

1.0 EXECUTIVE SUMMARY

1.1 Background and Objectives

In a meeting held on June 27, 2005, Municipal Council authorized the Fire Chief to proceed with the Master Fire Planning process. The Master Fire Plan serves as a strategic, forward-thinking document that reviews and evaluates local fire protection needs and circumstances. It aims to strengthen the Township's ability to provide the most effective, efficient and safe fire protection services possible¹.

The Master Fire Plan is a strategic blueprint for current and future fire protection services in the Township that aims to accomplish a number of important objectives:

- 1) To document the fire risks within the Township.
- 2) To ensure that the quality and levels of service set by Council are maintained and/or improved.
- 3) To assist the Township in determining the most appropriate structure and delivery model for fire emergency services within its jurisdiction.
- 4) To ensure that the Township's Fire Department adheres to the statutory requirements under the province's Fire Protection and Prevention Act (FPPA).
- 5) To identify best practices and make recommendations to Council for improving the efficiency and effectiveness of current fire protection services.

The approach used to develop the Master Fire Plan is based on the Public Fire Safety Guidelines established by the province's Office of the Fire Marshal.

Many individuals were involved in the development of the Master Fire Plan. Those who contributed to the Plan include the Master Fire Planning Committee, members of the Fire Department, the Township's Firefighters Association and staff from the Township's municipal office (Town Hall). All of these individuals are rightfully acknowledged at the beginning of this document.

In February 2006, a meeting was held between the Master Fire Planning Committee, volunteer firefighters and the Firefighters Association. The purpose of the meeting was to give members of the Fire Department the opportunity to voice their concerns over the state-of-affairs of the Fire Department. A great deal of what was discussed in the meeting is detailed throughout the Plan.

From February to June 2006, regular weekly meetings were held between the Master Fire Planning Committee, the outside consultant and advisers from the Office of the Fire Marshal, with the consultant providing a regular status report to Committee members on the progress of the Master Fire Plan. In April 2006, the Firefighters Association submitted a written brief to the Master Fire Planning Committee to include

¹ Oshawa Fire Services (2002).

in the Master Fire Plan. In May 2006, a formal status report on the progress of the Master Fire Plan was presented to Council and the volunteer firefighters.

1.2 Areas to be Reviewed in the Plan

The areas reviewed in the Master Fire Plan fall under three distinct categories:

- 1) Fire Risk
- 2) Economic Circumstances
- 3) Capabilities of Existing Fire Protection Services

An assessment of fire risk involves the examination of the Township's demographic profile to determine high-risk groups, the characteristics of existing building stock (i.e. age, whether buildings comply with building and fire codes), fire loss statistics and local infrastructure (i.e. water supply).

A review of economic circumstances helps in painting a clear picture of the level of demand and the resources available for fire protection services in the Township. Factors such as current value assessments, the budgetary process, current fire protection costs and economic consequences resulting from fire loss are all examined in order to establish whether the Township has the economic and financial capacity to continue funding for fire protection services now and in the foreseeable future.

Assessing the capabilities of the Township's existing fire protection services system is a lengthy task. It requires an investigation of the Fire Department's current role, structure, administration, activities, services and operations, among many other things. While examining the nature of the Township's fire protection services as it exists today is incredibly time-consuming, it is a process that must be completed.

1.3 Summary of Key Findings

1.3.1 Fire Risk Assessment

Demographic Profile

The Township has a population of 17,380 people, with the Township's Official Plan anticipating that between the years 1999 and 2021, the population of the Township's urban area alone will increase to 12,500 people, from 7,745 people in 1996.

Building Stock

The building stock of Township is very diverse. It includes single-family and multi-unit dwellings, commercial establishments, farm buildings, schools, large and small industrial/manufacturing complexes, nursing homes and a number of community centres. However, single-family residential dwellings make up the majority of occupancies in the Township.

Fire Loss

Fire loss has remained relatively constant over the last 6 years, with the Township experiencing very few fire incidents. From the year 2000 to 2005, there have been 0 fatalities and 0 injuries resulting from structural fires. Dollar loss and economic impact from fire incidents have also been low according to the latest fire loss statistics of the Office of the Fire Marshal (OFM).

The majority of structural fires that have taken place in the Township over the last 6 years have occurred in residential occupancies. The major cause of residential fires in the Township is the poor maintenance of heating equipment (i.e. chimneys and flue pipes).

Fire Station Relocation

It has been advised by Fire Underwriters, an insurance broker, that the Township relocate its existing fire station in order to improve street accessibility and to accommodate a new aerial apparatus.

1.3.2 Capabilities of Existing Fire Protection Services

Call Volume and Response Type

Over the past few years, the number of emergency calls that the Fire Department responds to has gone up dramatically. Between the years 2000 and 2005, the Fire Department responded to an average of 379 calls annually. The majority of emergency calls made to the Fire Department have been for medical and rescue purposes. This is a result of a tiered response system that the Fire Department shares with regional ambulance services. Tiered response places additional demands on the Township's fire services system.

Fire Department staff are currently able to respond quickly to fire and non-fire emergencies across the Township. Residents can be reached in 5 to 10 minutes from the time the Fire Department is notified by dispatch of an emergency. Response times may increase as the Township's population continues to grow and disperse into rural areas as a result of increased residential development. In the near future, factors such as day-time staffing shortages and changes in policies of local businesses and industries regarding volunteer firefighters leaving their fulltime or part-time work may also lead to longer response times to fire emergencies.

Fire Prevention and Public Fire Safety Education

While both the Fire Department's inspection and smoke alarm programs comply with the minimum requirements of the Fire Protection and Prevention Act (FPPA), they continue to be reactive, not proactive, in nature. Yearly routine inspections of all commercial, industrial and residential properties are impossible to undertake, due to low staffing. Same is the case with the Fire Department's current smoke alarm program, where smoke alarms are only installed after the Fire Prevention Officer has inspected properties for working smoke alarms or has responded to a fire emergency. No in-service, door-to-door smoke alarm program

exists in the Township because of limited fire prevention staff to undergo door-to-door visits. The Fire Department has only one Fire Prevention Officer to carry out all fire safety inspections.

The Fire Department has an effective public fire safety education program that is in compliance with the minimum standards of the FPPA. Fire safety education programs and initiatives that are offered by the Fire Department include the Learn Not To Burn (LNTB) program offered to K to 8 students, the TAPP-C programs, Older and Wiser training for senior citizens, fire station tours, open houses and fire safety displays, among others.

Apparatus and Equipment

In 2005, the Fire Underwriters downgraded the municipal commercial classification of the Township from a 5 to a 7. The downgrade was due to the fact that the Fire Department didn't have an aerial apparatus in its current fleet. Many large buildings in the Township point out a need for an aerial ladder or truck.

Radio System

The Fire Department's current radio system is outdated. Members of the Fire Department are unable to communicate with fire departments west or south of the Township in the event of an emergency. The Township is one of three municipalities that have not upgraded its radio system to a trunked 800 MHz system.

1.4 Summary of Recommendations and Key Priorities

Recommendations, or recommended actions, are best practices that Council and the Fire Department should consider when attempting to map out the future of fire protection services in the Township. The following is an identification of all the recommendations presented in this Master Fire Plan:

It is recommended by the Master Fire Planning Committee that...

Building Stock

- 1) The Fire Department ensure that all industrial and commercial establishments possessing a sprinkler system be inspected as determined by the Fire Department staff.

Fire Loss

- 2) The Fire Department ensure that all households in the Township install smoke alarms in their residences, as per the requirements of the Ontario Fire Code.

- 3) Greater attention be given to educating the public on fire prevention and public fire safety.
- 4) More training be provided to volunteer firefighters on fire prevention measures and practices.

Water Supply

- 5) The Fire Department acquire additional tankers for fire suppression in areas of the Township without a hydrant system.
- 6) All plans for development received by the Township include a built-in water supply for fire suppression in areas where municipal water services are not provided or are inadequate.
- 7) Plans for alternative sources of water supply be developed by the Fire Department. In its latest efforts to improve water supply accessibility in rural areas of the Township, the Fire Department is conducting a study on rural static water supplies and sources.
- 8) Fire Department staff be trained on how to calculate available water supply and flow.
- 9) A list of all private hydrants be maintained by the Fire Department.
- 10) Maps of public hydrants be carried on pumpers at all times.
- 11) All public and private hydrants be colour-coded in accordance with NFPA standards and reflective street markers be used to assist firefighters in locating hydrants at night.

Economic Circumstances

- 12) The approved budget for the Fire Department continue to address vehicle and equipment replacement, training, fire prevention, inspection, fire safety education and staffing.
- 13) The Fire Department consider alternative funding options for its future projects.
- 14) The Fire Department continually review all of its expenditures to ensure that it is in the position to meet current and future fire emergency and safety requirements.

(Certain expenditures, while capital in nature, occur annually at approximately the same level. Funding for firefighting equipment such as bunker gear, self-contained breathing apparatus (SCBA) and hoses should come from the tax levy and not from alternative funding sources, such as reserves).

- 15) The terms of the Fire Department's existing fire protection agreements be reviewed annually, as well as prior to the next budget submission, to ensure that the costs and collection payments to the Township are in the best interest of the Township.

- 16) If suitable Township-owned land cannot be found for the construction of a new fire station, alternative cost-saving methods for fire station relocation and construction be considered.

(The Uxbridge Fire Department may want to explore projects with local developers and businesses. Alternatively, joint use of land and facilities could provide the Township with significant cost savings towards the construction of the new fire station and its ongoing annual maintenance.)

- 17) A department-specific equipment reserve be established for the Fire Department for the replacement of all light and heavy fire vehicles.

Mission and Vision Statements

- 18) A review of the Fire Department's mission and vision statements be conducted every 3 to 5 years, so that they are kept up-to-date.

Records and Reports Management System

- 19) An automated records and reports management system be adopted by the Fire Department to 1) assist with the management of financial records, 2) conduct the collection of revenue and assets and 3) provide the basis for budget submissions. Request for the resources and funding for the creation, introduction and maintenance of this system should be submitted in the 2007 Operating Budget.
- 20) The Fire Department use the Treasury Department's new computerized financing/tax system in conjunction with its own records and reports management system to improve its financial management.
- 21) A specialized computer software system be utilized by the Fire Department to improve the filing of incident reports and departmental records.

Fire Protection Agreements

- 22) The Township adopt a contingency plan in the event that fire protection agreements with the Town of Whitchurch-Stouffville and the Town of East Gwillimbury are not renewed.
- 23) The Township establish an automatic aid agreement.

Fire Prevention and Public Fire Safety Education

- 24) Additional fire prevention policies be developed to assist fire prevention division in adhering to its statutory and municipal requirements.

- 25) The Township consider remuneration for staff time for reviewing of plans and inspections of new construction as mandated by the Township of Uxbridge By-Law # 27.
- 26) All burning permits be signed and approved by either the Fire Chief or his designate, in order to protect the Fire Department from liability issues. This action ensures that the Ontario Fire Code is being lawfully applied.
- 27) The Fire Department adopt an electronic, computer-based records and reports management system for inspection and investigation reports. This system will not only ease the retrieval of departmental information, it will act as a time-saving mechanism.
- 28) An "Alarm for Life" or similar door-to-door program be implemented by the Fire Department. The Fire Department can either use its weekend duty crews or hire co-op students for the summer to distribute smoke detectors to individual residences. To avoid issues concerning liability, Fire Department staff should train students on how to properly install the alarms.
- 29) The Fire Department continue to enhance its current public fire safety education activities (e.g. Learn Not To Burn in local schools, Older and Wiser, TAPP-C, the distribution of public education material during public events).
- 30) The Fire Department put greater emphasis on educating the public on the safe use of heating and wood burning appliances as a way of addressing residential fire occurrence.
- 31) Fire Department staff conduct information sessions with building owners in regards to fire safety and the proper maintenance of building fire protection and life safety systems.
- 32) That both fire and planning officials work closely together in reviewing plans for new developments to ensure the inclusion of sprinkler and detection systems for fire suppression purposes.
- 33) The Fire Department increase its assistance with Durham Regional Police when investigating fire incidents.

Training

- 34) The Fire Department continue to aggressively promote its current training program.
- 35) An additional two endorsed module trainers be acquired by the Fire Department.
- 36) The Fire Department acquire a larger training facility. This facility can be built in conjunction with the proposed new fire station.
- 37) A training tower of a suitable size be constructed.
- 38) On-line theory-based firefighting training be offered to Fire Department staff.

Apparatus and Equipment

- 39) The Fire Department acquire an additional pumper tanker truck.
- 40) The current replacement cycle of 20 years for fire apparatus and equipment be decreased to reflect protected usage.
- 41) The Fire Department continue to make strides towards improving its current vehicle and equipment maintenance program.
- 42) The Fire Department acquire an appropriate facility for drying fire hoses. This facility can be built within the proposed new fire station.
- 43) Certificate testing of fire pumps be conducted yearly, instead of every 3 years. This can be achieved through the Fire Department providing opportunities for existing staff to become certified in fire pump testing.

Communications

- 44) The Township renegotiate its Dispatch Agreement with Oshawa Fire Services to eliminate the need for Fire Department staff to operate the fire station's control centre.

Key Priorities

Many recommendations have been made throughout this Plan. However, attention must be given to a select few recommendations, since they represent priorities that have been identified by the Fire Department. These priorities are as follows, in order of importance:

- Priority #1 – Addressing staffing.
- Priority #2 – Upgrading the existing radio system.
- Priority #3 – Relocating the existing fire station.
- Priority #4 – Acquiring an aerial apparatus

Priority #1 – Staffing

It is recommended by the Master Fire Planning Committee that:

1. The Fire Department continue to hire additional fire suppression staff as needed to better respond to increasing fire and rescue call activity. As a first step, the Fire Department welcomed 10 new recruits in March 2006. However, as a community grows, fire servicing demands will also grow,

and with that, the Fire Department must continue to be vigilant and begin preparations for hiring fire suppression staff.

2. Propose to add a second full-time Fire Prevention Officer Position in the 2007. Council should direct the Fire Chief to prepare a business case for inclusion in the 2007 Fire Department Budget.

Priority #2 – Radio System

It is recommended by the Master Fire Planning Committee that:

1. The existing radio system be replaced. This will ensure the health, safety and welfare of citizens and operational personnel.

