

# Severe Weather Awareness For the Rio Grande Valley

March 2 – 8, 2014



# Be Prepared For Severe Weather !!

Have a **NOAA Weather Radio** - is the best means to receive warnings from the National Weather Service. It will automatically alert you when a watch or warning is issued for your area.

## Listen for:

**Watch:** Conditions are favorable for the **development of severe weather** in your area

**Warning:** Life threatening thunderstorm **is occurring or likely to occur**. Take shelter, imminent danger to life and property

## Have an Emergency Kit Available:

- Flashlights
- Extra batteries
- NOAA Weather Radio
- Extra food & water
- Extra clothing to keep dry
- Tissues/ paper towels
- Personal hygiene products
- Fire extinguisher

- Mobile phone charger
- Blankets /sleeping bags
- Non-perishable food
- First- aid supplies
- Extra medicine
- Extra baby items

### **For Pets:**

Have extra water, food and shelter.



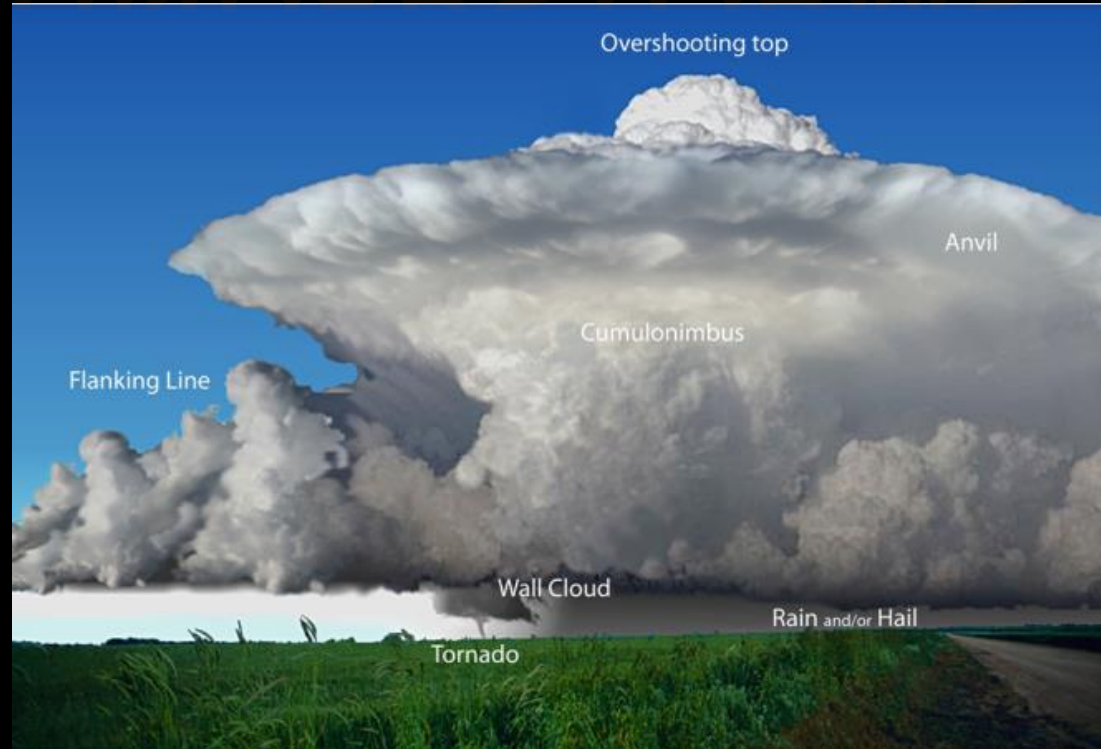
# SEVERE THUNDERSTORMS

A thunderstorm is “severe” if it produces:

- Hail at least one inch in diameter
- Winds of 58 mph or stronger
- A tornado.

## Thunderstorm Threats:

- Damaging Wind
- Large Hail
- Tornadoes
- Lightning
- Flash Flooding



## How do severe thunderstorms impact the Rio Grande Valley?

Severe thunderstorms are rare in the Rio Grande Valley. On average, fewer than 30 days a year have thunderstorms; severe thunderstorms occur on less than a third of these days. Most common between late February and mid June, with late October and November a secondary period for activity. Can occur any time of day, but are most common in the afternoon and evening hours.



# WHAT IS A DOWNBURST?

A downburst, also known as straight line winds, is a small area of rapidly descending air beneath a thunderstorm. Downbursts can exceed 125 mph and are responsible for most thunderstorm wind damage. Nationwide, they cause more damage and are more frequent than tornadoes. Downed trees are the number one cause of the fatalities associated with thunderstorm winds.



