

LEEDS AND THOUSAND ISLANDS FIRE SERVICE



MASTER **FIREPLAN** 2016-2020

Final Draft
January, 2016

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1.0 Foreword

This report is the result of an external review of the Leeds and Thousand Islands Fire Department. The review benchmarks the performance of the Department against both Ontario Fire Marshall (OFM) and National Fire Protection Association (NFPA) standards. It also reflects a comprehensive engagement process to identify the Mission, Vision and Values of the Department and determine cultural, organizational or other issues that may adversely impact the efficiency and effectiveness of the Department.

The Report describes the current state of the Department and provides recommendations to improve service delivery.

The Department consists of committed and skilled firefighters that are dedicated to provide assistance to those who require help in time of greatest need. Whether it is a medical emergency, a fire, or providing public fire prevention education, all members of the Department strive to perform professionally and competently to exceed the public's expectations. There is a consistent and profound sense of duty to serve.

The Report proposes strategic improvements that will make the operation of the Fire Service more efficient. It addresses the challenges of recruiting and retaining volunteer firefighters. Infrastructure has been critically examined and need for priority remediation identified.

Fire Departments are evolving with growing emphasis on prevention rather than response. Roles and responsibilities continue to change with new responsibilities and resulting workload will require a change in staffing.

Advancements to technology will necessitate upgrades to out-of-date systems. Staff training must be more than achieving base level competency; it must be an ongoing process in attaining excellence.

This Strategic Plan has been developed for a five year time frame from January 2016 to December 2020.

Change is only worthwhile when the benefits exceed the costs and will only be achieved when there is support to implement and sustain the new direction. This report has been prepared with the active support of the Department Firefighters and Officers. We are confident that the recommendations are supported, can be implemented and will result in continuation of the Departments tradition of service excellence.

2.0 Introduction

This document is prepared in response to the Leeds and Thousand Islands Fire Department (LTI FD) request for consulting services to develop a Master Fire Plan (Plan) that will provide a framework to guide future policy, organizational, capital and operational planning decisions.

The Ontario Fire Marshall (OFM) has provided a concise summary of the objectives of a Master Plan as follows:

“Every fire department should be guided by a master or strategic plan. This Community Master Fire Protection Plan traditionally focused on the identification of fire hazards and planning an appropriate suppression force response. Today, hazard or risk assessment has expanded well beyond the fire problem in the community to include emergency medical incidents, hazardous materials incidents and many other emergency situations. Paradigms are being shifted to emphasize the concept of fire prevention and control systems as communities attempt to effectively reduce losses experienced. This document should include plans for human resources and program financial support as well as the many external influences that impact on the fire service. The information contained within the Community Master Fire Protection Plan should provide a clear and concise overview of the most recently adopted organizational goals and objectives, budgetary commitments, mission statements and assessments of organizational activity. The document should cover a long range planning period of five to ten years.”¹

Current challenges faced by LTI FD are similar to those faced by many rural/urban interface fire departments in Ontario. Increased rigour from statutory and standards requirements related to firefighter health and safety, improved and more advanced suppression technology, increased skills and competencies required, changing work patterns where fewer firefighters are available for workday response, and increased emphasis on prevention and public education are examples of common themes. In addition, the presence of high-value seasonal residences, challenging access to seasonal occupancies, extensive recreation activities on numerous lakes and rivers, proximity to a major border crossing as well as major rail and highway corridors present unique challenges.

3.0 Methodology

A great plan is more than the production of a report. For the document to truly ‘live and breathe’, be inspiring, and be successfully implemented the project methodology has incorporated the following objectives:

First, the Plan needs to reflect the collective energy of the team to build enthusiasm for a positive future and reflect both a shared sense of purpose (mission) and desired future (vision). As well, the plan needs

¹ Personal Communication, Dan Koroscil, Advisor, Ontario Office of the Fire Marshal

to reflect and articulate shared values. Development of Values is critical to promoting a clear understanding of expected behaviours both in and outside the workplace.

The second key objective in the development of the plan is to create a process that is inclusive, consultative and collaborative. Thus, the process has been designed to involve Firefighters, Council Members, Senior Municipal Leadership as well as Department Officers.

The third objective of the process is to build consensus and ‘buy in’ so there is enthusiasm, commitment and energy in the implementation of the plan. The process should not only lead to a robust Plan, it should also assist Firefighters, Council and community representation to better understand and support the Department’s role and priorities.

The fourth objective is to base the plan on solid, quantitative information to ensure future direction and recommendations are based on objective evidence and recognized ‘best practice’.

The Plan addresses traditional strategic planning components including Mission, Vision and Values as well as multi-year strategic directions.

The Plan also addresses multi-year capital requirements related to apparatus, station assessment and location as well as tactical objectives for training, suppression, public education, fire prevention, department organization and human resource planning.

The Plan reflects the recently developed corporate strategic plan of the Township including strategic directions, mission, vision and values.

The Plan development provides extensive documentation and analysis of data to fully understand the role, challenges and performance of the Department

Hazard Identification and Risk Analysis is a critical component of the study and provides the foundation for the multi-year plan. The risk analysis includes analysis of response coverage to reflect statistical need in terms of risk, population, demographics and call volume. The plan documents and evaluates emergency response times and deployment.

The existing apparatus replacement plan was reviewed and updated.

A high level review of the existing fire stations has been conducted including consideration of location options. The review referenced National Fire Protection Association 1720 standards, Underwriters Insurance Dwelling Protection Grade standards, and Ontario Fire Marshal guidelines. As well response travel time contours are provided.

Recommendations are presented in an “Action Plan” table format with clear timelines to facilitate multi-year planning, implementation and budgeting.

A SWOT analysis was performed to identify the current and likely future risks to LTI FD. This analysis will utilize both internal and external focus groups and interviews including firefighters and officers, Councillors, Township Senior Department Heads including the CAO.

Five key questions were used to guide the focus groups: *What is working well today? What do you see as the key issues facing the Department? What would you like to see changed? What would you like to stay the same? Any other advice or comments?*

To identify, consider priorities, and develop consensus regarding the recommendations of the Plan, a planning day occurred with participation from firefighters, officers, Chief, CAO and Councillors.

With the information gathered from the above steps, a draft report was developed and presented to the Steering Committee. A final draft was then prepared incorporating feedback from the Steering Committee. The Final Draft was presented to the Firefighters and Council. Commentary was subsequently incorporated to create the approved version of the report.

4.0 Relevant Statutory, Regulatory and Policy Requirements

Fire Departments in Ontario operate within a statutory and regulatory environment. A key purpose of the Strategic Master Fire Plan is to ensure continued compliance with legal requirements. Further, there are a number of important government policy statements which, although not legally mandated, are important to acknowledge and implement as part of risk management due diligence and continued early adoption of ‘best practice’.

4.1 *Fire Protection and Prevention Act, 1997*

The relevant legislation for the operation of a Fire Department in Ontario is contained within the Fire Protection and Prevention Act, 1997 (FPPA).

The FPPA recognizes the importance of implementing the *three lines of defence* to achieve an acceptable level of fire safety within communities.

The three lines of defence are:

- I. *Public Education and Prevention:*** *Educating residents of the community on means for them to fulfill their responsibilities for their own fire safety is a proven method of reducing the incidence of fire. Only by educating residents can fires be prevented and can those affected by fires respond properly to save lives, reduce injury and reduce the impact of fires;*
- II. *Fire Safety Standards and Enforcement:*** *Ensuring that buildings have the required fire protection systems, safety features, including fire safety plans, and that these systems are maintained, so that the severity of fires may be minimized;*
- III. *Emergency Response:*** *Providing well trained and equipped firefighters directed by capable officers to stop the spread of fires once they occur and to assist in protecting the lives and safety of residents. This is the failsafe for those times when fires occur despite prevention efforts.*

The FPPA provides the following requirement for each Municipality in Ontario to establish fire prevention and protection services as follows:

2.(1) Every municipality shall (a) establish a program in the municipality which must include public education with respect to fire safety and certain components of fire prevention, and (b) provide such other fire protection services as it determines may be necessary in accordance with its needs and circumstances.

Further, Section 8 (1) of the FPPA provides that *“There shall be a Fire Marshal who shall be appointed by the Lieutenant Governor in Council”*. FPPA specifies the duties of the Fire Marshal which include responsibilities to assist in the interpretation of the Act, to develop training and evaluation systems and enforcement of the Act and its regulations.

4.2 Public Fire Safety Guidelines

The OFMEM has developed Public Fire Safety Guidelines (PFSG) to assist municipalities in making informed decisions with regard to determining local *“needs and circumstances”* and achieving compliance with the FPPA.

The guidelines are intended to be used as part of an overall municipal fire risk management program – therefore all OFMEM guidelines are intended to be utilized as applicable.

Section 9(1)(b) of the *Fire Protection and Prevention Act, 1997* (FPPA) states:

The Fire Marshal has the power to issue directives to assistants to the Fire Marshal respecting matters relating to this Act and the regulations.

And further:

Section 11 (1) states:

The following persons are assistants to the Fire Marshal and shall follow the Fire Marshal’s directives in carrying out this Act,

- (a) the fire chief of every fire department;*
- (b) the clerk of every municipality that does not have a fire department;*
- (c) any member of a fire prevention bureau established by a municipality; and*
- (d) every person designated by the Fire Marshal as an assistant to the Fire Marshal*

Relevant PFSG’s to the Strategic Master Fire Plan include:

PFSG 00-00-01 “Framework for Setting Guidelines within a Provincial-Municipal Relationship”

PFSG 00-00-01 provides interpretation and advice regarding the delegation of responsibilities and relationship between the Province and municipalities regarding fire protection, suppression and public safety. The PFSG notes:

“Municipalities are compelled to establish a program in the municipality which must include public education with respect to fire safety and certain components of fire prevention. The act also states that municipalities are responsible for arranging such other fire protection services as they determine may be necessary according to their own needs and circumstances. The relationship between the province and municipalities is based on the principle that municipalities are responsible for arranging fire protection services according to their own needs and circumstances”.

The PFSG has the following Objectives:

- *Clarifying municipal responsibility for local fire protection, while protecting the provincial interest in public safety.*
- *Removing remaining legislative barriers which forestall the restructuring and reorganization of municipal fire services.*
- *Facilitating a shift in focus which places priority on fire prevention and public education as opposed to fire suppression.*
- *Providing municipalities with decision-making tools to help them provide services according to their own needs and circumstances.*
- *Facilitating more active involvement of the private sector and other community groups in fire prevention and public education through the Fire Marshals Public Fire Safety Council.*

PFSG 04-40-03 “Selection of Appropriate Fire Prevention Programs”

PFSG 04-40-03 and 04-40-12 identify the four minimum requirements to comply with FPPA Section 2. (1) (a) *“establish a program in the municipality which must include public education with respect to fire safety and certain components of fire prevention”.*

The requirements include: 1) Simplified risk assessment, 2) A smoke alarm program, 3) Fire safety education material distributed to residents/occupants; and 4) Inspections upon complaint or when requested to assist with code compliance.

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

PFSG 04-08-10 provides interpretation as to the requirements under the FPPA Section 2. (1) (b) *“provide such other fire protection services as it determines may be necessary in accordance with its needs and circumstances”.*

The key concept in this PFSG is that *“Fire suppression is one aspect of the three lines of defence; the other two lines are Public Education and Prevention and Fire Safety Standards and Enforcement. A municipality needs to evaluate its existing fire suppression capabilities to ensure that it is managing all fire risk levels within the community, responding to and addressing fires that occur, and meeting public and council expectations”.*

PFSG 01-02-01 “Comprehensive Fire Safety Effectiveness Model”

PFSG 01-02-01 was developed to assist municipalities in evaluating their level of fire safety. It identifies eight key components, all of which impact on the fire safety of the community. The components include:

- 1. Assessing Risk** - identify potential fire risk scenarios such as older buildings, high rise, commercial and industrial occupancies, vulnerable occupancies, water supply, exposure risks, and the risk which the combination of these factors pose to the occupants.
- 2. Fire Prevention Program Effectiveness** - Enforcement of regulations (codes) and standards.
- 3. Public Attitude** - Improve public attitudes toward the prevention of fire.
- 4. Detection Capabilities** - Notify occupants to escape.
- 5. Built-in Suppression Capabilities** - Automatic sprinkler protection.
- 6. Intervention Time** - Fire Department intervention time is crucial in determining the consequences of a fire.
- 7. Fire Ground Effectiveness** - affects the degree of damage to the environment, property loss, personal injury and death from fire.
- 8. Impact of Fire** - Properties whose loss would result in a significant financial burden to the community, significant impact of local employment, significant environment risk, impact of a major fire?

The components are seen as interdependent. Deficiencies in one of the components can be offset by enhancements in another component or components. For example, by developing programs and providing resources to effectively implement the first line of defence, a proactive public education and prevention program, the need for the other lines of defence can be reduced.

The Model acknowledges that Municipalities must manage increasing public expectations as well as budget pressures. It suggests Fire services within Ontario must critically assess their fire protection needs and identify new, innovative ways to provide the most cost effective service. There is more to providing fire protection services than fighting fires.

The Model suggests that every municipality should be guided by a master or strategic plan covering a planning horizon of five to ten years. It promotes shifting from the traditional focus of fire suppression to a more comprehensive risk assessment and use of fire prevention and control systems.

PFSG 01-01-01 “Fire Protection Review Process”

Analysing local circumstances is a core component of the fire master planning process. PFSG 01-01-01 identifies the three main issues that define local circumstances including the guidelines to be utilized including:

- *PFSG 02-03-01 “Economic Circumstances,*
- *PFSG 02-02-03 “Comprehensive Community Fire Risk Assessment”* and

- *PFSG 02-04-01 “Capabilities of Existing Fire Protection Services.*

Detailed analysis of these issues is included within this report to provide the background and rationale to support the recommendations of this Strategic Fire Master Plan.

PFSG 04-40D-03 Inspections Upon Request or Complaint

This PFSG is designed to assist fire departments in the development and implementation of a process to ensure fire safety inspections are conducted upon complaint, request and as necessary to meet the mandatory requirements of the *Fire Protection and Prevention Act, 1997* (FPPA) and associated regulations. The premise is that buildings maintained in accordance with the provisions of the Fire Code are more fire safe for the occupants and the responding Firefighters.

While building owners are responsible for carrying out the provisions of the Fire Code, Fire Services have a public safety interest in ensuring that buildings are maintained in accordance with the provisions of the Fire Code.

Inspections of properties must be conducted, or arranged for, by the municipality when:

- A complaint is received regarding the fire safety of a property;
- A request is made by a property owner or occupant for assistance to comply with the Fire Code where the involvement of the Chief Fire Official is required; and
- The fire department becomes aware of Fire Code violations and/or other fire hazards at a particular property.

The PFSG provides interpretation regarding the following key Regulations that must be enforced by Fire Services in Ontario

Ontario Regulation 365/13 – Mandatory Assessment of Complaints and Requests for Approval – requires that fire safety assessments and inspections, if necessary, be undertaken as directed by the Fire Marshal for:

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

Ontario Regulation 364/13 – Mandatory Inspection – Fire Drill in Vulnerable Occupancy - that fire safety inspections be undertaken, as directed by the Fire Marshal, for every care occupancy, care and treatment occupancy and retirement home for which an annual fire drill is required by Sentence 2.8.3.2.(2.1) of Division B of the Fire Code.

Further, the following directives have been created as part of this Guideline to assist Municipalities in understanding and complying with their responsibilities regarding:

- Fire Marshal Directive 2014-001, Registry of Vulnerable Occupancies

- Fire Marshal Directive 2014-002, Vulnerable Occupancies – Fire Drill Scenarios, Fire Drill Observations, Fire Safety Inspections
- Fire Marshal Directive 2014-003, Inspections of All Buildings

The guideline states that the fire department's fire prevention policy and operational guidelines should contain criteria to determine how quickly and in what manner a complaint/request is addressed as well as appropriate follow-up with enforcement, as necessary, to ensure corrective action has been taken to ensure Fire Code compliance. Appropriate follow-up with enforcement, as necessary, must be conducted to ensure corrective action has been taken to eliminate any identified violations and/or hazards.

The following factors should be considered when developing Fire Department Operational Guidelines and Policies:

- The type of inspections to be conducted and the buildings to be inspected.
- The methods of inspection appropriate for the circumstance. This will have implications for the amount of time required to inspect, as more comprehensive inspections require more time.
- The classification of buildings being inspected and the skills and knowledge required to inspect them. The more complicated the building, the more skill and knowledge required.
- Technical assistance required to assist with conducting the inspection, e.g. Electrical Safety Authority, Professional Engineer.
- The seriousness of the complaint received.
- Records management policies (Inspection history of the building including non-compliance or Inspection Orders issued).

Fire departments are expected to respond to requests to assist owners to comply with fire safety legislation in accordance with Directive 2014-003.

Conducting complaint inspections will assist communities and their fire departments to mitigate liability concerns. A complaint may be received from a number of sources including: the public, fire suppression crews, outside agencies or government ministries. Complaints are often initiated as a result of a dispute. Therefore it is important that the inspector must demonstrate impartiality and remain focused on the fire safety concern that has been raised. Any fire code violations or other fire and/or life safety hazards identified during the inspection must be reported to the property owner or other person having responsibility for the property.