A new radio system will cost the Township \$1,000,000. Council has approved \$200,000 for the purchase of a new radio system.

Priority #3 – Fire Station Relocation

It is recommended by the Master Fire Planning Committee that:

1. The Township relocate its fire station in order to a) accommodate an aerial apparatus and b) improve street accessibility. The new fire station must be of a suitable size and design to meet the needs of the Fire Department now and for years to come.
2. A new fire station/headquarters for the Fire Department be constructed at a location to be determined by a Fire Station Location Study. This study will be completed in early 2007.

Funding has already been requested by the Fire Department in its 2006 capital budget submission for the purchase of land and the construction of a new and improved fire station for the years 2007 and 2009. The overall cost of a new fire station is estimated at \$3,290,000². In order to determine the feasibility of relocating and constructing a new fire station, \$25,000 of the Fire Department's 2006 capital budget has been set aside for a Fire Station Location Study, to be conducted at a future date.

Priority #4 – Aerial Apparatus

It is recommended by the Master Fire Planning Committee that:

1. The Fire Department acquire an aerial apparatus upon construction of a new fire station. The estimated cost of an aerial apparatus is expected to amount to \$ 1,400,000.

² This figure derives from a Development Charges Study that was conducted by the Fire Department.

2.0 INTRODUCTION

On June 27, 2005, Council authorized the Fire Chief to develop a Master Fire Plan. The Plan outlines a 15-year time frame (2006–2021) in order to identify short, medium and long-term fire protection needs of the Township. Based on a detailed analysis and evaluation of fire protection services in the Township, the Master Fire Plan presents projections for 1,3, 5, 10 and 15 years.

While analyzing identified fire risks, circumstances and fire protection capabilities, the Master Fire Plan takes into consideration important factors affecting fire service provision, such as the nature of the geographic area and the anticipated population and development growth rates of the Township.

To help in facilitating the process, a Master Fire Planning Committee was formed. Work on the Plan commenced in October 20th, 2005.

2.1 Purpose

The purpose of a Master Fire Plan is to provide the Township with an effective risk management tool. The Plan is intended to serve as a strategic blueprint for fire protection that takes into account all local needs and circumstances, based upon costs that the community can afford³. As a valuable tool in evaluating fire protection services in a community, a Master Fire Plan presents programs and projects, projected costs and schedules for maintaining a community's fire protection services. A Master Fire Plan should enable a community to set standards of service that it can achieve, decrease the costs for fire protection and reduce fire loss⁴.

Resulting from a detailed municipal review of the Township's existing fire protection services by the Fire Department and the Office of the Fire Marshal, the Master Fire Plan addresses areas of immediate concern and fire protection needs in a systematic and progressive manner. Additionally, the Plan identifies the resources necessary to meet current and future levels of service. Through identifying issues related to the provision of the Township's fire protection services, the Master Fire Plan will present options for the provision of optimal levels of service.

2.2 Objectives of the Plan

As a strategic blueprint for fire protection, The Master Fire Plan aims:

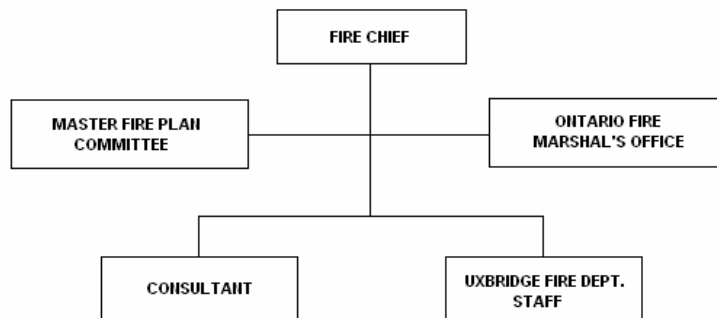
- 1) To document the fire risks within the Township.
- 2) To ensure that the quality and levels of service set by Council are maintained and/or improved.

³ Office of the Fire Marshal (1998).

⁴ Office of the Fire Marshal (1998).

- 3) To assist the Township in determining the most appropriate structure and delivery model for fire emergency services within its jurisdiction.
- 4) To ensure that the Township's Fire Department adheres to the statutory requirements under the province's Fire Protection and Prevention Act (FPPA).
- 5) To identify best practices and make recommendations to Council for improving the efficiency and effectiveness of current fire protection services.

2.3 Participants in the Plan's Development



A Master Fire Planning (MFP) Committee was established in order to advance the development of the Master Fire Plan. The Committee comprises of:

- The Fire Chief
- 1 Council Member
- The Chief Administrative Officer
- The Treasurer
- Citizen Representatives (1 representative being the Committee Chair)

Responsibilities of the Committee included developing terms of reference, defining the scope of work, developing a project work plan (i.e. list of deliverables and timelines) and reviewing & commenting on work produced throughout all phases of the Master Fire Planning process.

Other participants in the preparation of the Master Fire Plan include:

- The Office of the Fire Marshal
- An Outside Consultant
- Fire Department Staff
- Fire Fighter Association

The Office of the Fire Marshal acted as an advisor in the Master Fire Planning process, providing technical support, advice and assistance to the MFP Committee throughout the development of the Master Fire Plan. An Outside Consultant was hired by the Township to facilitate the Master Fire Planning process and prepare the Master Fire Plan on behalf of the MFP Committee.

Fire Department staff provided any documents requested by the Consultant and the MFP Committee, as well as verified and substantiated data to be used for the purposes of the Master Fire Plan.

2.4 Approach

The approach adopted for the Master Fire Plan is consistent with the Public Fire Safety Guidelines promoted by the Office of the Fire Marshal (OFM).

The recommendations contained in the Master Fire Plan will be based on a review of:

- Fire Risk
- Economic Circumstances
- Capabilities of Existing Fire Protection Services

3.0 FIRE RISK ASSESSMENT

Identifying fire risk in a community is an important exercise. Fire risk can vary considerably from one part of a community to another. Therefore, it is important that fire departments tailor their fire protection services to the risks that are faced in different parts of a community or municipality. Fire risk can be identified by examining factors such as demographics, the age and type of building stock and the state of existing local infrastructure (i.e. water supply, quality of roads). The following section will assess the fire risk of the Township.

3.1 Background on the Township

The Township of Uxbridge is a predominantly rural community located approximately 40 km northeast of the City of Toronto, and is one of the 8 municipalities forming the Regional Municipality of Durham. It formally came into existence in 1974, when the former Township of Uxbridge, Township of Scott and Town of Uxbridge amalgamated⁵. It is bordered by the Region of York to the north, the Township of Brock and the Township of Scugog to the east, the Region of York to the west and the Town of Pickering to the south.

While the Township of Uxbridge has the second smallest population in the Region of Durham, it has the third largest geographic area (420.65 sq. km) of the 8 municipalities that form the Region. There exists a urban area in the Township, the Town of Uxbridge, which is home to the majority of the Township's population and is the location of the Township's downtown core. The remainder of the Township is comprised of many small hamlets, which include the Hamlets of Coppins Corners, Goodwood, Leaskdale, Sandford, Siloam, Udora and Zephyr.

FIGURE 1
The Township of Uxbridge



Source: The Township of Uxbridge Fire Department

⁵ The Corporation of the Township of Uxbridge Accessibility Plan (2003).

Due to its balanced mix of urban and rural living and its many amenities, The Township has become a desirable community to live in. The Township is a popular location for persons commuting to nearby Oshawa/Whitby and the Greater Toronto Area for work. A significant increase in residential development in the Township has led to a rapidly growing commercial base. However, despite an increase in development activity, the Township continues to possess a great deal of prime agricultural land.

Various forms of agricultural activity take place in the Township. Dairy farming continues to be the most important sector of the Township's agricultural economy, with beef, hog, sheep, poultry and cash crop operations following closely behind.

Along with a stable agricultural base, the Township also possesses a strong industrial economy. For instance, the Township is a valuable source of mineral aggregates such as sand, stone and gravel, which end up being transported to construction sites across Ontario. Other industries in the Township include plastic automobile parts manufacturers, a metal fabricating company, a spice factory, concrete product manufacturers and large corn drying operations⁶.

⁶ The Corporation of the Township of Uxbridge, Accessibility Plan (2003).

3.2 Demographic Profile

The Township has a population of 17,380 people. This number is expected to increase as more residential and commercial development continues to take place in the Township. It is anticipated by the Township's Official Plan that between the years 1999 and 2021, the population of the Township's urban area alone will increase to 12,500 people, from 7,745 people in 1996⁷.

The majority of the Township's population resides in the urban area or core, located generally in the area formerly known as the Town of Uxbridge. The remainder of the Township's population resides in a variety of small rural communities.

TABLE 1
The Township of Uxbridge – Population & Households

Characteristics	
Population in 2001	17,380
Population in 1996	15,882
Population change – past 5 years	14.5 %
Population change – last 10 years	27.3%
Private households – 2001	6,094
Population density per square kilometre	41.3
Land area	420.65 sq km

Source: Statistics Canada (2001).

Note: Figures for population change were calculated from population estimates presented in a Region of Durham (2005) report entitled "Monitoring of Growth Trends".

Approximately 37% of the Township's area is considered to be woodland. Woodland includes wooded wetlands, smaller woodlands, regional forests and hedgerows⁸.

The majority of the Township's population is made up of individuals that are between the ages of 15 and 64. This group represents a significant portion of the Township's working class population. As a result of a relatively low commercial base in the Township, a large percentage of working class residents tend to commute to their jobs in other parts of the Greater Toronto Area daily.

Approximately 12 percent of the Township's population are 65 years of age or older. These individuals reside in a variety of residential establishments, nursing homes and health care facilities across the Township.

⁷ The Township of Uxbridge Official Plan (2001).

⁸ Ministry of Natural Resources (2002).

TABLE 2
Population (by Age Group)

Age of Population	# of persons	% of Total Population
0 – 14	3,915	22.53%
15 – 64	11,330	65.19%
65 and over	2,135	12.28%
Total	17,380	100.00%

Source: Statistics Canada (2001).

Note: The population of the Township represented in this Plan is based on 2001 Statistics Canada data. It should be expected that the Township's population has increased since then.

The Fire Department has no major concerns in regards to language barriers to public education. The table below stipulates that there is a low percentage of non-English speaking residents. Additionally, most residents who speak a language other than English likely use English as their second language.

TABLE 3
Township of Uxbridge – Language Profile

Language	# of Individuals	% of Population
English	17,244	99.21%
Dutch	31	0.18%
Finnish	14	0.08%
German	75	0.43%
Other	8	0.05%
Multiple Languages	8	0.05%
TOTAL	17,380	100%

Source: Statistics Canada (2001).

3.2.1 Demographic Characteristics

Individuals ages 65 and over belong to the fastest growing age group in the Township⁹. As was mentioned earlier in this document and is indicated in Table 4, individuals in the 65 and over age group reside in a variety of establishments, which include their own residences, local nursing and retirement homes and health care facilities. In its Simplified Needs Analysis of the Township, the Fire Department states that it has become increasingly difficult for its staff to provide members of the senior population with public education programs. The main reason why this is the case, according to the Analysis, is because some senior citizens have become less mobile.

TABLE 4
Occupancies where Individuals 65 Years of Age and Over Reside

Occupancy	# of Residents
Aberdeen Place Condominiums	29 residents
Brookside Apartments	44 residents
Group Homes (3)	5 residents in each residence
Mossbank Condominiums	73 residents
Shobrook Gardens Condominiums	80 residents
Testa Apartments	168 residents
Trinity Manor Apartments	44 residents
Uxbridge Cottage Hospital	30 beds
Versa Care Nursing Home	100 residents

Source: Township of Uxbridge Fire Department, Simplified Needs Analysis (2005)

⁹ Township of Uxbridge Fire Department, Simplified Needs Analysis (2005).

3.3 Building Stock

The following information shows the existing building stock in the Township. These figures were obtained from the most current data available from the Township's Fire Department and the Municipal Tax Assessment Department.

TABLE 5
Existing Building Stock in the Township of Uxbridge, by Occupation Classification

Occupancy Classification		# of Occupancies
Group A	Assembly	65
Group B	Institutional	12
Group C	Single Family	5883
	Multi Unit Residential	59
	Hotel/Motel	3 (Bed and Breakfasts)
	Residential Condominium	5
	Mobile Homes and Trailers	1 trailer park with 320 sites
	Combination Residential & Other (Com/mercantile)	3
	Other	3
Group D & E	Commercial	176
Group F	Industrial	86
Other occupancies not classified in OBC (i.e. farm buildings)		946
TOTAL		7242

Source: The Township of Uxbridge (2006).

The Township has a very diverse collection of buildings, which include single-family and multi-unit dwellings, commercial establishments, farm buildings, schools, large and small industrial/manufacturing complexes, nursing homes and a number of community centres of varying sizes. Single-family dwellings make up the majority of occupancies in the Township.

One recreational trailer park exists within the Township with sites for a total of 320 self-contained units. There is a small land-locked lake in the north-end of the Township with approximately 80 cottages surrounding it. In some cases, cottages have been converted to year-round residences. A total of 86 industrial occupancies are located within the Township, with 3 of these occupancies located in what is considered to be the Township's urban area. There is one large nursing home located in the urban area, which houses up to 100 people at any one time. The remaining building stock in the Township is mainly farm buildings of varying sizes.

In the past few years, the Township has seen an increase of new home development in its urban and rural areas. The migration of new residents into the Township will inevitably create new demands for fire

protection and emergency services. It is important that the Township's current fire protection system addresses community growth.

TABLE 6
Development Activity in the Township of Uxbridge

Occupancy Type	# of Developments
Residential	<u>Urban area – 13 developments (1048 units)</u> <u>Rural area – 9 developments (303 units)</u>
Commercial	Urban area – 11 developments (32,320.5 sq. m)
Industrial	Rural area – 2 developments (9,476 sq. m), 1 development (37 lots)

Source: The Township of Uxbridge (2006).

Note: Table includes approved applications for development and existing developments.

Table 6 identifies the new residential, commercial and industrial construction that is taking place in the Township. Residential construction represents the majority of the development activity in the Township's urban and rural areas. The likelihood of more residents to serve in the Township will place additional demands on existing fire services.

