

# **Hurricane Appendix to the Severe Weather Annex**



**August 2023**

## Purpose and Scope

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This Hurricane Appendix identifies specific college tasks necessary before, during, and after a hurricane or tropical system incident.

### Scope

This document applies to the college and surrounding community, including first responder agencies. All college faculty and staff who are assigned emergency management roles and responsibilities will have access to training and all college emergency plans. External stakeholders likely to respond to an incident should also review this appendix for compatibility with their operations and resources.

## General Information

### What is a hurricane (tropical cyclone)?

A tropical cyclone is a rotating, organized system of clouds and thunderstorms that originates over tropical or subtropical waters and has closed low-level circulation. Tropical cyclones rotate counterclockwise in the Northern Hemisphere. They are classified as follows:

- **Tropical Depression:** A tropical cyclone with maximum sustained winds of 38 mph (33 knots) or less.
- **Tropical Storm:** A tropical cyclone with maximum sustained winds of 39–73 mph (34–63 knots).
- **Hurricane:** A tropical cyclone with maximum sustained winds of 74 mph (64 knots) or higher. In the western North Pacific, hurricanes are called typhoons; similar storms in the Indian Ocean and South Pacific Ocean are called cyclones.
- **Major Hurricane:** A tropical cyclone with maximum sustained winds of 111 mph (96 knots) or higher, corresponding to a Category 3, 4, or 5 on the [Saffir-Simpson Hurricane Wind Scale](#).

## Specific Actions Taken Before, During, and After A Hurricane

<b>BEFORE a Hurricane (Tropical Cyclone) Incident</b>	
<b>Task</b>	<b>Responsible Role</b>
Determine which staff members (e.g., maintenance, custodial, transportation) will be needed to prepare or make emergency repairs to facilities (make-ready team).	Sr. Director of Physical Plant
If the college has a stay-behind team, ensure that members are properly trained and equipped for their roles. Team members should be given adequate time off before the storm to prepare their own homes and make family arrangements.	Sr. Director of Physical Plant
Identify what supplies and equipment will be needed for the hurricane hazard.	Sr. Director of Physical Plant
Obtain supplies and equipment for a hurricane hazard. Communicate with vendors to identify which external resources may be available. Example supplies could include: <ul style="list-style-type: none"> <li>• Materials to secure a building</li> <li>• Portable and standby generators</li> <li>• Fuel for vehicles and equipment</li> <li>• Water and food for the stay-behind team</li> <li>• Communication equipment (e.g., portable radios, batteries)</li> </ul>	Sr. Director of Physical Plant
Ensure that staff members are trained on how to properly operate equipment (e.g., chain saws, generators) and are supplied with appropriate personal protective equipment (PPE).	Sr. Director of Physical Plant
Identify essential equipment and vehicles for relocation to areas less vulnerable to a hurricane hazard.	Sr. Director of Physical Plant
Relocate equipment and vehicles to areas less vulnerable to a hurricane hazard.	Sr. Director of Physical Plant
Ensure that all exterior storage buildings are properly anchored to avoid being displaced by high winds. <ul style="list-style-type: none"> <li>• Secure loose objects vulnerable to high winds.</li> </ul>	Sr. Director of Physical Plant
Identify areas that may be suitable for use by stay-behind teams.	Sr. Director of Physical Plant
Designate administrators responsible for identifying and completing documentation required to be eligible for disaster reimbursement funds. Coordinate with insurance providers and understand the requirements. Communicate with the local emergency management office to identify training and coordination needs.	VP of Business Affairs
Communicate with the local emergency management coordinator to develop guidance and policies for your college that include closure and reopening procedures.	VP of Business Affairs

Develop a college fuel use policy, which addresses storage tanks. <ul style="list-style-type: none"> <li>Fully fuel all college vehicles and equipment.</li> <li>Enforce a refueling policy that requires vehicles to maintain minimum fuel levels.</li> <li>Coordinate use of fueling facilities with local government.</li> </ul>	VP of Business Affairs
Participate in conference calls with local and state emergency management agencies. Determine which resources are likely to be requested from local jurisdictions.	Incident Commander
Ensure that any perishable foods are distributed or disposed of per USDA and TDA guidelines.	Food Services Contractor
Secure facilities to prevent looting.	AC Police Chief
Determine if Angelina County Emergency Management can help with damage assessment and identify what might be required of the college prior to obtaining assistance.	Manager of EH&S and Emergency Management
Consider relocating computers and equipment to an interior portion of a school building and store items off the floor to protect against flooding and wind damage.	Sr. Director of Information Technology
Consider turning off utilities to a school building such as electrical and natural gas before evacuation if possible. (Keep water on for fire sprinkler systems.)	Sr. Director of Physical Plant

### **DURING a Hurricane (Tropical Cyclone) Incident**

<b>Task</b>	<b>Responsible Role</b>
Monitor official sources for changing weather conditions.	Administration
Participate in conference calls with local and state emergency management agencies.	Incident Commander
Prepare and maintain an accurate roster of all college personnel working in any capacity during the storm for accountability purposes.	Planning Section Chief
Ensure that any perishable foods are distributed or disposed of per USDA and TDA guidelines.	Food Services Contractor
Route resource requests through Angelina County Emergency Management office.	Logistics Section Chief
If using a stay-behind team, remind staff to stay away from windows, glass, and doors during the storm and continue to shelter-in-place. Educate the stay-behind team about what to expect from all phases of the hurricane.	Safety Officer
Ensure that emergency equipment (e.g., gas generators) only operates in well-ventilated areas to avoid exposure to carbon monoxide and other dangerous fumes. Make sure fuel supplies are safely protected and stored.	Safety Officer

