



City of Kingston

Fire & Rescue

Master Fire Plan

2010

City of Kingston Master Fire Plan 2010

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Chapter 1: Executive Summary

The fire services review was conducted by KFR staff, designated UK staff, KPFF Association representatives, Kingston Volunteer Firefighter representatives, two members of Council, two civilian members designated by Council and Senior Staff from the Ontario Fire Marshal's Office and the Commissioner of Community Services. This group was to be known as the Master Fire Plan Steering Committee as approved by Council in 2007.

The Committee reviewed in excess of 1200 risks which were identified through the application of questions generated from the Office of the Fire Marshal's "Fire Safety Effectiveness Model". All risks were reviewed by the MFP Steering Committee over 19 meetings conducted over a two year period.

The summary recommendations contained herein are consistent with the areas of delivery of fire services that are recommended for review by the Office of the Fire Marshal in the Province of Ontario. The *Ontario Fire Protection and Prevention Act* requires a municipality to assess its risks in public fire safety and to provide services as may be necessary in accordance with the community needs and circumstances. The preferred method used to identify risks is to conduct a full review of the hazards in our community and establish a Master Fire Plan to respond to the community risks.

The following resolution was approved City Council at Meeting No. 11-2010 held on April 6th 2010:

- A) THAT Council adopt the twenty (20) Policy recommendations of the Fire Chief detailed in Part III of the Master Fire Plan Executive Summary report as listed below for inclusion in the final Master Fire Plan:
- 1) Implement an Assistant Chief Officer's position for volunteer firefighters in 2012 (See Page 9)
 - 2) Develop and deliver an operational hazardous materials program as a new part of the core services provided by KFR (See Page 9)
 - 3) Participate in the Municipal Performance measurement system with the Ontario Fire Marshal's Office (OFM) (See Page 16)
 - 4) Conduct detailed risk assessments in fire protection every five (5) years in consultation with the OFM (See Page 17)
 - 5) Develop formal guidelines for Fire Prevention Programs in consultation with the OFM (See Page 17)
 - 6) Develop formal policies for fire prevention public education by 2012 for Kingston Fire & Rescue in consultation with Office of the Fire Marshal (See Page 17)
 - 7) Examine a staff position to perform Public Education Program delivery in 2012 (See Page 17)
 - 8) Implement alternative traffic management systems which will help to improve response times and increase efficiencies of emergency response until such time to be determined by Council that a third crossing of the Cataraqui River can be completed (See Page 20)

- 9) Continue service by volunteer firefighters at Gore Road Fire Station (#3) with support by career firefighters as set out in current response plans (See Page 20)
- 10) Retain Brock Street Fire Station (#4) in service (See Page 21)
- 11) Construct a new fire substation on Elliott Street at Division Street in 2013/2014 and dispose of Railway Street Fire Station (#5) (See Page 22)
- 12) To develop and submit a business case for consideration of Council during 2012 Capital budget deliberations to build a new fire substation on Bayridge Drive at Henderson Blvd on Airport site in 2013/2014 along with the closure of Days Road Fire Station (#10) (See Page 22)
- 13) Identify performance measures on services provided by KFR and provide statistical data to report the performance of those services through an annual report (See Page 25)
- 14) Consolidate fire and property loss statistics for and reporting to Council through the annual reporting program (See Page 25)
- 15) Proceed to secure a twenty acre site in an undisclosed location for the development of a suitable centre of learning excellence for industrial and emergency services in Kingston and area (See Page 26)
- 16) Commence construction on the fire training facility on the center of learning site in 2011 with the project to be debt financed and repaid out of the Fire Capital Reserve (See Page 26)
- 17) A repair facility to be considered on the training site in 2012/2013 site to accommodate repair of Emergency Vehicles for Emergency Services in Kingston and area. Estimated cost \$3,000,000 which is to be debt financed through fire Capital Reserve (See Page 28)
- 18) Employ a second emergency vehicle certified technician in 2010 to replace the retired Director of mechanical as is currently budgeted for, and provide for the inclusion of a third technician with a new \$100,000 for implementation within the 2011 budget (See Page 28)
- 19) Complete fire hydrant flow tests for KFR and Utilities Kingston (UK) to use the data to identify low flow areas and review with UK any interim measures that may be actioned to mitigate risks in emergency response (See Page 32)
- 20) Develop contingency plans for areas identified with less than adequate water supplies for firefighting operations (See Page 32)

And further,

- B) THAT all of the Operational Recommendations included in the Kingston Fire & Rescue (KFR) Fire Action Plan dated November 10, 2008 *not* form part of the Master Fire Plan and that they be referred to the Fire Chief for inclusion into Kingston Fire Rescue's Annual Work Plan; and
- C) THAT the Fire Chief is directed to submit to Council an Annual Report ensuring that Council is informed of internal and external organizational changes and accomplishments affecting Kingston Fire & Rescue commencing in 2011; and
- D) THAT the Master Fire Plan Executive Summary be adopted; and
- E) THAT the KFR Master Fire Plan 2010-2015 be adopted; and
- F) THAT the 10 year Capital Forecast be updated to reflect the recommendations in this report; and
- G) THAT future Operating Budgets consider the recommendations in this report.

Chapter 2: Introduction

Fire and Rescue services carry life safety and property conservation measures from the provincial level of accountability to the City through various areas of legislation and policies, which are recognized in the fire service industry. Specifically, Section 2(1) of the *Fire Protection and Prevention Act* sets out the responsibility for a municipality to conduct a risk assessment of their jurisdiction identifying what fire protection services are necessary to mitigate those risks to an acceptable level. It is traditional to develop long range plans, more aptly known as Master Fire Plans, to set out a critical path of development for a local fire service in response to the identified risks in their community. Master Fire Plans are developed in consultation with the Office of the Fire Marshal, Insurance Underwriters, staff, the community and members of Council. Typically the development of a plan takes about two years to complete.

Although the new City of Kingston was formed in 1998, the fire services were not amalgamated at that time and continued to operate as three separate and quite distinct organizations until a full organizational review process commenced in 2002. The Master Fire Plan is part of the *Transition* process set out in Step 4 of the Organizational Restructure. The comprehensive review process was presented to Council and approved. At the regular meeting of Kingston City Council held on Tuesday, February 21, 2006 the following resolution, being Clause (a), Report No. 31 was approved:

THAT Kingston City Council authorize the Fire Chief to proceed with the Office of the Fire Marshal (OFM) to develop a Comprehensive Master Fire Plan for Kingston Fire & Rescue in 2006, and that the Terms of Reference as attached (Exhibit A) to this report be approved

-And further-

THAT Council hereby directs the Fire Chief to forward this resolution to the Office of the Fire Marshal for Ministerial consent to proceed with Kingston Fire & Rescue with the development of the pilot Comprehensive Master Fire Plan

-And further-

That the Comprehensive Master Fire Plan be developed with the strictest adherence to any collective agreement which the City of Kingston has entered into.

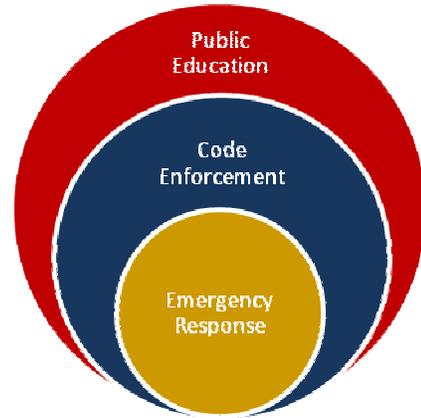
Ultimately it is Council who responds to community expectations, establishes community response times, service standards and determines the resources that will be provided to the fire service. Important steps have been taken by Kingston Fire & Rescue over the last eight years with improvements initiated to mitigate many of the organizational difficulties presented by amalgamation. The notable changes were reported in the reorganizational process as finance planning and circumstances permitted.

