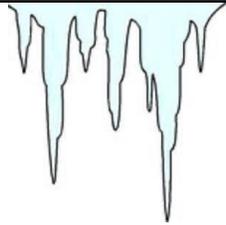




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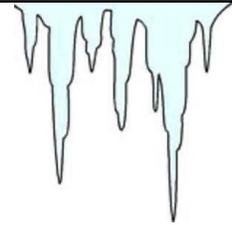
Training Circular

Volume 15 Issue 3



March

Severe Texas Weather



Where can you go and get hot weather, cold weather flooding, tornadoes, snow, hurricanes, thunderstorms, lightning, and even a beautiful summer day? TEXAS! Severe weather in the Lone Star State can range from a flash flood to something more deadly such as a tornado. That's why it's always important to be prepared for anything that severe weather can bring. Especially in the spring, these dangerous weather events can take lives, and destroy neighborhoods.



You would expect by now living in Texas, we would be better prepared for severe weather and not wait until the last minute. However, the truth is the majority of Texans are not prepared. Early preparation can save lives and property when disastrous weather occurs.

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:

Blizzard Warning - Issued for winter storms with sustained or frequent winds of 35 mph or higher with considerable falling and blowing snow that frequently reduces visibility to one quarter of a mile or less. These conditions are expected to prevail for a minimum of 3 hours.

Winter Storm Watch - means that severe winter conditions, such as heavy snow and ice, may affect your area, but its occurrence,

location and timing are still uncertain.

Winter Storm Warning - when 4 or more inches of snow or sleet is expected in the next 12 hours, 6 or more inches within 24 hours, or 1/4 inch or more of ice accumulation is expected.

Winter Weather Advisory - informs you that winter weather conditions are expected to cause significant inconveniences that may be hazardous. If caution is exercised, advisory situations should not become life-threatening.

Tornado Watch - tornadoes are possible in the area. Remain alert for approaching storms.

Tornado Warning - a tornado has been indicated by weather radar. If a tornado warning is issued for your area, and the sky appears threatening, move to a pre-designated 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 - means it is possible that rains will cause flash flooding in the specified area. Be alert and prepared for a flood emergency.

Flash Flood Warning - means flash flooding is occurring or is imminent in the specified area. Move to safe ground immediately.

Employee Actions

Avoid traveling when the weather service has issued advisories.

If a tornado warning is issued for your area, take the following actions.

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 building:

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

***If indoors:***

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

If outdoors:

- If possible, move inside a sturdy building or a hard-top automobile with the windows rolled up.

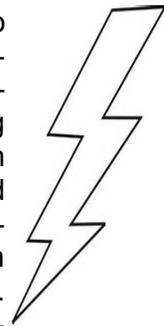
- Avoid getting under objects that act as lightning rods such as tall isolated trees, telephone poles, or large radio antennas.
- Seek shelter in low places such as ravines or under a thick growth of relatively small trees.
- Stay away from tractors, metal farm equipment, and small vehicles such as bicycles.
- Stay away from wire fences, metal pipes, and rails.

Severe Weather Action Planning

Blizzard Winds of 35 miles per hour (mph) or more with snow and blowing snow reducing visibility to less than 1/4 mile for 3 hours or more.

Tornadoes are one of nature's most destructive forces. Each year, an average of 800 tornadoes is 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 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. Only about 10 per-



cent of those struck by lightning are killed. Of the 90 percent who survive a lightning strike, the majority suffer lifelong severe injury. Those injuries are primarily neurological, with a wide range of symptoms, and are difficult to diagnose.

The number of deaths and injuries resulting from lightning is higher than the number resulting from tornadoes and hurricanes combined. In fact, lightning is the number two storm-related killer, surpassed only by flooding. Lightning also causes about \$5 billion in U.S. economic losses annually.

