

Annex C: Risk Management

Risk Management is a comprehensive process that requires organizations to identify, assess, and prioritize risk. Organizations accept the risk or apply resources to mitigate or control the impact of the risk. The key to having an effective risk management program is understanding potential risks and the organization's relation to the risks. Organizations should conduct and document a risk assessment of all critical functions and services by completing a Business Impact Analysis (BIA) against all hazards at least every five years.

Types of Risk *(not all inclusive)*

- **Natural Hazards**
 - Meteorological – Temperature Extremes, Flooding, Dam Failure, Severe Thunderstorms (Wind, Rain, Lightning, Hail), Tornadoes, Windstorms, Hurricanes and Tropical Storms, and Winter Storms (Snow/Ice)
 - Geological – Earthquakes, Landslides, and Subsidence/Sinkholes
 - Biological – Infectious Diseases and Food-borne Illnesses
- **Human-Caused Hazards**
 - Accidents – Workplace Accidents, Entrapment/Rescue (Machinery, Water, Confined Space, and High Angle), Transportation Accidents (Motor Vehicle, Rail, Water, Air, Pipeline), Structural Failure/Collapse, and Mechanical Breakdowns
 - Intentional Acts – Labor Strikes, Demonstrations, Civil Disturbances (Riot), Bomb Threats, Lost/Separated Person, Kidnapping/Extortion, Hostage Incidents, Workplace Violence, Robberies, Sniper Incidents, Terrorism (Chemical, Biological, Radiological, Nuclear, and Explosives), Arson, and Cyber/Information Technology (IT) (Malware Attack, Hacking, Fraud, Denial of Service, etc.)
- **Technological Hazards**
 - IT – Communications Degradation/Outage, Loss of Connectivity, Hardware Failure, Lost/Corrupted Data, and Application Failure
 - Facility – Structural Damage, Fire Alarm Failure
 - Utility Outage – Communications, Electrical Power, Water, Gas, Steam, Heating/Ventilation/Air Conditioning, Pollution Control Systems, and Sewage Systems
 - Fire/Explosion – Fire (Internal) and Explosion (Chemical, Gas, or Process Failure)
 - Supply Chain Interruption – Supplier Failure and Transportation Interruption

- Hazardous Materials – Hazardous Material Spill/Release, Radiological Accidents, HAZMAT Incident Off-Site, Transportation Accidents, and Natural Gas Leak Supplies

Risk Assessment Approach

In order to help determine what its greatest probable risks and threats are, the following categories were considered in the performance of the assessment:

- Probability – Likelihood of this incident occurring
- Human Impact – Possibility of death or injury
- Property Impact – Physical losses and damage
- Business Impact – Potential Disruption of Services
- Preparedness – What planning, training, and preparedness activities have been done
- Internal Response – Timeliness, Effectiveness, and Resource Allocation
- External Response – Community/Mutual Aid staff and supplies

Results of the assessment are used to correct deficiencies and reduce risks. Results also assist in operational and resilience planning, training, and exercising.

The Hazard Vulnerability Assessment for South Portland is maintained by the Municipality Manager, local EMA Director, and CCEMA, both in hardcopy and electronically, and are reviewed and/or updated annually.

All Municipalities Risk Assessment Tool (RAT)		Likelihood	Continuity of Operations Impact to the operations of essential services and/or critical infrastructure	People Impact to people in terms of casualties and/or fatalities	Property impact in terms of damage and/or destruction to residential and	Environment Impact to natural resources	Composite	
							Total	Score
Hazard	Type							
Flooding	Natural	Unlikely - 1 point: within the next 10+ years	No impact - 1 point; Low impact - 2 points; Temporary disruption - 3 points; Significant disruption - 4 points; Permanent disruption - 5 points	No injuries/or fatalities - 1 point; Some injuries/no fatalities - 2 points; Some injuries/any fatalities - 3 points; Multiple injuries or fatalities - 4 points Mass injuries and fatalities - 5 points	No damage - 1 point; Low damage - 2 points; Temporary damage - 3 points; Significant damage - 4 points; Permanent damage - 5 points	No damage - 1 point; Low damage - 2 points; Temporary damage - 3 points; Significant damage - 4 points; Permanent damage - 5 points	Average of all four impact areas	2
Tsunami	Natural	1	3	3	3	3		3
Severe Winter Weather	Natural	5	3	2	3	2		2
Hurricane	Natural	2	3	2	4	3		3
Wildfire	Natural	2	2	1	2	2		2
Erosion/Coastal Flooding	Natural	3	2	1	3	2		2
Landslides	Natural	2	2	1	2	2		2
Severe Summer Weather	Natural	4	3	2	2	2		2
Drought	Natural	3	2	1	2	2		1
Earthquake	Natural	1	2	2	3	2		2
Disease Outbreak	Natural	3	3	4	1	2		3
Dam Failure	Technological	2	2	2	3	2		2
Widespread Utility Failure (with Infrastructure Impacts)	Technological	3	4	2	3	3		3
Water System Contamination	Technological	2	3	3	2	3		3
HAZMAT Release – Fixed Site	Technological	2	2	2	2	2		2
HAZMAT Release – Transportation	Technological	4	3	3	2	3		3
Transportation Incident (Mass Casualty Incident)	Technological	3	2	4	2	3		3
Explosion	Technological	2	2	3	3	2		3
Bridge/Building Collapse	Technological	1	2	3	3	3		3
Urban (Building) Fire	Technological	5	2	3	4	3		3
Terrorist Threats	Adversarial	2	2	2	3	2		2
Criminal Threats	Adversarial	3	2	2	2	2		2
Cyber Threats	Adversarial	3	3	1	2	2		2
Drug-related Threats	Adversarial	3	2	3	2	2		2
Civil Unrest	Adversarial	3	2	2	2	2		2