We must not lose sight of the fact that Kingston Fire & Rescue is still in its formative post amalgamation stage of development. There is considerable work to be done to respond to long standing operational challenges to ensure that we can facilitate the ongoing transformation of Kingston Fire & Rescue into one truly unified urban/rural fire service that responds to the changing needs and circumstances of the City of Kingston.

This Master Fire Plan provides three levels of analysis:

- a) *Tactical* - immediate needs of our fire service.
- b) *Operational* – day to day operations.
- c) *Strategic* – envisions the future of the fire service and sets out strategies to achieve these visions.

This Master Fire Plan will provide the City the time and structure to properly evaluate the stresses of the emerging issues in public fire protection. Council will be able to ascertain to what degree all aspects of the fire service are above or below fire industry standards. In summary the benefit of having a comprehensive Master Fire Plan is as follows:



- a) It is a proven process for affecting positive changes in service delivery.
- b) It is timely given the requirements for the municipality to achieve recognized levels of emergency preparedness within verification standards as required in the new Emergency Management Act.
- c) It provides Council with an informed understanding of the fire risks within our community.
- d) Council will be able to ascertain to what degree all aspects of the fire service are above or below fire industry standard.
- e) It ensures that Senior Staff do not overstate or understate service level requirements as it relates to local community needs and circumstances.
- f) It ensures that all staff within Kingston Fire & Rescue understands service requirements within the community due to their participation in the development of the plan.
- g) It identifies unfunded mandates which become a service requirement for the fire service.

Kingston Fire & Rescue would like to thank the Office of the Fire Marshal for the guidance and support in developing this plan. We trust many other Ontario municipalities will benefit from the City of Kingston's experience in the development of the Kingston Fire & Rescue Master Fire Plan.

History

Fire protection in the City of Kingston has an extensive history beginning as far back as 1683. The original French settlement of Fort Frontenac had a group of citizens organized in a bucket brigade. Historical sources indicate that a long piece of metal was suspended from a large oak tree and struck when a fire was discovered in either building or bush land. When control of Kingston was passed to the British, the use of citizens for fire protection was discontinued. Out of fear of insurrection and unauthorized groups banding together, the British military in 1790 made firefighting duties the responsibility of the Town Guard. Volunteer Fire Companies were eventually organized in the Town of Kingston. These competing fire companies tended to be divided along religious lines, both Catholic and Protestant. This religious factionalism became quite serious and as a result there were several reorganizations of the fire companies in 1859 and 1871. In 1878 the practice of using competing fire companies was finally dropped with the reorganization of the fire companies into one entity, the “Alert Volunteer Fire Company”.



Through much of Kingston’s history the military establishment routinely assigned men and firefighting equipment to help out with big fires in Kingston proper. Kingston’s first career fire department was established in 1892. The City’s first fire hall, designed to house steam powered pumpers, was built in 1873 and was located on Ontario Street. It was closed in 1962 and replaced by the Palace Road Fire Hall. In 1891 the City of Kingston secured a second fire hall by converting a former Wesley Church on Brock Street. This fire hall serviced the community until 1966 when a new Brock Street Fire Hall was constructed. A third fire hall was added on Railway Street and was opened in 1974.

Until the 1950’s, the communities surrounding Kingston relied on fire protection service provided by the Kingston Fire Department. The Kingston Township Volunteer Fire Department was established in 1954 under the direction of Fire Chief Vincent Pierce. Two fire stations were constructed in 1955 with one station on Days Road and the second in Elginburg. A headquarters fire station was constructed on Woodbine Road and opened in 1980. In the mid 1990’s two more stations were built, one on Rock Road and the other in Glenburnie.

Pittsburgh Township Volunteer Fire Department was established in 1955 under the direction of Fire Chief Sidney Taylor operating out of the Fire Station on Joyceville Road. A second station was constructed in 1984 on Brewers Mills Road and a third station was added on Gore Road in 1989. The Department of National Defense Fire Services were withdrawn in 1996 and fire protection duties for C.F.B. Kingston were transferred to the Pittsburgh Township Fire Department. DND continues to provide fire inspection and prevention activities to C.F.B. Kingston.

Although the new City of Kingston was formed in 1998, the fire services of Pittsburgh Township, Kingston Township and the City of Kingston did not amalgamate and continued to operate as three separate and very distinct organizations. In 2002 the three former fire departments of amalgamated municipality were integrated as one composite fire service as Kingston Fire and Rescue under the direction of Fire Chief Harold Tulk. The new headquarters for Kingston Fire and Rescue is located on O’Connor Drive.

City of Kingston Background

Kingston is a mid size municipality that is rich in Canadian history located on the eastern shore on Lake Ontario “where history and innovation thrives”.

In 1998 the amalgamated City became home to approximately 117,000 residents. The day time population is elevated due to the municipality’s role as a major economic centre for eastern Ontario.

The City spans approximately 450 square kilometers consisting of level terrain and a patchwork of fresh water lakes and forests. Currently, approximately 85 % of the population resides within the urban area of the municipality, which accounts for 15% of the total land mass.



Kingston is home to three post secondary institutions for higher learning Queens University, St Lawrence College and Royal Military College.

At this time the City has three primary industrial parks which are thriving with activity.

Fire Protection is provided by a composite department comprising of approximately 152 Career and 175 Volunteer personnel. The current complement of staff respond from ten fire stations strategically located throughout the city.

Chapter 3: Process

The *Fire Protection and Prevention Act* (FPPA) is the governing legislation for fire prevention and public safety in Ontario. Within the framework established by the FPPA, municipalities are responsible for funding and delivering fire protection services and the province is responsible for providing municipalities with advice, guidance and support.

In 2002, Fire Chief Harold Tulk began to review and restructure Kingston Fire & Rescue under the direction of Council. The Fire Chief implemented a project that would see fire service staff proceed with the development and preparation of a draft Master Fire Plan based on an analysis of risks in the community. This Master Fire Plan project began in 2006 as directed in a resolution from Council.

City Council defined the service levels to the community in consultation with the Office of the Fire Marshal (OFM). Fire Chief H. Tulk advocated for the production of a strategic blueprint in partnership with the Office of the Fire Marshal to test the OFM *Shaping Fire Safe Communities* program. The purpose of the program was to identify a path for the fire service to ultimately improve the delivery of fire protection services at the municipal level optimizing the use of available resources. Kingston Fire & Rescue must respond to the needs and circumstances of the community ensuring the economic viability of our local economy from the impact of fire or other emergencies.

The initial phase of Kingston Fire & Rescue's Master Fire Plan project began with a comprehensive review of all guidance notes and guidelines from the Office of the Fire Marshal (OFM) which described the process as "a framework for municipal decision making which should link council policy setting responsibility and the fire service operational expertise to accommodate short, medium or long term planning." A critical phase in this process is a thorough review of the current context of service delivery within the community.

The guiding principles of a Master Fire Plan were defined as:

- a) The residents of Kingston are entitled to the most effective and efficient fire services available;
- b) The content of existing collective agreements will be respected and the collective bargaining process will be recognized as the appropriate channel for resolving labour relations issues under collective agreements and the *Fire Protection and Prevention Act*;

Collective bargaining issues affecting public safety will be identified and those responsible must work within these parameters in making recommendations for improving municipal fire services.

