Emergency Management Group

2025

Six Nations Fire and Emergency Services

Master Fire Plan and Station Location Study

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EXECUTIVE SUMMARY

This Master Fire Plan (MFP) comprehensively reviews the Six Nations Fire and Emergency Service's (SNFES) strengths, weaknesses, opportunities, and challenges. This MFP also consists of a review of the community of Six Nations (through the development of a separate Community Risk Assessment (CRA) report), along with identifying present and future population statistics and anticipated growth of the community. By conducting these reviews, the Emergency Management Group Inc. (EMG) developed this 10-year Master Fire Plan for the SNFES.

Benefits of Master Planning

The benefits of master planning are many, but the key advantages are:

- Having a clearer vision of what future needs are to be implemented and when,
- A guide that includes options and budgetary estimates for implementation,
- Prioritization of each project, and
- The ability to communicate with staff and internal and external stakeholders about the organization's future goals.

The recommendations contained within this MFP document have been submitted to provide a set of strategies and goals for implementation that are aimed at assisting the Fire Chief and the Council in making decisions relating to the efficient allocation of SNFES resources and staffing. The recommendations provided by EMG have been broken down into the following timelines:

Immediate
0 to 1 year (should be addressed urgently due to legislative or health and safety requirements)

Short-Term
1 to 3 years

Mid-Term
4 to 6 years

Long-Term
7 to 10 years

Ultimately, the implementation of the recommendations will depend on the direction that the Council provides, as well as the allocation of associated resources and the ability to move forward with the associated recommendations contained within the document.

Scope of Work

As the original Request for Proposal (RFP) notes, the following describes the consultant's responsibilities in developing the MFP.

- The development of a Community Risk Assessment (CRA) based on the requirements of the *Fire Protection and Prevention Act, 1997 Ontario Regulation 378/18 Sections 1 – 4* and Schedule 1.
- Master Fire Plan (MFP) that will include an analysis of current and forecasted fire service delivery needs and provide a detailed 10-year implementation strategy for the Council's consideration. The report will consider the Fire Underwriters Survey (FUS) municipal grading system and opportunities per FUS category to improve those ratings.

This study and final document will include as minimum project deliverables:

- Governance Section
- Assess the needs of each division within the department.
- Assess fire stations and apparatus, staffing, training and prevention.
- Response capabilities
- Review of mutual and automatic aid programs
- Review of communication and NG 9-1-1
- Review of past reports and recommendations
- Detailed findings and recommendations by category based on legislation and industry best practices.
    - Include suggested implementation timelines, funding and associated operational and capital costs.

Summary Overview of Recommendations

Based on the information received during the meetings, the review of supplied documentation, and references to industry standards and best practices, there are 68 recommendations for consideration and inclusion by the fire chief, senior management, and Council to assist in developing the plan.

More information surrounding each recommended option can be found within the section from which it is derived. For quick reference, Section #9, contains a chart with all the recommendations, timelines, estimated costs and a short rationale for each recommendation.

Many of the recommendations noted are “staff time” related recommendations which will incur minimal costs as opposed to a recommendation relating to the building of a new facility or the need for more equipment.

It must be emphasized that any cost estimates noted in this document can vary significantly based on when the option is implemented and the level of implementation, as well as what the Fire Chief eventually recommends.

Note: When referring to staff time, it is assumed that the SNFES will utilize appropriate staff to accomplish the recommendation requirement.

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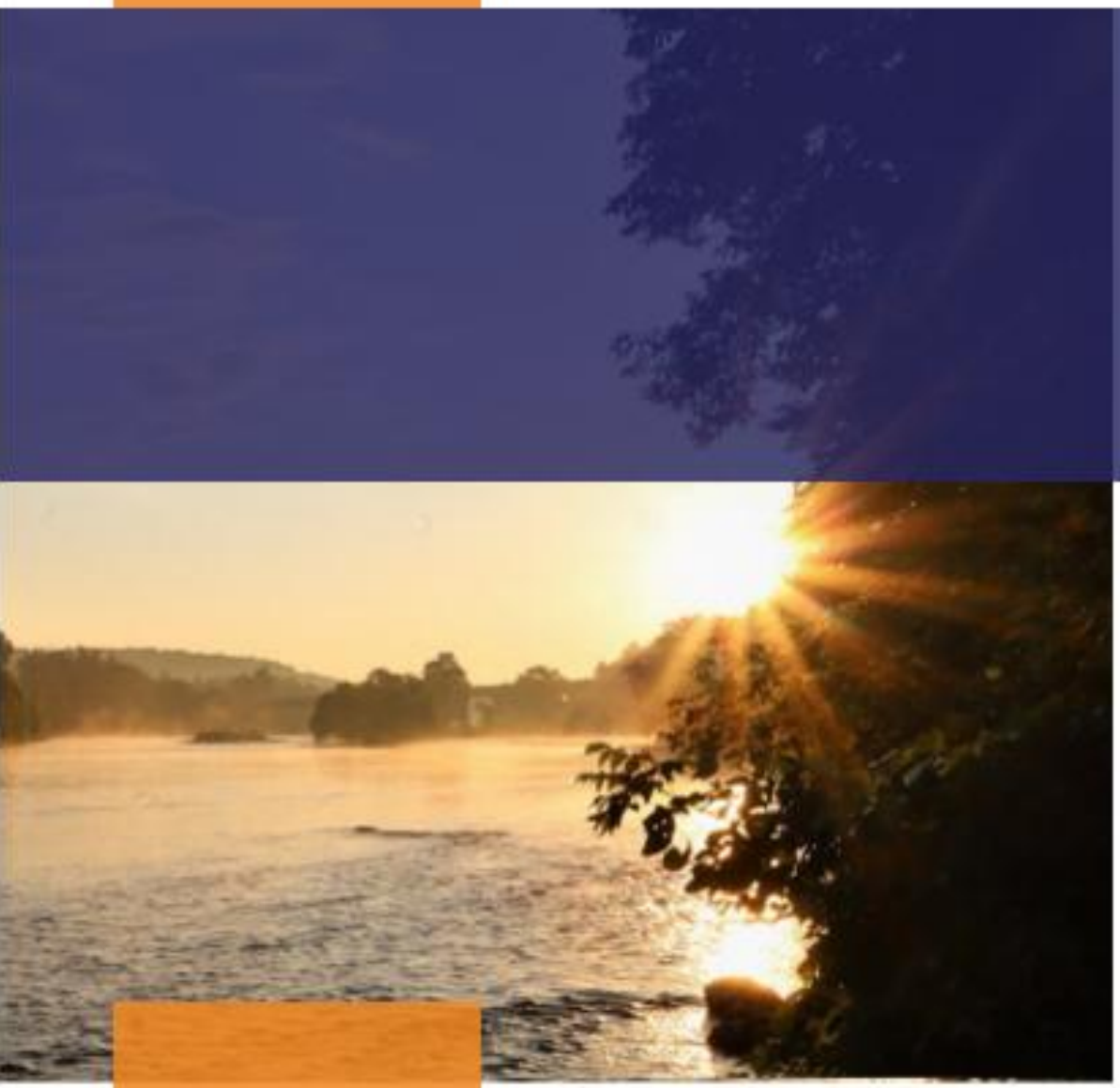
ACRONYMS

CAO	Chief Administrative Officer
CEMC	Community Emergency Management Co-Ordinator
CRA	Community Risk Assessment
CRRP	Community Risk Reduction Plan
EMCPA	Emergency Management and Civil Protection Act
EMG	Emergency Management Group Inc.
ERP	Emergency Response Plan
EOC	Emergency Operation Centre
MFP	Master Fire Plan
FPO	Fire Prevention Officer
FUS	Fire Underwriters Survey
HAZMAT	Hazardous Material
ICS	Incident Command System
IMS	Incident Management System
ISC	Indigenous Services Canada
NFPA	National Fire Protection Association
NIST	National Institute of Standards and Technology
OBC	Ontario Building Code
OFC	Ontario Fire Code
OFM	Office of The Fire Marshal

ACRONYMS

OHSA	Ontario Occupational Health and Safety Act
PPE	Personal Protective Equipment
RFP	Request for Proposal
RMS	Records Management System
SCBA	Self-contained breathing apparatus
SNFES	Six Nations Fire and Emergency Service
SOG	Standard Operating Guidelines
SOP	Standard Operating Procedures
SWOT	Strengths, Weaknesses, Opportunities, and Threats
WSIB	Workplace Safety & Insurance Board

Introduction



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INTRODUCTION

Project Methodology

EMG has based its review process on the community's initial RFP and EMG's proposal response document. The specific scope of work noted in the RFP was reviewed and included in each section of this document. The MFP review was completed by utilizing best practices, current industry standards, and applicable legislation as the foundation for all work undertaken.

EMG also utilized quantitative and qualitative research methodologies to understand the community's current and future needs and circumstances. Overall, the methodology involves considerable research, documentation review, data analysis, and stakeholder consultation. From that, the draft report and recommendations are derived. The final product is a living document that provides a high-level strategic direction for the SNFES Council.

To accomplish the scope of requirements, EMG has:

- Reviewed all related by-laws.
- Reviewed applicable provincial, and federal legislation.
- Reviewed planning statistics regarding the community and areas of growth projections over the next 10-20 years.
- Reviewed any previous risk assessment, council's strategic priorities, and other pertinent documents.
- Prepared a Community Risk Assessment (CRA).
- Reviewed current service agreements with neighbouring municipalities and any other current documents.
- Gathered information on operational requirements, including past and current response statistics (call volumes/response times) to analyze trends, staff availability/needs, response capabilities, etc.
- Reviewed service administration, including staffing, organizational structure, policies and procedures, administrative support, record keeping and information management/technology, purchasing and inventory control, public and media relations, and customer service.
- Toured the fire stations, conducting a location/ response analysis.
- Examined fire vehicles, apparatus and equipment, including the maintenance program.
- Reviewed fire service policies, procedures, emergency response operational guidelines, training programs and records.

- Collected information on the fire prevention program, including education programs, inspection reports/data, enforcement data, and investigations.
- Identified and compared industry best practices for fire and emergency services performance measurement.
- Reviewed current staff recruitment and retention practices, promotional policy, succession planning and demographics.
- Reviewed the operational and capital budgets, reserves, and current revenue generation programs within the emergency services and the Municipalities (development fees).

Based on these criteria, through meetings with the Council, senior leadership team, firefighters, and community stakeholders, the consulting team was able to complete a thorough review of elements that are working well and areas requiring improvement within the SNFES.

Performance Measures and Standards

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

- The *Fire Protection and Prevention Act (FPPA)*
- The Office of the Fire Marshal and Emergency Management (OFMEM) Communiques
- The *Ontario Occupational Health and Safety Act* (OHSA), with reference to the National Institute for Occupational Safety and Health (NIOSH)
- The Ontario Fire Service, Section 21, Advisory Committee Guidance Notes
- The National Fire Protection Association (NFPA) standards
- The FUS technical documents

Project Consultants

Although several staff at EMG were involved in the collaboration and completion of this MFP, the overall review was conducted by (in order of involvement):

- Lyle Quan, Fire Service Consultant/VP of Operations - Project Sponsor
- Jeremy Parkin, Fire Service Consultant – Project Lead
- Rick Monkman, Fire Service Consultant
- Haida Fortier, Fire Service Consultant
- Steve Lambert, Fire Service Consultant
- Darryl Culley, President

The team has gained extensive experience across all aspects of fire and emergency services program development, evaluation, and training. The EMG team has been involved in a wide range of projects, including fire service assessments, the creation of strategic and master fire plans, and the development of emergency response programs for clients.

Section 1

Community & Fire Department Overview

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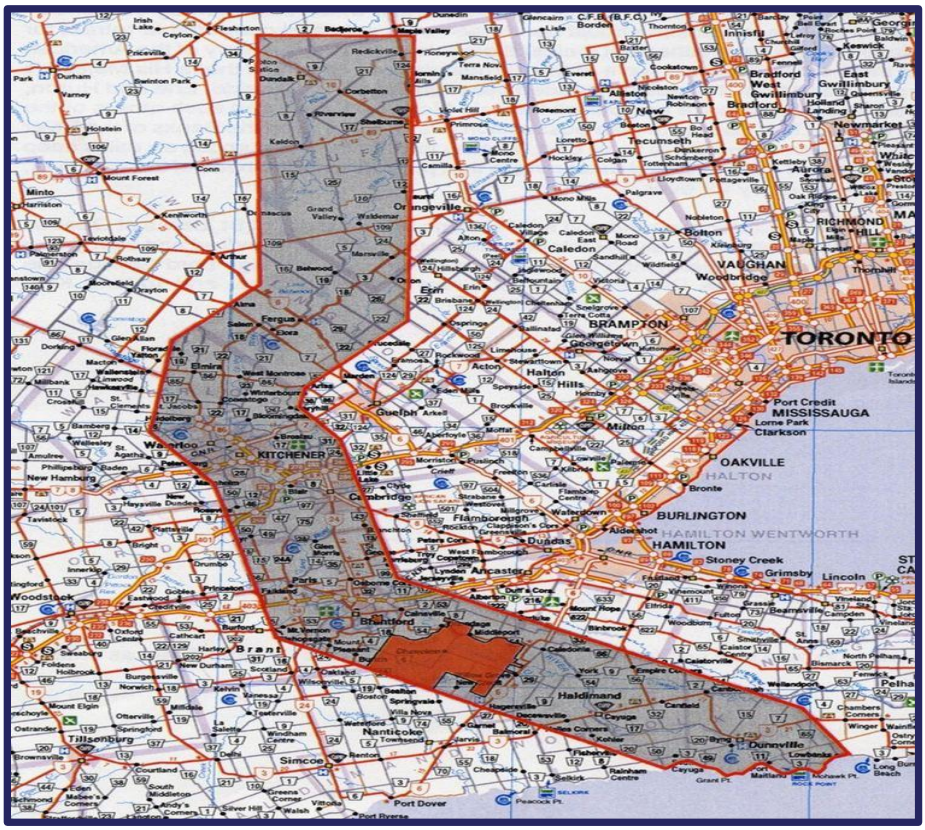
SECTION 1: COMMUNITY & FIRE DEPARTMENT OVERVIEW

This Master Fire Plan for the Six Nations Fire and Emergency Services studies and identifies current and probable community fire risks and needs over the next 10 years. This MFP will assist the Six Nations of the Grand River elected leadership and senior management in considering service levels and associated resources, which will enable the Fire Chief with future planning relating to staffing and response, fire and life safety programming, and asset management. To ensure a comprehensive review is conducted, this review has examined and researched all aspects of SNFES operations including planning, fire prevention, training and education, communications, apparatus and equipment, human resources, and station suitability, and was done understanding the current funding programs available from Indigenous Services Canada as it relates to First Nation fire safety.

1.1 Community Overview

Six Nations of the Grand River are located along the shores of the Grand River and are the home to the Haudenosaunee, made up of the Seneca, Cayuga, Onondaga, Oneida, Mohawk, and Tuscarora Nations. The land was granted to Haudenosaunee in the Haldimand Proclamation after being displaced from their lands in what is now New York State. The land ran for six miles on either side of the river and encompassed an estimated original area of 2,740 km^2. Now, the community area accounts for approximately 182km^2 and is the largest First Nation community in size.



Nestled among other towns like Caledonia and Hagersville and southeast of Brantford, Six Nations has a population center in the village of Ohsweken.

The community reports a population of 12,912 members from 13 bands living in the community, making it the most populous First Nation community in Canada. With the land area considered, Six Nations has an estimated population density of 70.9 people per square kilometre.

1.2 Fire Service Composition

The Six Nations Fire and Emergency Services is a composite fire department with full-time and volunteer firefighters. The roster of emergency response staff is approximately 62 firefighters, with 38 career and 24 volunteer firefighters. The department is supported by eight positions in the administrative team consisting of a Fire Chief, an Assistant Fire Chief, a Fire Prevention Officer, four Battalion Chiefs, and a Chief Training Officer. There are four fire stations located across the community. SNFES responds to calls ranging from emergency medical assistance to fire-related incidents and motor vehicle collisions.

The fire department recently instituted a policy related to the establishing and regulating by-law. The document, the Policy to Regulate Fire & Emergency Services for Six Nations of the Grand River, effectively establishes the fire department in the same manner as a municipal counterpart. Based on this, the Fire Chief is ultimately responsible for the leadership of the Fire Department and to Council. The Fire Chief reports to the CAO in a council-manager style of government. This reporting system allows the Fire Chief to present reports and updates to the Council.

Because of the mixed structure of the department, references have been made to both the *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* and *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*.

The organizational chart in Figure #1 reflects the general reporting structure within SNFES.

FIGURE #1: SNFES ORGANIZATIONAL CHART

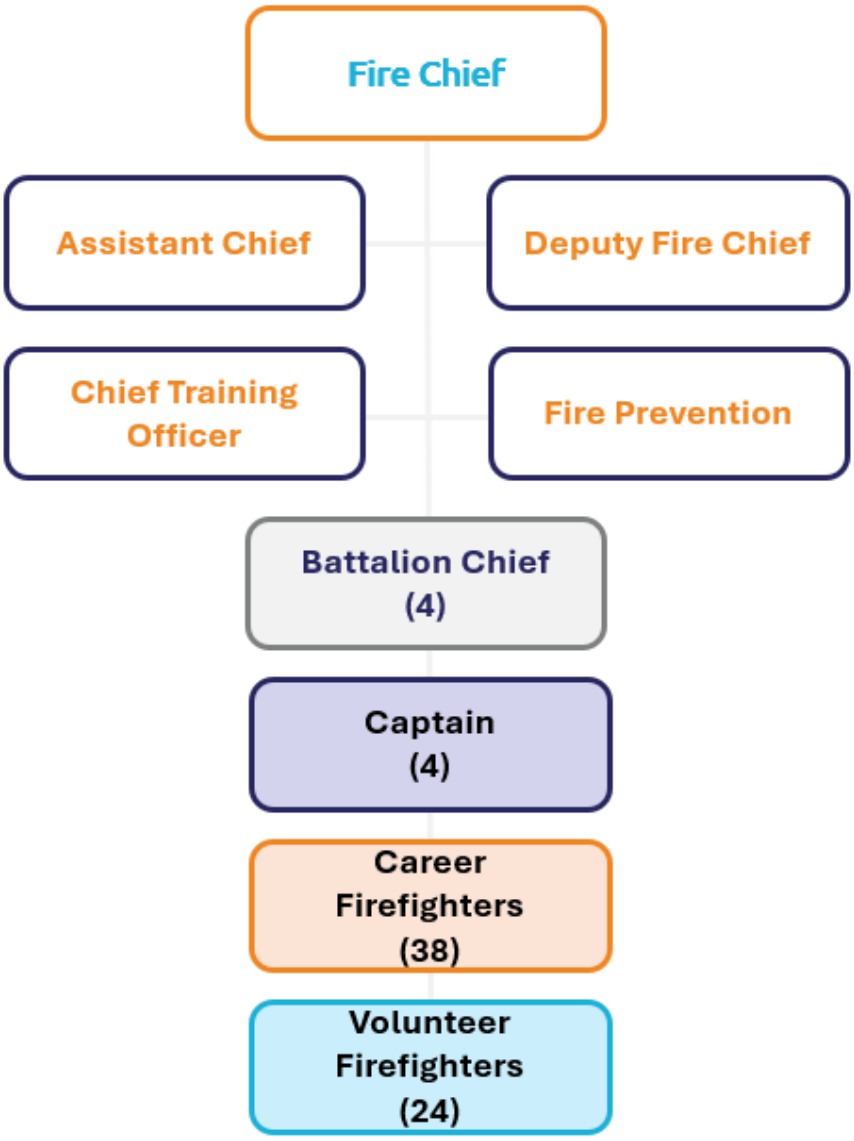
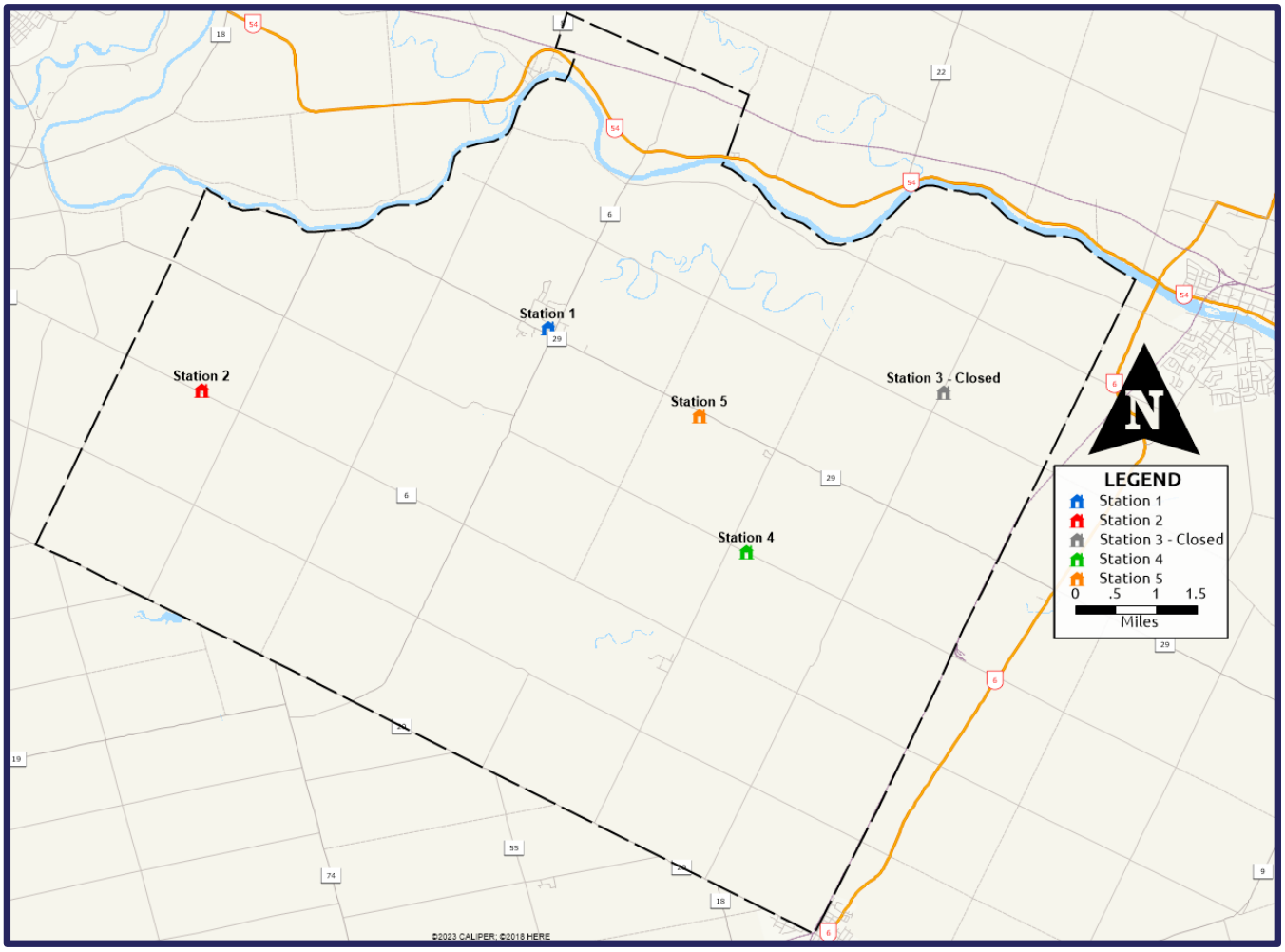


FIGURE #2: SNFES STATION LOCATIONS



1.3 Governance and By-laws

Within First Nation communities, the application of municipal-type legislation or acts of governance is related specifically to the community itself. SNFES must operate outside of the provincial fire legislation, the *Fire Protection and Prevention Act of 1997*. This document establishes all expectations and regulations of fire safety and fire departments within Ontario.

The current Policy to Regulate Fire & Emergency Services for Six Nations of the Grand River is structured similarly to a municipal by-law, including sections such as:

- Establishment and Composition
- Goals and Core Services
- Department Organization

- Responsibilities of the Fire Chief & Deputy Chief
- Member Responsibilities
- Fire Protection Services
- Offences

General offences under O. Reg. 213/07 Fire Code, while enforceable by all municipal fire chiefs in Ontario, are not available to the SNFES fire chief through the same mechanism. SNGR is currently working with the Fire Chief to find an alternative method to allow code enforcement within the community.

Other related legislation, regulations, standards or guidance notes would be considered as industry standards and a necessary reference in the application of fire safety within SNFES. Some of those references include (but are not limited to):

- FPPA
- Ontario fire and building codes
- National fire and building codes
- Provincial and federal occupational health and safety legislation
- Section 21 Guidance Notes
- Related NFPA standards
- Applicable provincial and federal legislation related to associated components of firefighting, firefighter safety, and public safety

It is important that the Fire Chief stay current with changes, updates or additions to any of these documents and inform via the reporting structure within the SNGR administration.

There are no proposed changes or recommendations for this section.

Section 2

Risk Assessment

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SECTION 2: RISK ASSESSMENT

2.1 Community Risk Assessment Profile

Risk assessment is the process used to identify the level of fire protection required within the community's boundary. It measures the probability and consequence of an adverse effect on health, property, organization, environment, or community due to an event, activity, or operation. The Elected Council has the authority to establish fire protection within their community. The Fire Chief is responsible for informing the Elected Council of all risks existing within the community. Based on this information, the Elected Council can make an informed decision on the level of service to be achieved by SNFES.

NFPA 1300 – *Standard on Community Risk Assessment and Community Risk Reduction Plan Development* Article 3.3.3 states that a Community Risk Assessment (CRA) is

A comprehensive evaluation that identifies, prioritizes and defines the risks that pertain to the overall community.

Further, Article 4.1 states that

The CRA. The purpose of the community risk assessment (CRA) is to evaluate a community's risks prior to the development and implementation of a community risk reduction (CRR) plan and programs to reduce, mitigate, or eliminate the community's risks.

Article 5.3 Frequency states:

The CRA shall be conducted every 5 years or more frequently based on community need.

The accumulation and analysis of the following factors will assist in applying this information to identify potential risk scenarios. It is during the assessment of the data 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?
- To whom could it happen?
- Why could it happen?
- How likely could it happen?

- How bad would it be if it happened?
- Can programs be developed to mitigate or prevent any or all of the above?

Once answered, these questions will frame the basis for formulating and prioritizing risk management decisions to reduce the likelihood of these incidents and mitigate their impact.

The completed CRA may identify gaps and areas where conditions vary from the desired outcomes. NFPA 1300 recognizes the need to complete nine profiles to review the following:

Demographics Profile - includes age, gender, educational attainment, socioeconomic makeup, vulnerable individuals or occupancies, transient population, and 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 - includes waterways, highways, canyons, other landforms, railroads, wildland-urban interface, bridges, and other specific community features.

Building Stock Profile – identifies 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, and 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, and cultural/ethnic groups.

Hazard Profile – human, technological, or natural hazards.

Economic Profile – reviews infrastructure, local employers and industries, institutions, community's tax base, and local attractions.

Past Loss/Event Profile – Consider the impact and frequency of an event; identify significant acute events with a low frequency but a high impact or small chronic events with a high frequency and a low impact.

The Six Nations of the Grand River's CRA is separate from this MFP/SLS; however, they contain valuable information, including recommendations. Once the Fire Chief has reviewed the CRA and MFP/SLS contents and discussed them with the Elected Council and the Chief Administrative Officer (CAO), a risk reduction plan should be developed and implemented.

Utilizing the CRA and MFP/SLS recommendations gives the Fire Chief the foundation to identify the best way to implement the community risk reduction (CRR) plan.

2.1.1 Fire Mortality Rate in First Nations

In 2021, a report was released by the Centre for Indigenous Statistics and Partnerships (CISP), in cooperation with Statistics Canada, on mortality and morbidity related to fire, burns, and carbon monoxide poisoning among First Nations people, Métis and Inuit in Canada.[49] Some findings included that Indigenous Peoples are over five times more likely to die in a fire. That number increases to over 10 times for First Nations people living on reserves. Inuit are over 17 times more likely to die in a fire than non-Indigenous people. Rates among Métis were higher than non-Indigenous estimates (2.1), but these rates were not significantly different.

The report examined age-standardized mortality and hospitalization rates relating to fire, burns and carbon monoxide poisoning among First Nations people, Métis and Inuit and compares it to rates among non-Indigenous people living in private households.

Primary findings include:

- The fire-related mortality rate was 1.6, 0.6 and 5.3 deaths per 100,000 person-years at risk among First Nations people, Métis and Inuit, respectively. In comparison, it was 0.3 among non-Indigenous people.
- The hospitalization rate from injuries associated with fires was 7.5, 2.8 and 8.8 hospitalizations per 100,000 person-years at risk. The rate among non-Indigenous people was 1.7.
- The mortality rate for burns was 1.0 death per 100,000 person-years at risk among First Nations people and 0.2 among non-Indigenous people.

[49] Mortality-and-Morbidity-Related-to-Fire-Burns-and-Carbon-Monoxide-Poisoning-Among-First-Nations-People-Metis-and-Inuit.pdf, accessed November 2024, https://assets.ctfassets.net/5izjgsoqhaa4/2Jfrnxxk8PtYHhEAHYLsYq/db39d84c43f556049db4110c77bcee75/Mortality-and-Morbidity-Related-to-Fire-Burns-and-Carbon-Monoxide-Poisoning-Among-First-Nations-People-Metis-and-Inuit.pdf

- The hospitalization rate for burns was 13.9, 5.0, and 13.5 hospitalizations per 100,000 person-years at risk. The rate among non-Indigenous people was 4.3.
- CO mortality rate was 0.5 deaths per 100,000 person-years at risk among First Nations people, 0.7 among Métis and 0.6 among non-Indigenous people.

The study indicates that disparities continue to exist among First Nations people, Métis and Inuit and non-Indigenous people. Contributing factors, which are not examined in the study, such as inadequate housing, lack of smoke detectors, underfunding for fire services in Indigenous communities, poverty, and lack of legislation mandating adherence to building and fire codes on reserve, need to be considered in interpreting the disparities in mortality and morbidity.

2.1.2 Provincial Community Risk Statistics

While the First Nation communities of Ontario are not permitted to record their fire services responses using the OFM's Standard Incident Reporting system, the following is just an overview of provincial statistics. The first set of statistics noted is the most recent provincial data provided by the Office of the Fire Marshal (OFM). Occupancy classifications are listed based on the Ontario Building Code.

Note: *The OFM has not yet verified the 2023 statistics.*

Provincial - Loss fires by Property Class

From 2018 to 2022, 54,645 fires, with a dollar loss, were reported to the OFM

- 74% of these fires occurred in Residential occupancies.
- 28% occurred in vehicles.
- 7% of loss fires occurred in Industrial occupancies.
- 5% occurred on structures/properties not classified by the Ontario Building Code – this includes many non-structure property types – land, outdoor storage, and some structures ranging from barns to weather stations.
- 3% in Assembly occupancies.
- 3% in Mercantile occupancies
- 3% in Business and personal services occupancies.
- 2% in Occupancies classified under the National Farm Building Code
- 1% in Care and Detention occupancies.

The distribution of fire occurrence across property types has been relatively unchanged.

Provincial - Loss Fires Property Class: Structures only

From 2018 to 2022, 35,132 structure fires with losses were reported to the OFM.

- Fires in residential occupancies account for 74% of structure loss fires.
- Industrial occupancies – 7%
- Properties not classified by the Ontario Building code – 5%
- Assembly occupancies – 3%
- Mercantile – 3%
- Business and Personal Services – 3%
- Occupancies classified under the National Farm Building Code – 2%
- Care and Detention Occupancies – 1%

This distribution of fire incidents across structure property types has been consistent over many years.

Provincial - Structure Loss Fires: Ignition Sources

Notably, 8% of the reported structure loss fires were suspected to be caused by arson or vandalism (intentionally set).

Between 2018 and 2022, the ignition sources in other (not intentionally set) structure loss fires were:

- 26% undetermined
- 16% cooking
- 14% open-flame tools, smoker's articles
- 10% miscellaneous
- 8% electrical distribution equipment – wiring
- 7% heating equipment, chimney, etc.
- 5% other electrical, mechanical
- 5% Exposure fires
- 4% Appliances
- 2% Lighting - excluding candles

- 1% Processing Equipment
- 0% Unknown, not reported

2.1.2 Fire Loss Statistics – Six Nations of the Grand River

The following information was provided by the SNFES and through past reports. For many reasons, a comprehensive recording of calls for service and fire data has been lacking over the years. It became evident that the record management system (RMS) for documenting fire response information was inadequate between 2019 and 2022, the years of interest to EMG in developing the CRA and this MFP. This deficiency resulted in a lack of data to identify concerns. The record management issue should be resolved when the RMS First Due comes online early in 2025.

What is known is that several fires occurred in the following years. What is unknown is the occupancy classification they are involved in, the total damage, and the injuries or deaths:

The data available for 2023 was significantly better, and the previous 'years' response data was not well documented and was incomplete. Ideally, the OFM would permit the First Nations Fire Departments in the Province to access the Standard Incident Reporting system currently in use for all non-First Nations Departments to log their response information.

Notable in 2023 is that there were 45 fires involving vehicles, and not all resulted in a dollar loss. The number of no-loss vehicle fires indicates that many were possibly derelict/abandoned vehicles. Even though many were possibly in poor condition and unroadworthy, chances are there was no battery in them and, therefore, no ignition source. Some may have been the result of vandalism or arson in nature. SNFES should monitor this situation, and EMG suggests that those involved in fire investigations for the Department should augment their training by attending vehicle fire investigation courses.

Even though the number of fires is somewhat known, when they occurred in structures, the information lacked clarity regarding the occupancy classification in which they were. In their record management system, EMG recommends that SNFES implement documentation of occupancy classifications for cases where a fire occurred.

TABLE #1- OVERVIEW OF PROPERTY CLASS

Year	2022*		2023	
Property Classification	Number of Fires	Property Loss	Number of Fires	Property Loss
Agricultural	1	$300,000	--	--
Attached Dwelling – e.g. Rowhouse, Townhouse	--	--	2	$3,000
Automobile	1	$0	19	$190,000
Barn – containing equipment or produce	--	--	1	$0
Bus, trackless trolley	1	$0	--	--
Detached Dwelling	1	$85,000	10	$705,000
General Business Office	--	--	1	$500,000
Manufacturing – Tobacco Products	--	--	2	$50,000
Mobile Home	1	$50,000	2	$400,000
Motor Vehicle Parts, Accessory Sales	--	--	1	$40,000
Motor Home, Camper, Trailer	--	--	2	$2,000
Multi-Unit Dwelling (7 to 12 units)	--	--	1	$1,000
Open Land	--	--	1	$0
Other Residential	--	--	7	$83,000
Other Vehicle	--	--	2	$15,000
School – Pre Elementary	--	--	1	$0
Shed, 'Children's Playhouse	--	--	1	$5,000
Sidewalk, Street, Roadway	--	--	2	$0
Small Truck, i.e., pick-up or van	1	$20,000	14	$380,000
Store – Other mechanical/electrical/miscellaneous products	--	--	1	$15,000
Vehicles or Vehicle Parts	2	$21,000	6	$50,000
Warehouse	1	$0	--	--
Total	7	$476,000	76	$2,437,000

**Note:* *The 2022 data was incomplete; this is only a partial list of the fires.*

Note: The data available does not reveal the origin and cause of the fire, which is vital information in reducing the number of fires in the community.

2.2 Community Risk Assessment

Completing a community risk assessment is the process used to identify the level of fire protection required within the Six Nations of the Grand River. The advantage of having a current Assessment is that it measures the probability and consequence of an adverse effect on health, property, organization, environment, or community due to an event, activity, or operation.

The completed Community Risk Assessment will provide an overview of the risks identified within the community. The document includes suggested options for mitigating the risks. Through an analytical exercise, the Six Nations Elected Council, in discussion with the CAO and the Fire Chief, will be in a better position to determine the best levels of fire protection for the community.

Identifying potential risks through accumulating and analyzing nine risk factors will assist in applying this information in various scenarios. 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?
- To whom could it happen?
- Why could it happen?
- How likely could it happen?
- How bad would it be if it happened?
- What programs can SNFES develop and implement to mitigate or prevent any or all of the above?

Upon answering the questions, the Fire Chief can formulate and prioritize the risks, which leads to developing a plan to manage them. Another advantage of having a risk assessment is that it identifies gaps and areas where the conditions may vary from the preferred outcomes.

While the Community Risk Assessment is a separate document from the Master Fire Plan, it is an essential reference for completing the master plan.

2.2.1 Community Risk Assessment – Identified Risks

The following outlines some of the identified risks to life safety and property.

Note: *The following risks are discussed at length in the Community Risk Assessment and not presented in the order of their level of risk.*

Hazardous Material Incidents - Hazardous material (HAZMAT) incidents could occur on the road or railway, in mercantile occupancies, and in manufacturing and industrial processes. Although the SNFES firefighters train at the Operations Level under NFPA 1001, the SNFES may be unable to mitigate all HAZMAT situations and may need outside resources to aid them.

Railway - The Canadian National Railway goes through the Six Nations of the Grand River in one area and alongside the boundary in another. The rail line transports freight and hazardous materials. There may also be the odd passenger train. Risks are not limited to the payload. Operator fatigue leads to poor judgement, resulting in accidents. Mechanical failures and fires are also high on the list of risks for railways.

Domestic Terrorism - The threat of domestic terrorism exists in Canada, with numerous incidents producing havoc and terror among the populace. Active shooter incidents may occur in factories, schools, supermarkets, and seasonal facilities. Situations have appeared in several Canadian cities with catastrophic consequences.

Fire Stations – When planning new fire stations, design them for future growth, including additional apparatus such as tankers, aerial devices, and career firefighters (if necessary). Depending on the land available, an addition to existing fire stations may be all that is required, and in some cases, moving the fire station to a new location may improve service response times. The stations lack post-disaster engineering components, a direct connection to the source exhaust extraction system, and a bunker gear storage room with a negative-pressure ventilation system. They also lack fitness rooms.

The SNFES uses four fire stations, some of which are nearing the end of their lifespan due to functionality and available space. Establish reserve accounts in the budget for each fire station for expansion/renovations/replacement, focusing on the facility in the poorest condition.

Fire Prevention - Fire prevention should focus on the first two lines of defence per the OFM: line one, public fire safety education, and line two, fire safety standards and enforcement. Currently, the SNFES lacks personnel for fire prevention and public education, and the process of hiring them is ongoing.

Oil and Gas Well - After the events in the Wheatley community in Chatham-Kent, the risk of old and abandoned oil and gas wells is coming to the forefront. Communities are taking a proactive approach to identifying each one with the aid of maps available from the Provincial Government.

Bodies of Water - The Grand River is the primary river that runs through the First Nation on its way to Lake Erie, which presents its share of risks. In addition to this risk are the many tributaries that flow through the community. When responding to rescues in big bodies of water, many considerations must be considered, including where the victim is, how far from shore, what type of rescue it is, and whether the Department has the necessary training and equipment to facilitate the rescue. There are several types of water rescue, per NFPA 1006, such as ice, swift water, surface water, flood water, surf water, and watercraft.

Lithium-ion Batteries - Recently, fires involving lithium-ion batteries have become a topic of interest with incidents of fatal fires. When investigated, the cause is the charging of scooter batteries and other battery-powered devices, such as cell phones and laptops.

Demographics - Demographic statistics are forecasted to grow between 30% and 50% in Brant County between 2023 and 2051. It is unknown what the growth will be in the Six Nations of the Grand River. The number of residential developments, the type of occupancies, and the community's ability to provide services such as water and wastewater will dictate the growth rate.

Training and the Training Facility (Station 5) - The importance of training cannot be overstated in emergency services. Where life safety is at risk, the competence of the responders should be paramount. When the citizens in the community call for help, they expect and deserve the very best service from those responding.

Fire Underwriters Survey (FUS) - Fire Underwriters Survey publishes the Canadian Fire Insurance Grading Index, which property-casualty insurers utilize. FUS provides data on public fire protection for fire insurance statistical work and underwriting purposes of subscribed insurance companies. Subscribers of the Fire Underwriters Survey represent approximately 85 percent of Canada's private sector property and casualty insurers.

Weather Events - This area of southern Ontario receives severe weather events ranging from snowstorms to extreme wind events, including tornadoes and flooding. Advanced notification of any severe weather event allows people to prepare before its pending arrival, even if no action is required. An early warning option is to convert the sirens on the fire stations to storm sirens. The County of Brant has not been immune to severe weather, including tornadoes.

Technical Rescues - Includes trench, water, ice, confined space, and low- and high-angle rescues. Mitigating technical rescues requires that SOGs, policies and procedures, equipment, and training specific to each discipline are in place. SNFES has department members trained in the awareness level for confined space and trench rescues and the operations level for ice, surface water, elevators, and low/high angle rope rescues. The SNGR needs a response mitigation strategy before an event occurs. This preparation may require response agreements with other fire services or a third party. While the risk of these rescues occurring in the First Nation is low, a response Memorandum of Understanding (MOU) must be activated when and if they arise.

Apparatus - Four apparatuses the SNFES operates are coming to their 20-year mark and need replacing in 2026. An apparatus at risk of breaking down enroute to fires also risks lives and structures.

2.3 Community Risk Reduction Plan

One of the last tasks is the development of a Community Risk Reduction (CRR) Plan, and it is this Plan that aids in completing the MFP/SLS. The in-depth steps to developing a Community Risk Reduction Plan are available in the Six Nations of the Grand River's Community Risk Assessment. When properly applied, the Plan coordinates emergency operations with all aspects of fire prevention. It identifies mitigation strategies for making the community safer in ways not customarily realized, including at the fire station level. Critical to successfully implementing the Plan is the cooperation and participation of suppression personnel. The involvement of fire station personnel is for gathering local risk data and performing activities necessary to execute the CRR Plan.

Aside from the primary benefits to the community, a CRR Plan can positively impact the fire department by identifying possible gaps in staff development and response capabilities. A properly applied CRR Plan can improve firefighters' and emergency responders' health and safety in the station, at home and on the fire ground. This is partly due to enhancements in the number of fire inspections and fire and life safety education events completed, enforcement of the Fire Code, be it the National or Ontario, and the reduction in the number of fires resulting from these measures.

In addition to firefighter safety, there are several other reasons why departments should begin the process of developing a Community Risk Reduction Plan, including the following:

- Identifying new and emerging hazards and managing risks makes the community safer.
- Declining budgets among fire departments and local governments; a Community Risk Reduction Plan can improve resource allocation.

- It results in improved community engagement with direct involvement in the Plan's development and implementation.
- Beyond just fighting fires, it better defines the fire department's purpose and value within the community.

In developing the Plan, additional questions need answers, and viable strategies need designing. The following outlines the steps taken in developing the project.

Identification and Prioritization – Upon completing the Community Risk Assessment and identifying risks, priorities can be determined and assigned for mitigation. The results are itemized and analyzed for use in the remaining planning process. The document does not need complexity but in a clear and concise format that enables the reader to understand the risks and those that should have the highest priority.

During this process, consider the following:

- Why and how the risk occurs and, sometimes, when.
- Whom does the risk affect the most, and why?
- How are the community and the fire department affected by the threat?
- What about this risk necessitates its ranking to be higher than others?

Develop Mitigation Strategies & Tactics – This step requires input from various individuals involved, including those most affected by the risk. At this point, stakeholder involvement is paramount and should always be part of the decision-making process. Decisions are needed to determine what tactics and strategies will be necessary to prevent and mitigate those risks with the highest priority.

Implementing the Community Risk Reduction Plan – The completed Community Risk Reduction Plan usually involves several steps. The process should include timelines, which can be quick and focused or slow and methodical. At no time should the plan implementation be rushed and not provided due attention to detail. Reliance on the fire department, community partners, or a combination is vital for successful implementation and performance.

Monitor the Progress, Evaluate Your Findings, and Modify the Community Risk Reduction Plan – The previous steps culminate in the final stage, which involves monitoring and evaluating the Plan's effectiveness and adjusting as necessary. During this process, not every strategy will be successful, and a willingness to modify and, in some cases, start over identifies a determination to have a successful program. This final process will enable the organization to determine if they are achieving the desired outcomes and if the program is or is not impacting them. Ongoing monitoring allows for prompt modifications to the Plan.

A thriving Community Risk Reduction Plan will bring additional resources to the effort through partnerships within the fire department and the community it serves. It is not uncommon for fire departments to miss public/private partnerships in program development and delivery. The community-based approach increases public safety because of the collective work within the community to understand, assess, and provide inclusive solutions to community safety issues.

2.4 Next Steps

As the community grows, the frequency of calls and the need for all service levels will increase, especially fire inspections and public education. Based on this growth and the current demands, the need for full-time staff in the Fire Prevention Division, which supports the Fire Suppression Division, has been identified and expanded in detail in other sections of this MFP/SLS. During the development of this MFP/SLS, the Six Nations of the Grand River was moving towards a full-time Fire Prevention Officer/Public Fire and Life Safety Educator. This position should be a dual role whereby fire prevention is the priority, but the individual would respond to structure fires as a firefighter.

Even though the SNFES is not mandated to follow Provincial Legislation, it would be a good practice to do so. The provincial government has recently introduced updates to *FPPA*, which outlines the responsibilities of a community and its fire department concerning service level expectations. The updates to the *Act* are:

- Certification for firefighters, fire service instructors (training officers), and fire service inspectors (fire prevention inspectors)
- Mandatory reporting requirements
- Completion of the mandatory annual review of the CRA and complete a new one every five years.
- Establish an inventory of all building stock, including identifying those with lightweight construction (LWC) components, which is mandatory.

These four additions will put an even greater strain on fire departments' efforts to ensure proper training, reporting, and completion of CRAs.

2.5 Residential Fire Sprinklers & Monitoring Fire Alarm Systems

The NFPA, the Canadian Association of Fire Chiefs (CAFC), and the Ontario Association of Fire Chiefs (OAFC) strongly support residential sprinkler systems to reduce the risk to life and property from fire. Because fire sprinklers react so quickly, they can dramatically reduce the

heat, flames, and smoke produced in a fire. Properly installed and maintained fire sprinklers help save lives, minimize damage, and make it safer for firefighters.

Fire sprinklers have been around for over a century, protecting commercial and industrial properties and public buildings. Many people do not realize that the same life-saving technology is also available for homes, where roughly 85% of all civilian fire deaths occur. Early detection systems such as smoke and heat alarms and sprinkler systems, monitored by an external agency, enhance fire protection, reduce the risk of loss of life and help minimize fire damage.

Developers and builders alike have not been proponents of residential sprinklers due to misinformation on the installation costs. Due to external pressures, the provincial government has been cautious in mandating their installation in new home construction.

In new residential construction, installing a fire sprinkler system can be for as little as $1.50 per square foot, which, in most cases, is less than 2% of the total construction cost.[50] On a 1-million-dollar home, that works out to less than $20,000, which, when put in proper context, is low-cost insurance to ensure a person's family has greater chances of escaping a fire with a fire sprinkler system in place.

2.5.1 Facts About Residential Fire Sprinklers

Unfortunately, we must rely on American statistics due to the lack of Canadian statistics. Since there are so many similarities in building construction, the statistics accurately reflect the Canadian experience. Automatic sprinklers are highly effective and reliable elements of total system designs for fire protection in buildings.

Source: U.S. Experience with Sprinklers[51]

According to NFPA, American Fire Departments responded to 52,948 structure fires annually between 2017 and 2021. Of those, 11% had fire sprinklers. The reported residential structure fires between 2017 and 2021 resulted in an average of 36 civilian fire deaths (1% of all structure fire deaths), 1,002 civilian injuries (8%), and $1.2 billion in direct property damage (10%).

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[50] Home Sprinklers | Ontario Association of Fire Chiefs, accessed November 2024, https://www.oafc.on.ca/public-safety/home-sprinklers#:~:text=A%20sprinkler%20system%20can%20be%20installed%20%20in%20a,less%20than%202%25%20of%20the%20total%20construction%20cost

[51] NFPA, U.S. Experience with Sprinklers, accessed November 2024, https://www.nfpa.org/education-and-research/research/nfpa-research/fire-statistical-reports/us-experience-with-sprinklers?l=27

Sprinklers reduced the impact of fires compared to reported fires in properties with no automatic extinguishing systems (AES). When sprinklers were present, the civilian fire death and injury rates per fire were 90 percent and 32 percent lower, respectively. Additionally, the firefighter rate of injuries per fire was 35 percent lower.

Flame spread, and damage remained in the room of origin, where sprinklers were present in 94% of the fires compared to 70% without sprinklers.

One sprinkler is usually enough to control a fire. Only one operated in 77 percent of the structure fires where sprinklers operated. In 96 percent, five or fewer operated. In 98 percent, ten or fewer operated.

SNFES has not previously promoted residential fire sprinklers. By working with the developers and the public to encourage the installation of home sprinkler systems, the SNFES would be demonstrating a proactive approach to educating the public on another viable option for homeowners to help reduce fire risk. As such, EMG recommends that SNFES investigate this safety initiative as part of its fire prevention and fire and life safety education initiatives.