3.3.1 Current Situation and Identified Issues

3.3.1.1 Potential Fire Risks, by Occupancy Classification

Some buildings in the Township are considered to be high or special risk occupancies due to their age, their activities and/or their high occupancy levels.

The Downtown Core

The majority of buildings in the Township's downtown core (located in the Town of Uxbridge) were constructed in the late 1800s. These buildings are predominantly commercial establishments located at street level, with usually two floors of residential apartments above. Currently, all of these buildings have completed all the necessary retrofit requirements. However, because of their age, buildings in the downtown core should be inspected on a regular basis by fire prevention staff to ensure that all buildings are complying with the maintenance requirements of the Ontario Fire Code.

Assembly Occupancies

A number of schools (7), community centres/halls (8), places of worship and cultural facilities are located across the Township. Particular occupancies, such as community centres and schools tend to accommodate a large number of people during regular hours of operation. The presence of such large occupancy loads, especially in the case where alcoholic beverages are served, can pose a potential fire hazard.

In the case of several places of worship and cultural facilities in the Township, their physical structure is aging, making them more vulnerable to fires. This is especially the case for older churches and the historic Music Hall located in the downtown core.

FIGURE 2
Trinity United Church



Source: The Township of Uxbridge Fire Department

Institutional Occupancies

Institutional occupancies include hospitals, nursing homes and long-term care facilities. There is one hospital, three group homes and one long-term nursing home located in the Township. Some of the fire concerns regarding these facilities are low staffing levels to deal with an emergency situation, such as a full evacuation involving physically and mentally challenged individuals.

The loss of the Township's only hospital would have an enormous effect on the community and would mean that residents would have to travel longer distances to seek emergency medical treatment.

FIGURE 3
Uxbridge Cottage Hospital



Source: The Township of Uxbridge Fire Department

Commercial Occupancies

There are many large building centres, lumber yards and retailers of farm supplies located in the Township. These businesses tend to store and sell large amounts of wood, chemical and fertilizer products. The storage of these products creates a significant fire hazard, since they tend to be highly combustible. Occupancies that store chemical products may produce hazardous chemical run-off during a major fire situation, potentially requiring a large evacuation of the area where these establishments are located.

Residential Occupancies

The Township contains a mix of residential structures. These structures include:

- Single-family detached and semi-detached units.
- Multi-unit dwellings – which include townhouses, row houses, duplexes and low-rise and high-rise condominiums/apartments.
- Bed and Breakfasts

- Mobile Homes and Trailers
- Residential units located above commercial or business establishments.

There are many potential fire risks in residential properties that can derive from practices such as the unsafe use of kitchen appliances (stoves, microwaves) and chimneys. It is important that existing fire prevention and public fire safety education programs focus their attention on promoting the mandatory use of smoke alarms in residential establishments.

FIGURE 4
Private Residence



FIGURE 5
Bridgewater Condominiums



Source: The Township of Uxbridge Fire Department

Industrial Occupancies

Various metal fabrication factories, automotive parts manufacturers and woodworking companies that are located in parts of the Township are considered to be high-risk occupancies because of the large quantities of highly combustible products that they typically store and use. Many of these industrial establishments tend to work with chemicals, rubbers and plastics, all of which pose a significant fire hazard.

Rural Farm Buildings

There are some major concerns over potential fires occurring in rural farm buildings in the Township. The rural areas typically do not have access to an adequate water supply for fire suppression. As a consequence, local farmers may experience substantial losses in structure, livestock and feed that they may never fully recover from.

FIGURE 6
Farm Building



Source: The Township of Uxbridge Fire Department

3.3.2 Recommended Action(s)

It is recommended by the Committee that:

The Fire Department ensure that all industrial and commercial establishments possessing a sprinkler system be inspected as determined by the Fire Department staff.

3.4 Fire Loss Statistics

The fire loss statistics of the Township cannot be examined in isolation. It is important for the Township to compare its fire loss data with that of other communities in order to gain a better understanding of its fire safety performance. The purpose of this section is to determine the Township's position when it comes to fire loss, when compared to the province and other municipalities.

3.4.1 Fire Loss in the Township

Over the past 6 years, the Township has experienced relatively few fire incidents (see Table 7). From the year 2000 to 2005, there have been 0 fatalities and 0 injuries resulting from structural fires. In its latest fire loss statistics for the Township, the Office of the Fire Marshal states that the dollar loss and economic impact from fire incidents in the Township have been low.

Although the Township has been successful in limiting fire loss, the Fire Department must always keep in mind that all fire incidents, whether they are major or minor, can have a significant impact on a community. For this reason, it is essential that the Fire Department continue to be vigilant in its fire prevention and public fire safety education initiatives. Attention should also be given to maintaining effective and rapid fire suppression response.

TABLE 7
Township of Uxbridge
Number of Structural Fires with Loss (by Property Class)

Property Class	2000	2001	2002	2003	2004	2005
Assembly Occupancies	0	1	2	0	0	1
Business and Personal Services Occupancies	0	0	0	0	0	0
Industrial Occupancies	0	0	1	0	0	2
Institutional Occupancies	0	0	0	0	0	0
Mercantile	0	1	2	0	1	1
Residential	6	9	9	10	9	7
Structures/Properties not classified by the O.B.C.	2	1	2	1	0	3
Total	8	12	16	11	10	14

Source: Municipal Fires: Overview, The Office of the Fire Marshal (2006).

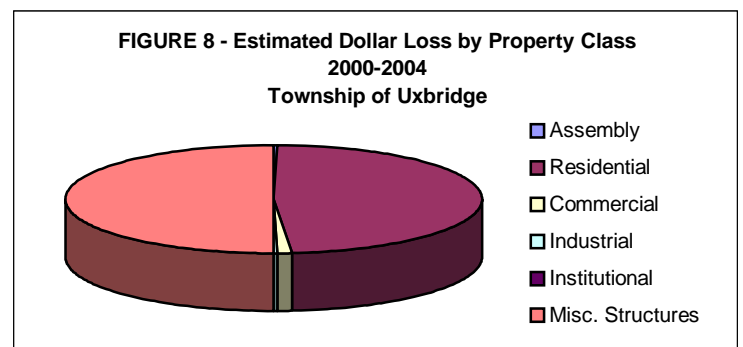
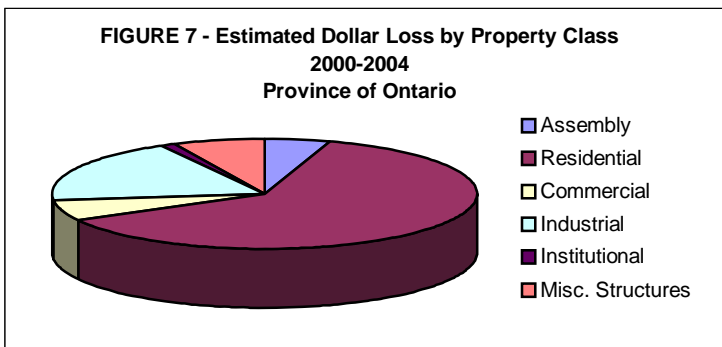
3.4.2 Fire Loss Comparisons

The Fire Department can determine if it is performing well when it comes to limiting fire loss by comparing its fire loss statistics with those of the Province, as well as with those of municipalities of similar size and population. Developing fire loss comparisons informs the Township on whether it is aligned with other communities when it comes to fire loss prevention. At the same time, a comparison of fire loss statistics over time can assist the Fire Department in determining public education and fire prevention needs and priorities.

3.4.2.1 Comparison with the Province

It is strongly recommended by the Office of the Fire Marshal that municipalities observe provincial fire loss data when trying to select and implement local fire safety programs and activities.

In the case of both the Township and the Province, the highest dollar loss from fire is experienced in the residential property class. However, the Township has a much lower percentage of residential dollar loss than that of the Province as a whole. The same is the case with assembly, commercial and industrial property classes, where dollar loss percentages are lower than the provincial average. In order to ensure that the Township experiences low dollar losses now and in the future, the Fire Department should continue to undergo its various fire prevention and public fire safety education activities. Additionally, the Fire Department should centre its current training activities on informing firefighters on how to minimize dollar loss when fighting fires.



Source: The Office of the Fire Marshal, Public Fire Safety Guidelines – <http://www.ofm.gov.on.ca/english/fireprotection/munguide/04-40a-03.asp>

Source: The Office of the Fire Marshal, Municipal Fires: Overview (2006).

3.4.2.2 Comparisons with Other Municipalities

Table 8 compares the Township's residential fire loss statistics with those of the Township of East Gwillimbury, the Township of Scugog and the Town of Whitchurch-Stouffville. From the year 2000 to 2005, the Township witnessed a total of 50 residential fires, compared to 33 fires in East Gwillimbury, 46 fires in Whitchurch-Stouffville and 78 fires in Scugog. With a population of 17,380 people, the Township has the smallest population of all 4 municipalities. However, despite its low population, the Township still managed to produce the second highest number of residential fires of all the municipalities. In order to explain the number of residential fires taking place in the Township, the Fire Department should investigate its current fire prevention and public fire safety education practices. Through uncovering some of the strengths and limitations of its current fire prevention and public education programs and initiatives, Fire Department staff will be able to determine some of the important factors of residential fire loss that it's currently not addressing.

TABLE 8
Number of Residential Fires with Loss from 2000 to 2005

Municipality	# of Residential Fires
Uxbridge	50
East Gwillimbury	33
Scugog	78
Whitchurch-Stouffville	46

Source: Municipal Fires: Overview, The Office of the Fire Marshal (2006).

3.4.3 Current Situation and Identified Issues

Residential Fires

Recent fire loss statistics for the last six years suggest that the majority of structural fires that are taking place in the Township are occurring in residential occupancies. It has been determined that the major cause of residential fires in the Township is the poor maintenance of heating equipment (i.e. chimneys and flue pipes)¹⁰. There are steps that the Fire Department can easily take in order to minimize the occurrence of residential fire loss.

¹⁰ The Office of the Fire Marshal, Municipal Fires: Overview (2006).

3.4.4 Recommended Action(s)

It is recommended by the Committee that:

- 1) The Fire Department ensure that all households in the Township install smoke alarms in their residences, as per the requirements of the Ontario Fire Code.
- 2) Greater attention be given to educating the public on fire prevention and public fire safety.
- 3) More training be provided to volunteer firefighters on fire prevention measures and practices.

3.5 Water Supply

Water for fire fighting purposes in the urban area of the Township is provided by a municipal water distribution system (hydrants). For rural areas of the Township without a pressurized system, water is supplied by a tanker truck.

Fire fighting water supply is the most reliable in areas of the Township serviced by a municipal water system. All new and existing residential developments in the Township's urban area have been provided with a hydrant system for fire suppression. The following table lists all the major water sources in the Township's urban area.

TABLE 9
An Inventory of the Township's Water Wells and Tanks (Urban Area)

Uxbridge West	Uxbridge Well No.6 (pumps 3.927 million L of water/day).
Uxbridge East	Uxbridge Well No.5 (pumps 2.945 million L of water/day).
Uxville	- Uxville Well No. 2 (pumps 1.897 million L of water/day). - Uxville Elevated Tank (contains 1.136 million L of water).
Quaker Hill Reservoir	Has a storage capacity of 6,872 million L.

Source: Region of Durham Works Department (2006).

3.5.1 Current Situation and Identified Issues

Accessibility to Alternative Sources of Water Supply

- The majority of the Township (predominantly rural) is not protected by a municipal water supply.
- In areas not covered by a municipal water supply, water for all structural fires is obtained from static sources and/or tankers
- In areas where adequate water supply from hydrants or static sources is not available, additional water is transported by tankers on first alarm apparatus
- As more residents choose to make the Township their home, it becomes important for the Fire Department to establish alternative sources of water supply in the event of a major disruption in the Township's water supply distribution system

Calculating Water Supply

- The Fire Department has not calculated or established water supply requirements for the Township, including maximum flows for all high, medium and low risk occupancies
- Members of the Fire Department have not been trained on how to calculate available water supply

Hydrants

- The Fire Department does not maintain an inventory list of all private hydrants
- Not all public and private hydrants are colour-coded in accordance with NFPA 291, "Fire Flow Testing and Marking of Hydrants"
- Public hydrant maps are not carried on Fire Department pumpers

3.5.2 Recommended Action(s)

It is recommended by the Committee that:

- 1) The Fire Department acquire additional tankers for fire suppression in areas of the Township without a hydrant system.
- 2) All plans for development approved by the Township include a built-in water supply for fire fighting in areas where municipal water services are not provided or are inadequate.

- 3) Plans for alternative sources of water supply be developed by the Fire Department. In its latest efforts to improve water supply accessibility in rural areas of the Township, the Fire Department is conducting a study on rural static water supplies and sources.
- 4) Fire Department staff be trained on how to calculate available water supply and flow.
- 5) A list of all private hydrants be maintained by the Fire Department.
- 6) Maps of public hydrants be carried on pumpers at all times.
- 7) All public and private hydrants be colour-coded in accordance with NFPA standards and reflective street markers be used to assist firefighters in locating hydrants at night.

3.6 Existing Fire Station

The Uxbridge Fire Department operates from one fire station, located on Bascom Street in Uxbridge's downtown core. The existing facility was built in 1952 (See picture). A second storey was added in 1977 (see picture) and finally a third bay complete with a second storey addition was added in 1988 (see picture).

The station incorporates two floors. The main, or ground floor, consists of fire apparatus bays and a control room. The fire apparatus are doubled up in each bay. The fire apparatus exit the station via Bascom Street and reverse into the station upon returning. The station also has a rear door, however, as this incorporates private property it is only used in the event of an emergency. All Bascom Street doors have electric openers with mechanical back up.

The floor covering of the apparatus floor is coloured concrete with no slip protection. There is one unisex washroom downstairs with no shower facilities. The upstairs of the fire station incorporates offices for the Fire Chief, the Deputy Fire Chiefs, Public Education and the Fire Prevention Officer. There is also a public reception area, a training room and a kitchen. The existing fire station serves not only as an emergency response facility, but also a control centre and the Township's emergency operations centre.

Members of the public can access the reception area by climbing up a steep staircase on the northwest corner of the building. A major issue with the fire station's existing public entrance is the difficulty that is faced by individuals using walkers, wheelchairs or with disabilities when attempting to climb up the steep staircase.

