

Master Fire Plan

2023 - 2034

Municipality of Thames Centre

Fire & Emergency Services





June 4, 2024

Nick Dorken
Fire Chief
Municipality of Thames Centre
4305 Hamilton Road
Dorchester, ON N0L 1G3
Ph. 519-268-3928

Re: Community Risk Profile & Master Fire Plan

Dear Chief Dorken,

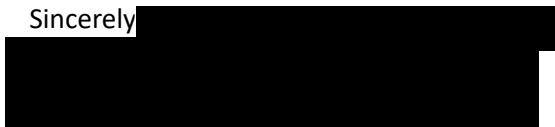
The 308 Consulting & Strategy Group Inc. team is pleased to submit the completed Community Risk Profile and Master Fire Plan, developed to guide the Municipality of Thames Centre from 2024 to 2034. The purpose of these documents is to provide a comprehensive evaluation of the community's fire risks and to outline a strategic plan to enhance the fire department's effectiveness, safety, and operational readiness.

Our final report includes 14 recommendations derived from the Community Risk Profile. Additionally, there are 17 recommendations developed through our observations and analysis during the development of the Master Fire Plan. These recommendations cover a wide range of areas, including training, equipment, staffing, community engagement, and emergency response protocols.

We would like to extend our heartfelt thanks to you and your staff for your dedication to the community and your invaluable involvement in this consulting project. Your cooperation and insights were crucial in developing these comprehensive plans, and we are confident that their implementation will significantly benefit the Municipality of Thames Centre.

Should you have any questions or require further information, please do not hesitate to contact us. We look forward to continuing our partnership and supporting the Municipality of Thames Centre in its commitment to fire safety and community well-being.

Sincerely,



| AEMCA, CMM III, BA, MPA |

President & Chief Executive Officer

blainelucas@308consulting.ca



CONSULTING &
STRATEGY GROUP

15 Pinetree Court Dundas, ON L9H 6V5
1-888-308-2563

Halifax: 902-500-1405
Ottawa: 613-909-5009

Hamilton: 365-3665837
Vancouver: 604-265-0043

Municipality of Thames Centre Master Fire Plan



2023-2034



Prepared and Reviewed By:
308 Consulting & Strategy Group Inc.
and Emergency Services Strategy and Solutions Inc.

Table of Contents

EXECUTIVE SUMMARY	4
OBSERVATIONS AND RECOMMENDATIONS:.....	6
<i>Recommendations forwarded from the Community Risk Assessment:</i>	6
<i>Recommendations derived from observations within the Master Fire Plan:</i>	9
METHODOLOGY.....	15
PURPOSE	16
LEGISLATIVE BACKGROUND, STANDARDS AND AGREEMENTS	16
ORGANIZATIONAL STRUCTURE	21
REPORTING.....	21
COUNCIL (AUTHORITY HAVING JURISDICTION).....	22
SENIOR LEADERSHIP OF FIRE DEPARTMENT.....	22
COMMITTEES.....	23
STAFFING	27
ADMINISTRATION.....	27
OPERATIONS.....	27
SUCCESSION PLANNING.....	29
TRAINING.....	29
RECRUITMENT.....	30
CERTIFICATION.....	31
COMPENSATION.....	32
RESPONSE CAPACITY	35
RESPONSE AGREEMENTS.....	36
<i>Automatic Aid with Central Elgin</i>	36
<i>Automatic Aid within County of Middlesex and City of London</i>	37
.....	39
<i>Mutual Aid within the County of Middlesex (and surrounding areas)</i>	39
OPERATIONAL CAPACITY	41
STATIONS.....	41
<i>Dorchester Station</i>	41
<i>Thorndale Station</i>	44
.....	45
FLEET.....	46
<i>Dorchester</i>	46
<i>Thorndale</i>	47
EQUIPMENT.....	48
FIRE PREVENTION	50
LEGISLATION.....	50
AUTHORITY.....	50
PROGRAM.....	50
<i>Fire Prevention Officer</i>	50
<i>Municipality of Thames Centre Fire Department</i>	Error! Bookmark not defined.
PUBLIC SAFETY	54
DATA ANALYSIS	56

RESPONSE TIME PERFORMANCE.....	58
<i>Tiered Response Calls</i>	60
<i>Chute Times (aka Turnout Times) - Urban and Rural Areas</i>	61
<i>Response Times</i>	62
APPENDIX 1	64

Executive Summary

This Master Fire Plan was developed with the focus on delivering an essential municipal service that meets the needs of a growing community over the next 10 years. This was made possible with:

- Comprehensive review of associated documents, policy, and strategic plans;
- Overview of annual operating and capital budgets;
- Historical call data;
- Community Risk Assessment;
- Interviews with the CAO, Fire Chief and two District Chiefs;
- Survey with Mayor and Council;
- Firefighter survey that achieved a 91% participation rate; and
- Peer Review

When asked why local community members have volunteered to serve as firefighters, an overwhelming majority, identified “community” as the number one reason. It is “community volunteers” that are essential to the social fabric of Municipality of Thames Centre.



Feedback from Volunteer Firefighters – 2024 Survey

What is special about these volunteer firefighters, is that they provide a **quality** level of prevention and protection to the community in a very cost-effective model.

This **Master Fire Plan** will guide Council and Senior Staff with a 10-year plan to continue operating this valued community service for the health and safety of residents, businesses and visitors. The Master Fire Plan has been prepared for subsequent integration into associated elements of the annual budget, official plan, and other municipal and departmental strategic plans.

Overall, this report contains **14 recommendations** derived from the Community Risk Assessment, followed by another **17 recommendations** generated from the observations and development of the Fire Master Plan.

Of the combined 31 recommendations, the following four are prioritized as “High” priority:

No.	Observation	Recommendation
2	The Municipality of Municipality of Thames Centre Fire Department’s Standard Operating Procedures (SOPs) and departmental orders are outdated, and in some cases, non-existent.	The Municipality of Thames Centre Fire Department should implement a review of the Standard Operating Procedures (SOPs) and departmental orders for safe and effective fire operations and mitigate risk and liability parameters.
7	The Municipality of Municipality of Thames Centre Fire Department is legislatively mandated to certify all firefighters to the criteria specified in Ontario Regulation 343/22.	It is recommended that the Training Officers, in consultation the Training Committee and senior fire management, adopt a training schedule for firefighter certification as mandated by Ontario Regulation 343/22 for compliance on July 1, 2026, and thereafter, compliance on July 1, 2028.
13	There is an emerging need to add aerial capacity to the fire fleet for both aerial fire attacks and high angle rescue.	<p>Should the municipality expand its building stock to include high-density residential apartment or condominium buildings, it is essential to consider the current risks associated with modern lightweight construction methods. These methods, while economically beneficial, result in roofs that may not support substantial loads in the event of a fire, posing significant hazards to fire suppression staff. In the medium term, the municipality should prioritize securing access to an aerial apparatus through a partnership with another municipality. This partnership would ensure immediate emergency access to elevated places, such as the roofs of taller buildings, for removing individuals from high locations and applying elevated water streams during fire suppression emergencies.</p> <p>It is important to distinguish between mutual aid, mutual assistance, and formal partnerships. Mutual aid involves an agreement where neighboring municipalities assist each other in emergencies, usually without preconditions</p>

		<p>or detailed planning. Mutual assistance is more structured, involving pre-arranged plans and coordination for sharing resources during significant incidents. A formal partnership, on the other hand, entails a more comprehensive agreement with specific commitments and shared resources, ensuring that critical equipment like an aerial apparatus is available when needed.</p> <p>By prioritizing a formal partnership, the municipality can ensure reliable and immediate access to an aerial apparatus, significantly enhancing the fire department's capabilities. This strategic approach would protect both firefighters and residents, addressing current residential risks and preparing for future growth. Additionally, this approach would allow the municipality to evaluate the capital procurement of an aerial apparatus, ensuring long-term readiness and safety.</p>
15	<p>One of the responsibilities of the newly constructed Public Education Committee is to plan and deliver the fire department's community events and public education opportunities.</p>	<p>The Public Education Committee should include the following added responsibilities:</p> <ul style="list-style-type: none"> a) The development and planning of an Annual Public Education Plan for the subsequent year to coordinate and schedule community events and educational opportunities; and b) Prepare and submit an Annual Report listing all community events and educational opportunities completed for inclusion in the Fire Chief's updates to Council.

Observations and Recommendations:

Recommendations forwarded from the Community Risk Assessment:

1. This Community Risk Assessment should function as one of the primary platforms to inform the municipality in strategically planning budgets and policies relative to the Department of Fire Services.

2. For any planned construction or rehabilitation on roads, bridges and/or culverts, Public Works should provide advance notices to the Fire Department and the Fire Communications Centre.
3. Given the number of waterways within the municipality, the Municipality of Thames Centre Fire Department should consider training and equipping firefighters to NFPA Standard 1952 (Standard on Surface Water Operations Protective Clothing and Equipment).
4. Given the number of railway kilometers and the number of at-grade railway crossings, the Municipality of Thames Centre Fire Department should:
 - a. consider training firefighters to NFPA Standard 1072 (Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications).
 - b. partner and plan with railway companies operating in the Municipality of Thames Centre regarding on-scene Incident Command when managing train derailments and spills; and
 - c. develop public education programs railway safety, and, what to do during a railroad emergency (including evacuation procedures).
5. The “Building Stock” of the municipality (residential, commercial, agricultural and industrial) should be geographically inventoried and mapped, where Fire and Protection Services (and their communication centre) have the capacity to readily access this information when responding to emergencies.
 - a. This can be achieved via a partnership between the Planning Department, GIS, and the Fire Department.
 - b. Once the “building stock” mapping project has been completed, the Community Risk Assessment should be updated to include this data resource.
6. Should the municipality grow their building stock with high density residential apartment or condominium buildings, consideration should be given to the purchasing of an aerial fire truck for emergency access to an elevated place (such as the roof of a building); remove people from a high location; and/or elevated water stream application in a fire suppression emergency.
7. In regard to the water distribution network, there are issues related to the system’s ability to provide adequate fire flow protection to specific areas in Dorchester and Thorndale.
 - a. As per the [Water and Wastewater Master Plan](#) (2019), capital improvements are required to address adequate fire flow protection, especially to industrial lands and development growth areas;
 - b. Should land along the 401 corridor be further developed, water servicing needs to be addressed, to support local fire services; and
 - c. In the interim, investment and training with water tanker apparatus, water holding tanks, and specialized equipment involving fire services should continue.

8. Discussions should be entered with Middlesex-London Paramedic Services, where consideration should be provided in locating a paramedic station and resources based in the community of Thorndale.
9. Pertaining to the fire services' fleet, as identified in the [Asset Management Plan](#) (2021), there should be:
 - a. an asset inventory data review and validation.
 - b. the formalization of condition assessment strategies.
 - c. the implementation of risk-based decision-making as part of asset management planning and budgeting;
 - d. the continuous review, development and implementation of optimal lifecycle management strategies; and
 - e. the identification of proposed levels of service.
10. In association with expected growth levels, both in terms of population and development, the municipality needs to consider parallel growth and modernization of the fire protection service in terms of:
 - a. staffing (levels, retention, and recruitment);
 - b. fleet (new and capital replacement);
 - c. stations (capital improvements); and
 - d. modernized equipment (such as infrared cameras, drones, etc.).
11. The Municipality should review the Emergency Plan and clearly identify:
 - a. The role distinction between the Municipal CEMC and the County CEMC; and
 - b. The equipment and location of the Primary and Secondary EOCs (Emergency Operation Centres).
12. Based on a number of economic and social factors, the issue of affordable housing is becoming prevalent across Ontario and Canada. As a result, homelessness (and associated encampments) is increasing. Fire protections services should continue working with the County's community services to address responding to emergencies involving homelessness, encampments, and marginalized members of the community.
13. The Municipality of Thames Centre Fire Department should develop performance measures, aligned with Public Fire Protection Classification (PFPC) and Dwelling Protection Grades (DPG) insurance grading systems, for assessment and reporting to Council.
14. Municipality of Thames Centre Fire Department should:
 - a. Review current data software to determine if the needs of the software meets data capture for reporting measures (such as chute times, response times, multi-vehicle times, etc.);
 - b. Train designated personnel for consistency and frequency of data entry; and
 - c. Train designated personnel to consistently report and enter data reflective of estimated property loss values, injuries, and other specialized data capture points.

Recommendations derived from observations within the Master Fire Plan:

No.	Observation	Recommendation
1	The municipal bylaw to establish a fire department was last updated and adopted by Council on February 18, 2015. Since this bylaw, there have been changes to provincial legislation, industry standards, agreements and department structure.	Municipal By-law 15-2015 should be reviewed and amended to reflect changes in provincial legislation, industry standards, agreements and department structure.
2	The Municipality of Thames Centre Fire Department’s Standard Operating Procedures (SOPs) and departmental orders are outdated, and in some cases, non-existent.	The Municipality of Thames Centre Fire Department should implement a review of the Standard Operating Procedures (SOPs) and departmental orders for safe and effective fire operations and mitigate risk and liability parameters.
3	The Municipality of Thames Centre Fire Department is involved in a variety of automatic, mutual aid, and tiered response agreements. It is crucial that the Mutual Aid agreement and related bylaws be reviewed and updated regularly to ensure they remain effective and aligned with current needs and best practices. This proactive approach will help maintain a high level of preparedness and cooperation with neighboring municipalities, ensuring optimal response capabilities during emergencies.	It is recommended that a quarterly review and analysis of data associated with response agreements (automatic aid, mutual aid, and tiered response) be established to assess level of effort, quantify performance measures, and annual reporting to Council.
4	There are some improvements that can be addressed to reflect availability, communications and support of the senior leadership.	<p>It is recommended that the Municipality of Thames Centre:</p> <p>a) Provide all firefighter with a designated Municipality of Thames Centre specific email address in order that firefighters can:</p> <ul style="list-style-type: none"> • Have a sense they are part of the Municipality of Thames Centre team. • Receive direct communications from senior leadership. • Receive and access departmental news, events and information.

		<ul style="list-style-type: none"> • Receive and access corporate news, events and information (such as Council highlights, Mayor’s Breakfast, etc.) b) Fire Chief could schedule an “Open Door” once a month, where firefighters can engage the Fire Chief without a scheduled appointment.
5	There is no updated centralized file to collate all training records of individual firefighter certifications, training courses, and other mandatory certificates and licences (such as driver licences, CPR, etc.).	The Training Committee responsibilities, specific to the two Training Officers, should include the creation, input and monitoring of a centralized training file that is readily accessible electronically to the Fire Chief, and documents firefighter certifications for regulatory compliance.
6	The average year of service is 15.5 years, and 25.5% of firefighters indicated they would retire over the next 5 years.	<p>It is recommended that:</p> <ul style="list-style-type: none"> a) Municipality of Thames Centre Fire Department will need to monitor attrition and adapt with the recruitment of additional community volunteers to become firefighters. b) For effective fire operations, the fire department should maintain a threshold of 5 Officers and 30 Firefighters, for a total of 35 personnel in Dorchester. c) For effective fire operations, the fire department should maintain a threshold of 5 Officers and 20 Firefighters, for a total of 25 personnel Thorndale.
7	The Municipality of Thames Centre Fire Department is legislatively mandated to certify all firefighters to the criteria specified in Ontario Regulation 343/22.	It is recommended that the Training Officers, in consultation the Training Committee and senior fire management, adopt a training schedule for firefighter certification as mandated by Ontario Regulation 343/22 for compliance on July 1, 2026, and thereafter, compliance on July 1, 2028.

