



Goal

This Safety Training Program will provide information on the actions employees should take during severe weather.

Objective

After completing this Safety Training Program, the participant will be able to:

- Define watches and warnings as they apply to tornadoes and thunderstorms
- List the actions employees should take during severe weather
- List the elements of a severe weather plan

Background

Severe thunderstorms are common in all parts of Texas. Sometimes tornadoes form in these storms, and tornadoes are one of nature's most destructive forces. Each year, an average of 800 tornadoes are reported in the United States, and these result in as many as 80 deaths and more than 1,500 injuries. Tornado winds range from 40-72 miles per hour (mph) in an F-1 tornado to 261-318 mph in an F-5 tornado.

Lightning is also a danger with severe thunderstorms. Lightning causes more than 100 deaths and hundreds of injuries annually in the United States. The number of deaths and injuries resulting from lightning is higher than the number resulting from tornadoes and hurricanes combined.

Watches and Warnings

If severe weather is anticipated in an area, the National Weather Service issues watches and warnings, which are relayed via the National Oceanic and Atmospheric Administration (NOAA) Weather Radio, commercial radio, and television. If there is a chance of severe weather in your area, be sure to have one of these on in the work area to monitor the situation. These definitions apply to the watches and warnings:

- **Tornado Watch** - tornadoes are possible in the area. Remain alert for approaching storms.
- **Tornado Warning** - a tornado has been sighted or indicated by weather radar. If a tornado warning is issued for your area and the sky appears

threatening, move to a predesignated place of safety.

- **Severe Thunderstorm Watch** - severe thunderstorms are possible in the area.
- **Severe Thunderstorm Warning** - severe thunderstorms are occurring in the area.
- **Flash Flood Watch** - flooding is possible in the area.
- **Flash Flood Warning** - flooding is occurring in the area.



Think of it like this: a **watch** means the weather is being **watched for** in your area; a **warning** means the weather **is occurring** in your area.

If a tornado warning is issued for your area, take the following actions based on your location:

If in a small building:

- Stay away from windows, doors, and outside walls.
- Do not open the windows (opening the windows does not protect buildings from tornado damage).
- Go to a basement, if one is available.
- If there is no basement, go to an interior room on the lowest floor, such as a closet or bathroom.
- Cover yourself in blankets, towels, or anything that will protect you from flying debris.

If in a school, hospital, factory, or shopping center:

- Go to interior rooms and halls on the lowest floor.
- Stay away from areas enclosed with glass.
- Stay away from areas with wide-span roofs such as auditoriums, gymnasiums, cafeterias, and warehouses.
- Cover yourself in blankets, towels, or anything that will protect you from flying debris.

If in a high-rise building:

- Go to an interior small room or hall.
- Stay away from exterior walls or areas enclosed in glass.

Indoors:

- Don't use the telephone except for emergencies, as lightning can travel through phone lines.
- Avoid using electrical appliances.
- Avoid contact with metal surfaces.

Outdoors:

- If possible, move inside a sturdy building or a hard-top automobile with the windows rolled up.
- Avoid getting under objects that act as lightning rods such as tall isolated trees, telephone poles, or large radio antennas.
- Seek shelter in low places such as ravines or under a thick growth of relatively small trees.
- Stay away from tractors, metal farm equipment, and small vehicles such as bicycles.

Stay away from wire fences, metal pipes, and rails. If you feel your hair standing on end or feel a tingling sensation, squat as close to the ground as possible.

Don't lie flat on the ground!

If a severe thunderstorm watch or warning is issued, be alert to changing conditions and listen for further information.

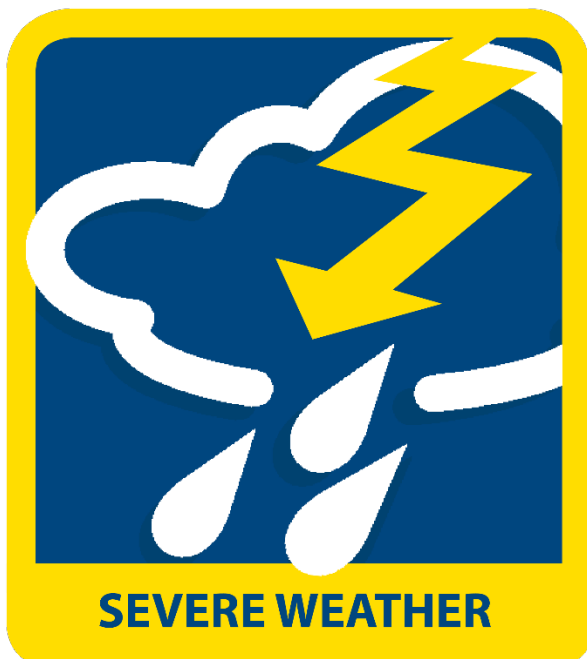
If a flash flood watch or warning is issued, be alert for changing conditions. Do not drive through low water crossings.

Severe Weather Plan

When developing a severe weather plan, be sure to include:

- Actions employees must take when severe weather occurs
- Assembly locations for employees within the workplace
- Procedures for accounting for employees once the severe weather threat has passed

Each employer also should consider purchasing an emergency weather radio to keep up with changing weather conditions.



Review Questions

1. In a high-rise building during severe weather, you should move to a small interior room or hallway.
 - a. True
 - b. False
2. If there is a chance that severe thunderstorms may occur in your area, the National Weather Service will issue a:
 - a. severe thunderstorm warning
 - b. tornado watch
 - c. severe thunderstorm watch
 - d. tornado warning
3. To protect yourself from lightning when outdoors, you should do the following:
 - a. move to shelter under a tree
 - b. lie flat on the ground
 - c. get on a bicycle and ride out of the area
 - d. seek shelter in a low place such as a ravine
4. If you are caught in a building during a tornado, open the windows to avoid damage to the structure.
 - a. True
 - b. False
5. When developing a severe weather plan, include:
 - a. actions employees must take
 - b. assembly locations for employees during the severe weather
 - c. procedures to account for all employees once the threat has passed
 - d. all of the above

Answers

1. A
2. Any of the above
3. D
4. B
5. D

For more information on weather safety and other topics, see the Service Lloyds website. In Risk Control's Training Materials section, we have additional resources including:

- Flash Flood Alert – Toolbox Talk
- Tornado Safety – Toolbox
- Lightning Safety
- Heat Illness Prevention

Remember to practice Safety; don't learn it by accident.

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