2.6 Assessment of Current Fire Services Policies

As part of developing the MFP/SLS, as noted in the RFP, EMG reviewed fire service-related policies and made recommendations where necessary.

2.6.1 Governance and Establishing & Regulating Policy

The Establishing and Regulating (E&R) Policy, i.e., (Policy to Govern and Regulate Fire & Emergency Services for Six Nations of the Grand River), is the Elected Council's direction to the SNFES and prescribes what services are to be provided by the fire department. The current E&R Policy was updated in Q-3 of 2024, making this a very recent document. An annual review (or as changes occur) of all policies affecting fire department operations is required. Doing so will ensure that the fire chief's service levels, expectations, and authority align with the community's needs.

As part of any policy update process, the SNGR solicitor must review by-laws before they are presented to the Elected Council. Indigenous Fire Services are not regulated federally, nor does the provincial legislation govern the Six Nations of the Grand River fire services. The development, approval and implementation of the E&R Policy allows the fire services to progress under its sovereignty and self-determination, but with consideration of professional guidelines that would be useful and accessible to better reach the outcomes expected. An E&R bylaw is encouraged by Indigenous Services Canada (ISC) as part of the First Nations Fire Protection Strategy.

The E&R Policy is the primary mechanism for delivering accredited programs that support budgets to ensure that federal funding provides the necessary financial allocations.

The Fire Chief should also consider bringing the E&R Policy forward to the newly sitting Elected Council at the beginning of every term. Doing so will allow new Elected Council members to understand the level of service provided to the community and the Elected Council's responsibility to fund this level of service as set by the Elected Council.

Since there is a lack of legislated practice to govern Indigenous fire services, an alternative refers to industry best practices and standards such as those of the National Fire Protection Association (NFPA). Doing so would set a benchmark for the Fire Chief to strive to meet with their fire department. Industry best practices and standards, such as NFPA and Ontario's Ministry of Labour's Section 21 Committee, will be referenced during any type or scope of investigation. Referencing standards and guidelines such as these within any E&R Policy is a crucial element which the SNFES has within its Policy.

In collaboration with the Fire Chief, the Elected Council must establish an objective, definitive response time per NFPA 1720 and include it in the E&R Policy. The NFPA 1720 for volunteer fire departments recommends completing some assessments to evaluate a baseline for a department's response time goal. This review will offer an understanding of how the Department has been performing and identify areas for possible improvement.

However, during the EMGs review, the Department did not have an approved response time benchmark. Based on the NFPA 1720 standard for volunteer fire departments, SNFES needs a response time benchmark of 14 minutes, as established for rural communities. By setting this benchmark, SNFES can establish a response time goal and better measure its outcomes.

The E&R Policy should reflect new legislation, changes in the types and levels of response, and training expectations. Consideration should also include reference to such guidelines and standards as:

- Section 21 Firefighter Guidance Notes
- OFM Guidelines concerning staffing and response recommendations.
- *FPPA* of 1997.
- Related NFPA Standards that deal with:
  - Training
  - Fire prevention and public safety programs
  - Fire Department response time and staffing Goals and Objectives

- Communications and vehicle dispatching
- Response times.
- Fleet and Maintenance

Many of today's fire services often have a Mission, Vision, and Values statement to guide the premise of what the fire department is about, as well as goals and expected outcomes. The SNFES has prepared and included such statements in an appendix to the Policy.

The SNFES should review the E&R Policy and its Mission, Vision, and Values Statements. Upon the Elected Council's approval, the SNFES needs to post these in the fire stations to remind the firefighters of their purpose in belonging to the SNFERS: to serve the residents of the Six Nations of the Grand River.

The following are the Mission, Vision and Values statement per the E&R Policy:

Vision Statement – Provides insight into the fire department's hopes to achieve both now and in the future. The Vision Statement of the Six Nations Fire & Emergency Services states that SNFES will:

Endeavour to be recognized for the engagement, involvement and support of the community members and visitors by achieving internationally accredited status in personal, professional, and departmental performance.

Values Statement – This should reflect the fire department's core principles and ethics.

The questions to answer in developing the values statement could include:

- Courage - Have the courage to do what's right.
- Honour - Conduct with honour to the community and its residents.
- Discipline – Maintain discipline in all aspects of service delivery.
- Respect - Respect one another.

Mission Statement - A mission statement that accurately reflects the goals and purpose of the SNFES.

Six Nations Fire & Emergency Services will:

Effectively and efficiently provide fire and emergency services to the Six Nations of the Grand River community through mitigation, prevention, preparedness, response and recovery using safe, recognized, and measurable practices.

Ensure the safety of the Department and the community members during all professional operations.

Provide quality leadership and support continuous education.

The updated by-law should reference the NFPA 1300 regarding CRAs that came into effect in 2020[52]. The Standard specifies the need for an annual review and a new document produced every five years. To the SNFES' credit, developing a CRA that aligns with NFPA 1300 has been completed as a separate operationally focused document. The combination of the CRA and the MFP/SLS is the community's CRR Plan.

Other notables within the current by-law for consideration include:

- While firefighters are in Appendix C, Staffing, of the Policy, it refers to them as either a full-time, part-time, or voluntary basis. Most departments no longer refer to their "volunteers" in that terminology but as "paid-on-call" to better reflect that they receive an honorarium for their work with SNFES.

Many E&R Policies include an organizational chart to describe the hierarchy within SNFES. Each position and their role should be in the revised version of this Policy, including:

- The qualifications required for consideration for the position,
- Hiring procedures,
- Their duties around the fire stations,
- Roles and expectations around the station and at incidents, any restrictions
- Training expectations,
- Any attendance requirements for responses and training,
- Their pay scale (honorarium),

[52] NFPA 1300 Standard Development, accessed November 2024, https://www.nfpa.org/codes-and-standards/nfpa-1300-standard-development/1300

Appendix E outlines the Fire Prevention Programs and Services provided by SNFES. While the inclusion of this information is valuable, several revisions are recommended to strengthen its clarity and alignment with best practices.

The inspection frequency should clearly reference the origin of the standards used—such as the Fire Underwriters Survey (FUS), NFPA 1730, or a customized hybrid approach that best supports the operational needs of SNFES. Additionally, the development of a formal Fire Prevention Program Policy is recommended to articulate the program's overarching goals and anticipated outcomes.

It would also be beneficial to reference specific Ministry of Labour Section 21 Guidance Notes, particularly those pertaining to technical rescue response levels, by number.

Given that Fire Prevention is responsible for conducting fire investigations, their required qualifications—such as relevant certifications—should be clearly stated. Similarly, any active response, automatic aid, or mutual aid agreements should be included to provide a comprehensive overview of interagency collaboration.

Training is a critical component of effective fire service delivery. As such, a dedicated section outlining the roles and responsibilities of Training Officers, along with their required qualifications and expected outcomes, should be added.

The apparatus replacement schedule should be aligned with recognized standards, including NFPA 1901 and ULC S515-12. The report should identify whether an asset management program is in place and whether it tracks equipment with recommended replacement timelines.

Finally, the inclusion of the department's Respiratory Protection Policy and Post-Traumatic Stress Disorder (PTSD) Prevention Plan—both required for fire services in Ontario—is advised. The dispatching agreement should also be referenced, along with its associated policy number.

2.6.2 Assessment of Other Applicable By-laws

The By-laws reviewed for this MFP/SLS include the following:

- Six Nations of the By-law Governing Roads, Road Construction and Road Maintenance - 01 May 1952
- A By-Law limiting the weight of vehicles passing over bridges on Six Nations Indian Reserve - 03 January 1963
- Fire Works By Law – 13 May 1969
- Traffic By-law – 13 May 1990

- Traffic By-law – 13 May 1990

2.6.2.1 By-law Governing Roads, Road Construction and Road Maintenance, and a By-Law limiting the weight of vehicles passing over bridges on Six Nations Indian Reserve

These by-laws have been enforced since 1952 for one and 1963 for the other, and they are very outdated. While speaking about road construction and maintenance, most of it is no longer current and obsolete. It must meet today's road standards and construction regulations. The new version should regulate private roadways, streets, parking, and fire routes.

The community should develop a by-law regulating private laneways and roadways regarding their structure and capability of handling heavy trucks, vegetation removal, winter maintenance, and turn-around areas.

To ensure traffic flow during a road closure of any of the primary routes through the community, consider the designation of emergency detour routes (EDR). These could be pre-determined with signage identifying them as EDRs posted along the way. SNFES should be aware of roadways with load restrictions, which implies extra caution when travelling.

Fire Routes

One definition of a fire route states:

> *Fire Route means any private roadway that has been designated as a Fire Route by the Fire Chief through the installation of authorized fire route signage. Such signage may include, but is not limited to, signs posted at all vehicular access points to the property, clearly indicating internal driveways, aisles, and roadways that are designated as Fire Routes. Where only one side of a private roadway is designated as a Fire Route, the signage must clearly indicate the applicable side. All designated Fire Routes must maintain a minimum width of 9 metres, in accordance with the Ontario Building Code, as amended, or any successor legislation.*[53]

Vehicles parking in routes that fire apparatus travel on within private property has been an ongoing concern for fire personnel everywhere. The vehicles parked in designated fire routes may impede the entry of fire apparatuses and block access to fire department standpipe and hose connections.

[53] Fire Route Definition: 110 Samples | Law Insider, accessed November 2024, https://www.lawinsider.com/dictionary/fire-route

Depending on the specific content of the by-law, some municipalities require the adoption of an additional by-law for each location where fire routes are designated.

It is recommended that the revised fire route by-law incorporate and enforce the following provisions from the Ontario Fire Code (OFC):

- OFC 2.5.1.2.(1): Fire access routes, as well as access panels or windows intended to facilitate firefighting operations, must remain unobstructed by vehicles, gates, fences, construction materials, vegetation, signage, or any other impediments.
- OFC 2.5.1.3: Fire access routes must be maintained in a condition that allows for immediate use by fire department vehicles at all times.
- OFC 2.5.1.4: Approved signage must be clearly displayed to identify designated fire access routes.

Temporary Road Closures

The by-law would temporarily permit the Manager of Public Works to close a road for necessary work completion. When identifying temporary road closures, include the emergency services that may require a road closed temporarily to perform their duties. A section should be dedicated to emergency closures so any emergency service may carry out its responsibilities as Legislated, including the role of Public Works in establishing it.

2.6.2.2 Fireworks By Law – 13 May 1969

It is not uncommon for communities to lack stand-alone by-laws for selling and discharging fireworks. The SNGR has a by-law to regulate fireworks that has been in effect since 1969, and since then, many regulations and standards that regulate the sale and discharge of fireworks have come into force. Even though the SNGR is not required to follow them, they are a great reference in developing a revised by-law. With the increase in visitor traffic, special celebrations, and religious ceremonies, there is a higher occurrence of fireworks being discharged. There is a connection between fireworks and festivals, historical events, triumphs, and spiritual practices.

Consider the following for inclusion in the by-law:

- The by-law should include specifics regarding recreational usage, public high-hazard displays, and those released during a show or music concert (pyrotechnics). The authority to control fireworks rests within the Ontario Fire Code O. Reg. 213/07, Division B, Part 5, ss 5.2.
- Referencing the actual federal regulation regarding the training required to set off commercial and pyrotechnic fireworks should be included in the document. Doing so

will direct those who need this training and education and assist them in locating the supporting information. The by-law should list the differentiation between the consumer, display, and pyrotechnic fireworks, as listed in the Explosives Act, R.S. C. 1985, c. E-17.

- Include the need for documentation of completion of the Display Fireworks Safety and Legal Awareness Training through the authority of the Explosive Regulatory Division of Natural Resources, Canada.
- The individual responsible (supervisor) for discharging high-hazard professional fireworks and their assistant(s) must have obtained their Fireworks Operator Certification.
- Those that use special effect pyrotechnics (e.g., visual gunshots in a stage production, a waterfall of sparks at a musical concert, or an explosion on a movie set) must have a pyrotechnician certificate specific to the type and purpose of the pyrotechnic used. There are four classes of certification for the use of pyrotechnics.
- The by-law should include the importance of fire safety while setting off fireworks. Therefore, it would also be appropriate to have safety information on the proper method of setting off fireworks and the equipment worn by those setting off consumer fireworks. It will also be essential to outline the need for some form of extinguishment that should be readily available, such as a pail of water and a fire extinguisher or garden hose.
- Beaches and parklands are prevalent locations for parties in the summer, and a section should speak to discharging fireworks along the beach and parkland areas year-round.
- Include the requirement that all those discharging high-hazard fireworks complete the National Fireworks Certification Program (NFCP)[54].
- The document should include when fireworks should not be discharged, such as during winds exceeding a pre-determined speed.
- A guide on how to set off "Family Fireworks" should be written (i.e., use a pail of sand to place the firework in, have a charged garden hose or a fire extinguisher close by, keep children away from the discharge area, etc.)[55].

[54] Fireworks operator certification - Natural Resources Canada, accessed November 2024, https://natural-resources.canada.ca/our-natural-resources/minerals-mining/explosives-fireworks-and-ammunition/fireworks-and-pyrotechnics/fireworks-operator-certification/fireworks-operator-certification/9885

[55] Fireworks Safety Tips – Canada Safety Council, accessed November 2024, https://canadasafetycouncil.org/fireworks-safety-tips/

For discharging high-hazard ordinances, the fire department would conduct a pre-event inspection of the site to ensure it complies with the application by the SNFES' Chief Fire Official or their designate.

- Include in the by-law that a fire apparatus with four firefighters will stand by at the site of high-hazard firework displays. The standby crew should not leave the site during discharge to tend to other incidents.
- There should be at least two post-event inspections of the area adjacent to the discharge zone to look for unexploded ordinances. One takes place the night of the display, and the second the following morning during daylight hours.

Include the pre-and post-discharge inspections and the stand-by fire crew in the Fees and Charges By-law.

Identify the occasions when the public may discharge fireworks, such as Victoria Day, Canada Day, and New Year's Eve,

2.6.2.3 Traffic By-law – 13 May 1990

Like many others, this by-law is dated and needs updating. It should be brought forward to the Elected Council for approval and enactment. The by-law regulates travel on the SNGR road system. Since its inception, the Province of Ontario has enacted many new road safety initiatives, which the SNGR should consider including in the new by-law.

2.6.2.4 Open-Air Burning

The SNGR lacks an Open-Air Burning By-law that would stipulate the parameters for outdoor burning within the community. The SNFES should consider bringing forth such a by-law for the Elected Council's consideration and enactment. The following clauses are for consideration when developing an Open-Air Burning By-law.

The community should consider the following for inclusion in the revised by-law upon its acceptance of the OFC:

- Reference the Ontario Fire Code (OFC), and stipulate O. Reg 256/14, under the *FPPA, 1997*, of the *OFC* and include Article 2.4.4.4.[56]

[56] O. Reg. 256/14 FIRE CODE | ontario.ca, accessed November 2024, https://www.ontario.ca/laws/regulation/r14256

Open-Air Burning

2.4.4.4. (1) Open-air burning shall not take place unless

(a) it has been approved or

(b) the open-air burning consists of a small, confined fire that is

(i) used to cook food on a grill, barbecue or spit,

(ii) commensurate with the type and quantity of food being cooked, and

(iii) supervised at all times.

(2) Sentence (1) does not apply to the use of an appliance that

(a) meets the requirements of the Technical Standards and Safety Act, 2000,

(b) is for outdoor use,

(c) if assembled, has been assembled in accordance with the manufacturer's instructions and

(d) if installed, has been installed in accordance with the manufacturer's instructions.

Reference should be made to O. Reg. 207/96, Outdoor Fires, from the *Forest Fires Prevention Act*.[57]

The by-law should stipulate the prohibited materials to burn, and the list should include materials that contain preservatives such as creosote and pressure-treating materials.

- Burning creosote or pressure-treated wood is not recommended as it can release toxic chemicals and gases through their smoke, which can cause various health hazards. Some of these chemicals are known to be carcinogenic.

Being a tourist area, consider a clause that speaks specifically to burning along any shoreline or in a park.

2.6.2.5 Registry and Regulating Accessory Dwellings By-law

The Province of Ontario's Housing Supply Action Plan supports accessory dwellings to relieve some affordable housing shortages[58]. Secondary dwellings are an essential part of Ontario's

[57] O Reg 207/96 | Outdoor Fires | CanLII, accessed November 2024, https://www.canlii.org/en/on/laws/regu/o-reg-207-96/latest/o-reg-207-96.html

[58] Building more homes | ontario.ca, accessed November 2024 https://www.ontario.ca/page/building-more-homes

rental housing landscape. They offer affordable housing solutions throughout the Province. Secondary dwellings are self-contained residential units generally allowed in single detached, semi-detached, and row houses. The *Act* also states that secondary dwellings may be in ancillary structures (i.e., garage, laneway house, or garden suite).

All secondary dwelling units constructed in Ontario are required to comply with applicable health, safety, housing, and maintenance standards. These include, but are not limited to, the Ontario Building Code (OBC), the Ontario Fire Code (OFC), and relevant property standards by-laws. It is important to note that these regulatory changes do not automatically legalize existing second suites, nor do they permit the construction of new units without the appropriate building permits.

As previously noted, should the SNGR choose to formally adopt the OBC and OFC as governing frameworks for new construction, many of the provisions discussed in this report—as well as those outlined in the following sections—may become enforceable under local jurisdiction.

The SNGR currently does not have a stand-alone by-law governing the operation of accessory dwelling units (ADUs), including provisions for the registration and licensing of such units. The absence of a regulatory framework limits the ability of SNGR to inspect newly constructed or renovated dwellings that include secondary residences.

SNGR should consider the development and implementation of a dedicated by-law to regulate ADUs. This by-law should include a licensing process and establish the authority to inspect units to ensure compliance with applicable standards. Additionally, SNGR should implement a fee structure associated with the licensing process to support administrative and inspection-related activities.

Key Considerations for Accessory Dwellings

Tenants with limited financial resources may reside in accessory units that do not comply with the Ontario Building Code (OBC) or Ontario Fire Code (OFC). Common violations include issues such as:

- Inadequate or missing exits
- Undersized or inaccessible basement windows that do not provide a viable means of escape during a fire
- Missing or improperly installed smoke alarms, carbon monoxide (CO) alarms, or fire extinguishers
- Lack of a posted or practiced fire escape plan

Additional concerns may include:

- No direct means of egress from the basement level to the outside
- Poor understanding among property owners of their legal responsibilities under the fire code
- General lack of awareness regarding minimum fire safety standards

Until SNFES acquires a Provincial Fire Prevention Officer (FPO) or Public Fire and Life Safety Educator (PFLSE), each department should assess its current fire prevention and enforcement capacity to ensure adequate staffing for the inspection of accessory dwellings within SNGR for OFC compliance.

Given the unknown number of these occupancies in the community, a full-time fire inspector is recommended to properly address this risk profile.

SNFES and the Building Department should also work collaboratively with By-Law Enforcement to create and promote a clear reporting mechanism (e.g., a dedicated phone line or online form) for community members to report suspected illegal accessory units.

Key fire safety requirements for basement (in-ground) accessory dwellings include:

- Compliance with Ontario Building Code (OBC) and OFC standards
- A direct and unobstructed means of egress to the exterior
- Windows that are adequately sized and accessible for emergency escape and rescue

2.7 Policies, Directives, & SOG/SOPs

Each year, more fire departments find themselves and their municipalities in court defending their actions, or lack thereof, about activities at an incident. In many of these cases, the scenario involves a fire department leaving the scene of a fire and the fire flaring up. The structure was damaged further, as the fire department did not ensure extinguishment before departing. Property conservation is an area where fire departments do not develop and practise their skill sets, such as using salvage tarps, water conservation to reduce water damage, completing excessive overhaul operations, etc., which may lead to litigation if not adequately monitored.

If an incident does arise, the fire chief and the community's senior management team should develop a plan to reduce the harm that may arise, which may lead to a lawsuit. The key to helping prevent lawsuits is realizing the importance of having policies, procedures, and training in place.

Fire departments commonly lack the development of Standard Operating Guidelines (SOGs) and Standard Operating Procedures (SOPs) for firefighters posting pictures of fire scenes they attended without permission from the community or the Fire Chief. The OFM has previously cautioned about posting photographs of fire scenes online as they may jeopardize fire investigations.

All emergency service organizations must develop, adopt, and implement SOGs or SOPs, which SNFES has chosen to refer to its directives as SOGs. The courts have significantly limited and narrowed the beliefs that defined immunity (individual vs government), and SOGs must reflect these limitations. Today, some courts permit legal action against the emergency service and those in charge. To prepare for these challenges, develop, adopt, and implement a comprehensive set of SOGs. Terms such as "duty to care," "breach of omission or commission," and "joint and several liabilities" are becoming frequent vocabulary of emergency services personnel.

Fire department policies and guidelines have immense value for a department. They are the critical foundation of a fire department's success. SOGs are not static documents. They should be regularly reviewed and updated. This does not suggest that every SOG should be changed yearly but that each SOG needs reviewing for updates, corrections, fine-tuning, or otherwise changes if necessary. Reviewing and revising the SOGs is more important than determining how many SOGs there have been. Some fire departments review a third of their SOGs annually. Adopting this procedure ensures that the whole set of documents receives a full review and is updated as necessary every three years.

Reviewing the SOGs can be incredibly detailed and very involved; SNFES has initiated a complete review of all SOGs in 2024, and from now on, this should occur every three years. It is incumbent upon the Fire Chief to complete this task on top of their already busy schedule and workload. Some fire departments have established SOG committees that meet regularly to create new guidelines and review older ones, which would relieve some of the pressure on the Fire Chief. The development of a structured SOG Committee that includes representation from every rank of SNFES and establishes its Terms of Reference would be a great benefit to the SNFES in several ways:

- It provides for updated and current SOGs.
- More staff would be more involved in the fire department operations.
- A safer environment for members to work in by ensuring current and relevant SOGs are in place.

A Terms of Reference (TOR) describes the committee's purpose, scope, and authority. Typically, the TOR is a written guide for the committee that contains clear and specific information on

how the committee is organized, what it is trying to achieve, who its members are, and when and where it meets.

The Section 21 Committee is part of the *OHSA* initiative for firefighter safety. The Section 21 Guidance notes are kept current by a provincial team of fire service personnel and are a good and current source for reference. The many NFPA standards are also a good resource for developing SOGs.

The following are suggestions for consideration:

Include a section titled Reference Material. This section lists all documents available in the development of the SOG. These documents may include:

- Section 21, Guidance Notes
- NFPA Standards
- *OHSA*
- The *FPPA*, the OBC, and the OFC
- Any training materials, such as those from the International Fire Service Training Association (IFSTA),
- Policies and by-laws.
- Other SOGs that are relevant to the SOG.

In evaluating policies, obtaining input from the organization's members is essential. Consideration of the following questions will provide clarity:

- Is it founded on sound judgment?
- Is it reasonably attainable?
- Is it within legal and or regulatory boundaries?
- Is it definite, positive, and clear?
- Does it need further definition or explanation to those affected?
- Is it applicable to all organizational units?
- Is it flexible? Should it be flexible?
- Does it reflect the general thinking and enforcement philosophy of all levels of personnel?
- Will (or must) it be supported by procedures, guidelines, rules, and regulations?

- Is it morally sound and defensible?
- Can it be enforced?
- Will it be implemented?

An area lacking in some fire departments is the lack of adherence and accountability. Firefighter safety is a paramount consideration when developing SOGs. Insubordinate actions toward them by fire department members must not be tolerated, as it may lead to freelancing and insubordination; those in violation must be held accountable.

Table #2 compares the NFPA and Section 21 Guidance Notes to serve as best practices for developing SOGs. During the review of current SOGs, there was little reference to the Section 21 Guidance Notes.

TABLE #2 - NFPA & SECTION 21 GUIDANCE NOTE COMPARISON

NFPA Code/Standard	Standard	Section 21 Guidance Notes
NFPA 1001	Standard for Fire Fighter Professional Qualifications	7-7
NFPA 1002	Standard for Fire Apparatus Driver/Operator Professional Qualifications	6-25, 6-26
NFPA 1003	Standard for Airport Fire Fighter Professional Qualifications	6-21
NFPA 1006	Standard for Technical Rescuer Professional Qualifications	6-3, 6-5
NFPA 1081	Standard on Open-Circuit Self-Contained Breathing Apparatus (SCBA) for Emergency Services	4-9
NFPA 1142	Standard on Water Supplies for Suburban and Rural Fire Fighting	6-26
NFPA 1401	Recommended Practice for Fire Service Training Reports and Records	7-3
NFPA 1402	Standard on Facilities for Fire Training and Associated Props	7-6
NFPA 1403	Standard on Live Fire Training Evolutions	7-5
NFPA 1404	Standard for Fire Service Respiratory Protections Training	6-43

NFPA Code/Standard	Standard	Section 21 Guidance Notes
NFPA 1451	Standard for a Fire and Emergency Service Vehicle Operations Training Program	6-25
NFPA 1500	Standard on Fire Department Occupational Safety, Health, and Wellness Program	4-10, 7-3
NFPA 1521	Standard for Fire Department Safety Officer Professional Qualifications	2-4
NFPA 1561	Standard on Emergency Services Incident Management System and Command Safety	5-1
NFPA 1670	Standard on Operations and Training for Technical Search and Rescue Incidents	6-3, 6-4, 6-5
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	6-26
NFPA 1851	Standard on Selection, Care and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting	4-8, 6-1
NFPA 1858	Standard on Selection, Care, and Maintenance of Life Safety Rope and Equipment for Emergency Services	1-5
NFPA 1901	Standard for Automobile Fire Apparatus	1-8, 4-11, 6-10, 6-29
NFPA 1906	Standard for Wildland Fire Apparatus	1-8
NFPA 1911	Standard for Inspection, Maintenance, Testing and Retirement of in-Service Automotive Fire Apparatus	1-2
NFPA 1912	Standard for Fire Apparatus Refurbishing	6-26
NFPA 1936	Standard on Powered Rescue Tools	1-6
NFPA 1971	Standard on Protective Ensembles for Structural Firefighting and Proximity Firefighting	4-1, 6-1
NFPA 1977	Standard on Protective Clothing and Equipment for Wildland Firefighting	4-7
NFPA 1982	Standard on Personal Alert Safety Systems	4-4

NFPA Code/Standard	Standard	Section 21 Guidance Notes
NFPA 1983	Standard on Life Safety Rope and Equipment for Emergency Services	1-5, 6-5
NFPA 403	Standard for Aircraft Rescue and Firefighting Services at Airports	6-21
NFPA 414	Standard for Aircraft Rescue and Firefighting Vehicles	1-8, 6-21
NFPA 472	Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents	6-9

2.8 Surveys

Fire departments, as a public service are constantly engaging with its community members. To better assess the needs and circumstances of the Six Nations Fire and Emergency Services, EMG engaged input via survey questions from three levels: internal, external, and Council and Senior Management. The input provided by respondents helps to provide context to the research and observations from the EMG consultants. This context assists with the recommendations provided within this report.

Methodology

The methodology used to collect data consisted of online surveys created by EMG and made available to the community and provided internally by the Fire Chief. Paper copies were available should anyone without internet access require a survey to complete.

Online surveys are one of the most effective surveying methods. They can be used by anyone for just about anything and are easily customized for a particular audience. Statistics show that age bias is no longer a concern with the use of online surveys as a research methodology. The increase in social media use, digital technologies, portable electronic devices, and ease of use have allowed for the capture of big data. Familiarity with online surveys allows users to provide personal perspectives and increase knowledge for the survey provider. EMG uses online/electronic surveys to allow for fast and immediate data collection from target audiences.

The SNFES survey was provided via Survey Monkey, a trusted website that allows for customizable surveys and provides data analysis. The surveys provided respondents with anonymity. After survey links were provided, EMG staff collated, compiled, and analyzed the data to ensure confidentiality.

The external survey consisted of ten questions. The types of questions included open-ended questions and ordinal scale questions. Different types of questions were used because each

type of question collects a different type of data to inform a more comprehensive understanding of the SNFES level of service delivery to community members. Ordinal scale questions allowed EMG to order and rank the range of services provided by SNFES.

The internal survey consisted of ten questions. The types of survey questions included open-ended questions, nominal scale questions, and ordinal scale questions. Open-ended questions provided opinions, feelings, impressions, and/or suggestions to evaluate the state of mind of staff and attitude of SNFES staff toward their fire service. One question was an interval scale question gauging the opinion of the firefighters in relation to fire protection services most valued by the community, on a scale from most important to least important. One question was a nominal scale question to identify respondents who received services from SNFES and respondents who did not. The internal survey allows EMG to evaluate which of public education, standards and enforcement, or suppression as lines of defence is perceived as the overarching purpose of SNFES.

The Council and Senior Management survey consisted of nine questions. All questions were in the style of open-ended questions. The open-ended question type allows EMG to gather constructive insight and gain detailed, valued, and descriptive information given the target group's knowledge and understanding of the SNFES, the community, and their members.

2.8.1 External Surveys

There was a total of five external participants. This low level of response cannot provide sufficient insight into the views and opinions of the community. Typical survey response rate is expected to range from 10% to 30% of a target audience.

The results still indicate that respondents felt that SNFES serves the community well. Following is a breakdown of the results.

Question 1. What is your general impression of the Fire & Emergency Services concerning its level of professionalism, community safety, education, and fire prevention awareness programs?

Responses included:

- "a professional group of individuals, passionate about their community, providing effective, professional response. Not familiar with their education or prevention programs."
- "SNFES is top notch, which is a testament to the leadership in place in the organization."

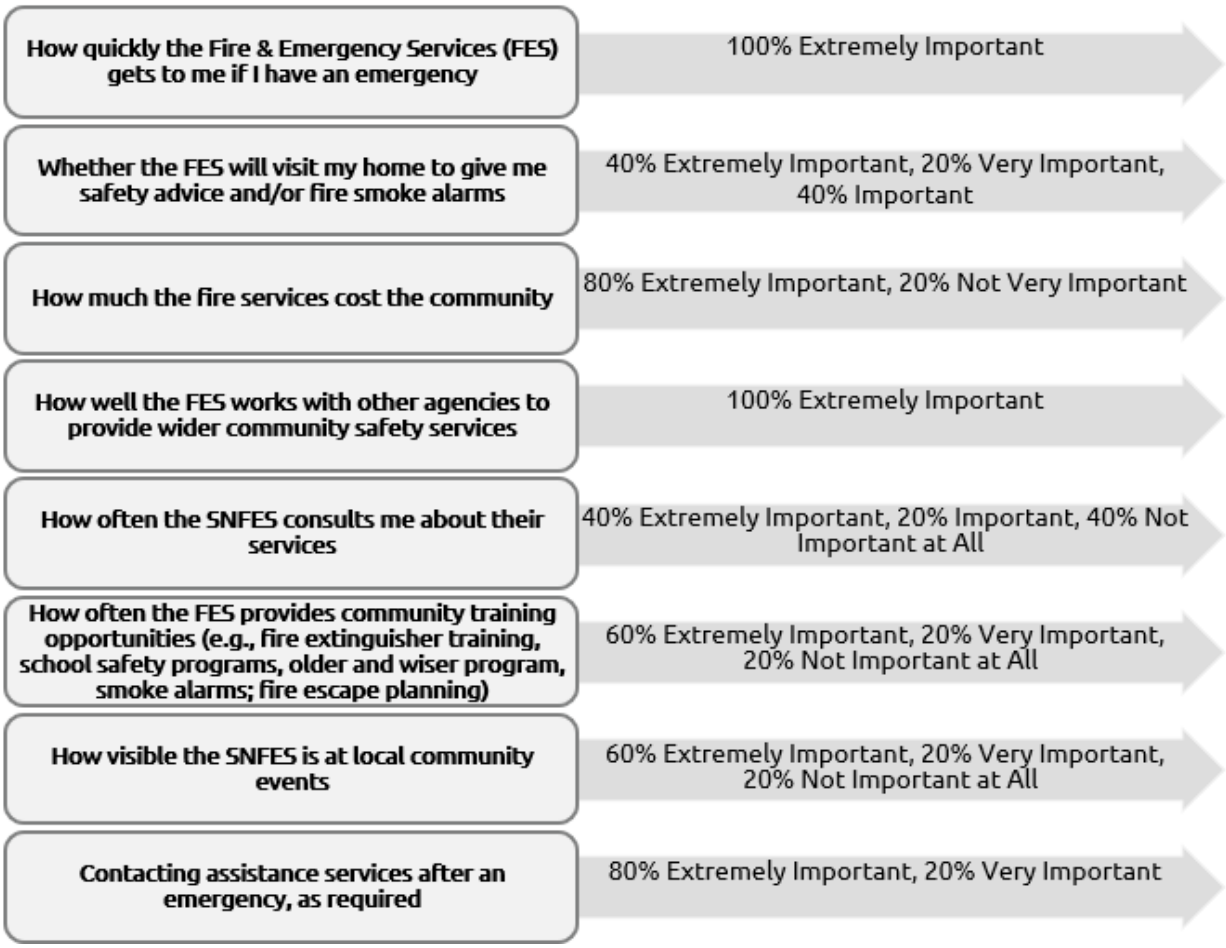
- "The service is well run, administrations over the last 5-7 years have created a vision that is reflective of the service today. I believe fire prevention programs have been lacking over the years. However, the new leadership appears to have brought prevention to the forefront in the interest of public safety."
- "The fire and emergency services are very professional. I don't know a whole lot about community safety and fire prevention."
- "Good."

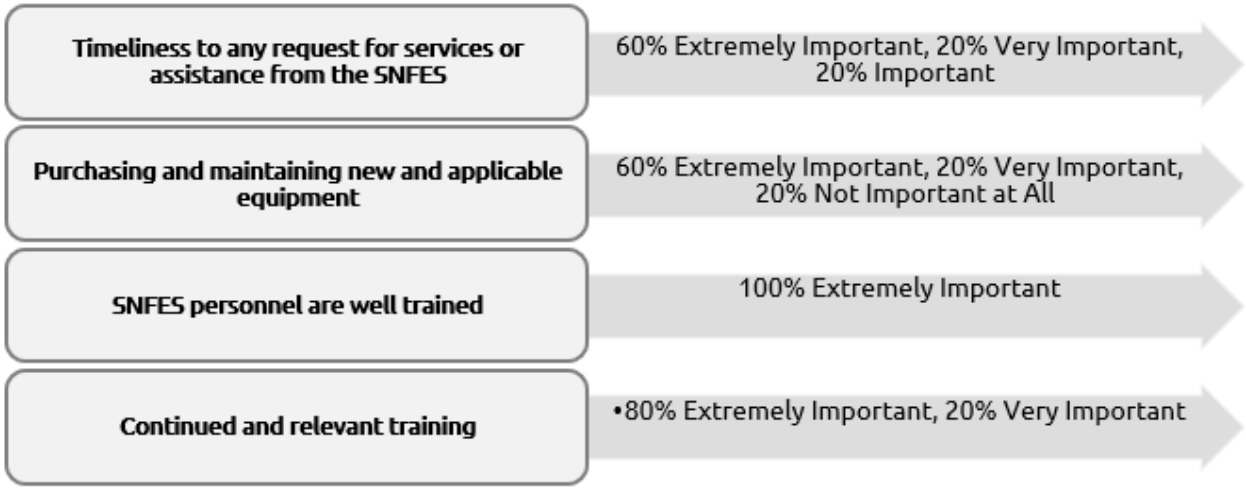
Question 2. Has the Fire & Emergency Services staff approached you concerning their Smoke Alarm Program, and if so, how did you find this interaction?

Four respondents had no involvement with the Smoke Alarm Program, and one did with positive comments stating, "the interaction was informative and professional".

Question 3. How important are the following statements to you? Please rank in order of priority from Extremely Important to Not Important at All.

The following criteria were assessed, with the relative rankings provided:





Question 4. Based on your knowledge/understanding of the Fire & Emergency Services, what are the top three issues facing our fire service today (i.e. barriers to providing safety), and why?

Of the replies from the participants, the top issue was *funding*. The replies included:

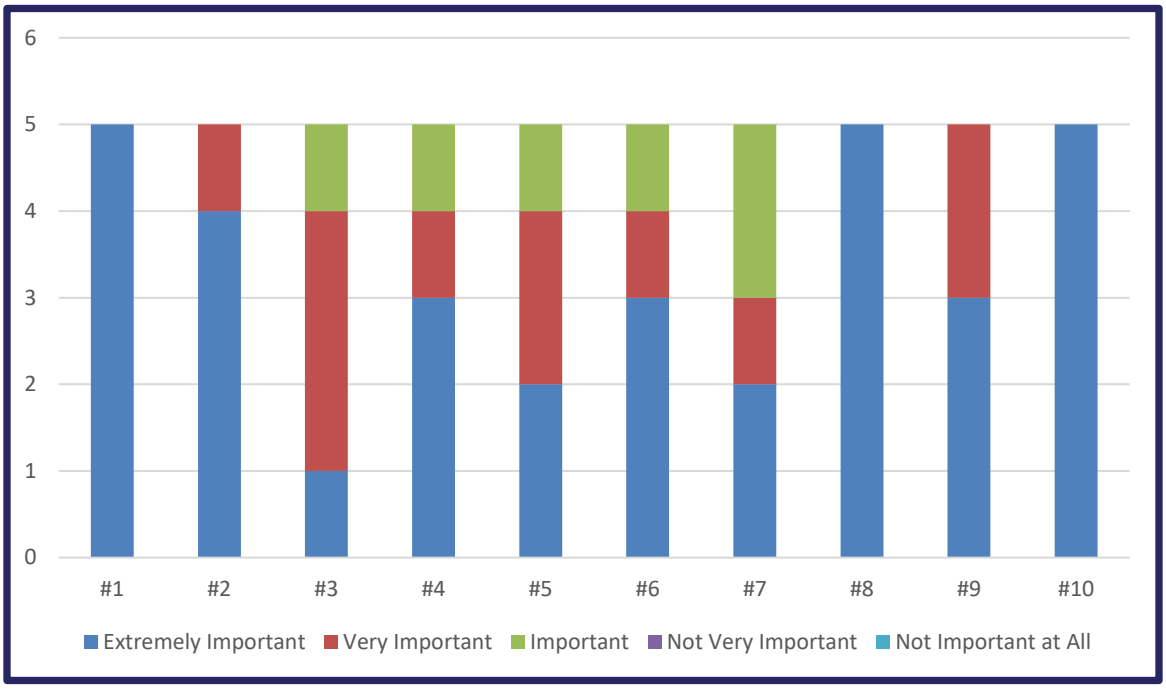
- "Recruitment, Fire Safety, Funding"
- "Funding increases for equipment, training will enhance community safety, hiring more personnel"
- "Staffing, finances, understanding of the job requirements (from public)"
- "Funding, equipment, staffing"
- "Funding, infrastructure, equipment"

Question 5. Six Nations Fire & Emergency Services delivers ten core services. Which services are most important to you? Please rank in order of priority from Extremely Important to Not Important at All.

The options included:

1. Firefighting	6. Water and Ice Rescue
2. Vehicle Collision and Extrication	7. Confined Space Rescue – Awareness Level
3. Grass, Bush, Forestry Firefighting	8. Fire Prevention
4. Emergency Medical Intervention	9. Fire Code Enforcement
5. Hazardous Materials Res – Operations Level	10. Public Fire Safety Education

The results were:



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

Of the replies, only one participant provided a response.

- "Emergency Management coordination during a community crisis"

Question 7. Over the next ten years, if you could recommend/implement up to three things to improve how the Fire and Emergency Services provides the current services, what would those things be?

Two participants skipped this question. The remaining three replies focused on *staffing* and *equipment* as priority concerns. The responses included:

- "Increased personnel. Modernized equipment and infrastructure"
- "Relevant and updated equipment, staffing of FN community members"
- "Provide adequate stable and predictable funding, increase water main so that hydrants are more accessible, provide updated equipment and new trucks as required"

Question 8. Have you received services from the Six Nations Fire and Emergency Services?

Three of the five respondents indicated that they had not received services from SNFES. The remaining two indicated that they have.

Question 9. Could you share some details of your experience and any recommendations for improving the Fire and Emergency Services?

Two respondents skipped this question. The others provided these responses:

- "From a fellow First Responder perspective, my experiences have been great. All members how (sic) they want to make a difference and do what they are able for community safety and awareness."
- "Mutual aid"
- "Fire responded to a 911 call of an acute environment smell at my workplace. They responded quickly and professionally."

Question 10. Which age group are you?

As a control question to provide additional insights into the respondent group, this question established demographics. The replies showed that the group consisted of adults.

- One participant was between 31 and 40
- Two participants were between 41 and 50
- Two participants were between 51 and 60

External Survey Summary

With a population of over 12,000, four external responses is not statistically significant. The results, while important, add no value to the opinions and perspectives of the community members being served by SNFES.

2.8.2 Council & Senior Management Surveys

There were four participants from within the Council and Senior Management pool for this targeted survey. The available number of potential respondents included 13 council members and 15 in senior administration. This represents a 14% response of available participants. While within the 10% to 30% typical response range, the total number of four responses is low. The responses may not be reflective of the actual opinion and perspective of the SNGR Council and Senior Management. The results for the questions are detailed in the following summary.

Question 1. Do you think the residents are getting fair value in relation to the fire services provided? If so, why, if not why?

Three respondents answered this question. The answers were:

- "No, we're not getting fair value. We're only getting what the limited budget can provide. We need more firemen and better equipment."
- "Yes, I believe that fire services provided to the Six Nations of the Grand River community is very fair. From what I see and know, they continue with much training that grows their expertise in this area."
- "Yes"

Question 2. Do you feel the community is properly protected by the present number of fire stations and fire apparatuses? If so, why? If not, why?

All respondents answered this question. The replies were:

- "I think the community is protected by the number of fire halls and fire apparatuses. The only fire station we don't have is the one on Cayuga Road but there's nothing we can do about that because of the vandalism."
- "I am not sure, however, the fire station that sits vacant on Cayuga Road is in that condition due to vandalism by neighbours, and this requires the fire department to be efficient without it. If fire sees this as a detriment to their service, then another station needs to be erected as soon as possible."
- "Yes"
- "Fire safety enforcement is needed."

Question 3. Based on the future growth of the community, do you feel that the Fire and Emergency Services can keep up with the demands in its present state? If not, what is missing?

All participants responded to this question. The answers were:

- "No. With all the cigarette factories going up almost on a daily basis, there's no way we can meet the demands of a major fire breaking out, what with all the chemicals at these factories."
- "I am judging my understanding on this question is that no they are not equipped to keep up with the demand. They are constantly in search of funding to adequately equip the fire fighters with safety equipment, maintain their equipment and there should never be any question on their needs as it is their duty to maintain a fire safety standard and this particular situation can only assessed by the people in charge of this department."
- "Yes."
- "Population increase requires more fire stations and firefighters."

Question 4. What do you believe are the greatest strengths of the Fire & Emergency Services?

All participants responded to this question. The results were:

- "Greatest strength is their commitment to our community to do the best job they can with limited resources."
- "The biggest strength of this operation is the fact that it is owned by Six Nations of the Grand River and has our many of our own community members trained as firefighters."
- "24 responders"
- "Training and caring for one's own people. Fully"

Question 5. What do you believe to be the top risks/issues facing the Fire and Emergency Services (i.e. barriers to response/delivery of service, recruitment, and retention)?

All participants responded to this question. The answers provided were:

- "I would think recruitment and retention would be the top risk. We've been through several fire chiefs over time and for some reason we can't seem to hang on to personnel. Seems fire chief gets in and before long doing whatever they want. Chalking up expenditures."
- "Top risks for the emergency services are the drugs and alcohol problems. They have to deal with the mental states of people who are under influence and probably receive

threats when they are trying to help. Therefore, this department really needs to have debriefings and counselling discussions after tragic events have occurred. Recruitment and retention need to encourage the community members to want to become part of this, because our people want their people to be employed and for their services required."

- "Training our own FN members for the fire service."
- "Fully trained firefighters and staff to meet the needs of the increase in population."

Question 6. How would you like to see the Fire and Emergency Services in the next 5 to 10 years in relation to serving the community, keeping in mind growth of the community?

Only three respondents answered this question. The results were:

- "I think our fire and emergency service is doing the best they can but we can do better. I would like to see our fire and emergency services with ample volunteers and the best equipment possible with more trucks and equipment to deal with the fires and emergency."
- "I would like to see the fire and emergency services merge into a department that includes the Police, Fire and Ambulance. I would like to see our own community members in the positions and adequately staffed based on the growth of the community."
- "Increase paramedic services within fire services"

Question 7. Do you see an opportunity for the Fire and Emergency Services to develop strategic partnerships with other organizations in relation to cost and service efficiencies? If so, then with whom and why?

Only three respondents answered this question. The results were:

- "I don't know enough about the fire department as to whether strategic partners might be worth a try."
- "I am not sure. I see Fire, Police and Ambulance as our established Emergency Services."
- "Yes, an opportunity to strategically plan, develop and implement partnerships for fire safety and cost saving."

Question 8. Can you share any input received from your community and/or staff in relation to the Fire and Emergency Services, whether they are cost-related, service-related, or fire safety and education-related?

Only three respondents answered this question. The results were:

- "Most input I received was in relation to cost related. People our fire department needs more money to operate effectively."
- "I just know that community was very angry when the Fire Chief was non-native and hired many non-native firemen when it should be our own people."
- "Children and elderly training on fire safety in the home. Fire extinguisher training for elders."

Question 9. Are there any other aspects or factors that you believe should be considered that we have not touched on already? For example, fire station closures or additions, reduction in services by the Fire and Emergency Services, or even an increase in services through the hiring of more fire personnel.

Only one respondent answered this question. The reply was:

- "I believe this assessment lies within the Fire Department who would better understand the need for more staff, equipment, trucks etc. It should all be based on the growth and development of the Six Nations of the Grand River."

Council Survey Summary

Council and the Senior Management team have unique insights into the fire department and its position as a deliverable service within Six Nations of the Grand River. Typically, this view is not one of service provider or service recipient, but instead one of service manager. They understand the financial burden of fire services, who are not revenue generating divisions. They accrue costs and the deliverables are not measurable in dollars. This perspective allows for an outward view of fire department operations.

Based on the replies submitted, the identified trends in answers centre around several key items. Station 3 being closed was mentioned as a concern. There is mention about recruitment and retention, both currently and forecasted. Also, the issue of finding ways to establish secure and sustainable funding for the fire department was discussed. This would allow proper apparatus and equipment maintenance and replacement.

2.8.3 Internal Surveys

There were 33 responses to the internal survey sent to staff within the fire department. This represents a response rate of 47% based on the total number of staff of 70. This indicates a high response rate, exceeding normal expectations and represents almost half of fire department personnel. This survey consisted of 12 questions, mixed between open-ended and rating-type questions.

Question 1. What are the things that make you most proud of the Six Nations Fire & Emergency Services (e.g., the level of professionalism, community involvement or making a positive difference within the community)?

93% (31/33) of respondents answered this question.

Of the replies, almost all participants commented that these three things make them proud of SNFES:

- Level of training
- Professionalism
- Community involvement

Making a positive difference in the community and the strong work ethic of staff were also mentioned more than once.

Other comments included: staff, mentorship, traditional aggressive firefighting style, social media presence, commitment to improvement, level of service, and resilience of senior firefighters & captains enduring adverse past.

Question 2. How do you think most people living in the community perceive the Fire and Emergency Services, and why?

All participants answered this question.

A majority of replies were focused on four comments:

- Professional
- Positive
- Mixed reactions
- Respected

The other comments that were provided included: having non-Indigenous members (twice), good customer service, not realize the commitment of staff, newer experiences would be good as opposed to old, excellent customer service, and dependable.

Question 3. Based on your experience with Fie and Emergency Services, what would you say are the top three issues facing the department today? Why and how do you feel these should be addressed?

All participants answered this question.

The overall top three issues identified by respondents were:

- Pay & benefits
- Staff retention
- Issues with department administration, organization and communication

These three issues were included in most replies. Other answers that occurred more than once include: lack of community members, volunteer training, training at higher levels, health and wellness supports, funding, geographic response area, lack of experience, staff motivation, workload, and staff involvement in renovation discussions.

Items mentioned once included: traumatic calls, community event involvement from staff, lack of adequate water supply, vandalism, cultural division between Indigenous and non-Indigenous staff, and aging apparatus and equipment.

Question 4. Which services do you believe are most valued by the community? Please rank in order of priority from Extremely Important to Not Important at All.