8	<p>There is no formalized compensation agreement. The Municipality of Thames Centre has completed a salary wage review across the municipal departments, which includes the fire department.</p>	<p>It is recommended that:</p> <ul style="list-style-type: none"> a) Council receives the ongoing salary review and adjust firefighters' compensation that is competitive to neighbouring jurisdictions (if applicable) and review the compensation every 3 years. b) The Municipality should review the current payment model based on a point system. It is recommended to simplify the payment model by compensating staff for the actual hours worked. This change would streamline the compensation process, ensure fair remuneration for the time and effort invested by the firefighters, and enhance transparency in payroll management.
9	<p>The Office of the Fire Marshall has produced a Mutual Aid Plan template (revised March 2023) as a guide for municipalities to enter into agreements for assistance with fire protection services. Automatic Aid agreements with other municipalities be reviewed and updated accordingly, including any fees for service.</p>	<p>The Automatic Aid agreement between the Municipality of Thames Centre and the Municipality of Central Elgin be reviewed and reformatted in accordance with the Mutual Aid Plan template published by the Office of the Ontario Fire Marshall.</p>
10	<p>The County of Middlesex Mutual Aid Plan contains all the authorizing Letters of Agreements and/or bylaws authorizing automatic aid. Of the four automatic aid agreement pertaining Municipality of Thames Centre, only two Letters of Agreement are contained in the County's Plan.</p>	<p>The Letters of Agreements for Automatic Aid between the Municipality of Thames Centre and the City of London (Station #10), and the Municipality of Thames Centre and the Biddulph-Blanchard Fire Department should be included in the County's Mutual Aid Plan.</p>
<p>** Note A fire protection agreement is a formal arrangement between municipalities, fire departments, or other entities that outlines the terms and conditions under which fire protection services will be provided. Types of fire protection agreements include Mutual Aid and Automatic Aid, which facilitate coordinated and efficient responses to fire emergencies across different jurisdictions.</p>		

11	<p>The Dorchester Fire Station is in great need of improvements in all areas of amenities, storage and maintenance, and vehicle bays. This observation is aligned with most firefighters who reported low rankings in these categories.</p>	<p>It is recommended that:</p> <ul style="list-style-type: none"> a) The Municipality establish a financial plan in 2024 to either rehabilitate the existing station or construct a new fire station in Dorchester. b) The target date to complete the rehabilitation, or new construction, should be prior to 2029. c) The financial plan includes funding parameters, such as: contributions to a capital reserve from 2025 to 2029, development charges, debenture, and possibly fundraising. d) A building committee, including firefighter participation, be implemented for the purposes of design plans for the rehabilitation, or construction. e) It is recommended that the fire leadership conduct an assessment to confirm that the garage exhaust systems are adequate for safely ventilating and removing exhaust fumes produced by fire apparatus. Proper ventilation and exhaust systems are critical in fire station garages to ensure the health and safety of personnel by preventing the accumulation of harmful diesel exhaust fumes. These fumes contain carcinogens and other hazardous substances that can pose significant health risks to firefighters and other station personnel if not properly managed. In 2024, priority should be given to implementing cost-efficient options for exhaust removal.
12	<p>The Thorndale Fire Station is in good condition in all areas of amenities, storage and maintenance, and vehicle bays. This observation is aligned with the majority of firefighters who reported high rankings in these categories, except for one element (lockers).</p>	<p>It is recommended that a capital plan be developed to retrofit a designated space to accommodate bunker gear storage and locker space for firefighters.</p>

13	There is an emerging need to add aerial capacity to the fire fleet for both aerial fire attacks and high angle rescue.	Should the municipality expand its building stock to include high-density residential apartment or condominium buildings, it is essential to consider the current risks associated with modern lightweight construction methods. These methods, while economically beneficial, result in roofs that may not support substantial loads in the event of a fire, posing significant hazards to fire suppression staff. In the medium term, the municipality should prioritize securing access to an aerial apparatus through a partnership with another municipality. This partnership would ensure immediate emergency access to elevated places, such as the roofs of taller buildings, for removing individuals from high locations and applying elevated water streams during fire suppression emergencies.
14	The municipality has entered into a shared service agreement with the Municipality of Middlesex Centre for the provision of fire prevention and inspection services.	It is recommended that the Municipality revise the shared service agreement to include: a) An annual Fire Prevention Business Plan where the Fire Chief and Fire Prevention Officer would formally agree on the program objectives for the pending operating year (January to December). b) An annual Fire Prevention Report where the Fire Prevention Officer would report to the Fire Chief their level of effort. c) The Fire Chief utilize elements of the annual Fire Prevention Report in regular scheduled updates to Municipal Council. d) Implement performance measures to evaluate the program and the associated shared services agreement.
15	One of the responsibilities of the newly constructed Public Education Committee is to plan and deliver the fire department's community events and public education opportunities.	The Public Education Committee should include the following added responsibilities: a) The development and planning of an Annual Public Education Plan for the subsequent year to coordinate and

		<p>schedule community events and educational opportunities; and</p> <p>b) Prepare and submit an Annual Report listing all community events and educational opportunities completed for inclusion in the Fire Chief's updates to Council.</p>
16	<p>Although the agreement between Municipality of Thames Centre and Middlesex Centre contains duties for the Fire Prevention Officer pertaining to public education, there is no reference of these duties in the Public Education Committee's Terms of Reference.</p>	<p>The Public Education Committee's Terms of Reference should include the added scope:</p> <p>a) Identification of the Fire Prevention Officer as an ex-officio member of the committee; and</p> <p>b) Responsibilities of the Training Committee include consulting with the Fire Prevention Officer on community events and educational opportunities.</p>
17	<p>There are no standardized key performance indicators (KPIs) in terms of emergency responses, fire prevention and public education, that are developed and reported to Council, on a semi-annual or annual basis. In addition, the current data software program to capture performance measures requires updating or replacement.</p>	<p>It is recommended that the Municipality of Thames Fire Department:</p> <p>a) Develop standardized key performance indicators (KPIs) for their emergency responses, fire prevention and public education services.</p> <p>b) Utilize a software platform that is compatible to capture and report the developed KPIs.</p> <p>c) Provide staff training to ensure data being entered into the database is standardized and consistent; and</p> <p>d) Report KPIs to Council on either a semi-annual or year-end basis.</p>
<p>The consultant recommends that the Fire Chief develop an implementation plan for the recommendations outlined in the Community Risk Profile and the Master Fire Plan, for consideration by the Chief Administrative Officer (CAO). This plan should include a comprehensive operational review to determine the staffing necessary to maintain the department's administrative requirements within the existing budget allocation.</p>		

Methodology

in preparation of this Master Fire Plan, the following methodology was implemented to develop the observations and recommendations:

1. Project launch meeting with the Fire Chief;
2. Interview with the Fire Chief on the Strengths, Weaknesses, Opportunities & Threats (SWOT) of the fire department;
3. Interviews with the District Chiefs (Dorchester and Thorndale);
4. Communications with the Police Chief, Strathroy-Caradoc (responsible for fire communications);
5. Attendance at Training Night (Dorchester and Thorndale);
6. Tour of fire stations (Dorchester and Thorndale);
7. Review of documentation, including (but not limited to):
 - a. Annual Budgets (operating and capital)
 - b. Official Plan;
 - c. Asset Management Plan;
 - d. Strategic Plan (which included Public Engagement);
 - e. Water and Wastewater Master Plan;
 - f. NFPA Standards;
 - g. Legislation and Bylaws; and
 - h. Standard Operating Procedures and Departmental Directives;
 - i. Agreements (Automatic Aid, Mutual Aid, and Tiered Response); and
 - j. Data Assembly and Analysis;
8. Follow-Up Interview with Fire Chief;
9. Volunteer Firefighter Survey;
10. Council Survey;
11. Preparation of Draft Report;
12. Peer Review;
13. Review of Comments and Input to Draft Report; and
14. Preparation and Delivery of Final Report.

Purpose

The purpose of a **Master Fire Plan** is to implement a key component of the overall strategic policy framework, that will guide Council and Staff in achieving the goals and objectives of the municipality for the next 10 years.

The Master Fire Plan integrates the [Vision](#) of the Municipality of Thames Centre, which is:

Thames Centre is a vibrant safe community combining innovation and tradition for all stages of our life.

In specific, as the municipality grows and prospers socially and economically, the Fire Department will need to grow in parallel to meet the needs and expectations of the community. This will align with the newly adopted Municipality of Thames Centre Strategic Plan, where one of the key focus areas is [Smart Growth](#):

A commitment to make informed decisions for community growth while maintaining a cherished “hometown feel”. Increased transparency in decision-making, better communications and essential municipal information is paramount.

Legislative Background, Standards and Agreements

Legislative Background

As per Ontario’s [Fire Protection and Prevention Act](#), Section 2(1) of the Act mandates a municipality to “(a) establish a program in the municipality which must include public education with respect to fire safety and certain components of fire prevention; and (b) provide such other fire protection services as it determines may be necessary in accordance with its needs and circumstances.”

Further, Section 2(2) and Section 5 of the Act, permits a municipality to establish a fire department.

To meet the mandate of providing fire protection services, Section 2(3) of the Act permits the municipality to determine “form and content” on how the fire departments provides this service. As a result, the Municipality of Thames Centre has adopted By-Law No. 15- 2015 (dated February 18, 2015) to establish, maintain and operate a fire department under the direction of the Council. The bylaw authorizes the fire department to engage in the following emergency services:

- Fire Suppression / Search and Rescue
- Fire Prevention
- Fire Safety Education
- Training of Persons involved in the provision of Fire Protection, Rescue and Emergency Services
- Rescue and Emergency Services and the delivery of those services based on the expertise and training of fire personnel
- Medical First Response according to Agreement with Ontario Ministry of Health
- Water Entry Ice and Water Rescue, Water Entry Still Water Rescue, and Water Entry Swift Water Rescue; and
- Personal Injury / Auto Extrication at Motor Vehicle Crashes.

Observation 1:

The municipal bylaw to establish a fire department was last updated and adopted by Council on February 18, 2015. Since this bylaw, there have been changes to provincial legislation, industry standards, agreements and department structure.

Recommendation 1:

Municipal By-law 15-2015 should be reviewed and amended to reflect changes in provincial legislation, industry standards, agreements and department structure.

[Ontario Regulation 378/18](#) entitled “Community Risk Assessments” requires all municipalities to “(a) complete and review a community risk assessment; and (b) use its community risk assessment to inform decisions about the provision of the municipality’s fire protection services.”

This Community Risk Assessment (CRA) must be completed every 5 years. The Municipality of Thames Centre has completed a recent CRA (dated March 2024) and the CRA has been utilized to develop this Master Fire Plan.

Further, [Ontario Regulation 343/22](#) entitled “Firefighter Certification”, identifies the mandatory certification of firefighters for fire protection services by July 1, 2026 (Certification Items 1 to 29) and July 1, 2028 (Certification Items 30 to 43). The Municipality of Thames Centre Fire Department is diligently implementing training programs to achieve compliance to this Regulation within the identified dates.

National Fire Protection Association (NFPA) Standard

NFPA Standard 1720, entitled “Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments”, is applicable to the Municipality of Thames Centre Fire Department.

As per NFPA Standard 1720, “The purpose of this industry standard is to specify the minimum criteria required to address the effectiveness and efficiency of the volunteer fire department in protecting the citizens of the jurisdiction.”

The criteria are based on how the Fire Department is organized, which in turn, determines the fire suppression capability. The capability is defined by how much firefighting power can be put into action at a fire:

- It includes the amount of apparatus, equipment, and personnel available;
- the time needed to respond and place equipment in action;
- the water supply;
- the application of strategy and tactics; and
- the level of training.

The authority having jurisdiction (AHJ) shall promulgate the fire department's organizational, operational, and deployment procedures by issuing written administrative regulations, standard operating procedures (SOPs), and departmental orders.

Observation 2:

The Municipality of Thames Centre Fire Department's Standard Operating Procedures (SOPs) and departmental orders are outdated, and in some cases, non-existent.

Recommendation 2:

The Municipality of Thames Centre Fire Department should implement a review of the Standard Operating Procedures (SOPs) and departmental orders for safe and effective fire operations and mitigate risk and liability parameters.

Fire Underwriters Survey

[Fire Underwriters Survey™](#) (FUS) is a national organization administered by OPTA Information Intelligence, formerly CGI Insurance Business Services, formerly the Insurers' Advisory Organization and Canadian Underwriters Association. FUS provides data on public fire protection for fire insurance statistical work and underwriting purposes of subscribing insurance companies. Subscribers of Fire Underwriters Survey represent approximately 85 percent of the private sector property and casualty insurers in Canada.

The FUS provides a grading system that sets insurance rates. The grading system is based on:

1. Risk Assessment - Municipal building stock details such as size, construction, exposures, occupancy, and fire protection systems, lay the foundation of a municipal risk assessment and determine the community's fire hall, apparatus and staffing needs ([See Recommendation #5 of the CRA](#));
2. Water Supply - Within a water system assessment for public fire protection, the major emphasis is placed upon the ability to deliver adequate water to control major fires throughout the municipality on a reliable basis. What is ultimately available to the fire department is the critical test in the evaluation ([See Recommendation #7 of the CRA](#));

3. Fire Safety Control - The fire safety control assessment includes a review of all fire prevention activities including public education. The overall needs of these programs should be determined with the aim of reducing the number of fires within the community. All activities should be measured for their effectiveness (See [Fire Prevention Program, and, Public Education Committee in Master Fire Plan](#)); and
4. Fire Department - Areas reviewed in the Fire Department assessment include apparatus, distribution of companies, staffing, training, maintenance, pre-incident planning, etc. (See [Recommendations in Master Fire Plan](#)).

Given the value of such structures, the majority of owners purchase property insurance, which is primarily based on the FUS grading system.

[Fire insurance grading & recognition is important](#). To help establish appropriate fire insurance rates for residential and commercial properties, insurance companies need reliable, up-to-date information about a community's fire-protection services. Fire Underwriters Survey provides that information through the Public Fire Protection Classification (PFPC) and Dwelling Protection Grades (DPG) insurance grading systems.

When a community improves its PFPC or DPG, insurance rates may be reduced, and underwriting capacities may increase. Every insurance company has its own formula for calculating their underwriting capacities and insurance rates, however the PFPC and DPG classifications are extremely useful to insurers in determining the level of insurable risk present within a community.

Special Agreements / Fire Protection Agreements

There are three primary “special agreements” pertaining to the emergency response of the Municipality of Thames Centre Fire Department. The agreements are as follows:

- **Automatic Agreement**

For the purposes of the Fire Protection and Prevention Act, 1997 an automatic aid agreement means any agreement under which

(a) a municipality agrees to ensure the provision of an initial response to fires, rescues and emergencies that may occur in a part of another municipality where a fire department in the municipality is capable of responding more quickly than any fire department situated in the other municipality; or

(b) a municipality agrees to ensure the provision of a supplemental response to fires, rescues and emergencies that may occur in a part of another municipality where a fire department situated in the municipality is capable of providing the quickest supplemental response to fires, rescues and emergencies occurring in the part of the other municipality.

▪ **Mutual Aid Plan**

Means the Province of Ontario Mutual Aid Plan, which incorporates the County, Regional and District mutual aid plans developed under the authority of the FPPA, 1997, and under the direction of the Fire Marshal, facilitate the provision of associated fire protection services to the residents of County, Regional and District under a co-ordinated and cooperative provincial plan.

The Mutual Aid program means:

- to provide / receive assistance in the case of a major emergency/significant event in a municipality, non-municipal community or area; and
- to provide a mechanism that can be used to activate responses to incidents that exceed the capability of the participant or non- municipal participant.

