

Storm Ready



Tornado

What causes A Tornado?

Thunderstorms develop in warm, moist air in advance of eastward-moving cold fronts. These thunderstorms often produce large hail, strong winds, and tornadoes. Tornadoes in the winter and early spring are often associated with strong, frontal systems that form in the Central States and move east.

During the spring in the Central Plains, thunderstorms frequently develop along a "dryline," which separates very warm, moist air to the east from hot, dry air to the west. Tornado-producing thunderstorms may form as the dryline moves east during the afternoon hours.

Along the front range of the Rocky Mountains, in the Texas panhandle, and in the southern High Plains, thunderstorms frequently form as air near the ground flows "upslope" toward higher terrain. If other favorable conditions exist, these thunderstorms can produce tornadoes.

Chester County EMA participates yearly in the Severe Weather Awareness week program. That is conducted in *the* late winter before spring.

During that week there is a Tornado Drill that is conducted thru the NOAA weather radios, we urge citizens, County Buildings, Schools and Day Cares to participate. The NOAA Weather monitors are activated to perform safety procedures in the event of a Tornado.

STAY INFORMED ABOUT THE STORM

By listening to NOAA Weather Radio, commercial radio, and television for the latest tornado **WATCHES** and **WARNINGS**.

NOAA WEATHER RADIO IS THE BEST MEANS TO RECEIVE WARNINGS FROM THE NATIONAL WEATHER SERVICE!

The National Weather Service continuously broadcasts updated weather warnings and forecasts that can be received by NOAA Weather Radios sold in many stores. The average range is 40 miles, depending on topography. Your National Weather Service recommends purchasing a radio that has both a battery backup and a tone-alert feature which automatically alerts you when a watch or warning is issued.

If you need assistance in programming your NOAA Weather Radio call Chester County EMA at 803-377-4632.

What to Listen For...

- **TORNADO WATCH:** Tornadoes are possible in your 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 becomes threatening, move to your pre-designated place of safety.
- **SEVERE THUNDERSTORM WATCH:** Severe thunderstorms are possible in your area.
- **SEVERE THUNDERSTORM WARNING:** Severe thunderstorms are occurring.

Environmental Clues

Look out for:

- Dark, often greenish sky
- Wall cloud
- Large hail
- Loud roar; similar to a freight train

A DISASTER SUPPLIES KIT SHOULD INCLUDE:

- A 3-day supply of water (one gallon per person per day) and food that won't spoil
- one change of clothing and footwear per person
- one blanket or sleeping bag per person
- a first-aid kit, including prescription medicines emergency tools, including a battery-powered NOAA Weather Radio and a portable radio, flashlight, and plenty of extra batteries
- an extra set of car keys and a credit card or cash
- special items for infant, elderly, or disabled family members.

<http://www.noaa.gov/>

Hurricane



Hurricanes

Hurricanes start when warm, moist air from the ocean surface begins to rise rapidly, where it encounters cooler air that causes the warm water vapor to condense and to form storm clouds and drops of rain. The condensation also releases latent heat, which warms the cool air above, causing it to rise and make way for more warm humid air from the ocean below.

As this cycle continues, more warm moist air is drawn into the developing storm and more heat is transferred from the surface of the ocean to the atmosphere. This continuing heat exchange creates a wind pattern that spirals around a relatively calm center, or eye, like water swirling down a drain.

Converging Winds Create Hurricanes

converging winds near the surface of the water collide, pushing more water vapor upward, increasing the circulation of warm air, and accelerating the speed of the wind. At the same time, strong winds blowing steadily at higher altitudes pull the rising warm air away from the storm's center and send it swirling into the hurricane's classic cyclone pattern.

High-pressure air at high altitudes, usually above 30,000 feet (9,000 meters), also pull heat away from the storm's center and cool the rising air. As high-pressure air is drawn into the low-pressure center of the storm, the speed of the wind continues to increase.

As the storm builds from thunderstorm to hurricane, it passes through three distinct stages based on wind speed:

- **Tropical depression**—wind speeds of less than 38 miles per hour (61.15 kilometers per hour)
- **Tropical storm**—wind speeds of 39 mph to 73 mph (62.76 kph to 117.48 kph)
- **Hurricane**—wind speeds greater than 74 mph (119.09 kph)

- **Tropical Storm Watch** - Tropical storm conditions with sustained winds from 39 to 73 mph **are possible** in your area within the next 36 hours.
- **Tropical Storm Warning** - Tropical storm conditions **are expected** in your area within the next 24 hours.
- **Hurricane Watch** - Hurricane conditions (sustained winds greater than 73 mph) **are possible** in your area within 36 hours.
- **Hurricane Warning** - Hurricane conditions **are expected** in your area in 24 hours or less.

<http://www.nws.noaa.gov> - NOAA Weather Center

<http://www.nhc.noaa.gov/> - National Hurricane Center