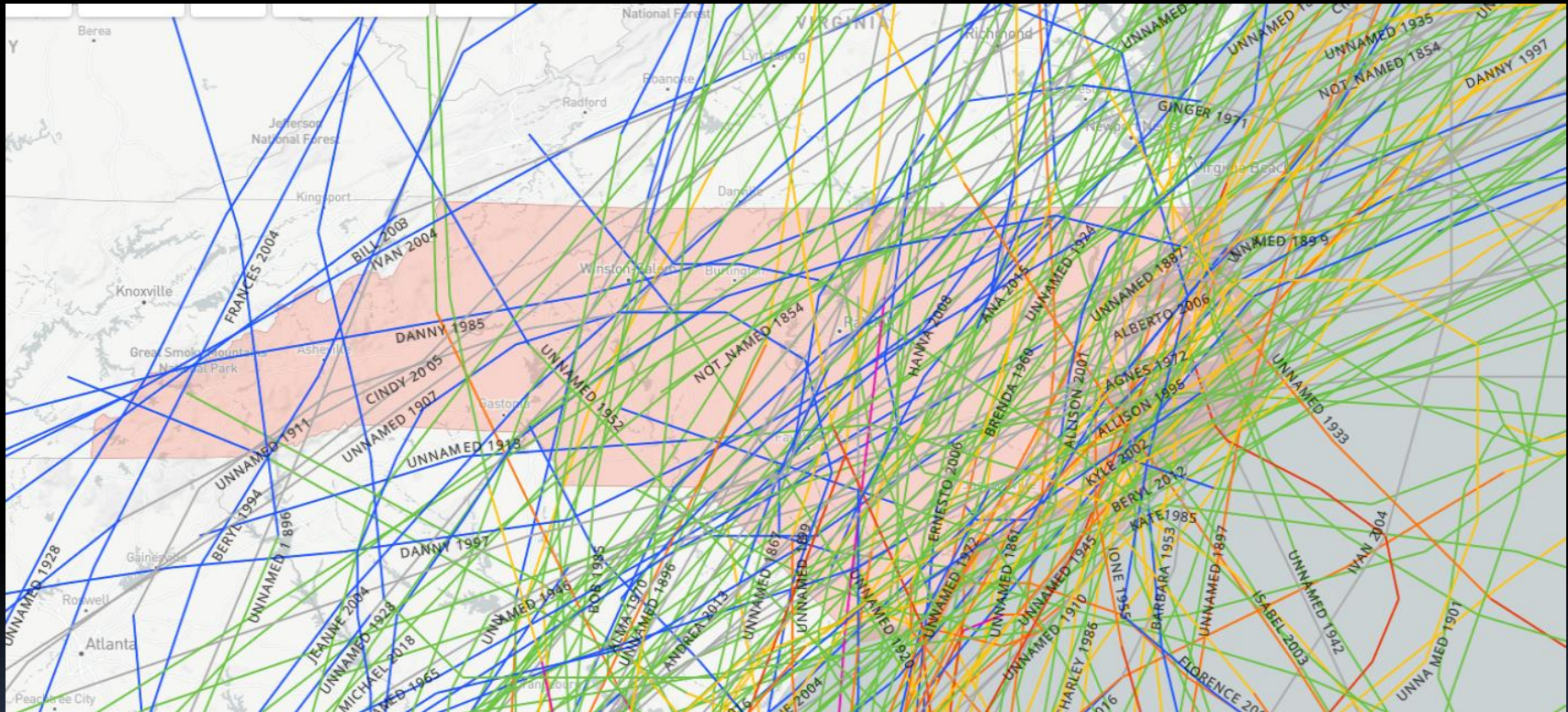


HURRICANES: A STATEWIDE CONCERN



Virginia Enzor NC4VA
Central Carolina SKYWARN Emergency Coordinator
NC Deputy AUXCOMM Coordinator

What is a Tropical Cyclone?

A **tropical cyclone** is a rotating, organized system of clouds and thunderstorms that originates over tropical or subtropical waters and has a closed low-level circulation.

