

TOWN OF KINGSVILLE FIRE DEPARTMENT
MASTER FIRE PLAN

ORGANIZATIONAL RISK ANALYSIS

COMMUNICATIONS

A key component of an effective fire service for the community is its communications system. Residents must be able to quickly report emergencies to the dispatch centre and the dispatch centre must have the capability to expeditiously alert fire department personnel to respond. Communication capability must also extend between responding fire apparatus, personnel and the dispatch centre and continue at the emergency scene. From an administrative and customer service standpoint, communication capabilities are also important for day-to-day operations.

The analysis that follows will describe the current communications systems of the Kingsville Fire Department and will include any gaps that require attention.

911 Central Emergency Reporting Bureau:

The County of Essex currently utilizes the Ontario Provincial Police communications centre in North Bay, Ontario for C.E.R.B. services. Residents dialing "911" to report an emergency will be answered by dispatchers at the C.E.R.B. who will immediately transfer the call to the appropriate dispatch centre. The county has provided "enhanced" 911 in that the name, address, phone number and responding agencies for the address are "attached" to the call instantaneously by computer when the call is made.

While the system functions exceptionally, there are some issues which arise from time to time. On occasion, the location from where the 911 call is made is not the same one as the billing address for the telephone. This problem usually occurs at large establishments such as greenhouse operations where the 911 call location will be shown as the main office and the call is actually in another building on the site. Another issue which is gaining prevalence is the trend of residents to utilize Voice Over Internet Protocol for their residential telephone service. When these residents call "911" they will actually be talking to a centre attached to their internet provider, not the C.E.R.B. No additional information will automatically be attached to the call. It will be incumbent upon the internet provider to direct the call to the appropriate dispatch centre which could result in undue additional time.

Recommendations resulting from the analysis of the 911 C.E.R.B. are as follows:

- ***Recommendation #1: Provide the staff time necessary to utilize the media and maintain the fire department website to continue public education efforts targeted at the general population to educate them on the importance of providing internet providers with appropriate information for their files in terms of emergency response should they choose to utilize Voice Over Internet Protocol for their phone service.***
- ***Recommendation #2: Provide the staff time necessary to utilize the media and maintain the fire department website to continue public education efforts targeted at the general population to educate them on the fact that the fire department still provides a seven digit emergency telephone number that can be used for emergency calls by cell phone or Voice Over Internet Protocol in order to contact our dispatch centre.***
- ***Recommendation #3: Provide the staff time necessary to educate large businesses on the importance of indicating call location to the dispatch centre when the 911 address may not be actual street address of the emergency.***

Dispatch Centre:

The Kingsville Fire Department utilizes the Town of LaSalle Police Department for dispatch services. The service is provided under contract and by an agreement signed by both municipal councils. An annual review of the agreement is conducted by a committee consisting of the Mayors of Kingsville and LaSalle, a representative of the LaSalle Police Services Board, the LaSalle Police Chief and the Kingsville Fire Chief. In addition, operational issues are dealt with at bi-monthly meetings of a fire dispatch committee consisting of the LaSalle Police Staff Sergeant in charge of communications, the LaSalle Police Communications Supervisor, the LaSalle Fire Chief and the Kingsville Fire Chief.

Dispatch staff consists of one full time supervisor, seven full time dispatchers and two part time dispatchers. Services are provided for the LaSalle Police Department, LaSalle Fire Department and Kingsville Fire Department at this time. Staffing is as follows:

- 2 dispatchers from Monday to Friday between 0800 and 1600.
- 2 dispatchers every day from 2100 to 0300.
- 1 dispatcher at all other times.

Other LaSalle Police Department staff are trained in dispatch and can assist when a single dispatcher is on duty and there is a serious call. As well, there is a call back procedure to up-staff the dispatch centre with regular dispatch staff when a serious emergency occurs. The full time staff are all trained to the Association of Public Safety Officials fire dispatch standards (A.P.C.O. is a recognized standards setting body for emergency communications and dispatch centres). In addition, staff training workshops are conducted for dispatch staff on a regular basis. At least one of these workshops per year focuses strictly on fire department dispatching. Three of the full time staff have attended the Fire Communicators Seminar at the Ontario Fire College.