## Safety tips if there are strong winds...

- Stay indoors
- Stay away from windows
- Once the storm has passed, do not approach fallen power lines

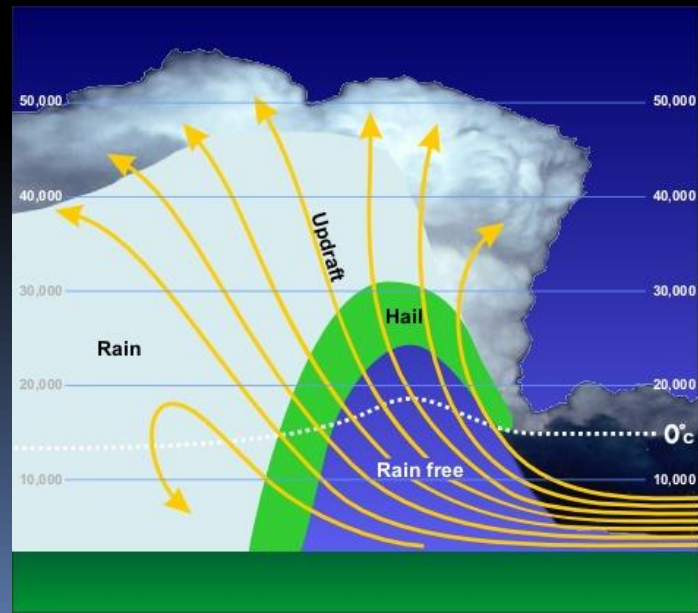
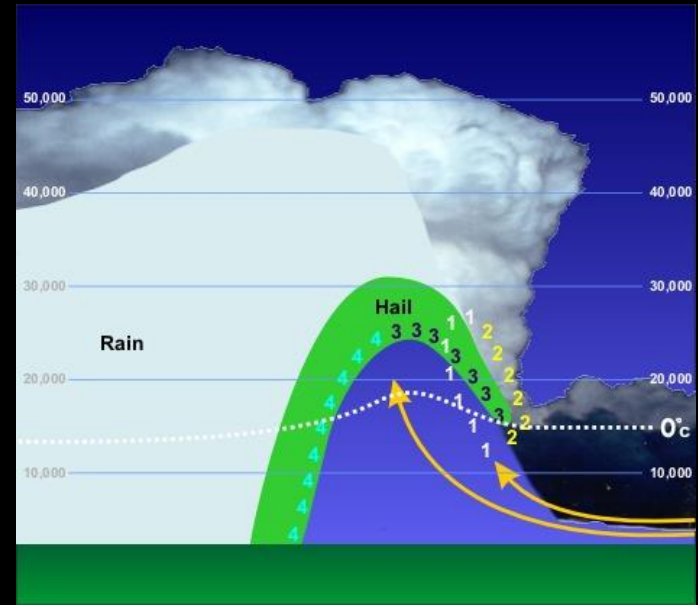


Above: Downburst life cycle in central Oklahoma. ©Bill Bunting

# HAIL

## What is Hail?

Rising air (updraft) within a storm carries water droplets to heights where they freeze. Ice particles grow in size, then become too heavy to be supported by the updraft and fall toward the ground as hail "stones". If the storm is tilted and the updraft is strong, melting hail that falls back into the updraft and be lifted above the freezing layer. Giant hailstones are carried through the updraft multiple times before falling to the ground.



©UCAR



# HAILSTORM SAFETY



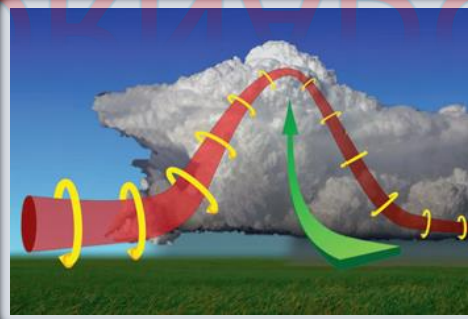
- Remain indoors
- Stay away from windows
- Account for all family members, bring dogs inside.
- If on the road and there's time, seek cover under a gas station or car wash canopy
- If on the road and cannot find safety, cover your eyes, get onto the floor face down or lay down on the seat with your back to the window.
- Put small children under you, and cover their eyes.



# HOW TORNADOES FORM



Before thunderstorms develop, winds change direction and increase in speed with altitude. This creates an invisible, horizontal spinning effect in the lower atmosphere.



Rising air within the thunderstorm updraft tilts the rotating air from horizontal to vertical.