Classification of tropical cyclone:

Tropical Depression - maximum sustained winds ≤ 38 mph

Tropical Storm – maximum sustained winds between 39-73 mph
given a name at this point

Hurricane – maximum sustained winds ≥ 74 mph and over

Saffir-Simpson Hurricane Wind Scale

Category 1 – 74-95 mph

Category 2 – 96-110 mph

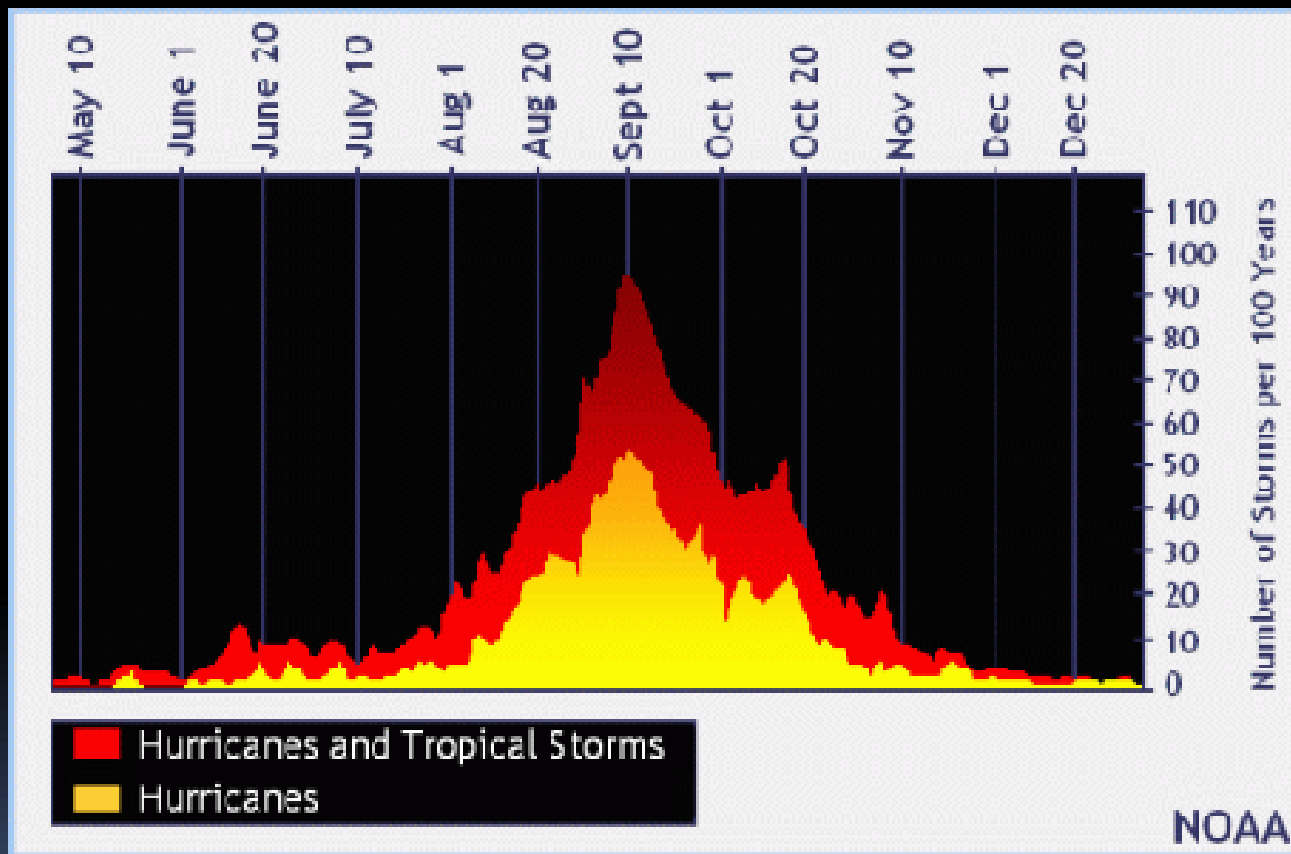
Category 3 – 111-129 mph

Category 4 – 130-156 mph

Category 5 – ≥ 157 mph

Atlantic Hurricane Season

June 1 – November 30



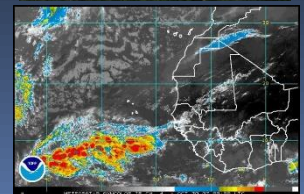
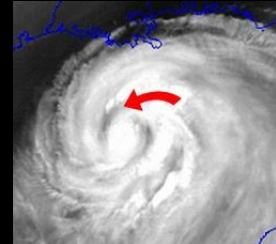
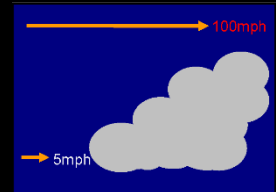
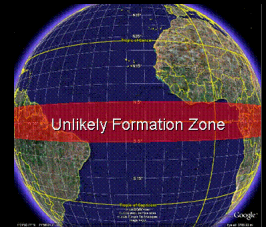
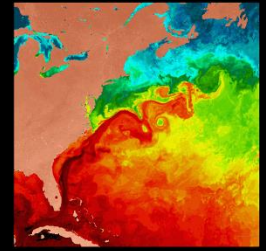
<https://www.weather.gov/media/tbw/1921/Climatology.pdf>