But the real tragedy of lightning's devastation is that protecting yourself is easy, although the simple safety precautions are sometimes inconvenient. It requires diligence and continual reinforcement and encouragement. Lightning safety is a multi-step process, with each step providing an increasing level of protection – plan around the weather, and have a lightning safety plan.

Flash floods can strike any time and any place, with little or no warning. In mountainous or flat terrain, distant rain may be channeled into gullies and ravines, turning a quiet stream side



campsite or wash into a rampaging torrent in minutes. City streets can become rivers in seconds.

Shelter from Lightning

The best shelter commonly available against lightning is a large, fully enclosed, substantially constructed building, e.g., your typical house. Substantially constructed means it has wiring and plumbing in the walls.

Once inside, stay away from any conducting path to the outside. Stay off corded telephones. Stay away from electrical appliances, lighting, and electric sockets. Stay away from plumbing. Do not watch lightning from windows or doorways. Inner rooms are generally safer.

If you can not get to a house, a vehicle with a solid metal roof and metal sides is a reasonable second choice. As with a house, avoid contact with conducting paths going outside: close the windows, lean away from the door, put your hands in your lap, and do not touch the steering wheel, ignition, gear shifter, or radio. Convertibles, cars with fiberglass or plastic shells, and open framed vehicles don't count as lightning shelters.

30-30 Rule

If you are planning to be outside, watch the weather forecast and know your local

weather patterns. Make plans around the weather to avoid the lightning hazard. If you are outside when a storm approaches, stay near proper shelter and use the '30-30 Rule' to know when to seek proper shelter.

When you see lightning, count the time until you hear thunder. If you count 30 seconds or less, seek proper shelter. If you can not see the lightning, wait 30 minutes or more after last hearing thunder before you leave shelter.

Places to Avoid

If you can not get to proper lightning shelter, at least avoid the most dangerous locations and activities. Those are:

- Higher elevations
- Wide-open areas including sports fields
- Tall isolated objects like trees, poles, and light posts
- Water-related activities: boating, swimming (includes indoor pools), and fishing.
- Golfing
- Wide-open vehicles like farm tractors, open construction vehicles, riding lawnmowers, golf carts (even with roofs), etc.
- Unprotected open buildings like picnic pavilions, rain shelters, and bus stops.
- Metal fences and metal bleachers.

Last Resort Safety Measures

If you've made several bad decisions and are outside far away from proper shelter and lightning threatens, proceed to the safest location. If lightning is imminent, it will sometimes give a very few seconds of warning.

Sometimes your hair will stand up on end, or your skin will tingle, or light metal objects will vibrate, or you will hear a crackling sound. If this happens and you're in a group, spread out so there are several body lengths between each person. If one person is struck, the others may not be hit and can give first aid. Once you've spread out, use the lightning crouch: put your feet together, squat down, tuck your head, and cover your ears. Minimize ground contact. Don't lay down.

When the immediate threat of lightning has passed, continue heading to the safest spot possible. Remember, this is a desperate last resort. You are much safer having followed the previous steps and not putting yourself into this high-risk situation. All deaths from lightning result from cardiac arrest or respiratory failure. The recommended first aid treatment for cardiac arrest is CPR and for respiratory failure, mouth-to-mouth resuscitation.

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. Observe these flash flood safety rules. They could save your life.

- Keep alert for signs of heavy rain (thunder and lightning), both where you are and upstream. Watch for rising water levels.
- Know where high ground is and get there quickly if you see or hear rapidly rising water.
- Be especially cautious at night. It's harder to recognize the danger then.
- Do not attempt to walk across or drive through flooded areas or roadways. You will not know the depth of the water.
- If your vehicle stalls, abandon it and seek higher ground immediately.

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. Staff members who have access to the internet, should regularly check the local weather conditions to ensure they make their plans according to the weather.

Daylight Savings

Sunday, March 8, 2015, 2:00 AM clocks are turned forward 1 hour.

References:

<http://www.weather.gov/safety>

<http://www.tdi.texas.gov/wc/safety/videoresources/index.html>

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