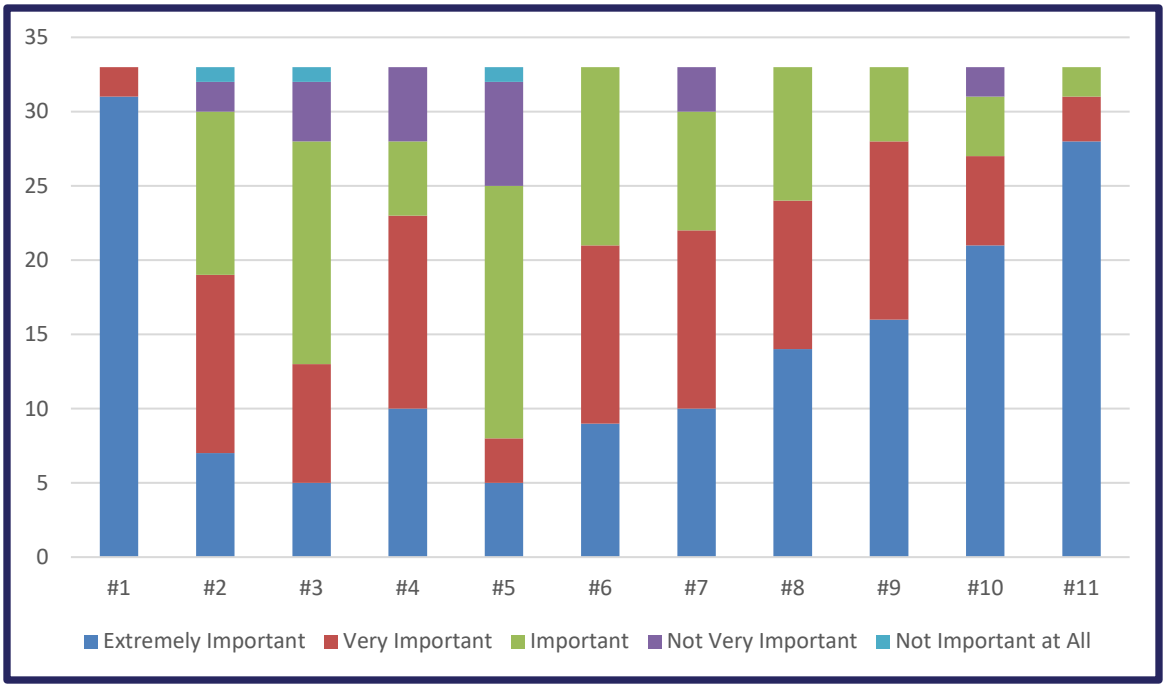
All participants answered this question.

Participants were asked to rank the importance of several service-related measures. Those targets were:

1. How quickly the Fire & Emergency Services (FES) gets to me if I have an emergency
2. Whether the FES will visit my home to give me safety advice and/or fire smoke alarms
3. How much the fire service costs the community
4. How well the FES works with other agencies to provide wider community safety services
5. How often the SNFES consults me about their services

6. How often the FES provides community training opportunities (e.g., fire extinguisher training, school safety programs, Older and Wiser program, smoke alarms, fire escape planning)
7. How visible the SNFES is at local community events
8. How easy to receive assistance services after an emergency, when required
9. Timeliness to any request for services or assistance from the SNFES
10. SNFES apparatuses and equipment is up-to-date and well maintained
11. SNFES personnel are well trained

The results were as follows:



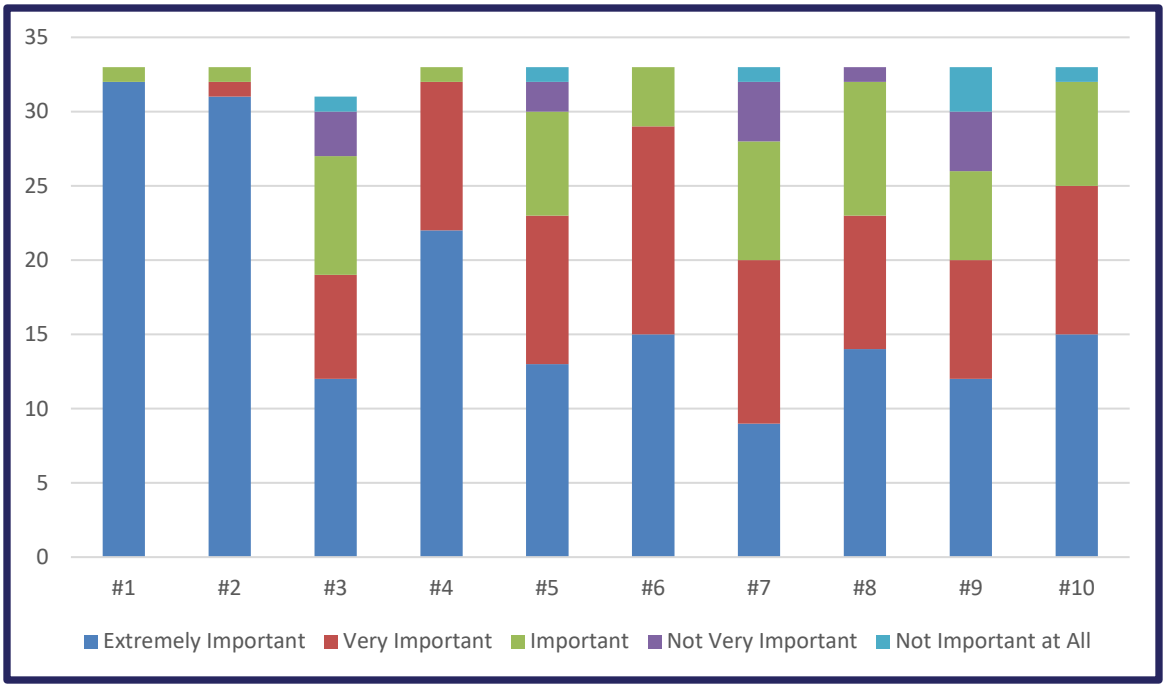
Question 5. There are ten core services delivered by the Fire and Emergency Services. Which services are most important to you? Please rank in order of priority from Extremely Important to Not Important at All.

All participants answered this question.

Participants were asked to rank the importance of the ten core services delivered by SNFES. Those core services are:

1. Firefighting (including rescue) 2. Vehicle Collision and Extrication 3. Grass, Bush, Forestry Firefighting 4. Emergency Medical Intervention (including defibrillation) 5. Hazardous Materials Res – Operations Level	6. Water and Ice Rescue 7. Confined Space Rescue – Awareness Level 8. Fire Prevention 9. Fire Code Enforcement 10. Public Fire Safety Education

The results were as follows:



Question 6. Do you believe SNFES should respond to technical rescue at to which level per NFPA 1006?

93% (31/33) of respondents answered this question.

All respondents answered "yes" (100%).

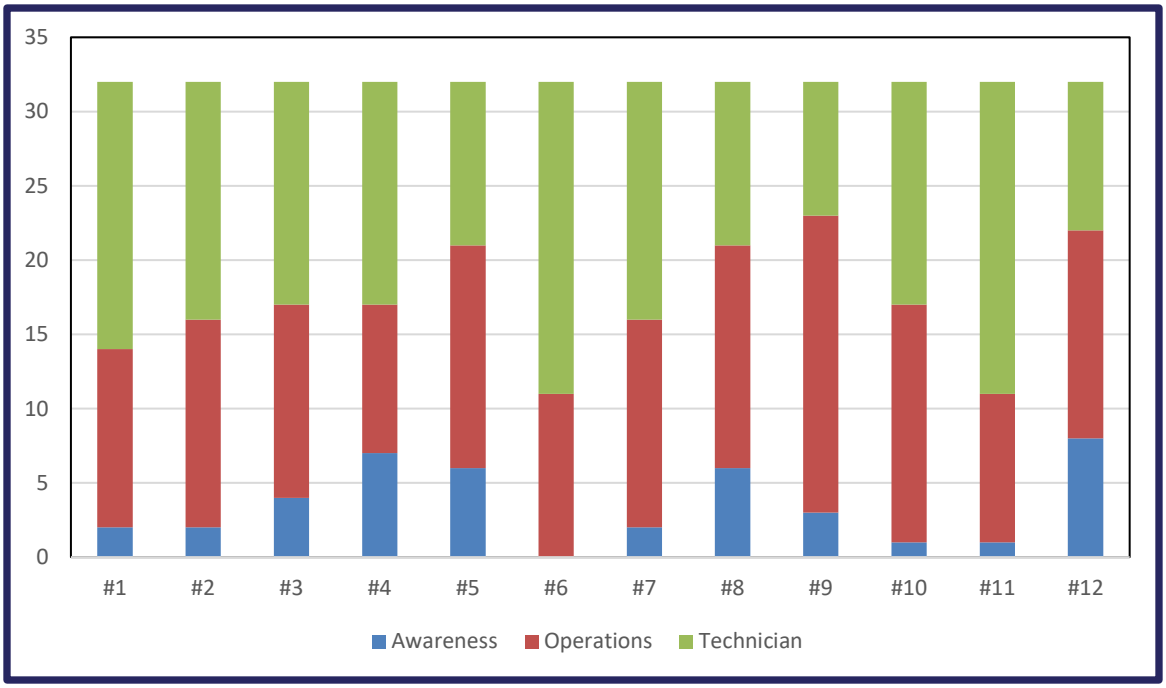
Question 7. Please rate which level you believe SNFES should respond to each of the following:

97% (32/33) of respondents answered this question.

Participants were asked to rate the level of technical rescue response as per NFPA standards that SNFES should set as a level of service. The specific rescue types asked were:

1. Ice Rescue	7. High Angle Rope Rescue
2. Surface Water Rescue	8. Trench Rescue
3. Floodwater Rescue	9. Elevator Rescue
4. Swiftwater Rescue	10. Heavy Machinery Rescue
5. Confined Space Rescue	11. Bus/Large Truck Extrication
6. Low Angle Rope Rescue	12. Animal Rescue (Farm)

The results were as follows:



Question 8. Are there any other services that you believe the Fire & Emergency Services should provide or increase the level of the present service? Why, and what would be the outcome/benefit?

70% (23/33) of respondents answered this question.

Three services were mentioned more than once. They were:

1. Public education
2. Outreach services
3. Mental health support for staff

Other services mentioned in the responses included: *grass fire services, increased smoke alarm program, volunteers able to respond to medicals, rope rescue, improved training, and junior firefighting programs.*

Question 9. What improvements, if any, could the Fire & Emergency Services implement to make it better? What do you believe would be the outcome of implementing these changes?

85% (28/33) of respondents answered this question.

The top responses in terms of repetition were two answers that accounted for 72% of the responses (11 and 9, respectively. Those improvements were:

1. Pay and retention improvements
2. Increased training and certifications in other disciplines

Other improvements mentioned more than once included organization, mental health, efficiency in response times, another full-time station, and department morale.

Single responses included reopening the closed station, increasing technology, resource allocation, uniforms, a full-time smoke alarm program, an apparatus design committee, a volunteer structure, enhanced communications and inclusion in decision-making, cancer prevention, community outreach and public education, upgrading older apparatus and equipment, health benefits, a higher level of service, and code enforcement.

Question 10. If it were up to you, what would the Fire & Emergency Services be like in 5 to 10 years from today, and why? How do you propose we get there?

93% (31/33) of respondents answered this question.

The primary response, accounting for 55% of the replies, was:

1. More fulltime stations

Other repeated responses included:

2. Fair wages
3. Equal training certification and standards

4. Improved technology
5. Full-time prevention, inspections, and public education
6. Complete training program
7. Recruitment and retention

Singular responses to this question were: mental health, staff deployment, growth, accredited tanker shuttle, health and wellness, professional development, strong community relationships, regional training centre, and all Indigenous staff.

Question 11. Are there any other comments or suggestions that you would like to add that would improve the services that the Fire & Emergency Services delivers to the community?

61% (20/33) of respondents answered this question.

Within the replies to this question, only two were repeated. They were:

1. Investing in community members
2. Community involvement

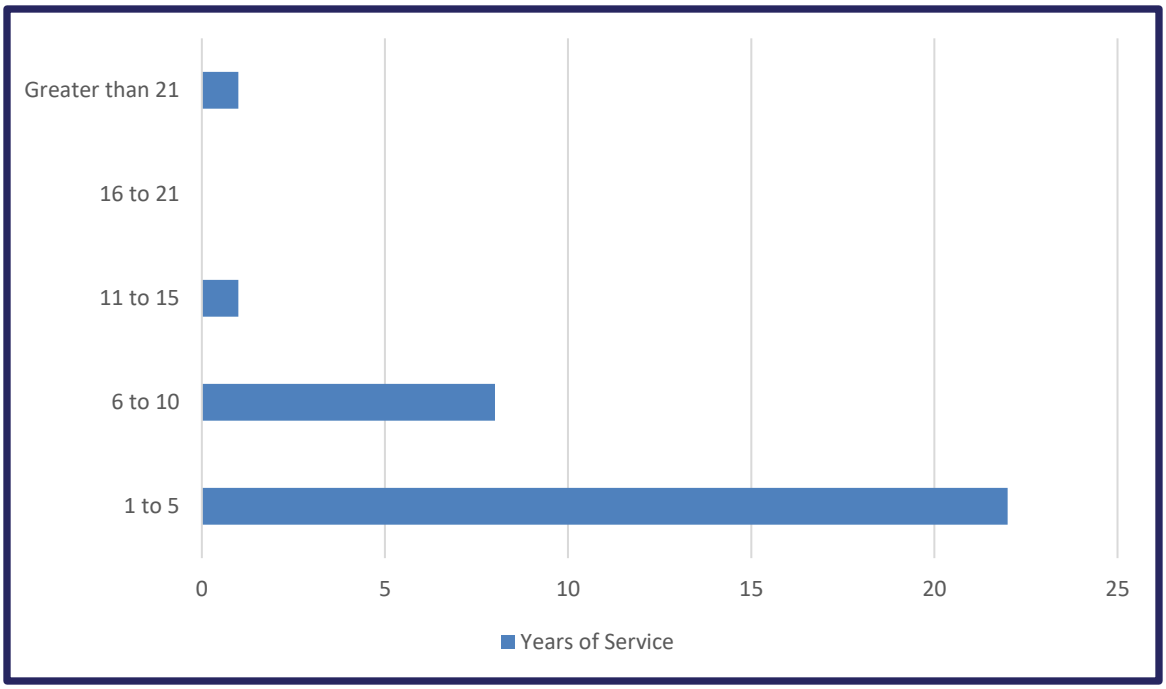
All other replies were mentioned only once and included: pay and retention, hazardous materials, staffing for prevention, adherence to rank and responsibility, more space, new stations, more live fire training, and improved internal relationships within SNGR.

Question 12. How long have you been a member of the SNFES?

97% (32/33) of respondents answered this question.

Options for participants to select to determine their time with SNFRS were:

1. 1 to 5 years
2. 6 to 10 years
3. 11 to 15 years
4. 16 to 21 years
5. Greater than 21 years



Internal Survey Summary

Based on the total responses from SNFES staff, there are several key takeaways. First, there is a strong concern regarding pay and benefits. This is coupled with a turnover rate that creates a retention issue. Both matters impact morale and can create anxiety and frustration within a department. However, in all questions related to self-image and community image, the staff overwhelmingly communicated a professional and positive belief in SNFES. They seek improvements and growth in a department that has suffered from turnover and a move from volunteer to career without a structured pay and compensation plan that has struggled to catch up. Staff responses indicate a willingness to improve the department and see it grow. A strong sense of community involvement and community member development also resonates within the answers provided in the survey.

2.9 Survey Recommendations

The surveys were reviewed and explained in this section. Based on the low response in the Council and Senior Administration survey, as well as the External survey, there is little insight to be gained that can be determined to be reflective of the larger group. No recommendations are gathered from those surveys.

The Internal survey did yield a strong participation rate. From that, the following recommendations have been developed based on the responses.

Section 2 - Recommendations

Rec #	Recommendation	Suggested Implementation Timeline	Estimated Costs	Rationale
1	With the completion of the Community Risk Assessment and this Master Fire Plan, the Fire Chief should utilize the components of the two documents' recommendations for developing and implementing the Community Risk Reduction Plan.	Short-Term (1 to 3 years)	Staff time, but some recommendations may include associated costs	Keeping track of the Community Risk Assessment and Master Fire Plan recommendations, along with implementation and outcomes resulting from the recommendations, will ensure proper tracking and accountability.
2	The occupancy classification in which a fire has occurred should be identified in the record management system storing this data and based on the OBC.	Short-Term (1 to 3 years)	Staff time	Identifying the occupancies in which fires occur will aid fire prevention in determining where to focus public education efforts to reduce the number of fires in that occupancy.

Rec #	Recommendation	Suggested Implementation Timeline	Estimated Costs	Rationale
3	The SNFES promotes residential fire sprinklers' benefits in new home construction in cooperation with local developers.	Short-Term (1 to 3 years)	Staff time with consideration of the costs associated with any demonstrations.	With the forecasted growth in population, new residential developments will come to the forefront. During the initial approval stages, SNFES should work with the developer to promote the value of residential fire sprinklers.
4	The Fire Chief updates the by-laws that directly affect the fire department and collaborates with other fire departments in other municipalities as required.	Short-Term (1 to 3 years)	Staff Time	The annual review of by-laws ensures they are current and meet the needs of the Six Nations Fire and Emergency Services.
5	SNFES reviews and updates the Mission, Vision and Values statements and re-includes them in the revised Establishing and Regulating By-law Schedule. They should be posted at each fire station upon the Elected Council's approval.	Short-Term (1 to 3 years)	Staff Time	Having the three statements helps guide the reason and purpose of the SNFES to its members and the public it serves.

Rec #	Recommendation	Suggested Implementation Timeline	Estimated Costs	Rationale
6	SNFES establishes a SOG Committee that includes members of each Division of SNFES, and the group establishes its Terms of References as its guiding document.	Short-Term (1 to 3 years)	Staff Time and associated costs with non-full-time personnel.	Having a committee address the needs of SNFES' SOG requirements will relieve some of the workload burden upon the Fire Chief. Upon the committee's establishment, the first order of business should be the development of its Terms of Reference (TOR), which describes the committee's purpose, scope and authority.
7	The Fire Chief should work with the Human Resources and Finance department to review the existing pay and benefits package for career and volunteer firefighters and administrative staff	Short-Term (1 to 3 years)	Actual new pay & benefits package to be determined; process cost is staff hours	Staff state the current compensation package is inconsistent and not reflective of department; current labour situation may dictate a different path.
8	The Fire Chief should create a medium to long-term staffing plan as it relates to volunteer and fulltime positions, and include recruitment and retention initiatives with focus on community youth	Short-Term (1 to 3 years)	Staff Time	Staff retention is indicated in the internal survey responses. An approved plan to stabilize staffing levels will help with morale.

Section 3

Fire Department Divisions

SECTION 3: FIRE DEPARTMENT DIVISIONS

The purpose of a comprehensive Master Fire Plan (MFP) is to guide the Six Nations Fire and Emergency Service (SNFES) through the next ten years of population and growth. The final Plan will review the Department's operations and assess the current resources against existing and future needs. The final report will aim to align with the SNFES's Strategic Plan and assist in a planning framework to guide policy, organizational, capital, and operational decisions and ensure that current and future needs are met in a fiscally feasible and responsible manner. The plan will provide flexibility to adapt to future community needs and circumstances.

3.1 Community Safety – Four Lines of Defence

The OFM community safety model identifies three lines of defence: Public Education, Safety Standards and Enforcement, and Emergency Response. EMG views Emergency Management as the fourth inclusive line of defence and has added it to the overall concept of community safety. Reference to these lines of defence helps to set the goal of this divisional review.

- Public Education – educating residents has proven to be the most effective means of reducing and preventing fire and property damage incidences. Reducing the number of fires before they start and identifying how the community will continue to meet the fire education needs while the community grows.
- Safety Standards and Enforcement – ensuring that the inspection and enforcement of fire codes occur so buildings meet the required safety standards.
- Emergency Response – the availability of well-trained and well-equipped firefighters to respond and effectively mitigate the incident is the last defence identified by the OFM. The staff, equipment, and fire station locations impact how the emergency is mitigated.

- Emergency Management—A community is legislated to have an emergency preparedness program to ensure the safety of the community's residents by having a training, education, response, and mitigation plan in place for any possible emergency the community may encounter. More information on this topic can be found in Section 5.

Along with these four lines of defence, the following industry best practices help to inform a fire department of industry expectations. Neither the National Fire Protection Association (NFPA) nor the FUS have legislated requirements, but EMG strongly encourages utilizing them to improve a community's fire service.

3.2 National Fire Protection Association 1201

NFPA Standard 1201—*Standard for Providing Fire and Emergency Services to the Public* notes the services that should be offered and how they are to be delivered based on the composition of an emergency service.

Section 4.3.5 notes:

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

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

To provide an emergency service with a more precise focus on the ultimate goals for emergency response criteria, the NFPA suggests that response times should be used as a primary performance measure in emergency services. 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 1720) refers to goals and expectations for volunteer emergency services that have been incorporated into the evaluation of the emergency services' response and staffing needs.

3.3 Administration Division

A team of seven personnel manages the Six Nations Fire and Emergency Services: the Fire Chief, Assistant Fire Chief, Data Inventory Clerk, Fire Prevention Officer, four Battalion Chiefs, Chief Training Officer, and Public Education and Social Media Coordinator. The Fire Chief is a Senior Management Position that works with the SAO and reports directly to the elected Chief and Council. Much like the duties of a municipal Fire Chief, the SNFES Establishing and Operating Bylaw defines the Fire Chief as "*the person appointed by council to act as fire chief for the corporation and is ultimately responsible to council as defined in the Fire Protection and Prevention Act*".

3.3.1 Reference Documents

In a review of the SNFES administrative management systems, a profile was created. This profile is compared against other source documents and recommended administrative models. The Commission on Fire Accreditation International and the National Fire Protection Association offer insight into the necessity of proper administrative management systems.

The intent of Section 4.13 in NFPA 1201 and CFAI Category 9C is to reinforce that a fire department is not strictly an emergency response. Incident reporting, training records, financial documents, operating guidelines, policies, inspection reports, maintenance logs, and other essential documentation and reporting tools require substantial time and resources to maintain. Having adequate staffing models and supportive administrative management systems are essential to meeting the demands.

3.3.2 Commission on Fire Accreditation International

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

Category 9C: Administrative Support and Office Systems

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

With the growing demands of the SNFES, the administrative staff is finding it challenging to meet the department's current and growing needs while ensuring that all departmental data and documents are completed and stored.

3.3.3 NFPA 1201

The NFPA *1201 Standard for Providing Fire and Emergency Services to the Public* discusses a Fire and Emergency Service Organization (FESO). Section 4.13 of the Management Information Systems (MIS) discusses several points about the importance of proper administrative management.

4.13.1 – The FESO shall develop a management information system

4.13.2 – A management information system shall be maintained to support the management of the FESO by providing the leaders with data that indicate the effectiveness of the organization in its services, programs, and procedures

4.13.4.1 – A records retention and destruction policy shall be instituted consistent with applicable legal requirements

4.13.5 – The FESO leader shall regularly receive, analyze, and act on information that details organization activity and performance

The standard outlines the essential areas of fire department administration and includes management information systems as part of the governance and administration section.

3.3.4 Six Nations Fire and Emergency Services Bylaw

The SNFES Bylaw outlines in Section 6 – Organization that Administration shall constitute one of the five divisions of the Fire Department.

Additionally, Section 8 – Responsibilities and Authority of the Fire Chief specifies the following duties:

- Subsection 8: Maintaining accurate and accessible records of all fires, rescues, and emergencies responded to by the Fire Department.
- Subsection 9: Keeping any additional records as may be required by Council.
- Subsection 10: Preparing and presenting the Fire Department's annual report to both the Corporate and Emergency Services Committee and the Council.

The proper management and administration of a fire department, as indicated in this by-law, requires efficient systems to coordinate the flow of information within the department.

3.3.5 Current and Future Administrative Work Demands

As a leader in First Nations fire services, SNFES builds and maintains the department to mirror the expectations of a municipal fire service. This requires instituting direction to be consistent with industry standards. As part of their ongoing efforts to demonstrate equality in the fire service, SNFES will take on two initiatives: a certification plan and CFEI accreditation.

As the OFM Mandatory Certification regulation approaches in 2026, the Fire Chief and the SNFES administrative team may face an increased workload. This pertains to the increased demands of achieving and maintaining appropriate certifications in all related positions and divisions. Having reliable administrative management systems in place can reduce the burden and streamline many processes.

As SNFES prepares to pursue CFEI accreditation, the administrative demands of this project may require reassigning current staff or adding a dedicated position to focus on the project.

An additional full-time administrative assistant would be an asset in managing the daily administrative tasks as well as surge management when projects, plans, or events increase periodically. Currently, the burden is lessened with a summer student, which is only of value during their contract period.

A job evaluation should be conducted to properly divide the administrative responsibilities between the current Administrative Assistant position and another full-time Administrative Assistant, including the work completed by the summer student, to provide balance and structure within the department. The documentation required within any fire department can be efficiently managed with the proper division of labour and an administrative management system.

Should additional staff be incorporated into SNFES, adequate space must be accommodated for them. This should be part of the consideration when reviewing staffing increases. If new stations are a consideration in the future, the inclusion of office and workspace should be included as part of any expansion of administrative and support staff.

Electronic Management Systems

Using an electronic management system can improve efficiency and productivity within a department. It helps with department operations, data collection, fire safety education, code enforcement, training and municipal liability protection. It also provides secure records management. Paper tracking is becoming difficult with the increasing demand for additional documentation. Paperwork duplication creates errors. When information in several forms is changed, all associated documentation must be changed. The use of electronic management systems can automatically update interconnected files.

Six Nations Fire and Emergency Services reported that the department is moving from Symposium to First Due.

Mandatory certification will require proper records management and a fire department training plan. Pursuing CFEI accreditation will require a database. Expanding the fire prevention division will incur additional documentation demands. The increase from current levels of documentation should not burden an already understaffed system. Staff have commented that the recent move to electronic documentation has eased the burden created by paper. A properly managed administrative management system can benefit from third-party software systems. Proper data entry and records management are still essential, and having dedicated staff for this task is important.

3.3.6 Current and Future State

The review conducted by EMG reveals that SNFES is in a state of transition. The Fire Chief is planning a staffing review to add administrative positions and streamline productivity. They have recently integrated a new electronic records management system aimed at improving department systems.

SNFES also has plans to grow, and growth requires change. As the Fire Chief works toward finding funding solutions to support the planned growth, it is important to state that an increase in staffing complemented by a fully integrated administrative management system would provide efficiencies and improvements in documentation and records management.

The administrative management system upgrade should include a review of the information technology hardware and software within each fire station. Having adequate technology improves both user interactions and access to optimal information systems. The use of cloud-based storage, tablets both in station and apparatus, internet-based training, cellular phone-based applications and data analytics are becoming commonplace in the fire service. The recent launch of the OFM dashboard analytics website is an example of applying current and real-time

information to aid with decision-making and predictive analysis. An information technology audit is a worthwhile investment into the future of SNFES.

3.3.7 SWOT Analysis

EMG requested that SNFES staff complete a Strengths, Weaknesses, Opportunities, and Threats (SWOT) assessment. There were assessments for different sections within the Master Fire Plan.

Responses related to Administration included:

Strengths

What are our successes?

- Have rebounded after some rough leadership periods and have grown to become a functioning department
- Hire more staff and have regular communication both electronically and in person. Organizational strength in having projects completed in proper time frames, social media development and outreach gaining new ground, inventory processes put in place, storage availability increasing creating cleaner more professional filing and storage areas, more opportunities for training, ongoing teamwork development, strong leadership, community's trust in department, building relationships between other EMS services
- New building 10 years ago
- Wage parity
- Budget allocation
- Staffing

What is out strongest asset?

- Our strongest asset is the workload is now being properly delegated to the appropriate people, and they are held responsible for the work.
- We are building the department from within and allowing opportunities for the community.
- Strength of employees in their positions, knowledge and cooperation. Continuity of employees where was a higher turn around in past
- Strong leadership

Weaknesses

What weak points/area/functions/departments do we have?

- Unsure what our operating budget is for each sub-dept
- IT is not up to date, many commonly used programs are not available, salaries are not ideal to encourage or motivate per employee knowledge and ethic, slow communication with other departments hinders what our administration can accomplish in a timely manner
- Outgrowing Facility
- Not enough staff

What parts of the FD are least performing?

- We still heavily rely on paper copies for all admin work.
- Addition of a fire prevention division
- Computer efficiency
- Ineffective comms/consistency with other internal departments i.e. HR + IT

Opportunities

What are the current trends in the fire service?

- Current trends in fire service administration include a focus on data-driven decision-making through the use of analytics for resource allocation and response times
- Moving away from volunteers to paid employees, social media to build knowledge of departments and services offered and fire prevention

What are we targeting or not targeting?

- Targets often include enhancing community engagement through public education and risk reduction programs, improving diversity in recruitment practices, and integrating advanced technologies for better operational efficiency and data analysis. Targets often overlooked are strategic planning and long-term visioning
- Electric vehicle fires and lithium-ion battery fires. Battery storage facilities. Data collection
- Informed recommendations & decision making
- Creating an efficient workplace
- Accreditation CPSE

Threats

What external factors exist that may hinder our operations?

- Budget Constraints
- Approval of additional personnel and funding for new training, tools and apparatus.
- The slow processes and lack of prompt communication of other departments may slow projects and create ineffective business relationships with vendors and/or contractors, groups who wish to use our training facilities
- Collective agreement/sovereignty debate
- Inconsistent governance, national vs. provincial vs. Six Nations

Based on these responses, it is important for SNFES management to review these and discuss with both staff, management and senior management so that a clear communication stream is established. If there are concerns listed that may be a result of a misunderstanding, it is important for management to address them sooner rather than later. Any identified positives should also be followed up to benefit from any potential positive momentum.

3.4 Fire Prevention & Public Education and Fire Investigations,

Fire prevention and public education are the foundations of creating a safe community, and this should be the initial focus of a fire service to create an effective, manageable program. EMG reviewed the existing fire prevention programs, identifying strengths, gaps, and areas for growth and improvement.

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* (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." Public education is seen as the first line of defence concerning the 'Three Lines of Defence' presented by the OFM; therefore, the more resources assigned to this endeavour, the more proactive a community and its fire department are regarding fire safety.

Fire Safety Standards and Enforcement are the second of the 'Three Lines of Defence' in preventing fires before they begin. Public education and Fire Safety Standards and Enforcement are the most effective methods of reducing injuries and deaths associated with fires and associated emergencies.

The SNFES is hiring several qualified individuals to form a robust Fire Prevention Division. Until they are in place, no inspections or public education occur in the SNGR unless requested or based on a complaint. The SNFES needs to build up its resources in its Fire Prevention Division to initiate a proactive, robust program of fire inspections and public education. In the future, the Fire Prevention Division (FPD) should have a Chief Fire Prevention Officer (CFPO), a Fire Prevention Officer (FPO), two Fire Prevention Inspectors (FPI) and a Public Fire and Life Safety Educator (PFLSE).

Once in place, the CFPO oversees all prevention and education activities and sets overall program goals. Historically, the FPD manages all community outreach programs and data analytics, and division staff are the primary investigators for fire origin and cause investigations. The building department examines and reviews Building development plans, and either the CFPO or FPO conducts reviews to provide comments on behalf of the fire department.

Within some departments, the FPOs and FPI are also firefighters and attend some fire calls, dependent on their availability when the call comes in.

The school program should include public education at elementary schools only (as there are no high schools in SNGR). Topics to discuss include smoke and CO alarms, escape planning, fire safety in the home, playground safety, and the required fire drills. SNFES has an excellent working relationship with the many businesses in the First Nation. It is possible that some of those stakeholders would be interested in sponsoring some contests that the school-aged children could participate in, such as a fire safety poster or recording their family practising their home escape plan. The younger school-aged children help drive fire safety messaging within the home, and it is important to continually engage this age group in understanding the importance of fire safety. To the credit of SNFES, the suppression crews have been assisting with public education at the schools.

Fire Prevention personnel must engage the public to spread fire safety messages. They could engage the public at club meetings and community events such as seniors' meetings. When presenting to a senior’s group, many topics to discuss could range from conducting a fire drill to what to do when a fire, smoke, or CO alarm is activated, how to check smoke and CO alarms are within their life cycle, and testing procedures.

Another area of concern is dual and/or multiple occupancies in a residential structure, also known as second units. Many of these (second units) involve basement apartments that may not meet NFC or OFC Standards. It is unknown how many are operating in SNGR. The owners/operators may not have proper smoke and/or CO alarms, lack fire extinguishers, lack a direct exit out of the structure or have windows that are too high and small for a person to

escape through. Fire deaths have occurred from people residing in basement apartments that do not meet the NFC or OFC, and they are unable to escape when a fire occurs.

The SNGR are vulnerable occupancies, known as high-risk structures, that require constant monitoring by fire prevention.

The SNFES should participate in OFM's "Test Your Smoke Alarm Day." The program encourages residents to ensure their smoke alarms are operating. The SNFES should build its Fire Prevention Division into a proactive, robust group. This won't happen quickly, as the division is in a building state.

The SNFES fire Prevention personnel are unique in that they are required to respond to fire calls (on top of their fire prevention duties) when on duty. This is due to the significant shortage of POC firefighters during daytime hours. It is difficult when an FPO must leave an inspection to attend a fire call. An alternative is that they respond to only confirmed fires.

3.4.1 Code Enforcement/Inspections

For a Community Risk Reduction Plan to be successful, ongoing fire inspections are necessary. The inspections will identify deficiencies and infringements of the Fire Code or Building Code of Canada or Ontario before they cause a fire.

The FPOs address Fire Code violations and fire safety hazards within the authority of the SNGR's Establishing and Regulating By-law. Fire inspections of all types of occupancies in the community, with the intent of compliance with the Fire Code, are crucial to protecting persons and property from fire hazards. Reducing risks from fire and other life safety hazards with detection and reporting through inspection is necessary to create a fire-safe community, ensure occupant safety, and preserve buildings. Inspections also ensure that fire detection equipment in buildings meets code standards, is present and operational, and that building firefighting equipment has been tested to the standards. Aside from the inspections the FPOs complete, they also manage the issuance of orders and the filing of court documents.

Using the FUS Inspection Frequency Chart (Table #3), the Fire Chief can assess resource requirements to meet inspection benchmarks, develop a plan with what can be accomplished with the Department's staffing complement, and present options for increasing inspection frequencies. SNFES does not conduct fire inspections following the recommended FUS or NFPA 1730 inspection frequency. This may be partly due to the Department not having completed a FUS that guides the matter.

TABLE #3 - FUS RECOMMENDED FREQUENCY OF FIRE PREVENTION INSPECTIONS

Occupancy Group Based on the OBC Occupancy Classifications	Group – Divisions	Minimum Inspection Frequency
Assembly	A-1 –Performing Arts	6 months
	A-2 –Not classified elsewhere in Group A	6 months
	A-3 – Arena Type	6 months
	A-4 – Gathering in the Open Air	6 months
Detention	B-1	6 months
Care and Treatment	B-2	6 months
Care	B-3	6 months
Residential	C	6 months
Business and Personal Services	D	12 months
Mercantile	E	12 months
Industrial	F-1 – High Hazards	3 months
	F-2 – Medium Hazards	6 months
	F-3 – Low Hazards	6 months

Fire services know the FUS suggested frequency chart can be challenging to achieve, especially with limited staffing. Therefore, the priority of a Fire Inspection Program should be focused on the mandatory inspections of vulnerable occupancies as established in the Ontario Fire Code. These types of occupancies are classified into various building types. These include institutional buildings, assemblies, multi-residential buildings, and industrial buildings. Utilizing the *NFPA 1730 Standard on Organization and Deployment of Fire Prevention Inspection and Code Enforcement, Plan Review, Investigation, and Public Education Operations* will help develop a sustainable program for ensuring optimal fire and life safety practices within the community. This standard outline specific inspection frequencies based on the occupancy risk profile and hazard rating of different types of buildings.

TABLE #4 - NFPA 1730 RECOMMENDED FREQUENCY SCHEDULE

Occupancy Risk Classification	Frequency
High	Annually
Moderate	Biennially
Low	Triennially
Critical Infrastructure	Per Authority Having Jurisdiction

NFPA 1730, Article 3.3.3 directs fire departments to assign a level of risk to each occupancy classification by three categories:

Upon establishing a level of risk for each Occupancy Classification, build the Fire Inspection Program by developing a schedule for the frequency of fire inspections. Due to the lack of documentation from previous personnel, an accurate picture of the fire prevention activities of SNFES is lacking.

Should the first two lines of defence fail, and a fire occurs, the third line of defence is called upon. This third line of defence is the frontline firefighter response to extinguish any fire. An important aspect of fire prevention is ascertaining the origin and cause of fires once the fire is extinguished. This knowledge builds targeted educational materials or programs, ensures manufacturers are aware of product shortcomings, and holds offenders accountable for breaches of law. Frontline firefighters should also understand investigative practices to assist in investigations when needed and ensure they perform their duties with investigative practices in mind. This helps preserve evidence and determine the origin and cause of fires.

Any person conducting fire investigations as a primary function of their job is required by *O. Reg. 343/22: Firefighter Certification* to be certified, at minimum, under NFPA 1033 S*tandard for Professional Qualifi*cations *for Fire Investigator*. Any person conducting fire inspections as a primary function of their job is required by the same O. Reg to be certified to NFPA 1033 *Standard for Professional Qualifications for Fire Investigator.* During the completion of NFPA 1033, a small portion of time is on NFPA 921 *Guide for Fire and Explosion Investigations.* The

entirety of the course is not completed and needs completion as a separate course. Unfortunately, this Standard cannot be certified upon its completion in Canada.

The SNFES should initiate a practice of tracking the time spent on each fire prevention activity (site plan reviews, routine inspections, licensing, complaints, requests, etc.). By identifying the time spent on each project and collating this into approximate baseline times, the Fire Chief can use this information to apply future initiatives.

The Fire Chief is encouraged to review the number of inspections and associated orders/fines issued. This information will identify those who re-offend and/or require more inspections and follow-ups and, therefore, more time for the FPO versus those requiring minimal assistance or interaction with the FPO. A business or owner with tendencies to re-offend or ignore the primary concepts of fire prevention may unnecessarily preoccupy the FPO. The involvement of the SNGRs By-Law Department may assist in these enforcement matters.

EMG recommends that the FPD report annually on activities to reset baselines and benchmarks to indicate success or challenges with achieving any noted benchmarks. If the number of required inspections is becoming a taxing workload, a review of the FPD's activities should be conducted, with consideration given to realigning priorities, including the need for additional FPOs.

3.4.2 Public Education

The FPD must develop and deliver a successful public education program that teaches fire safety in various formats and settings for all ages. The lack of resources has prevented this from occurring. The SNFES requires a full-time PFLSE, not leaving it to the FPOs to look after. The role of PFLSE is to run public education activities and create and/or deliver educational programs. The Department is in the process of acquiring a PFLSE with the Elected Council's support.

SNFES has identified its commitment to delivering various fire prevention services and public education programs with available resources, including the firefighters stopping by the schools for visits. The SNFES has established working relationships with local businesses, media outlets, and other entities, and this needs to include the library to aid in delivering this public education programming. SNFES needs to be proactive in this regard, identifying and implementing opportunities for increased effort in promoting public education. Its focus must include several social media platforms and develop partnerships with internal and external stakeholders to support advancing public safety messaging campaigns.

Further to what has already been noted by the NFPA and FUS, the Commission on Fire Accreditation International (CFAI) outlines the following regarding fire prevention and public education:

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

Using existing resources is cost-effective for promoting fire prevention and public education programs. To accomplish this, some fire departments have trained suppression staff to conduct inspections of non-complexity or assist in public education. Doing so not only brings more resources to the table but also enhances the level of fire safety awareness by those trained staff.

Currently, SNFES utilizes suppression personnel to support the public education program with school visits but not the inspection program. EMG recommends that suppression members be offered enrollment in courses to complete NFPA 1031 and 1035 related to fire prevention and public education. Opportunities exist to enhance these fire safety programs and implement innovative approaches with support from SNFES directed towards Fire Prevention. Having more SNFES personnel trained to the 1031 and 1035 standards will enhance fire safety and education initiatives.

Documentation of the public education events, including the topics discussed and the number of participants in attendance, should be more accurately tracked. The OFM has provided a means of documenting these events, and SNFES should use this tool as a means of records management of public education events.

Additional information is available on the OFM's Public Education, Planning and Tracking Tool located at:

https://drive.google.com/file/d/0B0f8qgi7_vN2LVloem5tdFl1aEk/view?resourcekey=0-22HF5jDfUiF-R7E-OnxtiQ

Over the past few years, SNFES has not tracked the number of participants at public education events, which the Department needs to address in the future.

3.4.3 Origin and Cause

The SNFES must have the resources and means to determine the origin and cause of fires. The results of these investigations assist in identifying trends used in building and fire code development, as well as public education and fire prevention initiatives. Typically, fire investigation is a part of the FPO's role. Ontario's *Fire Protection and Prevention Act* (FPPA), which SNFES is not required to comply with, requires fire departments to investigate and determine the origin and cause of all fires. A Battalion Chief of SNFES has completed NFPA

1033 *Standard for Fire Investigation* but has not yet been certified as a fire investigator. SNFES needs to transfer this responsibility to the members of the Fire Prevention Division once it is up and operating for a while. Having members who fought the fire also tending to the investigation portion of the incident has been questioned in the courts. It is discouraged in favour of having people with no pre-investigation ties to the address involved.

Knowledge from determining origin and cause assists in targeting groups or causes to educate the public on fire safety better. Another purpose is to ensure fire code compliance, be it the NFC or OFC (i.e., whether there are working smoke alarms).

3.5 Training, Career Development & Policies

The SNFES is a composite fire service. 46 full-time career firefighters, including two Chief Officers, service the community's response needs. SNFES also has a contingent of 24 volunteer firefighters.

The training and development of members is paramount to ensuring the health and safety of personnel so that they can provide efficient and effective emergency and non-emergency services to the SNGR community. As shared through survey results, SNFES' dedication and commitment to training and education enhance firefighter skills and ensure the highest level of safety and preparedness for the SNGR community.

The training curriculum is developed to meet industry best practices. This supports service delivery, which meets operational standards, such as the NFPA standards.

Six Nations Fire & Emergency Services uses a SOG system to support decision-making. SOGs may be foundational, such as SOG 1.5 Code of Conduct; specific to a functional area, such as SOG 4.1 OH&S Program; or operational or task level, such as SOG 7.27 Elevator Rescue. When training, SOGs are important to personnel safety and support the safe delivery of service by personnel to the community. SOGs differ from policies. Policies typically prescribe actions that "shall" be followed. Guidelines provide flexibility and thus inform decision-making within parameters.

Code of Conduct – Safe Operating Guideline 1.5

- The department has a long and proud history. This heritage of dedication and unselfish sacrifice has accumulated over many years of service. Each member of the department inherits this tradition of excellence from the past and now. It is the actions of the current members that will shape how the department will be viewed in the present and in the future.

The Training Centre is responsible for providing opportunities and guidance to develop the knowledge, skills, and abilities of SNFES firefighters. SNFES training and career development practices support personnel in delivering service to the SNGR community safely and effectively.

3.5.1 Training

3.5.1.1 Minimum Qualifications for Hiring

A volunteer firefighter must have a Class G license. There are additional qualifications to be hired as a career firefighter:

- NFPA 1001 *Standard for Fire Fighter Professional Qualifications* Level I and II (Pro Board and/or IFSAC Accredited)
- NFPA 472 *Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents* Hazardous Materials Operations Level (Pro Board and/or IFSAC Accredited)
- Standard First Aid, CPR Level C with AED (Canadian Red Cross)
- Canadian Red Cross First Responder Certification or Higher
- Minimum Class DZ Driver's License

When hired as full-time employees (FTE), career firefighters must have NFPA 1001 "Standard for Fire Fighter Professional Qualifications" Firefighter Level I and II certification. Once assigned to a shift, career firefighters regularly receive skills training on duty in accordance with the annual training calendar.

Six Nations Fire & Emergency Services' firefighters have different expectations at the point of hire and for ongoing training and development depending on their classification—career or volunteer. A volunteer firefighter is expected to learn the skills and to become proficient in the drills required to become certified as an NFPA 1001 "Standard for Fire Fighter Professional Qualifications," Level I and II. A career firefighter is expected to maintain their skills and to attain new proficiencies.

3.5.1.2 New Recruit Training

When new volunteer recruits are hired, they undertake a 52-week training program. The SNFES training program is ProBoard Accredited to deliver NFPA 1001 *Standard for Fire Fighter Professional Qualifications* Firefighter Level I and II training and certification. At various points in the training program, a firefighter will reach a milestone that correlates to the ability to provide increasing firefighter service to the SNGR community. To complete the training

modules and attain certification, the student must demonstrate the learned skill in a practical environment and pass a written exam. This program ensures a consistent level of skills and abilities of the new recruits.

3.5.1.3 Annual Training

The SNFES Training Schedule is detailed on a weekly basis and identifies the Wednesday training night for volunteer firefighters. The curriculum for training night is detailed in the Training Division lesson plan. Lesson plans include objectives, goals, supporting information, media required, delivery methodology, evaluation method, asynchronous learning resources, (referenced) resources, skills and lesson information, and safety notes. The lesson plans that were reviewed were well-detailed and clearly laid out. What was lacking was a specific reference to the industry standards, i.e. NFPA 1001 *Standard for Fire Fighter Professional Qualifications* and the specific texts supporting the training, i.e. *Essentials of Fire Fighting, 7th Edition, Chapter 8 – Ground Ladders*. References to applicable SOGs, the Occupational Health & Safety Act, etc., should also be included. The data referenced in the lesson plan should also be included in the First Due RMS. The individual lesson plans of the Training Division should be updated to include the specific industry standards and must correlate to the records in First Due.

The shift captain provides most of the scheduled training. They deliver the training as per the training schedule unless it is specialized training outside of their scope. All Captains have a minimum of NFPA 1041 *Standard for Fire and Emergency Services Instructor Professional Qualifications* Fire Instructor II. Additionally, any personnel who deliver training have a minimum of NFPA 1041 Fire Instructor Level I certification.

As the annual training calendar outlines, the career recruit training program is delivered alongside career personnel. The program is delivered by on-duty Captains and the Chief Training Officer (CTO). There is some overlap of career and volunteer training topics, although career training typically goes into greater depth in the lesson plan.

The Volunteer Chief oversees the volunteer firefighter training program. Volunteer firefighters are expected to attend regularly scheduled training nights, where they learn and practice skills and complete training modules leading to Level II certification.

Volunteers are encouraged to attend career training at their discretion. They may also pursue their own training with outside organizations but must request permission to use SNFES personal protection equipment (PPE). Participating in career training provides an opportunity for a volunteer firefighter to get extra hands-on training, learn skills, and become proficient in drills at a quicker pace than if they only trained two hours per week.

3.5.1.4 Specialty Training Programs

Six Nations Fire & Emergency Services provides emergency and non-emergency services to the SNGR community. Regular training is required to facilitate the safe, efficient and effective provision of fire services. SNFES currently provides specialty services to support the response phase of emergencies.