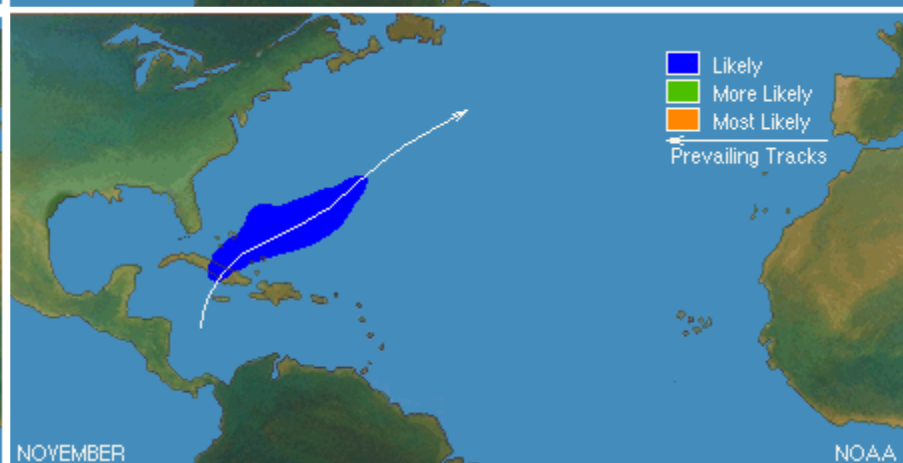
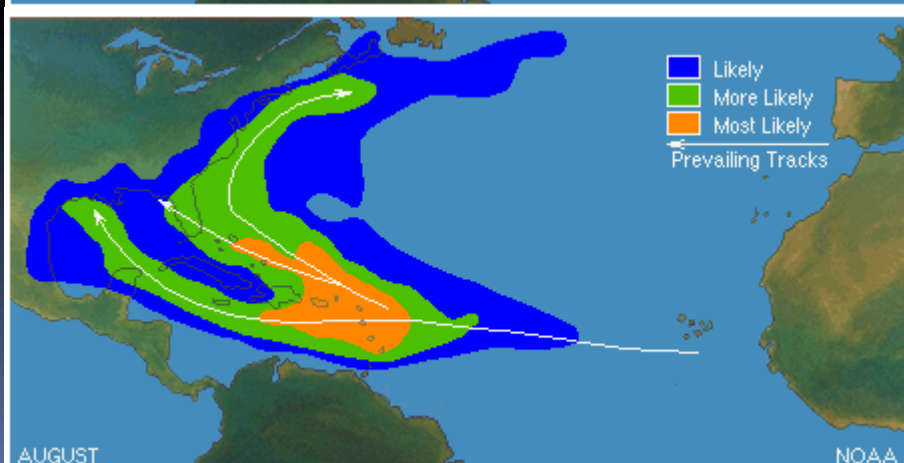
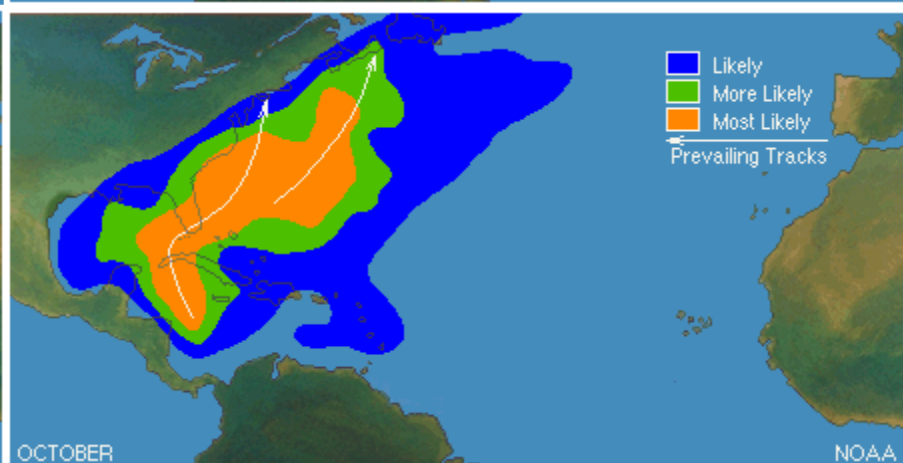
