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# Fire Master Plan

## **FIRE SERVICE REVIEW**

### **1. Introduction**

The Council of the Township of Woolwich identified the need to complete a review of fire services for the Township within their Strategic Plan. A resolution was passed giving staff direction to conduct a fire service review including a Risk Assessment and the development of a Fire Master Plan. An internal committee was established to complete this review and consists of the following members: Rick Pedersen, Township Fire Chief, Kieran Kelly, District Fire Chief – Elmira, Kevin Karley, District Fire Chief – Maryhill, Dave Gosnay, Director of Planning and Engineering (former member), John Scarfone, Manager of Planner, Brian Detzler, Manager of Facilities, Christine Broughton, Director of Council and Information Services, Richard Petherick, Director of Finance, Mark Bauman, Councillor, David Brenneman, Chief Administrative Officer and Debra Widmeyer, Protective Services Assistant.

Throughout the review process, the five District Chiefs and Chief Fire Prevention Officer were consulted and participated in the review of the Township's fire service operations.

### **2. Purpose of the Fire Master Plan:**

The purpose of the Plan is to define the current and future fire protection needs, assess local circumstances to identify high risk occupancies in the community and to determine and outline fire service responsibilities, capabilities and performance. A service gap analysis was conducted by setting goals and objective, defined acceptable life, property and environmental risk levels. This plan provides a detailed program of action to implement and maintain a system of evaluation and monitoring of performance. It will also provide a policy guide and direction with the authority for the actions necessary to achieve the objectives of managing the local fire protection system and providing for a continuous improvement process. The plan will be monitored to judge the effectiveness of the strategies, new policies and performance measures. The Fire Master Plan is a five year on-going process that will be reviewed on an annual basis in order to keep pace with the ever changing need. It is also used as part of the implementation of the Township's Strategic Plan.

#### **2.1 Benefits:**

It is beneficial to develop a Fire Master Plan to allow for the following:

- Implementation of new technology and/or innovative approaches to fire protection by our municipality
- More efficient use of available resources to improve fire protection
- Assist the Fire Chief and other municipal officials in fulfilling the legislative requirements of the FPPA
- A systematic process to collect, coordinate information in managing community fire risks
- To assist Council and municipal officials in making informed decisions on the provision of fire protection services
- The improvement to fire protection services to address local risks

### 3. Guidelines for Response and Service

The level of service is set by Council. The overlying principle of this document is to meet or exceed the NFPA 1720 standard of ten firefighters in ten minutes, 80 % of the time.

### 4. Background

#### 4.1 Referenced Documents:

The following reference documents were used in the development of the Fire Master Plan:

- National Fire Protection Association – Document 1720
- Fire Protection and Prevention Act
- Public Safety Guidelines
- Comprehensive Fire Safety Effectiveness Model
- Best Practices

#### 4.2 Geography

The geography of the municipality presents many challenges for the delivery of fire services. These challenges include:

- Difficulty in terms of the recruitment of volunteers because of the various employment sectors in each community
- The diverse make up of each community from a demographics stand point
- The varied location of the communities

#### 4.3 Population and Development

The Township of Woolwich is an area of approximately 31,912 hectares (78,854 acres) with a population of 19,658. It is comprised of an extensive rural area, fifteen (15) residential settlements and five (5) industrial/commercial areas.

##### 4.3.1 Population

Population of at year end of 2006 – 19,658 (Stats Canada)

Households at year end of 2006 – 6,805 (Stats Canada)

Population of Individual Settlements within Woolwich Township (Listed Alphabetically)

(not census data but based on total settlement units - 2006 x PPU of settlement)

Bloomingtondale	280
Breslau	906
Conestogo	1330
Crowsfoot Corners	175
Eldale	114
Elmira	9421
Floradale	205
Heidelberg	707
Martin Grove	N/I
Maryhill	525
Mundil	45
Shantz Station	40

St. Jacobs	1813
Weber	37
West Montrose	220
Winterbourne	352

#### 4.3.2 Population and Household Forecast

##### Population

	<u>Township</u>	<u>Elmira</u>	<u>St. Jacobs</u>	<u>Breslau</u>
2002	18,201	8,200	1,350	630
2016	24,600	12,200	2,090	3,750

##### Households

2002	6,320	2,904	480	219
2016	8,500	4,390	730	1,250

#### 4.3.3 Current Housing Development

- **Birdland Developments (west end of Elmira)** – The last stage was registered in 2006 to develop 60 single-family lots
- **Westfield Acres (west/central Elmira)** – The last stage was registered in 2005 to develop 66 single-family and townhouse units
- **Bristow Creek Development – Phase 2 (north/west Elmira)** – The last stage was registered in 2005 to develop 39 single-family lots
- **Raceway Estates Development (central Elmira)** – The second of three stages, which will be registered in 2007 to develop 69 single-family and semi-detached units
- **Woolwich Holdings (north/west Elmira)** – The first of three phases, which started in 2005 to develop 75 single family, semi-detached and townhouse units and 1 convenience commercial block
- **Valley View Heights Development (south end St. Jacobs)** – The second and fourth of four stages, which started in 2006 to develop 56 single-family and semi-detached units
- **Hopewell Heights Development (north/west end Breslau)** – The first stage started in 2005 to develop 124 single-family and semi-detached units, as well as 37 townhouse units. Phase 2 was registered in late 2006 to develop 85 single-family and semi-detached units
- **Empire Communities - Riverland (south west end of Breslau)** – A total of 475 units containing a variety of housing types. The first stage is expected to start in 2007
- **Hazad Developments (Conestogo – Golf Course Area)** – A total of 65 large estate lot singles and up-scale semi detached units. The entire development started in 2003
- **Klondike Homes (Conestogo)** – A total of 21 large single family lots. The entire development started in 2004 and completed in 2006.

Clearly, the demographic and housing numbers outlined above confirm that the township is growing and will continue to grow. As such it is critical that a fire master plan be developed to map out the future delivery of fire services in the municipality.

#### **4.4 Administration**

The department operates under a chain of command supported by a set of rules, regulations and operational guidelines designed to provide direction for the operational practices of the department and conduct of its members.

The administrative staff of the Woolwich Fire Department includes the Fire Chief, appointed by a municipal by-law and a Protective Services Assistant.

The Fire Chief is responsible for the overall operation of the department, including administrative, technical and operative affairs. The "Fire Protection and Prevention Act" names the person as ultimately responsible to Council for the delivery of fire protection services. The Fire Chief reports to the Chief Administrative Officer within the Township's management structure.

The five (5) District Fire Chiefs are the second ranking officers of the department and in the absence of the Township Chief the "Acting" Township Chief has all the powers and performs all the duties of the Fire Chief. At present, the Chief Fire Prevention Officer (CFPO), a part time employee also serves as the department's Chief Fire Official. The CFPO works twenty (20) hours per week and oversees the five (5) station Fire Prevention Officers.

The Protective Services Assistant is a full time employee who performs duties as required by the Fire Chief and CFPO as well as departmental invoicing, maintenance of records and personnel files.

Currently, the department maintains a reporting and records system which includes incident response, administration, training, apparatus and equipment maintenance, fire prevention and inspection as well as daily activity logs. The department is in the process of computerizing all records and reports.

The department operates on a budget, set annually by Council. The 2008 operating budget was approved at \$1,237,810 with a capital budget set at \$221,749. The department's budget is managed by the Fire Chief within the approved budget policies of the Township of Woolwich.

#### **4.5 Emergency Operations**

The department provides 24 hour emergency response to the community including fire suppression, medical assistance, awareness level hazardous materials response, land base water and ice rescue, vehicle extrication and response to any other natural or accidental emergencies.

There are several agreements in place for emergency response to assist neighbouring municipalities, including a mutual-aid agreement with other fire departments in the Region of Waterloo. The service agreements with Mapleton and Guelph/Eramosa Fire Department provide them with first response in a specific area of their Township, as required. We also have an automatic aid agreement with Centre Wellington for fires occurring in their areas.

Council has authorized the fire department to have a maximum of 127 volunteer firefighters, which places twenty five firefighters in three stations, with the exception of Floradale, which has twenty (20) members and Elmira which has thirty (30) members plus 5 subs. The volunteer firefighters provide a valuable resource and service to the community by providing a dedicated and essential service in the time of emergency within the Township.

The Woolwich Fire Department has had problems in the past meeting the response guidelines. There have been numerous occasions where the Fire Department has taken a lengthy period of time to have ten firefighters on scene. The average assembly time of some stations is in excess of ten minutes. There have been occurrences when a station has been toned out and not had an adequate number of fire fighters (10) to respond. Therefore, another station was called resulting in a long delay/response time. This is influenced by two factors the travel time and adequate staffing Monday to Friday. The municipality has some settlements that are considered bedroom communities and firefighter response during daytime hours is extremely difficult. West Montrose, Heidelberg, Breslau, Middlebrook Road, Kressler Road, Erbsville Road and the north border of Floradale are areas where daytime response is a problem. Currently we are not able to meet the municipal standard set by Council to require 10 fire fighters in 10 minutes 80 % of the time Monday to Friday 8:00 am to 5:00 pm in the Conestogo and Mayhill areas.

Recruitment drives that we have conducted in the past have proven to be challenging. We have experienced problems finding people interested in becoming volunteer firefighters who live in close proximity to our existing stations. Retention of firefighters has also been of concern. Approximately one third of the department personnel have less than five years experience.

#### **4.6 Municipal Fire Losses**

The tables below show the statistics for the fire department with relation to the number of deaths and injuries that have occurred, as well as the statistics for the municipal property dollar loss due to fires in the Township from 2004 to 2006.

### Municipal Fire Deaths and Injuries

Occupancy Classification		2004		2005		2006		2007		Total Deaths + Injuries
		Deaths	Injuries	Deaths	Injuries	Deaths	Injuries	Deaths	Injuries	
Group A	Assembly	0	0	0	0	0	0	0	0	0 deaths and 0 injuries
Group B	Institutional	0	0	0	0	0	0	0	0	0 deaths and 0 injuries
Group C	Residential	0	0	0	0	0	0	0	0	0 deaths and 0 injuries
Groups D & E	Commercial	0	0	0	0	0	0	0	0	0 deaths and 0 injuries
Group F	Industrial	0	0	0	0	0	0	0	0	0 deaths and 0 injuries
Mobile Homes & Trailers		0	0	0	0	0	0	0	0	0 deaths and 0 injuries
Other/ Farms		0	1	0	0	0	1	0	0	0 deaths and 2 injuries
<b>Total Deaths/ Injuries</b>		<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0 deaths and 2 injuries</b>

### Municipal Tax Dollar Loss

Occupancy Classification		2004		2005		2006		2007		% of Total Dollar Loss (2004-2007)
		# of Fires	\$ Loss	# of Fires	\$ Loss	# of Fires	\$ Loss	# of Fires	\$ Loss	
Group A	Assembly	1	0	10	103,300	10	8,500	1	0	2.1%
Group B	Institutional	0	0	0	0	1	500	0	0	0.8%
Group C	Residential	8	810,000	31	649,400	18	496,750	22	158,000	44.8%
Groups D and E	Commercial	6	121,500	2	50,500	2	60,000	3	435,000	1.3%
Group F	Industrial	6	857,000	9	96,300	7	250,000	3	205,000	29.1 %
Mobile homes and trailers		1	10,000	0	0	0	0	1	20,000	0.2%
Other/Farms		21	565,075	5	25,000	9	227,750	12	12,000	21.7%
<b>Total Dollar Loss (note some fires have no dollar loss)</b>		<b>43</b>	<b>2,363,575</b>	<b>57</b>	<b>924,500</b>	<b>47</b>	<b>1,043,500</b>	<b>42</b>	<b>830,000</b>	<b>100%</b>

The risk of fire in residential buildings is greatest as indicated by the number of residential building fires and fire losses that we have had from 2004 to 2006. Fifty seven residential fires accounts for 47.3% of the fire losses in the community. Although there have not been any deaths and only 1 injury in residential structures from 2004 to 2006, provincial statistics show that there is a high potential. From 2001 to 2003, other (miscellaneous) building and vehicle fires had the greatest number of fire calls and the largest dollar loss which did not follow the provincial trend.