Station Infrastructure

The current facility is serviced by municipal water and sewers. The station also has an unmetred water supply, which is used for filling the water tanks on the fire apparatus. The station's electrical system consists of a 200 amp service and all circuits are protected by circuit breakers. The Fire Department utilizes a 12 kW

diesel powered portable electric generator in the event of a power failure. This system is not automatic and must be manually operated by Fire Department personnel. The generator does not have the capacity to run the whole station; specific circuits have been labeled to run on emergency power supply. These circuits include lighting, electric doors and Radio Control room. The station is also protected by a monitored alarm system, which monitors for both fire and intrusion.

Ventilation and Exhaust Extraction

There is no ventilation or air exchange units in the existing fire station, however, there is a modern exhaust extraction system in the apparatus bay area. This system utilizes a drop exhaust hose to each fire apparatus, operating automatically upon activation of the vehicles ignition. The hoses disengage upon the apparatus leaving the station. The system exhausts the products of the vehicles engine combustion to the outside air at the rear of the fire station. The fire station also has a compressor for supplying breathing air replenishment for their self-contained breathing apparatus. This system is powered by electricity and draws its air supply from outside of the station.

Telephone System

The telephone system for the station incorporates three dedicated phone lines and one fax line. The phone switchboard system is approximately 18 years old and was donated to the Fire Department from the municipal office when their system was changed. The existing station has a high-speed Internet connection from an outside source. The station has no access to the dedicated system that is used by the other municipal departments.

3.6.1 Current Situation and Identified Issues

The Fire Department has experienced some significant changes since the time the fire station was built. Fire suppression is no longer the primary activity of the Fire Department. Presently, fire prevention, public education, rescue and medical aid represent a large portion of the services that the Fire Department provides. At the same time, factors such as public access, gender issues, disaster preparedness and training requirements place additional operational demands on the existing fire station. All of these variables have a direct impact on the design and function of the existing fire station.

Another significant change that has occurred since the existing fire station was built is the design and size of new firefighting apparatus. Current fire apparatus are much larger than models built in the past. What results is a common dilemma experienced by many older fire stations – the apparatus bays are too small to house newer firefighting vehicles thus resulting in a number of Health & Safety issues.

The Fire Underwriters Survey expressed 3 primary concerns in their updated risk assessment of the Township, one being that the present fire station is too small to house an aerial apparatus. It was additionally stated by Fire Underwriters that with the expansion of the Township's urban area, the fire station is poorly located to provide prompt emergency response to all areas of the Township.

The Township has been advised by Fire Underwriters to relocate its existing fire station on Bascom Street to a more accessible location and to construct a new station in order to accommodate an aerial apparatus. The current location of the fire station is on a side street and access for the volunteer firefighters is by way of highly congested traffic routes during normal business hours.

3.6.2 Recommended Action(s)

It is recommended by the Committee that:

- 1) The Township relocate its existing fire station based on the facts indicated above. The new fire station must be of a suitable size and design to meet the needs of the Fire Department now and for years to come.
- 2) A new fire station/headquarters for the Fire Department be constructed at a location to be determined by a Fire Station Location Study, which will be completed in early 2007.

4.0 ECONOMIC CIRCUMSTANCES

The economic stability of the Township can have a significant impact on the availability of resources for fire protection. Factors, such as a limited tax base, budget reductions and delays in purchasing firefighting apparatus and equipment can have a detrimental effect on the quality of service provided by the Fire Department. The following section is a review of the economic conditions of the Township and its connection to the provision of fire protection services now and in the future. This review will involve an examination of the Township's property assessments, financial management and budgeting practices, existing reserves and major employers.

4.1 Assessment Growth and Current Value Assessments

Table 10 displays the current value assessments for the Township from 2002 to 2006. The data in the table indicates that assessment values for all recognized designations have consistently increased over the past 5 years.

From the standpoint of the fire protection services system, there is a *direct* relationship between current value assessments and fire loss. The higher the current value assessments of properties, the greater the financial risk in the event of a fire. For this reason, taking the necessary preventative measures towards reducing property loss and damage resulting from fire-related incidents should be a priority for the Fire Department.

TABLE 10
 Township of Uxbridge Assessment Levies (2004 - 2006)

Designation	2004	2005	2006
Residential	\$1,678,290,360	\$1,723,596,910	\$2,019,108,185
Multi Residential	\$23,458,550	\$28,673,550	\$31,076,665
Farmland	\$208,025,480	\$207,430,015	\$220,346,400
Managed Forest	\$17,176,440	\$23,126,050	\$13,695,215
Commercial	\$98,982,470	\$103,008,180	\$116,565,795
Commercial Vacant Land	\$2,963,080	\$2,904,330	\$4,169,815
Shopping Centre	\$1,130,000	\$1,130,000	\$1,236,810
Industrial	\$39,772,010	\$38,197,060	\$44,882,435
Industrial Vacant Land	\$9,864,885	\$9,066,245	\$9,219,380
Pipelands	\$3,005,000	\$3,105,000	\$3,149,000
Total	\$2,082,668,275	2,140,237,340	2,463,449,700

Source: The Township of Uxbridge (2006).

4.2 Financial Management and Budgeting, Fire Protection Costs

The Township is a small municipality, with a limited tax base. What this essentially means is that there is limited funding available to provide public services, such as fire protection, when compared to larger municipalities. The table below shows the operating budget for the Fire Department over the past few years:

TABLE 11
Township of Uxbridge Fire Department Operating Budget (2004 - 2006)

	2004	2005	2006
Salaries	\$122,778	\$164,800	\$173,785
Benefits	\$55,000	\$57,200	\$70,000
Local Fire Costs	\$293,000	\$285,000	\$332,190
Communications	\$23,750	\$32,840	\$34,153
Other Operational Costs	\$194,400	\$292,776	\$309,099
Station Maintenance and Supplies	\$19,065	\$18,996	\$22,255
Truck Repairs & Maintenance	\$35,500	\$49,900	\$33,983
Equipment Repairs & Maintenance	\$7,000	\$16,280	\$16,931
Training	\$15,000	\$16,688	\$31,948
Capital Expenditures	\$120,990	\$184,900	\$102,500
Total	\$886,483	\$1,119,380	\$1,126,844
Revenue	\$123,000	\$123,000	\$115,000
Net Budget	\$763,483	\$996,380	\$1,011,844

Source: The Township of Uxbridge (2006).

4.2.1 Revenues

Municipal fire services tend to be fully levy-supported, with limited funding coming from other levels of government. This is the case in the Township, where the Fire Department receives the bulk of its financing from the municipal tax base.

In order to pay for the increased capital costs associated with providing fire services to the Township, the Fire Department receives a portion of the revenues collected from residential development charges imposed by the Township. By-law No. 2004-111 authorizes the Township's municipal council to impose development charges onto properties to cover additional servicing costs arising from development. A complete schedule highlighting all existing residential development charges for fire and rescue services can be found in the appendices of this Plan.

TABLE 12
Revenues for the Uxbridge Fire Department (2005 - 2010)

	2005	2006	2007	2008	2009	2010
Tax Levy	\$184,900	\$102,500	\$2,412,300	\$228,000	\$2,150,000	\$1,215,000
JEPP Funding	\$12,190	\$0	\$0	\$0	\$0	\$0
Development Charges	\$108,000	\$274,000	\$2,247,700	\$0	\$0	\$0
3rd Party Contributions	\$0	\$0	\$0	\$0	\$0	\$0
Reserve Funds	\$393,500	\$0	\$0	\$0	\$0	\$0
Previous Year's Financing	\$393,500	\$492,508	\$0	\$0	\$0	\$0
Provincial Grant	\$70,000	\$0	\$0	\$0	\$0	\$0
Total	\$1,162,090	\$869,008	\$4,660,000	\$228,000	\$2,150,000	\$1,215,000

Source: The Township of Uxbridge (2006).

4.2.2 Fire Protection Agreements

The Fire Department has entered into a number of fire service agreements with neighbouring municipalities. These agreements allow for the provision of fire protection & emergency services by participating municipalities to defined areas of the Township, and vice versa. The terms of these agreements should be reviewed regularly.

4.2.3 Fire Station Relocation

As was identified earlier in the plan, the existing fire station does not meet the growing needs of the Fire Department and therefore should be relocated. In the Township's 2006 capital budget submission for fire services, funding for the purchase of land and the construction of a new and improved fire station has been

allocated for the years 2007 and 2009¹¹. Based on the findings of a Development Charges Study that was conducted by the Fire Department, the overall cost of this station is estimated at \$3,290,000¹².

In order to investigate the feasibility of relocating and constructing a new fire station that will serve the entire Township, \$25,000 has been set aside in the Township's 2006 capital budget for a Fire Station Location Study. At this time, the Fire Department is considering the possibility of constructing a new fire station on an existing property owned by the Township. However, if a suitable Township-owned site cannot be found, then alternative cost-saving methods for fire station relocation and construction must be considered.

4.2.4 Recommended Action(s)

It is recommended by the Committee that:

- 1) The approved budget for the Fire Department continue to address vehicle and equipment replacement, training, fire prevention, inspection, fire safety education and staffing.
- 2) The Fire Department consider alternative funding options for its future projects.
- 3) The Fire Department continually review all of its expenditures to ensure that it is in the position to meet current and future fire protection and life safety requirements.

(Certain expenditures, while capital in nature, occur annually at approximately the same level. Funding for firefighting equipment such as bunker gear, self-contained breathing apparatus (SCBA) and hoses should come from the tax levy and not from alternative funding sources, such as reserves).

- 4) The terms of the Fire Department's existing fire protection agreements be reviewed annually, as well as prior to the next budget submission, to ensure that the costs and collection payments to the Township are in the best interest of the Township.
- 5) If an acceptable Township-owned property cannot be found for the construction of a new fire station, alternative cost-saving methods for fire station relocation and construction be considered.

(The Fire Department may want to explore joint projects with local developers and/or businesses. Alternatively, joint use of land and facilities could provide the Township with significant cost savings towards the construction of the new fire station and its ongoing annual maintenance.)

¹¹ The Township of Uxbridge (2006).

¹² The Township of Uxbridge (2006).

4.3 Reserves and Reserve Funds

A reserve is defined as *an appropriation from net revenue at the discretion of Council*. It has no reference to any specific asset, and is therefore not department-specific. A reserve can be provided during the annual budget process or by transferring unexpended funds prior to the end of the fiscal year.

In the case of the Township, the most common reserves are:

- 1) **Working capital** – this reserve is used to ensure funds are available for those time periods during the year where expenditures exceed revenue, especially prior to the first interim tax installment.
- 2) **Contingencies** – this reserve is created to finance unknown expenditures or liabilities, such as damage claims.
- 3) **Equipment** – these reserves provide a means to spread the cost of replacing equipment over a number of years, reducing the impact of the cost of acquisition in the year the asset is required.

Reserves are generally used to cover the costs of building and equipment, not operations. Working capital and contingencies are generally corporate reserves, while equipment reserves are generally program-specific. The Fire Department makes use of an equipment reserve for the replacement of fire vehicles. The Township's Treasury Department claims that at the end of the 2005 fiscal year, the value of the equipment reserve for the Fire Department amounted to \$50,000.

Reserve funds are established by by-law for specific purposes, and are revenues that are placed into the Township's existing reserves. The Township has established two types of reserve funds:

- 1) **Obligatory reserve funds** – Are created whenever revenues received for specific purposes are required to be segregated in accordance with legislation. An example of this would be *development charges*. Council cannot reallocate these funds to be used for any other purposes.
- 2) **Discretionary reserve funds** – Are established by council in order to identify revenues to be used for specific purposes at a future date. Council has the authority to transfer any of these funds throughout the budget process.

4.3.1 Recommended Action(s)

It is recommended by the Committee that:

A department-specific equipment reserve be established for the Fire Department to ensure adequate funding will be available when replacement of all light and heavy fire vehicles is required.

4.4 Major Employers and Potential Economic Loss Resulting from Fire

The Township is home to several major employers. The loss of any one of these employers as a result of fire could result in the Township experiencing substantial economic loss, with many of the Township's residents losing their main source of income.

In the case of some companies, what may occur as a result of a fire is either the shutting-down of their operations altogether or the relocation of their operations to a location that is closer to a larger urban area. Therefore, for the sake of preserving the economic livelihood of Uxbridge residents, it becomes extremely important for the Fire Department to take the appropriate measures to ensure that these establishments meet all necessary fire safety requirements.

FIGURE 9
Uxbridge Firefighter fighting a blaze



Source: Township of Uxbridge Fire Department

5.0 CAPABILITIES OF EXISTING FIRE PROTECTION SERVICES

This section of the Plan evaluates the Township's existing fire protection services system and its ability to serve residents of the Township. Examining the existing fire protection services of the Township is a time-consuming task that requires a detailed review of everything from emergency operations and response to training to fire prevention and public safety education measures. However, despite the length of time it may take for one to fully study and analyze the existing fire protection services, it is important to provide a clear picture of the nature of the Township's fire protection system as it exists today.

In addition to reviewing the capabilities of the Township's existing fire protection services, there will be an identification of strengths, limitations, threats and opportunities respecting the present-day fire protection services system. At the same time, the efforts of the Township's Fire Department when addressing some of the limitations of its existing fire services system are recognized.

5.1 Mission and Vision Statements

The Fire Department recently developed its own mission and vision statements. It is important to note that these two statements serve separate purposes. While the mission statement describes the Fire Department's reason for being and its current functions, the vision statement envisions where the Fire Department wants to be in the foreseeable future. In order to be effective and relevant, both the mission and vision statements must be consistent with not only the Fire Department's goals and objectives, but also its establishing and regulating by-law (i.e. By-law # 2005-084).

Mission Statement

The mission statement is meant to be a clear and concise summary of the Fire Department's purpose for existence and its core values. It is meant to reflect the broad and over-arching goals and objectives of the Fire Department. The following is the Fire Department's current mission statement:

Township of Uxbridge Fire Department Mission Statement

The Township of Uxbridge Fire Department is committed to reducing death, injury and property loss due to fire and other related emergencies. We are dedicated to serving and protecting residents and visitors of the Township in a professional manner through providing high-quality services such as public education, fire prevention, fire suppression and training. In order to fulfill our mandate, we will continue to be persistent in acquiring the most up-to-date technical skills and knowledge in the realm of fire protection. As a leader in fire safety, we will use all of our available resources to best serve our diverse communities in the most efficient and effective manner.

