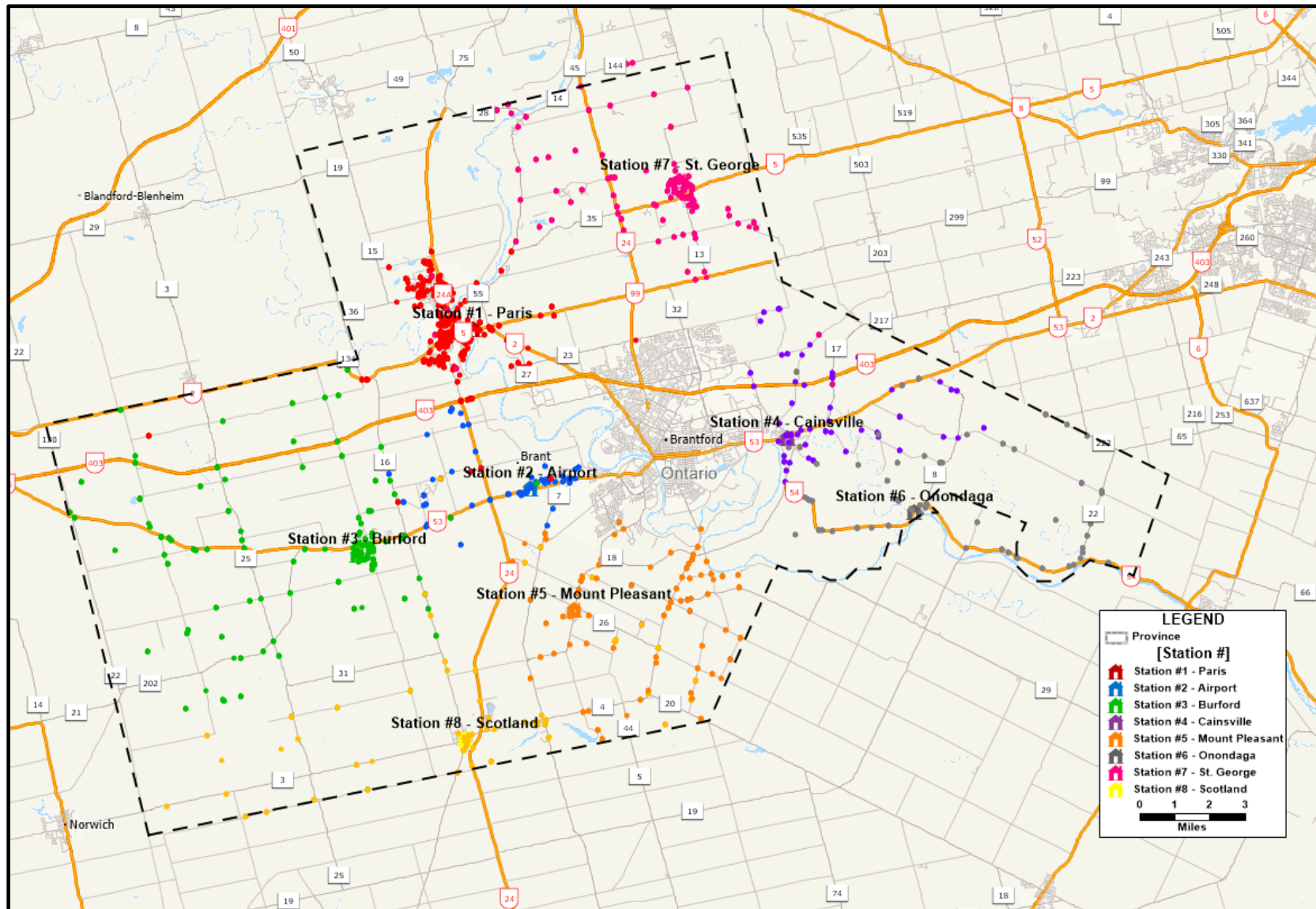
FIGURE #10: 2019 Call Types

Currently, medical calls are a full station response, paging all the firefighters assigned to that station. Medical calls only require two to four firefighters to provide care to the patient prior to the ambulance arriving and assisting the paramedics. An opportunity to reduce costs is to assign firefighters to platoons for medical calls whereby only four or five assigned firefighters are paged to respond. This would be most effective where there are higher call volumes such as Paris (Station 1), St. George (Station 7), and Burford (Station 3). The Fire Chief should develop procedures for those times when response personnel cannot meet the minimum needed for medical or non-emergent incidents. It would be expected that response times would not be impacted by moving to a platoon-based response system.

Response Location Map

It is useful 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 if there is a shift in call locations that would suggest the possible need for reconfiguration.

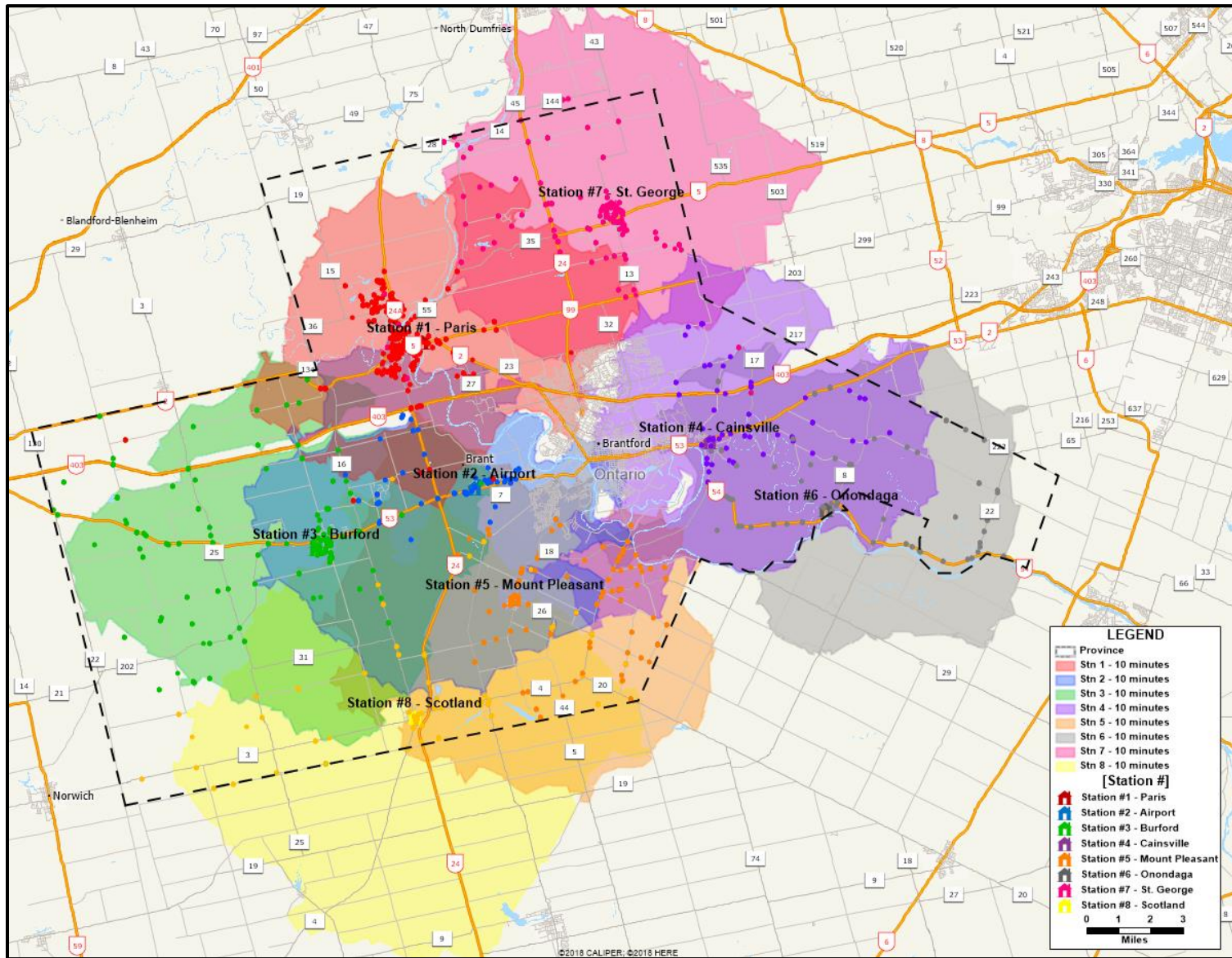
FIGURE #11: Call Clustering Map 2019



This call cluster map plots the location of the emergency calls within the County of Brant for 2019. This map confirms that the bulk of the calls are in the populated areas of Paris, St. George, and Burford communities. With planned residential, commercial, and industrial development still to come in Paris and St. George, the demand for fire responses will continue to grow in the County.

Figure #12 indicates the fire station coverage (10-minute drive time) for each station along with the call locations. As illustrated, approximately 1% of the call volume falls outside a 10-minute drive time from any station.

FIGURE #12: Station Locations and 2019 Call Locations with 10-Minute Drive Time



This style of call clustering should become a regular review of data analytics by the Fire Chief to ensure that the fire stations are effective in meeting the growing needs of the community. This will also help to identify if there is a shift in the major call locations due to growth.

5.2 Service Level Standards – Dispatching Services

The County of Brant Fire Department dispatches its fire apparatus through their own communications centre operated out of the OPP Station in Paris. There are both full-time and part-time employees working twelve-hour shifts during the week and eight-hour shifts on the weekends. Part-time employees cover any shifts in which the full-time employee is off, and on weekends.

A condition within the contract with the OPP stipulates that the County of Brant must provide a counter person 24/7 to complete administrative duties relating to the police. The communications operators also answer the administration phone lines for the OPP, after hours for the county roads department, water department, crossing guards, and by-law enforcement.

The Communications Operators (COs) are responsible for:

- Answering 9-1-1 calls.
- All fire related dispatch procedures.
- Incident related dispatching procedures and ongoing communications with the scene commander.
- Coordination of Mutual Aid support, as required.
- Contacting and initial dispatching of other agencies, such as Police, Ambulance, Hydro, Gas, etc.
- Documenting of related data required by the Office of the Fire Marshal and Emergency Management, such as time of call, turnout of firefighters, drive time, etc.
- Maintaining the CriSys database.
- Reception and telephone answering at the OPP Detachment.
- After hours call reception for other County departments.
- Back-up communications center at the fire station in Paris if the communications systems experience a failure.

One CO is on duty 24-hours a day, 365 days a year, and reports to the Deputy Fire Chief. In the event of a major emergency, it is procedure to call back an additional CO to assist with radio traffic and incident command and control, however, this occurs very infrequently.

Dispatch is supported by a CAD (computer aided dispatch) software program (CriSys) that effectively assists with timely dispatch. It is reported that the system is reasonably reliable with infrequent operation interruptions and timely system support.

Being a Communications Operator is inherently stressful (dealing with upset callers in traumatic situations, having to deal with rude clients at the counter, answering after-hours calls, dispatching other County departments as well as the Fire Department) and takes a toll on personnel. Simply leaving to go to the washroom while working by themselves may become a challenge. It is not uncommon for communications centers to have personnel off on stress leave due to post traumatic stress disorder (PTSD). This impacts the budget, requiring additional COs to cover for the personnel off on sick leave, and WSIB fees many increase if it is deemed to be a work-related illness.

It is recommended that the Cbfd monitor sick time related to PTSD or other mental health illness and the impacts that may be placed upon staffing, shift scheduling/coverage and any financial implications.

The Cbfd ensures that the Communications Operators work towards meeting the requirements of NFPA 1061, Standard for Public Safety Telecommunications Personnel Professional Qualifications. The communications center follows NFPA 1221, Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems, which is used to identify dispatching service criteria.

5.2.1. NFPA 1221, Section 7.4 Operating Procedures

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

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

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.

The Fire Chief should continually review the performance of the communications operators to ensure they meet NFPA 1221, Section 7.4.

NFPA 1221 Standards for Emergency Services Communications, is the Standard on how fire services communications centres should be operated. If any questions are raised regarding activities that are to take place within a fire service communication centre such as communication operator qualifications, radio communications, telephone communications, back-up communication centre, or power requirements and staffing, this document will be referenced.

The CBFD's back-up communications centre is located at Paris - Station 1 and is fully outfitted as the regular communications centre, including back-up power in the forms of a generator and battery cells to ensure that there is a continuous supply of power and the centre remains fully operational.

It has been reported that NFPA 1225, *Standards for Emergency Services Communications*, which is the combination of both NFPA 1061 and 1221, will be approved within a year. This new standard and the integration of the Next-generation 9-1-1 will have far reaching impacts on emergency service communications, both operationally and financially.

In Canada, the Next-generation (NG) 9-1-1 system standards are due to be available in 2020 and become mandatory by 2023 to be available in all communication centres across the country. It is anticipated the start-up costs for NG 9-1-1 could be from \$250,000 and \$500,000 to have the ability to receive emergency texts and pictures of the scene from the caller.

Communication centres are the fire service lifeline; they take the call for assistance from the citizens, gather the necessary information, dispatch the firefighters and apparatus, and maintain radio communications with responding firefighters and apparatus up to the point where all have returned to quarters. It is this constant link of communications that is so important to the firefighters.

Currently CBFD has budgeted \$460,000 for the operation of the communications centre. Based on a population of 40,000 residents that works out to a cost of \$11.50 per capita.