The most common probable causes of fires in our community are:

- a) Improper installation and maintenance of wood burning appliances in residential occupancies.
- b) Mechanical and electrical failure most common in farm buildings.
- c) Maintenance deficiencies most common in industrial occupancies.

## **5. Fire Service Gap Analysis and Recommendations**

### **5.1 Introduction**

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

This section of the Fire Master Plan deals with our approach to the master planning process, which is to generate fire protection strategies through the development and assessment of various options for the provision of fire protection services.

The Comprehensive Fire Safety Effectiveness Model, developed by the Office of the Fire Marshal, was used as a basis for evaluating fire safety effectiveness in the community. This model looks at the community fire protection as the sum of eight key components, all of which impact on the fire safety of the community.

While the report generally refers to fire protection services, this reference includes emergency medical response, hazardous materials incident response, land base water and ice rescue, vehicle and farm extrication, natural and accidental emergencies.

#### **Comprehensive Fire Safety Effectiveness Model**

The Fire Protection and Prevention Act states that every municipality shall:

1. Establish a program in the municipality which must include public education with respect to fire safety and certain components of fire prevention; and
2. Provide such other fire protection services as it determines may be necessary in accordance with its needs and circumstances.

### **5.2 Impact of the Risk Assessment**

The Woolwich Fire Department has performed a basic evaluation of the impact of fire and other emergency incidents (a Risk Assessment) and the loss potential of these incidents in the community.

The various types of occupancies in the community and consequences of fire on the local economy, on employment, on the municipal assessment and tax base, social impact, environmental damage, and the loss of historical structures have generally been reviewed. For example, a significant fire loss at a major employer such as Safety Kleen could have a negative impact on employment and on the tax base. If there was a large fire at one of the nursing homes, the risk for potential for loss of life is very high.

### **Status Quo**

Currently the township does not review on an annual basis the impact of fire and risk of fire in the community. Continuing the status quo is not an option because the municipality needs a policy that clearly identifies the impacts and risks that exist in the community to mitigate and protect the community.

### **Enhanced**

Going forward it is critical to maintain an understanding of the impact of fire and the risk of fire in the community in order to develop fire prevention, protection and response programs, as well as allocate resources to prevent fire incidents and protect the citizens and property in Woolwich. To meet the minimum Provincial requirements a policy is required which would ensure that an annual simplified risk assessment is completed.

### **Optimal**

The municipality could choose to complete a comprehensive risk analysis on an annual basis, but staff does not feel that this direction is required at this time.

### **Recommendation # 1:**

*That the Woolwich Fire Department adopt a policy to review, on an annual basis, the Simplified Risk Assessment; to assess the impact of fire on the community and the risks associated with the characteristics of structures and operations, to understand where resources need to be focused on any budget year and develop a database from this review to document the risk and impact of fire.*

## **5.3 Fire Prevention**

Prior to beginning the process of the Fire Master Plan, the Fire Department was required to complete a Simplified Risk Assessment by the Office of the Fire Marshal. The fire safety priority that came from this risk assessment was that a smoke alarm program be established, including fire escape planning for single family dwellings and multi-unit residential buildings and that fire inspections be completed upon request or complaint. Fire extinguisher training and information should be provided for farms, campgrounds and commercial properties.

The Fire Department is active in the area of fire prevention and public fire safety education. Inspections are conducted in all types of occupancies within the Township including assembly, commercial, industrial, institutional and multi-residential dwellings. Fire Department staff will complete inspections upon complaint or request and forward a copy of the report to the owner of the property. These inspections are intended to ensure occupant safety and fire code compliance. Currently, the Fire Chief, Elmira District Chief and the CFPO are responsible for conducting the inspections. The Chief Fire Prevention Officer also has 6 volunteer firefighters who conduct inspections but require additional training. The volunteer firefighters as well provide some public education to the residents of the community. Public fire safety education programs are in place to educate all target groups in the community including pre-school children, school age children, and adults (which includes seniors and special interest groups). The public education programs that are currently being offered by the department are the smoke alarm program, which includes a fire escape plan, fire extinguisher training, older and wiser, and the WRAPP-C program.

A fire prevention policy is required to provide a policy as to when and which inspections should take place.

### **5.3.1 Public Attitude**

The Office of the Fire Marshall has noted "North Americans tend to be more complacent about fires and the resulting losses than other parts of the industrialized world."

It is important to understand the public's attitude towards fire so that properly designed public fire safety education programs can be delivered which will result in lower fire losses. Public attitudes may vary among various sectors of the community based on age (i.e. school children, adults, and senior citizens), type of property (i.e. commercial, residential, and industrial), ownership, etc.

The primary source of information regarding public attitudes comes from the personal experience of the Woolwich firefighters who are in daily contact with citizens of the community in both areas of fire protection and prevention. These experiences would appear to indicate that while the Department and its personnel are highly regarded and respected in the community, the public's expectations of the Department to have a solution for all sorts of problems and to respond to all emergency incidents is also very high. Public reliance on the fire service is significant.

While public response to fire safety, prevention, and education programs appears to be satisfactory, it is essential that these programs continue to be delivered to educate the public about how fire may affect their lives and what steps can be taken by individuals to minimize and mitigate the effects and results of fire. This is evident in the local business community where enforcement of the Fire Code and regulations may be seen as an additional bureaucratic cost to a business rather than the true intent, which is to actively prevent significant fire losses and to protect public safety.

### **5.3.2 Fire Prevention Program Effectiveness**

Public fire safety education, fire safety inspections, code enforcement, planning and fire cause determination/investigation are areas of fire prevention in which the Woolwich Fire Department has been involved, to varying degrees. The Township of Woolwich does not have a written policy that adequately addresses fire prevention activities.

#### **Status Quo**

Currently the township does not have a written Fire Prevention policy that outlines the activities that the municipality would like to undertake as part of its fire prevention program.

#### **Enhanced**

To ensure that the municipality is providing a proper level of service relative to public fire safety education, fire safety inspections, code enforcement and planning and fire cause determination/investigation there is a need for the municipality to develop a policy. The policy would outline a work program of priority fire prevention activities and when they should take place.

## **Optimal**

There is no optimal option because you either have a policy or you do not.

### ***Recommendation #2:***

*That the Woolwich Fire Department develops a written Fire Prevention policy for adoption by Council which includes a resourcing implementation plan. (See Recommendation #5)*

### **5.3.3 Public Fire Safety Education**

Public education activities are evident throughout the year with department involvement in community events such as the Maple Syrup Festival, the Ploughing Match, Fall Fair and Fire Prevention Week. We also give safety talks to several special interest groups that make a request such as Brownies, Scouts, day camps and nursery schools. There are various topics that can be covered at these events, such as barbecue safety, smoke alarms, fire escape planning, and a program for seniors called Older and Wiser. Another means to provide public education to the community is through the education system. Firefighters can conduct in-class sessions for the students, providing them with information on smoke alarms and fire escape planning. Public education conducted in the schools provides another opportunity for the Fire Department to reach the community, as the students pass along the information they receive and encourage their parents to participate.

The Fire Department offers a variety of fire safety education programs to both the general public as well as special interest and target groups. The department is active with a program called WRAPP-C, an arson prevention program which deals with problem juvenile fire-setters.

We have a number of other programs available, which enhance efforts to educate the public, such as, "Alarmed for Life", a program that addresses residential smoke alarms. These programs require a considerable number of hours to deliver. In 2005, The Smoke Alarm Program was launched. Through this program, we are better able to determine where our problem areas are in the Township. We are noticing now that one area, which requires some attention, would be in the development and utilization/practice of fire escape plans for households.

We have recently achieved compliance, and been presented with a certificate from the Office of the Fire Marshal for meeting the minimum requirements of the Fire Protection and Prevention Act, for our efforts in implementing the Alarmed for Life program. Currently, we do not have an industrial fire safety or farm safety program in effect. We would require additional man hours to deliver an adequate public education program in the community.

### **Status Quo**

In view of limited labour and financial resources the Public Fire Safety Education program that is currently in place is a reactive and complaint driven education program.

### **Enhanced**

To ensure that the municipality is meeting its legislative requirements as set out by the Province, the preferred option is for the municipality to implement a Public Fire Safety Education program that is somewhat reactive but also includes the targeting of identified risk sectors.

### **Optimal**

The municipality could choose to develop a comprehensive Public Fire Safety Education program to deal with all risk sectors. However staff does not feel that this level of service is required, and that the enhanced level will provide the municipality with adequate direction for the future.

### ***Recommendation #3:***

*That an enhanced Public Fire Safety Education program that meets the requirements of the Fire Protection and Prevention Act and the needs of the community be developed and submitted to Council for approval which includes a resourcing implementation plan. (See Recommendation #5)*

### **5.3.4 Fire Safety Inspections**

The Woolwich Fire Department currently performs inspections by request, complaint, or licensing. The inspections are conducted primarily by the part time Chief Fire Prevention Officer and the Fire Chief. This system needs to be modified, as the inspections should be conducted on an annual basis for the majority of occupancies.

The current high risk targets for inspections are not being performed, as the availability of man hours is limited. With reference to the Township's risk assessment, the high risk occupancies, including nursing homes, schools, the farm operations and manufacturing plants are only being visited upon request or complaint. Therefore the needs of the community are not being met.

While there is still a need for firefighting personnel to perform in-service inspections in commercial occupancies and pre-incident planning of certain occupancies, as of this time, we do not have any formal program in place. Dedicated or fire prevention staff are needed to perform fire prevention duties in occupancies such as institutional, assembly, industrial and multi-unit residential facilities. The presence of dedicated fire prevention staff would also greatly enhance public fire safety education programs.

A process for the certification of fire prevention officers is currently being developed for the Fire Service in Ontario. To expect an individual to progress through certification as both a volunteer firefighter and a fire prevention officer may very well be unrealistic. There may also be the possibility that an individual will be required to be certified in order to perform inspections in certain occupancies.

Fire safety inspections represent a key component of any fire prevention program. Inspections service a number of significant roles including: an opportunity to strengthen public fire safety education initiatives; enhance public safety; monitor fire code compliance; prosecution under the Ontario Fire Code, if required; and the promotion of public relations.

It is estimated that we require 1000 hours annually to provide the optimum level of fire safety inspections.

### Status Quo

That the current rate of inspections be maintained.

- 1) There is no frequency established for multi-unit residential occupancies. The department is still working on retro-fit legislation introduced in 1992.
- 2) There is no frequency established for industrial occupancies. Industrial inspections to date have been conducted only on either a request or complaint basis.
- 3) Current resources only allow for inspections of commercial occupancies on a request or complaint basis.

### Enhanced Level I

That a program be established that provides for a minimum acceptable frequency of fire safety inspections in all types of occupancies within the Township of Woolwich.

That the fire department develop a resourcing implementation plan to provide sufficient resources to maintain a minimum acceptable frequency of fire safety inspections.

### Enhanced Level II

That a program be established that provides for an enhanced frequency of fire safety inspections and public fire safety education.

