

Understanding Hurricanes

Hurricanes are low-pressure weather systems with wind speeds of 74 mph and higher. Even with today's sophisticated computer-forecasting models, a hurricane's path, strength and potential for damage cannot be exactly predicted. That is why preparing your family and possessions for the worst possible situation is a smart move.

As hurricanes approach land, a hurricane watch or warning is issued for coastal and inland residents in the storm's path.

- Hurricane watch: Indicates hurricane conditions are possible within 24 to 36 hours.
- Hurricane warning: Indicates hurricane conditions are expected within 24 hours.

Wind

The strongest winds in a hurricane are generally found on the right side of the hurricane's eye wall, the area closest to the center.

Coastal and other land areas experience the worst damage. Damage to structures, roofs and trees from wind and flying debris is common.

Once a hurricane makes landfall, winds begin to decrease and within 12 hours slow significantly. However, winds can remain at hurricane strength well inland.

Structures built to meet or exceed wind provisions have a much better chance of surviving.

Garage doors are frequently the first to fail. Windows should be storm-shuttered or covered with plywood.

Tornadoes

Hurricanes can spawn tornadoes, which generally occur in the right front quadrant of the storm and in thunderstorms embedded in the hurricane but not immediately near the center.

According to the National Hurricane Center, more than half of the land-falling hurricanes produce at least one tornado.

Tornadoes usually occur within 24 hours after landfall and within 150 miles of the coast. But they can occur well inland two or three days after landfall if a hurricane interacts with a cold front.

Tornadoes can also form in outer rain bands 100 miles to 150 miles from the center. They can generate winds up to 300 mph.

Gulf of Mexico hurricanes produce more tornadoes than Atlantic storms.

Water

Hurricanes have the potential to dump enormous amounts of rain, sometimes as much as 10 to 15 inches.

In addition, these storms can push huge walls of water – the storm surge – into coastal areas, causing catastrophic damage.

Storm surge

Surges can range from 4 feet to 6 feet in minimal hurricanes to greater than 20 feet in stronger storms. A storm surge can sweep across the coastline near landfall in a swath 50 to 100 miles wide.

In addition to the height of the surge itself, devastating waves can be present at the top of the surge.

Storm surge, not wind, is the greatest threat to life and property near the coast.

Flooding

According to records during the past 30 years:

- 23 percent of U.S. tropical cyclone deaths occur to people who drown in, or attempting to abandon, their cars.
- A person can be swept away by 6 inches of moving water.
- An automobile can be swept off the road in 12 inches of moving water.
- Rainfall is typically heavier with slower moving storms.