Tornado
Appendix to the Severe Weather Annex

December 2024

Purpose and Scope

Purpose

This Tornado Appendix identifies specific tasks necessary before, during, and after a tornadic event.

Scope

This document applies to the campus and surrounding community, including first responder agencies. All college staff, including adjunct faculty and part time 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 tornado?

A tornado is a narrow, violently rotating column of air that extends from a thunderstorm to the ground. Because wind is invisible, it is hard to see a tornado unless it forms a condensation funnel made up of water droplets, dust, and debris (Severe Weather 101, n.d.)

Specific Actions Taken Before, During, and After Incident

BEFORE a Tornado Incident	
Task	**Responsible Role**
Identify areas suitable for use as the best available shelter-in-place areas for tornadoes. **Select interior rooms with no exterior glass windows or doors**.	Manager of EH&S and Emergency Management
Secure loose objects vulnerable to high winds.	Grounds Manager
Cut down or trim trees that may be in danger of falling on people or buildings.	Grounds Manager
Monitor weather changes from official sources.	Administration
Have a plan to cancel any activities with little notice.	Administration
Ensure that all storage buildings are properly anchored to avoid being displaced by high winds.	Grounds Manager
NOAA Weather Radio are in place and can be constantly monitored.	Sr. Director of PP
If given a warning within a suitable amount of time, move all occupants to a first floor small interior room in the center of a building. • Avoid rooms with large-span roofs such as cafeterias, agriculture barns, and gymnasiums. • Close all interior and exterior doors.	Manager of EH&S and Emergency Management
Develop a plan with clear benchmarks for when to evacuate portable buildings and when to pause or cancel outdoor events. • Refer to National Weather Service: Lightning Safety and Outdoor Sports Activities for outdoor events guidance. • The National Weather Service recommends moving staff and students from portable buildings when a severe thunderstorm or tornado **watch** is issued. A *warning* is considered *too late*.	Athletic Trainer
Determine rally points for students and staff to relocate if separated.	AC Chief of Police

DURING a Tornado Incident	
Task	**Responsible Role**
Notify all staff members of tornadic activity and maintain communications throughout the event.	Public Information Officer
Remain in the best available areas for shelter-in-place. • Avoid rooms with large-span roofs such as cafeterias, agriculture barns, and gymnasiums. • Keep everyone away from windows and exterior doors.	Faculty & Staff
Require that staff check hallways, restrooms, and other common areas and direct everyone to the best available areas for shelter-in-place.	Faculty & Staff
Dial 911 if assistance is needed from emergency response agencies.	AC Chief of Police
Monitor official sources for changing weather conditions.	Administration
Ensure that district personnel are prepared to transition into a Unified Command structure with outside response agencies if needed.	AC Chief of Police

AFTER a Tornado Incident	
Task	**Responsible Role**
Evacuate damaged buildings and carefully consider utility hazards.	Sr. Director of PP
Conduct damage assessment activities.	Sr. Director of PP
Request transportation resources for evacuation (if necessary).	Sr. Director of PP
Implement the reunification plan (if necessary).	Manager of EH&S and Emergency Management
Report any injuries or building damages to district administrators.	Sr. Director of PP
Dial 911 if assistance is needed from emergency responders.	AC Chief of Police
Check for downed power lines or broken utilities, restrict access to the area, and report to the utility company.	Sr. Director of PP
Avoid walking through standing water, as it may be electrically charged from downed power lines.	Faculty & Staff
Repair any damage starting with the most critical repairs.	Sr. Director of PP
Initiate and coordinate public information activities with local response agencies. • Consider transitioning into a Joint Information Center (JIC).	Public Information Officer
Document any assistance provided to other districts or agencies for potential reimbursement.	VP of Business Affairs
Take video and photographs of damages for insurance and reimbursement purposes.	Sr. Director of PP Designee
Conduct an after-action review (AAR).	AC Chief of Police
Develop and implement an Improvement Plan (IP) based on findings from the AAR.	Manager of EH&S and Emergency Management

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 more than 50–60 mph.

Lightning – Lightning is a giant spark of electricity in the atmosphere between clouds, the air, or the ground.

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

National Severe Storms Laboratory (NSSL) – The National Severe Storms Laboratory (NSSL) is a federal research laboratory under NOAA’s Office of Oceanic and Atmospheric Research. NSSL serves as a national resource for severe weather research and works collaboratively with the National Weather Service to ensure that forecasters have the knowledge, capabilities, and technologies to effectively communicate accurate, timely, and actionable forecasts and warnings of extreme weather to the public and commerce.

National Weather Service (NWS) – The National Weather Service (NWS) 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 life of the national economy.

NOAA Weather Radio – NOAA Weather Radio All Hazards (NWR) 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.

Severe Thunderstorm – A thunderstorm is classified as “severe” when it contains one or more of the following: hail one inch or greater, winds gusting more than 50 knots (57.5 mph), or a tornado.

Tornado Warning – A tornado warning is issued by your local NOAA National Weather Service Forecast Office meteorologists who watch the weather 24 hours a day, 7 days a week over a designated area. This means a tornado has been reported by spotters or indicated by radar and there is a serious threat to life and property to those in the path of the tornado. A tornado warning indicates that you should ACT NOW to find safe shelter! A warning can cover parts of counties or several counties in the path of danger.

Tornado Watch – A tornado watch is issued by the NOAA Storm Prediction Center meteorologists who watch the weather 24/7 across the entire U.S. for weather conditions that are favorable for tornadoes and severe weather. It defines a cluster of counties where tornadoes and other kinds of severe weather are possible in the next several hours. It does not mean tornadoes are imminent, just that you need to be alert, and be prepared to go to a safe shelter if tornadoes do happen or a warning is issued. A watch can cover parts of a state or several states. Watch and prepare for severe weather and stay tuned to NOAA Weather Radio to know when warnings are issued.

Wireless Emergency Alerts (WEA) – Wireless Emergency Alerts (WEAs) are another way to rapidly provide emergency notifications to the public. WEAs can be automatically sent to mobile devices without the need for a subscription to a service or the download of an app.

Additional Resources

NOAA Severe Weather 101 – Tornadoes
The NOAA National Severe Storms Laboratory (NSSL) is a federal research laboratory under NOAA's Office of Oceanic and Atmospheric Research. NSSL's research spans weather radar, tornadoes, flash floods, lightning, damaging winds, hail, and winter weather.

NWS and Partners Publications and Brochures
The National Weather Service (NWS) provides publications and brochures that address various weather-related topics. This site also includes teaching aids for educators and weather-related activities for students. Materials are available at no cost and can be downloaded and printed.

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.

Tornado Preparedness Tips for School Administrators
Written by the Storm Prediction Center in Norman, Oklahoma, this outlines how to prepare a tornado safety plan, advance strategies on how to prepare for tornadoes, and what to do when a tornado threatens or a tornado warning is issued, and what to do after the tornado.