That the fire department be provided sufficient resources to maintain an enhanced frequency of fire safety inspections.

### Optimal

That a program be established that provides for an optimum level of fire safety inspections.

That the fire department be provided the necessary resources to maintain an optimum level of fire safety inspections.

OCCUPANCY	Status Quo		Enhanced Level I		Enhanced Level II		Optimal	
	Freq.	Hrs. Req'd	Freq.	Hrs. Req'd	Freq.	Hrs. Req'd	Freq.	Hrs. Req'd
Assembly	Request or complaint		Annual	87	Annual	87	Annual	87
Institutional	Request or complaint		Annual	39	4 mos	39	Annual	39
Commercial	Request or complaint		3 yrs	236	3 yrs	236	3 yrs	236
Industrial			3 yrs	127	2 yrs	191	2 yrs	191
Residential – Multi Unit			3 yrs	13	2 yrs	24	2 yrs	24
Boarding/Lodging Hotel/Motel	Request or complaint		Annual	48	Annual	48	Annual	48
Single Family	Request		Request		Request		2 yrs	2442
TOTAL*				550		625		3067

\*These totals do not include the additional 300 hours for public fire safety education programs.

**Recommendation #4:**

*The recommendation is that Fire Inspections modified status quo that a program be established that provides for a minimum acceptable frequency of fire safety inspections in all types of occupancies within the Township of Woolwich. That the fire department develops a resourcing implementation plan to provide sufficient resources to maintain a minimum acceptable frequency of fire safety inspections be adopted.*

**5.3.5 Plan Review**

The Fire Department reviews site plans supplied by the Planning Department and also works closely with the Building Department to ensure compliance with applicable codes and regulations relative to fire and life safety. The strain on department resources is dependant on development activity and is difficult to predict in terms of man-hours required.

**Status Quo**

Currently the Fire Chief completes all plan review. When one combines all of priorities that the Fire Chief has on his plate, with the continued growth of the municipality and related plan review, a tremendous strain is put on staff in the area of plan review. This is not deemed to be the best utilization of resources.

**Enhanced**

The municipality would benefit from the hiring of a Chief Fire Prevention Officer. Sufficient resources could then be focused on plan review, inspections and public education priorities. This will allow the Fire Chief to have time for not just the day-to-day operational matters but also long term strategic planning.

**Optimal**

The municipality could look at hiring a Chief Fire Prevention Officer for plan review and inspections, as well as a dedicated Public Education Officer, but staff does not feel that the workload is such at this time that the municipality requires two new positions.

**Recommendation #5**

*That a full time Chief Fire Prevention Officer who would be responsible for fire inspections, public education and plan review, be considered in the 2009 Budget process to fulfill recommendations #2, #3 and #4 and to supplement departmental response where required.*

**5.4 Preplanning**

Planning for fire does not instill confidence or sense of security, however, knowing that responding Fire Department personnel are familiar with the building or facility does.

Successful fire ground operations can depend on the firefighter or officer having prior knowledge of a building. Its layout, construction, facilities, services, contents, and its use can all have significant impact on how a fire or any other situation is approached or handled and, ultimately, the success of Fire Department operations.

Developing an effective pre-plan of a building or facility can take a considerable amount of time; however there are tangible benefits that result from an effective program.

## **Status Quo**

Currently the municipality allocates very limited resources to pre-planning and building familiarization.

## **Enhanced**

Staff feels that a pre-planning and building familiarization program needs to be developed that targets high risk buildings. An effective pre-planning program can in turn save countless dollars in property conservation, minimize environmental impact, protect jobs and ensure the safety of firefighters and civilians. It is envisioned that the allocation of resources as recommended in other areas of operation will in turn free up man-hours allowing a redeployment of current resources, some of which can be directed to preplanning.

## **Optimal**

The municipality could develop a pre-planning program for all multi use and high assembly buildings. The optimal level is not required at this time because the municipality can meet the legislative requirements by targeting our high risk buildings.

## **Recommendation #6:**

*That the 2009 Operating Budget process include funding for fire suppression staff to carry out inspections as well as firefighting pre-planning and building familiarization.*

## **5.5 Cause and Determination**

Fire cause determination and arson investigations are routinely conducted by the department after the occurrence of a fire. The Office of the Fire Marshal is mandated to investigate all fires of a suspicious nature, however, with dwindling resources, an OFM investigator is increasingly hard to obtain. Therefore, the Woolwich Fire Department is required to investigate any suspicious fires, with only its own resources. Fire cause determination and arson investigation are an integral part of fire prevention. Currently only the Fire Chief has successfully completed any advanced fire cause determination courses.

The most effective way to fight a fire is to prevent it from happening in the first place. To do that there must be a clear understanding of the cause of fires in the community. Fire cause determination and arson investigation is a learned skill. There is a process currently being developed for the certification of municipal fire cause investigators. A trained eye is required to accurately determine the cause of a fire in the ash and ruin that accompanies fire. Critical evidence can be destroyed if firefighters are not properly trained in fire cause determination.

It is the duty of the Office of the Fire Marshall to investigate the cause, origin and circumstance of fire; however, these investigations are limited to suspected arson fires, fires involving a fatality, explosions and large loss fires.

It is important for the prevention of fire, as well as investigation by the Office of the Fire Marshall, that Township firefighters be trained in fire cause determination and scene preservation.

### **Status Quo**

Currently only the OFM completes the investigations on suspected arson fires, fires involving a fatality, explosions and large loss fires. To date, inadequate funding has been included in the budget to provide staff training in fire investigation and cause determination.

### **Enhanced**

It is being recommended that the municipality provide adequate funding for the training of staff in fire investigation and cause determination to allow for a clear understanding of the causes of fire in our community.

### **Optimal**

The municipality could choose to provide advanced training in fire investigation and cause determination which would eliminate the need for the OFM, but staff does not feel that there is a need for this level of service at this time.

### ***Recommendation #7:***

*That the Township of Woolwich sustain and embrace the inclusion of operating funds to provide additional training in fire cause determination, via increased staff attendance at the Ontario Fire College or regional schools if available.*

## **5.6 Fire Department Emergency Operations**

### **5.6.1 Response**

The Township of Woolwich Council, as per the establishing and regulating by-law, has authorized the Woolwich Fire Department to respond to the following emergencies; fire suppression, medical assist, motor vehicle accidents, land base water and ice rescue, hazardous materials (awareness level) and other emergencies as listed in By-law 81-96. Improved training and equipment at the five stations are required to meet current standards. Based on appropriate levels of service chosen by council, departmental guidelines and protocols would specify response and equipment levels at the station. Special training and equipment is required to respond to unique risks and hazards that exist within the township, i.e. chemical factories.

### **5.6.2 Emergency Operations**

The Township of Woolwich provides a 24-hour service to the community in the following areas: fire suppression, medical assist, and hazardous materials response, land based water and ice rescue, vehicle extrication, and response to any other natural or accidental emergencies.

The Township of Woolwich does not have a written policy that addresses the level of emergency service provided to the community.

The emergency services that the department currently provides are adequate for the needs of the community; with the exception of water rescue and aircraft fire fighting. The Fire Department is currently at the awareness level, land based rescue, which simply means that responding crews are restricted to land base rescue only.

**Concerns:**

If the incident involves water rescue that cannot be achieved by land then responding crews may be unable to execute a rescue.

There are a large number of reservoir systems and river systems in the Township where water and ice rescue would be required

- The present equipment is 10 years old and has not been upgraded
- There have been no refresher courses on water rescue for the firefighters other than in the Floradale Station
- There have only been 10 water rescue calls in 10 years – Conestogo and Floradale
- We presently have land base rescue only
- The boat in Floradale does not meet the NFPA standard
- To upgrade to water base rescue is costly
- The training is costly and time consuming
- It is difficult to train fire fighters to the minimum standard; it will be even more difficult to do specialty training
- There are full time departments within the Region of Waterloo (3) available to supply service with a limited amount of delay to respond

**Options:**

- Upgrade existing equipment as well as upgrade training for all stations (land based); call full time department to assist; cost approximately \$7500, training costs approximately \$2500
- Upgrade to shore based and boat based program. Train one station to NFPA standard; equipment costs approximately \$15,000; training costs approximately \$2500 to have one station trained to standard

**Status Quo**

The level of service the municipality currently provides is a restricted low level awareness in land based water rescue.

**Enhanced**

The preferred option would see the Township upgrade the existing equipment as well as upgrade training for all stations in land based water rescue, call full time departments when necessary to assist, with costs being approximately \$7,500 as well as training costs of approximately \$2,500.

**Optimal**

The optimal level would involve an upgrade to a shore based and boat based program. This would be to train one station to NFPA standards, with equipment costs being approximately \$15,000 as well as and training costs of approximately \$2,500. This comprehensive level is not required.

***Recommendation #8:***

*That the Woolwich Fire Department move to upgrade our land based water rescue and that agreements be executed with two of the full-time fire departments in the Region to supply water-based rescue when required and that sufficient operating funds be allocated to upgrade the existing land-based water rescue equipment.*

## **5.7 Fire Intervention**

### **5.7.1 Intervention Time**

Fire department intervention time is defined as the elapsed time from ignition to the application of an effective fire suppressant and is crucial in determining the consequences of a fire in terms of injuries, deaths, loss of property and damage to the environment. Reducing intervention time can significantly increase fire department effectiveness.

### **5.7.2 Detection**

Detection time is the elapsed time from ignition to the detection of fire.

### **5.7.3 Residential Smoke Alarms**

As a result of a 1998 amendment to the Ontario Fire Code, residential smoke alarms are required in single family dwellings. In 2004, the Woolwich Smoke Alarm Program was developed. The program ensures that every home within the township is inspected every five years. Presently, we have completed the fourth year of the five year program. The Fire Department promotes smoke alarms in all of its public education programs, as per the Alarmed for Life smoke alarm program.

### **5.7.4 Fire Alarm Systems**

The Ontario Building Code requires the installation of fire alarm systems in specific occupancies, while the Ontario Fire Code provides for the maintenance of these systems. These systems exist where required for the most part, however the systems are often not fire code compliant due to lack of maintenance. The maintenance of fire alarm systems is addressed as part of an inspection.

### **5.7.5 Built-In Suppression Capabilities**

As with fire alarm systems, the Ontario Building Code requires built-in suppression devices in certain buildings or applications. Again, the Fire Department addresses the maintenance of these systems as part of our inspection program.

The adoption of Recommendation #3 (That a comprehensive Public Fire Safety Education program that meets the requirements of the Fire Protection and Prevention Act and the needs of the community be developed and submitted to Council for approval which includes a resourcing implementation plan. (Also Recommendation #5 That a full time Fire Prevention Public Education Officer be considered in the 2009 Budget process to fulfill recommendations #2, #3 and #4 and to supplement departmental response where required) will address the issue of residential smoke alarms.

The adoption of Recommendation #4 (The recommendation is that Fire Inspections Option #2 be adopted. (See Recommendation #5 That a full time Fire Prevention Public Education Officer be considered in the 2009 Budget process to fulfill recommendations #2, #3 and #4 and to supplement departmental response where required) will address the issue of fire alarm systems and built in suppression capabilities.

The Building Code does not address residential fire suppression systems. Residential sprinkler systems are designed to provide early fire suppression capabilities with minimal water damage.

### **Status Quo**

The fire department currently addresses the maintenance of sprinkler systems as part of our inspection program.

### **Optimal**

That the municipality support changes to the Building Code to mandate the installation of sprinkler systems in residential occupancies and that monitoring occur through the Kitchener Fire Department direct detect program.