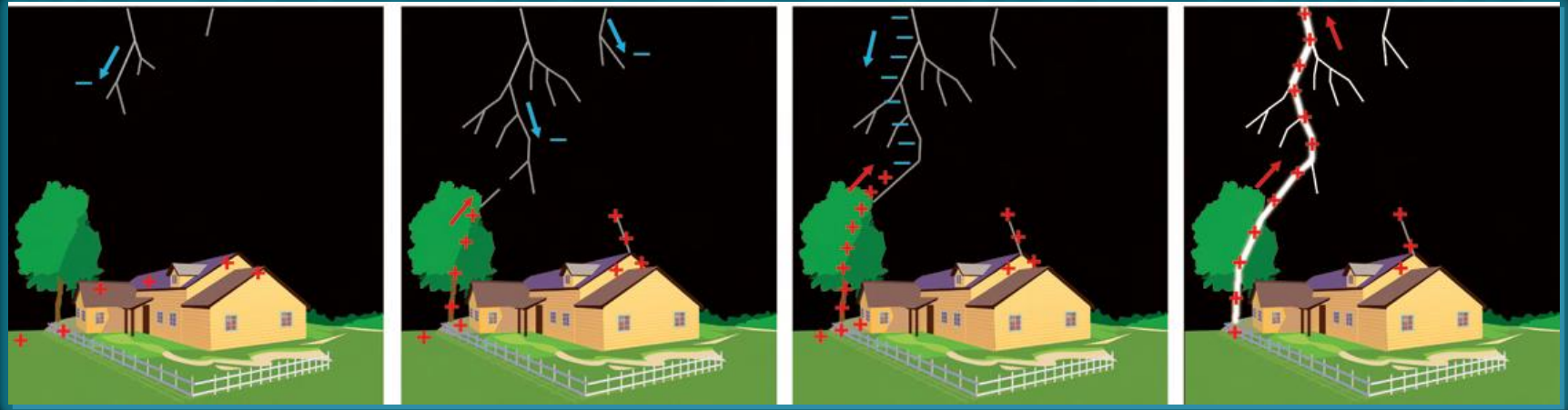
An area of rotation, 2 to 6 miles wide, now extends through much of the storm. Most tornadoes form within this area of strong rotation.

## Tornado Safety

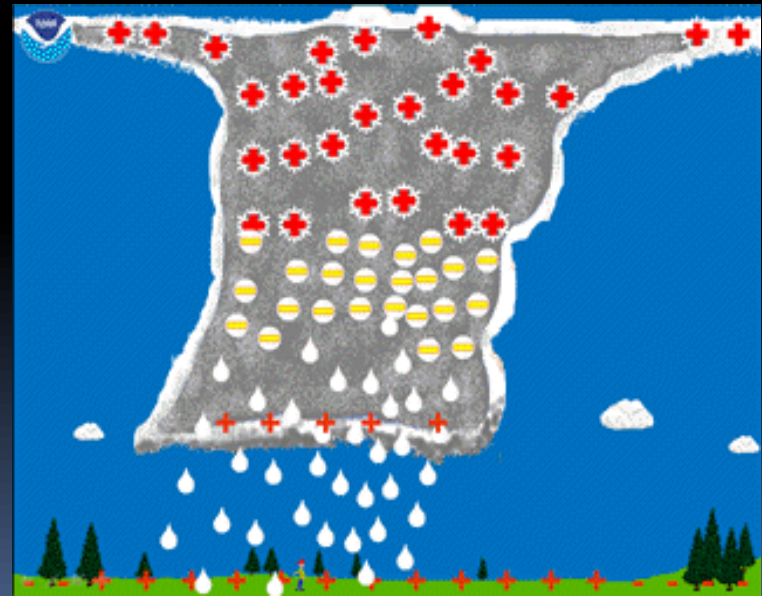
- Go to the lowest floor of the building in a interior room away from windows. Get under a sturdy piece of furniture, and protect your head.
- Mobile homes are not safe during tornadoes. Abandon mobile homes. Even if tied down, they will offer no protection in a tornado.
- If driving and cannot avoid an oncoming tornado, pull over and park. Put your head down and cover your head with your hands or soft items. If there's time, get into a nearby ditch or depression.
- If caught outside, lie flat in a nearby ditch or depression.