▪ **Tiered Response Agreement**

A tiered response agreement is between the Municipality of Thames Centre and the Ministry of Health and Long-Term Care. This agreement is focused on medical emergencies within Thames Centre.

Based on a protocol involving specific types of medical emergencies, the agreement authorizes Municipality of Thames Centre Fire Department to respond to medical emergencies as a first response.

Observation 3:

There are a variety of automatic, mutual aid and tiered response agreements involving Municipality of Thames Centre Fire Department.

Recommendation 3:

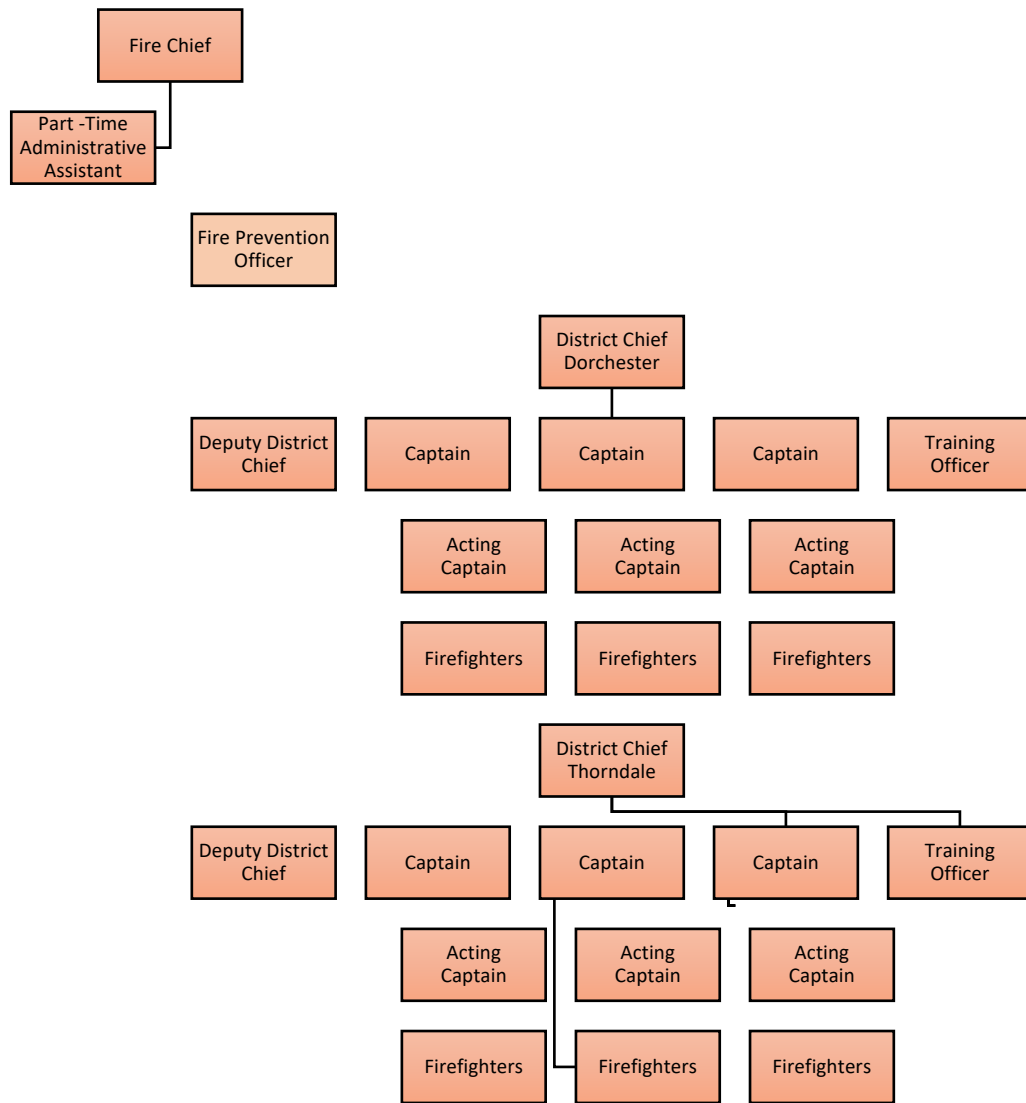
It is recommended that a quarterly review and analysis of data associated with response agreements (automatic aid, mutual aid, and tiered response) be established to assess level of effort, quantify performance measures, and annual reporting to Council.

Organizational Structure

Reporting

The Fire Chief is the most senior officer of the Fire and Emergency Services Department. In terms of reporting, the Fire Chief primarily reports administratively to the Chief Administrative Officer. However, as per Section 6 (3) of the *Fire Prevention and Protection Act*, the Fire Chief is ultimately responsible to Council.

In addition, as per Section 7 of the *Fire Prevention and Protection Act*, the Fire Chief may be appointed as a “Fire Coordinator” or a “Deputy Fire Marshall”, and as such, reports to the Ontario Fire Marshall under these appointments.



Council (Authority Having Jurisdiction)

The Municipality of Thames Centre Council consists of a Mayor and 4 Municipal Councillors. The Council as a whole is responsible for determining the service delivery model of the fire department, passing bylaws determining level of effort, determining the goals and objectives of the department, approving departmental budgets, and receiving and deliberating reports from the Fire Chief.

Overall, identified via a survey, Council is very supportive of the fire department's personnel (from the Fire Chief to the front-line volunteer firefighters).

Senior Leadership of Fire Department

The Fire Chief is supported by the two designated District Chiefs in Dorchester and Thorndale. As per the February 2024 Firefighter Survey, there was overall satisfaction with the availability, communication, and support of the senior leadership team.

However, in terms of communications, 46.8% commented communications with the senior leadership as good to excellent, with 19.2% indicating an average response. This brings a total of over 66% rating in regard to a satisfactory level towards communication.

These measures are typical of a volunteer-based firefighter service where there are several conflicting schedules and factors impacting the ratings and associated firefighter engagement. Overall, some improvements are recommended.

Observation 4:

There are some improvements that can be addressed to reflect availability, communications and support of the senior leadership.

Recommendation 4:

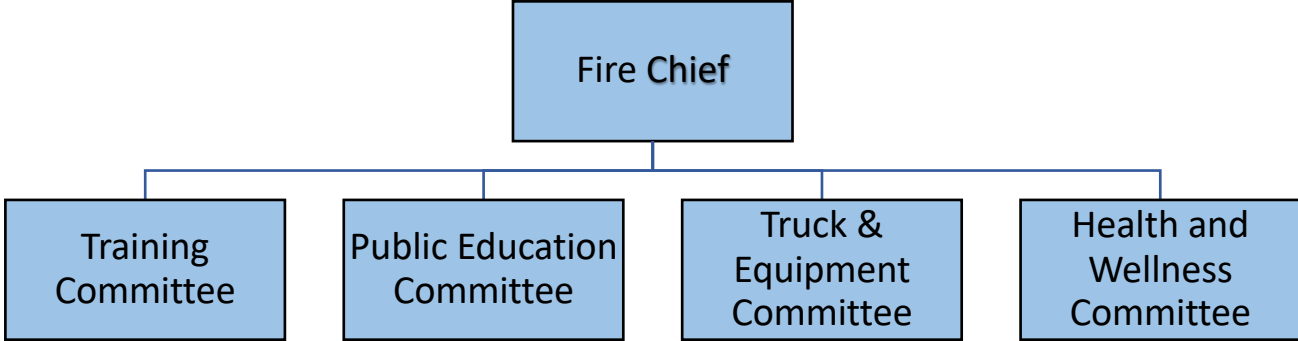
It is recommended that the Municipality of Thames Centre:

- a. Provide all firefighter with a designated Thames Centre email address (and domain) in order that firefighters can:
 - I. Have a sense they are part of the Municipality of Thames Centre team.
 - II. Receive direct communications from senior fire leadership;
 - III. Receive and access departmental news, events and information; and
 - IV. Receive and access corporate news, events and information (such as Council highlights, Mayor's Breakfast, etc.); and
- b. Fire Chief could schedule an "Open Door" program once a month, where firefighters can engage the Fire Chief without a scheduled appointment.

Committees

The municipal bylaw to establish the fire department (By-Law 15- 2015) identifies a “Truck and Equipment” committee, which consists of 9 members.

However, the new Fire Chief for Thames Centre has appropriately reviewed the committee structure and has restructured the committees to maximize and effectively seek firefighter engagement, participation, and feedback. The new committee structure is as follows:



1. Training Committee	
Scope	The Training Committee will be responsible for the research, organization, planning, facilitation, delivery, and administration of training and development for the TCFD.
Chair	Fire Training Officer
Membership	Fire Training Officer (Dorchester) and Fire Training Officer (Thorndale) Four Firefighters and/or Officers from both Dorchester and Thorndale
Term	2 Years
Qualifications	<ul style="list-style-type: none"> ▪ Over 1 year of service ▪ NFPA 1041 Fire Instructor – Level One (or willing to achieve certification within 1 year of appointment).
Responsibilities	<ul style="list-style-type: none"> ▪ Plan and deliver (or assign and monitor delivery) TCFD training to firefighters and officers at both regularly and non-regularly scheduled training opportunities. ▪ Assist in the delivery of training in each station. ▪ Research new training opportunities and techniques, following NFPA and other recognized entities. ▪ Keep accurate and up-to-date training records of all personnel attending training, training safety plans and lesson plans. ▪ Post training bulletins, and information regarding upcoming scheduled training events.
Frequency	The committee will meet quarterly.
Reports To	Fire Chief

2. Public Education Committee	
Scope	Public Education is the first line of defence. The Public Education Committee will be responsible for the research, organization, planning, facilitation, delivery, and administration of fire safety public education for the TCFD.
Chair	Selected amongst Committee members.
Membership	Three Firefighters and/or Officers from both Dorchester and Thorndale
Terms	2 Years
Qualifications	<ul style="list-style-type: none"> ▪ Over 1 year of fire service experience. ▪ NFPA 1035 Fire and Life Safety Educator – Level One (or willing to achieve certification within 1 year of appointment).
Responsibilities	<ul style="list-style-type: none"> ▪ Plan and deliver (or assign and monitor delivery of) TCFD community event participation and public education opportunities. ▪ Research new public relations opportunities, trends and techniques. Keep accurate and up-to-date records of all public events attended. ▪ Post bulletins and information regarding upcoming scheduled events. ▪ Network and build relations with external stakeholders in the community. ▪ Regular communication with the Public Information Officer (PIO) is expected.
Frequency	The committee will meet quarterly.
Reports To	Fire Chief

3. Truck and Equipment Committee	
Scope	The Truck and Equipment Committee will be responsible for the research, organization, planning, development and administration of any new or current apparatus or piece of equipment in the TCFD.
Chair	Selected amongst Committee members.
Membership	Six Firefighters and/or Officers (minimum two members from both Dorchester and Thorndale). Committee may invite other fire department staff to meetings for assistance with planning and/or repairs.
Terms	2 Years
Qualifications	<ul style="list-style-type: none"> ▪ Over 1 year of fire service experience. ▪ NFPA 1001 - Firefighter Level 2 (or willing to achieve certification within 1 year of appointment).
Responsibilities	<ul style="list-style-type: none"> ▪ Research and make recommendations on the purchasing, maintenance, repair, and implementation of new and existing apparatus and equipment. ▪ Attend appropriate trade shows and conventions showcasing new apparatus and equipment. ▪ Research and design specs for new TCFD apparatus. ▪ Make or recommend repairs of vehicles and equipment according to manufacturer's specifications and legislation.
Frequency	The committee will meet quarterly.
Reports To	Fire Chief

4. Health and Wellness Committee	
Scope	The Health and Wellness Committee will be responsible for the research, organization, planning, facilitation, and the recommendation of firefighter mental and physical wellness initiatives for the TCFD.
Chair	Selected amongst Committee members.
Membership	Six Firefighters and/or Officers (minimum two members from both Dorchester and Thorndale). Committee may invite other fire department staff to meetings for assistance with planning and/or repairs.
Terms	2 Years
Qualifications	<ul style="list-style-type: none"> ▪ Over 1 year of fire service experience. ▪ NFPA 1001 - Firefighter Level 2 (or willing to achieve certification within 1 year of appointment).
Responsibilities	<ul style="list-style-type: none"> ▪ Research new trends, attend appropriate approved training, make recommendations for and champion both mental and physical health and wellness in the TCFD. ▪ Act as the initial point of contact for any member of the TCFD requiring CISM (Critical Incident Stress Management). ▪ Provide confidentiality to fire department members requesting assistance with mental health issues. ▪ The committee will organize and facilitate both mental and physical wellness opportunities for the TCFD.
PTSD Mitigation	<ul style="list-style-type: none"> ▪ It is recommended that a focus on Post-Traumatic Stress Disorder (PTSD) mitigation strategies be a priority for the Health and Wellness Committee in 2024. PTSD is a mental health condition triggered by experiencing or witnessing a traumatic event. Firefighters are at high risk for PTSD due to their occupational exposure to traumatic incidents, which can have a cumulative impact over time, exacerbating the potential for severe psychological distress. ▪ A comprehensive PTSD mitigation strategy should include several key components: education and training on recognizing the signs and symptoms of PTSD, access to mental health resources, regular psychological assessments, peer support programs, and debriefing sessions after traumatic incidents. ▪ In Ontario, the Occupational Health & Safety Act mandates that employers take every reasonable precaution to protect the mental health and well-being of their staff, which includes addressing the unique needs of emergency responders. ▪ Resources such as the “Boots on the Ground Peer Support for First Responders” program provide crucial peer support for first responders, offering confidential, volunteer-based assistance from those who understand the challenges faced by emergency personnel. (https://www.bootsongtheground.ca)

	<ul style="list-style-type: none"> ▪ Additionally, access to a staff psychologist can provide expert guidance on developing a robust PTSD mitigation strategy, ensuring that mental health is a key focus. While the Employee and Family Assistance Program (EFAP) offers valuable services, the specialized nature of emergency services requires additional, tailored supports to ensure that staff have access to the necessary resources to maintain their mental health and well-being. ▪ Integrating these elements into the fire department’s health and wellness initiatives will help meet legislative obligations under the OHSA and provide a safer, more supportive environment for firefighters. Recognizing and addressing the cumulative nature of trauma in this high-risk occupation is essential for the long-term health and effectiveness of fire service personnel.
Frequency	The committee will meet quarterly.
Reports To	Fire Chief

Staffing

Administration

The Municipality of Thames Centre Fire Department employs a Fire Chief who is responsible for the administration of the department. The Fire Chief is supported by a shared administrative support staff.

The department is also supported administratively by inter-departmental services, such as human resources, finance, and public works. The Fire Chief is responsible for the following administrative and operational functions. It was noted that the volume of committees is an effort to mitigate the administrative resource limitations of the fire department. The observations related to the fire department and the administration workload of the Chief are highlighted below:

- CEMC
- On-Call
- Deputy Chief
- Committees trying to make up for lack of resources
- Senior leadership team no full-time and corporate responsibilities
- Total number of employees
- Span of control on fire ground is 5
- Span of administrative control is 60:1

The responsibilities of the Fire Chief in Ontario are substantial, given the significant legislative requirements and standards. The Fire Chief, leveraging specialized knowledge and skills, plays a pivotal role in leading the entire fire service, managing operations, and spearheading various initiatives. As mandated by the Fire Protection and Prevention Act and its associated regulations, the Fire Chief holds the position of Chief Fire Official within the municipality. In this capacity, the Fire Chief possesses statutory authority and assumes all prescribed duties and responsibilities. Additionally, the Fire Chief must adhere to directives issued by the Fire Marshal in accordance with the Fire Protection and Prevention Act.