### **Recommendation #9:**

*That the Fire and Building Departments of the Township of Woolwich encourage the installation of residential sprinkler systems wherever practical and that the Township of Woolwich endorses the Kitchener Fire Department Direct Detect Program which monitors smoke alarms in residential properties in the Township of Woolwich.*

## **5.8 Communications**

The Regional Voice Radio system has just gone through an upgrade. This has improved the radio communications from vehicle to vehicle, as well as the portable radio communications between firefighters and dispatchers.

Our paging system has improved with the upgrade of the repeater system but additional modifications are still necessary. Pagers are continuously submitted for repairs, some of the complaints being that pagers are not activated when a call comes through. For example, if a station is paged for a call, some firefighters may receive the page, while others from the same station do not. Twenty new pagers were purchased last year to help alleviate the problems and the coverage of the new pagers has been excellent. There are several buildings where the old pagers do not function, while the new pagers receive every call.

The Fire Department installed a computer network in all stations, which link these stations to the Township Administration Office. These computers are used by the Officers to input information about calls into the Firepro2 software program. This software also assists with the tracking of personnel records, incident reporting, inspections, fire prevention activities and occupancies, enabling us to pre-plan any high risk building.

### **Status Quo**

Currently the municipality replaces 10 to 12 pagers per year, however this six year replacement program is insufficient for the Department's needs because it means that there are still pagers in the system that are not working properly,

### **Enhanced**

To ensure that an adequate replacement program is in place the municipality should be replacing 30 pagers per year as part of a two year phase program. This will provide an effective replacement program and an enhance notification system.

## **Optimal**

It would be advantageous to replace all the pagers in one year; however this type of replacement program would be cost prohibitive.

### ***Recommendation # 10:***

*That the Woolwich Fire Department replaces all Minitor II and Minitor III pagers in the 2008 and 2009 budget years.*

### **5.8.1 Notification**

Notification time is defined as “the elapsed time between discovery of the fire and the communications centre receiving notification of the fire”.

The Township of Woolwich has an enhanced 9-1-1 system in place. Problems, which surface from time to time, are generally as a result of the caller not having the correct information to give to the 9-1-1 operators. This can range from not having or knowing the correct address to not having correct or sufficient knowledge of the nature of the incident. There can also be a hesitation by the general public to call 9-1-1. People can be reluctant to categorize the circumstances as an emergency. They often wait until the situation escalates until there is no question that they need help. This often results in a significant negative impact in the mitigation of an incident regardless of its nature.

### ***Recommendation # 11***

*The enhanced 9-1-1 system is the best the Township could expect to provide its citizens. The problems described above can be addressed through public education programs.*

### **5.8.2 Dispatch**

Dispatch time is defined as “the elapsed time between the communications centre receiving notification of the incident and the incident having been dispatched to the fire department”.

Kitchener Fire Department provides our dispatching service on a contractual basis. Incoming emergency calls are answered and appropriate vehicles dispatched to the incident. This service also looks after contacting any further resources that may be required, i.e. hydro, gas, police, etc. They track all times and other information that is transmitted over the air, which is provided to them by the members of the Fire Department. This information is entered into CAD by the dispatchers. Once the call has been terminated, the Officers can complete the required paperwork in the system. The centre is also equipped with paging capabilities, which operate on the Regional of Waterloo radio system. This allows the communicators to instantly notify firefighters of any emergency requiring fire department response. The dispatching system has been recently upgraded, the computer aided dispatch system and a records management information system. Woolwich runs its own incident management system (FirePro), which will allow firefighters preplan information and history of properties. Many of the current pagers that are used by the Fire fighters are older models and are not repairable because of their age and lack of replacement parts.

### **Status Quo**

The Township is in the third year of a five year contract with Kitchener Dispatch which meets our current needs. The municipality could consider investigating contract service with another supplier(s) or choose to provide our own service, but currently Kitchener is meeting our needs.

## **Recommendation #12**

*Continue with the status quo and contract with the City of Kitchener for our dispatching service.*

### **6. Assembly**

Assembly time is defined as “the elapsed time between the fire department receiving the alarm from dispatch and the first apparatus actually responding”.

Assembly time is affected by a number of factors, but primarily by the number of firefighters available at the time of alarm, the proximity of firefighters to the alarm location and responding station.

#### **Concerns:**

1. Firefighter availability during daytime, weekday calls.
2. Firefighter's proximity to fire station. (i.e. Firefighter lives or works ten minutes from station)
3. Firefighters that don't have proper licensing to operate apparatus.
4. Firefighters and staff are not aware of how many personnel are on scene due to the usage of personal vehicles to travel to the incident scene.
5. Health and safety issues are raised due to firefighters arriving prior to the apparatus.
6. Liability is also increased, as firefighters are unable to do anything prior to the arrival of apparatus.
7. No response or limited response on several occasions from designated stations because of lack of adequate staffing

#### **Status Quo**

As outlined above, there are a number of concerns related to assembly time, including insufficient volunteer fire fighter weekday, daytime response at a number of the fire stations throughout the municipality. Staff is concerned that in some areas we are unable to meet the 10 firefighters in 10 minutes eighty per cent of the time requirement.

#### **Enhanced**

It is recommend that with respect to structure fires that a two station response model be implemented to ensure that the municipality is able to meet the 10 firefighters in 10 minutes eighty per cent of the time requirement. Staff had to implement the enhanced level with respect to Maryhill and Conestogo.

#### **Optimal**

It may be necessary to examine movement towards a composite fire service which would include part-time staffing to meet our daytime response needs.

To ensure proper weekday, daytime response the municipality will most likely have to look at enhanced and optimal options.

**Recommendation # 13:**

*That in the event that the fire department encounters response problems due to volunteer staffing deficiencies, the Fire Chief be permitted to increase the number of firefighter personnel, subject to the availability of funding. Options to be considered include:*

- *Two station response*
- *Part time staff – Monday to Friday*
- *Using firefighters that are employed in the communities but could respond to achieve the Standard*

**7. Status of Current Fire Stations**

The fire halls, apparatus, and equipment are maintained by department staff as much as possible, for example, cleaning, painting, or minor repairs. General Contractors are used when staff does not have the expertise or the time available to complete the repairs.

The Township Fire Chief requested the Manager of Facilities to perform inspections of the existing stations and forward a report. As a result, the following items require consideration to be established, repaired, or replaced:

**Conestogo Station:**

1. New rated fire door and repair of the fire separation between the training room and truck bay.
2. The creation of a work/office area for Officers to complete administration duties.
3. Purchase of emergency back-up power for the station.
4. Larger training area to accommodate 25 fire fighters.

**Elmira Station:**

1. Create a larger training area
2. Install a carbon monoxide exhaust system.
3. Replace ceilings and walls in training and administration area.
4. Create an new office area for Officers
5. If a larger apparatus is purchased in the future to transport firefighters, the station may not have enough depth to store the apparatus. Therefore, an addition may be required to the side of the building. (1,670SQ FEET)
6. Station does not have emergency back-up power

**Floradale:**

1. New station to be constructed in June, 2008

**Maryhill Station:**

1. Foundation wall requires repair, floors are cracking and separating
2. Future fire trucks will possibly require additional space, which is not available on this particular property.
3. The floor is settling into the cistern under the truck bays and meeting area.
4. No room for maintenance of equipment.
5. Inadequate work area for Officers to do paperwork.
6. No area to clean and dry personal safety equipment.
7. No room for equipment and station training.
8. Station does not have emergency back-up power.
9. No room for possible expansion or replacement of the building.

**St. Jacobs:**

1. As the hall is used by other groups, there are accessibility requirements for assembly that need to be met.

**Facility Back Up Power**

The location of the fire halls is critical to effective fire department emergency response. Fire halls need to be strategically located if Fire Department response is to be within accepted time limits. Fire stations should be located in close proximity to the residences of the firefighters to allow for quick assembly times. The fire stations currently do not have emergency back up power and should be equipped with such. The township has experience increased blackouts and the stations need to be running during blackouts the need to have back up power is critical to station operations.

**Status Quo**

With respect to the current situation that exists in Woolwich, it is only the St. Jacobs Fire Station that has a backup power system in place.

**Enhanced**

In terms of finding middle ground solution the Township could look at starting with certain stations being designated as priority locations for back up power.

**Optimal**

It would be staff's preference to have all stations fitted with backup power, as all stations will require a backup power supply in a blackout type situation.

**Recommendation # 14**

*That the Woolwich Fire Department present to Council for consideration, a program outlining the equipping of fire stations with portable back-up power to provide power during an emergency.*

**7.1 Station Location and Models**

The Fire Department has conducted a study of the response areas in the Township as part of the Master Fire Plan process. Throughout this study we have taken a look at a number of options that we felt as a committee would better serve the community. As previously referenced, some of the stations require significant repairs to bring them up to standard. We have investigated possible locations for these stations. Time trials were conducted to research travel time to various locations throughout the township.

The chart below indicates the total number of calls received annually for the past four years. Taking into consideration the growth in Woolwich, it is obvious call volume will increase in the future. In recent years, as vehicle traffic has risen throughout the township, the occurrence of motor vehicle accidents have increased as well. When the combination of elevated traffic and special services are taken into account along with the added growth of the township, and the additional tiered response services being delivered by the Fire Department, the logical conclusion is that the response statistics for the department will continue to escalate.

<b>Response</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
Structure Fires	183	216	152	80	43
Medical	329	394	405	324	242
MVC(accidents)	107	87	109	92	115
False Alarms	46	100	71	110	92
Other (rescue, CO)	18	20	80	142	167
<b>Total</b>	<b>683</b>	<b>753</b>	<b>881</b>	<b>748</b>	<b>659</b>

The committee reviewed the fire station locations analyzing the run statistics, the proposed growth areas, and mapping areas of deficiency in response times. The Council of the Township of Woolwich adopted the NFPA 1720 standards of 10 fire fighters in 10 minutes 80 % of the time. This was used as the standard and any areas that the fire fighters did not meet this standard were highlighted to determine areas of deficiency. The committee reviewed the following models and possible improvement options:

### **Travel**

Travel time is defined as “the time required for the fire department to physically travel to the scene of the fire”.

Factors affecting travel time include the time of day, weather conditions, road conditions or location of the incident. These factors generally are considered to be uncontrollable. Other factors that can have significant impact are traffic conditions, location of fire halls, travel routes and distances. These can be controlled or manipulated to enhance travel time. Some areas in the municipality have excessive drive times which affect the response time to those locations.

### **Models**

#### **Existing Fire Station Model**

The current coverage under the existing service is deficient by 18 % with the guideline of 10 fire fighters in 10 minutes 80 % of the time. Currently the Township has a response time on average of 10 fire fighters in 10 minutes 62 % of the time. To endeavor to meet the guideline set by Council the Township can change the current fire station locations, move to hiring full- time fire fighters at one or more stations, add new fire station locations, or entering into service contracts for fire coverage with neighbouring municipalities.

The committee identified a number of areas of concern which included the residential and commercial growth areas in Breslau, covering the risk with the Airport and Safety Kleen in Breslau, areas in Heidelberg where the response time is over the 10 minutes, Erbsville, Floradale north area, West Montrose (value of loss is high in West Montrose), Bridgeport, Ebycrest area, and the Middlebrook Road area. The committee reviewed the current fire station model and agreed that changes would be necessary to improve the fire service for the Woolwich residents.

The committee also reviewed the location of the Elmira station as a possible option to reduce the travel distance to improve the service in the West Montrose and the northern area of Woolwich.

