City of Sault Ste. Marie

Fire Master Plan Update

Final Report

December 2025 – Project #23003

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Acronyms, Abbreviations, Definitions

AHJ	Authority Having Jurisdiction
ANSI	American National Standards Institute
AODA	Accessibility for Ontarians with Disabilities Act
AS&E	Academic Standards and Evaluation
ATV	All Terrain Vehicle
BCA	Building Condition Assessments
BCIN	Building Code Identification Number
BEM	Basic Emergency Management
CACC	Central Ambulance Communications Centre
CAD	Computer Aided Dispatch
CAO	Chief Administrative Officer
CEMC	Community Emergency Management Coordinator
CFAI	Commission on Fire Accreditation International
CFSEM	Comprehensive Fire Safety Effectiveness Model
CI	Critical Infrastructure
CO	Carbon Monoxide
CPC	Commission on Professional Credentialing
CPSE	Centre for Public Safety Excellence
CRA	Community Risk Assessment
CRRP	Community Risk Reduction Plan
CRTC	Canadian Radio-television and Telecommunications Commission
CTM	Critical Task Matrix
DSSAB	District of Sault Ste. Marie Social Services Administration Board
e.g.	exempli gratia, meaning “example”

E&R By-Law	Establishing and Regulating By-law
EOC	Emergency Operations Centre
EM	Emergency Management
EMCPA	Emergency Management and Civil Protection Act
EMO	Emergency Management Ontario
EMS	Emergency Medical Services (Paramedic Services)
ERFs	Emergency Response Facilities
ERP	Emergency Response Plan
ERRS	Emergency Response and Responder Safety
ERUs	Emergency Response Units
EVT	Emergency Vehicle Technician
FCI	Facility Condition Index
FF	Firefighter
FMP	Fire Master Plan
FMPU	Fire Master Plan Update
FOI	Freedom of Information
FPO	Fire Prevention Officer
FPPA	Fire Protection and Prevention Act
FSP	Fire Safety Plan
FTE	Full-Time Equivalent
FUS	Fire Underwriters Survey ™
GIS	Geographic Information Systems
HIRA	Hazard Identification and Risk Assessment
HWIN	Hazardous Waste Information Network
IAFF	International Association of Firefighters

IC	Incident Command
i.e.	id est, meaning “in essence”
IFSAC	International Fire Service Accreditation Council
IMS	Incident Management Systems
JPR	Job Performance Requirements
K	thousand
km	kilometre
KPI	Key Performance Indicator
m	metre
M	million
MAP	Mutual Aid Plan
MECG	Municipal Emergency Control Group
MNRF	Ministry of Natural Resources and Forestry
MOU	Memorandum of Understanding
MPAC	Municipal Property Assessment Corporation
MPDS	Medical Priority Dispatch System
MTO	Ministry of Transportation
MW	Megawatt
NFPA	National Fire Protection Association
NG 911	Next Generation 911
NGO	Non-Governmental Organization
NIST	National Institute of Standards and Technology
OAB	Open Air Burning
OAFC	Ontario Association of Fire Chiefs
OBC	Ontario Building Code

OFC	Ontario Fire Code
OFM	Office of the Fire Marshal
OFSS	Ontario Fire Services Standards
OHSA	Occupational Health and Safety Act
OG	Operating Guidelines
OP	Official Plan
O. Reg.	Ontario Regulation
OSTI	On-Shift Training Instructors
PC	Platoon Chief
PEO	Public Education Officers
PEOC	Provincial Emergency Operations Centre
PEOI	Public Education Officer
PFSG	Public Fire Safety Guideline
PPE	Personal Protective Equipment
PTSD	Post-Traumatic Stress Disorder
RCIP	Rural Community Immigration Pilot
RESC	Regional Emergency Services Complex
RFP	Request for Proposal
RMS	Records Management Software
RNIP	Rural Northern Immigration Pilot
RTC	Regional Training Centre
SCBA	Self-Contained Breathing Apparatus
SIR	Standard Incident Reporting
SMT	Senior Management Team
SOG	Standard Operating Guideline

SOP	Standard Operating Procedures
SRA	Simplified Risk Assessment
SSM	Sault Ste. Marie
SSMFS	Sault Ste. Marie Fire Services
TG	Technical Guideline
TO	Training Officer
TRM	Tiered Response Medical
TSSA	Technical Standards and Safety Act
ULC	Underwriters Laboratory of Canada
US	United States
VO	Vulnerable Occupancy
VON	Victorian Order of Nurses
VPR	Vulnerable Persons Registry
WSIB	Workplace Safety and Insurance Board

Executive Summary

The City of Sault Ste. Marie and its fire services initiated this Fire Master Plan (FMP) Update to provide the members of Council and fire services senior staff with an updated strategic planning framework to guide the delivery of fire protection services within the municipality.

This FMP Update has been prepared to renew and build upon the previous 2018 Fire Master Plan and to consider the identified risks and key findings of the recently completed Community Risk Assessment (CRA). The plan's recommendations, strategies, and options aim to support the Sault Ste. Marie Fire Services (SSMFS) in delivering cost-effective and efficient fire protection services that provide the best value to the community being served.

This FMP Update was informed by applicable legislation, including the Fire Protection and Prevention Act, 1997 (FPPA), Occupational Health and Safety Act (OHSA), R.S.O. 1990 and the more recently adopted Ontario Regulation 378/18 – Community Risk Assessment (O. Reg. 378/18) and Ontario Regulation 343/22 – Firefighter Certification (O. Reg. 343/22).

The FPPA requires that a municipality "establish a program in the municipality which must include public education with respect to fire safety and certain components of fire prevention; and provide such other fire protection services as it determines may be necessary in accordance with its needs and circumstances". With the introduction of O. Reg. 378/18 municipalities are now required to "use its community risk assessment to inform decisions about the provision of fire protection services".

This Fire Master Plan Update also considers the Comprehensive Fire Safety Effectiveness Model (CFSEM) developed under the leadership of Ontario's Office of the Fire Marshal (OFM). This includes a fire protection planning strategy known as the 'Three Lines of Defence'. This strategy prioritizes prevention and fire safety education and considers the need for fire suppression as the final line of defence, or 'fail-safe' response. The three lines of defence include:

1. Public Education and Prevention.
2. Fire Safety Standards and Enforcement.
3. Emergency Response.

The analyses within this FMP Update present findings that indicate the SSMFS is very proactive in optimizing the use of the first two lines of defence (including the delivery of public fire-safety education and fire prevention programs, including proactively applying

and enforcing fire safety standards). The recommendations within this FMP Update seek to enhance these programs and services by ensuring alignment with the risks and findings identified within the recently completed CRA.

To further assist Council in the decision-making process, the framework presented within this FMP Update proposes the adoption of the following strategic priorities:

i. The use of a Community Risk Assessment in determining the level of existing fire safety risks within the City as the basis for developing clear goals and objectives for all fire and emergency services to be provided by the Sault Ste. Marie Fire Services.
ii. The optimization of the first two lines of defence, including public education and fire prevention, and the use of fire safety standards and fire code enforcement to provide a comprehensive fire protection program within the City based on the results of the Community Risk Assessment; and
iii. Emphasis on strategies, such as continuous improvement, that support the sustainability of fire and emergency services that provide the most effective and efficient level of fire protection services, resulting in the best value for the community.

The analysis presented within this FMP Update also includes proposed strategies and recommendations for consideration in responding to the new Ontario Regulation 343/22 – Firefighter Certification (O. Reg. 343/22) that will begin to come into effect on July 1, 2026. This new regulation requires mandatory training certification for fire service personnel based on the mandatory transition to the utilization of National Fire Protection Association (NFPA) training standards in Ontario.

The emergency response analysis and fire suppression strategies and options presented within the FMP Update recognize that different firefighter deployments are required according to the fire risk present within certain building occupancy types. The risk-based methodology focuses on applicable performance measures based on the initial response (initial responding apparatus and number of firefighters), depth of response (total number of firefighters responding), and rural response. Options are presented for Council's consideration to continuously improve the response capabilities of the fire service, in comparison to industry performance measures and best practices.

As a strategic planning tool intended to guide the delivery of fire protection services over the next ten-year community planning horizon, it is expected that the Fire Chief will continuously bring forward reports, work plans, projects, and budget requests informed by the FMP Update for consideration, approval, and implementation.

1.0 Introduction

Dillon Consulting Limited (Dillon) completed a Comprehensive Risk Assessment and Fire Master Plan (FMP) for the City of Sault Ste. Marie in March 2018 to assess the delivery of fire protection services provided by the Sault Ste. Marie Fire Services (SSMFS). A best practice within the industry is to review and update a 10-year strategic planning document, such as the 2018 Fire Master Plan, at the midpoint or five-year mark. Since the completion of the City's Comprehensive Risk Assessment in 2018, the Province of Ontario introduced new legislation (Ontario Regulation 378/18: Community Risk Assessments) requiring all municipalities in Ontario to prepare a Community Risk Assessment (CRA) by July 1, 2024, which complies with the legislated format. Tayport Limited, in association with Dillon, was retained to review and update the 2018 FMP, and revise the Comprehensive Risk Assessment into a legislatively compliant and updated Community Risk Assessment (CRA). The Community Risk Assessment directly connects to the Fire Master Plan Update, as the findings of the CRA outline the needs and circumstances of the City to inform the decisions about providing fire protection services. This FMP Update also provides consideration for Community Risk Reduction (CRR) strategies, based on the risks identified in the CRA. A CRR strategies include practices, programs, actions, and resource needs relating to education, enforcement, engineering, economic incentives, and emergency response to avoid, mitigate, transfer, or accept the identified community risks.

This Fire Master Plan Update (FMPU) has been developed for the City of Sault Ste. Marie to provide Council with a strategic planning framework to inform the delivery of fire protection services over the next ten-year community planning horizon, including a long-term vision and systematic approach for implementation. The legislatively compliant and updated CRA is presented under separate cover, however, the identified **key risks** and **key findings** of the CRA are presented within this FMP Update to assist Council in developing community risk reduction strategies. As an update, this plan also reviews and validates the remaining recommendations of the 2018 FMP, addresses current challenges, recognizes department successes, and provides options for consideration as the department strives for continuous improvement into the future.

Analyses of the existing fire protection services provided by the Sault Ste. Marie Fire Services has been conducted by reviewing compliance with the *Fire Protection and Prevention Act* (1997), the *Occupational Health and Safety Act*, R.S.O. 1990 (OHSA), consideration of current industry best practices, including recognized guidelines and standards, and municipal fire risk.

At this point, five years after the global COVID-19 pandemic, fire services are beginning to look back on the past few years of data and experiences and reflect on the impacts of COVID-19. This FMP Update reviews the data from 2017 to 2023, providing a review of the impacts and changes that have occurred as a result.

The City has experienced changes since 2018, including social, economic, and demographic shifts. These changes have led to different community needs, demands for services, local circumstances, and fire-related risks. This FMP Update reviews the existing locations of the current SSMFS stations relative to service demands and considers the number and locations of stations within the context of established industry standards and best practices. This process, informed by the findings of the updated CRA, reviews and updates the findings of the 2018 FMP.

This FMP Update provides an objective analysis of local **"needs and circumstances"** as defined by the FPPA to support decision-making with respect to community fire protection and prevention programs and services. The development of this FMPU recognizes the continued commitment of the City's Council and senior municipal staff in striving to achieve the most effective and efficient level of fire protection services, resulting in the best value for the community.

1.1 Municipal Overview

The City of Sault Ste. Marie (City or SSM) is one of the key regional centres located in Northern Ontario, found in the Algoma District, as shown in **Figure 1**. Sault Ste. Marie (colloquially known as "the Soo") is a border city to the United States, which shares its name. Located on the St. Marys River, which spans Lake Superior and Lake Huron, the City has a long history (including an Anishinaabe meeting place and a European trading post).[1] Sault Ste. Marie became well developed before and after World War II, largely because of the growth in the steel industry. The steel economy required a freight system to ship steel to the United States and elsewhere in Canada.[2] Today, Sault Ste. Marie has two rail lines, which are operated by Canadian National and Canadian Pacific Railways, and has an economy that remains connected, in part, to the steel industry.

[1] City of Sault Ste. Marie. (2017). *Local History*. Retrieved January 15, 2018, from City of Sault Ste. Marie: http://saultstemarie.ca/City-Hall/City-Departments/Community-Development-Enterprise-Services/Community-Services/Recreation-and-Culture/Historic-Sites-and-Heritage/Local-History.aspx

[2] Wikipedia. (2018, January 11). *Sault Ste. Marie, Ontario*. Retrieved January 15, 2018, from Wikipedia: https://en.wikipedia.org/wiki/Sault_Ste._Marie,_Ontario

The City of Sault Ste. Marie is approximately halfway between Toronto and Thunder Bay (700 km to each metropolis). The closest major Canadian city is Sudbury, located over 300 kilometres from Sault Ste. Marie to the east. As such, Sault Ste. Marie is a key regional and economic centre located centrally in Northern Ontario. Its immediate neighbours include Prince Township to the northwest (2021 Census population of 975), the Algoma District to the north, and Batchewana First Nation (referred to as Rankin Location 15D by Statistics Canada) to the east.[3] Similar to other metropolitan centres in Northern Ontario, the City is a hub that stands alone in the region.

Based on data released by Statistics Canada in 2024, the City's estimated 2022 population was 76,014[4] and the estimated 2023 population was 78,574[5]. The population as of 2021 was 72,051 (2021 Census Subdivision). The 2021 population reflects a decrease in population compared to other recent Census years (-1.8% decrease from 2016). However, the 2022 and 2023 estimates indicate population growth of 1,335 and 2,560 persons, respectively.

The City's population is dispersed across a large geographic area of 221.99 square kilometres (2021 Census Profile). As much of this area is rural in nature, this results in an overall population density of 324.6 people per square kilometre (2021 Census Profile). The majority of the population resides within the Urban Settlement Area boundary, which the City's Official Plan defines. The rural area includes natural features like forested areas and wetlands, agricultural lands, clusters of residential development, the airport, and aggregate resource extraction sites.

The City is served by four existing fire stations strategically located throughout the Urban Settlement Area of the City. The locations of the station are presented in **Figure 1**.

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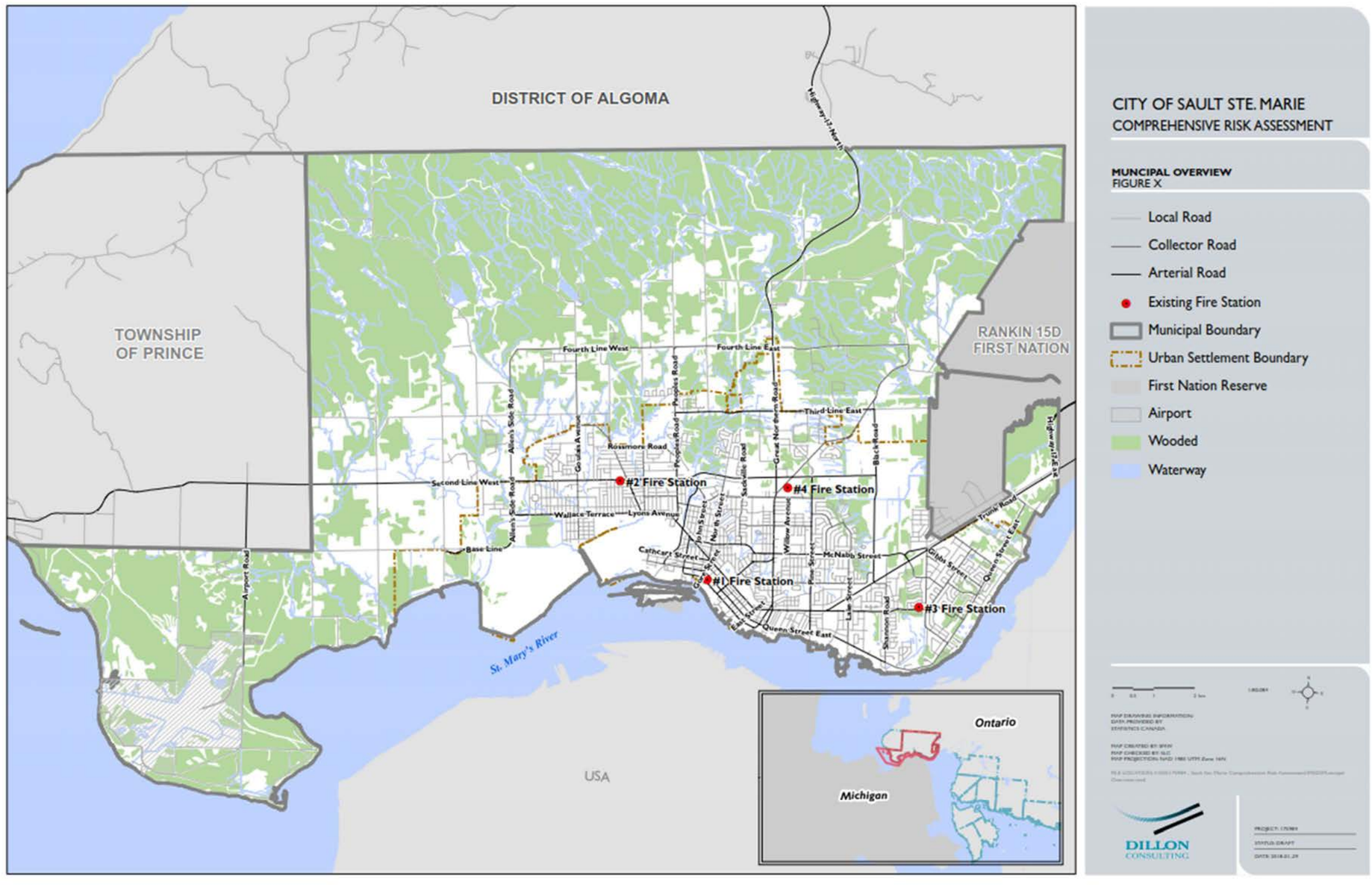
[3] According to the 2021 Census, the Algoma District (North Part) has a population of 6,050 people over a land area of 43,618.95 square kilometres. No 2021 Census population data is available for Rankin Location 15D.

[4] According to Statistics Canada. Table 17-10-0155-01 Population estimates, July 1, by census subdivision, 2021 boundaries. Retrieved May 30, 2024 from: https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1710015501

[5] According to Statistics Canada. Table 17-10-0155-01 Population estimates, July 1, by census subdivision, 2021 boundaries. Retrieved May 30, 2024 from: https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1710015501

Figure 1: Municipal Overview of Sault Ste. Marie



1.2 Department Overview

The SSMFS currently delivers fire protection services through an organizational structure that includes three primary divisions, including administration, fire prevention and operations. For the purposes of this fire master planning process analysis of the SSMFS is presented by core function. This strategy provides the opportunity for a more comprehensive analysis. The core functions of the SSMFS for the delivery of fire protection services are presented as follows:

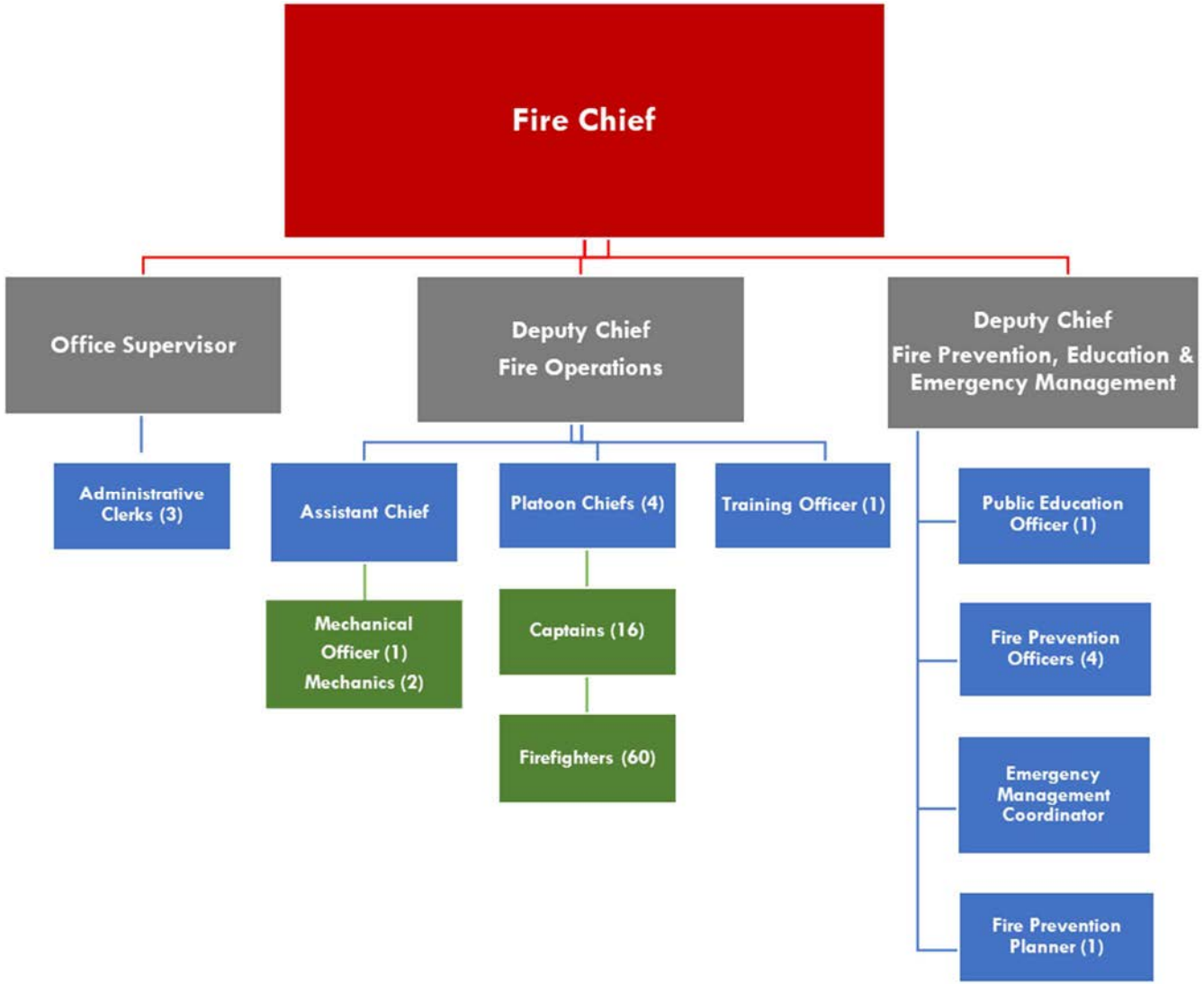
- Administration;
- Fire Prevention/Public Education;
- Emergency Management;
- Training;
- Fire Suppression/Operations;
- Stations, Apparatus and Equipment; and
- Communications.

The SSMFS is recognized within the industry as being a “Career Fire Department”. This definition is based solely on the fire suppression deployment capabilities of the fire service that utilizes career (full-time) firefighters who are immediately available to deploy full-time firefighters, comprising at least 50% of an initial full alarm assignment. Currently, the SSMFS utilizes only full-time firefighters; therefore, the current fire suppression deployment model is 100 percent comprised of full-time firefighters.

1.2.1 Current Organizational Model

The current organizational model of the SSMFS is presented in **Figure 2**. This figure illustrates the organizational structure of the SSMFS as of July 2025.

Figure 2: SSMFS Existing Organizational Structure



The current total staffing complement of the SSMFS includes 99 full-time staff, as listed in **Table 1**. More information on staffing to provide the core services can be found in the respective sections of this FMP Update.

Table 1: Sault Ste. Marie Fire Services Current Staffing

Division	Role	# Full-Time Staff
Administration	Fire Chief	1
Administration	Deputy Chief - Operations	1
Administration	Deputy Chief - Prevention, Education, and Emergency Management	1
Administration	Assistant Chief Support Services	1
Administration	Office Supervisor	1
Administration	Administrative Clerks	3
Operations / Fire Suppression	Platoon Chiefs	4
Operations / Fire Suppression	Captains	16
Operations / Fire Suppression	Firefighters/Communications	60
Training	Training Officer	1
Fire Prevention / Public Education	Fire Prevention Officers	4
Fire Prevention / Public Education	Public Education Officer	1
Fire Prevention / Public Education & Emergency Management	Fire Prevention Planner	1
Emergency Management	Community Emergency Management Coordinator	1
Fleet / Maintenance	Mechanical Officer	1
Fleet / Maintenance	Mechanic	2
SSMFS	**Total Staffing:**	**99**

2.0 Related Plans and Reports

The City of Sault Ste. Marie has several interconnected planning documents. The City and its fire service have also prepared or received background reports assessing the programs and services of the SSMFS. The following identifies background documents that have informed this FMP Update.

- Corporate Strategic Plan (2024-2027)
- Official Plan (and Draft Official Plan)
- Zoning By-Law
- Emergency Response Plan
- 2015 Fire Services Organizational Realignment Report
- 2017 Review of Fire Protection Services by the Office of the Fire Marshal and Emergency Management.

2.1.1 2018 Fire Master Plan

As introduced in Section 1.0, this Fire Master Plan Update is intended to review the status of the 2018 Fire Master Plan recommendations. **Table 2** lists the Council Recommendations from the 2018 FMP and the current status. **Table 3** lists the operational recommendations and current status.

Table 2: 2018 Council Recommendations and Current Status

Rec. No.	2018 Fire Master Plan - Council Recommendation	2025 Status
1	That the strategic priorities identified within the proposed Fire Service Master Plan be adopted to form the strategic framework for the delivery of fire protection services within the City of Sault Ste. Marie including: i. The utilization of a Comprehensive Risk Assessment in determining the level of existing fire safety risks within the municipality as the basis for developing clear goals and objectives for all fire and emergency services to be provided by the Sault Ste. Marie Fire Services;	These strategic priorities remain relevant and have been carried forward to guide the FMP Update.

Rec. No.	2018 Fire Master Plan - Council Recommendation	2025 Status
	ii. The optimization of the first two lines of defence, including public education and fire prevention, and the utilization of fire safety standards and fire code enforcement to provide a comprehensive fire protection program within the City based on the results of the Comprehensive Risk Assessment; and, iii. Emphasis on strategies that support the sustainability of fire and emergency services that provide the most effective and efficient level of fire protection services resulting in the best value for the community.	
2	That the proposed public fire safety education activities and program cycle objectives be included within the proposed Fire Prevention Policy and proposed Establishing and Regulating By-Law.	In progress
3	That the proposed fire inspection cycle objectives be included within the proposed Fire Prevention Policy and proposed Establishing and Regulating By-Law.	Contained in Operating Guideline
4	That the proposed Fire Prevention and Public Education staff resource plan presented within the proposed FMP be considered for implementation.	Considered. New Fire Prevention Planner hired
5	That Council consider a reorganization of the Emergency Management staff resources and functions as referenced within the FMP.	In progress
6	That the Council of the City of Sault Ste. Marie approve the Fire Suppression Model – Option 3 included within the proposed Fire Master Plan as the preferred operating model for the SSMFS including a minimum of fifteen firefighters on duty at all times and the proposed three fire station location model.	Completed the staffing component but maintained four stations.
7	That the proposed Fire Suppression Performance Benchmarks included within the Fire Master Plan be approved including:	Approved benchmarks, however,

Rec. No.	2018 Fire Master Plan - Council Recommendation	2025 Status
	I. The Sault Ste. Marie Fire Services will strive to achieve a deployment of six firefighters arriving on scene within a 14-minute travel time to all structural fires within the defined rural area of the City; II. The Sault Ste. Marie Fire Services will strive to achieve an initial deployment of four firefighters arriving on scene within a four-minute travel time to all structural fires within the defined urban area of the City; and III. The Sault Ste. Marie Fire Services will strive to achieve an initial depth of response deployment of 14 firefighters arriving on scene within an eight-minute travel time to all structural fires occurring within identified moderate risk occupancies located in the defined urban area of the City.	Stations 3 and 4 have frontline units with three firefighters.
8	That the City of Sault Ste. Marie conduct a comprehensive review of the radio system infrastructure replacement requirements of the SSMFS.	Complete, new P25 digital system
9	That the City of Sault Ste. Marie conduct a comprehensive review of the costs associated with sustaining the current communications centre operating model in comparison to contracting these services from another agency.	In progress. KPMG completed a review of shared services.

Table 3: 2018 Operational Recommendations and Current Status

Rec. No.	2018 Fire Master Plan – Operational Recommendation	2025 Status
1	That the current job description for the Fire Chief be reviewed and updated as referenced in the proposed Fire Master Plan.	In progress
2	That an appointment by-law for the current Deputy Chief Fire Operations, Training and Logistics be developed and presented to Council for consideration and approval.	Completed
3	That the current job description for the Deputy Chief Fire Operations, Training and Logistics be reviewed and updated as referenced in the proposed Fire Master Plan.	Completed
4	That an appointment by-law for the current Deputy Chief- Education/Prevention and Emergency Management be developed and presented to Council for consideration and approval.	Completed
5	That the current job description for the Deputy Chief – Education/Prevention and Emergency Management be reviewed and updated as referenced in the proposed Fire Master Plan.	Completed
6	That consideration be given to improving the administrative workspace as identified within the proposed Fire Master Plan.	Completed
7	That subject to Council's consideration and approval of the proposed Fire Master Plan that the Establishing and Regulating By-law be updated and presented to Council for approval.	Completed
8	That the Fire Chief be directed to implement a regular process for the review of all applicable fire protection services by-laws.	Completed
9	That the Fire Chief be directed to review the current user Fee and Service Charge By-law #2016-180 and	Completed

Rec. No.	2018 Fire Master Plan – Operational Recommendation	2025 Status
	provide additional information for Council's consideration to expand the scope of services included.	New user fees and recoveries activated
10	That the SSMFS implement the framework for the utilization of department policies, operating guidelines and department memorandums referenced within the proposed Fire Master Plan.	In progress
11	That the SSMFS implement the proposed Operating Guideline Committee referenced within the proposed Fire Master Plan.	In progress, Deputy Chief of Operations works with suppression to update Operating Guidelines
12	That By-law #90-90 - To Establish the Retention Period of Documents and Records of the Corporation be reviewed and updated, including revisions to Schedule 20 regarding the SSMFS.	Completed. Corporate update
13	That the SSMFS continue to present an Annual Report to Council and the community including the findings of an annual review of the Comprehensive Risk Assessment.	Completed each year.
14	That the SSMFS replace the current Simplified Risk Assessment with the framework of the comprehensive risk analyses model.	Always in progress
15	That the draft Fire Prevention Policy be updated and presented to Council for consideration and inclusion within the proposed Establishing and Regulating By-law as an appendix.	Not completed
16	That department Notice #300-01 – Pre-Fire Plans be replaced with a comprehensive operating guideline	In progress

Rec. No.	2018 Fire Master Plan – Operational Recommendation	2025 Status
	informed by the findings of the Fire Master Plan and Comprehensive Risk Assessment	
17	That an Operating Guideline be developed for the SSMFS home smoke alarm, carbon monoxide alarm and home escape planning program, and that this program be included within the proposed Fire Prevention Policy and proposed Establishing and Regulating By-Law.	In progress
18	That the SSMFS develop an operating guideline to define the process of tracking all public fire safety information distributed to the public in response to legislative requirements of the FPPA and for inclusion within the Annual Report.	completed
19	That the SSMFS continue to prioritize the delivery of seniors (aged 65 and over) public education programs as referenced within the proposed Fire Master Plan.	Completed, Project ASAP
20	That the proposed public fire safety education activities and program cycle objectives be included within the proposed Fire Prevention Policy and proposed Establishing and Regulating By-Law.	Completed
21	That the SSMFS develop a consolidated Operating Guideline containing the goals and objectives for all services related to vulnerable occupancies within the City.	Not completed
22	That the SSMFS develop a comprehensive strategy for managing false alarm calls that includes additional public education, enhanced routine fire inspections and the implementation of user fees as referenced within the proposed FMP, and further that cost recovery be included in the Establishing and Regulating By-law.	Completed, new recovery put in place, letter sent to owner
23	That the SSMFS develop a department Operating Guideline for responding to requests and complaints as referenced within the proposed FMP.	Completed – Operating Guideline

Rec. No.	2018 Fire Master Plan – Operational Recommendation	2025 Status
24	That consideration be given to updating the City's flood plain mapping as part of the next Hazard Identification and Risk Assessment (HIRA) review process.	HIRA review complete, preparing the mapping was determined to be too costly
25	That the SSMFS consolidate the current firefighter training initiatives into one Comprehensive Training Program including performance goals and objectives to be defined within a consolidated Operating Guideline.	In progress, training goals are to meet mandatory certs
26	That the SSMFS complete additional research and consultation with external organizations to identify options for the delivery of water-related technical rescues as referenced within the FMP.	Shore-based only, in progress
27	That the SSMFS conduct a review of the current Tiered Response Agreement for medical calls to ascertain if any revisions can be made to reduce the response of fire suppression staff.	In progress, new medical director, training in place
28	That the SSMFS develop one comprehensive operating guideline for responses to the Sault Ste. Marie Airport.	Completed
29	That the SSMFS develop a Business Plan for Council's consideration in developing a Training Centre including the capability of "live fire" training as presented within the FMP.	In progress: Corporate Asset Plan study in place, this is part of the long-term plan
30	That the SSMFS further develop the current Company Officer training initiatives into a comprehensive Officer Development Program.	In progress, all officers require level 1 and 2, Command training as well

Rec. No.	2018 Fire Master Plan – Operational Recommendation	2025 Status
31	That the SSMFS consider adoption of the Blue Card Incident Command Training program to enhance its current Incident Command training program.	Tested Blue Card Command, but discontinued.
32	That the SSMFS consider developing a defined succession plan to guide the career development of all members of the SSMFS.	Completed
33	That the SSMFS review and update the Respiratory Protection Program in a comprehensive operating guideline.	Completed
34	That the SSMFS consider developing a Training Development Committee as identified within the proposed FMP.	Decided internally not to implement a committee.
35	That the SSMFS further investigate the existing emergency response capabilities of Mutual Aid and International Response Agreements to define within a department operating guideline the expected capability, capacity, reliability and compatibility of the participating agencies.	Completed, signed new international agreement in 2024
36	That the SSMFS prioritize the development and implementation of a revised call back process for off-duty firefighters including defined performance benchmarks and record management process, and that the revised call back process be monitored and evaluated to assess its efficiency and reliability as presented within the proposed FMP.	Completed, “Who’s Responding App” implemented
37	That in the absence of implementing an efficient and reliable call back process for full-time firefighters the SSMFS consider the implementation of a Composite Fire Department model as presented within the FMP.	Not required

Rec. No.	2018 Fire Master Plan – Operational Recommendation	2025 Status
38	That the SSMFS optimize the recognized "Three lines of Defence" fire protection model in prioritizing the delivery of public education, fire prevention and enforcement programs within occupancy types assigned as high risk and high-rise high risk within the Comprehensive Risk Assessment.	In-progress, ongoing programs
39	That the SSMFS develop an ongoing process for tracking and reporting all proposed fire suppression performance benchmarks for inclusion within the Annual Report to Council.	Completed
40	That the SSMFS consider adopting the Emergency Vehicle Technician Certification (EVT) for all Mechanical Division staff.	Completed, all support staff completed training
41	That the SSMFS considers transitioning to the major apparatus replacement cycle presented within the Fire Master Plan.	Completed, last large apparatus are being requested for the 2024 budget
42	That the SSMFS sustain its current complement of service ready apparatus at all times.	Completed
43	That the SSMFS develop a life cycle replacement plan for all major equipment, such as self-contained breathing apparatus and protective clothing, including manufacturers recommended life cycles.	Completed – ordered and received
44	That the City of Sault Ste. Marie prioritize the replacement of the SSMFS telephone system.	Completed, Avaya system

3.0 Fire Master Planning Process

The development of this Fire Master Plan Update has been informed by **PFSG 03-02-13 Master Planning Process for Fire Protection Services**. This includes an analysis of community fire risk and future community growth. This analysis has been utilized to inform the fire master planning process with a focus on the delivery of fire suppression services in addition to all other services and programs provided by the SSMFS, including:

- Administration (organizational structure, governance, staffing, legislation, by-laws, department policies);
- Fire Prevention & Public Education (staffing, service delivery, legislation, programs, department policies, mitigation strategies);
- Firefighter Training (staffing, organization, legislation, annual plan, department policies, specialized services, training facilities);
- Emergency Planning (staffing, emergency plan, legislation); and
- Communications (staffing, dispatch & radio systems) and Mechanics (staffing, organization, department policies, facilities).

In our view, the guiding principles of PFSG 03-02-13, including the following, are applicable to this fire master planning process:

- The residents of any community are entitled to the most effective, efficient and safe fire services possible;
- The content of existing collective agreements will be respected, and the collective bargaining process will be recognized as the appropriate channel for resolving labour relations issues under collective agreements and the Fire Protection and Prevention Act;
- Collective bargaining issues affecting public safety will be identified; and,
- Those responsible must work within these parameters in making recommendations for improving municipal fire services.

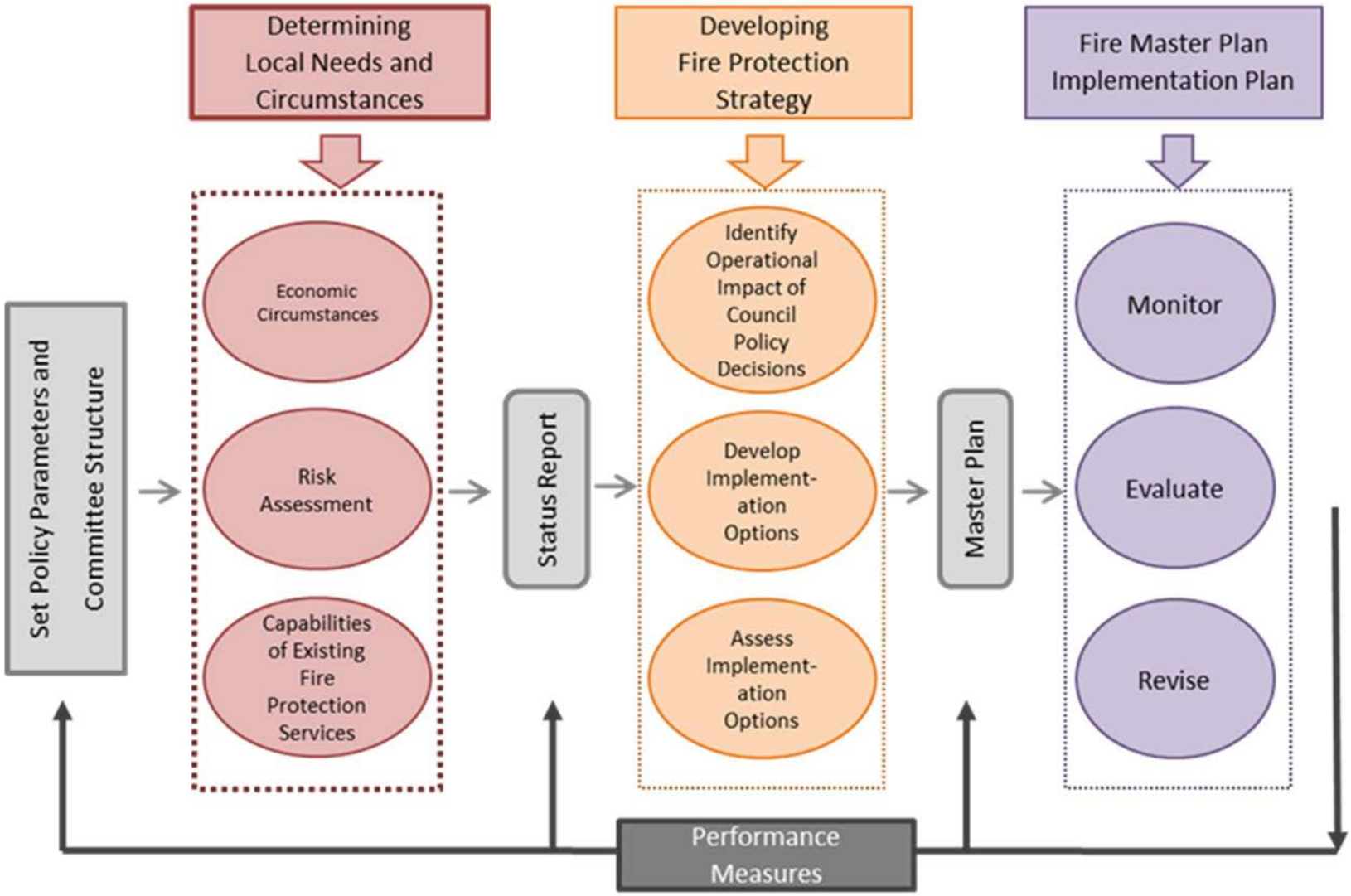
This FMP Update has also been informed by **PFSG 01-01-01 Fire Protection Review Process**, which identifies a number of factors to be considered in conducting the fire protection review process, including:

- The overall objective of any fire protection program is to provide the optimum level of protection to the community, in keeping with local needs and circumstances;

- Extensive research has demonstrated that there are a variety of factors that will have an impact on the fire department's capacity to fulfill this objective;
- Conversely, there are many different options that a municipality may pursue to improve the efficiency and effectiveness of its fire protection system;
- Local circumstances will have a profound effect on which factors are most important for any one municipality, and what options are available for its fire protection system;
- Selecting among these options is an extremely complex task; and,
- Success will require a combination of specialized expertise in fire protection and a thorough appreciation of your municipality's economic, social and political circumstances.

Figure 3 reflects the framework for developing or updating an FMP, such as the City of Sault Ste. Marie's FMP Update, to optimize public fire safety.

Figure 3: Fire Master Plan Framework



3.1 Applicable Legislation

In addition to the Community Risk Assessment, the analysis and findings of this fire master planning process have been informed by the applicable legislation including the **FPPA, 1997** the **OHSA, RSO 1990**, guidelines as authored by the **OFM**, industry standards as authored by the **NFPA**, and Dillon's knowledge of current industry best practices, as garnered from our experience in working with other municipalities across Canada.

3.1.1 Fire Protection and Prevention Act, 1997

Within the Province of Ontario, the relevant legislation for the operation of a fire department is contained within the FPPA. In addition to promoting fire prevention and public safety, the FPPA is also the Act under which the **Ontario Fire Code** (OFC) is regulated. While all legislation should be read and understood in its entirety, the following are applicable sections of the FPPA for reference purposes in this fire master planning process.

Table 4: FPPA Definitions – Part 1

Part 2	Definitions
Definitions	1.(1) In this Act, **"fire chief"** means a fire chief appointed under section 6 (1), (2) of (4); **"fire code"** means the fire code established under Part IV; **"fire department"** means a group of firefighters authorized to provide fire protection services by a municipality, group of municipalities or by an agreement made under section 3; **"firefighter"** means a fire chief and any other person employed in, or appointed to, a fire department and assigned to undertake fire protection services, and includes a volunteer firefighter; **"Fire Marshal"** means the Fire Marshal appointed under subsection 8 (1); **"fire protection services"** include fire suppression, fire prevention, fire safety education, communication, training of persons involved in the provision of fire protection services, rescue and emergency services and the delivery of all those Services; **"municipality"** means the local municipality as defined in the Municipal Act, 2001; **"prescribed"** means prescribed by regulation; and **"regulation"** means a regulation made under this Act.
Automatic Aid Agreements	(4) For the purposes of this Act, an automatic aid agreement means any agreement under which, (a) a municipality agrees to ensure the provision of an initial response to fires and rescues, and emergencies that may occur in a part of another municipality where a fire department in the municipality is capable of responding more quickly than any fire department situated in the other municipality, or (b) a municipality agrees to ensure the provision of a supplemental response to fires, rescues and other emergencies that may occur in a part of another municipality where a fire department situated in the municipality is capable of providing the quickest supplemental response to fires, rescues and other emergencies occurring in the part of the other municipality. 1997, c. 4, s. 1 (4).

Table 5: FPPA Definitions – Part 2

Part 2	Responsibility for Fire Protection Services
Municipal Responsibilities	2.(1) Every municipality shall: (a) establish a program in the municipality which must include public education with respect to fire safety and certain components of fire prevention, and (b) provide such other fire protection services as it determines may be necessary in accordance with its needs and circumstances.
Services to be Provided	(3) In determining the form and content of the program that it must offer under clause (1)(a) and the other fire protection services that it may offer under clause (1)(b), a municipality may seek the advice of the Fire Marshal.
Automatic Aid Agreements	(6) A municipality may enter into an automatic aid agreement to provide or receive the initial or supplemental response to fires, rescues and emergencies.
Review of Municipal Fire Services	(7) The Fire Marshal may monitor and review the fire protection services provided by municipalities to ensure that municipalities have met their responsibilities under this section, and if the Fire Marshal is of the opinion that, as a result of a municipality failing to comply with its responsibilities under subsection (1), a serious threat to public safety exists in the municipality, he or she may make recommendations to the council of the municipality with respect to possible measures the municipality may take to remedy or reduce the threat to public safety.
Failure to Provide Services	(8) If a municipality fails to adhere to the recommendations made by the Fire Marshal under subsection (7) or to take any other measure that in the opinion of the Fire Marshal will remedy or reduce the threat to public safety, the Minister may recommend the Lieutenant Governor in Council that a regulation be made under subsection (9).
Regulation	(9) Upon the recommendation of the Minister, the Lieutenant Governor in council may make regulations establishing standards for fire protection services in municipalities and requiring municipalities to comply with the standards.
Fire Departments	(1) A fire department shall provide fire suppression services and may provide other fire protection services in a municipality, group of municipalities or in territory without municipal organization. 1997, c. 4, s. 5 (1).
Same	(2) Subject to subsection (3), the council of a municipality may establish more than one fire department for the municipality. 1997, c. 4, s. 5 (2).
Exception	(3) The council of a municipality may not establish more than one fire department if, for a period of at least 12 months before the day

Part 2	Responsibility for Fire Protection Services
	this Act comes into force, fire protection services in the municipality were provided by a fire department composed exclusively of full-time firefighters. 1997, c. 4, s. 5 (3).
Same	(4) The councils of two or more municipalities may establish one or more fire departments for the municipalities. 1997, c. 4, s. 5 (4).
Fire Chief, Municipalities	6 (1) If a fire department is established for the whole or part of a municipality or for more than one municipality, the council of the municipality or the councils of the municipalities, as the case may be, shall appoint a fire chief for the fire department.
Responsibility to Council	6(3) A fire chief is the person who is ultimately responsible to the council of a municipality that appointed him or her for the delivery of fire protection services. [6]
Same	(2) The council of a municipality or the councils of two or more municipalities may appoint a fire chief for two or more fire departments.
Responsibility to Council	(3) A fire chief is the person who is ultimately responsible to the council of a municipality that appointed him or her for the delivery of fire protection services.
Powers of a Fire Chief	(5) The fire chief may exercise all powers assigned to him or her under this Act within the territorial limits of the municipality and within any other area in which the municipality has agreed to provide fire protection services, subject to any conditions specified in the agreement.

[6] OFM Communique No. 2023-09 **Interpretation of s.6(3) of the FPPA**, issued September 6, 2023, clarifies that "While a municipality may choose to have the fire chief report through an administrative
organizational structure, the fire chief remains accountable directly and individually to council for all aspects of fire safety and the delivery of fire protection services within the municipality." The document also clarifies that "any consideration of these matters be risk-based, as communities are required under O. Reg. 378/18: Community Risk Assessments to use their community risk assessments to inform decisions about the provision of fire protection services by no later than July 1, 2024."

Table 6: FPPA Definitions – Part 3

Part 3	Fire Marshal
Appointment of Fire Marshal	8 (1) There shall be a Fire Marshal who shall be appointed by the Lieutenant Governor in Council.
Powers of Fire Marshal	9.(1) the Fire Marshal has the power, (a) to monitor, review and advise municipalities respecting the provision of fire protection services and to make recommendations to municipal councils for improving the efficiency and effectiveness of those services; (b) to issue directives to assistants to the Fire Marshal respecting matters relating to this Act and the regulations; (c) to advise and assist ministries and agencies of government respecting fire protection services and related matters; (d) to issue guidelines to municipalities respecting fire protection services and related matters; (e) to co-operate with anybody or person interested in developing and promoting the principles and practices of fire protection services; (f) to issue long service awards to persons involved in the provision of fire protection services; and (g) to exercise such other powers as may be assigned under this Act or as may be necessary to perform any duties assigned under this Act.

Part 3	Fire Marshal
Duties of Fire Marshal	9.(2) It is the duty of the Fire Marshal, (a) to investigate the cause, origin and circumstances of any fire or of any explosion or condition that, in the opinion of the Fire Marshal, might have caused a fire, explosion, loss of life, or damage to property; (b) to advise municipalities in the interpretation and enforcement of this Act and the regulations; (c) to provide information and advice on fire safety matters and fire protection matters by means of public meetings, newspaper articles, publications, electronic media and exhibitions and otherwise as the Fire Marshal considers available; (d) to develop training programs and evaluation systems for persons involved in the provision of fire protection services and to provide programs to improve practices relating to fire protection services; (e) to maintain and operate a central fire college; (f) to keep a record of every fire reported to the Fire Marshal with the facts, statistics and circumstances that are required under the Act; (g) to develop and maintain statistical records and conduct studies in respect of fire protection services; and (h) to perform such other duties as may be assigned to the Fire Marshal under this Act.

The FPPA includes a series of important O. Reg. that are very applicable to this fire master planning process, including:

- O. Reg. 213/07 – OFC;
- **O. Reg. 365/13** – Mandatory Assessment of Requests and Complaints;
- **O. Reg. 364/13** – Mandatory Inspections and Fire Drills in Vulnerable Occupancies;
- O. Reg. 378/18 – CRA; and
- The new **O. Reg. 343/22** – Firefighter Certification.

3.1.2 Occupational Health and Safety Act

The **OHSA, R.S.O. 1990** requires every employer to "take every precaution reasonable in the circumstances for the protection of the worker"[7]. The OHSA provides for the appointment of committees, and the Minister of Labour has established the **Ontario Fire Services Section 21 Advisory Committee** as the advisory committee to the

[7] OHSA, R.S.O. 1990, c. O.1 Part III s. 25(2)(h).

Minister with the role and responsibility to issue guidance notes to address firefighter-specific safety issues within Ontario.

Firefighter safety must be a high priority, considering all of the activities and services to be provided by a fire department. This must include the provision of department policies and procedures, or Operating Guidelines or alternatively Operating Procedures that are consistent with the direction of the OHSA Section 21 Guidance Notes for the fire service.

3.2 Applicable Public Fire Safety Guidelines

The FPPA defines the roles and responsibilities of the OFM. This includes assigning specific powers to the OFM, such as: “To issue guidelines to municipalities respecting fire protection services and related matters”. At this time, the OFM is conducting a comprehensive review of all PFSGs. During this review process, the OFM has informed the fire service that the current PFSGs may be referred to for reference purposes. Where applicable, this FMP identifies relevant PFSGs for reference. Electronic copies of documents managed by the OFM, such as the existing PFSGs can be requested by emailing AskOFM@ontario.ca.

3.2.1 Three Lines of Defence

Under the leadership of the OFM, the Province of Ontario has developed what is known as the **Comprehensive Fire Safety Effectiveness Model** (CFSEM) as detailed through PFSG 01-02-01. This includes a fire protection planning strategy known as the **Three Lines of Defence**. Historically, the fire service has focused on firefighters and fire suppression. The Three Lines of Defence model recognizes that there are proactive measures that can be taken to reduce the risk of a fire by reducing the probability of a fire occurring and reducing the consequences of the fire.

The Three Lines of Defence model includes:

1. Public Education and Prevention;
2. Fire Safety Standards and Enforcement; and
3. Emergency Response.

These are further defined as:

1. **Public Education and Prevention:**

As outlined by the OFM, Public Education and Prevention means educating residents of the community on means for them to fulfill their responsibilities for their own fire safety is a proven method of reducing the incidence of fire. Only by educating residents can fires

be prevented and can those affected by fires respond properly to save lives, reduce injury and reduce the impact of fires.

2. **Fire Safety Standards and Enforcement:**

Ensuring that buildings have the required fire protection systems, safety features, including fire safety plans (FSP), and that these systems are maintained, so that the severity of fires may be minimized.

3. **Emergency Response:**

Providing well-trained and equipped firefighters directed by capable officers to stop the spread of fires once they occur and to assist in protecting the lives and safety of residents. This is the failsafe for those times when fires occur despite prevention efforts.

The CFSEM emphasizes the importance and value of preventing a fire. This is important from both an economic and public safety perspective. At the same time, the CFSEM ensures an appropriate level of health and safety for firefighters. The model also recognizes that developing programs and providing resources to implement the first line of defence (a proactive public education and fire prevention program) can be the most effective strategy to reduce and potentially minimize the need for the other lines of defence.

The analyses and recommendations contained within this FMP prioritize the application of the "**Three Lines of Defence"** model for two main reasons. First, the scope of this FMP is not limited to fire suppression, as this plan also considers and provides a review of fire prevention and public education, with consideration for optimizing the first two lines of defence. Second, this plan is informed by a Community Risk Assessment, as required by O. Reg. 378/18 Community Risk Assessments.

3.3 Applicable Industry Standards

The **NFPA** is an international non-profit organization that was established in 1896. The organization's mission is to reduce the worldwide burden of fire and other hazards on the quality of life by providing and advocating consensus, codes and standards, research, training, and education. With a membership that includes more than 70,000 individuals from nearly 100 nations, NFPA is recognized as one of the world's leading advocates of fire prevention and an authoritative source on public fire safety.

NFPA is responsible for 300 codes and standards that are designed to minimize the risk and effects of fire by establishing criteria for building, processing, design, service, and installation in the United States, as well as many other countries. It has more than 200 technical code and standard development committees that are comprised of over

6,000 volunteer seats. Members vote on proposals and revisions in a process that is accredited by the American National Standards Institute (ANSI).

Over the past decade, the Ontario fire service has been transitioning to the use of NFPA standards to guide many of the services provided.

An example of this is the transition process from the previous Ontario Fire Services Standards to the NFPA Professional Qualifications (NFPA Pro-Qual) Standards announced by the OFM in 2014. Where applicable, this FMP will identify the specific existing NFPA standards that have been referenced. **Table 7** lists a sample of standards by division that may be described or referenced throughout this plan.

In April 2019, the NFPA Standards Council voted to support a consolidation plan to combine the Emergency Response and Responder Safety (ERRS) standards, best practices and guides, by topic, into consolidated standards. The consolidation process began in January 2020 and is expected to be completed by 2025. NFPA has identified the new draft standards that will consolidate the existing single standard. For example, a new NFPA 1750 standard will consolidate existing NFPA 1201, NFPA 1710, NFPA 1720 and NFPA 1730. The new draft standards are identified within **Table 7**.

Table 7: Summary of Applicable NFPA Standards

Division	Applicable NFPA Standards [Consolidation Plan – New Draft Standard]
Fire Prevention	NFPA 1730 – Standard on Organization and Deployment of Fire Prevention Inspection and Code Enforcement, Plan Review, Investigation, and Public Education Operations (2019 Edition) [NFPA 1750]. NFPA 1031 – Standard for Professional Qualifications for Fire Inspector and Plans Examiner (2014 Edition) [NFPA 1030]. NFPA 1035 – Standard for Professional Qualifications for Fire and Life Safety Educator, Public Information Officer, and Juvenile Firesetter Intervention Specialist (2015 Edition) [NFPA 1030]. NFPA 1033 – Standard for Professional Qualifications for Fire Investigator (2014 Edition) [single standard]. NFPA 1300 Standard on Community Risk Assessment and Community Risk Reduction Plan Development (2020 Edition) [NFPA 1300].
Training	NFPA 1041 – Standard for Fire Service Instructor Professional Qualifications (2019 Edition) [NFPA 1020]. NFPA 1403 – Standard on Live Fire Training Evolutions (2018 Edition) [NFPA 1400].

Division	Applicable NFPA Standards [Consolidation Plan – New Draft Standard]
Fire Suppression	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 (2020 Edition) [NFPA 1750]. NFPA 1001 – Standard for Firefighter Professional Qualifications (2019 Edition) [NFPA 1010]. NFPA 1021 – Standard for Fire Officer Professional Qualifications (2020 Edition) [NFPA 1020]. NFPA 1142 – Standard on Water Supplies for Suburban and Rural Fire Fighting (2017 Edition) [single standard].
Communications	NFPA 1221 – Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems (2019 Edition) [NFPA 1225]. NFPA 1061 – Professional Qualifications for Public Safety Telecommunications Personnel (2018 Edition) [NFPA 1225].
Mechanical	NFPA 1901 – Standard for Automotive Fire Apparatus (2016 Edition) [NFPA 1900]. NFPA 1911 – Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Emergency Vehicles (2017 Edition) [NFPA 1910].

3.3.1 National Institute of Standards and Technology

The **National Institute of Standards and Technology (NIST)** was founded in 1901 as a non-regulatory agency within the United States (US) Department of Commerce. NIST's mission is to promote US innovation and industrial competitiveness by advancing measurement science, standards, and technology in ways that enhance economic security and improve our quality of life.

In April of 2010, NIST released their Technical Note #1661 "**Report on Residential Fireground Field Experiments**" reflecting a collaborative research analysis conducted by leading fire service agencies. The analysis within this report investigated the effects of varying crew sizes, apparatus arrival times and response times on firefighter safety, overall task completion and interior residential tenability using realistic residential fires.

The result of a similar study identified in Technical Note #1797 "**Report on High-Rise Fireground Field Experiments,**" was released in April 2013, which assessed the deployment of firefighting resources to fires in high-rise buildings. These studies are both examples of the technical research and analyses that are taken into consideration in order to develop and update the NFPA standards referenced within this FMP Update.

3.3.2 Commission on Fire Accreditation International

The **Centre for Public Safety Excellence** (CPSE) serves as the governing body for the two organizations that offer accreditation, education and credentialing: the **Commission on Fire Accreditation International** (CFAI) and the **Commission on Professional Credentialing** (CPC).

The CFAI defines itself as an organization that is committed to assisting fire and emergency service agencies throughout the world in achieving excellence through self-assessment and accreditation in order to provide continuous quality improvement and the enhancement of service delivery to their communities.

The objective of the CFAI program is to define an accreditation system that is a credible, achievable, usable, and realistic model. The ultimate CFAI goal is to provide an accreditation process to improve the abilities of municipalities to both understand and recognize their respective community fire risks, provide balanced public/private involvement in reducing these risks and improve the overall quality of life for community members using the accreditation model. Of importance to this fire master planning process is the CFAI strategy that seeks to achieve "**continuous improvement**" in the delivery of fire protection services.

The CFAI accreditation system is recognized as a current industry best practice within the fire service across North America. The CFAI strategy that promotes ongoing **'continuous improvement'** is, in our view, an applicable strategic objective for all fire services.

3.4 Strategic Priorities and Categories of Recommendations

This FMP Update aims to give senior staff and the Council a strategic framework to help them make decisions about emergency and fire service provision. This FMP Update was created in consideration of the municipality's legal and regulatory obligations under the Fire Protection and Prevention Act of 1997 and the Occupational Health and Safety Act of R.S.O. 1990.

Emphasis has been placed on the use of the current Public Fire Safety Guidelines and the resources provided by the Office of the Fire Marshal (OFM). One of the primary roles of the OFM is to provide assistance to municipalities through the provision of information and processes to support determining the fire protection services a municipality requires based on their local needs and circumstances. The Comprehensive Fire Safety Effectiveness Model and Fire Risk Sub-model are examples of the OFM documents that have been referenced to prepare this Fire Master Plan Update.

3.4.1 Strategic Priorities

Ultimately, the fire master planning process aims to provide a strong focus on developing and implementing strategies for providing the most effective and efficient delivery of fire protection services that provide the most value to a community. Through the experience of our clients, we have found that identifying guiding principles, or **strategic priorities**, to guide the decision-making process is a valuable tool for a municipal Council when considering the recommendations of an FMP.

In order to provide the best level of fire and emergency services as established by the analysis of the needs and circumstances of the City of Sault Ste. Marie, as referenced in the FPPA, Tayport has interpreted Council's commitment to the community through the consultation process in developing this FMP Update.

The analyses within this report recognize three **strategic priorities** to assist Council in defining the service levels for the delivery of fire and emergency services within the City of Sault Ste. Marie including:

i. The use of a Community Risk Assessment in determining the level of existing fire safety risks within the City as the basis for developing clear goals and objectives for all fire and emergency services to be provided by the Sault Ste. Marie Fire Services.
ii. The optimization of the first two lines of defence, including public education and fire prevention, and the use of fire safety standards and fire code enforcement to provide a comprehensive fire protection program within the City based on the results of the Community Risk Assessment; and
iii. Emphasis on strategies, such as continuous improvement, that support the sustainability of fire and emergency services that provide the most effective and efficient level of fire protection services, resulting in the best value for the community.

Recommendation #1: That the strategic priorities identified within the proposed Fire Master Plan Update be adopted to form the strategic framework for the delivery of fire protection services within the City of Sault Ste. Marie including:

i. **The use of a Community Risk Assessment in determining the level of existing fire safety risks within the City as the basis for developing clear goals and objectives for all fire and emergency services to be provided by the Sault Ste. Marie Fire Services.**
ii. **The optimization of the first two lines of defence, including public education and fire prevention, and the use of fire safety standards and fire code enforcement to provide a comprehensive fire protection**

program within the City based on the results of the Community Risk Assessment; and

iii. **Emphasis on strategies, such as continuous improvement, that support the sustainability of fire and emergency services that provide the most effective and efficient level of fire protection services, resulting in the best value for the community.**

3.5 Stakeholder Consultation

Stakeholder consultation is a core component of a comprehensive fire master planning process. The project's scope of work included the following elements of stakeholder consultation:

- Interviews with City Corporate and SSMFS staff;
- Interview with the SSM Professional Firefighters Association Executive (Local 529);
- Project Team Meetings and Correspondence;
- Project Initiation Community Risk Assessment Presentation to Council;
- Presentation of the Final Community Risk Assessment to Council; and
- Presentation of the Final Fire Master Plan Update to Council.

3.6 Community Risk Assessment

This section summarizes the CRA process and how the risk conclusions (i.e., identified risks or key findings) of the CRA inform the analyses of the existing and future fire protection needs of the City of Sault Ste. Marie, through the development of this FMP Update.

3.6.1 Methodology

The City's 2018 Comprehensive Risk Assessment predates Ontario's Community Risk Assessment legislation **(O. Reg. 378/18),** which requires municipalities in Ontario to identify fire-related risks within the community through a comprehensive analysis of nine mandatory profiles (shown in **Figure 5**). To assist municipalities and fire departments in the process of developing a Community Risk Assessment, the OFM has developed **Technical Guideline-02-2019 (TG-02-2019)**, which recognizes the value of understanding community fire risk, and the importance of developing fire-risk reduction and mitigation strategies in addition to providing fire suppression services. The Community Risk Assessment (CRA) developed for this project aligns with the legislative requirements of O. Reg. 378/18 by following the methodology outlined in TG-02-2019, as well as other current industry standards and best practices. The CRA was informed

by the 2018 Comprehensive Risk Assessment, but is based on analyses of updated available data.

