



THE MUNICIPALITY OF
LAMBTON SHORES

Fire Master Plan



May 2021

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Lambton Shores Fire Master Plan

Executive Summary

In 2020, Emergency Services Strategy and Solutions Inc. was retained by Lambton Shores to review their fire services and to create a Fire Master Plan (FMP) for the municipality. The development and implementation of the FMP demonstrates the commitment of Council and senior staff to provide the most efficient and effective level of fire and emergency services to the community.

The Lambton Shores Fire Master Plan is a strategic document, that will provide an objective basis to support decision-making with respect to the provision of fire protection services while balancing fiscal impact. The project included an update to the Municipality's Community Risk Assessment (CRA), thereby achieving compliance with the requirements of Regulation 378/18).

In summary, this Fire Master Plan will:

- Provide specific recommendations for the provision of fire prevention, protection, and suppression services by LSFES. These recommendations will incorporate the current needs and circumstances along with future growth plans of the community
- Ensure that the residents, visitors, and businesses of Lambton Shores have access to effective fire protection services that also ensure firefighter safety
- Address local needs and circumstances, while providing fire protection services in an efficient and effective manner

ESSSi incorporated a robust organizational engagement strategy to develop this Master Plan. At the outset, an education session was held with the Mayor and Members of Council, to outline: roles and responsibilities in the delivery of fire protection services, scope and scale of this project and to secure support for the plan.

Information gathering sessions were also coordinated to facilitate the participation of members from across all ranks and divisions within the LSFES. A total of thirty (30) meetings were held over a six (6) month period commencing on April 27, 2020. Attendees included the Fire Chief, ninety (90) Staff, the Chief administrative Officer and Treasurer.

The sessions were structured to seek feedback on a specific set of questions along with an open forum that provided opportunities for open discussion.

Topics of discussion were comprised of the following areas:

- Governance, legislation, by-laws.
- Administration.
- Fire prevention and public education.
- Fire Suppression.
- Fire Department organization.
- Emergency response and station locations.
- Firefighter training.
- Communications and technology.
- Facilities, apparatus, equipment.

- Fire Protection Agreements.
- Community Risk; and
- Future growth.

This information along with an analysis of relevant information in the form of by-laws, procedures, other reviews and an understanding of the history of the fire service in this community along with the challenges have been incorporated into the FMP.

The Office of the Fire Marshal and Emergency Management (OFMEM) conducted a review of Fire Protection Services provided by Lambton Shores dated December 23rd, 2015. The OFMEM found Lambton Shores was not fully compliant with the legislative requirements of the *FPPA* and issued thirty-two (32) recommendations to achieve compliance.

Since then, Lambton Shores has made a fundamental change in the delivery of fire protection services by hiring a full-time Fire Chief, moving away from having five (5) individual fire departments. The Fire Chief was tasked with implementing the recommendations of the OFMEM review, and has made significant progress in addressing the majority of the recommendations. The balance are all incorporated into the efficiency and resource recommendations of the FMP.

This FMP will assist Council in establishing key objectives for the department, and position the organization for success. An implementation plan should be developed to address the recommendations based on municipal priorities, budget constraints and allowances.

Acronyms

CACC	Central Ambulance Communications Centre
CAO	Chief Administrative Officer
CEMC	Community Emergency Management Coordinator
CO	Carbon Monoxide
CRA	Community Risk Assessment
CSA	Canadian Standards Association
DFC	Deputy Fire Chief
FC	Fire Chief
E&R	Establishing and Regulating By-Law
EMS	Emergency Medical Services
EOC	Emergency Operations Centre
ERP	Emergency Response Plan
FMP	Fire Master Plan
FP	Fire Prevention
FPO	Fire Prevention Officer
FPPA	Fire Protection and Prevention Act
FF	Firefighters
FT	Full-time
FUS	Fire Underwriter's Survey
IC	Incident Commander
ICI	Industrial, Commercial, Institutional
ICS	Incident Command System
IRM	Integrated Risk Management
LSFES	Lambton Shores Fire & Emergency Services
MOL	Ministry of Labour
MTO	Ministry of Transportation
NFPA	National Fire Protection Association
OAFC	Ontario Association of Fire Chiefs
OFC	Ontario Fire College
OFMEM	Office of the Fire Marshal and Emergency Management
OH&S	Occupational Health & Safety Act
PE	Public Education
PFSG	Public Fire Safety Guidelines
SCBA	Self-contained Breathing Apparatus
SOG	Standard Operating Guidelines
TO	Training Officer



Legislative Summary

Legislative Summary

The provision of fire protection services in Ontario is primarily outlined in the Fire Protection and Prevention Act (1997) and supported by a number of guidelines and regulations issued under the authority of the FPPA. There are also a number of industry recognized standards that guide the provision of many aspects of fire protection services that either need to be complied with or adhered to. Details of the various requirements are outlined below

- 1) Fire Protection and Prevention Act – The Fire Protection and Prevention Act, 1997 (FPPA), defines the powers and duties of the Fire Marshal on a provincial scale as well as the responsibilities of municipal councils for fire-related services at the local level. The FPPA provides for each municipality to set its own level of service for what is generally referred to as the three lines of defense in Ontario to achieve an acceptable level of service. The three lines are:
 - a. Public Education
 - b. Fire Safety Standards and Enforcement &
 - c. Emergency Response

The Fire Marshal also has the legislative ability and authority to issue guidelines, make additional regulations and issue orders under the FPPA.

- 2) Emergency Management and Civil Protection Act – The Emergency Management and Civil Protection Act, 2003 (EMCPA) issued in 2003 provides the framework for emergency management and response to several large-scale emergencies.

In Ontario, emergency management is delivered through what is commonly referred to as a “bottom up” approach. Individuals, municipalities and the Province all have a role to play. One of the responsibilities that municipalities are required to fulfill is the completion of a Hazard Identification and Risk Assessment (HIRA) to outline all hazards and risks present in the municipality. This assists municipalities in preparing for, responding to and recovering from emergencies.

The Comprehensive Risk Assessment (CRA) for Lambton Shores focused specifically on the fire and emergency risks so as to inform the provision of fire protection services

- 3) Public Fire Safety Guidelines – the Ontario Office of the Fire Marshal and Emergency Management (OFMEM) issues Public Fire Safety Guidelines (PFSG’s). These Guidelines are intended to provide an interpretation of the various legislative requirements to municipalities. The PFSG on Simplified Risk Assessments (PFSG-04-40A-03) and the Fire Marshal’s Fire Risk Sub-model are considered best practice in Canada and partially informed several NFPA standards on risk assessment. The PFSG on assembling Fire Attack Teams (PFSG 04-13-12) and the NFPA 1720 provide additional details.
- 4) Ontario Regulation 378/18 – In May 2018, the Office of the Fire Marshal and Emergency Management announced new regulations, under the FPPA that requires all municipalities to complete a community risk assessment and use its community risk assessment to inform decisions about the provision of fire protection services. The regulation defines the risk assessment as “a process of identifying, analyzing, evaluating and prioritizing risks to public safety to inform decisions about the provision of fire protection services.” It further

states that it must be completed every five (5) years and must be reviewed at least every one (1) year.

5) The National Fire Protection Standards (NFPA) – The National Fire Protection Association (NFPA) is a global self-funded nonprofit organization, devoted to eliminating death, injury, property and economic loss due to fire, electrical and related hazards. NFPA delivers information and knowledge through more than 300 consensus codes and standards, research, training, education, outreach and advocacy; and by partnering with others who share an interest in furthering their mission. Their mission is to help save lives and reduce loss with information, knowledge and passion.

a. NFPA Professional Qualification Standards – These standards identify the minimum job performance requirements for career and volunteer firefighters. In April 2013, the OFMEM announced that the decision had been made that Ontario would adopt the National Fire Protection Association Professional Qualifications (NFPA Pro-Qual) Standards. The following table outlines the NFPA Standards that are accepted as the benchmark within the fire service, even though achieving certification is voluntary

Public Education	NFPA 1035
Fire Safety Standards & Enforcement	NFPA 1031 NFPA 1033
Emergency Response	Fire Fighter – NFPA 1001 I & II Captain – NFPA 1021 I & 11 Station Chiefs & Fire Chief – NFPA 1021 III & IV
Training	NFPA 1041 I & II
Communications	NFPA 1061 I & II

b. National Fire Protection Association (NFPA) has published several standards that contain components related to risk assessments and the deployment of volunteer firefighters. They are:

- i. NFPA 1300 - Standard on Community Risk Assessment and Community Risk Reduction Plan Development. This new standard helps a broad range of authorities determine what kinds of emergencies are occurring in their community, where, and to whom. Community Risk Reduction (CRR) is a process that helps identify and prioritize all types of risks, and emphasizes the integrated and strategic investment of resources to reduce their occurrence and impact. NFPA 1300 provides guidance on conducting a Community Risk Assessment (CRA), creating and implementing a CRR plan, and establishing ongoing evaluation of that plan. It also provides the framework for building a CRR team, fostering strategic partnerships, and applying data to conduct both a CRA and CRR activities. (NFPA 1300, 2020)
- ii. The NFPA 1730 - Standard on Organization and Deployment of Fire Prevention Inspection and Code Enforcement, Plan Review, Investigation, and Public Education Operations. This contains minimum requirements

relating to the organization and deployment of code enforcement, plan review, fire investigation, and public education operations to the public. It also provides guidance and a clear process for developing and implementing an effective Community Risk Reduction plan, identify the risk profiles and use resources effectively. (NFPA 1730, 2020)

- iii. NFPA 1720 - Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments. This standard specifies requirements for effective and efficient organization and deployment of fire suppression operations, emergency medical operations, and special operations to the public by volunteer and combination fire departments to protect citizens and the occupational safety and health of fire department employees. (NFPA 1720, 2021)

This combination of regulatory requirements and industry accepted standards create a robust set of tools that enable a municipality to identify the hazards, assess risk, allocate its resources effectively and mitigate or eliminate risks. These tools have all been used to varying extents in creating the Fire Master Plan for Lambton Shores. Additionally, the Comprehensive Risk Assessment allows Lambton Shores to comply with the requirements of O/Reg 378/18.