## **Six Station Model – Adding Breslau**

### Station in Breslau located at Beacon Point Court

In determining the proposed location of a new fire station in Breslau, the committee reviewed the run stats, proposed growth areas, level of risk with regard to the Regional Airport and the commercial component of Breslau, specifically Safety Kleen. The advantage of locating the station at Beacon Point Court is that it will provide better coverage for the residential growth in Breslau. This location provides good coverage for the high risk areas such as the Regional Airport and Safety Kleen. This location would reduce the calls for the Maryhill station by 48%. In 2006, Maryhill attended 165 incidents. If the Breslau station were added, this number would be reduced to approximately 79. Adding another station in Breslau will increase the operation costs for fire services by increase capital costs to build and equip the station. It would take approximately 2 years to train and have a number of volunteers ready to man the new station.

### Locate the Breslau Station by the Regional Airport

Another location could be to locate the Breslau station near the Regional Airport. This could be an advantage if the Township is contracted to provide airport fire coverage. It is also closer to the high risk industries for daytime response. The disadvantage of this location would be longer turnout time for firefighters. The Township may be required to hire part-time firefighters to provide the level of service to the Regional Airport and settlement of Breslau. There is also risk that the Airport could lose their airline carriers, therefore, eliminating the need for fire coverage.

### Composite Fire Department Stationed In Breslau (Beacon Court location)

Another possible option is to hire four (4) full time firefighters stationed in Breslau to respond with a lower number of volunteers. The full time would be contracted to supply fire service to the airport. Two firefighters would be staged at the airport to supply the service when demanded. Other duties include providing specialized training to all volunteers in the areas of Hazardous Materials, Water Rescue, Auto Extrication and Aircraft Rescue Fire Fighting. Additional duties could include fire prevention/education and preplanning. With full time firefighters, there would not be the need to contract service agreements with other municipalities for coverage.

### **Maintain the Status Quo: Re: Breslau Coverage**

A decision will need to be made whether or not the township wants to provide fire coverage at the airport. At this point, there are no volunteers trained in this type of airport coverage. If the decision is to provide coverage, this may provide revenue in the future. If the decision is not to provide coverage, Cambridge Fire Department (proposed station is behind the Toyota Plant), has a 3 1/2 minute response time to the airport.

### **Remove Conestogo Station, Add a Breslau Station, Relocate Elmira to Church Street**

The committee reviewed the option of removing the Conestogo Station, adding a Breslau Station, and relocating the Elmira Station to Church Street. The percentage of 10 firefighters in 10 minutes increased from 62% to 68%. With the removal of the Conestogo station, response time to the Winterbourne area becomes a problem; however, the coverage for Breslau improves.

### **Remove Maryhill Station and add Breslau Station**

The committee examined removing the Maryhill fire station and adding a new station in Breslau. Although, the response time coverage increases from 62% to 64%, the problem of response time is merely transferred from Breslau to the northern Maryhill area. One other consideration is that the township would lose the service agreement with Guelph-Eramosa. The Maryhill station currently provides fire service for part of Guelph-Eramosa and generates \$ 28,194.00 dollars in revenue each year.

### **Remove Conestogo and Maryhill, add Winterbourne and Breslau (stay with the 5 station model).**

One advantage of closing the two existing stations would be the resale value that could be used as revenue towards the construction of new fire stations. In removing the Conestogo and Maryhill stations and adding stations in Winterbourne and Breslau, coverage increases from 62% to 77%. The concern with this scenario is the lack of volunteer base to sustain a fire station in Winterbourne and the loss of trained firefighters with the closing of Conestogo and Maryhill. With no commercial or industrial base in Winterbourne, there is the concern that there would not be volunteers available to respond between 8:00 am and 5:00 pm.

### **7.2 Fire Coverage Breslau Area**

The population and building growth in the Breslau area within the next 5 years is expected to triple. The response time from the Maryhill station is greater than the 10 in 10 requirement mandated by the OFM. A temporary solution would be to contract coverage from the Cambridge Fire Department.

There are large industries that pose a high risk such as the Safety Kleen oil recycling plant. The question becomes where is the optimum location for a station in Maryhill's coverage area. As the volunteer firefighters live in the settlement, the response time to the residential area is well within the 10 in 10 rule.

If there is an opportunity to locate a station close to the airport, part time firefighters could supply the service; however, this location does not serve the settlement area. Firefighters traveling from their homes to the airport and returning with equipment to the settlement area for a call would double the reaction time. The Region purchased an Aircraft Rescue & Fire Fighting (ARFF) vehicle but has no long term plan. There are costs to train firefighters to ARFF standard as well as a cost of administrating schedules for coverage. Building a fire hall and supplying staff support at the airport is risky. If air operations that require fire-fighting services are dissolved, lost capital dollars will result if a station is built at the airport since it would not service the settlement area. This would push the township into a part-time or composite fire service.

#### Other Options:

- a) Contract outside trained staff and pay an hourly rate
- b) Train volunteer staff and pay the township hourly rate
- c) Hire Township firefighters to cover Monday – Friday. When not attending the airport, other duties such as pre-plans, inspections and medical responses would be performed.
- d) Highway 7 and Beacon Point Court: If the Breslau station was located at Beacon Point Court and other stations stay at their present locations, 10 in 10 rule would be met 70% of the time. All areas past Maryhill to Highway 7 will be affected. West Montrose and Middlebrooke will be beyond the minimum coverage. The coverage problem is then shifted from Breslau to Maryhill.

- e) Close Maryhill and Conestogo/Build Station in Settlement of Winterbourne: Conestogo covers the largest area in the township. No firefighters reside in the settlements of Breslau or Winterbourne. Locating here would still not solve the problem of lack of daytime coverage for Conestogo. Staying with the five station model, the fire department meets the standard of 10 in 10, 83% of the time.

Floradale station on Florapine Road: Certain pockets in the coverage area do not meet the 10 in 10 rule; however, this also applies to the current location of the station.

**St. Jacobs:** Maintain present location.

### **Location of Elmira Station**

#### Remain At Present Location

One option is to remain at the current location. The current Elmira Fire station building will need to be upgraded and expanded. An expansion is needed at an estimated cost of \$300,000 to provide room for a tanker. The present location is 8.1 km to West Montrose at Covered Bridge Road. Travel time is slowed down due to traveling through the industrial area at 50 km/hour.

#### Relocate Elmira Fire Hall- to corner of Church and Memorial

Another option to allow for 10 fire fighters in 10 minute coverage to West Montrose area is to relocate the Elmira Fire Station to the corner of Church and Memorial. This location would lower the turn out time for the Elmira Fire Fighters that currently have an average time of 3 minutes and 46 seconds. At the present time the other fire stations turn out time is at 3 minutes and 24 seconds. This location would still provide coverage for the high risk areas within Elmira. The draw back to this location is that this is a busy corner to exit the fire station.

#### Relocate Elmira Station- to 126 Church Street West Area

In the area of 126 Church Street West the Lunar Group will be developing all around this area and there is the possibility of land being set aside for a new fire station. Also there is the possibility that John Deere may sell 3 acres of their property. This location is 7 km to West Montrose at Covered Bridge Road with a travel time of 7 minutes @ 80 km/hour. Conestogo station, at its present location is 8.6 km with a travel time of 7.25 minutes to Covered Bridge Road travelling on Highway 86. This provides a response time of 1 minute longer to West Montrose versus the Church and Memorial location but the response to the station for the fire fighters would be reduced. The access for entry and exit of the fire hall would be better than the Church and Memorial location.

#### Service Contracts

The committee reviewed the fire service to the Heidelberg and Breslau areas. In contracting fire service for the Heidelberg and Breslau areas the response time will increase to 72%. This is still not meeting the guideline of 80 % but may be acceptable coverage if Council chooses to lower the standard in these areas.

### Full-time Fire Fighter Coverage

A volunteer fire fighter on average will take 3 minutes and 25 seconds to respond to the station this adds to the overall response time to arrive on the fire scene. In the hiring of a minimum of 4 on duty Fire Fighters stationed in Breslau and Elmira, the response time decreases by the response to the hall because the fire fighters are already working. With full time fire fighters, the standard allows for 9 minutes of travel time. With a volunteer, it only allows for a 6 minute travel time. Therefore, the travel radius for a full-time fire fighter is greater. With further growth in Elmira and Breslau, the Township will need to review the benefits of a full-time compliment. The Office of the Fire Marshal recommends that if a station has over 1000 calls that there is a review of the response times and that the compliment change to full-time. One of the reasons it is recommended to move to a compliment of full-time is that fire prevention and education as well as training become an issue for volunteer base stations when the call volume increases over 1000 calls.

### **Recommendation # 15:**

*That the Township approve a six station model:*

- a) and that the Breslau station be constructed in 2011;*
- b) and that a three year recruitment and training program for volunteer firefighters begin immediately;*
- c) and that the Township of Woolwich enter into an Automatic Aid Agreement with Cambridge or Kitchener to cover the Breslau area until the new station is constructed and manned at a cost of \$120.00 per household per year;*
- d) and that consideration be given to the relocation of the Elmira station to a Church Street location;*
- e) and that the Township of Woolwich pursue an Automatic Aid Agreement with Wellesley Township Fire Department for coverage in the areas of Kressler Road and Lobsinger Line at a cost of \$1,050.00 per call (average call volume per year 12 calls).*

## **8. Fire Ground Staffing**

### Set-Up

Set-up time is measured from the time the Fire Department arrives on scene to the actual initiation of the fire attack.

Set up time is directly proportional to the availability of trained manpower and equipment. Set-up time generally involved the following activities:

- Size-up of the fire
- Establishing a Safety Officer and an Accountability Officer
- Establishing a water supply
- Engaging the pump
- Deploying hose lines
- Donning breathing apparatus
- Making entry into the fire zone
- Locating the fire and commencing extinguishment

### Fire Ground Effectiveness

Fire Department effectiveness on the fire ground has a direct relationship to property damage, environmental damage, personal injury and death. Factors which influence effectiveness include:

- Fire risk
- Fire ground staffing
- Response time
- Fire ground command and control
- Operating guidelines
- Firefighter safety
- Apparatus and equipment
- Fire prevention and public education
- Water supply
- Firefighter and officer training
- Pre-planning

Several of these factors are detailed elsewhere in this report and therefore will not be addressed again here. This does not imply that those factors do not have significant impact on fire ground effectiveness.

Adequate fire ground staffing is judged on two (2) considerations:

1. Assembling initial fire attack teams – Minimum fire ground staffing required to initiate safe, effective interior fire attack including rescue in a 1-1 storey single family dwelling is ten (10) firefighters including a supervisor. The Office of the Fire Marshal guidelines on fire ground staffing calls for ten (10) firefighters in ten (10) minutes and Section 21. (*The Section 21 committee is comprised of representatives of the fire service, Ministry of Labour and the Association of Municipalities of Ontario.*) Section 21 calls for the appointment of a Safety Officer and an Accountability Officer prior to the commencement of interior fire attack operations. The assembly of initial fire attack teams has some urgency – flashover can occur within 6-8 minutes after ignition. Chances of survival after flashover are very minimal.
2. Sustaining effective fire attack – A successful fire ground operation is often dependant on a sustained fire attack. The frequent rotation of fire attack teams and rehabilitation of exhausted crews is crucial for safe, efficient fire ground operations.

### **Status Quo**

No policy is in place currently. Resources are requested by the incident commander.

### **Enhanced**

It is being recommended that a policy be developed, and that the level of service be pre-determined by Council

### **Optimal**

An option could be that the minimum and maximum staffing levels be outlined through a policy set by Council.