3.6.2 Risk Assignment Process

There are three steps included in the risk assignment exercise outlined in the CRA methodology:

1. Determine a probability level
2. Determine a consequence level
3. Establish the risk level (i.e., low, moderate or high) for each based on the identified probability and consequence for each event

The following sections provide additional insight into the assignment process.

3.6.2.1 Step 1 - Probability Levels

The probability of a fire or emergency occurring can be estimated in part based on the historical experience of the community and that of the province as a whole. The likelihood categories and the values presented follow the OFM TG-02-2019 Community Risk Assessment Guideline. **Table 8** presents the probability levels and the adjusted descriptions.

Table 8: Probability Levels

Likelihood Category*	Numerical Value	Description (Adjusted)
Rare	1	• may occur in exceptional circumstances • no incidents in the past 15 years
Unlikely	10	• could occur at some time, especially if circumstances change • 5 to 15 years since the last incident
Possible	100	• might occur under current circumstances • 1 incident in the past 5 years
Likely	1,000	• will probably occur at some time under current circumstances • multiple or recurring incidents in the past 5 years
Almost Certain	10,000	• expected to occur in most circumstances unless circumstances change • multiple or recurring incidents in the past year

Source: OFM TG-02-2019 Community Risk Assessment Guideline

3.6.2.2 Step 2 - Consequence Levels

The consequences of an emergency event relate to the potential losses or negative outcomes associated with the incident. There are four components that should be evaluated in terms of assessing consequences. These include:

1. **Life Safety:** Injuries or loss of life due to occupant and firefighter exposure to life-threatening fire or other emergency situations;
2. **Property Loss:** Monetary losses relating to private and public buildings, property content, irreplaceable assets, significant historic/symbolic landmarks and critical infrastructure due to fire;
3. **Economic Impact:** Monetary losses associated with property income, business closures, downturn in tourism, tax assessment value and employment layoffs due to fire; and,
4. **Environmental Impact:** Harm to human and non-human (e.g., wildlife, fish and vegetation) species of life and general decline in quality of life within the community due to air/water/soil contamination as a result of fire or fire suppression activities.

Table 9 presents the consequence levels applied within the CRA methodology.

Table 9: Consequence Levels

Consequence Category	Numerical Value	Description
Insignificant	1	• No life safety issue • Limited value or no property loss • No impact on the local economy and/or • No effect on general living conditions
Minor	10	• Potential risk to the life safety of occupants • Minor property loss • Minimal disruption to business activity and/or • Minimal impact on general living conditions
Moderate	100	• Threat to the life safety of occupants • Moderate property loss • Poses a threat to small local businesses and/or • Could pose a threat to the quality of the environment
Major	1,000	• Potential for large loss of life • Would result in significant property damage • Significant threat to businesses, local economy, and tourism and/or • Impact on the environment would result in a short-term, partial evacuation of local residents and businesses
Catastrophic	10,000	• Significant loss of life • Multiple property damages to a significant portion of the municipality • Long-term disruption of businesses, local employment, and tourism and/or • Environmental damage that would result in the long-term evacuation of local residents and businesses

Source: OFM TG-02-2019 Community Risk Assessment Guideline

3.6.2.3 Step 3 - Risk Level

Once probability and consequence are determined, the level of risk is calculated by multiplying the numerical values for probability and consequence. The relationship between probability and consequence, as it pertains to risk levels, can be illustrated in a risk matrix. In a risk matrix, probability and consequence are defined on separate scales with varying descriptors providing direction on how to assign the probability and consequence of an event. **Figure 4** shows the risk matrix for this CRA.

Figure 4: Risk Matrix

Probability \ Consequence		Insignificant	Minor	Moderate	Major	Catastrophic
		1	10	100	1,000	10,000
Almost Certain	10,000	Moderate	Moderate	High	High	High
Likely	1,000	Moderate	Moderate	Moderate	High	High
Possible	100	Low	Moderate	Moderate	Moderate	High
Unlikely	10	Low	Low	Moderate	Moderate	Moderate
Rare	1	Low	Low	Low	Moderate	Moderate

3.6.3 Assigned Risk Levels

The purpose of assigning a risk level is to assist in prioritizing the range of risks identified as part of the CRA.

The results of the risk assignment process are presented in **Table 10** and **Table 11**. Where possible, quantitative data was used to inform the risk assignment as described in the rationale in the table. It is important to recognize that with the availability of new or updated data, the probability levels could change or be refined. It should also be recognized that, as identified in OFM TG-02-2019, "professional judgment based on experience should also be exercised in combination with historical information to estimate probability levels".[8] Similarly, OFM TG-02-2019 acknowledges the role of professional judgment and reviews of past occurrences in determining consequence levels. The rationale provided, for both probability and consequence, takes into account information from the nine profiles, as OFM TG-02-2019 supports consideration of the profiles together in order to inform decision-making about the provision of fire protection services in the specific municipality/community.

3.6.4 Risk Prioritization

As illustrated in **Figure 5** the mandatory profile analysis resulted in a series of risk conclusions. These risk conclusions are referred to as a '**Key Finding**' or an '**Identified Risk**'. Risk conclusions referred to as an 'Identified Risk' were taken through a risk assignment process based on their probability and consequence as referred to within TG-02-2019. This resulted in each risk having a risk level (exempli gratia [e.g.], low, moderate, or high) assigned to assist in the prioritization of risks as part of this FMP Update.

3.6.5 Risk Treatment Process

All risk conclusions were assessed through a risk treatment process and aligned with the three lines of defence in order to inform the analysis and recommendations within this FMP Update. The risk treatment process is presented within **Figure 5**.

As detailed in the CRA, the risk treatment process includes the application of risk treatment options as identified in TG-02-2019 (and best practices such as NFPA 1300 the Standard on Community Risk Assessment and Community Risk Reduction Plan Development).

[8] Source: OFM TG-02-2019 Community Risk Assessment Guideline, p.12

The risk treatment options include:

- **Avoid:** Implementing programs and initiatives to prevent a fire or emergency from happening;
- **Mitigate:** Implementing programs and initiatives to reduce the probability and/or consequence of a fire or emergency;
- **Accept:** No specific programs or initiatives will be implemented. Accept the risk and respond if it occurs; and
- **Transfer:** Transfer the impact and/or management of the risk to another organization or body.

In addition to the four risk treatment options, each risk conclusion was reviewed through the lens of the "Five Es" as outlined in NFPA 1300, and the Institution of Fire Engineers' Vision 20/20 National Strategy for Fire Loss Prevention. They include the following, which are also presented in **Figure 5**:

- **Education:** influences audiences to refrain from risky or unhealthy behaviour or take positive action to reduce risk;
- **Enforcement:** reduces risks through enforcing legislation through inspections and fines for non-compliance;
- **Engineering:** includes incorporating new products and technology to modify the environment to prevent or mitigate injuries and deaths;
- **Economic Incentives:** are typically offered to encourage better choices and changes in behaviour; and
- **Emergency Response:** effective emergency response can mitigate the effects of unintentional injuries and save lives.

After applying the risk treatment options and Five Es, the risk conclusions can be aligned with the three lines of defence. Where applicable, these risk conclusions are referenced throughout this FMP Update through the application of the Three Lines of Defence model.

The Three Lines of Defence model acknowledges that steps can be taken to mitigate the risk of a fire, including reducing the likelihood of a fire occurring and minimizing the consequences of a fire.

The results of the risk treatment process for both the Identified Risks and the Key Findings are shown in **Table 10** and **Table 11.** The process and results are presented in a matrix format to illustrate how SSMFS can address the risks and, ultimately, the risks to be considered within the analysis and recommendations of this FMP Update.

Figure 5: Risk Conclusions Application Process

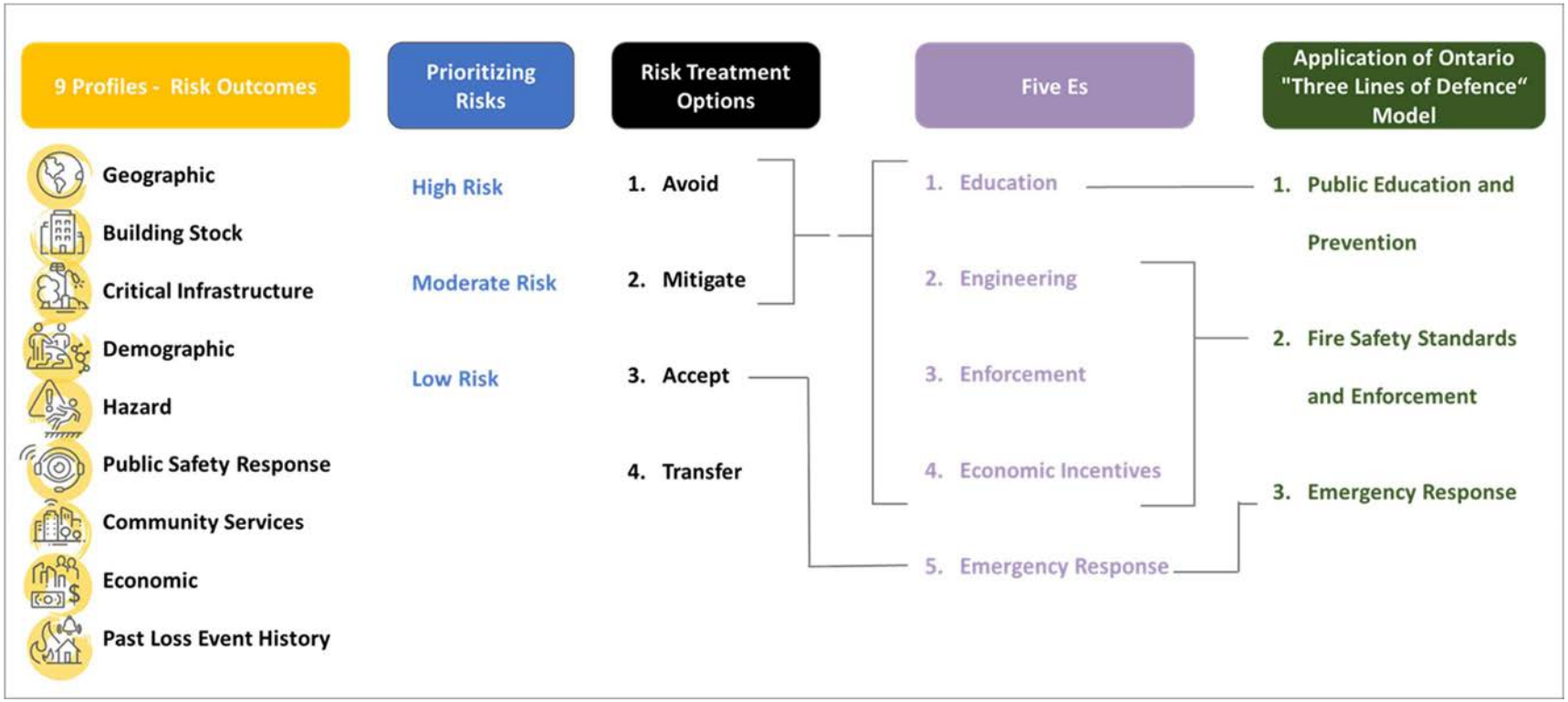


Table 10: Treatment Options and Five E's Categorization – Identified Risks

Profile	Identified Risk	Risk Level	Risk Treatment Option: Avoid Mitigate Accept Transfer	Education For consideration within the proposed Public Education Program	Enforcement For consideration within the proposed Inspection and Enforcement Program	Engineering For consideration within the proposed Inspection and Enforcement Program	Economic Incentive For consideration within the proposed Inspection and Enforcement Program	Emergency Response For consideration within the proposed Emergency Response Program
Geographic (Past Loss & Event History)	From 2018 to 2023, motor vehicle-related incidents (collisions and extrications) on the existing road network represent 69.3% of all rescue responses (622 calls) and 4.6% of the total calls responded to by the Sault Ste. Marie Fire Services.	High	Accept Transfer	No	No	No	No	Yes
Geographic	The rail lines within the City present a risk of a rail-based transport incident, such as a derailment or accident, including the potential of hazardous materials.	Moderate	Accept Transfer	No	No	No	No	Yes
Geographic	Special Consideration: The Sault Ste. Marie Airport presents unique fire-related risks associated with aircraft, supporting infrastructure, and the transportation of potentially dangerous goods, requiring specialized fire protection services.	Moderate	Accept Transfer	No	No	No	No	Yes
Geographic	The presence of waterways within the City of Sault Ste. Marie, including the unique characteristics of the St. Marys River, creates a potential risk for water-based incidents.	Moderate	Accept Mitigate Transfer	Yes	No	No	No	Yes
Geographic	The City has a risk of wildland fire due to potential hazardous forest types and the wildland-urban interface, primarily outside of the Urban Settlement Area.	Low	Accept Mitigate Transfer	Yes	No	No	No	Yes
Building Stock	Group C - Residential Occupancies represent 95.25% of the City's existing building stock, and over the five-year period from January 1, 2017, to December 31, 2023, Group C occupancies were associated with 76.8% of the structure fires within the City.	High	Mitigate Accept	Yes	Yes	Yes	Yes	Yes
Building Stock	Between April 2020 and September 2024, the SSMFS identified 34 fire incidents that occurred in vacant properties within the City.	High	Mitigate Accept	Yes	Yes	Yes	Yes	Yes

Profile	Identified Risk	Risk Level	Risk Treatment Option: Avoid Mitigate Accept Transfer	Education For consideration within the proposed Public Education Program	Enforcement For consideration within the proposed Inspection and Enforcement Program	Engineering For consideration within the proposed Inspection and Enforcement Program	Economic Incentive For consideration within the proposed Inspection and Enforcement Program	Emergency Response For consideration within the proposed Emergency Response Program
Building Stock	An analysis of the City's parcel data indicates that 69.4% of the City's total building stock was built prior to the introduction of the 1981 Ontario Fire Code. Census data from 2021 indicates that 73.4% of occupied private dwellings were constructed prior to the Ontario Fire Code.	High	Mitigate Accept	Yes	Yes	No	No	Yes
Building Stock	Data provided by the City identified 51 buildings defined by the OBC as high-rise buildings with a floor level 18 metres (59 feet) above grade, or 6 storeys or more. These buildings are mostly clustered in the downtown of the City, with a few distributed throughout the urban settlement area.	High	Mitigate Accept	Yes	Yes	Yes	Yes	Yes
Building Stock	94.9% of the buildings have a footprint of 2,500 sq. ft. or less, which is consistent with the proportion of the property stock that is Group C – Residential occupancies.	Moderate	Mitigate Accept	Yes	Yes	Yes	Yes	Yes
Building Stock	The City has 65 buildings with a total building area (footprint) that exceed 50,000 square feet (4,655 square metres). A large cluster of large buildings are located in the City's industrial area located west of downtown. Other large buildings exist in the downtown, and in commercial and industrial areas along Arterial Roads.	High	Mitigate Accept	Yes	Yes	Yes	Yes	Yes
Building Stock	The City of Sault Ste. Marie currently has 40 registered vulnerable occupancies.	High	Mitigate Accept	Yes	Yes	Yes	Yes	Yes
Demographic	Seniors (those 65 years and over) are considered to represent one of the highest fire risk groups across the Province based on residential fire death rate. According to the 2021 Census, seniors represent 24.9% of the City's total population, significantly higher than the Province as a whole at 18.5%.	High	Mitigate Accept	Yes	Yes	Yes	Yes	Yes

Profile	Identified Risk	Risk Level	Risk Treatment Option: Avoid Mitigate Accept Transfer	Education For consideration within the proposed Public Education Program	Enforcement For consideration within the proposed Inspection and Enforcement Program	Engineering For consideration within the proposed Inspection and Enforcement Program	Economic Incentive For consideration within the proposed Inspection and Enforcement Program	Emergency Response For consideration within the proposed Emergency Response Program
Past Loss and Event History	Vehicle collisions account for 62.2% of rescue calls from 2018 to 2023 within the City of Sault Ste. Marie or 93.2 calls per year on average.	High	Accept Transfer	No	No	No	No	Yes
Past Loss and Event History	Of the technical rescue type incidents from 2018 to 2023, vehicle extrication was the most common type of rescue response, accounting for 7.0% of all rescue calls and averaging 10.5 calls per year.	High	Accept Transfer	No	No	No	No	Yes
Past Loss and Event History	Of the technical rescue type services, water rescue calls are the second most common type with a total of six calls over the six-year period from 2018 to 2023, or an average of one call annually.	Moderate	Mitigate Accept Transfer	Yes	No	No	No	Yes

Table 11: Treatment Options and Five E's Categorization – Key Findings

Profile	Key Finding	Risk Treatment	Education For consideration within the proposed Public Education Program	Enforcement For consideration within the proposed Inspection and Enforcement Program	Engineering For consideration within the proposed Inspection and Enforcement Program	Economic Incentive For consideration within the proposed Inspection and Enforcement Program	Emergency Response For consideration within the proposed Emergency Response Program
Geographic	The large geographic size of the City, divided into urban settlement areas and rural areas, results in extended emergency response times to some areas.	Accept	Yes	Yes	Yes	Yes	Yes
Geographic	Bridges, with restrictions or closures, have the potential to reduce the connectivity of the City's road network resulting in the potential for delays in emergency response times.	Accept	No	No	No	No	Yes
Geographic	Grade level rail crossings could create a physical barrier to the connectivity of the City's road network that can potentially result in delays in emergency response times.	Accept	No	No	No	No	Yes
Geographic	From 2017 to 2023 SSMFS responses to the airport is primarily for calls categorized as False Alarm Calls.	Accept Mitigate	Yes	Yes	Yes	Yes	Yes
Geographic	The presence of two marinas and a boating club along the City's shoreline present unique and complex fire safety risks due to fuel load, boats stored in close proximity to one another, and the potential for occupants to sleep on boats.	Accept Mitigate Transfer	Yes	No	No	No	Yes
Geographic	The use of the City as a Port of Call for cruise ships travelling within the Great Lakes presents unique and complex fire safety risks when cruise ships are docked at the City's shoreline.	Accept Mitigate Transfer	Yes	No	No	No	Yes
Geographic	Recreational activities within the City's conservation areas, such as hiking and snowmobiling, have the potential to generate calls for emergency services, such as rescue calls.	Accept Mitigate Transfer	No	No	No	No	Yes

Profile	Key Finding	Risk Treatment Option: Avoid Mitigate Accept Transfer	Education For consideration within the proposed Public Education Program	Enforcement For consideration within the proposed Inspection and Enforcement Program	Engineering For consideration within the proposed Inspection and Enforcement Program	Economic Incentive For consideration within the proposed Inspection and Enforcement Program	Emergency Response For consideration within the proposed Emergency Response Program
Geographic	Recreational trails, including multi-use non-motorized trails and motorized trails within the City and surrounding area, have the potential to generate calls for emergency services, such as rescue calls.	Accept Mitigate Transfer	No	No	No	No	Yes
Building Stock	Based on the property stock mapping Group F – Industrial Occupancies are typically located west of Great Northern Road north of Second Line West, and along the waterfront west of Downtown.	Mitigate Accept	Yes	Yes	Yes	Yes	Yes
Building Stock	Based on the property stock mapping Group C – Residential uses are distributed across the City, including outside of the Urban Settlement Area.	Mitigate Accept	Yes	Yes	Yes	Yes	Yes
Building Stock	The City includes areas of building stock that have higher density and, as such, greater potential for exposure in the event of a fire. Statistics Canada 2021 census data indicates that 28.2% of the City's building stock is comprised of attached dwellings (e.g. semi-detached, row housing, low-rise apartment buildings, etc.).	Mitigate Accept	Yes	Yes	Yes	Yes	Yes
Building Stock	Potential building exposures are largely linked to the built-up areas primarily found Downtown and throughout residential areas within the Urban Settlement Area boundary.	Mitigate Accept	Yes	Yes	Yes	Yes	Yes
Building Stock	Within the Urban Settlement Area Boundary, there is a high concentration of buildings built prior to any provincial fire or building codes being in effect.	Mitigate Accept	Yes	Yes	Yes	Yes	Yes
Building Stock	There are properties within the City that may have an increased potential for high fire risk due to fuel load conditions, primarily linked to the identified Industrial land uses.	Mitigate Accept	Yes	Yes	Yes	Yes	Yes

Profile	Key Finding	Risk Treatment Option: Avoid Mitigate Accept Transfer	Education For consideration within the proposed Public Education Program	Enforcement For consideration within the proposed Inspection and Enforcement Program	Engineering For consideration within the proposed Inspection and Enforcement Program	Economic Incentive For consideration within the proposed Inspection and Enforcement Program	Emergency Response For consideration within the proposed Emergency Response Program
Building Stock	In addition to registered vulnerable occupancies, the City has 37 schools, 12 EarlyON centres, and 26 licensed daycare centres, representing higher fire life-safety risks due to the number of children attending these facilities.	Mitigate Accept	Yes	Yes	Yes	Yes	Yes
Building Stock	The City has two detention centres, as well as a live-in treatment facility, which houses vulnerable individuals who may be at increased risk in the event of a fire.	Mitigate Accept	Yes	Yes	Yes	Yes	Yes
Building Stock	There are a number of identified heritage buildings within Sault Ste. Marie, primarily located in the downtown area, the majority of which were constructed prior to the introduction of the Ontario Building Code or the Ontario Fire Code.	Mitigate Accept	Yes	Yes	Yes	No	Yes
Demographic	The 2021 Census data indicates that children, aged 14 and under, represent 14.2% of the City's total population, slightly less than the Provincial population at 15.8%.	Mitigate Accept	Yes	Yes	No	No	Yes
Demographic	Of the City's total population, 15.9% fall into the age range of 55 to 64, representing a cohort aging towards the seniors' demographic of 65 years or older.	Mitigate Accept	Yes	Yes	No	No	Yes
Demographic	Based on socioeconomic factors, such as a lower participation rate in the labour force, lower levels of educational attainment and lower median incomes than the Province there is a potential increased fire risk within the City of Sault Ste. Marie in comparison to the overall province.	Mitigate Accept	Yes	Yes	No	Yes	Yes

Profile	Key Finding	Risk Treatment Option: Avoid Mitigate Accept Transfer	Education For consideration within the proposed Public Education Program	Enforcement For consideration within the proposed Inspection and Enforcement Program	Engineering For consideration within the proposed Inspection and Enforcement Program	Economic Incentive For consideration within the proposed Inspection and Enforcement Program	Emergency Response For consideration within the proposed Emergency Response Program
Demographic	Spatial analysis of the bottom income decile shows the Downtown area (and the area surrounding Fire Station 1), at the southwest end of Wellington Street East, and in some smaller areas west of Pine Street at McNabb Street and at Northern Avenue East may be at increased risk of fire incidents and fire losses as a result of lower incomes.	Mitigate Accept	Yes	Yes	No	Yes	Yes
Hazard	The City's 2021 Hazard Identification and Risk Assessment identifies hazards that could each impact the ability of the City to deliver fire protection services.	Mitigate Accept	Yes	Yes	Yes	No	Yes
Economic	The City's major employers contribute to the economic vitality of the community. If a fire were to occur at one of these facilities, it could have a negative impact on the financial well-being of the City.	Mitigate Accept	Yes	Yes	Yes	Yes	Yes
Past Loss and Event History	Over the seven-year period from January 1, 2017, to December 31, 2023, the City experienced a total of 482 structure fires, averaging 68.9 per year.	Mitigate Accept	Yes	Yes	Yes	Yes	Yes
Past Loss and Event History	Over the seven-year period from January 1, 2017, to December 31, 2023, structure fires occurring in Group C – Residential Occupancies account for 76.8% of total structure fires within the City (higher than the Province at 75.2%) and 53.3% of total structure fire loss (lower than the Province at 70.4%).	Mitigate	Yes	Yes	Yes	Yes	Yes
Past Loss and Event History	Over the seven-year period from January 1, 2017, to December 31, 2023, structure fires occurring in Group F – Industrial Occupancies account for 5.8% of total structure fires within the City and 32.0% of total structure fire loss.	Mitigate	Yes	Yes	Yes	Yes	Yes
Past Loss and Event History	From 2017 to 2023 most reported fire-related civilian injuries (62) and all fire-related fatalities (9) in the City of Sault Ste. Marie occurred in Group C – Residential Occupancies.	Mitigate Accept	Yes	Yes	Yes	Yes	Yes

Profile	Key Finding	Risk Treatment Option: Avoid Mitigate Accept Transfer	Education For consideration within the proposed Public Education Program	Enforcement For consideration within the proposed Inspection and Enforcement Program	Engineering For consideration within the proposed Inspection and Enforcement Program	Economic Incentive For consideration within the proposed Inspection and Enforcement Program	Emergency Response For consideration within the proposed Emergency Response Program
Past Loss and Event History	Of the fires occurring in the City over the seven-year period from January 1, 2017, to December 31, 2023, the leading cause of unintentionally set fires was due to misuse of ignition source at 29.7% (143 fires), compared to 27.7% in the Province.	Mitigate Accept	Yes	Yes	Yes	Yes	Yes
Past Loss and Event History	Of the fires occurring in the City over the seven-year period from January 1, 2017, to December 31, 2023, the second most frequent cause of unintentionally set fires was due to mechanical/electrical failure at 9.4% (45 fires), compared to 15.0% across the Province.	Mitigate Accept	Yes	Yes	Yes	Yes	Yes
Past Loss and Event History	Of the fires occurring in the City over the seven-year period from January 1, 2017, to December 31, 2023, undetermined/unknown causes accounted for 22.5% of fires (108), compared to 20.8% across the Province.	Mitigate Accept	Yes	Yes	Yes	Yes	Yes
Past Loss and Event History	Of the fires occurring within the City over the seven-year period from January 1, 2017, to December 31, 2023, 29.3% of fires had an undetermined reported ignition source, which is 2.7% higher than the Province (26.6).	Mitigate Accept	Yes	Yes	Yes	Yes	Yes
Past Loss and Event History	Of the fires occurring within the City over the seven-year period from January 1, 2017, to December 31, 2023, 20.7% of fires had a reported ignition source that was classified as Cooking Equipment, which is 5.1% higher than the Province (15.7%).	Mitigate	Yes	Yes	Yes	Yes	Yes
Past Loss and Event History	Of the fires occurring within the City over the seven-year period from January 1, 2017, to December 31, 2023, 13.3% of fires had a reported ignition source of open flame/tools/smokers' articles, which is 0.5% lower than the Province (13.8%).	Mitigate	Yes	Yes	Yes	Yes	Yes

Profile	Key Finding	Risk Treatment Option: Avoid Mitigate Accept Transfer	Education For consideration within the proposed Public Education Program	Enforcement For consideration within the proposed Inspection and Enforcement Program	Engineering For consideration within the proposed Inspection and Enforcement Program	Economic Incentive For consideration within the proposed Inspection and Enforcement Program	Emergency Response For consideration within the proposed Emergency Response Program
Past Loss and Event History	Over the seven-year period from January 1, 2017, to December 31, 2023, of the fire loss incidents in Group C – Residential occupancies, 21.1% of incidents did not have a smoke alarm present (compared to 17.3% in the Province).	Mitigate	Yes	Yes	Yes	Yes	Yes
Past Loss and Event History	Over the seven-year period from January 1, 2017, to December 31, 2023, of the fire loss incidents in Group C – Residential occupancies, 34.2% of incidents had a smoke alarm present and operating compared to 44.7% in the Province.	Mitigate	Yes	Yes	Yes	Yes	Yes
Past Loss and Event History	During the period from January 1, 2012, to December 31, 2019, the total annual volume of emergency calls for services to the Sault Ste. Marie Fire Services increased by 10.1% and averaged 2,642 calls. The annual call volumes decreased in 2020 to 2021 as a result of the COVID 19 pandemic. The average annual calls for service between 2012 to 2023 was 2,441 calls.	Mitigate Accept	Yes	Yes	Yes	No	Yes
Past Loss and Event History	For the period from January 1, 2018, to December 31, 2023, the highest percentage of emergency call volume responded to by Sault Ste. Marie Fire Services as defined by the OFM response types was false fire calls representing 21.7% of the total emergency call volume.	Mitigate Accept	Yes	Yes	Yes	Yes	Yes
Past Loss and Event History	For the period from January 1, 2018, to December 31, 2023, the second highest percentage of emergency call volume responded to by Sault Ste. Marie Fire Services as defined by the OFM response types was medical/resuscitator calls representing 20.8% of the total emergency call volume.	Accept Transfer	No	No	No	No	Yes
Past Loss and Event History	The downtown area and the neighbourhood surrounding Fire Station 1 (Steelton) experiences the highest concentration of all emergency call types within the City. There are several smaller areas of high emergency call concentration in close proximity to the other fire stations across the City.	Mitigate Accept	Yes	Yes	Yes	Yes	Yes

4.0 Administration Division

The Fire Chief reports directly to the Chief Administrative Officer (CAO), and through legislation is ultimately responsible to the Mayor and Council for operating the Fire Service. The Deputy Fire Chief of Operations, Training, and Logistics, as well as the Deputy Fire Chief of Education, Prevention, and Emergency Management, assist the Fire Chief with the overall management of the Fire Department. Overseeing the department's daily administrative operations, the Office Supervisor answers directly to the Fire Chief.

The core administrative functions of the SSMFS include:

- Oversee compliance with federal and provincial legislation, corporate policies, and department policies.
- Oversee fire prevention and public education initiatives.
- Oversee all department operational activities and manage related equipment.
- Preparation and implementation of City-wide emergency management.
- Oversee training and development.
- Managing labour relations and human resource issues; and,
- Department records management, including attendance and payroll.

This section of the FMP Update describes the resources available to achieve these core functions. It also presents the current department organizational structure, vision and mission, by-laws and agreements, policies and guidelines, records management, performance measures and proposed strategic priorities for the City.

4.1 Administrative Staff Resources

The current staff resources assigned to the core functions listed above include the Fire Chief, two Deputy Fire Chiefs, one Assistant Chief, one Office Supervisor, and three Administrative Clerks. The primary roles and responsibilities of these positions are described within this section.

4.1.1 Fire Chief

The Fire Service Establishing and Regulating By-law (By-Law 2024-148, By-Law 2020-211 Amended), which is attached as Appendix A to this FMP Update, describes the responsibilities and authority of the Fire Chief in the City of Sault Ste. Marie. Through By-law 2017-159, the council appointed the fire chief, granting him or her the authority to perform the duties and responsibilities specified in the Fire Protection Act (FPPA): "The fire chief is the person who is ultimately responsible to the council of a municipality

that appointed him or her for the delivery of fire protection services." The Fire Chief is responsible for overseeing the management of the fire department's activities and reports directly to the CAO on a corporate level.

According to the research done for this FMP Update, the job description for the Fire Chief, which was created on April 1, 2002, describes the current duties and responsibilities of the position. These duties and responsibilities include:

- Discharges duties and responsibilities of an incident commander at major emergency scenes.
- Discharges duties and responsibilities of the Director of EMS.
- Supervises the overall administration and operations of all divisions of the fire department, including the EMS Division.
- Responsible for the preparation and administration of the capital and operating budget for the City Fire Services and EMS operations. Conducts long and short-term financial planning.
- Ensures appropriate interpretation and application of Legislation, Codes and By-laws for the City Fire Services and EMS operations.
- Develop and maintain a thorough working knowledge of the Corporation's Health & Safety Policies/Procedures and applicable legislation for the City Fire Services and EMS operations, and ensure all divisions comply with the health and safety policy.
- Ensures that Fire Services policies and programs are developed and implemented for both unique Fire and EMS operations.
- Contributes to the formulation of Municipal policies, programs and services at the senior management level.
- Responsible for promoting and facilitating Public Education and Public Media Relations with respect to all Fire and EMS operations.
- Advises Council on strategic issues associated with emergency and related issues.
- Facilitates effective labour management and employee relations.
- Supervises employees in accordance with City policy and applicable collective agreements, including ensuring satisfactory work performance, maintaining acceptable conduct and taking appropriate disciplinary action.
- Assumes on-call duties as required; and
- Performs other related duties as required.

The department has reviewed and updated job descriptions on an as-required basis. In 2023, the Deputy Fire Chief of Fire Education, Prevention, and Emergency Management was reviewed and updated, while the job descriptions for the Deputy Chief

of Fire Operations, Training, and Logistics were reviewed in 2016. The job description for the position of Fire Chief has not been revised for many years. As a result, it does not currently reflect the corporate responsibilities of the Fire Chief in Sault Ste. Marie or the position in comparison with the current Ontario Fire Service environment. As such, it is recommended that the job description for the Fire Chief be reviewed and updated.

In addition, to assist in managing the distribution of the workload, a potential realignment of the fire management team's responsibilities should be reviewed, subject to Council's review and acceptance of this Fire Master Plan.

Recommendation #2: That the current job description for the Fire Chief be reviewed and updated as referenced in the proposed Fire Master Plan Update.

4.1.2 Deputy Chief Fire Operations, Training and Logistics

The Deputy Chief Fire Operations, Training and Logistics reports directly to the Fire Chief. A core function of this position is to support the Fire Chief in providing strategic leadership in achieving the goals and objectives of the SSMFS.

The operations and training responsibilities of the department are directly under the supervision of this role. According to research done for this FMP Update, the job description for the Deputy Chief Fire Operations, Training, and Logistics position from August 2016 lists the following current tasks and responsibilities:

- Develop and implement strategies in line with the City's corporate strategic plan.
- Create business plans for the attainment of goals and objectives set out by City Council.
- Build an effective team of leaders by providing guidance and coaching.
- Ensure adherence to the City's daily activities and long-term plans of established policies and legal guidelines.
- Establish and maintain relations of trust with stakeholders, co-workers and community partners.
- Public relations representative when required.
- Prepare and review various reports.
- Devise remedial actions for identified issues and conduct crisis management as needed.
- Establish standards and policies for delivery of services to ensure a quality level of efficient services is provided in compliance with Provincial/Municipal guidelines and policies.
- Initiate and oversee departmental budget preparation and to control departmental budget.

- Coordinate the preparation of departmental reports to City Council on changes, improvements, plans and projects and to make presentations to City Council on these matters.
- Consult with groups, agencies, citizens, Provincial Ministries, other Municipal Departments on service delivery (i.e. service expansion, reduction and needs).
- Set framework of work to be completed and services to be provided; monitor the same and develop improvements, plans and changes.
- Analyze legislation, regulations, policies and procedures to ensure compliance.
- Ensure purchasing, payroll and accounting procedures for the department are performed in accordance with City Policy.
- Direct personnel to achieve the most effective utilization of personnel and facilities.
- Review for approval: reports, time sheets, major purchases, etc., as required.
- Oversee the work practices and procedures of a departmental unit. Establish priorities and control work quality.
- Supervise employees in accordance with City policy and applicable collective agreements, including ensuring satisfactory work performance, maintaining acceptable conduct and taking appropriate disciplinary action.
- Maintain a thorough working knowledge of the City's health and safety policies and procedures and ensure application in all Divisions
- Provide coverage of Fire Chief, as needed; and
- Perform all other related duties.

The current job description does not contain any reference to the responsibility to act in the position of Fire Chief in his/her absence. Although the delegation of the powers and authorities of the Fire Chief to the Deputy Chiefs is outlined in the Establishing and Regulating By-Law 2020-211 (Amended through By-Law 2024-148) under clause 3.4, it is recommended that the responsibility be identified in the job descriptions of the Deputy Chiefs as well. Subject to Council's consideration and approval of this Fire Master Plan Update, there may also be a need to consider further revisions to this job description to align with the proposed strategic priorities for the delivery of fire protection services.

4.1.3 Deputy Chief Education, Prevention, and Emergency Management

The Deputy Chief Education, Prevention and Emergency Management reports directly to the Fire Chief. Research conducted as part of this FMP Update indicates that the current duties and responsibilities of the Deputy Chief Fire Education, Prevention, and Emergency Management are described in the job description for this position, updated in February 2023, including:

- Oversee operations, functions and activities, and provide strategic direction of Public Education, Prevention and Emergency Management.
- Ensure services are delivered in accordance with the appropriate Government Legislation and City Policy.
- Manage and lead the Division towards the realization of its mission and mandate.
- Drive continuous improvement and increase efficiency while minimizing costs and maintaining safety, quality and legislative standards.
- Support Strategic Focus areas
- Develop and implement strategies in line with the City's corporate strategic plan.
- Establish priorities and control work quality as they pertain to:
    - Emergency Management
    - Public Education
    - Prevention/ Enforcement
- Set framework of daily, monthly, and annual work to be completed by the Division,
- Oversee work practices and procedures.
- Analyze relevant legislation/regulations and ensure procedures are in place to mitigate
- Community risks in line with the three lines of defence.
- Establish operating guidelines and policies for the delivery of prevention
- services: ensure a quality level of efficient services is provided in compliance
- with Provincial legislation / Municipal guidelines, and policies
- Analyze legislation/regulations, policies and procedures to ensure compliance.
- Coordinate the preparation of departmental reports to City Council on
- changes, improvements, plans and projects, and make presentations to City
- Council on these matters.
- Prepare and review various reports.
- Establish and maintain relations of trust with stakeholders, co-workers and community partners. E.g. PUC, MOE, etc.
- Consult with groups, agencies, citizens, Provincial Ministries, other Municipal
- Departments on service delivery (i.e. service expansion, reduction and needs)
- Prepare and administer divisional budget and assist in departmental budget preparation.
- Ensure purchasing, payroll and accounting procedures for the department
- are performed in accordance with City Policy.
- Review and respond to various requests, e.g. Freedom of Information, Committee of Adjustment, Planning Department Applications, etc.

- Review and approve; Alcohol and Gaming Commission Applications, Propane Facility Level I & II RSMP plans in accordance with TSSA Regs., "Vulnerable Occupancy" Fire Drill Scenarios and Fire Safety Plans, etc.

The review and revision of this job description in 2023 created a current and detailed set of responsibilities for this position.

4.1.4 Assistant Chief

The Assistant Chief reports directly to the Deputy Chief of Operations. Research conducted as part of this FMP Update indicates that the current duties and responsibilities of the Assistant Chief are described in the job description for this position established in September 2017, including:

- Responsible for the administrative and operational functions of the Support Services.
- Participates in short- and long-term strategic planning for the Support Services and Fire Service Assets.
- Liaises with Deputy Chiefs, Platoon Chiefs, Captains and Mechanical Officer.
- Manages the Support Services staff through leadership, evaluation, monitoring, communication and planning.
- Administers operations of Support Services Division including maintenance of all buildings, apparatus, tools, equipment, fleet, computers and radio communication systems.
- Liaises with other City Departments and Contractors for infrastructure repairs.
- Conducts performance reviews on all members of Support Services Division.
- Oversees the Strategic Planning and Vision of the Mechanical Division. Takes part of Strategic Planning for Fire Services.
- Develops and administers budgets and reports for capital and operational aspects of Support Services Division.
- Develops and maintains the Fleet Replacement Plan.
- System Administrator for the Fire Services Computer Aided Dispatch and Records Management System.
- System Administrator for Keyscan Electronic Card Access System.
- Manages HWIN for Fire Services for Departmental site waste disposals.
- Administer liaison with information Systems regarding office computer and network operations.
- Administer statistical records for fuel dispensing for Fire Services.
- Facilitates the development and implementation of Department plans, directives and Operating Guidelines.

- Participates with initiatives, including pilot programs, research and review existing goals, objectives and results for Support Services.
- Prepares tender specifications and makes recommendations for the purchase of Fire Services infrastructure, apparatus, vehicles, tools, and equipment.
- Maintains signing authority with Ministry of Transportation of Ontario to search employee driver license records.
- Responsible for employee training, related to apparatus, equipment, computer aided dispatching.
- Facilitates effective Labour - Management and Employee Relations ensuring compliance with the collective agreement.
- May take part of recruitment and hiring of new employees.
- Supervise employees inclusive of ensuring satisfactory performance, maintaining acceptable conduct and taking appropriate disciplinary action.
- Prepare budgets to facilitate delivery of programs and operate within the budget.
- Perform administrative duties i.e., reports, documentation, testing/promotional procedures and purchasing equipment.
- May act on behalf of the Deputy Fire Chief in his/her absence.
- Work in accordance with Corporate and Fire Service policy and procedure, Departmental Operational Guidelines and the Collective Agreement.
- Assumes on-call duties as assigned.
- Perform other related duties as required or assigned.

The current job description for the Assistant Chief is seven years old and should be reviewed and updated.

4.1.5 Office Supervisor

The Office Supervisor answers directly to the Fire Chief and is a non-union position. This role is essential to the department's administrative operations. The most recent revision to the job description was made in September 2016. The key activities and responsibilities of this position are clearly defined in the current job description. The main responsibilities of this role include overseeing, managing, and organizing all tasks associated with assisting the department's administrative operations, including:

- Supervising and coordinating work assigned to the Administrative Clerks.
- Coordinating the administrative needs of other divisions within the department.
- Liaison with other corporate departments, including Human Resources, Finance and Information Technology.
- Developing and coordinating the department's current operating and capital budgets, including payroll, purchasing, and monitoring.

- Coordinating the information technology needs, including overseeing the records management needs of the department.
- Participates in the development and implementation of department goals, objectives, policies and procedures.
- Coordinating with outside agencies and the general public.
- Providing administrative support to the Fire Chief and Deputy Chiefs relating to all confidential human resource and other matters.

4.1.6 Administrative Clerks

Three administrative clerks work in the department, and they are directly accountable to the Office Supervisor. The Professional Firefighters Association of Sault Ste. Marie represents all three of these roles, which share the same job description. One of the primary responsibilities is the utilization of a variety of computer software programs:

- Compile information and prepare billing for accounts payable/ receivable.
- Receive and process various payments and provide receipts, including fire permits, inspection fees, general receipts, manage and balance cash and prepare bank deposits, etc.
- Receive and match invoices, packing slips, field purchase orders, purchase requisitions and purchase orders.
- Maintain Payroll data entry and manage travel requests
- Maintain, distribute and reconcile the department's annual clothing issue as outlined in the Collective Agreement.
- Conduct statistical research and analysis.
- Prepare fire inspection letters and orders of compliance.

The three clerks answer questions from the general public and serve as the central fire station's receptionists in addition to providing administrative support.

This FMP Update's analysis also evaluates the administrative burden and the necessity of redistributing duties among the fire administration team.

The Province of Ontario has transferred several duties to local governments in the last ten years, which has increased Fire Administration's responsibility and accountability. The Ontario Fire College's closure, stricter training and certification standards, new thorough community risk assessments, and the continuous development of Public Fire Safety Guidelines (PFSGs) are some of the causes contributing to this trend. Fire and Emergency Services are nevertheless subject to further duties from the provincial government through the Ontario Fire Marshal's Office. Municipalities have also

expanded the Fire Chief's participation in the City's senior management team in addition to the provincial government's downloading.

It is advised that Sault Ste. Marie Fire Services evaluates the current job descriptions of the Fire Chief, Deputy Fire Chiefs, and the Assistant Chief in order to help manage the Fire Chief's workload. This evaluation should be conducted with the goal of reallocating the administrative responsibility between the Chief, the two Deputies and the Assistant Chief.

Recommendation #3: That the current job descriptions of the Fire Chief, Deputy Fire Chiefs, and the Assistant Chief be reviewed and updated to reflect the redistribution of responsibilities as referenced in the proposed Fire Master Plan Update.

4.2 Vision and Mission Statements

The significance of a fire department's mission statement is noted in PFSG 03-02-13 "Master Planning Process for Fire Protection." A mission statement should make it apparent what the department's main objective is and what its personnel are dedicated to accomplishing. A well-crafted mission statement outlines the goals, objectives, and methods of a business. According to the SSMFS, the department has a mission statement to incorporate the following:

“A proud partner within our community that provides exceptional service through prevention, education, protection and wellness.”

Vision statements, on the other hand, are meant to articulate the future ambitions and objectives of a company, even though they also define its purpose. In contrast to mission statements, which might change as the organization does, vision statements frequently stay the same. The SSMFS Vision statement includes the following:

“Committed to provide effective and efficient emergency services in a caring manner to create a safe community.”

4.3 Administrative Workspace

Workspace for the administrative staff of the SSMFS is located within Fire Station 1 located at 72 Tancred Street. This building was constructed prior to the adoption of the current *Accessibility for Ontarians with Disabilities Act, 2005* (AODA). Administrative staff are located on the second floor of this building. Following changes in 2020, public access is restricted within many City buildings, including Fire Station 1. When public access is required, staff meet with members of the public in the small foyer/hallway on

the first floor. The space in this area is limited and could be adjusted to better serve this purpose.

Office space is currently provided for the Fire Chief, Deputy Chiefs, Assistant Chief and Office Supervisor (following a renovation in 2021). The administrative clerks work from workstations located within an open area outside of the offices.

In addition to the administrative staff, this area also includes the fire prevention/public education staff workspace. This shared workspace provides some efficiency in accessing printers and supplies; however, the proximity of workstations within this area creates an environment that can be loud at times when several people are on the phone at the same time.

4.4 Municipal By-Laws

The Municipal Act, 2001 provides the authority for a municipal Council to pass by-laws related to the delivery of services to be provided by the municipality. A municipality must pass certain bylaws to run the municipality, and particularly the fire service, according to the Municipal Act, R.S.O. 1990. Apart from fulfilling the legal obligation, bylaws furnish the community with crucial details concerning the quality of services that a municipality plans to offer. Additionally, by-laws give municipal employees the authority to offer these services and the accountability to meet the required service level. The SSMFS currently has 19 fire service-related by-laws.

4.4.1 Establishing and Regulating By-Law

The Establishing and Regulating by-law should give the community and the department precise and unambiguous policy guidance for the kinds of services and activities the department is permitted to offer. It should also outline the performance standards that the department must meet in order to offer each of these services and initiatives. PFSG 01-03-12 “Sample Establishing and Regulating By-law” (**Appendix B**) prepared by the OFM provides a description of the primary issues to be addressed, as well as a template for developing an Establishing and Regulating By-law. The primary components identified by the OFM include the following:

- General functions and services to be provided.
- The goals and objectives of the department.
- General responsibilities of department members.
- Method of appointment to the department.
- Method of regulating the conduct of members.
- Authority to apply costs to property owners for fire inspections.

- Procedures for termination from the department; and,
- Authority to proceed beyond established response areas.

The research conducted as part of this FMP Update identified that the current Establishing and Regulating By-law 2020-211 was approved by Council on November 30, 2020, and reviewed and amended in 2024 (By-Law 2024-148).

Determining and incorporating the service levels appropriate for each of the programs, activities, and services offered by the SSMFS is crucial to amending the current Establishing and Regulating By-law. Next, a procedure for evaluating the effects of continuous departmental changes that might have an impact on the authorized Establishing and Regulating By-law should be created. These choices must consider the possible effects on the authorized Establishing and Regulating By-law, particularly if the by-law provides the authority for the change.

Usually, as the yearly operating and capital budget is being developed, changes that could affect an Establishing and Regulating By-law should be considered. An efficient and successful way to start a regular review would be to establish a procedure that incorporates a review of any relevant bylaws, such as the Establishing and Regulating Bylaw, into the department's annual budget process.

Through our analysis for this FMP Update, there are several areas where the City will require further amendments over the life span of this FMP Update. For example, the appendices to the Establishing and regulating By-law should be reviewed to reflect the current department services and with the requirement of O. Reg. 343/22 – Firefighter Certification, Council's approved levels of service outlined in Appendix C of the E&R By-Law should reference a specific level of service based on the Fire Department's current training levels, the corresponding applicable NFPA standard(s) and the department's standard Operating Procedures for each discipline. Currently there are two significant dates in which certification to a specific discipline must be achieved and the council's approved level(s) of service is to reflect the department's: level of certification achieved; funding for the provision and maintenance of the equipment required to provide the approved level of service, and funding for the continued maintenance training to maintain the approved level of service. Details of O. Reg 343/22 will be covered under the Training section of this FMP Update.

The updates to the Establishing and Regulating By-law will also provide additional opportunities for the Fire Chief to present a detailed outline of the level of services Council is authorizing the fire service to provide to citizens, and, just as importantly, what services are not provided by the Sault Ste. Marie Fire Services.

Subject to the Council's consideration and approval of this FMP Update, a review of the Establishing and Regulating By-law and associated appendices should be undertaken as outlined in this FMP Update.

Recommendation #4: That, subject to Council's consideration and approval of the proposed Fire Master Plan Update, the Establishing and Regulating By-law be reviewed, updated and presented to Council for approval.

Recommendation #5: That the Fire Chief be directed to implement a regular process for the review of all applicable fire protection services by-laws.

4.4.2 User Fee and Service Charge By-Laws

The current User Fee and Service Charge By-law 2024-159 came into effect on January 1, 2025. This by-law enables the City to recover costs for the provision of fire protection services, building services, and planning services, among others. A summary of fees and charges relating to the SSMFS is presented in **Table 12**.

By-law #2024-159 identifies the range in services provided by the SSMFS, which qualify for cost recovery as categorized by: fire alarm systems, inspection charges, air bottle refills, training and burning permits.

Table 12: User Fees and Service Charges Summary

Category	Service Provided	User Fee (Excluding Taxes)
File Searches	General	$77.88
File Searches	Rush	$52.21
Inspection Charges	Residential Building up to 4 dwellings	$137.17
Inspection Charges	Residential Building – 5 or more dwelling units	$137.17 (+$50 per story)
Inspection Charges	Industrial Mercantile, Office space, Assembly – less than 3000 square feet	$137.17
Inspection Charges	Industrial Mercantile, Office space, Assembly – 3000 square feet to 4999 square feet	$212.39
Inspection Charges	Industrial Mercantile, Office space, Assembly – greater than 5000 square feet	$287.61
Inspection Charges	AGCO Liquor License	$137.17
Inspection Charges	Daycare	$137.17
Inspection Charges	Boarding Rooming Lodging House	$137.17
Inspection Charges	Group Home	$137.17
Inspection Charges	Short-Term Rental	$137.17
Inspection Charges	Rush Fee – 72 hours or less	$52.21
Re-Inspection	First Re-inspection	$0.00
Re-Inspection	Subsequent Re-inspections	$100.00
Air Bottle Refills	Refill per Bottle	$7.52
Training	Fire extinguisher training (30 person Maximum)	$132.74
Burn Permits - Recreational	Burn permit – 4 year	$64.00
Burn Permits - Recreational	Burn permit – 1 year	$32.00
Propane Facility RSMP Reviews	Level 1 </= 5k water gallons – all RSMPs	$274.34
Propane Facility RSMP Reviews	Level 2 Facility > 5k water gallons – initial review	$646.02

Category	Service Provided	User Fee (Excluding Taxes)
Propane Facility RSMP Reviews	Level @ Facility > 5K water gallons – Renewal	$398.23
Approvals	Approval Fireworks – Consumer /Family	$85.84
Approvals	Approvals – Fireworks Exhibition	$287.61
Approvals	Rush Fee – 72 hours or less	$52.21
Fire Services Response Fees	Cost Recovery Fees - MTO Rate Applied	Current MTO Rate
Fire Services Response Fees	Specific Response Fees - Any cost recovery fees as provided for in the Cost Recovery Fire Service By-law and Schedule “G” herein of the Cities User Fee & Service Charges By-law for fire service attendance at a property for which the property owner has Fire Department Insurance coverage	As Applicable
False Alarms	Nuisance False Alarm fee, Working on the System – Not Notified Alarm Fee, Malicious False Alarm fee	Current MTO Rate
False Alarms	Malfunction, System Maintenance – not notified	Current MTO Rate
False Alarms	1st Call Recovery Fee – No Charge	$0.00
False Alarms	2nd Call Recovery Fee- per truck per call	Current MTO Rate
False Alarms	3rd Call Recovery Fee – Per truck per call	Current MTO Rate
False Alarms	4 or more calls - # of calls x per truck per call	Current MTO Rate
Natural Gas Leak	Natural Gas Leak – Caused by No Locate (per truck, per call)	Current MTO Rate
Grow Operation/Clandestine Labs	Compliance Inspection Fee and any Fees/Expenses set out in Section 8 of the City’s Cost Recovery By-law Fire Services, as amended	As Applicable
Grow Operation/Clandestine Labs	Per truck per call Compliance Inspection Fee and any Fees/Expenses set out in	As Applicable

Category	Service Provided	User Fee (Excluding Taxes)
	Section 8 of the City's Cost Recovery By-law Fire Services, as amended	
Grow Operation/Clandestine Labs	Plus any additional cost incurred Per truck per call	Current MTO Rate
Open Air Burning Violation	Unapproved Burning	Current MTO Rate
Miscellaneous	Indemnification Technology Miscellaneous	Recovery as per Indemnification Technology (Fire Marque)
Miscellaneous	All Cost Recover Fees are subject to an Administration Fee- 10% of the costs billed, Indemnification Technology	Recovery as per Indemnification Technology (Fire Marque)
Administration Fees	All Cost Recovery Fees	Subject to 10% of costs billed

It is necessary to routinely assess and modify the user fees related to the use of the essential services provided by Sault Ste. Marie Fire Services. The foundation for defining the financial responsibilities assumed by people and organizations receiving departmental support is the User Fee By-Law 2024-159. In order to uphold equity, openness, and financial accountability, it is important to conduct a regular review of the current charge schedule. The purpose of this evaluation is to make sure that the current user fees fairly represent the costs of equipment maintenance, operational expenditures, and other pertinent aspects of delivering emergency services. In addition to reviewing fees, the fire department should also be reviewing potential services to be added to the Fees for Service By-law, such as a fee for non-residents involved in motor vehicle accidents within the municipality. Sault Ste. Marie can maintain its financial stability by matching user fees to the actual expenses incurred by the department.

4.4.3 Other By-Laws Related to the Fire Services

The Fire Sault Ste. Marie Fire Services also has the following by-laws related to the delivery of fire protection services:

- By-law 2017-159: A By-law to appoint the Fire Chief

- By-law 2023-97: A By-Law to appoint Deputy Fire Chief Thibault
- By-law 2025-42: A By-law to appoint Deputy Fire Chief Morgenstern
- Update By-law 2018-128: A By-law to appoint Chief Fire Prevention Officer.
- By-law 2024-147: Open-air Burning By-law
- By-law 2024-178: Fire Protection Agreement with the City and The Batchewana First Nation of Ojibways of the Rankin Indian Reserve
- By-law 2019-057: Fire Protection Agreement with Prince Township
- By-law 2018-129: A By-law authorizing the Delegation of Authority
- By-law 2019-241: Tiered Response Agreement
- Bylaw 2023-114 Emergency Management Program and Emergency Response Plan By-law
- By-law 2019-242: RESC Lease Agreement with District of Sault Ste. Marie Social Services Administration Board (DSSAB)
- By-law 2019-038: Fire Route By-law
- By-law 2018-130: Naloxone Administration
- By-law 2015-069: Fire Service and Police Investigations
- By-law 2013-146: Fireworks
- By-law 2007-074: Aircraft Emergency Rescue
- By-law 2004-048: Municipal Forest Fire Management with the Ministry of Natural Resources
- By-law 2023-161: Fire Services Agreement, Intermunicipal Civil Defence and Emergency/Disaster Compact
- By-law -1979-283: Algoma District Mutual Aid

Industry Best Practice is to review and revise By-laws and agreements on a regular basis, such as every five years, to ensure By-laws and/or agreements are still required and, if so, updated to reflect current conditions.

Recommendation #6: That the Fire Chief assess the agreements and bylaws in effect, to ensure they reflect the current situation and establish a review cycle for future reviews.

4.5 Fire Protection Service Agreements

Within the fire service, there are multiple approaches to sharing services or procuring services, including mutual aid, automatic aid, and fire protection agreements. Through our research for this fire master Plan Update, we have identified several agreements which are described in the sections that follow.

4.5.1 Mutual Aid Agreement

Mutual aid agreements are predetermined plans that allow a participating fire department to request assistance from a neighbouring fire department. The Public Fire Safety Guideline (PFSG 04-05-12, “Mutual Aid”, Appendix A), provided by the OFM, identifies the information required to develop and approve these agreements.

There are two main scenarios when mutual aid agreements are enacted:

- A fire department may ask for mutual aid assistance when it is at the scene or has information that immediate assistance is required.
- Fire departments may immediately request a simultaneous response from a participating fire department where distance and/or conditions dictate.

The SSMFS is an active participant in the District of Algoma Mutual Aid Plan. This mutual aid plan forms an integral component of the province-wide fire service mutual aid system. Through our research of the documents provided by Sault Ste. Marie, the current Mutual Aid By-law is dated October 1979, and the current Mutual Aid Plan is also dated 2013-2018. It is recommended that the current Mutual Aid Plan be updated to reflect all changes in the District, and By-law 1979-283 for the participation in the District of Algoma Mutual Aid plan be revised and presented to council for their consideration.

Recommendation #7: That the Fire Chief works with the District of Algoma Fire Chiefs to update the Mutual Aid Plan, and once completed, the Fire Chief revise the By-law authorizing participation in the District of Algoma Mutual Aid Plan for Council’s consideration.

4.5.2 International Mutual Aid Compact (Agreement)

An international mutual aid compact, or agreement, binds the City of Sault Ste. Marie in Ontario and the City of Sault Ste. Marie in Michigan to respond to emergencies and disasters across the international bridge and enter the municipality in need of assistance. This agreement covers more than solely emergency response and firefighting services; it also covers the evacuation or reception of injured parties and the exchange of basic supplies, equipment, food, and clothes.

A best practice is to review agreements at a set frequency to ensure the agreement is continuing to serve the parties. The Agreement was reviewed in 2023, and the current by-law approving the agreement is 2023-161.

4.5.3 Municipal Forest Fire Management Agreement

The Ministry of Natural Resources and Forestry (MNRF) and the City of Sault Ste. Marie has an agreement that outlines the roles and responsibilities of both organizations in responding to forest fires. Both the "Municipal Protection Area," where the SSMFS is the major responder, and the "Crown Protection Area," where the MNRF is the principal supplier of fire suppression services, are defined in the agreement.

An agreement between the MNRF and municipalities that have a border with provincially-owned lands is a common practice. Participation in the agreement includes the provision of Instructor Training Kits for:

- Municipal Fire Department Forest Fire Training (SP103); and
- Air Attack Safety Training Module for Municipal Fire Operations.

The importance of this agreement and training is supported by a key finding of the CRA that indicates the City has a potential risk of wildland fire due to hazardous forest types and the wildland-urban interface primarily outside of the Urban Settlement Area. This should be considered within the proposed emergency response program.

4.5.4 Batchewana First Nation of Ojibway of the Rankin Indian Reserve 15D Agreement

The SSMFS responds to fire, medical assistance, and carbon monoxide alarms on the Rankin Indian Reserve 15D (First Nation) in accordance with an agreement between the City of Sault Ste. Marie and the Batchewana First Nation of Ojibway. Additionally, if brush fires are easily accessible and pose a risk to a structure, the agreement mandates a response. Responses to alarms on CP Rail lines are also included if the fire endangers the First Nations lands.

Services supplied by the SSMFS are subject to the availability of resources and are provided on a cost-recovery basis established under the agreement. The present contract ends on December 31, 2029.

This arrangement is in line with typical Automatic Aid Agreements (Fire Protection Agreements), in which a municipality looks to secure services from a nearby community for particular purposes.

4.5.5 Summary of Fire Protection Service Agreements

According to our analysis, the City of Sault Ste. Marie participates in a variety of agreements pertaining to the provision of emergency response and fire suppression services. Our research has also shown the City of Sault Ste. Marie is mostly a provider

of services rather than a recipient of services from the smaller nearby communities because it is the largest municipality in the District of Algoma.

4.6 Operating Guidelines, Department Notices and Memorandums

As part of the review conducted for this FMP Update, it was identified that the SSMFS currently utilizes several strategies to communicate with staff, including procedures, operating guidelines and department notices.

Operating Guidelines (OGs) are commonly used within the fire service to establish a written statement to guide the performance or behaviour of departmental staff, whether functioning alone or in groups. PFSG 04-69-13 “Co-ordination, Development, Approval and Distribution of Standard Operating Guidelines for Various Disciplines” provides the following points to reflect the intent of Operating Guidelines:

- Enhance safety.
- Increase individual and team effectiveness.
- Improve training efficiency.
- Improve orientation for entry-level staff.
- Improve risk management practices.
- Prevent/avoid litigation.
- Create objective post-incident evaluations; and,
- Permit flexibility in decision making.

Industry best practices indicate that understanding the distinction between Policies, Procedures, and Guidelines is paramount for effective organizational management, particularly within the Fire Department. While Policies set the overarching goals and values, Procedures offer detailed instructions on task execution, and Guidelines provide specific direction for task performance.

All Policies, Procedures, and Operating guidelines should be finalized and approved by the Fire Chief prior to being distributed to all staff within the department. A follow-up is then required to ensure that these operating guidelines are clearly understood and implemented by all relevant staff. An applicable policy should also be in place to outline and record the process of developing, approving and distributing operating guidelines, as well as a set review period to ensure due diligence on behalf of the fire department and the City, as the employer.

Health and safety are essential for fire and emergency services. When creating department policies and operational procedures, fire departments must prioritize

adherence to the Occupational Health and Safety Act (OHSA) Section 21 Guidance Notes in addition to the pertinent sections of Ontario's OHSA.

The review conducted for this FMP Update indicates the SSMFs utilizes Operational Guidelines and Procedures to manage their departmental activities. The department currently does not utilize Policies in its operations. It is recommended that a review of the current Procedures and Guidelines be undertaken with the mindset of realigning the current procedures and guidelines into Policies Procedures and guidelines keeping in mind that Policies should set the overarching goals and values, Procedures should offer detailed instructions on task execution, and Guidelines provide specific direction for task performance with the option for deviation due to experience, training and or the situation does not fit into the stated guideline.

In addition, as part of the review, an overarching policy should be established that identifies the differences in the hierarchy of Policies, Procedures, and Guidelines and identifies the review process and a specific time frame for the process to occur.

Recommendation #8: That a review of the current Procedures and Guidelines be undertaken to realign with industry best practices as identified in this Fire Master Plan Update.

4.7 Department Records Management

There are many reporting responsibilities for fire services, and one of the most important ways the municipality can exercise due diligence is through documentation. Supervising records keeping and reporting is an essential administrative task for a number of reasons, such as emergency response to fires, firefighter training records, and assessing the success of public education and fire prevention initiatives.

Standards for record quality, protocols for the security and integrity of hard-copy and electronic records, the proper use and protocol by division of the existing records management systems, record retention schedules, and other applicable codes, standards, or industry best practices are all outlined in PFSG 04-60-12 "Records Management," which offers a thorough overview of an effective and efficient records management program (e.g., Municipal Freedom of Information and Protection of Privacy Act, 1990).

Within SSMFS, the Office Supervisor manages and oversees the tracking of data for all divisions of the SSMFS, including invoicing, training records, emergency response attendance records, personnel records, inventory and purchasing, and municipal addresses. As part of the review completed for this FMP Update, it was identified that the department utilizes a range of software solutions, including Microsoft Office

components such as Excel spreadsheets, to track many of the department's activities and programs.

