

**StormReady
Hazardous Weather Plan
Support Document 12 to
Annex A Warning**



RECORD OF CHANGES

StormReady Hazardous Weather Plan

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STORMREADY HAZARDOUS WEATHER PLAN

I. INTRODUCTION

A. StormReady program

In 1998, the National Weather Service (NWS) established StormReady. StormReady is a national program that encourages communities to take a proactive approach to improving local hazardous weather operations by providing clear-cut guidelines for emergency managers. StormReady is a program by which communities can help implement procedures to reduce the potential impacts from natural disaster events. The program focuses on improving communication and severe weather preparedness.

Nearly 90% of all presidential declared disaster are weather related, leading to approximately 500 deaths per year, and nearly \$14 billion in damage. A StormReady university should be better prepared to respond before a natural disaster strikes. The StormReady program is intended to:

- Improve the timeliness and effectiveness of hazardous weather warnings for the campus community.
- Provide detailed and clear recommendations that help emergency managers establish and improve effective hazardous weather operations.
- Help justify costs and purchases that may be needed to support emergency response and hazard mitigation plans.
- Provides an image incentive for communities that are recognized as StormReady.

B. Becoming StormReady

To be recognized as a StormReady university, University of Texas at Arlington (UTA) needs to meet the same criteria as a large city. The guidelines, as established by NWS, are as follows:

- Incorporate our community's severe weather threats into our hazard mitigation and emergency response plans.
- Establish a 24-hour Local Warning Point (LWP) and Emergency Operations Center (EOC).
- Establish multiple ways to receive severe weather warnings, forecasts and alert the campus.
- Create a system that monitors weather conditions locally.
- Promote the importance of readiness through seminars, severe weather spotter training and by conducting emergency exercises.
- Create a hazardous weather plan that describes our local warning system, warning dissemination, evacuation and sheltering, campus closure, EOC activation, storm spotter activation, and reporting of damage to NWS. This document is Support Document 12 to Annex A Warning.

II. ACRONYMS

ARC	American Red Cross
Arlington	City of Arlington
EAS	Emergency Alert System
EOC	Emergency Operations Center
LWP	Local Warning Point
NOAA	National Oceanic and Atmospheric Administration
NWS	National Weather Service
SOC	State Operations Center
UTA	University of Texas at Arlington

III. LOCAL WARNING SYSTEM & ACTIVATION CRITERIA

A. Receiving warnings

UTA may receive hazardous weather warnings from the following:

1. NWS weather products
 - a. NWS disseminates weather forecasts, watches, and warnings via the National Oceanic and Atmospheric Administration (NOAA) Weather Wire Service, which is a satellite communications system that broadcasts to specialized receiver terminals. NWS watches and warnings are transmitted to the State Operations Center (SOC). The SOC, as the State Warning Point, retransmits these weather messages to communities, including UTA, by the Texas Law Enforcement Telecommunications System. Some of the weather messages that are provided are:
 1. Flood and flash flood watches and warnings.
 2. Severe weather watches and warnings.
 3. Tornado watches and warnings.
 4. Winter weather advisories.
 - b. NOAA weather radio. UTA also receives NWS weather warnings disseminated by NOAA weather radio on tone-alert radios located in residence halls, departments, UTA dispatch, and emergency management office.
 - c. City of Arlington (Arlington) also provides weather input.
2. Emergency Alert System (EAS)
 - a. EAS is intended to provide a means for government to provide emergency warning and instructions to the public. UTA will receive EAS messages that contain warning information broadcast by:
 1. Federal authorities or agencies,

2. state government, and
 3. local governments.
- b. Incoming EAS messages are received on commercial radio or television stations monitored by officials on campus and at the Arlington.

B. Dissemination of warnings to the university

1. In the initial stages of an emergency situation, UTA dispatch, as the LWP for the university, should within the limits of the authority delegated to it:
 - Determine what type of warning should be issued.
 - Formulate a warning (using pre-scripted messages where possible).
 - Disseminate the warning using appropriate systems.

The LWP should execute the warning by activating one or more of the warning systems. The public information officer may disseminate emergency public information directly to the media.

2. The systems described below are used to issue warnings and instructions to the campus community. To facilitate dissemination of warning and instructions to the campus, a set of pre-scripted warning messages and public information messages suitable for use in likely emergencies have been developed. They are included in Support Document 8 to Annex A, Warning of the UTA emergency plans. These pre-scripted messages may be used as written or tailored for specific circumstances.

a. Outdoor warning system

1. The outdoor warning system consisting of three siren arrays that covers 100 % of the campus' geographic area and population.
2. Sirens are an alerting device. During siren activation, individuals are expected to turn on their radio or television to obtain further information. UTA's outdoor warning system does have the capability for providing verbal instructions.

b. Route alerting & door-to-door warning

The campus may be warned by route alerting using vehicles equipped with sirens/lights and address systems/megaphones. Response personnel going door-to-door may also deliver warnings. Both of these methods are effective in delivering warnings, but they are labor-intensive and time-consuming and may be impractical for large areas. The following departments maintain vehicles equipped for route alerting:

- Police Department
- Environmental Health & Safety
- Office of Facilities Management

c. MavAlert

The university has the ability to alert faculty, staff, and students through this system. It can notify an individual's campus email, cell phone, home email, landline, and text messaging capable devices.

d. Fire audio network

The university has the ability to alert faculty, staff, and students when an event occurs within a building. The fire audio network may alert the campus of severe weather conditions, sheltering-in-place, evacuation, active shooter, or other hazards, or special conditions.

e. UTA website

The Office of Information and Technology has prepared an optimized website with minimal graphics to provide information to the university community during emergencies.