Table #8 outlines a comparison of what other fire communications centres charge per capita, per year, for dispatching services compared to the County of Brant. The table is based on 2020 rates and a population of 40,000 residents and does not include the start-up costs for radio

installations, phone hookup, GIS 9-1-1 mapping, etc. which normally is a one-time cost. Most communications centres have a clause in their contracts that allow for cost increases based on the cost of living.

TABLE #8: Communication Centre Comparisons

Communications Centre	Cost per capita	Annual Cost
County of Brant Fire Department	\$11.50	\$460,000
Barrie Fire & Emergency Service	\$2.65	\$106,000
Brantford Fire Department	\$3.50	\$140,000
Orillia Fire Department	\$2.10	\$84,000
Owen Sound Police Service	\$4.50 to \$6.50	\$180,000 to \$260,000
St Catharines Fire Department	\$2.13	\$85,200
Tillsonburg Fire Department	\$2.25	\$90,000

Based on the current and future expenditures and challenges to operate a communications centre, it is recommended the County of Brant Fire Department issue a Request for Information to fire communications centres that dispatch multiple locations to investigate the costs, options, and alternatives.

5.3 Reliability and Vehicle Movements

Section 5 has focused mainly on the response data received, which offers a good level of assessment in relation to CBFDF response times to emergency calls. To get a more accurate picture of response capabilities and services being provided, a fire department should also track and evaluate total vehicle movements, along with how often a station's vehicles are available to respond to calls within its assigned response zone; this is known as the Reliability Factor.

The CFAI defines reliability as *"The degree to which a test or other examination is free from chance errors of measurement. The extent to which scores are trusted and dependable."* Based on the definition and the intent of measuring reliability, it is recommended that a fire service track how many times other units must cover calls that are outside of a specific station's response zone, and why these types of calls occur. This can be a result of the following:

- A station is receiving an increase in call volume that is exhausting present resources.
- A fire service agreement with a bordering community is pulling the host community's fire vehicles out of the community more than anticipated.

- The types of calls are of such a nature that the present station's units are not equipped to handle the specific type(s) of response.

By tracking the percentage of times that a station is unable to send a vehicle within its identified response zone, the Fire Chief is then able to identify areas of concern and possible solutions to address the situation. These solutions can range from a new fire station, with vehicle and crew to respond to the increase in calls, or a realignment of response zones. Without an annual reliability study conducted, a Fire Chief will not be able to assess if the department's resources are adequately situated and supported.

While conducting field visits at the fire stations and the Fire Prevention Division, it was noticed that a 3rd party response monitoring software was being used but not efficiently utilized by the stations or the responding officers. Significant benefits could be realized by utilizing this common technology for Fire Prevention Inspections and Pre-Fire Planning. It is recommended that a review is completed by the Fire Chief to find ways of ensuring this type of technology is utilized to maximize efficiency for responders and Fire Prevention Staff.

During the tour of the fire stations and assessment of the dispatching centre it was noted that dispatchers and fire crews were utilizing GIS mapping from 2013 for Fire Station Protection Areas. The Fire Chief should conduct a full review of the Fire Station Protection Areas. It is recommended that this analysis and revision be completed by the Fire Chief to provide the best protection to the citizens of the County of Brant. As the community grows this review should be completed bi-annually or as needed with the anticipated growth or shifts in hazards for certain areas.

Recommendation(s)

Rec #	Recommendation	Estimated Costs	Suggested Timeline
22	Fire Chief should conduct a regular review of data analytics to watch for shifts in call locations due to community growth.	Staff time	Ongoing
23	Develop a platoon response plan for nighttime single unit responses (e.g., medical calls) to limit paging to 4-5 firefighters. This would include reducing the number of volunteer firefighters responding to certain types of calls on prescribed shifts for Station 1, 3 and 7.	Cost savings to be determined	Short-term (1-3 years)
24	It is recommended that the CBFDD monitor sick time related to PTSD or other mental health illness and the impacts that may be placed upon staffing, shift scheduling/coverage, and any financial implications.	Staff time	Short-term (1-3 years)
25	CBFDD issue a Request for Information to fire dispatch centres to look at capabilities, pricing, and options to meet future requirements of fire communications.	Staff time	Short-term (1-3 years)
26	Track the percentage of times a station is unable to send a vehicle within its identified response zone.	Staff time	Short-term (1-3 years)
27	Review 3 rd party technology for responders and Fire Prevention Staff currently used and look to maximize its potential.	Staff time	Short-term (1-3 years)
28	An analysis and revision of the Fire Station Protection Areas be completed by the Fire Chief.	Staff time	Bi-annually and ongoing

SECTION 6 – Facilities

6.1 Station Locations

6.2 Station Assessment

SECTION 6: Facilities

Firefighters serve the community from eight stations, most of which were built pre-amalgamation into the County of Brant Fire Department.

The key question here is not how to equip the Fire Department to meet increasing call volumes but how to better meet the present call volumes and response times.

6.1 Station Locations

Fire stations should be situated to offer the most efficient and effective response to the community they serve. Centering them within a determined response zone simply based on “timed” responses is not always the best option to implement. Fire station location depends on factors such as key risks within the response zone, future growth of the community, and the geographical layout of the community that can include natural barriers or divides, such as water, that makes it necessary to have some stations located within proximity of each other.

Public Fire Safety Guideline – PFSG 04-08-13 on Fire Station Location notes fire stations should be positioned to achieve the most effective and safe emergency responses. Distance and travel time may be a primary consideration, however, if a basic expectation is set by the community’s decision makers, then a more realistic level of service and fire station location criteria can be identified.

As already noted, there are eight fire stations located within the County of Brant. Figure #13a identifies the location of the eight stations, along with the NFPA recommended 10-minute drive time polygons around each fire station.

FIGURE #13a: CBFD Fire Station Locations and 10-Minute Drive Times

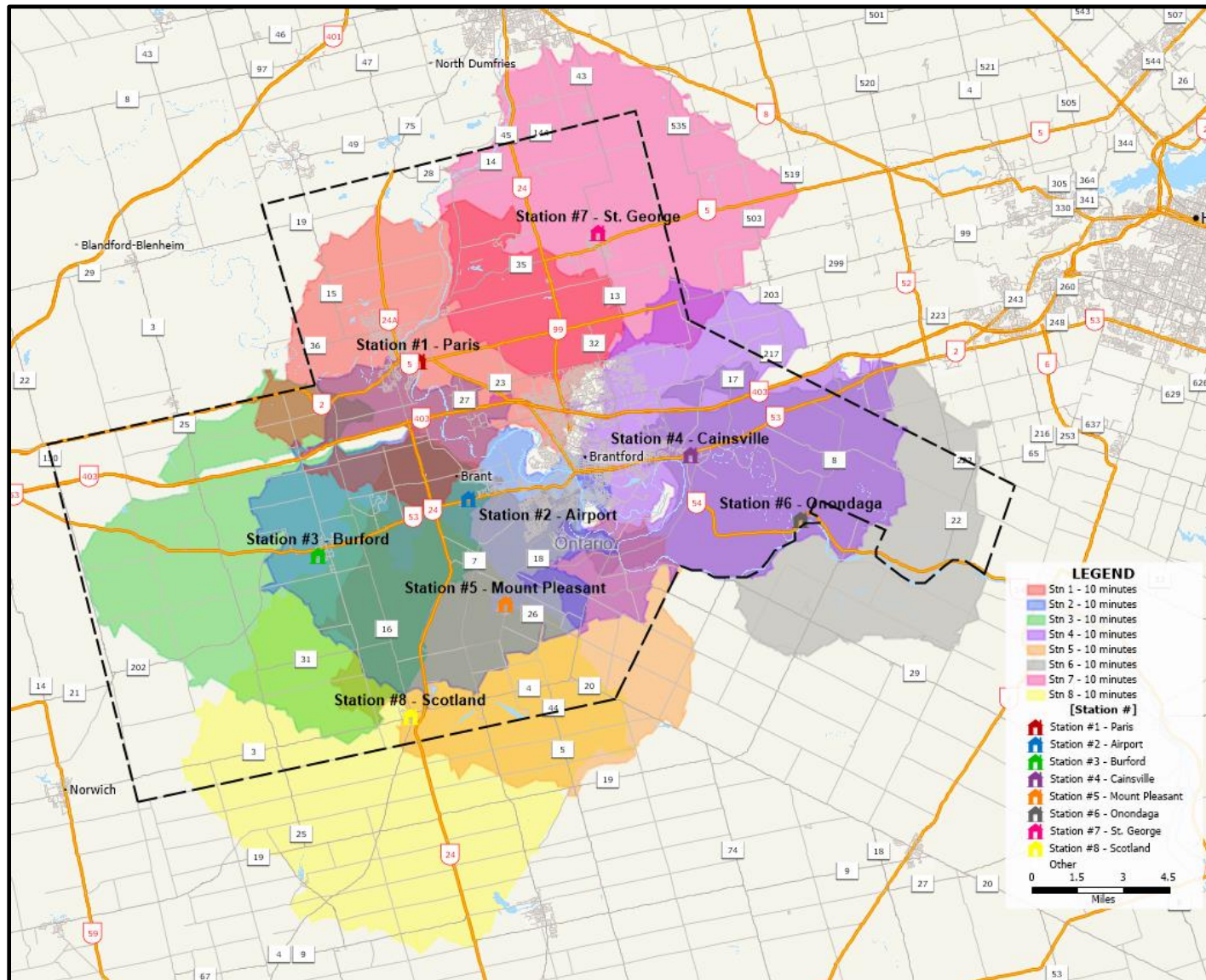
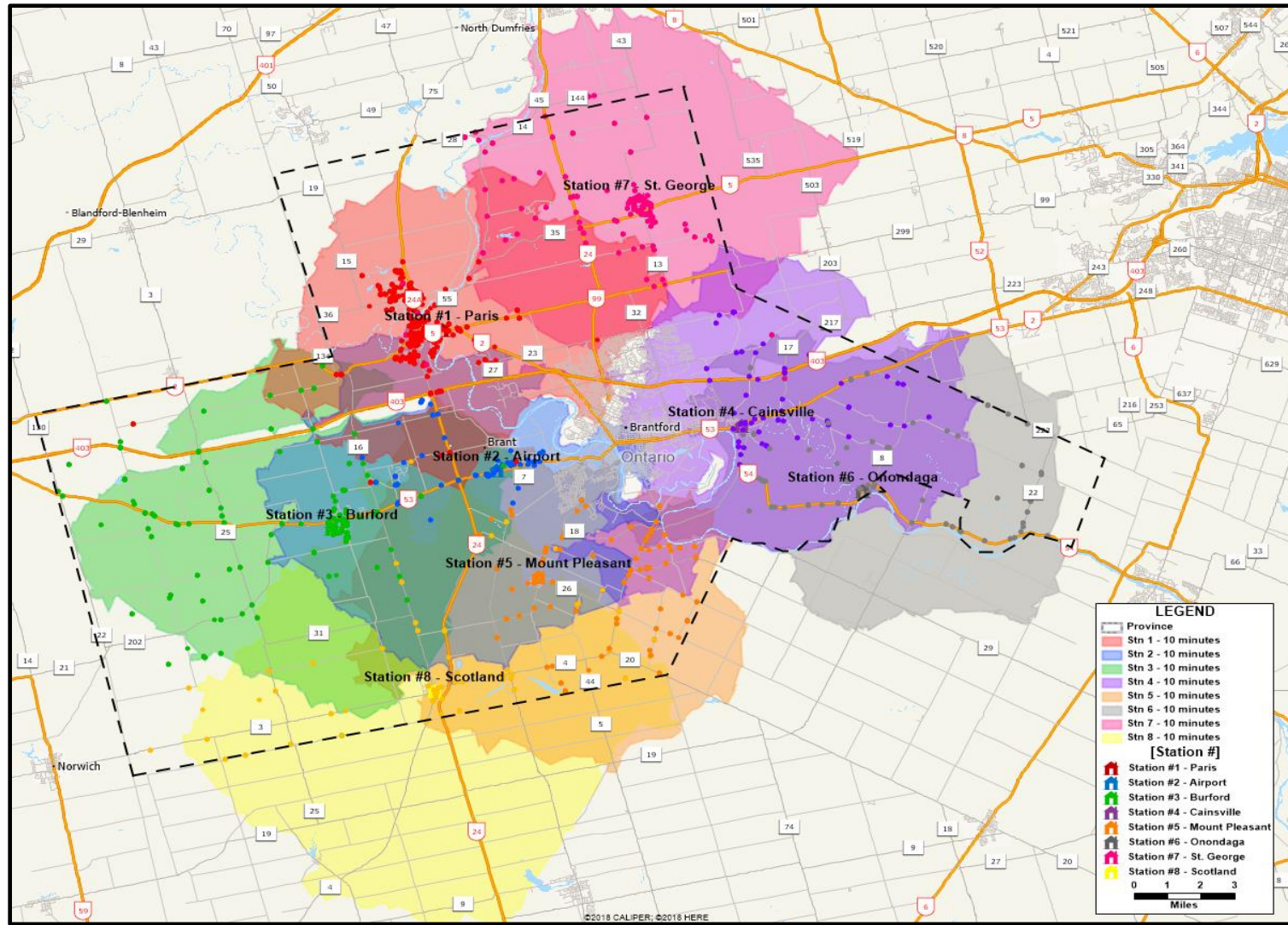


Figure #13b identifies the locations of the calls over a one-year period in relation the present fire station locations.

FIGURE #13b: Station Locations with 2019 Incident Locations



As can be seen in both maps (13a and 13b) the majority of the calls are concentrated in the more populated areas and also fall within the 10-minute drive time..