The department also utilizes the CriSys Xpert fire software program for fire dispatching and records management in several other areas, including tracking fire prevention, public education and training activities. In addition to providing a central database, the CriSys Xpert fire software provides a range of options for reporting on activities such as the number of hours per fire inspection. The current approach to department records management is meeting the needs of the department, with the opportunity to enhance the use of dedicated software programs.

The retention of records is critical for a modern fire department. The establishment of a process and retention period is usually set out in a Corporate By-law 2020-12 for all city departments to follow. The SSMFS currently utilizes the Corporate Policy C-1-5 which identifies the retention requirements for the fire department.

4.8 Annual Report

The OFM's "Optimizing Public Fire Safety" model recognizes the importance of ongoing monitoring, evaluation and revisions to the fire protection services approved by Council. To ensure a high degree of accountability and transparency in reporting to the community and Council on the quality of fire protection services delivered, fire services throughout the province have utilized yearly reports to Council as a tool. The Community Risk Assessment and fire-related bylaws may be updated during this routine reporting procedure. This regular review process can provide further value in identifying changes or trends within the community.

Annual reports can include highlights, such as public education events, program successes, as well as the number and type of emergency response calls. The reports can be further organized by division, providing details on staff, programs, changes and accomplishments.

The degree of information provided to Council and the public is also enhanced by including the data in a Community Risk Assessment as part of an annual report. Aside from the reporting advantage, the yearly report-writing approach keeps risk assessments current, improving SSMFS comprehension and bringing any changing community patterns to Council's attention.

Although yearly reports offer many advantages, they also require a significant amount of resources, including data gathering, inter-divisional communication, analysis, document design, reviews, and approvals. If an annual report is to be utilized as a vehicle for communicating the level of service to the public, it is especially crucial to carefully

consider the language and illustrations used. In the context of a department's daily operations, the process's demanding nature might be difficult to manage without enough resources.

Our research into developing this FMP Update indicates that the SSMFS recognizes the value and importance of developing an Annual Report. Our review while preparing this FMP Update identified that SSMFS has published annual reports from 2018 through 2023. Industry best practices support the continuation of this initiative, as well as the inclusion of the additional performance measures recommended in the discussion section that follows. Developing the expanded Annual Report, which includes an annual review of the Community Risk Assessment, is an effective strategy for the department in monitoring ongoing performance and identifying evolving trends that may require adjustments to services or programs for Council.

Recommendation #9: That the SSMFS continue to present an Annual Report to Council and the community, including the findings of an annual review of the Community Risk Assessment.

4.9 Performance Measures

Information about the function and application of performance metrics is included in PFSG 01-01-01 "Fire Protection Review Process." According to this guideline, performance measures can be divided into six main areas, which include:

- **Time:** The time it takes to complete a process (cycle time) or deliver a service or product.
- **Effectiveness:** Doing the right things, meeting corporate objectives and strategic directions.
- **Quality:** A measure of the extent to which a thing or experience (service meets a need, solves a problem, or adds value for someone (client, stakeholder, taxpayer).
- **Efficiency:** Outputs relative to inputs, doing things right every time.
- **Costs and Productivity:** Cost to provide a product or service, the relationships among costs, inputs and outputs; and,
- **Safety:** The extent to which important assets (personnel, property, records) are safeguarded so that the organization is protected from danger of losses that could threaten its success, credibility, continuity etc.

Best practices for municipalities emphasize the importance of performance evaluation and benchmarking in the administrative role of public services, including the fire department. Continuous evaluation of the department's performance, using both

quantitative and qualitative methods, provides important information on the general efficacy and efficiency of the services and programs offered.

To assess the effectiveness and efficiency of all services provided by the SSMFS, establishing **Key Performance Indicators for each division** is an industry best practice. The collection of data and benchmarking serve as essential tools for tracking and improving business activities within the fire department. By systematically analyzing various metrics such as dispatch time, turn-out time, and road response time, departments can identify areas for improvement and enhance overall performance. Leveraging mapping tools further enhances the effectiveness of response time analysis. To ensure accountability and transparency, it is recommended that the Fire Chief establish Key Performance Indicators (KPIs) for each division's activities, which should be entered into CriSys. and be subject to regular review by the Council. This approach enables informed decision-making and provides both the Council and the public with valuable insights into the department's performance. Additionally, within the department's annual report, the Fire Chief should report to the Council on any identified gaps affecting benchmark achievements within the established KPIs. This reporting mechanism fosters a culture of continuous improvement across all divisions of the fire department.

Recommendation #10: That the Fire Chief identify Key Performance Indicators (KPIs) for all divisions within the SSMFS, to be included within the department's annual report for Council's review.

4.10 Administration Division Summary and Recommendations

Under the leadership of the Fire Chief and Deputy Chiefs, the Sault Ste. Marie Fire Services, with the support of Council and senior corporate staff, Tayport has undertaken the development of this Fire Master Plan Update and Community Risk Assessment.

Our analysis of the Administration functions of the SSMFS has identified a high degree of skills and competencies within the staff resources assigned to this area. This division has achieved, and in some cases exceeded, its workload capacity. The evidence of this is presented in the examples within this report of sustaining key functions of the division's responsibilities, such as developing and sustaining current Policies and Operating Guidelines, By-laws and agreements. Competing priorities, such as the increasing workload in the area of labour relations, are challenging the current workload balance. The introduction of additional performance goals and objectives, as presented in this FMP Update, will further negatively impact this workload balance if left unaddressed. This FMP Update will present specific strategies to address the current

workload balance, particularly in the area of administrative support, in the following divisional analyses.

Our review of the Administration activities and resources has identified the following recommendations for consideration.

4.10.1 Administration Recommendations

Recommendation #1: That the strategic priorities identified within the proposed Fire Master Plan Update be adopted to form the strategic framework for the delivery of fire protection services within the City of Sault Ste. Marie including:

i. The use of a Community Risk Assessment in determining the level of existing fire safety risks within the City as the basis for developing clear goals and objectives for all fire and emergency services to be provided by the Sault Ste. Marie Fire Services.

ii. The optimization of the first two lines of defence, including public education and fire prevention, and the use of fire safety standards and fire code enforcement to provide a comprehensive fire protection program within the City based on the results of the Community Risk Assessment; and

iii. Emphasis on strategies, such as continuous improvement, that support the sustainability of fire and emergency services that provide the most effective and efficient level of fire protection services, resulting in the best value for the community.

Recommendation #2: That the current job description for the Fire Chief be reviewed and updated as referenced in the proposed Fire Master Plan Update.

Recommendation #3: That the current job descriptions of the Fire Chief, Deputy Fire Chiefs, and the Assistant Chief be reviewed and updated to reflect the redistribution of responsibilities as referenced in the proposed Fire Master Plan Update.

Recommendation #4: That, subject to Council's consideration and approval of the proposed Fire Master Plan Update, the Establishing and Regulating By-law be reviewed, updated and presented to Council for approval.

Recommendation #5: That the Fire Chief be directed to implement a regular process for the review of all applicable fire protection services by-laws.

Recommendation #6: That the Fire Chief assess the agreements and bylaws in effect, to ensure they reflect the current situation and establish a review cycle for future reviews.

Recommendation #7: That the Fire Chief works with the District of Algoma Fire Chiefs to update the Mutual Aid Plan, and once completed, the Fire Chief revise the By-law authorizing participation in the District of Algoma Mutual Aid Plan for Council's consideration.

Recommendation #8: That a review of the current Procedures and Guidelines be undertaken to realign with industry best practices as identified in this Fire Master Plan Update.

Recommendation #9: That the SSMFS continue to present an Annual Report to Council and the community, including the findings of an annual review of the Community Risk Assessment.

Recommendation #10: That the Fire Chief identify Key Performance Indicators (KPIs) for all divisions within the SSMFS, to be included within the department's annual report for Council's review.

5.0 Emergency Management

The roles and responsibilities of the fire department in the City of Sault Ste. Marie's emergency management program were assessed as part of the fire master planning process. The Emergency Management and Civil Protection Act (EMCPA), which is supplemented by **O. Reg. 380/04 - Standards**, provides the legislative foundation for emergency management in Ontario. This regulation specifies the minimum requirements for emergency management programs that municipalities and provincial ministries must meet. This section of the FMP Update follows the relevant laws and industry standards and provides an overview of the emergency planning, management, and preparedness activities occurring in the City of Sault Ste. Marie.

5.1 Compliance with Provincial Legislated Requirements

The EMCPA gives the Solicitor General the power to enact rules that establish guidelines for the creation, execution, and upkeep of emergency management plans that each municipality must have. Additionally, it mandates that all municipalities, Crown ministers, authorized agencies, boards, commissions, and other branches of government make sure their emergency management plans and programs meet the Act's requirements. Municipalities must examine and submit supporting documents every year to confirm compliance with the EMCPA. This documentation may include:

- Emergency Response Plan (ERP);
- Proof of training;
- Proof of exercises;
- Evidence of public education program;
- Municipal Hazard Identification Risk Assessment (HIRA);
- Critical Infrastructure (CI) List; and
- Emergency Management Program By-law.

After consulting with SSMFS management, the City has confirmed that it is compliant with the Emergency Management and Civil Protection Act for 2023 and is awaiting confirmation of compliance from the Province for 2024.

5.2 City of Sault Ste. Marie's Emergency Management Plan

Sault Ste. Marie's Emergency Management Program was developed under authority By-law No. 2023-114. The Emergency Plan provided for review as part of this FMP Update was the 2023 public version.

5.3 Emergency Management Staffing

SSMFS is responsible for overseeing the City of Sault Ste. Marie's Emergency Management portfolio, which presently includes two positions: the Emergency Management Coordinator and the Fire Prevention Emergency Planner.

The City's Emergency Management Coordinator operates from City Hall.

5.3.1 Emergency Management Coordinator

The main responsibility of the Emergency Management Coordinator who reports directly to the Deputy Chief Education, Prevention, and Emergency Management, is to develop direct and command the City's Emergency Management Plan in order to guarantee ongoing adherence to the Emergency Management and Civil Protection Act. According to the current job description, the main duties and responsibilities for this position are as follows:

- Provides strategic direction and oversight and the day-to-day management of the City's Emergency Management Program.
- Ensures the mandatory requirements of the Emergency Management and Civil Protection Act are met and continues to be ready to respond to and recover from any type of emergency or significant event.
- Establish and maintain a collaborative working relationship with staff in all departments, local municipalities, local hydro utilities, the police services, school boards, hospitals, other community partners, the Province and the business sector to ensure a coordinated response to any type of emergency or significant event.
- Ensure the Community Emergency Response Plan is current, reflective of response capabilities and incorporates industry-recognized best practices.
- Implements a comprehensive program of testing, assessing and revising the Emergency Response Plan through a rigorous training program, including conducting a series of mock emergency exercises.
- Ensure there is a comprehensive public awareness program making residents are aware of the importance and the need for personal emergency preparedness, and
- Participate on inter-agency working group and committees.
- Perform as the Community Emergency Management Coordinator (CEMC) and ensure all responsibilities of the CEMC are met, including:
    - Make recommendations to key decision-makers, including guidance and advice to the Fire Chief and the Emergency Control Group in the event of an emergency or significant incident requiring a Regional response.

- Ensuring the Emergency Operations Centre is ready and set up when required.
- Ensure the Emergency Control Group follows the emergency plans and procedures in the event of an emergency or significant incident requiring a Regional response.
- Leading the recovery efforts following a response to any type of emergency or significant event.

5.3.2 Fire Prevention Emergency Management Planner

Reporting to the Deputy Chief Fire Education, Prevention and Emergency Management, the Fire Prevention Emergency Planning position provides support and assistance with Fire Prevention and Emergency Management Duties. Primary roles and responsibilities, as taken from the current job description for this position, include:

Emergency Management

- Support Community Emergency Management Coordinator in the development, update, testing, exercise and maintenance of the municipal Emergency Management Program in accordance with applicable legislated requirements.
- Assist CEMC in ensuring the emergency operations centre is maintained in a state of continual readiness.
- Assist CEMC in developing and managing responses to emergencies, and potential emergencies, and manage the provision of / provide emergency management advice and recommendations to senior provincial and community officials and stakeholders.
- Co-Chair/participate in internal and external committees, councils and working groups related to emergency management.
- Act as CEMC Alternate, as required.
- On call (weekends/ nights) to respond to EOC during an emergency.

Fire Prevention

- Perform file search requests for real estate transactions.
- Issue open air burning permits and respond to burning complaints.
- Administer fireworks applications for approval by the Chief Fire Official.
- Prepare and issue suspension letters concerning open air burning.
- Monitor open air burning (OAB) electronic website, input OAB renewals and new applications.
- Perform and administer cost recovery fees.
- Assist Fire Prevention Officers and/or Public Education Officer as required.

Through our research and staff interviews, it appears that the Fire Prevention Emergency Planner is pulled into the fire prevention role on a regular basis due to the priorities in fire prevention. Currently, there is no coverage for this position, which leaves the workload in emergency management to the Coordinator and the Deputy Chief to cover. If the City wishes to focus on outstanding projects and enhance the EM program above the minimum, there will be a need to increase staff capacity for emergency planning. As noted above, the staffing needs of the Fire Prevention Division, including needs related to any program enhancements, should be included in the recommended divisional workload analysis.

At present, the City of Sault Ste. Marie has several large projects in need of review and or development, but has not been able to take them on due to the current workload. The City needs to address their business continuity plans, create an emergency social services plan (due to the reduced availability of the Red Cross and the fact that Sault Ste. Marie is an evacuation centre for some of the surrounding area), and review and revise their floodplain mapping (which remains outstanding from the 2018 FMP recommendations). Currently, the City of Sault Ste. Marie has retained a consultant to create an Emergency Social Services plan with the expectation for completion in 2025. It will become the responsibility of the Emergency Management division to ensure all non-union City Staff are trained to fulfill the various roles and responsibilities during an emergency.

Recommendation #11: That the City of Sault Ste. Marie review the capacity and workload of all Emergency Management positions.

Recommendation #12: That the City of Sault Ste. Marie require all City-wide departments to prepare Business Continuity Plans.

Recommendation #13: That the City of Sault Ste. Marie update the City's floodplain mapping as part of the next Hazard Identification and Risk Assessment (HIRA) review process.

5.4 Training and Annual Exercise

Municipalities in Ontario are required by the EMCPA to provide emergency management program staff with training. Emergency Management Ontario (EMO) offers courses that are based on Ontario's best practices and principles. Incident Management Systems, Exercise Program Management, Note Taking, Basic Emergency Management (BEM), and Community Emergency Management Coordinator (CEMC) training are among the courses offered by EMO.

The most current guidance provided to municipalities with respect to emergency management training specifies the following four courses as mandatory for CEMCs:

- Basic Emergency Management (EM 200).
- Community Emergency Management Coordinator (EM 300).
- Introduction to Incident Management System (IMS 100) available online; and
- Basic Incident Management System (IMS 200).

Under O. Reg. 380/04, Community Emergency Management Coordinators are required to complete the required training within one year of being appointed as CEMCs.

Municipal Emergency Control Group members are required on an annual basis to demonstrate:

- Knowledge of all components of the Emergency Management program, including the HIRA and Critical Infrastructure list.
- Knowledge of the Municipal Emergency Plan, including their respective roles and responsibilities, as well as the roles and responsibilities of local agencies and organizations included in the Plan.
- Knowledge relating to the procedures required to activate and operate under the Municipal Emergency Plan.
- Knowledge of notification procedures for the Municipal Emergency Control Group (MECG) when the Plan is activated, and
- Knowledge of the location and equipment utilized in the Emergency Operations Centre (EOC).

Every year, the City of Sault Ste. Marie's Emergency Management team provides emergency management training to staff members who are assigned (or dedicated backups) to the Emergency Operations Centre, as well as regional emergency management/response partners, including local organizations, businesses, NGOs, surrounding communities, provincial and federal partners, etc. All employees responsible for working in an EOC must get ongoing training in order to provide a successful and effective group response to any municipal emergency.

The EMCPA requires each municipality to hold an annual emergency drill to guarantee readiness. In order to help the EOC team become more adept at handling emergencies, this exercise simulates emergency scenarios. Municipalities can verify the skills of those in charge of planning for and handling emergency situations, as well as test their emergency response plans and processes, by holding disaster exercises.

5.5 Public Education Program

Municipalities must educate the public about disaster preparedness under the EMCPA. The following emergency preparedness information is available on the City's website:

- Emergency Alerts and Public Information sources via city website, social media, local media, weather warning updates, Ontario Public warning system and or the amateur radio emergency service.
- Neighbours helping neighbours, is a grant program for neighbourhoods to host an event that will allow neighbours to connect and build resilience at the neighbourhood scale.
- Book a presentation, SSMFS offer presentations on general emergency preparedness topics for the community.
- Emergency preparedness documents, the City has posted the Emergency Response Plan, Emergency Management Program Committee, and the Emergency Control Group Concept of Operations documents for the public to view.

Where possible, SSMFS should continue to utilize its expertise and resources to increase the emergency preparedness messaging throughout the community.

In order to reach the City's residents proactively, the SSMFS should also distribute disaster preparedness information through its Home Smoke Alarm program, along with its pamphlets about fire safety and smoke alarms.

Recommendation #14: That the SSMFS proactively distribute disaster planning preparedness information through its Home Smoke Alarm Program.

5.6 Hazard Identification and Risk Assessment

The Office of the Fire Marshal (OFM) published the "Hazard Identification Report" and "Methodology Guidelines" in 2019 to help municipalities evaluate their local risks and hazards. These documents provide a procedure for developing a HIRA program. This methodology considers the following steps:

1. Plan;
2. Identify Hazards;
3. Build Community Knowledge;
4. Assess Risk; and
5. Report and Follow-up.

Municipalities are required to review the HIRA on an annual basis and update as needed. Municipalities are required to review the HIRA on an annual basis and update as needed. Based on our research and interviews conducted, SSMFS updates the HIRA annually and performs an update every five years. The last update to the HIRA for the City's of Sault Ste. Marie occurred in 2021. The Province has recently released the 2025 HIRA tools, which the City will be using to prepare a new HIRA.

5.7 Critical Infrastructure

The Province of Ontario defines critical infrastructure as "interdependent, interactive, interconnected networks of institutions, services, systems and processes that meet vital human need, sustain the economy, protect public safety and security, and maintain continuity of confidence in government." [9] The EMCPA requires municipalities to identify critical infrastructure. **O. Reg. 588/17 – Asset Management Planning for Municipal Infrastructure** also requires municipalities to have plans in place to address vulnerabilities affecting certain municipal infrastructure assets; levels of service; maintenance schedules; adaptation opportunities and, amongst other things, disaster planning and contingency funding. Ensuring the City's CI is protected from vulnerabilities, whenever possible, is vital to the resilience of the community. This requires proactive and strategic measures.

The City of Sault Ste. Marie has created a prioritized list of its assets and infrastructure that are critical to the health, safety, security, and economic well-being of its citizens. For the purposes of the FMP Update, the concerns related to the CI were reviewed as they would pertain to the provision of fire protection in the Community Risk Assessment section of this document. The CI document is restricted from the public domain and is appended to the Municipal Emergency Plan.

5.8 Emergency Operations Centre

According to the Incident Management Systems for Ontario Resource Manual, "the ability to coordinate incident support is dependent on having a facility with the capabilities to monitor the incident responses, and to communicate with Incident Command." This support is typically coordinated through an Emergency Operations Centre.

[9] Source: "Critical Infrastructure", Ministry of the Solicitor General, last modified April 19, 2017.

The City of Sault Ste. Marie's EOC is located at City Hall (99 Foster Drive), and MECG members are set up for virtual meetings when required. The alternate EOC is located at the Police Service building, 580 Second Line East.

According to best practices, the primary and alternate EOCs should be as far apart geographically as possible. This way, if the primary EOC is incapacitated, the alternate will be far enough away to make sure it is not in the same area as the primary EOC.

According to our review and interviews with SSMFS staff, the two EOC facilities have the necessary alternate power sources, computer and communications technologies, resources, and redundancies to function successfully during prolonged emergency operations.

5.9 Emergency Management Summary and Recommendations

The City of Sault Ste. Marie has developed a comprehensive emergency management program that complies with the minimum requirements of the EMCPA and O. Reg. 380/04. The City provides training to staff designated to oversee the City's Emergency Planning process and operational needs. As a result of the review of the City's Emergency Management Program, the following recommendations are presented for consideration.

5.9.1 Emergency Management Recommendations

Recommendation #11: That the City of Sault Ste. Marie review the capacity and workload of all Emergency Management positions.

Recommendation #12: That the City of Sault Ste. Marie require all City-wide departments to prepare Business Continuity Plans.

Recommendation #13: That the City of Sault Ste. Marie update the City's floodplain mapping as part of the next Hazard Identification and Risk Assessment (HIRA) review process.

Recommendation #14: That the SSMFS proactively distribute disaster planning preparedness information through its Home Smoke Alarm Program.

6.0 Fire Prevention and Public Education Division

As required by the FPPA, “Every municipality shall, establish a program in the municipality which must include public education with respect to fire safety and certain components of fire prevention[10]" and "Provide such other fire protection services as it determines may be necessary in accordance with its needs and circumstances"[11] as a minimum legislative requirement for the delivery of fire protection services.

The OFM developed **PFSG 04-40-03** and **04-40-12 Selection of Appropriate Fire Prevention Programs** to further assist municipalities in understanding the definition of what the minimal acceptable fire prevention and public education programs are. Although these PFSGs are currently under review, they continue to provide valuable insight into identifying the minimal acceptable fire prevention and public education programs, including:

- A risk assessment;
- A smoke alarm/carbon monoxide (CO) program;
- The distribution of fire safety material; and
- Inspections upon complaint, or when requested to assist with code compliance.

In our professional opinion, the OFM is currently examining all PFSGs, in part, to make sure they are up to date with any legislative changes that may have an impact on how public education and fire prevention programs are implemented. Examples of such changes include the adoption of **O. Reg. 378/18**, which requires all municipalities to establish CRAs, and changes to the rules governing smoke and carbon monoxide detectors.

Our understanding of the current applicable laws, such as the new **O. Reg. 378/18 - CRA**, the OFM's PFSGs, and relevant NFPA standards, has guided the analysis in this section.

A municipality can assess various community fire-risk reduction and mitigation strategies by integrating risk analysis into the fire master planning process, as specified in **O. Reg. 378/18 - CRA**. Some strategies to lower the risk of fire include improving a

[10] FPPA, 1997 Part II, Section 2. (1) (a).
[11] FPPA, 1997 Part II, Section 2. (1) (b).

fire inspection program within a specific building occupancy classification, developing a public education program for a community demographic thought to be at-risk, such as seniors, or taking into consideration local initiatives to install residential sprinklers in newly constructed and remodelled homes. These risk mitigation and reduction strategies acknowledge that enhancing a community's capacity to suppress fires is not the only proactive option.

6.1 Fire Prevention and Public Education Industry Best Practices

The public education and fire prevention initiatives of the Sault Ste. Marie Fire Service should be based on the most recent legal requirements and industry best practices. FPPA, NFPA 1730 Standard on Organization and Deployment of Fire Prevention Inspection and Code Enforcement, Plan Review, Investigation, and Public Education, and the NFPA Fire and Life Safety Ecosystem are the main needs for these.

6.1.1 NFPA Fire and Life Safety Ecosystem

The **NFPA Fire and Life Safety Ecosystem** is a framework of eight elements that work in conjunction with one another with the collective goal of risk reduction. Together, they promote the prevention of fires and other hazard-related loss, injuries and fatalities. The eight components that comprise this framework include:

1. Government responsibility;
2. Development and use of current codes;
3. Referenced standards;
4. Investment in safety;
5. Skilled workforce;
6. Code compliance;
7. Preparedness and emergency response; and
8. Informed public.

This ecosystem is premised on the notion that the cause of all life safety incidents can be traced back to the breakdown of one or more of these components.

The Fire and Life Safety Ecosystem recognizes that fire prevention is multifaceted and there are various key components that need to work in tandem to cultivate an environment and culture of fire safety.

This FMP Update supports a multifaceted approach to fire prevention and, where applicable, will present strategies to enhance existing fire prevention and public education programs and services provided by the SSMFS.

Through interactions with OFM personnel and fire chiefs throughout the province, it has been determined that the reduction of fire losses and enhancement of community fire safety are primarily due to the work of fire departments that prioritize maximizing the first two lines of defence.

We believe that this FMP Update should prioritize tactics that maximize the use of the first two lines of defence to meet the Community Risk Assessment (CRA) results. For instance, this should involve giving public education and fire safety initiatives a priority in neighbourhoods where elderly and other vulnerable residents live.

6.1.2 NFPA 1730: Standard on Organization and Deployment of Fire Prevention Inspection and Code Enforcement, Plan Review, Investigation, and Public Education Operations to the Public (2019 Edition)

The most recent Standard on Organization and Deployment of Fire Prevention Inspection and Code Enforcement, Plan Review, Investigation, and Public Education Operations is the 2019 Edition. This standard establishes its criteria through six chapters:

1. Organization.
2. Community Risk Assessment.
3. Fire Prevention Inspection and Code Enforcement Activities in Existing Occupancies.
4. Plan Review.
5. Investigations; and
6. Public Education Programs.

The focus of this standard is to ensure that a Fire Prevention Division has a Community Risk Reduction Plan (CRRP) in place and that it is based on the local “needs and circumstances” established through a CRA. A CRRP is then used to establish resources and programs that are designed to mitigate and/or reduce identified fire risk. For example, the NFPA 1730 standard identifies a minimum fire inspection frequency cycle which could be refined based on the local context. The supporting appendices of NFPA 1730 provide exercises to identify staffing resource needs, taking into account required tasks and time demands.

The analysis and methodology included within this FMP integrates the intent of developing a CRRP as referenced within NFPA 1730. Where applicable, this FMP will present risk reduction and risk mitigation strategies to optimize the use of the “three lines of defence” in response to the identified “key findings” and “identified risk” included in the CRA to enhance the existing fire prevention and public education programs and services provided by the SSMFS. The focus of the NFPA 1730 Standard is consistent

with the current industry trends to further emphasize fire prevention and public education services and programs through the application of the first four “E’s” (education, enforcement, engineering, and economic incentive) of community risk reduction and risk mitigation planning.

These identified best practices, as well as PFSGs developed by the OFM, will be referenced throughout the review of the operations of the Fire Prevention and Public Education Division.

6.2 Existing Fire Prevention and Public Education Staff Resources

The Deputy Chief Education Prevention and Emergency Management serves as the direct supervisor of the Public Education and Fire Prevention division within SSMFS. In addition to carrying out fire inspections and investigations and delivering the department's public education program, prevention and public education personnel are in charge of upholding the Ontario Fire Code. Administrative support for this division is provided by one of the administrative clerks.

6.2.1 Public Education Officer

SSMFS currently has one Public Education officer who is responsible for developing, implementing and evaluating all public education programs, including marketing and delivering programs to schools, service clubs, businesses, the general public and other community groups.

Upon review of the job description provided by SSMFS, the Public Education Officer’s roles and responsibilities are:

- Perform research for Simplified Risk Assessment (SRA) Community Risk Profile and Hazard Identification.
- Risk Assessment (HIRA) to facilitate program development and implementation.
- Deliver new and existing Fire Prevention and Emergency Management education programs to schools, service clubs, businesses and the general public and others.
- Evaluate & quantify existing public education programs to ensure they satisfy/mitigate risks identified in the SRA and HIRA.
- Develop new programs to ensure risks/trends identified in the SRA and HIRA are being abated.
- Coordinate annual smoke alarm program with suppression staff and ensure all program needs are being met. Provide ongoing training for suppression staff.

- Liaise with outside agencies ensuring all public education program needs are being fulfilled. This shall include but is not limited to; internal and external staff, suppliers, public safety agencies, media.
- Develop & implement effective media campaign strategy, including issuing all media releases as directed by executive and senior management.
- Act as Sault Ste. Marie Fire Services (SSMFS) Public Information Officer.
- Establish and maintain sponsorships and partnerships with government, non-government agencies, companies and other interested parties, as authorized by the Division head, for the purposes of supporting fire prevention and Emergency Management education activities.
- Maintains city website and social media mechanisms to ensure appropriate pictures, articles etc. are up to date with current trends and programs.
- Provide training to internal and external staff as required.
- Maintain a thorough working knowledge of the City's Health and Safety policies and procedures.
- Attend Ontario Fire College and/or Regional Training Centers (RTC).
- Design effective training programs.
- Provide support and assist in the development of a media relations strategy.
- Provide support in the development of the annual budget for public education initiatives with the Division Head.
- Available to perform public education duties, including evenings and weekends as required.
- Alternate Community Emergency Management Coordinator (CEMC), as required.
- Perform other duties related to Fire Prevention, Public Education and Emergency
- Management, as assigned.

The current job description for the Public Education Officer was updated in April of 2021 and reflects the current roles and responsibilities for this position.

6.2.2 Fire Prevention Officer

The current organizational structure in this division includes four Fire Prevention Officers who provide fire safety code compliance services, inspections, implementation of municipal inspection programs, and perform fire cause determination. Through a review of the job descriptions provided by SSMFS, a summary of their roles and responsibilities includes:

- Conduct regular fire safety inspections, prepares inspection reports and maintains records ensuring premises meet or exceed of Ontario Fire Code and

other relevant legislation and acceptable degree of life safety and property protection is achieved, including enforcement.

- Conduct specialized inspections upon request, complaint, or if evidence suggests a hazardous situation exists, ensuring compliance with applicable fire safety legislation and a minimum level of life safety and property protection is achieved.
- Evaluate and monitor fire safety plans, reviewing, modifying and recommending for approval, submitted plans verifying implementation to ensure compliance with the Ontario Fire Code.
- Assist in implementation, delivering public education programs for community groups, schools, businesses, industry, etc.
- Perform public relations duties.
- Prosecute offenders of fire safety legislation by reviewing relevant Acts, regulations and municipal by-laws establishing ownership, preparing and swearing an information providing a written summary of the case for the Crown Attorney or City Solicitor and presenting evidence in court so that all
- relevant evidence is accurate and complete.
- Evaluate development proposals including site plans, subdivision plans, zoning and official plans and prepares written recommendations for incorporating adequate fire protection measures.
- Under the direction of the Fire Chief, serves as an Assistant to the Fire Marshal as per the Fire Protection and Prevention Act.
- Participate in an on call rotational schedule to investigate fire scene(s) to determine origin and cause.
- Provide technical support and training for Fire Services' personnel as directed.
- Perform administrative duties preparing reports and correspondence, organizing and maintaining administrative files, records and data in accordance with Department and Corporate policies and procedures.
- Attend and successfully complete work-related courses and training as directed.
- Respond to fires, if required.
- Act as a Court witness on matters relating to the employer's business.
- Maintain a thorough working knowledge of, and work in compliance with, the Occupational Health and Safety Act and the City's health and safety policies and procedures.

The current job description for the Fire Prevention Officer was updated in March of 2021 and reflects the current roles and responsibilities for this position in the City of SSM.

Currently all fire prevention officers are assigned a specific geographical area within the City.

The Fire Prevention Division is supported by one of the three Administrative Clerks, who is responsible but not limited to preparing inspection letters and orders of compliance for the fire prevention officers. The Administrative Clerk reports to the Officer supervisor.

6.2.3 Training, Qualifications and Certifications

The Ontario Fire Services Standards (OFSS) were to be replaced with the NFPA Pro-Qual Standards, according to a 2013 announcement by the OFM. In order to establish guidelines for the education and credentials of fire department employees, the Ontario Fire Chiefs Association (OAFC) collaborated with the OFM to create the former OFSS.

To aid communities in this transition, the OFM created a "Grandfathering Policy" to streamline the NFPA Pro-Qual Standards implementation process. "To give recognition for training and education already completed and for experience already gained, and to exempt anyone from having to start over in any program," according to the OFM grandfathering policy. Up to April 14, 2022, the Province of Ontario recognized the NFPA Pro-Qual Standards as the industry best practices for training and qualifications pertaining to the provision of public education and fire prevention programs and services.

The Ministry of the Solicitor General filed **O. Reg. 343/22 - Firefighter Certification** on April 14, 2022, mandating that all firefighters in Ontario obtain certification in accordance with NFPA Pro-Qual criteria within the following four to six years. According to the FPPA, fire professionals who provide fire protection services are considered firefighters. Since fire prevention and safety education are included in the FPPA's wider definition of fire protection services, fire prevention officers are subject to **O. Reg. 343/22** and its compliance deadlines.

In summary, regardless of the department's existing training and "qualifications", Ontario's new firefighter legislation will require departments to have their firefighters certified to the prescribed NFPA standards, ensuring that such certification is issued by the OFM, International Fire Service Accreditation Council (IFSAC), or a Pro Board seal. A detailed explanation of the changes to the training and certification of fire department staff is outlined in the Training Division section of this FMP Update.

Since the local college does not offer courses for current residents to take and the courses offered through the Ontario Fire College curriculum are only available to current fire service employees, recruiting skilled fire prevention officers can be a major problem for Sault Ste. Marie. Due to this predicament, Sault Ste. Marie either hires unqualified people and requires them to complete education courses during the first few years of their employment, which prevents the new hire from performing fire inspections until

they are certified, or attempts to recruit qualified applicants from other municipalities or organizations.

6.2.4 Applicable NFPA Pro-Qual Standards

The applicable NFPA Pro-Qual Standards as they pertain to the roles and responsibilities of fire prevention and public education staff are outlined in **Table 13**.

These standards reflect the requirements and compliance dates outlined in **O. Reg. 343/22 – Firefighter Certification**.

Table 13: Applicable NFPA Pro-Qual Standards

NFPA Standard	Qualification	Description	Compliance Date
NFPA 1031 – Standard for Professional Qualifications for Fire Inspector and Plans Examiner	Fire Inspector I	All job performance requirements of NFPA 1031, "Standard for Professional Qualifications for Fire Inspector and Plan Examiner", 2014 Edition, Chapter 4 (Fire Inspector I).	July 1, 2026
NFPA 1031 – Standard for Professional Qualifications for Fire Inspector and Plans Examiner	Fire Inspector II	All job performance requirements in item 19 and NFPA 1031, "Standard for Professional Qualifications for Fire Inspector and Plan Examiner", 2014 Edition, Chapter 5 (Fire Inspector II).	July 1, 2026
NFPA 1033 – Standard for Professional Qualifications for Fire Investigator	Fire Investigator	All job requirements of NFPA 1033 "Professional Qualifications for Fire Investigator", 2014 Edition, Chapter 4 (Fire Investigator).	July 1, 2026
NFPA 1035 – Standard for Professional Qualifications for Fire and Life Safety Educator	Fire and Life Safety Educator I	All job performance requirements of 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", 2015 Edition, Chapter 4 (Fire and Life Safety Educator I)	July 1, 2026

Prior to the certification date of July 1, 2026, in the interim, all staff resources performing fire inspections should possess the abilities and skills listed in NFPA 1031 - Fire Inspector Level I. NFPA 1031- Fire Inspector Level II certification is advised for those conducting fire inspections that involve more complicated matters and call for interpretation of several laws, as well as OFC and OBC requirements. To ensure that

staff members in the Public Education and Fire Prevention Division are properly trained to carry out their duties, we have found that successful completion of courses in addition to NFPA 1031 Level I and II requirements, such as Effective Inspections of Commercial Cooking Equipment, are beneficial. Employees who oversee the investigation of fires ought to possess the abilities and proficiencies listed in NFPA 1033, the Standard for Professional Qualifications for Fire Investigators.

Only those designated as Chief Fire Officials have the authority to authorize alternative fire solutions, compliance alternatives, compliance equivalency, FSPs, life safety studies, and fire drill scenarios. Fire chiefs are granted Chief Fire Official status based on their rank. Any delegation of this kind of authority needs to be recorded in writing in accordance with industry standards. All Chief Fire Officials who are responsible for authorizing FSPs for buildings that house care occupancies, care and treatment occupancies, or retirement homes must now finish mandatory training approved by the Fire Marshal, per recently passed legislation.

6.3 Existing Fire Prevention and Education Division Staff Training and Qualifications

As part of the data collection process for this FMP Update, documentation provided by the SSMFS was utilized to determine the level of training of fire prevention and education division resources. **Table 14** summarizes the current training certifications of the fire prevention staff who deliver fire prevention and public education programs and activities.

Table 14: Current Fire Prevention and Public Education Staff Qualifications

Position	NFPA 1031 Level I	NFPA 1035 Level I	NFPA 1035 Level II	NFPA 1033
Fire Prevention Officer	Yes	Yes	No	Yes
Fire Prevention Officer	Yes	No	No	Yes
Fire Prevention Officer	Yes	Yes	Yes	Yes
Fire Prevention Officer	Yes	No	No	Yes
Fire Prevention Officer/ Emergency Planner (temp)	Yes	Yes	No	Yes*
Public Education Officer	Yes	Yes	Yes	No

(* Passed testing process and awaiting results of report)

Sault Ste. Marie Fire Service has taken the initiative to make sure that ongoing professional development is accessible to the Fire Prevention Division personnel. At this time, some of the FPOs are engaged in Building Code Identification Number (BCIN) training. Building code practitioners who conduct inspections of buildings covered by the Ontario Building Code can earn professional credentials through the BCIN courses.

To ensure that all SSMFS FPOs continue to hold their leadership roles in this extremely specialized field, it is recommended that they continue to pursue ongoing professional development. The city will be required to continue funding financial commitments to cover staff attendance and course expenses, in addition to providing more time for staff to attend training sessions in order to earn more certifications. The City of Sault Ste. Marie will be able to improve the safety of its citizens and visitors by proactively enforcing fire safety laws and regulations, as well as public education and prevention, which are the first two lines of defence, thanks to the allocation of this expenditure.

6.4 Fire Prevention Policy

Based on our expertise, a Fire Prevention Policy is a highly beneficial tool that mirrors industry best practices and provides department staff with direction and clarity. The policy specifies the service expectations for the division that have been adopted by Council. Policies are essential, mostly in the areas of public education and fire prevention, to set performance targets and goals, guide trend analysis, and permit ongoing monitoring of these public services.

PFSG 04-45-12 Fire Prevention Policy offers the elements of a fire preventive policy together with a structure for creating one. A fire prevention policy serves to accomplish, among other things:

- To establish policies and procedures for fire department personnel for fire prevention, public education programs and activities as a primary means of protecting lives and property from fire; and
- To maintain compliance with the minimum fire prevention and public education activities as required by the FPPA, 1997.

A Fire Prevention Policy should also describe the following fire prevention and fire safety education programs and services such as:

- Fire inspection activities.
- Fire code enforcement.
- Fire and life safety education.
- Fire investigation and cause determination.

- Fire loss statistics; and
- Fire department operational guidelines identifying how, when and where activities will be conducted.

6.4.1 SSMFS Fire Prevention Policy

Through our research, SSMFS does not have a Council-approved Fire Prevention Policy and continues to rely upon the use of operating guidelines for staff to use in the course of their inspection duties. SSMFS currently has 22 active guidelines covering items such as issuing open air permits to conducting complaint and request inspections. Guideline 1700-03 Appendix A, identifies a monthly inspection cycle for staff to follow; however, it remains a guideline and is not council-approved. According to industry's best practices, City Council should approve the fire inspection cycles in the Fire Department Establishing and Regulating By-Law. The types of occupancy fire inspections and the fire inspection cycles are not specifically covered under SSMFS's existing Establishing and Regulating by-law. As part of the proposed Fire Prevention Policy, the Establishing and Regulating By-Law should include a list of the kinds of occupancy and inspection cycles. This will allow the fire department to carry out these operations and inform the community of the service levels that must be provided. A crucial part of fire master planning and the continuous assessment of the fire department's fire protection service levels is identifying important performance objectives, such as fire prevention inspection cycles. In addition, a council-approved policy would also set performance targets and goals, guide trend analysis, and permit ongoing monitoring of these public services.

The 2018 FMP recommended that a Council-approved policy be put in place, and through our research, a policy was created and remains in a draft form.

It is recommended that the draft fire prevention policy be reviewed and revised where necessary to reflect any changes in the industry and recommendations contained in this FMP Update. Upon completion of the review, the Fire Prevention policy will be presented to the council for consideration and approval.

Recommendation #15: That SSMFS develop and present for Council's consideration and approval a Fire Prevention Policy along with the recommended revision of the Establishing a Regulating By-law as identified in this FMP Update.

6.5 Existing Fire Inspection and Enforcement

Legislative requirements of the municipality defined in section 2 (1) (a) of the FPPA include the provision of fire inspections following a complaint or a request.

A number of stand-alone regulations pertaining to fire safety inspections have been established since 2013 under the Fire Protection and Prevention Act. Furthermore, the Fire Marshal published Directive 2014-003, which sets a guideline that fire departments must adhere to when conducting fire safety inspections and evaluations in response to complaints or requests. A summary of these regulations and directives follow.

6.5.1 O. Reg. 150/13 Enhancing Fire Safety in Occupancies Housing Vulnerable Ontarians

O. Reg. 150/13 – Enhancing Fire Safety in Occupancies Housing Vulnerable Ontarians was filed on May 9, 2013. This regulation introduced amendments to the OFC that came into force on January 1, 2014. The OFM led the development of this new regulation in consultation with a Technical Advisory Committee of industry experts. This regulation is intended to enhance fire safety in occupancies that house vulnerable occupants. The legislation applies to care, care and treatment and retirement homes that are regulated under the **Retirement Homes Act.**

6.5.2 O. Reg. 364/13 – Mandatory Inspection – Fire Drill in Vulnerable Occupancy

O. Reg. 364/13 – Mandatory Inspection – Fire Drill In Vulnerable Occupancy (VO) also requires that a fire inspector observe a fire drill scenario representing the facility's lowest staffing complement (as approved by the Chief Fire Official), conduct a fire safety inspection (utilizing the Annual Inspection Checklist which forms part of **OFM Directive 2014-002: Vulnerable Occupancies – Fire Drill Scenarios, Fire Drill Observations, Fire Safety Inspections,** as a minimum level of inspection), and then update the OFM's VO Registry, as appropriate.

6.5.3 O. Reg. 365/13 – Mandatory Assessment of Complaints and Requests for Approval

O. Reg. 365/13 – Mandatory Assessment of Complaints and Requests for Approval requires the Chief Fire Official to assess a complaint about the fire safety of a building to determine if conducting a fire safety inspection of all or part in a building is warranted.

The regulation further requires Chief Fire Officials to determine whether a fire safety inspection is required when a request is made for approval under the fire code. As with complaints, the Chief Fire Official has been empowered to assess requests for approval to determine if a fire safety inspection is required.

Through consultation with the OFM, it is our understanding that the intent of this regulation is not for the Chief Fire Officials to cause a fire safety inspection to be

conducted as the result of every complaint or request for approval received, but rather to assess each complaint and request to determine if an inspection is necessary.

6.5.4 Fire Marshal's Directive: 2014-003

Fire Marshal's Directive: 2014-003 provides direction to all Assistants to the Fire Marshal to follow with respect to performing request or complaint inspections and was intended to provide a uniform standard for all fire departments to follow when conducting fire safety inspections and assessments. The directive references **PFSG 40D-03 Inspections upon Request or Complaint** and **OFM TG-01-2012: Fire Safety Inspections and Enforcement**.

The fire prevention divisions of municipal fire departments now have more work to do as a result of these rules and guidelines. According to the CRA, there are 40 registered vulnerable occupancies in the City of Sault Ste. Marie, and each one requires the SSMFS to conduct fire safety inspections and observe a fire drill once a year.

Additional training is required for those individuals responsible for approving the fire drill scenarios and FSPs for these facilities, as outlined in Article 1.2.4.1 of Division C of the Fire Code. Currently, only the Deputy of the division has completed this training and, therefore, is the only person in the department who signs off on drill proposals and FSP for vulnerable occupancies.

6.5.5 Request or Complaint Inspections

In compliance with **O. Reg. 365/13: Mandatory Assessment of Complaints and Requests for Approval**, upon receipt of a complaint or request for assistance to comply with the Fire Code, the SSMFS will perform a fire safety inspection. This regulation requires that fire safety assessments and inspections, if necessary, be undertaken for:

- Every building or property for which a fire safety complaint is received; and
- Every building or property for which a request for assistance to comply with the Fire Code is received, and the involvement of the Chief Fire Official is required.

Our review of SSMFS OG 1700-19 "Fire Code Inspection - Complaint and Request" outlines the procedure to be taken when receiving a request or complaint and walks the FPO through the criteria of when a fire code inspection shall be. Currently, there is no written timeline associated with the receipt of a complaint or request, and the inspection to be performed. To standardize and document for consistency, it is recommended that the SSMFS create or amend a standard operating guideline outlining the timelines

associated with the receipt of fire safety complaints and requests and the performance of the initial inspection.

Based on our analysis of the FPPA criteria and knowledge of industry best practices, the SSMFS is achieving legislative compliance.

6.5.6 Routine Fire Inspections

The SSMFS conducts routine fire inspections as a proactive measure in response to known potential fire threats. Prior risk assessments and risk profiles pertaining to fire hazards have traditionally served as a guide for routine fire inspections. Within this FMP, the "identified risk" and "key findings" determined by the Community Risk Assessment will guide the emphasis of routine fire inspections.

Sault Ste. Marie Fire Service OG #1700-03 Fire Code Inspections provides an outline of the department's fire inspection program above and beyond the complaint and request inspections. This operating guideline identifies the fire inspections of significant building code occupancy categories based on a monthly schedule. Every Fire Prevention Officer has a designated geographical area within the City to complete the monthly plans. Once completed, all fire inspection information is recorded in the CriSys database.

The monthly schedule includes the mandatory inspections and evacuation drills required under **O.Reg.150/13 - Enhancing Fire Safety in Occupancies Housing Vulnerable Ontarians**. The City of Sault Ste. Marie currently has 40 registered vulnerable occupancies and has set aside two months of the year to complete the required tasks.

A list of the types of inspection is provided under operating guideline #1700-03, ranging from routine, complaint and request inspections (which are free of charge) to requested inspections, which are subject to a fee (as per the User fee bylaw). In addition to the overall goal of achieving compliance with the Ontario Fire Code (OFC), the guideline provides a list of inspection options that Fire Prevention Officers can take into consideration based on the potential danger to property and/or life safety and the severity of any violations that may exist.

Table 15 provides the schedule of the SSMFS's current routine fire inspection program outlined in OG 1700-03 Appendix A. The division uses the month of December to address outstanding, missed or special request inspections each year.

Table 15: Existing Routine Fire Inspection Cycle

Group	Occupancy Type	Month(s)
A	Assembly	All schools are inspected annually. October is dedicated to school inspections. March and April are dedicated to all other assembly occupancies, with the goal of an inspection every 5 years
B	Care/Detention: Vulnerable Occupancies	Annually (May & September)
B	Care/Detention: Other	Annually
C	**Residential:** High/Low (2-4 units)	November is dedicated to triplexes/fourplexes with the goal of an inspection at least every 5 years
C	**Residential:** High/Low Rise High/Low Rise (5 or more units)	June & July are dedicated to multi-unit residential with a goal of an inspection at least every 5 years
C	**Residential:** Boarding, Lodging, Rooming	At least every 5 years
C	**Residential:** Dual Purpose – Accessory Apartment	Request/Complaint-based
C	**Residential:** Hotels/Motels/Motor Lodge	February is dedicated to hotels/motels with the goal of annual inspection
C	**Residential:** Other	Short-term rentals are inspected as part of the City's licensing process, and every 3 years after. All other residential - request/complaint only.
D	**Business & Personal Service**	January is dedicated to offices and mercantile, with the goal of an inspection every 5 years.
E	**Mercantile**	January is dedicated to offices and mercantile, with the goal of an inspection every 5 years.
F	**Industrial**	August is dedicated to industrial inspections, with a goal of an inspection at least every 5 years.

Source: SSMFS

In addition to the scheduled proactive inspection activities outlined in **Table 15**, SSMFS Fire Prevention Officers also performed other inspections and activities, summarized in **Table 16**.

Table 16: Additional Inspections and Prevention Activities

Activity	2019	2020	2021	2022	2023
Other Building Inspections	322	213	172	194	275
Other Building Rechecks	387	196	190	324	249
Complaints and Requests	144	92	122	154	153
Fire and Explosion Investigations	86	81	65	29	32
Fire Safety Plan Reviews and Approvals	296	167	156	282	240
Total Activity	**1,235**	**749**	**705**	**983**	**949**

The outcomes of the Fire Prevention Division's workload from 2019 to 2023 are shown in **Table 15** and **Table 16**. It's important to remember that the SSMFS's operations during the COVID-19 pandemic were limited because of 2020 and 2021 restrictions, which led to a lower activity level, as shown in the tables above.

It is important for this FMP Update process that the time spent on the fire prevention tasks assigned to the Fire Prevention Officers is not included in the workload summary. In order to collect the data required to assess the division's capabilities, the department would benefit from putting in place a procedure for tracking these activities as identified in NFPA 1730.

6.5.7 Recommended Fire Inspection Frequency

The results of the accompanying Community Risk Assessment, particularly the "identified risks" from the building stock profile that have been classified as "high risk," need to be considered in developing a recommended fire inspection/enforcement program. They consist of the following:

Group C – Residential Occupancies represent 95.25% of the City's existing building stock, and over the five-year period from January 1, 2017, to December 31, 2023, were associated with 76.81% of the structure fires within the City.
An analysis of the City's parcel data indicates that 69.4% of the City's total building stock was built prior to the introduction of the 1981 Ontario Fire Code. Census data from 2021 indicates that 73.4% of occupied private dwellings were constructed prior to the Ontario Fire Code.

Between April 2020 and September 2024, the SSMFS identified 34 fire incidents that occurred in vacant properties within the City.
Data provided by the City identified 51 buildings defined by the OBC as high-rise buildings with a floor level 18 metres (59 feet) above grade, or 6 storeys or more. These buildings are mostly clustered in the downtown of the City, with a few distributed throughout the urban settlement area.
The City has 65 buildings with a total building area (footprint) that exceed 50,000 square feet (4,655 square metres). A large cluster of large buildings is located in the City's industrial area, west of downtown. Other large buildings exist in the downtown, and in commercial and industrial areas along Arterial Roads.
The City of Sault Ste. Marie currently has 40 registered vulnerable occupancies. Seniors (those 65 years and over) are considered to represent one of the highest fire risk groups across the Province based on residential fire death rate. According to the 2021 Census, seniors represent 24.9% of the City's total population, significantly higher than the Province as a whole at 18.5%.

The CRA's "key findings," which include the following, should also influence the development of a proactive fire inspection and enforcement program:

- Over the seven-year period from January 1, 2017, to December 31, 2023, the City averaged 68.9 structure fires per year.
- Over the seven-year period from January 1, 2017, to December 31, 2023, structure fires occurring in Group C Residential occupancies account for 76.8% of total structure fires within the City and 53.3% of total structure fire loss.
- Over the seven-year period from January 1, 2017, to December 31, 2023, structure fires occurring in Group F Industrial occupancies account for 5.8% of total structure fires within the City and 32% of total structure fire loss.
- Over the seven-year period from January 1, 2017, to December 31, 2023, structure fires occurring in Group E Mercantile occupancies account for 1.7% of total structure fire loss within the City.
- From 2017 to 2023, most reported fire-related civilian injuries (62) and all fire-related fatalities (9) in the City of Sault Ste. Marie occurred in Group C – Residential Occupancies.
- Of the fires occurring in the City over the seven-year period from January 1, 2017, to December 31, 2023, the leading cause of unintentionally set fires was due to misuse of ignition source at 29.7% (143 fires), compared to 27.7% in the Province.
- Of the fires occurring in the City over the seven-year period from January 1, 2017, to December 31, 2023, the second most frequent cause of unintentionally

set fires was due to mechanical/electrical failure at 9.4% (45 fires), compared to 15.0% across the Province.

- Of the fires occurring in the City over the seven-year period from January 1, 2017, to December 31, 2023, undetermined/unknown causes accounted for 22.5% of fires (108), compared to 20.8% across the Province.
- Of the fires occurring within the City over the seven-year period from January 1, 2017, to December 31, 2023, 29.3% of fires had an undetermined reported ignition source, which is 2.7% higher than the Province (26.6%).
- Of the fires occurring within the City over the seven-year period from January 1, 2017, to December 31, 2023, 20.7% of fires had a reported ignition source that was classified as Cooking Equipment, which is 5.1% higher than the Province (15.7%).
- Of the fires occurring within the City over the seven-year period from January 1, 2017, to December 31, 2023, 13.3% of fires had a reported ignition source of open flame/tools/smokers' articles, which is 0.5% lower than the Province (13.8%).
- Over the seven-year period from January 1, 2017, to December 31, 2023, of the fire loss incidents in Group C – Residential occupancies, 21.1% of incidents did not have a smoke alarm present (compared to 17.3% in the Province).
- Over the seven-year period from January 1, 2017, to December 31, 2023, of the fire loss incidents in Group C – Residential occupancies, 34.2% of incidents had a smoke alarm present and operating compared to 44.7% in the Province.

Table 17 illustrates an enhanced fire inspection cycle, proposed for adoption by SSMFS. The inspection targets presented are based on the major building occupancies classifications identified in the OBC, the FUS fire inspection frequencies and the inspection frequency proposed in this FMP Update.

Table 17: Proposed Target Inspection Cycle

Group	Occupancy Type	SSMFS Current Inspection Frequency	FUS Inspection Frequency	Proposed Inspection Frequency
A	Assembly	1-5 years, schools annually	6 months	1-3 years, schools annually
B	Vulnerable Occupancies	Annually	Annually	Annually
C	Residential	Complaint/Request	Annually	Complaint/Request and Home Smoke Alarm Program

Group	Occupancy Type	SSMFS Current Inspection Frequency	FUS Inspection Frequency	Proposed Inspection Frequency
C	Residential	Short-term Rentals Every 3 years	6 Months	Short-term Rentals Every 3 years
C	Multi-Unit Residential	5 years	6 Months	Annually
C	Triplex, Fourplex, etc.	5 years	6 Months	2-3 years
C	Hotels/Motels	Annually	6 months	Annually
D/E	Business/Mercantile	5 years	Annually	3 years (Pre-planning)
F	Industrial	5 years	3-6 Months	2-3 years (Pre-planning)

In summary, based on the analysis presented in Monthly Fire Inspection Completed 2019-2023 (**Table 15**) and Additional Inspections and Activities (**Table 16**). The SSMFS Fire Prevention Division is active in both proactive inspection programs and legislated duties. The inspection results identify that SSMFS is working towards returning to pre-COVID proactive inspection activities. It is recommended that SSMFS work to ensure the proposed schedule identified in **Table 17** is contained in the approved fire prevention policy and implemented. Group C — residential occupants — make up the most vulnerable category of property stock in the City of Sault Ste. Marie, when taking into account factors like age, previous fire losses, the number of fire-related deaths and injuries, and the overall percentage of property stock. A variety of building types are included in Group C - Residential Occupancies. These include:

- Single-family dwellings.
- Multi-unit stacked townhouses and low-rise multi-unit buildings.
- Seniors' residence buildings.
- High-rise multi-unit buildings.
- Boarding, lodging and rooming houses.
- College/university and student rental housing; and
- Hotels and motels.

For specific building types, the OFC and OBC define several fire and life safety system criteria, which vary according to building design and intended use. Group C-residential occupancies are categorized by considerable variation in their fire and life safety equipment. For example, in single-family dwellings, smoke alarms are required to be

installed on every floor and outside of every sleeping area. Additionally, carbon monoxide alarms are required to be installed under specific circumstances. On the contrary, for a high-rise Group C residential occupancy, an FSP, a monitored, fully integrated fire alarm system, and other life and fire systems are mandatory.

The proposed Fire Inspection/Enforcement Program includes the following strategies:

- Fire Inspection/Enforcement Targets.
- Enhanced Pre-planning Program.
- Enhanced Smoke Alarm Program; and
- Targeted Fire Inspection Program.

The implementation of these strategies is consistent with current industry best practices and standards such as the NFPA 1300 – Standard on Community Risk Assessment and Community Risk Reduction Plan Development.

This standard identifies the importance of developing a CRRP and the optimization of risk mitigation and risk reduction as the first two lines of defence in a comprehensive community fire protection plan.

Recommendation #16: That the proposed fire inspection cycle be adopted by SSMFS through inclusion in the Council-Approved Fire Prevention Policy and be implemented by SSMFS.

6.5.8 Fire Prevention User Fees and Service Charges

The User Fees and Service Charges contained in the Sault Ste. Marie Bylaw permits a fee or charge for the several predetermined services that the SSMFS offers to the general public. The fees were last updated in 2024. Being proactive, Sault Ste. Marie currently offers seventeen various inspections or services for fire prevention-related inspections of which a fee is applicable. It is recommended the City to examine the time spent performing these services and the associated fees as part of a review process to update the user fees and service charges schedule. This would allow them to determine whether the current service fee accurately reflects the time commitment needed to complete the task(s) and the true cost of a fire prevention officer's rate. This evaluation would determine the actual cost of providing the services and provide justification for both the present and future increases in the service schedule fees. As the City grows, the SSMFS will continue to see an increasing number of complaints and requests on an annual basis. Depending on the nature and validity of the complaint, the workload associated with this requirement can be significant.

Recommendation #17: Review the User Fees and Service Charges for Fire Prevention Inspections annually, and update as required, as identified in this Fire Master Plan Update.

6.5.9 Open Air Burning

The City of Sault Ste Marie allows open air burning on residential properties providing specific conditions are met. The fire prevention division is responsible for taking the requests and ensuring the homeowners meet the requirements. Operating Guideline 1700-02 – Issuing Open air Burning Permits and Responding to Burning Complaints identifies the procedure for issuing a permit and, where necessary, responding to complaints.

Currently in Sault Ste. Marie permits are only available during office hours through the fire prevention office or online through the City website. Prior to 2025, permits were usually only issued after a Fire Prevention Officer performed a site visit and reviewed with the owner the open air permit guidelines and issued or refused a permit. In 2023, fire prevention performed 382 new open air burning inspections and only declined by seven. As of 2025, the Division is no longer performing site inspections.

The time commitment involved with the previous open air burning permit issuance was extensive, from the initial contact with the clerical staff receiving the request and obtaining the appropriate user fee to the FPO performing the onsite inspection. As of 2025, new and more comprehensive Open Air Burning requirements are in place, which allow permits to be issued without the requirement of a fire prevention officer to visit the site for approval.

The permitting process was moved to an online system in 2025 with easy-to-follow guidelines identifying the requirements for the resident to be eligible for a permit, with online payment for the appropriate user fee. Residents are still able to make a phone call to go through the permitting process if they so choose.

Fire crews currently respond to burning complaints and advise owners of the guidelines of open air burning. If the burning is compliant with the guidelines, the owner is permitted to continue to burn. If the burning does not meet the guidelines, the owner is advised of the requirement, the fire is extinguished, and a burn complaint data form is filled out. Fire Prevention will then follow up as necessary.

6.5.10 Fire Safety Enforcement

Recommended fire safety inspection and enforcement procedures for Ontario fire departments are outlined in **OFM TG 01-2012 Fire Safety Inspections and Enforcement**. It also gives municipalities strategies, especially regarding Ontario Fire

Code enforcement, in cases where compliance has been or may be more challenging to attain. Helping municipalities fulfill their fire safety and enforcement obligations in an efficient and effective manner is the goal of OFM TG 01-2012 Fire Safety Inspections and Enforcement. Historically, municipalities would work with property owners to ensure adherence to the Ontario Fire Code and not frequently employ enforcement. With the OFM's assistance and the use of this OFM Technical Guideline, this tendency is reversing throughout the province.

To maximize the quality of fire protection services in a community, Tayport's evaluation of this guideline shows that it supports the direction of the first two lines of defence. Based on our experience, there is a significant benefit to using a range of strategies to help a property owner comply with the OFC.

Although public engagement and education of the OFC's obligations are frequently sufficient to achieve compliance, there are some situations in which enforcement may be required.

Through the interview process for this FMP Update, we discovered that the SSMFS works with property owners to educate them about their OFC requirements. Under Part I and Part III of the Provincial Offences Act, SSMFS will use Fire Safety Orders and Summons to Court for matters of non-compliance with the Ontario Fire Code when the education process fails to correct the violation within a reasonable amount of time and the owner/tenant is merely being negligent. It should be noted that enforcement through the court system can be time-consuming for fire prevention personnel and the City's legal department. In our view, there would be value in tracking benchmarks associated with enforcement activity within the town. Examples of benchmarks include:

- Fire department personnel time spent enforcing the Ontario Fire Code, specifically time spent preparing for court, attending court, document preparation, issuing certificates of offence, and preparing fire safety inspection orders.
- Legal and city staff time spent enforcing the Ontario Fire Code.
- Number of convictions vs. charges brought before the court.
- Amount of penalty awarded on conviction; and
- Jail time imposed (if any).

In an attempt to inform the public and alter human behaviour to lower the risk of fire, some jurisdictions decide to publish information on fire inspection enforcement when appropriate and in compliance with the municipality's communications policy.

Our research has indicated that during the years 2021-2024, Sault Ste. Marie was successful in the prosecution of 27 charges laid under Part I and III provincial offences for non-compliance.

6.5.11 Fire Investigations and Cause Determination

Through delegated authority from the OFM, SSMFS are required to investigate the origin and cause of a fire. NFPA 1033 – Standard for Professional Qualifications for Fire Investigators lays out the necessary knowledge and skills to conduct fire scene investigations competently. If a fire meets certain requirements, the local fire department may request that the OFM conduct the investigations, the requirements and process for this request are described in the May 2019 revision of Fire Marshal's Directive 2019-001.

The documentation review completed for this FMP indicates that the SSMFS has several Notices and SOGs describing the department's activities with regards to fire investigations, these include:

- Notice 1400-10 – Call Out Procedure for Fire Investigation & Scene Security
- Notice 1700-10 – Arson Criminal Court Judgement and Search and Seizure
- SOG # 1700-14 – Fire Investigation Safety and PPE.
- SOG # 1700-23 – Investigation Documentation.

Call-Out Procedures for Fire Investigation and Scene Security, Department Notice #1400-10, outlines the SSMFS's procedures and responsibilities for the 'Platoon Chief' and the 'On Call - FPO' when the determination of origin and cause of a fire is required. The four Fire Prevention Officers have all completed the NFPA 1033 "Standard for Professional Qualifications for Fire Investigator," and the Fire Prevention Emergency Planner has finished the test and is awaiting the results.

Industry best practice is for fire investigators to follow a specific methodology for conducting fire and or explosion investigations. In our opinion, it would be in the best interest of SSMFS to establish a guideline which outlines the procedures and steps for investigating fires and or explosions to ensure consistency is maintained between the fire prevention officers when performing fire investigations.

Recommendation #18: That SSMFS develop a Standard Operating Guideline which outlines the department's expectations for fire investigation/explosion procedures.