C. Activation of the local warning system

One or more elements of the UTA local warning system may be activated for any of the following reasons:

1. When the NWS issues a tornado warning or severe thunderstorm warning with the phrase, "destructive winds in excess of 70 mph (or higher) are likely with this storm" for central Arlington.
2. Trained storm spotters have reported a tornado that has the potential to affect central Arlington.

Reported hail of 1.25" in diameter or greater. (1 inch may be more appropriate for areas or events where large numbers of people are outdoors)

3. .
4. Other emergencies, as dictated by campus administration, UTA police department or elected official.

See Section IX for contact names and numbers to verify information before setting off the sirens for severe weather warning.

IV. EVACUATION & SHELTER PLANS

A. Evacuation

1. Evacuation is one means of protecting the campus community from the effects of a hazard. UTA is prepared to conduct both evacuations from known hazard areas and from unexpected incident locations.

2. The Office of Emergency Management, chief of police, and director of Environmental Health and Safety should work cooperatively with the Arlington to ensure a safe, efficient evacuation of the campus.

B. Shelter

1. UTA has ultimate responsibility for providing shelter and mass care to protect students. The American Red Cross (ARC) has been chartered under federal law to provide mass care to victims of natural disasters. UTA's efforts should be coordinated with ARC. Arlington, surrounding jurisdictions, other volunteer organizations, and religious groups may open shelters if ARC services are unavailable.

V. CAMPUS CLOSURE PROTOCOL

A. Weather closings

When severe weather may affect the university, the following procedure is used:

1. The vice president for administration and campus operations checks campus road conditions with UTA police department and facilities management staff.
2. The assistant vice president for media relations (or the senior media relations officer) checks:
 - a. NWS update.
 - b. Television and online news reports of other institutional closings. Key institutions include Arlington Independent School District, Fort Worth Independent School District, Tarrant County College District, Texas Christian University, and University of North Texas.
3. The vice president for administration and campus operations and the assistant vice president for media relations confer with senior university administrators about campus road conditions, forecasts, and other institutional closings.
4. The vice president for administration and campus operations confers with the university president and notifies the assistant vice president for media relations of the closing decision.
5. The vice president for communications and the assistant vice president for media relations notify the Department of University Communications staff to launch MavWire and Trailblazer Extra editions and social media postings announcing campus closing. Assistant vice president for media relations notifies the media relations officer to begin the notification process.
6. The assistant vice president for media relations updates the emergency information line with the closing message.

7. The Department of University Communications updates the UT Arlington main web page with closing information.

B. Channels for campus closure

The following is a list of channels for information regarding campus closures:

1. www.uta.edu
2. MavAlert
3. Emergency information line
1-866-258-4913
4. Local television stations

WFAA (ABC)
KXAS (NBC)
KDFW (Fox)
KTVT/KTXA (CBS)

5. Local AM radio stations

KLIF (570)
WBAP (820)
KRLD (1080)
KFCD (990)
KFXR (1190)
KTCK (1310)

6. Local FM radio stations

KZPS (92.5)
KLIF (93.3)
KSCS (96.3)
KBFB (97.9)
KLUV (98.7)
KPLX (99.5)
KJJK (100.3)
KDGE (102.1)
KDMX (102.9)
KVIL (103.7)
KISS (106.1)

VI. EOC ACTIVATION

EOC activation

The UTA EOC, when activated, provides general guidance and direction, provides emergency information to the campus community, and coordinates resource support for emergency operations. An activated EOC monitors an incident that has the potential to become an emergency. The EOC is activated at a level necessary to carry out the tasks that need to be performed. The level of activation may range from a situation monitoring operation with minimal staff, to a full activation involving all department agencies, volunteer organizations, and liaison personnel.

VII. REPORTING DAMAGE TO THE NWS

Damage reports

Basic storm damage reports from storm spotters on the ground provide the NWS with real time and relevant information that aids forecasting. The number for reporting storm damage to NWS is 817-429-2631.

VIII. GLOSSARY OF WEATHER TERMS

Advisories. An advisory is issued for weather that is expected to be a disruption to the normal routine and an inconvenience, but is not expected to be life threatening. Advisories may be issued for wind, snow, sleet, and freezing rain, among other things. Lead-times are generally 6 to 12 hours.

Bankfull. The maximum height of the river before it overflows its banks.