Vision Statement

The vision statement is meant to create an image of what the Fire Department wants to become. It should have social meaning and relevance to all members of the Fire Department and give them a sense of pride and belonging. In essence, a vision statement should be meaningful, as well as memorable. The vision statement of the Fire Department can be found in detail in the appendices.

5.1.1 Recommended Action(s)

It is recommended by the Committee that:

A review of the Fire Department's mission and vision statements be conducted every 3 to 5 years, so that they are current to the services provided by the Fire Department.

5.2 Organization

5.2.1 Staffing

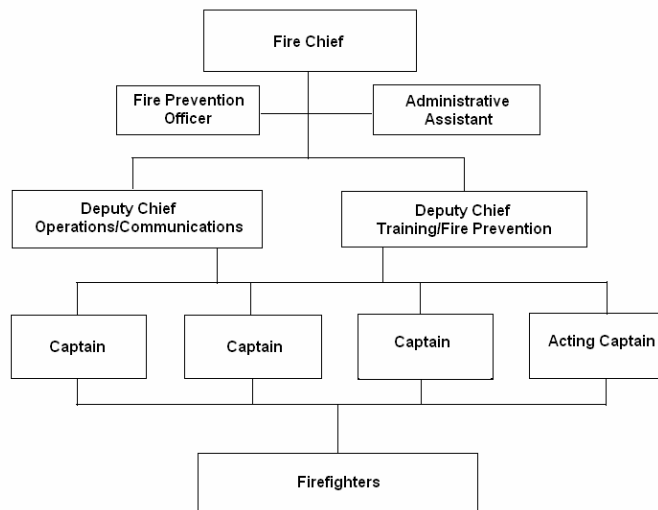
The Fire Department is a volunteer fire department comprised of 37 staff members. Fire Department personnel include one Fire Chief, two Deputy Fire Chiefs, three Captains, one Acting Captain, one Fire Prevention Officer, one Administrative Assistant, nineteen volunteer firefighters and ten probationary firefighters. The Fire Chief and the Deputy Fire Chiefs together form the Fire Department's senior management team.

Although the Fire Department does not consist of full-time career firefighters, it does have 3 full-time members. Those members of the Township's Fire Department that are considered to be full-time are the Fire Chief, the Fire Prevention Officer and the Administrative Assistant.

Several staff members have been assigned multiple roles in the Fire Department. These members include the Fire Chief, the Deputy Fire Chiefs, the Captains and the Fire Prevention Officer, who all perform fire suppression duties. In addition, one of the Fire Department's four Captains assumes the role of Fire Prevention Officer.

As is the case with most career or volunteer fire departments, there exists a clearly defined ranking structure or chain-of-command that is respected by all members. The chart below indicates the organizational and rank structure of the Fire Department:

FIGURE 10
Township of Uxbridge Fire Department
Organizational Chart



5.2.2 Firefighters Association

The Uxbridge Firefighters Association is considered to be the ‘social conscience’ of the Township’s Fire Department. It is important that this Plan recognizes the current activities and growing pains of this Association, as they will have a significant impact on the future organizational structure/make-up of the Uxbridge Fire Department. See the Firefighters Association Master Fire Plan Article in the appendices of this plan.

5.2.2.1 Background

The Uxbridge Firefighters Association is considered to be the social conscience of the Township’s Fire Department. The Association dates back to 1996, when members of the Uxbridge Fire Department identified the need to separate its community and social support activities from its official firefighting duties. All Fire Department staff are members of the Association.

Comprised of a *social* side and an *operational* side, the Association has several primary functions. The social side of the Association focuses on funding community social events and organized little league sports teams, contributing to local charities and fundraising, while the operational side looks at providing financial assistance to Association members and their families (i.e. providing life insurance benefits/coverage in case of accidental death, offering flowers and/or donations in the event of a firefighter's death.)

5.2.2.2 Current Situation and Identified Issues

One of the main concerns expressed by Association members has been the dramatic increase in the number of fire calls that the Fire Department has responded to in the past few years. The Fire Department has completed one of its busiest years to date, with 470 responses to fire emergency and rescue calls in 2005. Unprecedented increases in responses have volunteer firefighters struggling to find an acceptable balance between their work (full time & part time), their family lives & their other daily responsibilities. In some cases, local businesses are discouraged from employing volunteer firefighters because of the increase in fire response activity. This results in more volunteer firefighters commuting to jobs that are located outside of the Township, essentially decreasing the attendance rate for day-time fire and emergency calls.

While the Association remains focused on its original principles, the evolution of the fire services system in the Uxbridge community now requires the Association to deal with critical issues such as wages and benefits, labour relations, occupational health and safety, management and policy changes. Although the Association is not considered to be an organized labour group, it is moving closer to becoming a bargaining unit as it continues to strive to maintain standards that have been adopted by fire departments in other municipalities in order to ensure the highest quality of service to the Township's citizens. Additionally, as part of its evolution, the Association is attempting to develop a more structured framework that is complete with a mission statement and a vision statement in hopes of protecting the quality of life of its members.

The strong foundation created by members of the Association today will provide the direction and support needed to ensure a positive future for fire services in the Township of Uxbridge.

5.3 Administration and Human Resources

5.3.1 Roles and Responsibilities

Fire Chief

The position of Fire Chief is full-time salaried. As one of three full-time members of the Uxbridge Fire Department, the Fire Chief is expected to work a full 35-hour work week, from Monday to Friday. However, the Fire Chief is expected to be available 24 hours a day, 7 days a week, in case of a major fire emergency. The current Fire Chief is the first full-time Fire Chief in the history of the Uxbridge Fire Department.

In addition to his role as Head of the Fire Department, the Fire Chief is also the Community Emergency Management Coordinator for the Township of Uxbridge, and is in charge of implementing the Province's emergency management initiatives. The Fire Chief is also considered to be a member of the Township's senior management team. As is required by by-law, the Fire Chief reports directly to Council through the Township's Chief Administrative Officer.

The responsibilities of the Fire Chief are mainly supervisory and administrative in nature. Some of the responsibilities and duties of the Fire Chief include:

- Enforces the rules and regulations of the Fire Department
- Reviews applications and makes recommendations for the hiring and dismissal of employees.
- Recommends Fire Department personnel for promotions.
- Sets training and examinations for new firefighters and presently employed firefighters.
- Enforces fire service-related legislation (i.e. The Fire Protection and Prevention Act).
- Assists in the administration of the Township's fire prevention program, both internally, as well as to the public at large.
- Prepares reports relating to fire emergencies and submits them on behalf of the Fire Department to the Office of the Fire Marshal.
- Submits to Council and the Chief Administrative Officer for approval the annual budget for the Fire Department and an annual report.
- Investigates the cause and origin of fires.
- Conducts the pre-fire planning of all major target hazards in the municipality.
- Attends meetings with the council, fire boards and fire committees regarding emergency planning, Attend required meetings with municipal officials, building officials and concerned citizens.

Deputy Fire Chiefs

As members of the Fire Department's senior management team, the role of the two voluntary Deputy Fire Chiefs is to provide support to the Fire Chief. Both Deputy Fire Chiefs have been assigned specific areas of responsibility by the Fire Department. One Deputy Fire Chief is responsible for Operations and Communications, while the other is responsible for Training and Fire Prevention.

Both Deputy Fire Chiefs are extremely seasoned and experienced in the area of fire services provision. As part-time/volunteer members of the Fire Department, the Deputy Fire Chiefs are paid a stipend amount in addition to an hourly rate for all hours that they devote to their specific tasks. The Deputy Fire Chiefs are required to report directly to the Fire Chief. In the event of the Fire Chief's absence, The Deputy Fire Chiefs must assume the role of Fire Chief.

Captains

As was indicated earlier in this plan, the Uxbridge Fire Department currently employs three part-time/volunteer Captains. There is a fourth individual in the Department who is currently taking on the role of Acting Captain. This individual will soon be promoted to the rank of Captain. All the Captains are paid a yearly stipend as well as an hourly rate for all duties that they perform. The Captains report directly to the Department's senior management team.

Fire Prevention Officer

The Fire Prevention Officer is one of three full-time salaried employees in the Fire Department. He assumes all roles and responsibilities related to fire prevention, which would primarily include fire inspections. Additionally, the Fire Prevention Officer performs legislated public education and awareness functions. As a full-time salaried employee of the Fire Department, the Fire Prevention Officer is required to work a standard 35-hour work week. The Fire Prevention Officer reports directly to the Fire Chief.

Volunteer Firefighters

There are currently 36 part-time/volunteer firefighters in the Uxbridge Fire Department (which includes the Fire Chief, the Deputy Fire Chiefs and the Captains). Volunteer firefighters are divided up into individual crews that are under the direct supervision of the Department's Captains and Deputy Fire Chiefs. The firefighters are paid an hourly rate for all fire suppression functions that they perform.

Administrative Assistant

The Administrative Assistant is a full-time salaried employee. The responsibilities of the Administrative Assistant include maintaining detailed records of staff attendance and documenting the financial transactions of the Fire Department. The Administrative Assistant is the only member of the Fire Department that does not perform official firefighting duties (i.e. fire suppression, operations and response). As a full-time employee, the Administrative Assistant must work a 35-hour work week. The Administrative Assistant reports directly to the Fire Chief.

5.3.2 Records and Reports Management System

Financial Records and Reports

Over the years, much of the accounting, purchasing of equipment & apparatus and preparation of financial reports and budgets for the Fire Department have been done through the Township's Treasury Department, due to the lack of available staff within the Fire Department. The resources of the Treasury Department are limited, and as a result, there is only a quarterly financial report produced for review by senior staff.

In order to increase the efficiency of its current accounting, monitoring and financial management activities, the Treasury Department is implementing a new computerized financing/tax system in 2006. The Fire Department should use the introduction of this system as an opportunity to improve its own financial records and reports management system.

Incident and Billing Reports

Staff at the Fire Department currently file all incident reports in file folders. Incident reports are usually filed the day after the Uxbridge Fire Department receives them.

Billing reports from neighbouring municipalities that have formed fire protection agreements with the Township, such as the Township of Scugog, come once a month, in the form of a package. Incident reports are filed by incident.

It has been commented by the Township's fire staff that although the current filing and records management system for incident and billing reports is adequate, a more sophisticated and specialized system would prove to be more efficient and time-saving.

5.3.2.1 Recommended Action(s)

It is recommended by the Committee that:

- 1) An automated records and reports management system be adopted by the Fire Department to 1) assist with the management of financial records, 2) conduct the collection of revenue and assets and 3) provide the basis for budget submissions. Request for the resources and funding for the creation, introduction and maintenance of this system should be submitted in the 2007 Operating Budget.
- 2) The Fire Department use the Treasury Department's new computerized financing/tax system in conjunction with its own records and reports management system to improve its financial management.
- 3) A specialized computer software system be utilized by the Fire Department to improve the filing of incident reports and departmental records.

In the case of all of these recommendations, there needs to be an individual within the department that would be willing to take on the responsibility of maintaining the system on a regular basis. It is therefore

recommended by the Committee that the Fire Department assign the responsibility of the system's maintenance to one of its current staff members.

5.3.3 Human Resources Policies

Recruitment

The current process for recruitment of volunteer firefighters involves a public appeal process, followed by an aptitude test, physical testing and the interview process.

Retention

The Fire Department has made many attempts to address the retention of its part-time volunteer staff. Retention has been addressed through wages, benefits and other monetary incentives. It is important to note that the Township has in place a competitive wage and life insurance structure to aid in staff retention.

Discipline

The fire service emulates a paramilitary structure. The Fire Department, like so many other fire departments, requires all of its members to adhere to strict rules, regulations and practices. This is especially the case when firefighters are at the scene of an emergency or are conducting day-to-day operations. The Fire Department currently has in place a very fluid disciplinary attitude, which is acknowledged in a departmental document entitled "Fire Chief's Standing Orders".

Attendance Management

The Fire Department has established an effective attendance management policy. This policy is an internal initiative that gives discretionary powers to the Department's senior officers to deal with the attendance of staff. The main objective of the policy is to monitor and improve the overall attendance of fire suppression personnel, especially during emergency calls and firefighting training sessions.

Health and Safety Practices

Currently, the Fire Department has in place its own occupational health and safety policy. First established in July 1991 and amended in March 1998, the policy recognizes that all members of the Fire Department have the right to work in a healthy and safe environment. The main objectives of the policy are:

- 1) To ensure that all operations within the Fire Department are conducted in a safe and healthy manner in order to prevent injury or illness to its members.
- 2) To eliminate any hazards to Fire Department personnel.

- 3) To ensure that the Fire Department's work environment and work procedures comply with federal and provincial legislation and Township and regional regulations relating to the health and safety of employees.

All members of the Fire Department are encouraged to be actively involved in maintaining a healthy and safe workplace environment. The Fire Chief is responsible for ensuring that the occupational health and safety standards and goals of the Fire Department are maintained and kept up-to-date. The health and safety goals of the Fire Department must be reported annually to management staff at the Township. In turn, officials at the Township are required to provide Fire Department staff with ongoing training in order to increase their awareness of the potential hazards of the workplace. A copy of the health and safety policy must be posted in a conspicuous location in the fire station.

Presently, the provisions of the Fire Department's health and safety policy are current and up-to-date. In addition, all members of the Fire Department have Workplace Hazardous Materials Information System (WHMIS) training to inform them of various workplace hazards. In order to ensure all members of the Fire Department are aware of the requirements and procedures of the health and safety policy, a copy of the policy has been posted in a visible location in the fire station's meeting room.

5.4 Legislative Framework

It is important that the Township comply fully with the requirements of the province's Fire Protection and Prevention Act when providing fire protection services to its citizens. Amended in 1997, the Fire Protection and Prevention Act (FPPA) is an important piece of provincial legislation that enables Ontario municipalities to provide its citizens with the highest possible level of protection from fire in the most efficient manner. The Township is expected to establish programs in its communities relating to public fire safety education and fire prevention. Additionally, the FPPA requires that the Township provide other fire protection services that it deems necessary, depending on the needs and circumstances of residents living in its diverse communities.