6.2 Fire Station Condition Assessment

The following is an overview of each fire station and the conditions observed during our walk-through by EMT consultants.

6.2.1 Fire Station – 1

Fire Station 1 is located at 61 Dundas Street East, Paris. This station is the CBF D Headquarters providing front line response from volunteer fire staff and houses the Fire Administration and Fire Prevention Division staff.



On the property sits a garage that provides space for mobile fire training props, suppression inventory, and a SCBA cylinder refilling station. The storage of an antique fire truck owned by the firefighter's association also resides in this building.



During the walk-through, it is EMT's opinion that the building is in "good" condition with some moderate facility updates required in the short-term. This building was built in 2002 and is meeting its estimated life cycle. With this building being utilized for Administration, Fire Prevention, Training, and Operations, there is not enough capacity for much needed and expected growth.

Presently, the office space for the Fire Chief and Deputy Fire Chief meets their space needs; vehicle bays were found to be well orchestrated and maintained. However, one concern noted revolves around the absence of an appropriate diesel exhaust extraction system for its apparatus. This health and safety concern should be addressed immediately.

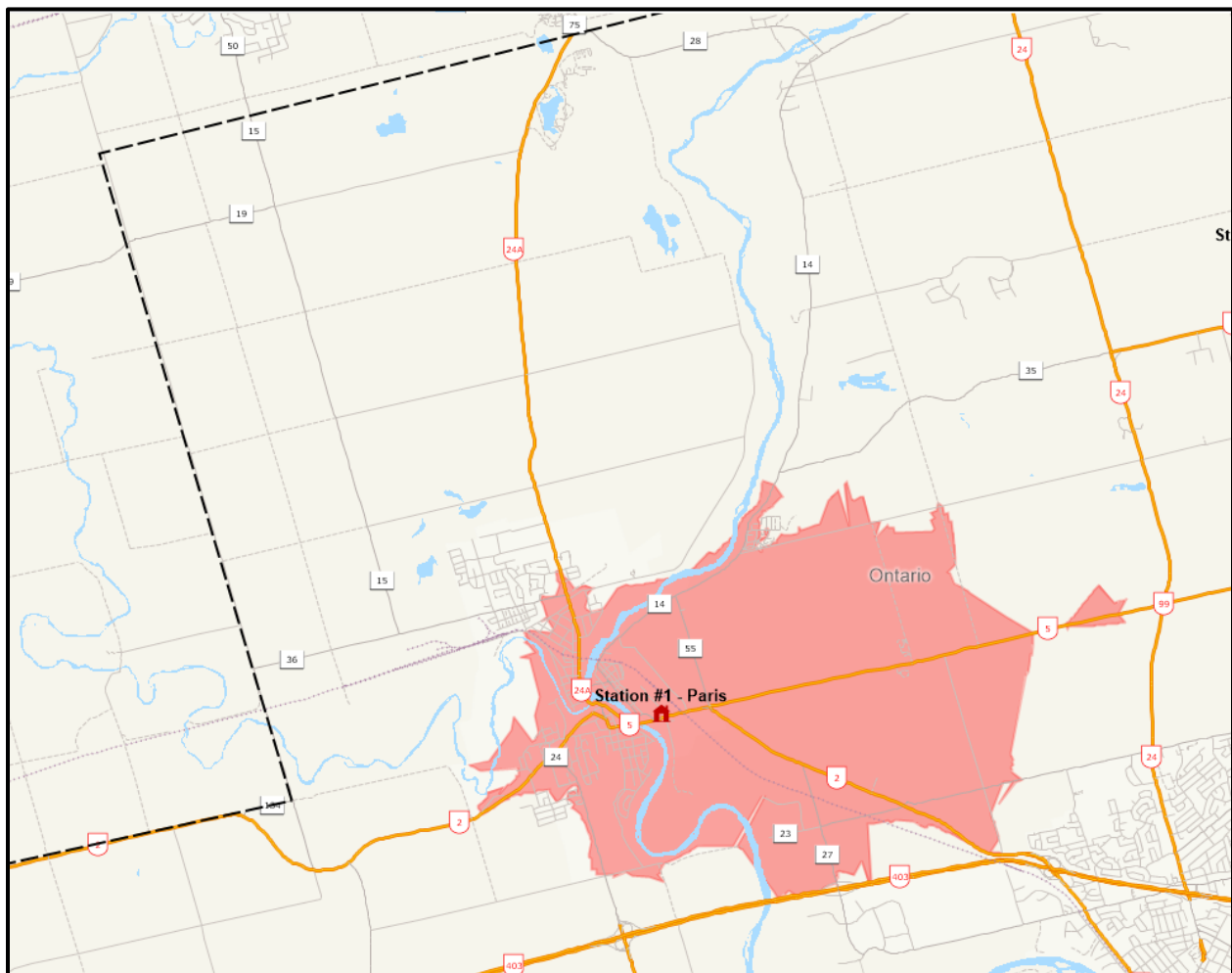
A back-up power generator is installed for power outages. The absence of an appropriate bunker gear storage area will require moderate renovation to accommodate this health and safety need.

This station is built on the east side of the Grand River while much of the growth in Paris has been

on the north side of the community. Further, responding to calls in much of the community requires the crossing of a bridge and travelling through the downtown core which is often congested.

Figure #14 shows a five-minute drive time from Paris - Station 1; this equates to a 9-minute response time as per NFPA standards, estimating 4 minutes for the volunteer firefighters to go to the fire station. This map indicates travel with light or no traffic. The map indicates the challenges of response to the northern part of town. With traffic congestion, which the downtown area often sees, the response times to the west side of the Grand River are dramatically reduced.

FIGURE #14: 5-minute Drive Time from Paris - Station 1

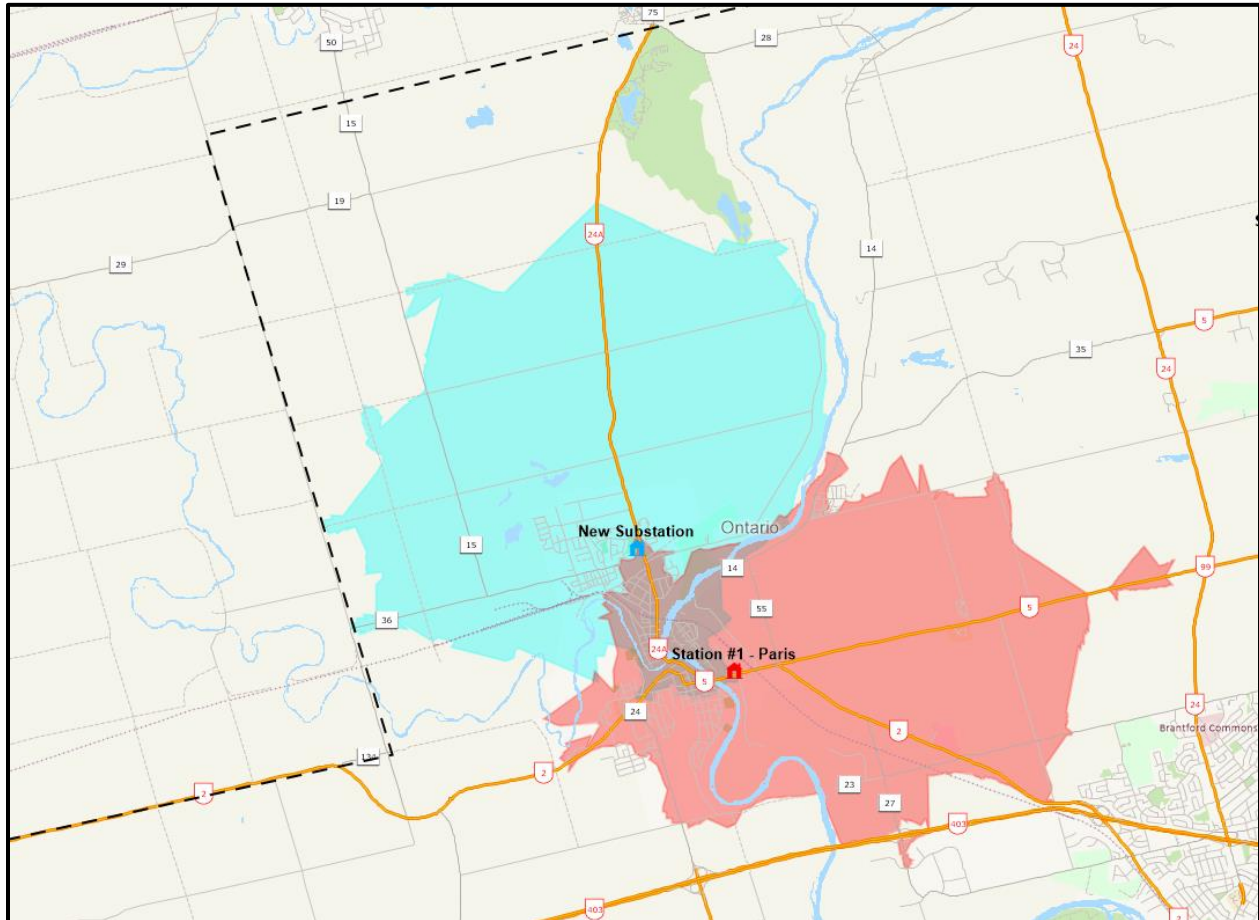


Adding a second station (substation) in the northern part of the community in the vicinity of Grand River Street North and County Road 52 dramatically increases the ability to respond to the newly developing areas of the community. This station would require the investment in an

additional pumper/tanker and hiring additional volunteers.

In addition to reducing the response times to the north end of Paris and the County, this station would reduce the call demand on Station 1 for single apparatus responses.

FIGURE #15: 5-minute Drive Time from Station 1 and New Substation



The station could either be purpose built or leased as part of a commercial property. For example, in 2012 the City of Barrie has leased the end unit of a commercial strip mall as a fire station (*pictured below*). The unit was constructed by the landlord to meet the City's requirements. Having a leased unit gives the County the flexibility to move/relocate the station should there be a change in the community development and reduce the initial capital cost investment

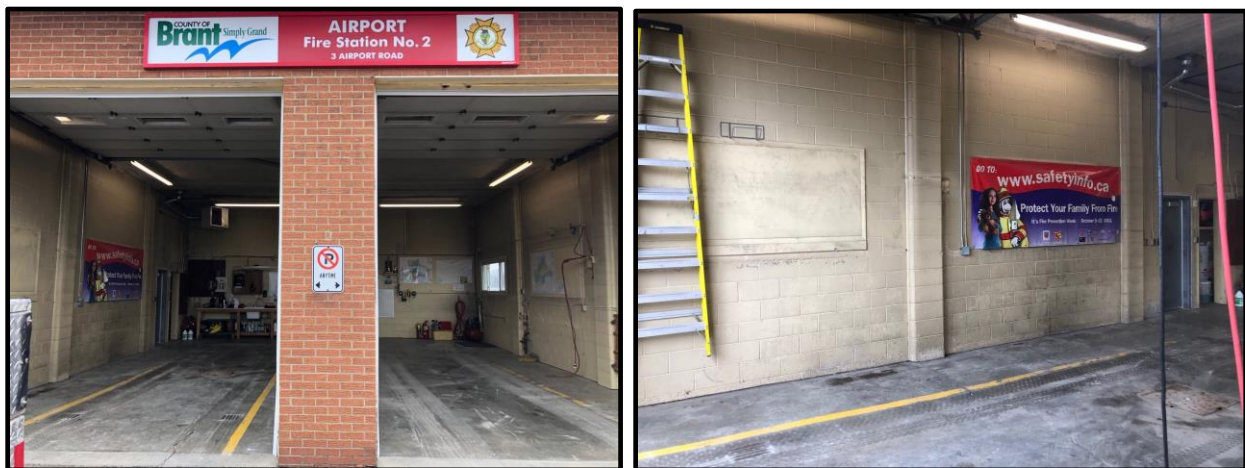


6.2.2 Fire Station – 2

Fire Station 2 is located at 3 Airport Road and was constructed in 1965. This station provides front line response from volunteer fire staff.



During the walk-through and review of Fire Station 2 it is EMT's opinion that the building is in "poor" condition with major upgrades needed in the short-term. There does not appear to be enough capacity for its current purpose. While office space for the Officers meets the need, vehicle bays were found to be unsatisfactory for space and have been poorly maintained.



There is an absence of an appropriate diesel exhaust extraction system for its apparatus. This health and safety concern should be addressed immediately. EMT did not notice any back-up

power capability for hydro outages. There are no decontamination showers or a training room. Generally, the station is reaching the end of its life span and should be considered for rebuilding within the next 10 years.

