EMERGENCY RESPONSE PLAN
Executive Summary

This Emergency Response Plan (ERP) is designed to provide the University of Waterloo with a management tool to facilitate a timely, effective, efficient, and coordinated emergency response. This plan is based on integrating University of Waterloo emergency response resources with those of other government emergency response agencies. The University will rely heavily on the City of Waterloo and the Region of Waterloo to provide resources and expertise for law enforcement, emergency medical and fire services.

The ERP uses the Incident Management System (IMS) for managing response to emergencies and disaster events and is intended to be fully IMS compliant.

IMS is designed to be used for all types of emergencies and is applicable to small day-to-day emergency situations as well as large and complex disaster incidents. IMS provides a system for managing emergency operations involving a single agency within a single jurisdiction; multiple agencies within a single jurisdiction; and multiple agencies from multiple jurisdictions.

This plan was developed with the understanding that all University departments/units responding to an emergency will utilize IMS for overall coordination of the response effort. Response efforts to incidents will be coordinated from a single location, normally the University of Waterloo’s Emergency Operations Center (EOC).

The designated Incident Commander (IC) may determine it necessary to use an alternative location for the EOC. The organizational structure of the IMS may not resemble the day-to-day organization of the university. Employees may report to other employees to whom they do not usually have a reporting relationship. Furthermore, as the severity of the incident increases, employee assignments may change in the IMS organizational structure. This means that an employee’s position in the IMS structure may change during the course of a single incident. The ERP consists of a basic plan (this document), functional and hazard specific appendixes.
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Section 1.0 - UWaterloo Emergency Management

1.1 Overview
The University of Waterloo (UWaterloo) is vulnerable to a number of natural and human-caused hazards that can affect university property and faculty, staff, students, and visitors that are present on campus. To effectively respond to these natural and human-caused hazards, the University has adopted this Emergency Response Plan (ERP) to guide response efforts.

The priorities for this plan are to (1) protect lives, (2) stabilize the incident, (3) protect the environment, (4) protect university property, (5) restore critical services, education, and research programs. This plan also strives to meet provincial Incident Management System (IMS) requirements as established by Emergency Management Ontario (EMO). The use of IMS enables this response plan to coordinate effectively with other jurisdictions involved in a response, such as the Waterloo Regional Police Service, Waterloo Fire Rescue and the Regional Emergency Medical Service as well as other local, provincial and federal agencies.

The ERP provides an emergency management structure and procedures for responding to an emergency situation that impacts the university or university community.

The role of University departments/units involved in emergency response will generally parallel normal day-to-day functions, however, employees may be assigned to work in areas and perform duties outside their regular job assignments. Day-to-day functions that do not contribute directly to emergency response may be suspended for the duration of an emergency. Efforts that would typically be required for normal daily functions will be redirected to accomplish emergency tasks following the IMS system.

This plan is designed to be flexible and to be used in any emergency response situation regardless of the size, type, or complexity (e.g., infrastructure failure, fire, civil unrest, winter storms, windstorm, pandemic, earthquake, etc.). The procedures outlined in this plan are based on a worst-case scenario. Part or all of the components of the plan can be activated as needed to respond to the emergency.

Plans addressing specific types of emergencies are subservient to the ERP and are contained in the Appendix A of this Plan. Appendices are not made publicly available.

1.2 Purpose
The purpose of the University of Waterloo’s Emergency Response Plan (ERP) is to outline the management structure, responsibilities, procedures, and guiding policies to assist the University of Waterloo when responding to an emergency event. The ERP directs response efforts when Standard Operating Procedures (SOPs) developed by university departments and units are insufficient to handle an emergency.
Department specific plans and Standard Operating Procedures are meant to complement and coordinate overall efforts while providing more depth and specific detail regarding department-level response.

1.3 Scope
The UW Waterlo ERP is a campus-level plan covering property owned and operated by the University and the faculty, staff, students, and visitors associated with the main and satellite campuses in Kitchener, Cambridge and Stratford. This ERP is designed to address a comprehensive range of natural and manmade hazards that could affect the University of Waterloo campus. The plan includes procedures for responding to a range of levels of emergency regardless of the size, type or complexity.

The ERP supersedes any previous plans and precludes employee actions not in concert with the intent of this plan, or the emergency response organizations created by it. This Plan supersedes and rescinds all previous editions of UW Waterlo emergency plans or policies. If any portion of this plan is held invalid by judicial or administrative ruling, such ruling shall not affect the validity of the remaining portions of this Plan. Nothing in this plan should be construed in a manner that limits the use of good judgment and common sense in matters not foreseen or covered by the elements of this plan or its appendices. Nothing in this plan is intended, or should be construed, as creating a duty on the part of the University of Waterloo toward any party for the purpose of creating a potential tort liability.

1.4 Hazard Identification Risk Assessment and Business Impact Analysis

**Hazard Identification and Risk Assessment (HIRA)**
A threat assessment for the University of Waterloo has been performed in order to determine potential threats that the University needs to prepare for both in terms of emergency management and business continuity planning. The threat assessment framework was developed based on the methodology provided by Emergency Management Ontario in the Hazard Identification and Risk Assessment (HIRA) Workbook. The University has identified potential hazards, determined the likelihood of their occurrence and the potential impact on people, property, the environment and the University as a whole. This methodology also captures changing risk where environmental, behavioural and other factors can be assessed to allow for a more in-depth analysis of whether hazards are more likely to occur based on these factors. An example of changing is the change in weather conditions as it becomes more volatile due to climate change.

Refer to Appendix B.1 for a complete list of hazards identified at the University of Waterloo. The University's HIRA findings are summarized in a Risk Matrix under Appendix B.2.

**Business Impact Analysis (BIA)**
The Business Impact Analysis (BIA) process is a key part of the overall emergency planning and business continuity program. Its goal is to predict the consequences of
disruption of a business function or process and gather information needed to develop recovery strategies, under an integrated Business Continuity Strategy. Appendix B.3 contains an overview of business impacts against the top ten threats identified in the University’s HIRA. Appendix B.4 provides a report outlining unit-level BIA processes and findings, along with recommendations for consideration under a business continuity framework.

1.5 Situation and Assumptions
The University of Waterloo campuses, students, staff, and visitors can be exposed to a number of hazards with the potential to disrupt the university, create damage, and cause casualties. The following situation and assumptions provide an overview of a potential emergency situation at the University and the assumed operational conditions that provide a foundation for establishing protocols and procedures.