Currently, the span of administrative control within the Municipality of Thames Centre Fire Department is 60:1. As a result, the Fire Chief oversees a department of significant size in the municipality, yet the administrative capacity does not align with the extensive administrative and operational demands.

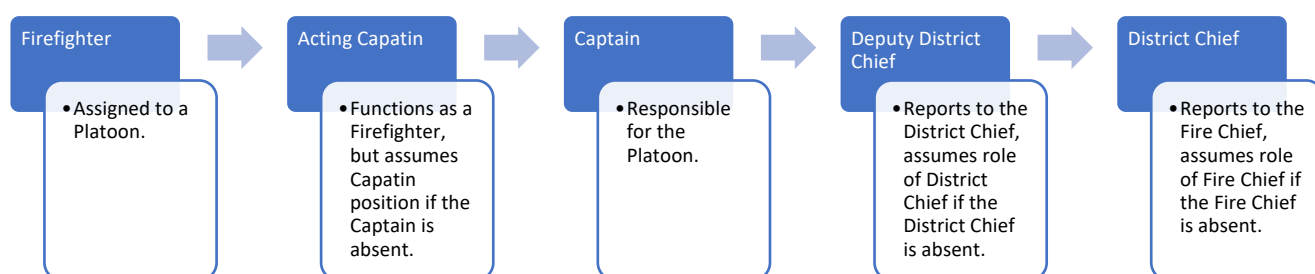
Considering the current fiscal climate and municipal resource allocations, the consultant suggests that the Fire Chief present a report to the Chief Administrative Officer (CAO) outlining recommendations for administrative support. The financial analysis of the proposed administrative support should include realigning the resources currently allocated to the external Fire Prevention Officer to support the implementation of a Deputy Fire Chief or alternative position.

The alternative position would not only support the Fire Chief in both administrative and operational oversight but also fulfill the fire prevention requirements. This approach would ensure a comprehensive and efficient structure, enhancing the overall effectiveness of the fire department and addressing both current and future needs. The objective is to ensure the administrative recommendations to the Chief Administrative Officer (CAO) are cost neutral to the municipality. The budget assessment indicates that administrative enhancements or structural changes could be achieved within the existing budget allocation. The consultant supports an operational review or efficiency assessment if administrative revisions are required.

Operations

From an operations perspective, there are two districts in the Municipality of Thames Centre Fire Department, located respectively in the urban settlement areas of Dorchester and Thorndale.

Each district has a chain of command hierarchy, which for the purposes of Incident Command, consists of:



At the time of writing this report (February 2024), the following describes the roster within the fire department's operations:

Position	Chief	Fire Prevention Officer*	District Chief	Deputy District Chief	Captain	Acting Captain	Fire Fighters	Totals
Thames Centre	1	0.5						1.5
Dorchester			1	1	3	3	24	33
Thorndale			1	0**	2**	3	11	19
Totals	1	0.5	2	2	6	6	34	53.5***

Notes:

- * The Fire Prevention Officer is part of a Shared Services Agreement with Middlesex Centre.
- ** Thorndale has two "officer" vacancies.
- *** The Fire Department is actively filling vacancies and recruiting firefighters.

The consultant noted that the Fire Chief has direct access to a municipal communications professional, facilitating effective collaboration on consistent messaging to the community regarding fire-specific risks. This partnership ensures that all communications are clear, coordinated, and effectively address the concerns and needs of the community, thereby enhancing public awareness and safety.

Succession Planning

Based on the firefighter survey (February 2024), 57% of non-officer firefighters indicated they would serve as an officer should the opportunity arise. This is a positive result. With firefighters continuously gaining field operations experience, there is a sufficient talent pool within the department to support succession planning.

The department should encourage and support firefighters receiving NFPA 1041 certification (Level 1 and 2), which is focused on firefighters becoming training officers. Thereafter, NFPA 1041 is a prerequisite for firefighters to enroll in NFPA 1021 (Levels 1, 2, 3 and 4), which certifies firefighters to become officers (such as Captains and District Chiefs).

Training

For each district, the fire department has designated a firefighter as the district's "Training Officer".

- The Dorchester Training Officer is certified to NFPA 1041 Fire Instructor – Level 1 and Level 2.
- The Thorndale Training Officer is certified to NFPA 1041 Fire Instructor – Level 1.

Each district is scheduled to train once a week. Dorchester designates every Tuesday as "training night" and Thorndale designates every Monday as "training night". As per the municipal bylaw, Captains and Acting Captains are to assist the Training Officers.

When required, the fire department will invite specialized instructors and guests to the municipality for training programs and workshops. In addition, the fire department will send firefighters and officers to the Ontario Fire College for specialized training.

At the time of writing this report, the Fire Chief has implemented a newly structured "[Training Committee](#)" consisting of the two appointed Training Officers and four Firefighters and/or Officers from both Dorchester and Thorndale.

The responsibilities of the new Training Committee are:

- Plan and deliver (or assign and monitor delivery) TCFD training to firefighters and officers at both regularly and non-regularly scheduled training opportunities.
- Assist in the delivery of training in each station.
- Research new training opportunities and techniques, following NFPA and other recognized entities.
- Keep accurate and up-to-date training records of all personnel attending training, training safety plans and lesson plans.

- Post training bulletins, and information regarding upcoming scheduled training events.

As referenced, Ontario Regulation 343/22 identifies the mandatory certification of firefighters for fire protection services by July 1, 2026 (Certification Items 1 to 29) and July 1, 2028 (Certification Items 30 to 43). The Municipality of Thames Centre Fire Department is diligently implementing training programs to achieve compliance by the identified dates.

Observation 5:

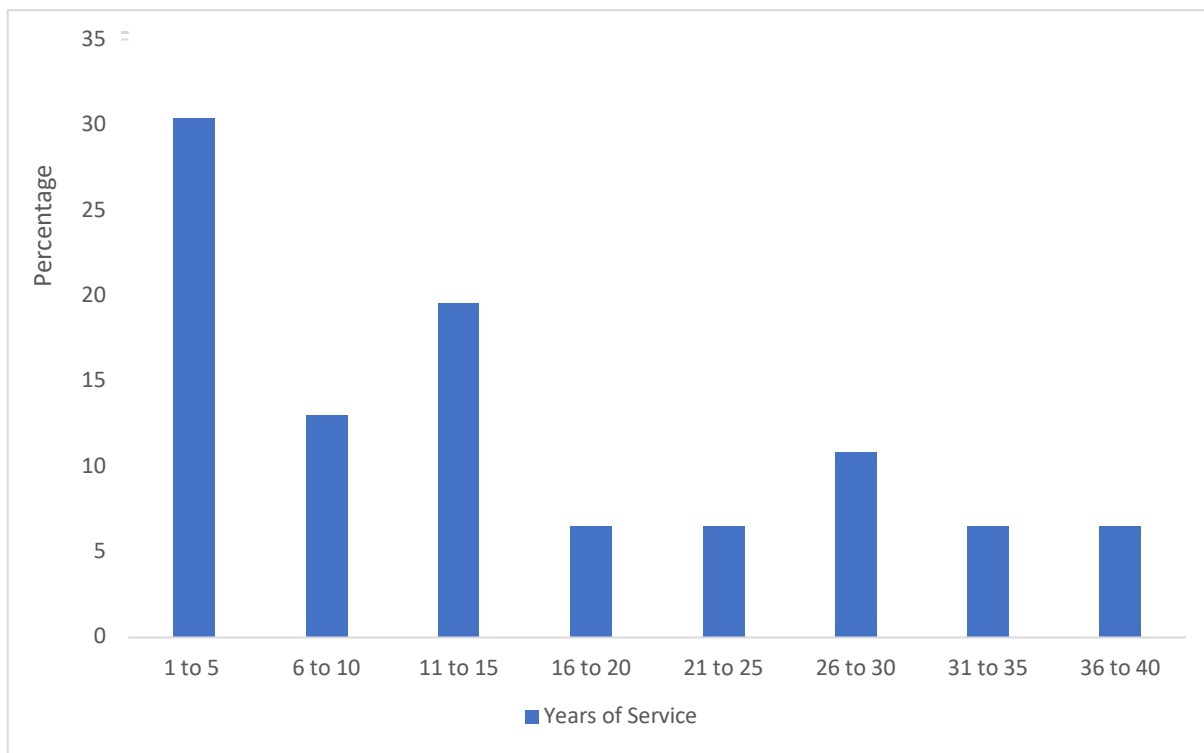
There is no updated centralized file to collate all training records of individual firefighter certifications, training courses, and other mandatory certificates and licences (such as driver licences, CPR, etc.).

Recommendation 5:

The Training Committee responsibilities, specific to the two Training Officers, should include the creation, input and monitoring of a centralized training file that is readily accessible electronically to the Fire Chief, and documents all individual firefighter certifications for regulatory compliance.

Recruitment

Upon reviewing the firefighter roster (February 2024), it was identified that the average “years of service” (or experience within the Municipality of Thames Centre Fire Department) was 15.5 years.



It is also illustrated that 43% of the roster have less than 10-years of experience as a firefighter. This is aligned with the age group of the firefighters, where 42% are between the ages of 20 to 39 years of age.

Age	Percentage
20 to 29	13.73
30 to 39	27.45
40 to 49	31.37
50 to 59	17.65
60 plus	9.80

Based on the firefighter survey, approximately 25.5% have indicated they plan to retire from the department within the next 5 years.

Based on the data, Municipality of Thames Centre Fire Department will need to monitor attrition and adapt with the recruitment of additional community volunteers to become firefighters.

Currently, the Dorchester district fire station has been assigned 5 Officers (consisting of a District Chief, a Deputy District Chief, and three Captains) and 28 Firefighters (three acting Captains and 25 firefighters), for a combined total of 33 personnel. For effective fire operations, the fire department should maintain a threshold of 5 Officers and 30 Firefighters, for a total of 35 personnel in Dorchester. Relative to Thorndale district fire station, there are currently 5 Officers (consisting of a District Chief, a Deputy District Chief, and three Captains) and 14 Firefighters (three acting Captains and 11 firefighters), for a combined total of 19 personnel. For effective fire operations, the fire department should maintain a threshold of 5 Officers and 20 Firefighters, for a total of 25 personnel in Thorndale.

Observation 6:

The average year of service is 15.5 years, and 25.5% of firefighters indicated they would retire over the next 5 years.

Recommendation 6:

It is recommended that:

- a. Municipality of Thames Centre Fire Department will need to monitor attrition and adapt with the recruitment of additional community volunteers to become firefighters.
- b. For effective fire operations, the fire department should maintain a threshold of 5 Officers and 30 Firefighters, for a total of 35 personnel in Dorchester; and
- c. For effective fire operations, the fire department should maintain a threshold of 5 Officers and 20 Firefighters, for a total of 25 personnel Thorndale.

Certification

As per [Ontario Regulation 343/22](#) entitled “Firefighter Certification”, under the *Fire Protection and Prevention Act*, all municipalities must ensure firefighter assigned to the fire protection service have the prescribed mandatory certification.

The Regulation contains provisions to exempt the mandatory certification requirements if the Fire Marshall issues a letter of compliance. This letter of compliance is based on conditions, that includes

the municipality providing the Fire Marshall with associated documentation of service and training records. However, the Municipality of Thames Centre has waived applying these exemptions. This is supported due to risk assessment and liability issues towards the municipality.

As a result, the Municipality of Thames Centre Fire Department is required to ensure all current firefighters have specific mandatory certifications by July 1, 2026, and subsequently, additional certifications by July 1, 2028. See Ontario Regulation 343/22 for complete list of the mandatory certification.

To meet this certification requirement, Municipality of Thames Centre Fire Department is conducting in-house training according to the identified NPPA Standards. Certification records should be centrally filed with the municipality (See Recommendation #4). Further, the designated Training Officers, in consultation the Training Committee and senior fire management, should adopt a training schedule for firefighter certification as mandated by Ontario Regulation 343/22.

[Appendix 2](#) provides a list of the status of the current firefighter certification.

Observation 7:

The Municipality of Thames Centre Fire Department is legislatively mandated to certify all firefighters to the criteria specified in Ontario Regulation 343/22.

Recommendation 7:

It is recommended that the Training Officers, in consultation the Training Committee and senior fire management, adopt a training schedule for firefighter certification as mandated by Ontario Regulation 343/22 for compliance by July 1, 2026, and thereafter, compliance by July 1, 2028.

Compensation

Other than the Fire Chief and the Fire Prevention Officer, all other fire personnel are “volunteers” and are designated “paid on call” (POC).

There is no formal compensation agreement between the Municipality and the firefighters. During the 2017 Operating Budget deliberations, Council received Report No. FS-001-17 and subsequently approved an hourly wage increase for volunteer firefighters, from \$24/hr to \$25/hr.

At the time of preparing this report, the Municipality has retained the services of a consultant to conduct a wage review, which will include the fire department. The wage review will include comparators of surrounding municipal jurisdictions.

Based on interviews with senior officers, the compensation is based on the following parameters:

Rank			
Fire Chief	Salaried		
Fire Prevention Officer	Salaried (via shared services agreement)		
	Hourly (Paid on Call)		Annual Stipend
	First Hour	Each Subsequent Hour	
District Chief	2 Points	1 Point	\$3,500
Deputy District Chief	2 Points	1 Point	\$3,000
Captain	2 Points	1 Point	\$1,500
Acting Captain	2 Points	1 Point	\$1,000
Training Officer	2 Points	1 Point	\$1,500
Firefighter	2 Points	1 Point	
Committee Chair			\$500

Each point = \$25. For example, if a firefighter responded to a call and was on scene for 30 minutes, they would receive 2 points = \$50. However, if a firefighter responded to a call and was on scene for 6 hours, they would receive 7 points = \$175.

With the exemption of salaried personnel, all officers and firefighters are paid once a year in December of that year.

As per the firefighter survey, approximately 64.6% indicated their compensation was too low, whereas 33.4% indicated their compensation as “adequate”. When asked for commentary, most firefighters who provided comments, explained that their wages were too low when compared to surrounding jurisdictions.

The term "volunteer firefighter" can be misleading, as it may imply a lack of compensation or formal occupational status. It is crucial to understand that volunteer firefighters are compensated for their services and perform functions that carry inherent risks.

Given the significant responsibilities and dangers associated with their role, the term "volunteer" does not accurately reflect the professional commitment and risk undertaken by these individuals. The consultant suggests reconsidering the use of the term "volunteer" and transition to “paid on call firefighters” to ensure it aligns with the reality of the position and recognizes the dedication and professionalism of these firefighters.

Observation 8:

There is no formalized compensation agreement. The Municipality has undertaken a salary wage review across the municipal departments, which includes the fire department.