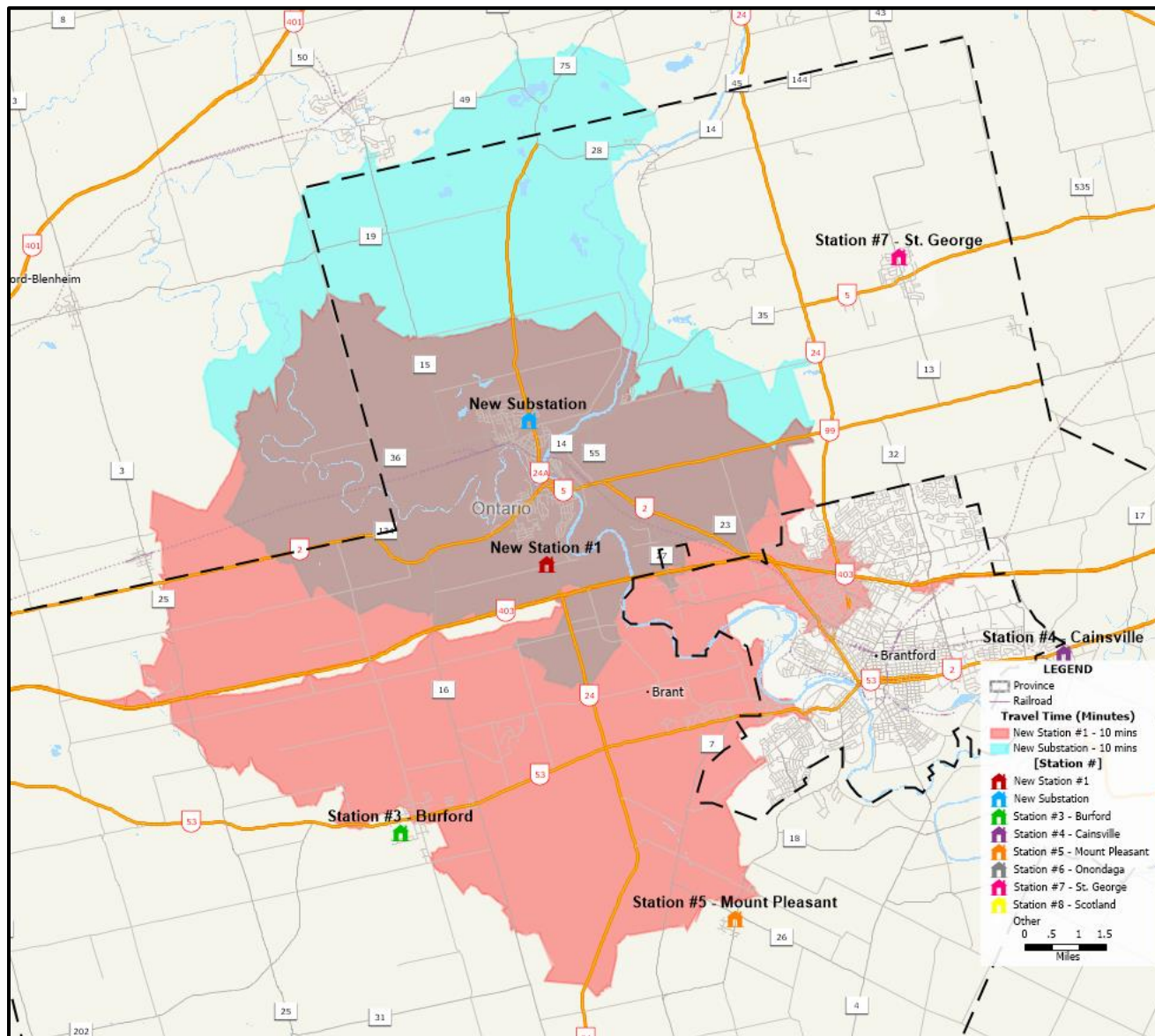
Examining the entire area and the fire service as a whole, if the recommendation for a station in the north of Paris moves forward, there is opportunity to integrate Station 1 and 2 in a new headquarters location in the vicinity of Rest Acres Road and Powerline Road. This location would provide good coverage to the areas of high development in the immediate vicinity of Rest Acres Road in addition to the south end of Paris and covering off the airport area.

The new headquarters would then have opportunity to incorporate a proper training ground.

The current Station 1 could be sold as valuable commercial property or repurposed for the County paramedic service.

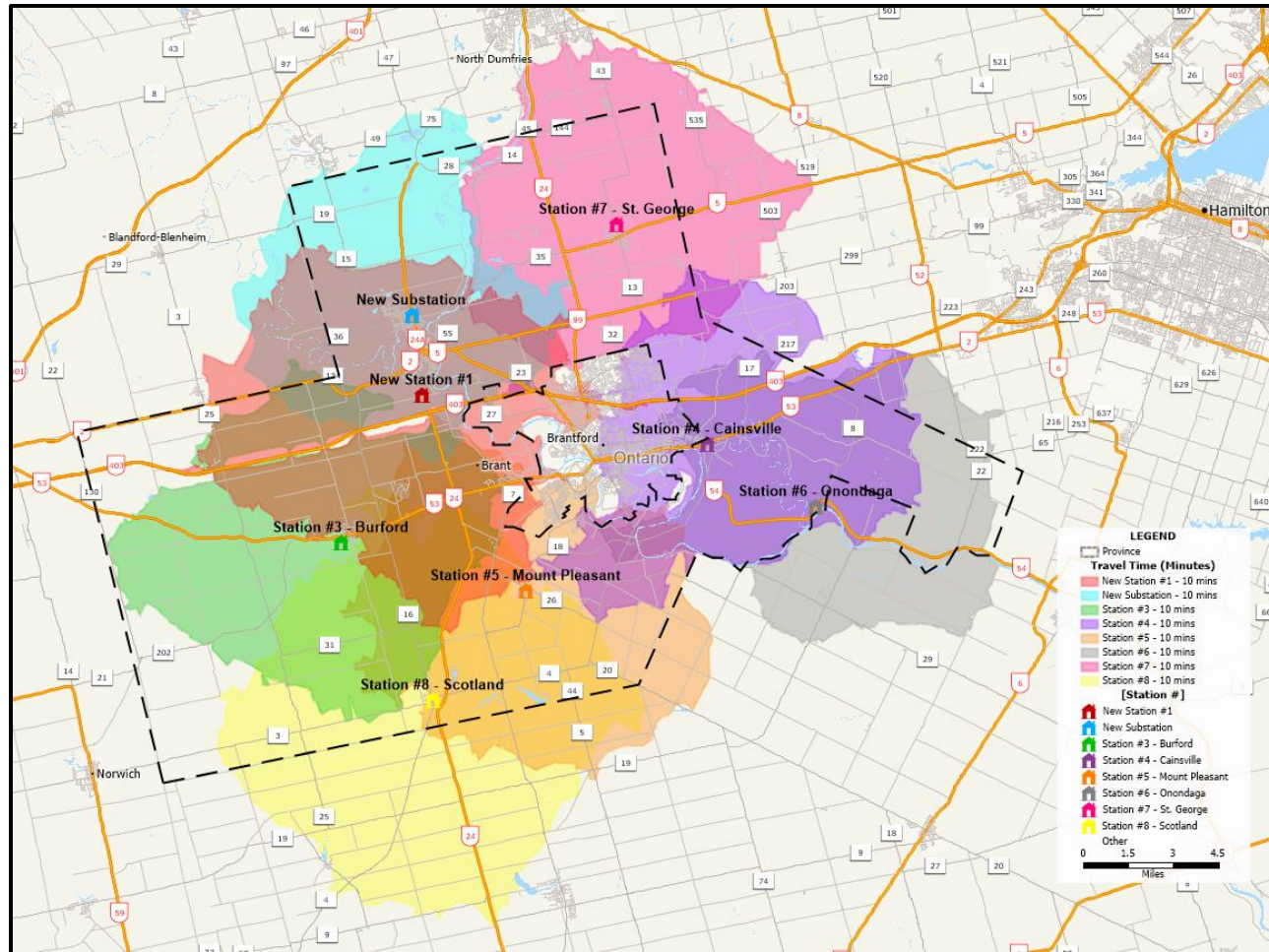
The following map shows the 10-minute drive-time coverage from a relocated headquarters amalgamated with Station 2, along with the new station located in the north end of Paris. The combination of the two facilities provides a high level of coverage to the north border of the County as well as Paris and those areas that are planned for development.

FIGURE #16: New Headquarters and Substation with 10-Minute Drive Time



The following map includes all the stations in the County with the new station in the north end of Paris, along with the new Headquarters (amalgamated Stations 1 and 2). As can be seen in the map, this station coverage provides exceptional coverage and response to the County.

FIGURE #17: All Station Locations with New Station 1 and New Substation



6.2.3 Fire Station – 3

Fire Station 3 is located at 13 Potter Drive, Burford. This station was constructed in 1992, providing front line response from volunteer fire staff.



During the walk-through and review of Fire Station 3 it is EMT's opinion that the building is in "good" condition with no major upgrades needed. Office space for the Officers meet the need and vehicle bays were found to be well orchestrated and maintained.

Two concerns noted are of the absence of an appropriate diesel exhaust extraction system for its apparatus and appropriate bunker gear storage. These health and safety concerns should be addressed immediately.



On the exterior, driveway repair should be considered in the short-term. EMT did not observe any back-up power capability for hydro outages.

6.2.4 Fire Station – 4



Fire Station 4 is located at 12 Garnet Road, Cainsville. This station will soon be relocated to the new site at 17 Ewart Street, Cainsville, approximately 800 meters from the current location. The proximity of the sites means that response times will remain unchanged in the coverage area. The new station will meet all the needs with expanded apparatus bay capacity, office space for Officers, a large training room, diesel extraction system for the apparatus, and back-up power for power outages.



6.2.5 Fire Station – 5

Fire Station 5 is located at 709 Mt. Pleasant Road, Mt. Pleasant. This station was constructed in 2011 and provides front line response from volunteer fire staff.



During the walk-through and review of Fire Station 5 it is EMT's opinion that the building is in "good" condition with no major upgrades needed in the short-term. Office space for the Officers meet the need and vehicle bays were found to be well orchestrated and maintained.

Two concerns are that of an absence of an appropriate diesel exhaust extraction system for its apparatus and appropriate bunker gear storage. These health and safety concerns should be addressed immediately.



This station also operates and maintains an SCBA air cylinder refilling station, complete with a cascade system and cylinder storage. The MAKO unit appears to be in great condition with the planned replacement of the compressor and cascade system.

6.2.6 Fire Station – 6



Fire Station 6 is located at 734 Highway #54, Onondaga. Operations of this station will soon be relocated to a new building on the same site. The new station will meet all the needs with expanded apparatus bay capacity, office space for officers, a large training room, diesel extraction system for the apparatus, and back-up power for power outages.



6.2.7 Fire Station – 7

Fire Station 7 is located at 72 Main Street North, St. George. This station was constructed in 1995, providing front line response from volunteer fire staff.



During the walk-through and review of Fire Station 7 it is EMT's opinion that the building is in "good" condition with no major upgrades needed in the short-term. Office space for the Officers meet the need and vehicle bays were found to be well orchestrated and maintained.

A concern is the absence of an appropriate diesel exhaust extraction system for its apparatus. This health and safety concern should be addressed immediately. This station does not have bunker gear storage at the fire station with all gear stored on the fire apparatus; appropriate bunker gear storage should be provided.

6.2.8 Fire Station – 8

Fire Station 8 is located at 43 Simcoe Street, Scotland. This station will soon be relocated to the new site at 83 Simcoe Street, Scotland. The new station will meet all the needs with expanded apparatus bay capacity, office space for Officers, a large training room, diesel extraction system for the apparatus, and back-up power for power outages.



Recommendation(s)

Rec #	Recommendation	Estimated Costs	Suggested Timeline
29	Design and construct/lease a north Paris station to be located in the area of Grand River St. N and County Road 52. Purchase a Pumper/Tanker Training and gear for additional firefighters.	Construction \$3-4 million. Lease could be \$100-150,000 a year. Pumper tanker \$650-750,000. Training and additional gear for new firefighters \$100,000.	Mid-term (4-6 years)
30	Design and construct a new Station 1 Headquarters and Training Centre in the vicinity of Rest Acres Road and Hwy 403 – dispose of the current Station 1 and 2.	Construction \$8-9 million, less the sale of current Stn 1 & 2	Long-term (7-10 years)
31	Exposure to diesel exhaust can be reduced through engineering controls at the source. The installation of direct capture exhaust system extractors is recommended in all stations. Stations 4, 6 & 8 will be outfitted in the new fire stations.	\$375,000 per station	Short-term (1-3 years)
32	Driveway replacement should be considered in the short-term for Burford - Station 3.	\$50-100,000	Short-term (1-3 years)
33	Back-up power generators should be installed for stations 2, 3 & 7.	\$100,000 per station	Short-term (1-3 years)
34	Bunker gear storage rooms should be provided for stations 1, 3, 5 & 7.	\$300,000 per station	Short-term (1-3 years)

SECTION 7 – Apparatus and Equipment

- 7.1 Fire Apparatus - New and Replacement Schedules
- 7.2 Maintenance
- 7.3 Equipment

SECTION 7: Apparatus and Equipment

7.1 Fire Apparatus – New and Replacement Schedules

The reallocation of vehicles from one station to another is not a simple matter. When assessing a fire department's ability to respond and meet the needs of the community, the Fire Underwriters Survey utilizes the age of a fire truck as one of its guidelines. In the following chart, the highlighted areas define what the County of Brant should be considering when it comes to forecasting its fire truck replacements.

TABLE #9: FUS – Vehicle Replacement Recommendations

(Green areas reflect the CBFD vehicle expectations for the community)

Apparatus Age	Major Cities ³	Medium Sized Cities ⁴ or Communities Where Risk is Significant	Small Communities ⁵ and Rural Centres
0 – 15 Years	First Line	First Line	First Line
16 – 20 Years	Reserve	Second Line	First Line
20 – 25 Years ¹	No Credit in Grading	No Credit in Grading or Reserve ²	No Credit in Grading or Reserve ²
26 – 29 Years ¹	No Credit in Grading	No Credit in Grading or Reserve ²	No Credit in Grading or Reserve ²
30 Years ¹	No Credit in Grading	No Credit in Grading	No Credit in Grading
- 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) - 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. - Major cities are defined as an incorporated or unincorporated community that has: - a populated area (or multiple areas) with a density of at least 400 people per square kilometre; AND - a total population of 100,000 or greater. - Medium Communities are defined as an incorporated or unincorporated community that has: - a populated area (or multiple areas) with a density of at least 200 people per			

square kilometre; AND

b. a total population of 1,000 or greater.

