



Hazard Identification and Risk Assessment 2020

Background

Durham Emergency Management is legislated under the provincial *Emergency Management and Civil Protection Act* (R.S.O. 1990, Chapter E.9) with implementing an emergency management program. A community Hazard Identification and Risk Assessment (HIRA) forms the basis for the Durham Emergency Management Program and must be reviewed annually as part of the compliance requirements to the Act.

The purpose of a HIRA is to understand what risks or threats to public safety, property or the environment exist in Durham and to assess their impact. Understanding the risks allows for prevention, mitigation, preparedness, response to and recovery from these threats.

Hazard Identification and Risk Assessment Process

There are four steps to create and maintain a HIRA:

1. Hazard Identification
2. Risk Assessment – frequency and consequence
3. Risk Analysis
4. Monitor and Review annually for change in frequency and/or consequence



Methodology

The HIRA completed in 2020 examined the potential hazards derived from the provincial hazards list identified by the Ontario Fire Marshal and Emergency Management, Ministry of the Solicitor General. The level of risk for each hazard was examined, past occurrences researched and possible scenarios reviewed. The likelihood of the hazard occurring and the potential consequences of the hazard on people, property, the environment, business and finance, and critical infrastructure were examined (Provincial HIRA Methodology Guidelines, 2019).

Prioritized Risks

The 2020 annual review of the HIRA produced a prioritized list of risks for Durham Region which was determined to be:

- Infectious Diseases
- Fire / Explosion
- Cyber Attack
- Winter Weather
- Transportation Emergency on Roads and Highways
- Extreme Temperatures
- Active Threat
- Tornado
- CBRNE Incident (Chemical, Biological, Radiological, Nuclear, Explosives)
- Chemical Spills