When completed and approved, Master Fire Plan components should include but not limited to:

- a) the values and roles of the department
- b) the necessary projects approved by Council
- c) projected expenditures for the projects enclosed
- d) schedules for developing, implementing and maintaining appropriate programs and services

The acceptance of the Master Fire Plan should also confirm a Council commitment to monitor, evaluate and revise this plan to improve community fire safety continuously. This is accomplished by directing the Fire Chief to generate an Annual Report, which sets out the internal and external accomplishments and organizational changes for Council's information.



Councillor Dorothy Hector accepted the Certificate of Compliance with Section 2.1(a) of the Fire Protection and Prevention Act 1997, from the Office of the Fire Marshal, on behalf of the City of Kingston on September 20, 2007.

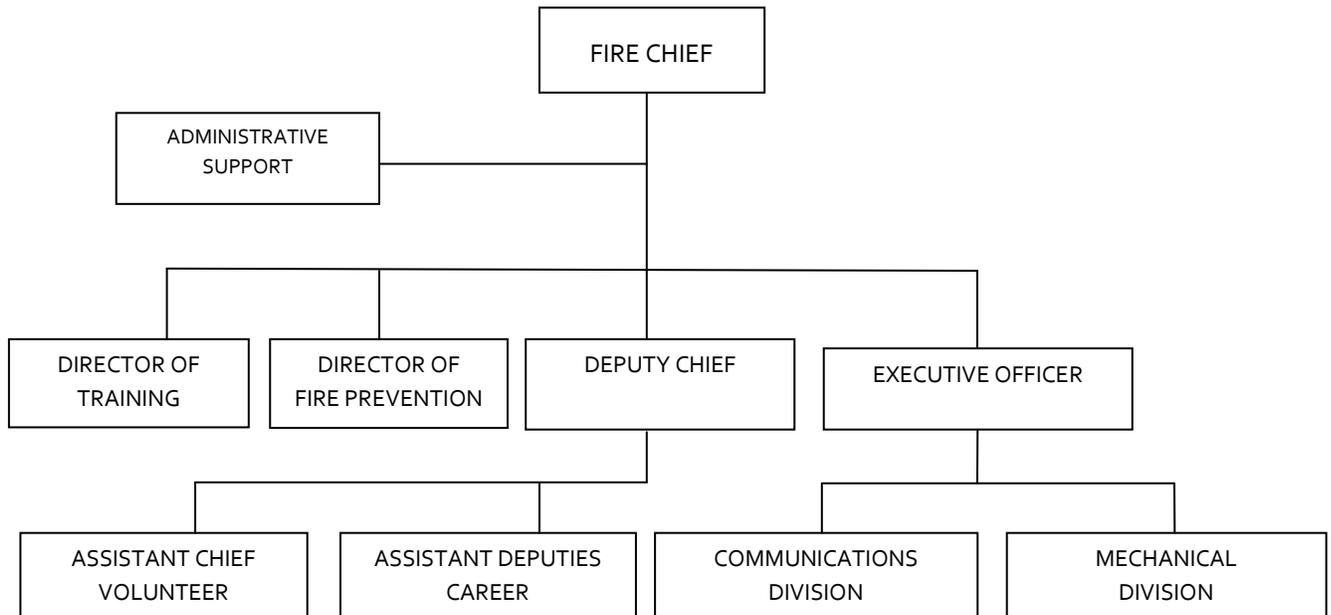
Chapter 4: Organization

Recommendation # 1

Assistant Chief of Volunteer Services

The Fire Chief supports analysis and recommendation of the MFP sub-committee. The position is proposed for the year 2012. Financial impact on the operating budget is approximately zero with the retirement of the second Deputy Fire Chief.

PROPOSED ORGANIZATIONAL CHART



Recommendation # 2

Core Services

The Fire Chief supports the analysis of the MFP steering committee and further recommends that Council support the development and delivery of a local hazardous materials program in 2011. The estimated cost of the training and certification is approximately \$15,000 annually. The capital cost to establish the hazardous material response program is approximately \$50,000.

Hazardous materials response is the only program not included in the service currently provided by KFR.

Kingston Fire & Rescue Core Services

On March 19, 2002 Council authorized Kingston Fire & Rescue to provide fire protection and public safety services. This list of approved services was developed from the Kingston Fire & Rescue organizational review and outlined below:

Emergency Response:

1. basic firefighting
2. structural firefighting including rescue
3. vehicle firefighting
4. grass, brush, forestry firefighting
5. marine firefighting
6. automatic aid
7. mutual aid
8. basic medical assist with defibrillation
9. awareness level hazardous materials
10. vehicle accidents
11. vehicle extrication
12. transportation incidents involving vehicles, trains, aircraft and watercraft
13. water and ice - shore based
14. water and ice - water entry
15. water rescue - boat (assist Canadian Coast Guard)
16. public assistance
17. police assistance
18. public utilities assistance
19. community emergency plan participation
20. high angle rescue
21. confined space rescue
22. trench rescue
23. farm/silo rescue
24. role as Assistant to Fire Marshal re suppression and investigations

Fire Prevention and Public Education:

1. role of chief fire official designate as required
2. perform the functions of Assistant to Fire Marshal
3. fire prevention policy development
4. code enforcement
5. development of fire prevention by-laws
6. inter-action with building department(s)
7. inter-action with other government agencies

8. inspection practices, including
 - o complaints inspections
 - o conducting routine inspections per fire prevention policy
 - o dealing with code compliance issues (mandated)
 - o conducting inspections, preparing reports and issuing written responses to requests
 - o issuing permits
9. public education practices, including
 - o providing routine education programs as per fire prevention policy
 - o facilitating smoke alarm initiatives
 - o providing access for media
 - o delivery of specialized programs
10. fire investigation practices, including
 - o determining cause and origin
 - o assessing code compliance
 - o assessing fire suppression effectiveness
 - o determining compliance with building standards
 - o determining effectiveness of built-in suppression features
 - o interacting with OFM investigator
 - o supporting criminal prosecutions
 - o consulting with police and other agencies
 - o provide forensic services
11. plans examination and approval practices, including
 - o examining and approving new construction plans
 - o examining and approving renovation plans
 - o reviewing and approving sub-division/development agreements
 - o reviewing and approving site plans
 - o providing on-site inspection of approved plans to determine compliance
 - o issuing occupancy permits
12. preparation for and appearances in court
13. systems checking, testing and approval
14. compile, analyze and disseminate functional statistics
15. consultation with architects, engineers, planners, contractors and building trades

Fire Administration:

1. planning & development:
 - o master planning
 - o evaluating programs and services
 - o projecting station locations and reallocations
 - o determining staffing levels and assignments
 - o coordinating with other emergency services
 - o coordinating development with other community departments
 - o coordinating with other Counties/Districts/Regions
2. financial planning:
 - o coordinating use of information from suppression activities
 - o coordinating use of information from fire prevention activities
 - o transitional adjustments for capital stock

- input into level of service issues (based on available funding)
- developing, controlling and monitoring budgets
- coordinating with department divisions
- identifying alternative sources of revenue and fees for services
- operating
- capital
- purchasing
- 3. records management:
 - note taking
 - records retention
 - freedom of information legislation
- 4. human resources:
 - recruitment, selection and retention
 - promotion
 - performance evaluation
 - career development and higher education
 - job classifications
- 5. customer relations:
 - preserving local identity
 - enhancing fire department image
 - marketing fire protection
 - developing inter-agency relationships
- 6. health and safety:
 - development of policies and programs