5. *Small Communities are defined as an incorporated or unincorporated community that has:*

a. no populated areas with densities that exceed 200 people per square kilometre; AND

b. does not have a total population in excess of 1,000.

The FUS is used by insurance companies to determine the cost rating on fire insurance in the community. FUS evaluates several areas to determine their ratings, including water supply, station locations, training, and even apparatus. Where the fire department adheres to the recommended replacement timelines through an identified capital replacement schedule, the department will retain its fire rating relative to the individual topic of review. This vehicle replacement cycle of first line response vehicles may affect the FUS insurance rating for the County.

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

Another standard that supports a regular replacement schedule of fire vehicles is the NFPA 1911, *Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire Apparatus*. This standard includes guidance on retirement criteria for fire apparatus. This standard recommends that all front-run vehicles are replaced on a 15-year cycle, with ability to extend to 20 years. It should be noted that this replacement cycle is an industry recommendation that is not always consistently adhered to throughout the fire service.

A brief survey found that some departments are replacing their front-run units as early as 12 years (urban communities) and up to a maximum of 20 years. Normally, vehicles that are kept longer than 20 years are "back-up" units that are put into service on a very sporadic basis.

There is no national standard that legally mandates the replacement of emergency vehicles, but 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 as it equates to

increased costs of the apparatus. More importantly, these vehicles are relied upon for their performance.

Light duty vehicles such as pickup trucks, SUVs, and vans are often scheduled for replacement between 7- and 15-years, dependant on their use.

For the most part, the CBFD is well equipped with pumper trucks, aerial, rescues, and tankers. There also appears to be a good level of support vehicles and equipment to meet the general needs of the Department. General replacement schedules are identified and promoted by the Fire Chief in the capital forecast for the fire trucks and large cost items.

TABLE #10: Apparatus Replacement Schedule

Station	FD ID#	Year	Designation	Make Model	In Service	Replacement Date
Paris	311	2013	Pumper	Spartan Dependable	2015	2035
	312	2002	Pumper	Kenworth Pierce	2002	2022
	314	2004	Tanker	Peterbilt Danko	2004	2024 – reserve 2029
	317	2006	Aerial	American LaFrance	2007	2031/2032
	319	2017	Rescue	RAM FLEV	2017	2032-2037
		2009	14' Boat	Zodiac MR2 GR w/trailer	2011	2021
		2013	Ranger	Polaris Ranger 6x6	2013	2033
		2013	Polaris Trailer	Miska 6x12 Flatbed	2013	As required
Airport	321	2003	Pumper	American LaFrance	2013	2023 – reserve/parts
	324	2014	Pumper/Tanker	Kenworth Spartan	2014	2034
Burford	331	2015	Pumper	HME	2016	2035
	334	2011	Pumper/Tanker	International Asphodel	2011	2031
	335	2004	Tanker	Peterbilt Danko	2004	2024-2029 reserve
	339	2014	Rescue	Ford F550 Dependable	2014	2029-2034
Cainsville	341	2020	Pumper	Spartan Dependable	2020	2040
	342	1999	Pumper	Spartan Almonte	2012	2024 – reserve
	344	2008	Pumper/Tanker	Kenworth Pierce	2008	2028
Mt. Pleasant	351	2001	Pumper	Kenworth Pierce	2001	2021
	354	2010	Pumper/Tanker	Kenworth Rosenbauer	2010	2030
	359	2017	Rescue	RAM FLEV	2017	2032-2037
		2013	Ranger	Polaris Ranger 6x6	2013	2033
		2013	Polaris Trailer	Miska 6x12 Flatbed	2013	As required

Station	FD ID#	Year	Designation	Make Model	In Service	Replacement Date
Onondaga	361	2008	Pumper	Kenworth Pierce	2008	2028
	364	2019	Tanker	Kenworth Dependable	2020	2040
	369	2009	Rescue	Dodge 5500	2012	2024
		2009	14' Boat	Zodiac MR2 GR w/trailer	2011	2021
		2018	Gator	JD Gator XUV835 w/trailer	2018	2038
St. George	371	2005	Pumper	Freightliner ALF	2005	2025
	374	2007	Pumper/Tanker	Freightliner ALF	2007	2027
	375	2007	Tanker	Freightliner Dependable	2007	2027
	379	2011	Rescue	Freightliner - Dependable	2011	2031-2036
Scotland	381	2000	Pumper	GMC Fort Garry	2000	2020
	384	2014	Tanker	Kenworth Dependable	2015	2035
	389	1996	Rescue	GMC Dependable	1996	2020 (transfer to rehab)
Reserve	394	1986	Tanker	Ford-F800 Dependable	1987	To be withdrawn - spare
Admin	270	2013	Car 1	Dodge Durango	2013	2021
	281	2018	Car 2	Toyota Highlander	2018	2026
	280	2015	Car 3	RAM Pick Up	2015	2023
	273	2014	Car 4	RAM Pick Up	2014	2022
	271	2017	Car 5	RAM Pick Up	2017	2027

NFPA and FUS both recommend replacement of front-run units after 20 years. This same vehicle can then be put into a secondary role. As such, all front-run units should be scheduled for replacement at the 20-year stage with the back-up/secondary units being replaced at 25 years. Once a pumper truck has passed the 25-year stage, no credit is given by Fire Underwriters.

7.2 Maintenance

The County of Brant Fire Department does not have its own mechanical division to complete repairs and testing to its vehicles and equipment, but they can conduct minor repairs and upgrades due to some of the volunteer firefighter's qualifications. If a major repair is required, a decision is made on whether the repair can be handled in-house or if it is a specialized repair that needs to be contracted out to a third-party. It is recommended that the Fire Chief review potential options of an in-house service/share with County Operations for mechanical services, maintenance of generators, gas powered equipment, apparatus, and service vehicle maintenance.

7.3 Fire Department Equipment & PPE

Tracking the completion of annual testing should be an organization's priority to ensure the functionality of equipment for the front lines. This tracking capability will allow the fire department to confirm that apparatus and equipment testing can be scheduled accordingly to minimize front line apparatus being unavailable.

During EMT field visits it was learned that the Department has taken steps to obtain a second set of bunker gear for each firefighter; this is a significant step for the health and wellness of the firefighters.

The CBFDF CSA Z94 Respiratory Protection Program is overseen by a third-party company. The state of the Self-Contained Breathing Apparatus (SCBA) is in fair condition but is nearing end of life. It is recommended that when considering procurement of new SCBA there should be consideration into the interoperability with fire service partners when the selection process has commenced.

Fire Administration should take immediate action to establish an asset management program and specifically a master equipment life-cycle plan to ensure that equipment replacement is occurring where applicable. It is a common practice to tie this equipment to the parent apparatus.

While some minor equipment repair is completed by the volunteer firefighters, a majority of the stationary equipment such as stand-by generators, breathing air compressors, fill stations, and portable equipment such as smaller pumps, chainsaws, Jaws of Life, lawn mowers, snow blowers, and boats are primarily serviced by third-party companies. Annual service testing for

fire hose, fire apparatus pump testing, ground ladders and aerial apparatus testing is currently serviced and tested by a third-party company.

Recommendation(s)

Rec #	Recommendation	Estimated Costs	Suggested Timeline
35	It is recommended that the Fire Chief review potential options of an in-house service/share with County Operations for mechanical services, maintenance of generators, gas powered equipment, apparatus, and service vehicle maintenance.	No costs associated; potential savings could be realized by way of joint department cooperation	Short-term (1-3 years)
36	It is recommended that when considering procurement of new SCBA, there should be consideration into the interoperability with fire service partners when the selection process has commenced.	No costs associated; potential savings could be realized through joint purchases	Short-term (1-3 years)
37	It is recommended that a Master Equipment Life-Cycle plan be established.	Staff time	Short-term (1-3 years)

SECTION 8 – Emergency Management

8.1 Emergency Management Program

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). The County has a dedicated CEMC responsible for ensuring the emergency response plan and training is current, and that the Emergency Operations Centres are maintained.

The County's Emergency Response Plan complies with all general requisite legislation. The primary and secondary Emergency Operations Centres (EOC) are functional spaces that can be set up, as needed, by the EOC group. The primary EOC is located at Fire Department Headquarters located in Paris, with the secondary EOC in Burford, the County building. Both facilities have back-up power that can be used in the event of a power failure.

The most recent Emergency Plan document is dated 2018. The County of Brant has an up-to-date plan and conducts annual training exercises to ensure that the Emergency Plan is reviewed and practiced on a regular basis. The Provincial Emergency Management Office notes that all emergency plans are to be reviewed and updated annually. Based on this recommendation, an update of the program is overdue.

Presently, the Fire Chief is the alternate CEMC, which is common with many communities. As the community grows and the Fire Chief's workload increases, consideration could be given to assigning the alternate duties to the Deputy Fire Chief. There is no Provincial legislation that identifies a community's fire chief as having to be the CEMC; only that the person needs to be properly trained to effectively carry out the duties of a CEMC.

Recommendation(s)

No recommendations for this section.

SECTION 9 – Mutual and Automatic Aid

9.1 Fire Service Agreements

9.2 Mutual Aid & Automatic Aid Agreements

SECTION 9: Mutual and Automatic Aid

9.1 Mutual Aid and Automatic Aid Agreements

Mutual aid, automatic aid, and fire protection agreements are programs used to:

- Support a community's fire department at times when local resources are exhausted.
- Offer quicker response coverage to areas that may be closer to a bordering fire department's response area than that of the host department.
- Create an automatic response by bordering fire departments to properties that are closer to their fire stations than that of the host fire department.

In fire and emergency services, mutual aid is an agreement among emergency responders to lend assistance across jurisdictional boundaries. This may occur due to an emergency response that exceeds local resources, such as a disaster or a multiple alarm fire. Mutual aid may be an ad hoc request, occurring only as needed. It may also be a formal standing agreement or cooperative emergency agreement on a continuing basis, ensuring that resources are dispatched from the nearest fire station, regardless of which side of the jurisdictional boundary the incident is on.

Agreements that send closest resources are regularly referred to as "automatic aid agreements".

County of Brant Fire Department has positive, working relationships with the other fire departments in the surrounding jurisdictions. As such, mutual aid and automatic aid agreements are in place. During interviews by EMT staff, concerns were noted about the lack of a Mutual Aid Agreement with Six Nations Fire Department.

It is reported that there have been numerous occasions in which Cbfd personnel and resources have responded into Six Nations to provide emergency coverage due of the lack of firefighters available within the Six Nations Reserve. This results in Cbfd resources being out of the County for long durations of time. The County of Brant should develop an official agreement with Six Nations for fire protection.

Presently, the County of Brant has several automatic or mutual aid agreements in place with:

- County of Norfolk Fire Department for automatic aid
- Township of North Dumfries Fire Department, that dates to 1984

- Township of Blandford-Blenheim for automatic aid
- The City of Hamilton for emergency plan support
- The City of Hamilton for mutual aid support
- The City of Brantford for Emergency Management Services
- The City of Brantford for tanker support

The Fire Chief has demonstrated a practical approach to ensuring that the community of the County of Brant receives the best, most efficient level of fire protection possible based on the available resources. To keep this positive initiative credible, it is recommended that the Fire Chief review all fire service agreements annually to ensure they are meeting the needs of the County.

There is a current OFMEM Mutual Aid Response Plan in effect for the municipalities of the County of Brant and the City of Brantford that does not include the Six Nations. It is recommended that the fire chiefs of these fire services (COB and Six Nations) develop a mutual aid plan, and have it approved by the OFMEM.

Recommendation(s)

Rec #	Recommendation	Estimated Costs	Suggested Timeline
38	It is recommended that County of Brant and the Six Nations of the Grand River develop a fire services agreement including cost recovery mechanisms for assistance provided.	Staff time Cost recovery once implemented.	Short-term (1-3 years)
39	It is recommended that the Fire Chief review present automatic and mutual aid agreements and explore future opportunities on an annual basis.	Staff time	Short-term (1-3 years) and ongoing

SECTION 10 – Finance, Budgeting, and Capital Investment Plan

10.1 Operating and Capital Budgets

10.2 Development Charges Program

SECTION 10: Finance, Budgeting, and Capital Investment Plan

10.1 Operating and Capital Budgets

The County of Brant Fire Department has an annual operating budget that appears to offer the Fire Chief the funds required to manage and support the Department's staff, facilities, and equipment in an effective manner.

CBFD's capital forecast fluctuates on an annual basis based on the equipment that has been identified for replacement (each year).

During the review of the budget process for both operating and capital, it was evident that CBFD is well configured in both areas. This would also indicate an adequate level of support by Council and the County's senior management team for assisting the Fire Department in meeting its service goals.