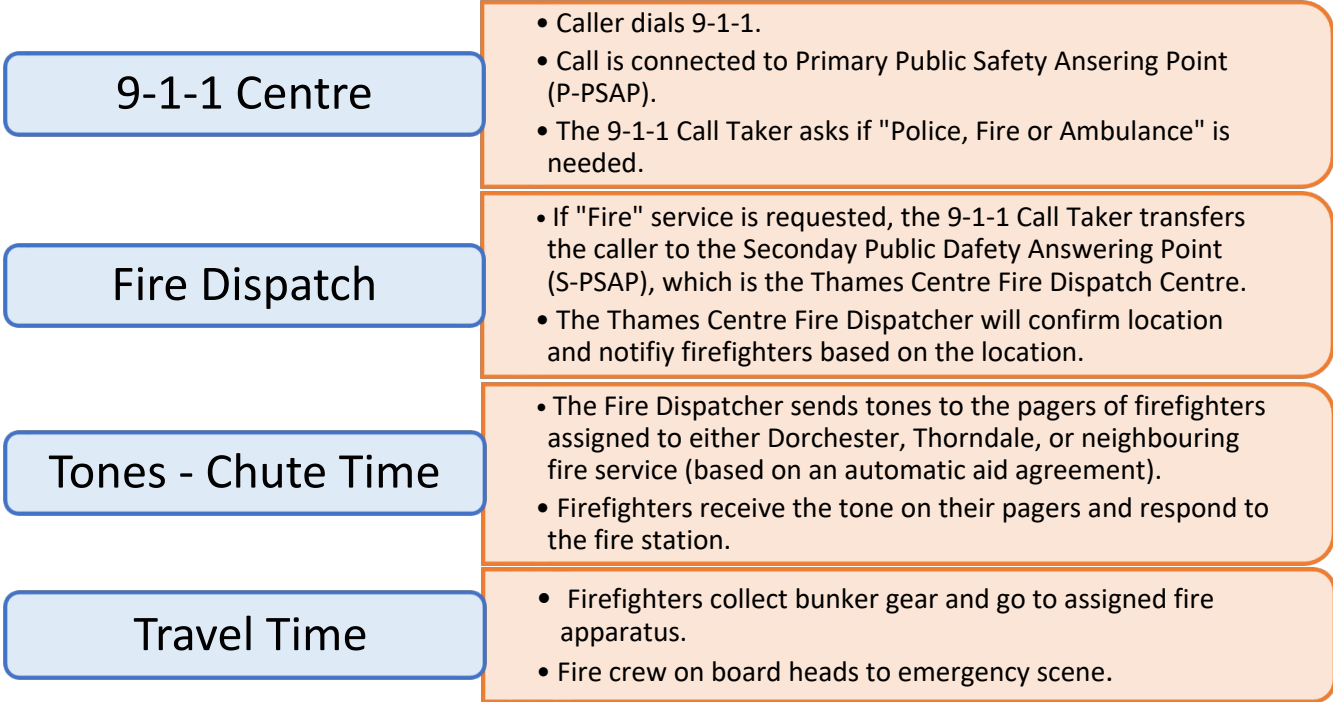
Recommendation 8:

It is recommended that:

- a. Council receives the ongoing salary review and make adjustments to firefighters' compensation that is competitive to neighbouring jurisdictions (if applicable), and review the compensation every 3 years;
- b. The Municipality review the payment model of a point system versus an hourly system; and
- c. The Municipality pay firefighters with greater frequency (either bi-weekly or quarterly) in lieu of the current annual payment method.

Response Capacity

When 9-1-1 is called, and the fire service is requested, there are various stages that occur prior to firefighters arriving on the emergency scene:



As recommended by NFPA 1720 (Standard for Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments), response times for volunteer fire departments are:

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

^a A jurisdiction can have more than one demand zone.
^b Minimum staffing includes members responding from the AHJ’s department and automatic aid.
^c Response time begins upon completion of the dispatch notification and ends at the time interval shown in the table.
 * AHJ = Authority Having Jurisdiction (Municipal Council)

There are various challenges in achieving this response time standard. For example, the old standard criteria of 10 firefighters on scene within 10 minutes, equates to the following sequence:

- Time 0 (Tones) = Tones are sent to firefighters’ pagers.
- Time 0 to 1 (Chute Time) = Firefighters travel time to station.
- Time 1 to 2 (Travel Time) = Fire crew travelling from station to emergency scene.
= Response Time = 10 Minutes

The challenges are:

1. Location of firefighters when tones are received (at home, work, shopping, restaurant, etc.);
2. Distance required to travel from location to the station;
3. Time period required for enough firefighters arriving at the station to staff the designated apparatus (pumper, tanker, or other response vehicle); and
4. Time to assemble 10 firefighters at emergency scene.

According to the firefighter survey, 78% of Dorchester firefighters reported they had a chute time (residence to station) of less than 5 minutes, and respectively, 70% of Thorndale firefighters had a chute time of less than 5 minutes. A summary of estimated chutes times are below:

Chute Time	Dorchester %	Thorndale %
Less than 1 minute	4	5
1:00 to 2:59	35	15
3:00 to 4:59	38	45
5:00 to 9:59	23	30
Greater than 10 minutes	0	5

It was also identified that:

- Over 80% of firefighters work at another job full-time, where 69% commute outside the municipality.
- Of these workers, predominately 58.5% work weekdays, and 29% work shifts (days and nights).

Response Agreements

As permissible under the Municipal Act and the Fire Protection and Prevention Act, two or more municipalities may enter into agreements into the delivery of specified municipal services, such as fire services.

Automatic Aid with Central Elgin

As authorized by By-Law 75- 2017 (dated August 21, 2017), the Municipality of Thames Centre has entered into an “automatic aid” agreement with the Municipality of Central Elgin. The agreement provides the authority of the Central Elgin Fire and Emergency Services enter the municipal jurisdiction of Thames Centre to provide an initial response to a “unconfirmed structural fire, motor vehicle

collision or medical emergency”. This response will occur when the Central Elgin Fire and Emergency Services (Belmont Station) is the closest fire department to respond to the emergency scene. The agreement states the Central Elgin Fire and Emergency Services will respond with “up to three (3) firefighting and rescue vehicles and related personnel”.

When the Central Elgin Fire and Emergency Services arrive on scene and confirm a structure fire, the Municipality of Thames Centre Fire Department will be notified to respond and assume command upon arrival.

The agreement provides the ability for the Central Elgin Fire and Emergency Services to invoice the Municipality of Thames Centre the level of effort costs for a minimum of 1 hour, and each subsequent hour that they remain on scene.

Observation 9:

The Office of the Fire Marshall has produced a Mutual Aid Plan template (revised March 2023) as a guide for municipalities to enter into agreements for assistance with fire protection services.

Recommendation 9:

The Automatic Aid agreement between the Municipality of Thames Centre and the Municipality of Central Elgin be reviewed and reformatted in accordance with the Mutual Aid Plan template published by the Office of the Ontario Fire Marshall.

Automatic Aid within County of Middlesex and City of London

As a local municipality of Middlesex County, the Municipality of Thames Centre is a participant to the County of Middlesex Mutual Aid Plan, which contains Automatic Aid Agreements in participation with all the local municipalities within the County (and the City of London).

1. Middlesex Centre (Bryanston Station) Receiving Automatic Aid from Thames Centre (Thorndale)

The aforementioned Municipalities, in accordance with the terms set out in their respective agreement(s) and as mentioned in the Middlesex County Mutual Aid Plan, hereby concur that at the direction of the Strathroy-Caradoc Communications Centre will provide “Automatic Aid” to reported structure fires within the area of the Municipality of Middlesex Centre.

A Letter of Agreement pertaining to the above was signed by the Municipality of Thames Centre on December 5, 2001.

2. Middlesex Centre (Avra Station) Receiving Automatic Aid from Thames Centre (Thorndale)

The aforementioned Municipalities, in accordance with the terms set out in their respective agreement(s) and as mentioned in the Middlesex County Mutual Aid Plan, hereby concur that at the

direction of the Strathroy-Caradoc Communications Centre will provide “Automatic Aid” to reported structure fires within the area of the Municipality of Middlesex Centre.

A Letter of Agreement pertaining to the above was signed by the Municipality of Thames Centre on December 5, 2001.

3. Thames Centre (Dorchester) Receiving Automatic Aid from City of London Fire Dept. (Station #10)

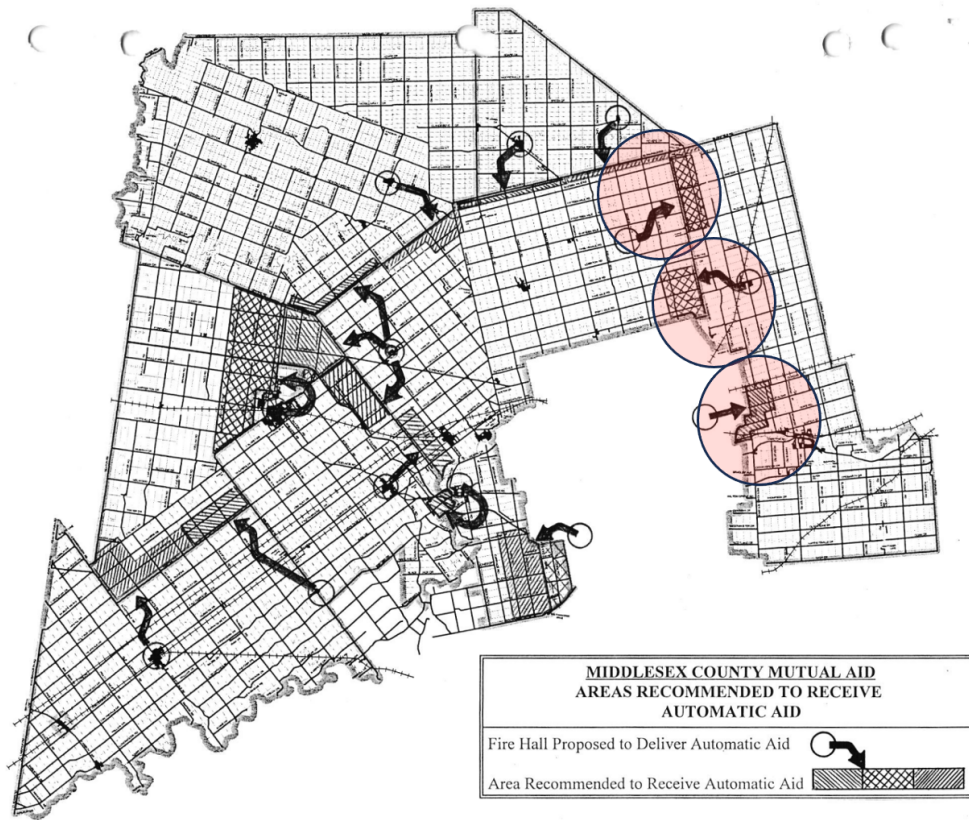
The aforementioned Municipalities, in accordance with the terms set out in their respective agreement(s) and as mentioned in the Middlesex County Mutual Aid Plan, hereby concur that at the direction of the Strathroy-Caradoc Communications Centre will provide “Automatic Aid” to reported structure fires within the area of the Municipality of Thames Centre.

A Letter of Agreement pertaining to the above was signed by the Municipality of Thames Centre on May 3, 2002.

4. Thames Centre (Dorchester) Receiving Automatic Aid from Biddulph-Blanchard Fire Department.

The aforementioned Municipalities, in accordance with the terms set out in their respective agreement(s) and as mentioned in the Middlesex County Mutual Aid Plan, hereby concur that at the direction of the Strathroy-Caradoc Communications Centre will provide “Automatic Aid” to reported structure fires within the area of the Municipality of Thames Centre.

There is no Letter of Agreement within the County of Middlesex Mutual Aid Plan.



Observation 10:

The County of Middlesex Mutual Aid Plan contains all the authorizing Letters of Agreements and/or bylaws authorizing automatic aid. Of the four automatic aid agreement pertaining Thames Centre, only two Letters of Agreement are contained in the County’s Plan

Recommendation 10:

The Letters of Agreements for Automatic Aid between the Municipality of Thames Centre and the City of London (Station #10), and the Municipality of Thames Centre and the Biddulph-Blanchard Fire Department should be included in the County’s Mutual Aid Plan.

Mutual Aid within the County of Middlesex (and surrounding areas)

As a local municipality of Middlesex County, the Municipality of Thames Centre has entered into a Mutual Aid Agreement in participation with all the local municipalities within the County (and the City of London).

The authorizing bylaw is identified as By-Law 68-2001 (dated July 9, 2001) entitled “A Bylaw Authorizing Participation in County Emergency Fire Service Plan and Program”.

The following “Running Card Assignments” are included in the County of Middlesex Mutual Aid Plan:

1. Middlesex Centre (Arva Station) receiving mutual aid from Thames Centre (Thorndale Station)

First Help Call, Backfill and Stand-by Assignments								
Add a Fire Department		Fire Department:		Station (if applicable):		Service Area (if applicable):		
		Middlesex Centre Fire Service		Arva				
Staffing, Pumper, Tanker or Full Station Support								
Add Resource	Help Call	Stand-by	Help Call	Stand-by	Help Call	Stand-by	Backfill	Stand-by
	Thames Centre Thorndale Station	Thames Centre Fire Department						

2. Middlesex Centre (Bryanston Station) receiving mutual aid from Thames Centre (Thorndale Station)

First Help Call, Backfill and Stand-by Assignments								
Add a Fire Department		Fire Department:		Station (if applicable):		Service Area (if applicable):		
		Middlesex Centre Fire Service		Bryanston				
Staffing, Pumper, Tanker or Full Station Support								
Add Resource	Help Call	Stand-by	Help Call	Stand-by	Stand-by	Stand-by	Backfill	Stand-by
	Thames Centre Thorndale Station	Thames Centre Fire Department	Biddulph-Blanchard Fire Department	Lucan-Biddulph Fire Department				

3. Thames Centre (Dorchester Station) receiving mutual aid from other municipalities

First Help Call, Backfill and Stand-by Assignments								
Add a Fire Department		Fire Department:		Station (if applicable):		Service Area (if applicable):		
		Thames Centre Fire Department		Dorchester				
Staffing, Pumper, Tanker or Full Station Support								
Add Resource	Help Call	Stand-by	Help Call	Stand-by	Help Call	Stand-by	Help Call	Stand-by
	Central Elgin Belmont Station	Central Elgin Fire Department	London Fire Department Station 10	London Fire Department	Zorra Twsp Thamesford Station	Zorra Twsp Fire Department	Southwest Oxford Mount Elgin Station	Southwest Oxford Fire Department

4. Thames Centre (Dorchester Station) receiving mutual aid from other municipalities

First Help Call, Backfill and Stand-by Assignments								
Add a Fire Department		Fire Department:		Station (if applicable):		Service Area (if applicable):		
		Thames Centre Fire Department		Thorndale				
Staffing, Pumper, Tanker or Full Station Support								
Add Resource	Help Call	Stand-by	Help Call	Stand-by	Help Call	Stand-by	Help Call	Stand-by
	Lucan-Bidulph Granton Station	Lucan-Bidulph Lucan Station	Zora Township Fire Department Thamesford Station	Zora Township Fire Department	Middlesex Centre Fire Services Arva Station	Middlesex Centre	Middlesex Centre Fire Services Bryanston Station	Middlesex Centre Fire Services

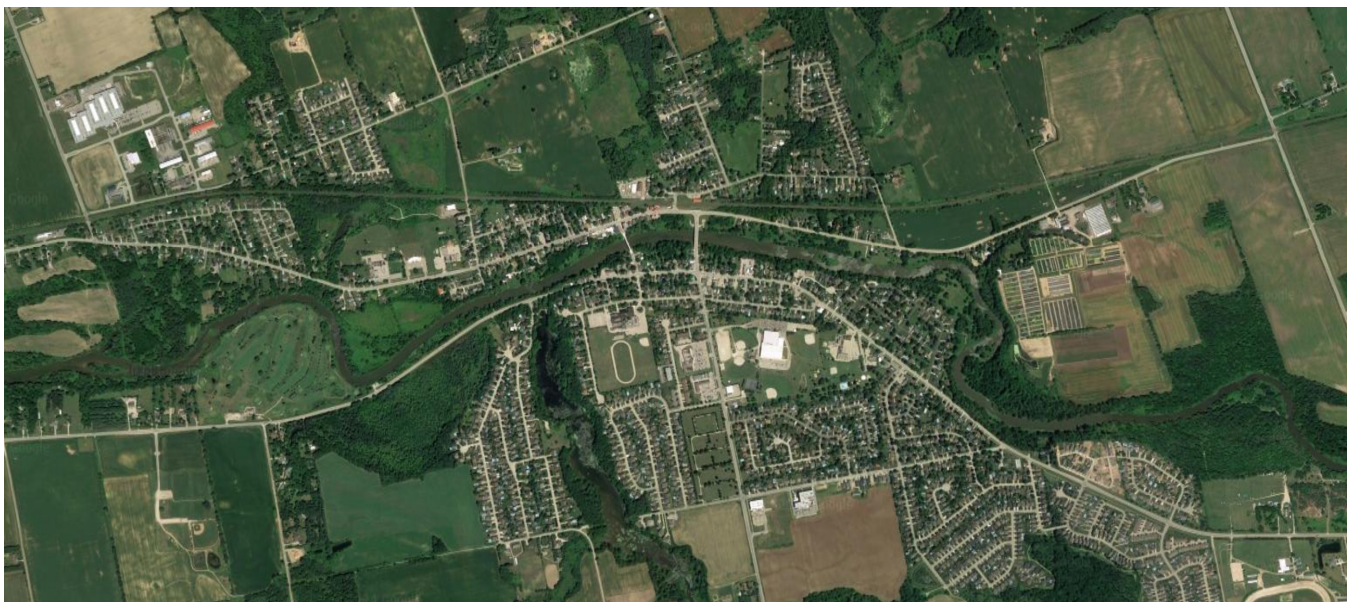
Operational Capacity

Stations

There are two primary fire stations located Thames Centre. They are located in the urban settlement areas of Dorchester and Thorndale.