Communications:

1. dispatch services:
 - liaising with dispatch centres
 - receiving emergency calls
 - dispatching of appropriate resources
 - providing on-going resources to operation during emergency
 - compiling emergency response data and inputting of information in data bases
 - sharing data with other department divisions
 - sharing data with other municipal departments
2. technology:
 - maintain communications systems and components (both routine and emergency)
 - providing technical support
 - developing specifications for radios, pagers, telephones, and computers
3. providing interface capability with other data systems

Training & Education:

1. program development:
 - develop trainer facilitators
 - coordinate core curriculum
 - develop specialized staff development programs

- suppression
 - prevention
 - administration
 - communications
 - maintenance
 - support services
 - develop succession training programs
2. provide access to training facilities:
 - coordinate access to facility
 - deliver hands-on training to staff
 3. station training:
 - deliver curriculum specific to discipline's needs
 - supervisory training drills
 4. develop incident management and accountability systems

Maintenance:

1. fleet and equipment maintenance:
 - maintain fleet and equipment
 - provide annual testing programs
 - develop equipment specifications
 - maintaining specialized equipment, e.g. SCBA
 - central supply facility

Chapter 5: Community Analysis

Kingston's population has changed from the previous 2001 census of 114,195 to 2006 figures of 117,207 which represents a 2.6% increase over the last census period, although this was less than the provincial growth average of 6.6% or 5.4% reported national growth.

Population density was reported at 260.2 persons per square kilometer. Population density converts to approximately 15% of the municipal population living in the rural area that comprises approximately 85% of the land area.

The Municipal Fire Protection Information Survey completed in September 2007 indicated Kingston is home to an aging population. Seniors have been identified as a vulnerable group to the effects of fire and medical emergencies have resulted in a need for specific public education programs to respond to this growing segment of our population to ensure our seniors community is being adequately served by Kingston Fire & Rescue.

The major areas of the municipality to be developed in the next decade are located in the west area of Cataraqui West and the Cataraqui North area. The planned use is to increase the density on the available lands with primarily medium and high density residential development with some complimentary commercial development. Also included in the Cataraqui North development is the provision if required for two additional schools.

Through the direction of Council the municipality has engaged in an aggressive development plan of new and upgraded infrastructure. Two of the city's largest public employers, Queen's University and Kingston General Hospital are presently undergoing tremendous growth and development.

Kingston is comprised of a wide variety of neighbourhoods. Construction type varies considerably between neighborhoods. The east and west areas of the municipality consist primarily of residential dwellings with tracks of commercial development along major transportation corridors. In contrast, the downtown core has some structures 250 to 300 years old constructed with heavy timber and stone, which was common in the late 1800's. Both very old and new buildings have unique firefighting problems.

Many of the buildings in the downtown core present significant challenges to firefighters. Buildings have multiple roofs, breached fire walls, building components that burn rapidly and can lead to early building collapse.

New residential buildings also present unique challenges to firefighters. New truss construction may lead to early collapse, thin roofing material makes operations on the roof dangerous, efficient insulation may lead to early flashover and backdraft conditions.

Kingston has a vibrant tourism business that is partially built on the historic charm of the older downtown core including the building architecture. This area is unique to the City and has historical significance as the First Capital of Canada.



Kingston is an older city with relative newer industrial, commercial and manufacturing buildings built to Provincial Building Codes and Standards. The mixed occupancy buildings are generally confined to the older parts of the City.

In the older areas of Kingston such as in the Queen's University district there is an abundance of older homes that had originally been designed as single family homes. Many of these over the years have been converted into multi tenanted dwelling units.

The Health Care facilities are considered high risk type occupancies partial due to the concentration of persons requiring assistance and may be difficult to evacuate in emergency situations.

Chapter 6: Administration and Staff Services

Recommendation # 3

Performance Benchmarking

The Fire Chief recommends KFR participate in the performance measurement benchmarking system through our fire prevention division with our comparable municipalities. The results may be reported through the KFR Annual Report and funded within current finance planning.

Synopsis

The Administration Division is responsible for human resources, health & safety, client/customer relation practices, finance planning, and policy development.

Human Resources within KFR include the following functional areas:

- promotion / succession planning
- performance management
- counseling and discipline
- collective bargaining / labour relations
- job classifications

There are two joint health and safety committees for KFR, one for career staff and the other for volunteer staff.

The Customer Relation Practices within KFR includes the following functional areas:

- enhancing fire department image
- environmental scanning, anticipating pressures and developing communication strategies
- developing inter-agency relationships

The Fire Chief submits yearly operational and capital financial estimates to Kingston City Council for approval.

Staff Services provides an important function for all divisions of KFR, including the quartermaster function, facilities maintenance, payroll, accounting and attendance management.

A building audit was completed as part of the station and staffing study which recommended station renovations and the construction of new stations.

Chapter 7: Fire Prevention & Public Education

Recommendation # 4

Detailed Risk Assessment

The Fire Chief recommends that a detailed risk assessment be completed by the Director of Fire Prevention, in consultation with the Office of the Fire Marshal utilizing the “Comprehensive Fire Safety Effectiveness Model” and the detailed risk sub-model. The Fire Chief recommends that the Risk Management Program be developed and delivered in 2011 and every 5 years thereafter and funded within the applicable current budget.

The outcome of the analysis is to be reported to Council through the Annual Report from the Fire Chief in the effective year.

Recommendation # 5

Guidelines for Fire Prevention Programs

The Fire Chief recommends concurrence with the MFP sub-committee recommendation to direct the Director of Fire Prevention in consultation with the OFM to develop formal guidelines to document and measure the outcomes of all fire prevention programs against the objectives of the current risk assessment in 2012. The program is to be funded within current KFR operating budget.

Recommendation # 6

Guidelines for Fire Prevention Public Education Programs

The Fire Chief hereby recommends that the Kingston Fire Service in consultation with the OFM develop formal policies for fire prevention public education programs in 2012 with all public education programs to be reviewed and consolidated into a standard program format with operating guidelines. This program is to be funded with the current KFR operating budget.

Recommendation # 7

Public Education Program Designer/Teacher

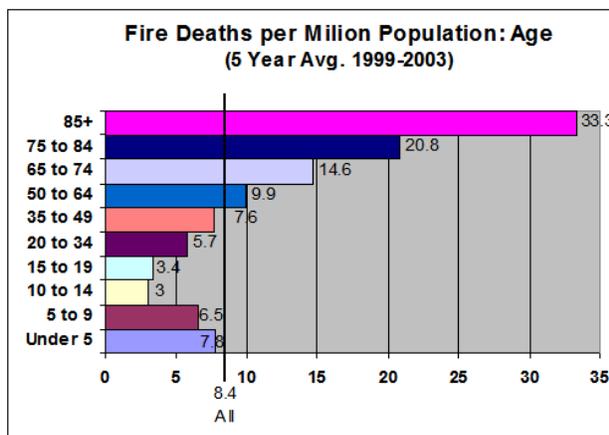
The Fire Chief recommends that a Fire Prevention Public Education position be examined and filled according to a detailed needs analysis in 2012. Financial impact on operating budget estimated to be \$90,000 annually.

Synopsis

Fire Prevention is a core service that is mandated through the provisions of the Fire Protection and Prevention Act (FPPA.) The existing level of service was reviewed and compared to the community risks and industry standards by the Master Fire Plan Steering Committee. A number of gaps were identified which, if addressed, provide opportunity for enhanced service levels and improved risk management.