Topics that are highlighted in the FPPA include:

- Methods for providing fire services
- The provision of fire services outside of a municipality
- Automatic aid agreements
- The role of fire departments
- The powers of the Fire Chief and the Fire Marshal
- Fire Prevention & Life Safety provisions

As part of the requirements of the FPPA, the Office of the Fire Marshal is responsible for monitoring and reviewing the fire protection services of Ontario municipalities and advising on how to improve the effectiveness of those services¹³. To date, the OFM has assisted the Fire Department in completing several documents reviewing the state of the Township's fire protection services and activities. For instance, a Simplified Needs Analysis of the Township was completed in January 2005 by Fire Department staff and the OFM. The purpose of the analysis was to identify areas of concern relating to fire risk, fire prevention and public fire safety education. Several key issues were identified in the analysis concerning barriers in providing public fire safety education, dealing with fire loss and staffing,

¹³ The Office of the Fire Marshal, Fire Protection and Prevention Act (1997).

among others. All of the issues identified in the analysis are described in greater detail throughout this plan.

In addition to assisting the Fire Department in completing its Simplified Needs Analysis, the OFM conducted a Municipal Fire Protection Information Survey (MFPIS) for the Township in 2005. The main objective of the MFPIS is to ensure that Ontario municipalities are meeting the minimum fire protection requirements, as stated in the FPPA¹⁴. As its focus, the MFPIS tries to determine whether municipalities are accomplishing the following requirements:

- Conducting a simplified risk assessment/analysis
- Implementing a smoke alarm program, which would include home escape planning
- Distributing public fire safety education information
- Delivering public fire safety education programs
- Conducting inspections upon complaint or request

Data resulting from the survey is used to identify best practices for municipalities in the delivery of fire protection services. The survey presented a number of key findings, among them being that the Fire Department is currently in compliance with the minimum requirements of the FPPA. For their compliance, the Fire Department received in October 2005 an official Certificate of Compliance from the OFM.

However, some findings indicate that there are issues that still need to be addressed by the Fire Department, and that there is definitely room for improvement. Specific details on these issues will be highlighted and expanded upon in the Fire Prevention and Public Fire Safety Education section of this plan.

5.5 By-laws and Agreements

5.5.1 The Establishing and Regulating By-law

By-law No. 2005-084 is the establishing and regulating by-law for the Fire Department. Adopted on June 13th, 2005, the by-law gives Council the authority/power to appoint all members of the Fire Department, which would include the Fire Chief. The by-law also defines the specific responsibilities of the Fire Department and the Fire Chief.

According to the provisions of the by-law, the Fire Department is expected to provide to the Township 'fire protection services', which are defined under the by-law as fire suppression, fire prevention, public fire safety education, fire investigation, communication, training, the delivery of rescue and emergency services. The by-law also gives the Fire Chief specific powers, which include recommending to Council the appointment of qualified individuals for the Fire Department, implementing departmental policies, developing

¹⁴ The Office of the Fire Marshal, Municipal Fire Protection Information Survey Explanatory Guide (2002).
http://www.ofm.gov.on.ca/english/Publications/MFPIS/pdf/MFPIS_Guide.pdf

standards operating procedures and guidelines and suspending or recommending the dismissal of any member of the Fire Department. While the by-law grants decision-making powers to the Fire Chief, it clearly states that the Fire Chief is ultimately responsible and accountable to Council for the proper operation and administration of the Fire Department, which includes the effective delivery of what Council defines as fire protection services.

As is the case for any policy or piece of legislation, it is important that the Fire Department's establishing and regulating by-law is reviewed regularly and kept up-to-date.

5.5.2 Fire Protection Agreements

The geographic area of the Township is quite vast, and can present some significant challenges when it comes to providing quick and efficient fire protection services. This is specifically the case for areas located in the northwest and southwest portions of the Township (i.e. the Hamlets of Zephyr and Goodwood), which are the most challenging areas for the Fire Department to serve. These areas are protected by fire protection agreements that the Township has made with several neighbouring municipalities. The following is a brief synopsis of the provisions of each of these agreements.

Town of Whitchurch-Stouffville/Township of Uxbridge Agreement

Since October 1989, the Town of Whitchurch-Stouffville Fire Department has agreed to serve a defined area of the Township with fire protection, rescue and extrication services, emergency medical services, public assistance and hazardous materials (hazmat) response. In order to provide fire protection services to the Township, the Town of Whitchurch-Stouffville Fire Department is required to have 1 pumper, 1 rescue vehicle and 1 tanker at the scene of every fire incident or emergency.

Township of East Gwillimbury/Township of Uxbridge Agreement

An agreement has been established between the Township of East Gwillimbury and the Township of Uxbridge stating that the Township of East Gwillimbury will provide at all times fire protection services to a defined area of the Township. These services would include rescue, resuscitator and extrication services, as well as services related to dangerous goods mishaps and fire fighting equipment.

In the case where back-up assistance for responding to a fire emergency is required or when the Township of East Gwillimbury is unable to respond to a fire emergency in the defined area of the Township that it has agreed to provide fire protection services to, the Township Fire Department must be called first to the scene of a fire emergency.

Township of Scugog/Township of Uxbridge Agreement

The Township of Scugog and the Township of Uxbridge entered into a fire protection agreement on February 1975. This agreement requires that the Uxbridge Fire Department provide fire protection services to a defined area of the Township of Scugog. The services that the Township have agreed to provide to the Township of Scugog include rescue, resuscitator and extrication services, as well as services related to dangerous goods mishaps and fire fighting equipment.

The Township will use the following firefighting equipment in order to respond to fire emergencies in the Township of Scugog:

- 1 Pumper
- 1 Tanker
- 1 Rescue Truck

In the case where back-up assistance for responding to a fire emergency is required or when the Township of Uxbridge is unable to respond to a fire emergency in the defined area of the Township of Scugog that it has agreed to provide fire protection services to, the Township of Scugog Fire Department must be called first to the scene of a fire emergency.

5.5.2.1 Current Situation and Identified Issues

Renewal of Fire Protection Agreements

Currently, the fire protection agreements that the Township has entered into with the Town of Whitchurch-Stouffville, the Town of East Gwillimbury and the Township of Scugog are living up to their expectations. However, there always exists the possibility of notification from one or all of the municipalities that have entered into fire protection agreements with the Township to not renew their service agreement. It is important that the Township thinks ahead and addresses this issue through adopting a contingency plan in the event that a contract is not renewed, so that residents of the effected areas are provided with emergency services.

5.5.3 Automatic Aid Agreement

An automatic aid agreement is an agreement that is made between two municipalities whereby one municipality agrees to provide initial response or supplemental response to fire emergencies that may occur in part of another municipality, since the fire department of the former municipality capable of providing fire and rescue services more quickly than the fire department situated in the latter municipality.

Currently, there exists no automatic aid agreement between the Township and any of its neighbouring municipalities.

5.5.4 Mutual Aid Agreement

The Township is part of a mutual aid agreement with all municipalities within Durham Region that have an established fire department. This agreement takes the form of a plan, entitled the *Regional Municipality of Durham Mutual Aid Plan*. The main objective of the mutual aid plan is to enable the fire departments of Durham Region to work together in order to respond to fires and emergencies that require regional support. The plan states that hazardous materials support and extrication support are considered to be activities requiring regional response.

5.5.5 Dispatch Agreement

The Township has entered into an agreement with the City of Oshawa whereby the City of Oshawa is required to provide the Township with dispatch services for fire emergency calls. According to the provisions of the agreement, the City of Oshawa must provide all the infrastructure, personnel, hardware and software needed in order to perform its dispatch services. In return, the Township is responsible for providing and maintaining all telephone and data lines in its existing fire station in order for the City of Oshawa to perform its fire emergency dispatching duties. All of the capital and operating costs, plus any applicable taxes, for the provision of dispatch services shall be paid in full by the Township to the City of Oshawa each contract year.

5.5.6 Recommended Action(s)

It is recommended by the Committee that:

- 1) The Township adopt a contingency plan in the event that fire protection agreements with the Town of Whitchurch-Stouffville and the Town of East Gwillimbury are not renewed.
- 2) The Township establish an automatic aid agreement.

5.6 Emergency Operations and Response

5.6.1 Core Services

Uxbridge Municipal Council, under By-law No. 2005-084, has authorized the Fire Department to provide the following fire protection services to the Township:

- Fire Suppression
- Fire Prevention
- Public Fire Safety Education and Fire Investigation
- Communication
- Training of individuals involved in the provision of fire protection services
- Rescue and Emergency Services

5.6.2 Response Procedures

The Fire Department's response procedures differ depending on the type of incident that fire suppression staff must respond to. A departmental policy has been established that indicates what type(s) of firefighting apparatus should be used in order to respond effectively to specific fire and emergency situations. The following table details the standard vehicle response for every type of emergency that the Fire Department encounters:

TABLE 13
Township of Uxbridge Fire Department
Vehicle Response to Specific Types of Incidents

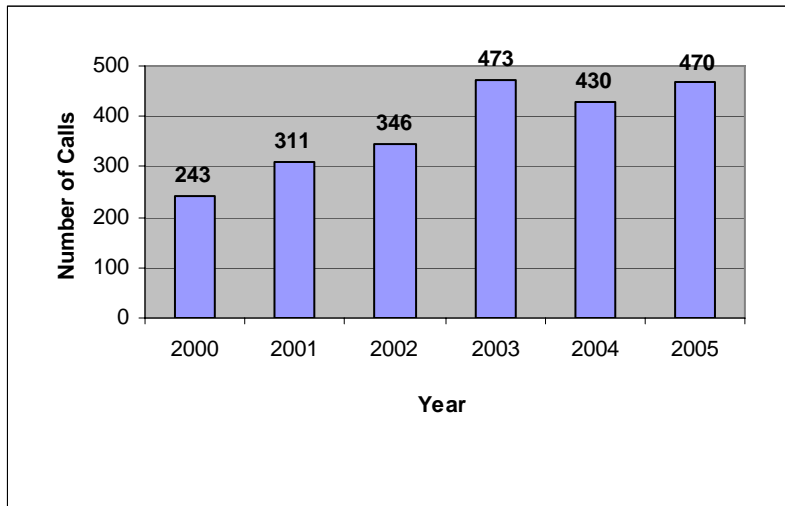
Incident Type	Standard Response
Motor Vehicle Collisions	1 Pumper/Rescue vehicle & 1 Pumper
Medical Emergency	1 Rescue vehicle
Rescue	1 Pumper/Rescue vehicle & 1 Pumper
Urban Alarm Activation	1 Pumper/Rescue vehicle & 1 Pumper
Rural Alarm Activation	1 Pumper/Rescue vehicle & 1 Pumper & 1 Tanker
Urban Chimney Fire	1 Pumper/Rescue vehicle & 1 Pumper
Rural Chimney Fire	1 Pumper/Rescue vehicle & 1 Pumper & 1 Tanker
Urban Structure Fire	1 Pumper/Rescue vehicle & 1 Pumper
Rural Structure Fire	1 Pumper/Rescue vehicle & 1 Pumper & 1 Tanker
Grass Fire	1 Pumper & 1 Tanker & 1 Rescue
Brush Fire	1 Pumper & 1 Tanker & 1 Rescue
Urban Hazardous Materials	1 Pumper/Rescue vehicle & 1 Pumper
Rural Hazardous Materials	1 Pumper/Rescue vehicle & 1 Pumper & 1 Tanker

Source: Uxbridge Fire Department (2005).

5.6.3 Call Volume and Response Type

The number of calls that the Fire Department responds to has gone up dramatically over the past few years. Figure 4 presents call volumes for the Fire Department for the years 2000 to 2005. On average, the Fire Department responds to 379 calls annually. It is evident that there have been a number of fluctuations in fire, rescue and medical call volumes over the past 6 years. However, the overall trend has been for call volumes to increase year by year, not decrease (with the exception of call volumes from 2003 to 2004.)

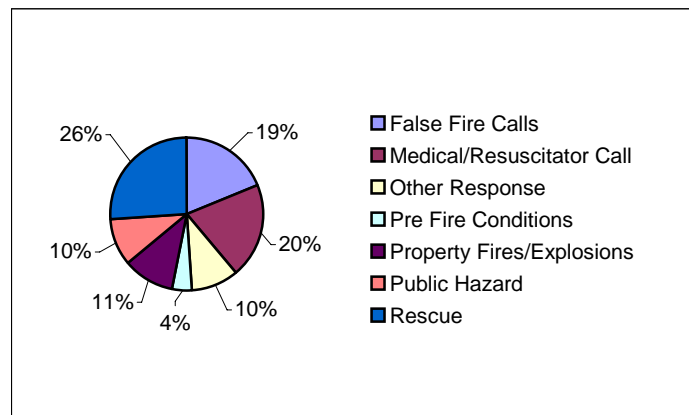
FIGURE 11
Uxbridge Call Volumes (2000 – 2005)



Source: The Office of the Fire Marshal, All Calls by Response Type Class (2006).

As indicated in the figure below, the vast majority of calls that have been made to the Fire Department have been for medical and rescue purposes. The high response to medical and rescue calls is the result of a tiered response system that the Township shares with regional ambulance services. The existence of tiered response to fire, rescue and medical emergencies inevitably places additional demands on the Township's existing fire services.

FIGURE 12
Uxbridge Calls, by Response Type (2001 – 2004)



Source: The Office of the Fire Marshal, All Calls by Response Type Class (2006).

5.6.4 Current Situation and Identified Issues

The emergency response capabilities of the Fire Department, in its existing mode of delivery, are at the same level as most fire departments across the Province of Ontario. Currently, firefighting staff are able to respond quickly to fire and non-fire emergencies across the Township.

Residents living in the Township's downtown/urban area can be reached in 5 to 10 minutes from the time Fire Department staff are notified by dispatch of an emergency. However, response times may become longer as the Township's population continues to grow and disperse into rural areas as a result of increased residential development taking place there. The Fire Department must take the necessary steps today in order to tackle this impending issue.

Another factor that can affect response times in the foreseeable future is the availability of fire suppression staff to respond to fire and emergency calls. Daytime shortages in firefighting staff ultimately lead to longer response times to fire emergencies. Firefighting units responding to emergencies with fewer than the required number of people needed to perform that unit's firefighting functions can pose a serious threat to the safety of the Township's residents. Longer response times can increase the likelihood of injury and death due to fire.