A total of 482 structural fires occurred in the City during the seven-year period from January 1, 2017, to December 31, 2023, with an average of 68.9 per year. In the City of

Sault Ste. Marie, Group C — Residual Occupancies — accounted for the majority of recorded fire-related civilian injuries (62) and all fire-related fatalities (9) from 2017 to 2023. The following conclusions regarding the cause of the fires they encountered were reached by the SSMFS as a result of fire investigations:

- Of the fires occurring in the City over the seven-year period from January 1, 2017, to December 31, 2023, the leading cause of unintentionally set fires was due to misuse of ignition source at 29.7% (143 fires), compared to 27.7% in the Province.
- Of the fires occurring in the City over the seven-year period from January 1, 2017, to December 31, 2023, the second most frequent cause of unintentionally set fires was due to mechanical/electrical failure at 9.4% (45 fires), compared to 15.0% across the Province.
- Of the fires occurring in the City over the seven-year period from January 1, 2017, to December 31, 2023, undetermined/unknown causes accounted for 22.5% of fires (108), compared to 20.8% across the Province.

All fire departments should use the results of fire investigations to create public education and fire safety programs that are specific to the fire occurrences that have occurred in their community. A best practice for SSMFS would be to perform an annual review of the past year's fire investigation results and work the results into their current Public Education programming.

Recommendation #19: That SSMFS perform an annual review of the previous year's fire investigation causes for all fires and incorporate any themes into their public education program.

6.5.12 Fire Safety Plans (FSPs)

FSPs are required for select occupancy types identified within the OFC. These occupancies include Group A – Assembly occupancies, and Group B – Care or Detention occupancies. All remaining major occupancy groups (e.g., Group C – Residential, Group F – Industrial, etc.) also require FSPs depending on their occupancy load or other building-related features such as storeys below grade.

Content requirements for a FSP are also specified by the OFC. Emergency measures in the event of a fire, including activating the fire alarm, informing the fire service, and providing instructions and facilitating the evacuation of inhabitants, are encompassed within these criteria. Designated supervisory personnel and specifics on fire drills, fire hazard management, and building facility maintenance must also be outlined in FSPs. An example of this would be the evacuation process for care providers in a long-term care facility, as outlined in the FSPs.

Recent legislated changes require all Chief Fire Officials approving FSPs for buildings containing care occupancies, care and treatment occupancies or retirement homes, to successfully complete mandatory training as approved by the OFM[12].

The SSMFS outlines the process to review and approve FSPs in **OG #1700-09 Fire Safety Plan Review and Approval.** The Operating Guideline was authored in 2004 and revised in 2023. The document outlines the process whereby all reviews and approvals of FSPs for new and existing occupancies within the City are conducted. This includes procedures for the inspection, submission, review, rejection, approval, and enforcement of FSPs.

6.5.13 Building Pre-Incident Planning (Pre-Plans)

Building Pre-incident Planning aims to provide fire firefighters with proactive understanding of vital building attributes, potential risks, and other essential building knowledge of an existing occupancy. On-duty fire suppression firefighters frequently carry out pre-fire planning using information obtained from a variety of sources, including the municipality's current records, information supplied by the property owner or tenant, and information acquired during a site visit. Pre-fire planning in a structure is essential for educating fire suppression crews about site-specific hazards, information before they arrive at an emergency occurrence and provides the opportunity for the department to identify obvious house cleaning issues which are considered fire code deficiencies and forward them to fire prevention for follow-up.

Pre-plans should also be looked at through the lens of health and safety for the firefighters. It is not considered best practice for firefighters to be attending a building for the first time under emergency response conditions.

In 2023, SSMFS completed 29 pre-plans. In 2024, the department implemented a new pre-plan program and completed 253 pre-plans during the kick-off year. The program goal is for each platoon to complete eight per month, which would result in 32 total per month or 384 per year.

The "identified risks" and "key findings" from the Community Risk Assessment should be prioritized for pre-planning of occupancies. Regarding the building occupancy classifications that ought to be prioritized in pre-incident planning, these offer important insight into the community's fire-related dangers.

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[12] Source: “Mandatory Training”, Ministry of the Solicitor General website, last updated: November 18, 2016.

Recommendation #20: That the SSFMS review the "identified risks" and "key findings" summarized in the Community Risk Assessment and prioritize the relevant occupancies for the pre-plan program.

6.5.14 Plans Review

Approval of plans for new construction or site alterations pertaining to building construction and fire safety is a crucial component of the municipality. Different jurisdictions have different standards for how much a fire prevention division looks at plans. Building layouts can be examined for sprinkler, suppression, and fire alarm and detection systems. In addition, site plan and subdivision approval are required for issues affecting fire services, such as water supply and fire department accessibility. The purpose of the plans review procedure in a municipality is to determine that the required built-in fire prevention systems and proper construction are there, both of which are critical for the safety of building occupants and first responders.

Building plan reviews are evaluated before construction starts and can be connected to new manufacturing techniques or actual construction. The plans review process assesses architectural, structural, mechanical, electrical, and/or fire protection drawings to ensure compliance with various standards and laws, including the Ontario Building Code.

Determining the level of plans review performed by fire prevention divisions is a decision that requires discussion and collaboration between the fire, building and legal departments.

In Sault Ste. Marie the fire department is currently not involved in the plans review process and is entirely left to the building department. It would be considered a best practice that both the building department and the fire prevention division maintain open communications with respect to the fire departments impute on fire protection requirements in all new and or site modification that occur in Sault Ste. Marie.

6.5.15 Lightweight Construction

The OFM issued guidance on February 25, 2022, requiring fire departments to use the information that is now available to them regarding the location and existence of truss and lightweight building systems (also known as lightweight construction) to guide their pre-planning efforts. Buildings with lightweight construction pose a safety risk to responding firefighters because they are known to break down prematurely and collapse quickly in the event of a fire. When responding, firefighters are aware of lightweight construction through pre-plans, which provides them the opportunity to implement proactive fire response tactics that will ensure the safety of responding

firefighters. It is recommended that Sault Ste. Marie Fire Services works with the City's Building Department on collecting and documenting information on buildings with lightweight construction and utilizes the information in the development of building preplans for firefighter safety.

Recommendation #21: That the Sault Ste. Marie Fire Service work with the City's Building Department to collect information on buildings constructed with lightweight construction.

6.6 Existing Public Education Program Review

The SSMFS's public education initiatives are primarily facilitated by one Public Education Officer (PEOI) who works out of the Fire Prevention Division offices. The PEOI has earned NFPA 1035, Standard for Professional Qualifications for Fire and Life Safety Education Level I and II. To support the PEO with larger public events like mall displays, the three FPOs have also earned the NFPA 1035 Level I credentials.

A variety of platforms, including community events, social media, the fire department website, and in-person programs (like Fire Prevention Week, and Home Smoke Alarm Program), are used to disseminate fire and life safety information as well as emergency management program materials to the general public.

According to our research, the public education program offered by SSMFS is extensive. The demographic groups and programs delivered in Sault Ste. Marie in 2023 focused on children/youth (0-13), teens (14-19), adults, seniors and people with disabilities. The methods in which SSMFS was able to reach the identified demographics were through extensive avenues identified below in **Table 18**.

Table 18: Existing Public Education Program Summary

Program Name	Description
Social Media	Instagram, FB, Twitter
Public Relations + Media Releases	Public Information Officer
Presentations – to businesses	Work with FPOs for scheduled presentations
School Program	High school foods, civics & careers, and science classes
Fire Extinguisher Training	Businesses, community members
Special Events	Parades, Block Parties, FPW, CO Week,
Signs	Digital Sign + MNR Signs (5 throughout the City)

Program Name	Description
In-Service Program	Smoke + CO Alarm Program
Station Tours	Book tours/Truck Visits – (assist and provide pub ed. portions)
Advertising	Radio, social media, and print advertising of information/events
Information Booths	Senior fairs, school fairs
Seminars	Post-secondary, businesses, seniors, etc.
Project ASAP	Seniors' program

The Public Education initiatives listed above generated 1,028 activities and reached 21,067 participants in 2023. This data is presented based on monthly breakdowns in **Table 19**.

Table 19: Number of Public Education Activities and Participation

Month	# of Activities/Events	# of Attendees
January	47	856
February	654	1,373
March	47	910
April	28	372
May	32	1,087
June	43	1,451
July	25	5,451 (parade and cook-off)
August	41	942
September	33	727
October	33	1229
November	17	7,114 (Santa Claus Parade)
December	28	465
Totals	**1,028**	**21,067**

Our research indicates that the public education activities in 2023 were higher compared to the previous years of 2020 to 2022. This was due to the restrictions put in place because of COVID-19 pandemic in 2020 through late 2022.

In summary, to educate the community on fire and life safety, the SSMFS has set up public education programs that reach a wide range of Sault residents and offer multiple opportunities for involvement. In our opinion, the public education programs go above and beyond best practices and the municipality's legal requirements.

6.6.1 Cultural Background and Language Considerations

When creating and implementing fire safety and public education programs, local fire service providers should consider cultural background and language in the development of programs. Communication barriers, in terms of language and the ability to read written material, may have an impact on the success of the programs. There may also be familiarity challenges related to fire safety standards within newcomer populations. A high proportion of immigrants may indicate a large population that has a potential for unfamiliarity with local fire life safety practices and/or may experience possible language barriers.

According to the 2017 Census the City of Sault Ste. Marie immigrant population was 5,990 which represented 8.5% of the population. However, in 2019, the Federal Government created a program to bring immigrants to northern rural and northern communities. The program titled “Rural and Northern Immigration Pilot” (RNIP), was designed to bring newcomers to rural and northern communities by supporting the communities, expanding immigration to create jobs, addressing labour shortages and helping business grow. The Federal Government identified 11 communities, of which Sault Ste. Marie was one of the selected communities. Initially the program was designed to be limited to 2,750 applicants and their family members in any given year. During the initial stages of the program, it was estimated that 125 newcomers and their family members would be welcomed into each of the participating communities every year. In 2022 the City of Sault Ste. Marie exceeded the goal of 125 allotted newcomers and family members by issuing 213[13] recommendation letters to applicants who then apply for permanent residency.

Since the program’s inception up to the end of 2022, the program in Sault Ste. Marie had recruited and retained 349 skilled workers, resulting in hundreds of newcomers to Sault Ste. Marie.

Although the current number of the immigrant population is unknown in Sault Ste. Marie, the RNIP program has attracted hundreds of newcomers to the City. With the changing demographics in the City, the public education and fire prevention programming should also accommodate the changing landscape. It is recommended that the fire department work with the Sault Ste. Marie Economic Development Corporation, Future SSM, the Sault Ste. Marie Local Immigration Partnership and the Sault Ste. Marie Career Centre (which is responsible for managing the RNIP) to identify

[13] City of Sault Ste. Marie Web site Newsroom 2023. (Sault Ste. Marie exceeds Rural and Northern Immigration Pilot 2022 Target - City of Sault Ste. Marie)

the makeup of the City's immigrant population and develop public education and fire prevention programs that take into account their cultural background and language(s).

The additional development and the delivery of the new public education and fire prevention programs that address the growing, diverse population will have an impact on the current workload of the fire prevention and public education staff. It is advisable to consider the impact of the additional workload and the current staff capacity when performing a time task analysis of the division's workload recommended later in this section.

Recommendation #22: That the SSMFS continue to work with community partners to develop public education and fire prevention programs to address the growing immigrant population in the City of Sault Ste. Marie.

6.6.2 Home Awareness Program

The Ontario Fire Code, under the authority of the FPPA, mandates that a functional smoke alarm be placed outside of every sleeping space and on every floor of a housing unit. The owner or landlord is in charge of installing and maintaining the smoke alarm. The goals of an effective smoke alarm program are outlined in **PFSG 04-40B-03 Smoke Alarm Program**, to help the fire department meet its obligation to provide one. All or some combination of the following are included in these goals:

- Providing smoke alarm and home fire escape planning information;
- Promoting regular testing and maintenance of smoke alarms;
- Providing or replacing smoke alarms and/or batteries;
- Encouraging residents to regularly maintain their smoke alarms;
- Educating residents about the legal requirements for smoke alarms;
- Enforcement of all legislation relating to smoke alarms;
- Effectively tracking and evaluating your smoke alarm program; and
- Modifying the program where necessary to ensure success.

O. Reg. 194/14 – Carbon Monoxide Alarms made under the FPPA came into force on October 15, 2014, introducing new requirements for the installation, testing and maintenance of carbon monoxide Alarms. As a result, fire services within the province have also been tasked with monitoring compliance with this new regulation. Current industry best practices indicate that fire services are revising their previous home smoke alarm programs to include assessing compliance with this new regulation.

Through our research of emergency call data, it was determined that over the five-year period from January 1, 2017, to December 31, 2023, structure fires occurring in Group

C – Residential Occupancies accounted for 76.8% of total structure fires within the City of Sault Ste. Marie (higher than the Province at 75.2%) and 53.3% of total structure fire loss (lower than the Province at 70.4%).

In addition, over the same seven-year period of the fire loss incidents in Group C – Residential occupancies, 21.1% of incidents did not have a smoke alarm present (compared to 17.3% in the Province) while 34.2% of incidents had a smoke alarm present and operating compared to 44.7% in the Province.

These statistics identify the importance and the need for a Home Smoke Alarm program.

Through the interview and research processes, it was determined that the SSMFS's in-service smoke and CO alarm program commences each year, beginning after the May long weekend through to the end of September. Sault Ste. Marie Fire Services visits local residents (door-to-door canvas) to provide valuable life safety information. Crews visit neighbourhoods Monday to Thursday, from 6:00 until 8:30 pm.

Upon arriving at a residence, firefighters will provide important fire safety information, including awareness booklets, alarm talks, evacuation and house escape plans, and the opportunity to test the home's carbon monoxide and smoke alarms. Firefighters also check the alarms' back dates to make sure they haven't expired as part of the testing process.

Operating Guideline 1700-21 The In-Service Smoke and CO Alarm Program outlines the program and the responsibilities of the Public Education Officer and the suppression staff.

In 2023, fire crews visited a total of 2,737 homes and were able to inspect 1,340. A total of 2,888 smoke alarms were passed, while 126 failed. Additionally, a total of 1,513 carbon monoxide alarms were passed and 112 failed.

6.6.3 Project ASAP

Seniors (those 65 years and over) are considered to represent one of the highest fire risk groups across the Province based on the residential fire death rate. According to the 2021 Census, seniors represent 24.9% of the City's total population, significantly higher than the Province as a whole at 18.5%.

To address the seniors population risks in Sault Ste. Marie, SSMFS has developed Project ASAP, a home fire safety initiative designed especially for seniors aged 65 and over. To visit the seniors' home, the Public Education Officer will schedule a time and day. The Education Officer will do the following during this one-hour visit:

- Check and test fire safety equipment, this may include smoke alarms, carbon monoxide alarms and extinguishers.
- Review potential fire hazards in the home.
- Discuss and complete a home fire escape plan.
- Fill out recommendations for the homeowner with a complete checklist.
- Provide the homeowner with a Project ASAP fire safety gift bag.

Seniors 65 and over, as well as their families, can schedule an appointment with the Public Education Officer by calling or emailing. Referrals from community organizations and healthcare professionals (e.g., physicians, caregivers, and community agencies) are another way to enroll in the program. Clients complete referral forms, which are then sent to Sault Ste. Marie Fire Services.

This initiative may develop into a yearly event. Every year, the Sault Ste. Marie Fire Service will get in touch with the homeowner to come back to the house. If there have been any changes in the homeowner's mobility, care, or health since the last visit, this is to make sure everything is in working order and to help with fire safety.

SSMFS completed 64 Project ASAPs in 2023.

6.6.4 Vulnerable Persons Registry

Several areas within the CRA note increased risks for vulnerable persons, such as seniors or those with mobility challenges. The City of Sault Ste. Marie offers a Vulnerable Persons Registry (VPR) for people considered at greater risk during an emergency event or incident. The service provides key information to emergency first responders (e.g. firefighters, police and paramedics) to help them be more aware when responding to addresses in the registry. The VPR can also provide emergency preparedness resources to its registered users. The VPR is a free, voluntary and confidential service. Interested persons can sign up via a link on the City's website. SSMFS provides promotional material for this service at applicable public education events across the City.

6.7 Historical Fire Inspection, Enforcement and Public Education Workload

Although SSMFS currently has proactive fire inspection and public education programs, through interviews and the results of the CRA, Sault Ste. Marie continues to have risks as identified in the downtown core area.

An analysis of the City's parcel data indicates that 69.4% of the City's total building stock was built prior to the introduction of the 1981 Ontario Fire Code. Census data from

2021 indicates that 73.4% of occupied private dwellings were constructed prior to the Ontario Fire Code.

Potential building exposures are largely linked to the built-up areas primarily found Downtown, and there are a number of identified heritage buildings within Sault Ste. Marie, primarily located in the downtown area, which were constructed prior to the introduction of the Ontario Fire Code.

Most of the identified high-rise occupancies are found in the Downtown area.

Between April 2020 and September 2024, the SSMFS identified 34 fire incidents that occurred in vacant properties within the City.

The City is experiencing a high homeless/ transient population, which tends to utilize the vacant buildings for shelter, thus increasing the risk of fire.

The CRA has identified the risks in the downtown core, and through information garnered through interviews, SSMFS struggles to keep up with the issues in the downtown core.

Options to address the risks that exist in the downtown core area include:

- Adding a second fire prevention officer to this geographical area to double up on the number of inspections and enforcement initiatives, and
- Increase pressure and fines on vacant building owners who fail to maintain the security of their buildings.

Two possibilities are available for consideration in relation to the addition of a second FPO to the downtown core area:

- Pull an FPO from one of the existing areas outside of the downtown core; or
- Hire a second FPO to help deal with this issue.

The first option is not recommended as Sault Ste. Marie currently has a proactive enforcement and inspection program, which is considered a best practice. Pulling an FPO from another area would lower the current requirement, which would impact the best practices for a fire-safe city.

To validate the need for an additional FPO, it is recommended that SSMFS conduct a workload/staff analysis. A comprehensive process for assessing the workload and staff resource needs related to the implementation of fire education and inspection programs is outlined in the 2019 edition of the NFPA 1730 Standard on Deployment of Fire Prevention Inspection and Code Enforcement, Plan Review, Investigation, and Public Education Operations. The worksheets contained in this exercise will identify the proper

number of FPOs required to continue to perform the current fire inspections, as well as the recommended Fire inspections and Public Education initiatives.

Recommendation #23: That SSMFS undergo a workload/staff analysis related to the implementation of fire education and inspection programs as outlined in the 2019 edition of the NFPA 1730.

Recommendation #24: That SSMFS hire a second FPO in the downtown core area to increase inspection and enforcement initiatives, if the results of the workload/staff analysis confirm the need.

6.8 Fire Prevention Division Workspace

The Fire Prevention Division staff currently work out of Fire Station 1, in space shared with the Administration Division. Staff operate from cubicles and workstations clustered outside the Administration Offices. Through our interviews with staff, it is our understanding that the space is functional. However, there is little to no space for expansion. There are also limited options for staff to conduct confidential or sensitive calls, as the open workspace environment is loud and voices carry throughout.

6.9 Fire Prevention and Public Education Summary and Recommendations

The importance of public education and fire prevention initiatives in lowering the likelihood and effects of a fire and enhancing public safety is acknowledged in this FMP Update. In accordance with relevant standards, guidelines, and industry best practices, the Fire Prevention Division offers a variety of efficient programs and activities.

The FMP Update's recommendations for improving the fire prevention and public education programs and activities currently offered by the SSMFS aim to address growing legislative requirements and maximize the benefits of these initiatives in reducing the likelihood and impact of fires, thereby creating a safer community.

This FMP Update's strategic priorities aim to provide Council with a framework for maximizing the utilization of public education and fire prevention initiatives, thereby delivering the most cost-effective and efficient level of fire protection services that offer the greatest benefit to the community.

Our review of the Fire Prevention and Public Education activities and resources has identified the following recommendations for consideration.

6.9.1 Fire Prevention and Public Education Recommendations

Recommendation #15: That SSMFS develop and present for Council's consideration and approval a Fire Prevention Policy along with the recommended revision of the Establishing a Regulating By-law as identified in this FMP Update.

Recommendation #16: That the proposed fire inspection cycle be adopted by SSMFS through inclusion in the Council-Approved Fire Prevention Policy and be implemented by SSMFS.

Recommendation #17: Review the User Fees and Service Charges for Fire Prevention Inspections annually, and update as required, as identified in this Fire Master Plan Update.

Recommendation #18: That SSMFS develop a Standard Operating Guideline which outlines the department's expectations for fire investigation/explosion procedures.

Recommendation #19: That SSMFS perform an annual review of the previous year's fire investigation causes for all fires and incorporate any themes into their public education program.

Recommendation #20: That the SSFMS review the "identified risks" and "key findings" summarized in the Community Risk Assessment and prioritize the relevant occupancies for the pre-plan program.

Recommendation #21: That the Sault Ste. Marie Fire Service work with the City's Building Department to collect information on buildings constructed with lightweight construction.

Recommendation #22: That the SSMFS continue to work with community partners to develop public education and fire prevention programs to address the growing immigrant population in the City of Sault Ste. Marie.

Recommendation #23: That SSMFS undergo a workload/staff analysis related to the implementation of fire education and inspection programs as outlined in the 2019 edition of the NFPA 1730.

Recommendation #24: That SSMFS hire a second FPO in the downtown core area to increase inspection and enforcement initiatives, if the need is confirmed by the results of the workload/staff analysis.

7.0 Training Division

In accordance with the Occupational Health and Safety Act of Ontario (OHSA) and the Ontario Fire Protection and Prevention Act, 1997 (FPPA), the SSMFS is responsible for making sure that all employees, including fire suppression professionals, receive the training they need. The training provided to fire suppression personnel is the subject of the analysis in this section.

Tayport's background and familiarity with the Ontario fire service suggest that, in the last ten years, firefighter training has been the subject of intense scrutiny. Numerous inquests and investigations have found that towns, in their capacity as employers, fire service directors, and supervisors, must prioritize firefighter training. The analysis in this section begins with a consideration of training standards and the training options available to fire departments. After that, it discusses training standards in relation to SSMFS. A review of the training procedures, initiatives, and materials currently in use by SSMFS is conducted, covering divisional staffing and organization, training requirements, and the yearly training program.

This fire master planning update process has presented the importance of assessing community fire risk as a component of determining the appropriate level of fire protection services to be provided. The information and analysis within this section will present the importance of linking the applicable training requirements for fire suppression staff (firefighters) with the level of fire suppression services to be provided by the SSMFS.

7.1 Firefighter Training Standards in Ontario

As part of the Province's "Modernization of Fire Safety Training" project, Ontario's municipal fire departments have undergone substantial changes to their educational programs during the past few years. Notably, the four policy modifications listed below have changed the course of firefighter education and training:

1. The OFC’s expansion of NFPA Pro-Qual certification programs to RTCs and online courses.
2. The closure of the Ontario Fire College’s Gravenhurst Campus.
3. The establishment of Learning Contracts through which departments may teach OFC curriculum via internal training programs.
4. The enactment of O. Reg. 343/22 – Firefighter Certification.

Together, these regulations establish the requirements for firefighter training and the certification procedure. These changes have impacted all municipal fire departments, but for the SSMFS Training Division, which is one of the province's 28 RTCs in addition to training internal staff, the changes are especially pertinent.

The following section will review relevant regulations and policies related to firefighter training in Ontario before providing an analysis of the SSMFS internal training programs and the department's role as an RTC.

Recommendations and strategies are provided for consideration where opportunities exist to assist the department with maintaining compliance with applicable legislation or to improve programs or services to better align the department with current industry best practices.

7.1.1 O. Reg. 343/22 – Firefighter Certification

On April 14, 2022, the Ministry of the Solicitor General filed **O. Reg 343/22 – Firefighter Certification,** requiring all Ontario firefighters to be certified to NFPA Pro-Qual standards over the next four to six years.

To fully understand the impact of this certification, it is important to note the distinction between "qualifications" and "certifications". The NFPA training standards and related qualifications **do not consider or require** certification. Instead, NFPA standards are intended to identify the required training for an individual to attain a recognized qualification related to specific positions, roles and responsibilities within the fire service. Conversely, certification is completed by third party organizations such as the International Fire Service Accreditation Congress (IFSAC) or the Fire Service Professional Qualifications System (Pro-Board) which provide independent evaluation to measure individual performance as set by the standards. Therefore, it is possible for fire departments to have trained to a relevant NFPA standard without having members certified with the necessary credentials.

Prior to the implementation of **O. Reg. 343/22**, many fire departments pursued qualification but not certification, a process that was considered an acceptable form of best practice training for firefighters. Moving forward **O. Reg. 343/22** explicitly requires all firefighters to be **"certified"** by either "**the Fire Marshal; or an accreditation from the IFSAC, or a Pro Board seal, that is recognized by the Fire Marshal as equivalent to the certification provided by the Fire Marshal"**. In summary, regardless of the department's existing training and "qualifications", Ontario's new firefighter legislation requires departments to have their firefighters certified to the prescribed NFPA standards, ensuring that such certification is issued by the OFM, IFSAC, or a Pro Board seal.

A firefighter who has previously obtained IFSAC or Pro Board certifications will continue to have these existing certifications recognized even **"if the requirements for obtaining that certification are subsequently updated or changed"**. This includes firefighters who may have applied for a "**letter of compliance"** in response to the OFM's 2014 **"Grandfathering Policy**". A similar grandfathering opportunity was provided as part of **O. Reg. 343/22,** now referred to as the **'Legacy Process';** however, unlike the 2014 policy, this new Legacy Process can only grant partial skills certifications known as the Ontario Seal Curriculum. Because O. Reg. 343/22 requires that larger career departments that offer a list of "full service" skills be certified to the complete standard, SSMFS is not eligible for any "Legacy Process" certification.

7.1.2 Suppression Staff Certification Levels

O. Reg. 343/22 requires that each municipality's certification needs be based on the level of fire suppression services offered through their respective Establishing and Regulating By-law. Based on our review of SSMFS's Establishing and Regulating By-Law 2024-148/By-Law 2020-211 Amended, SSMFS's suppression staff will require NFPA certifications related to the provision of:

- Fire ground and suppression activities (NFPA 1001 Level I and II/1002/1021 Level I/1521).
- Vehicle extrication (NFPA 1001 Level II to perform auto extrication).
- Hazardous materials response (NFPA 1072, Technician).
- Ice water rescue (NFPA 1006 2021 Edition, Chapter 20, Technician).
- Surface water rescue (NFPA 1006 2021 Edition, Chapter 17, Technician).
- Confined space rescue (NFPA 1006 2021 Edition, Chapter 7, Technician).
- Trench Rescue (NFPA 1006 2021 Edition, Chapter 12, Technician).
- Rope rescue (NFPA 1006 2021 Edition, Chapter 5, Technician).

While determining a department's exact certification needs can be complicated, the required NFPA Pro-Qual Standards listed in **O. Reg. 343/22** can generally be broken down into two categories: 1) Certifications needed for the provision of fire suppression services, and 2) those needed for the delivery of specialized rescue services.

Departmental records indicate that a substantial percentage of SSMFS firefighters already hold the required fire suppression certifications. However, many staff members may require additional training connected to the provision of the specialized rescue services listed in the Municipality's Establishing and Regulating By-Law 2020-211 (Amended through By-law 2024-148), Appendix "C".

The deadline for obtaining certification for any specialized rescue identified in O. Reg. 343/22 is July 1, 2028. After Council receives this Fire Master Plan Update, it is recommended the Fire Chief take a report to the council as soon as practicable to identify the changes to E&R By-law 2020-211 (Amended through By-Law 2024-148), Appendix "C" specifying the levels of specialty rescue services that SSMFS should provide post July 1, 2028, for Council to approve. The timing of this report will be crucial in order for the department to forecast and budget the necessary funds for any equipment needed to provide the specified level of service, as well as for the necessary time to train and certify SSMFS firefighters to the specific council-approved levels of specialized rescue services.

Recommendation #25: That the Fire Chief prepare a report for Council's consideration and approval identifying the levels of specialty services to be offered post July 1, 2028, along with the necessary budgetary requirements to provide said services.

Table 20 prepared using data from August 2023, provides an overview of the department's fire suppression certifications as they relate to the newly required NFPA Pro-Qual standards. Additional details on the department's specialized rescue certifications can be found later in this Section. It is also worth noting that O. Reg. 343/22 also prescribes certification requirements for Training Instructors, Fire Prevention Inspectors/Investigators, Fire and Life Safety Educators and Emergency Communicators. Details of these certification requirements for other divisional staff will be addressed in their respective sections of this Fire Master Plan Update.

Table 20: SSMFS Suppression Staff Certification and O. Reg. 343/22 Compliance

Required Certification	Applicable Ranks	Existing Compliance	Compliance Deadline
NFPA 1001 Firefighter I/II	Firefighters Acting Captains Captains Acting Platoon Chiefs	100%	July 1, 2026
NFPA 1002 Pump Ops	Firefighters Acting Captains	100%	July 1, 2026
NFPA 1021 Fire Officer I[14]	Acting Captains Captains Acting Platoon Chiefs Platoon Chiefs	100%	July 1, 2026
NFPA 1521 Incident Safety Officers[15]	Acting Captains Captains Acting Platoon Chiefs Platoon Chiefs Training Officers	90%	July 1, 2026

7.1.3 SSMFS Certification Options

To ensure ongoing compliance with O. Reg. 343/22, the fire suppression training provided by the SSMFS must meet the NFPA Pro-Qual Standards and be formally accredited by either the IFSAC, Fire Service Professional Qualification System (Pro-Board), or the OFM.

In Ontario, the OFM's Academic Standards and Evaluation (AS&E) section is the only authority having jurisdiction (AHJ) able to provide either IFSAC or Pro-Board accredited certification. Outside of the previously mentioned grandfathering process, NFPA Pro-Qual certifications can only be obtained through an official AS&E testing process, which requires a proctored written exam and may also include practical evaluations. Fire Departments seeking to train staff through these approved courses have six options:

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[14] Includes NFPA 1041, which is not specifically required by O. Reg. 343/22, but is a prerequisite for NFPA 1021 Certification.

[15] SSMFS's RTC delivered two NFPA 1521 courses in 2024, which allow SSMFS to certify 19 of 21 officers.

1. Ontario Fire College courses, which may be held at a RTC, entirely online, or in a blended format.
2. Registered private career college courses.
3. Out of province certification programs.
4. Third-party training providers.
5. A learning contract with the OFC whereby qualified staff can deliver OFC curriculum in-house and certification testing is completed by an AS&E proctor; and
6. Internally developed curriculum that is compliant with the relevant NFPA standard. As with the OFC Learning Contract model, all certification testing must be completed by an AS&E proctor.

Each training option logically has advantages and disadvantages, and departments must select the certification path that best suits their unique requirements and situation. SSMFS is in a unique position because it is entirely isolated from nearby fire departments that have the resources to help with its training requirements for suppression staff. It also has an impressive training ground, a diverse group of certified on-shift training instructors, and is one of the Province's 28 RTCs. When combined with SSMFS's remote location and the aforementioned resources, it would imply that internally based training programs or locally delivered RTC courses would be the recommended certification method, and that SSMFS would avoid the prohibitively costly use of private career colleges and out-of-town/province certification programs for suppression staff. It must be acknowledged that the Fire Prevention Officers and the Public Educator will typically need to continue to travel to obtain certification courses at other Regional Training Centres due to the course availability.

7.1.4 SSMFS as a Regional Training Centre

The SSMFS is in an advantageous position to comply with O. Reg. 343/22 because it is one of the 28 RTCs in the Province. RTCs have emerged as one of the main training pathways for Ontario firefighters to obtain certification after the Ontario Fire College's Gravenhurst Campus closed. Sault Ste. Marie can offer NFPA Pro-Qual courses that are approved by the OFC and promoted via the OFC's Course Calendar because it is an approved RTC. Furthermore, SSMFS's RTC status enables the department to prioritize its own employees for available training programs and keep track of student rosters for every course. Depending on necessity, firefighters from throughout the province or region may then apply to fill open positions.

By filling open seats with paying students from other departments, this strategy effectively utilizes fixed costs economic principles and allows SSMFS to conveniently offer a variety of NFPA Pro-Qual courses. Furthermore, because it offers a wider range

of viewpoints that can aid in balancing the narrow-minded characteristics that are inherent in the structure of Ontario's local fire services, this RTC approach has the potential to boost the instructional value of each course.

Throughout 2024, SSMFS's RTC hosted six certification courses focusing on Company Officer, Instructor certifications, Incident Safety Officer courses and firefighter 1001 courses.

Although SSMFS's RTC status has several advantages, there is a greater administrative burden involved in this system. Each RTC is required by the agreement with the Ontario Fire College to designate a specific "Coordinator" to serve as the main liaison with the OFC. This person is in charge of making class requests, enrolling students, giving all attendees class-specific information, and being on hand to help with class administration when necessary. The Training Officer in Sault Ste. Marie takes on these extra responsibilities beyond their normal duties. For these extra responsibilities, the OFC advises departments to develop a cost recovery mechanism funded by student fees. Apart from covering any administrative expenses, these students' fees may also cover consumables, refreshments, and depreciation of capital assets caused by increased use.

Nevertheless, SSMFS's RTC status continues to benefit the department and the greater firefighting community in spite of these obstacles. When weighed against the financial benefit of using a fixed cost delivery model, program administrative costs are negligible and can be recouped through calculated student fees. The fact that not all educational gains can be quantified financially, and that adding outside students is likely to broaden the range of viewpoints and values associated with each course should also be considered. In addition, the prohibitively costly use of private career colleges and out-of-town/province certification programs further adds to the value of a RTC in SSMFS

For these reasons, it is recommended that SSMFS continue for the foreseeable future their RTC partnership with the OFC.

Recommendation #26: That the SSMFS continue the partnership with the OFC to provide NFPA Pro-Qual training courses through their established RTC.

7.2 Training Division Staff Resources

Interviews with departmental staff identified that the SSMFS Training Division is comprised of only one Training officer who reports directly to the Deputy Chief of Operations. The Training Officer also acts as the Regional Training Centre Administrator, which the department is required to have through their partnership with the OFM. This adds additional duties to the Training Officer's responsibilities, as the

department's "RTC administrator" the TO is required to work with the OFM as the primary point of communications needed for requesting classes, student enrollment, and course-specific instructions, as well as an instructor for RTC classes.

According to the Collective Agreement, the TO's responsibilities are to be carried out throughout the course of four consecutive 10-hour days, Tuesday through Friday, during a 40-hour workweek. This position's job description was last updated in June 2016 and outlines the duties as they were intended at that time. The training standards for Ontario's fire services have changed significantly since 2016. O. Reg. 343/22's requirements and the Ontario Fire College's closing have raised the job requirements for the training officer, including the inclusion of the RTC Administrator. It is recommended that SSMFS review and revise the current job description for the training officer to meet the current workload demands that are in place today.

Recommendation #27: That the SSMFS review and revise the job description for the Training Officer as recommended in this Fire Master Plan Update.

With the current structure of the SSMFS's Training Division limited to one individual, they are required to rely heavily on on-duty firefighters who serve as On-Shift Training Instructors (OSTIs). SSMFS currently benefits from a complement of fire suppression members who serve as On-Shift Training Instructors (OSTI) capable of teaching specialized programs related to their subject matter expertise. This method of teaching is dependent on positive labour-management relations and the ongoing support for the OSTI program.

The oversight of the OSTI falls to the Training Officer, and the Training Officer must provide a great deal of assistance with this training delivery system. This involves making sure that current OSTIs and any firefighters aspiring to become OSTIs complete the necessary O. Reg. 343/22 certification and recertification training. In addition to maintaining uniformity of training content delivery within the four-platoon system, additional Training Officer time is required to support continuous monitoring and assessment of the programs offered by the OSTIs. Occasionally, co-facilitating or facilitating specialized rescue training programs may also be necessary.

7.2.1 Training Division Staff Qualifications

A wide range of NFPA certificates must be held by those who deliver training at SSMFS in order to conduct different training programs and to comply with the new O. Reg. 343/22. Similar to the training standards for fire suppression personnel, this new certification guideline establishes the minimum credentials for a department's training division staff. According to NFPA 1041, "Standard for Fire and Emergency Service Instructor Professional Qualifications," instructors in fire departments must hold

certifications at least at Level I for teaching fundamental firefighting skills and Level II for teaching "live fire training, and above or below grade technical rescue practical training." Naturally, these certifications are also required for OSTIs.

With SSMFS currently only having one Training Officer, the bulk of the training falls to the OSTIs. Their skill set is vital to successful training sessions and to meeting the certification requirements of O. Reg. 343/22 on July 1, 2028.

Table 21 identifies the current NFPA Certifications held by the Training Officer and the current OSTIs.

Table 21: Existing Training Division Staff NFPA Pro-Qual Certifications

Position	NFPA Pro-Qual Standard Certifications
Training Officer	NFPA 1001 Firefighter 1 & 2 NFPA 1006 Auto Extrication Operations & Technician NFPA 1006 Surface/Ice/Swift Water Awareness NFPA 1041 Fire Instructor I NFPA 1041 Fire Instructor II NFPA 1021 Fire Officer I, II, III & IV NFPA 1521 Incident Safety Officer NFPA 472 Hazardous Materials Operations & Mission Specific
On-Shift Training Instructors (3 as of February 2025, 8-10 on-course March 2025)	NFPA 1006 Ice-Water Rescue (Technician)
On-Shift Training Instructors (8)	NFPA 1006 Rope Rescue (Technician)
On-Shift Training Instructors (8)	NFPA 1006 Confined Space (Technician)
On-Shift Training Instructors (10)	NFPA 1072 (Hazmat Operations)

In addition to the above disciplines, OSTIs in SSMFs also deliver auto extrication, first aid, pump ops and high-rise fire fighting. Currently, all company officers are trained to deliver firefighter self-rescue. Some OSTIs have NFPA 1041, Level 2 and SSMFS is arranging courses to have more OSTIs certified to Level 2.

The SSMFS staff who deliver training have diverse backgrounds, creating the necessary overlap in certifications needed to deliver all of the department's required training programs. This certification is especially important for any Training Officer overseeing the technical rescue disciplines (rope and confined space, etc.) so that they can oversee, monitor and run independent training sessions with their respective OSTIs.

7.2.2 On Shift Training Instructors

This system of using on-duty firefighters as supporting instructors has a long history of success in Ontario and has been widely accepted as an industry best practice, especially when used for specialized programs such as:

- Fire ground and suppression training;
- Auto extrication;
- Rope rescue;
- Confined space rescue;
- Trench rescue;
- Hazardous materials response;
- Ice/water rescue;
- Driver program; and
- Medical-based training programs.

Professional growth, succession planning, and the sharing of firefighters' expertise in particular emergency response protocols are all supported by this concept. Since the On-Shift Training Instructors (OSTIs) are on-duty, they can provide instructional programs because they work the same 24-hour schedule and platoon as the ones they are educating.

The OSTI program will be an essential component of the SSMFS's certification process. It is expected to boost the morale of participants who are eager to contribute their expertise in an effort to improve the department, as a whole, and themselves.

7.3 Comprehensive Annual Training Plan

To attain and maintain the skills and competences necessary to deliver the Council-approved service levels, fire departments continue to implement extensive annual training plans as a best practice. NFPA 1500: Fire Department Occupational Health and Safety Programs and Section 21 Guidance Note 7-3: Training programs both support the use of annual training programs. Furthermore, to comply with O. Reg. 343/22, employers must implement thorough yearly training plans that cover all Section 21

Guidance Notes and the employer's obligations as outlined in the Occupational Health and Safety Act.

SSMFS utilizes a comprehensive Annual Training program, which was divided into the following subjects/sections in 2024:

1. Ice Water Rescue
2. Firefighter 101 evolutions
3. Rural Firefighting Operations
4. Auto Extrication
5. Auto Extrication 2
6. Hazardous Material
7. Technical Rescues Scenarios
8. High Rise Operations
9. Annual Evaluations (First Aid, Fit testing, etc.)
10. Peer Support/ Resiliency

SSMFS utilizes various delivery models to achieve their training programs; written curriculum through IFSTA, Canadian Red Cross, Ministry of Transportation and VFIS Driver training programs to the online software “Stillwater” FMLS E-Training, which contains all NFPA firefighter 1 & 2 material, NFPA 1002 Driver Operator program, NFPA 1407 Rapid Intervention Crew program and 1061 Telecommunicator program, to name just a few.

In addition to the day-to-day training requirements outlined in the Annual Training Plan, the document also includes the planned delivery of the RTC courses, Live Fire training (scheduled for spring and fall), Officer development opportunities and the three-week recruit firefighter orientation program.

7.4 Specialized Rescue Training Programs

A detailed analysis of SSMFS's specialized rescue and associated training programs will be provided in the next part. It is crucial to first comprehend the various specialized services and training levels that fire departments may provide. In Ontario, municipal councils make this decision and set forth the requirements in their individual Establishing and Regulating By-laws.

For a broad range of occurrences, from hazardous materials response to confined space rescue specialists, NFPA offers suggested performance criteria. It is improbable that any city would have employees certified in every discipline given the enormous number of qualifications. Rather, city councils through the recommendations of the Fire Chief, decide which specialties are required for their jurisdictions, the most popular ones

are those connected to rope, confined spaces, hazardous chemicals, and water and ice rescue.

In determining the right level of response and training in addition to the right rescue services for their town, fire departments turn to NFPA 1670 Standard on Operations and Training for Technical Search and Rescue Incidents which outlines three broad training levels for each discipline, which are as follows:

- **Awareness Level** – Reflecting the minimum capability of organizations and allows first responders to recognize a hazard before calling for more specialized rescuers;
- **Operations Level** – Reflecting the capability of organizations to respond, use equipment, and apply techniques to support and perform a technical rescue; and
- **Technician Level** – Often seen as the highest level of training, allows organizations to not only provide the Operational Level services but also to coordinate, perform, and supervise a technical rescue.

Specialty teams trained to the operations or technician level require a significant commitment for the initial and annual funding through the budget process to supply the tools and specific training required to consistently perform these services safely, around-the-clock, every day of the year. Since each member must not only be skilled in these areas but also have documentation of their certification, the adoption of O. Reg. 343/22 has only raised the level of dedication needed to provide these services. Therefore, it is crucial that a department's specialized rescue services are authorized by the Council through the Establishing and Regulating By-law and the corresponding services align with the recognized community hazards, past call volumes and consider the resource requirements to provide the defined service levels.

Sault Ste. Marie's Establishing and regulating By-Law 2020-211, passed in November 2020, and amended in 2024 (By-Law 2024-148), outlines the levels of service in Appendix "C" approved by council.

Table 22 identifies the current specialty disciplines being delivered by SSMFS.

Table 22: SSMFS Specialty Disciplines

Specialty Rescue Service	*NFPA Certification Level*
Hazardous Material Response	"Operations Level" (NFPA 1072)
Ice Rescue	As per SSMFS OG 1500-06
Water Rescue	As per SSMFS OG 1500-06
Confined Space Rescue	As per SSMFS OG 0900-05

Specialty Rescue Service	NFPA Certification Level
Trench Rescue	"Awareness" (NFPA 1670 Chapter 11)
Technical Rope Rescue	"Awareness" * (NFPA 1670 Chapter 5) and as per SSMFS OG 400-51

Notes:
SSMFS E&R By-law identifies awareness and as per OG.
OG 400-51 outlines rescues which would involve, at a minimum, operations-level training.

With the introduction of O. Reg. 343/22 requiring certification to a specific level of service (Awareness, Operations or Technician) for each specialty rescue service authorized by City council under the E&R By-law by July 1, 2028, SSMFS will have to make the determination of what level of certification they can achieve for each specialty rescue service identified in **Table 22**. The determination should be based on an analysis considering (but not limited to):

- The historical call volume for each specialty rescue to determine the need for such a service.
- Required staff resources to provide the level of service.
- The equipment required to provide the specific level of service that will be targeted for each discipline.
- The required training to certify to the specific level(s) of service targeted.
- The time commitment to achieve the specific level of training.
- The financial commitment from the city to a) establish the training and equipment required for the level of service, and b) the ongoing financial commitment to maintain the training and equipment needs.

While the remoteness of Sault Ste. Marie is a factor, and the ability of a neighbour to assist is limited. The Council must decide if SSMFS should be in the business of providing specialty rescues and to what level. In the event a specialty rescue call is received by SSMFS that exceeds their level of service provision or SSMFS does not provide the specific specialty rescue as identified in the Establishing and Regulating By-law, or is challenged by the scale of an incident, the department may request assistance through the Provincial Emergency Operations Centre (PEOC). In an emergency, the PEOC ensures that the response to any event is coordinated with the lead ministry. Assistance will be provided; however, the timing of the assistance will be delayed considering the remoteness of Sault Ste. Marie.

As referenced in this FMP Update, all levels of service provided by the SSMFS should be clearly defined by Council through an Establishing & Regulating By-law (E&R By-law). In addition to the basic firefighting requirements the By-law should clearly establish service levels for specialty rescues which directly influences specialized training programs and related division staff resource needs. As described previously in the Administration section, the existing E & R By-law does not fully reflect the current service levels of SSMFS and should be updated and revisited to reflect the requirements of O. Reg. 343/22 as the department achieves new/updated certifications.

7.4.1 Water/Ice Rescue

Waterways within the City of Sault Ste. Marie create a potential risk for water-related incidents. SSMFS response area includes bodies of water, which include St. Marys River and Lake Superior shoreline as well as interior lakes, rivers, creeks, etc., within the boundary of the City. Waterways throughout the City pose a potential risk, in part due to the recreational activity that occurs on them. Residents and tourists alike, for example, enjoy fishing in local areas, including St. Marys River. An additional consideration is that during summer months, flooding and/or faster currents could occur, and there is potential for swift water, which has unique needs from a rescue perspective. During winter months, the frozen streams and rivers pose a risk, and incidents could necessitate ice rescues. The “Community Risk Assessment” identifies the risk as moderate, and with the technical rescue type services, water rescue calls are the second most common type, with a total of six calls over the six-year period from 2018 to 2023, or an average of one call annually.

Sault Ste. Marie Fire Services currently provides water and ice rescue as identified in the Establishing and Regulating By-law 2020-211 (Amended through By-Law 2024-148) Appendix “C” 3(b), which identifies the level of service for Ice Rescue to be “per Departmental Notices and Operating Guidelines” and for Water Rescue “Shore based, per Departmental Notices and operating Guidelines”.

The Sault Ste. Marie Fire Service Operating Guideline OG# 1500-06 “Shore Based Ice/Water Rescue states the intent of the OG in the Purpose is: “to establish a guideline for conducting safe and effective shore-based ice/water rescue operations”. Although the purpose states shore-based operations for water/ ice rescue the OG discusses the option of personnel venturing onto ice/water and that personnel shall wear the required protective equipment. The OG further discusses “while it is preferred that rescuers who enter the water/ice be tethered, some situations preclude this as identified in Section 21 Guidance Note 6-3. “All rescuers who enter the water are to maintain controlled contact with the shore/boat (i.e. safety line, hand contact). It should be noted that some rescue situations such as, but not limited to, certain swift water situations may preclude

rescuers from safely being connected to a rope. In these situations, appropriate safety measures should be taken to ensure the safety of the rescue personnel".

Sault Ste. Marie Fire also has an airboat - WR-1, which can be utilized for offshore water/ice rescues as per OG 1500-06. In the case of an offshore rescue, two rescuers and two-line tenders (of which one will be an officer) will be assigned to WR-1 to attempt the rescue. As per the OG, WR-1 is only in service from November 1 to April 30 annually.

In addressing the current ice/water program in Sault Ste. Marie Fire Services, OG 1500-06 identifies shore-based water/ice rescue, which would indicate a non-entry rescue involving shore-based or watercraft-based. However, as previously stated, OG 1500-06 discussed entry onto ice/water. It is recommended that OG 1500-06 be reviewed and revised based on the department's current level of water/ice training. If the level is to be shore/watercraft-based, then entry into or onto the water/ice should be removed from the OG. If the current training level in Sault Ste. Marie Fire Services is at a technician level, then entry into/onto water/ice is appropriate in the OG.

Recommendation #28: That SSMFS review and revise Operating Guideline 1500-06 as outlined in this Fire Master Plan Update.

When certification is required to perform specialty rescues on July 1, 2028, city council, on the Fire Chief's recommendation, will have to make an educated decision and economic based decision what level of service they want to provide in terms of water and ice rescue based on the training requirements of NFPA 1006 Chapter 17 (Surface Water Rescue) and Chapter 20 (Ice Rescue) along with the necessary equipment to carry out the tasks involved in the rescues. If entry into water or onto ice is the preferred level of service, Technician-level certification training and equipment will be required.

In addition to water and ice rescue, any water that is moving at a rate greater than 1 knot (1.15 mph or 1.85 km/hr) is deemed to be swift water and requires training and certification to NFPA 1006 Chapter 18 as of July 1, 2028. This St. Mary's River and its specific characteristics would put this body of water into this category with respect to any water or ice rescue. Through our research, Sault Ste. Marie Fire Services currently does not have a provision for performing swift-water rescue.

7.5 Tiered Response Medical Program

Through on-shift instructors, the SSMFS is currently trained to the Red Cross First Responder medical training level. Under the direction of a Medical Director who oversees the department's procedures and competencies, SSMFS offers defibrillation and naloxone administration in addition to first aid.

Sault Ste. Marie District Social Services is responsible for the provision of Emergency Medical services through the Sault Ste. Marie Paramedic Services (EMS). A Tiered Response Medical (TRM) agreement between EMS and SSMFS defines the level of service and authority for Fire to respond to medical calls within the City of Sault Ste. Marie.

Currently, SSMFS responds to medical calls that fit the following requirements:

- Cardiac arrest.
- respiratory arrest.
- choking.
- unconsciousness, including active seizures.
- and at the request of EMS.

The Tiered Response Medical notification system is currently undergoing a momentous change throughout the province of Ontario with the phased implementation of the new Medical Priority Dispatch System (MPDS). Currently, the new MPDS system has yet to be implemented in Sault Ste. Marie, however, implementation will occur in the near future and the City of Sault Ste. Marie is encouraged to be an active partner in the decisions regarding the types of calls SSMFS will respond to post the implementation of the MPDS system and the revision of the TRM agreement.

For the period from January 1, 2018, to October 30, 2023, the SSMFS responded to 6,410 medical calls, representing 20.8% of the total emergency call volume. The CRA identifies the risk(s) and applicable findings related to medical call responses.

Recommendation #29: That the SSMFS actively participate with the Central Ambulance Communication Centre (CACC), EMS, and the Ministry of Health and Long-Term Care in the decision-making process with respect to the types of emergency medical calls the fire service will respond to after the MPDS system is implemented.

7.6 Live Fire Training

Realistic fire training scenarios in secure, regulated environments are the aim of live fire training. The goal of live fire training exercises is to replicate the heat, humidity, smoke, and eyesight restrictions that a firefighter could experience in the field. Firefighters, especially officers like captains, benefit greatly from this kind of training as it helps them better understand fire behaviour, including how to spot changing smoke conditions that could indicate a "flashover" or the possibility of a fire extension.

The department currently provides theoretical and practical training related to live fire training through the use of the Ontario Fire College's mobile live training unit. The unit is booked by SSMFS for two sessions, spring and fall where it is mandatory training for all personnel. The training is conducted by OFC instructors along with in-house adjunct instructors. In addition to providing SSMFS personnel with this valuable training and continuing their role as a regional training centre under the OFM, the two live fire sessions are also open to other local departments to attend and participate in this essential training.

SSMFS's twice a year live burns meets the "best practice" with respect to this low occurrence high risk emergency call type.

7.7 Online Training

Having access to online training courses can increase the flexibility of how a thorough training program is delivered. Online courses can be made to accommodate different learning goals and methods. Additionally, they offer convenience in terms of access from the home or the fire station where group or solo participation is possible. SSMFS utilizes Stillwater FMLS E-training to provide the theory portion of their Annual Training Plan while providing documentation of training once completed.

7.8 Incident Command

Incident command training is considered to be a fundamental component of company officer training. The Ministry of Labour Ontario Fire Service Section 21 Advisory Committee develops guidance notes to help protect the health and safety of firefighters. According to Firefighters Guidance Note #2-1-Incident Command, having an incident command system is crucial. Alan V. Brunacini, a former Fire Chief of the Phoenix Fire Department, created the "Phoenix Fireground Command System," which was a highly recognized and widely used incident management system in the industry. This original system created a foundation for today's updated versions of the incident management system, such as the Blue Card system.

The purpose of incident command systems is to improve firefighter safety and health as well as the outcome of an emergency scene operation. The effectiveness and efficiency of emergency response, as well as the safety of the emergency scene, can be significantly impacted by these systems. This covers any situation the fire department may respond to where coordination between emergency personnel and equipment is required, such as fireground incidents, hazardous materials incidents, vehicle extrication, water/ice rescues, and any other incident the fire department responds to.

Sault Ste. Marie Fire Service operates an incident management system, as outlined in Operating Guidelines #800-01, “Emergency Scene Management,” and OG #800-02, “Incident Command Functions.” Guideline #800-01 was originally written in January 2004 and revised in August 2023. OG #800-02 was originally authored in August 1995 and underwent a revision in January 2017. It is considered a best practice for operating procedures and guidelines to undergo a revision at a predetermined time frame (e.g. every five years) to ensure they remain current to any legislative changes and or industry standards such as the Ministry of Labour Ontario Fire Service Section 21 Guidance Notes and NFPA.

It is recommended that Sault Ste. Marie Fire utilize NFPA 1561 “Standard on Emergency Services Incident Management System and Command Safety” and perform a review of their incident management system and operating guidelines to ensure they continue to provide an up-to-date incident management system operating guideline and training program.

Recommendation #30: That SSMFS performs a review of their Incident Management System Operating Guidelines as identified in this Fire Master Plan Update.

7.9 Company Officer Training

To supervise the workforce, municipalities must make sure that enough supervisors, or officers are trained. According to Section 12, subsection (2) of the Occupational Health and Safety Act, Part III, Duties of Employers and Other Persons: "Without limiting the strict duty imposed by subsection (1), an employer shall, (c) when appointing a supervisor, appoint a competent person," According to this part of the OHSA, the City is required as an employer to guarantee the competence of all supervisors, including those in the position of incident commander.

According to the Occupational Health and Safety Act, a "competent person" is someone who:

1. is qualified because of knowledge, training, and experience to organize the work and its performance.
2. is familiar with this Act and the regulations that apply to the work, and
3. has knowledge of any potential or actual danger to health or safety in the workplace.

Any designated Chief Officer, including the Fire Chief, Deputy Fire Chief, Assistant Chief, Platoon Chiefs, Training Officer, as well as any designated Company Officer, including Captains (or Acting Captains), would be considered a supervisor within the

SSMFS. According to industry best practices, a company's officer training program ought to be a continuous component of a larger officer development program. Future senior officers' career growth and succession planning are further supported by this approach.

O. Reg. 343/22 mandates that SSMFS's company officers be certified to both the NFPA 1521: Incident Safety Officer Standard and NFPA 1021: Standard for Fire Officers Level I, in addition to these requirements in the OHSA. Additionally, as a condition for the NFPA 1021 course, any staff members interested in an officer position must also hold an NFPA 1041-Fire Instructor Level I certification. According to discussions with SSMFS, all 20 officers (Platoon Chiefs and Captains) have NFPA 1021, Level 1 and 1041, Level 1 and seven have 1521 ISO (with courses booked for fall of 2025 for the remaining officers). In addition to the RTC courses offered in 2024, SSMFS hosted an Officer Development Seminar with Paul Acton as the guest speaker. This session was focused on new officers, where a common approach to Incident Command was the theme.

7.10 Succession Planning

The current SSMFS approach to succession planning is in line with the promotional policies specified in the Collective Agreement, much like the majority of medium to large full-time fire departments. SSMFS created a number notice #1400-17 "Training and Professional Development" which outlines the process by which personnel are encouraged to attend expanded training and learning opportunities. The Notice is broken down into two distinct sections "required" and "discretionary" courses. The required courses are courses which are mandatory for individuals to take for specific positions within the SSMFS and require the individual to achieve IFSAC or ProBoard certification. Discretionary courses are courses in which the fire chief or designee may choose to require personnel to attend.

SSMFS has established a thorough list of the knowledge and abilities required for every position within the bargaining unit, with options for additional courses. However, through our research, there does not appear to be a succession plan process for the senior positions of Assistant Chief, Deputy Chief and or Fire Chief other than the two discretionary courses: Fire Officer III and IV level courses.

The development of a program which outlines the minimum preferred educational requirements for personnel who wish to aspire to the most senior ranks within the department will be advantages to the department and will provide a proactive succession plan to reassure elected officials and senior employees that qualified

applicants are on hand in case the department has a vacancy in the senior management ranks.

To ensure that competent and qualified personnel are available for senior leadership positions within the department, SSMFS should have a well-established senior officer training program. A program like this not only develops a pool of capable leaders, but it also raises firefighters' morale as they recognize potential opportunities for professional advancement inside the department.

Recommendation #31: That the SSMFS consider formalizing its Senior Officer succession plan to guide the career development of members seeking advancement to the senior leadership positions within the SSMFS.

The training program, as outlined in this section, represents a comprehensive program to ensure SSMFS is meeting their requirements under OHSA and the FPPA. The work associated with developing, delivering, and documenting this program is extensive. Couple the ongoing programming with the additional work load of O. Reg. 343/22 deadlines for certifications of July 1, 2026 and July 1, 2028, training new recruits, monitoring and assessing the OSTI program, ensuring the proper departmental training records are maintained, overseeing the training facility and managing the Regional Training Centre Administrator role while instructing courses as required, identifies the current work load for the single Training Officer is extensive and potentially overwhelming and is not considered a best practices. Therefore, it is recommended that one additional Training Officer be hired to balance the current and future workload of the division to ensure SSMFS can provide the necessary training programs required to be proactive and meet the department’s current and future training requirements.

Council Recommendation #32: That SSMFS hire one additional Training Officer as identified in this Fire Master Plan Update.

7.11 Sault Ste. Marie Airport

The City of Sault Ste. Marie is served by a local airport run by the Sault Ste. Marie Airport Development Corporation is a community-based, independent, non-profit organization situated next to the shore of Lake Superior, and to the west of the city's designated rural area. Normally, the airport is open 24 hours per day, seven days a week, though this might vary depending on the weather and other factors.

During business hours and for 15 minutes before and after a major airline's arrival or departure, the airport has its own emergency response personnel on duty. SSMFS will provide support to the airport’s emergency response crews in the event of an emergency at the airport requiring crash truck operations. Operating Guideline #0600-

06 “Support Operations for Airport Crash Truck” outlines the responsibilities of SSMFS while responding to aircraft incidents at the Sault Ste. Marie airport during regular business hours. In 2024, training was scheduled in the month of April for suppression crews to review and participate in airport operations.

7.12 Respiratory Protection Program

Employers are required under Ontario Regulation 833 to protect employees who are exposed to dangerous situations. In the fire service, where self-contained breathing apparatus (SCBA) is crucial, this is particularly important. A thorough respiratory protection program is required to meet respiratory protection regulations.

Written protocols covering SCBA selection, maintenance, and use are part of this program, as are training and education for firefighters on SCBA handling and use. The requirements for such a program are described in Section 21 Guidance Note 4-9 of the Occupational Health and Safety Act, along with pertinent standards and resources for its creation.

The SSMFS has a number of Operating Guidelines and Number Notices which cover the care and use of their SCBA. A best practice would be to create a specific section identified as the Respiratory Protection Program within the operating guidelines that contains all relevant OGs and number notices specific to the respiratory protection program. In addition, an annual review of the Respiratory Protection Program is a best practice to ensure the program continues to meet the requirements of the documents included as reference to the applicable OSHA Section 21 Guidance Note #4-9 Respiratory Protection Program.

Recommendation #33: That the SSMFS review and update the Respiratory Protection Program as identified in this Fire Master Plan Update.

7.13 Training Facilities

The Training Division has recently taken over the space at the Regional Emergency Services Complex (RESC)/Station 4 that previously housed the Emergency Management Division. The new space will be dedicated to the Regional Training Centre (RTC) needs of the Training Division.

The 2018 FMP identified that SSMFS should be considering the development of a Training Centre with the capability to conduct live fire training and recommended that “**SSMFS develop a Business Plan for Council’s consideration in developing a Training Centre, including the capability of 'live fire' training**”. Staff identified that this recommendation is in progress through the City’s Corporate Asset Plan study,

which is currently in place. The development of a SSMFS training centre is identified as part of the City's long-term plan.

In the years until a Training Centre is available, the OFM does provide the opportunity for departments in Ontario to reserve and rent one of the available mobile fire training units to conduct live fire training within the City. The Province's mobile training unit has been on site for use by SSMFS two times, and is scheduled to come in 2025 as well. This option should be applied for annually to provide live fire training for all Suppression Division personnel.

7.14 Training Division Summary and Recommendations

The development and delivery of a Comprehensive Training program as proposed within this FMP Update is intended to ensure that the City of Sault Ste. Marie and the SSMFS continue to comply with their legislative responsibilities and sustain an effective and efficient training program for all members of the SSMFS.

Our review of the Training activities and resources has identified the following recommendations for consideration.

7.14.1 Training Recommendations

Recommendation #25: That the Fire Chief prepare a report for Council's consideration and approval identifying the levels of specialty services to be offered post July 1, 2028, along with the necessary budgetary requirements to provide said services.

Recommendation #26: That the SSMFS continue the partnership with the OFC to provide NFPA Pro-Qual training courses through their established RTC.

Recommendation #27: That the SSMFS review and revise the job description for the Training Officer as recommended in this Fire Master Plan Update.

Recommendation #28: That SSMFS review and revise Operating Guideline 1500-06 as outlined in this Fire Master Plan Update.

Recommendation #29: That the SSMFS actively participate with the Central Ambulance Communication Centre (CACC), EMS, and the Ministry of Health and Long-Term Care in the decision-making process with respect to the types of emergency medical calls the fire service will respond to after the MPDS system is implemented.

Recommendation #30: That SSMFS performs a review of their Incident Management System Operating Guidelines as identified in this Fire Master Plan Update.

Recommendation #31: That the SSMFS consider formalizing its Senior Officer succession plan to guide the career development of members seeking advancement to the senior leadership positions within the SSMFS.

Council Recommendation #32: That SSMFS hire one additional Training Officer as identified in this Fire Master Plan Update.

Recommendation #33: That the SSMFS review and update the Respiratory Protection Program as identified in this Fire Master Plan Update.

8.0 Communications

Sault Ste. Marie's Fire Communications Centre is located at 72 Tancred Street within Fire Station 1. Under the direction of the Deputy Chief of Operations, the Assistant Chief of Support Services is responsible for managing the Communications Center's operations.

8.1 Communications Centre Staffing

The SSMFS has a long-standing practice of assigning the newest hired firefighters to become communications operators and run the communications centre. A new recruit firefighter is initially assigned to the communications centre after being hired by the SSMFS to be trained by the current communicator operator/firefighter in the roles and responsibilities of a communicator. Each recruit is placed through a testing procedure after completing this training to make sure they fully understand how to utilize the CriSys computer-aided dispatch and telephone systems. They are then assigned as the on-duty communications operator/firefighter for a platoon. Currently, each platoon maintains its five most junior firefighters as qualified communication operators to be able to fill in for breaks during the operators' shift, vacation or illness.