The three principal elements of fire prevention are public education, code enforcement and fire investigation. Public education is the first line of defense. Those elements are achieved through programs and services provided by seven fire inspectors under the direction of the Assistant Chief, Director of Fire Prevention and one secretary. The programs are also supported to a degree by the suppression groups who report code hazards to the bureau for follow up, conduct preliminary fire cause and origin assessment and by participation in station tours, public events open houses. Fire prevention effectiveness is also impacted through interaction with external partners such as Kingston Police, the Office of the Fire Marshal, Electrical Safety Authority and our many internal partners within the City of Kingston Corporate structure.



The composition of our fire prevention programs have evolved over many years and been modified as the result of a simplified risk assessment completed in 2002. The objective is to ensure that our programs continue to match our local needs and circumstances. An updated simplified risk assessment was completed in 2010. Due to the relatively low frequency of fire injury and loss statistics are also relied upon to identify fire occurrence trends and risks. The Office of The Fire Marshal has established a comprehensive fire

safety effectiveness model which includes a detailed fire risk sub-model.

A broad range of fire prevention programs are currently delivered throughout the city. Programs include extensive enforcement of the Ontario Fire Code, a role in the approval of new construction and the investigation as to the cause and origin of all fires. Guidelines for the performance and outcome of the programs are based on a combination of internal guidelines and external referenced documents. Statistical documentation of the programs is limited there by limiting the ability to measure year to year performance and efficiency.

Public education is the fundamental and mandatory component of all municipal fire protection initiatives. Each of our fire prevention bureau staff including the director and secretary have identified roles in the planning, scheduling and delivery of fire safety public education to the residents and visitors to Kingston. The current program descriptions have not been consolidated since 2006 though a number of new programs have been added. All programs should be reviewed to ensure that they are meeting the needs of the target groups and that they are in line with the current risk analysis. Following review, all public education programs and guidelines should be rewritten into a standard format to ensure ongoing quality and consistency in their delivery.

The Master Fire Plan Steering Committee identified that public education programs are the first line of defense in an effective community fire safety program. Public education programs which are effective will ultimately reduce the frequency of fires within the City leading to fewer deaths, injuries and less property loss. There are other corollary benefits in the form of reduced fire suppression costs, improved insurance rates and a healthier environment.



The Committee identified that increased fire and life safety public education provides the greatest opportunity to improve on our ultimate objective of reducing injury, loss of life and property damage. The current service model relies on each fire inspector to deliver one or more of our designated programs in conjunction with their other duties. Currently, each fire inspector allocates approximately twenty percent of their time to public education activities with the result that we have the equivalent of less than one and one half person years devoted to public education. Given the other duties and obligations of staff there is no potential to expand the current public education programs without additional staff resources.

Many mid-sized and larger departments have chosen to address the issue by hiring one or more staff in the specialized role of a public educator responsible for the design and delivery of programs. The Director of Fire Prevention advocates for increased staffing but for the position to continue in the multi-purpose role of a fire inspector but through increasing the dedicated allotment of public education time to the equivalent of two and one half person years. There is consensus that the need is there but the decision as to how to fill this staff need should be the subject of further analysis and a business plan following completion of the previously recommended detailed risk analyses.



Chapter 8: Emergency Response Capability

Recommendation # 8

Causeway Limited Access

The Fire Chief hereby recommends that a third crossing be provided at a time and cost to be determined by Council of the City of Kingston.

Further to the background provided in the Action Plan recommendation the Fire Chief would encourage Council to consider the additional points as provided below before they conclude discussion on this subject:

- Successful emergency response in medical and fire related emergencies are time sensitive. Early deployment and travel time are vital to the success of medical emergencies and property loss management processes.
- Efficient application of emergency service resources will largely depend on location of staff, call taking and deployment procedures and the integrated response of fire and medical emergency responders.
- The current natural and physical barriers handicap existing emergency response agencies due to the limited access to resources located in the core area when they are required to be assigned to support the east side of the City in a timely fashion.
- Strategically located lights and/or a radio link being installed on The Causeway would ensure reliability in open travel routes for emergency vehicles until a third crossing is provided. This is essential to ensure reliability in the response process.

Recommendation # 9

Station # 3 (Gore Road)

The Fire Chief recommends that Station #3 (Gore Road) remains open as a volunteer station with support from the career staff located in the core area for all reported structure fires in their response district. Cost to staff Station # 3 would be \$2,000,000 whereas current volunteer cost is \$100,000.

- 90% of the buildings and occupancies in the area of the base and those occupancies on the base are constructed to modern code standards.
- KFR current response performance meets the DND standard of five (5) firefighters on scene and ready for assignment in ten (10) minutes.
- The Fire Chief believes with radios issued to the causeway operations to notify them when career fire trucks are responding across the causeway also needs consideration.
- The converging response program is proving to be very effective and when coupled with comprehensive fire prevention program it has the potential to allow us to sustain the current volunteer/career fire response programs.

- The Fire Chief also believes that the full potential of a comprehensive fire prevention and public education program has not been realized since amalgamation.
- CFB Kingston has four (4) full time professional fire prevention staff on duty. Integration of the fire prevention initiatives must be explored to realize fire protection efficiencies before staffing Station #3.
- Staffing Station #3 (Gore Road) with career is premature at this time.

Recommendation # 10

Station # 4 (Brock Street)

The Fire Chief hereby recommends that Station #4 (271 Brock Street) remain in service to the core area of the City for the duration of the Master Fire Plan (5 years). The value of this property is \$1,000,000.

Station #4 is strategically located within the core area of the City of Kingston. There is capacity to house and deploy heavy equipment within acceptable time frames as set out in the table of effective response for high hazard occupancies such as our hospitals and other institutional occupancies. Preservation of these high life safety and aged facilities requires vigilance in areas of fire prevention, public education and early intervention to mitigate loss due to fire.

The benefits of a comprehensive fire prevention and public education initiative have yet to be realized therefore I am suggesting that early intervention by fire crews is essential to mitigate extended loss of life and property due to fire in this area. The Fire Chief views Station #4's central location essential for early intervention in KFR's Emergency Response Program in this high risk area of the City.

Station #4 in the current total response program is also a support to other stations in the core area. Although it is located on a one way street we feel with the current distribution of fire stations in the core area that this station location is an essential entity in the fire protection package.

The funding to operate out of this station is sufficient within the current operating budget as approved.

- Station location studies contemplate staff to be distributed to response areas north, east and west of the current location and then deployed in a converging response pattern into core area.
- Fire Chief believes this would have a negative impact on response efficiency in this high risk area of the City.
- Closure of this station contemplated redistributing four (4) staff to station #3 (Gore Road). The Fire Chief believes that more than 60% of the activity would be assigned back to the core area in converging response. In this circumstance the causeway becomes a physical barrier that could potentially reduce the current response efficiencies within the core area.

Recommendation # 11

Station # 5 (Railway Street)

In addition to the support analysis from the sub-committee Action Plan, the Fire Chief hereby recommends that a new fire substation be constructed in 2013/2014 on the lot located at Elliott Street and Division Street in the City core area. The estimated cost is \$2,000,000.

The detailed business plan ought to be submitted to Council as part of the 10 year capital finance planning submission in 2012 for implementation of the project in 2013.

Areas of discussion include but are not limited to consideration for the proposal to extend Wellington Street; the 3rd crossing; the age of the current structure; and the need for additional lands to complete the Central Works centre project for the Corporation.

All of the aforementioned will ultimately have a positive influence on the enhancement of the emergency response capability in Kingston.