<b>AFTER a Hurricane (Tropical Cyclone) Incident</b>	
<b>Task</b>	<b>Responsible Role</b>
Check facilities for obvious structural damage to buildings and foundations. Allow only qualified personnel to enter damaged facilities.	Sr. Director of Physical Plant
Prohibit staff and students from entering facilities that have been flooded until they have been thoroughly inspected for exposure to bacteria, chemicals, mold, and other hazards associated with floodwaters.	VP of Business Affairs
Report building damage to college administration, local emergency management office, and insurance providers.	VP of Business Affairs
Ensure that all members of stay-behind teams are accounted for.	
Make sure electrical outlets and appliances throughout facilities are dry and free of water before turning the power back on. If there is any doubt about the condition of wiring or appliances, have an electrician conduct an inspection.	Maintenance Manager
Secure facilities to: <ul style="list-style-type: none"> <li>• Prevent unauthorized access or looting.</li> <li>• Allow for a thorough and accurate assessment by college and local damage assessment teams.</li> <li>• Prevent anyone from walking through standing water, as it may be electrically charged from downed power lines.</li> <li>• Prevent exposure to toxic elements such as bacteria, chemicals, mold, and other hazards associated with floodwaters.</li> </ul>	Incident Commander
Check for downed power lines or broken utilities, restrict access to the area, and report to the utility company.	Maintenance Manager
Identify what resources may be needed from college vendors or the local emergency management office.	Logistics Section Chief
Take video and photographs of damages for insurance and reimbursement purposes.	

## Resources

### Definitions

**Damaging Winds** – Damaging winds are often called “straight-line” winds to differentiate the damage they cause from tornado damage. Strong thunderstorm winds can come from several different processes. Most thunderstorm winds that cause damage to the ground are a result of outflow generated by a thunderstorm downdraft. Damaging winds are classified as those exceeding 50–60 mph.

**Hurricane Warning** – Hurricane conditions (sustained winds of 74 mph or greater) are expected somewhere within the specified area. The National Hurricane Center (NHC) issues a hurricane warning 36 hours in advance of tropical storm-force winds to give you time to complete your preparations. All preparations should be complete. Evacuate immediately if so ordered.

**Hurricane Watch** – Hurricane conditions (sustained winds of 74 mph or greater) are possible within your area. Because it may not be safe to prepare for a hurricane once winds reach the tropical storm force, the NHC issues hurricane watches 48 hours before anticipated tropical storm-force winds.

**National Oceanic and Atmospheric Administration (NOAA)** – The mission of the National Oceanic and Atmospheric Administration is to provide daily weather forecasts, severe storm warnings, climate monitoring to fisheries management, coastal restoration, and the support of marine commerce.

**NOAA Weather Radio (NWR)** – NOAA Weather Radio All Hazards is a nationwide network of radio stations broadcasting continuous weather information directly from the nearest National Weather Service office. NWR broadcasts official Weather Service warnings, watches, forecasts, and other hazard information 24 hours a day, 7 days a week.

**National Weather Service (NWS)** – The National Weather Service provides weather, water, and climate forecasts and warnings for the United States, its territories, adjacent waters, and ocean areas to protect life and property and enhance the national economy.

**Storm Surge** – A storm surge is an abnormal rise of water generated by a storm's winds. Storm surges can reach heights well over 20 feet and can span hundreds of miles of coastline.

**Storm Tide** – A storm tide is the water level rise during a storm due to the combination of storm surge and the astronomical tide.

**Tropical Storm Warning** – A tropical storm warning indicates tropical storm conditions (sustained winds of 39–73 mph) are expected within the specified area within 36 hours.

**Tropical Storm Watch** – A tropical storm watch indicates tropical storm conditions (sustained winds of 39–73 mph) are possible within the specified area within 48 hours.

## Additional Resources

### [Hurricane Safety Tips and Resources \(NWS\)](#)

Consists of what to do when hurricane season begins, when a hurricane approaches, when the storm is in your area, and what to do after a hurricane leaves your area.

### [Hurricane Infographics \(NWS\)](#)

Consists of infographics to print out and share. The infographics provide information and strategies during hurricane season.

### [The National Risk Index](#)

The National Risk Index is an online mapping application from the Federal Emergency Management Agency (FEMA) that identifies communities most at risk from 18 natural hazards. This application visualizes natural hazard risk metrics and includes data about expected annual losses from natural hazards, social vulnerability, and community resilience.

### [Saffir-Simpson Hurricane Scale](#)

A 1 to 5 rating based on a hurricane's maximum sustained wind speed. The scale does not take into account other potentially deadly hazards such as storm surges, rainfall flooding, and tornadoes. It estimates potential property damage.

### [TxSSC/TEA Hurricane Quick Reference Guide for School Administrators](#)

School colleges in the Texas coastal region benefit from year-round planning for hurricanes due to the enormous potential for impact on their operations. A crucial step in this planning process is making sure the college Multi-Hazard Emergency Operations Plan is up-to-date and addresses all five phases of emergency management: Prevention, Preparedness, Mitigation, Response, and Recovery. TxSSC has prepared a [Hurricane Quick Reference Guide for School Administrators](#) to assist in their planning efforts.