8.2 Communications Centre Performance Benchmarks

The National Fire Protection Association (NFPA), a nonprofit that sets industry standards, has long set the benchmarks for municipal best practices in emergency call-taking and dispatching. NFPA standards, specifically NFPA 1061 and 1221, governed the certification of communicators and efficient call-taking and dispatching of emergency calls, respectively. These standards were combined in 2022 to create NFPA 1225, which is now regarded as the best practice for communications centres that dispatch the fire services. The operations chapter of NFPA 1225 provides guidelines for call answering and processing times, and it is recommended that a quality assurance process be established for monthly compliance evaluations.

The applicable NFPA 1225 performance benchmarks for emergency call taking (alarm answering) and fire dispatching (alarm processing) are for a communicator to complete 90% of emergency alarm processing within 64 seconds, and 95% of all alarm processing within 106 seconds.

Currently, SSMFS does not have any approved Key Performance Indicator (KPI) for the operations of its communication centre. As previously recommended in this FMP

Update, it is considered best practice to measure the effectiveness and efficiency of an activity and identify areas for improvement within the fire department.

A detailed review and statistical analysis of dispatch times is provided in **Section 9.7.1**.As discussed in that section, the 90th percentile dispatch times from 2017 to 2023 were 137 seconds, on aggregate, which is longer than the performance benchmark. Times increased from 2017 to 2021. The 95th percentile dispatch times from 2017 to 2023 were, on aggregate 167 seconds, which is 61 seconds over the performance target of 106 seconds. These results indicate that dispatch times are longer than current best practices for dispatching emergency response apparatus. Times to dispatch medical calls were below or near target for both performance measures.

Recommendation #34: That the SSMFS establish KPIs for the operation of the Communications Centre in alignment with NFPA 1225.

8.3 Next Generation (NG) 911

The Canadian Radio-Television and Telecommunications Commission (CRTC) has ordered the implementation of the Next Generation 911 (NG 911) networks and services in Canada through the Policy CRTC 2017-182. This change is a significant change to the infrastructure, methods, workflows, and systems supporting the emergency services in Canada. SSMFS has contracted Netagen Communications Technologies Inc. to manage the NG911 project through the implementation process.

Currently, SSMFS have replaced their telephone system and upgraded their radio system as part of the process leading up to the NG911 transition. SSMFS uses CriSys for their Computer Aided Dispatch (CAD) and Records Management Software (RMS), which have been confirmed as NG 911 compliant by the vendor and will be performing an upgrade to the current system in mid-2025.

With the final upgrade of the CAD scheduled for mid-2025, SSMFS should be in a good position to enter the queue to go live with NG911 in the second half of the year. The current costs of the NG911 implementation to date for Sault Ste. Marie is approximately 1.2 million. There are no anticipated future costs. However, SSMFS has recommended that they maintain 1.5 million in reserve funding for unforeseen expenses as the project unfolds.

As NG 911 goes live, industry experts are advising municipal fire services that additional dispatch/communications capacity will likely be required to manage the increased volume and complexity of emergency calls as a result of the new methods of communication (such as text messages, digital images, videos, etc.) in addition to voice

calls). It will be important for SSMFS to monitor the workload and capacity of the communications operators during and following the transition to NG 911.

Recommendation #35: That SSMFS monitor the workload and capacity of the communications operators during and following the transition to NG 911.

8.4 Training and Qualifications

The new NFPA 1225 - Standard for Emergency Services Communications contains the necessary requirements for a communications centre operator (fire dispatcher), which incorporates the previous NFPA 1061 requirements. Current industry best practices reflect that Communications Centre Operators (fire dispatchers) should be trained and qualified to NFPA 1225 levels. The new O. Reg. 343/22 – Firefighter Certification, also includes the mandatory training of 'Emergency Communicators Level I: Taking Emergency Calls' and 'Emergency Communicators Level II: Taking Emergency Calls and Dispatch Emergency Vehicles'. This new mandatory training and certification must be completed by July 1, 2026. In our view, this would include all current SSMFS personnel who perform the role of communications operators or who dispatch emergency calls for the department. A summary of the certification requirements for communicators is presented in **Table 23**.

Table 23: SSMFS Communications Staff Certification and O. Reg. 343/22 Compliance

Required Certification	Applicable Ranks	Existing Compliance	Compliance Deadline
NFPA 1061 - Standard for Public Safety Telecommunications Personnel Professional Qualifications	Emergency Communicators Level I	All job performance requirements of the NFPA "Standard for Public Safety Telecommunications Personnel Professional Qualifications", 2018 Edition, Chapter 4 (Public Safety Telecommunicator I)	July 1, 2026
NFPA 1061 - Standard for Public Safety Telecommunications Personnel	Emergency Communicators Level II	All job performance requirements in Public Safety Telecommunicator I and NFPA 1061 "Standard for Public	July 1, 2026

Required Certification	Applicable Ranks	Existing Compliance	Compliance Deadline
Professional Qualifications		Safety Telecommunications Personnel Professional Qualifications", 2018 Edition, Chapter 5 (Public Safety Telecommunicator II)	

The Communication Operators' training program, which previously consisted of an in-house training program lasting roughly two weeks, is being replaced by an NFPA 1225 training program. This program aims to bring the current bottom five communication operators/firefighters per platoon up to the NFPA standard, who provide relief and substitute when needed. SSMFS did not administer a testing procedure to current Communication Operators/Firefighters during the training program's phase-in, however they plan to implement the NFPA 1225 training and testing for all new hires in the future.

The current upgraded training program, Sault Ste. Marie Fire Service has underway aligns with the certification requirements of O. Reg 343/22, which requires all Communication Operators to be certified to Emergency Communicator Level I & II by July 1, 2026. The OFM/OFC does not yet offer the Emergency Communicator Course. The only option for the course at this time is offered by a third party at a high cost. The OFM has acknowledged this challenge and is working to address it. SSMFS are part of a working group tasked with assisting in the course development.

Recommendation #36: That Sault Ste. Marie Fire Service implement a training and testing process for all new communication operators/firefighters, when it becomes available from the OFM, to meet the requirements of the certification process outlined in O. Reg 343/22.

8.5 Review of Communications Centre Operating Model

The 2018 Fire Master Plan recommended "That the City of Sault Ste. Marie conduct a comprehensive review of the costs associated with sustaining the current communications centre operating model in comparison to contracting these services from another agency." KPMG was retained by the City and the Sault Ste. Marie Police Services Board to conduct a review of shared services in order to minimize pressures on taxes while maintaining or improving service levels.

The study examined the dispatching, finance, and human resources operations in relation to police and fire dispatching services. Out of the eight main recommendations and five further suggestions given by the study, recommendation 3.1 called for the transfer of the Fire Department's dispatching duties to the Police Services.

The suggestion to transfer fire dispatch to police services is deemed to be "high complexity and high impact" after investigation. Among the difficulties that could arise if this effort were implemented are:

- interpreting the Collective Agreement regarding the contracting-out clause,
- the specific language in the review that identifies the need for approximately 0.5-0.6 FTE for fire dispatch based on call volume,
- and lastly, any challenges that may be encountered where police services dispatch fire services across the province.

One benefit of the initiative for the City of Sault Ste. Marie, the four firefighters/communication operators who are currently assigned to perform dispatch duties, can be reassigned to a position on an apparatus for suppression responses as firefighters. This will assist in adding more personnel to the front-line apparatus at one of the stations staffed with three firefighters at minimal expense to the City. This would be a step towards achieving a minimum of four firefighters on all the front-line apparatus.

8.6 Communications Summary and Recommendations

Based on our review of department communications, SSMFS is well-positioned to manage the upcoming changes to emergency service dispatching, including the introduction of the NG 911. We provide the following recommendations regarding communications based on our analysis.

8.6.1 Communications Recommendations

Recommendation #34: That the SSMFS establish KPIs for the operation of the Communications Centre in alignment with NFPA 1225.

Recommendation #35: That SSMFS monitor the workload and capacity of the communications operators during and following the transition to NG 911.

Recommendation #36: That Sault Ste. Marie Fire Service implement a training and testing process for all new communication operators/firefighters, when it becomes available from the OFM, to meet the requirements of the certification process outlined in O. Reg 343/22.

9.0 Fire Suppression Division

According to the needs and circumstances of the local community, the City of Sault Ste. Marie must offer the fire protection services mandated by the Fire Protection and Prevention Act, 1997. This includes selecting the proper degree of fire suppression and the provision of specialized rescue services. The council must use its community risk assessment to make well-informed decisions regarding fire protection services, including the extent of fire suppression services to be given, in accordance with O. Reg. 378/18, Community Risk Assessments, which was created to aid in this decision-making process.

The delivery of fire suppression services is recognized by the OFM Comprehensive Fire Safety Effectiveness Model as the “Third Line of Defence”. This model also recognizes that “due to a variety of influences, not all communities are capable of, or should consider delivering the same level of service.” To assist Council in this decision-making process, the methodology presented in this section considers the “Risk Outcomes” identified by the companion Community Risk Assessment, the applicable PFSGs authored by the OFM, and current industry best practices as outlined in the applicable National Fire Protection Association standards.

In the City of Sault Ste. Marie, the fire department is responsible for responding to fires, medical calls, incidents involving hazardous materials, auto accidents, and technical rescues like high and low angle rope, surface water and ice rescue, auto extrication, confined space and trench rescues. Technical rescues demand highly skilled personnel with a high degree of expertise. With the recent implementation of O. Reg. 343/22, firefighters must hold varied degrees of certification in each particular subject. Both the fire department's capacity to deliver the service and Council's approval of financing will determine the degree of certification required.

9.1 Existing Fire Stations

Currently, Sault Ste. Marie Fire Services operates from four fire stations positioned throughout the City. Xpert Live by CriSys is installed in every Sault Ste. Marie fire station, along with backup power generators. To respond to emergencies and locate available resources, like fire hydrants, fire suppression personnel use CriSys' Xpert Live. An outline of the current stations is given in this section of the Master Fire Plan Update.

In 2013, the City of Sault Ste. Marie hired Morrison Hershfield to carry out Building Condition Assessments (BCA) of its fire stations. These assessments provide

anticipated costs for the year the assessment was completed, as well as repair, maintenance, and future replacement timelines for building components. Repairs are prioritized from desired to urgent, and capital budgeting for building and component maintenance and repairs is continuous. An accepted method among facility management professionals is to rate the condition of a facility utilizing a Facility Condition Index (FCI). The rating was first published by the National Association of Colleges and University Business Officers as a method to provide a benchmark to compare the condition of a facility. The benchmark takes into consideration the maintenance, repair, and replacement deficiencies of the facility based on a building condition assessment, versus the replacement value of the facility. This will create a percentage figure that will fit into established categories from Good (0 to 5%), Fair (5 to 10%), Poor (10 to 30%) and Critical (greater than 30%). Therefore, the lower the FCI rating the better condition the facility is considered.

9.1.1 Central Fire Station 1

Built in 1982/1983, Central Fire Station 1 is situated at 72 Tancred Street. It includes a two-story administration structure with a tower and a five-bay apparatus area. The building was rated as being in "Fair" condition after the 2013 BCA.

Central Fire Station 1 is the headquarters for SSMFS, housing the administration and support services staff, which includes the fire management team, Fire Prevention and Public Education personnel and Communications. In addition to administration, Station 1 houses Pump 1, staffed with a minimum of four firefighters (frontline apparatus) and an on-duty Platoon Chief who responds in PC1. The station also houses Rescue 1, Aerial 1, and WR 1, which are not staffed full-time; however, if required, a firefighter from the pumper will respond along with the station pumper.

9.1.2 Fire Station 2

Located at 363 Second Line West, Fire Station 2 was built in 1989 and has a single-story wing with office space and firefighter quarters, as well as a two-bay apparatus garage with a second-story mezzanine. It is generally the same design and layout as Station 3. The building was classified as being in "Good" condition by a BCA that was carried out in 2013. Station 2 houses a pumper crew that is staffed with a minimum of four firefighters and tanker 1 which is not staffed.

SSMFS recently completed renovations within this station to provide separated and ventilated storage for bunker gear and firefighter PPE, consistent with industry best practices. This reduces firefighter exposure to off gassing from used gear and also protects the bunker gear from exposure to diesel emissions.

9.1.3 Fire Station 3

Fire Station 3 was built in 1989 and is situated at 100 Bennett Blvd. It is generally the same design and layout as Station 2. Along with a single-story wing housing offices and firefighter quarters, the station also has a two-bay apparatus garage with a partially second-story mezzanine. The building was classified as being in "Good" condition by a BCA that was carried out in 2013.

The station is staffed with a pumper staffed with a minimum of three firefighters.

SSMFS recently completed renovations within this station to provide separated and ventilated storage for bunker gear and firefighter PPE, consistent with industry best practices. This reduces firefighter exposure to off gassing from used gear and also protects the bunker gear from exposure to diesel emissions.

9.1.4 Fire Station 4

Built in 1961, Fire Station 4 can be found at 65 Old Garden River Road. The main structure underwent renovations in 2007 and has apparatus bays on the south side and offices on the north side. According to a 2013 BCA, the condition was deemed to be "good." The station is staffed with a 75-foot quint/ pumper staffed with a minimum of three firefighters.

The Mechanical Division and Training Division also operate from Station 4. The space at this station that was previously dedicated to Emergency Management has been converted for use by the Regional Training Centre.

EMS rents space at Station 4, sharing living quarters, vehicle space and a dedicated locker/change room area.

9.1.5 Fire Station Diesel Emissions

Employers must "make sure the fire station is adequately ventilated by either natural or mechanical means so that the atmosphere does not endanger the health and safety of workers," according to OHSA Section 21 Firefighter Guidance Note 3-1 – Reducing Exposure to Diesel Exhaust. By installing direct capture diesel exhaust systems, the City of Sault Ste. Marie Fire Department has taken proactive measures to help reduce the exposure of personnel to diesel exhaust emissions in each fire station's apparatus bays. This action complies with industry best practices for addressing Guidance Note 3-1.

9.1.6 Structural Fire Fighting Personal Protective Clothing Storage

Over the years, the storage of structural firefighting personal clothing, or bunker gear has changed to address the problems of absorbing diesel exhaust fumes from the days when bunker gear was kept on the walls of the apparatus bays and containing possible contaminants that the gear would retain following an emergency call. Bunker gear, or structural firefighting personal protective clothing, should be stored properly, according to OHSA Section 21 Guidance Note 4-8 Care, Maintenance, Inspection and Replacement of Structural Firefighting Personal Protective Clothing. Separate, ventilated storage rooms that are vented to the outdoors are a feature of municipal best practices for bunker gear storage.

Bunker gear must be stored properly for both the equipment's longevity and firefighters' safety. It is advised to separate and ventilate the equipment to protect it from diesel

pollutants, which, over time, may harm it. Additionally, the gear itself may emit toxins into the air of the station after being used at active fire calls.

All SSMFS fire stations have separate bunker gear rooms, which are ventilated with powered exhausts, where the bunker gear can be stored away from the apparatus floors and living quarters. In addition, all spare firefighting gear is stored at Station 4, where it is isolated from the apparatus bay.

9.2 Recreation Trails

The City of SSM and the surrounding area are home to an extensive network of motorized trails (used for snowmobiles, All Terrain Vehicles (ATVs), and dirt bikes) and non-powered routes (used for walking, hiking, cycling, etc.). The City's system of bike lanes, walkways, and trails is contributing to the rise in active transportation in Sault Ste. Marie. A 25-kilometre multipurpose (non-motorized) trail system that links locations such as the Fort Creek Conservation Area, Bellevue Park, Algoma University, Sault College, the hospital, and the waterfront walkway is the John Rowswell Hub Trail. Tourists, students, and locals all use the trail.

There are hundreds of kilometres of motorized snowmobiling trails around the City of Sault Ste. Marie and Algoma County, including the Soo Highlands Loop, in addition to designated ATVing trails. The trails are a tourist destination in the city and surrounding area and offer recreational opportunities. Numerous emergency calls to Sault Ste. Marie Fire Services have been generated in the past and will continue to grow with the increased use of the trail networks in and around Sault Ste. Marie.

Sault Ste. Marie Fire Service's Establishing and Regulating By-law 2020-211 (Amended through By-Law 2024-148) currently does not specifically address rescue from the trail system(s); however, with the current mandate as identified in Appendix A of the By-law, "The Sault Ste. Marie Fire Department shall provide fire protection services, emergency response, public fire/ life safety education and fire prevention initiatives to protect the lives and property of the citizens, businesses and visitors to the City of Sault Ste. Marie" would lead citizens and visitors to believe that if they are in need of a rescue on the trail system, the fire service would attend. For Sault Ste. Marie Fire, this poses a significant issue. Depending on the location of the person or people in need of rescue, the number of crews that may need to be committed to the rescue could use up to 50% of the on-duty staff, or more, depending on the type of rescue and its location. Furthermore, depending on the rescue's location, it might be necessary to go a considerable distance off-road and away from their fire apparatus in order to get to the individual or individuals. Again, depending on the distance, carrying out the folks who are not ambulatory can be a difficult task that may require many fire crews to complete safely.

The consumption of on-duty crews needed for the trail rescue must be taken into account in addition to the previously mentioned concerns regarding the possible off-road distance, as this could deplete the city's on-duty resources that could be used for emergency calls within the city itself. On a trail system, a rescue call may be lengthy and would require the station or stations to be backfilled with either overtime firefighters or mutual aid that can be used on a short-term basis.

If the Sault Ste. Marie City Council intends to provide rescue service to those in need on the trail systems, it is recommended that the Establishing and Regulating By-law be amended to identify the specific level of service. In Council's deliberations to determine whether to provide the level of service, it is critical that equipment and training, identified by the Fire Chief, to enable the fire department to provide the service, be acquired to ensure the safety of the citizens and firefighters in the performance of the rescue.

Recommendation #37: That Council consider an amendment to the Establishing and Regulating By-law, along with the financial and operating impacts associated with providing rescue services to the trails systems in and around the City of Sault Ste. Marie, as identified in this Fire Master Plan Update.

9.3 Responses to Industrial Risks

The City of SSM is home to a number of large industrial facilities. One of the largest and most prominent is Algoma Steel. Due to the level of fire risk within Algoma Steel, the plant has an in-house emergency response team/fire response team. SSMFS can, at times, be called to respond to the steel mill property to provide support to the in-house emergency response. It is important to note that municipal firefighting and industrial firefighting are different and separate. SSMFS, as a municipal fire service, is training to the requirements of O. Reg. 343/22 Firefighter Certification, which outlines the required training levels for all municipal firefighters in Ontario. The training required to perform industrial firefighting is specific and beyond the scope of municipal fire services.

It is our understanding that best practices across Ontario reflect large industrial facilities (for example, the steel mills in Hamilton, Ontario), providing their own fire prevention, fire protection, fire safety education and emergency response programs, resources and in-house personnel, with the local municipal fire service providing support roles only, if and when required.. Considering this, it is recommended that SSMFS provide a support role only, at most, if called to respond to the Algoma Steel site or any other large/heavy industrial complex.

Recommendation #38: That SSMFS provide a support role, only, when requested to respond to large industrial complexes, such as Algoma Steel.

9.4 Fire Suppression Guidelines and Standards

In Ontario, there are no legally mandated requirements for the number of firefighters, the type of firefighters (e.g., volunteer, full-time, or part-time), the number of fire stations, or the degree of fire suppression services that must be offered in a municipality. The City of Sault Ste. Marie operates a full-time fire department, with a collective agreement in place between the City and the Sault Ste. Marie Professional Fire Fighters' Association (International Association of Firefighters Local 529).

As referenced in the previous section of this plan, the FPPA requires that determining the level of fire suppression services within the municipality is the role of the municipal Council. To assist municipal councils in this decision-making process, the FPPA assigns powers to the Office of the Fire Marshal that include responsibilities **"to issue guidelines to municipalities respecting fire protection services and related matters"**[16]. The OFM complies with this requirement through the issuance of PFSG, Fire Marshal's Directives, Technical Guidelines, Communiques and other forms of communication. At this time, all PFSG are under review but have been authorized by the OFM for continued use for reference purposes. Where applicable, PFSGs have been considered within this FMP Update to inform the analysis and to provide supporting reference documents.

As referenced throughout this FMP Update, in 2013, the Province of Ontario adopted the NFPA Pro-Qual training standards. NFPA standards have now become the foundation of firefighter training programs, professional qualifications and reference documents for firefighter safety as contained in the OHSA Section 21 Guidance Notes for the fire service. On April 14, 2022, the Ministry of the Solicitor General filed **O. Reg. 343/22 – Firefighter Certification,** requiring all Ontario firefighters to be certified to NFPA Pro-Qual standards over the next four to six years. Within this FMP Update 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 (2020 Edition)** has been utilized to inform the fire suppression service level analysis.

9.4.1 PFSG 04-08-10 Operational Planning: An Official Guide to Matching Resource Deployment and Risk

PFSG 04-08-10 – Operational Planning: An Official Guide to Matching Resource Deployment and Risk was released by the OFM in January 2011 and includes a "**Critical Task Matrix**" (CTM) to assist municipalities in determining the level of

[16] FPPA, 1997 Part III Fire Marshal, Powers of the Fire Marshal Section 9(1)(d).

fireground staffing capabilities. The OFM states that **"The CTM is based on the IMS. It will assist in identifying fireground staffing capabilities based upon low, moderate, high and extreme risk levels within your community."**

The OFM has identified the critical tasks from the Incident Management System that are used during fireground operations. These tasks are consistent with applicable legislation, industry best practices and the Ontario Fire College Curriculum."[17]

The CTM further recognizes that within the IMS:

- Upon arrival and rapid size-up, the incident commander can upgrade or downgrade the response;
- Crews can be reassigned to other tasks once original assignments are complete;
- Response protocols can be established with specific risk levels used to assist with pre-planning to obtain more resources based on the escalating nature of the emergency;
- Fire departments perform rescue and building personnel conduct evacuations according to their approved FSPs; and
- Some tasks will never be assigned based on the tactical approach chosen by the incident commander (e.g., offensive versus defensive).
- The CTM identifies a lower and upper range of the number of firefighters required to respond for each of the four risk levels. The actual number of firefighters within each range is based upon analysis of actual fires, the OHSA Section 21 Guidance Notes affecting firefighters, and industry best practices.

The CTM was informed by the NFPA 1710 Standard in place at the time of its development. These standards are both identified in the reference section of PFSG 04-08-10. In contrast to these NFPA Standards, the CTM includes very broad lower and upper-level incident response ranges to effectively, efficiently and safely conduct fire suppression operations. For example, to safely complete the tasks associated with a fire in moderate risk (Group C – Residential Occupancy) the CTM identifies a range of 16 to 43 firefighters that would be required. In part, this range can be associated with the range of fire suppression resources that may be available in Ontario, which include volunteer, part-time and full-time firefighters.

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[17] "Operational Planning: An Official Guide to Matching Resource Deployment and Risk Workbook," Ministry of the Solicitor General Website, Last Modified: May 5, 2017, http://www.mcscs.jus.gov.on.ca/english/FireMarshal/FireServiceResources/PublicFireSafetyGuidelines/04-08-10at1.html

9.4.2 NFPA 1710 Standard (2020 Edition)

In contrast to the OFM Critical Task Matrix, 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** (2020 Edition) provides fire suppression staffing performance benchmarks for municipalities that utilize only career (full-time) firefighters.

The NFPA 1710 Standard is designed for larger municipalities such as the City of Sault Ste. Marie that, as a result of many factors, are operating their fire department utilizing only career (full-time) firefighters.

Relevant references from NFPA 1710 include the following:

- This standard applies to the deployment of resources by a fire department to emergency situations when operations can be implemented to save lives and property[18]; and
- The standard is a benchmark for most common responses and a platform for developing the appropriate plan for deployment of resources for fires in higher hazard occupancies or more complex incidents[19].

These NFPA 1710 references support the strategic priority of saving lives and property, as well as recognizing the standard as a **"benchmark"** for determining the appropriate level of resources based on the complexity and level of fire risk present. This standard identifies minimum firefighter deployment benchmarks based on the fire risks present within a range of building occupancy types.

It is important to note that this NFPA 1710 Standard is designed for application within a broad range of jurisdictions across North America. This standard was not specifically developed for the delivery of fire suppression services within the Province of Ontario that has a more stringent Fire Code and Building Code than may be found in other jurisdictions. For example, **O. Reg. 364/13** requires mandatory annual fire inspections and fire drills in vulnerable occupancies designated as a care and treatment occupancy, a care occupancy or a retirement home. Ontario also has mandatory requirements for

[18] 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 (2020 Edition) Chapter 1 Administration, Application Section 1.3.1.
[19] 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 (2020 Edition) Chapter 1 Administration, Application Section 1.3.2.

sprinkler system installation in vulnerable occupancies, and requirements for enhanced fire and life safety systems in other building occupancies such as high-rise buildings.

It is also important to note that the NFPA 1710 Standard requires that the fire suppression deployment model be informed by a formal Community Risk Assessment[20]. In Ontario, the development of a CRA is now a mandatory requirement for all municipalities to comply with **O. Reg. 378/18** – Community Risk Assessments.

The NFPA 1710 Standard includes the following fire suppression deployment models based on the type of building occupancy and potential fire risks present:

- Initial Arriving Company;
- Second Arriving Company;
- Single-Family Dwelling Initial Full Alarm Assignment;
- Open air Strip Shopping Center Initial Full Alarm Assignment;
- Apartment Initial Full Alarm Assignment; and
- High-Rise Full Alarm Assignment.

9.4.2.1 Initial Arriving Company

The Initial Arriving Company is commonly referenced within the fire service as the initial responding apparatus deployed to an emergency incident. Fire service leaders and professional regulating bodies have agreed that until a sufficient number of firefighters are initially assembled on-scene, initiating tactics such as entry into the building to conduct search and rescue, or initiating interior fire suppression operations **are not safe practices**. **Based on NFPA practices, if fewer than four firefighters arrive on scene, they must wait until a second apparatus, or additional firefighters arrive on scene to have sufficient staff to commence these initial activities**.

Within the NFPA 1710 Standard an **'Initial Arriving Company'** is referenced as an 'Engine Company' with a minimum staffing of four firefighters whose primary functions are to pump and deliver water and perform basic firefighting at fires, including search and rescue.

An Initial Arriving Company of four firefighters, once assembled on-scene, is typically assigned the following operational functions:

[20] 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 (2020 Edition) Chapter 5 Fire Department Services, Section 5.2.1.1 Fire Suppression Capabilities.

- The officer in charge shall assume the role of Incident Commander;
- one firefighter shall be designated as the pump operator;
- one firefighter shall complete the task of making the fire hydrant connection; and
- the fourth firefighter shall prepare an initial fire attack line for operation.
- The assembly of four firefighters on the fire scene provides sufficient resources to safely initiate **limited fire suppression, or rescue operations**.

This first crew of four firefighters is also able to conduct the strategic operational priority of "size-up" whereby the officer in-charge can evaluate the incident and where necessary, request additional fire suppression resources that may not have been dispatched as part of the initial alarm.

The NFPA 1710 fire suppression deployment model for the initial arriving company requires a minimum of four firefighters arriving on scene with an 'Engine Company' within a four-minute (240 seconds) travel time to 90% of the fire suppression incidents.

9.4.2.2 Second Arriving Company

The NFPA 1710 Standard (2020 Edition) includes a **new performance benchmark** for the deployment and arrival of the second responding apparatus. The standard does not reference a specific type of apparatus for the second-arriving company, but it does require that it be staffed with a minimum of four firefighters. The term 'company' in this standard can be defined as "being usually organized and identified as engine companies, ladder companies, rescue companies, squad companies or multi-functional companies"[21]

The NFPA 1710 fire suppression deployment model for the second arriving company requires a minimum of four firefighters arriving on scene with a 'Second Company' within a six-minute (360 seconds) travel time to 90% of the fire suppression incidents.

9.4.2.3 Single-Family Dwelling – Initial Full Alarm Assignment

In comparison to the deployment of an 'Initial Arriving Company' the term **'Initial Full Alarm Assignment'** refers to "Those personnel, equipment, and resources ordinarily

21 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 (2020 Edition) Chapter 3 Definitions, Section 3.3.15.

dispatched upon notification of a structure fire"[22]. An initial full alarm assignment represents the 'total' number of firefighters initially deployed to a structure fire.

In this deployment standard, a single-family dwelling is defined as "a typical 2,000 square feet (186 square metres) two-storey single-family dwelling without a basement and with no exposures"[23]. This definition is a further example of the broad definitions utilized by the NFPA that, in this instance, may not necessarily represent the definition of a typical single-family dwelling in Ontario. Most single-family dwellings in Ontario have basements to accommodate heating systems.

The NFPA 1710 fire suppression deployment model for an initial full alarm assignment to a single-family dwelling includes a minimum deployment of 16 firefighters (17 if an aerial device is used) described as the **'total effective response force'** arriving on scene within an eight-minute (480 second) travel time to 90% of the fire suppression incidents in this occupancy type.

9.4.2.4 Open air Strip Shopping Center – Initial Full Alarm Assignment

In this deployment standard an open air strip shopping center is defined as ranging in size from 13,000 square feet (1,203 square metres) to 196,000 square feet (18,209 square metres). This deployment model is described as having a total effective response force of a minimum of 27 firefighters (28 if an aerial device is used).

This deployment model includes "the establishment of an initial medical care component consisting of at least two members capable of providing immediate on-scene medical support and transport that provides rapid access to civilians or members potentially needing medical treatment"[24]. In the City of SSM these services are provided by EMS. As such the total effective response force to be provided by the SSMFS would be a minimum of 25 firefighters (26 if an aerial device is used) arriving on scene within an eight-minute (480 second) travel time to 90% of the fire suppression incidents in this

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22 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 (2020 Edition) Chapter 3 Definitions, Section 3.3.40 Initial Full Alarm Assignment.
23 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 (2020 Edition) Chapter 5 Fire Department Services, Section 5.2.4.1.1.
24 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 (2020 Edition) Chapter 5 Department Services, Section 5.2.4.1 (9).

occupancy type. These deployment targets exceed the existing SSMFS minimum staffing of 15.

9.4.2.5 Low-Rise Apartment – Initial Full Alarm Assignment

In this deployment standard, an apartment is defined as a typical 1,200 square feet (111 square metres) apartment within a three-storey garden-style apartment building. This deployment model is also described as having a total effective response force that includes a minimum of 27 firefighters (28 if an aerial device is used) and includes the same establishment of initial medical care as described in the open air strip shopping center initial full alarm assignment deployment model that would be provided by EMS.

The applicable deployment model for the SSMFS would include an initial minimum deployment of 25 firefighters (26 if an aerial device is used), described as the 'total effective response force', arriving on scene within an eight-minute (480-second) travel time to 90% of the fire suppression incidents in this occupancy type. These deployment targets exceed the existing SSMFS minimum staffing of 15.

9.4.2.6 High-Rise – Initial Full Alarm Assignment

In this deployment model, a high-rise building is described as having the highest floor greater than 75 feet (23 metres) above the lowest level of fire department vehicle access. This deployment model is described as having a total effective response force that includes a minimum 42 firefighters (43 if the building is equipped with a fire pump) and includes the same establishment of initial medical care as described in the open air strip shopping center initial full alarm assignment deployment model that would be provided by EMS.

The applicable deployment model for the SSMFS would include an initial minimum deployment of 38 firefighters (39 firefighters if the building is equipped with a fire pump) described as the 'total effective response force' arriving on scene within a 10 minute and 10 second (610 second) travel time to 90% of the fire suppression incidents in this occupancy type. These deployment targets exceed the existing SSMFS minimum staffing of 15.

9.4.2.7 Vertical Response Times

High-rise structure fires are unique in the method of fire suppression, as detailed in a publication by the NFPA called **Structural Firefighting: Strategy and Tactics**.[25] When

[25] Source: Klaene, Bernard, Sanders, Russell, "Structural Firefighting: Strategy and Tactics," Jones and Bartlett Learning, 2007.

a fire is located above the eighth floor, exterior suppression methods are no longer effective. In these cases, fire suppression is mainly undertaken inside the building. Firefighters create a staging floor; usually two floors below the fire floor. Firefighters will travel to and from the staging area and the fire floor or evacuation floors. The staging area is the location of all safety and suppression equipment needed to combat the fire. Firefighters must get this equipment to the staging area. When fire service access elevators cannot be used firefighters climb the stairs with the equipment. Even in the best conditions climbing the stairs takes time. The average vertical response time, the average time it takes for a firefighter to climb the stairs, is shown in **Table 24**. To climb to the tenth floor, it would take a firefighter on average three minutes and seven seconds.

Table 24: Vertical Response

Floors	Average Time per Floor in Seconds
1 to 10	20.8
11 to 20	27.8
21 to 30	33.6
31 to 40	45.9
41 to 48	59.0

Source: Structural Firefighting: Strategy and Tactics.

Ascending with equipment can be physically exhausting. When dedicated fire service access elevators cannot be used additional alarms must be ordered to set-up stairway support to ensure firefighters have enough stamina for fire suppression after ascending. Stairway support is a system to carry equipment to the staging area.

A firefighter is usually positioned every two floors and ascends two floors with equipment, where the next firefighter picks up the equipment. This gives each firefighter a rest period during their two-floor descent[26].

9.4.2.8 Vertical Response Data Collection

As discussed in the CRA the City currently has 51 buildings defined by the OBC as high-rise buildings with a floor level 18 metres (59 feet) above grade, or six storeys, distributed throughout the urban settlement area. Considering the probability and consequence of a fire incident in high-rise buildings, this was identified as a high-risk for the City of Sault Ste. Marie.

[26] Provided as an example of best practices.

Vertical response is the time difference from the initial arrival of the fire crews at the address of the high-rise building to the actual arrival of fire crews to the fire floor. The time difference is critical in the growth of the fire and for the firefighting crews' actual ability to apply water to the fire or perform a potential rescue. In order to assess current vertical response performance and plan for the future needs of the fire service to serve the community risk, SSMFS should implement a process to collect, record, review and analyze its vertical response times experienced on-scene. This data will be essential for the purpose of evaluating the SSMFS's vertical response performance and to identify potential gaps/needs to inform future department planning.

Recommendation #39: That the SSMFS develop and implement a process to record, monitor and review vertical response performance for all emergency responses to incidents at high-rise buildings to inform future department planning.

9.4.3 NFPA 1720 Standard (2020 Edition)

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" provides a resource for determining and evaluating the number of volunteer firefighters required based upon recognized industry best practices.

The NFPA 1720 standard further supports the minimum initial response staffing to include four firefighters, including "Initial firefighting operations shall be organized to ensure that at least four firefighters are assembled before interior fire suppression operations are initiated in a hazardous area". This particular standard recognizes that the four firefighters may not arrive on the same vehicle, but that there must be four on the scene prior to initiating any type of interior firefighting operations.

Within this standard, the NFPA identifies five different categories described as "Demand Zones" that relate to the type of risk that may be found within a typical community, primarily based on population density. The standard then identifies a minimum level of firefighters that would be recommended for each of these categories.

Table 25 presents the NFPA 1720 standard minimum staffing levels by demand zone.

Table 25: NFPA 1720 Performance Measures

Demand Zones	Demographics	Minimum # of Firefighters Responding	Response Time (Turnout + Travel) in Minutes	Performance Objective
Urban Area	>1000 people per square mile	15	9	90%
Suburban Area	500-1000 people per square mile	10	10	80%
Rural Area	<500 people per square mile	6	14	80%
Remote Area	Travel Distance + or – 8 miles	4	Dependent upon travel distance	90%
Special Risks	To be determined by Fire Department	To be determined by Municipality/Fire Department	To be determined by Municipality/Fire Department	90%

The NFPA 1720 standard utilizes population density as a factor in evaluating the minimum number of firefighters recommended for depth of response. As a standard primarily for use by volunteer fire departments it recognizes lower population densities are typically found in smaller communities and in rural areas in comparison to higher population densities found within developed and defined urban areas.

The NFPA 1720 standard identifies an initial response deployment of four firefighters to effectively, efficiently and safely conduct initial fire suppression operations.

The NFPA 1720 standard identifies a depth of response deployment range of four to 15 firefighters, depending on the risks associated with fire demand zones, to effectively, efficiently and safely conduct initial fire suppression operations.

9.4.4 Applicable Fire Suppression Performance Benchmarks

The review of suppression guidelines, standards and best practices presented above considers the current PFSGs authored by the OFM and the NFPA 1710 and 1720 Standards (2020 Editions) for identifying the applicable performance benchmarks for the delivery of fire suppression services within the City of SSM.

9.4.4.1 Defined Urban Area

This FMP Update, and the 2018 FMP, assessed the deployment and emergency response capabilities of the SSMFS in two separate areas:

1. The designated Urban Settlement Area; and
2. The rural area that falls between the Urban Settlement Boundary and the City boundary.

Based on the urban or rural characteristics, different performance measures were applied within these areas. In our view, the Initial Arriving Apparatus, Second Arriving Apparatus and Initial Full Alarm Assignment performance benchmarks included within the NFPA 1710 Standard (2020 Edition) performance measure represent current industry best practices for assessing the fire suppression services within the urban area of the City of Sault Ste. Marie.

9.4.4.2 Defined Rural Area

According to Statistics Canada 2021 Census data, the City's Population Centre (as defined by Statistics Canada) is home to 90.1% of the City's population. This results in a population of 7,128 residents within the rural area outside of the Population Centre in a geographic area of 169 square kilometres (65.25 square miles). The resulting population density of the rural area (outside of the Population Centre) is 109 people per square mile. It is recognized that the Population Centre boundary defined by Statistics Canada does not perfectly align with the Urban Area boundary defined by the City. However, based on a desktop review of the land uses in the areas that do not align, it is not anticipated that having the exact alignment would result in a population density that is high enough to justify a different demand zone per NFPA 1720 (e.g., Suburban Demand Zone of 500 to 1000 people per square mile).

In our view, the Rural Demand Zone performance measure within the NFPA 1720 Standard (2020 Edition) represents current industry best practices for assessing the fire suppression services within the rural area of the City of Sault Ste. Marie.

9.5 Importance of Time with Respect to Fire Growth

Understanding how a fire grows from the time of ignition is a critical element of assessing a municipality's fire protection program, including the application of the "three lines of defence". Research conducted by the OFM and National Research Council of Canada indicates that a fire in a non-sprinklered residential occupancy can spread from the room where the fire originates in 10 minutes or less. Tests have shown that the fire

can extend from the room of origin in as little as three minutes, under fast fire growth conditions.

Fire growth rates, defined by the Society of Fire Protection Engineers as slow, medium and fast, are listed in **Table 26**. The fire growth rates are measured by the time it takes for a fire to reach a one-megawatt (MW) fire. This is roughly equivalent to an upholstered chair burning at its peak. A two MW fire is approximately equal to a large, upholstered sofa burning at its peak.

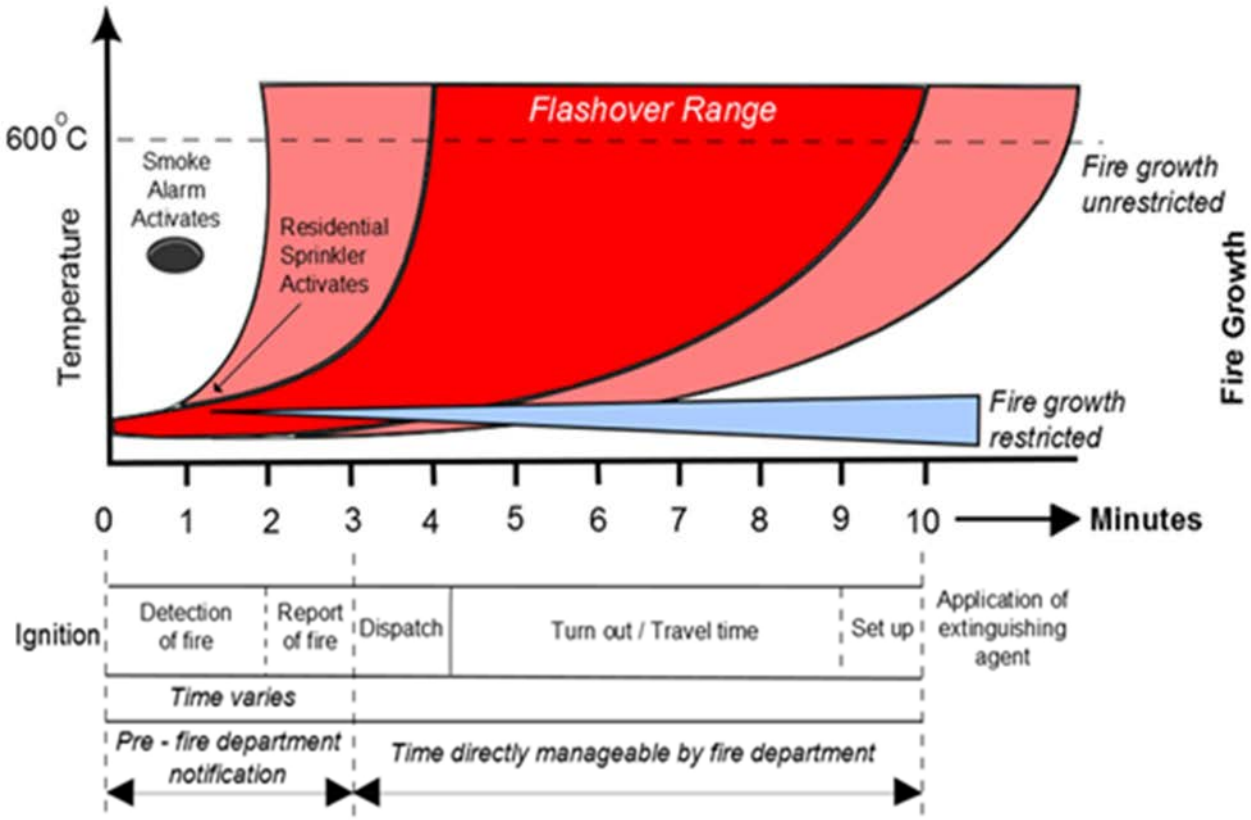
Table 26: Time to Reach 1 MW and 2 MW Fire Growth Rates

Fire Growth Rate	Time in Seconds to Reach 1 MW	Time in Seconds to Reach 2 MW
Slow	600 seconds	848 seconds
Medium	300 seconds	424 seconds
Fast	150 seconds	212 seconds

Source: "Operational Planning: An Official Guide to Matching Resource Deployment and Risk", Office of the Fire Marshal, January 24, 2011, p. 4

In less than 10 minutes from ignition, a fire can reach the point of "flashover," representing a point in the fire's growth and intensity at which all of the combustible items within a given space reach a temperature that is sufficiently high enough for them to auto-ignite. The fire propagation curve shown in **Figure 6** illustrates the importance of the time period prior to the fire department being notified and alerted to deploy fire suppression resources.

Figure 6: Fire Propagation Curve



Source: Fire Underwriters Survey "Alternative Water Supplies for Public Fire Protection: An Informative Reference Guide for Use in Fire Insurance Grading" (May 2009) and NFPA "Fire Protection Handbook" (2001)

Within the pre-fire department notification period, the presence of working smoke alarms, CO alarms and public education that has guided the residents of the building to develop and practice a home escape plan are critical elements to the life safety of the occupants. It is within this pre-fire department notification period that the first two lines of the "three lines of defence" are critical to the life safety of the occupants. These are the factors that support the proposed strategic priorities presented within this FMP Update, including:

i. The use of a Community Risk Assessment in determining the level of existing fire safety risks within the City as the basis for developing clear goals and objectives for all fire and emergency services to be provided by the Sault Ste. Marie Fire Services.
ii. The optimization of the first two lines of defence, including public education and fire prevention, and the use of fire safety standards and fire code

enforcement to provide a comprehensive fire protection program within the City based on the results of the Community Risk Assessment; and

iii. Emphasis on strategies, such as continuous improvement, that support the sustainability of fire and emergency services that provide the most effective and efficient level of fire protection services, resulting in the best value for the community.

9.6 Historical Emergency Calls for Service

The 2018 FMP reviewed SSMFS data and statistics from January 1, 2012, to October 30, 2017. The data used for the analysis within this FMP Update is a compilation of all historical calls for service and emergency response incidents that the SSMFS responded to from January 1, 2017, to December 31, 2023 (complete seven-year data set). For the review of annual call volumes over time, the dataset from January 1, 2012, to December 31, 2023, was assessed. The data presenting the percentage of historical calls by response type in Sault Ste. Marie, compared to the Province of Ontario, refers to data provided by the OFM for the years of 2018 to 2023.

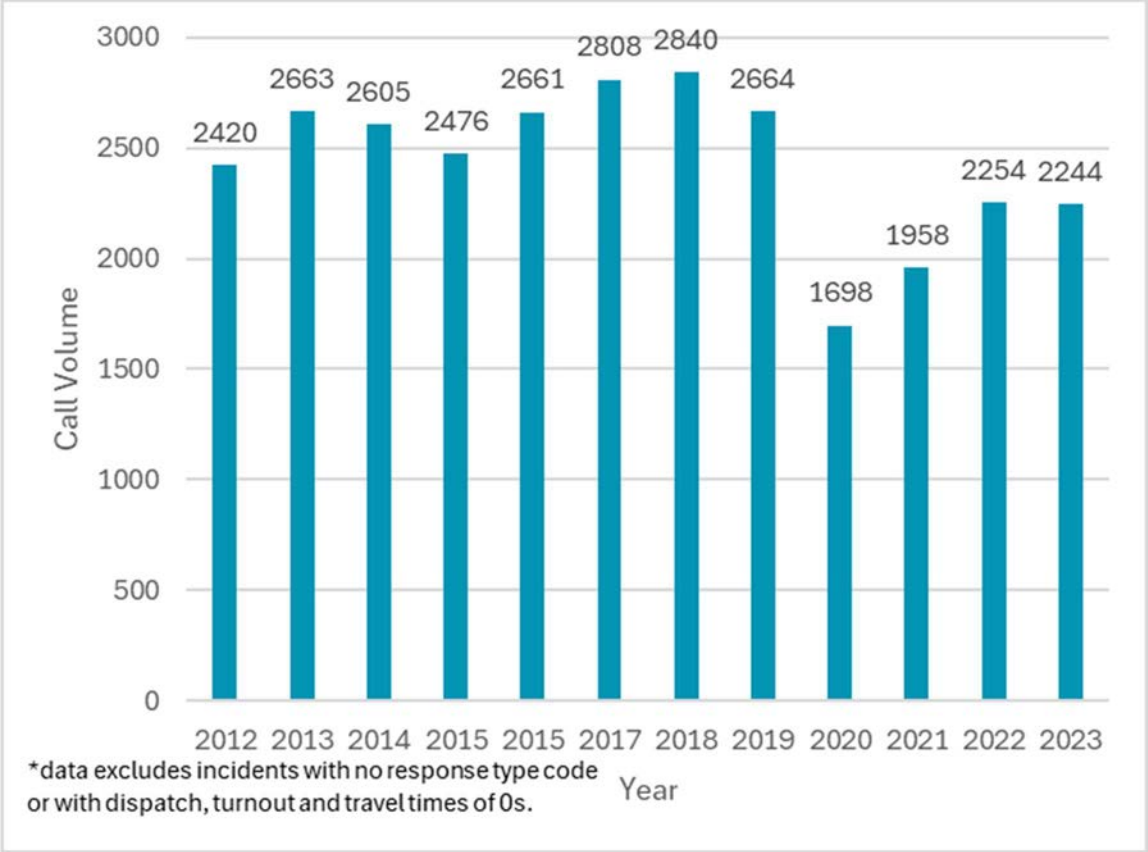
For the majority of the statistics presented, only the initial arriving company is included; this is to ensure a single incident is not counted multiple times, potentially impacting the accuracy of the analysis.

9.6.1 Annual Call Volume – All Calls, All Incident Types

Analyzing annual call volumes provides insight into the emergency response workload of a fire service. The volumes presented include all emergency response incident types (as defined by the OFM SIR Reports).

Figure 7 presents the total annual call volumes for complete years from 2012 to 2023. Apart from 2020 and 2021, which were anomalies due to the COVID-19 pandemic, SSMFS received between 2,244 and 2,840 calls for service. The call volume was fairly consistent, with a slight increasing trend from 2012 to 2019. As discussed in the CRA, following the pandemic, the tiered response agreement for medical calls has not reflected pre-pandemic conditions. This has resulted in an average call volume of 2,249 calls between 2022 and 2023. For some types of medical calls SSMFS has not been called to respond in 2022 and 2023, where they were previously responding prior to March 2020. It is our understanding that there are ongoing discussions to revise the tiered response agreement, which is expected to bring the annual call volume in alignment with pre-pandemic conditions.

Figure 7: Annual Call Volume – All Calls, All Incident Types

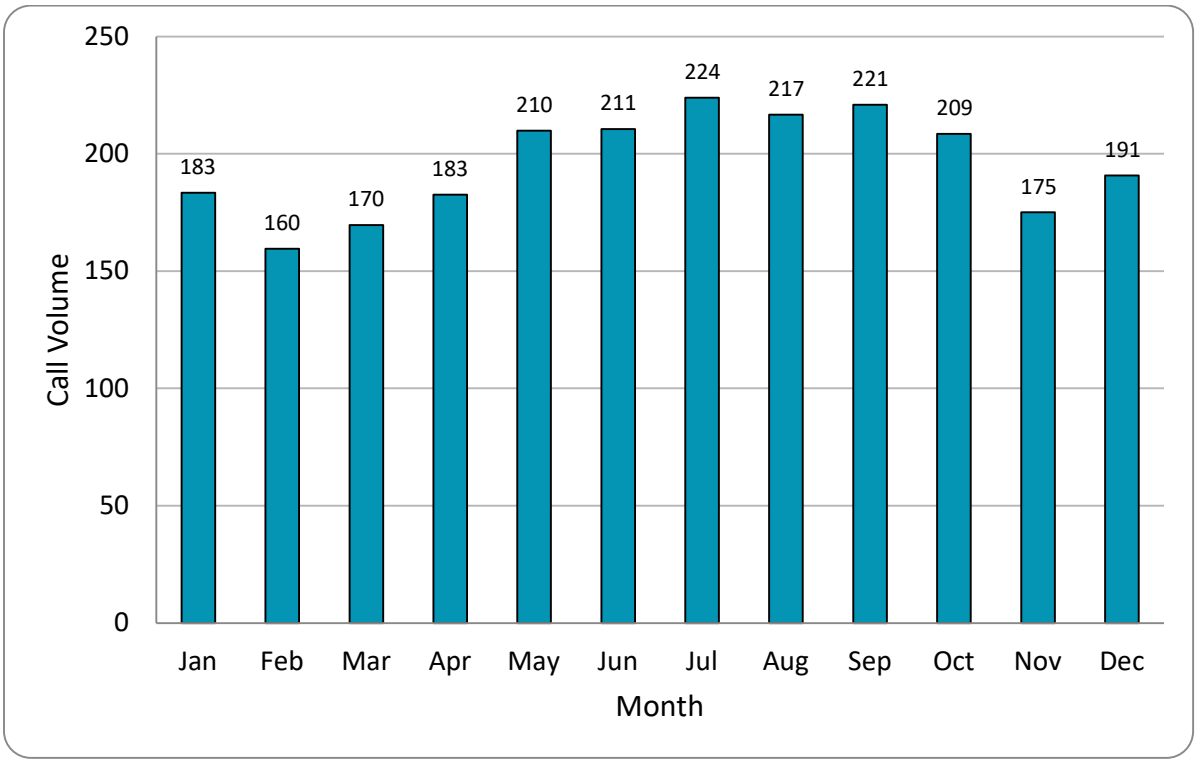


Source: SSMFS Emergency Response Call Data.

9.6.2 Average Call Volume by Month – All Calls, All Incident Types

Figure 8 presents the average call volume per month, responded to by SSMFS. The average calls per month across the seven-year data set (2017 to 2023) is 196. As shown below, the highest percentage of emergency calls occurred in July (224 calls) and September (221 calls).

Figure 8: Average Call Volume by Month – All Calls, All Incident Types



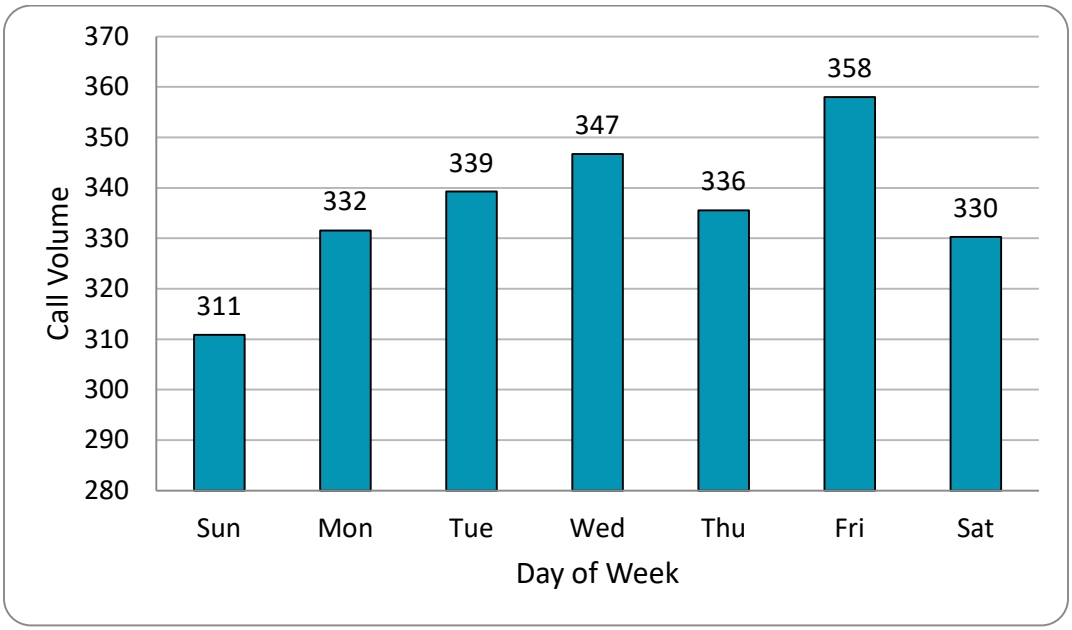
Source: SSMFS Emergency Response Call Data.

9.6.3 Average Call Volume by Day of Week – All Calls, All Incident Types (2017 to 2023)

Over the past seven years, SSMFS has received an average of 336 calls for service each day.

Figure 9 illustrates the average call volume by the day of the week for the period from January 1, 2017, to December 31, 2023. As shown, the highest volumes of calls occurred on Fridays (358) and the lowest volume of calls occurred on Sundays (311). This provides insight into the workload fluctuations of the department throughout the week.

Figure 9: Average Call Volume by Day of Week – All Calls, All Incident Types

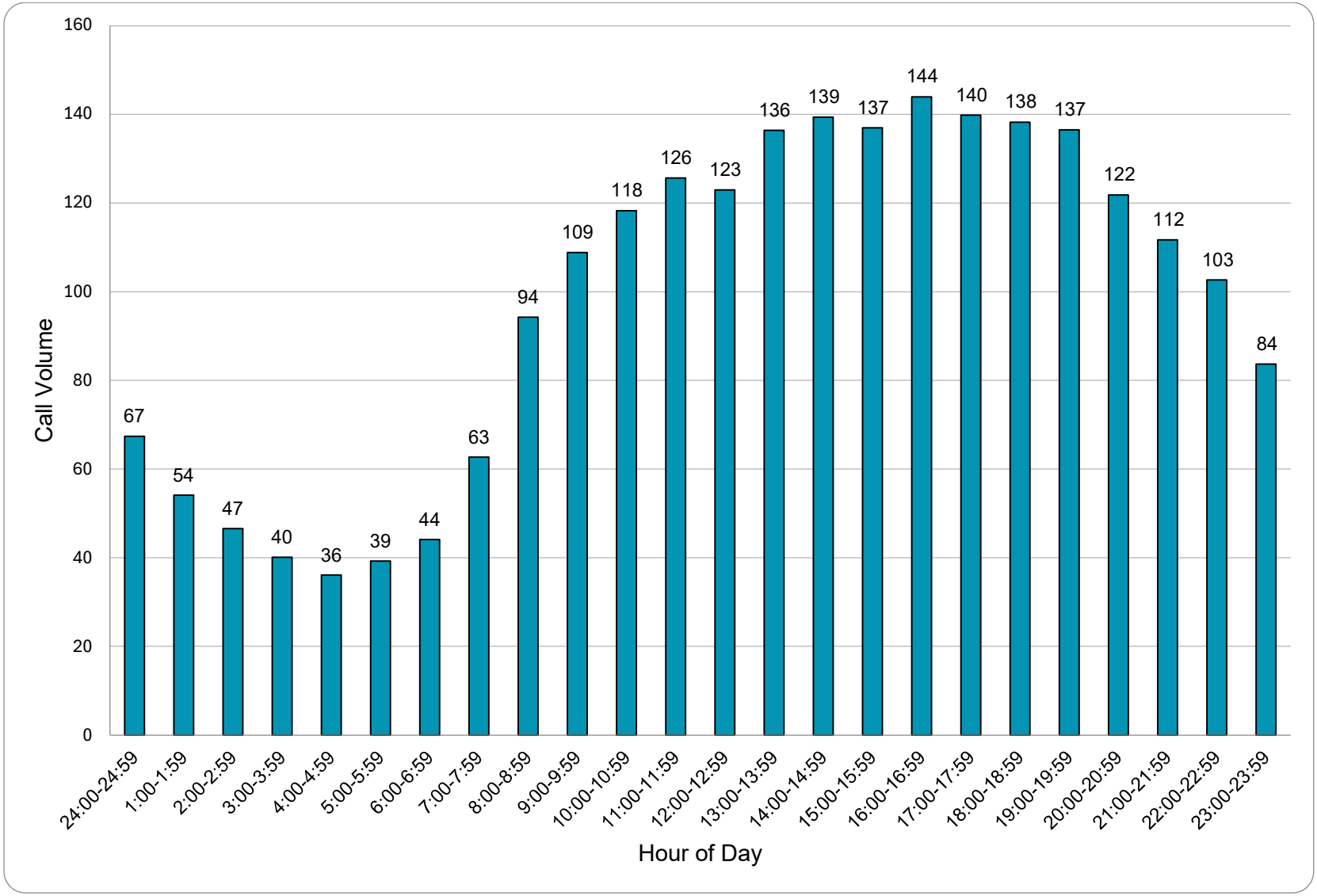


Source: SSMFS Emergency Response Call Data.

9.6.4 Average Call Volume by Time of Day – All Calls, All Incident Types (2017 to 2023)

Figure 10 indicates that for the period from January 1, 2017, to December 31, 2023, a higher emergency call volume (between 109 to 103 calls) is typically experienced between 9:00 AM and 10:00 PM. The call volumes appear to peak in the period from 1:00 PM to 7:00 PM, with volumes from 136 to 144. The lowest volume of emergency calls (36 to 47 calls) typically takes place between the hours of 2:00 AM and 7:00 AM, when most of the population is typically sleeping.

Figure 10: Average Call Volume by Time of Day – All Incidents January 1, 2017, to December 31, 2023

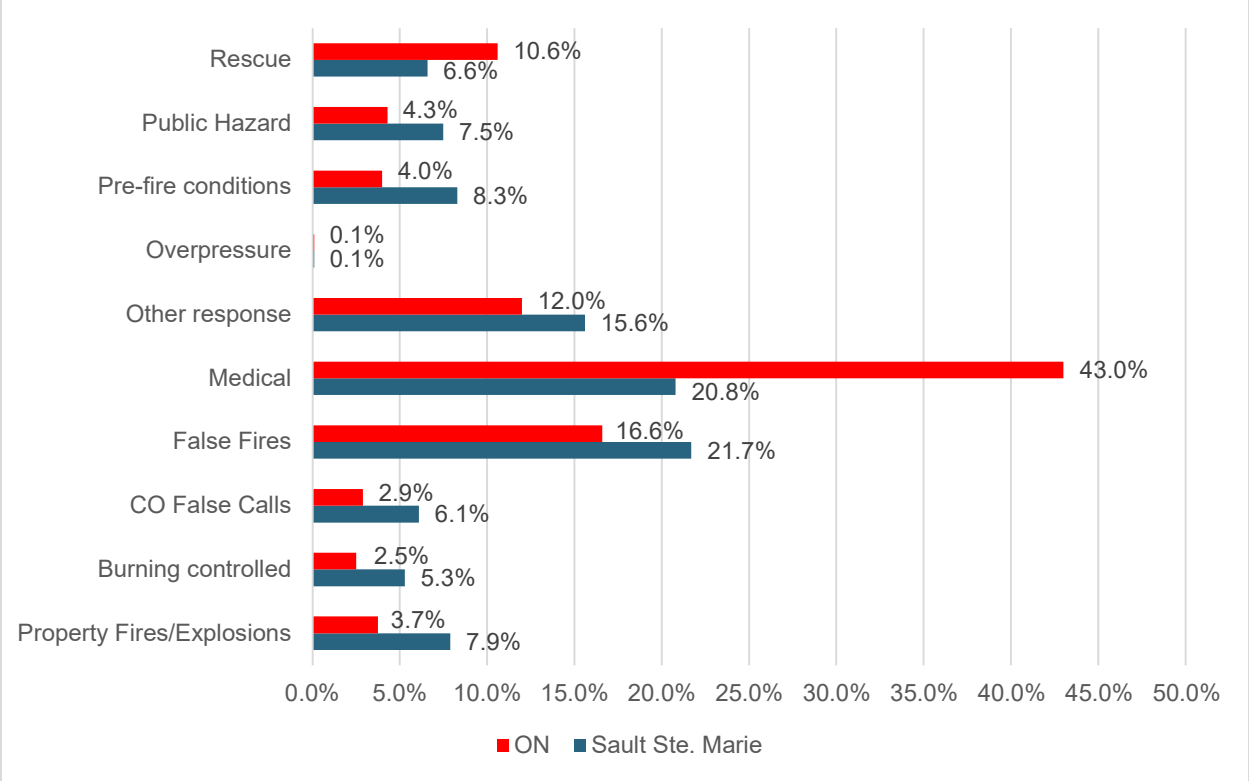


Source: Sault Ste. Marie Fire Services Emergency Response Call Data

9.6.5 Total Call Distribution by OFM Incident Type (All Calls), SSMFS versus Ontario (2018 to 2023)

Figure 11 illustrates the distribution (percentage) of all calls by the identified OFM incident type for the period from January 1, 2018, to December 31, 2023 (OFM Data), and compares the SSMFS results (shown in blue) to those of the Province (shown in red). This analysis indicates that false fire calls represent the highest percentage of historical calls in Sault Ste. Marie, representing 21.7% of all calls over the six-year period. This is higher than the Provincial average of 16.6%. Medical calls represented the second-highest percentage of calls in SSM at 20.8% of all calls, which is lower than the provincial average of 43.0%. Other type calls represent the third highest percentage of emergency call volume responded to by the SSMFS at 15.6% (higher than the Province by 3.6%). Property fires and explosions represented 7.9% of all call types in the City during this six-year period, which is higher than the Province at 3.7%.