In addition to the above, municipal by-laws, previous reviews and department policies were reviewed. Consideration was also given to population and employment growth impacts, aid agreements and all aspects of fire protection service delivery including facilities, apparatus and equipment.

An implementation plan should be developed to address the recommendations based on municipal priorities, budget constraints and allowances.



Establishing and Regulating Bylaw

CORPORATION OF THE MUNICIPALITY OF LAMBTON SHORES

BY-LAW NUMBER 49 OF 2019

BEING A BY-LAW TO ESTABLISH AND REGULATE A FIRE DEPARTMENT

WHEREAS Section 2 of the Fire Protection and Prevention Act requires every municipality to establish a program which must include public education with respect to fire safety and certain components of fire prevention, and to provide such other fire protection services as it determines may be necessary in accordance with its needs and circumstances;

AND WHEREAS Section 5 of the Fire Protection and Prevention Act authorizes the Council of a municipality to establish, maintain and operate a fire department to provide fire suppression services and other fire protection services in the municipality;

AND WHEREAS Sections 8 and 11 of the Municipal Act authorize a municipality to provide any service that the municipality considers necessary or desirable for the public, and to pass by-laws respecting, inter alia, health, safety and well being of persons, protection of persons and property, and services that the municipality is authorized to provide;

AND WHEREAS Section 391 of the Municipal Act authorizes a municipality to impose fees or charges on persons for services or activities provided by the municipality, and for costs payable by the municipality for services or activities provided or done by or on behalf of any other municipality;

AND WHEREAS Section 425 of the Municipal Act provides that the Council of a municipality may pass by-laws providing that a person who contravenes a by-law of the municipality is guilty of an offence;

AND WHEREAS Section 446 of the Municipal Act provides that if a municipality has the authority under that or any other act, or under a by-law under that or any other Act, to direct or require a person to do a matter or thing, the municipality may also provide that, in default of it being done by the person directed or required to do it, the matter or thing shall be done at the person's expense, and the municipality may recover the costs of doing a matter or thing from the person directed or required to do it by action or by adding the costs to the tax roll and collecting them in the same manner as property taxes;

AND WHEREAS the Council of the deems it desirable, necessary and expedient to amend, consolidate, revise and update its by-law to establish and regulate a fire department for the Municipality of Lambton Shores;

THEREFORE the Council of the Corporation of the Municipality of Lambton Shores enacts as follows:

Definitions

1. In this by-law, unless the context otherwise requires
 - a) “Approved” means approved by the Council of the Municipality of Lambton Shores
 - b) “Automatic Aid” means an Approved agreement under which a municipality that is capable of responding more quickly to an area agree to provide an initial response to fires, rescues, and emergencies in another municipality, or where a municipality agrees to provide a supplemental response to fires, rescues or emergencies that may occur in another municipality.
 - c) “Chief Administrative Officer” means the person appointed by Council to act as the Chief Administrative Officer for the Corporation
 - d) “Corporation” means the Corporation of the Municipality of Lambton Shores
 - e) “Council” means the Council of the Municipality of Lambton Shores
 - f) “Deputy Chief” means the person appointed by Council to act on behalf of the Fire Chief of the Fire Department in the case of an absence or a vacancy in the office of Fire Chief
 - g) “Fire Chief” means the person appointed by Council to act as the Fire Chief for a Fire Department.
 - h) “Fire Code” means Ontario regulation 213/07, as amended and successor regulations
 - i) “Firefighter” means any persons employed in, or appointed to, the Fire Department, and assigned to undertake fire protection services, and includes the fire chief, officers, full time and volunteer Firefighters
 - j) “Fire Department” means the Municipality of Lambton Shores Fire and Emergency Services
 - k) “Fire Prevention and Protection Act” means the Fire Protection and Prevention Act, 1997, S.O. 1997, c.4. as amended and any successor legislation
 - l) “Fire Protection Services” include fire suppression, rescue and emergency services, fire prevention, fire safety education, communication, and the training of persons involved in the provision of Fire Protection Services
 - m) “Limited services” means a variation of service significantly differing from the norm as a result of extenuating circumstances.
 - n) “Member” means any person employed by, appointed to, or volunteering for the Fire Department and assigned to undertake Fire Protection Services and includes

Officers, full-time and part-time firefighters, volunteer firefighters, support operation firefighters, Chaplains and administrative staff.

- o) “Mutual Aid” means a plan established pursuant to Section 7 of The Fire Protection and Prevention Act under which fire departments that serve a designated area agree to assist each other on a reciprocal basis in the event of a major fire or emergency.
- p) “Support Operations Firefighter” means a member who is appointed to provide certain limited functions in support of the delivery of Fire Protection Services.
- q) “Volunteer Firefighter” means a Firefighter who provides fire protection services either voluntarily or for a nominal consideration, honorarium, training or activity allowance.

Fire Department Establishment

- 2. A Fire Department for the Municipality of Lambton Shores to be known as the Lambton Shores Fire and Emergency Services is hereby established and the head of the fire department shall be known as the Fire Chief.

Structure

- 3. The fire department shall be structured in conformance with the approved Organizational Chart, Appendix A, forming part of this by law.
- 4. The Council shall appoint by by-law the Fire Chiefs and the Deputy Chiefs. The Chiefs shall recommend the appointment of any other Officers as may be deemed necessary.
- 5. The Fire Chief may recommend the appointment of any qualified person as a member of the Fire Department, subject to the approved hiring policies of the Municipality of Lambton Shores.
- 6. Persons appointed as members of the Fire Department to provide fire protection services shall be on probation for a period of 12 months, during which period they shall take such special training and examinations as may be required by the Fire Chief.
- 7. If a probationary member appointed to provide fire protection or other services fails any such examinations, the Fire Chief may recommend that he/she be dismissed.
- 8. The remuneration of the Volunteer Members shall be as determined by the Council.
- 9. Working conditions and remuneration for all full time Members shall be determined by Council in accordance with the provisions of Part IX of the Fire Protection and Prevention Act.

10. If a Medical Examiner finds a member is physically unfit to perform assigned duties and such condition is attributed to, and a result of employment in the Fire Department, the Fire Chief may assign the member to other employment in the Fire Department or may retire him/her.
11. Where the Fire Chief designates a member to act in the place of an Officer in the Fire Department, such member, when so acting, has all of the powers and shall perform all duties of the Officer replaced.
12. The Fire Chief may reprimand, suspend or recommend dismissal of any member for infraction of any provisions of this by-law, policies, general orders and departmental rules that, in the opinion of the Fire Chief, would be detrimental to discipline or the efficiency of the Fire Department.
13. Following the suspension of a member, the Fire Chief shall immediately report, in writing, the suspension and recommendation to the Chief Administrative Officer.
14. The procedures for termination of employment prescribed in Part IX of the Fire Protection and Prevention Act shall apply to all full-time Members of the Fire Department.
15. A Volunteer Firefighter shall not be dismissed without the opportunity for a review of termination, if he/she makes a written request for such a review within seven working days after receiving notification of the proposed dismissal. The Chief Administrative Officer shall conduct the review.

Duties and Responsibility The Fire Chief is ultimately responsible to Council, through the Chief Administrative Officer, as set out in subsection 6(3) of the Fire Protection and Prevention Act for the proper administration and operation of the Fire Department including all Fire Department functions and programs.

16. The Fire Chief shall be deemed to be the Chief Fire Official of the municipality for the purposes of the Fire Protection and Prevention Act and regulations enacted thereunder, and shall have all statutory authority and shall carry out all prescribed duties and responsibilities in respect thereof.
17. The Fire Chief is responsible for complying with all Fire Marshal's directives as mandated by the Fire Protection and Prevention Act.
18. Each division of the Fire Department is the responsibility of the Fire Chief and is under the direction of the Fire Chief or a Member designated by the Fire Chief. Designated members shall report to the Fire Chief on divisions and activities under their supervision and shall carry out all orders of the Fire Chief.

Policy and Procedures

20. The Fire Chief shall collectively implement all approved policies and shall develop such operating guidelines, general orders and departmental rules as necessary to implement the approved policies and to ensure the appropriate care and protection of all Fire Department personnel and Fire Department equipment.
21. The Fire Chief shall review periodically all policies, orders, rules and operating procedures of the Fire Department and may establish an Advisory Committee consisting of such members of the Fire Department as the Fire Chief may determine from time to time to assist in these duties.

Budgets and Reports

22. The Fire Chief shall submit to the Chief Administrative Officer and Council for approval, the annual budget estimates for the Fire Department, an annual report and any other specific reports requested by the Chief Administrative Officer or Council.

Powers

23. The Fire Chief shall take all proper measures for the prevention, control and extinguishments of fires and the protection of life and property and shall exercise all powers mandated by the Fire Protection and Prevention Act, and the Fire Chief shall be empowered to authorize:
 - a) Pulling down or demolishing any building or structure to prevent the spread of fire
 - b) Any necessary actions which may include boarding up or barricading of buildings or property to guard against fire or other danger, risk or accident, when unable to contact the property owner
 - c) Recovery of expenses incurred by such necessary actions for the Corporation in the manner provided through the Municipal Act and the Fire Protection and Prevention Act.
 - (d) Taking any and all steps as set out in Part V, VI and VII of the Fire Protection and Prevention Act.
 - (e) Enforcement of all municipal by-laws in respect of fire safety and fire prevention.

Recovery of Costs

24. If as the result of a Fire Department response to a fire, rescue, or other emergency, the Fire Chief, or his or her designate, or the highest ranking officer in charge determines that it is necessary to retain a private contractor, rent specialized equipment, or use consumable materials other than water in order to suppress or extinguish a fire, preserve property, prevent fire from spreading, remove hazardous materials, assist in or otherwise conduct an investigation to determine the cause of a fire, or otherwise control or eliminate an emergency situation, the Corporation may recover the costs incurred for taking such actions, from the owner of the property on which the fire or other emergency occurred.

