

4.0 FIRE PREVENTION AND PUBLIC EDUCATION

Earlier sections of this report highlighted the changes that have occurred within the fire service industry in Ontario over the past few years. The biggest change for fire prevention and public education was the introduction of legislation in 1997: the Fire Protection and Prevention Act (FPPA). Under the FPPA:

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

The Office of the Fire Marshal describes the minimum requirement for a community fire safety program as including:

- a smoke alarm program with home escape planning
- the distribution of fire safety education material to residents/occupants
- inspections upon complaint or when requested to assist with code compliance (including any necessary code enforcement)
- a simplified risk assessment

The Oakville Fire Department carries out a typical fire prevention enforcement and public fire safety education program. The Town is meeting the minimum requirements of the FPPA through the distribution of fire safety education brochures, provision of a smoke alarm program, promotion of home escape planning. However, the FPPA emphasizes that other fire protection services should be provided as the community needs and circumstances dictate.

The Oakville Fire Department ensures that risks identified in the community are addressed by targeting vulnerable population groups with the following programs and activities:

- Annual Fire Prevention Week
- Risk Watch Program
- Home Fire Safety Awareness Program
- Sparky the Fire Dog
- Fire Station Tours
- High Occupancy Building Audits and Inspections
- School Inspections
- Emergency Preparedness Week

In 2004, the Oakville Fire Department completed the Office of the Fire Marshal's Simplified Risk Assessment and the Municipal Fire Protection Information Survey. These assessments provide background information to create a community fire profile (e.g. demographic outline, building stock analysis, and fire loss and injury statistics). Once a community fire profile is created, the fire department can establish its priorities and develop an implementation plan.

Community Profile

According to the 2001 census data from Statistics Canada, the median income in Oakville was \$33,800, which was higher than the provincial average of \$24,800. Population density was reported at 1,050 persons per square kilometre, and the average value of a dwelling in Oakville in 2001 was estimated to be \$306,000, which is significantly higher than the provincial average of \$200,000. Out of a total of 49,300 dwellings, census tables show that 81% are owned and 19% are rented, which is higher than the provincial average of 68% ownership. Further, 94% of all dwellings were built prior to 1991, which is 10% lower than the provincial average.

In terms of community profile, **Table 4.1** compares Oakville’s age characteristics with provincial averages. The vulnerable populations are children less than 15 years of age and seniors 65 years of age and older. In Oakville, the proportion of children under the age of 15 is 2% higher than the provincial average, while the senior population is 2% lower. The median age is 37.1 years which is similar to the provincial average.

TABLE 4.1 COMMUNITY AGE PROFILE				
Age Characteristics of the Population	Oakville		Ontario	
	Total	% Total	Total	% Total
Total - All persons	144,740		11,410,050	
Age 0-4	9,070	6.3%	671,250	5.9%
Age 5-14	22,360	15.4%	1,561,500	13.7%
Age 15-19	9,910	6.8%	769,420	6.7%
Age 20-24	8,185	5.7%	718,420	6.3%
Age 25-44	44,375	30.7%	3,518,010	30.8%
Age 45-54	21,710	15.0%	1,635,280	14.3%
Age 55-64	13,385	9.2%	1,064,000	9.3%
Age 65-74	9,180	6.3%	818,165	7.2%
Age 75-84	5,145	3.6%	503,930	4.4%
Age 85 and over	1,415	1.0%	150,075	1.3%
Median age of the population	40.5		37.2	
% of the population ages 14 and under		21.7%		19.6%
% of the population ages 65 and over		10.9%		12.9%

Addressing demographic risks through public education becomes an important component of any municipal fire service.

Fire Prevention and Public Education Priorities

Staff carries out high quality fire prevention and public education programs. The department is committed to improving and expanding their programs and activities, but is constrained by limited financial and personnel resources. Staff is currently exploring private partnerships to help fund the purchase of a fire safety trailer, although the trailer requires three staff members to operate while in use.

These are excellent tools with which to target youth during public education visits in schools and during fire prevention awareness week and other events. **Table 4.2** summarizes the Department's priorities in terms of fire prevention and public education.

Population trends should continue to be monitored by the division so efforts continue to be tailored to suit community needs. The current profile indicates that programs should be concentrated toward children, given that their proportion within the community exceeds the provincial average and that they are a vulnerable group in society. The TAPP-C Arson Prevention Program for Children is one example of a targeted public education program, but it is not currently being delivered by the fire department, though efforts to revive it are in the works.