TABLE #5 - SPECIALTY SKILL/LEVEL OF TRAINING

Standard	Specialty Skill	Level of Training
NFPA 1072	Hazardous Materials	Awareness & Operations
NFPA 1006	Rope Rescue	Operations
NFPA 1006	Vehicle Rescue	Operations
NFPA 1006	Water Rescue (Surface/Boat)	Operations
NFPA 1006	Ice/Water Rescue	Operations
NFPA 1021	Fire Officer Qualifications	Fire Officer I & II
NFPA 1521	Fire Department Safety Officer	Incident Safety Officer
NFPA 1002	Fire Apparatus Driver/Operator	Engine Operator
NFPA 1002	Fire Apparatus Driver/Operator	Aerial Operator
NFPA 1002	Fire Apparatus Driver/Operator	Tanker Operator
NFPA 1001	Elevator Rescue	Operations
NFPA 1021	Medical First Responder	

In 2017, the risks to the community were identified through a Hazard Identification & Risk Assessment (HIRA) process conducted through the Emergency Management Program. Using the lens of training for the top 30 highest risks to the community, the following gaps have been identified:

TABLE #6 - TOP 30 SIX NATIONS OF THE GRAND RIVER COMMUNITY HAZARDS

Order of Priority	Top 30 Hazards	Skills and/or Specialties	Training Standard
1	Hazardous Materials Spill/Land Transport – Oil Pipeline	HazMat	NFPA 1072 Awareness & Operations Industry Expert Required
2	Water Contamination	HazMat	NFPA 1072 Awareness & Operations Industry Expert Required
3	Motor Vehicle Incident	Vehicle Rescue Suppression Medical	NFPA 1006 Operations
4	Brush, Bush & Grass Fire	Wildfire	NFPA 1140 (1051) Not Provided
5	Community Structure Fire	Suppression	NFPA 1001 Level I & II
6	Hazardous Materials Spill/Rail - Oil Pipeline	HazMat	NFPA 1072 Awareness & Operations
7	Atmospheric Heat Waves	Medical	Medical First Responder
8	Conflictual Social Action	Medical	Medical First Responder
9	Gas Explosion & Gas Leaks – Oil Pipeline	Hazmat	NFPA 1072 Awareness & Operations
10	Hazardous Materials Spills – Oil Pipeline	Hazmat	NFPA 1072 Awareness & Operations
11	Snowstorms	Medical	Medical First Responder
12	Disease – Pandemic	Medical	Medical First Responder

Order of Priority	Top 30 Hazards	Skills and/or Specialties	Training Standard
13	Nuclear Terrorism	HazMat (CBRNE)	NFPA 1072 Awareness & Operations CBRNE – Industry Expert Required
14	Blizzards	Medical	Medical First Responder
15	Climate Change	Medical	Medical First Responder
16	Lightning and Thunderstorms	Medical	Medical First Responder
17	Ice Fogs, Storms and Freezing Rain	Medical	Medical First Responder
18	Tornadoes and Waterspouts	Medical	Medical First Responder
19	Windstorms	Medical	Medical First Responder
20	Cyberterrorism	n/a	n/a
21	Train Derailments	*Tech Rescue*	NFPA 1006 Medical First Responder Specialty Industry Expert Required
22	Airplane Crashes	*Aircraft*	NFPA 440 NFPA 460 Industry Expert Required
23	Soil Contamination/Pollution	HazMat	NFPA 1072 Awareness & Operations
24	Human Disease/Infestation (Air & Water)	Medical	Medical First Responder
25	Community Interface Fires	Wildfire	NFPA 1140 (1051) Not Provided
26	Power Outage	n/a	n/a

Order of Priority	Top 30 Hazards	Skills and/or Specialties	Training Standard
27	Explosives & Bombs	HazMat CBRNE	NFPA 1072 Awareness & Operations CBRNE – Industry Expert Required
28	Structural Collapse	Tech Rescue – Structural Collapse	NFPA 1006 Not Provided
29	Food Shortages (Food Grown Elsewhere)	n/a	n/a
30	Land/Sinkhole Hazards	Tech Rescue – Trench Rescue	NFPA 1006 Not Provided

Notes:

- *Skills and/or specialties are listed based on the Primary Risk.*
- *A major emergency or disaster could include more than one Primary Risk. For example, a climate/weather event could include structural collapse, structure fire and land hazards. Many skills and/or specialties would be required.*

An incident of train derailment, Risk #21, may require personnel with a specialty skillset. This type of event would be considered an infrequent and potential high-risk incident. Existing technical rescue, suppression and medical first responder skills could manage some tasks, although industry experts would likely be required.

Risk #22, aircraft firefighting and rescue, would be an infrequent high-risk incident. However, there is a new private airport within SNGR lands. Minor types of aircraft incidents may be managed through technical rescue, suppression, and medical training. More extensive emergencies are highly specialized and would require industry experts.

The top 30 SNGR community hazards include details of skills and specialties required for the primary risk identified in the above noted table. Most risks are matched with an acceptable level of training to respond to them. Four risks have been identified that should be considered for additional training for personnel.

TABLE #7 - COMMUNITY RISK-DRIVEN TRAINING PRIORITIES

Order of Priority	Top 30 Hazards	Skills and/or Specialties	Training Standard
4	Brush, Bush & Grass Fire	Wildfire	NFPA 1140 (1051)
25	Community Interface Fires	Wildfire	NFPA 1140 (1051)
28	Structural Collapse	Tech Rescue – Structural Collapse	NFPA 1006
30	Land/Sinkhole Hazards	Tech Rescue – Trench Rescue	NFPA 1006

NFPA 1140 *Standard for Wildland Fire Protection*, is a consolidated standard that includes NFPA 1051 *Standard for Wildland Firefighting Personnel Professional Qualifications* ,NFPA 1141 *Standard for Fire Protection Infrastructure for Land Development in Wildland, Rural and Suburban Areas*, NFPA 1143 *Standard for Wildland Fire Management* and NFPA 1144 *Standard for Reducing Structure Ignition Hazards from Wildland Fire*. The consolidated NFPA 1140 standard provides the minimum requirements for wildland fire management and the associated professional qualifications for wildland fire positions. This includes the wildland/urban interface and infrastructure protection in wildland, rural, and suburban areas. Community safety, emergency preparedness, fire protection during construction, risk assessments, fire suppression, and more are also addressed.

Currently, SNFES has about 25% of its career firefighters trained as NFPA 1051 *Standard for Wildland Firefighting Personnel Professional Qualifications* Wildland Firefighter certification. This does not include training for wildland-urban interface fires or FireSmart training. Based on Risk #4 and #25, SNFES should consider including wildfire training in its curriculum. The Ontario Ministry of Natural Resources through the Aviation, Forest Fire and Emergency Services (AFFES) division offers free training resources. A Fire Ranger (Type I &II) in Ontario is trained and certified to SP-100, the required course for wildland firefighting in the province. SP-103 is an extension of that program and geared towards firefighters who are engaged in wildland firefighting within their jurisdiction. SP-103 training resources are available for fire departments to access. SNFES should review the contents of this program for addition to their training curriculum. Wildland firefighting training dollars may not be funded by ISC.

NFPA 1006 *Standard for Technical Rescue Personnel Professional Qualifications* establishes the minimum job requirements for technical rescue personnel. This NFPA standard for technical

rescue includes 20 specialties. Of those specialties, SNFES trains to the Operations level in Rope Rescue, Vehicle, and Ice/Water (Surface Water). SNFES must also ensure that NFPA 1006 is met as is referenced in Ontario Regulation 343/22 "Firefighter Certification," Table 1 "Mandatory Certification for Fire Protection Services."[59] Included in this table are suppression operations, vehicle rescue, hazardous materials response, pump operations, fire officer training, safety officer training, and technical rescue training.

Results from the surveys that were conducted as part of the gap assessment identified several technical rescue skills that could be of benefit to the training program and support the firefighters in the service that they provide to the SNGR community. The needs assessment highlights gaps in training, such as:

- Trench Rescue - training would assist personnel when called to excavating work taking place on SNGR lands for underground utilities.
- SNFES has responded to several incidents involving human operators and heavy machinery.
- Rope Rescue Training - should be increased to a technician level, which will support other disciplines as well, including water rescue and ice/water rescue—setting up belay lines, haul systems, patient packaging, and dealing with elevated or low-angle terrain at the water's edge.

Also, based on Risk #28 and #30, SNFES should consider adding *Structural Collapse* and *Trench Rescue* to the training curriculum. Alternatively, some of the services could be contracted to a third-party service provider.

TABLE #8 - TECHNICAL RESCUE TRAINING

NFPA 1006 Standard for Technical RescuePersonnel Professional Qualifications		
Specialty	**Level of Training Provided**	**Suggested Change**
Rope Rescue	Operations	Technician
Vehicle	Operations	
Ice/Water	Operations	

[59] Province of Ontario – Regulation, "O.Reg. 343/22: Firefighter Certification," accessed December 2024, https://www.ontario.ca/laws/regulation/r22343

NFPA 1006 Standard for Technical RescuePersonnel Professional Qualifications		
Specialty	Level of Training Provided	Suggested Change
Trench	None	Operations
Heavy Machinery	None	Operations
Structural Collapse	None	Operations

When updated HIRA results are available, they should be reviewed, and any need to make changes to the training program should be reconsidered. As a component of a continuous improvement cycle, each program should be evaluated against its NFPA standard and any other relevant industry best practices annually. Documenting the community needs for the program, comparing the training provided, and considering the standards should provide goals for the coming year. Feedback from training exercises and post-incident critiques should also facilitate the identification of the need for changes to programs. This will provide more details on the need for additional training and the appropriate level of awareness, operations, technician, or specialist.

3.5.1.5 Staffing of Training Division

Station #5, is the Fire Training Facility for SNFES. This is also the location to which all volunteers regularly respond. The Fire Training Facility and its associated activities are led by the Chief Training Officer (CTO). The CTO is responsible for overseeing the training facility, creating the annual training calendar, ensuring that the appropriate level of training for each discipline is provided to the firefighters, and for the maintenance of training records.

The CTO is responsible for creating an annual training schedule. The CTO is certified to NFPA 1041 *Standard for Fire and Emergency Services Instructor Professional Qualifications* as an Evaluator II.

The CTO or the on-duty Captain may conduct training on-site. At a minimum, all members who deliver training are certified as NFPA 1041, Evaluator I.

From time to time, training may be contracted with outside training agencies. An example of outside training is the Nozzle Forward program, which has been delivered at the Fire Training Facility.

TABLE #9 - SNFES OUTSIDE TRAINING PROGRAMS

Outside Training Programs – Level of Training	
Program	**Level of Training**
Search and Rescue – Canadian National Search and Rescue Standards	Operations
	Team Lead
Effective Command – NFPA 1561 Standard on Emergency Services Incident Management System and Command Safety	Incident Commander - New in 2025
Rope Rescue - NFPA 1006 Standard for Technical Rescue Professional Qualifications	Technician - New in 2025
Fire Instructor - NFPA 1041 Standard for Fire and Emergency Services Instructor Professional Qualifications	Level I and II
Fire Officer - NFPA 1021 Standard for Fire Officer Professional Qualifications	Level I and II New in 2025
Ice Rescue - NFPA 1006 Standard for Technical Rescue Professional Qualifications	Operations Level - New in 2025
Apparatus Pumping - NFPA 1002 Standard for Fire Apparatus Driver/Operator Professional Qualifications	Operations Level
Incident Safety Officer - NFPA 1521 Standard for Fire Department Safety Officer Professional Qualifications	Safety Officer
Elevator Rescue – NFPA 2500 Standard for Operations and Training for Technical Search and Rescue Incidents and Life Safety Rope and Equipment for Emergency Services	New in 2025
MTO Driver Sign Off Authority Training – Ministry of Transportation Standards	Examination Sign Off

Chief Training Officer Time Commitment

Through consultation with the CTO, it has been determined that the administrative needs in the Training Division require 550 hours per year. It is also estimated that the CTO responds to incidents 8 hours per week, which correlates to 416 hours per year (52 weeks @ 8 hrs/week).

The CTO is also the Lead Instructor for career firefighter training. The training calendar is a 52-week calendar with training sessions performed multiple times throughout the week in order to provide training opportunities for all 48 career personnel. It is likely that the CTO could instruct training for three hours per day, four days per week. Over the course of the year, this would be approximately an additional 624 hours. Including an uncertainly factor of 10%, reflects a time commitment of 1,645 hours per year.

The data indicates that the current number of personnel required to complete the Training Division's workflow is insufficient. The estimates included here are tight expectations that leave little room for unplanned events. Also, the data does not factor in the time commitment required for the 11 new programs planned for 2025. It should be expected that a minimum of two FTE personnel are required to accomplish the current and anticipated short-term needs of the Training Division.

The addition of new programs, the initiation of an annual program review cycle, and the building and initiation of a plan for future expansion of the Training Facility leaves little to no extra capacity for the CTO to be responsible for additional portfolios, such as Emergency Management. Training and Emergency Management are both important portfolios that require a great deal of time and thus should be administered individually by two separate people. Separate positions are supported by the approved budget and supported by the fact that the SNFES Training Program was clearly indicated to be important in the Council Survey—a top risk to the community is not having fully trained firefighters and staff to meet the needs of the increasing population of SNGR.

3.5.1.6 Curriculum and Training Records

There is an annual curriculum for minimum training levels. Specialty Skill/Level of Training is in accordance with the NFPA professional qualifications and Province of Ontario Regulation 343/22, Firefighter Certification.[60] The Training Division has lesson plans for each specialty.

[60] Province of Ontario – Regulation, "O.Reg. 343/22: Firefighter Certification," accessed December 2024, https://www.ontario.ca/laws/regulation/r22343

Training is delivered by NFPA 1041 Qualified Instructors and recorded in the First Due RMS. Lesson plans will need to be revised as new programs are added. Ensuring that all training programs are evaluated annually as part of a continuous improvement process should ensure that the curriculum meets the ongoing needs of SNFES and the changing needs of the SNGR community.

The industry best practice for training records is NFPA 1401 *Fire Service Training Reports and Records*. NFPA 1401 should be used to establish, upgrade and evaluate training records and reports systems to ensure clear documentation of performance and ability of individual and group activities related to:

- Performance standards.
- Internal and external career development training and education.
- Documentation of certification and recertification.
- Document of accreditation.
- Joint training, regulatory training and emergency medical care training.
- Team training and equivalency training.

In addition to meeting NFPA 1041, training records and RMS systems should also adhere to the Government of Ontario's best practices for providing for the health and safety of fire service workers in Ontario. The Ontario Fire Service Health and Advisory Committee,[61] Section 21 Committee, Part 7 of the Guidance Notes[62] refers to training which requires that training records be created and maintained in particular:

- Documentation is complete and accurate, including names of participants.
- They are completed promptly after training is conducted.
- The learning outcomes of the training program are documented.
- The training date(s) are recorded.
- Electronic files are reliably backed up.

The current process for the Training Division appears to be well aligned with industry standards.

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[61] Firefighters' Association of Ontario – Health & Safety, "Health & Safety Section 21," accessed December 2024, https://ffao.on.ca/health-safety/#:~:text=The%20objective%20of%20the%20Ontario,in%20the%20Province%20of%20Ontario.

[62] Province of Ontario – Jobs and Employment "Firefighter Guidance Notes," accessed December 2024, https://www.ontario.ca/document/firefighter-guidance-notes

The Training Division utilizes the First Due Records Management System (RMS) as its primary Learning Management System (LMS). First Due RMS is designed to align with NFPA 1041 standards for fire service training records and reporting. The platform allows for data capture and customization to meet the specific needs of the department.

All training activities are thoroughly documented. Participant records are entered into First Due RMS and include details such as student information, lesson content, certifications earned, and the applicable training standards. Learning outcomes and training dates are also recorded within the system.

In addition to digital entries, some training records continue to be maintained in paper format, including:

- Attendance sheets from scheduled training sessions
- Certificates of completion
- Shift-based training records (e.g., skills and drills)

First Due is intuitive software designed for the Fire and Paramedic industries. The system maintains student records with set parameters or expectations and timelines. First Due facilitates the timely tracking of individual and/or group training needs. It has an intuitive dashboard feature, provides effortless tracking of personnel certifications, and can automate training completion by linking with online learning management systems.

Record keeping and administration are currently performed at the Chief Officer level. Eventually, the shift Captains will be trained and authorized for data entry. The electronic data records are backed up off-site.

First Due RMS offers curriculum development, design, and delivery. The inclusion of lesson plans and connections to training levels align with best practices such as NFPA Standards. The CTO can initialize future capabilities that include the capacity to connect programs and students with web-based training.

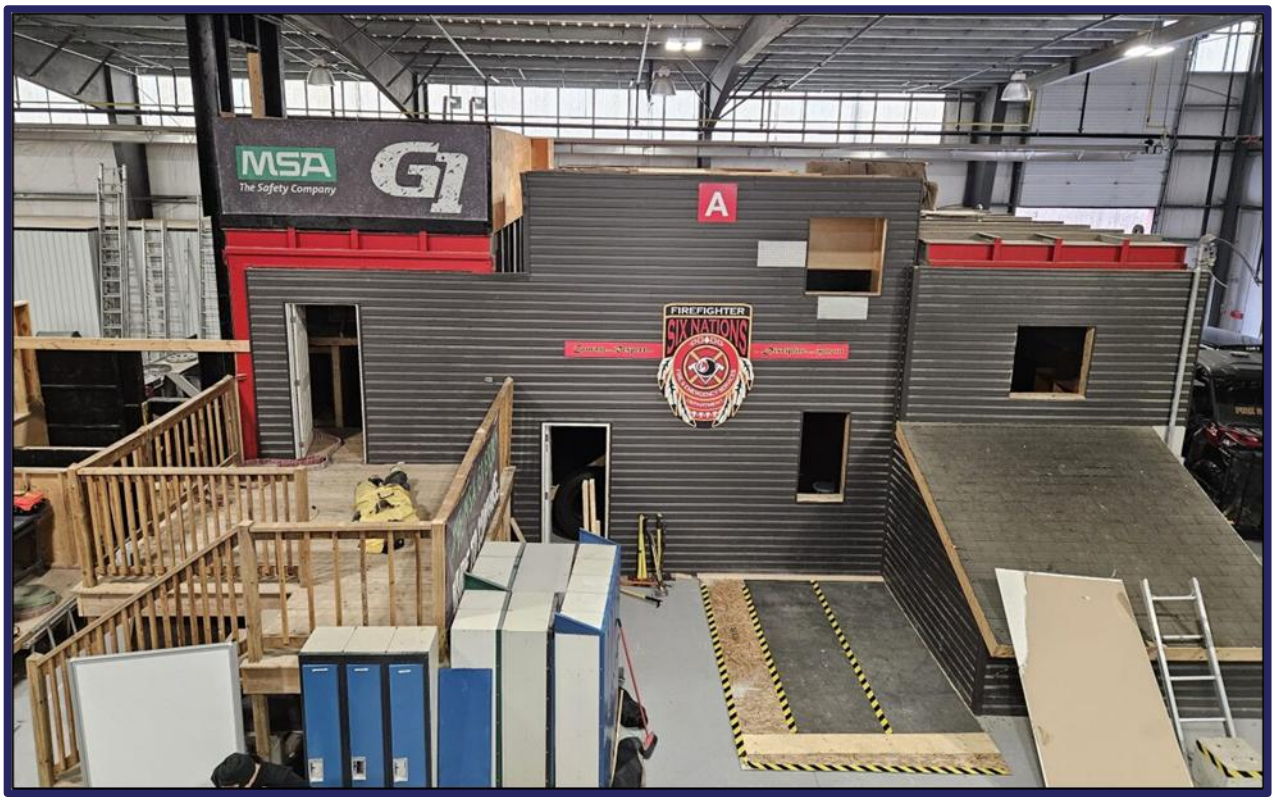
Whether training is recorded on paper initially or in electronic form, all records are entered into First Due RMS. First Due RMS facilitates curriculum and record keeping of training and offers many customization options.

3.5.1.7 Training Facility

The Fire Training Facility at Station 5 has an indoor training area, an outdoor training area, a flashover unit, and a live fire training building. The live fire training building (burn building) includes a flashover prop. Both are constructed per NFPA 1402, “Standard on Facilities for Fire

Training and Associated Props." They met the standard at the time of installation, estimated to be in 2014.

Training Facility – Indoor Search & Rescue with Firefighter Survival



Live fire training structures are required to be evaluated and documented on an annual basis. Also, the structural integrity is required to be evaluated and documented by a licensed professional engineer or other qualified professional at least once every ten years for gas-fired live fire training structures, every five years for non-gas-fired, and every three years if it is constructed of calcium aluminate refractory structural concrete. Structural defects are required to be evaluated and repaired by a licensed professional engineer or other qualified professional as per NFPA 1402. SNFES must ensure that the structural integrity of the live fire training structure is evaluated and documented as per the standard.

NFPA 1402 refers to the minimum design, construction, and maintenance requirements for training centers, fire training structures and props, gas-fueled and flammable liquid-fueled live fire training systems, and associated training props. Depending on the component of the system, it may be annual maintenance. Where the code requirements differ from the standard, the National Building Code and the National Gas Code supersede NFPA 1402. If SNFES adopts the provincial codes, those would supersede NFPA 1402 where applicable. SNFES must ensure that the maintenance requirements for the fire training structure, props, and their component parts comply with the applicable standards and codes.

Training Facility – Outdoor Live Fire Unit

Firefighters receive live fire training in the burn building at least once yearly. The Fire Training Centre has a positive reputation with its personnel and within the fire industry. However, the site's current physical configuration restricts the amount of training that can be conducted. It has also been identified that there is a need for an additional water supply, more outside storage, and additional parking for those working and training at Station #5.

Live Fire Training Prop – Vehicle Fire

TABLE #10 - LIVE FIRE TRAINING PROPS

Live Fire Training Props		
Type of System	**Training Prop**	**Fuel Type**
Drager System 64	Portable Exterior Live Fire Trainer	Propane
Drager Fire Extinguisher Training Equipment	The Tutor	Propane
Drager Swede Survival	Flashover Can	Wood and Straw
Drager Swede Survival	Two Storey Burn Building	Wood and Straw

As a single water source is provided, the industry best practice of NFPA 1403 requires an engineer's review. This must be commissioned to determine compliance with the standard. Further, SNFES should consider installation of an additional hydrant located closer to the burn building while also ensuring that the location of a hydrant does not impair ingress or egress for the site and buildings as happens currently.

Outside storage has been identified as a need. There is not enough storage space to accommodate burn materials such as skids, boards and straw. Outdoor storage would need to consider materials being stored and be designed to meet the codes and standards. Excessive quantities of combustible product may have limits per storage area, access paths, etc. SNFES must ensure compliance with the relevant standards and codes for storage.

Parking is already maximized on site and does not facilitate current needs for parking based on class size. Often students are required to park in alternate locations. Modifications to the site

and expansion of the Training Centre should take parking needs into consideration. Also, if SNFES contracts out the site for training there may be additional needs to accommodate fire apparatus.

3.5.1.8 Training Apparatus, Tools and Equipment

Parts are no longer being made for the Fire Training Facility pumper. There is a need to replace the current training pumper with a newer/certified pumper truck for pump operations. The training pumper should be equipped with all the tools, equipment, ladders, hoses, etc., that the frontline apparatus has. Mirroring the layout of tools and equipment would reinforce realistic and relevant training that supports the unconscious competency of personnel. The replacement of the training pumper should be prioritized within the Fire Fleet replacement cycle

Modification could include providing a live fire burn building that more accurately reflects current construction methods and building types found in the SNGR community—up to four-story buildings. It could also include hands-on training in life safety systems found in modern buildings.

Providing a state-of-the-art fire training facility could translate well to outside contracts for training as growth upwards is common throughout the region, including sprinkler systems, complicated fire alarm systems, fire alarm areas, etc. An additional area that should be considered if expanding the Training Facility and the potential to offer contract services for training at this location could be to include accommodations. Providing a state-of-the-art Fire Training Facility could generate revenue for the SNFES and enhance the training being provided to SNFES personnel and the service provided to the SNGR community.

3.5.1.9 Health and Safety

Health and safety during training is addressed in SOG 4.7, “Health and Safety During Training.” It is recognized that increased safety margins should be provided as skills and work processes are being learned during training. All personnel have the authority to stop training at any time. The officer in charge of the training is the Safety Officer for the training if the CTO is not present. If a Safety Officer is not declared, the Duty Captain is the Safety Officer. The Safety Officer is responsible for the health and safety of all personnel on site during the training exercise.

The Government of Ontario has best practices for providing for the health and safety of fire service workers in Ontario. The Ontario Fire Service Health and Advisory Committee, Section 21

Committee, Part 7 of the Guidance Notes[63] refers to Safe Training,[64] which requires that fire training include simulations of dangerous situations such as rope rescue, live fire, and ice rescue. Written lesson plans and safety plans are required. A list of concerns and precautions is included in Safe Training, including circumstances in which training must stop and how it will be stopped. This is supported by the *Ontario Occupational Health and Safety Act*, clause 25(2)(a)[65] "for providing information, instruction and supervision to a worker to protect the health and safety of a worker".

Decontamination of firefighter PPE and tools is recognized as an important part of a Health & Safety program. NFPA 1402 *Standard on Facilities for Fire Training and Associated Props,* requires that the Fire Training Facility shall facilitate personnel wash-down after training exercises that expose personnel to products of combustion.

Decontamination and rehabilitation should be included in a revised SOG specific to training. SOG 4.9, "Reducing Products of Combustion in the Fire Station," SOG 4.18, "SCBA Maintenance and Cleaning," and SOB 6.9, "Rehabilitation at Emergency Operations," each provide some level of direction currently to bridge those gaps.

The Training Facility does not currently have a dedicated decontamination room for on-site decontamination for PPE, self-contained breathing apparatus (SCBA), equipment, and personnel. A dedicated decontamination room is being considered with future renovations and expansion. Decontamination involves hosing down and scrubbing fire gear and equipment with soap and water. PPE is bagged, and the bagged PPE and cleaned equipment are placed back on the apparatus. Hoses that have been used are rolled up and placed in a compartment to be washed at the Fire Station. A deep cleaning of all equipment and hoses occurs at the fire station. PPE is washed and dried and then put back into service. Spare gear is available for personnel.

The provision of separate dirty and clean rooms should be provided in a Fire Training Facility and would align with generally recognized best practices within the fire service, which promote wellness and decrease exposure to cancer-promoting agents. The recognized best practices exceed NFPA 1402 *Standard on Facilities for Fire Training and Associated Props.* NFPA 1584

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[63] Province of Ontario – Jobs and Employment "Firefighter Guidance Notes," accessed December 2024, https://www.ontario.ca/document/firefighter-guidance-notes

[64] Province of Ontario – Jobs and Employment "Firefighter Guidance Notes – Safe Training," accessed December 2024, https://www.ontario.ca/document/firefighter-guidance-notes/7-1-safe-training

[65] Province of Ontario – eLaws, "Occupational Health and Safety Act R.S.O. 1990, C 0.1," accessed December 2024, https://www.ontario.ca/laws/statute/90o01#BK47

Rehabilitation Process for Members During Emergency Operations and Training Exercises provides additional details, including implementing preliminary exposure reduction activities, hazard control zones, reducing contamination and respiratory protection.

Expansion of the Fire Training Facility should take place to meet the current and future needs of the SNFES. This could allow for additional burn buildings, props, decontamination facilities, water supply, storage, and parking. Also, expansion could be planned to meet new service demand for a State-of-the-Art Training Facility that could offer contract services to others. Such a facility could include dormitory space, which would further expand the potential services that could be offered.

Being fit for duty, including physical fitness, is the responsibility of every member who operates on the fireground. SOG 4.14 "Fitness for Duty/Medical and Physical Assessments" outlines the expectations of SNFES with respect to completing biannual Physical Aptitude Assessments on their skills and abilities. In fiscal period one and again in fiscal period three, any person who operates on the fireground is expected to complete the skills and aptitude assessment successfully. Failure to succeed after a second attempt results in a personalized performance management plan being made and monitored by the CTO. A copy of the Physical Aptitude Assessment details is provided to each member in the period it is expected to be completed. Any updates to the details are to be advised to the members at least two weeks prior. SNFES must ensure that this process is applied consistently, as the SOG outlines.

3.5.2 Operating Budget – Training Division

The annual training budget for the Training Division for 2024 is advised to be approximately $120,000. This does not include the salary of the CTO which is included in the Administration Division operating budget. It also does not include the costs of testing and maintenance of the live fire building, fire props and associated systems.

The current budget does not meet the Training Division's needs, which is reportedly over budget. Training program funding needs to increase to sustain the current annual program and meet the community's needs now and in the future.

The CTO does not have access to a monthly or annual budget for the Training Division. Review of the Training Division expenses indicates that the records are not well detailed. The operating budget for the Training Division should be separated into line items by function. Aligning tracking by function allows for a more detailed analysis of programs on an annual basis and from year to year.

As the person responsible for the operations and future development of the Training Division, the CTO should review the program's efficiency and effectiveness, including the impact of costs

and potential revenues of the various functional components. A cycle of continuous improvement supports data-based decision-making. Financial data paints an important picture that must influence future directions and decisions. Having timely access to all data involved within the program area aligns with recognized fire service best practices.

Previously, the General Finance Agenda Package of June 8, 2010, approved a Level of Service and annual funding for the SNFES of $2,779,402. This annual budget would "allow the department to address staffing to meet the community needs and risks, within applicable standards (notably NFPA)".[66] Staffing included in the approved amount included an FTE Deputy Fire Chief of Training.

Maintenance of the Training Facility, Live Fire Building and Props is a concern. An ongoing investment is required to maintain the facility and appliances to industry standards. There are expectations for upgrades and expansion of the Training Facility, including the capacity to offer training to other fire departments. Future planning is ongoing. Capital planning for this eventuality should be in place for a minimum of five years.

3.5.3 Career Development

Six Nations Fire & Emergency Services does not currently have a formal promotion or recognition program. However, planning is underway for a process to recognize personnel who attain certifications, promotions, and notable achievements.

Career development is an important component of supporting the career progression of members through the ranks and promotion into Chief Officer positions. It can be designed to be functional, develop supervisory and leadership skills, and boost morale.

Each rank of personnel has an expectation for a level of education/training and a timeline to complete it. Personnel who are expected to be promoted to higher levels of responsibility are expected to attain additional education and/or training to support that movement. Some certifications may be obtained while in the position with the approval of the Fire Chief.

[66] Six Nations Council, "General Finance Agenda – June 8, 2010," accessed by email from Fire Chief Seth.

TABLE #11 - MINIMUM TRAINING LEVELS BY CLASSIFICATION

Classification	Minimum Training Level
Career Firefighter	NFPA 1001 (Level I & II), NFPA 475 (awareness & Operations), DZ license, Emergency Medical Responder, IMS 100, EM 100
Volunteer Firefighter	NFPA 1001 (Level I & II), NFPA 475 (awareness & Operations), Standard First Aid & AED, G Driver's License
Career Fire Officer	NFPA 1002, IMS 200, NFPA 1021 Officer 1, NFPA 1041 Instructor I, Incident Safety Officer, NFPA 1031 Fire Inspector
Volunteer Fire Officer	NFPA 1002, NFPA 1021 Officer 1, NFPA 1041 Instructor I,
Assistant Fire Chief	NFPA 1021 Officer II, NFPA 1041 Instructor II
Deputy Fire Chief	NFPA 1021 Officer III, EM200
Fire Chief	NFPA 1021 Officer IV, EM 300

There exists an opportunity to forward professional development from both a formal and an informal perspective. Formal programs designed around succession planning are recognized within the department but are challenging to move forward on a consistent basis. Training and education are costly, and the operational budget is accounted for with the training that is currently taking place. Restrictions are in place to limit costs; for example, DZ driver's testing is not a cost-recoverable expense for volunteer firefighters. A commitment to succession planning and the operating budget are required.

Formal mentoring programs could be implemented to support professional development. Mentoring can also be approached informally outside of a relationship arranged by the department. Informal programs can be driven at a personal level by a person's own desires and drive to learn.

3.5.3.3 Policies

SNFES provides many guidelines that support officers and members in the delivery of service, training, and day-to-day activities in and around the Fire Stations. Specific SOGs have been referenced throughout Training, Career Development, and Policies Section.

SOGs related to training are not reviewed by the CTO. This gap should be addressed as part of a cycle of continuous improvement. Those listed below could be considered to refer to training in whole or in part. Additionally, SOGs that refer to a specific operation that aligns with the job performance requirements of a skill should be reviewed by the CTO.

TABLE #12 - SAFE OPERATING GUIDELINES/POLICIES

SOG#	Description	Revised Date
1.4	Injury/Incident Report	Jan 2024 v.2
1.5	Code of Conduct	Jan 2024 v.2
4.1	OH&S Program	Jan 2024 v.2
4.2	Fire Department Safety Officer	Jan 2024 v.2
4.5	In Service Training (Initial & Refresher)	Jan 2024 v.2
4.6	Training Records	Jan 2024 v.2
4.7	Health & Safety During Training	Jan 2024 v.2
4.8	Outside Training Agencies	Jan 2024 v.2
4.14	Fitness for Duty/Medical and Physical Assessments	Jan 2024 v.2
4.18	SCBA Maintenance & Cleaning	Jan 2024 v.2
6.9	Rehabilitation at Emergency Operations	Jan 2024 v.2
7.3	Post-fire Critique	Jan 2024 v.2

SNGR also has three elected council policies that support the SNFES's decision-making, actions, and activities: the Health and Safety Policy (refer to Section Health and Safety), Employee Policy (refer to Section Administration), and SNFD By-Law (refer to Section Fire Prevention). Those sections provide more information and specifics on any service gaps.

3.6 Suppression and Emergency Response

The Six Nations Fire and Emergency Service serves one of the largest First Nations in Canada and operates one of the largest First Nation fire departments. SNFES has established vision and mission statements to support internal department governance systems.

Based on this foundation, SNFES has developed a deployment plan that includes levels of service, station staffing and apparatus placement, and response expectations. This section will review the components of their emergency response program.

3.6.1 Emergency Response – Suppression, Medical, Hazardous Materials and Technical Rescue Response

SNFES is a composite fire department with both a career and a volunteer component. The management team comprises the Fire Chief, Assistant Fire Chief, Fire Prevention Officer, four Battalion Chiefs, and the Chief Training Officer. The support staff include the Data Inventory Clerk and the Public Education and Social Media Coordinator. There are 46 career staff and 24 volunteer firefighters. They respond from Station 1. The volunteer corps are assigned to Station 5. Each station houses various apparatus. The personnel and fleet deployment for SNFES is:

Location	Management & Support Staff	Career Staff	Volunteer Assignments	Apparatus & Equipment
Station 1	8	38		4
Station 2	0	0		2
Station 3	*Permanently closed – station location study to be conducted*			
Station 4	0	0	24	2
Station 5	0	0		4

Training is conducted at the Station 5 training centre, which includes live fire training and search, rescue, and survival training components.

3.6.1.1 Fire Response Curve

When considering the response times and needs of a community, the fire response curve (Figure #3) presents the reader with a general understanding of how fire can grow within a furnished residential structure over a short period of time. Depending on many factors, the growth rate can be affected in several ways, which can increase or suppress the burn rate through fire control measures within the structure. As an example, in some older legacy homes, fire spread and flashover may progress slower than in newer homes due to the type of

construction and contents. Some older homes may not witness flashover for up to 25 minutes. In contrast, newer homes could incur flashover in as little as four minutes within the room of origin.

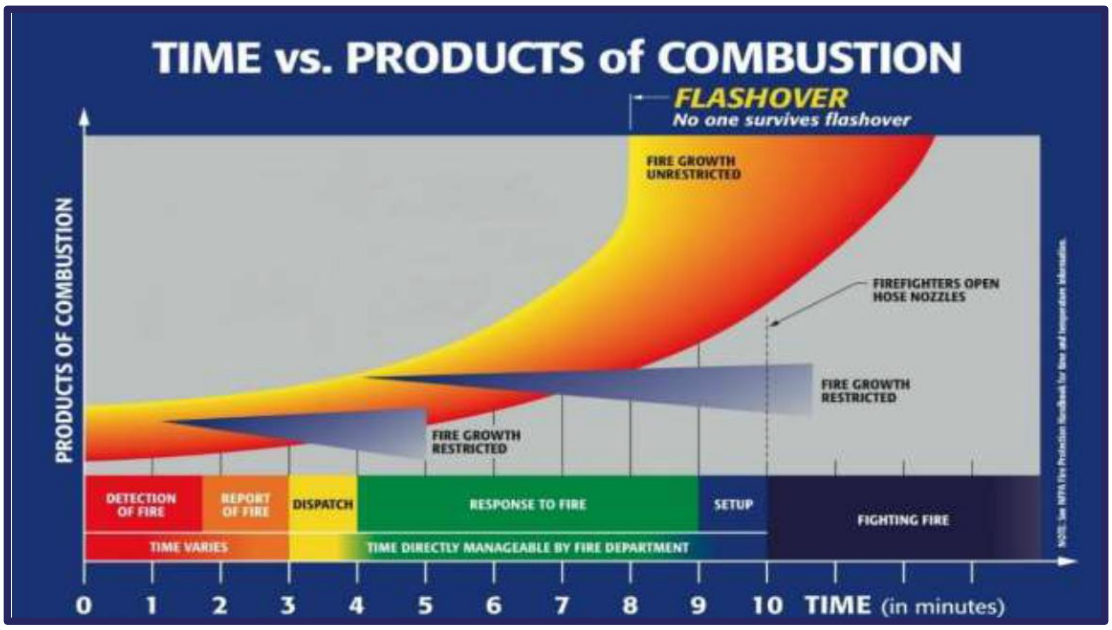
Note: Flashover is a situation in which the entire contents of a room ignite due to extremely high heat conditions. This situation is not survivable by unprotected occupants that may be caught in this type of situation. Even firefighters are at great risk of severe injury and/or death due to the extreme fire and heat conditions within the area of the flashover.

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

- The distance between the fire stations and response location
- The layout of the community
- Impediments such as weather, construction, traffic, and lack direct routes (rural roads)
- Notification time (including smoke alarms)
- Assembly time of firefighters, both at the station and at the scene of the incident
    - Assembly time includes dispatch time, turnout time, and response time. It should be noted that assembly time can vary greatly due to weather and road conditions along the way, with time of day

As illustrated in the following fire propagation diagram, the need for immediate initiation of fire suppression activities is critical. SNFES responds to more than just fires; motor vehicle collisions, medical emergencies, and rescues also need immediate response. Thus, it is imperative to be as efficient and effective as possible in responding to calls for assistance.

FIGURE #3: FIRE RESPONSE/PROPAGATION CURVE



The above figure notes the following time variables:

- Detection of Fire – this is when the occupant discovers the fire. For the purposes of this chart, detection time is noted as being within one to one and a half minutes (this could, in fact, be shorter or longer). The fire may be in a very early stage or could have been burning for quite some time before being detected.
- Report of Fire – this is when someone has identified the fire and is calling 911 for help.
- Dispatch – the time it takes the dispatcher to receive the information and dispatch the appropriate resources.
- Response to the Fire – response time is a combination of the following:
    - Turnout Time – how long it takes the career firefighters to get to the fire truck and respond or how long it takes the volunteer firefighters to get to the station to respond with a fire truck.
    - Drive Time – the time from when the crew advises dispatch that they are responding until the time that they report on scene.
- Setup Time – the time it takes for the fire crews to prepare to begin firefighting operations.
- Fighting the Fire – the actual time it takes to extinguish the fire on the scene.

The overall goal of any fire department is to arrive at the scene of the incident as quickly and effectively as possible. If a fire truck arrives on the scene in ten minutes or less, there is an increased opportunity to contain the fire by reducing its further spread to the rest of the structure.

In relation to on-scene staffing, based on studies and evaluations conducted by the National Institute of Standards and Technology (NIST) and the NFPA, no interior attack is to be made by the firefighters until sufficient personnel arrive on the scene. The expectation is that a minimum of three firefighters and one officer arrive on the scene to make up the initial fire suppression team. This team of four can effectively assess the scene, secure a water source (e.g., hydrant), ensure the fire truck is ready to receive water and engage the pump on the apparatus, 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.

3.6.1.2 NFPA Performance Objectives – Response Times

NFPA establishes response times in two standards: 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 and 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. As SNFES is a composite department, with full-time staff deployed from Station 1 and supported by volunteers from the other stations, these two standards can have different interpretations and impacts on the effectiveness of emergency response.

There are significant differences in the expected response times between career and volunteer fire departments. As the standards are referenced below, it is important to note that the career response time is based on multiple units and staffing levels. The volunteer response is based on a table that accounts for demographic and geographic criteria.

NFPA 1710 4.1.2.1

The fire department shall establish the following performance objectives for the first-due response zones that are identified by the AHJ:

- (3) 240 seconds or less travel time for the arrival of the first engine company at a fire suppression incident.

- (7) 240 seconds or less travel time for the arrival of a unit with first responder with automatic external defibrillator (AED) or higher-level capability at an emergency medical incident.

NFPA 1720 – Table 4.3.2

Table 4.3.2 shall be used by the AHJ to determine staffing and response time objectives for structural firefighting, based on a low-hazard occupancy such as a 2000 ft^2 (186 m^2), two-story, single-family home without basement and exposures and the percentage accomplishment of those objectives for reporting purposes as required in 4.4.2.

TABLE #13 - STAFFING AND RESPONSE TIME

Demand Zone [a]	Demographics	Minimum Staff to Respond [b]	Response Time (minutes) [c]	Meets Objective (%)
Urban Area	>1000 people/mi^2 (2.6km^2)	15	9	90
Suburban Area	500-1000 people/mi^2 (2.6km^2)	10	10	80
Rural Area	**<500 people/mi^2 (2.6km^2)**	**6**	**14**	**80**
Remote Area	Travel distance ≥ 8 mi (12.87 km)	4	Directly dependent on travel distance	90
Special Risks	Determined by AHJ	Determined by AHJ based on risk	Determined by AHJ	90

[a] A jurisdiction can have more than one demand zone
[b] Minimum staffing includes members responding from the AHJ's department and automatic aid
[c] Response time begins upon completion of the dispatch notification and ends at the time interval shown in the table

Table 4.3.2 outlines demographic classifications (as defined by the U.S. Census Bureau), along with corresponding staffing and deployment requirements, and fractal response time measurements.

- Suburban Areas: Staffing requirements for suburban areas are based on the Ontario Fire Marshal's report, Shaping the Future of Fire Ground Staffing and Delivery Systems within a Comprehensive Fire Safety Effectiveness Model. This report is also referenced in NFPA 1710.
    - To meet the standard, the required staffing level must be achieved 80% of the time.

- Rural Areas: Defined by lower population density, rural areas require a minimum of six personnel on scene:
    - Two firefighters inside
    - Two firefighters outside
    - One incident commander
    - One pump operator
        - This staffing model is derived from UK fire cover standards and must also be met 80% of the time.
- Remote Areas: These areas follow the OSHA “two in/two out” rule, requiring at least four personnel assembled on scene.
    - This requirement must be met 90% of the time.
- Travel Time Calculation: Travel distances can be estimated using the ISO travel time formula:
    - 1.7 × distance (miles) + 0.65 = travel time (minutes)

Based on a population of 12,912 and a land area of 73.36 square miles (190 km²), the population density for SNGR is approximately 176 people per square mile. This places SNGR within the "rural demand zone" under NFPA 1720 guidelines.

Under both NFPA 1710 and NFPA 1720, SNFES is expected to meet the following response benchmarks:

- Career crews should arrive on scene within 240 seconds (4 minutes) for fire or medical emergencies, 90% of the time.
- Volunteer crews should arrive within 14 minutes, 80% of the time.

It is important to note that NFPA standards are considered aspirational "gold standards". While they set high benchmarks, they may not always be financially or operationally attainable for all departments. However, fire departments are encouraged to evaluate their current response times and explore improvements through:

- Station placement
- Staffing models
- Route planning
- Station design

Given its higher population density and concentration of structures, the Ohsweken area may be more aligned with NFPA 1710 standards. This is supported by the presence of a career crew based at Station 1, centrally located in the village.

For the surrounding rural areas, NFPA 1720 is likely the more appropriate framework for deployment and planning.

3.6.1.3 NFPA Performance Objectives – Staffing Levels

Within NFPA 1720 Table 4.3.2 it is established that SNFES volunteer deployment is within the rural area demand zone. This table also provides that minimum staffing levels for that demand zone are six personnel.

NFPA 1710 does not set staffing levels per demand zone but instead assumes all stations are staffed and base staffing levels on operating units. This model is based on staff per apparatus type (pumper, aerial, rescue) and may also include hazard levels. NFPA 1710 defines staffing levels as:

- 5.2.3 Operating Units
    - Fire company staffing requirements shall be based on minimum levels necessary for safe, effective, and efficient operations.
- 5.2.3.1 Engine Companies
    - Fire companies whose primary functions are to pump and deliver water and perform basic fire fighting at fires, including search and rescue, shall be known as engine companies
- 5.2.3.1.1
    - These companies shall be staffed with a minimum of four on-duty members

SNFES is primarily an engine/pumper set-up, with an aerial and rescue unit as secondary support units deployed as necessary.

The overall goal of any fire department is to have personnel and apparatus on the scene as quickly and efficiently as possible. A composite department like SNFES with a career minimum staffing model will see four firefighters on the scene in the shortest amount of time, with volunteer firefighters responding to support the on-scene crew. Until sufficient resources arrive at the scene, the crew has limited actions available.

Based on studies and evaluations conducted by the National Institute of Standards and Technology (NIST) and the NFPA, no interior attack is to be made by the firefighters until

sufficient personnel 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 (e.g., 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.

In 2010 and 2020, the NIST in the United States conducted a study on fire crew efficiencies and the tasks that may be completed during a residential structure fire with different-sized crews. The following research questions guided the experimental design of the low-hazard residential

Fireground experiments documented in this report:

- How does crew size and stagger affect overall start-to-completion response timing?
- How does crew size and stagger affect the timings of task initiation, task duration and task completion for each of the 22 critical fireground tasks?
- How does crew size affect elapsed times to achieve three critical events that are known to change fire behavior or tenability within the structure?
    - Entry into structure?
    - Water on fire?
    - Ventilation through windows (three upstairs and one back downstairs window and the burn room window).
- How does the elapsed time to achieve the national standard of assembling 16 firefighters at the scene vary between crew sizes?

The experiments were conducted in a burn prop designed to simulate a low-hazard fire in a residential structure described as typical in NFPA 1710. A low-hazard occupancy is defined in the NFPA standard as a one-, two- or three-family dwelling and some small businesses. Medium hazard occupancies include apartments, offices, mercantile and industrial occupancies not normally requiring extensive rescue or firefighting forces. High-hazard occupancies include schools, hospitals, nursing homes, explosive plants, refineries, high-rise buildings and other high-life hazard or large fire potential occupancies. The study found that four-person crews were able to complete 22 essential firefighting and rescue tasks in a typical residential structure fire 30% faster than a two-person crew and 25% faster than a three-person crew[67]. Having

[67] National Institute of Standards and Technology (NIST), 'Report on Residential Fireground Field Experiments', accessed February 2025, https://www.nist.gov/publications/report-residential-fireground-field-experiments-0

crews of four firefighters lessens the risk of injury as more personnel are available to complete assignments.

By reviewing both the response times and staffing sections within NFPA 1710 and 1720 and referencing the NIST study will determine an appropriate response and deployment model. Other items to consider include call volume, which would indicate the amount of time fire units are at a call for service. This is the unit availability rate. Having volunteer firefighters lessens the necessity of relying on the unit availability rate, as a reliable volunteer response will have personnel and units on scene, just not at the same response time as the career units.

The Fire Chief should ensure that the deployment plan for SNFES has a complement of career staff available to respond to an initial response. If additional staffing is required, volunteers will need to be dispatched as quickly as possible to allow for a quicker response. The Fire Chief should review the annual call data for up to a five-year period to establish a median and mean response time that separates turnout times and travel times. When reliable data is available, SNFES can implement an internal policy related to expected response times. This will allow for improved emergency response.

3.6.2 Levels of Service

The industry standard for First Nation fire departments in Ontario is O. Reg. 343/22 Firefighter Certification[68]. This regulation from the Fire Protection and Prevention Act establishes that fire departments must certify and/or train their staff to their respective roles and responsibilities as per their defined level of service. The level of service is determined by the Community Risk Assessment. This regulation has a mandatory compliance for all municipal fire departments in Ontario, but not for any First Nation fire department due to jurisdictional authority. It is set to take effect in two parts, first in July 2026, and then all NFPA 1006 disciplines will follow in July 2028.

The wording within the First Nation Fire Protection Strategy states in 4B that "First Nations should adopt a minimum fire training strategy by 2025". The Level of Service Standards also states in Tier 2 that First Nations fire departments implement basic firefighter training standards. These two ISC-established criteria mirror the intent of the Ontario regulation that establishes a minimum training standard with certification necessary for full-service fire departments.

[68]Government of Ontario. Fire Protection and Prevention Act, 1997, S.O. 1997, c. 4. Accessed March 2025, https://www.ontario.ca/laws/statute/97f04.

A full-service fire department is one that conducts interior structural firefighting as well as hazardous materials and auto extrication. Those that do not include two of the three criteria need not certify but must train to the "Ontario Seal" which utilizes the same NFPA job performance requirements as training expectations. SNFES is a full-service fire department.

As outlined in Appendices A and B of the governance framework, SNFES has defined its current level of service to include the following:

- Interior structural firefighting, including search and rescue operations
- Wildland firefighting
- Medical emergency response at the First Responder level
- Technical rescue capabilities, including:
    - Trench rescue – awareness level
    - Ice and water rescue – operations level
    - Elevated devices – operations level
    - Confined space rescue – awareness level
    - Low and high angle rope rescue – operations level
- Vehicle extrication
- Fire prevention, public education, and fire code compliance

By comparison, Table #14 establishes the current SNFES level of service, the minimum level for full-service certified departments in Ontario, and the Ontario Seal minimum levels of service.