There are a total of five "911" lines currently in the dispatch centre. As well, there are two direct phone emergency lines from Kingsville that are call-forwarded to the dispatch centre. These are the seven digit emergency lines for the former Kingsville-Gosfield South and Gosfield North fire departments.

The LaSalle dispatch centre is National Fire Protection Association 1201 and 1221 (a recognized fire service standards setting body) compliant. There is backup power at the centre provided by an emergency generator. All dispatching is computer aided and reports are forwarded to the department upon completion of a call via facsimile. Most of the street and address locations have been inputted to the LaSalle computer system but there are still some areas that require clarification. All telephone and two way radio transmissions are recorded and can be obtained upon request to the dispatch centre as required. All radio transmissions are in "plain text" which is the standard set by the Office of the Ontario Fire Marshal for fire service communications. In consultation with the LaSalle and Kingsville Fire Services, operational guidelines have been completed and approved for the LaSalle dispatch centre with regard to fire dispatch. The LaSalle and Kingsville Fire Departments do not operate completely the same and this sometimes has led to some dispatching errors.

An evacuation dispatch site has recently been set up at the Kingsville Fire Department south station to provide a base where the LaSalle police dispatch can relocate temporarily should their centre require evacuation. The evacuation centre is equipped with a LaSalle Police radio, a LaSalle Fire radio and a Kingsville Fire radio including associated equipment to activate fire department pagers for each department. The Kingsville south station is also equipped with automatic standby power generation. Two telephones have also been installed. The emergency lines from LaSalle would have to be transferred to these phones should the site be required. A summary of the number and types of calls as recorded using the dispatch centre classification is shown in the following table. It should be noted that the year 2002 was for a three month period only.

| | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
|-----------------------------|------|------|------|------|------|------|------|
| Station detail | 0 | 2 | 0 | 0 | 1 | 0 | 0 |
| Community service | 0 | 12 | 9 | 16 | 10 | 11 | 10 |
| Alarm | 3 | 16 | 8 | 13 | 23 | 24 | 26 |
| 911 trouble unknown | 0 | 1 | 0 | 0 | 22 | 1 | 0 |
| Assist ambulance | 9 | 34 | 25 | 19 | 0 | 18 | 10 |
| Assist other police service | 1 | 1 | 0 | 0 | 0 | 0 | 2 |
| Industrial accident | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| By-law burning | 4 | 20 | 13 | 18 | 9 | 22 | 7 |
| Assist public | 0 | 3 | 0 | 4 | 1 | 0 | 1 |
| Federal act violations | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Vehicle/equipment repair | 0 | 3 | 3 | 7 | 5 | 5 | 2 |
| Fire | 89 | 313 | 195 | 241 | 202 | 290 | 213 |
| Follow up investigation | 1 | 3 | 0 | 5 | 0 | 2 | 1 |
| Hazardous conditions | 0 | 0 | 1 | 0 | 1 | 0 | 1 |
| Information received | 2 | 0 | 0 | 2 | 1 | 1 | 1 |
| Special detail | 0 | 4 | 1 | 1 | 1 | 5 | 3 |
| Medical assistance | 1 | 6 | 8 | 7 | 2 | 4 | 5 |
| Fire – no alarm | 0 | 0 | 49 | 15 | 17 | 21 | 11 |
| MVA – personal injury | 7 | 21 | 23 | 22 | 13 | 19 | 13 |
| MVA – property damage | 1 | 3 | 10 | 14 | 2 | 3 | 9 |
| Phone call | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| Board of works/hydro | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| Assist fire department | 0 | 0 | 0 | 1 | 2 | 0 | 0 |
| Training | 0 | 0 | 0 | 10 | 23 | 8 | 13 |
| Animal complaint | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 911 possible misdial | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| By-law other | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| Dispute | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| MVA – failure to remain | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Death – natural causes | 0 | 0 | 0 | 0 | 0 | 0 | 1 |