Emergency Response Outside of Municipal Boundaries

25. The Fire Department shall not respond to a call with respect to a fire or emergency outside the limits of the Municipality except with respect to a fire or emergency:
 - a) that, in the opinion of the Fire Chief or designate of the Fire Department, threatens property in the Municipality or property situated outside the Municipality that is owned or occupied by the Municipality in a Municipality with which an approved agreement has been entered into to provide Fire Protection Services which may include Automatic Aid
 - b) on property with which an approved agreement has been entered into with any person or Corporation to provide Fire Protection Services
 - c) at the discretion of the Fire Chief, to a Municipality authorized to participate in any County, District or Regional Mutual Aid Plan established by a Fire Coordinator appointed by the Fire Marshal or any other similar reciprocal plan or program

- d) on property beyond the Municipal boundary where the Fire Chief or designate determines immediate action is necessary to preserve life or property and the appropriate department is notified to respond and assume command or establish alternative measures, acceptable to the Fire Chief or designate.

Levels of Service

26. Levels of Service will be as follows:

- a) The Lambton Shores Fire and Emergency Services shall provide such approved services as specified and listed in **Appendix "B"**

- b) In consideration of the reliance by the Fire Department on the response of Volunteer Firefighters, whose deployment to emergencies in sufficient numbers cannot in all instances be guaranteed, adverse climate conditions, delays or unavailability of specialized equipment required by the Fire Department, or other extraordinary circumstances which may impede the delivery of Fire Protection Services, any Approved service set out in Schedule "B" may from time to time be provided as a Limited Service as defined in this by-law, as determined by the Fire Chief, his or her designate, or the highest ranking Officer in charge of a response.

- c) The Municipality of Lambton Shores accepts no liability for delay or inability to supply the services set out in Appendix "B" of this by law due to the provision of its approved services as limited services or due to the existence of unsafe conditions encountered reroute, impeding access to property, and/or environmental factors/constraints.

26. THAT an approved organizational chart forms part of this By-Law as Appendix "A".

27. THAT an approved list of supplied services forms part of this By-Law as Appendix

“B”.

28. THAT By-Law 21 of 2018 is hereby repealed.

29. THAT this By-Law comes into effect on the day it is passed by Council.

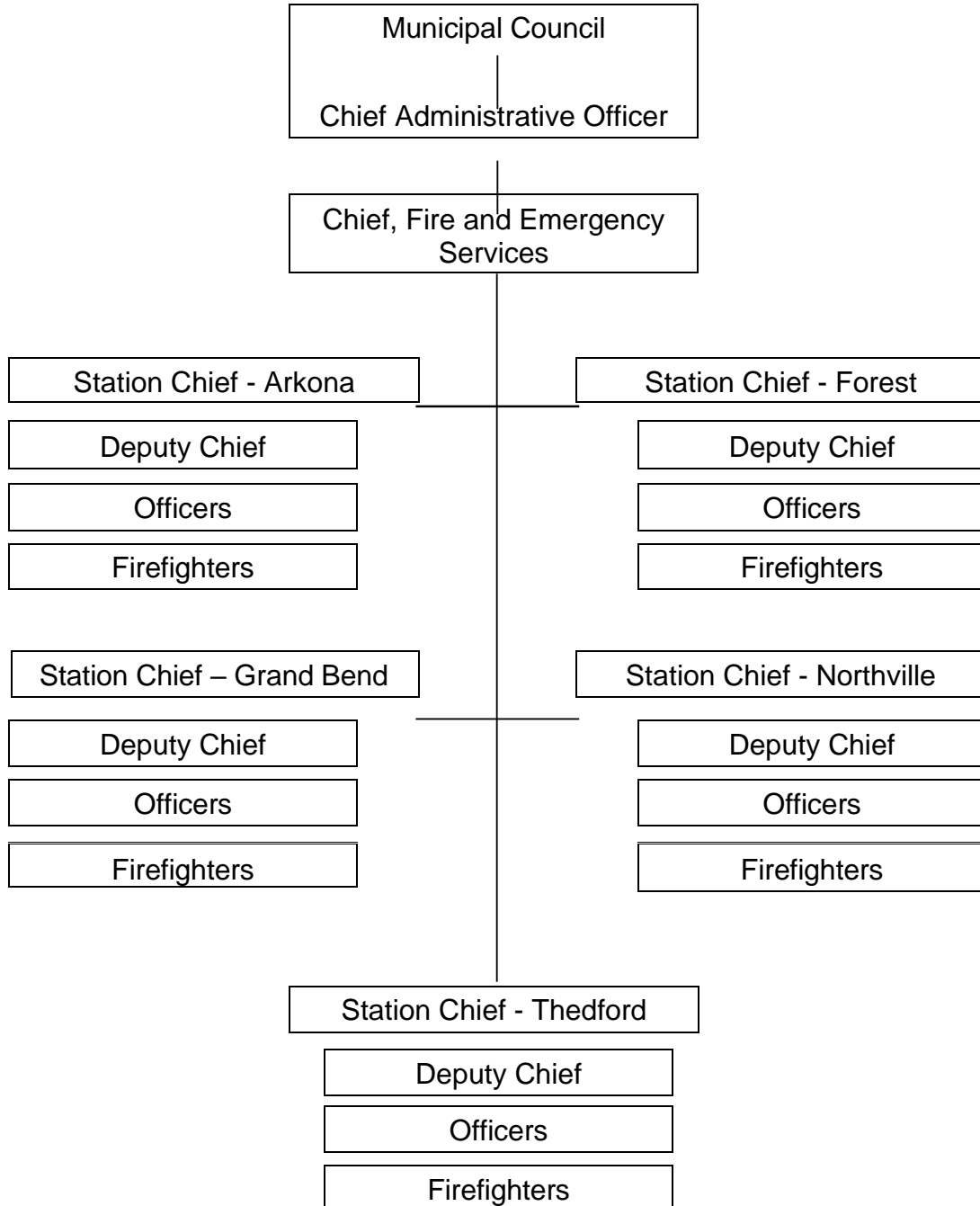
READ A FIRST, SECOND AND THIRD TIME, AND FINALLY PASSED this 18th day of June, 2019.

Mayor

Clerk

Appendix "A"
Lambton Shores Fire and Emergency Services

ORGANIZATION CHART



Note: Within the Officer and Firefighter categories some members or contractors may be specialized to deliver the following activities:

- Public Education
- Fire Prevention
- Training
- Driver/Engineer
- Support Operations

Appendix "B"
Lambton Shores Fire and Emergency Services

**CORE SERVICES PROVIDED
(Response and Support)**

A) Emergency Response

1. Basic firefighting services – responding to fires, alarms of fire, and pre-fire conditions to provide fire suppression services.
2. Structural firefighting - including interior rescue and fire attack, and sometimes limited rescue and fire attack in accordance with the fire services level of training, standard operating guidelines, Occupational Health and Safety Guidelines and the number and type of personnel and equipment available to the service and on each specific emergency response.
3. Emergency responses to water access properties, and those properties accessed via private roads, private lanes or private driveways, or fields are subject to the following limitations
 - a) Emergency response to water access properties will be limited to safe travel and environmental conditions. If in the opinion of the Fire Chief or his/her designated unsafe environmental conditions exist, no services shall be provided. Fire Department vehicles shall not enter any body of water, frozen or otherwise, at any time.
 - b) Emergency Response to properties accessed via private roads, private lanes, private driveways or fields may be limited by the condition of such road , land, or driveway including:
 - (i) The ability of such road, lane, driveway, or field to support and accommodate fire department equipment, vehicles and apparatus; and
 - (ii) The failure of the owner or user of the land upon which the road, lane, or driveway, is located to maintain in a condition that is passable by fire department vehicles and apparatus.
4. Vehicle firefighting
5. Grass, brush, and forestry firefighting
6. Marine firefighting – shore based and defensive only
7. Tiered Medical Assistance services (in accordance with Fire-EMS agreement)
8. Vehicle Accidents
9. Vehicle Extrication

10. Rope Rescue Services – Low Angle only (Operations Level)
11. Water Rescue Services – Surface Rescue only (Technician Level)
12. Elevator Rescue
13. Transportation incidents involving vehicles, trains, aircraft and watercraft
14. Public hazard assistance services – carbon monoxide incidents and electrical/ natural gas emergencies
15. Public assistance – assist public where the Fire Department has the equipment and/or specialized skills to mitigate the incident
16. Other agency assistance (EMS, Police etc.)
17. Participation and support in the emergency plan and operations
18. Mutual Aid Response Services
19. Automatic Aid Response Services
20. Fire Protection agreements
21. Joint service agreements

B) Public Education and Fire Prevention

Public Education and Fire Prevention activities shall be provided in accordance with the approved fire department Public Education/Fire Prevention and Smoke Alarm policies.

Activities include:

- Fire inspection services
- Public education services
- Fire investigation services
- Plans examination services
- Risk assessment services
- Junior firefighter program
- Consultation services
- Assistant to the Fire Marshall duties

C) Emergency Planning

- Pre-incident planning services
- Community Emergency Management planning services

D) Fire Department Administration

- Planning and developmental services
- Financial services
- Records management services
- Department Human resources services
- Customer relation services
- Health and Safety services
- Legal services
- Technology services
- Training and education services
- Fleet, equipment and facility maintenance services

E) Training and Education

- Training Program Standards – National Fire Protection Association (NFPA) is the primary training standard. Other standards may be used in the absence of an NFPA standard.
- Providing Station Training - Regular practice drills
- Program Development Services

F) Maintenance

- Fleet and Equipment Services
- Facility Maintenance Services



Recommendations

Recommendations

The recommendations are focused on ensuring compliance with all legislative and regulatory requirements while incorporating current needs and projected future growth.