TABLE #14 - COMPARISON OF SERVICE LEVELS

Fire Protection Service	NFPA Standard	SNFES	Ontario Full-Service	Ontario Seal	
Firefighting Operations					
Fire Fighter	1001	Firefighter II	Firefighter II	Exterior Firefighter	Interior Firefighter
Fire Officer	1021	Fire Officer I	Fire Officer I	Team Lead – Exterior	Team Lead – Interior
Hazardous Materials	1072	Operations	Operations (plus 6.2 & 6.3)	Hazmat Operations added to Exterior/Interior	
Auto Extrication	1001 FF II	NFPA 1001 FFII JPRs	NFPA 1001 FFII JPRs	Auto Ex (FFII JPRs) added to Ext/Int	
Pump Operations	1002	1002	Chapter 5	Pump Operator	
Technical Rescue			*Minimum Certification Level for Fire Departments*		
Common Passenger Rescue[1]	1006	Operations	Awareness		
Surface Water		Operations	Awareness		
Swift Water		Awareness	Awareness		
Ice Water		Operations	Awareness		
Trench Rescue		Awareness	Awareness		
Confined Space		Awareness	Awareness		
Structural Collapse		n/a	Awareness		
Rope Rescue		Operations	Awareness		
Additional Services			*Minimum Certification Level forFire Departments*		
Fire Inspector I	1031[2]	To be determined	Fire Inspector I		
Fire Inspector II		To be determined	Fire Inspector II		
Fire Investigator	1033[2]	To be determined	Chapter 4		
Fire & Life Safety Educator	1035[2]	To be determined	Educator I		
Training Officer I	1041	To be determined	Fire Instructor I		
Training Officer II		To be determined	Fire Instructor II		
Incident Safety Officer	1521	To be determined	Chapter 5		

[1] Common Passenger Rescue is not a minimum certification requirement, but FD are encouraged to train to operations or technician

[2] NFPA has now amalgamated these standards into 1030, curriculum currently unavailable

3.6.3 Response Data

Between 2019 and 2022, the records management system (RMS) used to document fire response activities was insufficient. As a result, critical data needed for thorough review—such as incident locations, response times, resources deployed, and performance benchmarks—was not consistently recorded. While calls were attended to in accordance with existing service levels, the lack of detailed documentation limited analysis during this period.

To address this gap, SNFES is currently implementing a new system, First Due, which is expected to improve data accuracy and completeness moving forward.

Despite the limitations, available information from the review period includes the number of fires and the associated dollar loss.

2021 – 56 fires	**2022 – 72 fires** with losses reported as $476,000	**2023 – 75 fires** (29 marked as structure) with losses reported as $2,439,000

A proper records management system is an important tool in operating a fire department. It allows for review of resources, times, benchmarks, and locations of calls for service. SNFES is implementing First Due, and improved results should come from this addition. The Fire Chief is encouraged to review the data provided by this software in comparison with recommendations from the CRA and this MFP. The data will assist with matching resources to established levels of service and allow for improvements.

3.6.4 Standard Operating Guidelines/Procedures and Policies

Fire department operations and management require a foundation of written expectations. They provide immense value and are critical for a department's success. The written expectations are the governing direction within the department. Of note, there is a difference in the types of governing documents.

- Policy - A high-level statement that expects consistent compliance. There is very little to no flexibility permitted within a policy.
- Guideline - A standard with an accepted level of quality or attainment. It provides direction on how to act in each situation with non-mandatory controls.
- Procedure - A requirement with an acceptable level of quality or accomplishment in a series of detailed steps to accomplish an end. There are step-by-step instructions for execution and completion.

SNFES has established a strong governance model and continues to improve upon it. Currently, there are ten sections that regulate the department's operations. Within these sections, there are 101 individual Safe Operating Guidelines, divided into nine sections. The operating guidelines account for many aspects of fire department operations.

Some of the operating guidelines resemble Section 21 Guidance Notes, which indicates a focus on safety.

Operational guidelines should be reviewed by personnel annually for clarity and currency. Fire department management should ensure that there is an established review cycle and a process for recommending and approving changes, deletions, and additions to the operating guidelines. Some fire departments review a percentage of their policies, guidelines, and procedures annually (33% to 50%).

Reviewing these documents requires technical knowledge, legislative awareness, and understanding of the intent of the document. This process can be tasked to managers, officers or committee members. Additional references to support these documents include *Section 21 Guidance Notes, NFPA standards, manufacturer recommendations, training notes, other fire department documents, and any study or research related to the topic*.

For SNFES to operate safely, effectively, and efficiently, all members must adhere to all policies, SOGs, SOPs, and those that fail to do so should be held accountable.

3.6.5 Recruitment and Retention Programs

SNFES is a composite department with volunteer staffing and career staffing. To improve job availability within the community and improve proper representation, there is a goal to develop opportunities for Six Nations members within the department. This involves implementing a recruitment and retention plan with committed growth and development objectives. Ideally, members could begin within the volunteer ranks and then move into career positions when development is complete.

Internally, SNFES personnel feel there is a retention issue. Senior management has indicated to EMG that current turnover rates have stabilized and sit at around 10% annually. With a total staff of over seventy personnel, this still accounts for up to seven new members annually.

Because of inadequate government funding for First Nation fire services, proper financial compensation programs cannot be established without resorting to own-source funding. The lack of a municipal tax base, as with a municipal fire department, means there is no guaranteed source of revenue to draw from.

SNFES offers in-house training and certification. In January 2025, they plan to launch a partnership with Ogwehoweh Skills and Trades Training Centre to offer a seven-week First Nations Firefighter Training and Certification program. The training will be conducted by a third-party organization that will offer ProBoard® certification in NFPA Firefighter I & II, NFPA 1072 Hazardous Materials Operations level, and Red Cross Emergency Medical Responder.

SNFES management is responsive to the current issues and gaps within its recruitment and retention strategy. A plan to acquire funds and partnerships to offer training and certification will help fill vacancies within the department. Improving pay and benefits may stabilize retention issues.

Recruitment is typically tied to available resources, both financial and candidates. Retention is based upon pay and benefits packages, along with satisfactory workplace conditions. While the two are often discussed together, the only correlation is that when retention decreases, recruitment is required.

As SNFES moves to stabilize retention rates, a recruitment strategy should be considered. This includes introducing community youth to fire services as a career option or as a part-time volunteer role. As youth are mentored and engaged, local interest may improve. Recruitment begins with inspiration to join the fire service, and SNFES has the ability to directly influence their community youth to consider a path to fire services.

3.6.6 Mental Health Programs

In 2024, SNFES signed a partnership agreement with Wounded Warriors Canada. Wounded Warriors Canada (WWC) "is a nationally recognized organization and mental health service provider dedicated to serving ill and injured Trauma Exposed Professionals (TExPs) and their families in both official languages." WWC focuses on two key areas of resiliency and recovery. This agreement provides SNFES with access to training programs like:

- Strength Warrior
- Trauma Resiliency Training
- Peer Support Training
- Trauma Informed Practice
- Core Trauma Concepts
- Before Operational Stress (BOS)

Wounded Warriors Canada also offers operational stress injury support. They provide this in a variety of ways, such as:

SNFES also has SOG 4.15 Critical Incident Stress Debriefing, which provides direction if there is an incident that "may cause emotional distress to department members."

In 2017, the Ministry of Labour introduced legislation that acknowledged PTSD as a work-related illness and would be a compensable injury under WSIB. Part of this announcement was that all first responder organizations affected by it, including First Nation firefighters, police and paramedics, were required to submit a PTSD Prevention Plan. This plan was for organizations to outline their approach to PTSD in the workplace moving forward. SNFES submitted a plan as requested[69].

With the new partnership with Wounded Warriors Canada, it is important for SNFES to access additional funding programs and services available to capitalize on the programs offered by

[69] Six Nations Council – 'Post Traumatic Stress Disorder (PTSD) – Prevention Plan, accessed March 2025, https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.labour.gov.on.ca%2Fptsd%2Fsix_nations_elected_council.docx&wdOrigin=BROWSELINK

WWC. This may include Peer Support Training to establish a team, resiliency training for all staff, and family programs. An investment in firefighters' mental health is a commitment to their future.

3.6.7 Rehabilitation and On-Scene Safety Programs

Safety during an emergency and immediately upon return to the station is an important component of a fire department health and safety program. There are four areas that comprise scene safety (aside from tactical operations), rehabilitation, exposure controls, scene safety, and PPE management.

A well-designed and easily implemented rehabilitation sector at a fire scene or other type of emergency is essential to scene management. Having staff who understand the role and assigning an officer to control it is important. Key components of rehabilitation are:

- Proper setup
- Medical monitoring
- Decontamination practices
- Hydration and Nutrition
- SCBA management

SNFES has established SOG 6.9 Rehabilitation at Emergency Operations. The document provides general level instruction in expected procedures for establishing a rehabilitation sector at an emergency scene. It is good practice to involve rehabilitation setup at training events, and as a dedicated training session for new firefighters. A partnership with Six Nations Paramedic Services on establishing scene standby and medical monitoring is worth investigating.

SNFES has also established SOGs to oversee exposure controls, but implementing a Designated Officer program is a strong step toward maintaining consistency with exposure controls.

SNFES utilizes an Incident Safety Officer on scene and established SOG 4.2 Fire Department Incident Safety Officer to detail the expectations within it. As part of the provincial mandatory certification process currently underway, training and certification to NFPA *1521 Standard for Fire Department Safety Officer Professional Qualifications* is a requirement. While mandatory certification is not intended for SNFES, it does make it an industry standard and should be adhered to.

Personal protective equipment is important at an emergency scene. Proper care and selection are key to firefighter safety, and proper training and use will help protect personnel from the hazards associated with emergencies. It is important for all staff to adhere to expectations that

PPE be worn appropriately. SNFES has several SOGs that detail the expectations of personnel regarding PPE use.

When all the components of emergency scene safety are implemented, they can greatly reduce the risk of injury, exposure, or death for personnel. It is important that SNFES:

- Train and maintain awareness for personnel responding to emergencies in the expectations of scene safety.
- Train and maintain managing personnel at an emergency scene for all officers and those who may lead a crew.
- Maintain, review, and revise the SOGs associated with scene safety.

3.6.8 Cancer Prevention Programs

There has been an increase in research and studies on cancer associated with firefighting in recent years. There has also been an increase in cancer types as a compensable work-related injury. While cancer claims continue to grow, a focus on cancer prevention is also growing. There has been increased attention on eliminating exposure to carcinogens as early as possible. Different components to this include:

- Post-fire decontamination of PPE
- Firefighter hygiene at fire scenes
- PPE during handling of contaminated gear/equipment
- Documenting potential exposures
- Reducing exposures to diesel exhaust

Post-fire decontamination programs involve immediate attention to the safe removal and packaging of all pieces of PPE and SCBA involved in fire suppression. There is also a necessity of applying immediate decontamination to PPE before a firefighter removes it, to reduce or eliminate the risk of both inhalation hazards and secondary contamination. It also involves appropriate PPE for personnel who will be handling the contaminated gear. Some departments purchase specialized equipment for on-scene decontamination, while others may just use buckets, dish soap, and scrub brushes. The intent of a post-fire decontamination program is not in its simplicity or investment, but in its adherence to proper use.

The use of a particulate filtering balaclava is becoming more prominent in the fire service. Studies indicate that exposure by absorption is likely at the wrists and neck while wearing PPE. A particulate filtering balaclava can greatly reduce this exposure risk. Properly wearing a bunker

coat and gloves can also reduce exposure. It is beneficial to SNFES to understand and address these risks within the department.

Section 21 has also created the Firefighter's Cancer Prevention Checklist[70]. This tool is intended to help a fire department create the most effective cancer prevention program possible. The document outlines all aspects of cancer prevention, including applicable legislation, regulations and standards:

- WSIB Cancers in Firefighters and Fire Investigators
- Ontario Regulation 253/07 – Firefighters
- Workplace Safety and Insurance Act, 1997, S.O. 1997, c. 16, Sched. A.
- Regulation 833 – Control of Exposure to Biological or Chemical Agents
- Ontario Regulation 714/94 – Firefighters – Protective Equipment
- CSA Z180.1-19 Compressed breathing air and systems
- NFPA 1500 Standard on Fire Department Occupational Safety, Health and Wellness Program
- Reporting an Occupational Illness
- Firefighter Cancer Support Network
- NFPA 1851 Standard on Selection, Care, and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting

WSIB covers 17 types of cancer. The Ontario Association of Fire Chiefs and the Ontario Professional Fire Fighters Association are actively working with the government to lower the screening ages and lower the years of service associated with certain cancer types.

Proper healthcare and early screening are important in firefighter wellness. Firefighters should consult with their physician to access early screening for potential cancers associated with firefighting. SNFES and SNGR should support and encourage personnel to have an active role in their health.

[70] Ontario, 'Firefighters Cancer Prevention Checklist', accessed March 2025, https://www.ontario.ca/page/firefighters-cancer-prevention-checklist

3.6.8.1 Health, Wellness, and Fitness Programs

The health and wellness of staff is a key focus for all fire departments, and SNFES is no exception. The inherent nature of firefighting is both stressful and physically demanding. To support a fitness and wellness endeavour, fire department management should work on maintaining the fitness equipment at Station 1 and have a fitness instructor work with staff to set up a proper workout program and or at the very least demonstrate the proper and safe way to use the exercise equipment. The department should also have an SOG relating to the proper use of the fitness equipment.

Many fire departments routinely test their firefighters to meet occupational fitness tests delivered internally or by a third party. NFPA 1582 details basic expectations placed upon firefighters. Six Nations Fire is encouraged to review these and incorporate them into both candidate testing and firefighter fitness and functionality. It is important that as part of a larger commitment to firefighter health and wellness, SNFES review the physical expectations of a firefighter for use in training and recruiting.

NFPA *1582 Standard on Comprehensive Occupational Medical Program for Fire Departments* Section 5.1 identifies 14 essential job tasks that detail the physical and physiological strains placed on firefighters. The standard outlines the requirements for a fire department medical program including certain conditions that may pose a risk to firefighting. As the core determination for the physicality of firefighting it is important for SNFES to understand the expectations they are placing on their personnel. These job tasks are listed in the standard as:

5.1 Essential Job Tasks and Descriptions

5.1.1 The fire department shall evaluate the following 14 essential job tasks against the types and levels of emergency services provided to the local community by the fire department, the types of structures and occupancies in the community, and the configuration of the fire department to determine which tasks apply to their department members and candidates:

1. While wearing personal protective ensembles and self-contained breathing apparatus (SCBA), performing firefighting tasks (e.g., hoseline operations, extensive crawling, lifting and carrying heavy objects, ventilating roofs or walls using power or hand tools, forcible entry) rescue operations, and other emergency response actions under stressful conditions, including working in extremely hot or cold environments for prolong time periods.

2. Wearing an SCBA, which includes a demand valve-type positive-pressure face piece or HEPA filter mask, which requires the ability to tolerate increased respiratory workloads.
3. Exposure to toxic fumes, irritants, particulates, biological (infectious) and nonbiological hazards, and heated gases, despite the use of personal protective ensembles and SCBA.
4. Depending on the local jurisdiction, climbing six or more flights of stairs while wearing a fire protective ensemble, including SCBA, weighing at least 50 lbs (22.6 kg) or more carrying equipment/tools weighing an additional 20 to 40 lbs (9 to 18 kg).
5. Wearing a fire protection ensemble, including SCBA, that is encapsulated and insulated, which will result in significant fluid loss that frequently progresses to clinical dehydration and can elevate core temperatures to levels exceeding 102.2°F (39°C).
6. While wearing personal protective ensembles and SCBA, searching, finding, and rescue-dragging or carrying victims ranging from newborns to adults weighing over 200 lbs (90 kg) to safety despite hazardous conditions and low visibility.
7. While wearing personal protective ensembles in SCBA, advancing water-filled hose lines up to 2 ½ in. (65 mm) in diameter from fire apparatus to occupancy [approximately 150 ft (50 m)], which can involve negotiating multiple flights of stairs, ladders, and other obstacles.
8. While wearing personal protective ensembles and SCBA, climbing ladders, operating from heights, walking, or crawling in the dark along narrow and uneven surfaces that might be wet or icy, and operating in proximity to electrical power lines and other hazards.
9. Unpredictable emergency requirements for prolonged periods of extreme physical exertion without the benefit of warm up, scheduled rest periods, meals, access to medication(s), or hydration.
10. Operating fire apparatus or other vehicles in an emergency mode with emergency lights and sirens.
11. Critical, time-sensitive, complex problem solving during physical exertion in stressful, hazardous environments, including hot, dark, tightly enclosed spaces, which is further aggravated by fatigue, flashing lights, sirens, and other distractions.
12. Ability to communicate (give and comprehend verbal orders) while wearing personal protective ensembles and SCBA under conditions of high background noise, poor visibility, and drenching from hose lines and/or fixed protection systems (sprinklers).

Functioning as an integral component of a team, where sudden incapacitation of a member can result in mission failure or in risk of injury or death to civilians or other team members.

13. Working in shifts, including during nighttime, they can extend beyond 12 hours.

The 14 essential job tasks explained in NFPA 1582 lay the groundwork for *NFPA 1583 Standard on Health-Related Fitness Programs (HRFP) by Fire Department Members*. NFPA states that "this standard outlines a complete HRFP for members of fire departments involved in emergency operations to enhance their ability to perform occupational activities and reduce the risk of injury, disease, and premature death".

The applicable portion of the standard comes from Section 4.1, wherein it states:

4.1 Program Overview

- The fire department shall establish and provide an HRFP that enables members to develop and maintain a level of health and fitness to perform their assigned functions safely.

The occupational health and safety program provides direction on safely performing assigned functions. The HRSP allows members to enhance and maintain their optimum level of health and fitness throughout their tenure with the fire department. Education, one provision of a health-related fitness program, allows a means for improving health and fitness throughout the organization. The organization needs to provide recognition and support to ensure the success of this process. Health and fitness need to become a value within the organization, just as safety is a value.

Data suggests the correlation between the following:

- A proactive approach to health and fitness and a decrease in debilitating occupational injuries.
- A reduction in workers compensation claims and a decrease in acute and chronic health problems of firefighters.

Combining the health-related fitness programs with the proactive occupational health and safety program provides a fire department with the level of quality needed for its members. It is suggested that, as part of a larger commitment to firefighter health and wellness, SNFES review the 14 essential job tasks from NFPA 1582 as they pertain to their recruitment and testing process and seek options for improving staff options to exercise and maintain fitness levels as explained in NFPA 1583.

SNFES does have two SOGs related to fitness, health, and wellness: 1.6 Physical and Mental Fitness and 4.14 Fitness for Duty/Medical and Physical Assessments. Developing a fitness, health, and wellness program for personnel is a worthwhile venture. Staff often manage these programs.

3.6.8.2 Respiratory Program

Protection from inhalation hazards and airborne hazards is an important part of firefighter occupational health and safety. To protect personnel, they may be required to wear a respirator or mask. Existing regulations and standards associated with this are Section 21 Guidance Note 4-9 Respiratory Protection Program and is based on Canadian Standards Association (CSA) Z94.4-02 "Selection, Care, and Use of Respirators" and CSA Z180.1-00 "Compressed Breathing Air and System".

A proper Respiratory Program includes an assignment of responsibility. This involves five levels: employer, program administrator, supervisors, respirator users, and support personnel (fit tester and maintenance personnel). The program should include the following sections:

- Hazard Assessment
- Respiratory Hazards
- Updating the Hazard Assessment
- Training
- Voluntary Respirator Use
- Fit Testing
- General Respirator Use Precautions
- Air Quality
- Change Schedules
- Cleaning
- Maintenance
- Storage
- Respirator Malfunctions and Defects
- Program Evaluation
- Documentation and Record Keeping

SNFES has established SOG 4.19 Respiratory Inspection Program. The document lists minimum expectations for a program. It would benefit the department if a full program, including a dedicated manual, was developed to comply with associated regulations and standards.

3.6.8.3 SWOT Analysis

EMG requested that SNFES staff complete a Strengths, Weaknesses, Opportunities, and Threats (SWOT) assessment. There were assessments for different sections within the Master Fire Plan.

Responses related to Suppression are detailed in Appendix C. Based on these responses, it is important for SNFES management to review them and discuss them with staff, management, and senior management so that a clear communication stream is established. If there are concerns listed that may be a result of a misunderstanding, it is important for management to address them sooner rather than later. Any identified positives should also be followed up to benefit from any potential positive momentum.

3.7 Communication/Dispatching Systems

This section outlines the current communication and dispatch systems used by first responders delivering fire response services within the Six Nations of the Grand River Territory (SNGRT).

SNGRT is responsible for providing 9-1-1 emergency services to both residents and visitors. This service begins with a Primary Public Safety Answering Point (PSAP), which is the first center to receive a 9-1-1 call. For SNGRT, the PSAP is the Northern 911 Communications Center, located in Sudbury, Ontario.

Call Handling Process

- Initial Call Reception
    - All 9-1-1 calls originating in SNGRT are first received by Northern 911 PSAP.
- Call Transfer Based on Nature of Emergency
    - If the emergency is medical, the call is transferred to Hamilton Central Ambulance Communications Centre (CACC) for dispatch.
    - If the emergency is fire-related, the call is transferred to the Brantford Fire Communications Center (BFCC), which is responsible for dispatching Six Nations Fire & Emergency Services (SNFES).

- Fire Dispatch
    - All fire calls received by Northern 911 are routed to BFCC, which in turn dispatches SNFES units accordingly.

Uncaptured Transfer Times

It was identified that the time taken to transfer a call between the PSAPs is not currently recorded. As a result, true response times may be longer than what is presently reported. When this issue was raised with Emergency Management Group (EMG), it was revealed that no formal request had been made to capture this data.

Recommendation

It is strongly recommended that inter-PSAP transfer times be recorded and incorporated into the total dispatch and response time calculations. This would provide a more accurate measurement of actual response performance.

Dispatching Contract

SNFES currently operates under a formal dispatch services contract with the Brantford Fire Communications Center (BFCC). The contract term is from September 30, 2024, to October 1, 2036.

- The contract cost for the 2025–2026 year is $91,258, based on a combination of per capita and per call billing.

The current dispatch services contract between the Brantford Fire Communications Center (BFCC) and Six Nations of the Grand River Territory (SNGRT) includes a per capita rate of $7.06. This rate is higher than that of seven comparable centers for which data was available. Given this disparity, it may be worthwhile to conduct a cost-benefit analysis if the community considers relocating or renegotiating dispatch services in the future. The contract includes annual rate increases, with the final payment in 2036 projected at $122,643.12.

To help offset these expenses, SNGRT receives 95% funding under a Municipal Type Service Agreement (MTSA).

Contract Gaps and Recommendations

It was observed that the current agreement does not specify any performance metrics, such as:

- Dispatch time standards
- Call processing benchmarks

- Compliance with recognized emergency communications standards

Recommendation

It is recommended that the agreement between BFCC and SNGRT be reviewed and revised to incorporate performance measures in line with the NFPA 1225: Standard for Emergency Services Communications. This will help establish clear expectations and accountability for dispatch operations.

Operational Observations

Based on documentation review and interviews with the Deputy Chief of BFCC, the following was confirmed:

- BFCC provides reliable and modern dispatch services for both SNFES and the broader SNGR community.
- A backup PSAP is located at Fire Station 4 in Brantford, with annual testing conducted to ensure operational readiness.
- There are always two NFPA 1225-certified dispatchers on duty. When dispatchers are on break, firefighters are assigned as substitute dispatchers.

Concerns Identified

SNFES personnel expressed concerns that substitute dispatchers (i.e., firefighters) may lack sufficient training or NFPA 1225 certification, potentially affecting dispatch quality or response times. Despite this concern, BFCC reports conducting internal audits and actively working to meet NFPA standards.

GIS and Infrastructure Support

- The BFCC Deputy Chief also noted a need for updated GIS mapping files from SNFES. The last update was provided in 2019, and outdated mapping may impair dispatch efficiency.

Recommendation

SNFES should provide updated GIS data to BFCC to ensure accurate call routing and enhanced situational awareness for responders.

BFCC's infrastructure includes

- Uninterrupted Power Supply (UPS) systems
- Emergency backup generators

- Annual training to ensure seamless transition to emergency power during outages

3.8 Next Generation 9-1-1 (NG9-1-1)

The Canadian Radio-television and Telecommunications Commission (CRTC) has mandated that all telephone and mobile service providers transition their networks from analog to digital. This upgrade is essential to enable the provision of Next Generation 9-1-1 (NG9-1-1) services, which include enhanced voice and text messaging capabilities for individuals seeking emergency assistance. The shift to digital infrastructure will facilitate seamless transmission of voice, text, and data from the public to emergency communication centers. Additionally, NG9-1-1 technology will allow emergency operators to determine the caller's location using Global Positioning System (GPS) coordinates, thereby improving the efficiency and effectiveness of emergency response efforts.

The CRTC initially set a national deadline of March 31, 2025, for full NG9-1-1 implementation across all provinces. However, while this report was being prepared, that deadline was extended to March 31, 2027. Ontario, specifically, is currently expected to meet a compliance date of March 4, 2025, although a further extension to March 2026 is under federal consideration. As of the date of this report, no formal decision has been announced.

The transition to NG9-1-1 requires substantial investment in new technologies and infrastructure, including updated telephone systems, call-handling platforms, internal network architecture, and enhanced cybersecurity measures. It is the responsibility of provincial and municipal governments to ensure the necessary steps are taken to facilitate this transition and deliver improved emergency communication services.

The Brantford Fire Communications Center (BFCC) has entered into a contract with SolaCom Technologies (SCT) to complete the necessary upgrades to become NG9-1-1 compliant. SCT has committed to meeting the original contract deadline of March 31, 2025. However, it is important to note that the contract does not specify any consequences or remediation measures should SCT fail to meet this deadline.

As NG9-1-1 technology is implemented, the associated costs are expected to be significant. It is anticipated that these costs will be passed down to the contracted municipalities on a per capita basis, including the SNFES.

The radio communications system used by BFCC was last updated in 2022, including upgrades to portable radios, repeaters, and transmission towers. However, the current portable radios remain analog and will require replacement with digital models to ensure compatibility with the NG9-1-1 system. It is recommended that SNFES procure new digital portable radios as part of its preparations for NG9-1-1 implementation.

3.8.1 Current Radio Infrastructure

The current radio communication system utilized by SNFES is approximately 10 to 12 years old.

- SNFES is dispatched through the BFCC, which operates on a P25 digital radio system. However, Six Nations currently communicates via an analog radio channel.
- The SNFES system comprises a three-site, conventional VHF analog simulcast radio network. Each tower site is equipped with a backup generator to ensure continued operation during power outages. This system supports approximately 67 portable radios and 18 mobile units, all of which are Motorola devices.
- SNFES retains Five9 Solutions to manage its radio communications system and the supporting infrastructure required for daily fire department operations. As part of their ongoing service, Five9 Solutions recently conducted a radio coverage study for the Six Nations territory. Based on their findings, they have recommended the addition of a fourth tower site, along with an infrastructure upgrade to a P25 digital conventional simulcast system.
- The proposed upgrade would enhance overall system performance, particularly in areas where radio coverage is currently limited due to geographic factors such as low-lying terrain. Implementation of the fourth tower and transition to P25 technology would provide more consistent and reliable communications throughout the service area.

FIGURE #4: TOWER SITES CURRENT AND THE PROPOSED TOWER

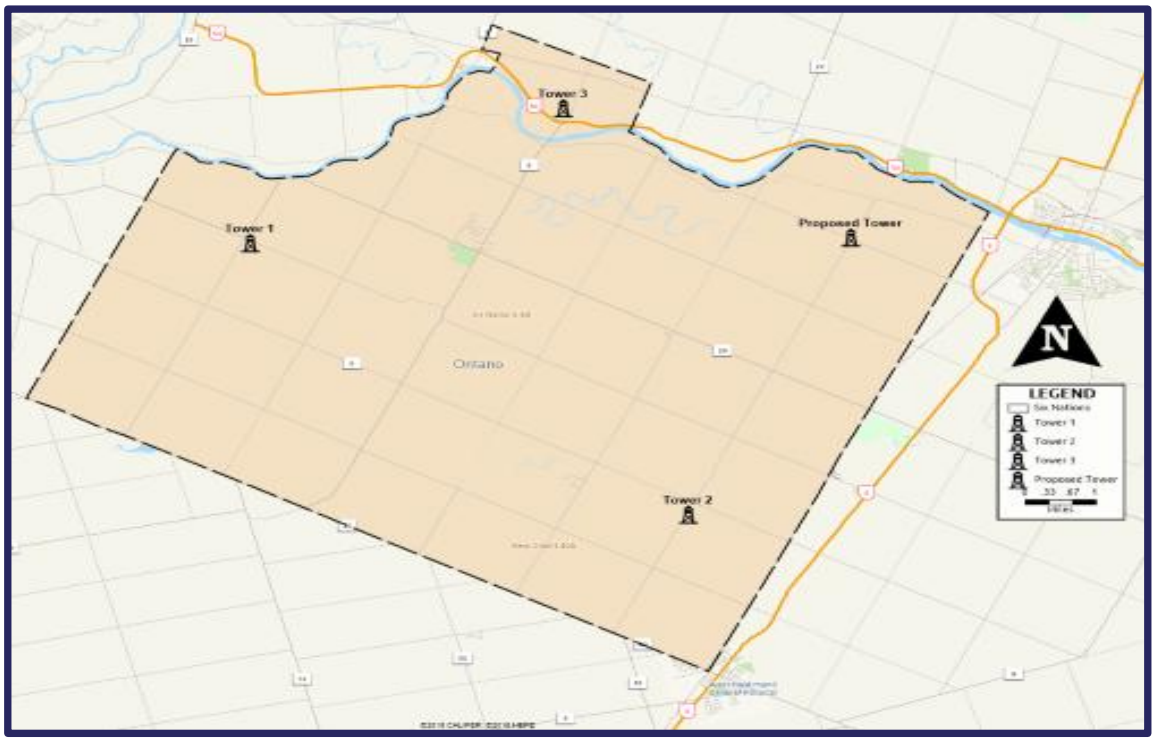
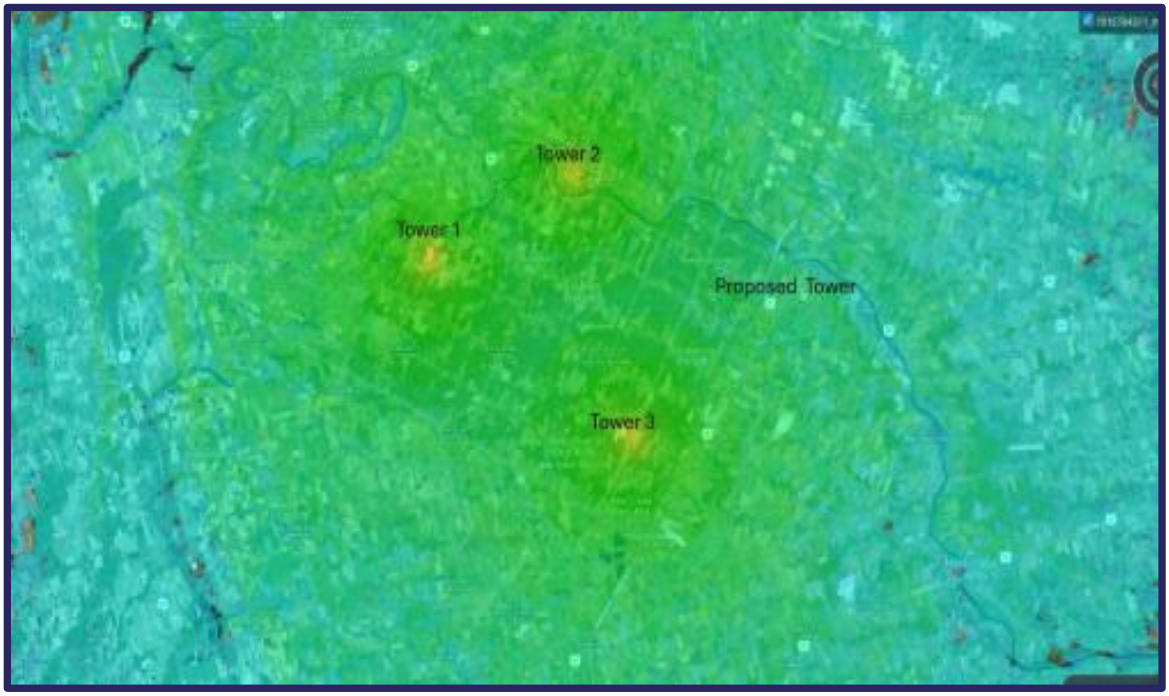


FIGURE #5: SIMULCAST COVERAGE MAP AND THE PROPOSED TOWER

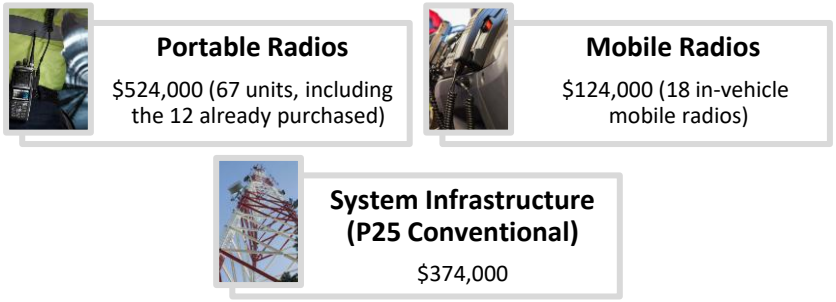


As part of its ongoing efforts to modernize communications infrastructure, Six Nations Fire & Emergency Services (SNFES) has initiated the replacement of its aging portable radios. The transition to updated equipment is expected to improve coverage and reliability, particularly in areas where performance has been inconsistent due to outdated technology.

To date, 12 Motorola APX6000XE P25 portable radios have been procured and will be deployed upon receipt. These radios are capable of operating in analog mode until the department completes the transition to a full P25 digital system.

Five9 Solutions has proposed a comprehensive infrastructure upgrade that includes the implementation of a fourth tower site and migration to a P25 digital conventional simulcast system. This upgrade aims to address current limitations in coverage and reliability, especially in low-lying areas.

Cost Breakdown for Proposed Upgrades



This modernization project represents a significant financial investment for the SNGR. However, the improvements in system reliability and operational safety are considered vital and potentially lifesaving for frontline personnel.

Currently, SNFES operates an analog paging system alongside a three-tower VHF analog simulcast radio network. Although general coverage is acceptable, low-lying regions experience signal degradation, which is sometimes misattributed to topography but may in fact result from the declining performance of legacy portable radios.

According to the senior program developer at Five9 Solutions, the existing radio infrastructure includes three primary tower sites licensed for VHF operation. The system is already capable of simulcast functionality and features proactive monitoring of core components, including repeaters, network connections, hardware integrity, and power backups.

The Fire Chief has indicated that the current radio system is nearing end-of-life. Existing repeater infrastructure is outdated, and the analog system lacks the scalability and support required for modern emergency response. The Motorola DMR (XPR series) radios currently in use are discontinued and are in post-cancellation support status, with limited spare parts

availability. These radios are commercial-grade and do not meet the "mission-critical" standards expected for fire suppression operations.

Additionally, the system lacks encryption, posing significant privacy risks and potential vulnerabilities to unauthorized access or interference.

In response, SNFES is actively exploring various grant opportunities and funding sources to support the upgrade project. These include potential federal programs, donations, intergovernmental agreements, and community contributions. Given the critical nature of emergency communications, it is strongly recommended that the radio system upgrade proceed without delay, with funding strategies to be finalized as the project progresses. Delaying these upgrades could compromise firefighter safety and operational effectiveness.

3.8.1 Six Nations Fire and Emergency Services Communications Present Program

When asked about the current radio dispatching services provided by the BFCC, it was reported that the system is functioning well. However, the Fire Chief emphasized the need for BFCC to formalize its planning process to ensure dispatch coverage aligns with NFPA certification and guidelines, guaranteeing all personnel are equally qualified for their roles.

When calls for service are received by BFCC, they are dispatched to the firefighters of SNFES. These calls are sent to each firefighter's assigned fire mobile pager and are also sent to their personal phones through a mobile application called IamResponding. The Fire Chief noted that this application has been effective, with integrated radio audio for all responders. Many volunteers rely on it as their primary notification system, and it has proven to be reliable.

The current radios used by the firefighters are Motorola XPR series that was bought in 2022, and service will be limited in the future. They are transitioning Motorola APX (or similarly functioning) radios into their latest purchase with long-term plans to transition the radio system from analog to digital and finally to P25 as part of the NG 9-1-1 system upgrade. There are enough radios in service so that every firefighter's seat on all apparatus has a portable radio assigned to it. There are about 12 spare radios. While looking at the portable radio inventory, it was noted that originally there were 67 portable radios. When doing my research, it was noted that eight portable radios were listed as missing and presumed to have been stolen. It is recommended that the department develop a policy that guides the department's portable radio program and what to do in the event one of the radios goes missing.

There were several concerns with the current radio system that the firefighters have identified through their SWOT analysis.

What follows are the major concerns provided by the firefighters:

- Technical Issues – instances where both the responding app and our normal radio dispatching system are down and we cannot be dispatched, or radio transmissions do not go through. And it's usually reactionary to resolve the issues.
- Security – Stolen fire department radios allow the public to hear confidential call details.
- Multiple dead zones.
- Lack of experience in dispatchers.
- Minimal information was given from the dispatcher.
- Poor information coming from other agencies. Firefighters could be responding to a dangerous scene but are not made aware.
- Lack of communication on the scene, specifically not following procedures.
- Lack of communication between services. Different agencies often use incompatible communication systems. Or different dispatchers in different cities.
- System outages, power outages, server failure, and software glitches can cause disruption.

Many of these concerns could be addressed by the firefighters following the current SOGs for communications. There may be a need to hold annual training on communications and radio procedures. It is recommended that the SNFES hold annual training on communications and radio procedures. It appears there is no training on the use of radios on the fire scene.

Section 3 - Recommendations

Rec #	Recommendation	Suggested Implementation Timeline	Estimated Cost	Rationale
9	The Fire Chief should develop a staffing plan, which will include a job analysis of new or revised positions within SNFES including but not limited to: • CFEI Project Staff • Administrative positions • Prevention positions And the staffing plan will include a review of available workspace.	Immediate (0 to 1 year) for review; Short-Term (1 to 3 years) for implementation	Staff Time For review, costs for position will be determined by job analysis and existing SNGR pay grid	As SNFES grows to meet industry standard and community needs, additional administrative positions are necessary. A thorough review by the Fire Chief in consultation with HR will determine the best use of additional support.
10	The Fire Chief should annually review the electronic management system for effectiveness, efficiency, and value for dollar.	Short-Term (1 to 3 years) ongoing	Staff Time	As SNFES implements electronic data management systems as part of the administrative management system, an annual review of current systems and available new options is important.

Rec #	Recommendation	Suggested Implementation Timeline	Estimated Cost	Rationale
11	SNFES should develop a plan that will integrate electronic devices within emergency response vehicles to better utilize available technologies.	Short-Term (1 to 3 years) for project review; implementation determined upon review	Staff Time For review; cost to be determined for selected mode of delivery	The utilization of electronic devices to deliver timely data and improve two-way communications in emergency response vehicles is advancing in fire services. SNFES should find options to integrate these technologies into their response.
12	SNFES and SNGR IT should conduct an information technology audit of all fire department hardware and software currently being used to find efficiencies in both use and costs.	Short-Term (1 to 3 years)	Staff Time For review; changes and/or upgrades determined in review	Because of the demand for data, documentation, and records management in SNFES, having adequate hardware and software is essential. As the department moves forward, having insufficient IT will hinder growth.
13	The Six Nations of the Grand River hires the following for the Fire Prevention Division of the SNFES: • Chief Fire Prevention Officer, a • Fire Prevention Officer (Captain), • Two Fire Inspectors and a • Public Fire and Life Safety Educator (PFLSE)	Immediate to Mid-Term (0 to 6 years)	Salary range is dependent upon rank. The wages range from $125,000 to $150, 000 including benefits per year	SNFES has lacked a robust fire prevention and public education program. Numerous studies have identified the mortality rate due to fires in First Nations is higher than those not living there. Inspections and public education are needed to reduce this statistic.

Rec #	Recommendation	Suggested Implementation Timeline	Estimated Cost	Rationale
14	The Fire Prevention Division report annually on activities to reset baselines and benchmarks to indicate success or challenges with achieving any noted benchmarks.	Short-Term (1 to 3 years)	Staff Time	Doing so will provide the means to judge the effectiveness of fire prevention programs and initiatives, including those of public education.
15	All Fire Prevention personnel must complete and certify in the NFPA 1033 Fire Investigation course and certification. Also, complete NFPA 921, *Guide for Fire and Explosion Investigations*, and certify upon its availability in Ontario.	Short-Term (1 to 3 years)	Staff Time Plus, course registration	Having all members of fire prevention certified in fire investigation will provide multiple individuals trained in what to look for during a fire investigation, thereby producing a more encompassing and effective investigation process for SNFES.
16	All firefighters should be allowed to become trained and qualified to be NFPA 1031, Fire Inspector, Level I, and NFPA 1035, PFLSE, Level I or equivalent certification.	Short-Term (1 to 3 years)	Staff Time Plus, registration and training time pay for POC members	By having more fire department staff trained to these NFPA standards, the Department increases its ability to conduct inspections and promote fire safety education initiatives.
17	The volunteer recruit firefighter training program be delivered in a consistent manner including advance notice of topic and access to online resources.	Short-Term (1 to 3 years)	Staff Time	Consistent delivery of training to volunteers is important to safety, skill development, and may support retention through greater satisfaction.

Rec #	Recommendation	Suggested Implementation Timeline	Estimated Cost	Rationale
	A designated training officer be scheduled as backup for the Volunteer Chief when absent. Additional training opportunities for volunteers be made available in a format that is easy for all to access.			Volunteering time is an important community service that should be respectfully acknowledged by timely delivery of consistent training. Communication is always a challenge, and much can be overcome with communication. Finding additional avenues to communicate training opportunities may increase attendance.
18	Top 30 Six Nations of the Grand River Community Hazards be updated when an updated Hazard Identification & Risk Assessment (HIRA) has been completed for the SNGR community.	Mid-Term (4 to 6 years)	Staff Time	The current HIRA is dated 2017. Some risks and priorities may have changed. Targeting service delivery to risks to the community supports effective and efficient service provision and data-based decision making.
19	NFPA 1140 "Standard for Wildland Fire Protection" training be provided including a focus on wildland urban interface (WUI) fires and the FireSmart program.	Short-Term (1 to 3 years)	Government Funding	The top 4 and 25 risk to the community as identified in the HIRA related to wildfire. 24% of the personnel have wildfire training. No personnel have WUI or FireSmart training. Some funding opportunities are available to support training.

Rec #	Recommendation	Suggested Implementation Timeline	Estimated Cost	Rationale
20	NFPA 1006 “Standard for Technical Rescue Personnel Professional Qualifications” training be provided that includes trench rescue, heavy machinery, and structural collapse. Rope rescue training be provided to the level of technician.	Short-Term (1 to 3 years)	Staff Time With current budget	The top 28 and 30 risks to the community as identified in the HIRA related to technical rescue specialties that are not currently being offered by SNFES. Trench rescue supports service provision to excavation sites for underground utilities. Heavy machinery rescue supports service provision related to accidents involving human operators. Rope rescue training is a component of other disciplines already provided. Having a higher level of training provides a higher level of potential service to the SNGR community.

Rec #	Recommendation	Suggested Implementation Timeline	Estimated Cost	Rationale
21	The Chief Training Officer must deliver the SNFES Training Program as their sole portfolio. The Part-time Training Officer position must be filled and increased to an FTE. Mentoring and succession planning be initiated for these positions.	Short-Term (1 to 3 years)	.5 FTE ($50,000)	The time commitment for the Training Division requires two (2) FTEs. An FTE is approved in the budget for the Deputy Chief Training Division. A part-time position is approved for in the budget (shared with Fire Prevention). Data tables in Section 3.3.6. support workflow in the Training Division to support 2 FTE at current workload. Mentoring and success planning for future vacancies strengthens the service being provided now and into the future. Mentoring and success planning can lead to greater job satisfaction and increased morale.

Rec #	Recommendation	Suggested Implementation Timeline	Estimated Cost	Rationale
22	The structural integrity of the Live Fire building must be conducted as per the standard. Maintenance and testing of the existing live fire building and props must be conducted on a regular basis. A chart of maintenance and testing requirements be prepared by a registered professional that details the responsibilities of the SNFES, and that the appropriate training be provided to personnel.	Immediate (0 to 1 year)	Capital Project Explore Funding	NFPA 1402 "Standard on Facilities for Fire Training and Associated Props" requires a licensed professional engineer to evaluate and document gas-fired live fire training structures every 10 years (or more). Some maintenance is required annually, while testing of some components may be before use or daily. Some maintenance and testing may be conducted by personnel, others may require a registered professional.

Rec #	Recommendation	Suggested Implementation Timeline	Estimated Cost	Rationale
23	The water source for training needs to be engineered to meet NFPA 1403 "Standard on Live Fire Training Evolutions". A second water source may be provided.	Mid-Term (4 to 6 years)	Capital Project Explore Funding	The instructor or safety officer is responsible for ensuring that the necessary water flow is available for the evolution. NFPA 1402 has specifications that a single water source may be able to meet. NFPA 1403 has additional specifications. A second hydrant closer to the burn building could provide better traffic flow through the Training Facility.
24	Create and start a cycle of annual program review that focuses on each of the functional areas of training including quantitative and qualitative data to support data-based decision making for future changes. That operational budget and capital budget information be readily accessible to the Chief Training Officer to assist with program review.	Short-Term (1 to 3 years)	Staff Time	Data-based decision making supports continuous improvement. Strategic decisions that support change for the better are best facilitated through a thorough review. Documented program reviews support budget requests in the future.

Rec #	Recommendation	Suggested Implementation Timeline	Estimated Cost	Rationale
25	Plan expansion and renovation of the Training Facility.	Long-Term (7 to 10 years)	Capital Project Explore Funding	A state-of-the-art Training Facility could offer training to neighbouring fire services. The current facility does not fully provide for the decontamination needed for personnel, tools and equipment. The current facility has restrictions on what training can be offered, storage, parking, and accommodations.

Rec #	Recommendation	Suggested Implementation Timeline	Estimated Cost	Rationale
26	Revise Standard Operating Guidelines (SOGs) related to decontamination and rehabilitation during and after training exercises. New Safe Operating Guideline (SOG) for Live Fire Training be developed.	Short-Term (1 to 3 years)	Staff Time	Contamination occurs during live fire exercises. An SOGs should clearly outline processes and safety measures to take, and barriers or challenges such as how to decontaminate when taking a break and responding to an incident. A rehabilitation SOG for training should include a methodology for achieving physical and mental rest, replacement of fluids and food, medical monitoring and treatment of injuries before a firefighter returns to action. There currently is no SOG for live fire training. An SOG should exist for responsibilities of the CTO and the Safety Officer for pre-live fire training, during, and after.

Rec #	Recommendation	Suggested Implementation Timeline	Estimated Cost	Rationale
27	The Operating Budget for the Training Division be aligned for tracking by function. Chief Training Officer be included in responsibility to oversee the operating budget. A five year capital plan be prepared and accessible to the Training Division.	Short-Term (1 to 3 years)	Staff Time	Facilitate annual program review. Better track expenses and plan for future needs. Table Proposed Operating and five-year capital Budget Details will ensure proper allocation of training funds.
28	Capitalize on government-to-government funding opportunities.	Short-Term (1 to 3 years)	Staff Time	Tier 2 funding should be available. SNFES should be planning qualification for Tier 3 funding. Annual funding for fire protection is available through Indigenous Services Canada (ISC) and the First Nations Infrastructure Investment Plan (FNIIP). This responsibility should be dedicated to a position and a table be developed of opportunities to ensure maximum funding.

Rec #	Recommendation	Suggested Implementation Timeline	Estimated Cost	Rationale
29	A formal promotion, mentorship and recognition program be developed for all levels within the department.	Short-Term (1 to 3 years)	Staff Time	Personnel performance should be recognized Mentorship is a successful method of developing personnel knowledge, skills and abilities. Recognition supports job satisfaction, an increase in morale, and may lead to an increase in retention.
30	The Fire Chief should review previous years response time to determine what is an acceptable level and develop a SNFES response time policy.	Short-Term (1 to 3 years)	Staff Time	Establishing minimum expectations to improve response times will have an affect on emergency response.
31	SNFES should prepare an annual report that details emergency response with call types and non-emergency activities that can be presented to the public.	Short-Term (1 to 3 years)	Staff Time	Public reporting of fire department efficiency is important in building and maintaining public support.
32	SNFES should work with Wounded Warriors Canada to begin implementing programs that will benefit personnel, including a Peer Support Program, and Family Resiliency Programs.	Short-Term (1 to 3 years)	Program costs (to be determined with WWC)	WWC has many programs that would aid personnel with mental health supports, and early implementation is a key to success.

Rec #	Recommendation	Suggested Implementation Timeline	Estimated Cost	Rationale
33	SNFES should meet with Six Nations EMS to discuss potential partnerships, including medical monitoring at fire scenes.	Short-Term (1 to 3 years)	Staff Time Program supplies (to be determined)	As a shared community service, there is potential for several integrated programs between Six Nations fire and EMS. Established programs like medical monitoring is a start. Continued discussions will benefit.
34	SNFES should implement a Designated Officer program that meets provincial criteria and expectations.	Short-Term (1 to 3 years)	Staff time Training costs	An established program such as the Designated Officer will benefit training, compliance, and exposure tracking for personnel. The program administration may be delegated to a manager.
35	SNFES should improve upon its Incident Safety Officer training and certification to mirror provincial requirements.	Short-Term (1 to 3 years)	Staff Time Training costs	Any component of the provincial mandatory certification regulation is an industry standard for SNFES and should be voluntarily complied with.
36	SNFES should develop and implement a Cancer Prevention Program, including a review of on scene practices, PPE handling, cleaning and decontamination procedures and firefighter health and wellness.	Short-Term (1 to 3 years)	Staff Time Program supplies (to be determined)	Cancer is a compensable injury with WSIB and every effort should be made to reduce or eliminate unnecessary exposures to firefighters. Provincial resources may be available.