Blizzard. Sustained winds or frequent wind gusts of 35 mph or more with considerable snow or blowing snow (visibility less than $\frac{1}{4}$ of a mile), and usually cold temperatures (generally below 20 F).

Blowing snow. Wind driven snow that causes reduced visibility and sometimes significant drifting. Blowing snow may be snow that is falling or snow that was once loose on the ground and has been picked up by the wind.

Cold front. The forward edge of an advancing mass of cold air that pushes under a mass of warm air. Cold fronts often cause precipitation; water vapor in the rising warm air condenses and forms clouds, often resulting in heavy rain, thunderstorms, hail, or snow. Winter cold fronts can cause temperatures to drop significantly. Summer cold fronts reduce humidity as drier, cooler air displaces the humid, warmer air.

Cumuluous cloud. A cauliflower shaped cloud with a flat base and sharp edges. This cloud is a rising column of condensing air. As the cloud and cloud droplets grow in size, the base will begin to gray.

Downburst. A sudden rush of cool air toward ground with speeds over 70 mph and can produce damage similar to that of a tornado. It usually occurs near the leading edge of the storm and may occur in heaving rain.

Drifting snow. Falling snow or loose snow on the ground blown into mounds, causing uneven snow depths. The wind carries the snow near the ground, causing little or no restriction to visibility.

Flash flood. A flood that occurs suddenly during or after heavy rain.

Flood crest. The highest stage that a river reaches during a flood event.

Flood stage. The stage of the river at which, property damage begins to occur. Flood stage often differs from bank full. The river may overflow its banks into a flood plain without reaching flood stage.

Freezing rain. Rain that falls onto a surface with a temperature at or below freezing.

Funnel cloud. A funnel-shaped cloud that extends from a towering cumulus or thunderstorm. It is associated with a rotating column of air that has condensed to form a cloud.

Gust front. The leading edge of the thunderstorm's downdraft of air as it spreads out away from the storm. It is associated with gusty cool winds and often preceded that thunderstorm's rain by several minutes.

Heavy snow. Snow accumulating 7 inches or more in 12 hours or less, 10 inches, or more in 24 hours.

River flood. A flood on a large river that takes a tremendous amount of rain and usually develops over a period of one to two days.

Severe thunderstorm. A thunderstorm producing damaging winds or winds greater than 58 mph and/or Reported hail of 1.25" in diameter or greater. (1 inch may be more appropriate for areas or events where large numbers of people are outdoors)

Sleet. Pellets or granules of frozen rain. Sleet occurs when rain falls into a layer of air with temperatures below freezing. Sleet can accumulate on roadways creating a hazard to motorists.

Snow. A prediction of snow indicates a steady fall of snow for several hours or more. It may be modified by terms such as "light," "intermittent," or "occasional" to indicate lesser intensity or periodic snow.

Snow flurries. Light snow falling for short durations, producing no accumulation to a dusting.

Snow showers. Snow falling at varying intensities for brief periods, some accumulation is possible.

Snow squalls. Brief, intense snow showers accompanied by strong gusty winds; accumulations may be significant.

Statements. Statements are issued to update current weather situations or to highlight significant changes to come. Statements are also used to explain why watches, advisories, and/or warnings have been issued.

Towering cumulus cloud. A cumulus cloud that continues to grow so that its height is taller than or equal to its width. It is the first stage of growth into a thunderstorm.

Thunderstorm (cumulonimbus). A towering cumulus cloud that has continued to grow in height and width and now lightning is occurring. The storm may extend 5 to 10 miles high into the atmosphere and 5 to 25 miles across. Heavy rains and gusty winds often accompany the storm.

Tornado. A violently rotating column of air in contact with the ground that extends to the base of a thunderstorm. Its size may range from a few yards across to a mile wide.

Urban flood. Flooding due to rapid runoff of rain off pavement (rain cannot soak into the ground so it runs downhill) into poor drainage areas.

Warm front. The forward edge of an advancing mass of warm air that rises over and replaces a retreating mass of cooler air. As it rises, the warm air-cools and the water vapor in it condenses, usually forming steady rain, sleet, or snow.

Warnings. The hazard (severe thunderstorm, tornado, flash flood, etc.) is imminent. The probability of occurrence is extremely high. Warnings are issued based on eyewitness reports or clear signatures from remote sensing devices such as Doppler radar. Lead-times for thunderstorm type events are generally 30 minutes or less. Lead-times for winter storms and river floods may be up to 24 hours.

Watches. Meteorologists have determined that conditions appear right for the development of the hazard. Watches generally cover larger areas than warnings. In the case of thunderstorms, less than 30% of the watch area may experience the hazard. However, with larger storms, such as winter storms, the entire watch area may be affected. Severe thunderstorms and tornado watches are usually issued 1 to 3 hours before the event begins. With flash floods, lead-times may be 3 to 12 hours. For winter storm watches, lead-times are generally 6 to 12 hours.

Wall cloud. This cloud appears as an abrupt lowering of the cloud base from the relatively flat rain-free base; and is attached to a thunderstorm and may be rotating. Tornadoes often descend from this portion of the thunderstorm.