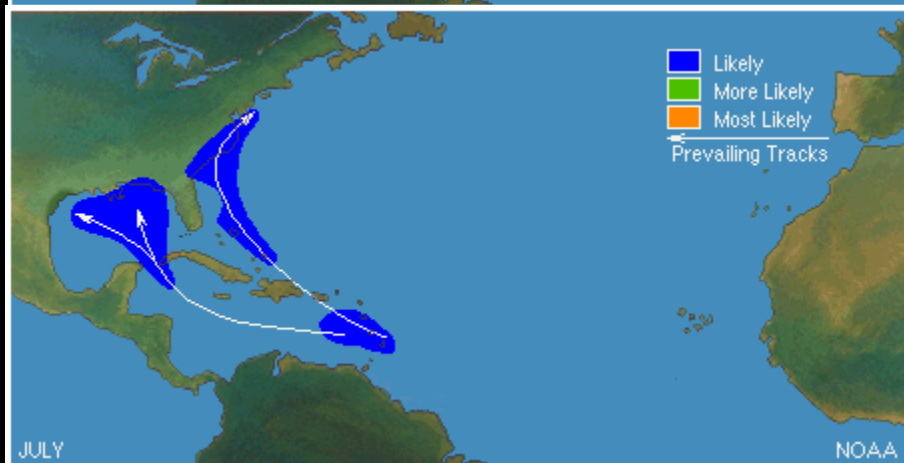
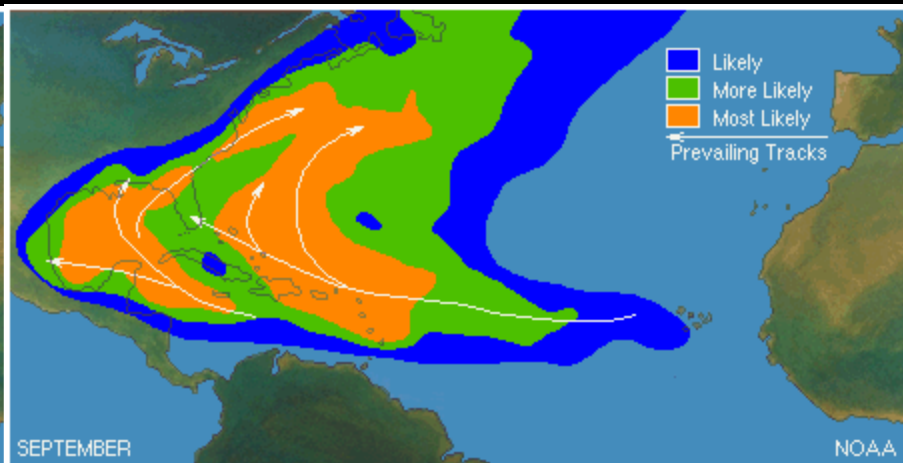
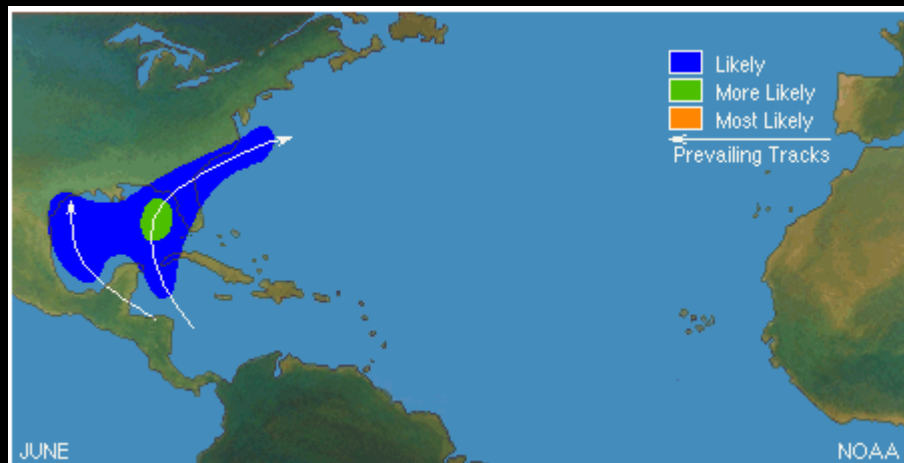
Development