Rec #	Recommendation	Suggested Implementation Timeline	Estimated Cost	Rationale
37	SNFES should strike a firefighter fitness and wellness committee to review current state and potential improvements to the fitness facility in Station 1 and access to trainers or trainer development.	Short-Term (1 to 3 years)	Staff Time Training costs, program supplies to be determined	SNFES has a fitness facility in Station 1 accessible to all staff. Improved utilization will benefit firefighter wellness and potentially reduce injury claims.
38	SNFES should review the NFPA 1582 Essential Job Tasks to ensure that they are incorporated in recruitment, testing, fitness, and training programs.	Short-Term (1 to 3 years)	Staff Time	Ensuring that candidates are being tested to appropriate standards ensures better suitability upon hiring. Using the EJTs in training can improve functionality in tasks. SNFES can research the use of third-party testing agencies for compliance.
39	SNFES should develop a Respiratory Protection Program that includes a stand alone manual, accepted industry practices, and compliance with regulations.	Short-Term (1 to 3 years)	Staff Time Program components as required	A Respiratory Protection Program is a required component under federal and provincial regulations and standards.
40	SNFES should provide the BFCC with updated GIS mapping files.	Immediate to Short-Term (0 to 3 years)	Staff Time	This will give BFCC the most updated GIS files available. This will ensure they are going to the correct address of the emergency.

Rec #	Recommendation	Suggested Implementation Timeline	Estimated Cost	Rationale
41	The proposed new digital portable radios be bought for SNFES. And that, SNFES should move forward with the radio system upgrade plan and determine funds later if needed.	Short-Term (1 to 3 years) As funding becomes available	$524,000.00 (67 portables, note 12 units already purchased) Mobile Radios - $124,000.00 (18 In vehicle mobile radios) System Infrastructure to P25 Conventional - $374,000.00	Will allow SNFES to be able to meet the new NG 911 standard and allow the firefighters to communicate with each other more efficiently.
42	SNFES should incorporate radio communications training as part of the Training Plan.	Short-Term (1 to 3 years)	Staff Time	Current communication SOGs should be part of the Training Plan to ensure consistent communication. Annual training, or training incorporated into other drills, is an opportunity to enhance skills. New recruits should understand proper communication protocols as part of initial training.

Section 4

Facilities, Vehicles and Equipment

Emergency Management Group

SECTION 4: FACILITIES, VEHICLES, & EQUIPMENT

This section provides a review of existing fire service facilities, an assessment of current and projected facility needs, and an evaluation of station locations. It includes recommendations for future station development or relocation based on evolving service delivery demands and relevant standards. Consideration is also given to the potential need for additional fire stations in alignment with long-term community growth and emergency response objectives.

A key element of effective fire service planning is understanding the Fire Underwriters Survey (FUS). The FUS is a national organization that supports the insurance industry by providing data on public fire protection for statistical analysis and underwriting. Its assessments are widely used by insurers, with subscribers representing approximately 90% of private-sector property and casualty insurance providers in Canada.

Certified Fire Protection Specialists from FUS conduct detailed evaluations of fire risk and fire protection infrastructure across both incorporated and unincorporated communities. These assessments examine four core components: fire department capabilities, water supply, fire prevention practices, and emergency communications systems.

Based on these evaluations, the FUS assigns each community a Public Fire Protection Classification (PFPC), which serves as a standardized measure of a community's ability to prevent and manage major fire incidents. Although FUS does not set insurance rates, the PFPC plays a significant role in the development of commercial property insurance rates and underwriting decisions.

The PFPC system evaluates the adequacy, reliability, effectiveness, and efficiency of a community's fire protection services in relation to the fire risk within the built environment. In addition to the PFPC, the FUS also issues a Dwelling Protection Grade (DPG), which is used by insurers to assess risk for detached residential dwellings containing no more than two units. Like the PFPC, the DPG reflects the community's fire protection capabilities relative to typical residential fire risks.

It is important to note that the FUS grading system is based on fire protection potential rather than historical fire loss data. Improvements in PFPC or DPG ratings may lead to lower insurance premiums and greater underwriting capacity for the community. While individual insurers apply their own formulas to determine rates and coverage, both PFPC and DPG ratings serve as essential tools in evaluating community-level insurable risk.

FUS described its grading process as follows[71]:

> *The Public Fire Protection Classification (PFPC) is a numerical grading system scaled from 1 to 10 that is used by Commercial Lines1 insurers. Class 1 represents the highest grading possible, and Class 10 indicates that little to no fire protection is in place.*
>
> *Fire Underwriters Survey also assigns a second grade for fire protection. The second grading system, entitled Dwelling Protection Grade (DPG), assesses the protection available for small buildings such as single-family dwellings and is used by Personal Lines2 insurers.*
>
> *The DPG is a numerical grading system scaled from 1 to 5. One (1) is the highest grading possible and five (5) indicates little or no fire protection is present.*

Historically, community assessments conducted by the Fire Underwriters Survey (FUS) were scheduled on a predetermined cycle, typically ranging from 10 to 25 years. However, evolving best practices and updated industry standards now support conducting FUS grade reviews on a five-year cycle. This more frequent evaluation better reflects ongoing changes in fire protection services and community development.

To support this shift, the FUS has introduced the FUS Municipal Fire Portal, a digital platform designed to facilitate timely updates and communication between fire departments and FUS. Through this portal, Six Nations Fire & Emergency Services (SNFES) can access, manage, and submit relevant operational and infrastructure data. Regular engagement with this system enables FUS Specialists to analyze updated information and publish revised fire protection grades as warranted.

Once a formal FUS assessment is completed, the Fire Chief can continue to access the Municipal Fire Portal, providing ongoing input and ensuring that any improvements or changes within SNFES are accurately reflected in future evaluations.

The Fire Underwriters Survey and its implications for insurance grading and community risk classification will be referenced at several points throughout this report.

Currently, the Six Nations Fire Department operates out of four fire stations, with a dedicated training facility located at Station 5. This training centre includes a burn tower and various props

used for firefighter skill development. The following section provides an assessment of each fire station in the district.

Note: A detailed review of SNFES's fire stations, including individual station conditions, facility concerns, and options for future station locations, has been provided as a separate document accompanying this Master Plan. Please refer to the Station Location Study Report for the full analysis and recommendations.

4.1 Apparatus and Equipment

The delivery of emergency response requires emergency vehicles. The use and maintenance of fire apparatus and other emergency response vehicles is an important part of fire department operations. A fire department requires a fleet management plan that includes maintenance and service requirements and replacement cycles. The replacement of fire apparatus is determined by use and age. Delaying the replacement of apparatus is inadvisable and may add to the overall maintenance costs and can influence insurance ratings. The reliability of aging apparatus is a concern to be noted as well.

SNFES maintains a fleet of nine apparatus: four pumpers, three tankers, one aerial, and one rescue. The Fire Chief provided EMG with a replacement schedule. NFPA standards and the Fire Underwriters Survey are considered when replacing apparatus.

4.1.1 Fire Underwriters Survey – Vehicle Replacement Recommendations

Insurance companies review the Fire Underwriters Survey. FUS provides a chart that cross-references a community size with the age of apparatus to determine the grading criteria it uses in its overall insurance ratings. The Fire Department will retain its fire rating for vehicle replacement if it adheres to the recommended replacement timelines through an approved capital replacement schedule. Table #15 outlines the FUS grading criteria for fire department apparatus. FUS offers surveys to First Nation communities to assist with insurance ratings for the community.

TABLE #15 - FIRE UNDERWRITERS SURVEY GRADING CRITERIA

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

1. *All listed fire apparatus 20 years of age and older are required to be service tested by a recognized testing agency on an annual basis to be eligible for grading recognition (NFPA 1071)*
2. *Exceptions to age status may be considered in small to medium sized communities and rural centre conditionally, when apparatus condition is acceptable, and apparatus successfully passes required testing*
3. *Major cities are defined as an incorporated or unincorporated community that has:*
    a. *a populated area (or multiple areas) with a density of at least 400 people per square kilometre; AND*
    b. *a total population of 100,000 or greater.*
4. *Medium Communities are defined as an incorporated or unincorporated community that has:*
    a. *a populated area (or multiple areas) with a density of at least 200 people per square kilometre; AND*
    b. *a total population of 1,000 or greater.*
5. *Small Communities are defined as an incorporated or unincorporated community that has:*
    a. *no populated areas with densities that exceed 200 people per square kilometre; AND*
    b. *does not have a total population in excess of 1,000.*

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

- *1st line is the first fire truck utilized for response at the fire station*
- *2nd line is the next truck to be used if the 1st line unit is tied up at a call, and*
- *Reserve is the vehicle kept in the fleet to be put into service if a 1st line or 2nd line vehicle is out of service.*

The population of Six Nations is mixed with higher density levels and increased risk properties closer to Ohsweken, with rural-type populations beyond that. It would put SNGR into a *Medium Size* community as the population density exceeds 200. This rating allows for SNFES to utilize apparatus in first line use for up to 15 years, with an additional five years if the unit is placed into second line use. The outlying rural areas and fire stations may be accommodated to a reduced rating. A proper FUS survey would be required to confirm. The current replacement plan for SNFES indicates that pumper units are to be replaced between 17 and 20 years. Currently, SNFES is adhering to the expectations of the FUS grading.

4.1.2 NFPA – Vehicle Replacement Recommendations

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

For fire departments that are considering refurbishing their vehicles to extend their in-service life, the NFPA 1912 Standard for Apparatus Refurbishing can be referenced.

The National Fire Protection Association and Fire Underwriters Survey both recommend the 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 backup/ secondary units being replaced at 25 years. Once a pumper truck has passed the 25-year stage, no credit is given by Fire Underwriters. It should be noted that although the FUS do take refurbishment of vehicles into consideration, no credit rating is assigned to vehicles over 30 years of age.

The Fire Chief has established an apparatus replacement plan that aligns with industry standards, recommending replacement cycles between 17 and 20 years.

Apparatus selection is influenced by community growth, the emergence of special-risk structures or properties, and risks identified through the Community Risk Assessment (CRA) that SNFES elects to address. In some cases, this may warrant the acquisition of specialized units. SNFES currently operates an aerial device, rescue unit, wildland interface unit, UTV, and marine unit. Future replacement decisions should take foreseeable risks into account to ensure operational readiness.

Additionally, station design must be considered when procuring new apparatus. It is essential to confirm that any current or future vehicles are compatible with existing or planned facility layouts.

4.1.3 Apparatus Maintenance

Section 21 Guidance Note 1-2 Apparatus inspections and maintenance programs reference the establishment of an apparatus maintenance plan. SNFES indicated that they utilize a third-party company for repairs and service. The third-party employs certified Emergency Vehicle Technicians (EVT). Proper maintenance schedules must include necessary inspections and testing.

Proper record keeping for service, repairs, inspections and testing is required. SNFES should ensure that they maintain proper records. Proper apparatus maintenance includes work on the components of the unit. This may include the pump, aerial ladder, generators, or any other added piece of equipment aside from the engine and chassis. A documented fleet maintenance program is a key portion of apparatus care and maintenance.

4.2 Equipment

Fire departments use a variety of items in the execution of their duties. This can range from personal protective equipment (bunker gear, rescue gear, medical PPE) to SCBA when in areas that present an immediate danger to life and health (IDLH), to the specialty items for task-specific incidents like rescue gear, and firefighting equipment.

The items required for a fire department require research in the selection stage, and proper care and maintenance when in service. Firefighters rely on their tools to work and their PPE to protect them.

4.2.1 Personal Protective Equipment (PPE)

Firefighters face increasing risks from carcinogens as society moves away from organic building materials and towards synthetic components. When burning, these items release dangerous toxins and increase the risk of cancer for firefighters. Their first line of defence against thermal injury when fighting a fire is their bunker gear. It is designed to protect them from the hazards of heat, smoke and fire. Properly fitted bunker gear is essential. A well-managed inspection, maintenance and service program is essential. Even after a fire, a proper decontamination program to manage gear is paramount to reducing additional exposure to personnel.

When used for interior structural firefighting, bunker gear has a lifespan of ten years. The method for managing a set of bunker gear is detailed in *NFPA 1851 Standard on Selection, Care, and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting*. Within this standard, it details the process for selecting gear for its intended use, proper sizing for the firefighter, how and when to inspect gear, the expectations of cleaning and decontamination, repair, and storage. It also identifies that gear should not be used in hazardous areas beyond ten years.

Section 21 also provides direction with two guidance notes: *4-1 Firefighters protective equipment* and *4-8 Care, maintenance, inspection and replacement of structural fire fighting personal protective equipment*. Of note, Guidance Note 4-1 adds to NFPA that helmets, hoods, boots and gloves are considered as part of the ensemble. 4-8 includes establishing a field

decontamination program; developing a program for care, maintenance, inspection and replacement of all PPE elements; and always consulting the manufacturers' instructions.

GN 4-8 states:

> *A PPE program should address the following:*
>
> - *Inspection of PPE elements after use and on a regular basis*
> - *Assessment of PPE to determine whether it needs to be repaired or replaced*
> - *Requirements for cleaning and decontamination and advanced cleaning*
> - *Advanced inspection and testing*
> - *Repairs*
> - *Storage*
> - *Records*
> - *Retirement of PPE*
> - *Training workers for the use, care, and limitations of PPE*
> - *Regular program evaluation and improvement*

It also states:

> *Some ensemble components that have been removed from emergency service operations may be suitable for use for activities that do not involve the risk of exposure to thermal hazards, such as certain training activities. Clearly marked retired bunker gear as being for non-live fire training only.*

SNFES has in place Operational Guideline 4-13 Personal Protective Equipment that describes the uses and inspection of PPE. It would be beneficial to SNFES to implement a full PPE care, inspection and maintenance program that includes annual third-party inspections, cleaning, and record keeping. SNFES issues staff two sets of PPE allowing for proper removal from service for cleaning, decontamination, and/or maintenance while personnel still have a backup set for response. An additional thirty sets of PPE are available.

4.2.2 Self-Contained Breathing Apparatus (SCBA)

Firefighters face many inhalation hazards while engaged in emergency response. The hazards associated with firefighting and hazardous materials response require the use of SCBA. The use of SCBA is within the scope of regulations, standards, and guidance notes. Section 21 Guidance

Note 4-9 Respiratory protection program clearly identifies the associated regulations, acts, and standards in the use of SCBA. They include:

- *Occupational Health and Safety Act*
    - clause 25(1)(b) for maintaining equipment and protective devices in good condition
    - clause 25(2)(a) for providing information and instruction to a worker
    - clause 25(2)(h) for taking every precaution reasonable in the circumstances to protect workers
- *Regulation 833 – Control of Exposure to Biological or Chemical Agents* for occupational exposure limits and respiratory protection requirements
- *O. Reg. 490/09 – Designated Substances* for respiratory protection requirements for designated substances
- *CSA Standard Z180.1 Compressed breathing air and systems* (compressed air)
- *CSA Standard Z94.4 Selection, use and care of respirators* (qualitative and quantitative fit testing, administration of an effective respiratory program and training requirements)
- *NFPA 1981 Standard on Open-Circuit Self-Contained Breathing Apparatus (SCBA) for Emergency Services* (levels of respiratory protection and functional requirements for SCBA in firefighting)

Of the three primary components of an SCBA, they each have specific testing components. It is important that a fire department ensure that they annually bench test SCBA, test and inspect SCBA cylinders including hydrostatically, and test SCBA masks both for service and for fit with individuals.

SNFES indicates that all SCBA is annually bench-tested. They also have compressors that are properly tested and maintained. They adhere to prescribed fit testing requirements and own and operate their own fit testing machine. However, they did indicate that they do not include N-95 particulate masks in their testing. They also have several operational guidelines related to SCBA and their respiratory program. While SNFES has a functional SCBA and respiratory program, it is good practice to ensure that staff are properly trained with all components of an SCBA, a proper records management system is in place, and a care and maintenance plan is in place.

4.2.3 Nozzles, Hose, Hand Tools and Rescue Equipment

The proper care and maintenance of related equipment in fire and rescue equipment is important. The recent amalgamation of NFPA standards into *NFPA 1930 Standard on Fire and Emergency Service Use of Thermal Imagers, Two-Way Portable RF Voice Communication Devices, Ground Ladders, Rescue Tools, Fire Hose, and Fire Hose Appliances* makes for ease of use when referring to one document in the care and maintenance of for all related equipment. The standard includes inspection and testing requirements for all incorporated equipment. It is useful for a department to ensure they are conducting tests on items like hose, nozzles, and ladders in a timely and proper manner.

SNFES has operational guidelines that reference only fire hose testing, inspection of chains and extrication tools and ropes. It would be beneficial to SNFES to develop and adapt an overall equipment care and maintenance plan that establishes replacement timelines, inspection dates, repair records, and proper documentation. This can be implemented either manually or with the assistance of an electronic management system. The size of the department would indicate the individual pieces of equipment spread over four stations and a training centre would require proper tracking and service.

4.3 Water Supply

Water supply, as it relates to fire department operations, is detailed in *NFPA 24 Standard for the Installation of Private Fire Service Mains, Their Appurtenances* as well as *NFPA 291 Recommended Practises of Fire Flow Testing and Marking of Hydrants*. Ensuring that there are adequate flow rates for effective firefighting is important if a department is going to rely on the use pf pressurized water systems.

Six Nations has a water supply servicing a portion of the community. It operates on six-inch water mains and consists of approximately 700 hydrants. These hydrants are flushed and serviced twice a year. SNFES indicated there are also several private hydrants, but they are included in the service program. SNGR and SNFES comply with applicable NFPA standards in the installation, care, and use of hydrants.

Other water supplies in the community include two fire ponds for use. One is located at Station 5, and the other at a hazard location. There are no dry hydrants, nor any cisterns located in Six Nations.

For improved operational response, it is important for communication between SNGR departments. If a hydrant is out of service, repairs should be done in an expedited manner to ensure that fire protection is not compromised. Notification to the fire department is important

to allow them to prepare in the event of a need for a hydrant in the general location of the closed unit.

SNGR utilizes a colour code system on the hydrants for quick identification for firefighters when arriving on scene. In winter months it is important to have height markers added to locate hydrants above snowbanks. It is also important to ensure there is a hydrant clearing plan in winter months. Firefighters should be prepared to clear a hydrant during a snow event. The use of reflective markers aids in location of hydrants at night. The evolution of the use of electronic devices in apparatus allow for GIS mapped hydrants and water sources, allowing for tactical decisions to be made on route allowing for improved efficiency.

4.4 SWOT Analysis

EMG requested that SNFES staff complete a Strengths, Weaknesses, Opportunities, and Threats (SWOT) assessment. There were assessments for different sections within the Master Fire Plan. The SWOT analysis was divided into three areas: Fire Station, Fleet, and Equipment. The results of the SWOT are detailed in Appendix C.

4.4.1 SWOT Analysis

Based on the responses for each section, it is important for SNFES management to review these and discuss them with staff, management and senior management so that a clear communication stream is established. If there are concerns listed that may be a result of a misunderstanding, it is important for management to address them sooner rather than later. Any identified positives should also be followed up with to benefit from any potential positive momentum. Strong communication with personnel can identify issues early on, and staff may be more willing to engage if they feel they will be heard.

Section 4 - Recommendations

Rec #	Recommendation	Suggested Implementation Timeline	Estimated Cost	Rationale
43	Apart from the Station Location recommendations, SNFES should develop a plan to improve the current state of Stations 2 and 4, including addressing key issues such as: • Potential PPE exposure (remove all gear) • Lack of showers (implement an OG directing staff to return to Station 1 or 5 after a fire for proper cleaning) • No washroom in Station 4 (plumbing issue) • Backing up in tight spaces (training and operational guidelines)	Immediate (0 to 1 year)	Only the washroom issue at Station 4 should incur additional costs (labour and parts). Other programs may require staff time to develop.	While most operations occur at Stations 1 and 5, SNFES is still required to provide adequate workspace to staff as per occupational health and safety expectations.

Rec #	Recommendation	Suggested Implementation Timeline	Estimated Cost	Rationale
44	Apart from the Station Location recommendations, SNFES should address safety issues related to vandalism at Stations 2 and 4, which may include changing the bay door glass to a stronger material not subject to projectile gravel; consideration to a security system and/or gate access; paving the driveway may reduce damage caused by gravel.	Short-Term (1 to 3 years)	Costs may be relatively to solutions chosen to reduce damage caused by vandalism; continued costs of repair may exceed costs of preventative measures.	While a station relocation study may change the use of Station 2 and 4, they are still part of the deployment plan with SNFES and therefor require a solution to reduce damage and security issues related to crime and vandalism.
45	SNFES should research upgrades or additions to the exhaust removal systems at all stations and determine an appropriate solution for their stations	Based on station location result and associated station development, a short-term solution specific to Station 1 and 5 is advisable.	Systems vary in price Dependent upon solution chosen and size of station; may range in price from $100,000 to $200,000 inclusive for all stations.	Exhaust removal systems are a standard in fire stations, with varying system configurations (passive removal or direct capture). Reduction of exhaust and limiting exposure is necessary for personnel safety and station maintenance.

Rec #	Recommendation	Suggested Implementation Timeline	Estimated Cost	Rationale
46	The training centre should have a separate Care and Maintenance Manual, including: • An inspection program • A maintenance plan • Inspection of connection points This plan should identify the requirements for the live fire units, indoor training unit, dedicated equipment, and instructions for third-party rental agreements.	Short-Term (1 to 3 years)	Staff Time to develop	The training centre is a highly used complex, and the proper care and maintenance is essential to ensuring it meets intended life cycle, and a proper program manual will identify the key components to its care and maintenance.
47	SNFES should develop a Fleet Management Plan document, including: • inspection requirements and timelines • inspection forms • consumable replacement cycle • maintenance schedules • testing of apparatus components	Short-Term (1 to 3 years)	Staff Time Associated costs if an electronic database is purchased.	To ensure compliance and regularity, a program intended to manage fleet inspections, care and maintenance is required. Electronic databases may be developed with existing software, or specialized software systems are also available to assist with records management.

Rec #	Recommendation	Suggested Implementation Timeline	Estimated Cost	Rationale
48	SNFES should include N-95 in the fit testing program.	Short-Term (1 to 3 years)	Staff Time Update training and associated costs for parts and consumables.	SNFES responds to medical emergencies, and medical-grade masks require proper fit testing as per CSA criteria.
49	SNFES should develop an Equipment Inspection Program document, including: • inspection requirements and timelines for each type of equipment (PPE, SCBA, Etc.) • inspection forms • maintenance schedules • testing cycle	Short-Term (1 to 3 years)	Staff Time Associated costs if an electronic database is purchased	With equipment spread across four stations, tracking the required inspection and testing should be collated into one program plan. Maintenance schedules should be part of the plan, as well as replacement dates. Staff may be assigned to manage the program. Electronic databases may assist in management.
50	SNFES should develop a protocol to ensure that hydrants always remain visible and are easily located when required at emergency calls, including researching electronic options.	Short-Term (1 to 3 years)	Staff Time Associated costs if markers are used; may integrate electronic systems if GIS is incorporated.	With rural response as part of SNFES operations, low light environments may cause issues in locating hydrants when required. During snow events, quick location and clearing is important.

Section 5

Emergency Management

SECTION 5: EMERGENCY MANAGEMENT

5.1 Emergency Management

This section is a review of the present status of the Six Nations Emergency Management program, along with suggestions for improvement.

Emergency Management Programs (EMP) affect and are influenced by the approach of many partnerships. From an individual's home escape and emergency plan to the SNGR Emergency Plan, its neighbouring municipalities' emergency plans, the province, and the federal government.

Preparedness, prevention, mitigation, response and recovery are the five components of emergency management. As per the SNGR Council Policy titled "Policy to Regulate Fire and Emergency Services for the Six Nations of the Grand River", these components support the mission of the Six Nations Fire and Emergency Service (SNFES):

Mission Statement

"Effective and efficient provision of fire and emergency services to the Six Nations of the Grand River community through mitigation, prevention, preparedness, response and recovery using safe, recognized and measurable practices".

This approach to emergency management planning employs strategic thinking. When viewed through the lens of a cycle of continuous improvement, an Emergency Management Program should have a positive, lasting effect on a community.

5.2 Emergency Management Program (EMP)

The development of an EMP should align with industry best practices. Aligning with the Canadian Standard Association CSA Z-1600 *Emergency Management and Business Continuity Plans* and NFPA 1600 *Standard on Continuity, Emergency and Crisis Management* would be appropriate. The CSA Z-1600 standard has a similar form and function as NFPA 1600, although the CSA standard reflects Canadian content. These standards speak to program management and include leadership and commitment, program coordination, performance objectives, program committee, program administration, laws and authorities, finance and administration, and records management.

Currently, the head of the Emergency Management Division for SNFES is the Assistant Chief of Emergency Management, who is also referred to as the Community Emergency Management Coordinator (CEMC). This presents a conflict with SNFES operations. In an emergency, the

Assistant Chief would likely be at the Incident Command Post, fully engaged in response operations, leaving the Emergency Management Division without a full-time manager. However, a Community Emergency Management Officer has been approved in previous budgets. This is a full-time employee (FTE) position which is not currently staffed. SNFES must prioritize permanent staffing of the Emergency Management Division.

The CEMC is an important position that is responsible for the development of the community EMP and ensuring the allocation of resources required to develop and administer the EMP. The CEMC is responsible for facilitating information flow, allocating resources as needed, and providing guidance to staff and volunteers to maintain a unified response.

An EMP is a foundational program that supports community safety. The diversity and responsibility required by this portfolio is not a role that can function efficiently or effectively off the side of a desk with many other competing responsibilities.

The EMP for SNGR is not moving forward. There is a large body of work that is not being performed. The Six Nations Emergency Response Plan (SN ERP) has not been updated since 2021. The Hazard Identification and Risk Assessment (HIRA) 2018 is outdated. Exercises that were planned in 2017 have not taken place, training and exercising are essential components of an EMP.

Based on this, it is recommended that the Emergency Management Division be permanently staffed with FTE CEMC, the Six Nations ERP and HIRA be reviewed and updated, and that exercise be completed in 2025.

5.2.1 Six Nations Emergency Response Plan (SNERP)

The Emergency Plan for SNGR is the Six Nations Emergency Response Plan (SN ERP). It was created in June 1994 and revised in June 2021. The creation of the SN ERP included a large variety of interest holder groups from within the community, as well as fire departments from neighbouring municipalities, Emergency Management Ontario,[72] Ontario Provincial Police,[73]Grand River Conservation Authority[74] and the Canadian Red Cross Society.[75] The Plan

[72] Province of Ontario, "Emergency Management Ontario," accessed December 2024, https://www.ontario.ca/page/emergency-management-ontario

[73]Province of Ontario, "Ontario Provincial Police," accessed December 2024, https://www.opp.ca/

[74] Grand River Conservation Authority, "Who We Are," accessed December 2024, https://www.grandriver.ca/who-we-are/

[75] Canadian Red Cross Society, "Organization Information," accessed December 2024, https://www.redcross.ca/about-us/about-the-canadian-red-cross/organization-information

was authorized by the Six Nations Elected Council in accordance with the Six Nations Elected Council Resolution #GC#516/06/20/2017.

The Six Nations ERP directs the activation of the Plan and the Emergency Operations Centre (EOC). Activation is determined based on the anticipated impact of the incident, its duration, resource requirements, quantity of incident sites, multi-agency resources required, and the threat to lives and property.

The ERP includes activation and notification information in its Annexes. Annex A "Emergency Notification System" includes detailed procedures, contact information, and an example of emergency messaging. For activation of the SN ERP and EOC to occur, notification to the Emergency Control Group (ECG) is required. The current contact information is not up to date.

A Level 1 activation of the SN ERP is typically managed within the resources of the SNFES. The EOC is activated for major emergencies and events that require support exceeding what can be managed on site at the Incident Command Post (ICP).

TABLE #16 – LEVELS OF ACTIVATION OF SIX NATIONS EMERGENCY RESPONSE PLAN

Level of Activation	Actions to be Taken
Level 1 (Small Event)	An event involving a single site, short duration, (evacuating the nursing home or the monitoring of an anticipated or potential event such as H1N1) that requires the response or support of more than one agency, potential threat or hazard.
Level 2 (Large Event)	A larger event, short duration, requiring moderate support that may involve more than one site, and several agencies and outside resources may be required. Recommendation to the Elected Chief or designate that a "declaration of a state of local emergency." Activate the EOC.
Level 3 (Major Event)	A major or complex event involving multiple agencies and/or incidents, long duration, interrupts normal activities in the community, and requires multi-jurisdictional, multi-organizational resources and likely extensive resource needs and/or site support. Activate the EOC.

The Six Nations ERP stipulates that its annexes must be updated as necessary. Additionally, quarterly meetings are required to ensure that the notification contact information in Annex A remains current. In alignment with best practices in emergency management, the ERP and its annexes must undergo an annual review. Regular review and revision of the SN ERP and its annexes are essential, and all changes must be documented in a change log maintained within the ERP.

During an incident, while the majority of personnel are deployed at the incident site, designated staff operate within the Emergency Operations Centre (EOC). These staff members facilitate communication between the site(s) and their respective Incident Command Post(s), ensuring timely information exchange to support on-site needs and strategic planning within the EOC. The EOC functions as a resource hub for the incident site.

Effective communication is critical to the coordination of goals, objectives, and operational tasks. To support this, the use of the Incident Management System (IMS) is recommended for consistent communication protocols, with site-specific operations guided by the Incident Command System (ICS).

The Incident Command System (ICS) is comprehensively addressed from a command-and-control standpoint in Standard Operating Guideline (SOG) 7.1, "Incident Command System". However, there is a notable gap concerning the interface between the incident site and the Emergency Operations Centre (EOC), as well as the broader relationship to the Incident Management System (IMS).

The National Fire Protection Association (NFPA) 1561, *Emergency Services Incident Management System and Command Safety,* outlines the minimum requirements for an incident management system applicable to emergency services for managing all types of emergency incidents. Furthermore, the newly consolidated NFPA 1550, *Standard for Emergency Responder Health and Safety,* incorporates NFPA 1561, NFPA 1500, *Standard on Fire Department Occupational Safety, Health, and Wellness Program,* and NFPA 1521, *Standard for Fire Department Safety Officer Professional Qualifications.*

The overarching objective of both IMS and ICS is to safeguard the health and safety of emergency responders and all individuals involved in emergency operations. To strengthen this objective, a new SOG should be developed to provide explicit guidance on the roles and responsibilities of the Incident Commander (IC) at the Incident Command Post when an EOC is activated.

Adjacent to the EOC, an Emergency Information Centre (EIC) has been established. Annex D of the Six Nations ERP outlines the procedures that EIC officers and personnel must implement

during an emergency. The EIC plays a critical role in coordinating public messaging about the emergency's nature, ensuring the accurate dissemination of information, and correcting any misinformation. This responsibility should lie with a communications professional, tasked with managing effective public communication using the most appropriate channels for the specific event. While the foundational structure is in place, it is recommended that this be expanded to include Information Technology to enhance communication capabilities.

Emergency Support Services (ESS) is a critical function within the Emergency Management Division, designed to provide short-term support to individuals impacted by emergencies or disasters. Currently, the ESS program is undergoing significant reorganization, including revisions to staffing, reporting structures, and the utilization of facilities. To support this transformation, the Province of British Columbia's Emergency Support Services Program Guide may serve as a valuable resource for SNFES.

The primary Emergency Operations Centre (EOC) for SNGR is located at Fire Station #1, 17 Veterans Lane. This central location is in close proximity to all Band Council departments and serves as the primary response location for career firefighters. Fire Station #1 was constructed to post-disaster building standards. The secondary EOC is located at the Paramedic Base, 29 Veterans Lane. This facility is newly constructed, also built to post-disaster standards, and centrally located. Both EOC sites are equipped with automatic emergency power generators and include amenities such as kitchens, showers, dormitory spaces, rest areas, and Wi-Fi connectivity.

However, the proximity of these two EOC sites to one another presents a potential risk. As a best practice, it is recommended that primary and secondary EOCs be geographically separated to minimize the likelihood of a single incident impacting both locations. A major emergency affecting Fire Station #1 could also compromise operations at the nearby Paramedic Base. Therefore, the selection of these sites should be re-evaluated with this risk in mind.

Non-Governmental Organizations (NGOs) and volunteer groups can play an essential role in supporting EOC operations during emergencies. Potential partners include Six Nations community organizations, local sports teams, the Canadian Red Cross, and Hamilton Amateur Radio Operators. Additionally, the EOC may require support from industry partners such as those in rail, aviation, and transportation sectors. A comprehensive and regularly updated list of these organizations, including contact information, should be maintained in an annex of the SN ERP.

The EOC has been activated twice. It was activated during the COVID-19 pandemic. As well, during a flooding event that impacted bridge crossing and transportation. Lessons learned through post-activation debriefing should have been considered, and any necessary updates

should have been included in the Six Nations ERP. At a minimum, there should be a record of the review. There is no documentation that a review has occurred.

Based on this it is recommended that the Six Nations ERP update include all annexes and incorporate a record keeping log, an Information Technology role be included in the Emergency Information Centre in Annex D, SOG 7.1 be revised or a new SOG be created identify the roles and responsibilities of personnel before during and after activation of the EOC, and locations of the primary and secondary EOC be reviewed.

5.2.2 Hazard Identification and Risk Assessment (HIRA)

SNGR has an Emergency Control Group (ECG), which is comprised of the heads of its departments. The ECG has participated in training, hazard identification, and emergency planning workshops since 1993. In 2017, SNFES undertook a community disaster resiliency planning process, which included a Hazard Identification and Risk Assessment (HIRA) for the community.

An important step in building an effective EMP is to have a thorough understanding of the unique risks to the community. The ECG analyzed the community utilizing the Aboriginal Disaster Resiliency Planning Guide.[76] Through the ECG's participation in a HIRA workshop, the breakout groups analyzed the SNGR risks and identified Hazard Resilience Index, Aboriginal Resilience Index, and Hazard Risk Index. The results determined the probable hazards and consequences to the SNGR community.

Sixty-four risks to SNGR were identified, rated, and ranked in order of priority. Numerous atmospheric conditions are rated in the high-risk category, including heat waves, snowstorms, blizzards, climate change, lightning and thunderstorms, ice storms, tornadoes, windstorms, extreme cold and drought. Diseases, terrorism, major accidents, pollution, community interface fires and wildfires, power outages, structural collapse, geological hazards, and food shortages are also included. The detailed HIRA is included in the Community Risk Assessment.

[76] Justice Institute of British Columbia, "Aboriginal Disaster Resiliency Planning – Resource Guide," accessed December 2024, https://cdrp.jibc.ca/wp-content/uploads/2016/03/ADRP_Resource_Guide_30March-2016.pdf

TABLE #17 – TOP TEN HIGH RISK HAZARDS

Order of Priority	Hazard
1	Hazardous Materials Spill/Land Transport – Oil Pipeline
2	Water Contamination
3	Motor Vehicle Incident
4	Brush, Bush & Grass Fire
5	Community Structure Fire
6	Hazardous Materials Spill/Rail - Oil Pipeline
7	Atmospheric Heat Waves
8	Conflictual Social Action
9	Gas Explosion & Gas Leaks – Oil Pipeline
10	Hazardous Materials Spills – Oil Pipeline

As part of the 2017 process, the ECG identified the next steps. Determining hazards by the election district through a mapping exercise was identified as a priority. Also, an emergency exercise was planned for March 2018. Neither of these actions took place.

Exercising is important not only for training personnel on the activation and operation of the EOC but also for providing an opportunity to educate and gain support from the community and neighbouring jurisdictions.

5.2.3 Emergency Operations Centre

The CEMC is responsible for designing and ensuring the delivery of training to personnel who are expected to staff the EOC during an emergency. Minimum training for personnel should be clearly identified within the framework of the EMP. Courses include Incident Management Systems (IMS), Incident Command System (ICS) 100-300, and basic emergency management training. Additional training is available for those expected to fill positions within the Operations, Finance, Planning, and Logistics sections.

Opportunities for training may include contract delivery services accessible through Emergency Management Ontario (EMO)[77] or through professional groups. For example, Emergency Management Ontario offers an annual symposium on flooding and wildfires, which should be included as a training resource. Organizations that design exercises can be contracted to customize a training and exercising program based on SNGR specific needs.

5.2.4 Emergency Control Group

The Six Nations Emergency Response Plan provides the following definition of the Emergency Control Group (ECG):

Emergency Control Group – ECG

> The group of community officials who are activated in a 'support role', providing off-site provision of strategic direction, guidance and resources to a site-specific Incident Command or Area Command (multiple sites).

The ECG can play a valuable role in providing ongoing oversight of the Emergency Management Program (EMP). This oversight function would support the identification of emerging gaps and facilitate informed recommendations to strengthen the program. Continued engagement of subject matter experts (SMEs) during plan revisions is also essential to ensure that program components remain relevant, functional, and aligned with best practices.

The Six Nations ERP currently references the Emergency Management Planning Committee (EMPC); however, the composition of this committee is not clearly defined. Similar to how the membership of the ECG is outlined, the Plan should specify the positions or roles that constitute the EMPC to ensure clarity and accountability.

Additionally, the respective roles and scopes of both the Emergency Control Board (ECB) and the EMPC should be reviewed. Any updates or changes to their responsibilities or mandates should be formally incorporated into a revised version of the SN ERP, ensuring consistency and alignment across all governance structures involved in emergency management.

[77] Province of Ontario, "Emergency Management Careers and Professional Development," accessed December 2024, https://www.ontario.ca/page/emergency-management-careers-and-professional-development

5.2.5 Training and Exercising

Exercising provides the opportunity to test the system that is in place. It is a proactive situation that allows for a gap analysis. After-action reports provide knowledge that can be reviewed and used to revise training programs and even the Six Nations ERP.

Emergency exercises are detailed in the SN ERP. The Emergency Management Planning Committee is responsible for ensuring that exercises are developed and conducted. Exercises are designed to test and validate community emergency practices, plans, training, equipment, interagency agreements. Operations-based exercises would also test notification list and process, operations of the EOC, emergency operations, community actions. The SNERP lays out a series of steps designed to be spread out over five years, in order to facilitate testing and revision of the Plan.

Prior to 2017, the ECG had training in IMS and emergency management. As the EMP moves forward the CEMC should ensure that refresher and new training opportunities are provided to the ECG and other personnel that fill positions in the EOC.

Training, exercising and incorporating lessons learned are an important part of a cycle of continuous improvement for an effective and efficient Emergency Management Program. This is not taking place. SNFES must prioritize hiring of a CEMC and ensure that the EMP for the SNGR community is in a state of readiness.

5.2.6 Six Nations Grand River Peoples – Public Education

The Six Nation Grand River Peoples should be driving the SNFES emergency management and public education program. A public education program that is targeted to risk should provide the highest levels of effectiveness.

Utilizing the Community Risk Reduction Plan (CRRP), the CEMC should design and deliver community education programs that support and align with the Fire Prevention programs. To determine efficiency and effectiveness of programs, a records management (RMS) program should be customized to capture public education programs, delivery, and to include measurement tools and reports.

SNFES is currently using First Due RMS to record public education events. The CEMC should work together with the Fire Prevention Chief to ensure that the software data fields are aligned with the EMP needs to capture data. Diligently recording events by type, quantity, location, and target audience allows for annual reporting of the program. Further, including an annual review process as part of the public education program identifies gaps and supports analysis of qualitative and quantitative data. Capturing qualitative data tells the story of the impact that

the targeted education is having on the people. Quantitative data figures support the story with data that supports decision-making and fine-tuning or revising programming.

TABLE #18 - EDUCATION PROGRAMMING FOR THE PUBLIC BY HAZARD

Risk #	Education	Hazard
1	Evacuation Planning & Emergency Kit	Hazardous Materials Spill/Land Transport – Oil Pipeline
2	Emergency Kit	Water Contamination
3	Partner w/Police for Safety Messaging	Motor Vehicle Incident
4	Evacuation Planning, Emergency Kit & FireSmart	Brush, Bush & Grass Fire
5	Smoke Alarms, Fire Extinguishers, Evacuation Planning & Emergency Kit	Community Structure Fire
6	Evacuation Planning & Emergency Kit	Hazardous Materials Spill/Rail - Oil Pipeline
7	Seniors Care, Evacuation Planning & Emergency Kit	Atmospheric Heat Waves
8	Evacuation Planning & Emergency Kit	Conflictual Social Action
9	Evacuation Planning & Emergency Kit	Gas Explosion & Gas Leaks – Oil Pipeline
10	Evacuation Planning & Emergency Kit	Hazardous Materials Spills – Oil Pipeline

As exampled in Table 5.1.5 - Education Programming for the Public by Hazard, aligning evacuation planning with Fire Prevention provides added value to the messaging. Partnering with police services and the ambulance service during high-risk times to support their messages—graduation time and drinking and driving messaging is another example of a force multiplier.

Currently, the SNGR people have access to public education through social media. There is no current annual or specific event program designed to address the risks to the community. A

public education program needs to be developed that is multi-faced in its delivery platform so that the messages reach all Peoples. It should be risk-based, targeting the highest risks and those risks that have the highest impacts. There should be coordination of messaging with the Fire Prevention Division and the Communications Department to capitalize on streamlining messages and utilizing delivery methods that have proven effective in the past.

The Emergency Management Division of SNFES has an EMP but currently does not have a CEMC. An FTE position was addressed in the Sustainable Funding Lobby Package dated June 8, 2010, presentation material to INAC, and including a Level of Service Standard prepared by the Fire Chief. Hiring for this position is planned but needs to be prioritized.

There is a great deal of work to be done by the CEMC to ensure that the EMP is up to date and that personnel and the community are prepared for and can respond to a large-scale emergency. The SN ERP, including the roles of personnel and contact information in the Annexes, needs to be reviewed and updated. The HIRA needs to be updated as well. Training and exercising needs to be planned and it needs to take place. Another key area of focus for the CEMC is a public education program to target risks to the SNGR community.

There is funding available, including grants. The CEMC will need to work with others to ensure that all possible funding sources are targeted to maximize the capacity of the EMP.

5.3 Funding of Emergency Program

The main foundation of the emergency program is funded through SNGR's core capital allocations from INAC. The Emergency Management Division has its own General Ledger (GL) Account in the SNFES operating budget.

TABLE #19 - 3-YEAR EMERGENCY MANAGEMENT PROGRAM BUDGET

Emergency Management Program Expenses	2023	2024	2025
Salary Wages & Benefits	$ 43,649.88	$ 253,060.44	$ 50,000
Utilities	$ 8,199.96	$ 6,600.00	$ 3,600.00
Administration	$ 1,700.16	$ 17,600.16	$ 36,600.16
Eqpt/Furniture Repairs	$ 5,450.04	$ 7,950.00	$ 152,580,78
Other	$ 999.96	$ -24,999.96	$ 17,429.70
Total - Division Operating Expenses	**$ 60,000**	**$ 260,210.64**	**$ 260,210.64**

The operating budget for the Emergency Management Division has increased since 2023. In 2023, the division accounted for 1.49% of the SNFES budget, in 2024 it had increased to 4.71%.

Increased expenses in 2024 and 2025 are generally attributable to Wildfire Training including overtime costs for personnel. In the future, training costs for Emergency Management and emergency management programs should be accounted for separately from firefighter training.

TABLE #20 – SNFES 3 - YEAR SNFES OPERATING EXPENSES

Operating Expenses	2023	2024	2025
Fire Protection	$ 3,975,966.04	$ 5,263,666.32	$ 6,391,229.67
Emergency Management	$ 60,000.00	$ 260,210.64	$ 260,210.64
Total SNFES Operating Expenses	$ 4,035,966.04	$ 5,523,876.96	$ 6,651,440.31
Percentage Emergency Management	1.49%	4.71%	3.91%

Typically, a lump sum amount is transferred into the Emergency Management Division general ledger account. An accounting process is not currently in place to reliably determine individual line items as noted in Table 5.3.3 - 3 Year Emergency Management Division Operating Expenses. This needs to change so that the revenue and expenses for this function can be accurately reviewed and compared year-to-year. Cost is relevant quantitative data to include as part of an annual program review.

5.3.1 Federal Funding

The Government of Canada provides financial assistance to First Nations as represented in the Levels of Service Standard for Fire Protection Services[78] (April 2024). The Emergency Management Assistance Program (EMAP)[79] helps First Nations build resiliency through preparedness, prevention, mitigation, response. The CEMC should be knowledgeable of the funding options available to support the EMP. For example, funding is available through Non-Structural Mitigation and FireSmart.

EMAP provides funding for some programs such as for mitigation and preparedness for emergencies such as flooding, landslides and drought. Project funding may also include purchase of low-value equipment such as EOC kits, Emergency Support Service (ESS) kits, radios, and small generators.

[78] Levels of Service Standard for Fire Protection Services retrieved 2 December 2024. Levels of Service Standard for Fire Protection Services

[79] Emergency Management Assistance Program retrieved 2 December 2024. Emergency Management Assistance Program.

The FireSmart[80] program in First Nations is aimed to prevent and prepare for wildfire. Indigenous knowledge about the environment and terrain supports the FireSmart program goals and the SNFES EMP. Funding is available for initiatives such as fuel reduction, wildfire crew training, fire mapping, and community youth engagement. Project funding may also include the purchase of low-value equipment such as firefighter protective gear, vegetative management equipment and fire suppression tools.

When targeting risk reduction for hazards, it is important to understand the relationship between the land, buildings, and households on First Nations lands. Buildings or structures on the bands' land are the responsibility of SNGR. The households inside the buildings are the responsibility of the individual people. Thus, the safety of the structures resides with the SNGR Council, and the preparedness and prevention methods used within the household should be targeted to the residents.

5.3.2 Provincial Emergency Management

The *Emergency Management and Civil Protection Act, R.S.O. 1990, c.E.9*[81] is provincial legislation that mandates local government to develop and provide an Emergency Management Program to its community. From a government-to-government perspective, the information contained in this *Act* is relevant to SNGR and its Emergency Program. Aligning with the provisions includes creating an Emergency Plan that outlines the roles and function of personnel in an EOC. Also, the stipulation of providing training and exercising for personnel that will be staffing the EOC.

Emergency Management Ontario (EMO)[82] is the government organization that supports emergency management activities and initiatives in the province. While the province does not have jurisdiction over First Nations communities in Ontario, EMO provides emergency program guidance and incident management coordination support to all First Nation communities in Ontario. EMO has declared a service commitment to:

"Equip trained emergency management staff to provide emergency preparedness and response services to Ontario First Nation communities in accordance with the 1992 Indigenous and Northern Affairs Canada (INAC) Agreement".

[80] Emergency Management FireSmart Program retrieved 3 December 2024. FireSmart.

[81] Emergency Management and Civil Protection Act, R.S.O. 1990, c.E.9, retrieved 2 December 2024. Emergency Management and Civil Protection Act

[82] Emergency Management Ontario, retrieved 2 December 2024, https://www.ontario.ca/page/emergency-management-ontario

The Provincial Emergency Operations Centre (PEOC)[83] of EMO is continually staffed. The PEOC is responsible for coordinating provincial response to emergencies. It is a single point of contact for First Nations that require provincial assistance during an emergency.

The Joint Emergency Management Steering Committee (JEMS)[84] is a jointly chaired committee of EMO and Indigenous Services Canada (ISC). The committee is responsible for maintaining evacuation standards. The evacuation standards developed by JEMS define the expectations for organizations supporting First Nations during an emergency evacuation.

Provincial support is available for First Nations before during and after an emergency through EMO, the PEOC, and JEMS. The CEMC should develop a relationship with their counterparts in those offices and be confident in their capacity for guidance and support systems before an emergency occurs.

[83] Government of Ontario – Provincial Emergency Response Plan, "The Provincial Emergency Response Organization," accessed December 2024, https://www.ontario.ca/document/provincial-emergency-response-plan/5-provincial-emergency-response-organization#section-4

[84] Province of Ontario – Emergency Management in Ontario, "Joint Emergency Management Steering Committee," accessed December 2024, https://www.ontario.ca/page/emergency-management-ontario

Section 5 - Recommendations

Rec #	Recommendation	Suggested Timeline for Implementation	Estimated Cost	Rationale
51	That the FTE position of Assistant Chief of Emergency Management—Community Emergency Management Coordinator—be filled by a person skilled and knowledgeable in the field of Emergency Management.	Immediate (0 to 1 year)	$80,000 to $150,000 Depending on Experience	A dedicated person is required to develop a comprehensive Emergency Management Program for the SNGR community. An FTE is accounted for in the annual budget. The Emergency Program Division is a service by Council Policy. Emergency Management is a specialty field. Development and administration of an Emergency Management Program would benefit from employing a person with that specific knowledge, skills and abilities. Specialty education is readily available from certificate to master's levels in Emergency Management.