When reviewing this section, one of the key areas that EMT looks for is whether actual operating expenditures are identified and tracked by the Department. During the review of the operating budget, it was noted that all key accounts and 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
- Station maintenance

Capital Budget Line Items:

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

10.1.1 Operating Budget

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

10.1.2 Capital Forecasts

It appears that there is a vehicle replacement cycle noted in the capital forecast. The fire truck replacement cycle is based on the FUS recommendations for frontline vehicles. This replacement cycle mirrors the industry standards of 15 and 20 years, depending on the vehicle's function. While equipment budgeting is in place, it is not tied to a Master Equipment Life-Cycle plan.

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

- one pumper truck for every eight
- one spare aerial truck for every eight
- one spare tanker truck for every eight

This applies even when there are less than eight units; there should be a replacement vehicle designated for up to eight vehicles for back up if one of those units goes out of service.

The Fire Chief and his staff are working hard to ensure that equipment is being replaced and/or upgraded on a regular cycle and on an as needed basis. Some of the Department's fleet is at or near the recommended replacement age, but the Fire Chief is aware of this and is working with Council and County staff to secure replacements.

Recommendation(s)

No recommendations for this section.

SECTION 11 – Conclusion

11.1 Conclusion

11.2 Recommendations

SECTION 11: Conclusion and Recommendations

11.1 Conclusion

During the review conducted by Emergency Management & Training Inc., it this report along with any estimated costs and suggested timelines for implementation. This FMP document is a culmination of 39 recommendations.

Rec #	Recommendation	Estimated Costs	Suggested Timeline
Section 1 – Fire Department and Community Overview			
No recommendations in this section.			
Section 2 – Planning and Stakeholder Surveys			
1	The E&R By-law document should include a table to identify the dates for review, along with noting whether updates were made. It is also recommended that the Fire Chief either have a response expectation included in the updated By-law, or that at the very least the Fire Chief report to Council on the annual CBFDF response comparisons to demonstrate that the Department is either improving or may require additional resources to meet response expectations.	Staff time	Immediate (0-1 year) and ongoing
2	It is recommended that the Fire Chief and senior staff continue an annual internal survey similar to the HRIR Satellite survey in February 2020 to obtain feedback from firefighters and staff. This information can be useful in identifying and addressing the staff concerns.	Staff time	Annually
3	The Fire Chief should plan to update the FUS – Tanker Shuttle Accreditation prior to the expiry date in 2024. The County should also maintain and expand the water source infrastructure that may be needed to improve the access to water supplies such as dry hydrants and cisterns.	\$10,000 plus staff time	Every 5 years

Rec #	Recommendation	Estimated Costs	Suggested Timeline
Section 3 – Risk Assessment			
4	The CBFD should actively promote/support the installation of residential sprinkler systems.	Staff time	Short-term (1-3 years)
5	It is recommended that CBFD give consideration to training the suppression officers on how to conduct fire safety inspections as an alternative means of achieving the FUS recommended frequency of inspections.	Staff time	Short-term (1-3 years)
6	It is recommended that the Fire Chief review CBFD's inspection program to identify levels of desired frequency relative to the inspections noted in the FUS Inspection Chart.	Staff time	Short-term (1-3 years)
7	The CBFD develop a sustainable pre-incident development and review program.	Staff time	Short-term (1-3 years)
8	It is recommended that the Fire Chief record and evaluate volunteer firefighter data analytics, assessing when there is an effective firefighting force on scene. This evaluation can assist with identifying possible gaps in staffing and response times.	Costs related to staff time only, unless the evaluation prompts the need for more VFFs	Immediate (0-1 year) and ongoing
Section 4 – Department Staffing and Programs			
9	Hire three career firefighters to provide day shift staffing Monday to Friday (0700-1700 hrs) at Paris - Station 1. Minimum staffing of two (2) firefighters.	\$300,000-\$330,000 per year	Short-term (1-3 years)
10	Assign the position of Duty Officer to rotate on-call coverage along with the Fire Chief and Deputy Chief.	To be determined	Short-term (1-3 years)
11	It is recommended to fill the second Administrative Assistant position that has been left vacant	\$50,000 (per annum)	Short-term (1-3 years)
12	It is recommended that the CBFD complete an OFMEM SIR after each public education event for statistical purposes.	Staff time	Short-term (1-3 years)
13	Enhance the training and certification of volunteer officers (Lieutenants and Captains) in the areas of fire prevention and public education so they are trained	Staff time	Short-term (1-3 years)

Rec #	Recommendation	Estimated Costs	Suggested Timeline
	and certified to at least NFPA 1031 – Fire Inspector I and NFPA 1035 – Fire and Life Safety Educator I.		
14	The County of Brant to hire an additional Fire Prevention/Public Fire Life Safety Educator that would be dedicated to conducting public education. This individual may also conduct inspections as required.	\$70,000 to \$105,000	Short-term (1-3 years)
15	Begin succession planning in Fire Prevention and senior officer positions prior to any retirement announcements to maintain continuity in the office and ensure a seamless transition.	Staff time	Short-term (1-3 years)
16	Promote a current FPO/PFLSO to the position of Chief Fire Prevention Officer.	\$15,000 per annum difference	Short-term (1-3 years)
17	Assign an FPO to focus solely on Public Education opportunities.	No additional cost	Short-term (1-3 years)
18	It is recommended that CBFD consider the purchase and appropriate placement of a mobile training unit to effectively accommodate live fire training needs of the firefighters.	\$250,000 to \$500,000 depending on options chosen	Mid-term (4-6 years)
19	Hire a full-time Training Officer.	\$110,000 for full-time	Short-term (1-3 years)
20	Hire a part-time Training Officer position to assist with the implementation and delivery of training programs.	\$50,000	Mid-Long-term (4-10 years)
21	EMT recommends additional hours be allocated for the volunteer firefighter-based training with a needs assessment review of the training program currently established.	Increases based on the needs assessment	Short-term (1-3 years)
Section 5 – Fire Suppression and Dispatching			
22	Fire Chief should conduct a regular review of data analytics to watch for shifts in call locations due to community growth.	Staff time	Ongoing
23	Develop a platoon response plan for nighttime single unit responses (e.g., medical calls) to limit paging to 4-5 firefighters. This would include reducing the number	Cost savings to be determined	Short-term (1-3 years)

Rec #	Recommendation	Estimated Costs	Suggested Timeline
	of volunteer firefighters responding to certain types of calls on prescribed shifts for Station 1, 3 and 7.		
24	It is recommended that the Cbfd monitor sick time related to PTSD or other mental health illness and the impacts that may be placed upon staffing, shift scheduling/coverage, and any financial implications.	Staff time	Short-term (1-3 years)
25	Cbfd issue a Request for Information to fire dispatch centres to look at capabilities, pricing, and options to meet future requirements of fire communications.	Staff time	Short-term (1-3 years)
26	Track the percentage of times a station is unable to send a vehicle within its identified response zone.	Staff time	Short-term (1-3 years)
27	Review 3 rd party technology for responders and Fire Prevention Staff currently used and look to maximize its potential.	Staff time	Short-term (1-3 years)
28	An analysis and revision of the Fire Station Protection Areas be completed by the Fire Chief.	Staff time	Bi-annually and ongoing
Section 6 – Facilities			
29	Design and construct/lease a north Paris station to be located in the area of Grand River St. N and County Road 52. Purchase a Pumper/Tanker Training and gear for additional firefighters.	Construction \$3-4 million. Lease could be \$100-150,000 a year. Pumper tanker \$650-750,000. Training and additional gear for new firefighters \$100,000.	Mid-term (4-6 years)
30	Design and construct a new Station 1 Headquarters and Training Centre in the vicinity of Rest Acres Road and Hwy 403 – dispose of the current Station 1 and 2.	Construction \$8-9 million, less the sale of current Stn 1 & 2	Long-term (7-10 years)
31	Exposure to diesel exhaust can be reduced through engineering controls at the source. The installation of direct capture exhaust system extractors is	\$375,000 per station	Short-term (1-3 years)

Rec #	Recommendation	Estimated Costs	Suggested Timeline
	recommended in all stations. Stations 4, 6 & 8 will be outfitted in the new fire stations.		
32	Driveway replacement should be considered in the short-term for Burford - Station 3.	\$50-100,000	Short-term (1-3 years)
33	Back-up power generators should be installed for stations 2, 3 & 7.	\$100,000 per station	Short-term (1-3 years)
34	Bunker gear storage rooms should be provided for stations 1, 3, 5 & 7.	\$300,000 per station	Short-term (1-3 years)
Section 7 – Apparatus and Equipment			
35	It is recommended that the Fire Chief review potential options of an in-house service/share with County Operations for mechanical services, maintenance of generators, gas powered equipment, apparatus and service vehicle maintenance.	No costs associated; potential savings could be realized by way of joint department cooperation	Short-term (1-3 years)
36	It is recommended that when considering procurement of new SCBA, there should be consideration into the interoperability with fire service partners when the selection process has commenced.	No costs associated; potential savings could be realized through joint purchases	Short-term (1-3 years)
37	It is recommended that a Master Equipment Life-Cycle plan be established.	Staff time	Short-term (1-3 years)
Section 8 – Emergency Management			
No recommendations in this section.			
Section 9 – Mutual and Automatic Aid			
38	It is recommended that County of Brant and the Six Nations of the Grand River develop a fire services agreement including cost recovery mechanisms for assistance provided.	Staff time. Cost recovery once implemented.	Short-term (1-3 years)
39	It is recommended that the Fire Chief review present automatic and mutual aid agreements and explore future opportunities on an annual basis.	Staff time	Short-term (1-3 years)

Rec #	Recommendation	Estimated Costs	Suggested Timeline
			and ongoing
Section 10 – Finance, Budgeting, and Capital Investment Plan			
No recommendations in this section.			

SECTION 12 – Appendices

Appendix “A” – Definitions and References

Appendix “B” - OFMEM guideline on
Recruitment and Retention

Appendix “C” – Response Data for 2018 and
2017

Appendix “D” – FUS – Superior Tanker Service
- Accredited

SECTION 12: Appendices

Appendix A – Definitions and References

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

4. For the purposes of this Act, an automatic aid agreement means any agreement under which,
- a) a municipality agrees to ensure the provision of an initial response to fires, rescues and emergencies that may occur in a part of another municipality where a Fire Department in the municipality is capable of responding more quickly than any Fire Department situated in the other municipality; or
 - b) a municipality agrees to ensure the provision of a supplemental response to fires, rescues and emergencies that may occur in a part of another municipality where a Fire Department situated in the municipality is capable of providing the quickest supplemental response to fires, rescues and emergencies occurring in the part of the other municipality. 1997, c. 4, s. 1 (4).
 - *Automatic aid is generally considered in other jurisdictions as a program designed to provide and/or receive assistance from the closest available resource, irrespective of municipal boundaries, on a day-to-day basis.*

Commission of Fire Accreditation International Community Definitions:

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

National Fire Protection Association (NFPA) Documents:

- NFPA 1201 - Standard for Providing Fire and Emergency Services to the Public
- NFPA 1500 – Standard on Fire Department Occupational Safety and Health Program, 2013 editions
- NFPA 1710 – Standard for the Organization and Deployment of Fire Suppression Operations, Medical Operations, and Special Operations to the Public by Career Departments
- NFPA 1720 – Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments.

Municipal Responsibilities (FPPA 1997)

2. (1) Every municipality shall,
 - 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:

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 – OFMEM Guideline on Recruitment and Retention

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 Chiefs of volunteers and composite fire services with a general overview of principles to consider in the recruitment and retention of volunteers.

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

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

Definition of Volunteer:

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

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

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

Recruitment and Retention Program:

The Benefits

A coordinated, organized program demonstrates:

- how seriously the leadership takes the services provided and the individuals who provide that service,
- sound risk management principles,
- proactive vs. reactive leadership within the department, and
- leadership's commitment to recognize volunteers, families and employers who support volunteerism.

It identifies:

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

It allows planning for:

- recruitment and selection,
- retention and succession, and
- training and development of volunteers.

Responsibility for Recruitment

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

Annual Recruitment and Retention Plan

An annual recruitment and retention plan is a cyclic, ongoing process that will assist the fire service in planning and focusing its efforts. It should be a logical consideration of the time of the

year, changing commitments throughout the seasons, weather, and psychological impact of seasons, milestones in the department, annual events, and other trends. This will prevent the department from coming up short in membership by not having good candidates to replace those leaving.