The seniors' population is also vulnerable and these risks are currently not being addressed as well as they could. Many municipalities use the Older and Wiser program as well as presentations to senior groups and senior clubs to address this demographic. Inspections of senior's facilities are conducted on a complaint or request basis, but should be inspected on a more formal schedule.

The department should explore the possibility of having firefighters on modified duty assist with public education efforts. In theory, fire prevention officers could also assist, but there is not currently the capacity under existing staffing levels to provide such help. On-duty firefighters also assist with the Home Awareness public education campaign from May to August. Generally, on-duty firefighters perform more of a "pre-planning" inspection at schools, commercial buildings and high-rises. The department practice of having on-duty firefighters assist in limited capacity with fire prevention audits is helpful and should continue.

An in-service inspection program would bring the department closer to providing the fire prevention attention needed in the municipality (i.e. full inspections as opposed to audits). Issues with "illegal" residential apartments continue to concern the fire department and should be addressed. Currently the expertise of fire prevention officers is required to carry out full inspections. Firefighters do not perform inspections. They do however provide components of public education and assist with audits, as mentioned above. Additional firefighter training would be required to enhance firefighters' role in fire prevention audits. Such training would be possible once the fire prevention staffing levels were brought back to an acceptable level.

The department has a positive relationship with the media, other city departments and outside agencies. The public relations role falls to the Public Education Officer; however with current workload constraints this duty sometimes shifts to the Fire Chief, Chief Fire Prevention Officer or Assistant Chief Fire Prevention Officer.

The Town of Oakville offers sail and power boat operators 17 kilometres of waterfront, located on the northwestern shore of Lake Ontario. Two harbours are available: the Bronte Harbour on Twelve Mile Creek and the Oakville Harbour on Sixteen Mile Creek located near the downtown core.

Harbours present different challenges to the fire department which are not currently addressed through fire prevention or fire suppression initiatives. In the summer months, both harbours house hundreds of boats with values that exceed the million-dollar mark. On site amenities allow boat passengers to spend the night on their boats, adding life risk to the mix of property risk within harbours. Adding to the complexity of these properties are on-site fuelling and the use of dry docks for winter storage of boats. Though situated on the waterfront, access to useable water sources is often problematic at harbours.

TABLE 4.2- PRIORITY SETTING WORKSHEET

Priority	Status		Effectiveness, Goals/Objectives		
Fire Safety Priority (List in order of Priority)	Current fire prevention / public education programs that address the fire safety priority		Do existing programs adequately address the fire safety priority & ensure compliance with minimum FPPA requirements?		
			If No, how should this change?		
	Fire Prevention (Inspection) Activities	Public Education Activities	Y/N	Fire Prevention (Inspection) Activities	Public Education Activities
1) Children	<ul style="list-style-type: none"> Day Care Inspections done by request or complaint School Inspections done by request or complaint 	<ul style="list-style-type: none"> School Visits Risk Watch injury prevention Annual Fire Prevention Week Home Fire Safety Awareness Program 	Y Y Y Y Y	<ul style="list-style-type: none"> Inspect Day care facilities annually Inspect Schools annually 	<ul style="list-style-type: none"> TAPP-C arson prevention Fire Safety Trailer – Fire Dept. presence in Safety Village
2) Seniors	<ul style="list-style-type: none"> Inspection of care facilities (Homes for the Aged, and Nursing Homes) done by request or complaint 	<ul style="list-style-type: none"> Educational opportunities are limited 	N	<ul style="list-style-type: none"> Inspect Seniors care facilities annually 	<ul style="list-style-type: none"> Presentations to seniors groups/ seniors clubs Older and Wiser
3) All Residents	<ul style="list-style-type: none"> Inspection of New Construction Inspections by complaint/ request Plans Examination Fire Code and By-law enforcement Burning Permits 	<ul style="list-style-type: none"> Home Fire Safety Awareness Program Public event displays School visits Special events 	Y	<ul style="list-style-type: none"> Basement apartments 	<ul style="list-style-type: none"> Rural public education campaigns'
4) Industry	<ul style="list-style-type: none"> Inspections by complaint/request 		N	<ul style="list-style-type: none"> Inspect industrial sites proactively 	
5) Businesses	<ul style="list-style-type: none"> Business Inspections by complaint/request 		Y		

An auxiliary unit of the Canadian Coast Guard currently provides marine search and rescue along Western Lake Ontario. The Town of Oakville Water Air Rescue Force (TOWARF) patrols the waters with a complement of over 100 trained volunteers. Their services do not include marine firefighting.