When a fire department becomes aware of a Fire Code violation or other fire and/or life safety hazard at a property, it is necessary to conduct an inspection to confirm the violation or hazard, and steps are taken to ensure the owner corrects the violation or eliminates the hazard.

When an owner is unwilling to comply with the Fire Code or correct a fire and/or life safety hazard voluntarily, the fire official should exercise their enforcement authority provided by the FPPA. *“Failure to do so could expose the municipality to potential liability for failing to exercise due diligence”*

The Master Fire Plan Risk Assessment may identify a number of high risk properties in a community. The PFSG “strongly encourage” Code enforcement inspections of high risk properties. High risk properties identified include:

- Properties where a fire would have a significant impact on the community, (employment, social, environmental impact);
- Assembly occupancies;
- Multi-unit residential occupancies;
- Industrial occupancies;
- Older buildings in downtown core;
- Care and treatment occupancies;
- Care occupancies; and
- Retirement homes.

Once a community’s fire risks have been identified, inspection programs, which are most likely to address these risks, should be implemented. Inspection priority should be based on the degree of risk. The frequency of the inspections will depend on the resources provided by the municipality or as regulated.

The following are other relevant PFSG’s. All are available at the [Ministry of Community Safety and Correctional Services OFMEM home page](http://www.mcscs.jus.gov.on.ca/) <http://www.mcscs.jus.gov.on.ca/>.

- 04-38-15** Role of Assistant to the Fire Marshal
- 04-39-12** Fire Prevention Effectiveness Model
- 04-40-12 & 03** Selection of Appropriate Fire Prevention Programs
- 04-40A-12 & 03** Simplified Risk Assessment
- 04-40B-12 & 03** Smoke Alarm Program
- 04-40C-12 & 03** Distribution of Public Fire Safety Education Materials
- 04-40D-12 & 03** Inspections upon Request of Complaint (Fire Code)
- 04-41A-13** Community Fire Safety Program
- 04-45-12 & 03** Fire Prevention Policy
- 04-47-12** Development of Fire Prevention By-laws
- 04-48-12** Liaison with Building Department
- 04-49-12** Liaison with Other Government Agencies and Individuals
- 04-50-12** Fire Safety Inspection Practices
- 04-52-12 & 03** Fire Investigation Practices
- 04-60-12** Records Management
- 04-80-01 & 23** Fees for Services
- TG-01-2012 - Fire Safety Inspections and Enforcement**

5.0 Community Profile, Hazard Identification and Risk Assessment

5.1 Community Profile

Leeds and the Thousand Islands was created through amalgamation in 2001 joining the townships of Front of Leeds and Lansdowne, Rear of Leeds and Lansdowne and Front of Escott. The Township has an area of 612.5 km² and a permanent population of 9,277 (2011 census). As a major tourist and recreation destination the seasonal population can swell in excess of 14,000.

The Township straddles the Frontenac Axis, a geological formation linking the Canadian Shield to New York's Adirondack Mountains. The geography is rugged with numerous lakes and rivers. Agriculture, tourism and seasonal residents are major economic drivers.



The 401 highway, main trans-Canada rail line and trans-Canada pipeline pass through the Township.



The Thousand Islands International Bridge is within the township and links to New York State. Much of the township is within the famous 1000 Islands region and it has approximately 950 islands

5.2 Demographic Profile

Table 1 and 2 presents a demographic summary of the Township. In 2011, the population was 9,280. Growth has been

modest over the past decade and is expected to remain modest with an increase of about 500 persons by 2021.

What is highly significant and not reflected in the census data is the major seasonal population increase which is estimated in the summer to double the population to 20,000.

The proportion of elderly is 18.7% significantly higher than the Provincial average of 14.6%.

Approximately 17% of the labour force lives and works in the Township.

Table 1 Leeds & Thousand Islands Demographic Profile

	2001	2006	2011	2021*
Population	9,070	9,440	9,280	9,770
Resident Employed Labour Force		4,900	4,820	
% live & work within LTI		17%		

*Forecast

Source: Leeds & Grenville Official Plan Growth & Settlement Analysis 2014

Table 2 Leeds & Thousand Islands Age Profile

Age	Number	% of Total Population
0 – 14	1360	14.60%
15 – 64	6190	66.70%
65 and over	1735	18.70%
Total	9285	100%

Source: Leeds & Grenville Official Plan Growth & Settlement Analysis 2014

5.3 Occupancy Profile

Table 3 presents the occupancies identified by the Ontario Municipal Property Assessment Corporation (MPAC). The occupancies reflect the predominantly rural nature of the Township with relatively few Assembly, Institutional or Industrial occupancies. There are no high rise buildings in the Township.

Table 3: MPAC Identified Properties Grouped by Ontario Building Code Classification*

Occupancy	Classification	#
Group A	Assembly	51
Group B	Institutional	2
Group C	Single Family	3192
	Seasonal	1714
	Multi-unit	108
	Hotel/Motel	22
	Mobile Home	73
	Other	198
Group D & E	Commercial	56
Group F	Industrial	32
Other (not classified i.e. Farm Buildings)		398
Total		5846

Source: MPAC Property Code Report August 26, 2015

- Note : Total Does not include vacant properties

Within the generic classifications there are a number of occupancies worthy of note from a hazard analysis perspective.

- International Bridge (1)
- Recreational Airport (1)
- Provincial Parks (2)
- Islands (130)
- Schools (4)
- Churches (14)
- Lumber Yard (1)
- Marinas (22, 17 on-water)
- Old Age/Retirement Homes (2)
- Casino (1)
- Gravel Pits (23)

5.4 Major Hazard Identification and Analysis

In compliance with the *Emergency Management Act*, the Township has completed an identification of hazards and assessed their associated risks to determine which hazards are most likely to result in an emergency. This has resulted in creation of Hazard Identification and Risk Assessment Sheets (HIRA) which identify the type of hazard, probability of occurrence and relative consequence.

Table 4 presents a summary of the HIRA results applicable to Fire Services

Table 4: Summary of Township HIRA applicable to Fire Services

Hazard	Probability	Consequence	Probability / Consequence Rating
Main CN/VIA Rail Line	4	4	High
Highways - 401, 15 - Dangerous Goods	4	3	High
Weather – Ice Storm	3	4	High
Loss of Electric Power, Lines down	3	3	Medium
Petroleum and Natural Gas Pipeline	2	4	Medium
St Lawrence Seaway – Dangerous Goods,	1	4	Medium
Snow Storm	2	3	Medium
Lightning Storm, Microburst	3	2	Medium
Flooding	2	3	Medium
Wildland Fires (Forest/Urban interface)	3	2	Medium
Marine – Small Vessel Incidents, Tour boats	3	2	Medium
Air (plane crash)	3	2	Medium
Highways - 401, 15 - Passenger	4	1	Medium
Terrorism - CBRN	1	3	Low
Pandemic	1	3	Low
Earthquake			Low

5.6 Historical Call Analysis

Analysis of emergency response calls over time provides a useful perspective on the type and frequency of hazards. Based on a 5 year average of calls between 2010 and 2014 LTI Fire Services responds annually to:

- 281 calls per year
- 22 (8%) structure fires
- 25 (9%) open air burns
- 38 medical calls (14%)
- 35 motor vehicle accidents (13%)
- 9 hydro lines down
- 2 gas leak/spill (0.6%)
- 45 Cancelled on route (16%)
- 56 Other (mutual aid, public assist) (20%)

As shown in Figure 1, annual Fire Calls have been decreasing, however, there can be significant variation depending on weather (grass fires, M.C.'s).

Figure 1: Annual LTI Fire Calls by Year

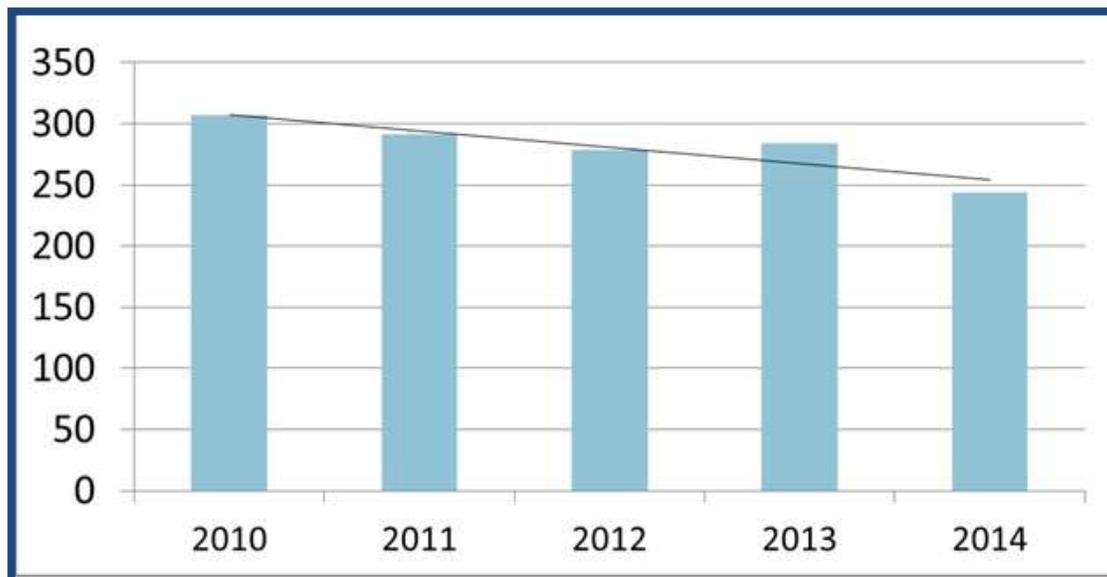


Figure 2 presents the historical call volume by type. Figure 3 illustrates the annual number of structure fires.

Figure 2: Leeds & Thousand Islands Historical Call Volume by Type

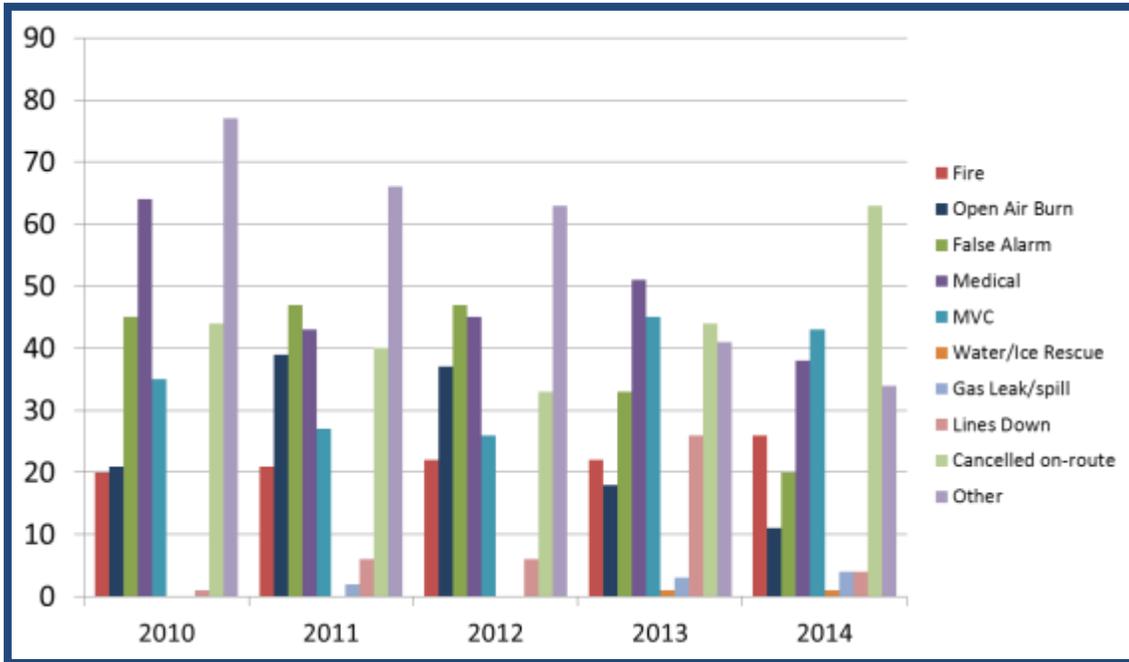


Figure 3: Leeds & Thousand Islands Annual Number of Structure Fires.

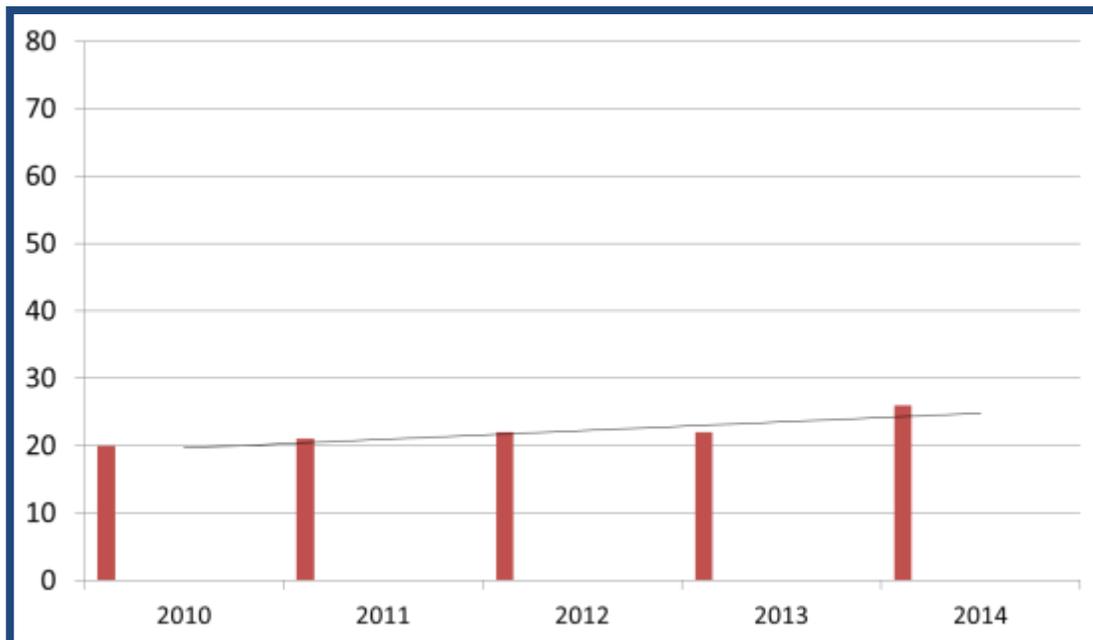


Figure 4: Annual Number of Calls for Open Air Burn.

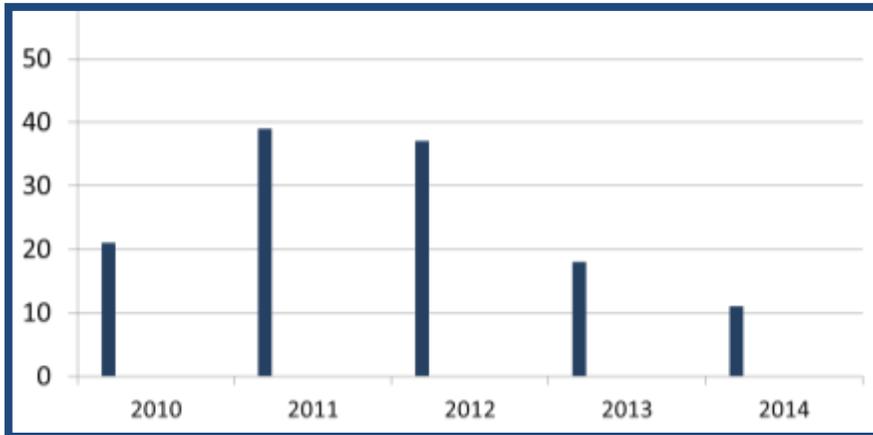


Figure 5: Annual Number of Medical Calls

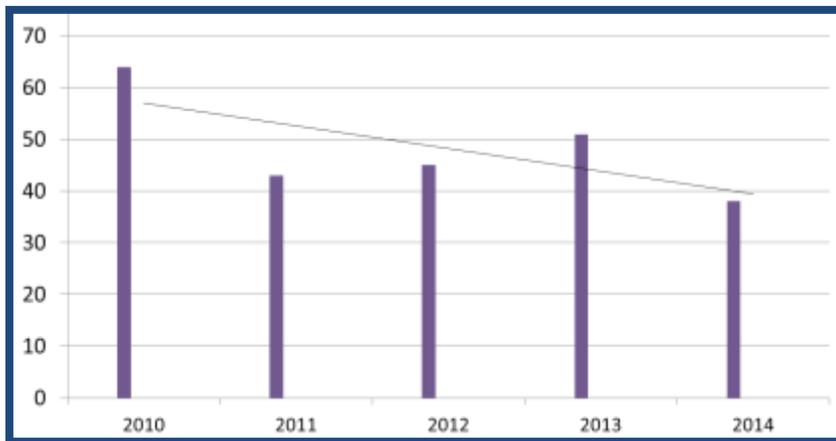
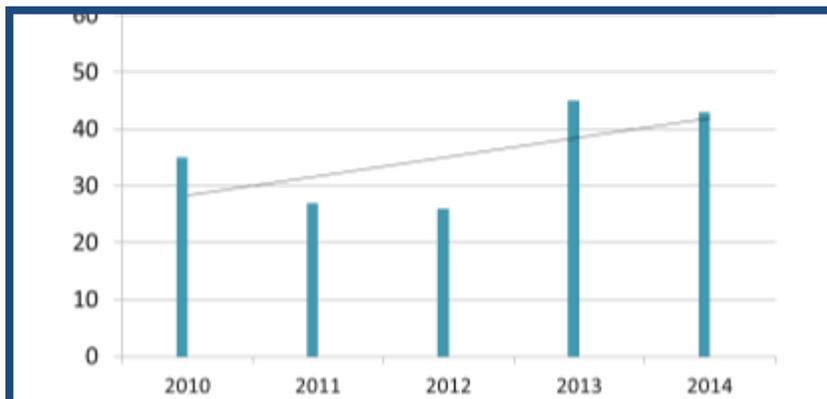


Figure 6: Annual Number of Motor Vehicle Collisions



5.7 Hazard Analysis and Risk Assessment

The emergency response profile illustrated in Figures 2 through 6 is typical of a rural Fire Department with the exception of motor vehicle accidents are significantly higher due to the presence of the 401 highway. The close relationship with the Town of Gananoque accounts for a significant number of mutual aid responses. Grass/wildland fires as well as 'lines down' vary significantly by year depending on weather.