Situation
The University of Waterloo main campus and the satellite campuses can each vary significantly in the number of faculty, staff, and students located on respective campus depending on the time of day, day of the week, time of year or through various events which occur on campus.

A number of natural hazards can affect the University of Waterloo including tornadoes, blizzards, ice storms, lightning strikes, high winds, flooding and earthquakes.

In addition, threats of technological and biological hazards, those caused by human omission or error, such as transportation accidents, hazardous materials incidents, or utility failures are also possible. A civil disturbance, terrorism incident or cyber-attack could also occur. The global nature of University of Waterloo business, programs, and travel to and from other continents elevates the potential risk of exposure to communicable diseases.

Assumptions
In the event of a worst-case emergency situation, such as a tornado, the University of Waterloo will operate under a set of assumptions that are incorporated into this plan. The following assumptions could apply in a worst-case emergency:

- Critical lifeline utilities may be interrupted including water delivery, electrical power, natural gas, chilled water, steam, compressed air, telephone communications, microwave and repeater-based radio systems, cellular telephones and information systems.
- Regional and local services may not be available.
- Major roads, overpasses, bridges and local streets may be damaged.
- Buildings and structures, including homes, may be damaged.
- Unsafe conditions including structural and toxic environments may exist.
- Damage may cause injuries and displacement of people.
- Normal suppliers may not be able to deliver materials.
- Contact with family and homes may be interrupted.
• People may become stranded at the university – conditions may be unsafe to travel off campus.
• The university will need to conduct its own rapid damage assessment, situation analysis, and deployment of on-site resources and management of emergency operations on campus, using the Emergency Operations Center (EOC) while emergency conditions exist.
• Communication and exchange of information will be one of the highest priority operations at the campus.

1.6 Emergency Management Phases and Principles
UWaterloo ERP considers commonly used emergency management phases and principles, which have been summarized in the following illustration to provide the reader with a basic overview.

Emergency management principles are vital in coordinating the communication, management, and relationship between internal and external response teams, and are vital to all other stakeholders that have a legitimate interest in the response.

1.7 Incident Management System (IMS)
The UWaterloo ERP follows the requirements set forth by the Incident Management System (IMS). IMS provides a nationwide template enabling federal, provincial, and local governments and private sector nongovernmental organizations to work together effectively and efficiently to prevent, prepare for, respond to, and recover from domestic incidents regardless of cause, size or complexity.

Disaster Management Process
Source: http://www.marrionconsulting.com/services/fundamental-activities/disaster-management-planning/
Using IMS enables the university to communicate and coordinate response actions with other jurisdictions and emergency response agencies.

The benefits of the IMS process are:
1. History
   a. Thirty-year history of successful implementation for emergency response management in the field.
   b. Ten-year history as the International (Global) Standard for Emergency Management organization.

   a. Flexibility in application – allows for scale-up, scale-down and transition.
   b. Team-based, bundled and linked processes and cross-functional efficiency within the organization.
   c. Easy-to-understand for the users.
   d. Action oriented – focuses on results and output.
   e. Starts and stops – designed for rapid deployment and smooth de-activation.
   f. Wide application to unique settings.

1.8   Emergency Response Priorities
Priorities for all emergency response at the University of Waterloo are as follows:

1. Protection of Life
   a. Emergency response personnel
   b. At risk people
   c. General public

2. Stabilization of the Incident
   a. Bring the situation to a point of order.
   b. Determine course of action.
   c. Prevent the incident from expanding.
   d. Isolate the scene and deny entry.

3. Protect the Environment
   a. Confine, contain or neutralize hazardous materials that may be released.
   b. Ensure, to the extent practical, that emergency response efforts do not adversely impact the environment.

4. Protect University Property
   a. Facilities used for emergency response are high priority.
   b. Facilities necessary for shelter and care of students are a high priority.
   c. Facilities used for education and operational purposes.
   d. Critical university records, collections and research.

5. Restoration of Critical Services, Education, and Research Programs.
   a. Services necessary for emergency response are of high priority.
   b. Services critical to the wellbeing of students are of high priority.
   c. Services critical to the integrity of research projects and educational services.
Section 2.0 - Emergency Management Structure

2.1 Governance and Management Oversight

The Emergency Management Policy Group (EMPG) provides institutional decision-making during an emergency as well as overall strategic policy decisions for incidents that impacts the university’s ability to meet its mission of teaching, research and public service. The EMPG shall attend mandatory training and participate in an exercise annually. They will also ensure an annual review of the ERP is conducted and changes implemented as required.

Membership of the EMPG will consist of:
- Vice-President, Academic & Provost
- Vice-President, Administration & Finance
- University Secretary

Resources to the EMPG include:
- Emergency Planning & Fire Safety Officer
- Director, Safety Office
- Director, Police Services
- Chief Information Officer
- Associate University Secretary (Risk and Compliance)

2.2 Emergency Control Group

The Emergency Control Group (ECG) is responsible for managing the response and recovery during and following an emergency. The ECG may be activated by any member of the ECG to determine whether an emergency should be declared and an appropriate response to the event. The ECG shall attend mandatory training and participate in an exercise annually.

The ECG will consist of:
- President & Vice-Chancellor
- Director, Police Services
- Vice-President, Academic & Provost
- Vice-President, Administration & Finance
- University Secretary
- Vice-President, University Relations
- Associate Provost, Students
- Chief Information Officer
- Executive Director, Facilities Plant Operations
- Director, Safety Office
- Emergency Planning & Fire Safety Officer
Trained scribes are required at the EOC whenever the ECG is called together for an emergency to ensure all decisions made by the ECG are documented.

