

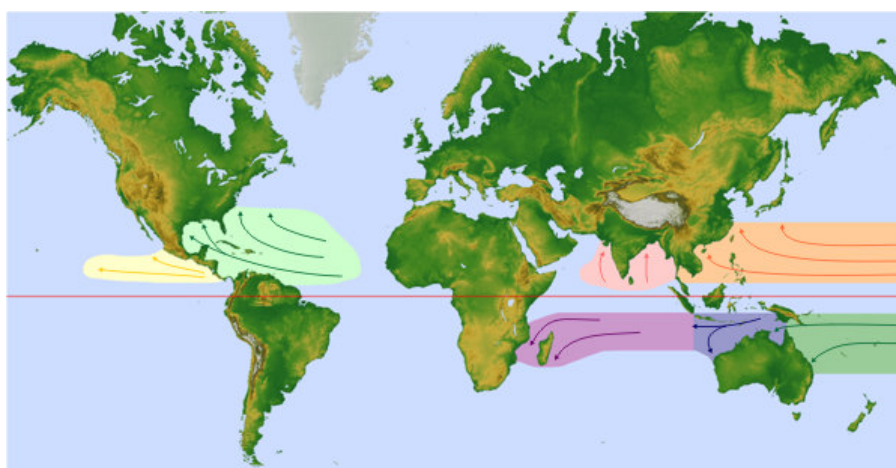
Zurich easy-tough guide to starting a hurricane emergency action plan

Introduction

Is your building located in a hurricane-prone region? Do you need to prepare a hurricane emergency action plan? If your answer to both of these questions is "yes", then this Risktopic is for you. It will provide the guidance you need for developing your first hurricane emergency action plan. We call this the Zurich easy-tough approach which are easy actions to take any time a hurricane threatens your location, and tough actions to take when you know a hurricane will strike your location. Please consult the Zurich Risktopic "Guide to hurricane emergency action plans" for further thoughts that will help you expand and enhance your plan.

Objective

Hurricane prone regions exist around the world. For the U.S., the regions include the states along the Atlantic and Gulf coasts, Hawaii, Puerto Rico, the U.S. Virgin Islands, Guam and American Samoa.



Tropical regions where hurricanes are born. Source - National Weather Service
<http://www.srh.noaa.gov/srh/jetstream/tropics/tc.htm>

A hurricane emergency action plan should be a living document. It is never finished. It should be reviewed and updated each year before hurricane season begins and also after any major storm. It should address actions to take before hurricane season begins, when a hurricane watch is issued, when a hurricane warning is issued, during a hurricane, and after a hurricane.

To get you started, this Risktopic will focus on the "easy" actions that you should take any time a hurricane is approaching your location, and the "tough" actions that you should take once you know you will be directly affected by the hurricane.

Easy actions – Measures you can take that will still make sense even if the hurricane turns and never affects your location.

Tough actions – Measures that you would only want to take once you are certain that a hurricane will be directly affecting your location.

Guidance

For the continental U.S. and Caribbean, hurricane season extends from June 1 to November 30. For the Northeast Pacific basin, the hurricane season is similar; however, it begins in mid-May. During hurricane season, maintain an awareness of hurricane activity. For the U.S., check the National Hurricane Center Website daily at <http://www.nhc.noaa.gov/index.shtml> for hurricane forecasts and advisories. Also, consider signing up for Tropical Cyclone Advisory Mailing Lists at <http://www.nhc.noaa.gov/signup.shtml>, but be aware this is an experimental email alert system and should not be the sole source of maintaining hurricane awareness.

Easy actions

About two days before a hurricane is expected to affect your location, begin implementing the easy actions. A hurricane watch is issued 36 hours before a hurricane may become a threat to your location. Make sure that all the easy actions are taken once a watch is issued. Easy actions include:

- Check building roofs. Make repairs to coverings and flashing as needed.
- Remove loose equipment and debris from roofs.
- Verify roof drains are clear of obstructions.
- Fill fuel tanks serving emergency generators and other vital services.
- Verify dewatering pumps are in-service and working.
- Verify outside drains and catch basins are clean.
- Remove debris from outdoor areas.
- Remove loose, outdoor, inactive equipment.
- Back-up computer data.
- For healthcare:
 - Verify that 96 hours of supplies are on hand.
- For manufacturing:
 - Ship out as much stock as possible.
 - Verify all stock is skidded at least 4 inches above the floor.
- For new construction projects:
 - Remove loose equipment and temporarily brace new construction.

Based upon your specific needs, add to the list of easy actions.

Tough actions

A hurricane warning is issued 24 hours before a hurricane makes landfall. Between the time the hurricane watch is issued and the hurricane warning is issued, make sure you have the time needed to complete all of the tough actions and then evacuate personnel that will not be remaining on site. The tough actions may include:

- Protecting or relocating vital business records.
- Removing all loose outdoor storage or equipment.
- Anchoring portable buildings or trailers to the ground.
- Securing outdoor storage or equipment that cannot be moved.
- Starting the installation of manual protection systems (e.g. shutters, plywood covers and flood gates).
- Raising critical equipment off floors (e.g. PC towers).
- Moving critical equipment from below grade areas.
- Covering critical stock and equipment with waterproof tarpaulins.
- Initiating an orderly shutdown of production equipment and systems that rely upon normal power.
- Turning off fuel gas services.
- Turning off non-essential electrical systems.
- Verifying all fire protection systems are in service (e.g. water supplies, fire pumps, sprinklers, fire alarms and special extinguishing systems).

Again, based upon your specific needs, add to the list of tough actions.

Tough-tough actions

There can be a few tough actions that are really tough. These are actions that take so long to complete that they need to be started during the easy action period. That is what makes them extremely tough.

You must have exceptional discipline to make the decision to implement a tough-tough action. An example would be setting up a flood barrier system to protect a large area. Another example would be taking actions to close-up buildings under construction.

It is absolutely essential to recognize when you have a tough-tough action. The overall plan must recognize their existence. And, the needed guidance and authority must be provided to those who will be charged with making the decision.

Conclusion

When a hurricane threatens your facility, you need to be prepared to manage rather than react. Begin your hurricane planning effort using the Zurich easy-tough approach. Evaluate the time needed for each action plan, and coordinate them in conjunction with the watches and warnings issued by the National Hurricane Center. Once your easy-tough plan is in place, begin the ongoing process of enhancement. Develop, implement, practice and maintain a comprehensive hurricane emergency action plan. A comprehensive plan begins before hurricane season starts.

Appendix A – related Zurich Risktopics available at www.zurichna.com

- Guide to hurricane emergency action plans
- Guide to emergency power for hurricane-prone regions
- Guide to securing rooftop equipment in hurricane-prone regions
- Guide to perimeter roof flashing in hurricane-prone regions
- Zurich recommended practice for buildings in hurricane-prone regions

Appendix B – sample list of hurricane supplies and equipment

- Emergency lighting
- Lumber and nails/screws
- Tape for windows
- Sandbags
- Roofing paper
- Tarpaulins
- Caulk

- Duct tape
- Power and manual tools
- Shovels and axes
- Chainsaws and fuel
- Nonperishable food and drinking water
- Cell phone with charged spare batteries
- Two-way radios with charged spare batteries
- Flashlights with spare batteries

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