Recommendation # 12

Station # 10 (Days Road)

It is recommended that the Fire Chief develop a business case for consideration of Council during the 2012 capital budget deliberations. This would allow the project to proceed in 2013/2014 for service and occupancy. A new site located on the northern portion of the airport in proximity to Bayridge Drive and Henderson Blvd is recommended at an estimated cost of \$2,000,000.

The integrated response plan in place within KFR needs to have a full time response capability in this area to be effective in minimizing property loss and loss of life due to fire and other emergencies. Population and traffic density coupled with the increased activity at the airport support the decommissioning of the 127 Days Road site.

Synopsis

Fire station locations, staffing and subsequent response plan changes are the single biggest issue that the Master Fire Plan will address. It is the heart of a Master Fire Plan because it has the largest impact on the organization, operations and the community.

Kingston Fire & Rescue retained the services of Marshall Macklin Monaghan and CGI to complete a comprehensive study on staffing and station locations for the City of Kingston. The Kingston Professional Firefighters Association requested the International Association of Firefighters to create a staffing and station location study. The two station location studies and the



supplement letter from CGI were used as the basis for the Station & Staffing Executive Report. The Station & Staffing Report, Marshall Macklin Monaghan Study and the International Association of Firefighters study were included as appendices to the Action Plan developed by the Master Fire Plan Steering Committee.

In 2006 a detailed and complex response plan was implemented for the deployment of Kingston Fire & Rescue resources. A Letter of Understanding with the Kingston Professional Firefighters Association regarding this response plan was negotiated. The agreement to consult with the KPFFA resulted in the Corporation being able to gain efficient and effective benefits from our composite fire delivery process.

Fire stations should be situated to achieve the most effective and safe emergency responses. Fire stations represent a substantial municipal investment and should normally be located and designed to offer many years of service. As a community grows, it may become necessary to replace existing stations or add more stations to meet increasing public demands for emergency responses.

The best sites for fire stations will vary with local needs and circumstances and the fire protection services the municipality has selected to provide. Stations staffed by volunteer firefighters may have some different considerations than those utilizing full time firefighters.

Along with fire station locations, staffing and deployment have a direct effect on service levels provided to the community. Our goal is to achieve the response criteria approved by Council. This is accomplished by having proper station locations, proper assignment and organized staffing, efficient deployment of apparatus and an effective response plan.

There is no single optimum arrangement of stations because of the uncertainties in demand and the complexity of the overall response network. A group of station locations must be analyzed as a whole, because moving some stations opens up other gaps, and adding stations can create overlaps with existing stations.

Kingston Fire & Rescue has a response policy to meet the Council approved response table with consideration for the benchmarks published by the Ontario Fire Marshal's Office (OFM) and the National Fire Protection Association (NFPA).

The following are the Council approved response time requirements and CFB Kingston and Kingston Airport response time requirements:

Community Standard

Kingston Fire & Rescue	Urban - 5 minutes (90% of the time)
Kingston Fire & Rescue	Suburban - 10 minutes (90% of the time)
Kingston Fire & Rescue	Rural - 15 minutes (90% of the time)
Kingston Fire & Rescue	Remote - 30 minutes (90% of the time)
CFB Kingston	5 firefighters on scene in 10 minutes.
Kingston Airport	5 firefighters on scene at runway in 5 minutes.

Station # 1 (Joyceville Road) Station # 2 (Brewers Mills Road) Station # 3 (Gore Road)

The eastern area of the City of Kingston includes stations 1, 2 and 3. Station #3(Gore Road) is located in a suburban area and therefore must meet the response requirements for suburban areas. Station #1(Joyceville Road) and Station #2(Brewers Mills) are in the rural area and must meet the requirements for rural areas.

The Fire Chief does not agree with the Marshall Macklin Monaghan study recommendation to close Station #1(Joyceville Road) and Station #2(Brewers Mills) and build a new more centrally located station. The Marshall Macklin Monaghan proposal will create a large gap area along the east boundary of the City.

Staffing Station #3 (Gore Road) with career is premature at this time as it currently meets the community standard as approved by City Council and therefore no change is required at this time.

Stations #4 (Brock Street), #5 (Railway Street) and #6 (Palace Road)

Kingston Fire & Rescue data analysis has confirmed that the 4 minute contours as shown in the Marshall Macklin Monaghan Study for these stations is accurate. The performance meets the community standard.

Stations #7 (Woodbine Road) and #10 (Days Road)

The west area of the City, south of Highway #401, includes Stations #7(Woodbine Road) and #10(Days Road). Station #10(Days Road) serves a suburban area while station #7(Woodbine Road) serves both a suburban and rural area.

Stations #8 (Unity Road) and #9 (Rock Road)

The area of the City, north of Highway #401 and west of the Cataraqui River includes Stations #8(Unity Road) and #9(Rock Road). This area is considered to be rural. The response performance meets the community standard.

Chapter 9: Communications

Recommendation # 13

Statistical Data

The Fire Chief recommends KFR identify performance measures and develop statistical data required to be able to report on the services delivered by KFR. This function would be performed at the Executive Officer level and be assigned within current administration division funding. The cost to perform this function would arise out of the operating budget currently in place for KFR.

Recommendation # 14

Fire Loss Statistics

The Fire Chief recommends that KFR data on loss statistics be consolidated and reported to Council through the annual reporting process.

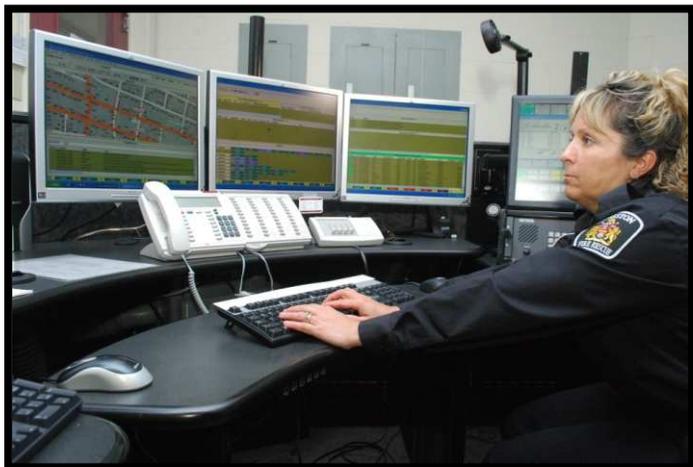
Synopsis

Following the 1998 amalgamation, the Communication Divisions from each of the three former Fire Departments were merged into one. Immediately following amalgamation, the Communication Divisions were relocated to one location and continued to operate with different response procedures.

The review of the Communication Division conducted in 2005 laid out the progress for the division for 2006 through 2009. The review set forth two primary goals: (1) to build a modern communication centre, and (2) to create a personnel management program to ensure all Communication Technicians (CT) receive proper supervision, training, guidance and support. The first goal has been achieved and the second goal is slated for completion in 2010 and beyond.

In 2006 a new response plan was implemented which ensures that the Communication Division operates under one comprehensive policy with standard operating procedures a new communication centre.

The Communications Division includes responsibility for call taking and/or dispatching for all of Fire Departments in the County of Frontenac. It also serves as the coordination centre for the County of Frontenac Lennox and Addington fire mutual aid program. It also provides communications for the emergency planning services for the City of Kingston.



Chapter 10: Professional Development & Training

Recommendation # 15

Training Facility

The Fire Chief hereby recommends that the Corporation proceed without delay to secure a twenty acre site and that the site development commence in 2010. \$2,000,000 is currently approved in the Fire Capital Reserve Program.