Although infrequent, technical rescue services have been required over the past five years including trench, high angle (silo) water and ice rescue.

Based on historic experience where the probability of an incident is in the range of once a year, the current array of services provided by LTI Fire including marine, ice and water rescue appear to be appropriate. Where the probability of an incident requiring technical rescue is in the range of once every 5 years or less such as haz mat, trench, high angle, and mutual aid arrangements with another Department which offers such services should be pursued.

The presence of the St. Lawrence Seaway, Highway 401, major rail lines with high volume passenger and freight, as well as weather related events create the potential for multi-casualty events as well as major environmental issues. Planning and training for multi-casualty and major environmental events should be incorporated in the annual training curriculum.

The documentation of Building Occupancies identified a number of high-risk concerns including schools, the airport, marinas, older buildings in the villages and vulnerable person occupancies. Pre-plans as well as specific inspection and other fire-prevention strategies should be developed for these occupancies.

5.8 All Hazards Approach

Section 4.5 clearly illustrates that Fire Services has a much broader mandate than fighting fires. With better public awareness, fire prevention strategies, improved construction and implementation of technology such as smoke detectors, Fire Departments have evolved from primarily fighting fires to becoming increasingly competent in managing a wide range of responses including emergency medical services and incidents requiring highly skilled technical rescue.

At the same time, except in the large, urban areas, Fire Departments cannot be all things to all people. The rigour and associated training as well as equipment requirements to assure scene safety, avoid potential civil and/ or statutory liability and financial limitations have caused Fire Departments to critically examine the breadth and depth of services they provide.

The challenge that presents as a result is the paradox of, on one hand, restricting capability to those services that can be afforded and delivered safely yet, on the other hand, still providing the services that the public requires.

The strategy that has emerged to meet this challenge is an integrated emergency management system known as “All-Hazards”.

In Canada, the federal, provincial and territorial governments have jointly published “*An Emergency Management Framework for Canada*”² which establishes a common approach for collaborative emergency management.

As a core principle, the Framework supports a comprehensive approach to emergency management which is proactive, integrates risk-based measures and is all-hazards. The Framework defines the all-hazards approach as the method by which vulnerabilities exposed by both natural and human-induced hazards and disasters are addressed.

The *Emergency Framework for Canada* articulates the expectation that all emergency management partners in Canada will work in collaboration to keep Canadians safe. The Framework acknowledges that in an emergency, the first response is almost always by the local authorities as that is where incidents occur. When required resources exceed the capacity of local responders at the municipal level to cope in an emergency or disaster, nearby municipalities should be prepared to assist. If further assistance is required, the Province will respond. The federal government is prepared to respond to requests for assistance by a provincial or territorial government. For major disasters, the international community will also respond.

The key steps to implementing an “All Hazards Approach” are:

- 1) understand the potential emergencies that could arise in the community that would require a response that exceeds local capability,
- 2) develop competencies to manage the initial response,
- 3) identify the resources that may be required for a major event, and,
- 4) develop the protocols and agreements to access services that may be required for a major event.

² (<http://www.publicsafety.gc.ca/cnt/rsrscs/pblctns/mrgnc-mngmnt-frmwrk/index-eng.aspx#a02>)

6.0 Mission, Vision and Values

A compelling theme in the academic analysis of great organizations is that there is a shared common understanding regarding the organization's purpose, where it wants to be and values that drive service excellence. This common understanding is fundamental to a positive, constructive organizational culture where performance thrives. Clear articulation of a compelling, inspirational Mission, Vision and Values that genuinely reflects the aspirations and beliefs of the organization is fundamental to this goal.

MISSION (*What we do*)

We are committed to keeping our community safe and healthy by providing superior fire prevention, public education, and 'All Hazards' emergency services to reduce loss of life and property.

VISION (*What we aspire to do.*)

We are a highly motivated and innovative organization that is striving to improve each day and are committed to provide the services that meet the needs of the community.

VALUES

Service Excellence: Committed to service, continual learning, teaching, and always looking for a better way.

Safety: Committed to ensuring the safety of the public and ourselves at all times.

Team Leadership: Committed to a common purpose, to working well together, to utilizing collective knowledge, supporting fellow team members, and to developing tomorrow's leaders

Respect: Committed to valuing each other, being open and supporting diversity.

Integrity: Committed to being professional, ethical and passionate in what we do, being accountable, doing the right thing ... always.

7.0 Strategic Directions:

7.1 Strategic Direction #1

Safe Community – Commitment to deliver effective Public Education, Fire Prevention, Fire Suppression and Rescue Services

Section 2 of the Ontario Fire Prevention and Protection Act provides that:

Every municipality shall, (a) establish a program in the municipality which must include public education with respect to fire safety and certain components of fire prevention; and (b) provide such other fire protection services as it determines may be necessary in accordance with its needs and circumstances.

This section of the Act refers to what is known as the three lines of defence required to keep communities safe:

I. Public Education and Prevention:

Educating residents of the community on means for them to fulfill their responsibilities for their own fire safety is a proven method of reducing the incidence of fire. Only by educating residents can fires be prevented and can those affected by fires respond properly to save lives, reduce injury and reduce the impact of fires;

II. Fire Safety Standards and Enforcement:

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

III. Emergency Response:

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

This strategic Direction “Safe Communities” recognizes the primary imperative of achieving optimal implementation of the three lines of defense. In the following section, current status of the program elements will be discussed and opportunities for further development will be noted.

7.1.1 Fire Prevention and Public Education

Fire Prevention, Inspection and Public Education are led by a full-time Chief Fire Prevention Officer. Table 5 presents a summary of annual activities.

Table 5: Summary of Fire Prevention, Inspection and Public Education Activities

	2010	2011	2012	2013
Open Burning Permits Follow up	29	18	24	22
Incident Follow up	9	29	17	5
Inspections	33	25	19	28
Fire Prevention/Public Ed	37	58	44	21

Appendix “A” of the Leeds and Thousand Islands Township *Establishing and Regulating By-Law* establishes objectives for the Department which include:

- Provide an effective fire prevention program to:
 - a. Ensure, through plan examination and inspection, that required fire protective equipment is installed and maintained within buildings,
 - b. Reduce or eliminate fire hazards, and
 - c. Ensure compliance with applicable Municipal, Provincial and Federal Fire Prevention Legislation, Statutes, Codes in respect to fire safety.
- Develop and maintain an effective public information system and educational program, with particular emphasis on school fire safety programs, and commercial, industrial and institutional staff training.

The Department has a Fire Prevention and Inspection Policy which requires that:

- The Chief Fire Official and/or Fire Prevention Personnel will conduct inspections of the properties specified in Appendix (A) at the frequencies indicated and;
- Fire Services Personnel will conduct a home inspection program for residential dwelling units on a request basis and;
- Fire Prevention Personnel examine plans and specifications of new buildings for compliance with applicable fire regulations and;
- Fire Services Personnel and/or other volunteers in the community will provide fire safety lectures and/or demonstrations for various public sectors such as industries, community groups, service clubs, business groups, day care facilities and schools, upon request where resources are available and;

- The installation and maintenance of smoke alarms and carbon monoxide detectors, in all dwelling units and sleeping units not within a dwelling unit is encouraged.

Public fire safety messages and awareness campaigns through media are provided at recurring intervals including at least, Christmas Season, Spring Clean-up and Fire Prevention Week and; Fire prevention information, pamphlets and fire safety literature available to the public through the fire stations, the Township Office, other locations in the community, the media and/or circulation during approved Fire Services activities.

Specific Public Fire Education and Safety Programs include:

- **Smoke Alarm Program:** LTI Fire Services provides a Smoke Alarm Program that promotes the installation and maintenance of working smoke alarms in all dwelling units. The smoke alarm program includes home escape planning. Firefighters will test smoke alarms when they respond to dwelling units and will ensure that the dwelling unit is provided with a working smoke alarm prior to their departure. Further, information regarding the installation and maintenance of smoke alarms and the preparation and practicing of a home escape plan will be distributed to the public. Smoke alarms and replacement batteries will be available from the fire department as part of the Program.
- **Carbon Monoxide Detectors:** Regulation 194/15 to amend the Fire Code came into effect October 15, 2014 to require carbon monoxide alarms near all sleeping areas in residential homes and in the service rooms, and adjacent sleeping areas in multi-residential units.

Fire departments are required to enforce the new regulation during home inspections for smoke detectors. Penalties for non-compliance are the same as those for failing to have a smoke detector. Inspectors can issue \$235 tickets or lay charges that could result in fines of up to \$50,000 for individuals and \$100,000 for companies. Although it is possible to issue fines, the emphasis is on public awareness and education.

Various methods are being introduced by Fire Departments across the Province to implement home inspections. For example, The City of Ottawa has a “Wake Up” program which was implemented for smoke detectors. During weeklong blitzes in the spring and fall, fire inspectors visit homes and ask occupants to voluntarily admit them to see if they have smoke and carbon monoxide detectors as required by law. About 15,000 homes per year are inspected.

Distribution of Fire Safety Information: Includes distribution of fire safety educational material to the public at community events and other opportunities. Fire Safety pamphlets and/or other education materials, public service announcements utilizing the available media and through instructions to the public on fire safety matters at various group functions and public events are examples of public education and awareness activities undertaken.

Fire Safety Education for Children: This is a specific program to provide and/or support a variety of fire safety education programs for children in the community. It includes the *Learn Not to Burn Program*.

The *Learn Not to Burn* initiative is based on the Canadian edition of the National Fire Protection Association's popular children's educational series. The program has been released by the Canadian Council of Fire Marshals and Fire Commissioners and is in use in many Canadian Fire Departments. The program encourages teachers, preschool educators and parents from Ontario to use the free access to the made-for-Canada edition of the *Learn Not to Burn* curriculum. Teachers can download free *Learn Not to Burn* lessons at www.safeathome.ca/lntb, and parents can support the effort at home by using the online family fire safety activities.

A current initiative that should be adopted by the Department is the "*Hear the Beep Where You Sleep: Every Bedroom Needs a Working Smoke Alarm*" program which reinforces the importance of being able to hear smoke alarms at night when families are sleeping.

The website and classroom lessons target children aged three to eight to learn how to recognize the smoke alarm beep, what to do when it sounds, the fundamentals of a home fire escape plan, and how to tell between things that are hot and cold.



Fire Safety Education for Seniors: This initiative provides public fire safety education programs such as the Older & Wiser Program in the community to address the fire safety concerns facing seniors. Continuing to focus on this age group and implementing the fire and falls prevention program such as “*Remembering When*” will be an important priority for future development. This can be done in partnership with community agencies that provide support services to seniors. The focus of the program is on group presentations and home visits including fire and falls safety presentations and assisting with home visit inspections and smoke and carbon monoxide alarm installations.

Fire Station Tours: Providing the opportunity for tours of the fire station is an excellent opportunity to promote fire safety education.

Future Direction: Risk-Based Awareness Program, Pre-Planning and Familiarization, and Vulnerable Occupancy Inspection

Vulnerable Occupancies: As of January 1, 2014, Ontario Regulation 150/13 amended the Ontario Fire Code to enhance the fire safety of occupants in care occupancies, hospital/care and treatment occupancies, and retirement homes. The new requirements include an annual mandatory fire drill

to ensure all duties under the approved safety plan are carried out and a mandatory Inspection Checklist to ensure fire protection systems are up to date.

There are two Group ‘B’ occupancies in the Township which require the annual inspection noted above. Although not required by law, expansion of the annual inspection program to Rooming Houses and Group Homes which may be housing vulnerable individuals would be prudent.

Fire Inspection: Currently, fire inspections are done on a request basis. Staff will also follow-up on fire hazards that are reported by the public and other officials. This practice should continue.

This request/complaint based approach, however, should be augmented with risk based, proactive inspections to reduce the risk of potential hazardous conditions. Proactive fire inspection can significantly reduce property and harm due to fire.

Due to the number of buildings and structures in the Township and limited resources, it is not possible to conduct proactive inspections of all buildings. Thus, inspections need to be priority ranked based on risk. Table 6 illustrates the occupancies that could be prioritized to support this risk-based approach. The suggested frequency of inspections is noted for each occupancy type.

Table 6: Annual Target Objective for Proactive Inspection

Occupancy	Total Number of Occupancies	Hours for Inspection (including travel time)	Total Hours (Annualized)	Re-Inspection
Assembly Occupancies	51	4	204	Annual
Rooming Houses / Group Homes (incl. fire drill)	2	10	20	Annual
Motels	22	4	88	Annual
Industrial Occupancies	32	4	64	Every 2 years
High Risk Residential & Farm Occupancies	120	4	160	Every 3 years

In addition to the inspections noted in Table 6, opportunities to do joint inspections such as Hydro sub-stations, solar farms and pipelines should be actively pursued.

Note: OFM-TG-01-2012 “Fire Safety Inspections and Enforcement” provides an overview of Inspection and Enforcement authority under the Fire Protection and Prevention Act (FPPA) and the Provincial Offences Act (POA). Although there may be authority under law to undertake inspections and enforcement, compliance and good will is greatly facilitated with an approach which is based on education and “I’m here to help”. There can be great resistance to

cooperation on the part of property owners if there is a threat of fines or other punitive measures.

Recommendation #1: *That annual inspections be undertaken as required by Ont. Reg 150/13 and a summary report be provided to Council quarterly.*

Recommendation #2: *The request/complaint based Inspection Process be augmented with proactive, risk-based 'education' visits with annual targets established and quarterly reports provided to Council.*

Risk-Based Awareness Program (Pre-Planning): As part of a pro-active inspection initiative, a Risk-Based Awareness Program will enhance knowledge of high-risk residential, industrial, institutional and commercial buildings and ensure there are no obstacles preventing a timely and effective fire response. Information regarding access, nature of the occupancy, potential hazards, entrances and exits as well as potential water supply can be difficult to obtain during an emergency incident.

Pre-planning provides an opportunity for Department personnel (including Firefighters) to work with building owners and/or management to gather information prior to an emergency. It provides an opportunity to get familiar with the layout of buildings and property, including the type of life safety systems, location of shutoffs, controls, response points, and any hazardous materials.

Recommendation #3: *The Inspection/Education Process be integrated with Pre-Plan development to facilitate emergency response.*

Coordination and Collaboration with the Building Department: A close, collaborative working relationship with the Building Department can significantly improve the effectiveness of fire prevention and education. Written policy and procedures can help define the respective roles of building and fire officials and provide a protocol regarding the review and approval of building permits, plans and proposed developments. Kingston Fire has an excellent policy document in this regard that has been shared. This document can serve as a reference document to begin the conversation regarding a policy and procedure appropriate for Leeds & Thousand Islands Fire.

Recommendation #4: *That a Policy and Procedure be developed regarding the respective roles of the Fire and Buildings Department with respect to Building Permit and Planning Application Approvals as well as Building Inspections.*

General Public Education Initiatives: Prevention and education programs will continue to be targeted to areas of greatest risk identified through enhanced inspection and ongoing review of call volumes. The current Fire Safety Trailer that is shared with the Town of Gananoque needs to be reviewed and a decision made regarding improvements, replacement and/or disposal.

Recommendation #5: *Specific Plans for Public Education and Awareness including Smoke and CO Alarms, in-school programs and seniors programs be developed annually and activity reports be provided quarterly to Council.*

7.1.2 Current and Future Station Location

The Department has four stations:

Station 1 - Lansdowne

- Built in 2009
- Co-located with Public Works & Township Offices
- 40 Firefighters & Officers
- 3 double length bays
- 98 calls in 2014



Station 2 - Seeley's Bay

- Built in 1951
- Community Hall in upper level
- 17 Firefighters & Officers
- 3 1 ½ length bays
- 29 calls in 2014



Station 3 - County Rd. 32 near Gananoque

- Built in 1993
- 21 Firefighters & Officers
- 83 calls in 2014
- 4 1 ½ length bays
- Shared with Leeds & Grenville EMS



Station 4 – Lyndhurst

- Built 1992, former Township Offices & Public Works
- 16 Firefighters & Officers
- 34 calls in 2014
- Co-located with Training Centre



Figure 7 illustrates the location of the stations.