Dorchester Station

The Dorchester Fire Station was built in 1993 at a cost of approximately \$423,317.00. It is conveniently located in the heart of the Dorchester urban area.



Given that the fire station is over 30 years old, there are significant improvements required to reflect parking, training needs, proper storage areas, new apparatus, and other needs of the volunteer firefighter department.

The firefighter survey achieved an 91% participation rate, which translates to a +/- 4% margin of error, with a 95% confidence level. According to the survey as identified in the chart below, improvements are required in all categories: amenities, storage and maintenance, and the vehicle bays.

Station	Dorchester				
Amenities					
Rating	Below	Meets	Above	Excellent	NA
Washroom	36 %	64 %	0	0	0
Showers	46	23	0	0	31
Lockers	38	27	0	0	35
Kitchen	35	65	0	0	0
Dining	20	16	0	0	64
Laundry	42	46	4	0	8
Rest	28	16	0	0	78
Storage and Maintenance					
Rating	Below	Meets	Above	Excellent	NA
Equipment	50	46	4	0	0
Supplies	46	46	4	0	4
Fleet					
Rating	Below	Meets	Above	Excellent	NA
Parking	42	58	0	0	0
Access	42	58	0	0	0
Egress	35	63	3	0	0
Exhaust	50	19	0	0	31
Cleaning	58	35	0	0	7
Maintenance	58	35	0	0	7

Of primary significance are the health and safety issues, which includes the storage of bunker gear in the vehicle bays next to the apparatus (and exhaust fumes), and insufficient diesel exhaust extraction.



Further, with inadequate storage of supplies and equipment, inventory control becomes problematic and thereby leading to additional increased costs (expired supplies, over stocking, and missing items). Further, supply and cleaning rooms are too cluttered, disorganized, primarily caused by insufficient storage shelves.



Observation 11:

The Dorchester Fire Station needs improvements in all areas of amenities, storage and maintenance, and vehicle bays. This observation is aligned with most firefighters who reported low rankings in these categories.

Recommendation 11:

It is recommended that:

- a. The Municipality establish a financial plan in 2024 to either rehabilitate the existing station, or construct a new fire station in Dorchester;
- b. The target date to complete the rehabilitation, or new construction, should be prior to 2029;
- c. The financial plan includes funding parameters, such as: contributions to a capital reserve from 2025 to 2029, development charges, debenture, and possibly fundraising; and
- d. A building committee, including firefighter participation, be implemented for the purposes of design plans for the rehabilitation, or construction.

Thorndale Station

The Thorndale Fire Station was built in 2018 and is located east of the Thorndale urban settlement area.



Given that the fire station is approximately 6 years old, there are no major improvements that are required to reflect the needs of the volunteer firefighter department.

The firefighter survey achieved an 91% participation rate, which translates to a +/- 4% margin of error, with a 95% confidence level. According to the survey as identified in the chart below, improvements to the storage of bunker gear should be considered.

Station	Thorndale				
Amenities					
Rating	Below	Meets	Above	Excellent	NA
Washroom	0	26	26	48	0
Showers	11	42	5	42	0
Lockers	16	21	5	16	42
Kitchen	0	32	32	36	0
Dining	0	36	0	32	32
Laundry	5	69	0	26	0
Rest	6	28	6	28	32
Storage and Maintenance					
Rating	Below	Meets	Above	Excellent	NA
Equipment	5	58	5	32	0
Supplies	5	52	11	32	0
Fleet					
Rating	Below	Meets	Above	Excellent	NA
Parking	22	26	10	42	0
Access	11	42	5	42	0
Egress	5	47	5	43	0
Exhaust	21	53	0	21	5
Cleaning	5	63	5	27	0
Maintenance	0	63	5	21	11

Observation 12:

The Thorndale Fire Station is in good condition in all areas of amenities, storage and maintenance, and vehicle bays. This observation is aligned with the majority of firefighters who reported high rankings in these categories, except for one element (lockers).

Recommendation 12:

It is recommended that a capital plan be developed to retrofit a designated space to accommodate bunker gear storage and locker space for firefighters.

Fleet

Dorchester



Unit 100

- 2017 Spartan Metro Star Pumper/Tanker Truck
- Expected Replacement Date: 2037



Unit 101

- 2007 Rosenbauer Pumper Truck
- Expected Replacement Date: 2027



Unit 103

- 2020 Spartan Metrostar Walk-In Rescue Truck
- Expected Replacement Date: 2040



Unit 104

- 1991 E Two Tanker Truck
- Expected Replacement Date: 2026



Unit 105

- 2017 Ford F550 Rescue/Brush Truck
- Expected Replacement Date: 2037



Unit 108

- 2012 International Water/Vacuum Truck
- Expected Replacement Date: 2032

Thorndale



Unit 200

- 2003 Frightliner Rescue Truck
- Expected Replacement Date: 2023



Unit 204

- 2015 International Work Star Tanker Truck
- Expected Replacement Date: 2035



Unit 205

- 2010 Pierce Tanker Truck
- Expected Replacement Date: 2030



Unit 206

- 2012 E One Typhoon Pumper Truck
- Expected Replacement Date: 2032

Based on information provided, there are 10 vehicles assigned to the fire department, with 6 apparatus allocated to Dorchester and 4 apparatus allocated to Thorndale. The replacement of the apparatus has been calculated by estimating a 20-year lifespan.

However, the 2021 Asset Management Plan identifies the fire fleet having an “estimated useful life” of 15-20 years.

In the 2024 Capital budget approved by Council, the fire department budgeted \$190,000 to replace Unit #200 (2017 Spartan Metro Star Pumper/Tanker Truck) and an additional \$80,000 to purchase a Fire Chief response vehicle.

Observation 13:

There is an emerging need to add aerial capacity to the fire fleet for both aerial fire attacks and high angle rescue.

Recommendation 13:

Should the municipality grow their building stock with high density residential apartment or condominium buildings, consideration should be given to the purchasing of an aerial fire truck for emergency access to an elevated place (such as the roof of a building); remove people from a high location; and/or elevated water stream application in a fire suppression emergency.

Equipment

When last reviewed, the 2021 Asset Management Plan identified that the Fire Department had:

- Capital equipment (other than vehicles) with a total \$480,000 replacement cost;
- Staff complete regular visual inspections of machinery & equipment to ensure they are in state of adequate repair;
- There is a structured reporting and tracking program in place for Fire Equipment assets; and
- Related to condition, 35% of the equipment was rated Very Poor, 48% rated Fair, 6% rated Good and 11% rated Very Good;



- Related to remaining use, 40% had 0-5 years of service remaining, 55% had 6-10 years remaining, and 11% over 10 years remaining.



Since this report, the municipality has been replacing capital equipment and investing in new technology.

Year	Equipment	Budget
2021	Bunker Gear (10 Units)	\$28,000
2022	Bunker Gear (3 Units)	\$7,934
	Replacement of SCBA Face Piece Fit Tester	\$27,500
	2022 Total	\$35,434
2023	Bunker Gear (6 Units)	\$17,100
	Gear Grid Lockers	\$8,000
	2023 Total	\$25,100
2024	Boots, Helmets (11 Units)	\$62,000
	PPE Coveralls (35 Units)	\$14,000

	Ground Monitor Water Nozzle	\$15,000
	Paratech Stabilization Kit	\$35,000
	Smoke Displacement Fan	\$8,000
	Thermal Imaging Cameras (5 Units)	\$30,000
	Water/Ice Rescue PPE	\$20,000
	Hydraulic Power Unit	\$20,000
	2024 Total	\$204,000

Based on the firefighter’s survey, 87.5% of the volunteers indicated they have the necessary Personal Protective Equipment (such as bunker gear, boots, helmet, etc.) to perform their work in a health and safe manner.

87.5% = Personal Protective Equipment

The primary exception is that firefighters would prefer a second set of bunker gear. Thus, when their primary gear is being cleaned, the firefighter has a second set to respond to a subsequent emergency.

The survey also revealed that 98% firefighters responded that they have sufficient supplies and equipment to safely and effectively perform their work.

98.0% = Supplies and Equipment

The newly restructured Truck and Equipment Committee is responsible for:

- Research and make recommendations on the purchasing, maintenance, repair, and implementation of new and existing apparatus and equipment;
- Attend appropriate trade shows and conventions showcasing new apparatus and equipment;
- Research and design specs for new TCFD apparatus; and
- Make or recommend repairs of vehicles and equipment according to manufacturer’s specifications and according to legislation.

Overall, the Municipality of Thames Centre Fire Department provides adequate funding for equipment to the high satisfaction of the volunteer firefighters.

Fire Prevention

Legislation

The *Municipal Act* contains provisions where two or more municipalities may enter into an agreement for the provision of specified services. Further, the *Fire Protection and Prevention Act* allows two or more municipalities enter into an agreement for the appointment of a Fire Safety Officer.

As a result, the Municipality of Middlesex Centre has employed a Fire Prevention Officer and has entered into an agreement with the Municipality of North Middlesex, and the Municipality of Thames Centre for the provision of fire prevention and fire safety services.

Authority

The Municipality of Thames Centre passed By-Law 50-2023 (dated May 8, 2023) authorizing the continuance of a shared service agreement with the Municipality of Middlesex Centre for the provision of fire prevention and fire safety services.

The Municipality of Thames Centre also passed:

- By-Law 87-2023 (dated September 25, 2023) appointing the Middlesex Centre Fire Prevention Officer as the designated Fire Prevention Officer for the Municipality of Thames Centre; and
- By-Law 88-2023 (dated September 25, 2023) appointing the Middlesex Centre Fire Prevention Officer as the designated Municipal By-Law Enforcement Officer for the Municipality of Thames Centre.

Finally, the Thames Centre Fire Chief signed a letter dated June 12, 2023, delegating the Middlesex Centre Fire Prevention Officer some of his authority as per the Section 6. (6) of the Fire Protection and Prevention Act. This delegated authority is specific to "...the inspection of a property or structure and mitigation of other potential hazards".

Program

Fire Prevention Officer

As per the shared services agreement, the Fire Prevention Officer is to:

- Commenting on development and building permit applications from a fire services perspective at the request of the Chief Building Official or designate;
- Carrying out inspections to ensure compliance with the Ontario Fire Protection and Prevention Act and its regulations along with applicable sections of the Ontario Building Code, municipal by-laws related to fire protection, and other related codes and standards;
- Identifying violations and facilitating and/or ordering corrective action;

- Assist in providing data for fire crews in preparation of preplans;
- Preparing and maintaining all required records, reports, statistics, correspondence and other material as related to fire inspections/prevention operations;
- Perform all of the duties of an assistant to the Fire Marshall, as prescribed by the Fire Protection and Prevention Act;
- Evaluate, approve, and enforce fire safety plans;
- Respond to enquiries from staff, the general public, businesses and business persons on fire safety related matters; and
- provide witness testimony on behalf of the municipality for provincial or criminal court as to fire related matters.

Based on our review of the Municipality’s Fire Prevention Program, we note that the entering of a shared service agreement for the provision of the fire prevention program is cost effective model for smaller neighbouring municipalities.

The fire inspection reports are completed and stored in a fire data base that is readily accessible for the Fire Chief to review. For inspections conducted in 2019 and prior, the information is stored in *FirePro* database. Thereafter, for 2020 and beyond, the information is stored in the *ICO Solutions* portal hosted by Middlesex Centre.

Year	Total Inspections Events
2018	68
2019	188
2020	25
2021	89
2022	45
2023	69

However, we also note there are no performance measures to evaluate the effectiveness of the Fire Prevention program, including no related “Annual Business Plan” or “Annual Program Report”.

An annual Business Plan would consist of the Fire Chief and Fire Prevention Officer formally agreeing on the program objectives for the pending operating year (January to December). Thereafter, at the conclusion of the operating year, the Fire Prevention would submit to the Fire Chief an annual report specific to Thames Centre, which would consist of:

- Status of Objectives agreed to by Fire Chief and Fire Prevention Officer as documented in the Annual Business Plan;
- Number and types of development and building permit applications that required review from the Fire Prevention Officer;
- Number and type of inspections completed;
- Number and type of violations facilitated and/or ordered corrective actions;
- Number of Fire Department’s Preplans reviewed;

- Number of Fire Safety Plans evaluated, approved and enforced;
- Number and type of responses from staff, the general public, businesses and business person specific to fire safety related matters;
- Number of times appeared as a witness in court on behalf of Thames Centre; and
- Number and type of assistance provided to the Ontario Fire Marshall Office.

The Annual Report would supplement the Fire Chief’s regular updates to Municipal Council.

Observation 14:

The municipality has entered into a shared service agreement with the Municipality of Middlesex Centre for the provision of fire prevention and inspection services.

Recommendation 14:

It is recommended that the Municipality revise the shared service agreement to include:

- a. An annual Fire Prevention Business Plan where the Fire Chief and Fire Prevention Officer would formally agree on the program objectives for the pending operating year (January to December);
- b. An annual Fire Prevention Report where the Fire Prevention Officer would report to the Fire Chief their level of effort;
- c. The Fire Chief utilize elements of the annual Fire Prevention Report in regular scheduled updates to Municipal Council; and
- d. Implement performance measures to evaluate the program and the associated shared services agreement.

Municipality of Thames Centre Fire Department

The Fire Department also developed the “Implementing the Thames Centre Fire Prevention and Inspection Program”.

The program mandates the following:

- a. Smoke Alarm/Escape Planning Program

Each year, the Chief will assign each station approximately 150 residences to complete. (Total per year is 300 homes). The residences will be a mixture of homes within the Municipality. By completing 300 residences per year, the department is effectively reaching approximately 10% of the population each year. Approximately \$500.00 per year (Firefighter compensation not included) is associated with purchasing alarms and batteries for this program.
- b. Pamphlet Distribution

Each year, the Department will order and distribute fire safety information to residences via our Prevention and Inspection Program. Approximately \$2,000.00 per year (Firefighter compensation not included) is associated with purchasing the material. Material is distributed via:

 - Smoke Alarm/Escape Planning Program

- School Presentations
 - Community/Presentations
 - Static Displays
 - Fire Hall Open Houses
 - Extinguisher Training Sessions
- c. Inspection Program
The Chief responds to all complaints and performs regular inspections as received by the Department. The Middlesex Fire Prevention officer carries-out inspections throughout the Municipality on an ongoing basis.