Recommendations resulting from the analysis of the dispatch centre are:

- ***Recommendation #4: Provide staff time to continue assisting LaSalle police dispatch with training seminars as related to fire dispatch and continue utilizing the dispatch operational committee to deal with dispatching issues in order to minimize dispatch errors.***
- ***Recommendation #5: Provide staff time to continue assisting LaSalle dispatch personnel by providing additional information with reference to cross streets and number ranges so as to keep their computer database up to date.***

Mobile Radio System:

The goals of the mobile radio system for fire department operations are:

- Mobile (apparatus) radios and portables shall operate throughout the entire coverage area of the fire department.
- The radio system must have the capability in channel coverage and radio units in order to meet the needs of the department.
- The system must be reliable.
- The radio system must be compliant with the regulations of Industry Canada (the federal agency responsible for communication regulations).
- The system shall have built in redundancies to overcome operational difficulties with partial system malfunctions.

The Kingsville Fire Department operates a VHF mobile radio system which normally utilizes a repeater tower in Ruthven. All transmissions are routed through the repeater tower which enables increased coverage. At the current time, there is 100% coverage of the fire response area in terms of mobile and base station communication. There is also excellent coverage in terms of portable (hand held) radios, although some issues occur in large buildings or stories below grade. The department utilizes a main channel, a talk-around channel (which bypasses the repeater), a fireground channel and the Ontario Fire Marshal's channels. In addition, the LaSalle Fire Department and Leamington Fire Department channels are also both installed in all base stations, mobile radios and portable radios. Several Coast Guard channels are also installed. The LaSalle Fire Department operates on its own repeater tower and tests have shown that the Kingsville Fire Department radios can be switched to the LaSalle channel and reach their repeater from our coverage area. This allows redundancy should the Kingsville repeater fail and will enable us to maintain communications with the dispatch centre. Fire department personnel can be paged from either station or any mobile (apparatus) radio except Engine 122 and Aerial 219. Both fire stations are equipped with automatic standby generators in case of power failure and can assume dispatch duties in an emergency (although emergency telephone calls would still have to be routed through LaSalle).

The mobile radio system consists of the following components, all of which are Industry Canada compliant, at this time:

- Four base stations including paging encoders-one in each station and two at the LaSalle dispatch centre (one main and one backup).
- Ten mobile (apparatus radios).
- Ten portable (handheld) radios on apparatus.
- Twelve portable (handheld) radios carried by officers.
- Repeater base station at the repeater site in Ruthven.

Each interior team is equipped with a portable radio so that communications can be maintained with incident command. Staff have suggested that each interior firefighter should carry a portable radio in the event that an emergency occurs whereby interior teams become separated and one or more personnel cannot communicate with incident command. While these events are very rare, their possibility does exist and the safety of our personnel warrants that this issue be investigated further.

The Essex, Lakeshore, Tecumseh and Amherstburg Fire Departments operate on a 400 MHz trunked radio system. There is no radio interoperability capability with these departments at the present time for mutual aid purposes other than providing them with a Kingsville Fire Department portable when they arrive at the scene. Some neighbouring departments have maintained a VHF radio in selected vehicles in order to have this capability.

Recommendations resulting from the analysis of the mobile radio system are as follows:

- ***Recommendation #6: Include the purchase of six (6) portable (hand held) radios per year in the fire department operational budget to ensure that every interior firefighter is radio equipped and that portable radios are replaced on a rotational basis.***

Paging Equipment:

A key element of providing an effective fire service is alerting personnel through paging equipment that they are to respond to a call. The department currently uses a mix of Motorola and Apollo pagers which operate in the VHF band. The pagers are able to monitor the radio frequency once a call is received allowing additional information from responding officers and apparatus to be heard by fire department personnel. The county fire radio system does not have this capability. An ongoing issue has been both the coverage and reliability of pagers. While the mobile and portable radios work well in the entire response district, there have been repeated difficulties with pager coverage in some locations. As well, there have been ongoing technological and operating problems with the pagers and many types have been tested with mixed results.