Figure 7: Location of Leeds & Thousand Islands Fire Stations

A core objective of the fire master plan is to address fire station location. Often fire stations arose in rural areas as a result of concerned citizens responding to a tragic fire loss in the community or as a result of proactive advocacy. The historic development may or may not make sense in terms of current response requirements or standards. This section will review current standards and comment on current location in the context of the standards, current hazards and response experience.

The two primary references for response time guidelines are the National Fire Protection Association (NFPA) 1710 and 1720 standards and the Ontario Fire Marshal (OFM) guidelines. These references are summarized as follows:

The OFM Fire Ground Staffing Guideline requires the arrival of 10 firefighting personnel (with appropriate apparatus) in 10 minutes total response time for 90 percent of incidents;

NFPA 1710 applies to full-time fire services and is not applicable in this circumstance. NFPA 1720 is applicable to volunteer firefighter departments. NFPA defines a Volunteer Fire Department as one having volunteer emergency service personnel comprising 85 percent or greater of its department membership. NFPA 1720 provides response times based on population density as follows:

- Urban Zones with greater than 1000 people/sq. mi. call for 15 staff with a response time of

- 9 minutes, 90 percent of the time;
- Suburban Zones with 500 to 1000 people/sq. mi. call for 10 staff with a response time of 10 minutes, 80 percent of the time;
 - Rural Zones with less than 500 people/sq. mi. call for 6 staff with a response time of 14 minutes, 80 percent of the time; and,
 - Remote Zones with a travel distance greater than or equal to 8 mi. call for 4 staff 90 percent of the time. Upon assembling the necessary resources at the emergency scene, the fire department should have the capability to safely commence an initial attack within 2 minutes 90 percent of the time.

While the NFPA standards generally ³ have no legal status in Canada, they are based on the collective experience of professional fire-fighters and technical research. These standards are considered to be the most comprehensive technically and are widely accepted in jurisdictions across the continent. Thus, NFPA guidelines have been relied upon as the *de facto* standard in Canada.

The implication is that if there is litigation, NFPA standards may be used to identify the baseline against which to measure. An expert witness testifying in a lawsuit against a volunteer department for negligence resulting in the loss of life or property may cite NFPA 1720 as the standard for organization and operations for a volunteer department. Although other experts can argue that they represent a standard not necessarily reflecting standard practices, it is more difficult to make that argument.

The NFPA Response standard that best fits the Leeds Thousand Islands Fire Department is the third noted above which calls for *6 staff with a response time of 14 minutes, 80 percent of the time.*

The other factor that should be considered in the location of stations is impact on home insurance. The cost of insurance may vary greatly from one property to the next, based on the community's fire insurance grade.

The system of determining fire insurance rates in personal lines insurance is the Dwelling Protection Grade (DPG) system. The system uses a scale of one to five, in which one represents the maximum possible credit for fire protection programs and five represents an unrecognized level of protection or no protection at all.

To be recognized for fire insurance grading purposes, the protected property must be located within:

- Personal Lines (DPG) - 8 km of a fire station *and* 5 km of an approved water supply point
- Commercial Lines (PFPC) - 5 km of a fire station *and* 2.5 km of an approved water supply point

³ There are some specific NFPA requirements specified by Statute.

To consider the theoretical distance stations need to be located within the township to achieve the applicable NFPA 1720 standard of 6 staff with a response time of 14 minutes, 80 percent of the time the following assumptions are used:

- As specified by NFPA 1720, response times are measured starting when the call is dispatched to when crews have established the resources for initial attack.
- 4 minutes to arrive at station and leave with a minimum crew of 4 in a pumper and two in a tanker.
- 8 minutes to travel to the scene at an average speed of 65 km per hour
- 2 minutes to set up initial attack.

Utilizing the above assumptions, coverage within the Township should be based on coverage to ensure populated areas are within 8 kms of a station.

Figure 8 illustrates the distances between stations at the 8 km distance. The location of nearby Fire Stations is also illustrated.

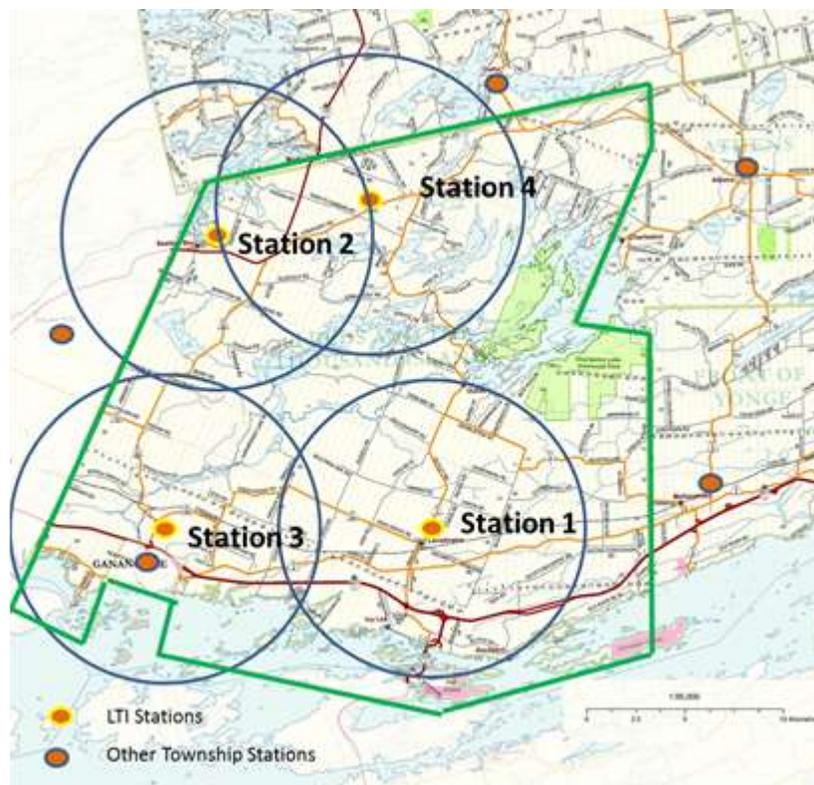


Figure 8: Distances between Stations - 8 km distance.

The use of 8 km ‘as the crow flies’ range is not a particularly sophisticated approach and does not reflect actual driving distance. It is, however, a reasonable approach in considering station

locations in a rural context. Optimal station location is often a compromise between a number of factors including:

- Location in populated areas to enable local firefighters to respond to the station promptly.
- Historic presence of a firehall.
- Location proximate to major hazards such as the 401 highway.

An important consideration in evaluating station response time is actual performance. Table 7 presents historical data regarding response time by station. It is important to note that this is an average of all calls including mutual aid and marine rescue/fires, not the best 80%. The data also does not indicate the number of responders on-scene.

Table 7: Historical Call Response Time from Page to Arrival On-Scene by Station

Response Time	2012	2013	2014
All Calls	13:50	12:01	14:17
Station #1	13:45	13:30	16:32
Station #2	11:10	11:10	11:05
Station #3	14:22	10:55	12:38
Station #4	14:46	10:06	13:48

Historically, response times appear to be largely within the benchmark of 14 minutes. This is remarkable as it includes 100% of calls. What is not known is the number of responders on-scene in this time. The anomaly with Station 1 in 2014 may be explained by a significant number of winter accidents on the 401 that year with road conditions creating longer response times.

It is important to note that coverage of the south-east portion of the Township is augmented through a purchase service automatic aid agreement with the Township of Front of Yonge. Coverage of the north-east quadrant of the Township is augmented by an automatic aid agreement with the Township of Rideau Lakes.

Recommendation #6: *That the current geographic station coverage be maintained to meet applicable NFPA response standards and Insurance grading criteria*

Recommendation #7: *That the Firehouse Program be utilized to generate quarterly reports on NFPA 1720 benchmark data including time from page to first responding apparatus leaving station, total time from page to arrival on scene with 6 or more firefighters.*

7.1.3 Station Building Assessment

Station 1 is located in the village of Lansdowne and provides coverage to the south eastern quadrant of the Township. Station 1 Firefighters are able to respond promptly to incidents on the 401, CN Rail, and St Lawrence River as well as surrounding hamlets.

Coverage for the south eastern portion of the Township outside of the 8 km response range of Station 1 is provided by a purchased service agreement with the Front of Yonge Fire Service Station located in Mallorytown.

Station 1 is located in a contemporary facility constructed in 2009. The hall is well equipped with showers, training areas, SCBA fill station and other amenities.

Station 2 is located in Seeley's Bay and provides coverage to the North West quadrant of the Township as well as provides automatic aid to the proximate south west quadrant of the Township of Rideau Lakes. The upper floor is used as a community centre.

This station was constructed in 1951 and, although there have been numerous improvements over the years, it is in need of replacement. The station is located on the main street of the hamlet of Seeley's Bay. The apron in front of the station is the sidewalk which means trucks must exit and enter the station directly on to the street. This access creates a potential hazard for pedestrians and traffic. Fire Stations typically have an apron of at least one truck length to allow vehicles to safely exit and enter.

Further, the clearance between the trucks and door columns is minimal requiring great care to exit and enter and creates a risk for vehicle and building damage. Training, shower, and storage facilities are inadequate. The parking lot is used by the public and if there is an event in the 2nd floor Community Centre, there may not be parking for firefighters. There are times when the truck bays are blocked by parked cars. The basement training room floods periodically with waste from the holding tank and there are moisture and mould issues due to poor ventilation, heating and drainage. The exterior brick façade is failing.

Recommendation #8: Due to safety hazards and age related building deficiencies, it is recommended that planning commence for the replacement of Station 2.

Station 3 is located on Hwy 32 immediately north of the Town of Gananoque. It provides coverage for the south west quadrant of the Township including west bound 401 to the Joyceville Rd. and east bound to the Lansdowne exit. It responds to the Town of Gananoque for structure fires and other major incidents through an automatic aid agreement.

Station 4 provides coverage to the North east quadrant of the Township. Station 4 was originally located in an undersized, aged fire station in Lyndhurst. As a result of amalgamation and consolidation of public works in a new facility in Lansdowne, Station 4 was relocated to the former municipal and public works facility on Highway 33. This provided the Fire Department with spacious accommodation for Fire Department apparatus as well as land and facilities for a training centre.

The question has been asked in the '5 question' interviews as to whether there is an opportunity to save money by closing a Station. The Stations are all located such that they provide effective emergency services to the four quadrants of the Township. Removing a station would adversely affect response times and is not recommended.

There is, however, a potential opportunity to create a combined station with the Town of Gananoque. The Town of Gananoque Fire Station is located approximately 2 km to the south of Station 3. Operationally, there already is a close working relationship between the two stations with shared personnel and numerous calls where both stations respond.

Creating a merged Station could achieve some operational benefits such as combined training and building maintenance costs. Significant financial benefits are unlikely as the same number and types of apparatus as well as current number of volunteer and career firefighters will be required to maintain the existing level of service.

Recommendation #9: Discussions be initiated with the Town of Gananoque to consider the potential of a merged station.

7.1.4 Current and Proposed Station Staffing

The Department has a complement of 105 volunteers, a Part-Time Chief, a full time Chief Fire prevention officer, and a part-time administrative assistant. The Establishing and Regulating By-Law allows for up to 120 Firefighters. As firefighter recruitment and retention is a constant challenge, staffing has been 'open' and there has not been a need to limit the numbers of firefighters at the stations to stay within the authorized complement.

7.1.5 Current and Proposed Services.

As authorized by Council By-Law, the services offered by the Department include: fire suppression, fire prevention, fire safety education, communication, training of persons involved in the provision of fire protection services; rescue and emergency services including extrication, ice/water rescue, hazardous spills and emergency first response. These services are delivered to the level of training of the personnel responding and the equipment and resources available at the time of the incident.

The Department routinely responds to a variety of emergency responses within the general parameters of the By-Law including:

- Structural, vehicle, hydro pole and wildland fires
- Hydro lines and trees down
- Medical Assists including Defibrillation
- Ice/water Rescue utilizing Boats and Fortuna equipment
- Marine Transport of Firefighters and EMS personnel and equipment to water access only

locations.

- Propane, Carbon Monoxide, and Natural Gas leaks.
- Auto and Farm Extrication

From a risk management perspective, it is important that the Establishing and Regulating By-Law specifically identify the services the Department is authorized to provide. Ideally, the By-law should also identify which services will be provided through mutual aid or other agreement.

Technical rescue services such as Hazardous Materials, High Angle, Confined Space, Heavy Urban Search & Rescue or Trench Rescue are required infrequently (occurrence of incidents less than once every 5 years). Local or Provincial agreements should be in place with Kingston or Ottawa to provide these services as required.

Recommendation #10: *That the current range of services to be provided by LTI Fire as specified in the Establishing and Regulating By-Law be maintained.*

7.1.6 Water Supply

The Department has access to numerous Lakes, Rivers and Streams for firefighting purposes and has the required equipment, training and personnel to set up an effective water shuttle. The Department is accredited by the Fire Underwriters Survey for the delivery of Superior Tanker Shuttle services. The most recent accreditation took place in August 2015.

Access to pressure or dry hydrants or other means of gaining rapid and safe access to water source in winter condition is a key factor in ensuring safe and effective fire suppression and rescue operations. Although it is possible to access natural water sources in the winter by cutting through the ice, this is not ideal as it is time-consuming, exposes firefighters to the risk of operating on ice, and may be difficult to access by trucks due to snow conditions.

A dry hydrant is a non-pressurized pipe permanently installed in existing lakes, ponds, or streams that provides a supply of water, by means of suction, to a tanker truck. The same function is obtained by a constructed well connected by a pipe to a natural body of water or a hydrant connected to a large storage tank.

Pressurized Hydrants are available in built-up areas such as the Town of Gananoque and Village of Lansdowne.

The key standard for Water Source construction, location and other parameters is the National Fire Protection Association Standard 1142 “Standard on Water Supplies for Suburban and Rural Fire Fighting” and the Underwriters Insurance Rating system. NFPA 1142 does not provide specific commentary on distance to dry hydrants leaving the determination to the “Authority having Jurisdiction”. As previously discussed, to achieve benefit from the Personal Lines (DPG) rating, homeowners need to be 8 km from a fire station *and* 5 km of an approved water supply point.

Figure 9: illustrates the location of year-round water access points with the 5 km radius noted.

Figure 9: Location of Year Round Water Source Access Points with 5 km Radius Area

The available water sources provide year-round access for most areas of the Township.

Areas which would benefit from additional dry hydrant location to ensure all areas of the Township are within 5 km of an all-season water source include: Gan Lake, Rockport area and the north-east area of Charleston Lake.

It is proposed that a multi-year strategy be adopted to add additional dry hydrants. Installation of dry hydrants is not complex and can often be incorporated into routine road/bridge maintenance or upgrade projects.

Recommendation #11: *That a multi-year plan be developed to add one dry hydrant every two years to ensure all areas of the Township have year-round access to dry or pressurised hydrants or equivalent within 5 kms.*

Recommendation #12: *NFPA 1120 “Standard on Water Supplies for Suburban and Rural Fire Fighting” be used to guide any future commercial, industrial or multi-occupant residential development.*

7.1.7 Dispatch and Radio Communication

The Department participates in the Leeds Grenville County Fire Dispatch and Radio system. Dispatch services for the County including Leeds and Thousand Islands is provided by Brockville Fire.

Paging is on a dedicated digital system providing alphanumeric information regarding calls on the pager. There are no paging tones or voice messages.

The radio system is digital and also supports analog so mutual aid communication is enabled.

All Officers are assigned portable radios. Apparatus are provided with mobile radios and sufficient radios for crew. At a minimum, there should be sufficient portable radios to ensure each Firefighter team in the 'Hot Zone' has a radio. Ideally, all Firefighters operating in an interior search and rescue or fire attack should have a radio in case a Firefighter becomes trapped or separated.

Recommendation # 13: *On an ongoing basis, the annual budget include the purchase of 4 portable radios to 'evergreen' the current number as well as build an inventory to ensure adequate numbers are available during major events.*

7.1.8 Vehicles and Equipment

A detailed inventory list of Apparatus is provided in Appendix II. The Department has a reasonably modern fleet of equipment sufficient to provide the services authorized by By-Law. There is a multi-year Truck replacement plan in place.

The Department is following contemporary practice by replacing the two-person pumpers with five or six person crew pumpers. This practice is supported by evidence and OFM direction that it is preferable to take an extra minute or two to leave the station with a crew and coordinate operations during transit rather than have firefighters potentially arrive independently on-scene faster, but not have the ability to carry out a safe and effective response.

The concept of utilizing crew cab first response pumpers and having firefighters respond directly to the station where practical facilitates achievement of NFPA 1720 4.3.5 *"Personnel responding to fires and other emergencies shall be organized into company units or response teams and shall have required apparatus and equipment"*.

The Department is also following contemporary practice in replacing single axle, 6,000 litre tankers with dual axle, 10,000 litre Tankers. This provides a significant amount of water during the initial stages of a fire and facilitates a high capacity water shuttle when required for sustained operations.