On a non-mandatory basis, the program also provides for

- d. Community Presentations
On a request basis, the department will deliver, free of charge, presentations to the community. Presentations/Topics offered include:
- Older and Wiser Program
 - Smoke Alarms
 - Escape Planning
 - Smoking Materials
 - Candle Safety
 - Wood Heating Safety
 - Electrical Safety
 - Kitchen Fire Safety
 - Open-Air Burning
 - Industrial Fire Safety
 - Fire Extinguishers
- e. School Presentations
During Fire Prevention Week, two levels of presentations (Grades 1-3 and 4-6) are presented to an elementary school. The presentation additionally includes material distribution, contests, and other activities. One of the three elementary schools is provided this focused program each year. The program is rotated between each school such that every student in town is provided the program twice (one in junior years and once as a senior student).
- f. TAPP-C
This program is promoted within the Community by the County of Middlesex and is offered on a request basis.
- g. Safety Messaging – Static Display
A static display is used throughout the Municipality on a proactive basis to display Fire Prevention messaging and for the distribution of material.
- h. Safety Messaging – Fire Hall Sign
Fire Prevention messaging is displayed on each side of the sign – changed monthly.
- i. Fire Hall Open House – Parades Community Participation
The department is very involved in Municipal activities throughout the year and utilizes these activities to promote both the department and fire prevention.

Public Safety

In previous years, public safety programs related to fire prevention was a district responsibility of each fire station. Public education programs and events were ad hoc with no centralized or annualized strategic plan.

Early this year, the Fire Chief established the “[Public Education Committee](#)” consisting of six Firefighters and/or Officers who have certification in NFPA 1035 Fire and Life Safety Educator – Level One (or willing to achieve certification within 1 year of appointment).

NFPA 1035 is a certified training program that enables firefighters to design and deliver sound public education programs that consider the needs of diverse audiences. The topics include basic learning theories, community-based programming, public relations, risk evaluation, and risk reduction strategies.

The responsibilities of the new Public Education Committee are to:

- Plan and deliver (or assign and monitor delivery of) TCFD community event participation and public education opportunities;
- Research new public relations opportunities, trends and techniques. Keep accurate and up-to-date records of all public events attended;
- Post bulletins and information regarding upcoming scheduled events;
- Network and build relations with external stakeholders in the community; and
- Regular communication with the Public Information Officer (PIO) is expected.

Observation 15:

One of the responsibilities of the newly constructed Public Education Committee is to plan and deliver the fire department’s community events and public education opportunities.

Recommendation 15:

The Public Education Committee should include the following added responsibilities:

- a. the development and planning of an Annual Public Education Plan for the subsequent year to coordinate and schedule community events and educational opportunities; and
- b. Prepare and submit an Annual Report listing all community events and educational opportunities completed for inclusion in the Fire Chief’s updates to Council.

In the agreement between the Municipality of Thames Centre and the Municipality of Middlesex Centre, the appointed Fire Prevention Officer’s duties within the agreement include:

- Consult on fire crew-led public education programs in a limited capacity and as required;
- Consult as to the delivery of programs related to public fire and life safety education to the general public; and

- Liaise with the (Municipality of Thames Centre) Fire Chief to networking with the local media to provide fire safety and emergency planning information and public service.

Observation 16:

Although the agreement between Thames Centre and Middlesex Centre contains duties for the Fire Prevention Officer pertaining to public education, there is no reference of these duties in the Public Education Committee's Terms of Reference.

Recommendation 16:

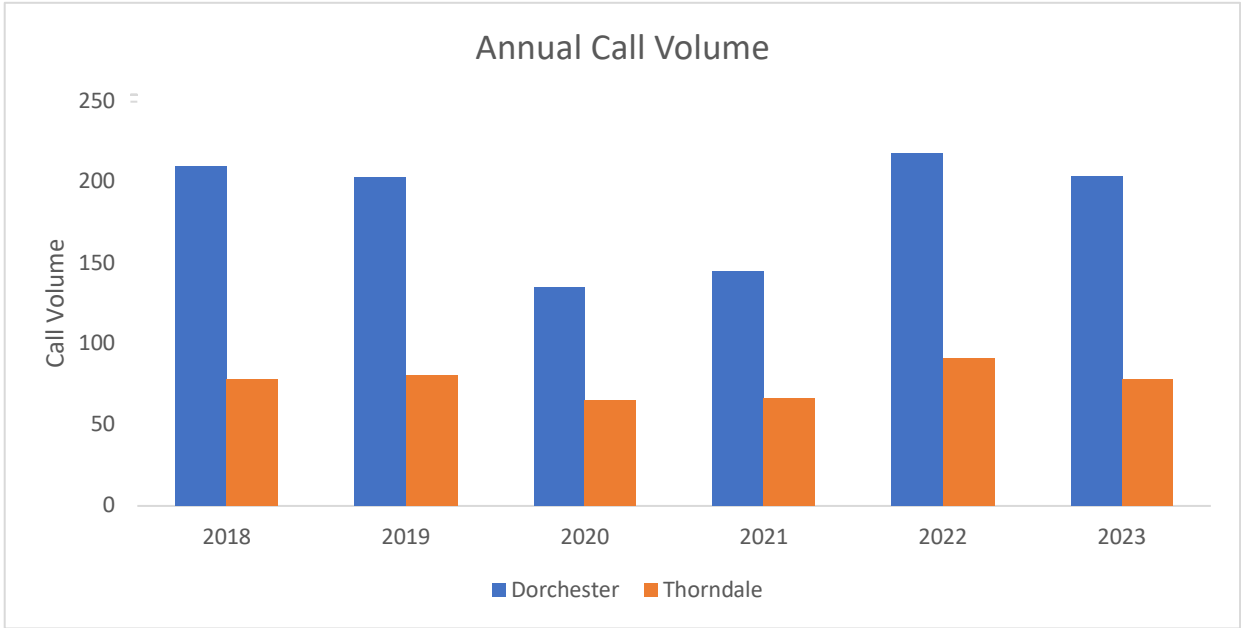
The Public Education Committee's Terms of Reference should include the added scope:

- a. Identification of the Fire Prevention Officer as an ex-officio member of the committee; and
- b. Responsibilities of the Training Committee include consulting with the Fire Prevention Officer on community events and educational opportunities.

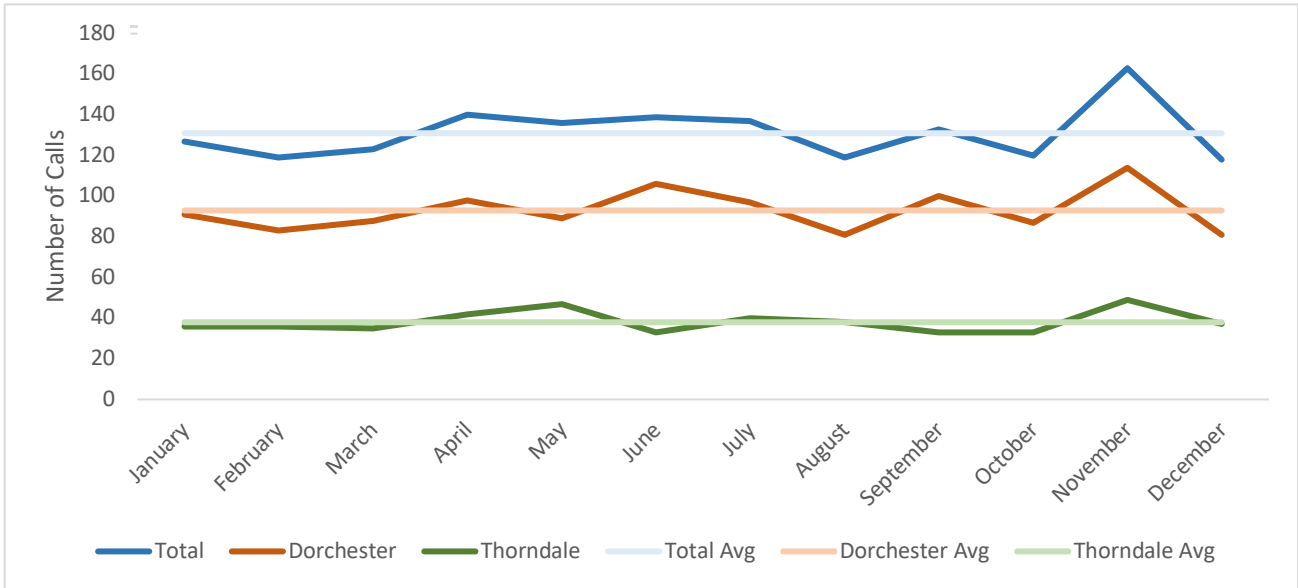
Data Analysis

Total Call Volume

As illustrated below, the total call volume remains at approximately <300 per year for emergency fire department response. There was a reduction of call volume in the period 2020 to 2021, primarily as a result of the global pandemic, where people movement was significantly lower than normal.



In a 6-year data aggregate (2018 to 2023), emergency calls for fire services were relatively consistent per month, with November being the busiest month due to motor vehicle collisions.

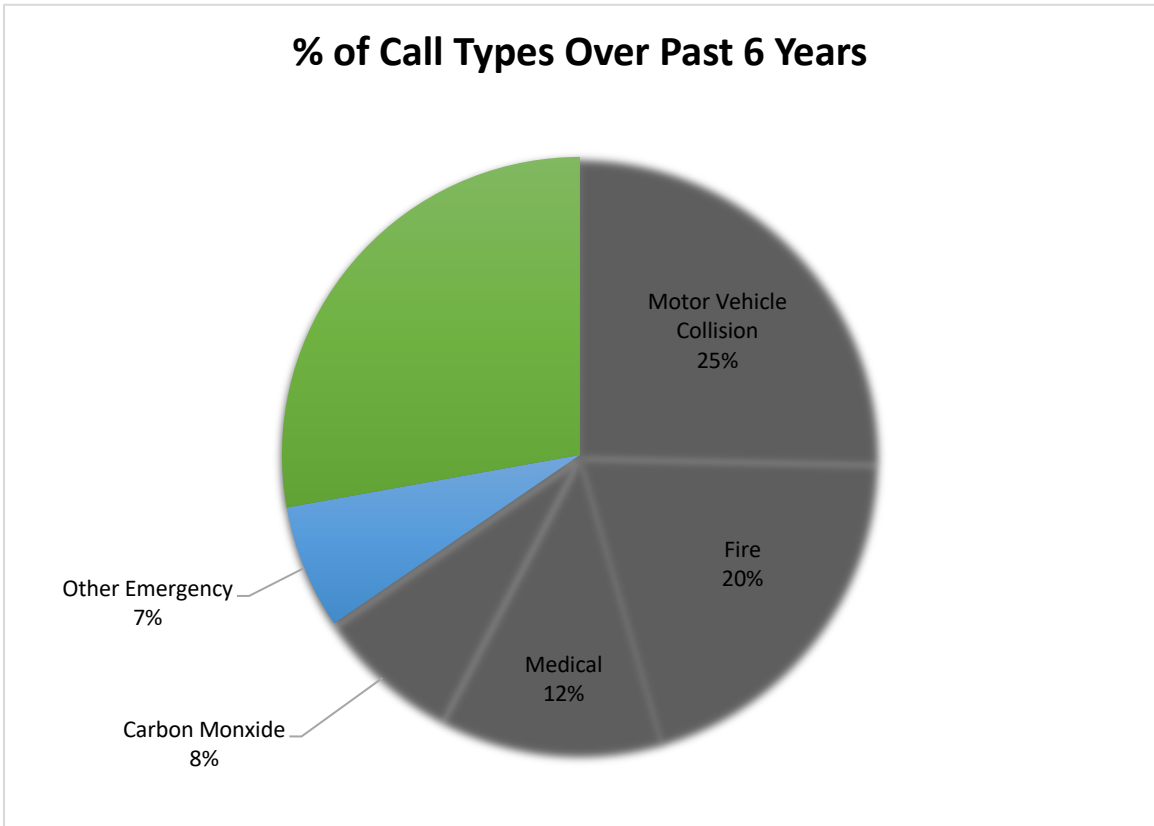


Call Volume by Call Type

Overall, in a 6-year timeframe (2018 to 2023), the type of calls received by Municipality of Thames Centre Fire Department was primarily motor vehicle collisions (25%) and fire related calls (20%). This was followed by medical calls (12%) and carbon monoxide alarms (8%).

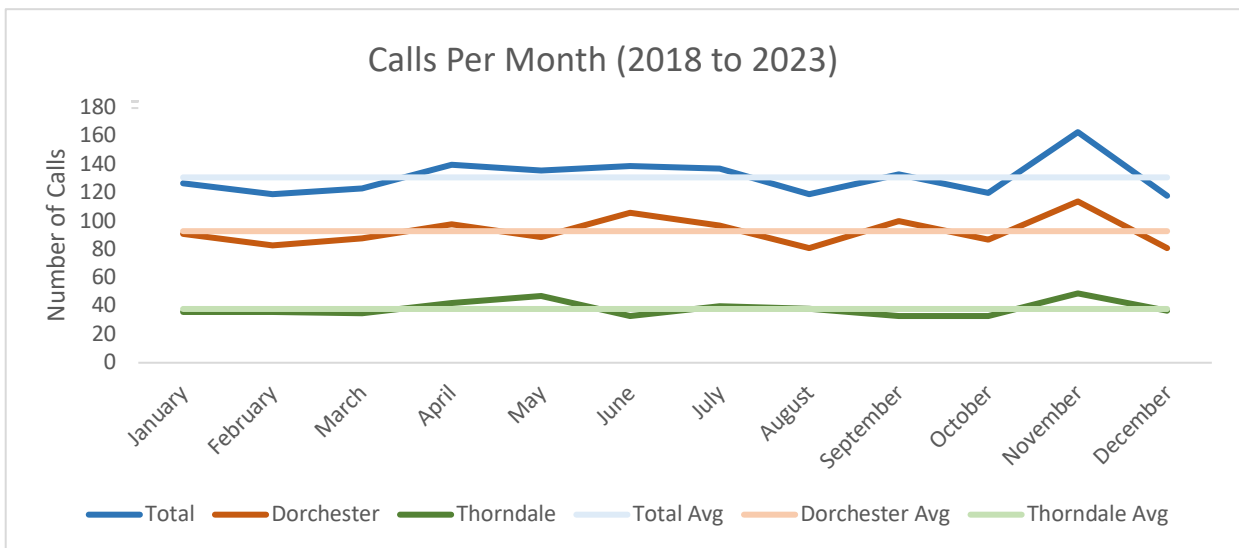
Of the total call volume, 28% of the calls were cancelled either while the fire personnel were responding or when they arrived on scene.