Inadequate staffing can be attributed to the following factors:

- Changes made to the policies of local businesses and industries regarding volunteer firefighters leaving their fulltime or part-time work in order to respond to an emergency call.
- Volunteer firefighters being employed outside the response area.

5.6.5 Recommended Action(s)

It is recommended by the Committee that:

- 1) The Fire Department continue to hire additional fire suppression staff as required to better respond to increasing fire and rescue call activity. As a first step, the Fire Department welcomed 10 new recruits in March 2006. However, as a community grows, fire servicing demands will also grow, and with that, the Fire Department must continue to be vigilant and prepare to hire fire suppression staff as necessary.

5.7 Fire Prevention and Public Fire Safety Education

The provision of fire prevention and public fire safety education services is mandated in the establishing and regulating by-law of the Fire Department. Fire prevention is an important component of fire protection. The main objective of the fire service is to reduce the loss of life and property due to fire. It is therefore essential that the Fire Department aggressively pursue fire prevention and public fire safety education activities that will allow it to limit the occurrence of fire incidents.

5.7.1 Needs Analysis of the Township

All fire departments across Ontario are encouraged to complete a needs analysis of their communities in order to evaluate their current fire prevention activities. A simplified needs analysis was conducted by the Fire Department in order 1) to assess and identify the various fire risks in the Township and 2) to develop recommendations on how to improve the Township's current fire prevention and public fire safety education practices. The analysis involved collecting and compiling pertinent information as it related to fire loss statistics, demographics and building stock. All data compiled for the analysis would be used as a basis for the selection of appropriate fire prevention and public fire safety education programs.

5.7.2 Fire Prevention

5.7.2.1 Fire Prevention Policies

Inspections, Smoke Alarm Programs and Site Plan Review

The Fire Department has established 3 policies relating to the fire prevention, which focus on 1) inspections by complaint or request, 2) smoke alarm programs and 3) building and site plan review for new construction. The results of the 2005 MFPIS survey conducted by the Office of the Fire Marshal for the Township indicate that the Fire Department's fire safety inspection activities, smoke alarm program and fire safety plan review process are all comply with the minimum requirements of the Fire Protection and Prevention Act.

5.7.2.2 Fire Safety Inspection Program

The vast majority of inspections that are conducted by the Fire Department are done on a *reactive* basis. There are four types of inspections that the Fire Department currently conducts:

- 1) Inspections by complaint or request
- 2) Routine inspections
- 3) Licensing (municipal and provincial)
- 4) New Construction (i.e. plan review), occupancy inspections

Complaint or Request Inspections

Inspections by complaint or request are performed by the Fire Prevention Officer. On average, the FPO is able to conduct 4 request or complaint inspections per week. As mentioned earlier, the Fire Department

currently has a policy in place that addresses where and how inspections by complaint or request must be conducted.

Routine Inspections

Inspections that are done routinely are generally not conducted at this time by the Fire Department. Complaint, request and licensing inspections, along with various other firefighting duties, are considered to be top priorities for the Fire Department, thus limiting the time available for the Fire Prevention Officer to conduct routine inspections. An exception is made for occupancies such as schools, nursing homes and hospitals, whereby the Fire Prevention Officer ensures that they are inspected annually. A major concern regarding routine inspections is that there exists no policy in the Fire Department that specifies what types of occupancies should be inspected on a routine basis, resulting in the Fire Prevention Officer having to use his own discretion.

Licensing

The Fire Prevention Officer inspects establishments that prepare and serve food (i.e. restaurants), which includes those licensed by the province's Alcohol and Gaming Commission, in order to determine whether they comply with the Ontario Fire Code. It can take the Fire Prevention Officer anywhere between 3 to 4 months to inspect 65 restaurants because of the priorities listed in the previous section.

At the municipal level, the Fire Prevention Officer is required to only inspect wrecking yards and Go kart tracks. However, there is no by-law in existence that states that the Fire Prevention Officer must inspect these particular occupancies.

New Construction

As mentioned previously, the Fire Department has adopted a by-law regarding the site plan review of new construction. The Fire Department may be the only department in the province to have developed a by-law concerning fire safety in new developments. Under the by-law, the Fire Department is responsible for reviewing the fire safety requirements for new developments, which would include new subdivisions. Site plan review for new subdivisions would allow for the Fire Department to determine potential fire routes and sources of water supply. Throughout the fire safety plan review process, Fire Department staff may be required to attend meetings with building officials, architects, and/or engineers.

Staffing

Existing staff in the Fire Department's fire prevention division makes it impossible to undertake yearly inspections of all commercial, industrial and residential properties. There is a greater demand for fire prevention and public fire safety education services. The Fire Department has only one Fire Prevention Officer on staff to carry out a multitude of responsibilities, which include inspections, education sessions, investigations and other job related functions.

5.7.2.3 Smoke Alarm Program

The Fire Department's current smoke alarm program is considered to be in compliance with the minimum requirements of the FPPA. Much like its current inspection program, The Fire Department's smoke alarm program is reactive in nature. The Fire Prevention Officer installs smoke alarms in dwellings only after he has inspected them for working smoke alarms or has responded to an emergency. Presently, there is no in-service, door-to-door smoke alarm program for residential occupancies. The main reason why a door-to-door smoke alarm program has not been implemented by the Fire Department to date is because fire prevention staff is limited.

5.7.2.4 Approval and Issuance of Permits

Residents of the Township can obtain a permit granting them permission to burn from three different locations, being the Fire Hall, Town Hall and Zephyr Library. While the Fire Department has made it convenient for residents to obtain burning permits, it has put itself into a compromising position. Individuals who sign permits in locations other than the Fire Hall do not have the authority under the Ontario Fire Code to do so, and as a result, are in contravention of the Code. It is stated in the Fire Code that the Fire Chief has the authority to give written permission to only members of the Fire Department to sign burning permits

5.7.2.5 Fees for Services

Council has approved a municipal by-law that highlights the fee schedule for the Fire Department. The Township's Clerk is responsible for administering and charging the fees. The Fire Department at this time is satisfied with the current fee schedule.

5.7.2.6 Records and Reports Management

There is currently no official records management system or filing system for inspection reports. Presently, records of inspection are recorded in the Fire Prevention Officer's day planner. While records of inspection are not filed accordingly, hardcopies of complaint/request forms are collected and filed by the Fire Department. An electronic, computer-based records management system for inspection reports/records would be an asset to the Fire Department. The computer program that the Fire Department currently utilizes for inspection reports is inefficient, since it allows the Fire Prevention Officer to only generate inspection reports, not store them.

5.7.2.7 Training

In order for staff to continue to perform their by-law appointed duties, the Fire Prevention Officer is in the process of completing the programs and courses required of him under Bill 124, an Act to amend the Ontario Building Code. It should also be noted that Fire Department staff will be required to take additional courses in order to maintain their Building Code certification.

5.7.3 Public Fire Safety Education

The Fire Department has a well-functioning public fire safety education program. Three Captains of the Fire Department are in charge of offering fire safety education to the public. Fire safety education is achieved in a number of ways, which include:

- Providing Learn Not To Burn (LNTB) program to Kindergarten to Grade 8 students
- Offering TAPP-C program
- Older and Wiser training to senior citizens at Shobrook Gardens
- Fire Station tours
- Open Houses for the public
- Giving out fire safety pamphlets at Uxbridge Fall Fair
- Setting up fire safety displays at Canadian Tire and Walmart
- Putting signage on the front of the fire station
- Placing fire safety messages in newspaper articles and advertisements
- Inserting flyers in tax bills

The results of the Simplified Needs Analysis produced by the Fire Department and the OFM were used to determine the focus of public fire safety education programs and initiatives. The analysis was able to conclude that most fires in the Township occur in residential occupancies and that the cause of most of these fires is the improper installation or maintenance of heating equipment (i.e. chimneys, stoves). This lead to the Fire Department focusing its efforts on distributing public fire safety education materials to reduce the occurrence of residential fires.

5.7.4 Fire Investigation

The Fire Prevention Officer and six additional members of the Fire Department are responsible for conducting all fire investigations. All of the fire investigators have taken OFM courses in fire cause and origin determination, as well as arson investigation.

All fires are investigated thoroughly and promptly. At the scene of every fire, the most qualified individual in the Fire Department is assigned to conduct the investigation. In order to determine what occurred during a fire incident, fire investigators interview witnesses and check inspection records to determine if any potential deficiencies or violations could have been the cause of fire. In addition, investigators assess the effectiveness of built-in fire suppression and detection features (i.e. sprinklers, smoke alarms). If it has been determined that arson was the cause of a fire, then fire inspectors notify the OFM immediately. To assist and support fire investigators, the Fire Department liases with the Durham Regional Police's Arson Prevention Committee and Emergency Medical Services (EMS).

All fire investigations are documented in reports and visuals (i.e. photographs). All reports are filed in the Fire Prevention Officer's filing cabinet and are readily available and easily accessible to all Fire Department staff.

5.7.5 Recommended Action(s)

It is recommended by the Committee that:

- 1) Additional fire prevention policies be developed to assist fire prevention division in adhering to its statutory and municipal requirements.
- 2) The Township consider remuneration for staff time for reviewing of plans and inspections of new construction under the Ontario Building Code as mandated by Township of Uxbridge Bylaw # 2005-102.
- 3) All burning permits be signed and approved by either the Fire Chief or his designate, in order to protect the Fire Department from liability issues. This action ensures that the Fire Code is being applied as intended.
- 4) The Fire Department adopt an electronic, computer-based records and reports management system for inspection and investigation reports. This system will not only ease the retrieval of departmental information, it will act as a time-saving mechanism.
- 5) An "Alarm for Life" or similar door-to-door program be implemented by the Fire Department. The Fire Department can either use its weekend duty crews or hire co-op students for the summer to distribute smoke detectors to individual residences. To avoid issues concerning liability, Fire Department staff should train students on how to properly install the alarms.
- 6) The Fire Department continue to enhance its current public fire safety education activities (e.g. Learn Not To Burn in local schools, Older and Wiser, TAPP-C, the distribution of public education material during public events).
- 7) The Fire Department put greater emphasis on educating the public on the safe use of heating and wood burning appliances as a way of addressing residential fire occurrence.
- 8) Fire Department staff conduct information sessions with building owners in regards to fire safety and the proper maintenance of buildings.
- 9) A request be made for a second full-time Fire Prevention Officer in the 2007 Fire Department Operating Budget. The Fire Department may want to conduct a brief study on how much it would cost the Township to hire an additional Fire Prevention Officer.
- 10) That both fire and planning officials work closely together in reviewing plans for new developments to ensure the inclusion of sprinkler and detection systems for fire suppression purposes.
- 11) The Fire Department increase its co-operation with Durham Regional Police when investigating fire incidents.

5.8 Training

Fire prevention and fire suppression are recognized as services that require special skills and technical knowledge. The work of a firefighter is two-fold; to minimize the chances of fire occurrence and to minimize the losses when fire occurs. It is therefore important that firefighters are taught the latest fire prevention and fire suppression skills, through participating in training programs carefully developed by Fire Department staff.

The Fire Department has designed a fairly aggressive, comprehensive and dynamic training program for its firefighting staff. The Deputy Chief of Training and Fire Prevention, who is responsible for overseeing and scheduling all of the training sessions, coordinates all training exercises. Many hours are spent on researching, monitoring and evaluating training programs, techniques and procedures.

As is the case with most fire departments in Ontario, the Township uses the Ontario Fire College curriculum as its baseline for training programs and activities. Some members of the Fire Department have enrolled into courses at the Ontario Fire College focusing on areas such as fire cause determination, hazardous materials, Legislation 101 (which many have taken and are still taking), auto extrication, flashover training, pre-fire planning, pre-incident planning, incident safety officer, executive development seminar, labour relations, Building Code – legal matters, Building Code – fire protection and public education. Four members of the Fire Department undertook fire protection technology courses when they were offered.

The table below lists some of the many training topics that new recruits are required to cover in their training sessions:

TABLE 14
Training Topics for New Recruits

<u>Training Topics</u>
<ul style="list-style-type: none">• Fire Service Organization• Safety in the Fire Service• Professionalism• Chemistry of Combustion• Protective Clothing• SCBA• Rope and Ladders• Search & Rescue• Ladders• Hoses and Appliances• Fire Streams• Ventilation• Fire Suppression Techniques• Incident Management System Size Up• Forcible Entry• Fire Attack Ops• Vehicle Fires• Portable Pumps• Water Supply & Hydrants• Fire Extinguishers• Salvage and Overhaul• Fire Ground Practical• Flashover Training• Fire Ground Evolutions & Sign Off

Source: 2006 EOFA Recruit Course Calendar

Training topics can only be delivered by individuals who have Ontario Fire Marshal Trainer/Facilitator certification. The Fire Department currently has 8 individuals on staff who are certified trainers/facilitators. The Fire Department uses several facilities in order to train its new recruits, since it does not have a training centre of its own. Training facilities that are currently available to the Fire Department are the Durham Region Flashover Trailer, Oshawa Fire Services Burn Tower, Eastern Ontario Training Centre in Norwood and the Fire College Training Centre in Gravenhurst.

Training sessions for firefighters take place three times per month, with a break during the Christmas and summer holidays. Extra training dates are usually required in order to complete extensive training sessions, such as the Pumper Operator's Course.

Firefighters are required to take part in ongoing extensive medical and defibrillation training. Medical training sessions are offered by Oshawa Base Hospital, an outside agency that operates under a doctor's license. All firefighters are trained in CPR and First-Aid.

Flashover and live fire training are offered to Fire Department staff once every two years. The Fire Department does not own its own flashover or live fire training unit and/or facility and instead uses the facilities of other fire departments located in Durham Region.

All firefighting crews under the direction of either a Deputy Chief or Company Officer rotate weekly truck and equipment checks. A portion of the time used to complete these checks could go towards training accreditation, since topics such as apparatus maintenance, vehicle familiarization, driving and equipment operation are covered.

In 2005, the Fire Department held 27 training sessions. Attendance for training sessions is high, with firefighting staff on average attending 81% of all training sessions held in 2005. Each training session is a minimum of 2 hours long. These sessions are normally held in the evenings, however shift workers are strongly encouraged to utilize daytime hours for training.

Methods of instruction practiced by Fire Department staff for training exercises include assigned reading, lecture, modified lecture, practical, discussion, video, case study and demonstrations. Throughout all training sessions, all firefighters are encouraged to bring forward interactive and dynamic training ideas.