It is prudent to maintain a spare pumper and tanker to maintain full station capability when trucks are not in service for maintenance or other reasons. Unless specifically requested by Command, spare trucks should not routinely respond to calls to avoid scene congestion.

The use of trailers for specialized functions such as wildland firefighting and rehabilitation is a cost effective method of providing resources in a cost effective manner.

The number of boats should be reviewed to consider the frequency of response required and target response times.

The current deployment of specialized ice rescue and utility ATV vehicles (Lansdowne and Lyndhurst) appears to be a cost effective deployment.

7.1.9 Medical Training and Response

The 'five-question' interviews revealed considerable frustration regarding medical calls. There is concern that Fire response may be redundant and the funds spent to provide this service is, in effect a subsidy of the EMS system. There is also frustration that the dispatch system creates delays in Fire Department notification such that Fire arrives on the scene at the same time or after EMS is on scene

The issue of dispatch delays is a regional issue and is not limited to Township or County. The issue stems from the way 911 calls are managed in areas of the Province which do not have an integrated 911 service such as Toronto. In Eastern Ontario, 911 calls are received by a call centre which transfers the call to the appropriate emergency service. For a medical issue, the call is transferred to the Central Ambulance Coordination Centre (CACC) located in Kingston. CACC will dispatch an ambulance and notify fire dispatch if required.

As CACC will dispatch the ambulance first, and may have other priorities, notification to the appropriate fire dispatch is often delayed. It is apparent that the delays in the dispatch can often be in the range of 5 to 10 minutes. With response time to the station in the range of 3 to 5 minutes and travel time to the scene of 5 to 10 minutes, Firefighters often arrive on the scene 13 to 25 minutes after EMS has been dispatched.

If the local availability of Firefighters to provide emergency responder services to be advantageous, this dispatch delay needs to be addressed.

Recommendation #14: *That LTI Fire in collaboration with other South-Eastern Fire Departments initiate discussions with the South-East CACC to explore the perceived dispatch delay issue and explore possible solutions to improve fire response times.*

The current protocol is to dispatch two stations to respond to medical calls. Further study should be undertaken to audit the number of emergency first responders present in the first-on-scene apparatus to determine if a single station response would be appropriate.

Recommendation #15: *Further study be undertaken to audit the number of emergency first responders present in the first-on-scene apparatus to determine if a single station response would be appropriate.*

The Medical SOG should be reviewed to determine the appropriateness of Firefighters responding directly to the call and if a minimum and maximum number of responders should be identified.

7.2 Strategic Direction #2 – To Develop an Organizational Culture that Supports Service Excellence.

7.2.1 Organizational Structure

The way organizations are structured can have a profound impact on culture and organizational effectiveness as well as ability to realize the organizations mission, vision and values. Organizations that are highly centralized tend to be less innovative, slow to respond to environmental changes and can lead to poor morale. Decentralized organizations allow greater flexibility, respond quicker and more effectively to change and can improve participation and teamwork. To be effective, however, decentralized organizations require a strong sense of common purpose, policy framework and values to be the ‘glue’ that creates synergy and facilitate alignment.

The Leeds 1000 Islands Fire Service was formed in January 2001 following the amalgamation of the former Townships of Front of Escott, Front of Leeds and Lansdowne and the Rear of Leeds of Lansdowne, the latter two having their own Fire Departments. At the time of amalgamation, senior staff was comprised of:

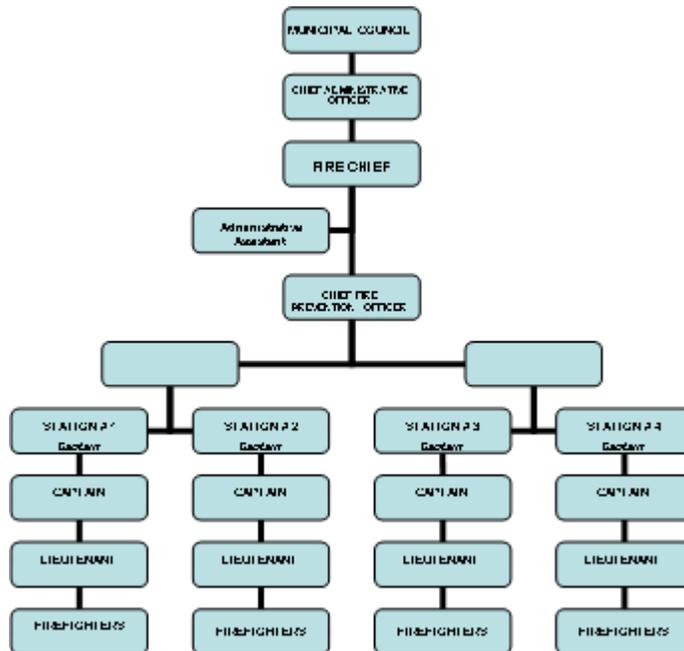
- Fire Chief — Volunteer
- Deputy Fire Chief — Training/Equipment — Full Time
- Deputy Fire Chief — Fire Prevention/Public Education — Full Time
- Assistant Deputy Chief (Stations #1 and #3) — Volunteer •
- Assistant Deputy Chief (Stations #2 and #4) — Volunteer
- Administrator — Volunteer 1 day per week
- Approximately 80 volunteers including Station Captains, Captains and Firefighters.

Today the compliment is:

- Fire Chief - Full Time, 50% shared with Gananoque Fire
- Chief Fire Prevention Officer - Full Time
- Administrative Assistant - Part Time, 4 days per week
- Station Captains (4) Part Time
- Approximately 80 volunteers including Captains, Lieutenants, Auxiliary and Firefighters

The current organization chart is presented in Figure 10:

Figure 10: Current Leeds & Thousand Islands Fire Department Organization Chart



Although the Organization Chart shows the Station Captains reporting to the Chief through the Chief Fire Prevention Officer, the Station Captains report to the Chief.

There are two positions noted by vacant boxes in the chart which represent geographic Deputy Chiefs which have not been recruited.

In each station, a Captain is designated to take responsibility for 1) apparatus and equipment, 2) Training and 3) medical.

The Training Program is coordinated by the Chief with the assistance of the Station Captains and Station Training Officer.

The organization by design and in practice is decentralized. Day to day operations including management of calls is managed by the Station Captains. The Chief undertakes a strategic role with pro-active meetings with the Station Captains on a weekly basis and frequent ‘town hall’ meetings in which all Firefighters are invited to attend. The Chief maintains high visibility within the Department and enjoys an effective working relationship with Council and the CAO.

The 5 Question interviews revealed an extraordinary high level of respect and genuine affection for the Chief on the part of Council, Senior Township Officials, Officers and Firefighters. Other positive comments regarding the current organization included:

- Shared Chief’s position with Gananoque. *“We often work really close together and having one person in charge instead of two lets us work fluidly”*.
- Although shared, Chief feels full-time

- Relationship with Gananoque FD – operationally superb relationship, shared FF
- Occupational Health & safety Committee (meets regularly, trained representatives)
- Positive, Collaborative relationship with Gananoque, Automatic Aid
- “Clone the Chief”
- Professionalism & Pride
- Open and frequent communication
- Station Captain Structure
- Designated roles of Lieutenant (Training, Trucks & Equipment, Medical, Fire Prevention)
- Good Morale

Regarding opportunities for improvement, the interviews highlighted:

- North South Divide: Improved greatly over the years; still issues.
- Role & Replacement of CFPO – Does it need to be full-time? Consolidation with other responsibilities (Deputy Chief with Chief Training Officer & CFPO responsibilities)
- Assistance for Chief; Deputy Chiefs
- More emphasis on Inspection/Prevention #1 priority is to prevent fires!
- Improvement in Training - Need Chief Training Officer to support Stations, develop common lesson plans and sign offs
- Develop closer relationship with Gan (Full merger, integration of senior staff, expanded formal agreement)
- Need increased joint station training to foster better relationships between FF
- Protocol is Stn 1 & 2 always respond together (south), stn 2 & 4 run together (north). Suggest quadrant dispatch so 1& 4 will respond in east and 2 & 3 will run together in west as well as existing north south protocol
- Stations should specialize: For example, do all need to be trained/equipped at technician level in ice/water rescue?
- Reduce workload on station Captains.
- Look at structure to effect merger with Gan.
- One Operating Budget with Gan.

Future Organization

A number of retirements of Officers are imminent including the Chief and Chief Fire Prevention Officer. This presents a unique opportunity to consider options regarding future organizational structure. In considering options for the future, there are a number of objectives that should be realized as follows:

- To promote an organizational culture that develops effective leadership now and for the future;

- Supports the three lines of defense – Prevention, public education and suppression/emergency response.
- Supports clear accountability.
- Enhances the power of the team.
- Facilitates continuous quality and improvement initiatives.
- Ensures the contributions of each member are respected and valued.
- Supports the synthesis of a variety of perspectives and processes for the successful completion of tasks.
- Builds on individual and group strengths to create an environment that reinforces dedication to delivering professional and customer-oriented services
- Supports positive environment that supports retention and recruitment and pride in being a Firefighter

The current shared Chief position with the Town of Gananoque has proven to be a major success. Both the Town and Township enjoy the professional leadership of a full-time Chief, which neither municipality could likely afford independently. The shared position has allowed alignment and sharing of public education, prevention and emergency response resources. This latter point is particularly important. Both municipalities have benefited greatly from seamless deployment of resources from both municipalities to respond to major events.

Recommendation #16: That the shared Chief position be retained and further opportunities for joint positions in Fire Prevention and Inspection as well as Training be explored.

The support of two Councils, two Chief Administrative Officers and two Departments places an extraordinary burden on the Chief. It is essential that the Chief is able to delegate day-to-day operations to other competent leaders so the Chief can focus on strategic issues and initiatives as well as relationships with other Departments, Council and Fire Department personnel.

The Station Captains and Officers have proven to be effective in managing suppression and emergency response operations. Many volunteer departments have District Chiefs rather than Station Captains; however, there appears to be no expressed desire to change. The current direct reporting relationship creates additional workload for the Chief but is an effective way to maintain close communication, supervision and problem solving. In Departments where Captains or District Chiefs report to a Deputy Chief, the role of the Captain/Station Chief can be diminished. Direct contact with the Chief is lost. The additional organizational layer also attenuates two-way communication with Firefighters.

Recommendation #17: The current organization of Station Captains and direct reporting relationship to the Chief be retained.

The size and proximity of Station 2 and 4 may allow consideration in the future of a shared Station Captain. This would facilitate joint operations between the two stations. On the other hand, the

value of ‘ownership’ where a station captain has clear responsibility for his or her geographic team should not be underestimated.

Excellence in emergency response is directly related to the quality and frequency of Training. As will be further discussed under Strategic Direction # 4, LTI Fire has an excellent training program as well as the potential to further develop as a regional training resource. The Department has dedicated Officers at each station who have been developing and delivering the training curriculum.

To further coordinate and develop an excellent training program a Lead Training Officer or Coordinator is required. This position should serve as the lead in ensuring state-of-the-art training programs, liaising with peers at other Departments such as Kingston and Ottawa to jointly develop programs, work collaboratively with the Fire Education leadership at St. Lawrence College and further develop the Training Centre as the regional training resource for the County.

Many Fire Departments in Ontario have a Deputy Chief position. This position enables a clear second-in-command when the Chief is absent as well as facilitates succession planning. The position enables delegation of tasks such as reviewing and creating Policies and Standard Operating Guidelines as well as providing leadership to inspection, public education and operations. This position should be combined with the Lead Training Officer noted above.

It would be ideal to share this position with the Town of Gananoque to facilitate common training curriculum and operational protocols.

Recommendation #18: A Deputy Chief be appointed to lead and develop in-house training programs, develop the Training Centre as the preeminent Regional Training Resource, take responsibility for ongoing development of Policies and Operating Guidelines, lead the Departments Public Education and Prevention responsibilities as well as assume the duties of the Chief in his/her absence.

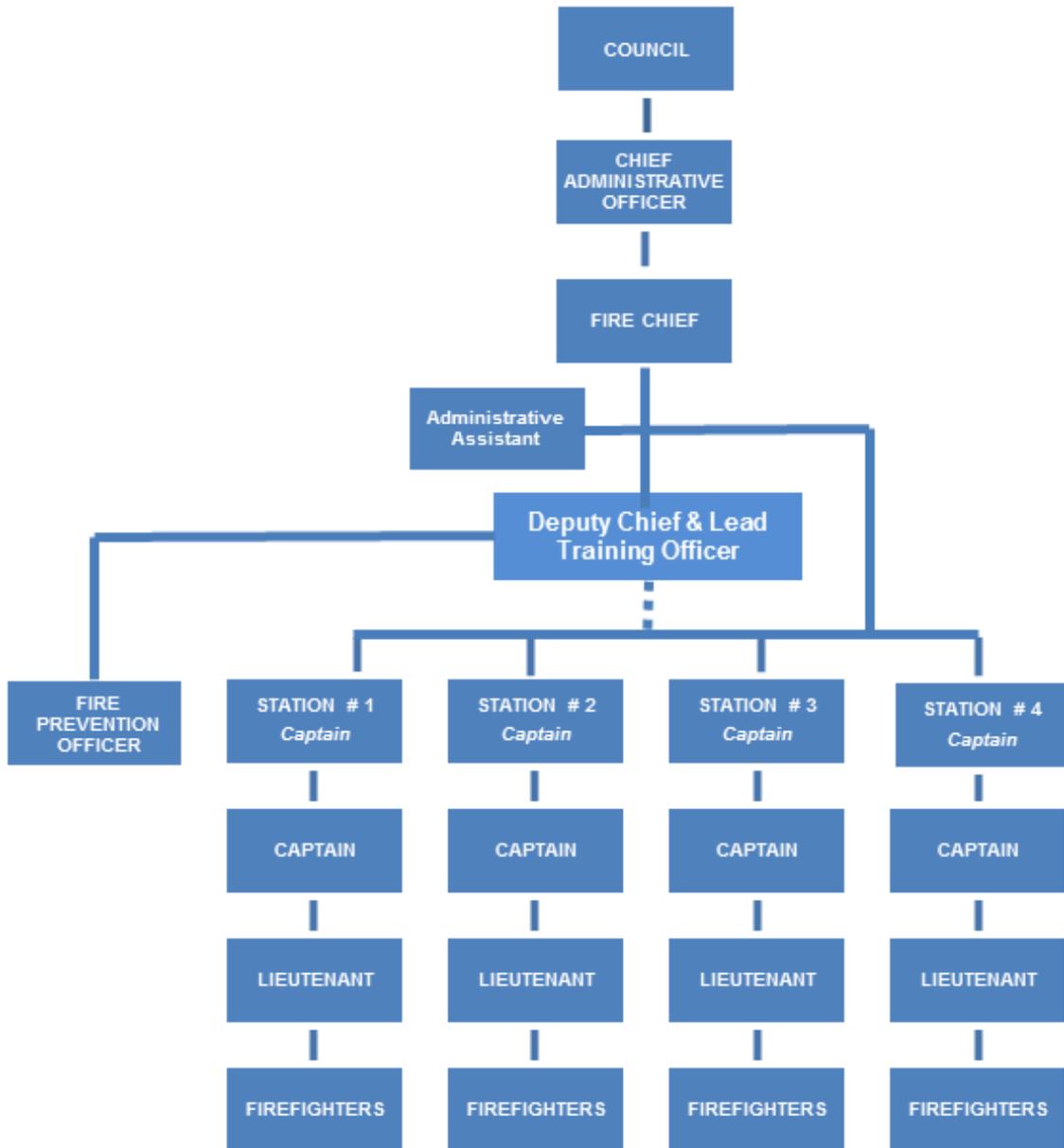
The current organization of a captain at each station being assigned the role of training officer should continue. The Station Training Officers would have a dual (matrix) reporting relationship to both the Station Captain and the Lead Training Officer.

With the retirement of the current Chief Fire Prevention Officer, it is recommended that a senior Fire Prevention Officer be recruited at the rank of Captain. This position would report directly to the Chief (or Deputy Chief if approved). This position should integrate and be supported by a designated officer in each station to support prevention, education, inspection and pre-plans within their district.

Recommendation #19: That a full-time Fire Prevention Officer be recruited immediately to replace the Chief Fire Prevention Officer upon his retirement.

Figure #11 presents the proposed organization structure.

Figure # 11 Proposed Organizational Structure.



7.3 Strategic Direction #3: Accountability

Great organizations understand their purpose (mission) and desired future (vision). They understand that achieving their vision is dependent on having a clear strategy to move forward from the present to a desired future state. And they understand that they are accountable for their actions and deliverables in achieving the strategy.

The concept of accountability is particularly relevant in the public sector where funding is predominantly provided by the taxpayer. Excellence in the public sector can be defined as the concept of delivering the best possible service within the resources allocated and providing evidence that this objective is being accomplished.

“If you don’t know where you’re going, you’re probably not gonna get there.”

Forrest Gump

Many organizations have adopted the “Balanced Scorecard”⁴ as a tool to translate long-term strategy in to day-to-day management through the mechanism of measurement. The Balanced Scorecard translates vision and strategy into a tool that effectively communicates strategic intent and motivates and tracks performance against tactical objectives.