Recommendations from the analysis of the paging equipment are as follows:

- ***Recommendation #7: Continue the analysis of other brands and styles of paging equipment and, once a suitable model is found, budget to replace the paging equipment over a five year period at an approximate total cost of \$24,000.***

Computer Systems:

The Kingsville Fire Department is part of the of the Town of Kingsville computer network. The administration offices, at the south station, have five computer work stations and the north station has one computer work station all connected to the municipal server and all with internet access. The network at the south station is currently reaching its limit. The training rooms of both stations are prewired to accommodate a number of computers should either location be required as an Emergency Operations Centre. Two pieces of apparatus at the south station and one piece of apparatus at the north station are equipped with on board computers. These on board computers provide street and hydrant information, preplan information, information on vehicles to aid in extrication, the Emergency Response Guide (hazardous materials) mobile version, and the M.S.A. entry control system to track self contained breathing apparatus users at emergency scenes. They are not, however, equipped with internet access. The municipality has a full time Information Technologist who is readily available to assist with computer and communication related problems.

Recommendations from the analysis of computer systems are as follows:

- ***Recommendation #8: The current long range capital budget plan for the fire department includes on board computers being purchased in 2009 and 2010. This will enable the addition of an on board computer at the north station (for a total of two at each station) and on the chief's vehicle. The purchase of these computers should be included in the capital budgets for 2009 and 2010 with a total estimated cost of \$9,000.***
- ***Recommendation #9: Upgrade the network system at each station in 2009 to accommodate multiple computer use should either station be required as an Emergency Operations Centre. This project has been included in the 2009 information technology budget.***
- ***Recommendation #10: Equip at least one on board computer at each station by 2010 with internet access to facilitate information access during major incidents such as a hazardous materials release at an approximate cost of \$600 in upgrades and \$50 per month access fees.***
- ***Recommendation #11: Provide computer workstations for any future additional staff.***

Telephone System:

The department has phone lines as follows:

- General business line (south station).
- Additional non published business line (south station).
- Business line (north station).
- Facsimile lines at each station which are capable of making outgoing calls.
- Internet line at north station capable of making outgoing calls.
- Emergency line at each station which is call forwarded to LaSalle dispatch.

Each station is prewired for additional phone lines should either one be required as an Emergency Operations Centre. These lines would have to be made live by the jurisdictional telephone company.

There are no current recommendations resulting from the analysis of the telephone system.

Department Website:

One of the most useful communication tools that the department has is its website. The site contains a wealth of information on the department summarized as follows:

- Department mission statement.
- Message from the Fire Chief.
- Fire department services provided.
- Ontario Fire Code requirements.
- Bylaws related to fire safety.
- Carbon monoxide information.
- Fire Safety Planning information and template.
- Pre Fire Planning information.
- Smoke alarm check reminder sign up form.
- Fire apparatus.
- Recruitment information.
- Seconds Can Save a Life (home fire safety).
- Green Flashing Light (volunteer firefighters) information.
- Frequently asked questions.
- Emergency preparedness information.
- Meet our team (fire department personnel).
- Fire department photo album.
- "Kidz" fire safety pages and links.
- Kingsville Fire Department personnel (Private) log in.
- Contact information.

The website has proven to be one of the most innovative and used tools that the department has. The website address is prominently displayed on the station signs and all fire department apparatus. Fire department staff especially refer to it for announcements, department memos, schedules, operational guidelines and a host of other information. It was designed and is maintained by the Fire Prevention Officer. In order to remain effective it must be kept up to date and additional information has to be periodically added.

Recommendations from the analysis of the Fire Department Website are as follows:

- ***Recommendation #12: Continue to advertise the website to the residents of the municipality as an excellent source for fire prevention and public fire safety information.***
- ***Recommendation #13: Provide the necessary staffing hours to keep the website current and responsive to the changing needs of the department and community.***

This report was approved by Kingsville Municipal Council on January 19, 2009.