5.8.1 Current Situation and Identified Issues

Training Facilities

Currently, most of the theory-based training sessions that are provided to volunteer firefighting staff are conducted at the fire station's upstairs meeting room. With such limited space to perform training activities, the Fire Department may need to seek a larger facility in order to perform its various training functions. The Fire Department has no dedicated facility to perform both fire ground and aerial ladder training.

Endorse Modules

The Uxbridge Fire Department has aggressively supported the endorsed modules of its training curriculum, specifically the endorse pump section. Currently, the endorsed module section of the Fire Department's training program is short-staffed, with only one trainer.

5.8.2 Recommended Action(s)

It is recommended by the Committee that:

- 1) The Fire Department continue to aggressively promote its current training program.
- 2) An additional two endorsed module trainers be acquired by the Fire Department.
- 3) The Fire Department acquire a larger training facility. This facility can be built in conjunction with the proposed new fire station.
- 4) A training tower of a suitable size be constructed.
- 5) On-line theory-based firefighting training be offered to Fire Department staff.

5.9 Apparatus and Equipment

The Fire Department has in its current fleet 1 pumper/rescue vehicle, 2 pumpers, 1 tanker and 1 rescue unit. The current inventory of firefighting equipment includes 5 portable generators, 3 portable pumps, 24 SCBA units and 24 SCBA spare cylinders. It is predicted that in the near future, the Fire Department will be in the financial position to purchase a new pumper tanker truck and aerial truck for its current fleet.

FIGURE 13 – Pumper 6



Year and Make: 1986 International Cargostar
Pump Size: 1050 GPM
Tank Size: 750 GAL
Price/Gross Expenditure: \$150,000.00

FIGURE 14 – Pumper 8



Year and Make: 1999 Freightliner FL 80
Pump Size: 1050 GPM
Tank Size: 900 GAL
Price/Gross Expenditure: \$287,277.08

FIGURE 15 – Tanker 2



Year and Make: 2001 Freightliner FL 80
Pump Size: 440 GPM
Tank Size: 1500 GAL
Price/Gross Expenditure: \$233,448.97

FIGURE 16 – Rescue 4



Year and Make: 2001 GMC Sierra sle, 1 tonne 4x4
chassis
Pump Size: N/A
Tank Size: N/A
Price/Gross Expenditure: \$116,012.61

FIGURE 17 – Pumper/Rescue 1



Year and Make: 2005 Rosenbauer Pumper/Rescue,
 Spartan VA41M chassis
 Pump Size: 1500 GPM
 Tank Size: 500 GAL
 Price/Gross Expenditure: \$553,000.00

FIGURE 18 – Fire Command #1



Year and Make: 2004 Chevrolet Tahoe Command
 Vehicle
 Pump Size: N/A
 Tank Size: N/A
 Price/Gross Expenditure: \$39,302.35

TABLE 15
Township of Uxbridge Fire Department – Proposed Vehicles

Vehicle Number	Year and Make	Pump Size (GPM)	Tank Size (GAL)	Price/Gross Expenditure
Service #6	Proposed for 2006	N/A	N/A	\$35,000.00
Aerial #9	Proposed for 2007	1500	200	\$1,400,000.00
Tanker #3	Proposed for 2008	1050	3000	\$500,000.00

Source: Township of Uxbridge Fire Department (2006).

5.9.1 Vehicle and Equipment Replacement

The Uxbridge Fire Department has established a vehicle and equipment replacement schedule. Timelines for the replacement of fire vehicles are 5 years for command and utility vehicles, 15 years for pumper/rescue vehicles, 15 years for tankers and 15 years for an aerial truck or elevating device. The following is the capital budget for all existing and proposed fire vehicles and equipment:

TABLE 16
Township of Uxbridge Fire Department – Vehicle Replacement Schedule

Vehicle Number	Vehicle Type and Year	Price/Gross Expenditure	Date of Purchase	Replacement Year
6	1986 Pumper	\$150,000.00	<u>1987</u>	2002
8	1999 Pumper	\$287,277.08	1999	2014
2	2001 Tanker	\$233,448.97	2000	2015
4	2001 Rescue	\$116,012.61	2001	2016
1	2005 Pumper/Rescue	\$553,000.00	2006	2021
1	2004 Chevrolet Tahoe	\$39,302.35	2004	2009
6	2006 Service (Proposed)	\$35,000.00	2006	2011
9	2007 Aerial (Proposed)	\$1,400,000.00	2007	2022
3	2008 Tanker (Proposed)	\$500,000.00	2008	2023

Source: The Township of Uxbridge Fire Department (2006).

TABLE 17
Township of Uxbridge Fire Department – Equipment Replacement Schedule

Equipment Type	Replacement Year
Portable generators (5)	2011
Portable pumps (3)	2011
SCBA Units (24)	2014
SCBA Spare Cylinders (24)	2014

Source: The Township of Uxbridge Fire Department (2006).

5.9.2 Vehicle and Equipment Maintenance

Vehicle Maintenance Procedures

Currently, the Fire Department maintains its vehicles to the minimum standards of the Province's Ministry of Transportation. All routine maintenance is performed by the Fire Department's mechanical officers and the Township's mechanic. Specialized maintenance and repair services are conducted when needed.

The Fire Department currently has a departmental policy in place that concentrates on the routine care and cleanliness of fire vehicles under its care. Steps are presently being taken by the Fire Department to increase the standards and the frequency of vehicle maintenance.

Equipment Maintenance Procedures

All non-specialized equipment (i.e. ladders, S.C.B.A. compressors, etc...) goes through routine maintenance and repair by Fire Department personnel. Equipment that requires maintenance and service beyond the capabilities of the existing personnel are sent to an outside specialized service provider.

Self-contained breathing apparatus and compressors are maintained using CSA Standard CAN3-2180.1-M85. Breathing apparatus are checked weekly, as well as before and after use by fire suppression staff. Currently, the coordination of breathing apparatus and compressors is under the direction of the Captain of the Fire Department's fire suppression division. The Fire Department completed an aggressive replacement program for self-contained breathing apparatus in 2005.

Pump Certification & Testing

Fire pumps are tested every 3 years by Fire Department staff. It is desirable that certificate testing of fire pumps be carried out annually, however, until existing personnel have the expertise and qualifications to perform this task, it is sub-contracted out to a specialized company.

Ladder Certification & Testing

Ladders are integral to effective fire suppression and rescue. The Fire Department currently uses a specialized outside contractor to perform service testing of ladders to N.F.P.A. standards. Service testing for ground ladders is performed every 2 years.

Fire Hose Certification & Testing

Fire hoses are tested annually. Age has a major impact on whether hoses fail or pass testing. The fact that the Fire Department lacks a suitable facility to dry fire hoses after a fire or testing affects their life span.

Bunker Gear

The Fire Department is extremely diligent in its inspection and cleaning of bunker gear. The process starts with an examination of the gear before and after use, which then culminates into a professional cleaning and inspection. A professional bunker gear management company is hired by the Township to conduct the inspection and cleaning of bunker gear annually, if not earlier. Detailed records of the inspection and cleaning process are kept by the Fire Department.

5.9.3 Current Situation and Identified Issues

The State of Vehicles and Equipment

Fire vehicles and equipment are in relatively good condition. All vehicles in the Fire Department's current fleet (with the exception of Pumper 6) have been purchased after 1999, making the vast majority of fire vehicles no more than 7 years old.

Fire Underwriters, an insurance agency, expressed a concern in their 2005 risk assessment of the Township over the presence of only 2 pumper trucks to serve the Township in the event of a fire emergency, with no reserve pumper available when one pumper is either under repair or going through regular maintenance. It should be pointed out that since the completion of the Fire Underwriters' risk assessment, the Fire Department has acquired a pumper/rescue vehicle to add to its fleet.

Maintenance Procedures

As was previously mentioned, maintenance procedures for vehicles and equipment meet the minimum standards of the Ministry of Transportation. The Fire Department must continue to work painstakingly to improve its current maintenance practices in order to enable its vehicles and equipment to meet higher standards.

Aerial Truck

In the Fire Underwriters 2005 risk assessment of the Township, Fire Underwriters downgraded the municipal commercial classification of the Township from a 5 to a 7. The main reason behind the downgrade was the absence of an aerial apparatus in the Fire Department's fleet.

Larger buildings found during the Fire Underwriters' risk assessment pointed out a need for an aerial ladder truck. Aerial trucks that are available through fire protection agreements made between the Township and surrounding municipalities would have far too lengthy response times to meet acceptable response standards. For example, it can take the fire department of a neighboring municipality a minimum of 30 to 45 minutes to get to the scene of a fire taking place in the Township. Additionally, a neighbouring municipality may need to use its aerial truck at the same time the Township needs its assistance. In such a case, it is vitally important for the Township to have its own aerial truck.

The Fire Department recognizes that in the past, there was not an immediate need for an aerial apparatus. However, with the more recent boom in commercial, retail and mid-rise condominium construction taking place in the urban and rural parts of the Township, it has become a top priority for the Fire Department to have its own well-functioning aerial truck. The purchase of an aerial truck is expected to cost the Township an estimated \$1,400,000¹⁵.

5.9.4 Recommended Action(s)

It is recommended by the Committee that:

- 1) The Fire Department acquire an aerial apparatus upon construction of a new fire station.
- 2) The Fire Department acquire a pumper tanker truck.
- 3) The current replacement cycle of 20 years for fire apparatus and equipment be decreased.
- 4) The Fire Department continue to make strides towards improving its current vehicle and equipment maintenance program.
- 5) The Fire Department acquire an appropriate facility for drying fire hoses. This facility can be built within the proposed new fire station.
- 6) Certificate testing of fire pumps be conducted yearly, instead of every 3 years. This can be achieved through the Fire Department providing opportunities for existing staff to become certified in fire pump testing.

¹⁵ The Township of Uxbridge Capital Budget (2006).

5.10 Communications

Having a strong communications system is essential to the proper functioning of any fire department. All forms of communication should be reliable and easily achievable. The Fire Department current communications system is expected to allow for:

- the notification of an emergency,
- the effective communication with the dispatch agency, emergency service providers and mutual aid partners,
- the alerting of Fire Department personnel and dispatch apparatus,
- the communication between the Command Officer(s) and firefighters at the scene of an emergency and
- the communication needed to carry on routine business.

The communication that occurs when the Fire Department is first notified of an emergency takes place in a number of interconnected steps. A call is first received by the Durham Regional Police Service's 911 answering service. The call is then forwarded by the 911 answering service to the appropriate dispatch agency, which is located in the City of Oshawa. Once all the information is gathered from the caller, the dispatch agency sends a notification of an emergency to the Fire Department. Once the Fire Department receives notification through a radio page, it contacts the dispatch agency for additional information. Once it has collected the information it needs, the Fire Department takes over the command and control of the call and begins to operate its control centre. While fire suppression staff are responding to an emergency call, a staff member must always be available at the fire station to manage the control centre.

5.10.1 Forms of Communication

Mobile and Portable Radios

The Fire Department currently has in its possession six mobile radios and twelve portable radios. These radios are relatively current models, none of them being more than 12 years old. Two 800 MHz radios are currently in use in Fire Command # 1 & Pumper/Rescue #1. At the moment, the Fire Department is in the process of testing and evaluating the coverage potential of these two radios.

Alerting Firefighters and Paging System

All operational staff within the Fire Department are issued a pager. These pagers are specifically programmed for the Fire Department's radio frequency and are activated by Oshawa Fire Services in the event of an emergency call. Pagers can also be activated from the fire station manually or by a telephone back-up system.

Cellular and Satellite Phones

The Fire Department currently owns five cellular phones. These phones have both telephoning capabilities and two-way communication through the "Mike Network". Cellular phones are used as a supplemental communication system by Fire Department staff in areas of the Township where there exists no radio coverage.

The purchase of two satellite telephones has been approved in the Fire Department's 2006 operating budget. It is expected that these satellite phones will be put into service in the summer of 2006. Satellite phones will be used primarily during major emergencies when cellular service is lost.

5.10.2 Current Situation and Identified Issues

Radio System

The Fire Department's radio system has a shared frequency with a 153 to 154 MHz range. It uses a remote repeater in order to enhance its coverage.

There are concerns over the limitations of the existing radio system. The radio system is outdated, resulting in members of the Fire Department not being able to communicate with fire departments west or south of the Township in the event of an emergency. Of the eight municipalities in Durham Region, the Township of Uxbridge, the Township of Scugog and the Township of Brock are the only ones that have not upgraded their radio systems to a trunked 800 MHz system.

Council has approved \$200,000 for the purchase of a new radio system. Altogether, the acquisition of a new state-of-the-art radio system will cost the Township approximately \$1,000,000. Currently, the Fire Chief is evaluating a number of radio systems. So far, he is investigating the following prospects:

- 1) Connecting to the 800 MHz radio system currently used by fire departments located in Southern Durham Region.
- 2) Forming a partnership with Durham Regional Police Service in order to secure space on their Telus public system.

Control Centre

The control centre is adequately managed by Fire Department staff. However, voice recording proves to be very difficult.

5.10.3 Recommended Action(s)

It is recommended by the Committee that:

- 1) The existing radio system be replaced. This will ensure the health, safety and welfare of citizens and operational personnel.
- 2) The Township re- negotiate its Dispatch Agreement with Oshawa Fire Services to eliminate the need for Fire Department staff to operate the fire station's control centre.

6.0 CONCLUSION

The Township of Uxbridge Master Fire Plan has been successful in evaluating local fire needs and circumstances. A detailed analysis of fire risk, economic circumstances and existing fire service capabilities has been achieved. Issues on the overall state of the Township's fire protection services were identified, accompanied by recommendations that presented proposed options for dealing with identified issues.

It is expected that over time, fire service expectations of citizens of the Township will rise. Rising expectations mean that the Fire Department must work hard to ensure that its mode of fire service delivery meets the needs of the Township now and in the future. Meeting the needs of the Township will require that the Fire Department meet its set priorities (i.e. addressing staffing shortages, acquiring an aerial apparatus, relocating the existing fire station and purchasing a new radio system). As a progressive and forward-thinking document, the Master Fire Plan should be continuously updated in order to reflect the changing needs of the Township.

Appendix