Figure 11: Call Volume Distribution by OFM Incident Type (All Calls, January 1, 2018, to December 31, 2023)

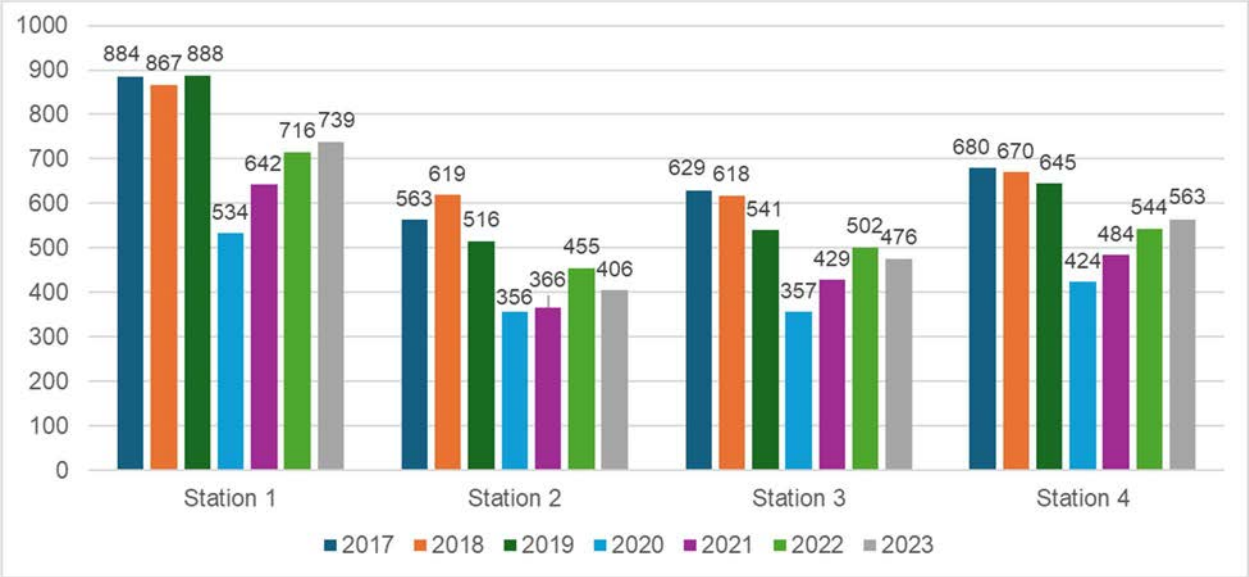


Source: SSMFS Emergency Response Call Data.

9.6.6 Call Volume by Station (2018 to 2023)

Emergency calls result in a specific station being dispatched depending on the location of the call. The spatialized nature of calls results in different call volumes by station. An analysis of call volume by station provides insight into station workloads as well as the volume of incidents in relation to the current initial response station coverage areas. Figure 12: Call Volume by Station (2017-2023)**Figure 12** presents the annual call volumes by station data for 2017 to 2023. The average call volume per station during that time period was 575. Station 1 located in the downtown area accounted for highest proportion of calls with an average annual volume of 753. Station 4 experienced the second highest annual call volume for the period with an average annual call volume of 573. The average annual call volume for Station 3 was 507 and for Station 2 was 469.

Figure 12: Call Volume by Station (2017-2023)



Source: SSMFS Emergency Response Call Data.

9.7 Historical Emergency Response Time Analysis

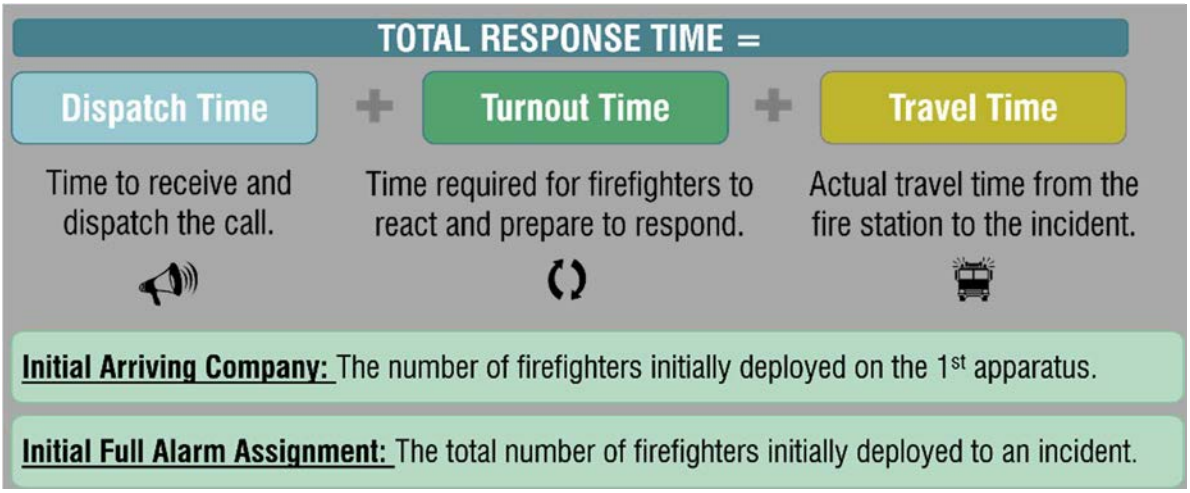
This section of the FMP Update assesses emergency response performance such as dispatch time, turnout time, travel time and total response time. The analysis within this section applies the emergency incident call data (i.e. lights and sirens responses/medium and high priority calls) from January 1, 2017, to December 31, 2023, call data. The statistics presented reflect only one (of each) dispatch, turnout and travel time per incident.

Response times are measured and analyzed according to percentile ranking (i.e. percentage of responses meeting a specified timeframe). The 90th percentile (i.e. where 90% or 90 out of 100 responses meet a specific response time target) is a common industry best practice for reporting and understanding emergency first responder performance. Fire and emergency services commonly measure and report 90th percentile response time data for system planning and resource deployment purposes.

Within the fire service, fire suppression emergency response capabilities are assessed based on **"Total Response Time"** that represents the total of three primary elements, including the **"Dispatch Time"**, **"Turnout Time"** and **"Travel Time"**.

Figure 13 illustrates how these three elements relate to calculating the total response time.

Figure 13: Total Response Time



The performance benchmarks included within 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 (2020 Edition) were referenced to inform the historical emergency response performance of SSFS. These benchmarks include:

- **Dispatch Time**: Is equal to the value in the "Time to Dispatch Column" converted to seconds. NFPA 1710 Benchmark: 64 seconds.
- **Turnout Time**: Is equal to the value in the "Turnout Time Column" converted to seconds. NFPA 1710 Benchmark: 60 seconds for medical calls, 80 seconds for fire and other calls.
- **Travel Time**: Is equal to the value in the "Drive Time Column" converted to seconds. NFPA 1710 Benchmark for the initial arriving apparatus is 240 seconds (4 minutes).

9.7.1 Emergency Calls – Dispatch Time

In Canada, the CRTC regulates the carriers who supply the network to direct and connect 911 calls to regional centres across Ontario. Calls initiated by the public through the use of the 911 system are typically directed to a regional 911 centre first and then rerouted to the applicable fire department. It is important to recognize this element of Ontario's 911 emergency dispatching process. As a result, the applicable **NFPA 1225 Standard for Emergency Services Communications (2020 Edition)**

applies only when the Authority Having Jurisdiction (AHJ), in this instance the SSMFS, takes control of the "Emergency Event Processing/Dispatching"[27] process.

The **NFPA 1710 – Standard for Organization and Deployment of Fire Suppression Operations by Career Fire Departments (2020)** defines alarm processing time (dispatch time) as "The time interval from when the alarm is acknowledged at the communication center until response information begins to be transmitted via voice or electronic means to emergency response facilities (ERFs) and emergency response units (ERUs)."[28]

Based on the NFPA 1225 standard, the performance benchmarks for emergency call taking (alarm answering) and fire dispatching (alarm processing) aim for a communicator to complete **90% of emergency alarm processing within 64 seconds**, and **95% of all alarm processing within 106 seconds**.

The SSMFS operates its own fire emergency call-taking (alarm answering) and fire dispatching (alarm processing) centre. This section presents the results of the statistical analysis of emergency response call data from January 1, 2017, to December 31, 2023. SSMFS have implemented technologies such as pre-alerts, which provide details of emergency calls to the fire crews in the fire stations prior to completing the "dispatch" component of the call. SSMFS have identified that the results of the statistical analysis likely present longer dispatch times than are experienced by the firefighters in-station. **Figure 14** illustrates the 90th percentile dispatch time analysis results for all emergency calls responded to by SSMFS for the period from January 1, 2017, to December 31, 2023. These results should be reviewed with the understanding that the statistical dispatch times may not accurately reflect the operations within the fire stations. With the implementation of NG 911 processes and related technology, these issues/discrepancies are expected to be resolved.

As shown in **Figure 14**, the calculated 90th percentile dispatch times from 2017 to 2023 were 137 seconds, for all call types in all years on aggregate, which is more than twice as long as the performance benchmark. Times increased from 2017 to 2021. Medical calls were under the performance measure in 2017 at 57 seconds but ranged between 89 and 122 seconds in all other years. Other call types ranged from 88 to 163 seconds, and fire calls ranged from 98 to 187 seconds. Dispatch times were longer during

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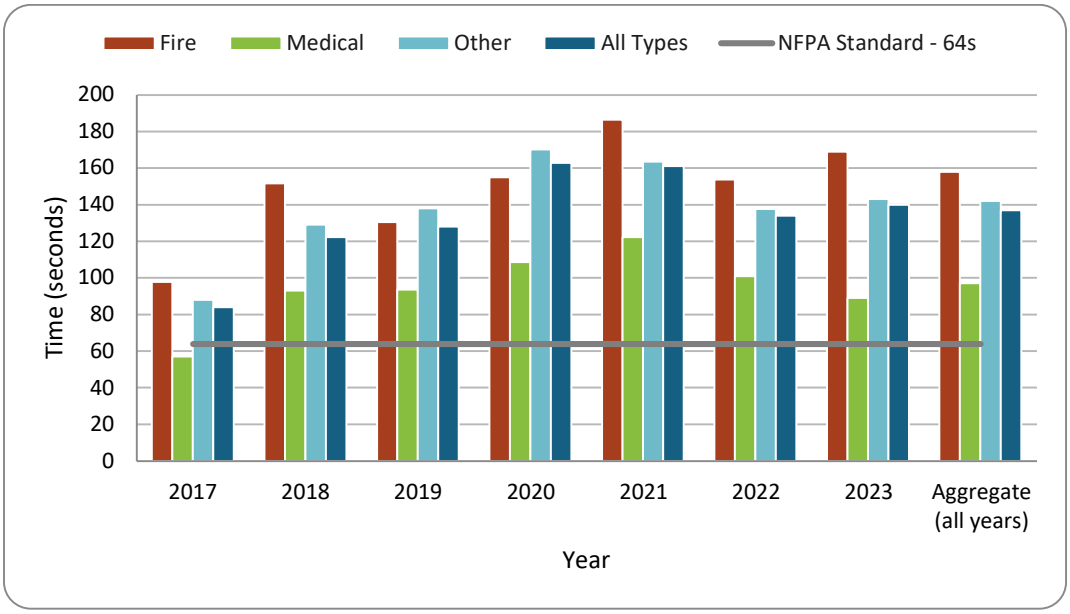
[27] NFPA 1225 Standard for Emergency Services Communications (2022 Edition) Chapter 3 Definitions, 3.2.2* Authority Having Jurisdiction.

[28] NFPA 1710 - Standard for Organization and Deployment of Fire Suppression Operations by Career Fire Departments (2020 Edition), Chapter 3 Definitions, Section 3.3.64.3 Alarm Processing Time.

pandemic years (2020 and 2021), when different protocols were in place. Overall, the statistical analysis results indicate that the dispatch times require improvement; however, it is expected that NG 911 technology and processes will improve the results going forward.

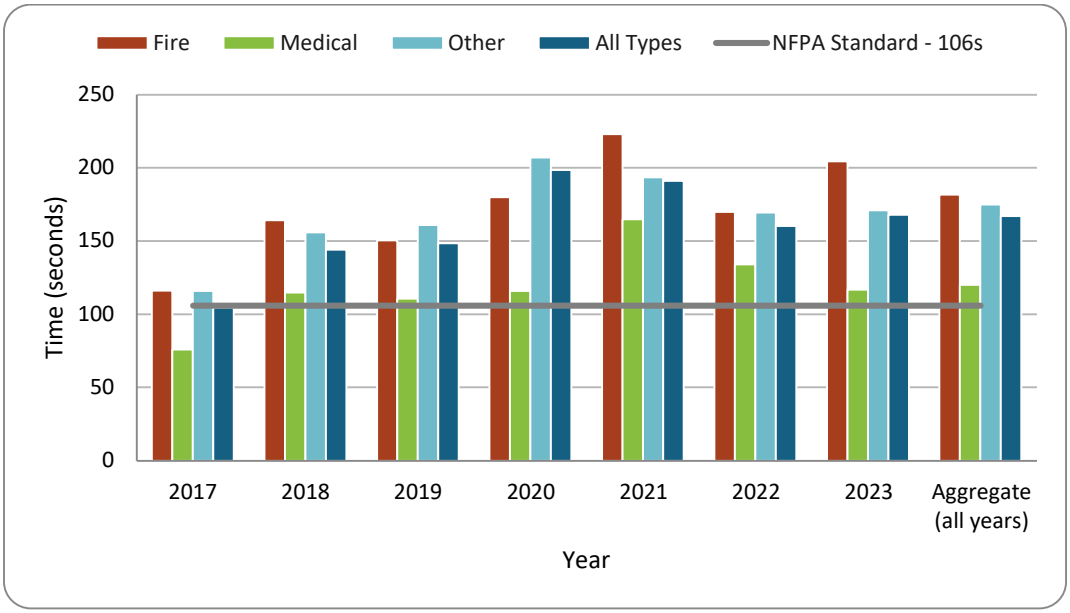
Figure 14: 90th Percentile Dispatch Times (2017 to 2023)



Source: SSMFS Emergency Response Call Data

Figure 15 presents the statistical analysis results of the 95th percentile dispatch times from 2017 to 2023. On aggregate (all call types over all years), the 95th percentile dispatch time was 167, which is 61 seconds over the performance target of 106 seconds. Medical 95th percentile dispatch times are close to the performance measures from 2018 to 2023 and were below the target in 2017. Fire dispatch times and other call dispatch times, as shown below, exceeded the performance measure. As noted above, the technology and processes being implemented as part of the NG 911 implementation are expected to resolve these issues.

Figure 15: 95th Percentile Dispatch Times (2017 to 2023)



Source: SSMFS Emergency Response Call Data

9.7.2 90th Percentile Turnout Time

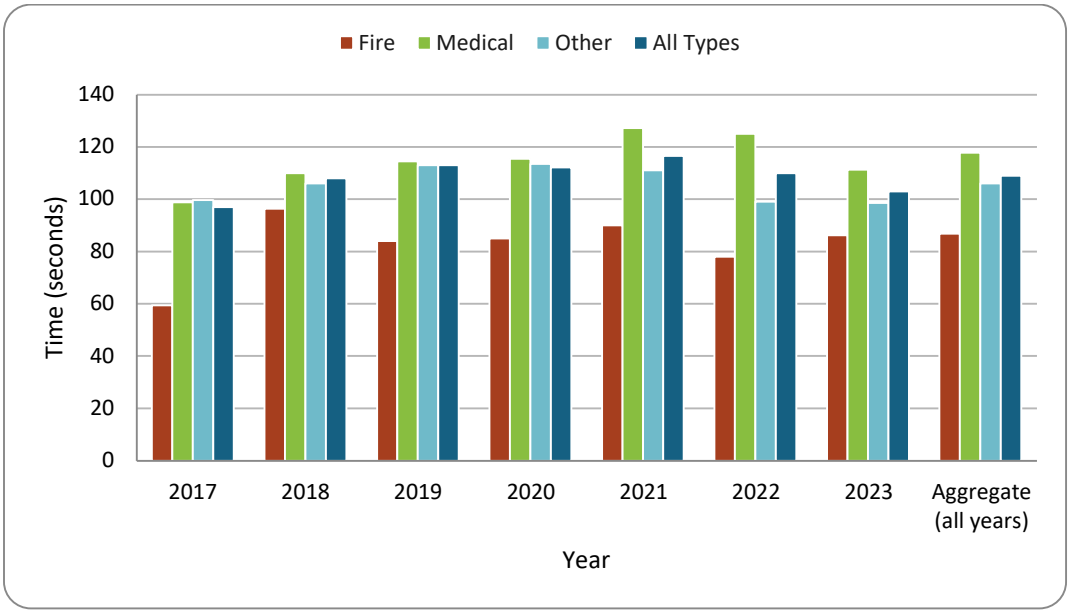
Turnout time is defined within **NFPA 1710 – Standard for Organization and Deployment of Fire Suppression Operations by Career Fire Departments** (2020) as "The time interval that begins when the emergency response facilities and emergency response units notification process begins by either an audible alarm or visual annunciation or both and ends at the beginning point of travel time."[29]

This standard identifies a performance benchmark of 80 seconds or less for all 'fire-related' and 'other' incidents and 60 seconds or less for 'medical/resuscitator' calls.

The general industry definition of firefighter turnout time is defined as the preparation time required between the emergency call being received at the fire station and the time the fire apparatus and firefighters leave the station to respond to the call.

[29] Source: NFPA 1710 Standard for Organization and Deployment of Fire Suppression Operations by Career Fire Departments 2020 Edition – Section 3.3.64.8.

Figure 16: 90th percentile Turnout Time (2017 to 2023)



Source: SSMFS Emergency Response Call Data

The aggregate turnout time of all call types over all years from 2017 to 2023 was 109 seconds. The analysis presented in

Figure 16 indicates that for the period from January 1, 2017, to December 31, 2022, the SSMFS met the turnout time performance target of 80 seconds for fire calls in 2017 and 2022 and were just slightly over (by 4 to 16 seconds) for all other years in the data period. During these years, the SSMFS consistently exceeded the 80-second performance benchmark for other emergency calls, with an aggregate turnout time of all years at 106 seconds. Turnout time for medical calls also exceeded the performance measure of 60 seconds from 2017 to 2023. In this time period, Turnout time is one of the three key elements that impact total response time. As such, improving firefighter turnout time should be further emphasized within updated operating guidelines and accountability that includes ongoing monitoring of this performance benchmark. This could include implementing processes or technologies for regularly reporting turnout time performance or displaying real-time performance (e.g., in-bay turnout clocks) in the stations.

9.7.3 90th Percentile Travel Times (2017 to 2023)

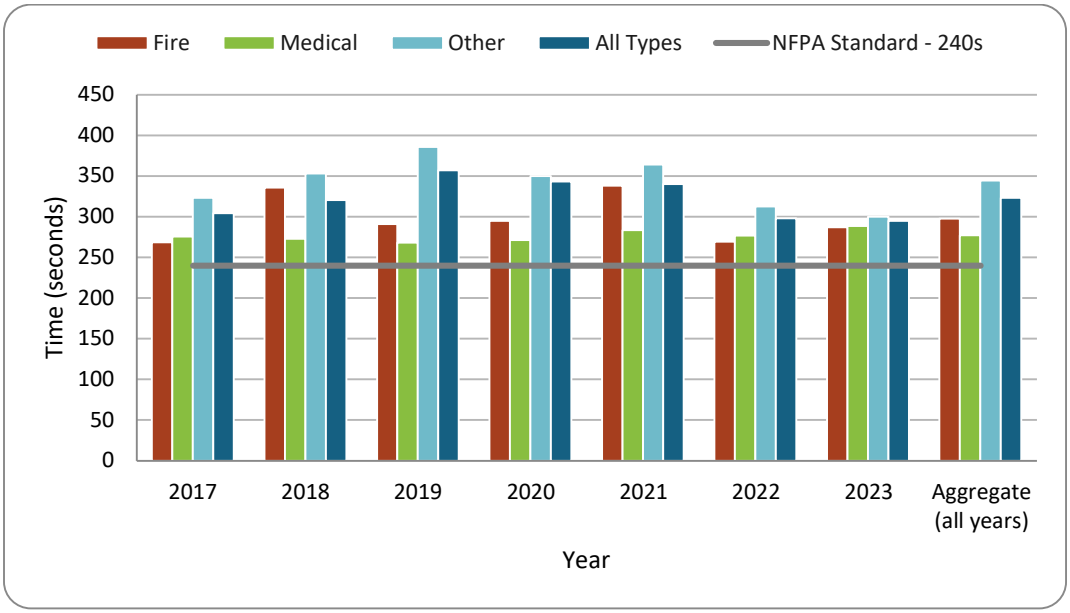
Travel time is defined by NFPA 1710 – Standard for Organization and Deployment of Fire Suppression Operations by Career Fire Departments (2020) as “The time interval that begins when a unit is enroute to the emergency incident and ends when the unit arrives at the scene”[30].

The standard identifies a performance benchmark of 240 seconds or less travel time for the arrival of the Initial Arriving Company at a fire suppression incident 90% of the time.

[30] Source: NFPA 1710 Standard for Organization and Deployment of Fire Suppression Operations by Career Fire Departments 2020 Edition – Section 3.3.64.7.

Figure 17 illustrates that for the period from January 1, 2017, to December 31, 2023, the SSMFS exceeded the 240-second performance benchmark. The data shows that travel times have remained relatively consistent over the seven-year period, with an aggregate ninetieth percentile travel time of all call types over the seven years of 323 seconds. Travel times are a factor of station location and call locations. Without adding fire station locations or changing the road network within the City, it would be unlikely to improve the SSMFS's turnout times. Within this FMP Update, it is not anticipated that travel times can be improved.

Figure 17: 90th Percentile Travel Time (2017 to 2023)



Source: SSMFS Emergency Response Call Data

9.7.4 90th Percentile Total Response Times (2017 to 2023)

The NFPA 1710 Standard defines Total Response Time as "The time interval from receipt of the alarm at the PSAP to when the first emergency response unit is initiating action or intervening to control the incident."[31]. Within this FMP Update, **Total Response Time** is measured by the sum of the following three components:

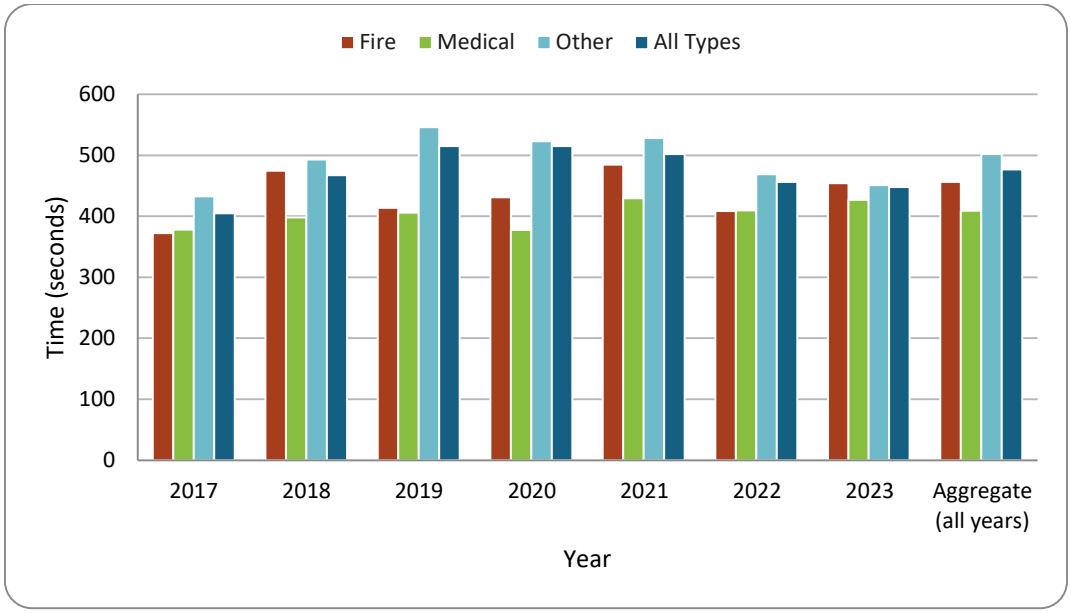
Dispatch Time + Turnout Time + Travel Time = Total Response Time

The applicable NFPA 1710 Standard performance benchmarks for these three components total 384 seconds for 90% of the fire/explosion or other incidents the fire department responds to, and 364 seconds for the medical/resuscitation calls it responds to. **Figure 18** illustrates an increasing trend for the SSMFS's total response times for the period from January 1, 2017, to December 31, 2023. The 90th percentile aggregate total response time for the period is 477 s for all call types, 409 s for medical calls and 456 s for fire calls, which is significantly higher than the performance targets of 364/384

[31] 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 (2020 Edition) Chapter 3 Definitions, Section 3.3.64.6.

seconds. Efforts to improve dispatch and turnout time performance would improve the department's total response time performance.

Figure 18: 90th Percentile Total Response Times (2017 to 2023)



Source: SSMFS Emergency Response Call Data

9.7.5 Historical Fire Suppression Emergency Response Summary

The analysis of the SSMFS historical fire suppression emergency response capabilities for the period from January 1, 2017, to December 31, 2023, indicates that the department exceeds the NFPA 1710 performance benchmarks for dispatch, turnout, and travel times in most years for fire, medical, and other call types. This is impacting the SSMFS's Total Response Time performance.

As identified within this FMP Update, the identification and implementation of strategies that specifically target improvements in the department's dispatch times and turnout times, which the SSMFS can influence, should be considered the priority to improve Total Response Time performance within the City.

9.8 Community Risk Assessment and Fire Suppression Needs

9.8.1 Residential Risk and Applicable Fire Suppression Performance Measures

The CRA identifies both **"Identified Risks"** and **"Key Findings"** that should be considered as part of assessing the emergency response (fire suppression) deployment

coverage within the City. This type of risk-based analysis provides further insight to identify the City's local needs and circumstances (as defined by the FPPA).

Based on the CRA analysis and findings Group C-Residential Occupancies are the fire-related risk that drives the most frequent need for emergency response within the City's building stock. This occupancy type has a demonstrated potential for the occurrence of a fire, a fire-related injury or fatality as a result of a fire. This conclusion is supported by the following **"Identified Risks"** and **"Key Findings"** included within the CRA:

- Group C - Residential Occupancies represent 95.25% of the City's existing building stock;
- 94.9% of the buildings have a footprint of 2,500 sq. ft. or less which is consistent with the proportion of the property stock that is Group C – Residential occupancies;
- Group C – Residential uses are distributed across the City including outside of the Urban Settlement Area;
- Over the seven-year period from January 1, 2017, to December 31, 2023, structure fires occurring in Group C – Residential Occupancies account for 76.8% of total structure fires within the City (higher than the Province at 75.2%) and 53.3% of total structure fire loss (lower than the Province at 70.4%);
- Over the seven-year period from January 1, 2017, to December 31, 2023, structure fires occurring in Group F – Industrial Occupancies account for 5.8% of total structure fires within the City and 32.0% of total structure fire loss;
- From 2017 to 2023 most reported fire-related civilian injuries (62) and all fire-related fatalities (9) in the City of Sault Ste. Marie occurred in Group C – Residential Occupancies;
- Over the seven-year period from January 1, 2017, to December 31, 2023, of the fire loss incidents in Group C – Residential occupancies, 21.1% of incidents did not have a smoke alarm present (compared to 17.3% in the Province); and
- Over the seven-year period from January 1, 2017, to December 31, 2023, of the fire loss incidents in Group C – Residential occupancies, 34.2% of incidents had a smoke alarm present and operating compared to 44.7% in the Province.

In our view, the **SSMFS fire suppression deployment model must prioritize its emergency response deployment capabilities to identified Group C-Residential Occupancies.**

Assessing the SSMFS against the NFPA 1710 performance measures for initial arriving apparatus, second arriving apparatus and initial full alarm assignment (Single-Family

Dwelling) aligns with this finding. Applying the NFPA 1720 'rural' performance measure addresses residential occupancies outside the urban settlement area.

9.8.2 Community Risk and Fire Station Locations

The CRA presents the results of spatial data that present the distribution analysis of risks within several of the CRA profiles. This approach highlights the locations of geographic, demographic, building stock, past fire loss, and response history risks. The spatial analysis within the CRA provides great value when considering the locations of municipal fire stations.

The location of all emergency incidents that occurred within the City from January 1, 2017, to December 31, 2023, provides a current and robust dataset to understand where the SSMFS's emergency response calls for service are located and concentrated. The spatial location and call concentration of all emergency incidents are shown in **Figure 19** below. The small dots identify individual call locations. These can be seen in clusters in the urban area, and more widely distributed in the rural areas. The darkest purple colour identifies areas with the highest concentration of emergency incidents/calls for service.

The map shows a wide distribution of emergency incidents across the City. The downtown core and area immediately surrounding Fire Station 1 have the highest concentrations of emergency calls. This supports the location of Fire Station 1 in the downtown core. The other purple areas, showing high concentrations of historical calls, visually encircle the three existing SSMFS fire station locations. The spatial analysis of call history indicates that the existing four-station model is serving the City well under current conditions.

In the spatial analysis of the City's demographics, seniors (aged 65 and older), identified within the CRA as the most vulnerable population with regard to fire risk (based on the highest fire death rate), are shown to have the highest concentration of population in the area immediately north of Fire Station 4. This includes seniors living in long-term care homes and the location of the hospital. The youth population, also identified as being vulnerable to fire risk, is shown to have the highest concentration around Fire Station 3.

Many of the socio-demographic risks identified in the CRA are concentrated around the downtown (Fire Station 1) and Fire Station 4.

The spatial analysis of building height identifies that the majority of high-rise buildings are located in the downtown area, near Fire Station 1. There are also clusters of high-rise buildings in the vicinity of Fire Station 3 and Fire Station 4.

The buildings identified with the largest area are concentrated around Fire Station 2, Fire Station 1 and Fire Station 4.

The CRA presents a map of vacant properties and historical fire incidents in vacant properties. These risks are primarily concentrated around the downtown and Fire Station 1, with another cluster around Fire Station 2.

The highest occurrence of old building stock, built prior to building codes being in effect, is located in the downtown, with the majority of the building stock surrounding all four existing fire stations being pre-fire code era construction. The downtown is also where the culturally significant/historic buildings identified within the CRA are located.

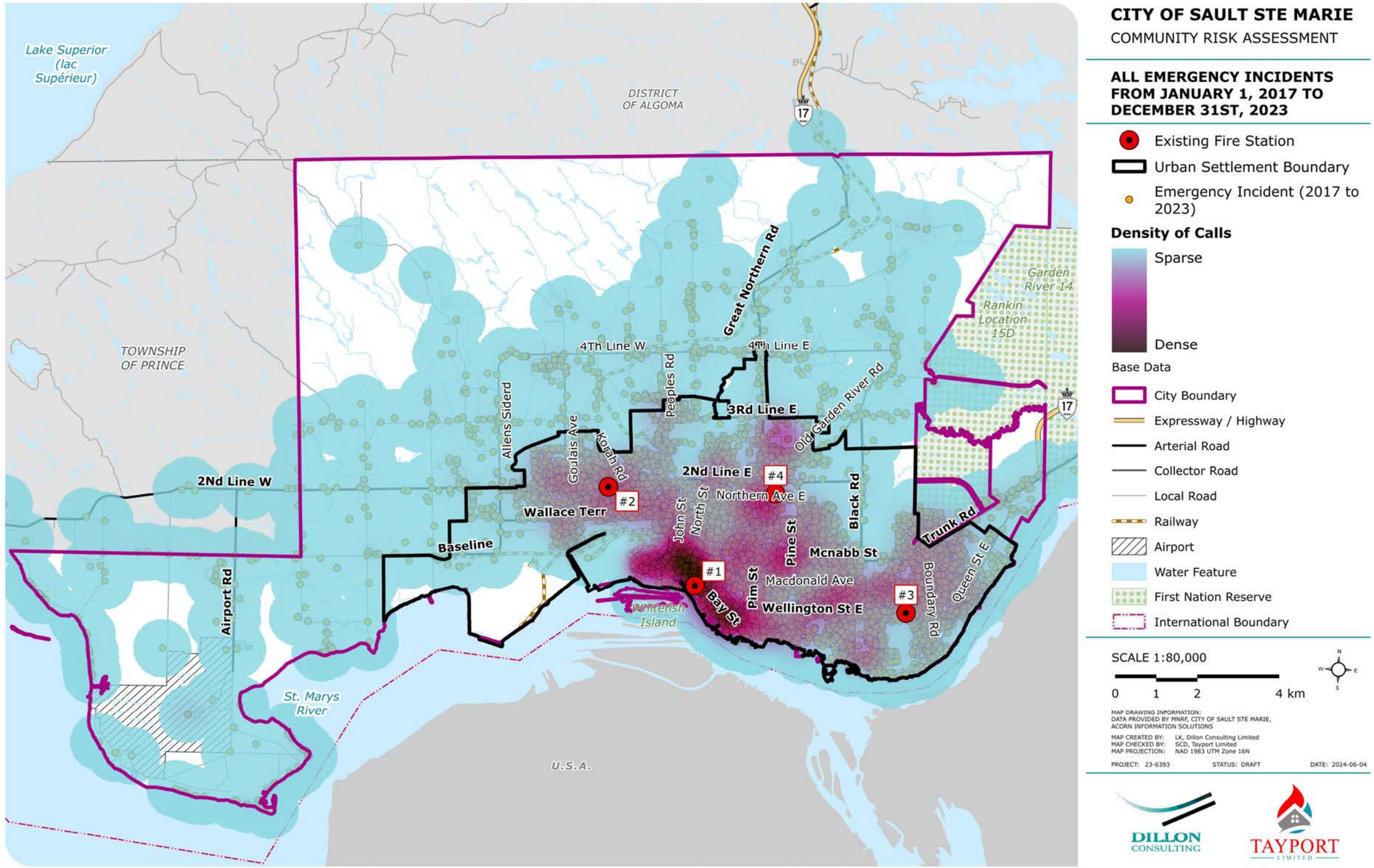
The potential fuel load mapping highlights the areas immediately surrounding Fire Stations 2, 4, 1 and 3.

Regarding transportation risks, Fire Station 2 is located closest to the City's airport. Stations 1, 2, and 4 are all close to the rail lines within the City.

During the presentation to Council on June 24, 2024, which introduced this fire master planning project, the Mayor expressed a desire to maintain a fire station in the downtown area. Based on the analysis within the Community Risk Assessment, the existing four-station model appears to be serving the City well in responding to fire and emergency services needs. It is our opinion that the risks and needs of the City have become more concentrated in the areas surrounding the existing fire stations, especially surrounding Fire Station 1 (downtown) and Fire Station 4, over the past seven years (2017 to 2023). The three-station model, presented in the 2018 FMP, required the relocation and merging of Fire Station 1 (the existing downtown station) and Fire Station 4. The three-station model results provided comparable geographic coverage of the City, but entailed trade-offs in response times in the downtown area and the vicinity of the existing Fire Station 4. Considering the current risks identified within the updated CRA, the existing four-station model is recommended.

Recommendation #40: That the City maintain the existing four-station model of emergency response to align with the needs and risks identified in the 2025 CRA.

Figure 19: Spatial Concentration – All Emergency Incidents 2017 to 2023 (Source: SSM 2025 CRA)



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9.9 Existing Fire Suppression Deployment Model

SSMFS's Suppression Division operates from four existing fire stations and consists of a complement of 80 firefighters (including four assigned to communications) who work on four platoons. Firefighters are assigned to a 24-hour shift system to provide emergency response coverage 24 hours per day, 365 days of the year.

Each of the four platoons is staffed with one platoon chief, four captains, 14 firefighters, and one dispatcher/communicator. This totals 20 staff per platoon and allows the department to maintain a minimum of 16 firefighters on duty (including the Platoon Chief and dispatcher). **Table 27** lists the current distribution of apparatus and the existing minimum staffing levels.

Table 27: Existing Fire Suppression Deployment Model

Station	Apparatus	Existing Minimum Staffing
1	Pump 1 (or Rescue 1 or Aerial 1)	4
1	Platoon Chief (PC) 1	1
1	Dispatcher - located in Communications	1
2	Pump 2 (or Tanker)	4
3	Pump 3	3
4	Pump 4 (or quint)	3
All	**Total**	**16**

9.9.1 Existing Minimum/Total Staff Complement Per Platoon

As noted above, the Suppression Division follows a four-platoon system to schedule the platoon chiefs, captains and firefighters and deliver emergency response services. Each of the four platoons is currently staffed with a total of 20 staff per platoon (including one Platoon Chief and one dispatcher). This staffing level supports the department's minimum on-duty staffing level of 15 in suppression and one in communications. The difference between the total complement of suppression firefighters on each platoon (20), and the minimum number of firefighters required on-duty for deployment(15 firefighters and 1 communicator, totalling 16 on-duty), is the current staffing buffer available to accommodate absences such as vacation, sickness, maternity and parental leaves, approved absences, and long-term leaves such as Workplace Safety and Insurance Board (WSIB), including PTSD related absences. Historically, it has taken five firefighters to maintain a minimum of four personnel on duty (i.e., the 1.25 ratio of total staff to on-duty staff). The SSMFS minimum staffing level reflects the historical 1.25 ratio.

The 1.25 ratio is based on a historical strategy within the fire service in Ontario that was applied when hiring firefighters to staff an apparatus with four firefighters. The strategy represented a hiring ratio of 1.25 firefighters for each apparatus being staffed with four firefighters on a full-time basis. For example, to staff a new pump apparatus with a minimum of four firefighters, on duty at all times (i.e., four shifts), requires the hiring of 16 firefighters (four per shift). To accommodate absences such as vacations and sickness, municipalities have historically applied a 1.25 ratio to this hiring process that, when applied, results in the need to hire 20 additional firefighters to staff each new apparatus.

In current-day conditions, municipalities are recognizing the evolution of new factors that are challenging their ability to maintain minimum on-duty firefighting staffing requirements. For example, over the past decade, significant progress has been made in recognizing the health risks associated with firefighting. **O. Reg. 253/07** was developed and implemented to recognize 19 prescribed diseases that can impact the health of a firefighter. This regulation provides recognition that these diseases are job-related and can impact the health and wellness of a firefighter, whether full-time, part-time or a volunteer firefighter. Fire services across the province are recognizing that their staff are not immune to these diseases.

The SSMFS is not immune to other fire suppression staffing challenges facing fire services across Ontario. In some instances, these can result from collective bargaining and, in other instances, new and evolving legislation. For example, there is an increasing trend in the fire service for the use of maternity/parental leave. This trend is appearing in municipalities where there has been a positive shift in workforce diversity, and where both spouses are required to work full-time.

Collectively, the deficiency of the 1.25 ratio and these new and evolving staffing challenges are having a negative impact on the abilities of municipalities to sustain the required minimum number of on-duty firefighters at all times. As a result, many municipalities are beginning to adopt a new ratio in their hiring practices that equates to adopting a new ratio of 1.33 on-staff firefighters to on-duty firefighters.

Increasing the staffing ratio can be an effective method of managing an increasing trend in overtime costs for the fire department. The 1.33 ratio applied to the SSMFS's current minimum on-duty staffing level of 15 suppression staff would total 20 suppression firefighters per platoon (not including the dispatcher). This would reflect an increase of four firefighters on staff, increasing the existing complement from 80 to 84, including communications. The SSMFS should continue to track and monitor overtime trends in consideration of the suitability of the 1.33 ratio for the department.

Recommendation #41: That SSMFS continues to track, review and monitor overtime trends and costs to assess the suitability and need to increase the 'minimum staffing' to 'complement staffing' ratio from the existing 1.25 to the revised 1.33.

9.10 Existing Fire Suppression Deployment Capabilities

The following sections present the assessment of the existing fire suppression/emergency response deployment capabilities of the SSMFS. The analysis includes various scenarios to model the existing emergency response coverage of SSMFS, including the **Initial Arriving Company**, **Second Arriving Apparatus**[32] and **Initial Full Alarm Assignment** in comparison to the applicable NFPA 1710 Standard performance benchmarks.

9.10.1 Modelling Methodology

The response and deployment analysis was conducted using Geographical Information Systems (GIS). GIS layers were provided by the City for the existing road network. Relevant base road information, such as road length and road classification, was extracted from the GIS data. The Network Analyst tool, developed by Esri Inc. was specifically designed to assess networks, such as roads. The deployment analysis for SSMFS within this FMP update was prepared using the Network Analyst tool.

A GIS-based model of the City of Sault Ste. Marie's existing road network was prepared based on GIS files provided by the City. Relevant base road information, such as road length and road classification, was extracted from the GIS data. Available planned future road information (location, alignment, etc.), provided by City staff, was incorporated into the existing GIS network to prepare a future road model. The Network Analyst tool was used to simulate the existing (and future) emergency response fire suppression deployment capabilities of the SSMFS navigating the City's current (and planned future) road network.

For the calibration of the road network used in the analysis for this FMP Update, the road network speed is calibrated based on historical locations and travel times for emergency calls (including structure fires, vehicle fires and medical calls, representing the most consistent and expedited type of responses) for the period from January 1,

[32] Second arriving apparatus measures where a second fire apparatus can respond within six minutes of travel time. The staffing, in this analysis, may be between three to four firefighters on the second apparatus. This was selected to align with the current staffing of second apparatus within the SSMFS.

2017, to December 31, 2023, informed the calibration process within the GIS-based model. To ensure our analysis excluded outliers and included calls only pertaining to fire and medical incidents, the data was filtered and organized into an appropriate format, and outliers, which included travel times with times less than five seconds or greater than thirty minutes (1,800 seconds), were excluded. As part of the calibration, an iterative process was applied to review and adjust the speeds throughout the road network in order to have the network travel speeds reflect the historical travel times of the first responding units.

Table 28 lists the posted road speeds and the modelled speeds resulting from the calibration process. The GIS roads-based model, calibrated with the modelled speeds, was used to assess the emergency response performance of the SSMFS against the applicable fire suppression performance benchmarks.

Table 28: Model Calibration

Posted Speed Limit (km/h)	Modelled Speed (km/h)
20	20
30	20
40	30
50	34
60	48
70	56
80	64

9.10.2 Application of NFPA Fire Suppression Deployment Targets

The calibrated existing and future road networks, existing station locations, and response time targets (associated with various performance targets) were used to map response polygons around the City's fire stations within the GIS model. These polygons represent the geographical area where the response target for the staffing level and/or travel time target is achieved.

9.10.3 Existing Low-Rise Apartment/Open-air Shopping Centre and High-Rise Initial Full Alarm Assignment Capabilities – Urban Settlement Boundary

The NFPA 1710 Standard includes a performance benchmark for high-rise buildings described as having the highest floor greater than 75 feet (23 metres) above the lowest level of fire department vehicle access. The associated deployment model for the SSMFS would include an initial minimum deployment of 38 firefighters (39 firefighters if the building is equipped with a fire pump) arriving on scene within a 10-minute and 10-

second (610-second) travel time to 90% of the fire suppression incidents in this occupancy type.

The standard also specifies performance benchmarks for low-rise / garden-style apartments and open-air shopping centers. The associated deployment model for SSMFS would include an initial minimum of 25 firefighters (26 if an aerial device is used) arriving on scene within an eight-minute (480-second) travel time to 90% of the fire suppression incidents in this occupancy type.

The existing fire suppression deployment model of the SSMFS includes a minimum suppression staffing level of 15 (14 firefighters and one platoon chief) on duty at all times across all four combined stations. Achieving either the 25 or 38 firefighters on-scene, as outlined in the performance measures noted above, is not possible with the City's current minimum staffing levels and resources alone. SSMFS can assemble more than its current minimum staffing of 15 firefighters on scene through the use of the emergency call-back process for off-duty firefighters and through mutual aid agreements. As the existing minimum on-duty suppression staffing of SSMFS reflects a total of 15 firefighters, neither the high-rise response nor the low-rise apartment/open-air shopping centre performance benchmarks can be achieved. Therefore, these measures were not carried forward in the GIS-based analysis of the department's suppression capabilities in this FMP Update.

In our experience, it is not uncommon for municipalities to find it challenging to assemble 25 or more firefighters to respond as defined by the NFPA 1710 Standard. As a result, it is important that municipalities, like SSM, prioritize the application of the first two lines of defence by applying proactive fire inspections, fire code enforcement and public education programs that specifically target high-rise buildings.

Regularly scheduled, routine inspections of high-rise buildings will ensure that fire safety features required by the Ontario Fire Code are maintained and operational. Such fire safety features include:

- Building Services (ventilation, firefighter elevators, water supply, etc.);
- Non-combustible construction (concrete and steel);
- Interior finishes (drywall, block, concrete slab);
- Fire detection and notification of occupants (pull stations, heat detectors, smoke detectors, alarm system);
- Compartmentation (containment of fire and smoke spread, fire doors, fire shutters, self-closing mechanisms on doors, etc.);
- Means of egress (stairwells constructed with non-combustibles); and

- Fire protection systems (automatic sprinklers, standpipes and hose cabinets, fire pumps, fire extinguishers, etc.).

9.10.4 Existing Initial Arriving Company Response Capabilities – Urban Settlement Boundary

The existing emergency response fire suppression deployment capabilities of the SSMFS's Initial Arriving Company were assessed in comparison to the NFPA 1710 Standard performance benchmark of **four firefighters arriving on scene within a four-minute travel time to 90% of fire suppression incidents**.

Figure 20 illustrates the modelled results of the existing conditions, initial arriving company analysis in the urban area. The bright green areas identify the locations where the model predicts the initial arriving apparatus, staffed with four firefighters, arrives on-scene within four minutes of travel time. The orange areas show the locations where the initial arriving apparatus, staffed with three firefighters, is modelled to arrive on scene within four minutes of travel time.

Based on existing conditions, the mapping indicates that 27% of the urban area and 50% of historical call locations are covered within the four-minute travel time of four firefighters arriving on scene.

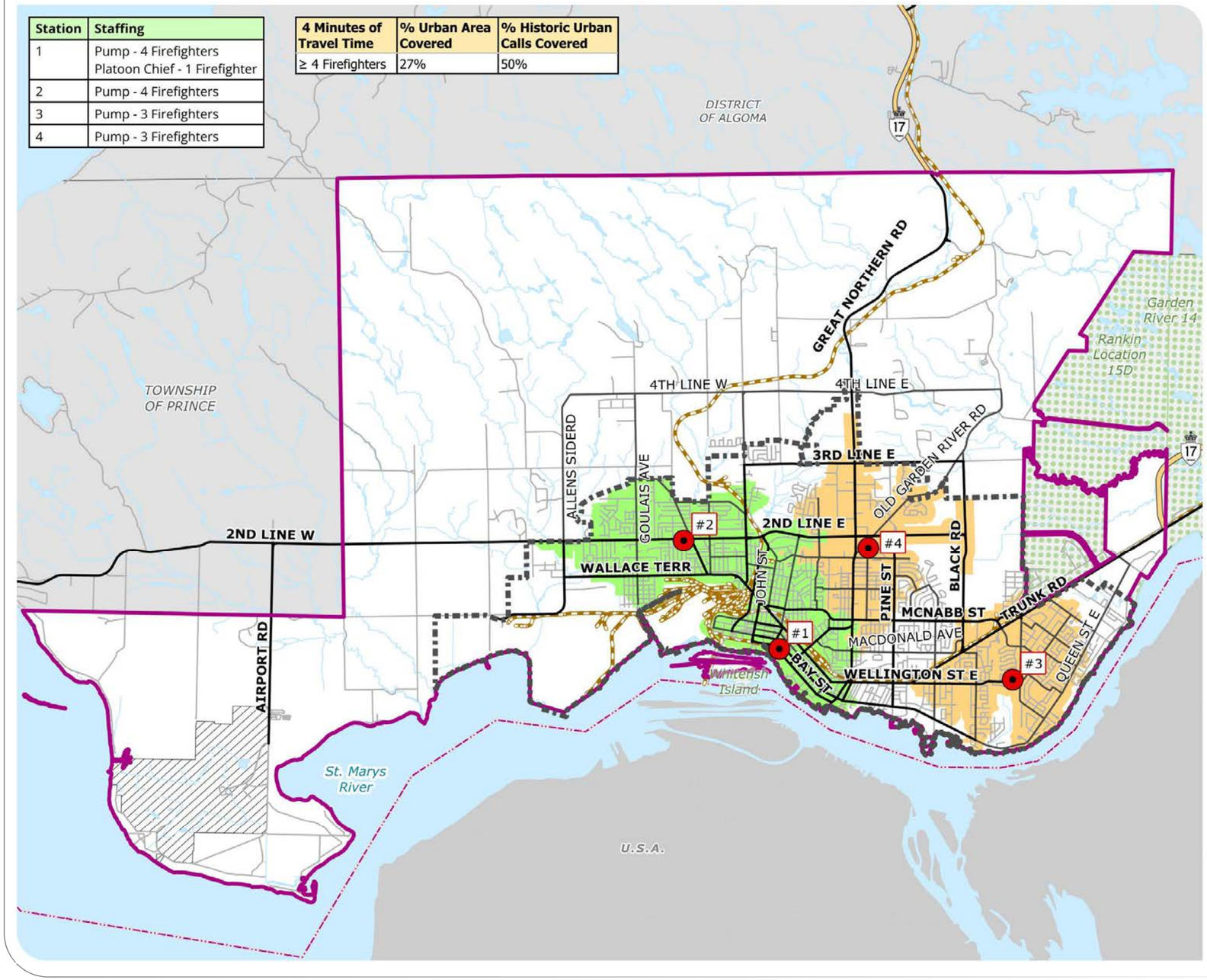
It should be noted that these coverages only reflect the applied NFPA four-minute travel time performance. SSMFS 's response capabilities provide coverage to the entire City; however, the travel time exceeds four minutes, or the staffing of the apparatus includes three firefighters, for the remainder of the City's urban area and historical call locations.

Compared to the 2018 FMP, the geographical area coverage where four firefighters arrive within four minutes on the initial arriving apparatus in existing conditions is improved from 18% previously, and the historical call coverage is improved from 47% previously. This is primarily as a result of Station 1 and Station 2 operating with a minimum staffing of four firefighters on the front-line apparatus in existing conditions.

Figure 20: Existing Initial Arriving Company Response Capabilities

Station	Staffing
1	Pump - 4 Firefighters Platoon Chief - 1 Firefighter
2	Pump - 4 Firefighters
3	Pump - 3 Firefighters
4	Pump - 3 Firefighters

4 Minutes of Travel Time	% Urban Area Covered	% Historic Urban Calls Covered
≥ 4 Firefighters	27%	50%



CITY OF SAULT STE MARIE
FIRE MASTER PLAN

INITIAL ARRIVING APPARATUS

- Existing Fire Station
- ≥ 4 Firefighters in 4 Minutes of Travel Time
- ≤ 3 Firefighters in 4 Minutes of Travel Time

Base Data
- City Boundary
- Urban Settlement Boundary
- Expressway / Highway
- Arterial Road
- Collector Road
- Local Road
- Railway
- Airport
- Water Feature
- First Nation Reserve
- International Boundary

NFPA 1710
Minimum of 4 firefighters responding within 4 minutes, 90% of the time.

SCALE 1:80,000

0 1 2 4 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, CITY OF SAULT STE MARIE, ACORN INFORMATION SOLUTIONS

MAP CREATED BY: GM, Dillon Consulting Limited
MAP CHECKED BY: SCD, Tayport Limited
MAP PROJECTION: NAD 1983 UTM Zone 16N

PROJECT: 23-6393 STATUS: DRAFT DATE: 2025-04-03

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9.10.5 Existing Second Arriving Apparatus Response Capability – Urban Settlement Boundary

The NFPA 1710 Standard (2020) edition introduced a new performance benchmark for assessing the second-arriving company. This standard defines a "company" as a group of members who are "usually organized and identified as engine companies, ladder companies, rescue companies, squad companies or multi-functional companies."[33] As with the initial arriving company, the NFPA standard specifies the minimum staffing for a second arriving company is four firefighters.

The existing emergency response fire suppression deployment capabilities of the SSMFS for the Second Arriving Company were assessed in comparison to the NFPA 1710 Standard performance benchmark of "**A second arriving company with a minimum of four firefighters arriving on scene within a six-minute travel time to 90% of fire suppression incidents."** For the purposes of assessing SSMFS's performance, this analysis assessed the Second Arriving Apparatus, including those staffed with a minimum of two or three firefighters, as well as those staffed with a minimum of four.

Each of the City's four existing fire stations operates a front-line apparatus which is staffed with either three or four firefighters. Station 1 includes a Platoon Chief. Under existing conditions, no SSMFS stations operate a second staffed heavy apparatus. **Figure 21** illustrates the results that within six minutes of travel time the Second Arriving Apparatus staffed with a crew of four firefighters is able to provide emergency response coverage to 22% of the City's urban area and 50% of the historical emergency incidents, and a second arriving apparatus staffed with at least three firefighters is able to provide emergency response coverage to 21% of the urban area of the historical emergency incidents (January 1, 2017, to December 31, 2023).

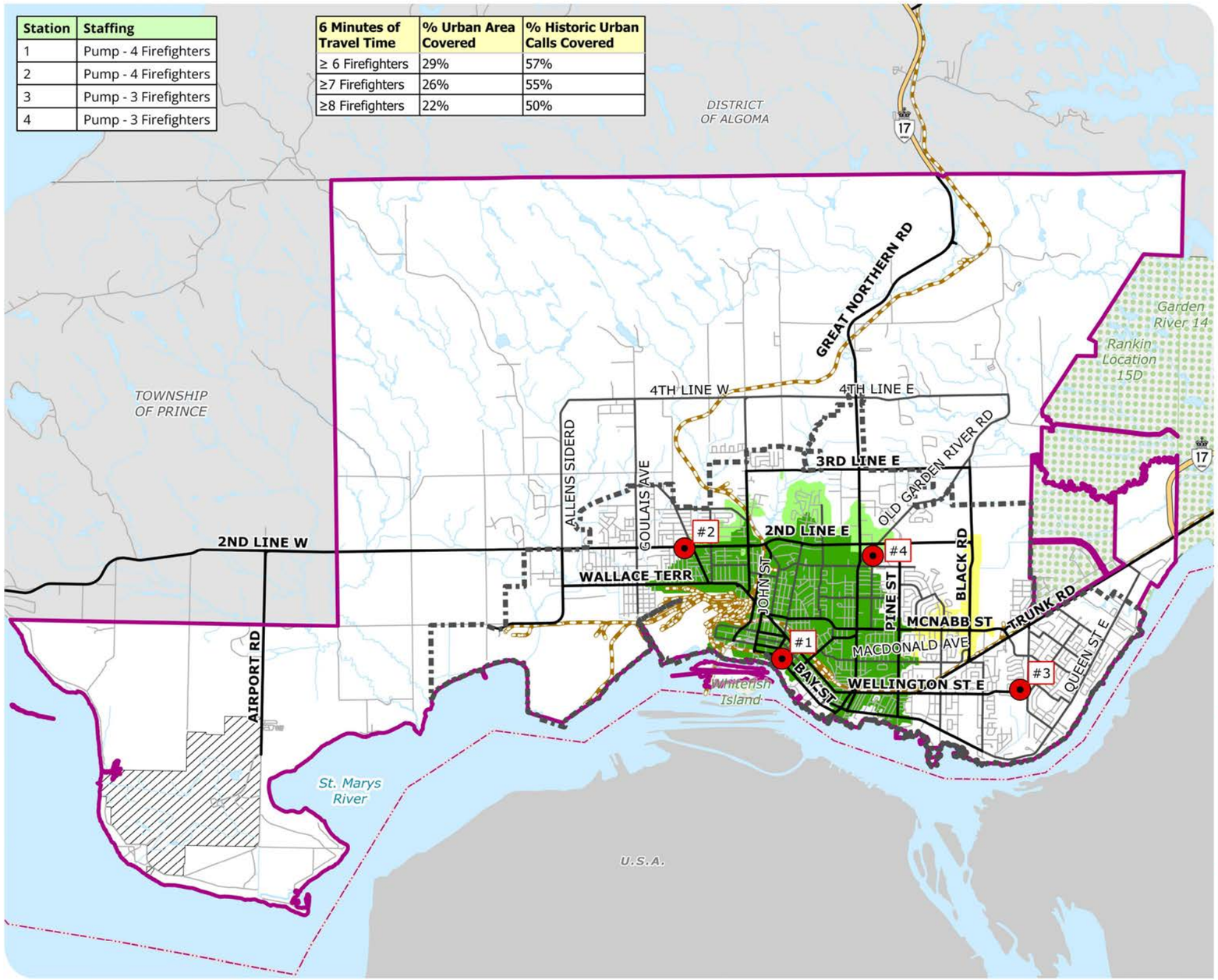
It should be noted that these coverages only reflect the applied NFPA six-minute travel time performance, and that the current SSMFS response capabilities exceed the six-minute travel time for the remainder of the City's geographical area and historical call locations.

[33] 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 (2020 Edition) Chapter 3, Definitions, 3.3.15.

Figure 21: Existing Second Arriving Apparatus Response Capabilities

Station	Staffing
1	Pump - 4 Firefighters
2	Pump - 4 Firefighters
3	Pump - 3 Firefighters
4	Pump - 3 Firefighters

6 Minutes of Travel Time	% Urban Area Covered	% Historic Urban Calls Covered
≥ 6 Firefighters	29%	57%
≥7 Firefighters	26%	55%
≥8 Firefighters	22%	50%



CITY OF SAULT STE MARIE
FIRE MASTER PLAN

SECOND ARRIVING APPARATUS

- Existing Fire Station
- 6 Firefighters
- 7 Firefighters
- ≥ 8 Firefighters

Base Data

- City Boundary
- Urban Settlement Boundary
- Expressway / Highway
- Arterial Road
- Collector Road
- Local Road
- Railway
- Airport
- Water Feature
- First Nation Reserve
- International Boundary

NFPA 1710
Minimum of 8 firefighters responding within 6 minutes, 90% of the time.

SCALE 1:80,000

0 1 2 4 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, CITY OF SAULT STE MARIE, ACORN INFORMATION SOLUTIONS

MAP CREATED BY: GM, Dillon Consulting Limited
MAP CHECKED BY: SCD, Tayport Limited
MAP PROJECTION: NAD 1983 UTM Zone 16N

PROJECT: 23-6393 STATUS: DRAFT DATE: 2024-07-26

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9.10.6 Initial Full Alarm Assignment – Urban Settlement Boundary

The SSMFS's existing **Initial Full Alarm Assignment** response capabilities were assessed in comparison to the applicable NFPA 1710 Standard for the **Single-Family Dwelling Initial Full Alarm Assignment.** The applicable NFPA 1710 fire suppression deployment model for an initial full alarm assignment to a single-family dwelling includes a minimum deployment of 16 firefighters (17 if an aerial device is used) **arriving on scene within an eight-minute (480-second) travel time to 90% of the fire suppression incidents in this occupancy type**.

It is important to note that the current SSMFS fire suppression deployment model includes a frontline quint (aerial) and the option to staff the aerial apparatus with the crew based at Station 1. One of these aerials would be deployed to any structure fires, including single-family residential occupancies. As such, our analysis of the performance benchmarks focuses on the deployment of 16 firefighters to single-family dwellings.

9.10.6.1 Existing Initial Full Alarm Assignment Response Capabilities

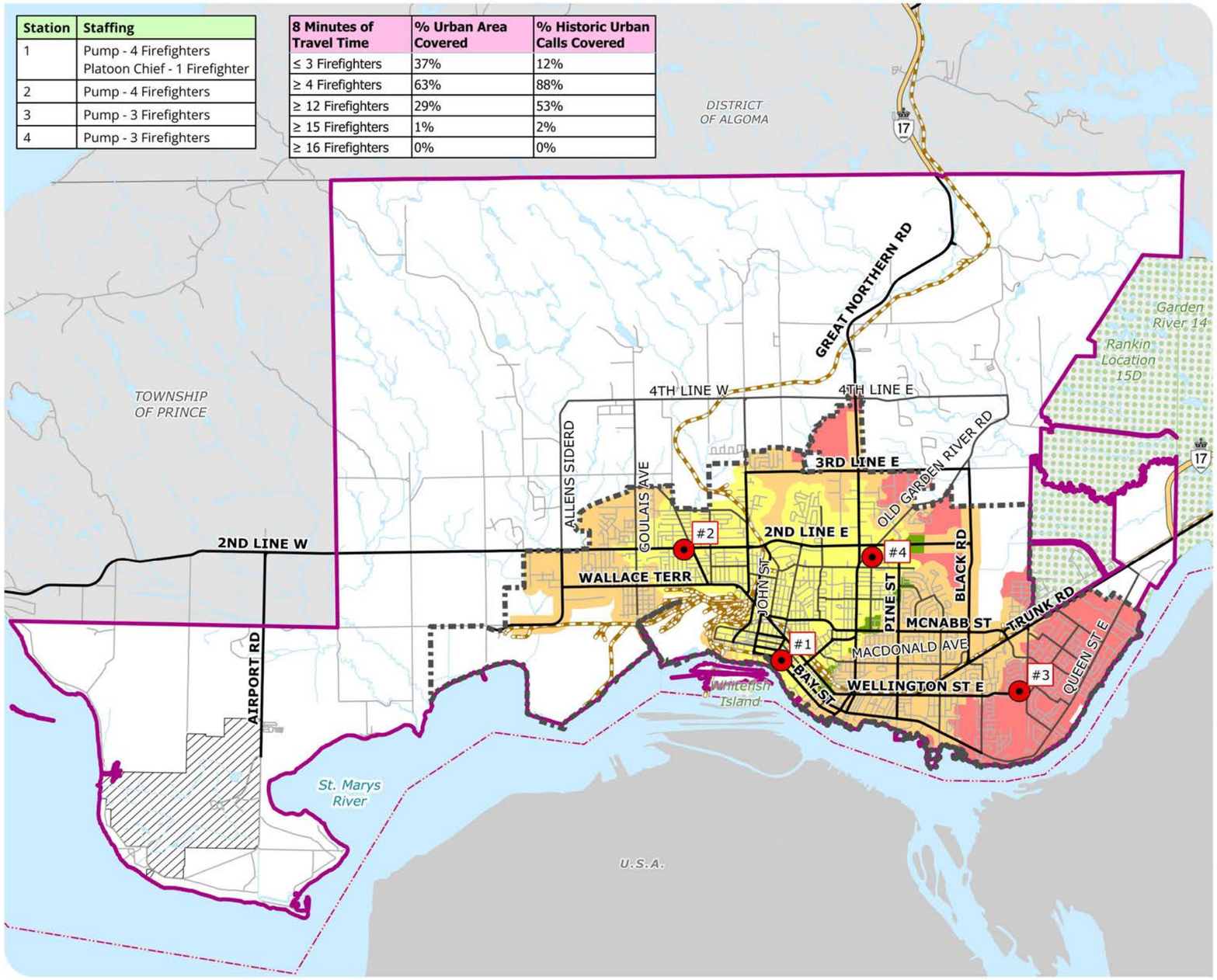
Figure 22 presents the analysis of the SSMFS's existing capabilities measured against the Initial Full Alarm Assignment performance measure. Due to the current minimum suppression staffing level of 15 firefighters, SSMFS is unable to achieve the target of 16 firefighters (the staffing benchmark for a Single-Family Dwelling) anywhere in the City. The small areas, shown in green, indicate where SSMFS can assemble 15 firefighters within an eight-minute travel time, which represents 1% coverage of the urban area and 2% coverage of historical calls. Under existing conditions, the SSMFS can currently assemble 12 firefighters (shown in yellow) within eight minutes of travel time to 29% of the urban area, and 53% of historical call locations (January 1, 2017, to December 31, 2023).