Category	Description	Dorchester	Thorndale	Total
Vehicles	Motor Vehicle Collisions (MVC)	236	133	369
	MVC with Extrication Required	27	3	30
Sub-Total				399
Fire	Structure	92	45	137
	Outdoor – No Permit	51	26	77
	Outdoor – With Permit	15	4	19
	Mechanical Overheat	28	0	28
	Pre-Fire Conditions	13	11	24
	Gas Leaks	8	7	15
	Mutual Aid	5	12	17
	Automatic Aid	0	1	1
Sub-Total				318
Medical	Emergency	79	24	103
	CPR or VSA	44	21	65
	No Assistance Provided	17	5	22
Sub-Total				190
(CO) Carbon Monoxide	Malfunction or No CO Detected	77	23	100
	CO Present	13	10	23
Sub-Total				123
Other Emergency	Public Hazard Conditions	26	4	30
	Power Lines Down	10	17	27
	Assistance to Other Agency	18	31	49
Sub-Total				106
Cancelled	On Scene – Incident Not Found	45	10	55
	On Scene – Other Agency Cancel	17	0	17
	On Scene – No Rescue Required	4	0	4
	Cancelled En Route	223	15	238
Fire Alarm	Accidental or Human Error	30	32	62
	Equipment Malfunction	37	25	62
Sub-Total				438
Total Calls				1574

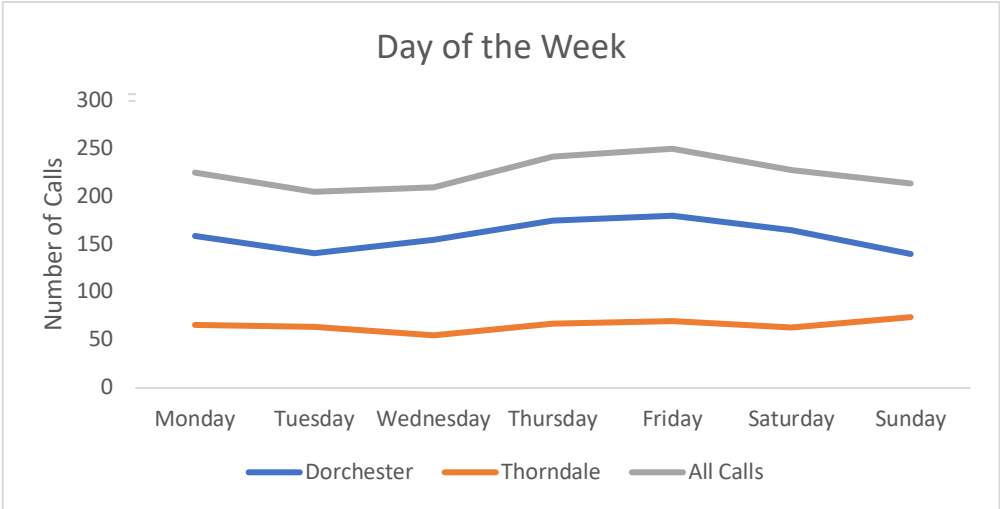


Emergency Call Indicators

In the 6-year aggregate (2018 to 2023), emergency calls for fire services are relatively consistent per month:

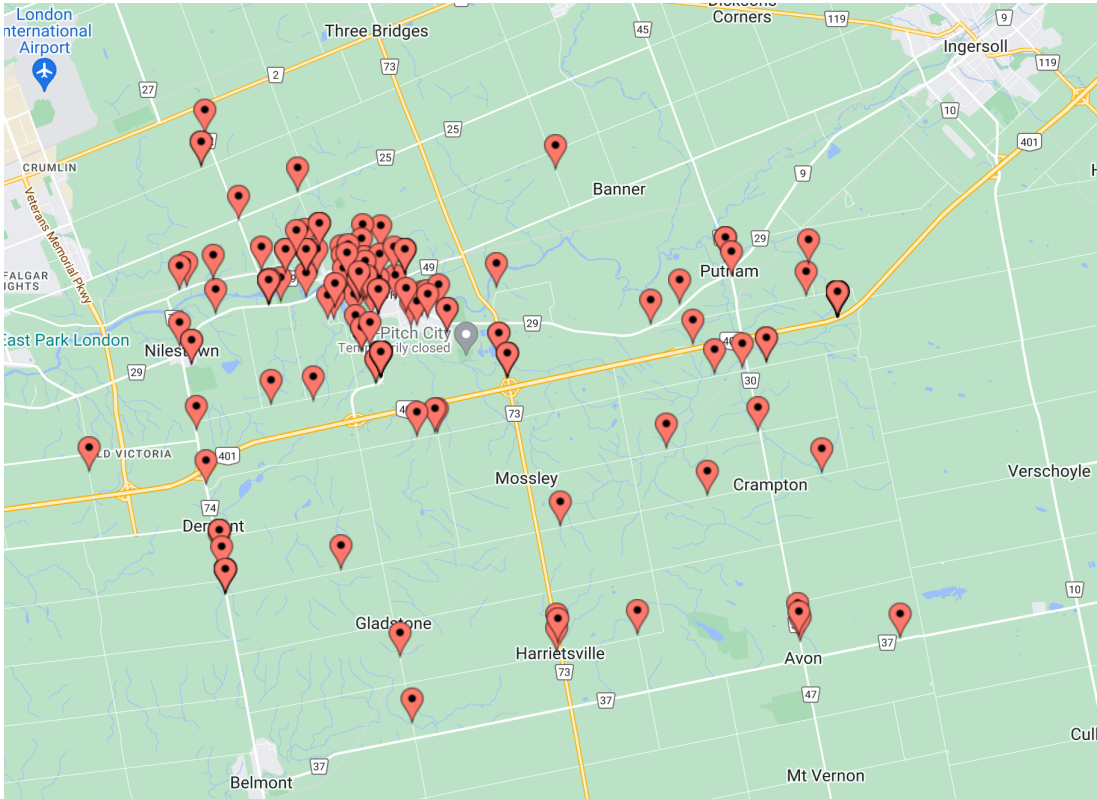


Further analysis of the 6-year data was conducted to identify what time of day emergency calls were being received by Municipality of Thames Centre Fire Department. The data illustrates that Municipality of Thames Centre Fire Department between 0900 to 1900 hours, with peak call volume between 1500 to 1700 hours.



Emergency Call Distribution

Sample- 2023 (January to December) Call Distribution – Dorchester Fire Station



* Excludes Hwy 401 Calls

Sample- 2023 (January to December) Call Distribution – Thorndale Fire Station



Response Time Performance

Tiered Response Calls

Providing rapid response to medical emergencies increasing the survival of out-of-hospital cardiac arrest.^{1 2}

Year	Total Medical Calls	Fire Department Arrival Prior to Ambulance
2018	22	8
2019	35	17
2020	22	8
2021	23	13
2022	36	18
2023	48	28
Totals	186	92

On average, the Municipality of Thames Centre Fire Department arrives on the scene to a medical emergency, 50% prior to the arrival of the paramedic service.

¹ Mosier J, Itty A, Sanders A, Mohler J, Wendel C, Poulsen J, Shellenberger J, Clark L, Bobrow B. Cardiocerebral resuscitation is associated with improved survival and neurologic outcome from out-of-hospital cardiac arrest in elders. *Acad Emerg Med*. 2010 Mar;17(3):269-75. doi: 10.1111/j.1553-2712.2010.00689.x. PMID: 20370759.

² J Hollenberg, J Herlitz, J Lindqvist, G Riva, K Bohm, M Rosenqvist, L Svensson. Improved Survival After Out-of-Hospital Cardiac Arrest Is Associated With an Increase in Proportion of Emergency Crew–Witnessed Cases and Bystander Cardiopulmonary Resuscitation. *Circulation*, 2008•Am Heart Assoc

Chute Times (aka Turnout Times)- Urban and Rural Areas

Chart 1: Parameters: Fire or Explosion – 90 s Chute Time, 10 Personnel in 10 Minutes

MVC – 90 s Chute Time, 4 Personnel in 10 Minutes

Medical – 90 s Chute Time, 2 Personnel in 10 Minutes

Year	Dorchester			Thorndale		
	Fire or Explosion	MVC	Medical	Fire or Explosion	MVC	Medical
2018	41.7%	28.9%	55.6%	16.7%	40.0%	30.0%
2019	25.0%	22.0%	50.0%	12.5%	14.8%	46.2%
2020	6.7%	22.7%	75.0%	66.7%	23.8%	16.7%
2021	44.4%	29.0%	38.1%	14.3%	28.0%	0%
2022	7.4%	26.8%	41.7%	20.0%	21.7%	33.3%
2023	5.56%	29.6%	81.6%	0%	26.3%	0%

Chart 2: Parameters: Fire or Explosion – 180 s Chute Time, 10 Personnel in 15 Minutes

MVC – 180 s Chute Time, 4 Personnel in 15 Minutes

Medical – 180 s Chute Time, 2 Personnel in 15 Minutes

Year	Dorchester			Thorndale		
	Fire or Explosion	MVC	Medical	Fire or Explosion	MVC	Medical
2018	83.3%	71.2%	88.9%	66.7%	84.0%	60.0%
2019	50.0%	66.0%	77.8%	87.5%	74.1%	100%
2020	73.3%	63.6%	100%	77.8%	66.7%	50.0%
2021	55.6%	80.0%	81.0%	71.4%	40.0%	75.0%
2022	55.6%	47.9%	66.7%	100%	56.5%	55.6%
2023	72.2%	79.6%	94.7%	40.0%	79.0%	100%

Chart 1 above is comparable to performance measures of a full-time firefighting service (NFPA 1710). It is identified only as a comparator measure. Chart 2 is more suitable to measuring the performance of a volunteer firefighting service.

Further, the data does not distinguish between urban and rural settlement areas, which greatly impacts the key performance indicators.

The data identifies the need for the Municipality to determine their “Level of Effort” that meets the need of their communities (both rural and urban) utilizing a volunteer fire department. (See Recommendation #17 below).

Response Times

Chart 3: Dorchester Station – Fire and Explosion Calls (Confirmed)

Year	No. of Incidents	Avg. Chute Time	Avg. En-Route Time	Avg. Response Time
2018	12	6 min 46 sec	5 min 21 sec	12 min 12 sec
2019	8	6 min 24 sec	9 min 02 sec	15 min 43 sec
2020	15	7 min 13 sec	7 min 35 sec	15 min 20 sec
2021	9	6 min 30 sec	11 min 51 sec	12 min 08 sec
2022	27	6 min 27 sec	6 min 14 sec	13 min 09 sec
2023	18	5 min 58 sec	9 min 25 sec	15 min 38 sec

Chart 4: Thorndale Station – Fire and Explosion Calls (Confirmed)

Year	No. of Incidents	Avg. Chute Time	Avg. En-Route Time	Avg. Response Time
2018	6	7 min 04 sec	6 min 06 sec	13 min 16 sec
2019	8	6 min 08 sec	6 min 31 sec	13 min 05 sec
2020	9	5 min 41 sec	5 min 24 sec	11 min 07 sec
2021	7	6 min 16 sec	6 min 48 sec	13 min 07 sec
2022	10	6 min 21 sec	5 min 29 sec	12 min 23 sec
2023	5	5 min 59 sec	11 min 48 sec	18 min 18 sec

Chart 5: Dorchester Station – Motor Vehicle Collisions (MVCs) Calls (Arrived)

Year	No. of Incidents	Avg. Chute Time	Avg. En-Route Time	Avg. Response Time
2018	52	5 min 58 sec	6 min 24 sec	12 min 29 sec
2019	50	6 min 24 sec	7 min 10 sec	13 min 56 sec
2020	22	6 min 01 sec	13 min 29 sec	12 min 34 sec
2021	25	5 min 57 sec	5 min 46 sec	11 min 51 sec
2022	71	6 min 30 sec	6 min 04 sec	12 min 14 sec
2023	44	5 min 40 sec	6 min 09 sec	12 min 21 sec

Chart 6: Thorndale Station – Motor Vehicle Collisions (MVCs) Calls (Arrived)

Year	No. of Incidents	Avg. Chute Time	Avg. En-Route Time	Avg. Response Time
2018	25	5 min 42 sec	5 min 38 sec	11 min 41 sec
2019	27	6 min 28 sec	5 min 33 sec	12 min 11 sec
2020	21	5 min 52 sec	6 min 33 sec	12 min 45 sec
2021	20	6 min 10 sec	7 min 45 sec	14 min 14 sec
2022	23	6 min 26 sec	6 min 31 sec	12 min 45 sec
2023	19	5 min 55 sec	6 min 45 sec	13 min 07 sec

Chart 7: Dorchester Station – Medical Calls (Treatment Provided)

Year	No. of Incidents	Avg. Chute Time	Avg. En-Route Time	Avg. Response Time
2018	9	4 min 46 sec	3 min 27 sec	8 min 21 sec
2019	18	5 min 59 sec	5 min 05 sec	11 min 12 sec
2020	12	5 min 58 sec	2 min 23 sec	8 min 52 sec
2021	21	6 min 06 sec	4 min 23 sec	10 min 48 sec
2022	24	6 min 03 sec	4 min 21 sec	10 min 41 sec
2023	38	5 min 02 sec	3 min 22 sec	8 min 28 sec

Chart 8: Thorndale Station – Medical Calls (Treatment Provided)

Year	No. of Incidents	Avg. Chute Time	Avg. En-Route Time	Avg. Response Time
2018	10	4 min 58 sec	6 min 25 sec	11 min 49 sec
2019	13	4 min 59 sec	5 min 21 sec	10 min 34 sec
2020	6	6 min 12 sec	4 min 14 sec	11 min 05 sec
2021	4	4 min 53 sec	7 min 16 sec	12 min 35 sec
2022	9	5 min 10 sec	7 min 50 sec	13 min 32 sec
2023	3	5 min 01 sec	7 min 07 sec	12 min 12 sec

As identified in Chart 3 to 8 above, there are various parameters to measure fire department response times (such as type of calls, arrived on scene confirmed, medical treatment applied, etc.). Similar to data identified in Charts 1 to 2, the Municipality needs to determine the “Level of Effort” required to support the needs of the community, as departmental goals and objectives. This translates to key performance indicators (KPIs) that can be subsequently reported in updates to Council by the Fire Chief

Observation 17:

There are no standardized key performance indicators (KPIs) in terms of emergency responses, fire prevention and public education, that are developed and reported to Council, on a semi-annual or annual basis. In addition, the current data software program to capture performance measures requires updating or replacement.

Recommendation 17:

- It is recommended that the Municipality of Thames Centre Fire Department:
- a. Develop standardized key performance indicators (KPIs) for their emergency responses, fire prevention and public education services.
 - b. Utilize a software platform that is compatible to capture and report the developed KPIs.
 - c. Provide staff training to ensure data being entered into the database is standardized and consistent; and
 - d. Report KPIs to Council on either a semi-annual or year-end basis.

Appendix 1

Position																						
NFPA Standard	1001	1001	1002	1006	1072	1072	1072	1072	1021	1021	1021	1021	1521	1031	1031	1033	1035	1035	1035	1041	1041	
Level	1	2			A	O	T	M	1	2	3	4		1	2		1	2	3			
Fire Chief																						
District Chief 1																						
District Chief 2																						
Deputy Chief 1	DNR																					
Deputy Chief 2	Vacant																					
Captain 1	DNR																					
Captain 2																						
Captain 3	DNR																					
Captain 4																						
Captain 5	Vacant																					
Captain 6	Vacant																					
Acting Captain 1	DNR																					
Acting Captain 2																						
Acting Captain 3																						
Acting Captain 4																						
Acting Captain 5																						
Acting Captain 6																						
Training Officer 1																						
Training Officer 2																						
Firefighter 1																						
Firefighter 2																						
Firefighter 3	DNR																					
Firefighter 4	DNR																					
Firefighter 5																						
Firefighter 6																						
Firefighter 7	DNR																					
Firefighter 8																						
Firefighter 9																						
Firefighter 10																						
Firefighter 11	DNR																					
Firefighter 12																						
Firefighter 13																						
Firefighter 14																						
Firefighter 15																						
Firefighter 16																						
Firefighter 17																						
Firefighter 18																						
Firefighter 19	DNR																					
Firefighter 20	DNR																					
Firefighter 21	DNR																					
Firefighter 22	DNR																					