Resources to the ECG include:

- Associate Provost, Human Resources
- Director of Maintenance & Utilities
- Manager of Parking & Ground Services
- Manager, Environmental Services
- Director of Procurement & Contract Services
- Director of Information Security Services
- Director of Housing
- Medical Director (Health Services)
- Director of Food Services
- Director of Counselling Services
- Legal Services

Resource to ECG may also include additional persons who bring essential expertise to the ECG. Each resource position will require an alternate to the ECG in case the primary resource is unavailable or requires relief during an extended emergency response.
The following chart describes UWaterloo's Emergency Management Structure:

**University of Waterloo Emergency Management Structure**

**Policy**

**Emergency Management Policy Group (EMPG)**
- Vice-President, Academic & Provost
- Vice-President, Administration & Finance
- University Secretary

**Functions:**
- Policy Decisions
- Institutional Decision-Making
- Priorities
- Strategy

**Resources to the EMPG**
- Emergency Planning & Fire Safety Officer
- Director, Safety Office
- Director, Police Services
- Chief Information Officer
- Associate University Secretary (Risk and Compliance)

**Emergency Operations Centre**

**Procedure**

**Emergency Control Group**
- President & Vice-Chancellor
- Director, Police Services
- Vice-President, Academic & Provost
- Vice-President, Administration & Finance
- University Secretary
- Vice-President, University Relations
- Provost, Students
- Chief Information Officer
- Executive Director, Facilities Plant Operations
- Director, Safety Office
- Emergency Planning and Fire Safety Officer
- Trained Scribes

**Functions:**
- Overall Coordination
- Resource Support
- Operational Planning
- Communication

**IMS Sections:**
- Administration
- Finance
- Logistics
- Operations

**Field Operations**

**Communications**
- Emergency Communication Team (ECT)

**Resources to the ECG in EOC**
- Associate Provost, Human Resources
- Director of Maintenance & Utilities
- Manager of Parking & Ground Services
- Manager, Environmental Services
- Director of Procurement & Contract Services
- Director of Information Security Services
- Director of Housing
- Medical Director (Health Services)
- Director of Food Services
- Director of Counselling Services
- Legal Services

**Site Response**
- UV Police
- UV Spills Team
- Environmental Response Contractor

**Outside Agencies**
- Fire, Police, EMS

**Departments & Teams**
2.3 University President Succession of Authority

To maintain emergency management functions and an orderly continuation of leadership in an emergency situation, the following succession of authority applies if the University President is unavailable:

1. Vice-President, Academic & Provost
2. Vice President Administration & Finance
3. University Secretary

2.4 Emergency Response Structure

Emergency response activities at the University of Waterloo follow the provincial Incident Management System (IMS) as set out by Emergency Management Ontario. The following describes the various components of the Emergency Response Structure.

There are four functional areas in the UWaterloo IMS structure:

1. ECG
2. Incident Commander (IC)
3. Command Staff, and
4. General Staff

The ECG generally assumes all of the Command and General Staff positions. The Incident Commander supervises the Command Staff and General Staff and is responsible for all emergency response activities and efforts.
### 2.5 IMS Functions and Roles

#### 2.5.1 Emergency Control Group (ECG)

The ECG provides the command and control infrastructure that is required to manage the logistical, fiscal, planning, operational, safety, and campus issues related to any and all incidents/emergencies. ECG is made up of the individuals who could serve as the primary Incident Commanders, Command and General Staff. An incident’s type and size will dictate whether all or some of the ECG members are activated. All ECG members will have at a minimum EMO training course for IMS 100.

Members of ECG are responsible for:
- Serving as the Deputy IC unless otherwise delegated by the IC.
- Managing the Emergency Operations Center (EOC).
- Leading the post-incident reviews and develops After Action Reports.

#### 2.5.2 Incident Commander

The Incident Commander (IC) manages all emergency activities, including development, implementation, and review of strategic decisions.

- The IC has the authority for all emergency response efforts and serves as supervisor to the Public Information Officer (PIO), Liaison Officer, Safety Officer, Operations Section, Planning Section, Logistics Section, and Finance & Administration Section.
- The IC is responsible for the overall management of the incident and all activities/functions until the IC delegates and assigns them to Command or General Staff depending on the complexity of the event.
- The IC communicates closely with the ECG.
- The IC determines the location of the Command Post (CP). If the event continues to expand and the Emergency Operations Center (EOC) is activated, then the IC and CP staff and functions would move to the EOC. The Incident Commander is responsible for the following tasks:
  - Providing overall leadership for incident response
  - Assessing incident situation
  - Establishing incident objectives
  - Developing the Incident Action Plan (IAP)
  - Initiating Incident Management System: developing an appropriate organizational structure and delegating authority functions to others (in conjunction with the ECG).
  - Authorize release of information to the news media and general campus community.
  - Approve requests for additional resources.
  - Keep Senior Administrators informed of incident status.

#### 2.5.3 Command Staff

Command Staff report directly to the Incident Commander. Positions include the Public Information Officer, Liaison Officer, and Safety Officer. Current lines of succession are provided for each position.
2.5.3.1 Public Information Officer (PIO)
The PIO is responsible for relaying incident related information from the ECG members to the University of Waterloo Emergency Communications Team (ECT) for dissemination to the public, media and with other emergency agencies. This position is always activated for level 1 and 2 incidents. The PIO shall provide internal and external emergency communications messaging in accordance with the UWaterloo Emergency Communications Plan as approved by the ECG.

The PIO role is usually assigned to:
   Vice-President, University Relations or alternate

2.5.3.2 Liaison Officer
The Liaison Officer is responsible for coordinating with **external** partners, such as city, region, province, or federal agencies, and public and private resources, as well as **internal** university groups. The Liaison Officer is also responsible for administrative management of the EOC.

The Liaison Officer role is usually assigned to:
   Emergency Planning & Fire Safety Officer or alternate

2.5.3.3 Safety Officer
The Safety Officer monitors, evaluates and recommends procedures for all incident operations for hazards and unsafe conditions, including the health and safety of emergency responder personnel. The Safety Officer is responsible for developing the site safety plan and safety directions in the Incident Action Plan (IAP).

The Safety Officer role is usually assigned to:
   Director of Safety or alternate

2.5.4 General Staff
The General Staff is comprised of four sections: (1) Operations, (2) Planning, (3) Logistics, and (4) Finance and Administration. Each section is headed by a person who has the knowledge skills and abilities to lead that section. Each section head can expand their respective areas to meet the resources and needs of the response. Section heads report directly to the Incident Commander.

2.5.4.1 Operations Section
The Operations Section is responsible for managing all incident specific operations of an emergency response, including:

- Developing operational components of the IAP.
- Determine needs and request additional resources.
- Report information about special activities, events, and occurrences to the IC.

### 2.5.4.2 Planning Section

The Planning Section is responsible for collecting, monitoring, evaluating, and disseminating information relating to the response effort. This section is responsible for the development, maintenance and distribution of the IAP.