It should be noted that these coverages only reflect the applied NFPA eight-minute travel time performance, and that the current SSMFS response capabilities exceed the eight-minute travel time for the remainder of the City's geographical area and historical call locations.

Figure 22: Existing Initial Full Alarm Assignment Response Capabilities

Station	Staffing
1	Pump - 4 Firefighters Platoon Chief - 1 Firefighter
2	Pump - 4 Firefighters
3	Pump - 3 Firefighters
4	Pump - 3 Firefighters

8 Minutes of Travel Time	% Urban Area Covered	% Historic Urban Calls Covered
≤ 3 Firefighters	37%	12%
≥ 4 Firefighters	63%	88%
≥ 12 Firefighters	29%	53%
≥ 15 Firefighters	1%	2%
≥ 16 Firefighters	0%	0%



CITY OF SAULT STE MARIE

FIRE MASTER PLAN

INITIAL FULL ALARM ASSIGNMENT

Existing Fire Station

Number of Staff on Scene within 8 Minutes of Travel Time

- ≤ 3 Firefighters
- ≥ 4 Firefighters
- ≥ 12 Firefighters
- ≥ 15 Firefighters
- ≥ 16 Firefighters (not achievable due to staffing levels)

Base Data

- City Boundary
- Urban Settlement Boundary
- Expressway / Highway
- Arterial Road
- Collector Road
- Local Road
- Railway
- Airport
- Water Feature
- First Nation Reserve
- International Boundary

NFPA 1710 Depth of Response

14 Firefighters in 8 minutes of Travel Time, 90% of the time.

SCALE 1:80,000

0 1 2 4 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, CITY OF SAULT STE MARIE, ACORN INFORMATION SOLUTIONS

MAP CREATED BY: GM, Dillon Consulting Limited
MAP CHECKED BY: SCD, Tayport Limited
MAP PROJECTION: NAD 1983 UTM Zone 16N

PROJECT: 23-6393 STATUS: DRAFT DATE: 2025-04-03

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9.10.7 Existing Rural Response Demand

Figure 23 shows the existing modelled response to the defined rural area (NFPA 1720 Rural Demand Zone) of six firefighters within 14 minutes of response time (turnout time + travel time). The figure shows that the department was able to provide a response of at least six firefighters within 14 minutes of response time to 18% of the rural roads and 55% of the historical emergency call locations in the rural area.

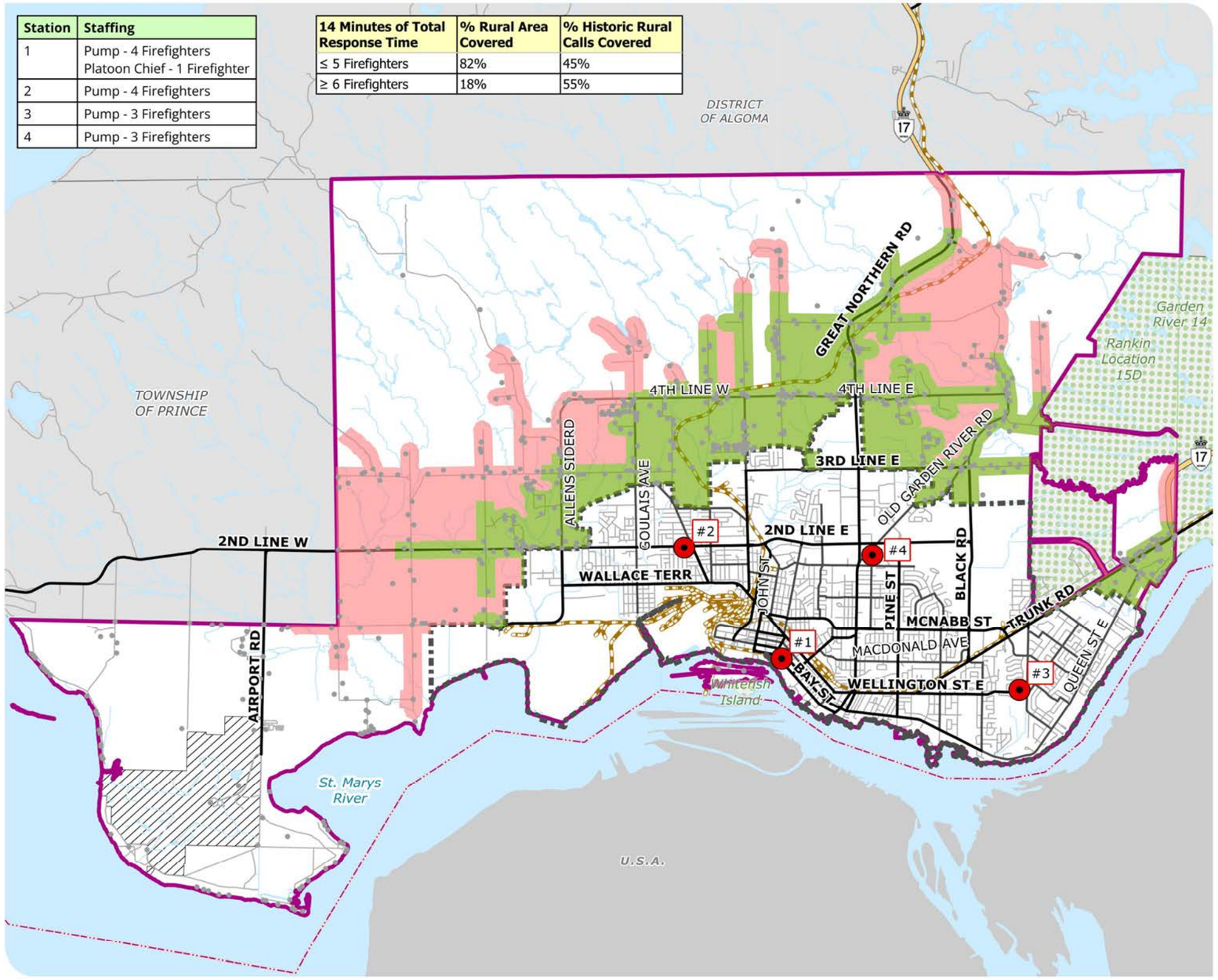
9.10.8 Existing Fire Suppression Deployment Capabilities Summary

Table 29 provides a summary of the emergency response capabilities of the SSMFS under existing conditions. Informed by the findings of the existing conditions results, the analysis and scenarios tested under future conditions will aim to improve from these baseline coverage levels.

Figure 23: Existing Rural Demand Zone Response Capabilities

Station	Staffing
1	Pump - 4 Firefighters Platoon Chief - 1 Firefighter
2	Pump - 4 Firefighters
3	Pump - 3 Firefighters
4	Pump - 3 Firefighters

14 Minutes of Total Response Time	% Rural Area Covered	% Historic Rural Calls Covered
≤ 5 Firefighters	82%	45%
≥ 6 Firefighters	18%	55%



CITY OF SAULT STE MARIE
FIRE MASTER PLAN

NFPA 1720
RURAL DEMAND ZONE

- Existing Fire Station
- Historic Incident (2017-2023)

Number of Staff on Scene within 14 Minutes of Total Response Time

- ≤ 5 Firefighters
- ≥ 6 Firefighters

Base Data

- City Boundary
- Urban Settlement Boundary
- Expressway / Highway
- Arterial Road
- Collector Road
- Local Road
- Railway
- Airport
- Water Feature
- First Nation Reserve
- International Boundary

NFPA 1720 Rural Demand Zone
6 Firefighters in 14 minutes of Total Response Time, 80% of the time.

SCALE 1:80,000

0 1 2 4 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, CITY OF SAULT STE MARIE, ACORN INFORMATION SOLUTIONS

MAP CREATED BY: GM, Dillon Consulting Limited
MAP CHECKED BY: SCD, Tayport Limited
MAP PROJECTION: NAD 1983 UTM Zone 16N

PROJECT: 23-6393 STATUS: DRAFT DATE: 2025-04-07

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Table 29: Summary of Existing Conditions Response Capabilities

Scenario	Minimum Staffing Level	Urban: Initial Arriving Company (4 firefighters arriving on-scene in 4 minutes or less 90% of the time)	Urban: Second Arriving Apparatus (8 firefighters arriving on-scene in 6 minutes or less 90% of the time)	Urban: Initial Full Alarm Assignment (16 firefighters arriving on-scene in 8 minutes or less 90% of the time)	Rural: (6 firefighters arriving on-scene in 14 minutes or less of response time 90% of the time)
Existing Conditions	15	27% of Urban Area 50% of Calls	22% of Area 50% of Calls	0% of Area 0% of Calls	18% Rural Area 55% of Calls

9.11 Future Growth Considerations

To support the analysis of the current and future fire suppression services provided by the City of SSM as part of this FMP Update, this section presents the City of Sault Ste. Marie's future growth assumptions with respect to population growth, land development and planned future roads. Growth relies on several factors such as economic development, regional and provincial policies and pressures (such as the new Ontario Bill 23 - More Homes Built Faster Act), in-migration from other jurisdictions, and demographic change. All of these factors are subject to change in ways that are difficult to predict with certainty. It is important for the City to regularly revisit and revise these growth assumptions to ensure that they reflect changes to the factors that inform these assumptions.

Through discussions with City Planning staff future growth and development is planned to occur primarily within the City's urban settlement boundary. In preparation for the analysis conducted within this FMP Update City staff provided details, plans and locations of seven planned future residential developments. Where plans, locations and details of new future roads were provided, the GIS-based emergency model road network was updated to create a future road network. This network was used to analyze future emergency response scenarios in this FMP Update. The planned future roads added are shown in purple on the future response maps.

As discussed within the CRA, the City has experienced a recent population increase. Based on data released by Statistics Canada in 2024, the City's estimated 2022 population was 76,014 and the estimated 2023 population was 78,574. The population as of 2021 was 72,051 (2021 Census Subdivision). Although the 2021 population reflects a decrease in population compared to other recent Census years (-1.8% decrease from 2016), the 2022 and 2023 estimates indicate population growth of 1,335 and 2,560 persons, respectively. The growth is attributed to immigration, internal migration, and most significantly, non-permanent residents.

Through its participation in the Rural Northern Immigration Pilot Program (RNIP) the City of Sault Ste. Marie welcomed approximately 1,094 new permanent residents with local employment. The RNIP ended on August 31, 2024. As of January 2025, the City of Sault Ste. Marie has been selected as of the 18 communities across Canada to participate in the new Rural Community Immigration Pilot (RCIP). This program is expected to increase the number of immigrants and new Canadians within the City.

Current industry best practices indicate that the fire master planning process should consider the projected ten-year community planning, and growth management process, and the concept of seeking "continuous improvement".

9.12 Enhance Existing Total Response Time Strategy

The analysis of the SSMFS historical fire suppression emergency response capabilities, including dispatch time, turnout time, travel time and total response time, for the period from January 1, 2017, to December 31, 2023, is presented in **Section 9.7**. The results indicate that SSMFS is significantly exceeding the NFPA 1710 performance benchmarks for dispatch, turnout, and travel times, and this is impacting the department's existing **Total Response Time** capabilities.

Improving the performance capabilities of the dispatch and turnout times does not directly impact the SSMFS's ability to achieve the NFPA 1710 standard travel time performance objectives of a four-minute travel time (initial arriving apparatus), six-minute travel time (second arriving apparatus) or eight-minute travel time (initial full alarm assignment). However, it would have a positive impact on improving the department's **Total Response Time** capabilities.

The analysis in **Section 0** of this FMP Update supports the recommendation that the SSMFS continue to identify and implement strategies to target the reduction of dispatch times (communications) and turnout times within the Fire Suppression Division.

In our view, the identification and implementation of strategies that specifically target improvements in the department's dispatch and turnout time should be considered the first priority for the City to improve the SSMFS's **Total Response Time**.

If the SSMFS was able to improve its historical dispatch time by one minute and turnout time by one minute the resulting impact would be an improvement in the department's capabilities that would improve the total response time by two minutes. In our view, there would be minimal financial investment on behalf of the City required to implement this option.

Recommendation #42: That the SSMFS investigate options to enhance the existing dispatch and turnout times as a strategy to further reduce the existing total response time of the SSMFS.

9.13 Future Fire Suppression Staffing Options

This section presents options for Council's consideration in revising the existing firefighter deployment model. These include revisions to the current minimum number of firefighters on duty. These options prioritize enhancing the delivery of fire suppression services in response to the findings of the Community Risk Assessment, including:

- Group C - Residential Occupancies represent 95.25% of the City's existing building stock, and over the five-year period from January 1, 2017, to December

31, 2023, Group C occupancies were associated with 76.8% of the structure fires within the City and 53.3% of total structure fire loss.
- 94.9% of the buildings have a footprint of 2,500 sq. ft. or less which is consistent with the proportion of the property stock that is Group C – Residential occupancies.
- Based on the property stock mapping, Group C – Residential uses are distributed across the City, including outside of the Urban Settlement Area.
- From 2017 to 2023, most reported fire-related civilian injuries (62) and all fire-related fatalities (9) in the City of Sault Ste. Marie occurred in Group C – Residential Occupancies.

As such, the options identified prioritize the core objectives of enhancing the identified existing tactical limitations of the SSMFS, including:

- Initial response capabilities, including the provision of four firefighters on all initial responding apparatus; and
- Depth of response capabilities, including a total minimum complement of 16 suppression firefighters on duty at all times (the NFPA 1710 staffing benchmark for a Single-Family Dwelling).

An Initial Arriving Company of four firefighters, once assembled on-scene, provides sufficient resources to safely initiate limited fire suppression or rescue operations and allows for the following operational functions:

- The officer in charge assumes the role of Incident Commander;
- one firefighter functions as the pump operator;
- one firefighter completes the task of making the fire hydrant connection; and
- one firefighter prepares an initial fire attack line for operation.

The firefighter deployment model options presented **do not** provide the required minimum total number of firefighters on duty to deploy 25 firefighters required for the NFPA 1710 staffing benchmarks to respond to higher-density developments, such as garden-style apartments or open air strip shopping centres. The options also **do not** provide the required minimum total number of firefighters on duty to deploy 38 or more firefighters required for the NFPA 1710 staffing benchmark to respond to high-rise buildings. These options continue to rely upon the response of senior officers (Chief and Deputy Chiefs), the call-back process of off-duty firefighters, and mutual aid from neighbouring departments.

As a result, it is recommended that the SSMFS prioritize the application of the first two lines of defence, including enhanced public education and fire inspection/enforcement

programs, to improve the delivery of fire protection services to identified high-risk and high-rise occupancies within the City of Sault Ste. Marie.

9.14 Future Fire Suppression Options – Enhance Initial Responding Apparatus Staffing (4 Station Model)

The Future Fire Suppression Options were modelled on the future road network, which includes some new roads as a result of planned future development. The new roads are shown in purple in the figures within this section.

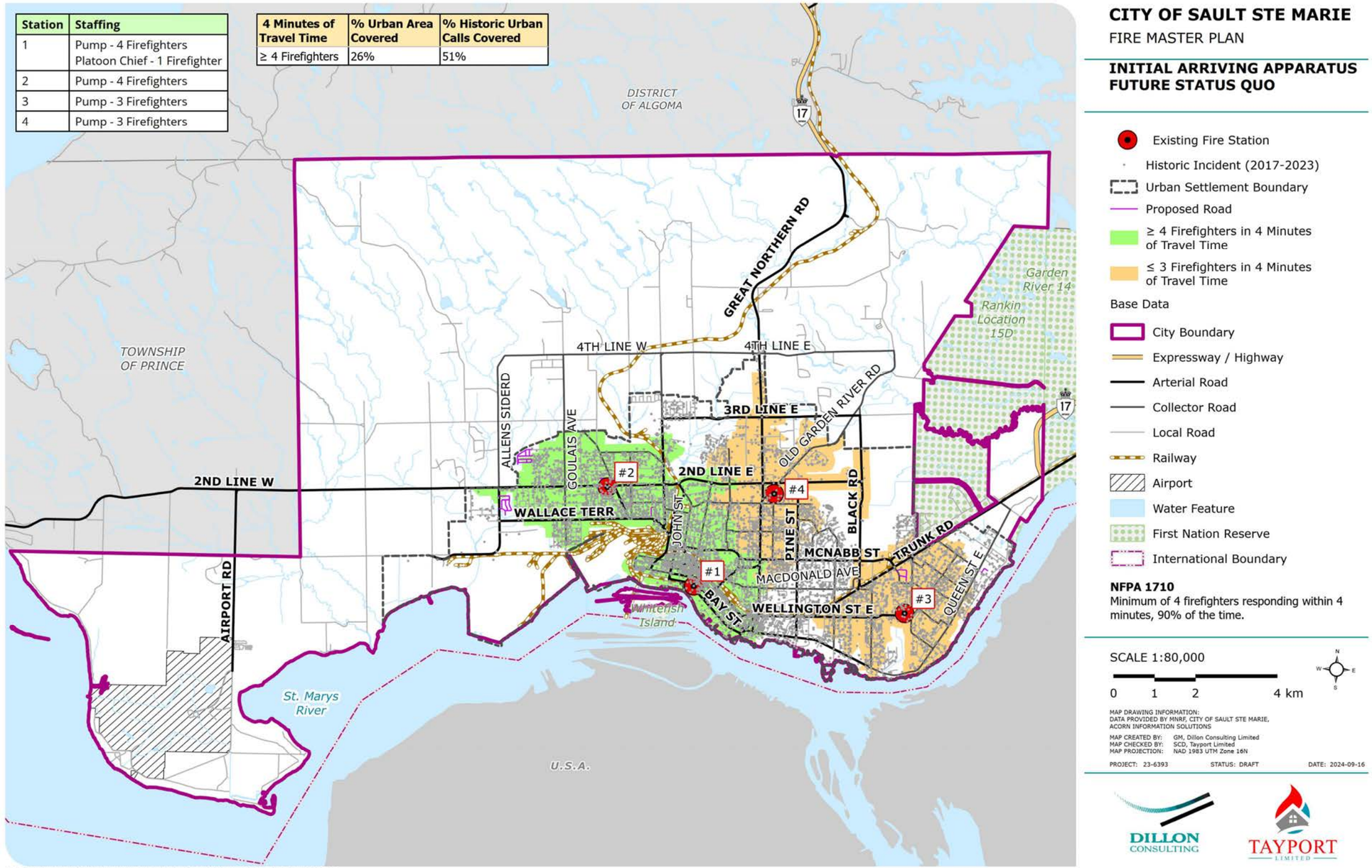
Both the NFPA 1710 and NFPA 1720 standards emphasize the importance of the initial responding apparatus being staffed with four firefighters. Under existing conditions, there is a different level of service provided across the City for initial arriving apparatus response, as two stations are staffed with four firefighters on the frontline apparatus and two stations are staffed with only three firefighters on the frontline apparatus.

The Future Options analyze the emergency response coverage potential of SSMFS under incremental increases in staffing to ultimately achieve a minimum of four firefighters on the frontline apparatus (initial arriving apparatus) at all four fire stations.

9.14.1 Future Option 1 – Status Quo, Maintain Existing Minimum Staffing

The first option maintains the existing minimum suppression staffing levels of 15 on-duty. This includes a platoon chief responding from Station 1, four firefighters responding on the front-line apparatus at Stations 1 and 2 and three firefighters responding on the front-line apparatus at Stations 3 and 4. The response coverage results of the initial arriving apparatus analysis for Future Option 1 are presented in **Figure 24**. The response capabilities analysis for Future Option 3 predicts that the SSMFS would reach 26% of the City's urban area (a decrease of 1% from existing) and 51% of the historical call locations (an improvement of 1% from existing) with four firefighters in four minutes of travel time. The areas where this performance measure is met are shown in bright green on the map. The minor changes in coverage in Future Option 1 compared to Existing Conditions are a result of changes in the future road network compared to the existing road network. The difference between existing conditions and the status quo is very minimal, as there are no changes to staffing or deployment. Therefore, it is assumed that the results of the second arriving **apparatus**, initial full alarm assignment, and rural response demand analyses would align very closely to the existing conditions results for those performance measures. Option 1 is not recommended, as it does not meet industry best practices for initial arriving apparatus staffing, or the staffing level recommended to respond to a single-family dwelling, and does not align with the strategic priority of continuous improvement.

Figure 24: Future Option 1 – Status Quo, Maintain Existing Minimum Staffing, Initial Arriving Apparatus



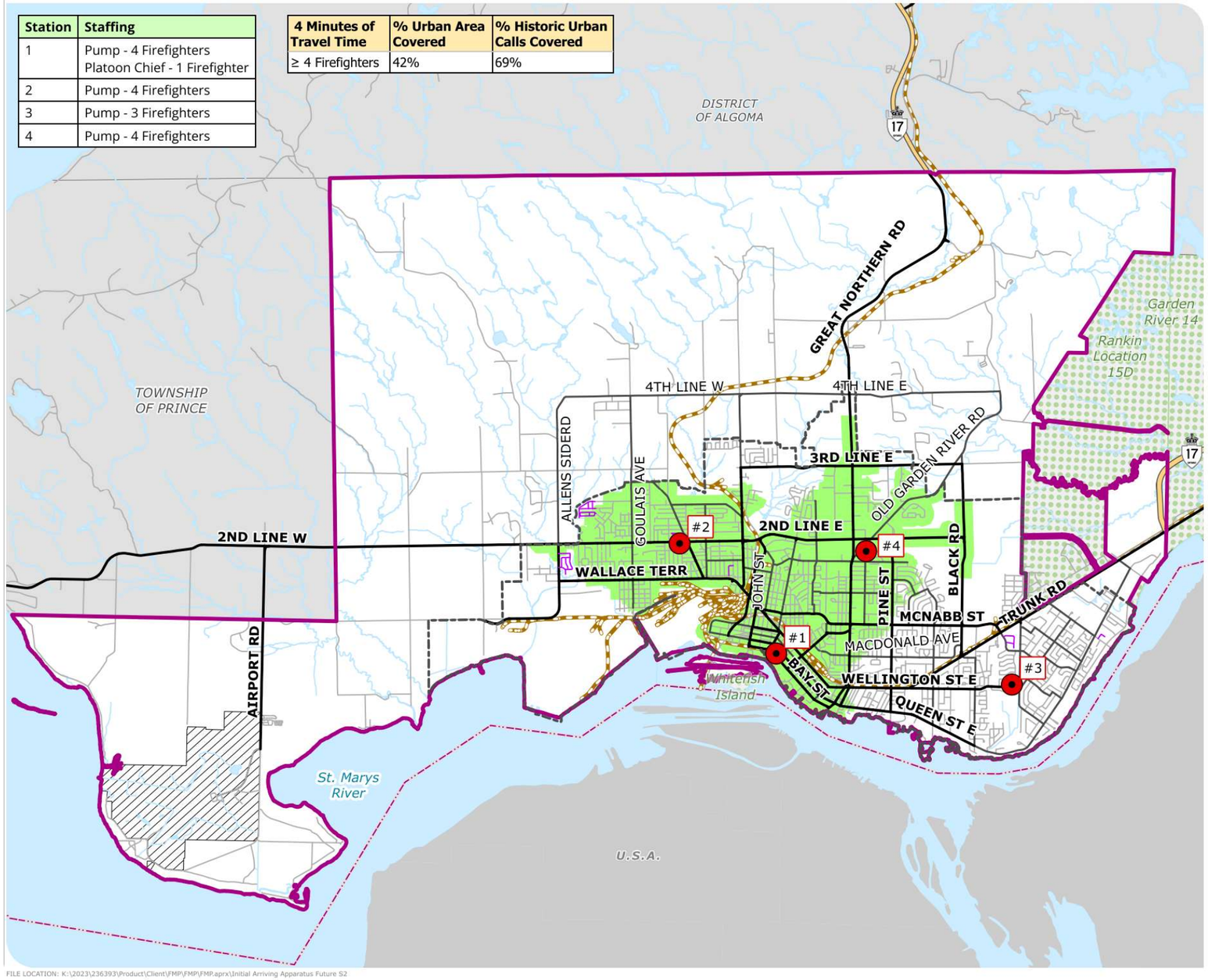
9.14.2 Future Option 2 – Staff Station 4 with Four on-duty Firefighters (Minimum Suppression Staffing of 17 on-duty)

9.14.2.1 Future Option 2, Initial Arriving Apparatus Predicted Response Capabilities

The objective of Future Option 2 is to continuously improve the department's initial arriving apparatus response capabilities and incrementally move towards a staffing model that reflects four firefighters on all initial responding apparatus. Option 2 increases the minimum staffing level to four firefighters on the initial responding apparatus from Station 4, achieving a minimum of four firefighters staffing the front-line apparatus at three of the four fire stations. This increases the overall minimum on-duty suppression staffing to 16 firefighters.

The mapped results of the initial arriving apparatus analysis for Future Option 2 are presented in **Figure 25**. The response analysis for the Future Option 2 predicts that the SSMFS would reach 42% of the City's urban area (an improvement of 15% from existing) and 69% of the historical call locations (an improvement of 19% from existing) and 69% of the historical call locations (an improvement of 19% from the sting) with four firefighters in four minutes of travel time. The areas where this performance measure is met are shown in bright green on the map. Comparing the green coverage shown in the Future Option 2 mapping to the existing conditions initial arriving apparatus figure (**Figure 20**) identifies significant improvements in the area surrounding Station 4, where the additional on-duty firefighter was added.

Figure 25: Future Option 2 – Initial Arriving Apparatus



CITY OF SAULT STE MARIE
FIRE MASTER PLAN

INITIAL ARRIVING APPARATUS FUTURE OPTION 2

- Existing Fire Station
- Urban Settlement Boundary
- Proposed Road
- ≥ 4 Firefighters in 4 Minutes of Travel Time

Base Data

- City Boundary
- Expressway / Highway
- Arterial Road
- Collector Road
- Local Road
- Railway
- Airport
- Water Feature
- First Nation Reserve
- International Boundary

NFPA 1710
Minimum of 4 firefighters responding within 4 minutes, 90% of the time.

SCALE 1:80,000

0 1 2 4 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, CITY OF SAULT STE MARIE, ACORN INFORMATION SOLUTIONS

MAP CREATED BY: GM, Dillon Consulting Limited
MAP CHECKED BY: SCD, Tayport Limited
MAP PROJECTION: NAD 1983 UTM Zone 16N

PROJECT: 23-6393 STATUS: DRAFT DATE: 2025-06-02

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9.14.1 Future Option 2, Second Arriving Apparatus Predicted Response Capabilities

The modelled results of the second arriving apparatus analysis for the Future Option 2 are presented in **Figure 26**. The response capabilities for the Future Option 2 predict that the SSMFS will cover 26% of the City's urban area (improved by 4% from existing) and 55% of the historical call locations from 2017 to 2023, also improved by 5% from existing, with eight firefighters in six minutes of travel time. The areas where this performance measure is met are shown in dark green on the map. Comparing the dark green coverage shown in the Future Option 2 to the 'existing conditions second arriving apparatus coverage' (**Figure 21**) there is a notable improvement in this performance measure from existing conditions in the areas previously covered by only six or seven firefighters in six minutes of travel time.

9.14.2 Future Option 2, Initial Full Alarm Assignment Predicted Response Capabilities

The modelled results of the initial full alarm assignment for the Future Option 2 are presented in **Figure 27**. The predicted response capabilities for the Future Option 2 show that the SSMFS would cover 1% of the City's urban area (improved from 0% in existing conditions) and 2% of the historical call locations from 2017 to 2023 (also improved from 0% in existing conditions), with a response of 16 firefighters in eight minutes of travel time. The areas where this performance measure is met are shown in bright green on the map. Future Option 2 results predict that the SSMFS can cover 39% of the urban area and 72% of historical call locations with 12 firefighters arriving on-scene within 8 minutes of travel time (shown in yellow).

It is important to identify that the mapped coverage measured against the performance measure only reflects the applied NFPA eight-minute travel time performance. Under the Future Option 2, SSMFS would be able to achieve the staffing level target of 16 firefighters across the entire City, within a longer travel time. This represents a significant improvement in depth of response coverage compared to existing conditions.

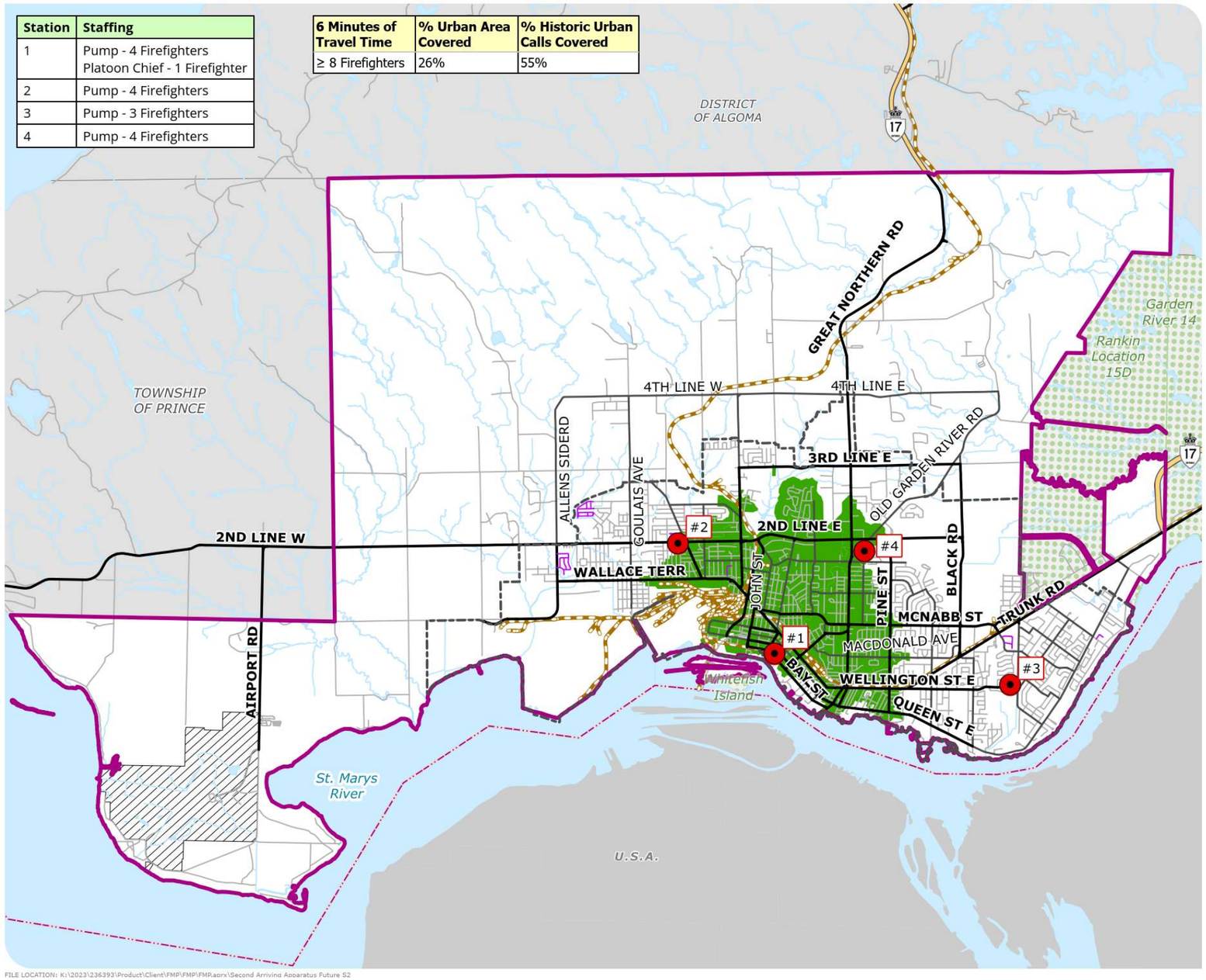
9.14.3 Future Option 3, Rural Response Demand

Figure 28 shows the Future Option 2 modelled response to the defined rural area (NFPA 1720 Rural Demand Zone) of six firefighters within 14 minutes of response time (turnout time + travel time). The figure predicts that SSMFS could respond with at least six firefighters within 14 minutes of response time to 18% of the rural roads and 56% of the historical emergency call locations in the rural area. This is the same area and covered as existing conditions.

Figure 26: Future Option 2, Second Arriving Apparatus

Station	Staffing
1	Pump - 4 Firefighters Platoon Chief - 1 Firefighter
2	Pump - 4 Firefighters
3	Pump - 3 Firefighters
4	Pump - 4 Firefighters

6 Minutes of Travel Time	% Urban Area Covered	% Historic Urban Calls Covered
≥ 8 Firefighters	26%	55%



CITY OF SAULT STE MARIE
FIRE MASTER PLAN

SECOND ARRIVING APPARATUS FUTURE OPTION 2

- Existing Fire Station
- Urban Settlement Boundary
- Proposed Road
- ≥ 8 Firefighters

Base Data

- City Boundary
- Expressway / Highway
- Arterial Road
- Collector Road
- Local Road
- Railway
- Airport
- Water Feature
- First Nation Reserve
- International Boundary

NFPA 1710
Minimum of 8 firefighters responding within 6 minutes, 90% of the time.

SCALE 1:80,000

0 1 2 4 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, CITY OF SAULT STE MARIE, ACORN INFORMATION SOLUTIONS

MAP CREATED BY: GM, Dillon Consulting Limited
MAP CHECKED BY: SCD, Tayport Limited
MAP PROJECTION: NAD 1983 UTM Zone 16N

PROJECT: 23-6393 STATUS: DRAFT DATE: 2025-06-02

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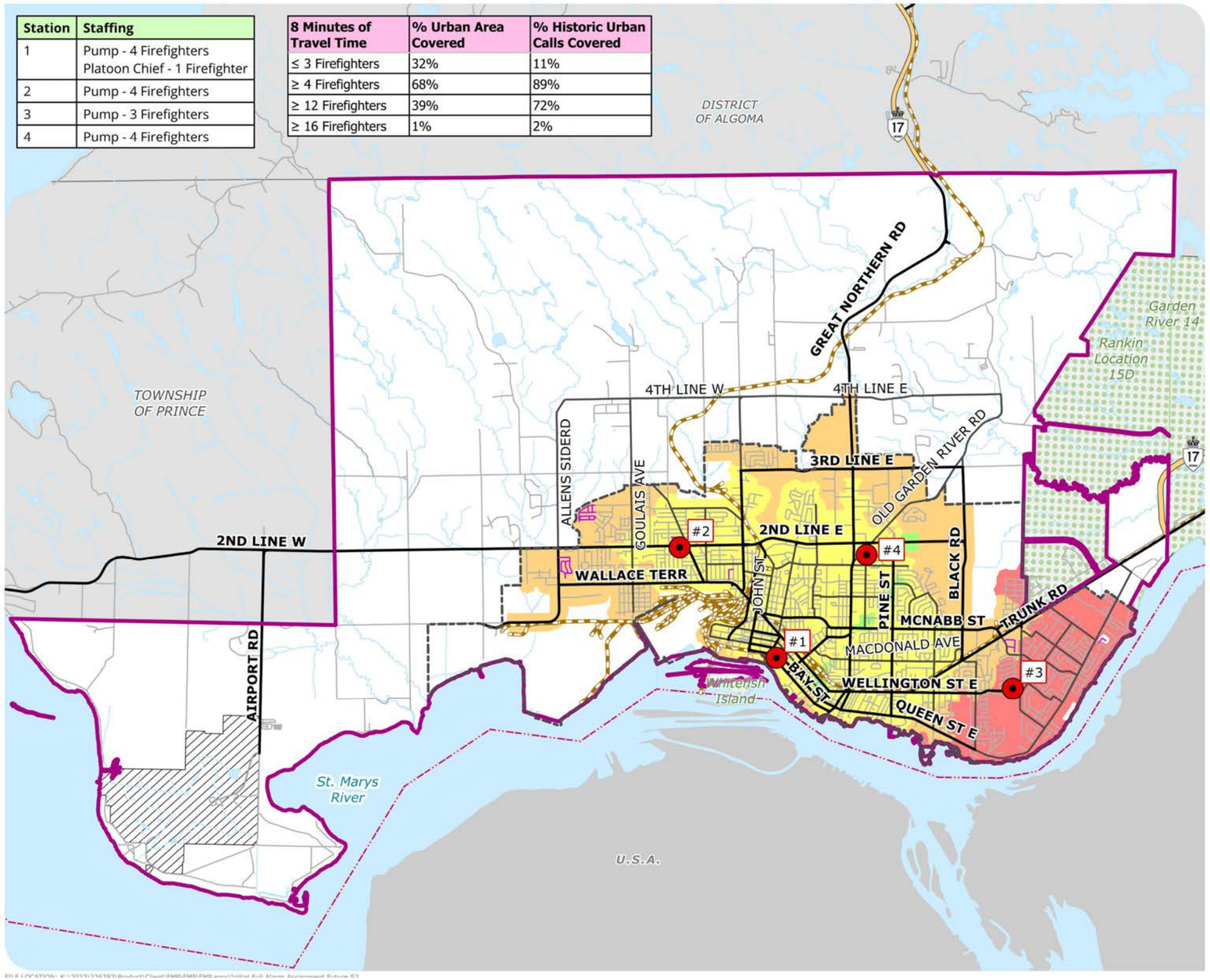
TAYPORT LIMITED

FILE LOCATION: K:\2023\236393\Product\Client\FMP\FMP\FMP.aprx\Second Arriving Apparatus Future S2

Figure 27: Future Option 2, Initial Full Alarm Assignment

Station	Staffing
1	Pump - 4 Firefighters Platoon Chief - 1 Firefighter
2	Pump - 4 Firefighters
3	Pump - 3 Firefighters
4	Pump - 4 Firefighters

8 Minutes of Travel Time	% Urban Area Covered	% Historic Urban Calls Covered
≤ 3 Firefighters	32%	11%
≥ 4 Firefighters	68%	89%
≥ 12 Firefighters	39%	72%
≥ 16 Firefighters	1%	2%



CITY OF SAULT STE MARIE
FIRE MASTER PLAN

INITIAL FULL ALARM ASSIGNMENT FUTURE OPTION 2

- Existing Fire Station
- Proposed Road
- Urban Settlement Boundary

Number of Staff on Scene within 8 Minutes of Travel Time

- ≤ 3 Firefighters
- ≥ 4 Firefighters
- ≥ 12 Firefighters
- ≥ 16 Firefighters

Base Data

- City Boundary
- Expressway / Highway
- Arterial Road
- Collector Road
- Local Road
- Railway
- Airport
- Water Feature
- First Nation Reserve
- International Boundary

NFPA 1710 Depth of Response
14 Firefighters in 8 minutes of Travel Time, 90% of the time.

SCALE 1:80,000

0 1 2 4 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, CITY OF SAULT STE MARIE, ACORN INFORMATION SOLUTIONS

MAP CREATED BY: GM, Dillon Consulting Limited
MAP CHECKED BY: SCD, Tayport Limited
MAP PROJECTION: NAD 1983 UTM Zone 16N

PROJECT: 23-6393 STATUS: DRAFT DATE: 2025-05-30

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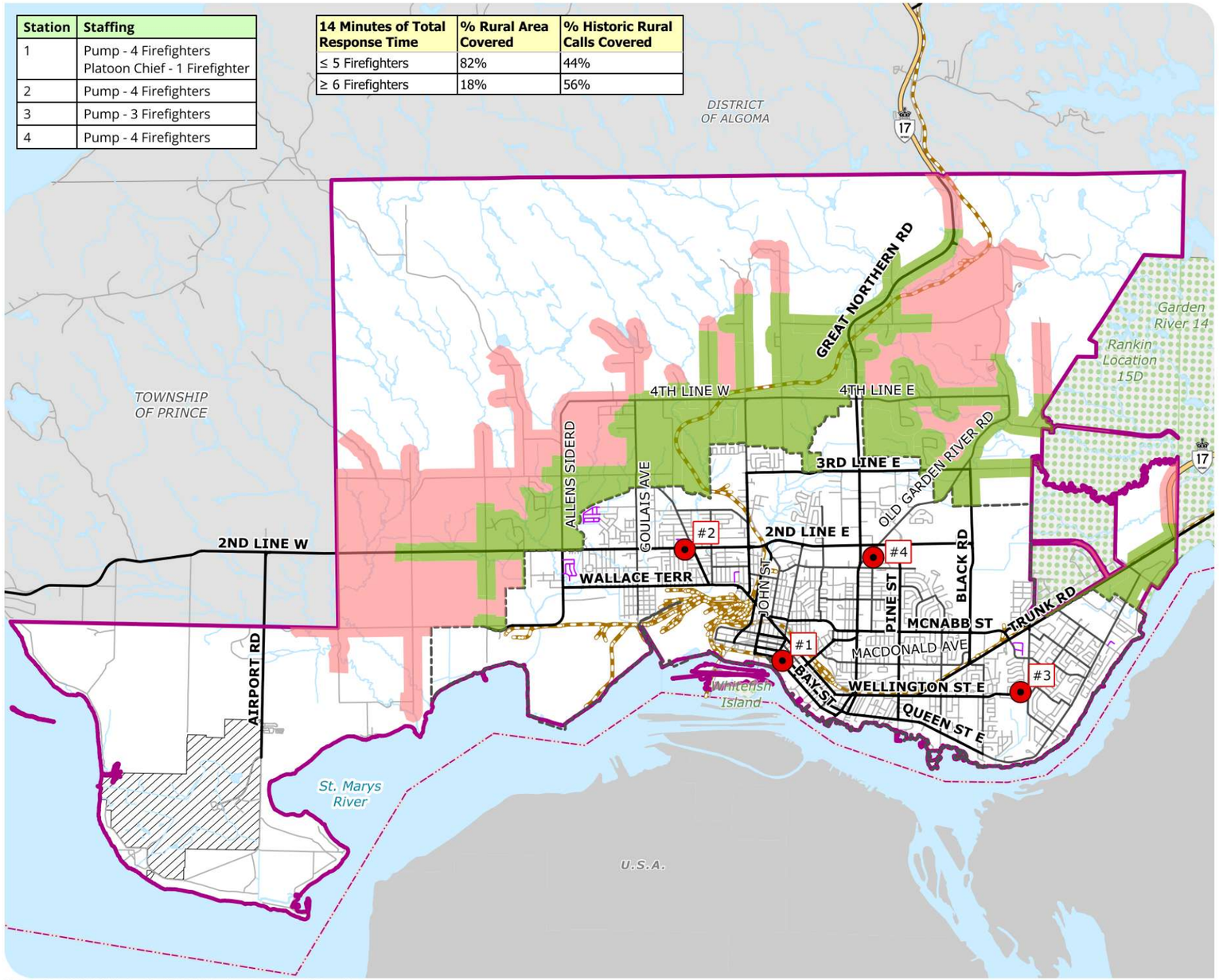
Figure 28: Future Option 2, Rural Demand Zone Response Capabilities

Station	Staffing
1	Pump - 4 Firefighters Platoon Chief - 1 Firefighter
2	Pump - 4 Firefighters
3	Pump - 3 Firefighters
4	Pump - 4 Firefighters

14 Minutes of Total Response Time	% Rural Area Covered	% Historic Rural Calls Covered
≤ 5 Firefighters	82%	44%
≥ 6 Firefighters	18%	56%



CITY OF SAULT STE MARIE
FIRE MASTER PLAN

NFPA 1720
RURAL DEMAND ZONE
FUTURE OPTION 2

- Existing Fire Station
- Urban Settlement Boundary
- Proposed Road

Number of Staff on Scene within 14 Minutes of Total Response Time
- ≤ 5 Firefighters
- ≥ 6 Firefighters

Base Data
- City Boundary
- Expressway / Highway
- Arterial Road
- Collector Road
- Local Road
- Railway
- Airport
- Water Feature
- First Nation Reserve
- International Boundary

NFPA 1720 Rural Demand Zone
6 Firefighters in 14 minutes of Total Response Time, 80% of the time.

SCALE 1:80,000

0 1 2 4 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, CITY OF SAULT STE MARIE, ACORN INFORMATION SOLUTIONS

MAP CREATED BY: GM, Dillon Consulting Limited
MAP CHECKED BY: SCD, Tayport Limited
MAP PROJECTION: NAD 1983 UTM Zone 16N

PROJECT: 23-6393 STATUS: DRAFT DATE: 2025-06-02

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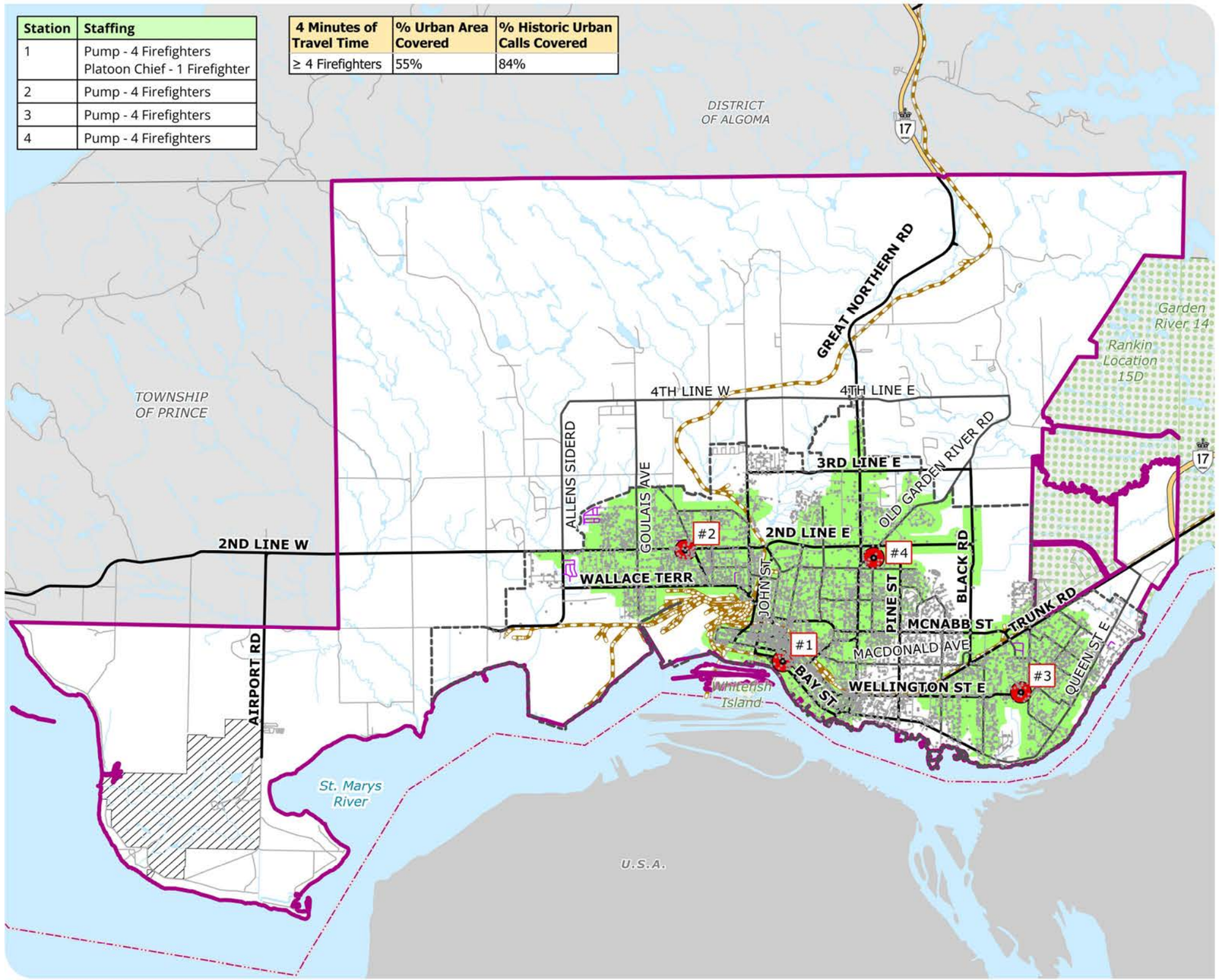
9.14.4 Future Option 3 - Staff Stations 3 and 4 with Four On-duty Firefighters (Minimum Suppression Staffing of 17 On-duty)

9.14.4.1 Future Option 3, Initial Arriving Apparatus Predicted Response Capabilities

The objective of Future Option 3 is to enhance the department's initial arriving apparatus capabilities by increasing the minimum staffing level to four firefighters on the initial responding apparatus from Station 3, achieving a minimum of four firefighters staffing the front-line apparatus at all four of the fire stations. This increases the overall on-duty minimum staffing from 16 in Option 2 to 17.

The mapped results of the initial arriving apparatus analysis for the Future Option 3 scenario are presented in **Figure 29**. The response analysis for the Future Option 3 scenario predicts that the SSMFS would cover 55% of the City's urban area (an improvement of 28% from existing) and 84% of the historical call locations (an improvement of 34% from existing) with four firefighters in four minutes of travel time. The areas where this performance measure is met are shown in bright green on the map. Comparing the green coverage shown in the Future Option 3 mapping to the existing conditions initial arriving apparatus figure (**Figure 20**) identifies significant improvements in the areas surrounding Stations 3 and 4, where the additional on-duty firefighters were added (Options 2 and 3). These improved coverage areas correlate to some of the highest concentrations of historical emergency incidents (2017 to 2023) mapped in the CRA and shown above as **Figure 19**.

Figure 29: Future Option 3 – Initial Arriving Apparatus



9.14.5 Future Option 3, Second Arriving Apparatus Predicted Response Capabilities

The modelled results of the second arriving apparatus analysis for Future Option 3 are presented in **Figure 30**. The response capabilities for Future Option 3 predict that the SSMFS will cover 29% of the City's urban area (improved by 7% from existing) and 57% of the historical call locations from 2017 to 2023, also improved by 7% from existing, with eight firefighters in six minutes of travel time. The areas where this performance measure is met are shown in dark green on the map. Comparing the dark green coverage shown in Future Option 3 to the 'existing conditions second arriving apparatus coverage' (**Figure 21**), there is a notable improvement in this performance measure from existing conditions in the areas previously covered by only six or seven firefighters in six minutes of travel time.

9.14.6 Future Option 3, Initial Full Alarm Assignment Predicted Response Capabilities

The modelled results of the initial full alarm assignment for Future Option 3 are presented in **Figure 31**. The predicted response capabilities for Future Option 3 show that the SSMFS would cover 1% of the City's urban area (improved from 0% in existing conditions) and 2% of the historical call locations from 2017 to 2023 (also improved from 0% in existing conditions), with a response of 16 firefighters in eight minutes of travel time. The areas where this performance measure is met are shown in bright green on the map. Future Option 3 results predict that the SSMFS can cover 39% of the urban area and 73% of historical call locations with 12 firefighters arriving on-scene within 8 minutes of travel time (shown in yellow).

It is important to identify that the mapped coverage measured against the performance measure only reflects the applied NFPA eight-minute travel time performance. Under Future Option 3, SSMFS would be able to achieve the staffing level target of 16 firefighters across the entire City, within a longer travel time. This represents a significant improvement in depth of response coverage compared to existing conditions.

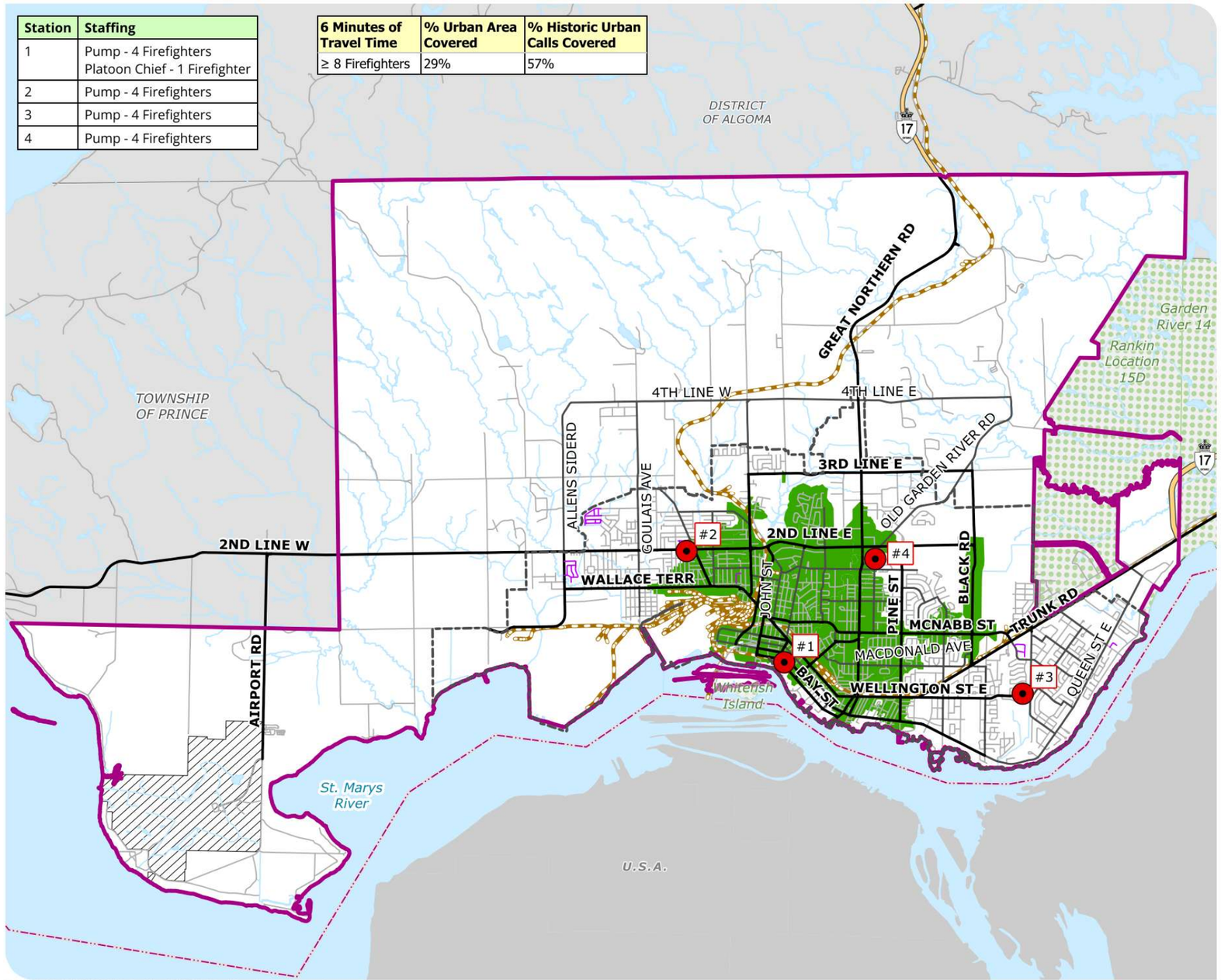
9.14.7 Future Option 3, Rural Response Demand

Figure 32 shows the future modelled response to the defined rural area (NFPA 1720 Rural Demand Zone) of six firefighters within 14 minutes of response time (turnout time + travel time). The figure predicts that SSMFS could respond with at least six firefighters within 14 minutes of response time to 18% of the rural roads and 56% of the historical emergency call locations in the rural area. This is the same area covered as existing conditions, and 1% improvement in historical call coverage.

Figure 30: Future Option 3, Second Arriving Apparatus

Station	Staffing
1	Pump - 4 Firefighters Platoon Chief - 1 Firefighter
2	Pump - 4 Firefighters
3	Pump - 4 Firefighters
4	Pump - 4 Firefighters

6 Minutes of Travel Time	% Urban Area Covered	% Historic Urban Calls Covered
≥ 8 Firefighters	29%	57%



CITY OF SAULT STE MARIE
FIRE MASTER PLAN

SECOND ARRIVING APPARATUS FUTURE

- Existing Fire Station
- Urban Settlement Boundary
- Proposed Road
- ≥ 8 Firefighters

Base Data

- City Boundary
- Expressway / Highway
- Arterial Road
- Collector Road
- Local Road
- Railway
- Airport
- Water Feature
- First Nation Reserve
- International Boundary

NFPA 1710
Minimum of 8 firefighters responding within 6 minutes, 90% of the time.

SCALE 1:80,000

0 1 2 4 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, CITY OF SAULT STE MARIE, ACORN INFORMATION SOLUTIONS

MAP CREATED BY: GM, Dillon Consulting Limited
MAP CHECKED BY: SCD, Tayport Limited
MAP PROJECTION: NAD 1983 UTM Zone 16N

PROJECT: 23-6393 STATUS: DRAFT DATE: 2024-09-16

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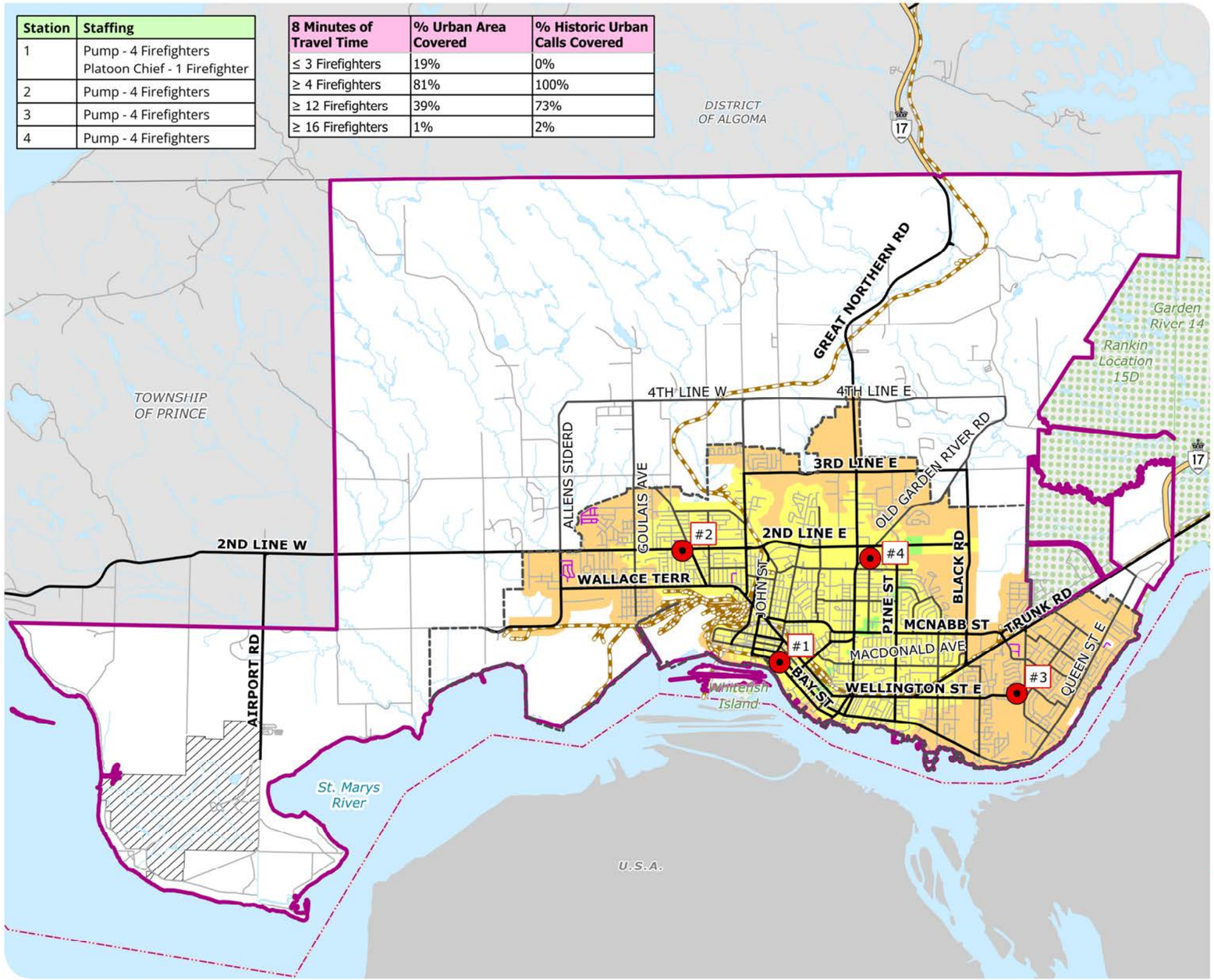
Figure 31: Future Option 3, Initial Full Alarm Assignment

Station	Staffing
1	Pump - 4 Firefighters Platoon Chief - 1 Firefighter
2	Pump - 4 Firefighters
3	Pump - 4 Firefighters
4	Pump - 4 Firefighters

8 Minutes of Travel Time	% Urban Area Covered	% Historic Urban Calls Covered
≤ 3 Firefighters	19%	0%
≥ 4 Firefighters	81%	100%
≥ 12 Firefighters	39%	73%
≥ 16 Firefighters	1%	2%



CITY OF SAULT STE MARIE
FIRE MASTER PLAN

INITIAL FULL ALARM ASSIGNMENT FUTURE

Existing Fire Station
Urban Settlement Boundary
Proposed Road

Number of Staff on Scene within 8 Minutes of Travel Time
≥ 4 Firefighters
≥ 12 Firefighters
≥ 16 Firefighters

Base Data
City Boundary
Expressway / Highway
Arterial Road
Collector Road
Local Road
Railway
Airport
Water Feature
First Nation Reserve
International Boundary

NFPA 1710 Depth of Response
14 Firefighters in 8 minutes of Travel Time, 90% of the time.

