



Risk Control

Water Damage: Prepare, Respond, Improve

Water from internal or external sources can significantly impact your operations. This checklist provides considerations business leaders can take before, during and after a water damage incident to improve business resilience.

Area of Impact	Suggested Actions
Prepare: Risk Assessment	<p>Identify natural hazards that may lead to water damage at each location (e.g., rainwater runoff, flooding, hailstorms and freezing temperatures) and vulnerable entry points to the structure(s) such as loading docks and entry doors.</p> <p>Identify internal and external sources of water and potential failure scenarios. Consider domestic plumbing failures, roof drain and cooling tower piping, fire sprinkler systems, heating/cooling systems, storm water and sewer systems, and sump pumps.</p> <p>Identify high-value equipment or critical infrastructure susceptible to water damage. Examples include electrical switchgear, elevator equipment, chillers and boilers, key production equipment, sensitive records and IT equipment.</p> <p>Assess vulnerability of equipment, processes or infrastructure located below grade (basements, sub-basements), if applicable.</p> <p>Inspect the building envelope (door and window seals, broken windows, open louvers, cold air intakes) to identify cold weather vulnerabilities.</p> <p>Identify exterior drainage, water diversion and flood control systems (downspouts, scuppers, storm drains, culverts, levees).</p>
Prepare: Physical Controls/Mitigation	<p>Improve exterior grading to ensure water runoff and snow melt are directed away from key structures and equipment.</p> <p>Make repairs to the building envelope to reduce risk of cold air intrusion.</p> <p>Repair minor leaks in plumbing and HVAC systems and address potential warning signs such as stained ceilings and walls.</p> <p>Exercise and lubricate key plumbing valves annually. Use identifying signs or markings for valves above ceilings or any areas where they are not visible.</p> <p>Install active and passive water and/or freeze detection devices (refer to CNA guide, <i>Water Damage: Technology Solutions</i>).</p>

Area of Impact	Suggested Actions
<p>Prepare: Physical Controls/Mitigation (continued)</p>	<p>Program elevators to remain at upper floors in multi-story buildings during unoccupied hours.</p> <p>Install automatic backflow or backwater valves to reduce the risk of backup in combined storm water/ sewer systems.</p> <p>Install liquid level alarms with remote monitoring in sump pumps. Install redundant pumps within each pit to eliminate the single point of failure. Connect pumps to backup power via emergency circuits or install dedicated battery backups.</p> <p>Move key processes and equipment to above-grade locations. If infrastructure and equipment cannot be moved, implement “defend in place” strategies such as barriers, curbs and pipe channels, and make floor/wall connections watertight.</p> <p>Relocate or redirect water lines, drains or floor penetrations at any level away from vital equipment and processes.</p> <p>Install emergency generators or battery backup systems to ensure continuity of power for active and passive water and freeze detection devices and other key equipment.</p> <p>Consult with a licensed sprinkler contractor and metallurgical laboratory to inspect fire protection piping where pinhole leaks and similar problems have been identified. Implement corrosion mitigation solutions (automatic air release, nitrogen inerting, vacuum) that address the type of corrosion identified to reduce the risk of future leaks.</p>
<p>Prepare: Human Element/Management Programs</p>	<p>Update incident/emergency response plans to include water damage incident response procedures.</p> <p>Assign clear roles and responsibilities that include procedures for both occupied and unoccupied hours.</p> <p>Ensure employees are trained on the proper installation of temporary flood barriers, gates and similar controls if flood hazards exist.</p> <p>Train staff on how to safely respond to water damage emergencies and where to locate key valves, pipe diagrams and drawings. Ensure pipe diagrams and maps are easily accessible.</p> <p>Ensure contractors adopt water damage incident response procedures prior to commencement of construction, renovation or relocation projects.</p> <p>Inspect roofing assemblies semi-annually and after any major storm event to check for damage, wear and tear, and other conditions that can lead to water intrusion.</p> <p>Research and document lead times for replacing critical equipment and develop cost-effective repair/replace strategies.</p> <p>Ensure low point auxiliary drains for dry pipe sprinkler systems are opened (system side), checked for condensate and drained before the onset of cold weather and periodically throughout the winter.</p> <p>Implement inspection, testing and maintenance for active and passive water-sensing systems.</p> <p>Implement inspection, testing and maintenance programs for exterior storm drains, gutters, downspouts, sump pumps, and other water control and diversion equipment.</p> <p>Implement a building envelope inspection program.</p> <p>Train housekeeping/janitorial and security employees on procedures to follow when any dripping, leakage or clogged drain is noticed.</p> <p>Conduct internal inspections of fire protection system piping every five years to look for signs of corrosion or other problems.</p> <p>Review resiliency plans of critical partners and develop alternate suppliers as needed for continuity of operations.</p>

Area of Impact

Suggested Actions

Respond

- Stop the water flow (when/where safe) as soon as possible.
- Initiate water mitigation procedures internally and engage identified restoration contractors.
- Engage local responders (e.g., fire, police, medical) as needed.
- Have qualified employees or engaged licensed contractors repair the issue.
- Address safety issues.
- Assess the business impact. Implement impairment procedures if fire protection systems are impacted.
- Engage insurance provider.
- Develop communications to inform staff, customers and stakeholders.

Recover

- Understand the business impact.
- Plan/design recovery steps based on the impact.
- Implement a recovery plan.
- Manage employee and stakeholder communication needs.
- Plan/design resources to restart operations.
- Implement restart plan.

Improve

- Update incident response procedures and plans based on learning from the incident.
- Test incident response procedures annually and train/retrain new and existing employees.

To learn more about managing your risk and increasing efficiency, visit cnacanada.ca.