**Recommendation #16:**

*That the Woolwich Fire Department develops a written "Level of Service" (Standards of Response) policy that addresses all areas of emergency services provided by the department to be submitted to Council for approval.*

**8.1 Fire Ground Command and Control**

Fire ground command and control serves a critical function on the fire ground. Successful operations require a well planned, coordinated attack. Firefighter and civilian safety is seriously jeopardized without proper command and control. The Woolwich Fire Department has a comprehensive command system in place which addresses both command and safety issues.

**8.2 Operating Guidelines**

Ensuring safe, effective and efficient fire ground operations is dependent on personnel operating within accepted parameters. Operating guidelines provide firefighters with the parameters they need. The Woolwich Fire Department requires developing a series of operating guidelines which are intended to cover all aspects of operations. These guidelines are prepared and need to be reviewed and revised if necessary each year. Operational guidelines are a fundamental part of command and control.

**8.3 Firefighter Safety**

Firefighting can be described at best, as extremely hazardous. Conditions on the fire ground can deteriorate in seconds and place personnel in a very life threatening situation. The Municipal Joint Health and Safety Committee have fire personnel within its structure.

**Status Quo**

The current process is deficient because there is a lack of co-ordination. The municipality does not have a committee in place, and so in the absence of a committee the operating guidelines are completed by each individual fire station.

**Optimal**

The best option for the municipality would see a staff working committee established that includes representatives from all the township fire stations. The committee would meet, develop and revise all operating guidelines for the Woolwich Fire Department. This type of process would be comprehensive and co-ordinated.

**Recommendation # 17:**

*That the Fire Chief assigns a committee to review and revise the Standard Operating Guidelines of the Woolwich Fire Department.*

**9. Apparatus**

The tools of the trade for the fire service are constantly changing and improving. Risks to public safety are numerous. The cost of protecting our community from these risks is expensive. The Township owns sixteen pieces of apparatus which includes six pumpers, four tankers, five rescue trucks and one aerial truck. The pumpers have been tested and while generally in good shape, some pumps are in need of minor repairs. Two of our tankers have had several mechanical problems recently, most occurring while responding to emergencies.

Due to the age of the apparatus, parts for repair are becoming more and more difficult to find, which causes the equipment to be out of service for several days at a time.

A formal vehicle replacement program is integral to the continuing availability of dependable apparatus for emergency purposes. It is also a useful tool in the budgeting process. It provides for long range planning and when used with capital reserve funding, ensures necessary funding for scheduled apparatus purchases. To follow a recommendation by the insurance underwriters, apparatus should be fifteen (15) years or newer for front line emergency response and twenty (20) years or newer to be a reserve vehicle. A vehicle would need to be replaced one every year, which would require the Fire Department to put approximately \$220,000 in reserve per year. In the several reviews that have been completed by different groups, they all recommend a vehicle replacement program.

The fire vehicles must be designed with enough space to allow the fire fighters to be seat belted. The Ministry of Transportation regulates that anyone in the fire vehicle needs to be seat belted.

### ***Vehicle Replacement Schedule***

<b>Replacement Year</b>	<b>Vehicle</b>	<b>Cost</b>
2007	Floradale Rescue	\$230,000
2008		
2009	Floradale Tanker	\$190,000
2010	Floradale Pumper	\$280,000
2011		
2012	Maryhill Rescue	\$230,000
2013	St. Jacobs Rescue	\$230,000
2014	St. Jacobs Tanker	\$190,000
2015		
2016	Conestogo Pumper	\$280,000

### **Status Quo**

The current replacement program is every 20 years.

### **Enhanced**

The municipality could evaluate the benefits of moving to a replacement program that would involve vehicles being replaced every 15 years.

### **Optimal**

Alternatively, the municipality could evaluate the cost/benefits of a 10 to 12 year vehicle replacement program.

Staff believes that the current status quo replacement program of every 20 years is acceptable for the township needs. The other options would be cost prohibitive for the municipality to entertain.

**Recommendation # 18:**

*That a capital equipment and vehicle replacement program be reviewed and that an updated program be submitted to Council for consideration and that when purchasing replacement vehicles, that they provide adequate room for personnel (i.e. crew cabs)*

**10. Portable Equipment**

Risks to public safety are numerous and generally go unnoticed in the public's daily routine. The township fire service has a variety of portable equipment and tools that are necessary to conduct fire, medical and rescue operations. This equipment includes portable pumps, ladders, hoses, medical response equipment (o<sup>2</sup> respirators, defibs) breathing apparatus, thermal imaging camera and a variety of specialized equipment to deal with hazmat incidents.

In the past, there was no formal replacement program for portable equipment. Minor capital funds were created for each station and equipment was purchased independently. There was no effort to standardize equipment, improve internal operability or take advantage of bulk purchasing. This created maintenance and repair issues and also led to training and firefighting safety concerns. With a two station response, it is important that firefighters are familiar and trained on the same equipment. In an effort to standardize the equipment thereby improving the operability of the five stations, the minor capital accounts of the five stations were amalgamated into one account in the 2007 administration operating budget. When these funds are in the operating budget and fire call payment to the volunteers exceeds the assigned budget amount, minor capital funds are not used to try and mitigate the budget overage. The result is that equipment that was old and out of date was only replaced if it was not operable.

The department has approximately 1.2 million in portable equipment and firefighting gear. Currently, staff is entering this inventory in FirePro, the fire software program. The cost of protecting the community from public risks/threats is expensive with tools of the trade constantly changing and improving. A staged capital replacement program is needed to keep equipment current and reliable as well as meet Health and Safety regulations and NFPA standards. This will enable the township to be in compliance with the 2009 Public Sector Accounting Board (PSAB) provincial mandate and assist the township in tracking a capital replacement program. It is estimated that \$120,000 per year plus inflation for the next ten years would keep the department modern and reliable.

**Status Quo**

The existing program is inadequate because equipment is only replaced when it no longer meets the current standards or the equipment is deemed to be not repairable.

**Enhanced**

Staff would suggest that the municipality adopt a 10-year staged capital equipment replacement program so that sufficient regard is being given to the corporation's health and safety obligations.

**Optimal**

A 5-year staged capital replacement program for equipment could be investigated. However, staff feel that this program level is not warranted and would be quite cost prohibitive.

**Recommendation # 19**

*That the Township of Woolwich develop a staged capital equipment program allowing \$120,000 per year plus inflation for the next ten years and that the level of this program be evaluated in four years time.*

**11. Water Supply**

Water serves as the primary suppression agent. Water supply for firefighting purposes in the Township of Woolwich is provided through a water distribution system and from hydrants in some built up areas. Some water systems in the urban areas do not have an emergency backup system in the event of a power failure. In the out lying rural area, the fire department is required to bring water with them via our tankers. For the most part, this system is adequate, although there are areas in the township where there is a long drive in order to refill the tank.

The township also has a wide range of holding tanks. New subdivisions have become more standardized, i.e. 30,000 gallon complete with draft pipe, fill pipes and venting. There are access hatches and ladders for inspection and maintenance use. Not all hatches are secure leaving the township vulnerable for liability should something happen. Access varies from good, year round, to seasonal, to porta-pump, to unsure. New development and standardized tanks may meet requirements for fire flow; however, no supporting documentation has been located. Older tanks are undersized and would have difficulty meeting the current fire load.

**Elmira and Breslau** have reliable water main hydrant systems maintained by municipal staff.

**St. Jacobs** has a good water main hydrant system although has experienced issues around power failure and fire flow in the extreme south end of the settlement. Pressure/flow problems are also an issue due to the variance in grades.

**Conestogo** has two subdivisions that have adequate water main and hydrant systems; however numerous power failures without immediate backup power have been experienced.

**West Montrose** has a water main system that is not sufficient enough to allow for hydrants and is subject to power failures.

**Maryhill** has two subdivisions with water main systems independent of each other. Isley water system does not have well field/pumps to expand. Maryhill Heights system, although designed for a fire protection system has never been developed and cisterns were opted for in place of hydrants. Both of these systems experience numerous power failures with no immediate backup power generation.

**Option:** Install hydrants in Maryhill Heights. As the infrastructure is in place, extend service to the 67 homes in the Isley subdivision.

**Farmer's Market** subdivision is an extension of the City of Waterloo water system with the Westmount standpipe of 6 million gallons. It is a dead end pipe system (not looped) with the King Street development (Power Centre).

**Option:** When future development occurs, loop to Waterloo.

Bloomingtondale, Winterbourne Floradale, Maryhill core, Wright subdivision, Conestogo (old village) has no municipal water systems. There is no expected growth in Heidelberg.

**Option:** Install dry hydrant system in Floradale. Approach Floradale Feed Mill - may consider a partnership with the Township to split the cost of a 30,000 reservoir.

Each station compiled a list of ponds and streams available for use as alternate water sources. Reliability is not guaranteed.

#### **Shuttle Tanker Service**

- Minimum 4 tanker response for each confirmed structure fire
- Increase in operational costs-80 calls in 2006, would average an extra 8 fire fighters per call, minimum 1 hour per call, approximate cost would be \$4,000/year
- Requires additional tanker in Elmira Station-\$160,000 plus operating costs
- Requires additional space to house tanker in Elmira. 1,600square feet @ \$180.00/square foot= \$185,000
- Costs saving to residences without hydrant system \$300.00/ year
- Requires change to response protocol
- More Mutual Aid response from neighbouring departments
- Training required by Elmira Station-300/hours cost \$6,000.00
- Must maintain year round water supply to meet certification standards

The committee reviewed the tanker shuttle service and recommended that the township pursue upgrading their water service systems before moving to a tanker shuttle service system.

#### **Recommendation # 20**

*That the Township of Woolwich pursues the upgrading of the following water systems:*

- *Install hydrants in Maryhill Heights, and Isley subdivision when the Region upgrades well and reservoir capability (township infrastructure is in place)*
- *Install hydrants in Heidelberg when the Region upgrade well field and reservoir capability (township infrastructure is in place in phase I and II)*
- *Install hydrants in West Montrose with expansion to Region well field and reservoir*
- *In all the above examples that the township pursue as an interim measure that the capacity of the said water systems be expanded to allow for residential sprinklers*
- *The St. Jacob's pressure versus dire flow capability be resolved before any future development (consider second river crossing)*
- *Install a dry hydrant system at Floradale dam and further a partnership with Floradale Feed Mill in providing a fire reservoir.*
- *Develop a comprehensive dry hydrant program for the long term supply of adequate firefighting water in rural areas*

*And further that the township evaluates the need for a tanker shuttle service in each of the station area.*

## 12. Firefighter and Officer Training

The Woolwich Fire Department provides a wide variety of emergency and non-emergency services to the community. The Fire Department is expected to provide these services effectively, efficiently and safely. In order to accomplish this, training must be comprehensive and on-going.

The Woolwich Fire Department does not have a comprehensive training program in place and lacks the facilities to deliver this program effectively. Classroom training sessions are currently conducted at each station. Other than the St Jacobs station, the training areas are small and not a good environment for learning. Most of the practical training is usually done on practice nights through out the year. The Regional Training Facility is available on request to conduct live fire training.

Given the variety of emergency and non-emergency services the department provides the community, training demands considerable time and attention. Our firefighters should train to provincial standards in firefighting techniques as well as vehicle extrication, land base water and ice rescue, medical care, awareness level hazardous material response, fire prevention and code enforcement, driver training and officer training.

The Department is mandated to keep training records on each firefighter, which documents the training history and competency level of that individual. The training program must be under constant review and revision in an effort to maintain an acceptable level of training to meet legislative and liability requirements. These demands are greater than ever and place added pressure on department resources.

The co-ordination of department training activities, program development and review, personnel performance assessments and profiles, is increasingly complex and time consuming.