Policies and Guidelines

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

Evaluation

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

Components in the Recruitment and Retention Cycle:

Pre-Recruitment

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

Recruitment

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

Selection and Hiring

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

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

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

Orientation and Probation

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

Ongoing Recruitment Efforts

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

Ongoing Retention Efforts

Recruiting and training new volunteers is just the beginning. The long-term challenge is to create an environment in which individuals continue to be motivated, interested, challenged, supported, and satisfied with the work they have 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

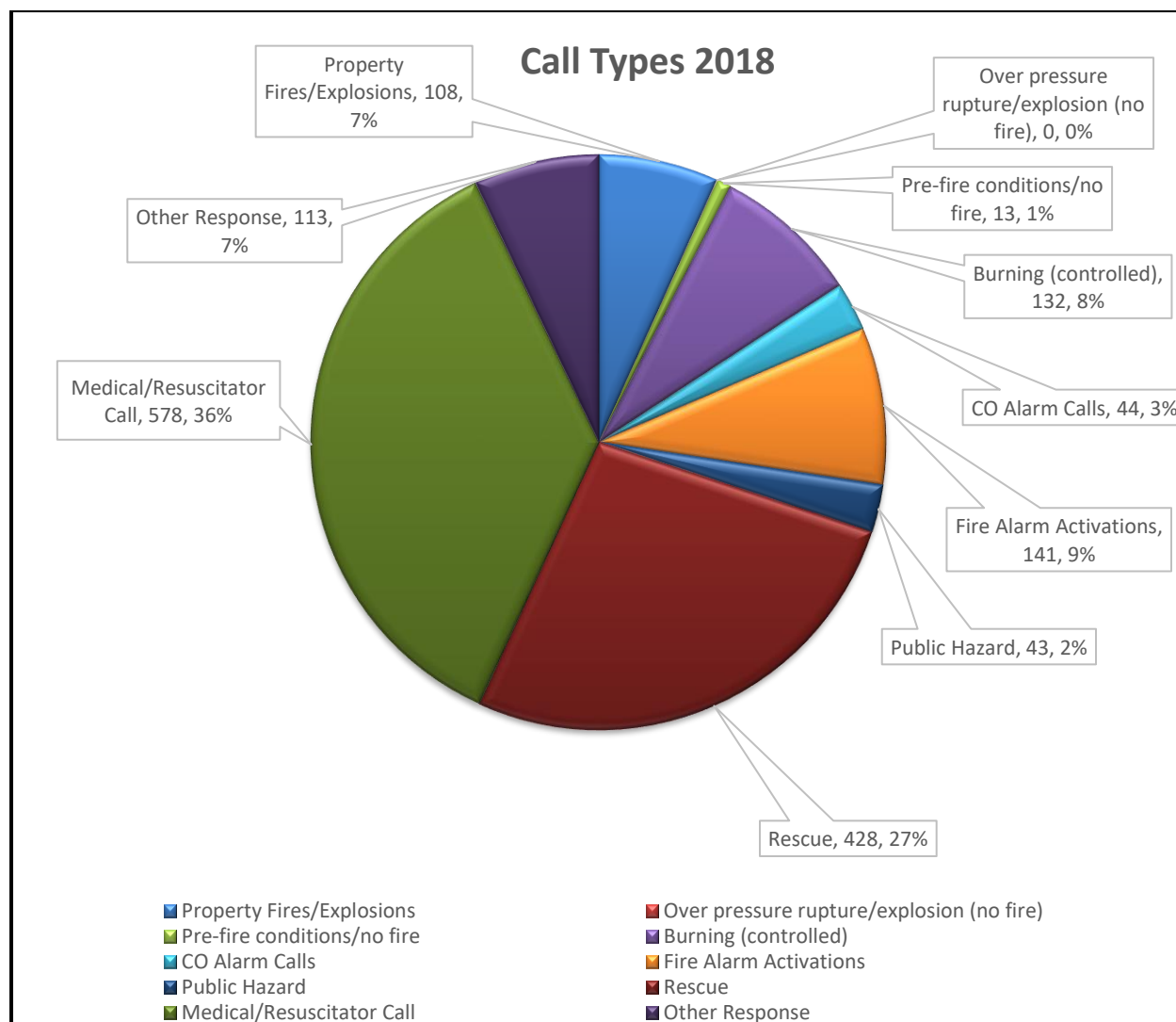
The following guidelines can be referenced when conducting a needs assessment to determine the role, quantity and characteristics of Volunteers required by the fire service.

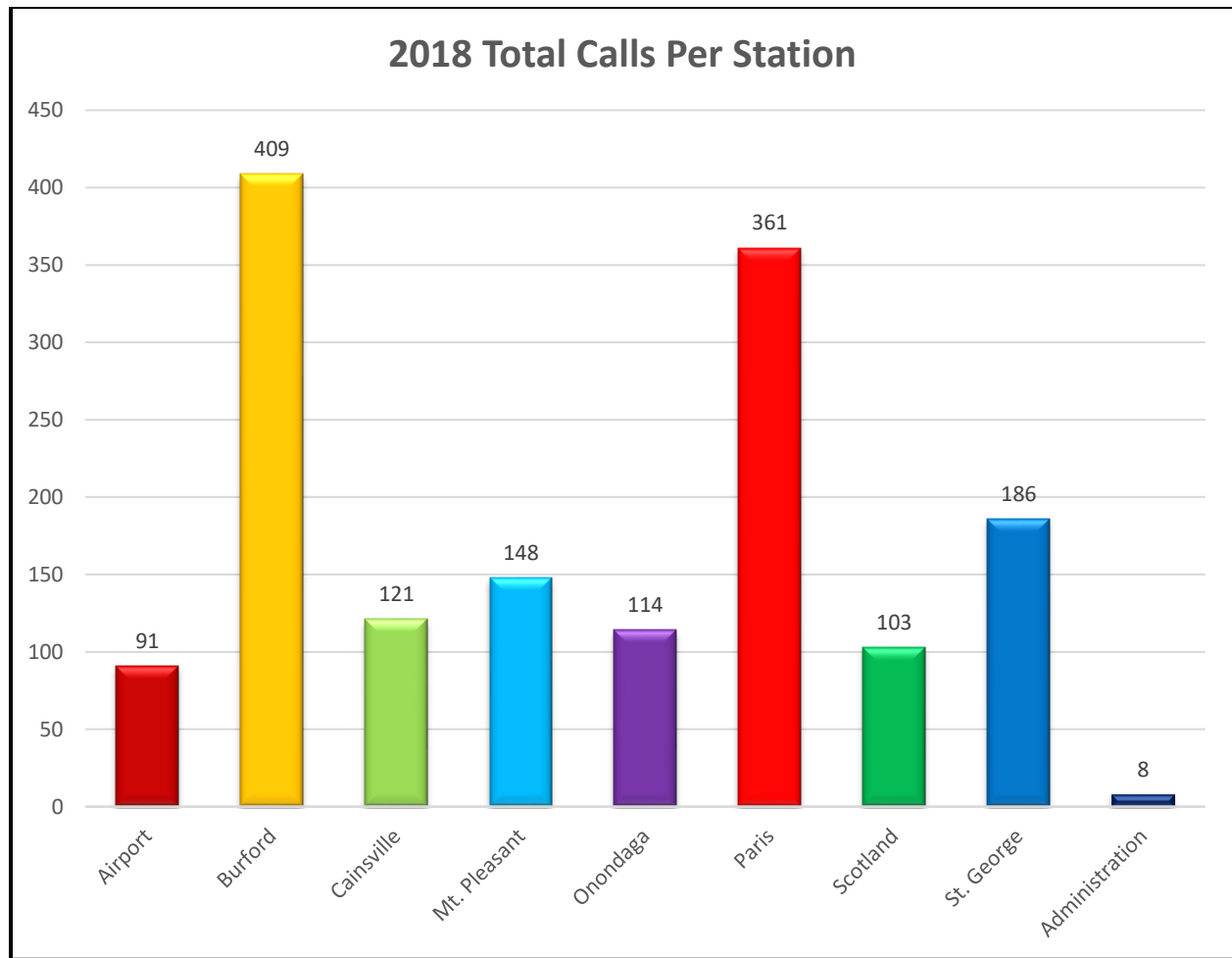
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04-12-13 Core Services (Response and Support) and Associated Guidelines

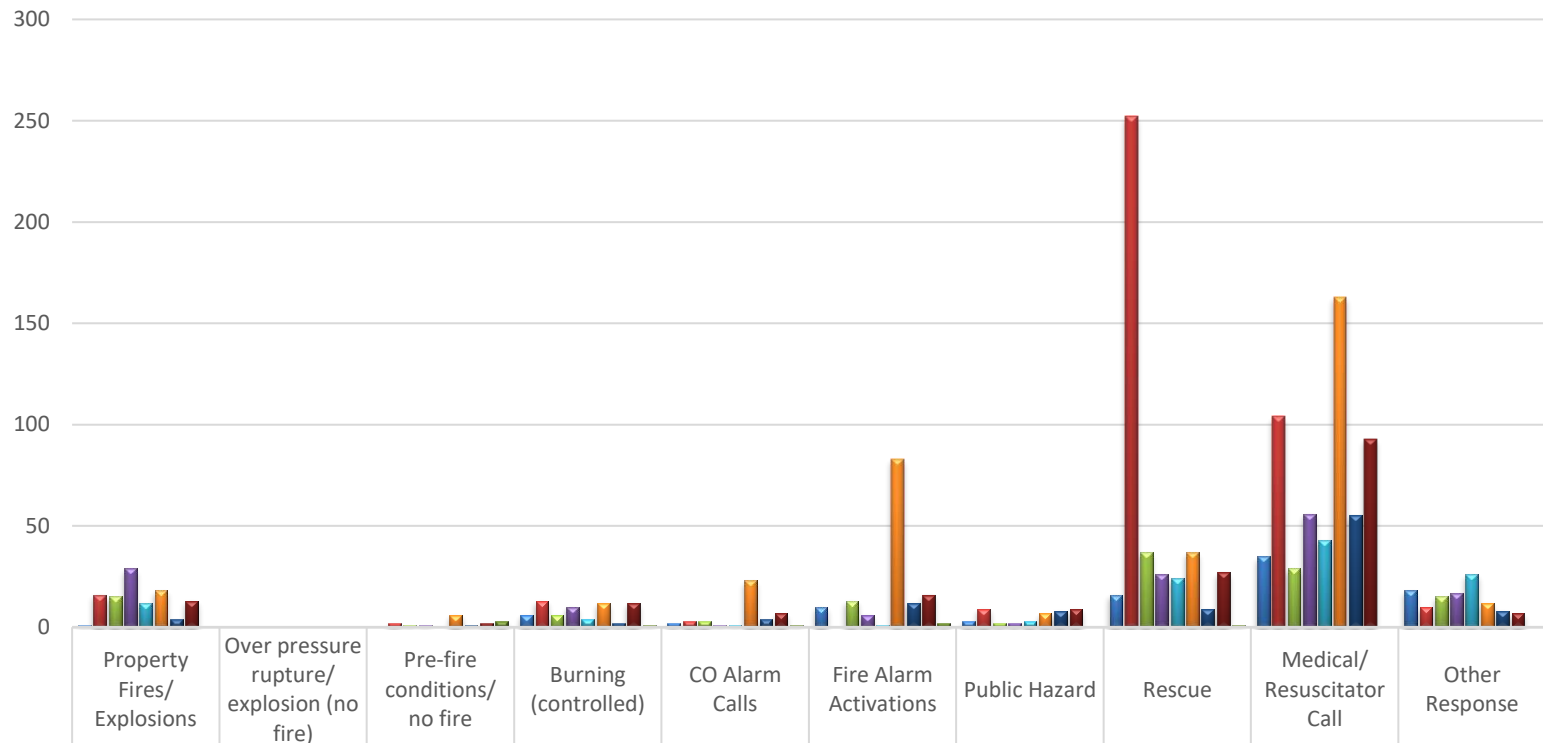
04-40A-03 Simplified Risk Assessment

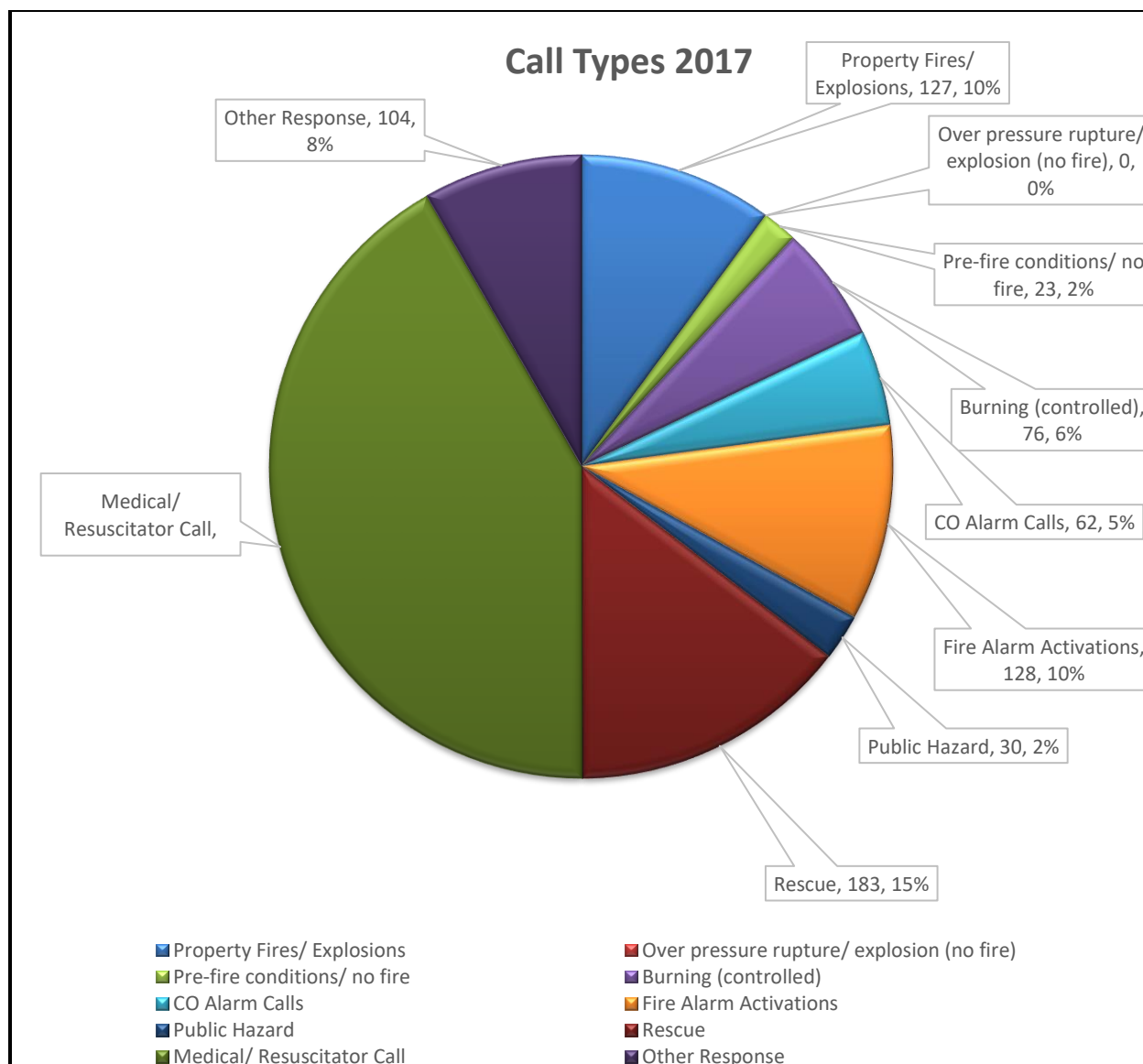
Appendix C – Response Data for 2018 and 2017