Typically, organizations report on financial and activity indicators. The paradigm shift created by the Balanced Scorecard was to look at the entire organization generally described as four dimensions:

- *Financial Perspective* – How do we look to our funders?
- *Customer Perspective* – How do our customers see us?
- *Internal Business Perspective* – What must we excel at?
- *Innovation and Learning Perspective* – How do we continue to improve and create value?

Within each dimension, reporting addresses relevant objectives, measurements, targets and initiatives that flow from the Strategic Directions.

Currently, LTI Fire provides a monthly report to Council that documents the number of calls by major type, Fire Prevention and Public Education Activities and Mutual Aid Responses.

It is recommended that a more comprehensive report be designed with quarterly rather than monthly reporting. Reporting quarterly will provide a better perspective of trends and will balance the workload associated with a more detailed report produced less frequently.

Suggested measures include:

Financial:	Quarterly actuals vs budget and forecast
	Capital expenditures actual vs budget and forecast

⁴ Kaplan, R.S. and Norton, D.P, the Balanced Scorecard, Measures that Drive Performance. Harvard Business Review, 1995.

Customer Performance:	Types and frequency of Calls Response times for 80% of Calls with 6 Firefighters on scene Public Education events vs target Fire Inspections vs target % of structure fires with fire investigation completed Pre plans completed vs target
Internal Processes	% Calls with Accountability System in place % Structure Fires with RIT Team established Calls with debrief Number of Building Permits/Plans reviewed Department Recruitment and Attrition Number of Exit Interviews completed
Growth & Development:	YTD Training Hours actual vs target Number of Firefighters/Officers achieving certification Number of SOG's and Policies Reviewed/Developed

Recommendation #20: That the LTI Fire Department develop and implement quarterly reporting based on the Balanced Scorecard accountability framework.

It is important to note that measuring performance is a sizable task. It requires ongoing effort to develop and update annual objectives, develop the performance metrics, record activities and create and maintain reports.

The 'Firehouse' automated system utilized by the Department will continue to be of great value in the collection, recording, and analysis of data. Significant support, however, from the leadership team as well as financial and staff resources, will be required to develop comprehensive quarterly reporting from the 'Firehouse' data.

7.4 Strategic Direction #4: Building a Learning Organization

7.4.1 The Learning Organization

Over time, many organizations lose their capacity to learn, change and adapt as structures and processes are established. When problems arise, the solutions are often short-term based on previous practice, and problems continue to re-emerge.

Expectations, methods of service delivery and technology, however, are constantly evolving. Organizations need to develop knowledge about new technologies and processes, understand what is happening in the outside environment and facilitate creative solutions using the knowledge and skills of all within the organization. This requires co-operation, communication, and a culture of trust. It requires a fundamental attitude change that effort and energy must be dedicated to a constant review of how one does work and always asks the question; *Is there a better way?*

This concept has been reflected in the concept of a **learning organization**⁵ which can be defined as one which facilitates the learning of its members and continuously transforms itself to best serve the customer.

LTI Fire has in place many of the core attributes of a Learning Organization. There is a serious commitment to learning as reflected in 3 nights a month being dedicated to training. Comprehensive Standard Operating Guidelines (SOG's) exist and are continually reviewed and updated. There are many examples of 'best practice' that have been adopted by the Department. Perhaps the most significant is the financial and operating support of a dedicated, well equipped Training Centre.

To assist in the continued development as a Learning Organization, the following recommendations are proposed:

Recommendation #21: *Explicitly stating in the Departments Vision and Strategic Directions that encouraging and implementing innovation is desired.*

Recommendation #22: *That the review and updating of Standard Operating Guidelines (SOG's) continue with a specific target performance metric regarding number to be developed, reviewed and updated be identified as part of the Departments annual objectives and be monitored in the quarterly report.*

The above recommendations are designed to recognize the relationship between Best Practice, SOG's, Training, and Performance. This relationship can be thought of as a interdependent linkage where Best Practice and ongoing evaluation informs SOG's, SOG's are the foundation for Training, and realizing excellence in efficient and effective performance in managing an emergency situation is dependent upon superb training

⁵ Senge, P. M. (1990) *The Fifth Discipline. The art and practice of the learning organization*, London: Random House.

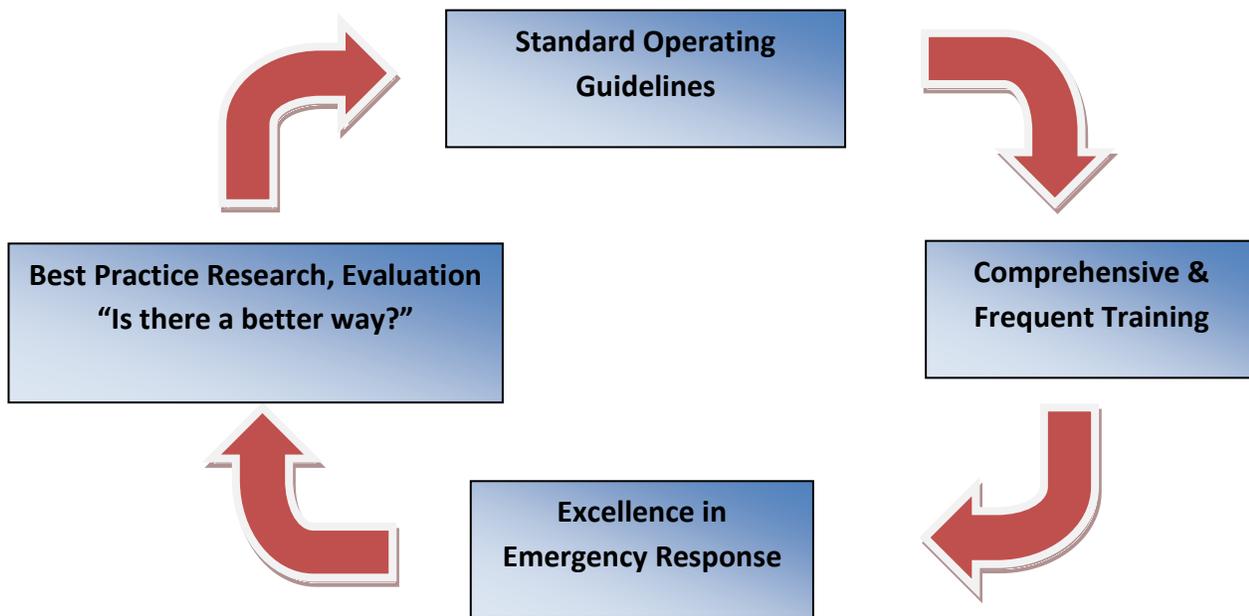


Figure 12: Relationship between Inquiry, Operating Guidelines, Training and Operational Excellence

7.4.2 Training Delivery

Each station has an identified Officer who generally takes responsibility for training in each station, Subject matter experts should be identified to deliver common training to each station to ensure a consistent interpretation of the SOG’s and Training Plans thus facilitating station interoperability. The subject matter experts can most likely be found within the Department. In some cases, it may be appropriate to contract with another Department or individual to provide the required expertise.

Recommendation #23: *Subject matter experts be identified and supported to assist in the review and development of SOG’s, Lesson Plans, and to deliver common training to each station to ensure a consistent interpretation of the SOG’s and Training Plans, thus facilitating station interoperability.*

As noted previously in Strategic Direction #2 the recruitment of a Deputy Chief/Lead Training Officer is recommended to coordinate SOG and lesson plan development and delivery as well as undertake a leadership role in the development of the Training Centre.

One of the significant issues that was identified in the 5-question interviews was a “north-south divide” that was largely a legacy issue associated with the historic township divide prior to amalgamation. This “divide” has been perpetuated by a dispatch protocol that favoured Stations 1 & 3 responding together and Stations 2 & 4 responding together. The dispatch protocol has been revised such that the closest stations now respond.

The ‘north-south divide’ can be further addressed by continuing to seek opportunities for joint station training. Joint station training should be actively sought to promote common practice and

build relationships. It will assist in building a culture of one Department with four stations rather than four Departments.

7.4.3 Transition to NFPA Standards and Certification

A key challenge for the Fire Service in Ontario is the transition from training standards, program development and delivery led by the Ontario Fire College and Office of the Fire Marshall to a program based on NFPA standards and certification.

NFPA 1001 provides the Standard for Firefighter Professional Qualifications. This Standard identifies the criteria for Firefighter Qualification at the Entrance, Firefighter I and Firefighter II levels.

NFPA Standard 1670, Standard on Operations and Training for Technical Search and Rescue Incidents describes three levels of competency for technical rescue:

- *Awareness Level* This level represents the minimum capability of organizations that provide response to technical search and rescue incidents.
- *Operations Level* This level represents the capability of organizations to respond to technical search and rescue incidents and to identify hazards, use equipment, and apply limited techniques specified in this standard to support and participate in technical search and rescue incidents.
- *Technician Level* This level represents the capability of organizations to respond to technical search and rescue incidents and to identify hazards, use equipment, and apply advanced techniques specified in this standard necessary to coordinate, perform, and supervise technical search and rescue incidents.

NFPA 1021 provides the Standard for Fire Officer Professional Qualifications.

Although the NFPA standards are reasonably clear, the level of support that the Province will provide in implementing the new standards and facilitating training and certification is unknown. It appears that the support in this regard will be minimal at best.

Thus, the challenge will be to develop and implement a new curriculum based on NFPA standards rather than OFM. This challenge will likely need to be addressed with minimal support from the Province.

All Ontario Fire Departments have this challenge. The larger Departments have the staff and other resources to adapt existing training protocols to meet the NFPA standards. Smaller Departments may find the task daunting.

Not having training programs in place that are based on recognized standards and not providing documentation that recognized competencies are achieved leaves Fire Departments in a precarious position from a risk management and safety perspective. The general duty clause in the Ontario Occupational Health and Safety Act section 25(2)(h) provides “*that an employer shall take every precaution reasonable in the circumstances for the protection of a worker*”. The definition of “*reasonable precaution*” is often based on generally accepted standards, which can now be assumed to be the NFPA standards.

The opportunity that presents is to facilitate collaborative efforts whereby resources are pooled and amongst geographically proximate Departments to enable a revised curriculum, lesson plans and training to be implemented.

As LTI already has a recognized training centre developed, has significant training resources and expertise in-house and enjoys reasonable proximity to other Departments in the County, it is ideally situated to undertake a leadership role in this regard.

It is likely, however, that implementation of this model will require a “build it and they will come” approach. In other words, the Township will likely need to provide an up-front investment to create a ‘product’ that other Departments will wish to purchase.

It will be worthwhile to engage in discussions with other Departments to see if mutual investment and development is possible. This would be ideal and should be seen as the preferred option. Financial investment, sharing of resources such as Instructors and other forms of collaboration should be sought.

However, such discussions should not impede efforts to develop a Business Case proposal to further develop the Training Centre as a marketed resource to both serve LTI Fire and neighbouring municipalities.

Recommendation # 24: That a Business Case Proposal be developed and presented to Council to propose an investment with a multi-year payback to create a comprehensive training program based on NFPA standards that can serve the needs of LTI Fire and neighbouring Fire Departments.

There are other Training Centres in Ontario that are fulfilling a regional mandate. The Meaford Firefighting Training Centre serves as a regional training centre for the Ontario Fire College and offers accredited courses to volunteer and full-time fire departments and other emergency service organizations.

The Eastern Ontario Emergency Training Academy based in Norwood provides a similar role in the Peterborough, Northumberland, Hastings, Prince Edward Counties and the cities of Kawartha Lakes region.

7.4.4 Medical Training

NFPA 1001 requires that Firefighters have as a standard of entry, minimum emergency medical skills including infection control, CPR, bleeding control and shock management. This standard is required for all new recruits (Policy 0012).

In Ontario, Fire Departments generally require additional first responder certification including bleeding control, positive pressure ventilation with a bag valve mask, oral airway, nasal airway, supplemental oxygen administration, suctioning, CPR, use of an automated external defibrillator (AED), manual stabilization of fractures, and assisting in the administration of basic medications such as epinephrine auto-injectors, oral glucose, and inhalers. They are also trained in packaging, moving and transporting patients. This level of training is supported by LTI Fire but not required.

Recommendation #25: That LTI Fire continues to encourage and support Emergency First Responder or equivalent certification for all Firefighters and require Emergency First Responder or equivalent certification for advancement to Firefighter II and Officer positions.

7.4.5 Enhanced Training for Mass Casualty Events

With a main VIA Rail Line and the 401 highway, the risk for mass casualty events in LTI is significantly greater than most rural departments. As Fire is often the first responder to a mass casualty event and, in a rural area, is able to provide the most resources for the initial response, Fire Services have a key role to play in the immediate management of such events.

Recommendation #26 : *That a SOG and Training Program be developed and implemented for on-scene initial management of mass casualty events such as school bus rollovers, tornadoes, long term care facility fires, multi-vehicle accidents and train derailments.*

7.4.6 Implementing All Hazards - Awareness Level Training

A central tenant of the All Hazards Concepts is that Fire Departments must be able to respond to all potential emergencies. This does not mean the Department has to have the capability of managing all potential emergencies.

The Enabling & Regulating (E&R) By-Law will provide the authority to respond and manage emergencies such as structure, vehicle and wildland fires, auto extrication and medical calls. The Department will be expected to be supplied with appropriate equipment and trained personnel to competently and safely manage these incidents.

Emergencies requiring specialized equipment and training such as trench, high-angle, confined space, or haz mat including chemical, biological, radiation, or nuclear response will require services of regional or provincial resources.

As noted previously, NFPA Standard 1670, *Standard on Operations and Training for Technical Search and Rescue Incidents* describes three levels of competency for technical rescue including *Awareness Level*. This level represents the minimum capability of organizations that provide response to technical search and rescue incidents.

Recommendation #27: *Senior Firefighters and all Officers be encouraged and supported to take Technical Awareness Level Training to facilitate safe and effective initial response to emergency situations requiring resources not authorized by the E&R By-Law.*

By their nature, Firefighters will do whatever is required to save lives and property even if they are not specifically trained and equipped to respond safely or authorized. Thus, it is critical to have written and well understood protocols for obtaining resources to respond promptly to emergencies not authorized in addition to awareness level training that prescribes what can and should be done to assist the specialty teams.

Recommendation #28: *That written protocols be developed regarding access to specialized technical rescue teams.*

Strategic Direction #5 – Strategic Management

This Strategic Direction will address a number of management issues related to the effective and efficient operations of the Department that were identified in the ‘5-question interviews.

7.5.1 Building a Culture of Safety

Firefighting, other emergency response, training as well as routine hall maintenance, truck and equipment checks present extraordinary hazards. Constant vigilance and adherence to best practice safety procedures are essential to achieving the objective of “Everyone goes home safe”.

The duty under the Ontario Occupational Health and Safety Act to ensure that everything reasonable under the circumstances is done to protect the safety of the worker has been expanded by a Criminal Code amendment to include “any other person”. Section 217.1 of the Criminal Code reads: “*Every one who undertakes, or has the authority, to direct how another person does work or performs a task is under a legal duty to take reasonable steps to prevent bodily harm to that person, or any other person, arising from that work or task.*”

Occupational Health & Safety Committee

The Township has a Joint Occupational Health and Safety Committee (JOHSC) and there is a Sub-Committee for the Fire Department. The Fire Department has 8 members on the Sub-Committee, one from management and one ‘worker’ representative from each station. The Sub-Committee is active; however, frequency of meetings should be monitored to ensure the statutory minimum of 4 meetings per year.

The Fire Department has 2 formally trained members on the Fire Department JOHSC sub-committee. Additional members should have the opportunity for training.

The designated Township Safety Officer should be invited to attend Fire JOHC meetings as well as actively serve as a resource to the Department.

The Sub-Committee should develop a schedule for routine station inspections as well as participate in the development to specific safety related training.

Recommendation #29: The Fire Department Joint Occupational Health & Safety Committee meet at least every 3 months, and the frequency of meetings, number of workers trained, and number of station inspections be reported to Council on a quarterly basis.

Accountability

A fundamental safety requirement for the fire service is an accountability system that identifies personnel, where they are located and what their task is. Should a firefighter become disabled or lost, the accountability system is essential to securing a prompt and effective rescue (Guidance Note 5-1, NFPA 1500, 1561). LTI Fire is in process of upgrading their accountability system to a ‘Passport’ and ‘Case Commander’ system. This is a very positive development and will improve

the effectiveness of the present system as well as encourage implementation of accountability at every call.

Recommendation #30: *The implementation of a 'Passport/Case Commander' Accountability System be supported as a means to insure accountability is in place for every call. A concurrent audit should be initiated to report quarterly on whether Accountability was set up during major incidents.*

Safety Officer

NFPA 1521 and Guidance Note 2-4 provide information regarding the importance of establishing a safety officer at major incidents to assist Command with managing scene safety. There does not appear to be a SOG that addresses the role and deployment criteria for a Safety Officer.

Recommendation #31: *That a SOG and related training be developed for the role and deployment of a Safety Officer based on Guidance Note 2-4 and NFPA 1521. A concurrent audit process should be developed to provide quarterly reports on the deployment of a Safety Officer at major incidents.*

Incorporating Safety in Formal Training Lesson Plans

Safety has to be a fundamental part of all training. Formal Lesson/Training Plans need to be in place that include specific safety procedures including incorporating a safety officer. Training/Lesson Plans need to be approved by the Chief. Contracted out training also requires formal lesson plans approved by the Chief.