Demands of such programs as General Level Fire Fighting Curriculum (GLFF), Section 21 Guidelines, Advanced First Responder, Defensive Driving & Traffic Control and Live Fire Training have proven an overwhelming task to this division. Notwithstanding, the greatest impact has been the constant influx of yearly recruits. Within the past three years, approximately 36 recruits have signed on. It is an enormous task to train this number and has taxed the entire department. Lately, the General Level Fire Fighter program and future requirements (specialized modules) have been temporary sidelined due to the time requirement to manage the program. Several firefighters have completed a small portion of the program and are waiting to continue. As Fire Departments are the catch-all service for new norm of potential threats to the community, personnel require additional training to meet these demands. Terrorism, SARS, and Hazardous Incidents are just a few of the new norms. Recent coroner inquests dealing with firefighter and civilian deaths have produced strong recommendations on the importance of firefighter training and record keeping.

The need for a training officer was expressed by the firefighters on several occasions to coordinate the training and to maintain the attendance and the training records. Trainer/Facilitators should do the actual training.

**Status Quo**

Currently each fire station administers its own training program. It is difficult under this type of system to ensure that there is consistency and co-ordination across the entire Department.

**Enhanced**

The municipality would be to wise have the Deputy Fire Chief coordinate the training for the Department which would eventually lead to better communication of efforts, consistency and co-ordination.

**Optimal**

The municipality could choose that training is such a high priority that an additional Deputy Fire Chief is required that would see the individual be strictly responsible for training coordination. Staff do not feel that the creation of an additional position is necessary or warranted.

**Recommendation #21**

*That the Deputy Fire Chief administer the training program of the department as approved in the 2008 budget.*

**13. Fire Department Administration**

Fire Department administrative staff includes a full-time Fire Chief and five volunteer District Fire Chiefs with administrative support from an Emergency Services Assistant who currently exceeds the scheduled 35 hour work week. Increasing demands on the fire service to provide more complex services coupled with a constantly rising standard of competency of fire service personnel place ever increasing pressures on administrative personnel. An average of twenty hours per week is allotted to resolving record management issues and training of fire personnel. Development of the remaining Fire Pro modules is a high priority; however, due to time constraints, this has been repeatedly pushed back. Demands come not only from the local community and Council but also from federal and provincial levels that expect local government to implement their programs. Evidence of this can be seen in the Occupational Health and Safety Act, and the Fire Protection and Prevention Act.

**Status Quo**

Currently the fire department does not have dedicated IT support person. This puts a strain on existing administrative staff.

**Enhanced**

An enhanced program would see 10 hours per week of IT support dedicated to the needs of the Fire Department.

**Optimal**

The optimal level would be to have a dedicated IT support person within the Department, but that is not realistic in terms of workload or affordability.

**Recommendation # 22**

*That Information Technology (IT) support for 10 hours per week be budgeted for 2009.*

#### 14. **Woolwich Proposal to Supply Firefighting At Waterloo Regional Airport**

**For the past 3 years, the Fire Department and the Airport have discussed the possibility of the Township supplying fire service to the Regional Airport.** In August of 2006, Woolwich submitted an RFP for a 2 year contract. The costing to the Region was for each fire fighter that attended. The fee was \$35.00/hour, minimum 1 hour. The contract was awarded to a Company from Bellwood Lake. In February of 2007, the Region of Waterloo terminated the contract. The Region did not want to commit to a two year contract because there was no long term commitment with the charter airlines that were using the airport to date; GTA firefighters are supplying the service with no contract in place. A meeting with John Hammer and airport Senior Staff revealed that other carriers are interested in establishing flights from the Region. West Jet started May 10. Bearskin, a northern carrier is looking at starting in October with flights to Ottawa.

Last month the Township received a single source informal RFP from Regional staff asking Woolwich Township to supply costing for firefighting services at the airport. The Region would consider a three year contract and would pay for the security of having a reliable service. This informal RFP is intended to be reviewed by Regional Council to assist the Region with their decision for long term fire coverage at the Airport. In the informal RFP, the Airport requested costing to supply fire coverage for the existing flights which at present is 840 hours of coverage for the entire year. The second request for costing is for 2 trained firefighters for 18 continuous hours per day for 365 days for the year. The costing also must include the required training of the firefighters and the certification of the Regional equipment needed to supply the service.

##### **Requirements to Supply Service:**

- Four trained firefighters to the ARFF standard – approximately 80 hours of training to cover the 840 hours of coverage proposal
- Administrative time to insure staff are present 1 hour before flight arrival and 15 minutes after departure
- Annual recertification of staff
- Legal agreement between Region and Township of Woolwich
- Insurance costs – extra coverage
- Vehicle and equipment – Region will supply; no cost to the Township of Woolwich, costing for certification of equipment

##### **Staffing Options:**

- Four trained volunteer firefighters in the station area to cover the 840 hours per year service
- Hire part-time trained firefighters for the hours required at the airport; back up with volunteer firefighters for the 840 hours per service
- Hire Eight full time firefighters 42 hours a week and assign other duties, (i.e. Fire Prevention and training) when they are not responding to airport commitment and volunteer backup

**Advantages:**

- Income from supplying service; this could be added to capital budget
- Will have trained firefighters in department to train other staff, addressed in the review of operations
- By supplying fire coverage to airport, lessen threat of regional amalgamation of fire service
- Possibility that income from supplying the service could be used to hire composite fire fighters in the Breslau area that could respond Monday- Friday during the day and resolve day time staffing issues that are presently occurring.

**Disadvantages:**

- Committed to training staff
- If Airport service requirements are discontinued we would have to lay off or re-evaluate workload needs
- Could defer the building of the Breslau Station for an indefinite time period.

**Recommendation # 23**

*That the Township of Woolwich develop a Business Case for the staffing of the Breslau area and supplying firefighting coverage for the Regional Airport. That the Township responds to the informal RFP and that the Township pursues the training of 2 Woolwich Fire fighters to NFPA 1003 Standard as soon as possible at a cost of \$6,000.00.*

**15. Other**

Ontario Emergency Management has initiated a program that municipalities had to be in compliance with by December 31, 2004. See below a listing of the items that remain priorities and are required to be completed:

- Consideration of a future full time Deputy Fire Chief in charge of Emergency Planning
- Formation of a Community Emergency Management Program Committee
- Updating of an approved Community Emergency Response Plan
- Development of a new backup Community Emergency Operations Centre
- Identification of critical infrastructure
- Development of an emergency response capability
- Annual training for the Community Control Group and Emergency Operations Centre staff
- Annual exercise to evaluate the Community Emergency Response Plan
- Identification of new individuals to act as Community Emergency Information staff
- Development and implementation of a Community Emergency Management Public Awareness Program
- Conduct an annual review of the Community Emergency Management Program

*Note: A Deputy Fire Chief has been hired to provide support for emergency management and planning.*



Township of Woolwich  
 2008 Fire Master Plan  
 Vehicle Replacement Program

Project Description	Replace Cost	Useful Life	Annual Transfer	Replace Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
<b>Fire Rolling Stock</b>															
C 1996 Freightliner Pumper	300,000	20	15,000	2016	0	0	0	0	0	0	0	0	300,000	0	0
C 2000 Freightliner Tanker	190,000	20	9,500	2020	0	0	0	0	0	0	0	0	0	0	0
C 2001 Freightliner Rescue	230,000	20	11,500	2021	0	0	0	0	0	0	0	0	0	0	0
E 1986 E-One Platform Aerial (2005)	300,000	20	15,000	2025	0	0	0	0	0	0	0	0	0	0	0
E 2006 ALF Pumper	300,000	20	15,000	2026	0	0	0	0	0	0	0	0	0	0	0
E 1986 Ford Pumper				2006	0	0	0	0	0	0	0	0	0	0	0
E 2002 Freightliner Rescue	230,000	20	11,500	2022	0	0	0	0	0	0	0	0	0	0	0
F 1978 Chevrolet Rescue	230,000	20	11,500	2008	230,000	0	0	0	0	0	0	0	0	0	0
F 1989 International Tanker	190,000	20	9,500	2009	0	190,000	0	0	0	0	0	0	0	0	0
F 1990 Pierce Pumper	300,000	20	15,000	2010	0	0	300,000	0	0	0	0	0	0	0	0
M 1992 GMC Rescue	230,000	20	11,500	2012	0	0	0	0	230,000	0	0	0	0	0	0
M 1997 Freightliner Dual Tanker	200,000	20	10,000	2017	0	0	0	0	0	0	0	0	0	200,000	0
M 1999 Freightliner Pumper	300,000	20	15,000	2019	0	0	0	0	0	0	0	0	0	0	0
SJ 1993 GMC Rescue	230,000	20	11,500	2013	0	0	0	0	0	230,000	0	0	0	0	0
SJ 1994 Freightliner Tanker	190,000	20	9,500	2014	0	0	0	0	0	0	190,000	0	0	0	0
SJ 2001 Freightliner Pumper	300,000	20	15,000	2021	0	0	0	0	0	0	0	0	0	0	0
Chief 2006 Chief's Vehicle	35,000	5	7,000	2011	0	0	0	35,000	0	0	0	0	35,000	0	0
Chief's Vehicle Purchase Recovery (2006-2011)	30,000	5	6,000												
<b>Fire Subtotal</b>			<b>199,000</b>		<b>230,000</b>	<b>190,000</b>	<b>300,000</b>	<b>35,000</b>	<b>230,000</b>	<b>230,000</b>	<b>190,000</b>	<b>0</b>	<b>335,000</b>	<b>200,000</b>	<b>0</b>



## TERMINOLOGY

AUTOMATIC AID AGREEMENT:	An agreement between municipalities to provide fire suppression service. In the event of an alarm, the closest fire department would respond first.
ARFF	Aircraft Rescue and Fire Fighting
CFPO	Chief Fire Prevention Officer
COMPOSITE FIRE DEPARTMENT	Full time personnel with volunteer/part-time staff
FPO	Fire Prevention Officer
GLFF	General Level Fire Fighting Curriculum
HAZ MAT	Hazardous Materials Response
IT	Information Technology
MUTUAL AID AGREEMENT	An agreement between two municipalities to provide reciprocal fire services
NFPA	National Fire Protection and Prevention Act
OFM	Office of the Fire Marshal
RISK ASSESSMENT	An evaluation of properties to determine community impact loss in the event of a fire.
SECTION 21	OFM Guideline
SOG	Standard Operating Guidelines
TANKER SHUTTLE SERVICE	
WRAPP-C	Waterloo Region Prevention Program for Children

## OPERATIONAL PLAN

**Recommendation # 1:** *That the Woolwich Fire Department adopt a policy to review, on an annual basis, the Simplified Risk Assessment; to assess the impact of fire on the community and the risks associated with the characteristics of structures and operations, to understand where resources need to be focused on any budget year and develop a database from this review to document the risk and impact of fire.*

**Strategy:** Develop a policy which will become part of the Township Business Plan, goals and objectives for the fire department as well as part of the budget process.

