

# Disaster Preparedness Risk Assessment Evaluation

## 1. Natural Disasters – Determine if the following are logistically & historically relevant to your business.

### Earthquakes

- Assess building structure and compliance with seismic standards.
  - Related Standards and Building Codes:
    - [ASCE 7-22](#): Minimum Design Loads and Associated Criteria for Buildings and Other Structures
    - International Building Code (IBC): The IBC adopts ASCE 7 provisions for seismic design and is commonly used as the enforceable building code in many states.
    - [FEMA P-1050](#), NEHRP Recommended Seismic Provisions: Offers guidelines aligned with ASCE 7 and focuses on improving the seismic performance of buildings.
- Identify critical equipment that may need additional securing.
- Establish evacuation routes and emergency shut-off procedures.

### Floods

- Identify if the business is in a flood-prone area.
  - [FEMA Flood Map Service Center \(FEMA MSC\)](#)
  - [NOAA's National Weather Service – Flood Outlook](#)
  - [USGS Flood Information](#)
- Evaluate the location of critical assets (servers, electrical systems) and consider relocation or protection measures.
- Check drainage systems, sump pumps, and waterproofing around the building.

### Hurricanes/Typhoons

- Inspect the building's roofing, windows, and doors for storm resistance.
- Assess the need for storm shutters and other protective barriers.
- Ensure backup power sources (generators) are functional and secure.

### Wildfires

- Review the proximity to fire-prone areas and vegetation management practices.
- Create [Defensible Space](#) Around Your Property
  - Zone 1: Immediate Zone (0-5 feet from the building)
  - Zone 2: Intermediate Zone (5-30 feet from the building)
  - Zone 3: Extended Zone (30-100 feet from the building)
- Check air filtration systems and fire-resistant landscaping.
- Ensure access to firefighting equipment (fire extinguishers, sprinklers).

### Tornadoes

- Evaluate building design and secure areas for safe shelter during tornadoes.



# Disaster Preparedness Risk Assessment Evaluation

- [FEMA P-361](#): Safe Rooms for Tornadoes and Hurricanes provides best practices for designing and constructing safe rooms to protect occupants during extreme wind events. It complements [International Code Council \(ICC\)](#) and the [National Storm Shelter Association \(NSSA\)](#). [ICC 500](#) offers additional guidance on performance criteria.
- ☐ Assess the stability of outdoor equipment and structures.
- ☐ Develop a communication plan for rapid alerts and response.

## Snowstorms and Ice

- ☐ Review snow load capacities of roofs and ensure safe access for snow removal.
  - Building Code Compliance: Ensure your building complies with local building codes regarding snow loads, which often refer to standards set by the [American Society of Civil Engineers \(ASCE 7\)](#).
- ☐ Inspect heating systems, pipes for freezing risks, and de-icing supplies.
- ☐ Plan for power outages and safe pathways during severe weather.

## 2. Human-Made Disasters

### Fire

- ☐ Conduct fire prevention risk assessments for flammable materials, processes and electrical hazards.
  - [1910 Subpart E](#) - Exit Routes and Emergency Planning
  - [1910 Subpart L](#) - Fire Protection
- ☐ Assess areas for where Hot Work is and is not permitted.
- ☐ Verify the functionality of facility fire alarms, sprinklers, and extinguishers.
- ☐ Ensure staff are trained regularly in fire evacuation and response.

### Cyber Attacks

- ☐ Assess vulnerabilities in IT systems, including outdated software and weak passwords.
- ☐ Evaluate data backup procedures and cybersecurity measures (firewalls, encryption).
- ☐ Review incident response plans for cyber incidents.

### Terrorism and Active Shooter

- ☐ Identify potential security vulnerabilities in the physical premises and surrounding area/businesses.
- ☐ Assess access control systems and surveillance measures to predict viability for quality review if an incident were to occur.
- ☐ Develop emergency response protocols and staff training for such incidents; involve local Law Enforcement or Risk & Safety Consultants.

### Chemical Spills or Toxic Leaks

- ☐ Review storage and handling procedures of hazardous materials. Ensure compliance with OSHA standards, such as the Hazard Communication Standard ([29 CFR 1910.1200](#)) and Process Safety Management (PSM) for high-hazard chemicals ([29 CFR 1910.119](#)).
- ☐ Check ventilation systems and emergency response kits (PPE, spill kits).



# Disaster Preparedness Risk Assessment Evaluation

- Assess evacuation and containment procedures.

## Transportation Accidents (e.g., HazMat near facilities)

- Evaluate the proximity to major transportation routes and associated risks.
- Review emergency notification systems and communication protocols.
- Check protective barriers and staff training for such emergencies.

## 3. Internal Threats

### Power Outages

- Assess the reliability of electrical infrastructure and backup power systems including [NFPA 101.7.9](#).
- Review the battery backup for critical systems (servers, security).
- Plan for prolonged outages, including communication and work continuity.

### Data Loss (non-cyber)

- Evaluate data storage practices, physical and cloud-based.
- Review the backup frequency and off-site storage policies.
- Assess disaster recovery plans for critical business data.

### Equipment Failures

- Inspect maintenance records and conduct regular checks on critical machinery.
- Evaluate the impact of key equipment failures on operations.
- Develop contingency plans for equipment downtime.

### Employee-Related Security concerns & Incidents (e.g., sabotage, theft)

- Assess internal controls for access to sensitive areas and information.
- Evaluate the background checks and monitoring of high-risk employees, positions & shift work.
- Develop clear reporting and response policy, program & procedures for suspicious activities.

### Supply Chain Disruptions

- Review critical suppliers and their vulnerabilities.
- Assess inventory levels and alternative sourcing options.
- Develop plans for rapid supplier replacement or material substitution.