### 2.5.4.3 Logistics Section

The Logistics Section is responsible for procuring supplies, personnel, and material support necessary to conduct the emergency response (e.g. personnel call-out, equipment acquisition, lodging, transportation, food, etc.).

### 2.5.4.4 Finance and Administration Section

The Finance and Administration Section is responsible for purchasing and cost accountability relating to the response effort. This section documents expenditures, purchase authorizations, damage to property, equipment usage, and vendor contracting, and develops documentation.

### 2.5.4.5 EOC Scribe

The EOC Scribe is responsible to maintain a complete and accurate record of all events that occur during and after the incident. The Scribe ensures that records of all EOC activity are maintained, filed and stored appropriately throughout response. Other duties as assigned.

### Section 3.0 - Emergency Response Plan Activation

This plan is activated whenever emergency conditions exist in which immediate action is required to:
- Save and protect lives.
- Prevent damage to the environment, systems and property.
- Initiate Incident Management System (IMS) and develop an appropriate organizational structure to manage the incident.
- Coordinate communications.
- Provide essential services.
- Temporarily assign university staff to perform emergency work.
- Invoke emergency authorization to procure and allocate resources.
- Activate and staff the Emergency Operations Center (EOC).

Refer to Appendix C.1 for UWaterloo emergency activation flowchart.
3.1 Emergency Levels

An Emergency is defined as any actual or potential natural or human-caused event that creates an urgent and/or critical situation that threatens to, or causes, harm to people, the environment, or the property of the University, or disrupts the normal business operations of the University.

Level 1:
Emergency events which can be handled by the University with only minor disruptions to normal activities which can be managed through university policies, procedures and resources. The ECG is notified but the EOC is not activated.

Level 2:
Events requiring the University to alter normal business operations (e.g. large fires, dangerous weather, civil disobedience) and may or may not require assistance from outside agencies. The ECG will be notified and may be called together to manage the emergency and recovery operations. If the ECG is called together, the members of the ECG will attend to the primary EOC unless directed elsewhere to meet for safety reasons.

Normally the President or designate will make the decision whether a university emergency should be declared. Where it is obvious that an event is a university emergency (e.g. imminent severe weather, active shooter), the Director of Police Services, or alternate, may make the declaration.

The President is responsible for partially or fully activating the ECG during an emergency by issuing a written (paper or electronic) delegation of authority. The delegation of authority identifies the lead individual for the incident, which is the Incident Commander. This delegation includes the understanding that those activated as part of the IMS structure may be required to drop some or all of their daily work assignments.

The EOC will remain in operation until the emergency is declared over at which time the EOC can stand down. The University Emergency Notification System shall be activated as soon as practicable when a Level 2 emergency is occurring (e.g. hazardous chemical spill) or when a potential emergency is imminent (e.g. tornado warning).

When an event occurs off campus that causes any of the Cities of Waterloo, Kitchener, Cambridge, Stratford or the Regions of Waterloo or Perth to declare an emergency, then the ECG will be notified to determine if a university emergency should be declared.

3.2 Initiation of Emergency Notification Systems

1. Level 1 Emergencies
a. The Director of Police Services and/or the Emergency Planning & Fire Safety Officer will determine the appropriateness of declaring a Level 1 Emergency and will initiate all or parts of the Emergency Notification System (See Appendix A.1 for Emergency Notification System Manual).
b. Where a Level 1 Emergency has been declared the Communication Plan will guide ongoing communications (See Appendix A.2 for Emergency Communications Plan).

2. Level 2 Emergencies
   a. Where a Level 2 emergency is obvious (e.g. violent person, tornado warning) University Police will declare the Emergency and initiate the Emergency Notification System.
   b. Where a Level 2 Emergency has been declared the Communication Plan will guide ongoing communications.

3.3 Establishing an Incident Commander

The Incident Commander (IC) in most cases will be the President and Vice-Chancellor or their alternate but this may vary depending on the situation at hand. The IC may not always be the highest-ranking individual at the university but rather an individual with the specific skills, knowledge base, and training needed to respond to the specific situation.

When an incident occurs, the initial Incident Commander will be established from the responding resources on-scene and communicated to ECG. During a more complex incident, a person with higher qualifications may be identified by the ECG. The initial IC will provide a situation status briefing to an incoming IC assuming command.

Incident command may be carried out by a Unified Command established jointly by units and/or agencies that have direct functional or jurisdictional responsibility for the incident.

3.3.1 Unified Command (UC)

Unified Command is used when more than one agency within the incident jurisdiction or when multiple jurisdictions are working together to respond to an incident. In many emergency situations the University will work in a Unified Command with the City of Waterloo, the Region of Waterloo or other agencies. In a Unified Command, the ECG will determine who will serve as the Joint Incident Commander representing the University of Waterloo. Waterloo Fire Rescue, Region of Waterloo EMS or Police will assume the role of Lead IC for any fire, special rescue, EMS, mass casualty incident, hazardous materials, violent person(s) or dangerous situation event that requires their resources to respond.

University of Waterloo ECG members and other appropriate personnel and resources would be integrated into IMS positions under the Unified Command. At the very least, the need for a representative and/or Liaison Officer from the University of Waterloo should be anticipated, and under most circumstances, will be requested.
3.3.2 Transfer of Command
Transfer of Command is the process of moving the responsibility for incident command from one Incident Commander to another. Transfer of command may take place for many reasons, including:

- A jurisdiction or agency is legally required to take command.
- Change of command is necessary for effectiveness or efficiency.
- Incident complexity changes.
- There is a need to relieve personnel on incidents of extended duration.
- Personal emergencies (e.g., Incident Commander becomes ill).
- Agency Administrator directs a change in command.

A main feature of IMS is a procedure to transfer command with minimal disruption to the incident. This procedure may be used any time personnel in supervisory positions change. The following three key procedures should be followed whenever possible:

- The transfer should take place face-to-face.
- The transfer should include a complete briefing.
- The effective time and date of the transfer should be communicated to all personnel who need to know, both at the scene and elsewhere.

The transfer of command briefing should always take place. The briefing should include the following essential elements of information:

- Situation status.
- Incident objectives and priorities based on the IAP.
- Current organization.
- Resource assignments.
- Resources ordered and en route.
- Incident facilities.
- Incident communications plan.
- Incident prognosis, concerns, and other issues.
- Introduction of Command and General Staff members.

