

Risk Engineering Services Windstorm preparation guide

Windstorms, hurricanes and tropical cyclones create a significant threat to coastal areas around the globe. Use this guide to ensure you are prepared to withstand a high wind event.

Plan components

- A dedicated response team with assigned tasks and authority levels
- Dedicated personnel to conduct pre-season preparation checks
- A list of equipment to be stored on-site for recovery efforts
- Local authority and utility contact information for reference when required
- □ Relationships with vendors for back-up critical equipment, such as generators
- A post-event business continuity plan
- A formal training procedure, including a section to record practice runs

Pre-season preparation

Roof inspection

- □ Check for loose roof flashing and roof cover damage
- Ensure all roof-mounted equipment is tightly secured
- Add additional roof securement, particularly around the perimeter
- Consult a roofing specialist to improve securement, particularly on the perimeter
- Verify that roof drains, outside drains and catch basins are clear of debris

Walls, windows and openings

- Inspect and repair exterior walls, glass, and doors
- □ Inspect fasteners for securement/protection brackets and components
- \Box Check that windows and weather seals are in good condition
- Verify that manual storm shutters/window coverings are available and in good condition
- Verify that all flood control materials are readily available and in good condition

Electrical and equipment

- □ Verify inspection, testing and maintenance of all emergency generators
- Exercise emergency generator transfer switches
- Check that all diesel equipment tanks and centralised bulk tanks are full
- □ Test fuel transfer pumps for emergency units
- Re-check if any equipment requires unique shutdown/start procedures
- □ Identify and label all electrical service equipment and switches
- □ Inspect and test all dewatering pumps and sump pumps
- Check that dewatering/sump pumps are connected to emergency power and operate properly

Supplies and clean-up

- Review safety supplies (PPE, flashlights etc) and essentials (water, food etc)
- Review inventory of recovery supplies (tarps etc). Order more if required
- Ensure that all basic cleaning supplies are in stock and ready for use



Hurricanes, windstorms and cyclones pose a significant threat to coastal areas around the globe, causing billions of dollars in property damage and business interruption each year. While escaping without damage may not be possible, being prepared for a storm and diligently maintaining your facility year round will yield the best possible results for any storm.

Be prepared: Having a contract in place for clean-up, repair and emergency equipment will allow faster access to critical services. This is particularly important for widespread natural hazard events, when contractor services will be in high demand.

In-season preparedness

- Be aware of hurricane and/or windstorm activity
- □ Continue periodic checks on consumables as they continue to be used in the normal course of maintenance. Consumables include fuel, oils, water supplies, etc.
- Limit the amount of inventory stored or work in progress at the floor level

If storm watch or warning is issued

- Test/start the emergency generator and transfer switch to ensure power is ready
- □ Verify dewatering/sump pumps are in service and working
- Remove debris around the facility
- Secure loose outdoor fixtures or equipment. This includes items on the roof
- Back-up computer and server data. Take all back-ups off site to a secure area
- Reduce stock where possible. Place all remaining stock on pallets or higher
- Secure or brace areas under construction. Remove unsecured items
- If possible. relocate and/or protect below grade, high value equipment

After the storm

Initial assessment and planning

- Expect the site to be difficult to reach or have access limited by officials
- Do not visit the site alone the area may be hazardous
- Bring identification. cameras. flashlights and PPE
- Perform an exterior assessment before entering the building to ensure structural safety
- □ Stay aware of potential site hazards incl. live electrical wires. broken glass and sharp metals. leaking gases or flammable liquids or contents that could shift or collapse
- Post security personnel in areas where access is not suitably controlled
- Ensure that a smoking ban is in place throughout the facility
- Survey and document findings/damage. Take plenty of photos
- Implement pre-established service restoration. repair and cleaning contracts
- □ If aware of any damage, contact your company's risk manager or insurance broker

Clean-up and repairs

- Initiate clean-up activities immediately, if safe to do so
- Begin salvage activities as soon as possible to prevent further damage
- Separate damaged goods from salvageable goods
- Establish repair priorities. Focus on the building envelope and fire protection
- Have qualified personnel thoroughly check all utility systems. special equipment and hazardous processes before returning them to service
- Check fire water supplies. fire pumps. automatic sprinklers. fire alarms and security systems. Contact a fire contractor if required
- Use the Swiss Re Fire Protection Impairment procedure if required. Follow all guidance, including implementing a designated fire watch in all impaired areas
- □ Where repairs require welding, cutting or grinding, ensure that the Swiss Re hot work permit is used, including all safety guidance and a fire watch
- Avoid accumulations of combustible materials and debris inside the building
- Clear roof drains, balcony drains and ground-level catch basins and drains in preparation for future rain events



Inadequately secured roofing panels can be stripped by high winds. opening the building envelope. allowing rain and debris to cause further damage.

European resources:

World Meteorological Organisation www.wmo.int Global Disaster Alert & Coordination System www.gdacs.org

North American resources:

National Hurricane Centre www.nhc.noaa.gov Federal Emergency Management Agency www.FEMA.gov and www.Ready.gov

Asia Pacific resources:

Bureau of Meteorology www.bom.gov.au/global www.bom.gov.au/cyclone Hong Kong Observatory www.hko.gov.hk



Post-storm site conditions can be hazardous. Do not access the site alone or at all if the building's structure is compromised.

This checklist is intended as a guide to property loss prevention and to aid in preparing for a windstorm. hurricane or cyclone event. This document should not be regarded as a standard and should not be referenced as supporting material in the event of a loss. Please do not distribute without permission from Swiss Re Corporate Solutions Ltd and its subsidiaries and affiliates. Under no circumstances shall Swiss Re or its Group companies be liable for any loss or damage resulting from use of this document.