**Start:** 2008                      **Completion:** Ongoing

**Resources Required:** OFM statistics

**Progress:**

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**Recommendation # 2:** *That the Woolwich Fire Department develops a written Fire Prevention policy for adoption by Council which includes a resourcing implementation plan. (See Recommendation #5)*

**Strategy:** Approval of Policy

**Start:** 2009                      **Completion:** 2009

**Resources Required:** Full-time FPO

**Progress:** Job justification sheet  
Job description  
2009 budget approval

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**Recommendation # 3:** *That an enhanced Public Fire Safety Education program that meets the requirements of the Fire Protection and Prevention Act and the needs of the community be developed and submitted to Council for approval which includes a resourcing implementation plan. (See Recommendation #5)*

**Strategy:** Full-time Chief Fire Prevention Officer (CFPO)  
Training of station Fire Prevention Officers (FPO) to OFM curriculum

**Start:** January 2009                      **Completion:** Ongoing

**Resources Required:** Increase budget from part-time hours to full-time hours

**Progress:**

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**Recommendation # 4:** *The recommendation is that Fire Inspections modified status quo that a program be established that provides for a minimum acceptable frequency of fire safety inspections in all types of occupancies within the Township of Woolwich. That the fire department develops a resourcing implementation plan to provide sufficient resources to maintain a minimum acceptable frequency of fire safety inspections be adopted.*

**Strategy:**

**Start:**

**Completion:**

**Resources Required:**

**Progress:**

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**Recommendation # 5:** *That a full time Chief Fire Prevention Officer who would be responsible for fire inspections, public education and plan review, be considered in the 2009 Budget process to fulfill recommendations #2, #3 and #4 and to supplement departmental response where required.*

**Strategy:**

**Start:**

**Completion:**

**Resources Required:**

**Progress:**

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**Recommendation # 6:** *That the 2009 Operating Budget process include funding for fire suppression staff to carry out inspections as well as firefighting pre-planning and building familiarization.*

**Strategy:** Update building stock  
Target risk priorities  
Development of FirePro Pre-plan module

**Start:**

2010

**Completion:** ongoing

**Resources Required:**

Budget for full-time CFPO

**Progress:**

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**Recommendation # 7:** *That the Township of Woolwich sustain and embrace the inclusion of operating funds to provide additional training in fire cause determination, via increased staff attendance at the Ontario Fire College or regional schools if available.*

**Strategy:** Full-time CFPO  
Assessment of skill sets  
Training

**Start:** 2010 **Completion:** ongoing

**Resources Required:** Budget

**Progress:**

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**Recommendation # 8:** *That the Woolwich Fire Department move to upgrade our land based water rescue and that agreements be executed with two of the full-time fire departments in the Region to supply water-based rescue when required and that sufficient operating funds be allocated to upgrade the existing land-based water rescue equipment.*

**Strategy:** Revise boundaries  
Approval of Policy  
Develop "Rules of Response"

**Start:** 2009 **Completion:** 2009

**Resources Required:** Budget  
Complete inventory list

**Progress:**

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**Recommendation # 9:** *That the Fire and Building Departments of the Township of Woolwich encourage the installation of residential sprinkler systems wherever practical and that the Township of Woolwich endorses the Kitchener Fire Department Direct Detect Program which monitors smoke alarms in residential properties in the Township of Woolwich.*

**Strategy:** Promotion of Direct Detect programs  
Endorsement of the Ontario Association of Fire Chiefs to mandate automatic sprinkler systems in all new homes

**Start:** 2008 **Completion:** ongoing

**Resources Required:**

**Progress:**

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**Recommendation # 10:** *That the Woolwich Fire Department replaces all Minitor II and Minitor III pagers in the 2008 and 2009 budget years.*

**Strategy:** Audit Inventory

**Start:** 2008 **Completion:** 2009

**Resources Required:** Budget

**Progress:**

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**Recommendation # 11:** *The enhanced 9-1-1 system is the best the Township could expect to provide its citizens. The problems described above can be addressed through public education programs.*

**Strategy:**

**Start:** **Completion:**

**Resources Required:**

**Progress:**

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**Recommendation # 12:** *Continue with the status quo and contract with the City of Kitchener for our dispatching service.*

**Strategy:**

**Start:** **Completion:**

**Resources Required:**

**Progress:**

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**Recommendation #13:** *That in the event that the fire department encounters response problems due to volunteer staffing deficiencies, the Fire Chief be permitted to increase the number of firefighter personnel, subject to the availability of funding. Options to be considered include:*

- *Two station response*
- *Part time staff – Monday to Friday*
- *Using firefighters that are employed in other communities but could respond to the Standard*

**Strategy:** Review staffing  
Survey affected area for volunteer firefighters

**Start:** 2009 **Completion:** 2009

**Resources Required:** Budget if increasing staff

**Progress:**

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**Recommendation # 14:** *That the Woolwich Fire Department present to Council for consideration, a program outlining the equipping of fire stations with portable back-up power to provide power during an emergency.*

**Strategy:** Assessment of Need  
Cost per station

**Start:** 2010                      **Completion:** 2012

**Resources Required:** Budget

**Progress:**

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**Recommendation # 15:** *That the Township approve a six station model*  
*a) and that the Breslau station be constructed in 2011*  
*b) and that a three year recruitment and training program for volunteer firefighters begin immediately*  
*c) and that the Township of Woolwich enter into an Automatic Aid Agreement with Cambridge or Kitchener to cover the Breslau area until the new station is constructed and manned at a cost of \$120.00 per household per year*  
*d) and that consideration be given to the relocation of the Elmira station to a Church Street location*  
*e) and that the Township of Woolwich pursue an Automatic Aid Agreement with Wellesley Township Fire Department for coverage in the areas of Kressler Road and Lobsinger Line at a cost of \$1,050.00 per call (average call volume per year 12 calls).*

**Strategy:** Breslau Station  
Elmira Station  
Contract possibilities with the Regional Airport

**Start:** 2008                      **Completion:** 2008

**Resources Required:**

**Progress:**

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**Recommendation # 16:** *That the Woolwich Fire Department develops a written "Level of Service" (Standards of Response) policy that addresses all areas of emergency services provided by the department to be submitted to Council for approval.*

**Strategy:**

**Start:**                                      **Completion:**

**Resources Required:**

**Progress:**

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**Recommendation # 17:** *That the Fire Chief assigns a committee to review and revise the Standard Operating Guidelines of the Woolwich Fire Department.*

**Strategy:** Assessment of existing policies and guidelines  
Develop a list of policies that are required  
Develop the required policies

**Start:** 2008 **Completion:** 2010

**Resources Required:** Deputy Fire Chief

**Progress:**

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**Recommendation # 18:** *That a capital equipment and vehicle replacement program be reviewed and that an updated program be submitted to Council for consideration and that when purchasing replacement vehicles, that they provide adequate room for personnel (i.e. crew cabs)*

**Strategy:** Review existing fire apparatus and equipment replacement program  
Review other departmental replacement programs

**Start:** 2010 **Completion:** 2010

**Resources Required:** Capital Funding

**Progress:**

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**Recommendation # 19:** *That the Township of Woolwich develop a staged capital equipment program allowing \$120,000 per year plus inflation for the next ten years and that the level of this program be evaluated in four years time.*

**Strategy:**

**Start:** **Completion:**

**Resources Required:**

**Progress:**

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**Recommendation # 20:** That the Township of Woolwich pursues the upgrading of the following water systems:

- *Install hydrants in Maryhill Heights, and Isley subdivision when the Region upgrades well and reservoir capability (township infrastructure is in place)*
- *Install hydrants in Heidelberg when the Region upgrade well field and reservoir capability (township infrastructure is in place in phase I and II)*
- *Install hydrants in West Montrose with expansion to Region well field and reservoir*
- *In all the above examples that the township pursue as an interim measure that the capacity of the said water systems be expanded to allow for residential sprinklers*
- *The St. Jacob's pressure versus dire flow capability be resolved before any future development (consider second river crossing)*
- *Install a dry hydrant system at Floradale dam and further a partnership with Floradale Feed Mill in providing a fire reservoir.*
- *Develop a comprehensive dry hydrant program for the long term supply of adequate firefighting water in rural areas*

*And further that the township evaluates the need for a tanker shuttle service in each of the station area.*

**Strategy:** Focus on areas where water systems can be upgraded  
Consider cost of upgrades  
Explore tanker certification by station area

**Start:** 2010                      **Completion:** 2010

**Resources Required:** Capital Funding

**Progress:**

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**Recommendation # 21:** *That the Deputy Fire Chief administer the training program of the department as approved in the 2008 budget.*

**Strategy:** Hire Deputy Chief in July, 2008  
Assess training needs  
Develop training schedule and curriculum

**Start:** 2008                      **Completion:** ongoing

**Resources Required:**

**Progress:**

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**Recommendation # 22:** *That Information Technology (IT) support for 10 hours per week be budgeted for 2009.*

**Strategy:** Strategic Plan

**Start:** 2009                      **Completion:** 2009

**Resources Required:** Budget

**Progress:**

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**Recommendation # 23:** *That the Township of Woolwich develop a Business Case for the staffing of the Breslau area and supplying firefighting coverage for the Regional Airport. That the Township responds to the informal RFP and that the Township pursues the training of 2 Woolwich Fire fighters to NFPA 1003 Standard as soon as possible at a cost of \$6,000.00.*

**Strategy:** Strategic Plan

**Start:** 2008                      **Completion:** 2008

**Resources Required:** Budget

**Progress:**

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**Township of Woolwich**  
**2008 Fire Master Plan**  
**Additions to Capital and Operating Costs for Recommended Changes**

ITEM	2009	2010	2011	2012	2013
<b>Capital Costs</b>					
Upgrade Land-based Water Rescue Equip.	\$10,000				
Fire Pager Replacement Program	\$15,000	\$15,000			
Fire Capital Equipment Program	\$120,000	\$123,500	\$127,000	\$131,000	\$135,000
Portable Back-up Generators		\$28,000	\$28,500	\$29,000	\$29,500
Capital Items for new Part-time Staff	\$12,000				
Additional Tanker Truck (Elmira Station)		\$190,000			
Renovation to Elmira Station for Tanker		\$185,000			
Install Hydrants in West Village & Isley Subdivision		\$250,000			
Dry Hydrant System (Floradale)		\$50,000			
<b>Breslau Fire Station</b>					
Fire Station			\$1,750,000		
Pumper Fire Truck			\$320,000		
Rescue Van			\$245,000		
Tanker Fire Truck			\$205,000		
Station Equipment			\$300,000		
<b>Total Breslau Station Costs</b>	<b>\$0</b>	<b>\$0</b>	<b>\$2,820,000</b>	<b>\$0</b>	<b>\$0</b>
<b>TOTAL CAPITAL COST</b>	<b>\$157,000</b>	<b>\$841,500</b>	<b>\$2,975,500</b>	<b>\$160,000</b>	<b>\$164,500</b>
<i>Incremental Operating Cost</i>					
<b>Operating Costs</b>					
Increased Fire Inspections	\$10,000				
Chief Fire Prevention Officer	\$69,000				
Building Familiarization Program		\$10,000			
Additional Fire Cause Determination Training	\$4,000	\$4,000	\$4,000	\$4,000	
Extra Cost for Two Station Response	\$15,500				
Four Part-time Firefighters	\$160,000				
Automatic Aid Agreement w/ Wellesley	\$13,000				
Information Technology Support	\$17,000				
Additional Costs for Tanker Shuttle Service		\$10,000			
<b>Breslau Fire Station</b>					
20 Firefighters	\$21,480	\$21,480	\$28,640		
Facility Costs			\$13,000		
Vehicle Maint & Fuel			\$6,000		
<b>TOTAL OPERATING COSTS</b>	<b>\$309,980</b>	<b>\$45,480</b>	<b>\$51,640</b>	<b>\$4,000</b>	<b>\$0</b>

**Notes:**  
 . Breslau Station DC Coverage  
     Fire Station      90.48535%  
     Vehicles          66%  
     Equipment        91.6%  
 Therefore the amount needed from other sources of funding is \$453,506.38  
 An additional \$38,500 will need to be added for the replacement of the new vehicles