The Town of Oakville should complete a risk assessment of its harbour areas. Fire Prevention inspections should occur on a regular basis under both summer and winter conditions. Public education materials should be disseminated. Opportunities should be explored to coordinate this with TOWARF's public education efforts. The suitability of available water supply should be examined to determine whether improvements can be made at either harbour. At the time of report writing, the Fire Department had identified a need for marine fire suppression capability, acknowledging that available water supplies were not sufficient. A service boat had been identified in the 2008 capital plan for the purpose of addressing fire protection at Town harbours.

While the ultimate goal of fire prevention and education is to reduce fire deaths and injuries to zero, that is not always possible. The aim of completely eliminating property loss may also not be attainable, but can be minimized. Office of the Fire Marshal statistics indicate that the property loss and death and injury statistics in the Town of Oakville are comparable with and in some cases lower than other municipalities.

Table 4.3 was prepared using statistics from the 2004 Simplified Risk Assessment.

TABLE 4.3 MUNICIPAL AND PROVINCIAL FIRE LOSS PROFILES		
Fires by Property Type (1997-1999) as a %	Oakville	Province
Assembly	12	6
Institutional	1	1
Residential	53	61
Commercial	10	5
Industrial	18	8
Other	6	19
Total	100	100

Property Fire Loss in Oakville

Fire loss reported for 2004 was \$1,727,551, down from \$2,981,939 in 2003 when a single industrial loss exceeded \$1,000,000.

STAFFING

When changes to the Ontario Building Code were implemented, two Fire Prevention Officers were seconded to the Town's Planning department. Their duties changed from fire code inspections and fire cause determination to being focused solely on Plans Review work in order to meet the review timelines specified in the Building Code legislation. No Fire Prevention Officers were hired to replace the two seconded officers. As such, two of the Town's six fire prevention districts (geography-based) were left empty. In addition, the Fire Department lost another Fire Prevention Officer position when one staff person required accommodated duty. All changes included, three Fire Prevention Officers were left to cover the six fire prevention districts.

The Fire Prevention Division now consists of eight staff, excluding administrative and accommodated staff. The Chief Fire Prevention Officer provides long-term direction for the division. The Chief Fire Prevention Officer is supported by an Assistant Fire Prevention Officer who is responsible for day-to-day administration of the division as well as Plans Review responsibilities.

Of the remaining positions, one person is designated as a Public Education Officer. The other five members of the division are designated as Fire Prevention Officers of which one is dedicated full time to Plans Review (i.e. the ACFPO and one FPO do Plans Review work) and four staff are assigned to carry out fire inspections (one of these positions was authorized in 2006). In addition there is one Clerk Typist who provides administrative support to the Division and one person on accommodated duty who assists with fire prevention work.

Table 4.4 was prepared using statistics from the Ministry of Municipal Affairs and Housing and Office of the Fire Marshal (OFM). Population data was obtained from Statistics Canada (2006 Census). A combination of full time and composite (i.e. combination of full time and part-time/volunteer suppression staff) fire departments has been included.

TABLE 4.4- MUNICIPAL COMPARISON OF DEPARTMENT STAFFING				
City	Population (2006)	Staffing	Coverage Area (Sq.km)	Fire Prevention Staff⁶
Cambridge	120,371	Full-time	300	8
St. Catharines	131,989	Full Time	97	8
Burlington	164,415	Composite	186	9
Oakville	165,600	Full Time	139	8
Richmond Hill	162,704	Full Time	101	9
Oshawa	141,590	Full Time	146	9

With the number of staff in the division, the Town of Oakville appears to be understaffed as compared to other peer municipalities. Though the department manages to perform the minimum requirements under the FPPA, there is no capacity within current staffing levels to make any improvements to public education programs or inspection targets. Also, the staffing level within the fire prevention area does not reflect that two of these positions are dedicated full time to Plans Review work (e.g. there is no such arrangement for the Burlington Fire Prevention staff).

It is difficult for staff to fulfill their fire prevention inspection duties because two divisional staff members are now permanently assigned to work with the Planning Department to meet the Building Code (Bill 124) requirements for plans examination. Previously this staff was also completing fire inspection duties in addition to plans assessment. This is no longer possible due to the workload requirements for Plans Review work.