3.4 Emergency Operations Centre (EOC)
Emergency situations that require extensive coordination of resources, personnel, and information sharing will be managed in part or in full from the Emergency Operations Center (EOC). The EOC is the centralized facility where emergency response and recovery activities are planned, coordinated, and delegated. The EOC will operate on a 24 hour, 7-day basis during extended events with rotating shifts until the emergency is over. The EOC will be operated by the ECG members. The Incident Commander determines when the incident no longer needs coordination from the EOC. Normal shift rotation is 12 hours on, 12 hours off. Detailed information about the EOC locations for the University and local municipal EOCs can be found in Appendix C.2.
3.4.1 EOC Activation

The EOC will be activated during any situation that requires the immediate coordination of multiple university departments/units and external agencies. The degree to which the EOC is activated depends on the need for coordination and communication between internal and external interest. Once the EOC is activated, the ECG members report immediately to the EOC. The Planning Section is responsible for preparing the EOC facility for operation and checking staff into the EOC. As a standard practice the Command Staff and General Staff will report to the EOC to assume emergency response roles.

The IC will determine which ECG and ECG resource members to report to the EOC and who should report to their normal workstations to coordinate response efforts. Command Staff and General Staff are required to check-in with Planning Section upon arrival at the EOC. If a member is unavailable in an emergency, Planning Section staff will coordinate with the Incident Commander to contact alternates or designate alternate positions based on the need.

3.5 Incident Action Plan

An Incident Action Plan (IAP) is a written or verbal strategy for responding to the incident developed by the Incident Commander and ECG. A written IAP is not required for smaller incidents, but is best practice. In those cases the Incident Commander can, at minimum, verbally or electronically communicate response strategy to the ECG and other responding resources. In larger emergency situations a written IAP will be more effective. A written IAP should be considered when:

- Two or more jurisdictions are involved in the response.
- A number of IMS organizational elements are activated (typically when General Staff Sections are staffed).
- An incident involves hazardous materials.

3.5.1 Developing an Incident Action Plan

In larger emergency situations the Incident Commander and ECG will meet immediately to develop the Incident Action Plan (IAP). The Planning section is responsible for the development, maintenance, and distribution of the IAP. The Operations section will delineate the amount and type of resources needed to accomplish the plan. The Planning section, Logistics section, and Finance & Administration section will have to work together to accommodate those needs.

The IAP will include standard forms and supporting documents that convey the Incident Commander's intent and the Operations section's direction for the accomplishment of the plan. The Planning section will communicate with other sections Chiefs any materials and documentation needed to develop the plan. The Incident Commander approves the written IAP.
Copies of the IAP are distributed members of the ECG. The IAP should be conveyed to all resources on scene. For extended incidents, a briefing prior to each shift should be held to communicate the IAP to everyone involved in the incident. In a Unified Command situation the Joint Incident Commanders will work together and with ECG to develop the IAP.

3.5.2 Implementing the Incident Action Plan
The Operations section is in charge of implementing components of the IAP. The Operations section head will meet with supervisors to brief them on the plan and delineate their respective assignments. The Operations section has the authority to make appropriate adjustments to the plan as needed to meet the plan objectives in the most efficient manner possible. Changes should be communicated to the IC and Planning section and documented.

3.5.3 Incident Documentation
It is important that the incident be properly documented by all sections throughout the response effort. Forms for documenting information will be provided with the Incident Action Plan (IAP). Thorough documentation will:

- Involve tracking key decisions and actions implemented and made as the incident progresses.
- Ensure information is transferred accurately during shift changes.
- Inform the After Action Report (AAR) that will be compiled once the incident has been resolved.
- Assist in reimbursement measures taken after the incident has been resolved.

Trained scribes will be required at the EOC and or the Command Post at all times while the emergency response is in operation. Depending on the complexity of the incident the IC may determine and request more scribes in order to accurately document all of the events and decisions made during the emergency and recovery. Scribes will generally be assigned to shifts of 2.5 hours maximum.

3.5.4 Media Relations
During a declared emergency, communications will be under the direction of the Public Information Officer (PIO). The PIO is located with the ECG in the EOC for Level 2 emergencies and is responsible for contacting the Emergency Communications Team Lead to establish the Emergency Communications Team (ECT). Working in support of the ECT Lead, Media Relations Officers will provide media monitoring and trend data to the ECT Lead and the PIO. In conjunction with the ECT Lead and the PIO, Media Relations Officers are responsible to manage media at the site of the emergency or make arrangements for media briefings at the designated media center locations. All press releases must be approved by the Incident Commander. Refer to Appendix A.2: Emergency Communications Plan for more details.
3.6 Deactivation Process

The Incident Commander decides when the situation is under control and the ECG can be deactivated. Deactivation requires two key functions:

- Demobilization of Response Units (General Staff Sections)
- Documentation of Incident

The Planning Section oversees the preparation of demobilization planning and collection of incident documentation. The IC meets with the various sections to develop a demobilization plan. Section heads are responsible for overseeing the demobilization of their respective sections.

3.6.1 After Action Report

After the incident has been resolved, an After Action Report (AAR) will be compiled to include information about the incident, the response actions taken, and lessons learned. The AAR is developed by the Planning Section. Information for the AAR will be gathered from the members of the ECG and other response team members. The AAR will serve as the official record describing the incident and the university’s response efforts. The lessons learned will be used to update the ERP and will be incorporated in future university training exercises.

3.6.2 Campus Recovery

Some situations may cause the campus to cease some or all university operations. In situations when university operations have been shut down, the first step to recovery is to ensure that the campus is safe and secure. The second step will be to restore campus facilities and grounds. The third step will be for the Emergency Control Group to determine when and how to return to normal campus operations.

Section 4.0 - Emergency Management Training

This section describes the University’s efforts to develop a trained and competent staff able to operate and support the EOC and fulfill the responsibilities identified in the Emergency Response Plan (ERP). The ERP together with a staffed and fully capable EOC provide a critical element of the overall emergency management effort and the ability to provide acceptable levels of protection and assistance to the campus community.