The recommendations of this report are organized into seven (7) key areas. They are:

1. Administration (Fire Department Organization & Finances)
2. Community Risk Assessment
3. Fire Prevention and Public Education
4. Fire Suppression
5. Fire Dispatch
6. Occupational Health and Safety
7. Emergency Response

1. Administration

This section of the FMP reviewed and analyzed the: i) E&R By-Law, ii) LSFES Organization, iii) Recruitment & Retention, iv) Fire Protection Agreements and v) Fire Underwriters Survey

i) Establishing & Regulating(E&R) By-law

The services provided by Lambton Shores Fire & Emergency Services is outlined in By-Law 49 of 2019. Council should review the E&R By-law on a regular basis to confirm that the fire service is meeting the needs of the community and reflects approved changes to the level of service. The review and/or change in service level should be informed, at least in part, by consideration of the Community Risk Assessment along with the recommendations contained in this Fire Master Plan.

The organizational chart is identified in Appendix A of the E&R By-law and only identifies the fire suppression division.

Many municipalities have an extensive cost recovery process for a wide range of fire protection services. The Lambton Shores E&R By-Law is solely focused on fire suppression activities and the actions required to extinguish a fire or to mitigate an emergency.

Recommendations:

- 1) Update the E&R By-law regularly to include the “Council Approved” Level of Service and activities as informed by the Community Risk Assessment and FMP
- 2) Ensure that Appendix A reflects the reporting structure, roles, and responsibilities of all fire department personnel
- 3) Incorporate all aspects of cost recovery for services delivered by the fire department beyond fire suppression such as: fire inspections; fire prevention training for businesses; response to hazardous materials spills; and water/ice rescue operations, thereby enabling additional revenue to offset associated expenditures

ii) Fire Department Organization

LSFES was created in 2018 through a consolidation of five previously independent fire departments namely: Arkona, Forest, Grand Bend, Northville and Thedford.

The hiring of a full-time Fire Chief was a progressive step that Council should be commended for. The Fire Chief is the designated person who has the expertise and skillset to lead the amalgamated service while maintaining a strong presence in the community. The Chief’s responsibilities include: personnel management, recruitment, selection, training, promotion, discipline and morale. The Chief has several day-to-day responsibilities and there is a need to increase organizational depth thereby creating time to focus on a strategic planning process and create short, medium, and long-term goals supported by implementation plans. To meet legislative and operational requirements the chief initially relied on committees and members for assistance. Unfortunately, there are now indications that member engagement is beginning to lesson, progress is slowing, and the committee system is not delivering the intended results. Members need return to the duties they

“signed-up for”, and the municipality needs to hire and utilize staff so that administrative and operational requirements can be met.

Recommendations:

- 4) Establish two Deputy Chief positions as follows:
 - a. Deputy Fire Chief, Protective Services & Prevention
 - b. Deputy Fire Chief, Training & Operations

This organizational structure is consistent with other similar sized departments. Developing a robust command structure will provide operational depth and allow the Fire Chief to fulfil administrative responsibilities, maintain visibility at community events and facilitate open communications with elected officials

- 5) Continue to consolidate individual station accounts to be administered by the Fire Chief or a Deputy, eliminating duplicate spending, providing improved fiscal accountability and consistency with Lambton Shores corporate policies along with opportunities for centralized procurement of goods
- 6) Revise the vehicle replacement schedule and assign appropriate funding to reflect changes in the Council approved Level of Service
- 7) Provide the Fire Chief with a dedicated and readily identifiable fire department vehicle for use as in emergency and non-emergency situations
- 8) Provide all Operational Committees with immediate support until additional personnel are hired and available. This would provide immediate relief to the Fire Chief and allowing focus on other legislative responsibilities
- 9) Assign an administrative assistant to provide dedicated support to the entire LSFES team, process invoices, maintain records and schedule events and appointments. This would allow the Chief and Officers to focus on other essential duties
- 10) Modernize the current fire department management software to meet the meet the changing needs and address future growth

iii) Recruitment and Retention

The recruitment of qualified persons to become firefighters is a challenge for all volunteer fire services. The part time/on call fire service workforce is constantly changing due to the regular turnover of staff. To be a part time/on call firefighter in Ontario, candidates require training to meet NFPA 1001, (FF I and II), and other service specific training. Firefighter recruits currently need over 160 hours of training to just become competent and safe to respond. Once this initial training is complete, members are then required to take both advanced and ongoing refresher training. These training changes, coupled with family and employer commitments have resulted in a much larger turnover of fire personnel and rosters that are often difficult to fill.

Recommendations:

- 11) Develop a community wide recruitment strategy to attract new firefighters including a public awareness campaign

- 12) Standardize processes for application, testing and the interviews to allow the candidates to be assessed fairly
- 13) Provide an hourly rate to compensate personnel and eliminate the current practice of providing stipends in lieu of an hourly wage
- 14) Develop and implement a Retention Policy to motivate and engage trained personnel to stay with LSFES

iv) Fire Protection Agreements

At this time, Lambton Shores provides limited fire protection services to the neighbouring municipalities of South Huron, Bluewater, Plympton-Wyoming and Warwick. Lambton Shores does not receive fire protection services under contract with any other municipality. Existing agreements are based on historical precedent with no consistent Council approved policy regarding fees charged to neighboring municipalities for fire protection services. The most recently renewed agreement is with Plympton Wyoming and could serve as a model for all subsequent renewals.

As Lambton Shores reviews its own service levels, and rationalizes its own needs related to facility, staffing, and apparatus there will be an opportunity to reflect on whether or not service provision outside of Lambton Shores is of benefit. Offering services to neighbours is of mutual benefit, as long as costs are recovered. Lambton Shores must rationalize its fire suppression infrastructure against the findings of its Community Risk Assessment and ensure that it is providing the best possible service to its own taxpayers prior to offering assistance.

If there is mutual interest between all municipalities in continuing with the provision of fire protection services, then Lambton Shores would be well served to establish a billing model that reflects the true cost of providing and maintaining fire protection services in a standardized manner. These costs can be easily incorporated into any agreements that are negotiated.

Recommendations:

- 15) Ensure the provision of effective fire protection services to the taxpayers of Lambton Shores as compared to the findings of the Community Risk Assessment
- 16) Review the cost of providing fire protection services to neighbouring municipalities and update Fire Protection Agreements as necessary
- 17) Negotiate new agreements with the municipalities receiving the services to incorporate the revised cost recovery model

v) Fire Underwriters Survey

Fire Underwriters Survey (FUS) is a national organization administered by OPTA Information Intelligence. FUS provides data on public fire protection for fire insurance statistical work and for the underwriting purposes of subscribing insurance companies. Subscribers of Fire Underwriters Survey represent approximately 85 percent of the private sector property and casualty insurers in Canada.

FUS provides a municipal rating that informs insurance rates for businesses and individuals based on a calculated a fire suppression capability for insured properties including the

ability to provide sufficient water flows in rural areas by a Certified Water Tanker Shuttle. These rates reflect on the municipality's investment in their fire services and the value of the service it provides.

The last full assessment by the Fire Underwriters Survey for Lambton Shores was completed in 2001. A minor data update was done in 2020, but a full review has not been commissioned. The 2001 assessment would have been based on the five individual fire departments in the newly formed municipality. The 2020 update did reflect some positive changes to the ratings and it is anticipated that a full assessment could result in another improvement to the insurance ratings.

Recommendations:

- 18) Consider a Fire Underwriters Survey following the implementation of the recommendations in the FMP

2. Community Risk Assessment

A CRA has always been a cornerstone of emergency planning. Community risk factors have previously been identified during the development of the Lambton Shores' Emergency Management Plan. This process is known as Hazard Identification and Risk Assessment (HIRA), a comprehensive document that outlines the hazards and their associated risks in a municipality. While effective in the context of emergency management, the HIRA does not specifically address fire safety in the community.

To comply with Regulation 378/18, the CRA needs to be approved by Council on or before July 1st, 2024. Once approved, the CRA must be reviewed yearly to identify any changes in the community risk. The approved CRA will provide a guide to Council for setting the level of fire protection services to be delivered.

Recommendations:

- 19) Approve and adopt the updated Community Risk Assessment
- 20) Establish a regular schedule to bring forward updates to Council to ensure regulatory compliance

3) Public Education & Fire Prevention

This section of the FMP reviewed and analyzed: Public Education and Fire Inspections including Planning Process, Development Charges and Fees By-Law

i) Public Education

Public education is the first step in the Three Lines of Defence and is fundamental to providing fire protection services and a fire-safe community. Public Education programs must meet the minimum requirements of the *Fire Protection and Prevention Act (FPPA)*. Examples of public education programs include, smoke and CO alarm awareness and home fire escape plans. These programs can be tailored to meet the needs and circumstances of Lambton Shores. The delivery of such programs must be based on the community risk assessment, delivered consistently, and evaluated regularly for effectiveness.

Social media is a highly effective method of communicating public fire safety messages and programs and can provide immense benefits and have significant impact.

Recommendations:

- 21) Assign a qualified staff member to lead the Public Education function as part of their overall responsibilities. (See staffing section below)
- 22) Develop a public education program to address mandatory requirements of the *FPPA*, and the needs and circumstances of the community based on the CRA
- 23) Provide opportunities to engage all LSFES personnel in delivering programs that promote public fire life safety education
- 24) Develop a social media communications strategy, in partnership with the Clerk's Office, to govern the creation and distribution of fire safety messages utilizing various social media platforms

ii) Fire Inspections

Fire inspections are a vital component of fire safety in a community and a core requirement in the second step of the 'Three Lines of Defence' model. The *FPPA* mandates that fire inspections to be conducted "On Request" or "By Complaint". Other inspections are required by specific Regulations.

The Office of the Fire Marshal and Emergency Management has identified specific occupancies that need to be inspected and the recommended frequency of the fire inspections.

