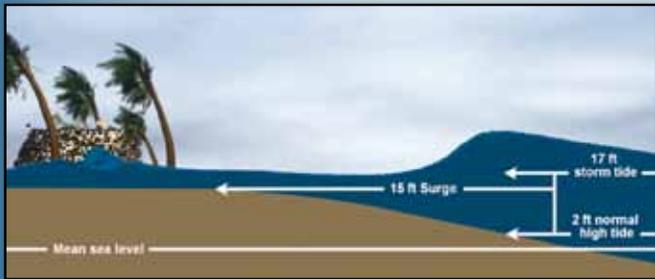


HURRICANE IMPACTS

Most people associate strong winds with hurricanes. While that is true, there are other impacts which are just as hazardous. Storm surge and coastal flooding, inland flooding, and tornadoes are all possible with a land-falling tropical system.

Storm Surge: Storm surge is an abnormal rise of water generated by a storm, over and above the predicted astronomical tides. Storm surge should not be confused with storm tide, which is defined as the water level rise due to the combination of storm surge and the astronomical tide. This rise in water level can cause extreme flooding in coastal areas particularly when storm surge coincides with normal high tide, resulting in storm tides reaching up to 20 feet or more in some cases. There are also other components of a hurricane storm surge, including storm motion, storm speed, and storm intensity.

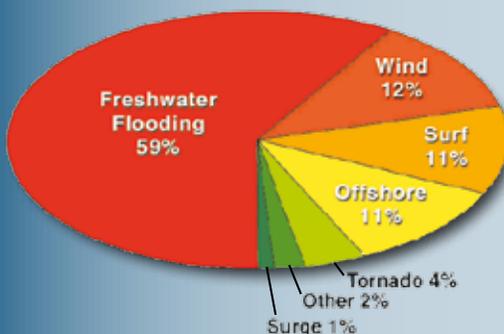


Shallow Slope



Steep Slope

Leading Causes of Tropical Cyclone Deaths in the U.S. 1970-1999



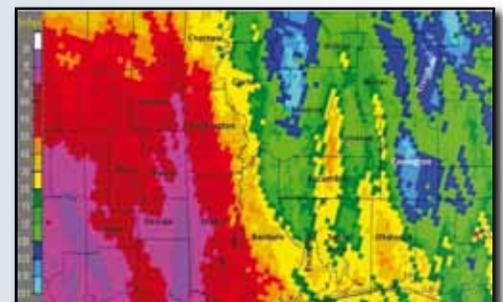
Source: Edward Rappaport - Chief, Technical Support Branch, Tropical Prediction Center

NEVER ATTEMPT TO DRIVE ACROSS A FLOODED ROADWAY!

Inland Flooding: In recent decades, inland fresh water flooding has become the most deadly hazard produced by tropical cyclones. Between 1970 and 1999, nearly 60% of the deaths due to floods associated with tropical cyclones occurred inland from the storm's landfall. Of that 60%, almost a fourth (23%) occurred when people drowned while in, or attempting to abandon, their cars.

The radar estimated total rainfall during Hurricane Isaac (Aug 2012) image shown easily illustrates the fact that very large rainfall totals can occur with tropical systems, even well inland away from the coast, that can easily result in flooding.

Hurricane Isaac Total Rainfall - Radar Estimated



Winds: Hurricane force winds can destroy buildings and mobile homes, down trees and power lines, and transform signs, roofing, and small items into dangerous flying missiles. Winds associated with a hurricane are most intense near the center of the storm. As a storm moves inland, winds rapidly decrease, but hurricane force winds can be felt as far as 150 miles inland. The stronger and faster the storm is moving, the further inland hurricane force winds will be felt.

Tornadoes: Landfalling tropical systems also produce tornadoes, adding to the destructive power of the storm. Tornadoes are most likely to occur in the right front quadrant of the hurricane, in rainbands far away from the center of the storm. However, they are possible near the eyewall. Tornadoes associated with tropical systems are generally less intense than those produced by supercell thunderstorms. When added to the larger area of hurricane-force winds, these tornadoes can still produce substantial damage and be potentially deadly.