Recommendation # 16

Training Centre Capital Funding

It is recommended that the training facility commence construction in 2010 and the project to be debt financed and repaid out of the Fire Capital Reserve.

Synopsis

The Training Division is managed by the Assistant Chief, Director of Training, who reports to the Fire Chief. There are three career training officers and four volunteer training coordinators who report to the Director of Training. The training officers and training coordinators are responsible for implementing, monitoring and providing resources for all training activities. Company officers and senior officers deliver the routine training to firefighters. External agencies and our specially trained staff are used to deliver training for special operations. The Ontario Fire College is used for officer training and other special training as required.



It is the responsibility of the Director of Training to ensure we meet the performance requirements of the new Training and Education programs when they are developed, and subsequently implemented, as required within the fire service. The Training Division plays a lead role in the development of safety programs.

In 2001, the City of Kingston sold the Kingston Fire & Rescue training facility on Centennial Drive. In 2005 funds were approved in the capital finance planning for a new training centre, but to date we have yet to acquire a site.

The Professional Development and Training section of Kingston Fire & Rescue will ensure that all training programs are standardized, with the inclusion of learning outcomes, performance objectives, and ensuring consistent application across Kingston Fire & Rescue. It is imperative for Kingston Fire & Rescue to secure a training site to support the development of Kingston Fire & Rescue staff.

The development of relationships is important across all divisions of Kingston Fire & Rescue, but is a particular goal of the Professional Development and Training division. The division has expressed a goal of improving internal relationships in order to improve understanding of the roles of a training officer. Increased activity of front line staff with our training staff in the development of Training and Education programs will ensure that all staff is engaged in taking Kingston Fire & Rescue into the future within the appropriate fire service standards.

We should continue our relationships with external agencies such as the Ontario Fire College, the Municipal Health and Safety Association, the Eastern Ontario Training Committee, in addition to other fire departments that are similar to our own operations. The development of training and education facilities will enable and enhance the development of educational relationships with our business community.

Training holds the primary responsibility for the development and administrative maintenance of a number of special teams within Kingston Fire & Rescue, including but not limited to Technical Rescue and Marine Operations.

Chapter 11: Mechanical and Equipment Maintenance

Recommendation # 17

Mechanical Repair Facility

The Fire Chief hereby recommends that a repair facility be designed to facilitate the major repair of Emergency Vehicles for Emergency Service in the City of Kingston and area Mutual Aid Departments; and further that the location of the site be established at the location of the Training Centre in 2012/2013. The preliminary financial estimates are \$3,000,000 and we recommend that the project be financed by debt and repaid from the Fire Capital reserve.

The Fire Chief does not support the further development of a fire truck repair centre on the Station #7 (Woodbine Road) property. The residents of the area are subjected to the noise created by emergency vehicles responding and other related broadcasts over station public address systems when repairs or the testing of equipment is undertaken by our crews. The training site is an industrial site that is not as sensitive to noise created as a result of heavy equipment maintenance.

It is therefore recommended that the City of Kingston authorize Kingston Fire & Rescue to establish an emergency vehicle repair facility that has the capacity to accommodate the repair and maintenance of designated emergency vehicles from all emergency service disciplines within the City.

Recommendation # 18

Staffing Levels Mechanical Division

The Fire Chief hereby recommends two emergency vehicle certified technicians that meet or exceed NPFA Standard # 1071 in 2011. This will bring the equipment and mechanical staff back up to the levels established at the time of amalgamation. Financial estimate is an additional \$100,000 will be required within the KFR operating budget in 2011 to accommodate the recommendation. The current budget provides for two technicians and a third will be required in 2011.

Synopsis

The Mechanical Division is responsible to ensure that the Fire Department complies with legislated Acts and Standards.

The purpose of the Mechanical Division is to ensure fire apparatus and equipment are serviced and maintained on a daily basis. The Mechanical Division is also responsible for identifying the systems and items to be inspected, the frequency of servicing and maintenance, and the requirements for testing of all of Kingston Fire & Rescue 70 apparatus and service vehicles, as well as firefighting equipment, marine

units, emergency planning generator, breathing air program, hydraulic rescue tools, fire station generators and air compressors.

Kingston Fire & Rescue apparatus and equipment inventory has almost doubled and emergency responses have increased as well as the number of apparatus sent to each response. This in turn has put greater demands on the division staff and resources. Unfortunately, the division staff has not grown with the rest of the Fire Department. The division has decreased from three staff to two staff.

Risks identified by the Master Fire Plan Mechanical Sub-committee were mainly related to previous vacancies in the division not being filled and a shortage of qualified personnel. The Mechanical Division has difficulty meeting applicable standards and best practices. The Mechanical Division can no longer perform their preventative maintenance program due to a lack of resources and therefore considerable repair work is currently undertaken by various agencies. There is limited time for training to ensure staff are current with rapidly changing technology.



Inadequate facilities were another factor that impacted the risks identified.

The operational review in 2002 highlighted the following recommendations:

- a) establish computerized maintenance/management program
- b) establish preventative maintenance check list/schedules
- c) assign proper mechanical vehicle
- d) designate additional/adequate service bays & personnel
- e) succession plan for the future
- f) establish maintenance SOP/SOGs
- g) establish a director of the division
- h) provide training where required
- i) draft vehicle & equipment specifications

Support equipment such as generators, ventilation blowers, portable pumps and saws are only serviced when they are in the shop for repair. Kingston Fire & Rescue has in excess of 70 pieces of this type of equipment.

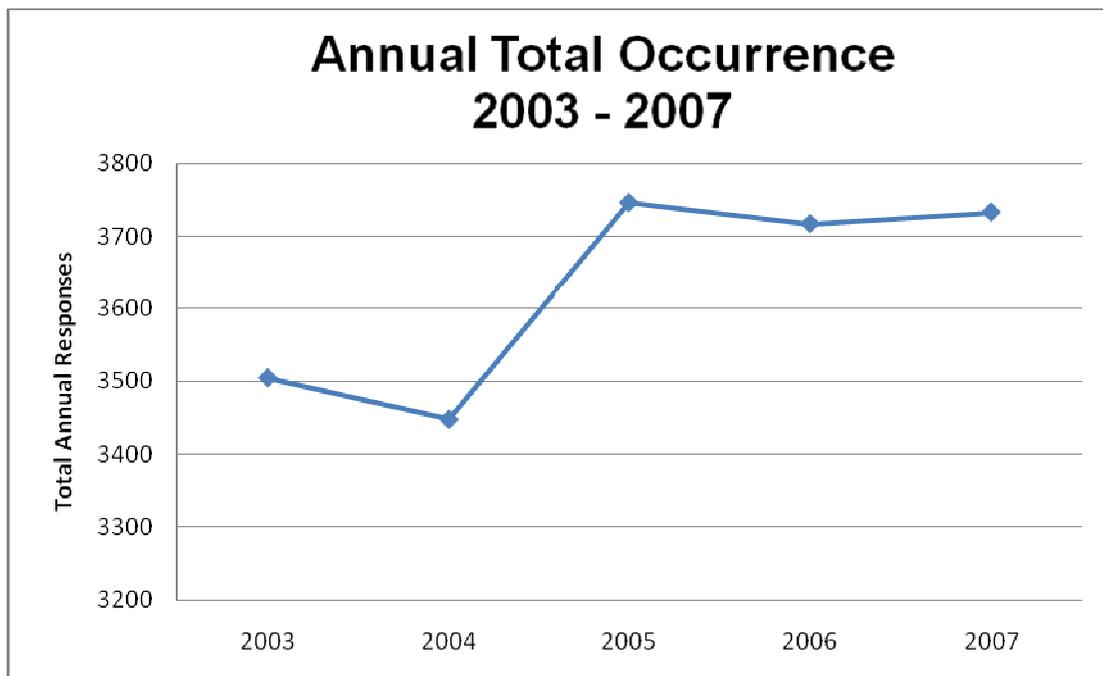
The Ontario Health & Safety Act requires aerial apparatus to be tested to NFPA 1914. A third party engineer is required to perform the non-destructive testing every 5 years. NFPA 1914 requires aerials be inspected annually. Mechanical staff conducts these inspections.

