

# Municipality of Kincardine

## Community Risk Assessment

Prepared by

Ron Simmons

Acting Fire Chief

Kincardine Fire and Emergency Services

## Introduction:

Ontario Regulation 378/18: Community Risk Assessments (CRA) requires that “Every Municipality, and every fire department in a territory without municipal organization, must,

- a. Complete and review a community risk assessment as provided by this Regulation and
- b. Use its community risk assessment to inform decisions about the provision of fire protection services.”

A CRA is a process of identifying, analyzing, evaluating and prioritizing risks to public safety. This process then becomes key to allowing the municipality to make informed decisions in regard to fire protection services provided. The CRA must address mandatory profiles listed by the Office of the Fire Marshal (OFM) and Emergency Management Ontario (EMO) and be in a form that EMO approves.

The mandatory profiles are:

1. Geographic Profile
2. Building Stock Profile
3. Critical Infrastructure Profile
4. Demographic Profile
5. Hazard Profile
6. Public Safety Response Profile
7. Community Services Profile
8. Economic Profile
9. Past Loss and Event History Profile

These profiles, have been evaluated for the Municipality of Kincardine by Kincardine Fire and Emergency Services using CRA worksheets and prescribed information resources to generate a list of top risks for the community.

Setting the level of Fire Protection Service is a responsibility of Council and those levels often involve one of the following:

### 1 Avoid the Risk

Avoiding the risk means implementing programs and initiatives to prevent a fire or emergency from happening. Avoidance is often linked to Public Education initiatives.

### 2 Mitigate the Risk

Mitigating the risk means implementing programs and initiatives to reduce the probability and/or consequence of a fire or emergency. Mitigation is often linked to fire service inspection and compliance activities.

### 3 Accept the Risk

Accepting the risk means that the fire department acknowledges that the potential risk might happen and will respond when it occurs. If the fire department accepts the risk, sufficient staffing, training, equipment and operating guidelines are required.

#### 4 Transfer the Risk

Transferring the risk means the fire department transfers the impact and/or management of the risk to another organization or body. Contracting a neighbouring municipality or another organization are examples of transferring the management of risks to another body.

### Work Sheet Summaries

#### Worksheet 1

##### Municipality of Kincardine Geographic Profile

This worksheet identifies physical impacts to the urban and rural areas within the municipality. It includes considerations for the Lakefront boundary to the West established by Lake Huron, the Penatangore River bisecting the town of Kincardine limiting the number of North to South thoroughways, a sizeable rural component with limited water sources and both the large nuclear power facility and an industrial centre within the municipality. An additional acknowledgement of wildland/urban interfaces throughout the area are identified for consideration.

#### Worksheet 2

##### Occupancy Classes within the Community

In this worksheet, the types of structures found in the Municipality are categorized. There are many assembly areas within the response area, a hospital and two senior care/housing facilities. Single and multi-unit housing within the urban areas are now comprised of approximately 70% light weight construction which carry additional structural considerations when responding to a fire call. Additional occupancy classes deal with hotels/motels, mobile homes, and cabins and then on to Mercantile/Retail, Industrial and finally rural farm related structures. In all classes, major issues or concerns as well as matrix ratings for probability, consequence and risk level of a fire.

### Worksheet 3

#### Critical Infrastructure Profile

This worksheet identifies the services within the community (mainly urban) in terms of electricity, telecommunications, water supply, wastewater and natural gas and the fire or other emergency concerns that can arise from events that can impact these services.

### Worksheet 4

#### Demographic Profile

Worksheet 4 looks at the age distribution through the municipality's population to assist in identifying target age groups for fire safety education and potential barriers to implementing its delivery. The Municipality of Kincardine is well distributed through all age categories but there is a sizeable transient worker grouping and tourist grouping that need to be considered for alternative means of distributing safety messaging.

### Worksheet 5

#### Hazard Profile Risks

In this worksheet, various hazards that could be introduced in the community through typical weather patterns or inherent activities specific to the community are identified and assessed for probability, consequence and level of risk. Similar assessment for the municipality has been conducted in EMO's HIRA (Hazard Identification Risk Assessment) being undertaken across the province this calendar year. For this CRA both formats are presented.