No accommodation was made to replace the fire prevention staff that moved to Plans Review. The duties of the two staff members were shifted to plan inspectors while their duties for fire inspection were assigned to the remaining staff. Since workload pressures continued to increase, the remaining staff inspectors' schedules were increased. Annual schedules for inspection are not being followed and some priorities are not being met at the expected frequency (e.g. responsibility for semi-annual hotel inspections which was delegated by the Office of the Fire Marshal).

⁶ Fire Prevention staffing as provided by Oakville Fire Department in 2007 and the Ontario Fire Marshal's Office in 2006 for other municipalities. Note that public educators are included within Fire Prevention for tracking purposes and that levels of administrative assistance are not shown.

The workload situation is compounded by the increase of inspection services required to comply with new legislation and continued rapid growth in the Town of Oakville. Given the current staffing levels, the department is only able to complete inspections on a reactionary basis when complaints are received or inspections requested. The department is not able to follow scheduled inspections of key occupancies such as nursing homes, retirement homes, senior apartments, long-term care facilities, group homes and student accommodations (e.g. Sheridan College).

The Division is also unable to follow scheduled inspections for completed Fire Safety Plans for industrial sites, commercial properties, major buildings owned by the Town of Oakville, churches, large occupancy facilities and public halls. There is also a concern regarding the impact on the community if there was a significant incident involving the Oakville Fire Department at the Ford Plant or the local hospital. Inspections were recently completed at these two properties by the Fire Department but it was a significant challenge to do so. A more regular inspection schedule should be followed for higher risk occupancies but current resources make this difficult.

Fire Safety Plans are required under section 2.8 of the Fire Code. The Department does not have the staff to implement a ‘proactive’ program to ensure compliance and only continue to be a ‘reactive division’ if a complaint is filed. There are new regulations being introduced or recently put into effect for the inspection of hotels, retrofit requirements under Part 9 of the Fire Code, smoke alarm enforcement and new codes dealing with flammable and combustible liquids. Staffing levels do not allow time for the necessary training or the development of a proactive plan to meet these requirements.

The current method of organizing fire prevention and inspection duties divides the Town into districts. There are basically two fire prevention models in use within fire departments. One model divides municipalities into districts where all fire prevention officers are trained in all risk types. The other model separates fire prevention officers by area of specialization and each officer covers the municipality or parts thereof for this specific type of risk. Given the level of growth expected in North Oakville, it may make sense to deviate from the current “district” model to spread some of the increase in workload across several officers. It could be beneficial to adjust boundaries when the workload associated with North Oakville begins to increase.

The Fire Department recently added an additional Fire Prevention Officer; this still leaves two vacant fire prevention officer positions to return the division to full complement. As development in North Oakville begins in earnest, the need for two or three more officers will manifest itself. The staff should be added when development starts to build out. This could occur within the next five years.

The Fire Prevention and Public Education section has good cooperation for electronic files and drawings with the Planning Department. However, the section would benefit from improved technological support for reporting. Fire loss statistics are not being kept as up to date as they should. Benefit could be gained from the use of software that links fire cause determination reports with fire loss statistics and tracks inspection and re-inspection reports and timelines. This should be addressed with the new records management software.

PUBLIC EDUCATION PROGRAM

The Town of Oakville’s Fire Public Education needs are now being provided by one Public Education Officer who is also assigned to special projects as required. There is a rough rule-of-thumb that suggests that Public Education Officers provided at a ratio of one for every 50,000 residents would provide a good

level of service. The Town of Oakville has a population of approximately 165,600⁷ and would require at least two more Public Education Officer to close the gap. Public education and fire prevention are considered to be a community’s first line of defence within the Ontario Fire Safety and Protection Model.

The Public Education Officer attempts to meet the community’s fire education needs with the aid of other fire prevention officers and in-service programs within the fire suppression division. However, programs and education initiatives such as Risk Watch are deteriorating or in danger of being eliminated because of the lack of staff to ensure completion of these types of programs and projects. In an addition, programs that target vulnerable populations such as the seniors programs Older & Wiser and the National Fire Protection Association (NFPA) “Remembering When” cannot be introduced because of limited resources.

As mentioned above, efforts to re-introduce the TAPP-C (arson program for children) are being made. One additional Public Education Officer is needed to ensure this and other new initiatives take place. More school visits could be planned than the twenty or so currently conducted. However, current staffing is a constraint and pressures will only increase as the population grows and new schools are added within North Oakville.

Current programs and activities delivered by the Oakville Public Education Officer are listed in **Table 4.5**. Other projects arise as new priorities are established. There is no room to accommodate new priorities with only one Public Education Officer. As such, programs or activities from the current list must be dropped if new activities are undertaken or required by the Office of the Fire Marshal.