SCALE 1:80,000
0 1 2 4 km

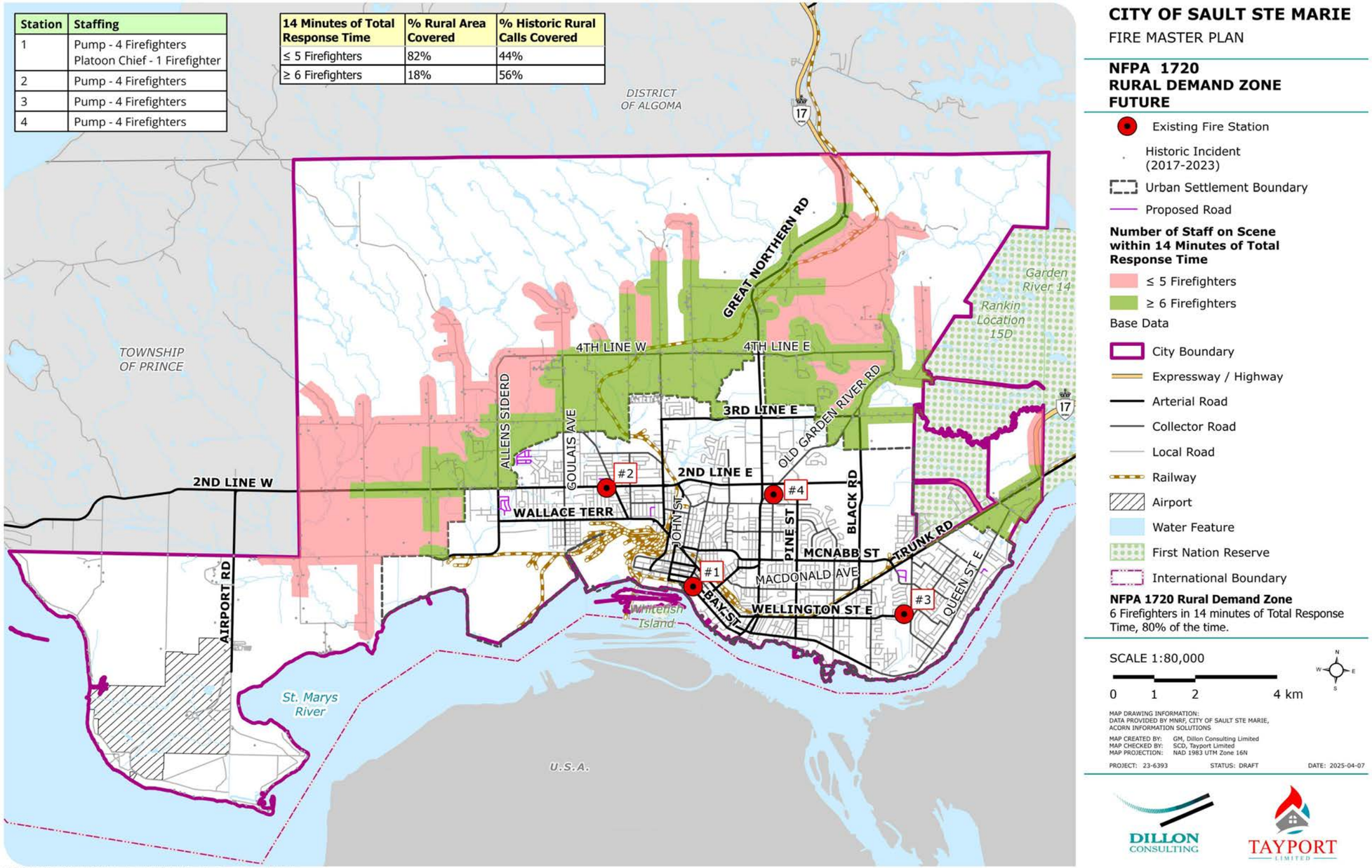
MAP DRAWING INFORMATION:
DATA PROVIDED BY MNRF, CITY OF SAULT STE MARIE, ACORN INFORMATION SOLUTIONS

MAP CREATED BY: GM, Dillon Consulting Limited
MAP CHECKED BY: SCD, Tayport Limited
MAP PROJECTION: NAD 1983 UTM Zone 16N

PROJECT: 23-6393 STATUS: DRAFT DATE: 2025-04-04

FILE LOCATION: K:\2023\236393\Product\Client\FMP\FMP\FMP.aprx\Initial Full Alarm Assignment Future

Figure 32: Future Option 3, Rural Demand Zone Response Capabilities



9.14.7.1 Future Options Summary, Staffing, and Recommendations

Table 30 summarizes the results of the emergency response capabilities analysis for the Future Options (1 to 3).

Future Option 1 maintains the status quo and does not increase staffing levels. The results of this option are comparable to existing conditions. Future Option 2 incrementally increases the minimum staffing levels to four firefighters on the frontline apparatus and Station 4, for a total minimum on-duty suppression staffing level of 16. This scenario improves the response of four firefighters on the initial arriving apparatus in the area surrounding Fire Station 4 and provides for the assembly of at least 16 firefighters on-scene, as per the staffing requirement of the NFPA 1710 Initial Full Alarm Assignment for fire suppression response to a Single-Family Dwelling.

In order to implement this scenario, SSMFS would need to add four firefighters to the Suppression Division's complement.

Future Option 3 increases the minimum staffing levels to four firefighters on the frontline apparatus at Station 3 and Station 4 (from Future Option 2), for a total minimum staffing level of 17. This scenario achieves a consistent response of four firefighters on the initial arriving apparatus across the City and provides for the assembly of at least 16 firefighters on-scene, as per the staffing requirement of the NFPA 1710 Initial Full Alarm Assignment for fire suppression response to a Single-Family Dwelling.

Option 3 results in significant improvement of the initial arriving apparatus response capabilities of the SSMFS, increasing the urban area coverage to 55% (an increase of 28% from existing) and increasing the historical calls (2017 to 2023) coverage to 84% (and increase of 34% compared to existing). The second arriving apparatus response capabilities increase modestly in this option, improving both the urban area coverage and historical call coverage by 7% to 29% and 57%, respectively. Option 3 results in 1% urban area and 2% historical call coverage when measured against the initial full alarm assignment performance measure to achieve 16 firefighters arriving on-scene within eight minutes of travel time.

In order to achieve these minimum staffing levels, SSMFS would need to add another four firefighters to the Suppression Division complement.

Based on the results of the Future Options (2 and 3), we recommend that the City consider incrementally increasing the minimum suppression staffing level of the frontline apparatus to reflect four firefighters at all four stations (adding one on-duty firefighter to Station 4 first, and then to Station 3). This would increase the minimum staffing complement of suppression staff from 15 to 17, including the Platoon Chief.

Implementing Options 2 and 3 requires adding a total of eight new firefighters to the Suppression Division's complement. It is understood that this results in a substantial impact on the SSMFS and overall City operating budget. In order to mitigate the budget pressures, SSMFS, with the support of Council, could consider:

Phasing in the staffing increase. The presentation of Future Option 2 and Future Option 3 assumes hiring is divided into increments of four fighters each year to smooth out the financial impact.

Another strategy is for the City to consider potential viable options for contracting communications/dispatch services from an outside agency and work with the local OPFFA to transfer the existing Communications staff to the Fire Suppression Division, thereby adding four firefighters to the Fire Suppression Division. This assumes another four new firefighters would then be hired to achieve the total of 8 new positions in the division.

Recommendation #43: That consideration be given to implementing Options 2 and 3 presented within the proposed FMP Update to increase the staffing of the frontline apparatus to four firefighters at all four existing fire stations.

Table 30: Summary of The Future Scenario Response Capabilities

Scenario	Minimum Suppression Staffing Level	Urban: Initial Arriving Company (4 firefighters arriving on-scene in 4 minutes or less 90% of the time)	Urban: Second Arriving Apparatus (8 firefighters arriving on-scene in 6 minutes or less 90% of the time)	Urban: Initial Full Alarm Assignment (16 firefighters arriving on-scene in 8 minutes or less 90% of the time)	Rural: (6 firefighters arriving on-scene in 14 minutes or less of response time 90% of the time)
Existing Conditions	15	27% of Urban Area 50% of Calls	22% of Area 50% of Calls	0% of Area 0% of Calls	18% Rural Area 55% of Calls
Future Option 1 – Status Quo	15	26% of Urban Area (modelled) 51% of Calls (modelled)	22% of Area (assumed, based on existing results) 50% of Calls (assumed, based on existing results)	0% of Area (assumed, based on existing results) 0% of Calls (assumed, based on existing results)	18% Rural Area (assumed, based on existing results) 55% of Calls (assumed, based on existing results)
Future Option 2 – Staff Station 4 with Four On-duty Firefighters	16	42% of Urban Area 69% of Calls	26% of Area 55% of Calls	1% of Area 2% of Calls	18% Rural Area 56% of Calls
Future Option 3 – Staff Stations 3 and 4 with Four On-duty Firefighters	17	55% of Urban Area 84% of Calls	29% of Urban Area 57% of Calls	1% of Urban Area 2% of Calls	18% Rural Area 56% of Calls

9.14.8 Support Depth of Response through Call-Back and Mutual Aid

The staffing recommendations within this FMP Update increase the minimum on-duty suppression staffing levels of SSMFS to 17. This meets the staffing component requirement of NFPA 1710 (2020 Edition) Initial Full Alarm Assignment for response to a Single-Family Dwelling. It is recognized, as detailed in the emergency response analysis and modelling, that SSMFS would only meet the staffing and time components of the performance measure.

In our opinion, this approach follows the industry best practice of continuous improvement. It also provides staffing levels that meet the critical task requirements for the most probable types of structure fire calls.

It should be noted that NFPA standards for initial full alarm assignments, such as those within NFPA 1720 have been revised several times in the recent past and are currently under review with a new version of the standard pending. As a result, this Fire Master Plan Update focuses on achieving consistent staffing of four firefighters on all initial responding apparatus, which has been a consistent best practice for several decades.

For the responses where more than 17 firefighters are required (e.g. low-rise apartment fire, high-rise fire, vulnerable occupancy fire, etc.) or in the event of simultaneous calls that exceed the capacity of the on-duty staffing SSMFS should be prepared and practiced to simultaneously initiate their call-back process and, when required, request mutual aid assistance from neighbouring fire services.

9.15 Fire Suppression Division Summary and Recommendations

SSMFS operates from four existing fire stations that are well-positioned to respond to the risks identified in the 2025 CRA.

This section presented the results of an analysis of historical call data for SSMFS from January 1, 2017 to December 31, 2023. The Fire Suppression Division review included an in-depth analysis of the department's emergency response capabilities using a GIS-based network analyst model. The analyses included consideration of existing conditions as well as planned future growth. The analysis of the department's existing emergency response capabilities identified an opportunity to enhance the department's initial arriving apparatus performance to align with industry best practices.

The emergency response analysis and fire suppression strategies and options presented within this section recognize that different firefighter deployments are required according to the fire risk present within certain building occupancy types. The risk-based methodology focuses on applicable performance measures based on the

initial response (initial responding apparatus and number of firefighters), depth of response (total number of firefighters responding), and rural response. Suppression and staffing options are presented for Council's consideration to continuously improve the response capabilities of the fire service, in comparison to industry performance measures and best practices.

9.15.1 Suppression Recommendations

Recommendation #37: That Council consider an amendment to the Establishing and Regulating By-law, along with the financial and operating impacts associated with providing rescue services to the trails systems in and around the City of Sault Ste. Marie, as identified in this Fire Master Plan Update.

Recommendation #38: That SSMFS provide a support role, only, when requested to respond to large industrial complexes, such as Algoma Steel.

Recommendation #39: That the SSMFS develop and implement a process to record, monitor and review vertical response performance for all emergency responses to incidents at high-rise buildings to inform future department planning.

Recommendation #40: That the City maintain the existing four-station model of emergency response to align with the needs and risks identified in the 2025 CRA**.**

Recommendation #41: That SSMFS continues to track, review and monitor overtime trends and costs to assess the suitability and need to increase the 'minimum staffing' to 'complement staffing' ratio from the existing 1.25 to the revised 1.33.

Recommendation #42: That the SSMFS investigate options to enhance the existing dispatch and turnout times as a strategy to further reduce the existing total response time of the SSMFS.

Recommendation #43: That consideration be given to implementing Options 2 and 3 presented within the proposed FMP Update to increase the staffing of the frontline apparatus to four firefighters at all four existing fire stations.

10.0 Mechanical Division – Fleet, Maintenance and Equipment

Our review of the Sault Ste. Marie's fleet and equipment replacement and operating procedures shows that they are in line with Ontario's current industry best practices. The SSMFS has well-maintained and well-functioning equipment and apparatus, with the oldest frontline apparatus being 16 years old. Three pumpers and an aerial are among the four frontline pieces of equipment that the SSMFS has. There are four reserve apparatus in addition to the front-line units: two tankers, one rescue, and one pumper.

The Ontario Fire Marshal's PFSG 04-07-12 refers to the NFPA 1901 Standard for Automotive Fire Apparatus (2009 Edition) as a reference for the standards that should be considered in determining the appropriate apparatus for a community. NFPA 1901 provides the following definitions of major fire apparatus:

- **Pumper:** Fire apparatus with a permanently mounted fire pump of at least 750 gallons per minute (3,000 litres per minute) capacity, water tank and hose body whose primary purpose is to combat structural and associated fires.
- **Initial Attack Apparatus:** Fire apparatus with a fire pump of at least 250 gallons per minute (1,000 litres per minute) capacity, water tank, and hose body whose primary purpose is to initiate a fire suppression attack on structural, vehicular, or vegetation fires and to support associated fire department operations.
- **Mobile Water Supply Apparatus (Tanker):** A vehicle designed primarily for transporting (pick-up, transporting, and delivering) water to fire emergency scenes to be applied by other vehicles or pumping equipment.
- **Quint:** Fire apparatus with a permanently mounted fire pump, a water tank, a hose storage area, an aerial or elevating platform with a permanently mounted waterway, and a complement of ground ladders.
- **Special Services Fire Apparatus:** A multipurpose vehicle that primarily provides support services at emergency scenes.

In addition to NFPA 1901 the industry commonly refers to the following types of major fire apparatus:

- **Rescue:** A vehicle specifically designed for the purposes of transporting specialized rescue equipment such as vehicle extrication equipment, water/ice rescue equipment, hazardous materials equipment, and additional fire

suppression support equipment such as additional self-contained breathing apparatus.

- **Pump/Rescue:** A vehicle that combines the traditional functions of a pumper and a rescue apparatus into one multi-functional apparatus.
- **Aerial Device:** A vehicle equipped with an aerial device, elevating platform, or water tower that is designed and equipped to support firefighting and rescue operations by positioning personnel, handling materials, providing continuous egress, or discharging water at positions elevated from the ground.

Table 31 represents the current frontline apparatus operating within the SSMFS and the current forecasted replacement year.

Table 31: Front-Line Fire Apparatus

Fleet Number	Station	Vehicle Description	Year Purchased	Forecasted Replacement Date
P1	Station 1	Smeal Rescue Pumper	2015	2027
P2	Station 2	Smeal Rescue Pumper	2009	2027
P3	Station 3	Smeal Rescue Pumper	2010	2027
P4	Station 4	Smeal 75'Aerial/Pumper	2014	2029

10.1 Service Ready Fleet Considerations

Maintaining a fleet of service ready fire apparatus reflects current industry best practices and is supported by the Fire Insurance Underwriters as due diligence on behalf of the municipality. Maintaining a sufficient number of reserve apparatus in good working condition is critical in the event of multiple frontline apparatus breakdowns, or in the event of a major incident where additional apparatus may be required to be pressed into service to maintain an adequate level of fire suppression services to the rest of the municipality.

The SSMFS currently has a fleet replacement plan based on a twenty-year capital budget cycle where the frontline apparatus is scheduled for replacement at the 20-year mark and then they placed into the reserve status.

The existing reserve apparatus within the SSMFS fleet are described below in **Table 32.**

Table 32: Service Ready Major Fire Apparatus

Fleet Number	Location	Vehicle Description	Year
P5	Station 4	Freightliner Pumper	2000
A1	Station 1	Smeal Aerial Platform 100’	2003
T1	Station 2	Spartan/Dependable Tanker	2022
RTC 1	Station 4	Ford Tanker (1600 gal.)	1994
R1	Station 1	International Rescue	2022
CM1	Station 1	Forest River Command Vehicle	2020

Currently, the P5 is pressed into service when a front-line unit is scheduled for service or when there is a mechanical breakdown. Aerial 1 (A1) and Rescue 1 (R1) are service-ready (not staffed) apparatuses which are utilized as required for emergency response at the discretion of the Platoon Chief. If it is determined they are required, either of these two apparatuses, a second or third arriving apparatus, will stop at the station housing the aerial or rescue and bring it to the scene.

RTC 1 is a tanker apparatus assigned to the RTC, which is currently 31 years old and is pressed into front-line service when the department experiences a number of out-of-service vehicles which exceed their service-ready units. This can be problematic on two fronts, firstly the age of the apparatus is outside the recommended standard for a fire apparatus as outlined by the Fire Service Underwriters, and secondly the unit is assigned to the RTC which could have a course running which requires the use of the apparatus, thus impacting the course and the students who may be from other municipalities.

10.2 Replacement Plan

Fleet lifecycle planning is a core component of the capital planning process and a best practice for fleet replacement for a municipality in Ontario. This assists in maintaining compliance with **O. Reg. 588/17 – Asset Management Planning for the Municipal Infrastructure**.

The Fire Underwriters Survey (FUS) requires that all major fire apparatus meet either the Underwriters Laboratory of Canada standard Underwriters Laboratory of Canada

(ULC) – S515 – 04 or the NFPA 1901 – Standard for Automotive Fire Apparatus. FUS identifies the following major fire apparatus replacement guidelines:

Major Cities: 12 to 15 years, with an additional five years in reserve.
Medium-Sized Cities: 15 years, with an additional five years as a backup, and five years in reserve; and
Small Municipalities: 20 years, with an additional five years second line or reserve.

FUS defines a medium-sized city as “an incorporated or unincorporated community that has: a populated area (or multiple areas) with a density of at least 200 people per square kilometre; and a total population of 30,000 – 99,999. The City of Sault Ste. Marie meets the criteria for a “medium City,” and with their current replacement life cycle for fire apparatus, they are meeting industry best practices.

In reviewing historical call volumes in Sault Ste. Marie (2012 to 2023), SSMFS experienced a 10.1% increase in emergency call volume from 2012 to 2019. A significant decrease in calls occurred in 2020 and 2021, which can be attributed to the unique circumstances of the COVID-19 pandemic, resulting in two abnormal years of call volume. Following the pandemic, the responses to medical calls have not reflected pre-pandemic conditions. This has resulted in an average call volume of 2,249 calls between 2022 and 2023. For some types of medical calls, the fire service has not been called to respond in 2022 and 2023, where they were previously responding prior to March 2020. As call volumes return to normal, the SSMFS's frontline equipment will be subjected to more wear and tear.

The complexity of the more recent modern fire apparatus, together with an increase in call volume, will drive the requirement for increased regular maintenance and the possibility of additional breakdowns. A best practice for Sault Ste. Marie will be to maintain the “medium city” replacement schedule as outlined by FUS (above) for additional front-line apparatus, which in turn will increase the number of service-ready apparatus over time to ensure they are prepared to manage the out-of-service frequencies they experience today and will occur in the future. It is recommended that the SSMFS increase the number of service ready pumpers to ensure they can maintain the approved service levels Council has set for the community.

As the City of Sault Ste. Marie grows, and call volumes continue to increase, it is recommended that the City of Sault Ste. Marie monitors the fleet-associated maintenance and repair budgets for continuous increases of maintenance associated with increased mileage of front-line apparatus to determine if Sault Ste. Marie may need to make adjustments to their replacement schedule based on excessive wear and tear on certain individual fire apparatus.

Recommendation #44: That the City and SSMFS maintain the replacement of front-line apparatus to reflect the FUS Medium City apparatus schedule as identified in this FMP Update.

Recommendation #45: That the City of Sault Ste. Marie monitors the kilometres, maintenance, and repair budgets of the fleet to determine if adjustments in the replacement schedule are required.

10.3 Small and Specialized Vehicles

A number of small and specialty vehicles are operated by the SSMFS in addition to the large fleet of fire apparatus. This covers vehicles for training and fire prevention personnel, support vehicles for suppression, and administration personnel (Fire Chief and Deputy Fire Chiefs).

Table 33 identifies the small and specialized vehicles of the SSMFS.

Table 33: Current Small and Specialized Vehicles

Fleet Number	Division	Vehicle Description	Year Purchased
C1	Administration	GMC Acadia	2012
C2	Administration	Kia Sorento	2017
PC1	Suppression	Chevrolet Silverado 2500	2022
S3	Support Services	GMC 4x4 Pick up	2004
S1	Support Services	Ford F150 4x4 Pick Up Truck	2011
S2	Support Services	Chevy 3500 Express Cut Away	2010
EM1	Emergency Management	Hyundai Tucson	2017
EOC1	Emergency Management	Toyota Corolla	2008
TR1	Training	Ford F250 4x4 Pick Up Truck	2017
FP1	Fire Prevention	Chev Equinox	2014
FP2	Fire Prevention	Ford EcoSport SE	2021
FP3	Fire Prevention	Kia Seltos	2021
FP4	Fire Prevention	Ford Ecosport SE	2022
FP5	Fire Prevention	Ford EcoSport SES	2022
FP6	Fire Prevention	Ford F150 4x4 Pick Up Truck	2017

Fleet Number	Division	Vehicle Description	Year Purchased
FP7	Fire Prevention	GMC Sierra K2500 4x4 c/w cap	2011
WR1	Suppression	Husky Airboat	2000
TRL1	Suppression	Tipping Trailer w/Electric Winch – transports WR1	1997
TRL3	Mechanical	Lawnmower Utility Trailer	2014
TRL4	Suppression	Haulmark Hazmat / Ice Water Res. Trailer	2004
TRL5	Suppression	Cargo Hazmat Trailer (CRBN-Regional)	2007

10.4 Fleet Maintenance

Emergency Vehicle Technicians (EVTs) from Fire Station 4 are responsible for maintaining the SSMFS's vehicles and fire apparatus, as well as the 23 Emergency Medical Service ambulances. For SSMFS, the Mechanical Division is in charge of fleet acquisition and disposal, parts and inventory, storage and distribution, and vehicle and equipment maintenance.

Fire Station 4, located at 65 Old Garden Road, is home to the SSMFS Mechanical Division. The EVT workspace features two drive-through bays, a back-in bay, and two bays equipped with hoists: one for raising smaller fleet vehicles (bay 8) and one for heavy fire apparatus (bay 10). The building has shared office space for the three EVTs. The Mechanical Division's area also houses parts storage. The Assistant Chief works in an office in Fire Station 1.

The EVT mechanics' current work schedule allows for coverage during the weekdays. For mechanical support to address problems outside of regular business hours and on weekends, the Assistant Chief contacts technicians to request their availability.

The Mechanical Division is responsible for the inspection, maintenance and repairs of all fire service pumpers, squads, rescues, aerials, and other fire apparatus, the 23 EMS units, as well as the small fleet vehicles used by non-suppression division personnel. Additional responsibilities of the Mechanical Division to support the fire services are:

- Ordering/returning mechanical parts and supplies.
- Creating and documenting manual work orders for the Fire Services/EMS and Ministry of Health (MOH)/CACC for billing purposes.
- Inventory and parts control.

- Providing stores supply services for the fire station's janitorial and other station needs.
- Coordinating the SCBA and bunker gear maintenance programs.
- Coordinating the maintenance and repair of the department's landscaping equipment (garden tractors/push mowers/grass trimmers).

From our research and interviews conducted, the workload for the EVTs' current repairs and maintenance is difficult to manage because it frequently exceeds the three mechanic roles that are available. With the expansion of the fire department and EMS fleet, this difficulty is only anticipated to get worse. The complexity of modern fire apparatus and EMS ambulances is causing more downtime and maintenance requirements overall. This is happening right now in Sault Ste. Marie. It's critical to continuously assess the division's workload and how it affects when repairs and maintenance are performed.

Currently, the SSMFS is also responsible for several fleet-related tasks.

The Assistant Chief oversees the outsourcing of various equipment and apparatus related tasks, including service, inspection, and testing. Among the most significant outsourced services are:

- Developing fire apparatus specifications for Tender or Request for Proposal (RFP).
- Review and approval of invoices from Support Services Mechanical Division.
- Co-ordination of ground ladder, aerial ladder testing.
- Co-ordination of annual pump testing; and
- Coordination of vehicle rust proofing.
- Ordering the replacement of fire specific equipment for suppression and training apparatus.
- Arranging equipment repair, both small equipment and large equipment.
- Coordinating annual service for heavy hydraulic tools.
- Overseeing the scheduled maintenance of station emergency generators; and
- Providing fire-related stores provisions for the department.

In our opinion, the Mechanical Division's workload has increased significantly. EMS's fleet has grown from ten ambulances in 2018 to 26 in 2025. The SSMFS Mechanical Division maintains all of the EMS Ambulances, which require additional qualifications to work on. Apart from the increased EMS workload, the complexities of the modern fire apparatus have shown that they require more downtime for maintenance and/or repairs. As a result of the amount and speed of growth of the EMS fleet and the resulting

increased maintenance needs, these services should be reviewed by the SSMFS and the Mechanical Division.

A task/time analysis would be beneficial to SSMFS in order to determine the division's overall workload in comparison to what an EVT can achieve on any given day, month, or year. The results should provide the SSMFS with options for a future plan for the Mechanical Division. Possible solutions could include, for example, outsourcing some mechanical work (where feasible), outsourcing EMS maintenance, or increasing the EVT FTE count to handle the present and future workload. It is recognized that due to down time and specific requirements of EMS equipment, sourcing out repairs could be challenging/limited. This study will be helpful as the City of Sault Ste. Marie proactively plans and manages the present and future maintenance requirements of the fire fleet and equipment. In conclusion, this is being motivated by:

- the growth of the fire department to meet the growth in the community.
- The significant increase in the EMS fleet and subsequent maintenance requirements.
- the ageing of the fleet due to wear and tear resulting from increased call volume; and
- the maintenance of modern-day fire apparatus increasingly becoming more complex due to computerization and potential 'greening' of the fire fleet.

Recommendation #46: That the maintenance services provided by the Mechanical Division for the EMS fleet be reviewed by SSMFS.

Recommendation #47: That the SSMFS consider performing a time-task analysis of the Mechanical Division's workload to identify options for the future of the SSMFS Mechanical Division.

10.5 Equipment

As a large modern fire department, the Sault Ste. Marie Fire Department needs a wide range of equipment, including automobile extrication tools, ladders, SCBA firefighting hoses and nozzles, firefighter protective clothing (bunker gear), and numerous specialized pieces needed for the specialized rescue services offered. The Assistant Chief of Support Services has the responsibility for the acquisition of and maintenance of firefighting equipment. The SSMFS has established a number of standard operating guidelines related to the operation, maintenance and testing of equipment. SOG 400-1 Removing Defective or Broken Equipment from Service identifies the procedure to document the inspection as well as the fault reporting process to address the problem(s) or concern(s) with a piece of equipment or apparatus.

NFPA 1851 Standard on Selection, Care, and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting (2019) will be combined with NFPA 1850 and NFPA 1852 as part of the standards consolidation process. The recommended practice identified within the standard requires maintenance and cleaning of bunker gear to occur twice per year. Furthermore, the standard specifies the use of an extractor for gear cleaning (technical requirements set forth in NFPA 1851). The annual cleaning, testing, repair, and certification of Sault Ste. Marie's bunker gear is contracted to an independent organization, and bunker gear maintenance is ongoing throughout the year. Currently, each firefighter in Sault Ste. Marie is given two sets of bunker gear, which are rotated out of use every ten years. Standard Operating Guide SOG 100-05: The Inspection and Maintenance of PPE outlines the process to be followed for inspecting personal protective equipment three times per year. SOG 100-05 also identifies the in-house cleaning procedures and the process for sending the PPE out for repairs and annual certification.

10.6 Records Management

The SSMFS manages daily apparatus checks manually and submits reports to support services to record their start-of-shift inspection in accordance with Schedule 1 **O. Reg. 199/07** and to record any problems discovered during the apparatus inspection check. Deficiencies are communicated from Suppression Staff to Support Services to arrange for an EVT to address the issue. Paper work orders are used to identify and track the repairs.

It would be advantageous to implement an electronic work order system to increase efficiency and eliminate the outdated paper-based order system. For smooth one-stop recording of fire/EMS apparatus and equipment defects, it is advised that the SSMFS investigate and take into consideration a work order software solution.

Recommendation #48: That SSMFS consider a software solution for the Mechanical Division to automate the work order process as identified in this FMP Update.

10.7 Fleet and Equipment Summary and Recommendations

The SSMFS has created a fleet of modern firefighting equipment with Council support that considers the community's fire risks. Options for consideration that will further improve the effectiveness and efficiency of the SSMFS's capabilities are included in this FMP Update.

10.7.1 Mechanical Recommendations

Recommendation #44: That the City and SSMFS maintain the replacement of front-line apparatus to reflect the FUS Medium City apparatus schedule as identified in this FMP Update.

Recommendation #45: That the City of Sault Ste. Marie monitors the kilometres, maintenance, and repair budgets of the fleet to determine if adjustments in the replacement schedule are required.

Recommendation #46: That the maintenance services provided by the Mechanical Division for the EMS fleet be reviewed by SSMFS.

Recommendation #47: That the SSMFS consider performing a time-task analysis of the Mechanical Division's workload to identify options for the future of the SSMFS Mechanical Division.

11.0 Summary of Recommendations

Recommendations can be administered and implemented by the Fire Chief through the authority delegated to this position. In some cases, this may require the Fire Chief to prepare further documentation and internal reporting to Council for approval. An example of this is updating the current Establishing and Regulating By-law. This is a process that can be led by the Fire Chief, and senior corporate staff, and through normal reporting, be brought to Council for consideration and approval. The timing and costing associated with implementing the operational recommendations will be developed and incorporated within the Fire Chief's Work Plan.

A compiled list of the FMP Update Recommendations is listed below.

Recommendation #1: That the strategic priorities identified within the proposed Fire Master Plan Update be adopted to form the strategic framework for the delivery of fire protection services within the City of Sault Ste. Marie including:

i. **The use of a Community Risk Assessment in determining the level of existing fire safety risks within the City as the basis for developing clear goals and objectives for all fire and emergency services to be provided by the Sault Ste. Marie Fire Services.**

ii. **The optimization of the first two lines of defence, including public education and fire prevention, and the use of fire safety standards and fire code enforcement to provide a comprehensive fire protection program within the City based on the results of the Community Risk Assessment; and**

iii. **Emphasis on strategies, such as continuous improvement, that support the sustainability of fire and emergency services that provide the most effective and efficient level of fire protection services, resulting in the best value for the community.**

Recommendation #2: That the current job description for the Fire Chief be reviewed and updated as referenced in the proposed Fire Master Plan Update.

Recommendation #3: That the current job descriptions of the Fire Chief, Deputy Fire Chiefs, and the Assistant Chief be reviewed and updated to reflect the redistribution of responsibilities as referenced in the proposed Fire Master Plan Update.

Recommendation #4: That subject to Council's consideration and approval of the proposed Fire Master Plan Update that the Establishing and Regulating By-law be reviewed, updated and presented to Council for approval.

Recommendation #5: That the Fire Chief be directed to implement a regular process for the review of all applicable fire protection services by-laws.

Recommendation #6: That the Fire Chief assess the agreements and bylaws in effect, to ensure they reflect the current situation and establish a review cycle for future reviews.
Recommendation #7: That the Fire Chief works with the District of Algoma Fire Chiefs to update the Mutual Aid Plan, and once completed, the Fire Chief revise the By-law authorizing participation in the District of Algoma Mutual Aid Plan for Council's consideration.

Recommendation #8: That a review of the current Procedures and Guidelines be undertaken to realign with industry best practices as identified in this Fire Master Plan Update.

Recommendation #9: That the Fire Chief prepare a report for Council's consideration and approval, which identifies Key Performance Indicators (KPIs) for all divisions within the SSMFS, and that the Fire Chief report on the KPIs to Council on a regular basis for review.

Recommendation #10: That the SSMFS continue to present an Annual Report to Council and the community, including the findings of an annual review of the Community Risk Assessment.

Recommendation #11: That the City of Sault Ste. Marie review the capacity and workload of all Emergency Management positions.

Recommendation #12: That the City of Sault Ste. Marie require all City-wide departments to prepare Business Continuity Plans.

Recommendation #13: That the City of Sault Ste. Marie update the City's floodplain mapping as part of the next Hazard Identification and Risk Assessment (HIRA) review process.

Recommendation #14: That the SSMFS proactively distribute disaster planning preparedness information through its Home Smoke Alarm Program.

Recommendation #15: That SSMFS develop and present for Council's consideration and approval a Fire Prevention Policy along with the recommended revision of the Establishing a Regulating By-law as identified in this FMP Update.

Recommendation #16: That the proposed fire inspection cycle be adopted by SSMFS through inclusion in the Council-Approved Fire Prevention Policy and be implemented by SSMFS.

Recommendation #17: Review the User Fees and Service Charges for Fire Prevention Inspections annually, and update as required, as identified in this Fire Master Plan Update.

Recommendation #18: That SSMFS develop a Standard Operating Guideline which outlines the department's expectations for fire investigation/explosion procedures.

Recommendation #19: That SSMFS perform an annual review of the previous year's fire investigation causes for all fires and incorporate any themes into their public education program.

Recommendation #20: That the SSFMS review the "identified risks" and "key findings" summarized in the Community Risk Assessment and prioritize the relevant occupancies for the pre-plan program.

Recommendation #21: That the Sault Ste. Marie Fire Service work with the City's Building Department to collect information on buildings constructed with lightweight construction.

Recommendation #22: That the SSMFS continue to work with community partners to develop public education and fire prevention programs to address the growing immigrant population in the City of Sault Ste. Marie.

Recommendation #23: That SSMFS undergo a workload/staff analysis related to the implementation of fire education and inspection programs as outlined in the 2019 edition of the NFPA 1730.

Recommendation #24: That SSMFS hire a second FPO in the downtown core area to increase inspection and enforcement initiatives, if the need is confirmed by the results of the workload/staff analysis.

Recommendation #25: That the Fire Chief prepare a report for Council's consideration and approval identifying the levels of specialty services to be

offered post July 1, 2028, along with the necessary budgetary requirements to provide said services.

Recommendation #26: That the SSMFS continue the partnership with the OFC to provide NFPA Pro-Qual training courses through their established RTC.

Recommendation #27: That the SSMFS review and revise the job description for the Training Officer as recommended in this Fire Master Plan Update.

Recommendation #28: That SSMFS review and revise Operating Guideline 1500-06 as outlined in this Fire Master Plan Update.

Recommendation #29: That the SSMFS actively participate with the Central Ambulance Communication Centre (CACC), EMS, and the Ministry of Health and Long-Term Care in the decision-making process with respect to the types of emergency medical calls the fire service will respond to after the MPDS system is implemented.

Recommendation #30: That SSMFS performs a review of their Incident Management System Operating Guidelines as identified in this Fire Master Plan Update.

Recommendation #31: That the SSMFS consider formalizing its Senior Officer succession plan to guide the career development of members seeking advancement to the senior leadership positions within the SSMFS.

Council Recommendation #32: That SSMFS hire one additional Training Officer as identified in this Fire Master Plan Update.

Recommendation #33: That the SSMFS review and update the Respiratory Protection Program as identified in this Fire Master Plan Update.

Recommendation #34: That the SSMFS establish KPIs for the operation of the Communications Centre in alignment with NFPA 1225.

Recommendation #35: That SSMFS monitor the workload and capacity of the communications operators during and following the transition to NG 911.

Recommendation #36: That Sault Ste. Marie Fire Service implement a training and testing process for all new communication operators/firefighters, when it becomes available from the OFM, to meet the requirements of the certification process outlined in O. Reg 343/22.

Recommendation #37: That Council consider an amendment to the Establishing and Regulating By-law, along with the financial and operating impacts associated with providing rescue services to the trails systems in and around the City of Sault Ste. Marie, as identified in this Fire Master Plan Update.

Recommendation #38: That SSMFS provide a support role, only, when requested to respond to large industrial complexes, such as Algoma Steel.

Recommendation #39: That the SSMFS develop and implement a process to record, monitor and review vertical response performance for all emergency responses to incidents at high-rise buildings to inform future department planning.

Recommendation #40: That the City maintain the existing four-station model of emergency response to align with the needs and risks identified in the 2025 CRA.

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Recommendation #42: That the SSMFS investigate options to enhance the existing dispatch and turnout times as a strategy to further reduce the existing total response time of the SSMFS.

Recommendation #43: That consideration be given to implementing Options 2 and 3 presented within the proposed FMP Update to increase the staffing of the frontline apparatus to four firefighters at all four existing fire stations.

Recommendation #44: That the City and SSMFS maintain the replacement of front-line apparatus to reflect the FUS Medium City apparatus schedule as identified in this FMP Update.

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Recommendation #46: That the maintenance services provided by the Mechanical Division for the EMS fleet be reviewed by SSMFS.

Recommendation #47: That the SSMFS consider performing a time-task analysis of the Mechanical Division's workload to identify options for the future of the SSMFS Mechanical Division.

Appendix A

Fire Service Establishing and Regulating By-Law (By-Law 2024-148/2020-211 Amended)

THE CORPORATION OF THE CITY OF SAULT STE. MARIE

BY-LAW 2024-148

FIRE SERVICES: A by-law to amend By-Law 2020-211 (being a by-law to re-establish and regulate a fire service for the City of Sault Ste. Marie).

THE COUNCIL of the Corporation of the City of Sault Ste. Marie, pursuant to Section 9 of the *Municipal Act, 2001, S.O. 2001, c. 25,* as amended, **ENACTS** as follows:

1. **BY-LAW 2020-211 AMENDED**

By-law 2020-211 is amended as follows:

a) Removing Section 14 RECOVERY OF COSTS – ADDITIONAL EXPENSES and replacing it with:

"14. RECOVERY OF COSTS – ADDITIONAL EXPENSES

14.1 The Fire Chief may require occupancy owners or persons within or outside the municipality to pay costs or fees for fire and emergency response or other administrative services provided to them.

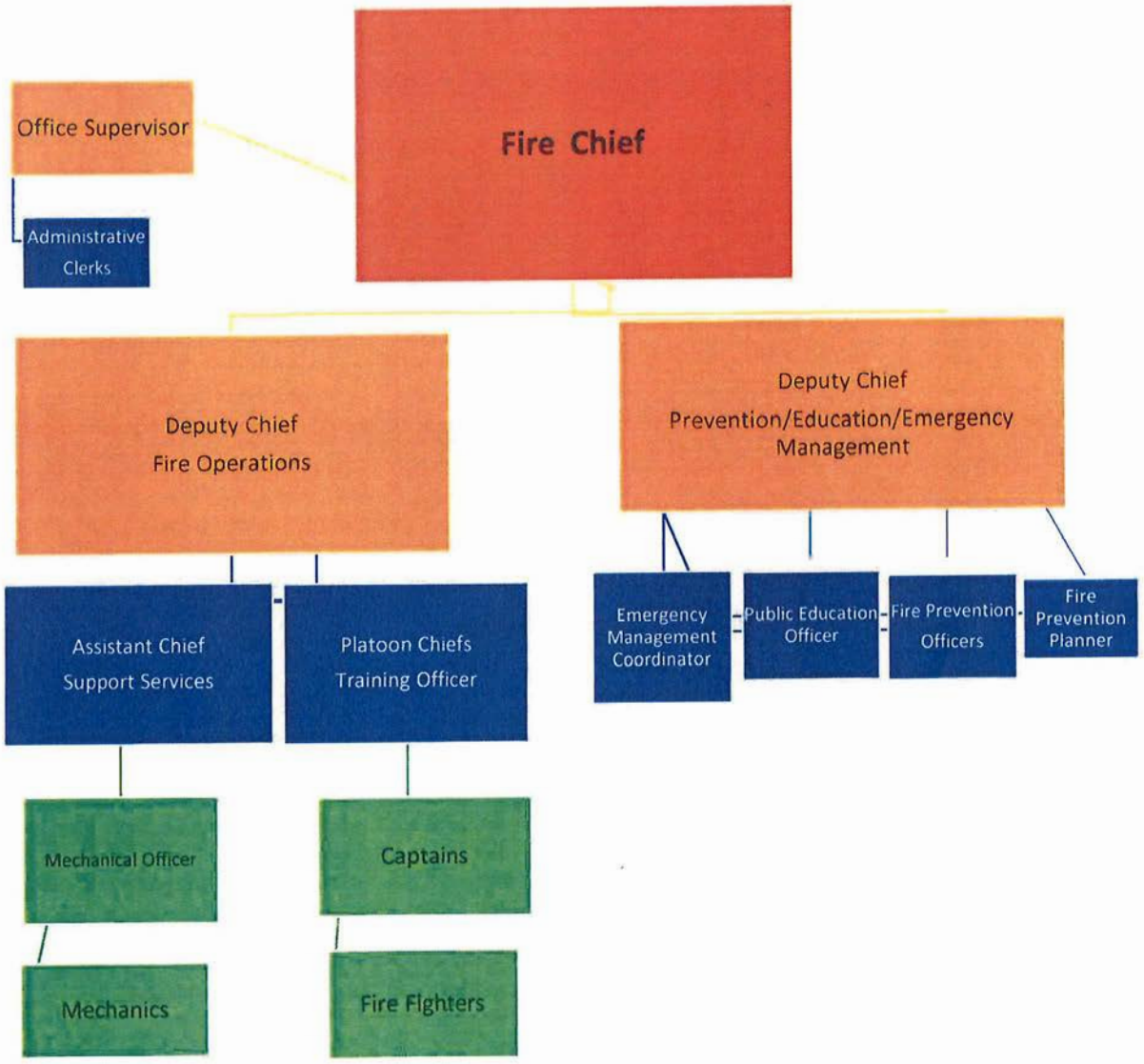
14.2 If as a result of a Fire Department response to a fire or emergency incident, the Fire Chief determines that it is necessary to incur additional expenses, retain a private contractor, rent special equipment not normally carried on a fire apparatus or use more materials than are carried on a fire apparatus (the "Additional Service") in order to suppress or extinguish a fire, preserve property, prevent a fire from spreading, control and eliminate an emergency, carry out or prevent damage to equipment owned by or contracted to the Corporation, assist in or otherwise conduct fire cause investigation or determination or otherwise carry out the duties and functions of the Fire Department and/or to generally make "safe" an incident or property, the owner of the property requiring or causing the need for the Additional Service or expense shall be charged the full costs to provide the Additional Service including all applicable taxes. Property shall mean personal and real property.

14.3 Invoicing for response services or recovery of fees in section 14.1 and 14.2 of this By-law shall be conducted in accordance with the City's User Fees and Charges By-law, as amended, and are payable to 'The Corporation of the City of Sault Ste. Marie'.

14.4 If costs or expenses are assessed against an Owner under this By-law, the City shall deliver an invoice to each such Owner and the Owner shall pay the fee within thirty (30) days of receipt of the invoice or as may be otherwise specified on

APPENDIX "B" TO BY-LAW NO. 2020-211

Sault Ste. Marie Fire Service Organizational Chart



CITY OF SAULT STE. MARIE
BY-LAW NO. 2020-211

FIRE: (F2) A By-law to re-establish and regulate a Fire Service for the City of Sault Ste. Marie and to repeal By-law 2001-80.

WHEREAS the Municipal Act, 2001, S.O. 2001, c.25, as amended ("Municipal Act"), provides that a municipality has the capacity, rights, powers and privileges of a natural person for the purpose of exercising its authority under the Act;

AND WHEREAS the Municipal Act provides that sections 8 and 11 shall be interpreted broadly so as to confer broad authority on municipalities to (a) enable municipalities to govern their affairs as they consider appropriate and, (b) enhance their ability to respond to municipal issues;

AND WHEREAS the Fire Protection and Prevention Act, 1997, S.O. 1997, c.4, as amended ("FPPA"), requires every municipality to establish a program in the municipality which must include public education with respect to fire safety and certain components of fire prevention and to provide such other Fire Protection Services as it determines may be necessary in accordance with its needs and circumstances;

AND WHEREAS the FPPA permits a municipality, in discharging these responsibilities, to establish a fire department;

AND WHEREAS the FPPA permits a Council of a municipality to establish, maintain and operate a Fire Department for all or any part of the municipality;

AND WHEREAS the FPPA requires a municipality that establishes a Fire Department to provide fire suppression services and permits the Fire Department to provide other Fire Protection Services in the municipality;

AND WHEREAS the FPPA requires a municipality that establishes a Fire Department to appoint a Fire Chief;

AND WHEREAS the FPPA authorizes a council of a municipality to pass by-laws under the FPPA to regulate fire prevention, to regulate the setting of open-air fires and to designate private roads as fire routes.

NOW THEREFORE THE COUNCIL FOR THE CORPORATION OF THE CITY OF SAULT STE. MARIE ENACTS AS FOLLOWS:

1. DEFINITIONS

1.1 In this By-law:

a) "Approved" means approved by Council;

b) "Automatic Aid" means any agreement under which a municipality agrees to provide an initial response to fires, rescues and emergencies that may occur in a part of another municipality where a fire department is capable of responding more quickly than any fire department situated in the other municipality; or a municipality agrees to provide a supplemental response to fires, rescues and emergencies that may occur in a part of

q) "Fire Marshall" means the Office of the Fire Marshal and Emergency Management, a position with specific authorities and responsibilities under the FPPA, including ensuring that fire departments throughout Ontario provide adequate levels of service to their communities, providing support to fire departments, and administering the FPPA. Also identified as the Office of the Fire Marshal;

r) "FPPA" means the Fire Protection and Prevention Act, 1997, S.O. 1997, c.4, as may be amended from time to time, or any successor legislation, and any regulation made thereunder;

s) "Fire Protection Agreement" is a contract between municipalities, other agencies, individuals, or a company that clearly defines the responsibilities, terms, conditions, and all other aspects of the fire services purchased, provided and/or required;

t) "Fire Protection Services" means and includes the activities defined in the FPPA, and includes fire suppression, fire prevention, fire safety education, communications and support services, administration services, training of persons involved in the provision of Fire Protection Services, rescue and emergency services and the delivery of all those services;

u) "Human Resources Division" means the Human Resources Division within the Corporation;

v) "Limited Services" means a variation of services significantly differentiating from the norm as a result of extenuating circumstances, such as environmental factors, obstructions, remote properties, private road ways, lanes and drives;

w) "Member" means any firefighter defined in Part I of the FPPA and/or any person employed in or appointed to the Fire Department and assigned to undertake Fire Protection Services;

x) "Mutual Aid" means a program to provide/receive assistance in the case of a major emergency in a municipality, community or area where resources in a municipality, community or area have been depleted and where agreements have been reached, but does not include Automatic Aid;

y) "Officer" means any member with the rank of Captain or higher;

z) "Property" means any real property located within the geographical boundaries of the City of Sault Ste. Marie, including buildings, structures, and erections of any nature and kind in or upon such lands, but excludes real property owned by the Crown either Federally or Provincially;

aa) "Property Owner" means the registered owner of property or any person, firm or corporation having control over or possession of the property or any portion thereof, including a property manager, mortgagee in possession, receiver, manager, trustee, or trustee in bankruptcy; and

bb) "Specialized Emergency Responses" means hazardous materials mitigation and rescue, water/ice rescue, high/low angle rescue, confined space rescue, trench and machine rescue.

4.4 All appointments, promotions, demotions, and retirements shall be reported to the Human Resources Division by the Fire Chief.

5. TERMS AND CONDITIONS OF EMPLOYMENT

5.1 Subject to the FPPA and applicable Collective Agreement(s), the remuneration and other terms and conditions of employment or appointment of the Members and administrative support staff that comprise the Fire Department shall be determined by Council or by the CAO acting in accordance with policies and programs established or approved by Council.

6. ORGANIZATION

6.1 The Fire Department shall be organized into Divisions such as Administration, Operations, Support Services, Training, Fire Prevention and Public Education and Emergency Management.

6.2 The Fire Chief, with prior approval of the CAO, may re-organize or eliminate Divisions or establish other Divisions or may do all or any of these things or any combination of them as may be required to ensure the proper administration and efficient operation of the Fire Department and the effective management of Fire Protection Services for the Corporation.

6.3 The Fire Chief may assign or re-assign such Members to a Division to assist in the administration and operation of that Division in accordance with the Collective Agreement.

6.4 The Fire Department Organizational Chart is set out in Appendix "B" to this By-law.

7. CORE SERVICES

7.1 The Core Services of the Fire Department shall be those contained in Appendix "C" to this By-law. In the event Sault Ste. Marie Fire Services is requested for Emergency Responses outside of the Core Services detailed in "Appendix C" item 3.(b), the level of service provided by Sault Ste. Marie Fire Services will reflect the definition of "Awareness Level" defined in Appendix C item 3.(a).

7.2 Due to the topographic and geographic configuration of the municipality, the level and amount of equipment at the Fire Department's disposal, budgetary constraints, the existence of unsafe conditions encountered en route, impeded access to property, environmental factors/constraints, structural integrity and/or the overall magnitude of an incident, the Core Services listed in Appendix "C" of this By-law may be provided as Limited Services.

7.3 The Office of the Fire Marshal and Emergency Management Academic Standards and Evaluation Standardized Curriculum, based on internationally recognized, competency based International Fire Service Accreditation Congress (IFSAC) and/or Professional Qualification Standards (ProBoard) through the National Fire Protection Association Standard (NFPA), and other related industry training standards and reference materials may be used as reference guides for Fire Department training as approved by the Fire Chief. Training will comply with the Occupational Health and Safety Act, R.S.O. 1990, c.O.1 as may be amended from time to time, or any successor legislation, and any regulation made thereunder.

7.4 Nothing in this By-law will restrict the Fire Department to providing only Core Services or limit the provision of Fire Protection Services.

8.3 The Fire Chief shall be responsible for the administration and enforcement of this By-law and all general orders, policies, procedures, rules and regulations made under this By-law and for the enforcement of any other By-laws of the Corporation respecting Fire Protection Services as set out in Appendix "D" to this By-law, and shall review periodically such By-laws, including this By-law, and shall recommend to Council such amendments as the Fire Chief considers appropriate and, in the case of general orders, policies, procedures, rules, and regulations made under this By-law, revise or terminate any of them if the Fire Chief considers it appropriate.

8.4 The Fire Chief shall have all powers, rights, and duties assigned to a Fire Chief under the FPPA including, without limitation, the authority to enforce compliance with the Ontario Fire Code. Further, the Fire Chief shall be afforded the ability to take all proper measures for the prevention, control and extinguishment of fires and for the protection of life and property and shall be able to enforce all municipal by-laws respecting fire prevention.

8.5 The Fire Chief may liaise with the Firefighters' Association and any union representing Firefighters.

8.6 The Fire Chief may liaise with the Fire Marshal and any other office or organization (local, regional, provincial or federal) as required by Council or as considered necessary or advisable by the Fire Chief for the proper administration and efficient operation of the Fire Department and the effective management of Fire Protection Services for the Corporation.

8.7 The Fire Chief is authorized to contribute to and assist in the formulation of Mutual Aid, Automatic Aid and emergency service agreements or response plans with other emergency response agencies.

8.8 The Fire Chief may utilize such Members and administrative support staff of the Fire Service as the Fire Chief may determine, from time to time, to assist in the performance of his or her duties and/or perform the role as required of a Chief Fire Official or other designate in such a manner as to include, but not be limited to, the following;

a) Provide administrative support and customer assistance for facilities and services provided by the Fire Department;
b) Prepare Divisional and overall Fire Departmental budget(s) and exercise budgetary control;
c) Prepare the payroll data of the Fire Department as required, to initiate requisitions and acquire materials and services and certify all accounts of the Fire Department;
d) Maintain personnel records as required in conjunction with the direction of the Corporation's Human Resources Division;
e) Arrange for the provision of new facilities, equipment, and apparatus;
f) Carry out the general administrative duties of the Fire Department;
g) Liaise with other emergency response and safety agencies;
h) Liaise with other Departments within the Corporation and participate on committees or be involved in functions as required;
i) Provide emergency communications/dispatch, firefighting and emergency response duties and/or assist at emergency or life supporting incidents as required by the Fire Chief to control and extinguish fires, and further prevent fire and life safety tragedy;
j) Conduct investigations of fires by Fire Services personnel in concert with Investigators of the Fire Marshal and the Sault Ste. Marie Police Services or other allied agencies in order to determine cause, origin, and circumstances of a fire incident;

9.6 Every Member and administrative support staff person shall conduct themselves in accordance with the general orders, policies, procedures, City of Sault Ste. Marie Code of Conduct and rules and regulations made by the Fire Chief and shall give their whole and undivided attention while on duty to the efficient operation of the Fire Service and shall perform the duties assigned to them to the best of their ability in accordance with the FPPA and any Collective Agreement or other written agreement that may be applicable.

9.7 The Fire Chief may reprimand or suspend any member of the Fire Department for insubordination, inefficiency, misconduct, tardiness, or for non-compliance with applicable jurisprudential supported conduct for any of the provisions of this By-law, departmental policies or procedures, guidelines or the general orders and departmental rules or noncompliance with corporate policies that, in the opinion of the Fire Chief, would be detrimental to the discipline and efficiency of the Fire Department. The Fire Chief shall submit a report to the Human Resources Division regarding the reprimand or suspension handed out to the staff member. Any such disciplinary action shall be in accordance with the Disciplinary Procedures as outlined in the Corporation's Human Resources Policy Manual unless otherwise governed by the Collective Agreement between the Corporation and SSMPFFA Local 529 International Association of Firefighters.

10. PROPERTY

10.1 No person shall normally supply any apparatus, equipment or other property of the Fire Service for any personal or private use without the express permission of the Fire Chief.

10.2 No person shall willfully damage or render ineffective or inoperative any apparatus, equipment or other property belonging to or used by the Fire Department or any emergency vehicle of a public safety agency engaged by the Fire Department to attend to a fire or emergency incident within the municipality.

11. FIRE SUPPRESSION

11.1 Fire Department may suppress any fire or other hazardous condition by extinguishing it or by other reasonable action and, for this purpose, may enter private property, if necessary, to do so.

11.2 The Fire Department may pull down or demolish any building or structure when considered necessary to prevent the spread of fire or to protect the safety of the public or member.

11.3 The Fire Department may perform all necessary actions which may include the boarding up or barricading of buildings or property to guard against fire or other danger, risk, or accident and to generally make "safe" an incident or real or personal property when unable to contact the property owner.

11.4 The Fire Department may request other appropriate persons or agencies present at a fire to assist in extinguishing fires, pulling down or demolishing buildings or structures to prevent the spread of fire, initiate crowd and traffic control or suppression of fires or other hazardous conditions in other reasonable ways.

b) in a municipality with which an agreement has been entered into to provide Fire Protection Services per By-Law 2019-112;
c) on property with respect to which an agreement has been entered into with any person or corporation to provide fire protection therefore;
d) at the discretion of the Fire Chief to a municipality authorized to participate in the Regional Mutual Aid plan established by a Fire Coordinator appointed by the Fire Marshal, emergency fire service plan and program or any other organized plan or program on a reciprocal basis;
e) on those highways that are under the jurisdiction of the Ministry of Transportation or other agency within the City of Sault Ste. Marie;
f) on property beyond the municipal boundary where the Fire Chief determines that immediate action is necessary to preserve and protect life and/or property and the correct department is notified to respond and/or assumes command or establishes alternative measures acceptable to the Fire Chief; and
g) response due to a request for special assistance as required through a declaration of a provincial or federal emergency and such request has been approved by the Fire Chief and the CAO.

16. INTERFERENCE

16.1 No person shall impede or interfere with or hinder the Fire Department in the performance of its duties.

17. CONFLICT

17.1 The provisions of this By-law are subject to the FPPA and all other applicable legislation and by-laws, and to the provisions of any agreement between the Corporation and the Firefighters' Association.

18. SHORT TITLE

18.1 This By-law shall be known as the Fire Department Establishing and Regulating By-law.

19. PENALTY

19.1 Any person who violates any provisions of this By-law is, upon conviction, guilty of an offence and shall be liable to a fine, subject to the provisions of the Provincial Offences Act, R.S.O. 1990, c. P.33, as amended.

20. REPEAL OF BY-LAWS

20.1 By-law 2001-80 is hereby repealed.

APPENDIX "A" TO BY-LAW NO. 2020-211

Mandate of the Fire Department

The Sault Ste. Marie Fire Department shall provide fire protection services, emergency response, public fire/life safety education and fire prevention initiatives to protect the lives and property of the citizens, businesses and visitors to the City of Sault Ste. Marie.

Vision of the Sault Ste. Marie Fire Department

The Sault Ste. Marie Fire Department is commited to provide effective and efficient emergency service in a caring manner to create a safe community.

Mission of the Sault Ste. Marie Fire Department

The Sault Ste. Marie Fire Department is a proud partner within our community that provides exceptional service through prevention, education, protection and wellness.

Core Values

- Public Safety
- Firefighter Safety
- Customer Service
- Integrity and Honesty

Primary Goals of the Fire Department

The primary goals of the Fire Department are to:

- Provide appropriate public fire and life safety education, other fire prevention programs and measures as legislated by the FPPA;
- Provide exceptional training to its members through well planned programs followed by appropriate testing and documentation; and
- Provide effective, timely and adequately staffed emergency response as outlined in the Fire Master Plan. This will be appropriate to the needs and circumstances of the municipality and as required by the FPPA and other applicable legislation

APPENDIX "C" TO BY-LAW NO. 2020-211

CORE SERVICES

Three Lines of Defence

1. **Fire Prevention and Public Education**

   Fire Prevention and Public Education services provided are detailed in The Fire Prevention and Public Education as per divisional Notices and Operating Guidelines, which includes the following:

- A smoke alarm program
- Distribution of fire safety education material
- Providing fire safety programs to community groups
- Providing school fire safety education programs
- A risk assessment program, which includes fire investigations, and inspections; to reduce and/or eliminate fire hazards, and develop fire prevention programs to increase life safety, and reduce the loss of life and property due to fires.

2. **Code Enforcement**

   Code Enforcement services shall include:

- Complaint and Request inspections
- Conducting routine inspections per fire prevention policy
- Dealing with code compliance issues (mandated)
- Enforcing municipal By-laws as related to Fire Protection Services per Schedule "D" By-Laws.
- Preparing reports and issuing written responses to requests
- Investigate fire for origin and cause
- Enforcment of the Ontario Fire Code shall be ongoing and administered in accordance with FPPA and Regulations.

3. **Emergency Response**

   (a) The following definitions are provided for clarification:

   Technician Level- *evaluate existing and potential conditions, protect persons, property or the environment, control and mitigate the emergency using specialized training, resources and equipment as provided.*

   Operations Level- *identify and assess existing and potential conditions, recognize unique hazards, conduct limited operations to minimize negative impact on persons, property or the environment using additional equipment and techniques. Additional specialized training, resources and equipment may be required to completely mitigate the emergency.*

   Awareness Level- *recognize the presence of hazards, identify needed resources, protect responders, notify trained personnel, isolate the area. Additional specialized training, resources and equipment will be required to completely mitigate the emergency*

- High angle rescue awareness level response (per Departmental Notices and Operating Guideline)

EMERGENCY DISPATCHING AND COMMUNICATIONS

The Communications Division will provide emergency call taking and dispatching of emergency vehicles as appropriate.

TRAINING

1. Develop, coordinate, manage, implement and evaluate training programs consistent with National Fire Protection Association (NFPA) Standards for approved Fire Protection Services.

2. Ensure training is in compliance with the Occupational Health and Safety Act R.S.O. 1990, c.O.1 as amended and any regulations made thereunder, and other applicable provincial and federal legislation and regulations.

3. Emergency response as Incident Safety Officer and/or Accountability Officer.

4. Maintain current industry standards and emerging trends.

5. Evaluate, recommend and implement new equipment and/or procedures.

6. Identify, evaluate and recommend solutions to deficiencies in fire protection services.

7. Ensure accurate completion of training documents and secure retention for inspection by the Ministry of Labour and/or audit by the Fire Marshal.

8. Liaise with private and public stakeholders, including other governmental, public safety agencies and other organizations.

Appendix B

PFSG 01-03-12 Sample Establishing and Regulating By-Law

Sample Establishing and Regulating By-law

Public Fire Safety Guidelines	Subject Coding PFSG 01-03-12
Section General	Date March 2000
Subject Sample Establishing and Regulating By-law	Page

Under Review

Purpose:	To assist in the preparation of a by-law, which will provide clear and accurate policy direction reflecting how council wants their fire department services to function and operate.
Introduction:	A municipality has responsibility to determine the types and extent of fire protection services necessary to meet their specific needs and circumstances. It is not practical to produce a sample that identifies the needs of every municipality..
Development:	An analysis must be made to determine if each clause is appropriate for the particular municipality. Unless otherwise noted in the margin, the OFM regards each clause as a necessary component for a complete by-law. In preparing by-laws, consideration must be given to the provisions of any collective agreement formulated under the Fire Protection and Prevention Act that supersedes establishing and regulating by-laws. The municipal solicitor, prior to enactment, should review any draft by-laws prepared by council.
Related Functions:	The primary issues addressed in an establishing and regulating by-law may include policy direction in these areas: • general functions and services to be provided • the goals and objectives of the department • general responsibilities of members • method of appointment to the department • method of regulating the conduct of members • procedures for termination from the department • authority to proceed beyond established response areas • authority to effect necessary department operations
Codes, Standards and Best Practices:	Codes, Standards, and Best Practices resources available to assist in establishing local policy on this assessment are listed below. All are available at www.ontario.ca/firemarshal Please feel free to copy and distribute this document. We ask that the document not be altered in any way, that the Office of the Fire Marshal be credited and that the documents be used for non-commercial purposes only. See also PFSG 02-02-12 Fire Risk Assessment 02-03-01 Economic Circumstances 04-01-12 Selecting a Fire Suppression Capability 04-02-01 Service Delivery Considerations

fire department
SAMPLE ESTABLISHING AND REGULATING BY-LAW
corporation of the Town of Anywhere
By-Law No.

Whereas the Municipal Act, R.S.O. 1990 c., as amended, and the Fire Protection and Prevention Act, 1997, S.O. 1997, c.4 as amended, permits the council to enact a by-law to establish and regulate a *fire department*;
BE IT THEREFORE ENACTED by the Municipal council of the corporation of the Town of Anywhere, as follows:

1- In this by-law, unless the context otherwise requires, • **approved** • means approved by the council • **chief administrative officer** • means the person appointed by council to act as chief administrative officer for the corporation • **corporation** • means the Corporation of the Town of Anywhere • **council** • means the council of the Town of Anywhere • **deputy chief** • means the person appointed by council to act on behalf of the fire chief of the fire department in the case of an absence or a vacancy in the office of fire chief • **fire chief** • means 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 • **fire department** • means the Town of Anywhere fire department • **fire protection services** • includes fire suppression, fire prevention, fire safety education, communication, training of persons involved in the provision of fire protection services, rescue and emergency services and the delivery of all those services • **member** • means any persons employed in, or appointed to, a fire department and assigned to undertake fire protection services, and includes officers, full time, part time and volunteer firefighters • **volunteer firefighter** • means a firefighter who provides fire protection services either voluntarily or for a nominal consideration, honorarium, training or activity allowance	***Definitions: define any terms or positions which may be of concern to users of the by law***
2- A fire department for the Town of Anywhere to be known as the Town of Anywhere Fire Department is hereby established and the head of the fire	

• at the discretion of the *fire chief*, to a municipality authorized to participate in any *county, district or regional* mutual aid plan established by a fire co-ordinator appointed by the fire marshal or any other similar reciprocal plan or program • on property beyond the municipal boundary where the *fire chief* or designate determines immediate action is necessary to preserve life or property and the appropriate department is notified to respond and assume command or establish alternative measures, acceptable to the *fire chief* or designate	

AN APPROVED ORGANIZATIONAL CHART FORMS PART of THIS BY LAW AS Appendix A

Goals and objectives of the fire department may also be added as an appendix to the By-law

This by-law comes into effect the day it is passed by council, in the manner appropriate to the municipality.