### Worksheet 6

#### Public Safety Response Profile

The worksheet identifies other public safety response agencies within our community and identifies the incidents they respond to. These responses are listed as well as any issues with inter-agency interaction. The Municipality of Kincardine is fortunate to have OPP, Bruce County EMS and Bruce Power's Industrial Fire Brigade all located within the community. A good rapport exists between all parties with some cross-seeding having taken place.

## Worksheet 7

### Community Services Profile

Worksheet 7 takes inventory of available Community Service Agencies and identifies the types of services they can provide. There is mention of any issues or concerns in the list of available services provided. The Municipality of Kincardine is fortunate to have several established agencies who in turn are able to source still others in the event of either a small or large scale event.

## Worksheet 8

### Economic Profile Risks

This worksheet identifies industrial or commercial occupancies that contribute to economic production and employment. The list is reduced to larger operations where a fire or other emergency impacting their continued operation could result in a significant economic impact to the community. In each case, key risks, the probability of occurrence and potential consequence are assigned to derive a risk level.

## Worksheet 9

### Past Loss and Event History Profile

The collection of data on these worksheets represents three years of past response history identifying fire responses and other emergency responses. Where information is available, the financial impact is included and the number of injuries and/or loss of life associated with the responses. The second part of the assessment then coordinates the events with building classifications and non-fire events to reflect a prediction of the type of incidents likely to happen and assign probability, consequence and risk level for the future.

## Worksheet 10

### Identifying treatment options for the Top Risks in the Community

This worksheet culminates the previous 9 worksheets into a predictive table for risk within the municipality and presents preferred treatment options (Avoid, Mitigate, Accept, Transfer) to assist in immediate and long range planning of fire and emergency preparations, scheduled education activities, training, procedures and policies and contracted services.



## Conclusions

The Community Risk Assessment (CRA) results indicate that the Municipality can expect to experience fires primarily impacting residential dwellings (low density) and non-Ontario Building Code structures as well as false alarms resulting from detection related issues. Further calls will result from public hazards such as downed power lines and potential small gas leaks, medical calls in accordance with the tiered response arrangement with Bruce County EMS and as a result of Motor Vehicle Collisions (MVCs). Other calls can and will come in but the greater number should fit in to the above mentioned categories.

From the CRA, it is important to point out that the Municipality of Kincardine is fortunate to have a low occurrence of fires over the last few years as attested to in the new collaborative venture by Statistics Canada and the Office of the Fire Marshal; "Community Fire Risk Reduction ArcGIS Online". Of the nineteen zones comprising the Municipality of Kincardine, none are rated as high risk and only one area is rated at a medium risk. This would also suggest that fire prevention education and inspection efforts are yielding positive results in fire occurrence numbers.

Conducting a Community Risk Assessment is an excellent operational exercise in the sense that emergency incidents do happen as a result of many factors and any existing response strategy must be dynamic, adjusting to changes within the community. Periodic review of various influences within our municipality provides feedback needed to prepare for growth and to correct for shortfalls in planning. This activity has necessitated referencing additional documents/sources in order to address some of the questions this process has generated. One such source, is the last complete Fire Underwriters Survey (FUS) conducted in 2009. The FUS is instrumental in prorating insurance fees that constituents of the Municipality will have to pay as a result of the Fire Prevention and Protection capability ranking it assigns. The findings and recommendations from this survey touched on all areas of Kincardine's Fire Service and on aspects of both the building and water departments, highlighting shortfalls in both Kincardine and Tiverton. Some of these issues have not as yet been rectified and may prove to handicap municipal growth.

Fire prevention efforts should focus on public education and an active inspection program. Annual inspections are required for vulnerable occupancies (hospitals and nursing homes) but recent indicators have emphasized the need to perform routine inspections in retail, multi-unit dwellings and in industrial facilities. Expanding pre-planning helps to promote the need for effective safety plans and allows fire responders to improve their safety by introducing them to hazards associated with various business establishments in a non-emergent setting. Current efforts have limited effectiveness given that the Fire Prevention Officer (FPO) at this time is available 21 hours a week. The completion of a Community Risk Assessment will allow the

municipality and its Fire Service to make sound decisions on the level of fire protection it will provide its residents.