Type of Occupancy	Frequency
Assembly	
Schools & Churches	Annually
Nursery/Day Care facilities	Annually prior to licensing
Licensed premises	Twice annually (once in December)
Unlicensed premises	Annually
Institutional	
Hospitals	Annually
Nursing Homes	Annually
Homes for Special Care	Annually prior to licensing
Commercial & Business	
In service mercantile	Every other year
Comprehensive mercantile	Every third year
Business / personal services	Upon request/complaint
Industrial	
Factories / Complexes	Annually
Industrial malls	Every other year
Residential	
Apartments – 6 units or more	Annually
Single Family duplexes & apartments up to six units	Upon request or complaint
Home inspection program	Voluntary – every third year
Boarding / lodging houses / B&B's	Annually prior to licensing
Hotel / motels	Annually

In 2020, LSFES conducted 82 inspections as summarized below:

Reason	Total
Request	11
Complaint	7
Burn Complaint	1
Routine	27
Licensing	8
Follow-up	4
Safety Concern	0
Plan Approval (Building Services)	7
Fire Safety Plan Approval	6

Monitored Fire Drill	9
Lawyer Letter – Property Information Search	2
Event Plan Approval – Review	0
Total – All Activities	82

Despite the impact of COVID 19, this number is consistent with past inspection history. In 2018 there were 59 inspections completed and 99 in 2019. The following table provides another view of this inspection activity by type of occupancy impacted.

Type of Occupancy	# of Occupancies	Inspected 2020
Assembly	45*	21
Institutional	8*	22
Commercial & Business	217*	1
Mercantile	104*	16
Industrial	27*	2
Residential	376*	15
Hotel /Motel	14*	0
Private Dwellings	4783	0
Seasonal Private Dwellings	2225	0
Multi-Unit Apartments (Rentals)	615 Units	0
Other Seasonal, B&B	Unknown	0
Other		5
Total		82

* Estimates only – No business licensing in place.

Although the number of inspections now being done is greater than at any time in the past, Lambton Shores is being challenged to conduct fire inspections at the frequency recommended by the OFM.

Planning process involvement

LSFES should seek out opportunities to become more involved with the site and building plan approval process for all ICI permits. Furthermore, LSFES should provide input into any new site plan and subdivision development agreements. By being involved in the above processes, LSFES becomes aware of the increased demand on its fire services, and is able to provide planning advice as it relates to the requirements of the fire code, facility ingress/egress, fire routes and water supply for suppression purposes.

Development Charges

At this time, there are no Development Charges specified for growth related projects associated with the fire department, however these charges can be utilized to fund the impact of growth on the provision of additional services.

Fee Bylaw

The municipality currently has a By-law Number 05 OF 2020 – Amended by By-law 37-2020 BEING A BY-LAW TO ESTABLISH VARIOUS FEES AND CHARGES FOR SERVICES PROVIDED BY THE MUNICIPALITY (FEE BY-LAW). A review of this by-law should include opportunities to increase cost recovery for services provided.

Recommendations:

- 25) Develop a more comprehensive fire inspection program, led by qualified staff members to address the mandatory requirements of the FPPA
- 26) Assign a qualified fire inspector with NFPA 1033 Certification to be the lead fire investigator to fulfil the mandate of the municipality as per the *FPPA* to determine the origin and cause of a fire or explosion and to report the findings to the Office of the Fire Marshal and Emergency Management.
- 27) Certify all qualified fire inspectors as building code inspectors, per the specifications of the Building Code Act
- 28) Discontinue the summer student program and divert funding to support other fire prevention programs.
- 29) Create new Development Charges that will support infrastructure investments to improve the delivery of fire protection services during the review of the By-Law in 2023
- 30) Increase LSEFS involvement in the site and building plan approval process for all ICI permits.
- 31) Review and revise the Fees for Service By-law to account for all services provided by the fire department.
- 32) Consider requiring new subdivision development agreements to install residential sprinklers in all dwellings

4. Fire Suppression – Personnel & LSFES Stations

This section of the FMP analyzes i) Suppression Personnel and ii) LSFES Stations

i) Suppression Personnel

The suppression division is a highly visible and critical component of any fire department. It plays a major role in how the fire department functions and in many cases is the public face of the fire department. This division delivers Council approved services by utilizing part time/on call firefighters and officers.

The suppression division is currently based on five stations, each operating under the command of a station chief, deputy station chief (in some stations), captains, and firefighters.

Station Chiefs manage the day-to-day activities of the stations under the direction of the Fire Chief.

Captains are the front-line officers responsible with primary responsibility for leading firefighting activities, conducting training and assuming the role of Incident Commander for routine non-complex emergency calls. They additionally provide support and leadership for specific station based routine activities.

Firefighters, are assigned to each station on a “volunteer” or part time/on call basis.

A significant change to the current organization structure is being proposed to streamline communications, standardize operations, enable change management and provide training/professional development opportunities to staff. This new model is consistent with other municipalities of similar size and operating environments.

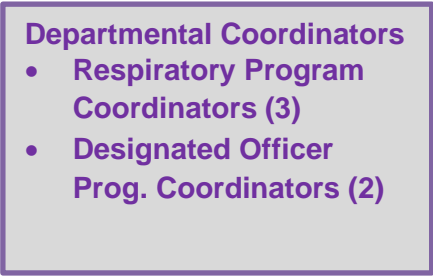
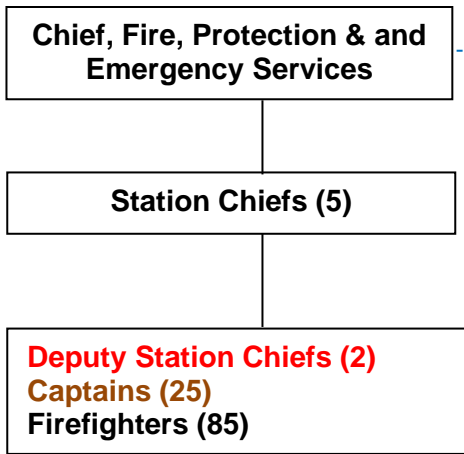
Recommendations:

- 33) Create two (2) geographic districts and divide the five (5) stations amongst the districts
- 34) Establish two (2) District Chief positions and appoint qualified personnel to manage the stations within their District
- 35) Support the implementation of an effective and standardized incident command system at any scene in the municipality, regardless of the station(s) responding.
- 36) Strengthen succession planning by incorporating all personnel rather than on a single station basis
- 37) Require Captains to complete required training and attain certification in NFPA 1021 FO (I), NFPA 1041 (I), IMS 100 & 200 and OH&S Supervisor qualifications. In addition, any current Captain should obtain the qualification within two years if they are not currently grandfathered or certified
- 38) Establish a full-time Training Officer position. Successful candidates must complete training and attain certification in NFPA 1041 I within twelve (12) months if they are not currently grandfathered or certified

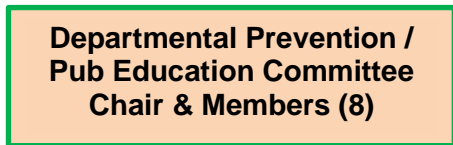
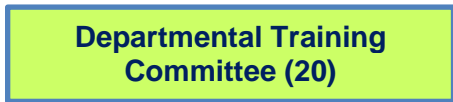
- 39) Establish a training facility in the municipality with consideration given to re-purposing the old arena in Forest
- 40) Explore the possibility of establishing a Regional Training Center (RTC) in Lambton County. The RTC could provide opportunities for cost recovery on facilities and salary costs of the Training Officer
- 41) Separate social activities from fire department operations
- 42) Assign firefighters to the most appropriate fire stations to facilitate the quickest response
- 43) Review each fire station roster, address absenteeism, and assign appropriate staffing based on the Council approved Level of Service
- 44) Establish and enforce a new uniform policy that reflects the amalgamated department and rank structure