The University Secretary is responsible for ensuring that staff members involved in the ERP are adequately trained. The University Secretary has delegated the responsibility for developing and conducting appropriate training programs to the Emergency Planning & Fire Safety Officer who is jointly managed by the Director of University Police and the Director of Safety.
The Emergency Planning & Fire Safety Officer shall establish, conduct and evaluate emergency exercises of the ERP with ECG members, alternates and external partners to ensure the plan meets the needs of the University and to make changes to the plan as required. As part of the regular testing of the ERP, the Emergency Planning & Fire Safety Officer will ensure the Emergency Notification System is tested at the beginning of each new term, along with fire drill testing and other departmental safety testing for new or returning students, staff and faculty. The following are guidelines for training and preparedness:

- ECG personnel receive and maintain training consistent with their current and potential responsibilities. Command and General staff positions complete EMO’s basic, intermediate IMS training as well as annual trainings on emergency management.
- Emergency Management Policy Group members receive basic IMS overview training.
- Staff designated for IMS positions (Incident Commander, Public Information Officer, Liaison Officer, Safety Officer, Operations Chief, Planning Chief, Logistics Chief, and Finance Chief) will attend EMO IMS Level 200 course or equivalent.
- IMS training is available to ECG personnel in 2 formats: 1) on-line through EMO for IMS100, or 2) in-person classes taught by EMO certified trainers.

Exercises provide opportunities to evaluate the University’s emergency response training and its ability to respond effectively to an emergency. They allow the University to identify weaknesses in policies, plans, procedures, facilities, equipment, training, and performance. Action items identified during post-exercise evaluations are recorded for potential incorporation into emergency plans, procedures, and training, as appropriate. The Emergency Planning & Fire Safety Officer has overall responsibility for coordinating emergency exercises on campus.

There are five types of emergency management exercises. They are:

1. Orientation Seminars: These sessions allow participants to evaluate plans and procedures before beginning a drill or exercise. They provide a low stress environment in which to resolve questions of coordination and assignment of responsibilities.
2. Drills: Usually a single-function event. Drills are used to demonstrate, build or refresh skills learned in training. They are focused on organizational standard operating procedures, such as testing the EOC activation call-out procedure and successor list.
3. Tabletop Exercises: A scenario-driven exercise that focuses on the Incident Management Team and their roles and responsibilities. Management personnel participate in a written scenario activity to affirm the process, identify problems, and/or bring light to incorrect assumptions. The tabletop exercise provides practice of emergency management skills, identifies organizational or operational shortfalls and builds confidence in the overall Emergency Operations Center process.
4. Functional Exercises: A scenario-driven, real-time exercise used to practice specific parts of the Emergency Response Plan. A functional exercise is a
management- or activity-oriented exercise used to practice skills, build coordination and develop teamwork.

5. Full-scale Exercises: These exercises simulate an actual disaster in a “real time” setting. Depending on the level of the exercise, it may include the use of props, specialized equipment and special effects in some instances. A full-scale exercise requires a high degree of training, organization and planning, yet it allows the University to practice all aspects of the emergency operations plan and develop its relationships with external support agencies.

Each year the University will conduct an exercise testing some aspect of the ERP. These exercises are considered an opportunity for specialized training related to the potential threats confronting the university. All exercises will include an after action report.

**Section 5.0 - Plan Maintenance**

To maintain a current and functional plan, a formal review of the ERP by the EMPG will occur annually. The University President will approve the plan update annually.

The Plan will be updated, as necessary, based upon deficiencies identified by the drills and exercises, changes in organizational structure, facilities, technological changes, etc. Approved changes will be incorporated into the ERP and forwarded to all departments and individuals identified as having possession of the plan. The Emergency Planning & Fire Safety Officer will be responsible for providing appropriate training to those individuals expected to participate in the implementation of the ERP and function in the Incident Management System.

The Emergency Planning & Fire Safety Officer will ensure the ERP and its appendices which could be utilized in an emergency event are reviewed by the respective plan owners.

The development and continued updating of all functional appendices is the responsibility of each of the lead departments identified in each respective appendix. The Emergency Planning & Fire Safety Officer will be responsible for coordinating completion of the functional appendices. UWaterloo Policy #60 will be reviewed every five years and updated as required.
Section 6.0 - Glossary of Terminology

**Activation**
Decisions and actions taken to implement a plan, a procedure or to open an emergency operations center.

**After-action report (AAR)**
A report that documents the performance of tasks related to an emergency, exercise or planned event and, where necessary, makes recommendations for improvements.

**Biological hazard**
A virus, bacterium, microorganism, fungus, prion, biological toxin or micro toxin produced by organisms capable of negatively affecting humans, animals or plants.

**Business Impact Analysis (BIA)**
A process designed to prioritize business functions by assessing the potential quantitative (financial) and qualitative (non-financial) impact that might result if the university was to experience a service disruption.

**Chemical, Biological, Radiological, Nuclear and Explosive (CBRNE) incident**
This is an incident that involves a chemical, biological, radiological, nuclear and/or explosive situation that may require a response by specialized teams and equipment.

**Command**
The act of directing, ordering, or controlling by virtue of explicit statutory, regulatory, or delegated authority.

**Communications**
Advisories, directives, information and messages that are transmitted.

**Community**
A generic term that includes both municipalities and First Nations.

**Comprehensive emergency management**
It is an all-encompassing risk-based approach to emergency management that includes prevention, mitigation, preparedness, response and recovery measures.

**Continuity of operations plan**
A plan developed and maintained to direct the university’s internal response to an emergency.
Crisis management
From a business continuity planning perspective, this term refers to the overall coordination of the university's response to a crisis in an effective, timely manner, with the goal of avoiding or minimizing damage to the organization's profitability, reputation, and ability to operate.

Critical infrastructure (CI)
Interdependent, interactive, interconnected networks of institutions, services, systems and processes that meet vital human needs, sustain the economy, protect public safety and security.

Disaster
A serious disruption to an affected area, involving widespread human, property, environmental and/or economic impacts, that exceed the ability of one or more affected communities to cope using their own resources.

Emergency
A situation or an impending situation that constitutes a danger of major proportions that could result in serious harm to persons or substantial damage to property and that is caused by the forces of nature, a disease or other health risk, an accident or an act whether intentional or otherwise (Emergency Management and Civil Protection Act).

Emergency Control Group (ECG)
A group composed of senior staff and employees of the University that may be involved in directing the university’s response to an emergency including, the implementation of its emergency response plans and procedures.

Emergency management program
A risk-based program consisting of prescribed elements that may include prevention, mitigation, preparedness, response and recovery activities.