Rec #	Recommendation	Suggested Timeline for Implementation	Estimated Cost	Rationale
52	A fulsome Emergency Management Program be developed and delivered to the SNGR community. The Emergency Social Services (ESS) program be redeveloped and planned for consistent delivery and annual program review.	Short-Term (1 to 3 years)	Staff Time	The current program is not in a proactive state. A program based on the five components of Emergency Management will increase the safety of the community. An emergency program is stated as a minimum service level in the Council Policy to Regulate Fire and Emergency Service. Program review should be at a minimum on an annual basis.
53	That updating of Hazard Identification and Risk Assessment be prioritized. And that the Emergency Management Program delivery including SNFES operational training and public education, be aligned to target the risks that the community faces now and into the future.	Short-Term (1 to 3 years)	Staff Time	Current HIRA is dated 2017. Changes to the community need to be incorporated into a new HIRA, i.e. new airport, increased risk of wildfire.

Rec #	Recommendation	Suggested Timeline for Implementation	Estimated Cost	Rationale
54	The Emergency Control Group (ECG) role be redefined in the Six Nations Emergency Response Plan to include a role in the development of the Emergency Management Program.	Short-Term (1 to 3 years)	Staff Time	A working group with a focus on Emergency Management supports a program developed to serve the needs of many as it is based on a diversity of knowledge and experiences of the people.
55	That the budget for the Emergency Management Division be reviewed and aligned to reflect the component parts of the program.	Short-Term (1 to 3 years)	Staff Time	Detailed line items that reflect component parts of the program will help to clearly track costs and perform annual program review from a cost perspective.
56	That the Six Nations Emergency Response Plan be reviewed and revised. And that reviews be planned and conducted as outlined in the current Plan. And that training and exercising be planned and conducted as outlined in the current Plan.	Short-Term (1 to 3 years)	Staff Time	Program reviews are detailed in the SN ERP. The current SN ERP is dated 2021. Components of the Plan are not being fulfilled—updating of contacts, reviewing of Annexes, and exercising. Industry best practice is inclusion and updating on "Reviews and Revisions" page within the SN ERP.

Rec #	Recommendation	Suggested Timeline for Implementation	Estimated Cost	Rationale
57	That minimum levels of training be identified for ECG members, people who staff the EOC, and people who are part of the Emergency Support Services (ESS) team. And that opportunities to attend training conferences and symposiums be identified and made available to personnel.	Short-Term (1 to 3 years)	Staff Time & Government Funding	Training and exercising support developing communication in a stressful environment. Helps people to develop skills to be able to work more effectively and efficiently in times of high stress. Expanding the knowledge base of people may create opportunities to implement new technology and methods that provide greater levels of service to the community.
58	That a comprehensive public education program be created that targets the risks present in the community. And that the public education program be aligned with other education programs that exist in the community such as the Fire Prevention program.	Short-Term (1 to 3 years)	Staff Time	The current program is minimal, i.e. social media only. Preparing for an emergency is proven as a necessity during disasters. Providing support that empowers people to help themselves before an emergency is proven to have positive impacts on risks. Funding for programs is accessible.

Section 6

Mutual Aid, Automatic Aid and Fire Service Agreements

SECTION 6: MUTUAL AID, AUTOMATIC AID AND FIRE SERVICE AGREEMENTS

6.1 Mutual Aid Plan and Fire Service Agreements

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 unplanned request when such an emergency occurs. It may also be a continuous formal standing agreement or cooperative emergency agreement that ensures resources are dispatched from the nearest fire station, regardless of which side of the jurisdictional boundary the incident is on.

Agreements that send the closest resources are regularly referred to as 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.

A mutual aid plan provides the framework by which assistance can legally be provided by all parties identified within the plan. On June 25, 2024, in a General Council meeting, the Six Nations Elected Council passed a motion to renew the Six Nations Fire Services Mutual Aid agreement with the cities of Brantford and Hamilton, along with the Counties of Brant, Haldimand-Norfolk, and Hamilton. This agreement is for when Six Nations or another fire agency nearby needs assistance handling a fire service emergency. Previously, under the Ontario Mutual Aid agreement, non-municipal participants could not coordinate mutual aid situations, a category that Six Nations falls under. The province has since updated its legislation, which allows non-municipal participants to coordinate the program. Now, the province is allowing coordinators regionally; in the past, that wasn't a possibility.

6.2 Mutual Aid

The Provincial Mutual Aid Program is a borderless and reciprocal agreement that allows fire departments to come to the assistance of other fire departments who have overstretched their own local resources in dealing with emergency events. Under this plan, assistance is at no direct cost to the department requesting assistance. Section 7 of the FPPA, 1997, S.O. 1997, c. 4, provides the authority for the Fire Marshal to appoint Fire Coordinators who in turn establish and maintain the Mutual Aid Plan. The local Mutual Aid Plan has been established within the County of Brant and is known as the Brant County Mutual Aid Plan.

In 2018 the Office of the Fire Marshal revised the Provincial Mutual Aid Program to officially allow First Nations fire departments access to participate. First Nation fire departments are considered “non-municipal participants”. This classification provides additional requirements that the other participating members must agree to. SNFES should ensure that they are meeting this requirement.

It was noted that in support of mutual aid efforts across the Province of Ontario, the OFM requires fire departments to update their equipment lists as to what apparatus they have and could be available for mutual aid purposes. However, it is incumbent upon each participating fire department to also have a clear understanding of what resources are available from its neighboring fire departments and how to access these during times of need.

The intent behind a mutual aid agreement is that it be reciprocal. When one fire department calls upon a neighboring fire department for tankers to assist at a large fire, in return, the receiving department would have tankers available for when their neighbor calls upon them for assistance. When a fire department requires a specialized piece of equipment that a neighboring fire department has in service, such as an aerial device, but they do not have one, mutual aid should not be considered as the request is not reciprocal. In these instances, a response agreement should be established between the two municipalities and their fire departments. Doing so will eliminate any delays in responding.

6.2.1 Brant County Mutual Aid Plan

There is a local mutual aid plan in place. The Brant County Mutual Aid Plan provides the framework by which assistance can legally be provided by all parties identified within the plan. On June 25, 2024, in a General Council meeting, the Six Nations Elected Council passed a motion to renew the Six Nations Fire Services Mutual Aid agreement with the cities of Brantford and Hamilton, along with the Counties of Brant and Haldimand-Norfolk.

During this review, it was observed that the SNFES has a positive working relationship with the other fire departments in the surrounding jurisdictions. As such, mutual aid and other required agreements are current and meet the needs of Six Nations Fire & Rescue Services.

When talking with the Six Nations Fire Chief, it was noted that the mutual aid departments rarely trained together. The Fire Chief stated that when the other departments came to their training facility to have scheduled training, they would assist them with their training. Coordinated training is rarely done with the specific intent of testing the mutual aid response. It is recommended that the departments that make up the Brant County Mutual Aid Plan have at least an annual training session to test the capabilities of the Brant County Mutual Aid Plan.

It is also in the best interest that fire departments in a fire protection agreement, automatic aid agreement, or mutual aid plan identify annual training sessions where firefighters get acquainted with the equipment of other departments. These combined training sessions also build working relationships and morale between fire departments. These agreements bring fire departments together to work as a team for the benefit of the public, but without combined training sessions to practice as a team, the team cannot effectively function, and breakdowns can occur.

Another benefit of the mutual training session is the identification of gaps in equipment, communications, or training before a real emergency. It is recommended that when the current agreements are revised and updated, a defined commitment to regular training be included in the agreements. In addition, the agreements should lay out a commitment to ongoing meetings with senior fire department leadership. These meetings would allow fire chiefs and officers from the participating departments to discuss issues or gaps in response protocols and identify a collaborative path forward that enhances fire protection for all participating agencies and communities.

6.3 Automatic Aid and Fire Protection Agreements

Automatic aid and fire protection agreements exist between fire departments and communities when time and resources are a factor in responding to an emergency. These agreements often identify the personnel and equipment that will be dispatched automatically under certain conditions. These agreements may also reference specific geographic areas to which resources will be deployed. These agreements are like the Mutual Aid Plan but differ as there is an expectation that a call for service will occur regularly and is therefore expected.

For clarity, the benefits of an automatic aid agreement in contrast to a mutual aid agreement mean that the necessary equipment and resources will automatically be dispatched for suppression services, rescue, and other identified emergencies that fall within the parameters

of the automatic agreement, thereby saving critical time. These automatic aid agreements often involve a reciprocal arrangement between two or more agencies. Typically, fire protection agreements, in contrast, follow this same model in terms of response, however, the arrangement is often weighed more heavily towards one agency providing a service rather than being focused on reciprocity.

After talking with the Six Nations Fire & Emergency Services Fire Chief, it was noted that they did not have any automatic fire protection agreements. All their agreements were mutual aid agreements.

6.4 City of Brantford Dispatch Agreement

This is an active agreement between the City of Brantford Communications Center and the Six Nations Fire & Emergency Services for emergency communications dispatching services. This agreement has an effective date of September 30, 2024 and is signed off on by both parties. It was noted that the initial payment for services would be from the effective date, September 30, 2024, to March 31, 2025, for $44,300. The first full year of the contract is from April 1, 2025, to March 31, 2026, at a cost of $91,258.00 and goes up 2% annually for the next 10 years. The final payment is due on March 15, 2036, and will be $122,643.12.

Communications Services provided to the Six Nations Fire & Emergency Services from the City of Brantford Communications Center.

- Receiving 911 telephone calls and non-911 telephone calls with respect to the Dispatch Service Area,
- Dispatching the Six Nations Fire & Emergency Services to an emergency.
- Communicating with Six Nations Fire & Emergency Services under emergency and non-emergency conditions.
- Communicating with Six Nations Fire & Emergency Services regarding the potential need for mutual aid and monitoring the level of ongoing emergency activity.
- Communicating with other agencies during an emergency at the request of the Six Nations Fire & Emergency Services incident commander.
- Provide support services, information and data during emergencies and on a day-to-day basis.
- Maintain a log of all incidents received, record the times and available information set out in the “Process” section of the Ministry of the Solicitor General Public Fire Safety

Guidelines No. PSFG 04-64A-12 and as defined by the City Fire Services Standard Operation Procedures.

It was noted that the contract did not include performance measures for dispatch times or any other job performances associated with dispatching fire calls to SNFES. In accordance with NFPA 1221 (1225), it is recommended that the agreement be reviewed and revised to include performance measures for dispatch times or any other job performances associated with dispatching fire calls to SNFES.

Section 6 - Recommendations

Rec #	Recommendation	Suggested Implementation Timeline	Estimated Cost	Rationale
59	The departments that make up the Brant County Mutual Aid Plan have at least an annual training session to test the capabilities of the Brant County Mutual Aid Plan.	Short-Term (1 to 3 years)	Staff Time	The firefighters would get acquainted with the equipment of other departments. These combined training sessions would also build the working relationship and morale between fire departments.
60	When the current agreements are revised and updated, a defined commitment to regular training will be included in the agreements.	Short-Term (1 to 3 years)	Staff Time	The main benefit of mutual training sessions is the identification of gaps in equipment, communications, or training before a real emergency. When an actual fire or emergency occurs, the firefighters are ready for the challenge.

Section 7

Finance & Budgeting, Fees & Cost Recovery Mechanisms

SECTION 7: FINANCE, BUDGETING, FEES, & COST RECOVERY MECHANISMS

7.1 SNFES Financial Environment

There are two relevant factors impacting the delivery of fire services in First Nation communities: the Indigenous Services Canada (ISC) First Nations Fire Protection Strategy (FNFPS)[85] and the ISC Levels of Service Standards for Fire Protection Services (LSS)[86]. Both documents provide a foundation for the funding model in which the federal government, through ISC, will support a First Nation community.

Indigenous Services Canada provides funding for some fire protection services in a community[87]. This includes:

Firefighting
Operating and maintaining fire halls
Purchasing fire trucks, firefighting tools and equipment
Training and educating firefighters and community members

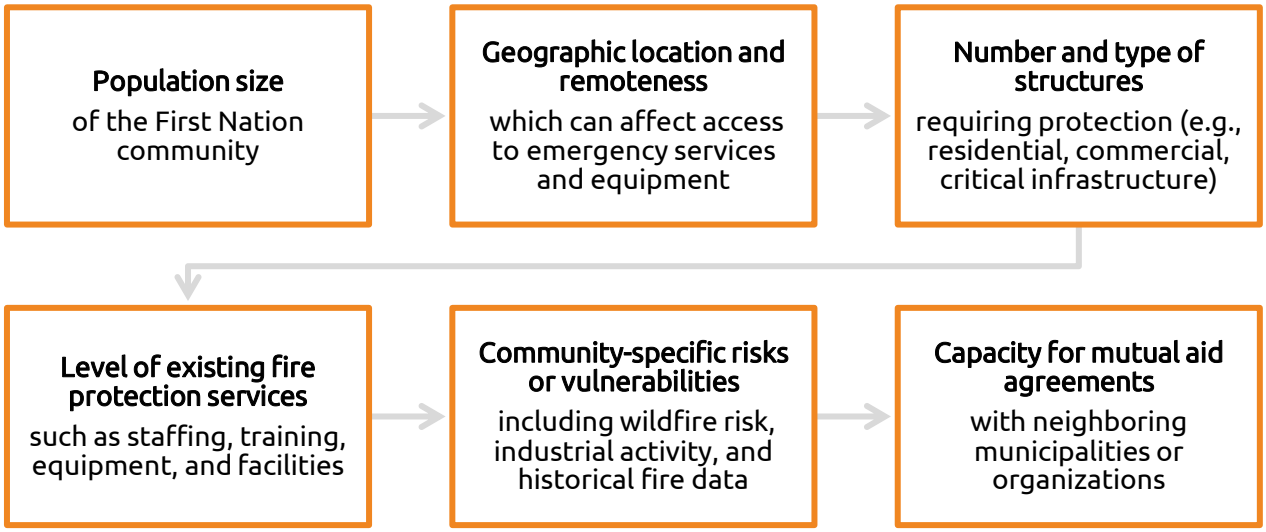
Indigenous Services Canada (ISC) states that *"First Nations band councils manage fire protection services on reserves"* and that *"ISC provides annual funding to First Nations that can be used for fire protection services as well as fire insurance."*

This funding is determined using a regionally based formula, aligned with provincial boundaries. The formula incorporates a range of factors, which may include but are not limited to:

[85] Government of Canada, 'First Nations Fire Protection Strategy, 2023 to 2028', accessed March 2025, https://sac-isc.gc.ca/eng/1683892947884/1683892982915

[86] Government of Canada, 'Level of Service Standards for Fire Protection Services', accessed March 2025, https://sac-isc.gc.ca/eng/1100100010632/1534353148780

[87] Government of Canada, 'Fire protection in First Nations communities', accessed March 2025, https://sac-isc.gc.ca/eng/1317842518699/1535120096924



The purpose of this formula is to distribute funding in a manner that supports equitable access to fire protection services across diverse First Nation communities, recognizing their unique needs and circumstances.

ISC also clarifies that communities can use these funds to run their own fire departments, contract fire protection services (MTSA) or use the fire protection funding elsewhere. ISC offers other funding programs to support fire protection services, including:

- First Nations Infrastructure Investment Plans
- Housing, Infrastructure and Communities Canada - Disaster Mitigation and Adaptation Fund: Overview
- Emergency Management Assistance Program
- Capital Facilities and Maintenance Program

7.1.1 First Nations Fire Protection Strategy

The current document states:

> *"The provision of funding for First Nation infrastructure is based upon the Government of Canada's spending power as a matter of social policy. ISC allocates funding for community infrastructure on a year-to-year basis. Core and capital operations and maintenance funding are provided annually. It is determined by regionally based formulas and considers factors such as the number of buildings on reserve, remoteness, population and environment. Chief and council manage fire protection services on*

reserves and allocate funding according to their own priorities and specific needs. Targeted funding for infrastructure, such as fire trucks and fire stations, is allocated on a national priority basis and competes with other First Nations Infrastructure Fund projects."

The Fire Protection Strategy is a document updated every five years. Often, stakeholders are invited to provide comments and input into it. The current version provides direction for the 2023 to 2028 timeframe. This iteration involved input from the Assembly of First Nations and the National Indigenous Fire Safety Council. Each successive strategy is designed to build upon the work of the previous one. The current document has outlined priorities and specific goals under six pillars:

The FNFPS includes strategic objectives in each pillar. These strategies are designed to provide communities with specific directions to improve their community fire safety efforts. Table #21 lists the 14 strategic objectives. As part of the EMG review, SNFES was provided with an update pertaining to the current state for each of the strategic objectives.

TABLE #21 - FNFPS PILLAR-SPECIFIC STRATEGIC OBJECTIVE

Pillar 1 - Partnership for First Nations Fire Protection
1A: Local and regional fire safety champions should participate in provincial and national Fire Chief and Fire Prevention Officer Associations 1B: First Nations should establish a process to make on-reserve fire safety education, fire assessment tools and smoke alarm programs available to off-reserve members at their local First Nation by 2024
Pillar 1 - Strategic Objective & Current State
1A: The Fire Chief is a member of local, provincial, national and international associations. Other staff are working toward joining related organizations. 1B: Currently programs are underway with contract staffing, and a planned posting for a full-time position in 2025. Services are not provided to off-reserve members.
Pillar 2 - Fire Prevention Education
2A: Chief and council should attend a fire protection governance workshop available through either their nearest First Nations technical organization or at various fire safety conferences by 2024 2B: First Nations should appoint a local or regional fire emergency coordinator, First Nation fire chief, or fire safety manager by 2024
Pillar 2 - Strategic Objective & Current State
2A: In the process of developing a policy draft 2B: Ongoing in conjunction with other policy drafts
Pillar 3 - Community Standards
3A: First Nations should ensure every on-reserve home has a working smoke alarm and carbon monoxide alarm in rooms as required by the applicable building code by 2025 and implement a maintenance replacement plan by 2026 3B: First Nations that cannot maintain fire suppression services through a fire department or a municipal-type service agreement (MTSA) should adopt a national home fire sprinkler standard for all new home construction in First Nations with adequate water supplies by 2026 3C: First Nations should acquire insurance for band-owned homes and buildings for fire by 2025

Pillar 3 - Strategic Objective & Current State
3A: In progress 3B: In consideration with policy development 3C: This action is intended for SNGR Council and Senior Management to consider; not a fire service item
Pillar 4 - Fire service operational standards
4A: First Nations should adopt national minimum building codes and develop a standardized inspection process for non-ISC funded buildings by 2026 4B: First Nations should adopt a minimum fire training standard for firefighters by 2025
Pillar 4 - Strategic Objective & Current State
4A: In progress with by-law development 4B: Completed
Pillar 5 - Climate Change
5A: All First Nations should conduct a wildfire risk assessment by 2024. High-risk First Nations should implement FireSmart programs by 2026. Moderate risk: First Nations should complete a FireSmart strategy by 2027 5B: Establish a federal framework to incorporate First Nations leaders, or their respective fire prevention officers or emergency management coordinators, in disaster and emergency preparedness responses both at the federal and provincial level for First Nations to share their expertise and traditional ways in handling extreme climate change events in their territories
Pillar 5 - Strategic Objective & Current State
5A: In progress 5B: Outside of the scope of SNFES to implement this

Pillar 6 - Critical Infrastructure
6A: First Nations technical organizations and provincial and federal organizations should collaborate to implement a business process, mapping and workflow solution to help First Nations track the maintenance requirements of their fire department equipment and apparatus 6B: Identify First Nations impacted by a deficient water supply system and develop a strategic plan to improve water infrastructure so that First Nations fire departments can respond to fires with a system that meets standardized life-safety requirements 6C: ISC should prioritize investments to support upgrading faulty or aged telecommunications equipment in First Nations fire departments. In addition, all First Nations should adopt the appropriate dispatch or 911 system as applicable to their region's fire response needs
Pillar 6 - Strategic Objective & Current State
6A: Outside of the scope for SNFES to implement this 6B: Outside of scope of SNFES to implement this, but SNGR would benefit from the strategic plan once completed 6C: Outside of scope for SNFES to implement but is currently in the process of a business case to improve their telecommunications system

The FNFPS and its 14 strategic objectives are important as they inform the current version of the Level of Service Standards. The FNFPS is a source document for ISC, which, as the primary revenue source for SNFES, provides funding either through direct fire strategy programs or indirect (discretionary) funds.

7.1.2 ISC Level of Service Standards

The Level of Service Standards (LSS) supports the specific goals of the Fire Protection Strategy. The LSS is structured in a three-tier continuum of services model. First Nation communities are encouraged to meet the requirements of each tier. Funding is available from the First Nation Infrastructure Investment Plans (FNIIP) or other programs that may be available from a regional ISC office. Funding is available for fire protection initiatives; however, it is not available for other emergency response-type programs. These are the programs that are either available or unavailable for funding.

ISC Program Funding Availability

Available	Unavailable
Fire Prevention and Education	Emergency Management response & training
Fire Preparedness	Fire service to third parties
Various Assessments	Forest & grass fire response
Training (for NFPA 1001, 1002, 1021, 1031, 1041, 1051)	Medical emergency response
Fire Protection Assets	Motor vehicle accident response
Other Activities • Asset inspections • Operating & maintenance deficiency report • Addressing code non-compliance • Fire investigations	Technical rescue response and training

The tiered program established in the LSS is a step process designed to implement the basics of fire safety and gradually build up to emergency response.

Tier 1 includes fire prevention and educational programming. This level is intended for communities serviced by a small fire service or with an MTSA or have no service.

Tier 2 invests in capacity development and training in accordance with provincial standards. The aim is to begin work towards a basic fire service that delivers public education, fire prevention, and fire suppression. Expectations within this tier also include a fire service assessment and a First Nation Band Council Resolution establishing the community's level of service (akin to an establishing and regulating bylaw). This tier is for communities with either partial or full MTSAs, a fire department or a combination of the two.

Tier 3 requires communities to have met all the requirements of the previous two tiers. This level offers capital investment opportunities toward fire protection infrastructure or equipment. This tier is intended for communities that are serviced solely by their own fire department or may be supplemented with partial MTSA service.

LSS Involving SNFES

Based on the continuum of service model, SNFES has over 2,000 residences and a fire department. They are expected to fund most Tier 1 services and activities from their core capital allocations but can submit project proposals for additional funding for specific home safety initiatives. Expected services and activities include:

- Education initiatives and home fire safety programs
- Ensure functioning smoke alarms in all households
- Third-party fire safety inspections
- Automatic sprinklers in all public buildings
- Band-administered fee-for-service community fire services and programming

Tier 2 funding requires that SNFES implements:

- Community risk assessments
- Basic firefighter training standards
- Capital investment plans

Tier 3 funding qualifications include:

- A Band Council Resolution to support the creation of a fire department
- A fire service assessment
- A community risk assessment and community risk reduction plan
- A capital investment plan
- Maintenance plans for firefighting equipment
- Firefighter recruitment, training, and an ongoing training plan specific to the community's needs

Once Tier 3 requirements are met, proposals for fire protection capital project funding can be applied for. These include apparatus, buildings, and PPE.

Currently, SNFES indicates that they have met the following criteria:

Tier	Requirement	Status
Tier 1	Education Initiatives and Home Fire Safety Programs	In Progress
	Ensure Functioning Smoke Alarms in all Households	In Progress
	Third-Party Fire Safety Inspections	Not Started
	Automatic Sprinklers in all Public Buildings	Not Started
	Band-Administered Fee-for-Service Community Fire Services and Programming	Not Started
Tier 2	Community Risk Assessments	In Progress
	Basic Firefighter Training Standards	Completed
	Capital Investment Plans	In Progress
Tier 3	Band Council Resolution to Support the Creation of a Fire Department	Completed
	Fire Service Assessment	Completed
	Community Risk Assessment and Community Risk Reduction Plan	Completed
	Capital Investment Plan	In Progress
	Maintenance Plans for Firefighting Equipment	In Progress
	Firefighter Recruitment, Training, and an Ongoing Training Plan Specific to the Community's Needs	Completed

A review of the progress made by SNFES within the ISC LSS tiers shows that they are either actively engaged in meeting expectations, or in progress to meet them. This EMG report will provide additional support in meeting some of the requirements.

LSS Considerations

It must be noted that the blue highlighted sections in Tier 1 are typically outside of the scope of many First Nation communities to meet. Third-party fire safety inspections are intended for communities without a fire department and may rely on external agencies or MTSA-provided services. A community that develops and/or hires its own inspector will exceed this minimum level expectation. Automatic sprinklers in all public buildings should be based on the application of building codes and self-enforced by the community. This expectation is to ensure that self-enforcement is adhered to, as building codes are not enforceable on their own within a community. SNGR has control over the codes that are adhered to only within their own

buildings. Band-administered fee-for-service community fire services and programming is a reference to municipal fire departments with fee by-laws that charge for plans review, permits and other non-emergency services.

The issue with these expectations is that in a community, there are code enforcement mechanisms, and often, the fees-for-services complement the code adherence. In a First Nation, there is no code enforcement applicability; hence, there can be no expectation that residents adhere to applicable fire and building codes and require fire department assistance. If SNFES is successful in finding a route to code enforcement, a fee by-law may be appropriate at that time.

A fire department assessment is a service provided by the Indigenous Fire Marshal Service to assist communities with determining their current state with recommendations for improvement. This report by EMG is a more comprehensive review and will meet the intent.

The ISC LSS is a baseline expectation that is intended to assist a community with no fire department a path to improve fire safety. That may mean contracting services or building a department. The document struggles to assist departments that are already developed. The FNFPS and LSS establish a minimum level, and for communities that exceed that, there is no support. SNFES may work within these expectations and guidelines to assist with funding the established minimum-level programs, but there may be little assistance in developing or maintaining services such as medical response, rescue disciplines, and staff wages.

7.2 Finance Planning

Operating a fire department requires effective financial planning. Unlike a municipal fire department funded solely by municipal tax dollars, SNFES relies on federal funds and its own source of revenue. As a composite department serving the largest First Nation in Canada, Six Nations Fire & Emergency Service incurs many of the same costs related to infrastructure, apparatus, and equipment as a municipally funded department. Maintaining a responsive operational budget combined with informed long-term forecasting is also a requirement for all fire service types.

SNFES is operating with a 2023 annual budget of $3,975,966 dollars, and a 2024 budget of $5,263,666. The community population in 2024 is 12,912 people. This equates to a 2023 per capita rate of $308 and a 2024 per capita rate of $408. With a department consisting of 70 fire department staff over four stations, comparable departments are listed in Table #22. Historically, ISC provided per capita funding at a rate of $25 per person for communities with populations over 2,000.

TABLE #22 – COMPARABLE FD TO SNFES – 2023

Department	Staff	Dept Type	Stations	Population[1]	Rate per Capita[2]
Six Nations[3]	70	Composite	4	12,912	308
Brockville	42	Composite	2	22,116	302
The Blue Mountains	60	Composite	2	9,390	247
Tiny	93	Volunteer	5	12,966	98
Sarnia	128	Career	5	72,047	291

[1] *2021 Statistics Canada*

[2] *BMA Municipal Study 2023*

[3] *SNFES data*

A "composite" fire department is one that utilizes volunteer firefighters combined with full-time staff. These full-time staff may include management, fire prevention, and a smaller complement of full-time firefighters. The ratio of full-time staff to volunteers is different for each department. The composite departments in the chart do have some full-time firefighters. The chart does not account for the size of the response area, call volume, population density, zoning, or level of service. It simply reflects department structure, population, and per capita rates based on operational budgets as an indicator of municipal costs.

The comparison municipalities provided were selected based upon having a shared comparable in either population, per capita rates, or a combination of staff, department type, and stations collectively. The chart shows that Brockville is similar in per capita rates with a difference of six dollars. However, there is a difference in that Brockville has a smaller department size with a larger population. The Town of Blue Mountains is a smaller department with slightly lower rates ($61) and twenty-seven percent less population. Tiny Township operates a larger strictly volunteer department with a near equal population, yet a significantly lower per capita rate. Sarnia was added to show that a larger city with a career fire department operates at a slightly lower rate.

The industry standard also aims to maintain a ratio of one career firefighter per 750 residents. SNFES data shows that they are maintaining a current ratio of 1 to 340. The use of volunteer firefighters impacts this ratio, lowering the number. However, the use of volunteer firefighters is not as reliable and typically requires a closer look at training levels, response levels and deployment of volunteers to indicate a detailed ratio. A ratio lower than 1:750 may indicate one of two things: a progressive staffing approach to emergency response or overstaffing. The progressive approach will align with future growth within the community and thus allow for

increased volume, while a community that has shrinking populations and business closures may be overstaffed.

The comparable datasets are to reflect correlations between fire departments and the costs involved in delivering emergency services. Ultimately, the cost to operate a full-service career department or anything less than that will be a decision made by the elected officials of that community. These decisions are often based on a review of a Community Risk Assessment and what minimum levels of service are required. Municipalities can account for costs through tax rates and development fees, while the Six Nations of the Grand River have to fund the fire department through government programs, own-source funds, or third-party support. The chart is intended to portray the costs of delivering different types of services in different types of municipalities.

Long-Term Planning

Fire department management requires both proper asset maintenance to assure expected life cycles and long-term planning to meet expected growth and meet industry compliance. Typical planning focused on future investments centre on three main things: building infrastructure, apparatus, and capital purchases. Six Nations FES provided EMG with their respective plans for these items.

7.2.1 Building Infrastructure

Currently, Six Nations FES operates four buildings in its fire services. Table #23 outlines the stations and age of building. Station 3 has been closed due to vandalism and an existing property concern with the landowner.

TABLE #23 - BUILDING INFRASTRUCTURE REPLACEMENT PROJECTIONS

Station	Year Built	Planned Upgrades or Replacement
Station 1 – Veterans Lane	2015	None
Station 2 – Second Line	1979	*Add this section to Station Location Section*
Station 3 – Permanently closed		
Station 4 – Third Line	1985	
Station 5 – Fourth Line[1]	2015	None

[1] *Station 5 is run from a repurposed building and not designed as a fire station*

With a proper forecast for infrastructure replacement in place, the Fire Chief should seek funding opportunities to implement any new initiatives. Until that goal is met, a focus on maintaining existing infrastructure is important, which includes an annual review of the building infrastructure replacement plan to ensure it meets community growth patterns and the current and/or projected fire department locations remain relevant. Proper financial planning is necessary to ensure that adequate reserves are in place to accommodate the costs associated with building replacement.

Funding programs addressed earlier may be a viable option for accessing financial resources necessary to revise the current station locations and operational deployment plan. However, the ISC response may lag and delay any expediency in a change of current station locations.

7.2.2 Apparatus Replacement

Six Nations Fire and Emergency Services has a fleet of nine apparatus. In documents provided to EMG, SNFES has projected fleet replacement plans in place. Of note, the Fire Underwriters Survey (FUS) and NFPA recommend apparatus replacement schedules.

Six Nations has an operational replacement plan in place that meets both NFPA and FUS criteria. As provided to EMG, the current replacement schedule is:

Pumpers
17 to 20 years

Tankers
20 years

Rescue
17 years

Aerials
20 years

The plan does not acknowledge the estimated cost of replacement units. The last five years have seen inflationary increases of fire apparatus surpassing thirty percent. The ability to forecast cost is becoming more difficult to predict. It is a good baseline to use current pricing with moderate increases depending on the replacement timeline. Current build times for custom apparatus are in the range of 36 to 48 months. It is good practice to plan to order a unit so that it arrives in the predicted replacement year and not order in the replacement year. Table #24 details the timeline for the replacement of the SNFES apparatus.

TABLE #24 - SNFES DEPARTMENT FLEET REPLACEMENT SCHEDULE

Description	Year	Replacement	Current Costing Estimates (CDN$)	Forecast Estimate (≥3% Annual)
Pumper 2 (621)	2006	2026	1.25M to 1.75M	1.35M to 1.9M
Pumper 3 (631)	2006	2026	1.25M to 1.75M	1.35M to 1.9M
Pumper 4 (641)	2006	2026	1.25M to 1.75M	1.35M to 1.9M
Ladder 1 (613)	2016	2036	1.9M to 3.1M	2.75M to 4.5M
Tanker 4 (644)	2018	2026	1.25M to 1.75M	1.35M to 1.9M
Rescue 1 (619)	2019	2036	1.3M to 1.8M	1.9M to 2.75M
Pumper 1 (611)	2019	2036	1.25M to 1.75M	1.5M to 2M
Tanker 1 (614)	2020	2040	1.25M to 1.75M	2.5M to 3M
Tanker 1 (624)	2020	2040	1.25M to 1.75M	2.5M to 3M

Six Nations Fire and Emergency Services has provided a fleet replacement plan that meets current industry standards. With four units scheduled for replacement in 2026, it is suggested that the Fire Chief annually review the fleet replacement schedule to update projected costs and currency. This will account for inflation rates and manufacturing costs to better budget for replacement vehicles. To assist in maintaining the fleet, proper apparatus and vehicle maintenance schedules are necessary. It would be good practice for SNFES to implement an electronic tracking software system for apparatus and vehicle maintenance. This will help ensure the units are kept at optimal operating condition and fulfill the expected life cycle.

7.2.3 Capital Purchases

Equipment maintenance and replacement scheduling is essential to department and financial management. This includes planning for items such as (but not limited to) PPE and bunker gear, SCBA and safety equipment, radio communications, hose and appliances, and specialty tools and equipment. Six Nations replaced all SCBA in 2016. Currently, SNFES uses MSA SCBA. SNFES also owns and operates a CAN-AM side-by-side UTV with a small fire suppression pump in the back, as well as a 16-foot Zodiac marine unit as part of the fleet.

7.2.3.1 Radio and Communication Systems

The current radio system is currently operating on the VHF analog system. SNFES indicated that there are plans to migrate to a digital capable radio system. The Fire Chief reports that a plan is

in place to upgrade the current portable radio system to the P25 digital radio system. This system offers advanced integration and interoperability.

Currently, SNFES operates with 67 portable radios (nine are listed as missing but on the inventory list). There are an additional radios in vehicles. Of the portables, 62 are Motorola 7350e series, and the remaining five are Motorola 7550 series. The 7550 series are ten years old, with a manufacture date in 2015. Most of the radios are either seven or eight years old (2017 and 2018 manufacture dates). The vehicle-mounted radios are listed as Motorola 5550 series radios. Some models are only provided service up to seven years after manufacturing ends.

SNFES has already procured twelve P25 radios. The planned migration to digital and upgrades to the radio infrastructure will improve coverage. The service provider for radio systems for SNFES has estimated upgrade costs as follows:

- Portable Radios: $524,000
- Mobile Radios: $124,000
- System Infrastructure to P25 Conventional: $374,000

This represents a capital investment of $1,022,000. Adequate funding both from government programs and potential own-source revenue is important to ensure that this project is supported before implementation.

Not listed in the radio inventory is the battery cache. Typically, batteries have a useable life cycle of three to five years, depending on use, maintenance and type. Batteries extended beyond their life cycle may show a full charge, but actual battery life may be drastically lower than firefighters are aware of. Unreliable battery life may become a communication issue on scene leading to safety issues. Having batteries tested and assessed for available charge is important in battery care and maintenance.

Until the change to the P25 radio system is achieved, the Fire Chief should assess the current state of portable radios and batteries.

7.2.3.2 Self-Contained Breathing Apparatus (SCBA)

Six Nations is meeting current industry and regulation standards in expected replacement schedules as they replace the SCBA units every ten years and cylinders every 15 years. The replacement schedule for these units is based on annual need and budgeted accordingly. SCBA units incur high costs, with a price range in or around $10,000 for a complete set with harness, cylinder and mask. Depending on the desired specifications, the price may rise. Fiscal

responsibility requires proper consideration in preparing a plan for care, maintenance, and replacement.

The Fire Chief communicated that there is no timeline or plan in place to replace the current inventory of SCBA.

7.2.3.3 Personal Protective Equipment

From a financial perspective, a set of PPE (bunker gear) can be a costly addition to a budget. Current costs range around $3,000 for a mid-range set of bunker gear (coats and pants), and a full ensemble can be more than $4,000 per firefighter. Structural fire fighting protective ensembles include, but are not limited to, garments, helmets, hoods, gloves, and footwear (NFPA 1971 A.3.3.130). Bunker gear is referenced in Ontario Regulation[88] 714/94 Firefighters – Protective Equipment:

- The employer shall provide every firefighter who may be required to perform interior structural fire suppression duties with structural firefighting protective garments that meet or exceed the requirements of the following standards:
    - NFPA 1971 "Standard on Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting", 2007 edition, in the case of garments manufactured on or after March 1, 2007.
    - CAN/CGSB-155.1-M88 "Firefighters' Protective Clothing for Protection Against Heat and Flame", in the case of garments manufactured before March 1, 2007 (O.Reg. 480/10, s.1.)

Structural firefighting gear (bunker gear) has a limitation on life cycle. *NFPA 1851 Standard on Selection, Care, and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting* states:

> 10.1.2 Structural fire fighting ensembles and ensemble elements shall be retired in accordance with 10.2.1 or 10.2.2 no more than 10 years from the date the ensembles or ensemble elements were manufactured.

[88] Ontario, 'Fire Protection and Prevention Act, 1997, S.O. 1997, c. 4', accessed February 2025, https://www.ontario.ca/laws/statute/97f04?highlight=false&lang=en&option=%7B%22selection%22%3A%5B%22current%22%5D%2C%22result%22%3A%5B%22statute%22%2C%22regulation%22%5D%7D&paging=%7B%22page%22%3A1%2C%22pageSize%22%3A50%2C%22sort%22%3A%22AZ%22%7D&searchMode=browse&searchWithin=%5B%22title%22%2C%22body%22%5D&searchWithinResult=false&selection=consolidated+law&text=&trigger=1&useExact=false&withinResultSearch=

Retired gear is permitted to be used for non-live fire training or as determined by the organization.

It is important to add that bunker gear cannot easily be recycled even if it is still within the ten-year life cycle. NFPA 1500 7.2 Protective Clothing for Structural Fire Fighting states:

> 7.2.1. Members who engage in or are exposed to the hazards of structural fire fighting shall be provided with and shall use a protective ensemble that shall meet the applicable requirements of NFPA 1971
>
> 7.2.1.1 The member shall be provided with correctly sized and fitted protective clothing in accordance with the manufacturer's recommendations.

Bunker gear can be recycled to a new member only if there is a proper department care and maintenance program, and a dynamic fit test is conducted, as found in NFPA 1500 A.7.2.1.1.

The selection, care, and maintenance of bunker gear in a volunteer fire setting can be an additional budget item. Based on recruitment and retention rates, staffing turnover may require additional sets of bunker gear to be included even if they are within the life cycle.

If Six Nations Fire and Emergency Services acknowledges within their levels of service that they will respond to and engage in wildland firefighting, then additional PPE should be acquired that is specific to that type of firefighting. It should be compliant with appropriate standards such as NFPA 1877 Standard on Selection, Care, Maintenance of Wildland Protective Clothing and Equipment. Standard structural firefighting PPE is not designed to operate in the changed setting. This may incur additional costs to the department in both capital and operating costs for the new gear.

SNFES should implement a PPE management system that allows for tracking of inspection, care and maintenance of all assigned personal protective equipment. With expected staff turnover rates, managing PPE is essential in maintain costs.

Section 7 - Recommendations

Rec #	Recommendation	Suggested Implementation Timeline	Estimated Cost	Rationale
61	The Fire Chief should annually review the First Nation Fire Protection Strategy to ensure SNFES programs and services align with the minimum expectations.	Short-Term (1 to 3 years) or life cycle of the document	Staff Time	As one of the defining documents set by ISC, SNFES programs will be compared to the expectations within it, hence having fire department programs that align will assist with funding needs.
62	The Fire Chief should develop a financial report that separates ISC funded programs from non-funded programs.	Short-Term (1 to 3 years)	Staff Time	To ensure maximum funding is received, SNFES should track applicable programs separately.
63	The Fire Chief should review the station location study completed and develop a funding strategy to implement it in a timely manner.	Short-Term (1 to 3 years)	Staff Time Costs are dependent on feasibility study and station build costs	Funding opportunities may lag in comparison the need for any new station construction, meeting all program criteria should expediate processing.
64	SNFES should review the apparatus replacement plan and update accordingly with specifications and expected pricing.	Immediate (0 to 1 year)	Staff Time Costs for four units may range from $5M to $6M in total	With four apparatus set for replacement in 2026 a priority should be made to guarantee ISC funding if available or acquire other revenues if necessary.

Rec #	Recommendation	Suggested Implementation Timeline	Estimated Cost	Rationale
65	SNFES should review the radio, SCBA and PPE replacement plans and ensure that all potential funding opportunities are assessed.	Short-Term (1 to 3 years)	Staff Time Unit costs dependent upon actual unit costs at time of order	There should be a focus on ensuring funding is available or that all potential funding streams are reviewed and applied for. And that all equipment is replaced on a regular cycle as recommended by the NFPA and/or supplier.

Section 8

Review of Previous Fire Related Reports

Emergency Management Group

SECTION 8: REVIEW OF PREVIOUS FIRE-RELATED REPORTS

8.1 Fire Underwriters Survey

The Fire Underwriters Survey establishes grades and ratings to assist insurers with providing insurance based on a properly assessed fire risk and response. FUS can assist communities and fire departments with both a full review (survey) and qualifying an insurance adjustment with the Superior Tanker Shuttle Service. This is to assess a fire departments ability to provide adequate water sustained over a pre-determined period with tanker apparatus. Both programs can help a community with lower insurance rates because the fire department is meeting established criteria. They also provide the department with goals to meet and maintain to be held to a minimum standard.

It was noted that the SNFES did not have a Fire Underwriters Survey. Obtaining these surveys would help the citizens of Six Nations of the Grand River when they are seeking insurance for their properties.

It is recommended that the Six Nations Fire & Emergency Services request for a FUS to be performed on their department.

8.1.1 Fire Underwriters Survey Superior Tanker Shuttle Service Accreditation

The Superior Tanker Shuttle Accreditation is a program of the Fire Underwriters Survey that recognizes a fire department's ability to shuttle water by way of tanker trucks to fight fires in areas without hydrants.

Four fire stations make up the Six Nations Fire and Emergency Services. They do not have hydrants throughout their fire district. It would benefit all four stations to obtain the Fire Underwriters Survey Superior Tanker Shuttle Service Accreditation. It was noted in the Community Plan dated 2019 that hydrants were insufficient as water main coverage was incomplete, and pressure was too low. There are tankers in place at each station that respond to all fire calls to deliver water if needed. It also states that the waterline project will not be completed until 2039.

The basic requirements for residential accreditation, known as Dwelling Protection Grade (DPG) are:

- Within five minutes of the first pumper arriving at a fire scene, firefighters must be able to deliver a minimum of one thousand (1,000) liters/minute (200 gal/min) of water; and

- Maintain that water flow uninterrupted for two hours.
- The basic requirements for commercial lines accreditation, known as Public Fire Protection Classification (PFPC) are:
    - Within ten minutes of the first pumper arriving at a fire scene, firefighters must be able to deliver a minimum of two thousand (2,000) liters/minute (400 gal/min) of water; and
    - Maintain that water flow uninterrupted for two hours.

How does accreditation benefit residents?

Insurers utilize the information provided by the Fire Underwriters Survey to set property insurance rates in Canada. They are advised that Superior Tanker Shuttle Service Accredited areas may be rated as 'hydrant protected'.

As a result of these accreditations,

- Residents who own detached dwellings within eight kilometers (by road) of a fire station and are five kilometers from an approved water supply may be eligible to receive a cost reduction in their fire insurance rates from insurers in Canada.
- Commercial business owners who own property within five kilometers (by road) to a fire station and are 2.5 kilometers from an approved water supply may be eligible to receive a cost reduction in their fire insurance rates from insurers in Canada.

It is recommended that the Six Nations Fire & Emergency Services request for a FUS Superior Tanker Shuttle Accreditation program. By doing this certified Fire Protection Specialists would come in and perform a detailed analysis of the overall fire protection by assessing four key areas: fire department, water supplies, fire prevention, and emergency communications.

8.2 Six Nations Community Plan

The Six Nations Community Plan has evolved over the past two decades from a capital plan and infrastructure needs approach in 1996 to the present-day community plan. The first community plan was developed in 2010. This plan gave an overview of each department within the Six Nations government. There was limited input from the community in the development of this community plan.

The 2010 Six Nations Community Plan advanced the community into the future. It outlined how every part of the community should try to be part of the plan and how the plan could be used to create positive change for the community. The 2010 Community Plan addressed seven

priorities: Mother Earth, Community, Arts & Culture, Built Environment, Employment and Education, Economic Development, and Wellbeing.

In November 2017, a team of two full-time planners was hired to undertake a comprehensive update for the Community Plan. The current Six Nations Community Plan was developed in 2018 / 2019. It is a living document that is updated annually or whenever one of the published goals within the community plan is met.

The community plan's seven priorities were evaluated for their strengths, weaknesses, opportunities, and threats. Each was further broken down into key activities and years. They were broken down further in 5-year increments ranging from 1 to 20 years, and each had organizations involved assigned to each priority.

The fire department is listed as part of the Community priority. Below is a chart that shows what the fire department should look like in the next twenty years, along with the estimated costs associated.

Key Activities Years 1-5: Enhance Fire Service to meet the needs of the community.

Secure adequate funding for the following.

- New Central Fire Station: This was completed in 2015
- Aerial Truck: This was completed in 2019
- Fire/EMS amalgamation: Incomplete currently.
- Fire satellite station at Iron Horse: Incomplete currently, Iron Horse estates have not come to fruition currently.
- Repairs to satellite Stations: Incomplete; awaiting the results of the station location study, Master Fire Plan, and standard of cover to develop plans to move this forward. With recommendations, data-supported solutions and business case development.

Key Activities Years 6-10

- Acquire accreditation: Recommendation formally going to council for the 2025-26. Budget year 2024 has been a busy year for developing the foundation for this. Standards of Cover, Master Fire Plan, Station Location Study, Community Risk Assessment and Governance Development approved in December 2024.
- Create training centre: Ongoing case to be presented in May of 2025.

- 2 new trucks: Ongoing discussion to replace three of the American LaFrance trucks with new models. Dependent on results of studies. Additionally, there will be considerable wait time for the building of the new trucks. In some cases, it takes two to three years.
- 24 Full-time staff Central: Has been completed
- 20 Ful time staff Iron Horse: Incomplete at this time due to Iron Horse Station not being approved.

Key Activities Years 11-15

- Update equipment: In early planning. Strategies include developing a complete equipment replacement plan.
- 10 Full-time administrative staff: In planning stages.

Key Activities Years 16-20

- Equipment and vehicle replacement: Planning processes will be developed within their system for future replacements.
- It was also noted that they will be monitoring and implementing a succession planning process for all positions, that would likely include the "Volunteers" transitioning to casual part-time-paid hourly, and when capable, be assigned to back fill career staffing vacancies.

It is recommended that the Six Nations Council continue to follow this Community Plan. With the enhancing of the fire department and providing them with the manpower and equipment they need to protect the community from the dangers of fire and other emergencies.

8.3 Six Nations Organizational Effectiveness Review

On May 6, 2022, the Korn Ferry consulting firm presented their completed Six Nations Organizational Effectiveness Review they were hired to complete.

The objectives of this review were to conduct an organizational review and determine the most effective structure for the organization to meet organization and community needs now and in the future. They reviewed all department functions in terms of workflow and alignment. What follows are the objectives this report came up with.

- Clarifying roles, responsibilities and authority of senior and middle management staff
- Reviewing decision making structures to identify opportunities for improvement

- Assessing current staffing levels to determine whether they are appropriate for the current and future level of program and service demand
- Identifying duplication and overlap of responsibilities within Six Nations Departments and between Six Nations Departments
- Mapping services and programs and perceived value of each to enable Six Nations to discuss and identify those programs that should no longer be offered or delivered in a different way or through a different department.

The purpose of this report was to present a detailed description of Korn Ferry's approach to the organizational review, key findings and recommendations. As part of these recommendations, Korn Ferry has included a new operating model and a revised organizational structure for each department that will help meet organization and community needs now and, in the future, improve efficiency, communication, collaboration and solutions, and delivery time as well as quality of services and programs provided internally and externally while helping achieve cost savings in some areas where appropriate.

This report recommended a new safety & emergency response services portfolio be developed with a Safety & Emergency Services Manager to lead this portfolio, which also includes both Fire and Ambulance Services, along with Animal Response. It also stated that both Animal Response and Fire Services will offer public education/prevention services in addition to their emergency response services. It was also noted that neither the Ambulance Service Manager nor the Fire Chief is appointed to this manager position.

It was also noted the Fire Service, which is unchanged, should include the existing Chief, Deputy, District and Captain Structure. The Fire clerk role will continue to manage specific paperwork and equipment requirements. Note that the scope of services response, public education and firefighter training is unchanged.