EXISTING ORGANIZATION CHART

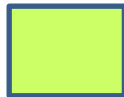
Line Report



Functional Report



Committees



Training Division

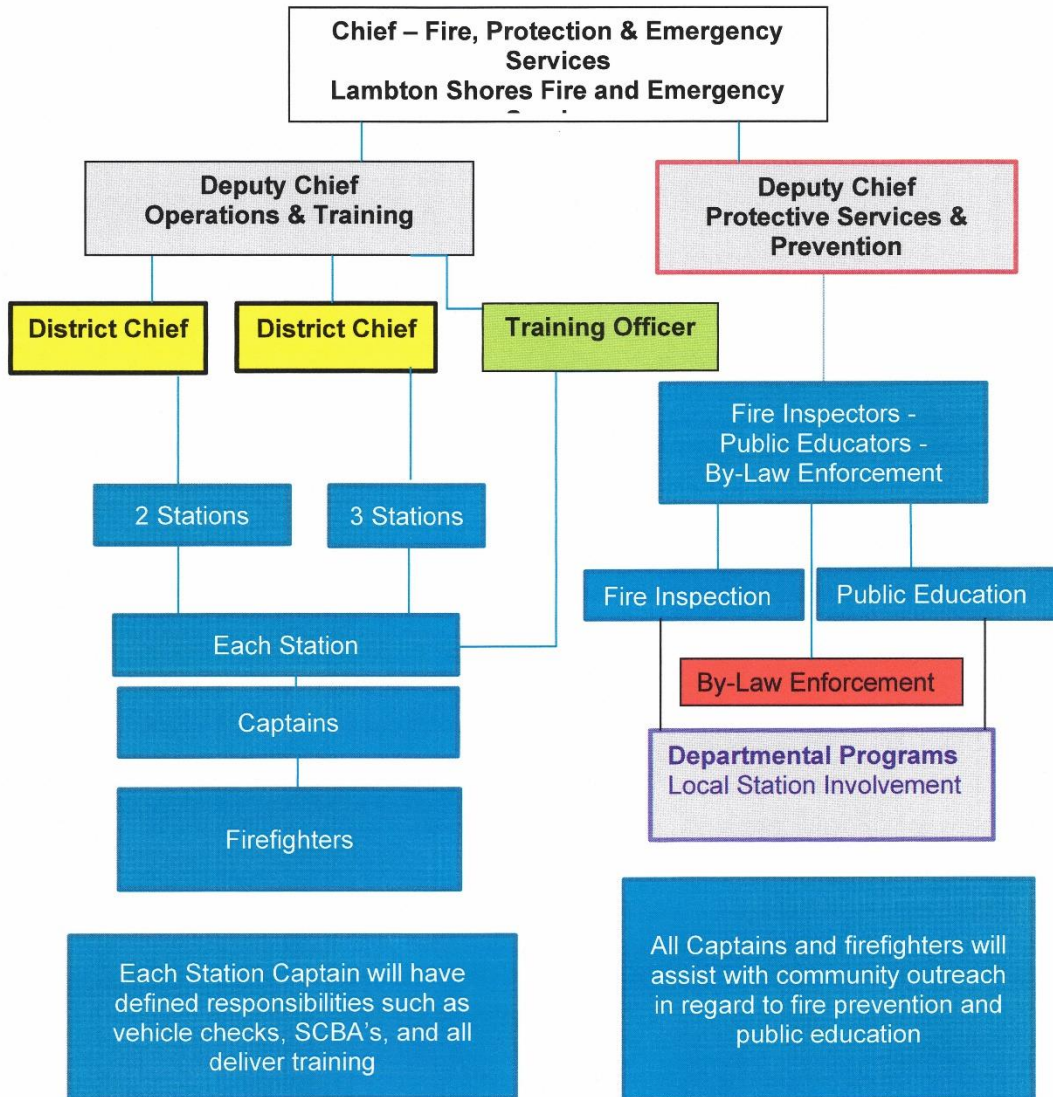


Prev-PubEd Division



Health & Safety

NEW ORGANIZATION CHART



ii) **Suppression Facilities**

LSFES operates from the following five (5) Stations:

Arkona (Station Age: 45 years)

Forest (Station Age: 34 years)

Grand Bend (Station Age: 37 years)

Northville (Station Age: 26 years. Space shared with the Public Works Building)

Theford (Station Age: 22 years. Space shared with the Community Centre)

ESSSi undertook an extensive review of all the stations as part of the FMP development. The stations are in need of significant infrastructure improvements in order to meet the needs of the staff and comply with the recommended practices under the Occupational Health and Safety Act.

Recommendations:

- 45) Undertake a detailed facility audit of each fire station
- 46) Engage a professional architect or organization to develop standardized floor plans for all LSFES stations that incorporate:
 - a. Gender neutral shower facilities
 - b. Dedicated space for storage of bunker gear, Self-Contained Breathing Apparatus & associated equipment
 - c. Appropriately sized Apparatus Bays that take into account current and future growth needs along with anticipated service level changes
 - d. Exhaust gas removal systems and appropriate HVAC upgrades
 - e. Decontamination facilities, showers and wash areas
 - f. Commercial washer(s) and dryer(s) for firefighter gear cleaning
 - g. Training Rooms and breakout areas
 - h. Office areas for Captains and District Chiefs
- 47) Incorporate the capital funding requirements as part of the planning process to secure support and commitment

5.Fire Dispatch

Lambton Shores Fire and Emergency Services is currently part of the Lambton County Fire Dispatch System. LSFES is experiencing delays in notification of emergencies due to alerts to the incorrect fire station and difficulty in paging multiple stations and/or personnel for the technical rescue teams. Dispatchers are not in constant contact with the fire crews at an emergency and call logging is not occurring. Fire officers need to be able to contact fire dispatch from an emergency scene to request further assistance and resources. Accurate records are vital for accountability, if needed. The current fire dispatch provider does not have the capabilities to provide these services.

Recommendations:

- 48) Acquire a viable fire dispatch service for LSFES. This should include a review of options available including provincial emergency service providers that supply NFPA compliant fire dispatch services on a contract basis
- 49) Incorporate the requirements of NG 9-1-1 in the new dispatch service
- 50) Utilize the funding allocated in the 2021 budget to address this as an immediate priority

6. Occupational Health & Safety

The health and wellbeing of every employee is a critical responsibility for every employer, is mandated by *OH&S Act* and enforced by the Ministry of Labour. Various regulations are also in effect for the protection of firefighters. For example, the Health and Safety Section 21 Committee is tasked with matters relating to the occupational health and safety of all firefighters in the Province of Ontario and has developed a Manual of Health and Safety Guidance Notes for fire services in Ontario, which outlines recommended procedures to prevent injury or illness.

There are several opportunities for LSFES to improve the health and safety of all of its personnel. The recommendations below will also address the mandatory obligations of the employer as outlined in the OH&SA and associated regulations.

Recommendations:

- 51) Initiate the plan for fire station infrastructure improvements
- 52) Create Standard Operating Procedures(SOP's) and Standard Operating Guidelines(SOG's) to address: decontamination of personnel, cleaning of contaminated gear/equipment and storage of air bottles
- 53) Review all SOP's & SOG's to ensure compliance with industry standards and applicable legislation
- 54) Develop and make available to all personnel a holistic wellness and fitness program that addresses physical and mental health and wellbeing.

7. Emergency Response

LSFES delivers fire suppression and rescue services from five (5) fire stations. Each firefighter assigned to a fire station is notified by a pager alert of an emergency that requires them to respond to the incident. Notification is provided by Central Ambulance Communications operated by the Ministry of Health and Long-Term Care located in Wallaceburg. The firefighters respond to the fire station, don their turnout gear, and respond with the appropriate apparatus. Depending on the nature of the call, more than one fire station maybe notified to respond.

It is Council's responsibility to provide the proper funding for the necessary training and equipment required to provide that service. It is the Fire Chief's responsibility to ensure that the approved services are delivered, within the levels outlined in the bylaw.

This section of the FMP addresses i) Fire Ground Staffing, ii) Intervention & Turnout times, iii) Travel time & Response Areas and iv) Response Apparatus

i) Fire Ground Staffing

The assembly of firefighters to perform firefighting duties is called the Fire Attack Team. To perform firefighting actions at any incident requires a defined number of firefighters to be on scene to perform various fire ground tasks. The fire attack team must be assembled as soon as possible after personnel are dispatched.

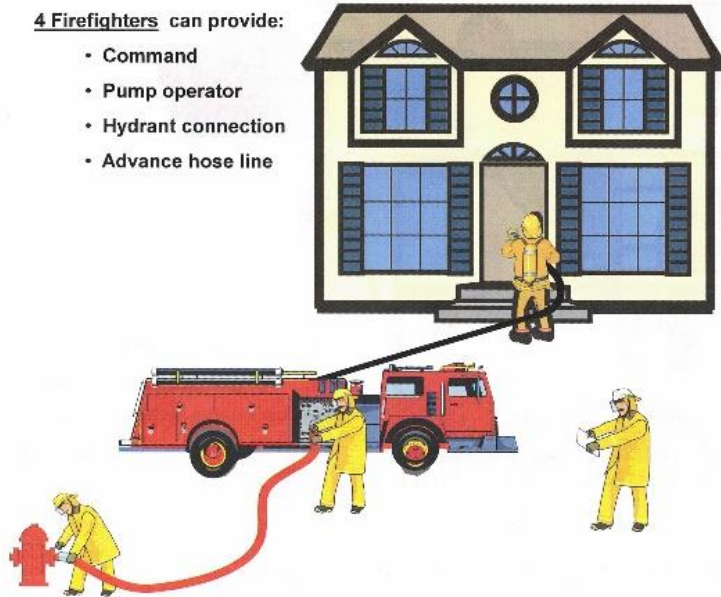
To perform basic structural firefighting, no building entry is made or attempted. All firefighting tasks are performed outside of the building and the fire is contained to the building of origin. Information on fire attack teams can be found in NFPA 1720 and at the OFMEM [OFM - 04-14-12 | Ministry of the Solicitor General \(gov.on.ca\)](#) , [Fire Attack Teams | Ministry of the Solicitor General \(gov.on.ca\)](#) , [Assembling Fire Attack Teams | Ministry of the Solicitor General \(gov.on.ca\)](#)

To perform an aggressive interior attack, the current level of service for LSFES, a fire attack team must be assembled in a timely manner with a minimum of four firefighters on scene. As the number of on-scene personnel grows, more tasks can be completed. The illustrations on the pages immediately following this, provide details on the various scenarios

Able to commence *limited* rescue
or
Limited fire fighting with 4 firefighters

4 Firefighters can provide:

- Command
- Pump operator
- Hydrant connection
- Advance hose line



Description: Four(4) firefighters are required to initiate an offensive attack and perform limited rescue (immediately inside a door or window)

Able to *commence* interior rescue
or
fire fighting with 8 firefighters

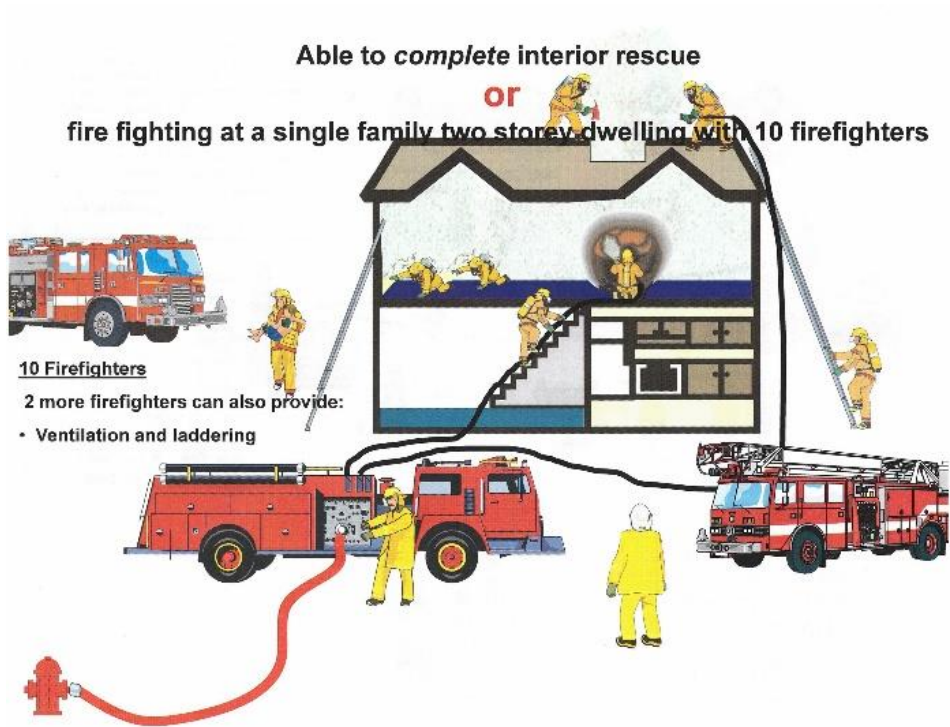
8 Firefighters

4 more firefighters can also provide:

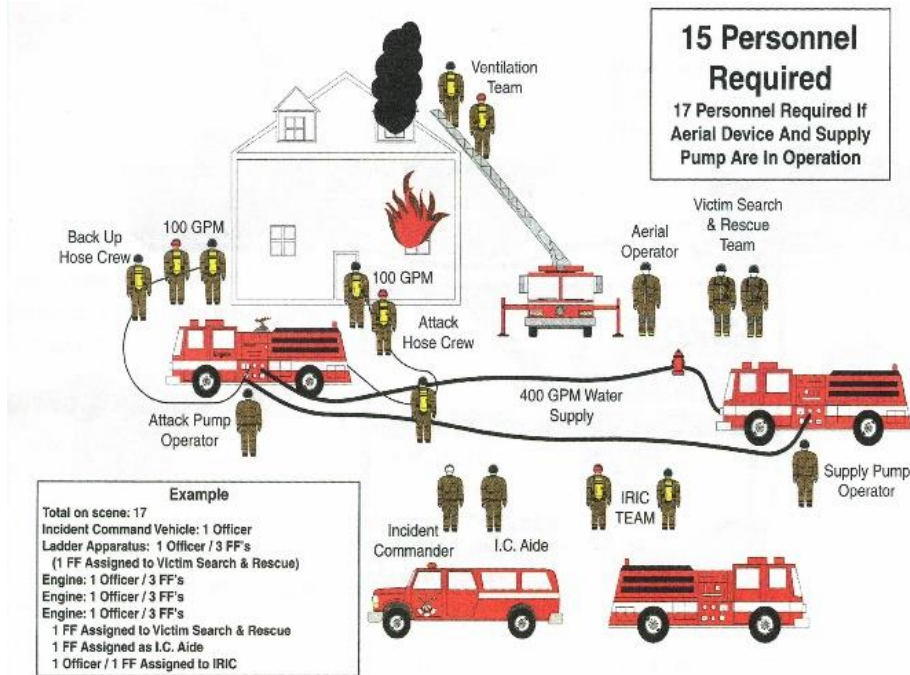
- Interior backup
- Exposure protection, laddering - RIT



Description: Eight (8) firefighters are required to initiate aggressive interior attack OR limited interior rescue



Description: Ten (10) firefighters are required to complete interior rescue OR aggressive interior attack



Description: Fifteen (15) firefighters are required to complete interior rescue and interior/exterior suppression activities

A multi-station response needs to be implemented to allow for the assembly of fire attack teams as defined in the level of suppression services.

Currently, firefighter turnout for emergencies varies from 3 or 4 firefighters initially and growing to 12 to 14 depending on the time of day and week and is consistent with other communities.

LSFES responds to:

- **Small commercial/retail, Vulnerable Occupancy fires** - Several small commercial establishments such as strip malls are prevalent throughout the community of Lambton Shores in addition to several retirement and long-term care homes. Fires in these settings requires the response of multiple stations and according to both the NFPA 1720 and the OFM guidelines, at least fifteen (15) and up to twenty-one (21) firefighters may be required to conduct an aggressive interior attack and mitigate the incident. This is referred to as a fire attack team. A critical component of assembling and operationalizing a fire attack team involves the use of an incident management system
- **Rural fires** – Fires in rural areas with limited water supply requires the same number firefighters as an urban area call. These responses will also require multiple tanker units that can provide the required water supply – referred to as a Tanker Shuttle – along with personnel that can operate the tankers as fire attack team numbers
- **Technical Rescue** – Vehicle rescue, Water and Ice rescue, Elevator and High-Angle rescues and Hazardous Materials response fall under this category
- **Medical Assist Requests**

Recommendations:

- 55) Train all personnel in the LSFES Standard Operating Policies and Standard Operating Guidelines for fire ground staffing. These SOP's & SOG's must comply with the NFPA 1720 and OFM Guidelines
- 56) Create a new department-wide response model for the assembly of fire attack teams
- 57) Implement a standardized Incident Management System (IMS) that shall be utilized at all emergency incidents
- 58) Provide IMS training to all personnel that are required to operate in any capacity at emergency calls
- 59) Continue to provide training, equipment and resources to the LSFES specialty rescue teams to maintain the current level of service
- 60) Strengthen mutual/automatic aid agreements within the County and opportunities for joint training
- 61) Explore opportunities for the provision of certain specialized technical rescue services such as a Hazardous Materials response and Sile/Confined Space rescue through a specialized team
- 62) Update the E&R By-Law to accurately reflect services provided by LSFES

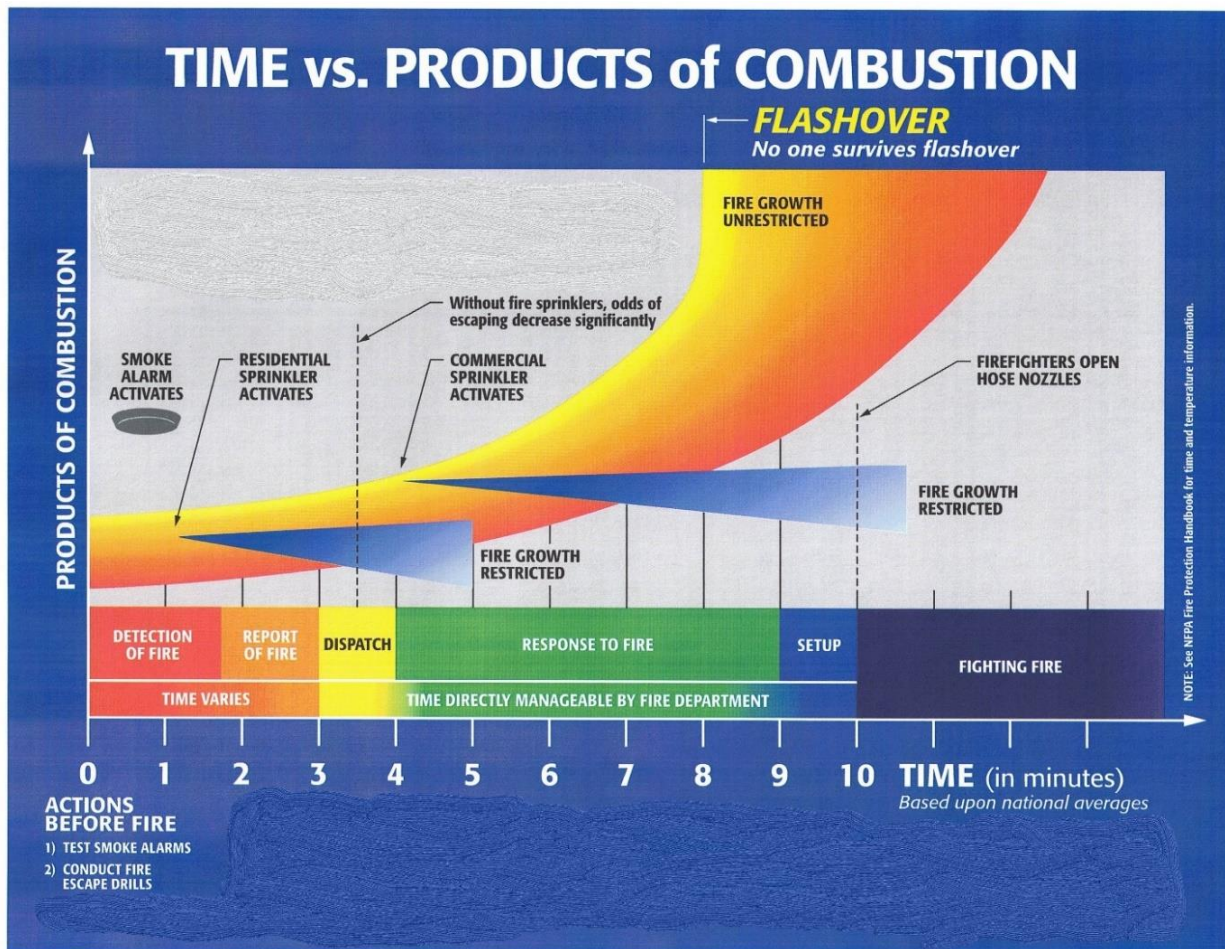
ii) Intervention & Turnout Times

An emergency response is measured from the discovery of fire to the application of water. It is broken into six categories and those include the detection of fire, report of alarm, dispatch time, assembly time, travel time, and set-up time [Appendix 1 - Response/Intervention Time | Ministry of the Solicitor General \(gov.on.ca\)](#) . All these factors affect the outcome of the incident. The growth of a fire increases by the minute and the longer the intervention time, the more chance of loss of life and greater property damage.

Turnout time is a measurement of the length of time it takes a firefighter to respond to and emergency and to don their protective gear. This varies from three (3) minutes to six (6) minutes based on the fire station, time of day and location of the volunteer firefighters.