Emergency Management Policy Group (EMPG)
A management team that oversees the development, implementation and maintenance of an organization’s emergency management program, policies and procedures.

Emergency Planning & Fire Safety Officer
A position designated to develop, implement and maintain the University's emergency management and fire safety programs.

Emergency Operations Centre (EOC)
A designated and appropriately equipped facility where officials from the university (and outside agencies as required) assemble to manage the response to an emergency or disaster.
Emergency plan
A plan developed and maintained to direct an organization's external and/or internal response to an emergency.

Evaluation
The process of assessing the effectiveness of an emergency management program, plan and/or exercise etc.

Exercise
A simulated emergency in which players carry out actions, functions, and responsibilities that would be expected of them in a real emergency. Exercises can be used to validate plans and procedures, and to practice prevention, mitigation, preparedness, response, and recovery capabilities.

Hazard
A phenomenon, substance, human activity or condition that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage. These may include natural, technological or human-caused incidents or some combination of these.

Hazard identification
A structured process for identifying those hazards which exist within a selected area and defining their causes and characteristics.

Impact
The negative effect of a hazardous incident on people, property, the environment, the economy and the ability of the university to maintain operations.

Incident
An occurrence or event that requires an emergency response to protect people, property, the environment, the economy and/or services.

Incident Action Plan (IAP)
Within IMS, an oral or written plan containing general objectives reflecting the overall strategy for managing an incident. It may include the identification of operational resources and assignments. It may also include attachments that provide direction and important information for management of the incident during one or more operational periods.

Incident Command/Incident Commander (IC)
The entity/individual responsible for all incident activities, including the development of strategies and tactics and the ordering and release of resources. The IC has overall authority for conducting incident operations and is responsible for the management of all incident operations.
Incident Management System (IMS)
A standardized approach to emergency management encompassing personnel, facilities, equipment, procedures, and communications operating within a common organizational structure. The IMS is predicated on the understanding that in any and every incident there are certain management functions that must be carried out regardless of the number of persons who are available or involved in the emergency response.

Interoperability
The ability of organizations and systems to exchange information, communicate effectively and work well together. This applies to technological and functional interoperability.

Liaison Officer (LO)
An individual assigned the responsibility to act as a link between the university and other organizations involved in the emergency.

Logistics section
Within IMS the section responsible for providing facilities, services, and material support for the incident.

Mitigation
Actions taken to reduce the adverse impacts of an emergency or disaster. Such actions may include diversion or containment measures to lessen the impacts of a flood or a spill.

Natural hazard
A naturally occurring event such as a forest fire, flood and/or severe weather that has the potential to harm people, property, the environment, the economy and/or services.

Operations section
Within IMS, the section responsible for all tactical incident operations. It normally includes subordinate branches, divisions, and/or groups.

Planning section
Within IMS, the section responsible for the collection, evaluation, and dissemination of operational information related to the incident, and for the preparation and documentation of the IAP. This section also maintains information on the current and forecasted situation and on the status of resources assigned to the incident.

Preparedness
Actions taken prior to an emergency or disaster to ensure an effective response. These actions include the formulation of emergency response plans, business continuity/continuity of operations plans, training, exercises, and public awareness and education.
**Prevention**
Actions taken to stop an emergency or disaster from occurring. Such actions may include legislative controls, zoning restrictions, improved operating standards/procedures or critical infrastructure management.

**Recovery**
The process of restoring to a pre-disaster level of functioning. This may include the provision of financial assistance, repairing buildings and/or restoration of the environment.

**Resilience**
The ability to resist, absorb, accommodate and recover from the effects of a hazard in a timely and efficient manner.

**Response**
The provision of emergency services and public assistance or intervention during or immediately after an incident in order to protect people, property, the environment, the economy and/or services. This may include the provision of resources such as personnel, services and/or equipment.

**Risk Matrix**
A matrix that is used during risk assessment to define the various levels of risk as the product of frequency and consequence.

**Safety Officer (SO)**
A member of the Command Staff responsible for monitoring and assessing safety hazards or unsafe situations and for developing measures for ensuring personnel safety.

**Site**
The geographical location of an incident.

**Threat**
A person, thing or event that has the potential to cause harm or damage.

**Vulnerability**
The susceptibility of a community, system or asset to the damaging effects of a hazard.
Section 7.0 - Appendices

Appendix A – Plans


Appendix A.2 – Emergency Communications Plan

Appendix A.3 – Pandemic Plan
### Hazard Identification and Risk Assessment Ranking

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Frequency</th>
<th>Frequency Category</th>
<th>Consequence</th>
<th>Consequence Description</th>
<th>Changing Risk</th>
<th>Risk Total (Frequency x Consequence x Changing Risk)</th>
<th>Level of Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical Infrastructure Failure</td>
<td>4</td>
<td>Probable</td>
<td>4</td>
<td>Severe</td>
<td>4</td>
<td>64</td>
<td>Extreme</td>
</tr>
<tr>
<td>Ice Storm</td>
<td>4</td>
<td>Probable</td>
<td>5</td>
<td>Very Severe</td>
<td>3</td>
<td>60</td>
<td>Extreme</td>
</tr>
<tr>
<td>Active Shooter / Violent Situation</td>
<td>3</td>
<td>Unlikely</td>
<td>6</td>
<td>Catastrophic</td>
<td>3</td>
<td>54</td>
<td>Extreme</td>
</tr>
<tr>
<td>Explosion / Fire / Arson</td>
<td>5</td>
<td>Likely</td>
<td>5</td>
<td>Very Severe</td>
<td>2</td>
<td>50</td>
<td>Very High</td>
</tr>
<tr>
<td>Cyber Attack</td>
<td>6</td>
<td>Almost Certain</td>
<td>2</td>
<td>Slight</td>
<td>4</td>
<td>48</td>
<td>Very High</td>
</tr>
<tr>
<td>Hazardous Materials Incident / Spills</td>
<td>4</td>
<td>Probable</td>
<td>4</td>
<td>Severe</td>
<td>3</td>
<td>48</td>
<td>Very High</td>
</tr>
<tr>
<td>Human Health Emergency</td>
<td>4</td>
<td>Probable</td>
<td>4</td>
<td>Severe</td>
<td>3</td>
<td>48</td>
<td>Very High</td>
</tr>
<tr>
<td>Extreme Temperatures</td>
<td>4</td>
<td>Probable</td>
<td>4</td>
<td>Severe</td>
<td>3</td>
<td>48</td>
<td>Very High</td>
</tr>
<tr>
<td>Food Emergency</td>
<td>4</td>
<td>Probable</td>
<td>3</td>
<td>Moderate</td>
<td>4</td>
<td>48</td>
<td>Very High</td>
</tr>
<tr>
<td>Transportation Emergency - Rail</td>
<td>3</td>
<td>Unlikely</td>
<td>4</td>
<td>Severe</td>
<td>4</td>
<td>48</td>
<td>Very High</td>
</tr>
<tr>
<td>Blizzard</td>
<td>3</td>
<td>Unlikely</td>
<td>5</td>
<td>Very Severe</td>
<td>3</td>
<td>45</td>
<td>Very High</td>
</tr>
</tbody>
</table>
## Appendix B.2 – UWaterloo Risk Matrix