Chapter 12: Emergency Response Urban and Rural

Fire suppression challenges for Kingston Fire & Rescue are similar to other older cities in Canada. The combination of higher density use and multiple occupancy type buildings located within the older congested downtown areas result in potential for larger fires in part due to the multiple exposures of adjacent rooflines. Past experience has demonstrated that the majority of fires have occurred in residential dwellings. Many of the older traditional walk up buildings line the downtown core. Buildings containing commercial on the main street level and residential on the second or third floor creates the risk of a large fire occurring in the downtown core.

Kingston Fire & Rescue responds to over 3600 incidents annually from ten fire stations. The services include fire, rescue, medical distress, hazardous materials, vehicle collisions and many other emergency incident types. Kingston Fire & Rescue Emergency Response staffing includes 120 career and 175 volunteer firefighters. Currently the career staff works a 24 hour shift rotation with a complement of 30 persons per shift. There are 13 pumpers, 6 tankers, 2 rescue, 1 ladder truck and 2 command units available for immediate response. There are an additional 4 pumpers and 1 ladder truck available for called in staff during large or multiple incidents.

The recent tiered response agreement for medical calls will invariably increase call volumes. Current statistics indicate that 26% of Kingston Fire & Rescue call volume is for medical assist responses.



Corresponding to call volume, the estimated dollar loss within the community has also increased in the past five years.

Summary of Dollar Loss by Fire

YEAR	ESTIMATED LOSS
2003	\$2,346,115
2004	\$2,011,295
2005	\$4,196,068
2006	\$2,852,277
2007	\$3,501,816

Special Operations to Kingston Fire & Rescue are those incidents that can be categorized as high risk, low frequency with high impact that requires specialized knowledge training and equipment. The greatest challenge for Kingston Fire & Rescue to deliver and train for these services is the high financial cost.

Given the increase in the recreational use of the City's marinas and waterways and future development of the waterfront, would indicate the need for continuing response capabilities in this specialized area.

Waterfront emergencies and fires can be particularly challenging. Fires in marinas can present significant logistical and tactical problems for land-based fire units because of poor or limited access. Fire personnel may be forced to carry equipment and/or stretch hose lines long distances to attack a fire. A fireboat can give the Incident Commander a tactical advantage in such situations because in many cases, the Fire Boat has unfettered access to waterfront structures that allows it to quickly maneuver into position and commence firefighting and/or support operations. A single boat fire in a marina has the potential spread to all boats and structures in and near the marina.

In 1995 Kingston acquired its first marine firefighting vessel named the Cowdy. The Cowdy was equipped with a low volume fire pump with minimal water based firefighting capabilities. The Cowdy was replaced in 2008 with the acquisition of the Canadian Coast Guard Vessel the "Bittern" which is a 13.7 meter long vessel drawing approximately 1.5 meters in depth. Power of the vessel is provided by two 350 horsepower Cummings diesel engines. Independent of the drive train for the vessel is a single 400 horsepower Cummings diesel engine that is fitted to the single 11,300 liter per minute pump.

The Kingston Fire & Rescue Fire Boat is well adapted to Lake Ontario which is the primary response area as it has been equipped with full electronic navigation equipment and VHF radios for marine unit communications.

The Kingston Fire & Rescue Fire Boat will respond to all fires on the water within the limits of the City of Kingston. One of the most important benefits of the Fire Boat is to provide an alternate water supply to firefighting efforts along the waterfront. The large capacity pump can be utilized to provide water supply in areas identified as low volume areas of the City.

The Fire Boat also responds to water rescue incidents within the City of Kingston upon request by the Canadian Coast Guard. It is expected that the Fire Boat will be in service from May 1 to October 31 each year.

Chapter 13: Water Supply

Recommendation # 19

Water Supply Analysis

The Fire Chief hereby recommends upon completion of the hydrant flow tests in 2010 that UK and KFR use the data to:

- a) Identify low flow areas.
- b) Determine immediate corrective action if possible.
- c) Ensure that areas identified are included in a water main replacement program.
- d) Review with KFR interim contingency plans to mitigate risk to adequacy of water supply in emergency response in areas of low flow rate.

Water supply is vital to firefighting operations and adequacy of supply is rated by the Insurance Underwriters when evaluating fire protection defenses in the municipality. The MFP subcommittee created a water supply committee to review records, testing procedures and adequacy of the current water works system in Kingston. See Appendix B.

It is essential that this committee continue with their analysis and report back to KFR and subsequently Council through the Fire Chief's Annual Report.

The program is to be funded out of the current operating budget.

Recommendation # 20

Water Supply Program

The Fire Chief hereby recommends that Kingston Fire Rescue develop a contingency plan for areas identified for inadequate water supply for fire suppression operations; and be it further recommended that \$50,000 be assigned to water supply programs in the Fire Capital Reserve annually.

Synopsis

The report entitled "Water Supply for City of Kingston Fire & Rescue" authored by Fire Protection Survey Services (FPSS) identified concerns respecting water supply for the purposes of fire protection within the City of Kingston. For further detail see Appendix A.

Currently the pressurized water supply infrastructure in Kingston is supplied from two independent water treatment facilities located within the urban and suburban areas of the municipality. Both are located on the shores of Lake Ontario. The urban core and part of the eastern part of the municipality (formerly Pittsburgh Township) are served by the Central Water Treatment Plant, and the West Water Treatment Plant serves the suburban part of the former Township of Kingston. It is important to note that the pressurized water system provides a usable water supply for approximately 15% of the total geographic area of the municipality. The remaining portion of the municipality is supplied water for firefighting purposes through a fire department tanker shuttle program, for which Kingston Fire & Rescue has received a Triple “A” Rating by The Insurance Advisory Adjusters IAO. See Appendix C



Conclusion

It is traditional to develop long range plans more aptly known as “Master Fire Plans” to set out a critical path of development for the fire service. This plan was generated with full regard for the Municipal Official Plan which provides a general policy framework in which to plan for the development of our municipality.

The approval of the Master Fire Plan includes:

The organizational review and analysis process which began in 2002 and was carried out in four steps, which commenced with:

- “Governance and Policy Development” at Step #1
- “A Review of all Operational Procedures and Services” at Step #2
- “Financial Impact Analysis of Amalgamation” at Step #3
- “Transition from three departments into a Single Composite Fire Service” at Step #4.

The development of the Master Fire Plan was a significant step in the transition process. The Master Fire Plan, as approved, provides the necessary catalyst to complete the restructuring of the City fire services into functional roles as a single composite fire service providing fire protection to the citizens of the City of Kingston.

The redevelopment of Kingston’s fire services has been complex and provided some unique experiences for all our firefighters. Divergent in philosophies of how to manage short and long term operational efficiencies were identified and resolved in a way that provided “full regard for prevailing cultures”.

“Kingston Fire & Rescue” continues to evolve and the Master Fire Plan provides the policy direction required to provide fire protection within the needs and circumstances of our City at a reasonable cost.