Recommendations:

- 63) Recruit or reassign firefighters that work or live, in close proximity to the stations
- 64) Examine station location to ensure the most effective and efficient response from all five (5) stations that are a part of LSFES



Source, NFPA

iii) Travel time & Response Areas

Travel time is an important component of an effective emergency response and a prime consideration in determining an effective “Level of Service” for the community. Travel time can vary greatly in a community based on its geographic make up. Urban areas usually have a four-to-six-minute travel time while rural areas can have travel times of seven to twelve minutes. The current average travel time of ten (10) minutes for LSFES is consistent with that of other departments of a similar size and type. A detailed travel time analysis and response area study were also undertaken as part of this FMP. A major factor in emergency response times and travel times is the location of the fire station. The response times for the fire stations are shown below and vary by station and range from six (6) minutes to thirteen (13) minutes. The following table outlines the 2020 response averages by station

Also identified in the CRA is a large area of trails, fields, beaches, and other areas that are not accessible by “normal” fire apparatus. The limited accessibility continually challenges firefighters to get themselves and the needed equipment to the scene of the emergency in a timely manner. There have been instances of private and/or personal all-terrain vehicles being seconded to provide transportation of firefighters and equipment to the emergency scene.

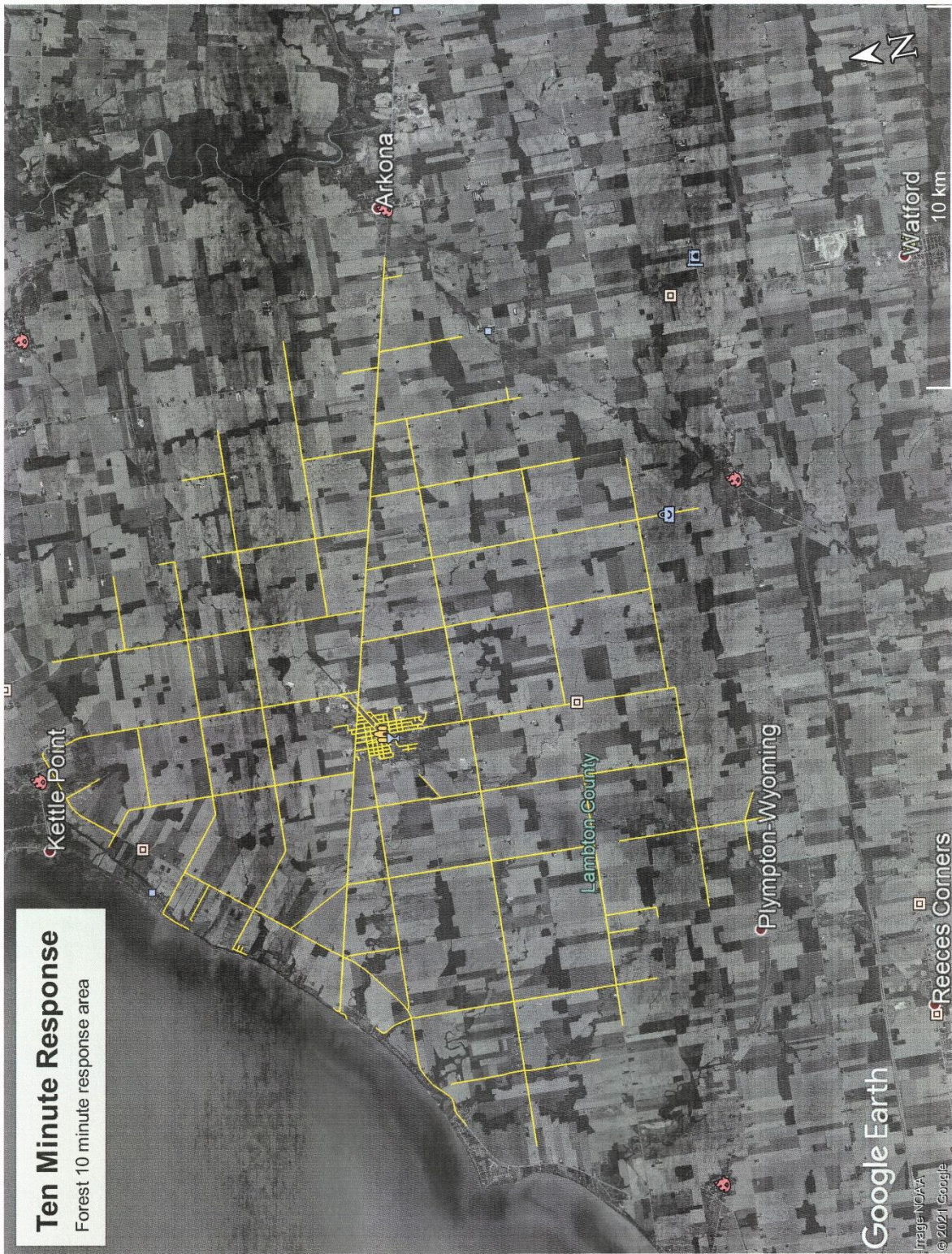
Incident Response Averages 2020						
Arkona	Primary	Assist	Dispatch	Chute	Response	Personnel
Fires	4	1	0:49	5:55	9:31	15
Rescues	4	1	1:05	6:16	10:49	11
Medicals	0	0	0	0	0	0
Total	8	2				
Other	8					
Total Responses	18		Fire Loss		\$16,000	
Forest						
Fires	5	1	0:33	3:39	11:07	17
Rescues	12	8	0:55	4:59	11:07	14
Medicals	19	0	0:27	3:51	8:01	10
Total	36	9				
Other	24					
Total Responses	69		Fire Loss		\$790,000	
Grand Bend						
Fires	16	0	1:03	6:17	10:55	11
Rescues	12	6	1:26	5:35	11:59	13
Medicals	17	0	0:26	7:02	10:26	7
Total	45	6				
	43					
Total Responses	94		Fire Loss		\$5,097,500	
Northville						
Fires	5	5	0:59	6:38	13:07	22
Rescues	9	5	0:47	5:34	12:12	13
Medicals	17	0	0:26	7:02	10:26	7

Total	31	10				
Other	11					
Total Responses	52		Fire Loss		\$520,000	
Theford						
Fires	3	4	0:54	3:24	11:11	29
Rescues	10	11	1:39	3:42	11:30	16
Medicals	9	1	0:45	3:36	6:41	11
Total	22	16				
Other	25					
Total Responses	63		Fire Loss		\$570,000	
All Responses						
Fires	33	11	0:55	6:11	?	16
Rescues	47	31	1:13	4:57	11:35	14
Medicals	62	1	0:33	5:15	9:43	8
Total	142	43				
Other	111					
Total Responses	296		Total Fire Loss		\$6,993,500	

Recommendations:

- 65) Review the current response area for each fire station, re-align to eliminate overlap and ensure that the closest station is designated as being responsible for the primary response
- 66) Establish a new response model and create standardized travel times to meet the LSFES level of service.
- 67) Adopt the “Suburban Zone” response time model for LSFES as recommended by NFPA 1720. The requirement from the Standard is for 10 staff to assemble an attack in 10 minutes, 80% of the time
- 68) Consider the introduction of a “first response model” at Arkona and Northville stations. This model would allow those two stations to respond immediately and reduce travel times for the first unit in most incidents. They will require support from other stations for structure fires
- 69) Implement paid duty firefighter standby at the Grand Bend station during weekends in the tourist season
- 70) Analyze response data from the new NFPA compliant dispatch service, for a 3-year period and utilize an evidence-based approach to determine station location and apparatus placement. This would assist in identifying “core” stations based on call volumes and ensuring that stations locations are optimized
- 71) Align the station infrastructure renewal and re-investment plan to achieve consistency with station re-alignments











iv) Response apparatus

Currently, the existing stations have a mix of apparatus. To the credit of the Department, there have been considerable efforts made to ensure standardization of equipment and safety gear over the past few years. The table below outlines both the current and future apparatus assignments that would position LSFES to deliver the appropriate level of service. At this time, LSFES apparatus meets the FUS industry standards for insurance ratings.

Station	Current	Proposed
Arkona	Pumper Tanker Rescue	Pumper/Tanker (multi-purpose)
Forest	Pumper Rescue/Pumper	Pumper Rescue with elevated master stream capability Pumper \Tanker (multi purpose)
Grand Bend	Pumper Tanker Rescue	Pumper Rescue with elevated master stream capability Pumper/Tanker(multi purpose)
Northville	Pumper Rescue	Pumper/Tanker (multi-purpose)
Theford	Pumper Tanker Rescue	Pumper/Tanker (multi-purpose)
Support Vehicles		<ul style="list-style-type: none"> • Command Vehicles • Pick Up Trucks • Trailers / support units

Recommendations:

- 72) Develop and adopt a standard fleet management plan to acquire all apparatus, specialty vehicles and command units
- 73) Acquire specialized watercraft for firefighting and rescue, maintained in a state of readiness and located at a municipal dock or trailer
- 74) Acquire an All-terrain vehicle, outfitted for wildland firefighting and rescue operations
- 75) Consider the future acquisition of an aerial apparatus to assist with fire operations that require a defensive attack due to rapid fire spread, particularly in low-rise and mid-rise buildings
- 76) Build a fleet of spare apparatus that can support front line operations at all stations and to support annual maintenance, ad-hoc repairs, annual certification and training
- 77) Acquire support vehicles such as pick-up trucks and transportation trailers to transport equipment to fire or specialized rescue incidents
- 78) Discontinue the transportation of bunker gear in personal vehicles and assign LSFES support vehicles to perform this function



Conclusion

Conclusion

The goal of this Fire Master Plan is to enhance education, prevention, and emergency response capabilities with an ultimate objective to improve the overall safety of those that live, work, and vacation in Lambton Shores. It is also meant to be a living document that is continuously evolving and improving as new information is gathered and analyzed.

Once this plan is endorsed by Council, an implementation plan is to be developed and executed to ensure all the suggested initiatives are carried out in a timely and cost-effective manner. The Fire Master Plan will ensure that LSFES is able to provide excellent fire protection services and be ready to address the future growth of the municipality.

Emergency Services Strategy and Solutions Inc. would like to thank Mayor Bill Webber and Council, Fire Chief Lawrence Swift, Chief Administrative Officer Kevin Williams, Treasurer Janet Ferguson, and the Officers and Firefighters for their input and co-operation to make this Fire Master Plan a reality.