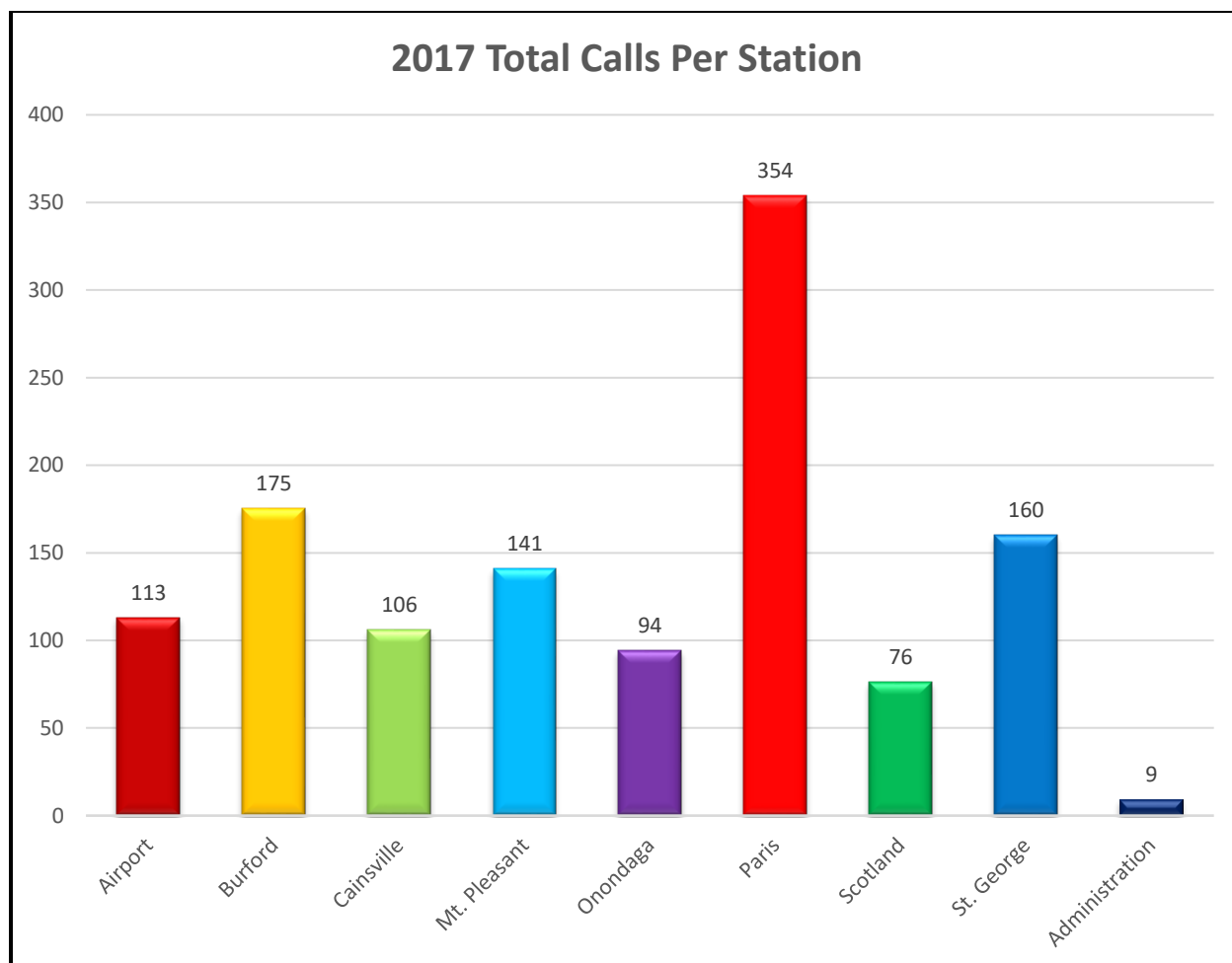




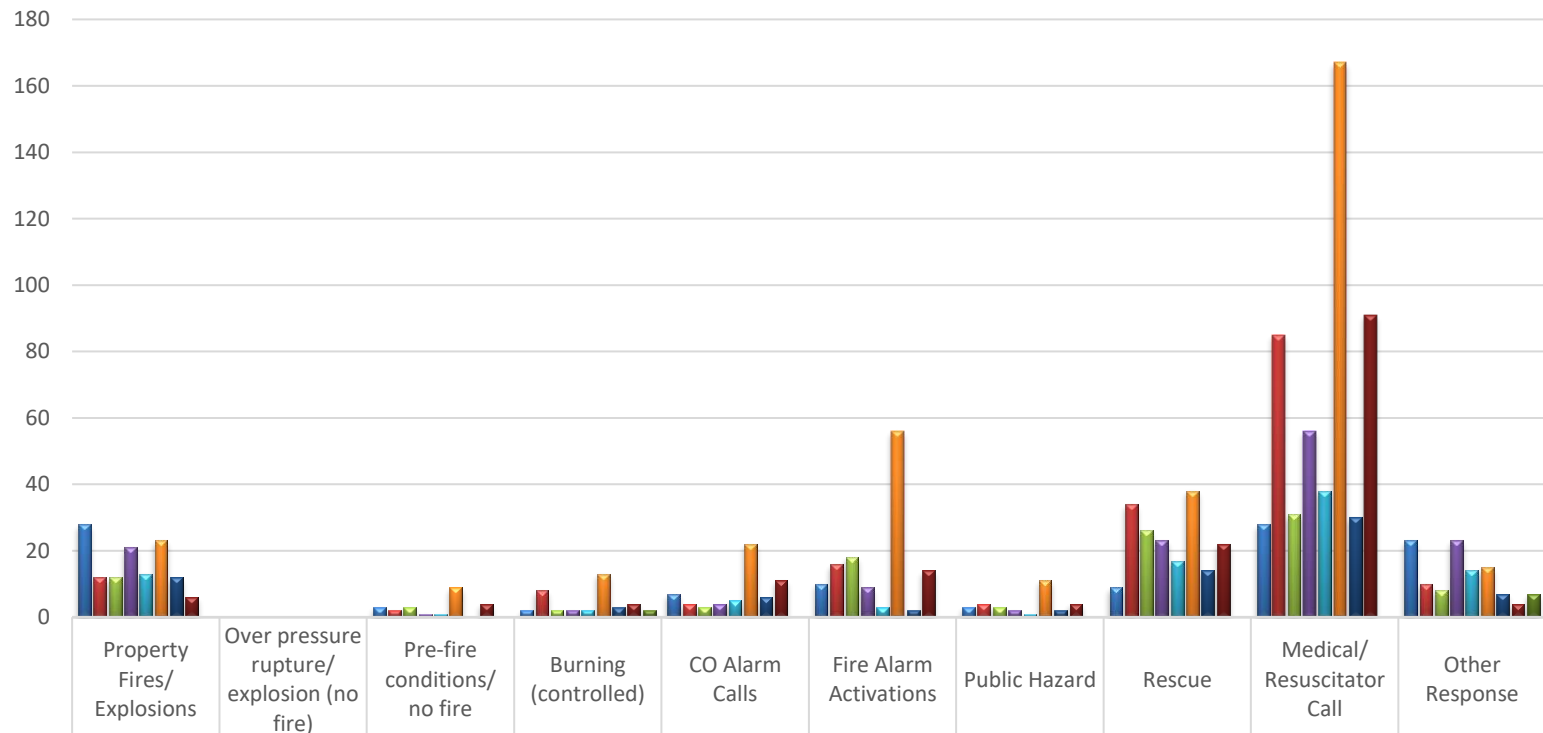
Calls 2018







Calls 2017



Appendix D – FUS – Superior Tanker Service – Accredited



Fire Underwriters Survey™

January 30th, 2020

RECOGNITION FOR FIRE INSURANCE GRADING RECEIVED

County of Brant
County of Brant Fire Department

Superior Tanker Shuttle Service - Accredited

I am pleased to advise you that the above mentioned fire protection district within the province of Ontario was recently registered in the fire insurance grading index as being accredited for the delivery of Superior Tanker Shuttle Service.

The requirements for this accreditation are stringent and verify that the fire protection district is capable of delivering the minimum accepted fire flows to detached dwellings throughout the fire protection district and within 8 kilometres (personal lines) or 5 kilometres (commercial lines) by road of the below accredited Fire Stations. This accreditation is an equivalency to the minimum requirements for hydrant protection, as set out by the insurance industry and the Fire Underwriters Survey.

Fire Underwriters Survey has provided information on fire protection and risk levels to the insurance industry in Canada since 1883. Fire Underwriters Survey was previously operated under the auspices of the Insurers Advisory Organization and CGI; however, is now operated by SCM Opta Information Intelligence.

Should you have any questions or concerns related to the Fire Underwriters Survey, the Superior Tanker Shuttle Service Accreditation process or any other related area, please contact the offices of Fire Underwriters Survey for further information.

Please note that this accreditation expires on September 20th, 2024 and is valid for the following fire stations:

- Fire Station #1 - Paris
- Fire Station #2 - Airport
- Fire Station #3 - Burford
- Fire Station #4 - Calnsville
- Fire Station #5 - Mt. Pleasant
- Fire Station #6 - Onondaga
- Fire Station #7 - St. George
- Fire Station #8 - Scotland

Personal Lines Fire Insurance Classification – DPG 3B(S) – Flow Rate of 261 IGPM
Commercial Lines Fire Insurance Classification – PFPC 6(S) – Flow Rate of 521 IGPM

David Wilson
Public Fire Protection Specialist
Fire Underwriters Survey

POWERED BY **opta**

AN SCM COMPANY

Western region: 1-877-255-5240
Central region: 1-800-268-8080
Eastern region: 1-800-263-5363

fus@opta-intel.ca
fireunderwriters.ca
opta-intel.ca



Fire Underwriters Survey™

January 30th, 2020

Geoff Hayman
Fire Chief
County of Brant Fire Department
61 Dundas Street East
Paris, ON
N3L 3H1

Re: Superior Tanker Shuttle Accreditation Effective September 20th, 2019

I am pleased to advise you that the Fire Underwriters Survey has evaluated your application for re-accreditation to deliver Superior Tanker Shuttle Service and has determined that your fire protection district qualifies for accreditation.

Your fire protection district name has been added to the list of accredited agencies for the delivery of Superior Tanker Shuttle Services and the appropriate changes have been made to the Canadian Fire Insurance Grading Index.

Please find the enclosed certificate of accreditation and a brief letter of recognition.

As an accredited agency, constituents within your fire protection district who own detached dwellings and are within a qualifying road distance of the responding fire station (8 kilometres – DPG, 5 kilometres PFPC), are eligible to receive a significant cost reduction in their fire insurance rates from the majority of insurers in Canada. Insurers utilize the information provided by Fire Underwriters Survey in setting property insurance rates throughout Canada. Insurers are advised that Superior Tanker Shuttle Service (STSS) Accredited fire protection districts qualify for hydrant protected equivalency status, and may be rated as protected.

It should also be noted that insurers are under no obligation to accept this equivalency; however, the Fire Underwriters Survey recommends that they do so.

As the Surveyor for the province of Ontario, I must advise you that the Superior Tanker Shuttle Service (STSS) Accreditation and benefits associated with the accreditation are contingent upon the fire protection district being capable of continuously meeting the requirements of the Superior Tanker Shuttle Service delivery and being continuously able to provide evidence of such capacity upon request. Should the capacity of the fire protection district to deliver this level of service change at any time, notification should be made immediately to the offices of Fire Underwriters Survey. Fire Underwriters Survey retains the right to revoke Superior Tanker Shuttle Service (STSS) Accreditation at any time.

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AN SCM COMPANY

Western region 1-877-255-5240

Central region 1-800-268-8080

Eastern region 1-800-263-5361

fus@opta.intel.ca

fireunderwriters.ca

opta.intel.ca



Fire Underwriters Survey™

The accreditation period is 5 years from the date of this letter. To maintain accreditation, the fire department must document practice of Tanker Shuttle Service; this documentation must be available for review.

Should you have any questions or concerns related to the Fire Underwriters Survey, the Superior Tanker Shuttle Service (STSS) Accreditation process or any other related area, please feel free to contact Fire Underwriters Survey for further information.

David Wilson
Public Fire Protection Specialist
Fire Underwriters Survey

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Western region: 1-877-255-5240
Central region: 1-800-268-8080
Eastern region: 1-800-263-5361

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