Recommendation #32: *Formal Lesson/Training Plans, approved by the Chief, need to be in place that include specific safety procedures including incorporating a safety officer.*

Specific Issues for further Investigation

There are a number of Occupational Health and Safety Issues which require further investigation and monitoring to determine the need for change in procedures or policy. These issues include:

- Fall restraint requirements i.e. loading hose on top of pumpers/tankers,
- CO removal in Halls – Is ventilation and automatic detection in Halls adequate? Should direct exhaust systems be considered?
- Decontamination at scene and Post-fire bunker gear management – There is developing evidence of contamination through bunker gear and need for decontamination. Need for on-site decontamination, post-incident showers, bunker gear cleaning procedures and other protection strategies are evolving and need to be monitored.

Recommendation #33: *Health and Safety Issues, policies and practices be continually monitored and reviewed including attendance at Ontario Association of Fire Chiefs annual Health & Safety Conference.*

7.5.2 Retention and Recruitment

Retention and recruitment of volunteers is becoming increasingly difficult. This is not simply a local issue; it is national and international in scope. The expectation is that the volunteer firefighter will have the same level of training and competencies as a career Firefighter. Further, the breadth and depth of training and response capability has grown significantly from the days of simply *'putting the wet stuff on the hot stuff'*.

Society has changed as well. Fewer people in rural areas live and work in the same community. Thus day time response can be a serious issue. Work and family pressures make it a challenge to undertake the intense training required as well as to respond to calls.

Volunteer Fire Departments have, in the past, been able to be relatively passive regarding recruitment and retention. There were always eager candidates anxious to join and many stayed on the department for 30+ years.

Today, it's becoming increasingly difficult to recruit and retain. Further, recruitment and retention of firefighters who are casual in attending training and calls is not as serious as recruitment and retention of firefighters who will develop advanced skills, have sufficient ability and commitment to respond to many calls, participate in fire inspection, pre-planning and public education and become tomorrow's officers.

One of the prominent retention and recruitment methods is to be a 'magnet organization'. That is all policies, procedures, activities, and decisions be examined through the lens of asking the question "*will this assist us in recruiting and retaining staff*"?

More specifically, questions can be asked such as:

- Do we have training programs that are informative, well presented, engaging and relevant? Lecture style PowerPoint presentations generally are not as helpful as a participative conversation. Hands-on doing is generally preferable to classroom teaching.
- Do we have fun when training or is there a culture of fear & intimidation where people are afraid to show initiative or ask questions?
- Do we use public education events at village fairs and other such events to provide information on being a volunteer firefighter?
- Do we actively provide training and promotional opportunities to firefighters who wish to advance?
- Do we have a compensation system that is fair and appropriate?
- Do we provide other incentives and rewards to acknowledge the contribution of firefighters?
- Is there a clear and supported plan for advancement?
- Do we consistently engage in a formal exit interview with firefighters who are leaving to identify opportunities for improvement?

The 'five-question' interviews revealed that many of the questions noted above are being addressed. In particular, the regular 'town hall' dinner meetings with the Chief, provision of hats and other fire department clothing, and annual 'awards' night were cited as very positive morale building strategies that aid retention and recruitment.

The interviews also revealed that there were some opportunities to gain recruits through more active community engagement.

Recommendation #34: *That a formal Retention and Recruitment Strategy be developed using community and Firefighter focus groups to identify issues and propose recommendations.*

One key issue that should be addressed is compensation. In the past, being a volunteer was just that, there was no compensation. Training was minimal and calls were infrequent. Today's volunteer is expected to attend:

- 72 hours of scheduled Firefighter Training Sessions per year, Minimum 44 hours per year.
- 16 hours required to cover CPR & First Aid Course every 2 years.
- 50 hours additional training provided to cover Firefighting (live fire), Ice/Water, Auto Extrication, and Emergency Med-Aid Responder etc.
- Additional hours are required for diver training and specialty courses such as Company Officer, Pump operations etc.

This commitment is in addition to actual calls.

In reality, the commitment required is more accurately described as a part-time job than volunteer.

The current compensation system is based on points which essentially translate into 1 point equals one paid hour. The Department budgets for a certain compensation amount. If the points exceed budget, the value of each point is diminished. This allows the Township to have an upset control on the budget but can reduce firefighter compensation per point if the budget is exceeded.

In practice, LTI Council has ensured that the budget is sufficient to ensure that Firefighter's hourly rate is not reduced and the Firefighters and Officers understand and appreciate the ongoing support of Council.

In the interest of improving retention and recruitment it is suggested that the concept of 'honorarium' and 'points' be reviewed to determine if a more attractive method of compensation should be considered.

Recommendation #35: *That the point system be reviewed to identify alternative compensation methods to support Firefighter retention and recruitment.*

7.5.3 Succession Planning and Retirement Policy

A formal succession plan should be developed to plan for development of Firefighters to replace officers as they retire. This plan should identify likely retirements over the next 5 years on an on-going basis and include a specific education and graduated responsibility map for individuals who wish to pursue advancement.

Clear path career advancement is an important incentive to maintain morale, engagement and retention. It is also very important in volunteer fire departments where an officer may not always be present at a call. Developing leadership capability and competency with senior firefighters enables calls to be well managed when officers are not present or are limited in numbers.

Retirement is a difficult issue often as senior firefighters and officers are committed and may not wish to end their involvement at a certain age. Further, it is difficult to generalize and force retirement at a certain age. On the other hand, there can be situations where there is risk associated with a member's health, physical fitness or willingness to actively learn and implement new procedures.

The Department has an 'Auxiliary' status which is very effective in providing a useful role for senior firefighters who wish to continue their role with the Department but not on the 'front line'.

From a risk management perspective, there is merit in considering a by-law requirement that all firefighters over the age of 60 require an annual medical assessment to state that they are able to perform the tasks expected of a firefighter.

Another tactic is to have annual conversations with senior firefighters and officers to discuss retirement and develop a mutually agreeable, documented plan.

Recommendation # 36: *That a formal Succession plan and Retirement Policy be developed.*

7.5.4 Records and Documentation

The Department uses "Firehouse" Software package for document management and statistical analysis. There are comprehensive reports filled out for each call and the information is entered into Firehouse.

Training records are maintained using iPads that allow sign-off at each training session that a firefighter achieved the required level of competency in the subject. Data is uploaded automatically to a centralized data base.

Personal documentation is maintained in paper files.

The documentation and filing process is supported by the Department Administrative Assistant.

There would be benefit in having documentation regarding the location and system associated with both electronic and paper filing. This would facilitate identifying what records are being kept and where they are located and the retention period. This is particularly important as records and documents are often electronic and are kept in multiple data bases and locations.

There is a Township Records and Retention Policy. The review recommended below should also address compliance with this policy.

From a business continuity perspective, this analysis is critical to understanding where there are risks and if there are appropriate back-up and alternative sites available should normal access be disrupted.

Recommendation #37: *That office procedures, processes, record location and access methods be documented and reviewed to ensure that complete records are being maintained and are readily accessible.*

Recommendation #38: *That office procedures, processes, record location and access methods be reviewed to determine if adequate back-up and alternative measures are in place to maintain business continuity should normal access or procedures be disrupted.*

IPads have the potential to improve fire inspection and pre-plans. Data can be collected on-site and uploaded in real-time eliminating delays and simplifying the documentation process. IPads can also be used by Senior Officers as a communication, information sharing, and Command resource tool.

Recommendation # 39: *That electronic tools such as iPads as well as existing or enhanced capability of “Firehouse” be explored to better keep track of performance measures and field documentation including fire inspections.*

7.5.5 Policies and Standard Operating Guidelines

The Department has a comprehensive array of Policies and Standard Operating Guidelines which are regularly reviewed and updated.

As technology and practice is constantly evolving and new hazards present, it is critical to devote significant effort to the ongoing review of existing SOG’s and development of new.

All SOG’s should specifically refer to and reference Sec. 21 Guidance Notes.

Recommendation #40: *A target number of SOG’s to be reviewed annually be established as well as an annual target for new SOG development.*

Recommendation #41: *SOG’s be developed for Electrical Emergencies (wires down, solar, transformer/pole fires, sub-station fires), Propane and Natural Gas Emergencies, Multi-Casualty Events, B.L.E.V.E., Safety Officer and Train Derailments.*

Recommendation # 42: *Consolidate SCBA related SOG’s into a Respiratory Program as required by Sec. 21 Guidance Note # 4-9, CSA Z94.4 and NFPA 1981.*

7.5.6 Electronic Communication and Access to Documents

Effective communication including full access to documents such as Policies, Reports, SOG’s, Notices and Training lesson Plans vital to keeping all Firefighters informed and engaged. Social media such as Facebook and Twitter can be useful for rapid communication. To facilitate access to documents, email, and scheduling software, it is recommended that Microsoft Office be adopted as

the standard, and, to ensure all Firefighters and Officers have access to a laptop and required software, an affordable employee purchase plan be developed.

Recommendation #43: *That standard office automation software be used to facilitate communication and documentation access and that an employee purchase plan for basic laptops/tablets be initiated to ensure all firefighters and officers have access to calendar, email and other electronic communication modalities.*

Strategic Direction #5 – Collaborative Relationships

No man is an island, entire of itself⁶

Few endeavors are more reliant on the assistance of others than emergency response. Effective relationships with responders within ones community as well as neighbouring communities are essential to serving the public interest in the most efficient and effective way.

Although the principle applies to even the largest and most sophisticated Fire Service, it is particularly true with Volunteer Services where coverage of large geographic areas and limited human and technical resources are present. The challenge is particularly compounded by the public expectation that the same level of emergency response service will be available whether you live in the city or country.

This Strategic Direction will review the formal and informal relationships that exist with neighbouring Fire Departments and other emergency response partners.

7.6.1 Mutual Aid Agreements.

Leeds & Thousand Islands Fire is an active participant in the Leeds and Grenville County Municipal Aid Agreement. This formal agreement is based on the OFM template and provides for a Mutual Aid Coordinator, identifies the key resources each participating Department has and outlines the protocol for activation. The purpose of the agreement is to facilitate the rapid deployment of resources from one municipality to another should they be required.

The Mutual Aid Agreement includes the Townships of Athens, Augusta, Edwardsburgh/Cardinal, Elizabethtown-Kitley, Front of Yonge, Township of Leeds and the Thousand Islands, North Grenville, Rideau Lakes, Village of Merrickville-Wolford, Village of Westport, City of Brockville and towns of Gananoque and Prescott.

There is a mutual aid agreement with the City of Kingston. This agreement should be reviewed to determine if technical rescue services are addressed. Specific technical rescue services that should

⁶ John Donne *Devotions upon emergent occasions and seuerall steps in my sicknes - Meditation XVII*, 1624

have protocols for access include High Angle, Trench, Confined Space, Heavy Extrication, Haz Mat, and Swift Water.

Recommendation #44: *That the mutual aid agreement with Kingston be reviewed to determine what technical rescue services can be provided and protocols for access.*

There are protocols for accessing Provincial Resources such as Chemical, Biological, Radiological, Nuclear Explosive (CBRNE) and Heavy Urban Search and Rescue (HUSAR), and Ministry of Environment Resources as well as resources for a major disaster. Clear Policies and Procedures should be present to access Provincial Technical Rescue Teams and other resources.

Recommendation #45: *Clear Policies and Procedures be developed to access Provincial Technical Rescue Teams (CBRNE, HUSAR) and other resources.*

To facilitate mutual aid operations where multiple Departments may be involved in an incident, some regions in the Province have adopted a coordinated apparatus identification system. In York Region for example, trucks are identified by a number for the Municipality, a second number for the station and a third number for the type of truck. A pumper is 1 or 2, a Telesquirt is 3, a tanker is 4 or 5, 6 is an Aerial, 7 is an Aerial Platform, 8 is a Hazmat, 9 is a Rescue and 0 is a Utility. Thus, a Pumper from Station 8 in King Township (which is designated as 3), would be 381.

The advantage of this approach is that apparatus from multiple departments deployed are easily identifiable to both Dispatch and Incident Command.

Recommendation #46: *In collaboration with Mutual Aid partners, LTI Fire explore opportunities to improve mutual aid interoperability including a common truck identification system. Should a common system not be feasible, LTI Fire should consider a coherent truck identification system that could be adapted to a common system in the future.*

7.6.2 Automatic Aid and Purchased Fire Service

In contrast with mutual aid agreements where other township services are requested, automatic aid agreements provide for automatic dispatch of a neighbouring fire department to provide fire and other emergency services to an agreed upon geographic area.

LTI has Automatic Aid Agreements with the City of Kingston for the 401 highway such that Kingston Fire will respond to eastbound collisions in the west portion of the Township which can only be accessed from the Joyceville Road in Kingston. LTI will respond to westbound 401 accidents in Kingston which can only be accessed from Highway 32.

There is also an automatic agreement with the Township of Rideau Lakes where certain geographic areas in Rideau Lakes have LTI as the first response and certain geographic areas in LTI have Rideau Lakes as the first response.

LTI has a purchased service agreement with the Township of Front of Yonge to provide first response fire and emergency services to the south eastern portion of LTI (Escott) from the Fire

Station in Mallorytown. Although the call volume is low (less than 10 calls per year) and there is a cost, this arrangement provides an effective way to ensure appropriate emergency response to this area of the Township. The alternative would be another station which would not be cost effective.

The need for an automatic aid agreement with the Township of Athens for the north-east boundary area was discussed with the Steering Committee and it was suggested that the existing mutual aid agreement was sufficient.

7.6.3 Relationship with the Town of Gananoque.

The Township of Leeds & Thousand Islands and the Town of Gananoque have a combination of agreements that provide a relatively unique and mutually beneficial relationship. There is an automatic aid agreement that provides dual response for structure fires and marine rescue in addition to the County Mutual Aid agreement. Further, the Chief position is shared.

This automatic aid and shared Chief position have been in place for over a decade and have resulted in significant benefits to both municipalities. Sharing the full-time Chief position effectively provides management capabilities that would otherwise cost more or would result in each Municipality having ½ time availability. The automatic aid agreement enables routine, prompt response of a larger number of firefighters and equipment than either municipality could provide on their own.

In addition to the Chief position, there are opportunities for other shared positions including Deputy Chief, Chief Training Officer and Chief Fire Prevention Officer. As previously noted in the Plan, there would be operational benefits and some cost savings if LTI Station 3 and the Gananoque Fire Station were co-located.

Recommendation # 47: *That opportunities to continue and further develop shared personnel and other mutually beneficial opportunities including integration of LTI Station 3 and the Gananoque Fire Station be explored.*

9 Appendices

9.1 Appendix I List of Recommendations

Recommendation #1: *That annual inspections be undertaken as required by Ont. Reg 150/13 and a summary report be provided to Council quarterly.*

Recommendation #2: *The request/complaint based Inspection Process be augmented with pro-active, risk-based 'education' visits with annual targets established and quarterly reports provided to Council.*

Recommendation #3: *The Inspection/Education Process be integrated with Pre-Plan development to facilitate emergency response.*

Recommendation #4: *That a Policy and Procedure be developed regarding the respective roles of the Fire and Buildings Department with respect to Building Permit and Planning Application Approvals as well as Building Inspections.*

Recommendation #5: *Specific Plans for Public Education and Awareness including Smoke and CO Alarms, in-school programs and seniors programs be developed annually and activity reports be provided quarterly to Council.*

Recommendation #6: *That the current geographic station coverage be maintained to meet applicable NFPA response standards and Insurance grading criteria*

Recommendation #7: *That the Firehouse Program be utilized to generate quarterly reports on NFPA 1720 benchmark data including time from page to first responding apparatus leaving station, total time from page to arrival on scene with 6 or more firefighters.*

Recommendation #8: *Due to safety hazards and age related building deficiencies, it is recommended that planning commence for the replacement of Station 2.*

Recommendation #9: *Discussions be initiated with the Town of Gananoque to consider the potential of a merged station.*

Recommendation #10: *That the current range of services to be provided by LTI Fire as specified in the Establishing and Regulating By-Law be maintained.*

Recommendation #11: *That a multi-year plan be developed to add one dry hydrant every two years to ensure all areas of the Township have year-round access to dry or pressurised hydrants or equivalent within 5 kms.*

Recommendation #12: *NFPA 1120 "Standard on Water Supplies for Suburban and Rural Fire Fighting" be used to guide any future commercial, industrial or multi-occupant residential development.*

Recommendation #13: *On an ongoing basis, the annual budget include the purchase of 4 portable radios to 'evergreen' the current number as well as build an inventory to ensure adequate numbers are available during major events.*

Recommendation #14: *That LTI Fire in collaboration with other South-Eastern Fire Departments initiate discussions with the South-East CACC to explore the perceived dispatch delay issue and explore possible solutions to improve fire response times.*

Recommendation #15: *Further study be undertaken to audit the number of emergency first responders present in the first-on-scene apparatus to determine if a single station response would be appropriate.*