It also stated that the Fire Chief's role should be expanded to include planning and operations for all community safety and emergency response services (including fire, perhaps ambulance, crisis response/victim services, and animal control) so that services are provided in an integrated and coordinated way. This will include education and training in these areas. Also noted, they requested a new title to adjust to reflect the new leadership structure. It could not be found what the new title was to be.

After conferring with the Fire Chief, EMG was informed that this plan or parts of it were put on hold. So, as of now, it appears that little to nothing that this plan recommended for the fire department has been addressed.

Rec #	Recommendation	Suggested Implementation Timeline	Estimated Cost	Rationale
66	The Six Nations Fire & Emergency Services have a Fire Underwriters Survey (FUS) completed on their department. And that they obtain the FUS Superior Tanker Shuttle Service Accreditation	Short-Term (1 to 3 years)	Staff Time	Could lower the cost of insurance for the citizens of the Six Nations of the Grand River.

Section 9

Recommendations, Timelines and Associated Costs

SECTION 9: RECOMMENDATIONS, TIMELINES, AND ASSOCIATED COSTS

9.1 Conclusion

The review conducted by EMG demonstrated that the full-time staff and volunteer firefighters are genuinely dedicated to the community they serve. SNFES is endeavouring to offer the most efficient and effective service possible based on the present staffing, equipment, and fire station location. By developing this MFP, the joint municipalities demonstrate their desire to improve their services and delivery.

All costs and associated timelines noted in this report are approximate estimates that can be implemented through prioritization between the fire chief and the Fireboard.

This MFP is a long-range planning document. It is recommended that annual updates be completed, along with a full review to be conducted at the five-year mark.

9.2 Recommendations, Estimated Costs, & Rationale

The following chart provides a detailed overview of the recommendations found throughout this report, along with any estimated costs and suggested timelines for implementation.

This MFP document is a culmination of 66 recommendations.

SNFES Recommendations Chart

Note: When referring to staff time, it is assumed that the SNFES will hire the adequate staff to accomplish the requirement of the recommendation.

Rec #	Recommendations	Suggested Implementation Timeline	Estimated Costs	Rationale
Section 1 – Community and Fire Department Overview				
There are no recommendations for Section 1				
Section 2 – Risk Assessment Recommendations				
1	With the completion of the Community Risk Assessment and this Master Fire Plan, the Fire Chief should utilize the components of the two documents' recommendations for developing and implementing the Community Risk Reduction Plan.	Short-Term (1 to 3 years)	Staff Time some recommendations may include associated costs	Keeping track of the Community Risk Assessment and Master Fire Plan recommendations, along with implementation and outcomes resulting from the recommendations, will ensure proper tracking and accountability.
2	The occupancy classification in which a fire has occurred should be identified in the record management system storing this data and based on the OBC.	Short-Term (1 to 3 years)	Staff Time	Identifying the occupancies in which fires occur will aid fire prevention in determining where to focus public education efforts to reduce the number of fires in that occupancy.

Rec #	Recommendations	Suggested Implementation Timeline	Estimated Costs	Rationale
3	The SNFES promotes residential fire sprinklers' benefits in new home construction in cooperation with local developers.	Short-Term (1 to 3 years)	Staff Time Consideration of the costs associated with any demonstrations.	With the forecasted growth in population, new residential developments will come to the forefront. During the initial approval stages, SNFES should work with the developer to promote the value of residential fire sprinklers.
4	The Fire Chief updates the by-laws that directly affect the fire department and collaborates with other fire departments in other municipalities as required.	Short-Term (1 to 3 years)	Staff Time	The annual review of by-laws ensures they are current and meet the needs of the Six Nations Fire and Emergency Services.
5	SNFES reviews and updates the Mission, Vision and Values statements and re-includes them in the revised Establishing and Regulating By-law Schedule. They should be posted at each fire station upon the Elected Council's approval.	Short-Term (1 to 3 years)	Staff Time	Having the three statements helps guide the reason and purpose of the SNFES to its members and the public it serves.

Rec #	Recommendations	Suggested Implementation Timeline	Estimated Costs	Rationale
6	SNFES establishes a SOG Committee that includes members of each Division of SNFES, and the group establishes its Terms of References as its guiding document.	Short-Term (1 to 3 years)	Staff Time Associated costs with non-full-time personnel.	Having a committee address the needs of SNFES' SOG requirements will relieve some of the workload burden upon the Fire Chief. Upon the committee's establishment, the first order of business should be the development of its Terms of Reference (TOR), which describes the committee's purpose, scope and authority.
7	The Fire Chief should work with the Human Resources and Finance department to review the existing pay and benefits package for career and volunteer firefighters and administrative staff	Short-Term (1 to 3 years)	Actual new pay & benefits package to be determined; process cost is staff hours	Staff state the current compensation package is inconsistent and not reflective of department; current labour situation may dictate a different path.
8	The Fire Chief should create a medium to long-term staffing plan as it relates to volunteer and fulltime positions, and include recruitment and retention initiatives with focus on community youth	Short-Term (1 to 3 years)	Staff Time	Staff retention is indicated in the internal survey responses. An approved plan to stabilize staffing levels will help with morale.

Rec #	Recommendations	Suggested Implementation Timeline	Estimated Costs	Rationale
Section 3 – Fire Department Divisions				
9	The Fire Chief should develop a staffing plan, which will include a job analysis of new or revised positions within SNFES including but not limited to: • CFEI Project Staff • Administrative positions • Prevention positions And the staffing plan will include a review of available workspace.	Immediate (0 to 1 year) for review; Short-Term (1 to 3 years) for implementation	Staff Time Review, costs for position will be determined by job analysis and existing SNGR pay grid	As SNFES grows to meet industry standard and community needs, additional administrative positions are necessary. A thorough review by the Fire Chief in consultation with HR will determine the best use of additional support.
10	The Fire Chief should annually review the electronic data management system for effectiveness, efficiency, and value for dollar.	Short-Term (1 to 3 years) on-going	Staff Time	As SNFES implements electronic data management systems as part of the administrative management system, an annual review of current systems and available new options is important.

Rec #	Recommendations	Suggested Implementation Timeline	Estimated Costs	Rationale
11	SNFES should develop a plan that will integrate electronic devices within emergency response vehicles to better utilize available technologies.	Short-Term (1 to 3 years) Project review; implementation determined upon review	Staff Time For review; cost to be determined for selected mode of delivery	The utilization of electronic devices to deliver timely data and improve two-way communications in emergency response vehicles is advancing in fire services. SNFES should find options to integrate these technologies into their response.
12	SNFES and SNGR IT should conduct an information technology audit of all fire department hardware and software currently being used to find efficiencies in both use and costs.	Short-Term (1 to 3 years)	Staff Time For review; changes and/or upgrades determined in review	Because of the demand for data, documentation, and records management in SNFES, having adequate hardware and software is essential. As the department moves forward, having insufficient IT will hinder growth.

Rec #	Recommendations	Suggested Implementation Timeline	Estimated Costs	Rationale
13	The Six Nations of the Grand River hires the following for the Fire Prevention Division of the SNFES: Chief Fire Prevention Officer, a • Fire Prevention Officer (Captain), • Two Fire Inspectors and a • Public Fire and Life Safety Educator (PFLSE)	Immediate to Mid-Term (0 to 6 years)	The salary range is dependent upon the rank. The wages range from $125,000 to $150,000, including benefits/year.	SNFES has lacked a robust fire prevention and public education program. Numerous studies have identified the mortality rate due to fires in First Nations is higher than those not living there. Inspections and public education are needed to reduce this statistic.
14	The Fire Prevention Division report annually on activities to reset baselines and benchmarks to indicate success or challenges with achieving any noted benchmarks.	Short-Term (1 to 3 years)	Staff Time	Doing so will provide the means to judge the effectiveness of fire prevention programs and initiatives, including those of public education.

Rec #	Recommendations	Suggested Implementation Timeline	Estimated Costs	Rationale
15	All Fire Prevention personnel must complete and certify in the NFPA 1033 Fire Investigation course and certification. Also, complete NFPA 921, *Guide for Fire and Explosion Investigations*, and certify upon its availability in Ontario.	Short-Term (1 to 3 years)	Staff Time Plus course registrations.	Having all members of fire prevention certified in fire investigation will provide multiple individuals trained in what to look for during a fire investigation, thereby producing a more encompassing and effective investigation process for SNFES.
16	All firefighters should be allowed to become trained and qualified to be NFPA 1031, Fire Inspector, Level I, and NFPA 1035, PFLSE, Level I or equivalent certification.	Short-Term (1 to 3 years)	Staff Time Plus registration and training time pay for POC members.	By having more fire department staff trained to these NFPA standards, the Department increases its ability to conduct inspections and promote fire safety education initiatives.

Rec #	Recommendations	Suggested Implementation Timeline	Estimated Costs	Rationale
17	The volunteer recruit firefighter training program be delivered in a consistent manner including advance notice of topic and access to online resources. A designated training officer be scheduled as backup for the Volunteer Chief when absent. Additional training opportunities for volunteers be made available in a format that is easy for all to access.	Short-Term (1 to 3 years)	Staff Time	Consistent delivery of training to volunteers is important to safety, skill development, and may support retention through greater satisfaction. Volunteering time is an important community service that should be respectfully acknowledged by timely delivery of consistent training. Communication is always a challenge, and much can be overcome with communication. Finding additional avenues to communicate training opportunities may increase attendance.
18	Top 30 Six Nations of the Grand River Community Hazards be updated when an updated Hazard Identification & Risk Assessment (HIRA) has been completed for the SNGR community.	Mid-Term (4 to 6 years)	Staff Time	The current HIRA is dated 2017. Some risks and priorities may have changed. Targeting service delivery to risks to the community supports effective and efficient service provision and data-based decision making.

Rec #	Recommendations	Suggested Implementation Timeline	Estimated Costs	Rationale
19	NFPA 1140 "Standard for Wildland Fire Protection" training be provided including a focus on wildland urban interface (WUI) fires and the FireSmart program.	Short-Term (1 to 3 years)	Government Funding	The top 4 and 25 risk to the community as identified in the HIRA related to wildfire. 24% of the personnel have wildfire training. No personnel have WUI or FireSmart training. Some funding opportunities are available to support training.
20	NFPA 1006 "Standard for Technical Rescue Personnel Professional Qualifications" training be provided that includes trench rescue, heavy machinery, and structural collapse. Rope rescue training be provided to the level of technician.	Short-Term (1 to 3 years)	Staff Time and Current Budget	The top 28 and 30 risks to the community as identified in the HIRA related to technical rescue specialties that are not currently being offered by SNFES. Trench rescue supports service provision to excavation sites for underground utilities. Heavy machinery rescue supports service provision related to accidents involving human operators. Rope rescue training is a component of other disciplines already provided. Having a higher level of training provides a higher level of potential service to the SNGR community.

Rec #	Recommendations	Suggested Implementation Timeline	Estimated Costs	Rationale
21	The Chief Training Officer must deliver the SNFES Training Program as their sole portfolio. The Part-time Training Officer position must be filled and increased to an FTE. Mentoring and succession planning be initiated for these positions.	Short-Term (1 to 3 years)	.5 FTE $50,000	The time commitment for the Training Division requires two (2) FTEs. An FTE is approved in the budget for the Deputy Chief Training Division. A part-time position is approved for in the budget (shared with Fire Prevention). Data tables in Section 3.3.6. support workflow in the Training Division to support 2 FTE at current workload. Mentoring and success planning for future vacancies strengthens the service being provided now and into the future. Mentoring and success planning can lead to greater job satisfaction and increased morale.

Rec #	Recommendations	Suggested Implementation Timeline	Estimated Costs	Rationale
22	The structural integrity of the Live Fire building must be conducted as per the standard. Maintenance and testing of the existing live fire building and props must be conducted on a regular basis. A chart of maintenance and testing requirements be prepared by a registered professional that details the responsibilities of the SNFES, and that the appropriate training be provided to personnel.	Immediate (0 to 1 year)	Capital Project Explore Funding	NFPA 1402 "Standard on Facilities for Fire Training and Associated Props" requires a licensed professional engineer to evaluate and document gas-fired live fire training structures every 10 years (or more). Some maintenance is required annually, while testing of some components may be before use or daily. Some maintenance and testing may be conducted by personnel; others may require a registered professional.

Rec #	Recommendations	Suggested Implementation Timeline	Estimated Costs	Rationale
23	The water source for training needs to be engineered to meet NFPA 1403 "Standard on Live Fire Training Evolutions". A second water source may be provided.	Mid-Term (4 to 6 years)	Capital Project Explore Funding	The instructor or safety officer is responsible for ensuring that the necessary water flow is available for the evolution. NFPA 1402 has specifications that a single water source may be able to meet. NFPA 1403 has additional specifications. A second hydrant closer to the burn building could provide better traffic flow through the Training Facility.
24	Create and start a cycle of annual program review that focuses on each of the functional areas of training including quantitative and qualitative data to support data-based decision making for future changes. That operational budget and capital budget information be readily accessible to the Chief Training Officer to assist with program review.	Short-Term (1 to 3 years)	Staff Time	Data-based decision making supports continuous improvement. Strategic decisions that support change for the better are best facilitated through a thorough review. Documented program reviews support budget requests in the future.

Rec #	Recommendations	Suggested Implementation Timeline	Estimated Costs	Rationale
25	Plan expansion and renovation of the Training Facility.	Long-Term (7 to 10 years)	Capital Project Explore Funding	A state-of-the-art Training Facility could offer training to neighbouring fire services. The current facility does not fully provide for the decontamination needed for personnel, tools and equipment. The current facility has restrictions on what training can be offered, storage, parking, and accommodations.

Rec #	Recommendations	Suggested Implementation Timeline	Estimated Costs	Rationale
26	Revise Standard Operating Guidelines (SOGs) related to decontamination and rehabilitation during and after training exercises New Safe Operating Guideline (SOG) for Live Fire Training be developed.	Short-Term (1 to 3 years)	Staff Time	Contamination occurs during live fire exercises. An SOGs should clearly outline processes and safety measures to take, and barriers or challenges such as how to decontaminate when taking a break and responding to an incident. A rehabilitation SOG for training should include a methodology for achieving physical and mental rest, replacement of fluids and food, medical monitoring and treatment of injuries before a firefighter returns to action. There is currently no SOG for live fire training. An SOG should exist for responsibilities of the CTO and the Safety Officer for pre-live fire training, during, and after.

Rec #	Recommendations	Suggested Implementation Timeline	Estimated Costs	Rationale
27	The Operating Budget for the Training Division be aligned for tracking by function A five-year capital plan should be prepared and accessible to the Training Division. The Chief Training Officer will be included in the responsibility to oversee the operating budget.	Short-Term (1 to 3 years)	Staff Time	Facilitate annual program review. Better track expenses and plan for future needs. Table Proposed Operating and five-year capital Budget Details will ensure proper allocation of training funds.
28	Capitalize on government-to-government funding opportunities.	Short-Term (1 to 3 years)	Staff Time	Tier 2 Funding should be available. SNFES should be planning qualification for Tier 3 funding. Annual funding for fire protection is available through Indigenous Services Canada (ISC) and the First Nations Infrastructure Investment Plan (FNIIP). This responsibility should be dedicated to a position and a table be developed of opportunities to ensure maximum funding.

Rec #	Recommendations	Suggested Implementation Timeline	Estimated Costs	Rationale
29	A formal promotion, mentorship and recognition program be developed for all levels within the department.	Short-Term (1 to 3 years)	Staff Time	Personnel performance should be recognized Mentorship is a successful method of developing personnel knowledge, skills and abilities. Recognition supports job satisfaction, an increase in morale, and may lead to an increase in retention.
30	The Fire Chief should review previous years response time to determine what is an acceptable level and develop a SNFES response time policy.	Short-Term (1 to 3 years)	Staff Time	Establishing minimum expectations to improve response times will have an affect on emergency response.
31	SNFES should prepare an annual report that details emergency response with call types and non-emergency activities that can be presented to the public.	Short-Term (1 to 3 years)	Staff Time	Public reporting of fire department efficiency is important in building and maintaining public support.

Rec #	Recommendations	Suggested Implementation Timeline	Estimated Costs	Rationale
32	SNFES should work with Wounded Warriors Canada to begin implementing programs that will benefit personnel, including a Peer Support Program, and Family Resiliency Programs.	Short-Term (1 to 3 years)	Program Costs (To be determined with the WWC)	WWC has many programs that would aid personnel with mental health supports, and early implementation is a key to success.
33	SNFES should meet with Six Nations EMS to discuss potential partnerships, including medical monitoring at fire scenes.	Short-Term (1 to 3 years)	Staff Time Program Supplies to be determined	As a shared community service, there is potential for several integrated programs between Six Nations fire and EMS. Established programs like medical monitoring is a start. Continued discussions will benefit.
34	SNFES should implement a Designated Officer program that meets provincial criteria and expectations.	Short-Term (1 to 3 years)	Staff Time Training Costs	An established program such as the Designated Officer will benefit training, compliance, and exposure tracking for personnel. The program administration may be delegated to a manager.

Rec #	Recommendations	Suggested Implementation Timeline	Estimated Costs	Rationale
35	SNFES should improve upon its Incident Safety Officer training and certification to mirror provincial requirements.	Short-Term (1 to 3 years)	Staff Time Training Costs	Any component of the provincial mandatory certification regulation is an industry standard for SNFES and should be voluntarily complied with.
36	SNFES should develop and implement a Cancer Prevention Program, including a review of on scene practices, PPE handling, cleaning and decontamination procedures and firefighter health and wellness.	Short-Term (1 to 3 years)	Staff Time Program Supplies to be determined	Cancer is a compensable injury with WSIB and every effort should be made to reduce or eliminate unnecessary exposures to firefighters. Provincial resources may be available.
37	SNFES should strike a firefighter fitness and wellness committee to review current state and potential improvements to the fitness facility in Station 1 and access to trainers or trainer development.	Short-Term (1 to 3 years)	Staff Time Training Costs, program supplies to be determined	SNFES has a fitness facility in Station 1 accessible to all staff. Improved utilization will benefit firefighter wellness and potentially reduce injury claims.

Rec #	Recommendations	Suggested Implementation Timeline	Estimated Costs	Rationale
38	SNFES should review the NFPA 1582 Essential Job Tasks to ensure that they are incorporated in recruitment, testing, fitness, and training programs.	Short-Term (1 to 3 years)	Staff Time	Ensuring that candidates are being tested to appropriate standards ensures better suitability upon hiring. Using the EJTs in training can improve functionality in tasks. SNFES can research the use of third-party testing agencies for compliance.
39	SNFES should develop a Respiratory Protection Program that includes a stand alone manual, accepted industry practices, and compliance with regulations.	Short-Term (1 to 3 years)	Staff Time Program Components as required	A Respiratory Protection Program is a required component under federal and provincial regulations and standards.
40	SNFES should provide the BFCC with updated GIS mapping files.	Immediate to Short-Term (0 to 3 years)	Staff Time	This will give BFCC the most updated GIS files available. This will ensure they are going to the correct address of the emergency.

Rec #	Recommendations	Suggested Implementation Timeline	Estimated Costs	Rationale
41	The proposed new digital portable radios be bought for SNFES. And that, SNFES should move forward with the radio system upgrade plan and determine funds later if needed.	Short-Term (1 to 3 years) As funding becomes available	$524,000.00 (67 portables, note 12 units already purchased) Mobile Radios - $124,000.00 (18 In vehicle mobile radios) System Infrastructure to P25 Conventional - $374,000.00	Will allow SNFES to be able to meet the new NG 911 standard and allow the firefighters to communicate with each other more efficiently.
42	SNFES should incorporate radio communications training as part of the Training Plan.	Short-Term (1 to 3 years)	Staff Time	Current communication SOGs should be part of the Training Plan to ensure consistent communication. Annual training, or training incorporated into other drills, is an opportunity to enhance skills. New recruits should understand proper communication protocols as part of initial training.

Rec #	Recommendations	Suggested Implementation Timeline	Estimated Costs	Rationale
Section 4 – Facilities, Vehicles and Equipment				
43	Apart from the Station Location recommendations, SNFES should develop a plan to improve the current state of Stations 2 and 4, including addressing key issues such as: • Potential PPE exposure (remove all gear) • Lack of showers (implement an OG directing staff to return to Station 1 or 5 after a fire for proper cleaning) • No washroom in Station 4 (plumbing issue) • Backing up in tight spaces (training and operational guidelines)	Immediate (0 to 1 year)	Only the washroom issue at Station 4 should incur additional costs (labour and parts). Other programs may require staff time to develop.	While most operations occur at Stations 1 and 5, SNFES is still required to provide adequate workspace to staff as per occupational health and safety expectations.

Rec #	Recommendations	Suggested Implementation Timeline	Estimated Costs	Rationale
44	Apart from the Station Location recommendations, SNFES should address safety issues related to vandalism at Stations 2 and 4, which may include changing the bay door glass to a stronger material not subject to projectile gravel; consideration to a security system and/or gate access; paving the driveway may reduce damage caused by gravel.	Short-Term (1 to 3 years)	Costs may be relatively to solutions chosen to reduce damage caused by vandalism; continued costs of repair may exceed costs of preventative measures.	While a station relocation study may change the use of Station 2 and 4, they are still part of the deployment plan with SNFES and therefor require a solution to reduce damage and security issues related to crime and vandalism.
45	SNFES should research upgrades or additions to the exhaust removal systems at all stations and determine an appropriate solution for their stations	Based on station location result and associated station development, a short-term solution specific to Station 1 and 5 is advisable.	Systems vary in price dependant on solution chosen and size of the station. May range in price from $100,000 to $200,000 inclusive for all stations	Exhaust removal systems are a standard in fire stations, with varying system configurations (passive removal or direct capture). Reduction of exhaust and limiting exposure is necessary for personnel safety and station maintenance.

Rec #	Recommendations	Suggested Implementation Timeline	Estimated Costs	Rationale
46	The training centre should have a separate Care and Maintenance Manual, including: • An inspection program • A maintenance plan • Inspection of connection points This plan should identify the requirements for the live fire units, indoor training unit, dedicated equipment, and instructions for third-party rental agreements.	Short-Term (1 to 3 years)	Staff Time	The training centre is a highly used complex, and the proper care and maintenance is essential to ensuring it meets intended life cycle, and a proper program manual will identify the key components to its care and maintenance.
47	SNFES should develop a Fleet Management Plan document, including: • Inspection requirements and timelines • Inspection forms • Consumable replacement cycle • Maintenance schedules testing of apparatus components	Short-Term (1 to 3 years)	Staff Time Any associated costs with the purchase of an electronic database.	To ensure compliance and regularity, a program intended to manage fleet inspections, care and maintenance is required. Electronic databases may be developed with existing software, or specialized software systems are also available to assist with records management.

Rec #	Recommendations	Suggested Implementation Timeline	Estimated Costs	Rationale
48	SNFES should include N-95 in the fit testing program.	Short-Term (1 to 3 years)	Staff Time Update training and associated costs for parts and consumables	SNFES responds to medical emergencies, and medical-grade masks require proper fit testing as per CSA criteria.
49	SNFES should develop an Equipment Inspection Program document, including: • Inspection requirements and timelines for each type of equipment (PPE, SCBA, Etc.) • Inspection forms • Maintenance schedules testing cycle	Short-Term (1 to 3 years)	Staff Time Any associated costs if an electronic database is purchased	With equipment spread across four stations, tracking the required inspection and testing should be collated into one program plan. Maintenance schedules should be part of the plan, as well as replacement dates. Staff may be assigned to manage the program. Electronic databases may assist in management.
50	SNFES should develop a protocol to ensure that hydrants always remain visible and are easily located when required at emergency calls, including researching electronic options.	Short-Term (1 to 3 years)	Staff Time Any associated costs if markers are used may integrate electronic systems if GIS is incorporated.	With rural response as part of SNFES operations, low light environments may cause issues in locating hydrants when required. During snow events, quick location and clearing is important.

Rec #	Recommendations	Suggested Implementation Timeline	Estimated Costs	Rationale
Section 5 – Emergency Management				
51	That the FTE position of Assistant Chief of Emergency Management—Community Emergency Management Coordinator—be filled by a person skilled and knowledgeable in the field of Emergency Management.	Immediate (0 to 1 years)	$80,000 to $150,000 Depending on experience	A dedicated person is required to develop a comprehensive Emergency Management Program for the SNGR community. An FTE is accounted for in the annual budget. The Emergency Program Division is a service by Council Policy. Emergency Management is a specialty field. Development and administration of an Emergency Management Program would benefit from employing a person with that specific knowledge, skills and abilities. Specialty education is readily available from certificate to master's levels in Emergency Management.

Rec #	Recommendations	Suggested Implementation Timeline	Estimated Costs	Rationale
52	A fulsome Emergency Management Program be developed and delivered to the SNGR community. Emergency Social Services (ESS) program to be redeveloped and planned for consistent delivery and annual program review.	Short-Term (1 to 3 years)	Staff Time	The current program is not in a proactive state. A program based on the five components of Emergency Management will increase the safety of the community. An emergency program is stated as a minimum service level in the Council Policy to Regulate Fire and Emergency Service. Program review should be at a minimum on an annual basis.
53	That updating of Hazard Identification and Risk Assessment be prioritized. And that the Emergency Management Program delivery including SNFES operational training and public education, be aligned to target the risks that the community faces now and into the future.	Short-Term (1 to 3 years)	Staff Time	Current HIRA is dated 2017. Changes to the community need to be incorporated into a new HIRA, i.e. new airport, increased risk of wildfire.

Rec #	Recommendations	Suggested Implementation Timeline	Estimated Costs	Rationale
54	The Emergency Control Group (ECG) role be redefined in the Six Nations Emergency Response Plan to include a role in the development of the Emergency Management Program.	Short-Term (1 to 3 years)	Staff Time	A working group with a focus on Emergency Management supports a program developed to serve the needs of many as it is based on a diversity of knowledge and experiences of the people.
55	That the budget for the Emergency Management Division be reviewed and aligned to reflect the component parts of the program.	Short-Term (1 to 3 years)	Staff Time	Detailed line items that reflect component parts of the program will help to clearly track costs and perform annual program review from a cost perspective.
56	That the Six Nations Emergency Response Plan be reviewed and revised. Reviews be planned and conducted as outlined in the current Plan. Training and exercising be planned and conducted as outlined in the current Plan.	Short-Term (1 to 3 years)	Staff Time	Program reviews are detailed in the SN ERP. The current SN ERP is dated 2021. Components of the Plan are not being fulfilled—updating of contacts, reviewing of Annexes, and exercising. Industry best practice is inclusion and updating on “Reviews and Revisions” page within the SN ERP.

Rec #	Recommendations	Suggested Implementation Timeline	Estimated Costs	Rationale
57	That minimum levels of training be identified for ECG members, people who staff the EOC, and people who are part of the Emergency Support Services (ESS) team. And that opportunities to attend training conferences and symposiums be identified and made available to personnel.	Short-Term (1 to 3 years)	Staff Time Government Funding	Training and exercising support developing communication in a stressful environment. Helps people to develop skills to be able to work more effectively and efficiently in times of high stress. Expanding the knowledge base of people may create opportunities to implement new technology and methods that provide greater levels of service to the community.
58	That a comprehensive public education program be created that targets the risks present in the community. And that the public education program be aligned with other education programs that exist in the community such as the Fire Prevention program.	Short-Term (1 to 3 years)	Staff Time	The current program is minimal, i.e. social media only. Preparing for an emergency is proven as a necessity during disasters. Providing support that empowers people to help themselves before an emergency is proven to have positive impacts on risks. Funding for programs is accessible.

Rec #	Recommendations	Suggested Implementation Timeline	Estimated Costs	Rationale
Section 6 – Mutual Aid, Automatic Aid and Fire Service Agreements				
59	The departments that make up the Brant County Mutual Aid Plan have at least an annual training session to test the capabilities of the Brant County Mutual Aid Plan.	Short-Term (1 to 3 years)	Staff Time	The firefighters would get acquainted with the equipment of other departments. These combined training sessions would also build the working relationship and morale between fire departments.
60	When the current agreements are revised and updated, a defined commitment to regular training will be included in the agreements.	Short-Term (1 to 3 years)	Staff Time	The main benefit of mutual training sessions is the identification of gaps in equipment, communications, or training before a real emergency. When an actual fire or emergency occurs, the firefighters are ready for the challenge.
Section 7 – Finance				
61	The Fire Chief should annually review the First Nation Fire Protection Strategy to ensure SNFES programs and services align with the minimum expectations.	Short-Term (1 to 3 years) Or lifecycle of document	Staff Time	As one of the defining documents set by ISC, SNFES programs will be compared to the expectations within it, hence having fire department programs that align will assist with funding needs.

Rec #	Recommendations	Suggested Implementation Timeline	Estimated Costs	Rationale
62	The Fire Chief should develop a financial report that separates ISC funded programs from non-funded programs.	Short-Term (1 to 3 years)	Staff Time	To ensure maximum funding is received, SNFES should track applicable programs separately.
63	The Fire Chief should review the station location study completed and develop a funding strategy to implement it in a timely manner.	Short-Term (1 to 3 years)	Staff Time Costs dependent on feasibility study and stations building costs	Funding opportunities may lag in comparison the need for any new station construction, meeting all program criteria should expediate processing.
64	SNFES should review the apparatus replacement plan and update accordingly with specifications and expected pricing.	Immediate (0 to 1 year)	Staff time; costs for four units may range from $5M to $6M in total	With four apparatus set for replacement in 2026 a priority should be made to guarantee ISC funding if available or acquire other revenues if necessary.

Rec #	Recommendations	Suggested Implementation Timeline	Estimated Costs	Rationale
65	SNFES should review the radio, SCBA and PPE replacement plan and ensure that all potential funding opportunities are assessed.	Short-Term (1 to 3 years)	Staff time; unit costs dependent upon actual unit costs at time of order	There should be a focus on ensuring funding is available or that all potential funding streams are reviewed and applied for. And that all equipment is replaced on a regular cycle as recommended by the NFPA and/or supplier.
Section 8 – Finance				
66	The Six Nations Fire & Emergency Services have a Fire Underwriters Survey (FUS) completed on their department.	Short-Term (1 to 3 years)	Staff Time	Could lower the cost of insurance for the citizens of the Six Nations of the Grand River.

Appendices

A Five-Step Staffing Process

B FUS Technical Document on Elevated Devices

C SNFES SWOT Results

Emergency Management Group

APPENDIX A: FIVE-STEP STAFFING PROCESS

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

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

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

Step 2: Time Demand

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

- Local nuances
- Resources that affect personnel needs

Plan Review - Refer to Plan Review Services Table A.7.9.2 of the standard to determine Time Demand.

Step 3: Required Personnel Hours

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

- Development/preparation
- Service
- Evaluation

- Commute
- Prioritization

Step 4: Personnel Availability and Adjustment Factor

Average personnel availability should be calculated, taking into account the following:

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

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

Step 5: Calculate Total Personnel Required

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

Correct calculations based on the following:

(1) Budgetary validation

(2) Rounding up/down

(3) Determining reserve capital

(4) Impact of non-personnel resources (materials, equipment, vehicles) on personnel

More information on this staffing equation can be found within the National Fire Protection Association 1730 standard. The Fire Prevention should assess the previous five steps and evaluate their present level of activity and the future goals of the Branches.

APPENDIX B: FUS TECHNICAL DOCUMENT ON ELEVATED DEVICES

Fire Underwriters Survey™

TECHNICAL BULLETIN

FIRE UNDERWRITERS SURVEY™

A Service to Insurers and Municipalities

LADDERS AND AERIALS: WHEN ARE THEY REQUIRED OR NEEDED?

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

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

Fire Underwriters Survey

Ladder/Service company operations are normally intended to provide primary property protection operations of

1.) Forcible entry;
2.) Utility shut-off;
3.) Ladder placement;
4.) Ventilation;
5.) Salvage and Overhaul;
6.) Lighting.

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

The needed length of an aerial ladder, an elevating platform and an elevating stream device shall be determined by the height of the tallest building in the ladder/service district (fire protection area) used to determine the need for a ladder company. One storey normally equals at least 3 metres (10 feet). Building setback is not to be considered in the height determination. An allowance is built into the ladder design for normal access. The maximum height needed for grading purposes shall be 30.5 metres (100 feet).

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Western region 1-877-255-5240
Central region 1-800-268-8080
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fus@optaintel.ca
fireunderwriters.ca
optaintel.ca

Exception: When the height of the tallest building is 15.2 metres (50 feet) or less no credit shall be given for an aerial ladder, elevating platform or elevating stream device that has a length less than 15.2 metres (50 feet). This provision is necessary to ensure that the water stream from an elevating stream device has additional "reach" for large area, low height buildings, and the aerial ladder or elevating platform may be extended to compensate for possible topographical conditions that may exist. See Fire Underwriters Survey - Table of Effective Response (attached).

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

NFPA

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

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

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

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

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

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

LOW-HAZARD OCCUPANCIES (one-, two-, or three-family dwellings and scattered small businesses and industrial occupancies):

At least two pumpers, one ladder truck (or combination apparatus with equivalent capabilities), one chief officer, and other specialized apparatus as may be needed or available; not fewer than 12 firefighters and one chief officer.

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

Excerpt: National Building Code 2012

A-3 Application of Part 3.

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

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

Firefighting Assumptions

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

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

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

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

The requirements of Subsection 3.2.3. are intended to prevent fire spread from thermal radiation assuming there is adequate firefighting available. It has been found that periods of from 10 to 30 minutes usually elapse between the outbreak of fire in a building that is not protected with an automatic sprinkler system and the attainment of high radiation levels. During this period, the specified spatial separations should prove adequate to inhibit ignition of an exposed building face or the interior of an adjacent building by radiation. Subsequently, however, reduction of the fire intensity by firefighting and the protective wetting of the exposed building face will often be necessary as supplementary measures to inhibit fire spread.

In the case of a building that is sprinklered throughout, the automatic sprinkler system should control the fire to an extent that radiation to neighbouring buildings should be minimal. Although there will be some radiation effect on a sprinklered building from a fire in a neighbouring building, the internal sprinkler system should control any fires that might be ignited in the building and thereby minimize the possibility of the fire spreading into the exposed building. NFPA 80A, "Protection of Buildings from Exterior Fire Exposures," provides additional information on the possibility of fire spread at building exteriors.

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

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

Western Canada	Quebec	Ontario	Atlantic Canada
Fire Underwriters Survey	Fire Underwriters Survey	Fire Underwriters Survey	Fire Underwriters Survey
3999 Henning Drive	255, boul. Crémazie E	175 Commerce Valley Drive, West	238 Brownlow Avenue, Suite 300
Burnaby, BC V5C 6P9	Montreal, Quebec H2M 1M2	Markham, Ontario L3T 7P6	Dartmouth, Nova Scotia B3B 1Y2
1-800-665-5661	1-800-263-5361	1-800- 268-8080	1-877-634-8564

APPENDIX C: SNFES SWOT RESULTS

Fire Station SWOT

Strengths	
What is good about the fire stations? • Station 1 is well set up • Assigned personnel • Fire equipment ex. Fire trucks • Rotations of apparatus for even use • Station 1 & 5 – space to house personnel on a daily basis • Station 5 – training station • Station 1 is less than 10 years old and is a very modern hall and we are constantly improving it. • The outlying halls spread out our volunteer response	What is the strongest asset of each fire station? • Station 1 – Design of the station is good. • Availability of service vehicles • Central locations throughout reserve aside from Northeast corner with loss of Stn. 3. Station 1 is newer hall with pull through bays. Station 5 is great training facility with new renovations and live burn facility. • Extra apparatus • Volunteer operators consistently showing up for calls • Personnel at station 1 • The apparatus located at each station • The outlying halls allow volunteer to be quicker due to them being spread out • Station 5 has the training academy and training props on site • Station 1 is very modern, and has the gym and patio for health and wellness

Weaknesses	
What weak fire station things do we have? • Aging infrastructure • Security • Not manned 24\7 • Not enough locker room space • Small gym • Small kitchen • Lack of sleeping quarters • Location of each station • Because we are continually growing the main hall is starting to become crowded.	What parts of the Six Nations FD fire stations are least performing? • Station 1 – outdoor patio area • (Station 1) Size – limited space for the growth of the department and its needs. • Outlying stations only getting attention once a week by on duty crews. • In service trucks at station 5? • Areas for bunker gear • Station. 1 sleeping quarters upstairs not isolated from bays so potential for CO and emissions to enter sleeping area. • Lack of terminals and access to computers and fire dept software and information. • No air filtering and recycling system where bunker gear is stored and washed. • No separation between wash area for clothes and bunker gear. • Bay doors failing • Alarms getting tripped • Station 3 – closed • Station 5 – needs to be expanded and improved to be highly functional • Exhaust capture at all stations • Available office spaces • The outlying halls need to have the volunteer come and take care of their trucks and halls to ensure they have some buy in to the buildings.

Opportunities	
What are the current trends related to fire stations? • Single truck per bay • Fire poles from 2nd story • Technology advancements • Health & safety • Failing components, bay doors, alarms etc. • Vandalism • Complete exhaust capture for all trucks • Larger fitness rooms • Saunas • Individual sleeping rooms • Single level stations • Drive through bays • Separate gear rooms vented • Containment of exhaust from work areas • The adoption of smart technology for real-time monitoring and response optimization, the integration of green building practices for environmental sustainability, the use of community-centric approaches that enhance engagement and education around fire safety	What can we do to improve the fire stations? • Utilize station 1 as admin headquarters. Build additional stations in more optimal locations, to provide even coverage via response times. • Repairs to station 3 • Larger briefing and dinner table, better gym equipment • Stay up to date with the changing times and new technology and developments • Better air ventilation systems for truck bays, gear storage lockers and wash area. Bifold doors aside from roll up, faster opening closing for response time, more durable and less maintenance. New location and hall for Station 3. Potential second full time hall on other side of river or reserve. New props and burn tower for Station 5 to match new developments on the reserve. • Volunteer assigned to stations participation • Add more space to Station 1 for above mentioned items • Another burn bldg. • Storage facility outside • Separate garage for training truck • Keep them up to date ex. Cameras for security

Threats
What external factors exist that may negatively affect the FIRE STATIONS • Volunteer stations are unmanned • Poor security • Damage to station 3 • Maintenance costs • New developments and construction through reserve increasing response times from Station 1 specifically. No Station 3 increasing response times. • Lack of funds • Lack of space available to expand • Stations are small and outdated • They need to be updated as both station 2 and 4 do not have working washrooms

Fleet SWOT

Strengths	
What is good about the fleet?	What is the strongest asset of the fleet?
• Up-to-date • low hours on the trucks • Command vehicles there if needed • Apparatus at station #1 are outfitted with good reliable equipment tailored to our needs. • Main frontline trucks are newer • Have a rescue, aerial, pumper and tanker as frontline • Are set up to function as needed • We have a very modern fleet and have trucks as backups in case one goes down.	• After assessing the needs of each front line apparatus, the appropriate equipment has been purchased. • Providing efficient operations and responsiveness to any particular situation • Newer frontline trucks and good variety between trucks • Having 4 trucks available ready to go at station 1 • The diversity of equipment between 611/619 allow us the ability to effectively respond to a multitude of call types. Customized hose/appliance and nozzle loadouts for multiple fire attack strategies • New equipment i.e. nozzles, hoses. • Well maintained front line and volunteer trucks • Pumper 1 – set up to act as an pumper with multi options to deliver water as needed via various appliances and methods • At our main station all our front-line trucks are less then 10 years old • We also have monthly apparatus checks where issues are fixed

Weaknesses	
What fleet related weaknesses do we have?	What apparatuses are least performing?
• Lots of trucks but not a lot of experienced operators • Sawtooth truck completely unused. Waste of money • If front line trucks are down, we have to rely on old trucks from volunteer stations • Have to go to station 5 to get marine 1 or defender if needed • Old tools/equipment at outlying stations • Need to replace 3 pumpers – old • Constant mechanical failures on frontline trucks • Trucks are not all the same – in terms of brand/model • Ability to repair trucks easily locally or on site	• Ongoing truck issues. (Ie. Foam not working, mechanical issues, etc.). • All front-line apparatus differ from an operator perspective. Tank capacity, pump capacity, discharge and intake locations/capabilities). • Little trucks are aging out i.e.. Admin/support • Lacking adequate admin support vehicles / FPO / Training • Some major defects with back up trucks at doors broken at Station 4 so only tanker at hall. Back up trucks not standard.

Opportunities	
What are the current trends related to fire apparatus?	What can we do to improve the department fleet?
• Electric vehicles • Faster, bigger tanks on front line trucks • Progression, making our loadouts more advanced and efficient. • Oil leaks • Foam issue • Rear hose beds • Smaller water tanks • Customization and modular designs are gaining popularity, allowing departments to tailor apparatus to specific operational needs. Additionally, there is an increased focus on firefighter safety features, such as crew cab configurations, improved stability systems, and safety monitoring technologies. Furthermore, the adoption of smart technology for maintenance scheduling and real-time performance monitoring is becoming more prevalent, helping improve the longevity and reliability of fire apparatus	• Marine could be stored at Chiefs wood Park, storage building needed. • Find funding for newer more fuel-efficient vehicles. Standardize trucks and procure new trucks to replace back up trucks. • Have two different vehicles ready to go with marine 1 and defender so we access them quick in an emergency. If both set at station 1 would be ideal. • Invest in new apparatus for volunteer halls. • More DZ operators • More response trucks at station 5 or even move towards reopening station 3 in the future. • Make all frontline engines the same – layout, model, equipment so that they can be rotated from station to station. Crews can also work on each truck with consistency. • New car 2 • Add a Tiller aerial truck (quint) • Add a heavy rescue with no pump or water tank • Add an EVT mechanic on staff • Dedicated training pumper and aerial truck. • Engaging with firefighters for feedback on fleet needs and efficacy can ensure the vehicles meet real-world operational demands.

Threats

What external factors exist that may negatively affect the fleet?

- Electric vehicles: greater cost + concerns about capacity
- Cost of replacement, repair, maintenance
- Cost to purchase new trucks.
- Low maintenance on volunteer trucks. Road conditions may wear the trucks down over time
- Security/vandalism/theft/pest control.
- Apparatus upkeep
- Time to get trucks replaced
- Space to put the trucks that we need
- budget constraints leading to underfunding for maintenance and upgrades, increased vehicle prices due to supply chain disruptions, competition for resources with other emergency services

Equipment SWOT

Strengths	
What Is good about the equipment? • Adaptation • All-around effectiveness and efficiency • The quality of our tools and equipment is good. Fairly modern • Variety of apparatuses • Extrication equipment is battery-powered at station 1 • Multiple pieces available • Various tools/equipment to use • On our front-line trucks, we have new equipment that we maintain very well.	What is the strongest asset of equipment? • Keeping up to date with new equipment and tech • Safe and efficient to do whatever job it needs to do • Newer front-line trucks, newer technical rescue gear or including rope rescue gear. • Power of the tools, while being lightweight and accessible • A continually healthy budget for new equipment to maintain currency and reliability. • Variety of applications at station 1 • Provides for the tactics to be employed and conducted

Weaknesses	
What weak equipment(s) do we have?	What equipment(s) are least performing?
• Minimal, out of date there's new and easier ways to do things • Rescue 42's, perhaps a different quick strut system would be efficient for set up in emergencies • Hazmat response equipment is nearly nonexistent. • Gas powered extrication tools • Old apparatus • SCBA • Command system • The tools placed on the outlying halls trucks are old equipment and hardly used	• Limited number of some connections (6" to 4") on apparatus pump panels. Could benefit from having a spare on the frontline trucks. Roll up doors on frontline trucks prevent us from keeping these adaptors pre-connected. • Air chisel • All hydraulic tools • Paper forms for checks – can get lost/misplaced and edited/altered. Gaps in equipment for services to provide – tech shoring, confined space, high angle, etc. • Age of some batteries and gear lowering usage time and effectiveness. Wear from use – potential training gear separate from front line gear. Training on new gear and lack of experience and effectiveness • Marine boat, we rarely use it. We also rarely use the Hurst strong arm • Equipment on the volunteer apparatus. • Outlying station pumps • Exhaust system at station 1

Opportunities	
What are the current trends related to fire equipment?	What can we do to improve the department equipment?
• Faster, efficient and safer • Battery-operated tools • Lightweight, fast and efficient tools. Also, more thermal technology-related tools • New hose load outs and nozzles to best suit our needs. New rescue equipment to aid in low-angle rescue. • Repairs on apparatus • Anything cancer-reducing • Stress reducing • Current trends related to fire equipment include the integration of advanced technology, such as drones for aerial reconnaissance and thermal imaging cameras for enhanced visibility in smoke-filled environments. There is also a growing emphasis on lightweight, durable materials for firefighting gear, improving comfort and mobility for firefighters.	• New equipment – struts looking to be replaced which will improve on scene operations. • Find funding or raise money • Spend the budget in spots you need to improve • New gear being purchased and put in service offering more services. Purchase new gear to improve efficiency and effectiveness • Implement and document regimented maintenance on all truck tools/equipment. • More funding to maintain equipment and repair in a timely manner • Increase budget to provide for replacing/adding equipment • To improve department equipment, a comprehensive needs assessment can be conducted to identify specific gaps and areas for enhancement. Regular training and education on the use and maintenance of existing equipment can ensure optimal performance and longevity. Investing in the latest technology, such as advanced communication tools, updated firefighting gear, and modernized vehicles, can enhance operational efficiency.

Threats

What external factors exist that may negatively affect the equipment?

- Cost
- Age of equipment, rust
- Budget restrictions.
- Delayed repairs
- Lack of knowledge for full application of how to use it all
- Lack of understanding from Council on needing equipment that is requested
- Supply chain disruptions can impact the availability of replacement parts and maintenance supplies, hindering timely repairs. Budget constraints can limit the ability to purchase or upgrade equipment, leading to reliance on outdated technology. Safety regulations and compliance requirements may also necessitate modifications or replacements, creating financial and logistical challenges. Lastly, improper storage and handling practices by personnel can lead to equipment damage or misuse, reducing its effectiveness in critical situations.

Suppression SWOT

Strengths
What is good about Suppression Division? • Career staffing • The crews are a tight family • Equipment and apparatus of station 1. Hose loadouts based on attack/deployment strategies. • Trained and experienced staff. • Good strategic plan of action. • Crew effectiveness What is the strongest asset of Suppression Division? • Competent, eager staff – career and volunteers • Hoses and nozzles, quantity and quality • New policies for pulling both transverse lines for structure fires • Training of our personnel • Ability to work as a team on scene • Multiple apparatus and water supply • A foam deluge system

Weaknesses

What Suppression Division-related weaknesses do we have?

- New employees and lack of experience
- High turnover rate
- Sometimes minimal staffing at scenes
- Staffing levels are low
- Older pumpers
- Lack of added Captain on each shift
- Low pay compared to other cities
- Inconsistent pay periods

What of Suppression Division are least performing?

- Succession planning
- Retention
- Training
- Standardize all trucks
- Aerial truck does not get used much
- Lack of foam on front line truck
- Volunteer response
- Some senior firefighters – lack of leadership to junior FF's
- Some Battalion Chiefs – lack of experience and qualifications to do the job
- Low skills due to lack of experience
- Lack of foam on front line truck

Opportunities

What are the current trends related to Suppression Division?

- Tailored hose loadouts and strategies relevant to our jurisdiction
- Consistent volunteer responders
- Adapting new tactics
- Being effective and efficient
- Adopting community risk reduction approaches that focus on prevention and education alongside traditional suppression methods is gaining traction, leading to better overall safety outcomes
- Reading thermal imagers, understanding the fire and its patterns
- Finding eco-friendly and sustainable fire suppression products

What can we do to improve Suppression Division?

- Succession planning / promotion
- Hire people from community
- Small dept stays personal and can grow together as a dept. Young dept means progression through ranks
- Reduce staff attrition/turnover. Implement a competitive current pay scale.
- Consistent volunteer responders
- Increase shift sizes
- Introduce a 42-hour work week pay system to provide a salary type of system
- Add a 2nd Captain
- Add official acting captain rank
- Add 2nd station for FT staffing
- Add HR rep for FD to work at the FD
- Let the FD have their own hiring system and process apart for the current HR system
- Fostering a culture of continuous improvement and innovation within the division can empower personnel to contribute ideas and solutions.
- Find the best products to put out the fire as well as do their best to limit the spread

Threats

What external factors exist that may negatively affect Suppression Division?

- Collective agreement
- Training
- Wages
- Retention
- Low response for large scale incidents
- Greater compensation/benefits on other departments.
- Distance to outlying stations
- Funding
- HR interference in FD operations/admin business
- Department image/notoriety – public perception is skewed and needs to be improved or communicated to attract qualified and valuable candidates
- Growing infrastructure, regulatory changes or political shifts may lead to restrictions on funding or operational protocols, impacting overall efficiency and preparedness.
- Unhealthy chemicals in suppression foam can cause harm to the earth