TABLE 4.5 – PUBLIC EDUCATION ACTIVITIES	
Activity	Time Commitment
Fire Prevention Week	650
Waterfront Festival	65
Midnight Madness	50
Fire Department Tours	50
Kids to Work Day	20
Emergency Preparedness Week (Kickoff)	120
Outdoor Events (e.g. Parades, street parties)	50
Home Awareness Program	115
Fire Safety Plans (50-100 per year)	200
School Program (20 schools Grades 4 and 5)	80
Fire Extinguisher Training (4 per year)	40
Youth Group Presentations	40
Seniors Programs	50
Community Organizations (VON, Meals on Wheels)	100
Emergency Services for New Canadians (ESNC)	25
Total Time Committed	1655
Percentage of Available Time	96%

⁷ Statistics Canada - 2006

Fire safety education programs have great value in reducing the loss of life and burn injuries. For the most part these programs are delivered at the school level and become life-long behaviours, further enhancing the goal of fire safe homes and communities. The Town of Oakville is experiencing rapid growth which includes an escalation of the number of schools, students and seniors in the area. The ability to deliver fire education programs needs to grow as the population increases. A third public education officer should be considered when the population reaches the forecasted level of 230,000. This recommendation should be monitored and reassessed to allow programs to be added or enhanced as needed which would require resources additional to the estimated total of three public education officers.

POLICIES AND PROCEDURES

As identified in the Office of the Fire Marshal Municipal Fire Protection Information Survey (MFPIS), the Oakville Fire Department Integrated Business Plan and interviews with staff, there are no approved departmental policies for fire prevention, public education or fire cause determination. These policies should be developed with clearly stated goals and objectives.

The use of OFM Fire Prevention Effectiveness Model – PFSG 04-39-12 and related guidelines will aid in their development and will formalize the department’s responsibilities with respect to fire prevention. When the current Fire Services Establishing and Regulating By-law is reviewed, it should include the above noted policies. The lack of available or up-to-date operating guidelines, policies and/or procedures also impacts the delivery of key messages to both the community in general and vulnerable populations. The division should contribute to the policy and procedure review process.

Training

There is no electronic records management system that allows for the division to document and monitor on an on-going basis the completion of the training requirements and certification levels of their inspectors. It was also identified that there is no formal training process for new personnel assigned to the Fire Prevention Division.

Since there is a considerable amount of time required for new inspectors to attend and complete certification courses, the Division should develop a training policy that includes objectives for new staff, which adopts specific training requirements in order to establish consistency. As noted earlier, the development of guidelines and procedures will assist in this regard.

The Fire Prevention Division is currently operating from a number of different locations. Town Hall, fire stations and a portable building at the training campus are all being utilized. The lack of a central location seriously affects productivity and impedes the ability to communicate with staff. A substantial amount of time is spent traveling from location to location to complete assignments.

The Fire Department is currently in the process of finalizing plans to erect an additional portable building at the training facility which would accommodate the Fire Prevention Division. This should be completed as soon as possible as a temporary solution. Divisional requirements for the longer term should be considered within the space needs assessment outlined in ***Section 3.0 - Administration***.

Summary of Recommendations

1. Two additional Fire Prevention Officers should be hired immediately to provide one inspector within each of the Town's six fire prevention districts. Two additional Fire Prevention Officers should be hired to meet the forecasted demands related to growth in the North Oakville when development is sufficiently advanced.
2. It is recommended that one additional Public Education Officer be hired immediately. Until this is completed, the current Public Education Officer's tasks should focus on public education initiatives with special projects reassigned as appropriate. One additional Public Education Officer should be hired to accommodate the growth needs in North Oakville when development is sufficiently advanced. This recommendation should be monitored and reassessed to allow programs to be added or enhanced as needed which would require resources additional to the estimated total of three public education officers.
3. In addition to ensuring the certification of fire prevention officers, introduce a basic training program for new employees in the division and document certification levels expected of Fire Prevention Officers.
4. Initiate a process to ensure that operating guidelines, procedures and policies are developed, reviewed and maintained by the fire prevention division. The Special Officer recommended under Administration could lead this.
5. Include the completion of the Office of the Fire Marshal Fire Prevention Effectiveness Model (Public Fire Safety Guideline 04-39-12) as part of division responsibilities and include annual reviews of programs and activities delivered.
6. Conduct a risk assessment of the Town's harbours to determine an adequate level of service for fire prevention, public education and fire suppression.