# WHAT CAUSES LIGHTNING?



Various types of precipitation, from ice crystals to rain and melting hail, exist in all thunderstorms. As the storm grows, smaller particles are carried towards the top of the cloud and become positively charged; the denser pellets remain in the mid/lower level of the cloud and become negatively charged. The negative charge near the cloud base induces a positive charge on the ground. Differences in charge within cloud and between cloud and ground are known as polarity; when polarity becomes larger than the insulating capacity of the air, a rapid discharge of electricity results – **Lightning!**



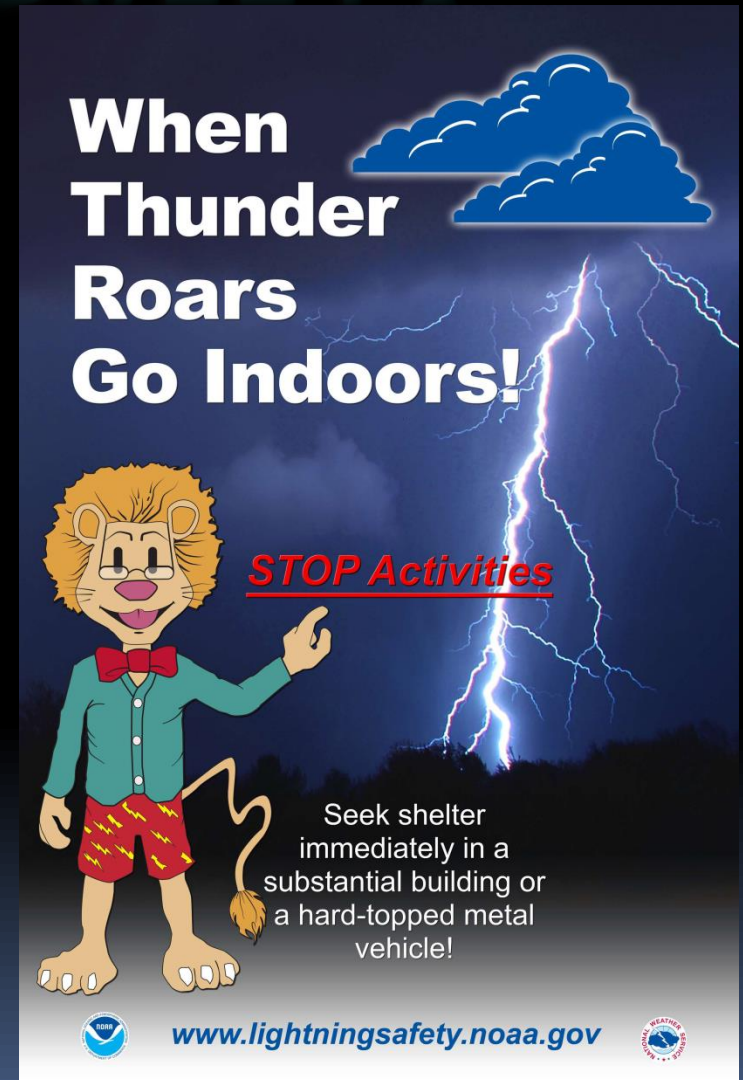


# LIGHTNING SAFETY

## Leon Says...

### Other Tips:

- Get out of the water, off the beach and out of small boat.
- If caught inside a boat, crouch down in the center of the boat, away from the metal hardware.
- Stay away from open doors or bathtub.
- If you feel your skin tingle or your hair stand on end, lightning may be about to strike.



**When Thunder Roars Go Indoors!**

**STOP Activities**

Seek shelter immediately in a substantial building or a hard-topped metal vehicle!

[www.lightningsafety.noaa.gov](http://www.lightningsafety.noaa.gov)

The poster features a cartoon lion character named Leon, wearing a green shirt, a red bow tie, and red shorts with yellow lightning bolts. He is pointing towards the text. The background is a dark blue sky with a large blue lightning bolt striking down from a dark blue cloud. The NOAA logo is visible in the bottom left corner, and the National Weather Service logo is in the bottom right corner.

***If you hear thunder, you are close enough to the storm to be struck by lightning.***

# Additional Information...

Click the Links Below for More

- ❑ [NWS Brownsville/Rio Grande Valley Severe Weather Awareness Guide](#)
- ❑ [NWS Brownsville/Rio Grande Valley Website](#)
- ❑ [NOAA Weather Radio in the Rio Grande Valley](#)
- ❑ [Texas Severe Weather Awareness](#)
- ❑ [NOAA Lightning Safety](#)
- ❑ Facebook: [US.NationalWeatherService.Brownsville](#)
- ❑ Twitter: [@NWSBrownsville](#)
- ❑ YouTube: [NWSBrownsville](#)

**BE PREPARED...**

**BE SAFE...**

**BE A FORCE OF NATURE!**