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Almost Certain (6)</th>
<th>Likely (5)</th>
<th>Probable (4)</th>
<th>Unlikely (3)</th>
<th>Very Unlikely (2)</th>
<th>Rare (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Catastrophic (6)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Active Shooter/Violent Situation</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Terrorism/ CBRNE</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Tornado (EF3&lt;)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Extreme</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Hurricanes/Tropical</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Extreme Windstorm</td>
<td></td>
</tr>
<tr>
<td><strong>Very Severe (5)</strong></td>
<td></td>
<td>Explosion/Fire/Arson</td>
<td>Ice Storm</td>
<td>Blizzard</td>
<td>Building/Structure Collapse</td>
<td>Geomagnetic Storm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Severe (4)</strong></td>
<td></td>
<td>Critical Infrastructure Failure</td>
<td>Transportation Emergency - Rail</td>
<td>Hazardous Materials Incident/Spills Human Health Emergency Extreme Temperatures</td>
<td>Flood - Urban</td>
<td>Extreme Hail Event</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Moderate (3)</strong></td>
<td></td>
<td>Tornado (EF&gt;3)</td>
<td>Food Emergency</td>
<td>Windstorm or Downburst Event</td>
<td>Oil/Natural Gas Emergency Transportation Emergency - Air</td>
<td>Dam Failure</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Slight (2)</strong></td>
<td>Cyber Attack</td>
<td>Serial Criminal Activity Bomb Threat</td>
<td>Drinking Water Emergency</td>
<td>Snowstorm</td>
<td></td>
<td>Flood - Riverine</td>
</tr>
<tr>
<td></td>
<td>Civil Disorder</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Snowstorm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Transportation Emergency - Road</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Minor (1)</strong></td>
<td>Freezing Rain Lightning</td>
<td>Drought/Low Water</td>
<td>Natural Space Object Crash</td>
<td>Human-made space Object Crash</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# Appendix B.2 – UWaterloo Risk Matrix (Cont’d)

<table>
<thead>
<tr>
<th>Colour</th>
<th>Risk Total Score</th>
<th>Risks</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>&gt;50</td>
<td>Extreme</td>
</tr>
<tr>
<td>2</td>
<td>41 - 50</td>
<td>Very High</td>
</tr>
<tr>
<td>1</td>
<td>31 - 40</td>
<td>High</td>
</tr>
<tr>
<td>0</td>
<td>21 - 30</td>
<td>Moderate</td>
</tr>
<tr>
<td>0</td>
<td>11 - 20</td>
<td>Low</td>
</tr>
<tr>
<td>0</td>
<td>&lt; 10</td>
<td>Very Low</td>
</tr>
</tbody>
</table>

## Frequency

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Category</th>
<th>Percent Chance</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Rare</td>
<td>Less than 1% chance of occurrence in any year</td>
<td>Hazards with return periods of &gt;100 years</td>
</tr>
<tr>
<td>2</td>
<td>Very Unlikely</td>
<td>Between 1 to 2% chance of occurrence in any year</td>
<td>Occurs every 50-100 years and includes hazards that have not occurred but are reported to be more likely to occur in the near future</td>
</tr>
<tr>
<td>3</td>
<td>Unlikely</td>
<td>Between 2 to 10% chance of occurrence in any year</td>
<td>Occurs every 20-50 years</td>
</tr>
<tr>
<td>4</td>
<td>Probable</td>
<td>Between 10 to 50% chance of occurrence in any year</td>
<td>Occurs every 5-20 years</td>
</tr>
<tr>
<td>5</td>
<td>Likely</td>
<td>Between 50 to 100% chance of occurrence in any year</td>
<td>Occurs &gt;5 years</td>
</tr>
<tr>
<td>6</td>
<td>Almost Certain</td>
<td>100% chance of occurrence in any year</td>
<td>Hazard occurs annually</td>
</tr>
</tbody>
</table>

## Consequence

<table>
<thead>
<tr>
<th>Consequence</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Minor</td>
</tr>
<tr>
<td>2</td>
<td>Slight</td>
</tr>
<tr>
<td>3</td>
<td>Moderate</td>
</tr>
<tr>
<td>4</td>
<td>Severe</td>
</tr>
<tr>
<td>5</td>
<td>Very Severe</td>
</tr>
<tr>
<td>6</td>
<td>Catastrophic</td>
</tr>
</tbody>
</table>

Appendix B.4 – Business Impact Analysis (BIA) Report, 2017

Appendix C – Operational

Appendix C.1 – UWaterloo Emergency Activation Flowchart
Appendix C.2 – Emergency Operations Centre Locations

University of Waterloo

1. Needles Hall (NH) - Room 3318
2. Commissary Building (COM) – Room 112D
3. Research Advancement Centre (RAC) Building – Rooms 2004/3004
4. School of Pharmacy (PHR) – Rooms 1008/1012

City of Waterloo

1. City Hall – 100 Regina St. S. Waterloo
2. Service Centre – 265 Lexington Court Waterloo

City of Kitchener

1. City Hall – 200 King St. W. Kitchener
2. Operations Facility – 131 Goodrich Dr. Kitchener

City of Cambridge

1. City Hall – 50 Dickson St. Cambridge
2. Fire Station #1 – 1625 Bishop St. N. Cambridge

Region of Waterloo

1. Regional Administration Building – 150 Frederick St. Kitchener
2. Regional Operations Centre – 100 Maple Grove Rd. Cambridge