Recommendation #16: *That the shared Chief position be retained and further opportunities for joint positions in Fire Prevention and Inspection as well as Training be explored.*

Recommendation #17: *The current organization of Station Captains and direct reporting relationship to the Chief be retained.*

Recommendation #18: *A Deputy Chief be appointed to lead and develop in-house training programs, develop the Training Centre as the preeminent Regional Training Resource, take responsibility for ongoing development of Policies and Operating Guidelines, lead the Departments Public Education and Prevention responsibilities as well as assume the duties of the Chief in his/her absence.*

Recommendation #19: *That a full-time Fire Prevention Officer be recruited immediately to replace the Chief Fire Prevention Officer upon his retirement.*

Recommendation #20: *That the LTI Fire Department develop and implement quarterly reporting based on the Balanced Scorecard accountability framework.*

Recommendation #21: *Explicitly stating in the Departments Vision and Strategic Directions that encouraging and implementing innovation is desired.*

Recommendation #22: *That the review and updating of Standard Operating Guidelines (SOG's) continue with a specific target performance metric regarding number to be developed, reviewed and updated be identified as part of the Departments annual objectives and be monitored in the quarterly report.*

Recommendation #23: *Subject matter experts be identified and supported to assist in the review and development of SOG's, Lesson Plans, and to deliver common training to each station to ensure a consistent interpretation of the SOG's and Training Plans thus facilitating station interoperability.*

Recommendation # 24: *That a Business Case Proposal be developed and presented to Council to propose an investment with a multi-year payback to create a comprehensive training program based on NFPA standards that can serve the needs of LTI Fire and neighbouring Fire Departments.*

Recommendation #25: *That LTI Fire continue to encourage and support Emergency First Responder or equivalent certification for all firefighters and require Emergency First Responder or equivalent certification for advancement to Firefighter II and Officer positions.*

Recommendation #25: *That LTI Fire continue to encourage and support Emergency First Responder or equivalent certification for all firefighters and require Emergency First Responder or equivalent certification for advancement to Firefighter II and Officer positions.*

Recommendation #26: *That a SOG and Training Program be developed and implemented for on-scene initial management of mass casualty events such as school bus rollovers, tornadoes, long term care facility fires, multi-vehicle accidents and train derailments.*

Recommendation #27: *Senior Firefighters and all Officers be encouraged and supported to take Technical Awareness Level Training to facilitate safe and effective initial response to emergency situations requiring resources not authorized by the E&R By-Law.*

Recommendation #28: *That written protocols be developed regarding access to specialized technical rescue teams.*

Recommendation #29: *The Fire Department Joint Occupational Health & Safety Committee meet at least every 3 months and the frequency of meetings, number of workers trained and number of station inspections be reported to Council on a quarterly basis.*

Recommendation #30: *The implementation of a 'Passport/Case Commander' Accountability System be supported as a means to insure accountability is in place for every call. A concurrent audit should be initiated to report quarterly on whether Accountability was set up during major incidents.*

Recommendation #31: *That a SOG and related training be developed for the role and deployment of a Safety Officer based on Guidance Note 2-4 and NFPA 1521. A concurrent audit process should be developed to provide quarterly reports on the deployment of a Safety Officer at major incidents.*

Recommendation #32: *Formal Lesson/Training Plans, approved by the Chief, need to be in place that include specific safety procedures including incorporating a safety officer.*

Recommendation #33: *Health and Safety Issues, policies and practices be continually monitored and reviewed including attendance at Ontario Association of Fire Chiefs annual Health & Safety Conference.*

Recommendation #34: *That a formal Retention and Recruitment Strategy be developed using community and Firefighter focus groups to identify issues and propose recommendations.*

Recommendation #35: *That the point system be reviewed to identify alternative compensation methods to support firefighter retention and recruitment.*

Recommendation #36: *That a formal Succession plan and Retirement Policy be developed.*

Recommendation #37: *That office procedures, processes, record location and access methods be documented and reviewed to ensure that complete records are being maintained and are readily accessible.*

Recommendation #38: *That office procedures, processes, record location and access methods be reviewed to determine if adequate back-up and alternative measures are in place to maintain business continuity should normal access or procedures be disrupted.*

Recommendation #39: *That electronic tools such as iPads as well as existing or enhanced capability of “Firehouse” be explored to better keep track of performance measures and field documentation including fire inspections.*

Recommendation #40: *A target number of SOG’s to be reviewed annually be established as well as an annual target for new SOG development.*

Recommendation #41: *SOG’s be developed for Electrical Emergencies (wires down, solar, transformer/pole fires, sub-station fires), Propane and Natural Gas Emergencies, Multi-Casualty Events, B.L.E.V.E., Safety Officer and Train Derailments.*

Recommendation #42: *Consolidate SCBA related SOG’s into a Respiratory Program as required by Sec. 21 Guidance Note # 4-9, CSA Z94.4 and NFPA 1981.*

Recommendation #43: *That standard office automation software be used to facilitate communication and documentation access and that an employee purchase plan for basic laptops/tablets be initiated to ensure all firefighters and officers have access to calendar, email and other electronic communication modalities.*

Recommendation #44: *That the mutual aid agreement with Kingston be reviewed to determine what technical rescue services can be provided and protocols for access.*

Recommendation # 45: *Clear Policies and Procedures be developed to access Provincial Technical Rescue Teams (CBRNE, HUSAR) and other resources.*

Recommendation # 46: *In collaboration with Mutual Aid partners, LTI Fire explore opportunities to improve mutual aid interoperability including a common truck identification system. Should a common system not be feasible, LTI Fire should consider a coherent truck identification system that could be adapted to a common system in the future.*

Recommendation # 47: *That opportunities to continue and further develop shared personnel and other mutually beneficial opportunities including integration of LTI Station 3 and the Gananoque Fire Station be explored.*

9.2 Appendix II Apparatus Plan

Station	Unit	Description	Year	Disposition	
1	10 old	Ford Pumper	1992	Dispose in 2017	
1	10 new	Spartan Pumper 5-person	2012	Replace in 2032	
1	12	GMC Pumper/tanker	1997	Surplus, to be replaced by 32 when new Tanker purchased for Station 3.	
1	14	International Tanker	2007	Replace in 2027	
1	17	Rescue 6-Person	2005	Replace in 2025	
1	Marine 1	Princecraft boat & trailer	1998	Replace in 2023	
1	Marine 5	Stanley located in water at Rockport	2002	Replace in 2027	
1	ATV	Kawasaki ATV & trailer	2012	Replace in 2022	
1	3	Chev pick up	2004	Replace in 2016	

Station	Unit	Description	Year	Disposition		
	Trailer	Rehab. Supplies	Elk River	2009	Replace in 2034	
	Trailer	Forestry	Liberty Stealth Forestry Trailer	2014	Replace in 2039	
2	22	Pumper/tanker	2006	Replace in 2026		
2	24	Chev pick up truck	2011	Replace in 2021		
2	28	6-person International Rescue	1988	Dispose in 2016, Replace with Rescue 37		
2	Forestry Trailer	Haulmark Forestry Trailer	2010	Replace in 2035		
3	30	2 Person GMC Pumper	2000	To be replaced with 5-6 person Pumper/Rescue and disposed of 2017		
3	32	GMC Tanker	1995	Tanker 42 to replace in 2016.		
3	34	GMC Tanker	2004	Replace in 2024		
3	37	GMC Rescue	2003	Replace 28 at Station 2 in 2016. Replace in 2023		

Station	Unit	Description	Year	Disposition	
3	38	Ford pick up truck	2002	Replace 2016	
3	Marine 3	Princecraft boat & trailer	1999	Replace 2024	
4	40	Freightliner pumper	2004	Replace 2024	
4	41*	Chev Pick up w cab	2004	Replace 2016	
4	42	International Tanker	2007	Move to Station 3, New 6,000 l Tanker to be purchased for Stn 4 in 2016.	
4	Marine 4	Boat/trailer	1991	Replace in 2017	
4	Mule & trailer	Kawasaki Mule/trailer	2012	Replace in 2022	
4	1	Chev pickup truck	2010	2022	
CFPO	2	Chev pick up truck	2005	2016	
4	Trailer	Fire Prevention/ Public Education Trailer	2003	Surplus/Replace	
4	Training Pumper	Training Centre Pumper			

9.3 Appendix III Task Tracking Plan

	Recommendation	Tactical Plan Developed	Target Completion Date	Responsibility
1	That annual inspections be undertaken as required by Ont. Reg. 150/13 and a summary report be provided to Council quarterly.	2016	2017	Management/ Admin/ Prevention
2	The request/complaint based Inspection Process should be augmented with proactive, risk-based 'education' visits with annual targets established and quarterly reports provided to Council.	2016	2018	Management/ Admin/ Prevention
3	The Inspection/Education Process be integrated with Pre-Plans as appropriate to facilitate emergency response.	2016	2018	Management/ Admin/ Prevention
4	That a Policy and Procedure be developed as to the respective roles of the Fire and Buildings Department regarding Building Permit and Planning Application Approvals as well as Building Inspections.	2016	2017	Management/ Admin/ Prevention
5	Specific Plans for Public Education and Awareness including Smoke and CO Alarms, in-school programs and seniors programs be developed annually and activity reports be provided quarterly to Council.	2016	2018	Management/ Admin/ Prevention
6	That the current geographic station coverage be maintained to meet applicable NFPA response standards and Insurance grading criteria	Ongoing	Ongoing	Management
7	That the Firehouse Program be utilized to generate quarterly reports on NFPA 1720 benchmark data including time from page to first responding apparatus leaving station, total time from page to arrival on scene with 6 or more firefighters.	2017	2018	Management/ Admin
8	Due to safety hazards and age related building deficiencies, it is recommended that planning commence for the replacement of Station 2.	2017	2019	Management/ CAO/ Works/ Treasurer

	Recommendation	Tactical Plan Developed	Target Completion Date	Responsibility
9	Discussions be initiated with the Town of Gananoque to consider the potential of a merged station.	Ongoing	Ongoing	Management/CAO
10	That the current range of services to be provided by LTI Fire as specified in the Establishing and Regulating By-Law be maintained.	2016	2016	Management/ CAO
11	That a multi-year plan be developed to add one dry hydrant every two years to ensure all areas of the Township have year-round access to dry or pressurised hydrants or equivalent within 5 kms.	2017	2017	Management/ Works
12	NFPA 1120 “Standard on Water Supplies for Suburban and Rural Fire Fighting” be used to guide any future commercial, industrial or multi-occupant residential development.	Ongoing	Ongoing	Management/ Planning/ Works
13	On an ongoing basis, the annual budget include the purchase of 4 portable radios to ‘evergreen’ the current number as well as build an inventory to ensure adequate numbers are available during major events.	2016	Ongoing	Management/ Treasurer
14	That LTI Fire in collaboration with other South-Eastern Fire Departments initiate discussions with the South-East CACC to explore the perceived dispatch delay issue and explore possible solutions to improve fire response times.	2017	2018	Management
15	Further study should be undertaken to audit the number of emergency first responders present in the first-on-scene apparatus to determine if a single station response would be appropriate.	2016	2017	Management/ Admin
16	That the shared Chief position be retained and further opportunities for joint positions in Fire Prevention and Inspection as well as Training be explored.	Ongoing	Ongoing	Management/CAO
17	The current organization of Station Captains and direct reporting relationship to the Chief	Ongoing	Ongoing	Management

	Recommendation	Tactical Plan Developed	Target Completion Date	Responsibility
	be retained.			
18	A Deputy Chief be appointed to lead and develop in-house training programs, develop the Training Centre as the preeminent Regional Training Resource, take responsibility for ongoing development of Policies and Operating Guidelines, lead the Departments Public Education and Prevention responsibilities as well as assume the duties of the Chief in his/her absence.	2017	2017	Management/CAO
19	That a full-time Fire Prevention Officer be recruited immediately to replace the Chief Fire Prevention Officer upon his retirement.	2016	Ongoing	Management/CAO
20	That the LTI Fire Department develop and implement quarterly reporting based on the Balanced Scorecard accountability framework.	2016	Ongoing	Management/Admin
21	Explicitly stating in the Departments Vision and Strategic Directions that encouraging and implementing innovation is desired.	2016	2016	Management
22	That the review and updating of Standard Operating Guidelines (SOG's) continue with a specific target performance metric regarding number to be developed, reviewed and updated be identified as part of the Departments annual objectives and be monitored in the quarterly report.	2016	Ongoing	Management
23	Subject matter experts be identified and supported to assist in the review and development of SOG's, Lesson Plans, and to deliver common training to each station to ensure a consistent interpretation of the SOG's and Training Plans thus facilitating station interoperability.	2016	Ongoing	Management
24	That a Business Case Proposal be developed and presented to Council to propose an investment with a multi-year payback to create a comprehensive training program based on NFPA standards that can serve the needs of LTI Fire and neighbouring Fire Departments.	2016	2017	Management/CAO/ Treasurer

	Recommendation	Tactical Plan Developed	Target Completion Date	Responsibility
25	That LTI Fire continue to encourage and support Emergency First Responder or equivalent certification for all firefighters and require Emergency First Responder or equivalent certification for advancement to Firefighter II and Officer positions.	Ongoing	Ongoing	Management
26	That a SOG and Training Program be developed and implemented for on-scene initial management of mass casualty events such as school bus rollovers, tornadoes, long term care facility fires, multi-vehicle accidents and train derailments.	2016	Ongoing	Management
27	Senior Firefighters and all Officers be encouraged and supported to take Technical Awareness Level Training to facilitate safe and effective initial response to emergency situations requiring resources not authorized by the E&R By-Law.	2016	Ongoing	Management
28	That written protocols be developed regarding access to specialized technical rescue teams.	2016	2017	Management
29	The Fire Department Joint Occupational Health & Safety Committee meet at least every 3 months and the frequency of meetings, number of workers trained and number of station inspections be reported to Council on a quarterly basis.	2016	2016	Management/ Admin
30	The implementation of a 'Passport/Case Commander' Accountability System should be supported as a means to insure accountability is in place for every call. A concurrent audit should be initiated to report quarterly on whether Accountability was set up during major incidents.	Complete	2016	Management
31	That a SOG and related training be developed for the role and deployment of a Safety Officer based on Guidance Note 2-4 and NFPA 1521. A concurrent audit process should be developed to provide quarterly reports on the deployment of a Safety Officer	2016	2017	Management

	Recommendation	Tactical Plan Developed	Target Completion Date	Responsibility
	at major incidents.			
32	Formal Lesson/Training Plans, approved by the Chief, need to be in place that include specific safety procedures including incorporating a safety officer.	2016	2018	Management
33	Health and Safety Issues, policies and practices need to be continually monitored and reviewed including attendance at Ontario Association of Fire Chiefs annual Health & Safety Conference.	Ongoing	Ongoing	Management/HR
34	That a formal Retention and Recruitment Strategy be developed using community and Firefighter focus groups to identify issues and propose recommendations.	2016	2017	Management/ HR
35	That the point system be reviewed to identify alternative compensation methods to support firefighter retention and recruitment.	2017	2018	Management/ CAO/ Treasurer/ HR
36	That a formal Succession plan and Retirement Policy be developed.	2017	2017	Management/ HR
37	That office procedures, processes, record location and access methods be documented and reviewed to ensure that complete records are being maintained and are readily accessible.	2016	2017	Management/ Admin
38	That office procedures, processes, record location and access methods be reviewed to determine if adequate back-up and alternative measures are in place to maintain business continuity should normal access or procedures be disrupted.	2016	2017	Management/ Admin
39	That electronic tools such as iPads as well as existing or enhanced capability of “Firehouse” be explored to better keep track of performance measures and field documentation including fire inspections.	2017	2018	Management/ Admin
40	A target number of SOG’s to be reviewed annually be established as well as an annual target for new SOG development.	2016	2017	Management

	Recommendation	Tactical Plan Developed	Target Completion Date	Responsibility
41	SOGs be developed for Electrical Emergencies (wires down, solar, transformer/pole fires, sub-station fires), Propane and Natural Gas Emergencies, Multi-Casualty Events, B.L.E.V.E., Safety Officer and Train Derailments.	2016	Ongoing	Management
42	Consolidate SCBA related SOG's into a Respiratory Program as required by Sec. 21 Guidance Note # 4-9, CSA Z94.4 and NFPA 1981.	2016	2017	Management
43	That standard office automation software be used to facilitate communication and documentation access and that an employee purchase plan for basic laptops/tablets be initiated to ensure all firefighters and officers have access to calendar, email and other electronic communication modalities.	2016	2017	Management/ Admin
44	That the mutual aid agreement with Kingston be reviewed to determine what technical rescue services can be provided and protocols for access.	2016	2017	Management
45	Clear Policies and Procedures should be present to access Provincial Technical Rescue Teams (CBRNE, HUSAR) and other resources.	2016	2017	Management
46	In collaboration with Mutual Aid partners, LTI Fire explore opportunities to improve mutual aid interoperability including a common truck identification system. Should a common system not be feasible, LTI Fire should consider a coherent truck identification system that could be adapted to a common system in the future.	2017	2018	Management
47	That opportunities to continue and further develop shared personnel and other mutually beneficial opportunities including integration of LTI Station 3 and the Gananoque Fire Station be explored.	Ongoing	Ongoing	Management/CAO