Six Necessary Conditions for Development

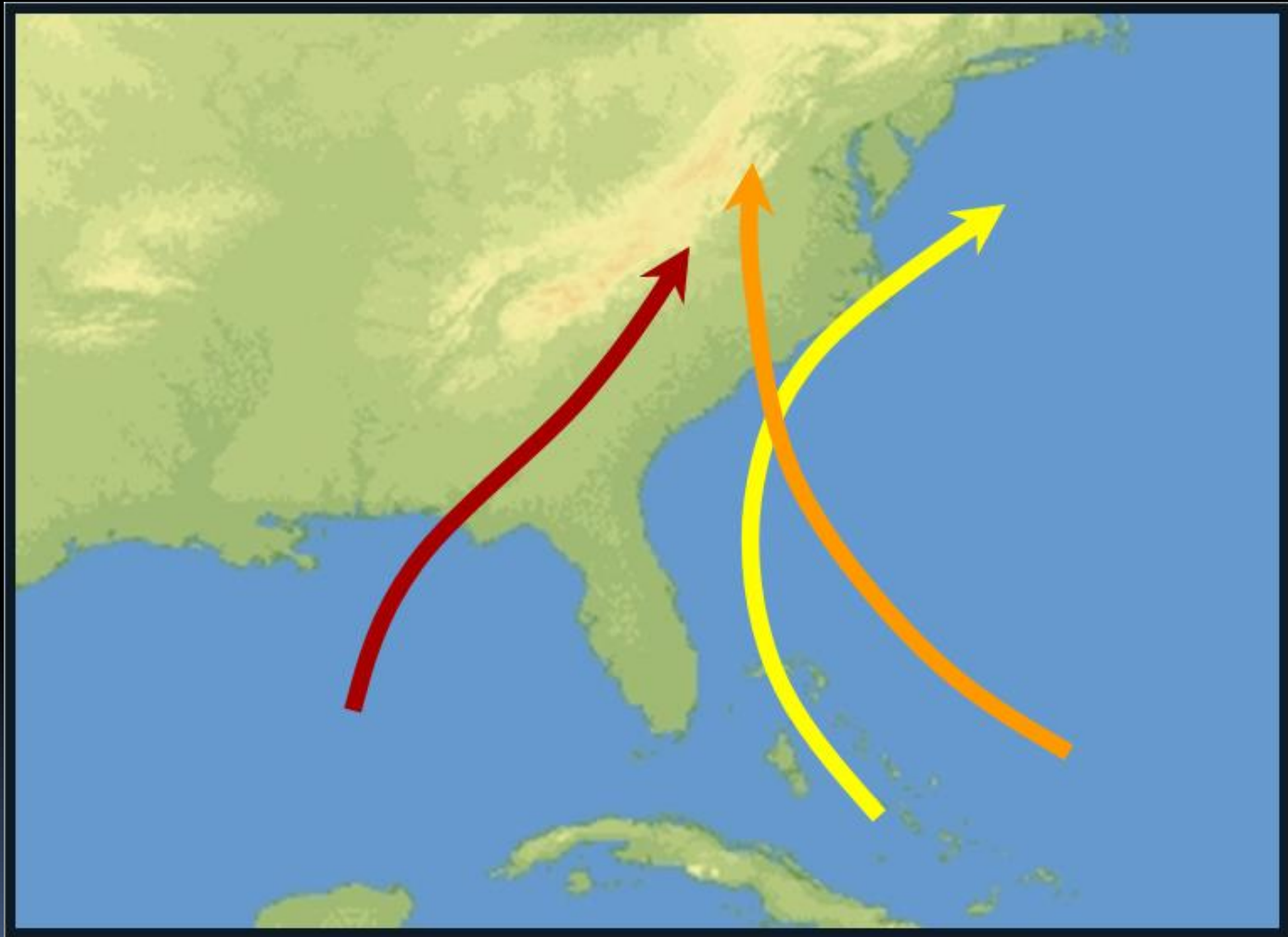
1. Warm ocean waters of **at least** 78°F (26°C)
2. At least 5° latitude from the equator
3. Low vertical wind shear
4. Moisture in the mid-troposphere
5. Unstable Conditions
6. Pre-existing disturbance

<https://climate.ncsu.edu/climate/hurricanes/development>





Typical Tropical Tracks in NC



Hurricane Threats

Storm Surge

Flash Flooding/Inland Flooding

Wind Damage

Tropical Tornadoes

Landslides/Mudslides



Carolina Beach cottages were damaged by Hurricane Hazel. STATE ARCHIVES OF NORTH CAROLINA

Storm Surge - the greatest threat to life and property along the coast

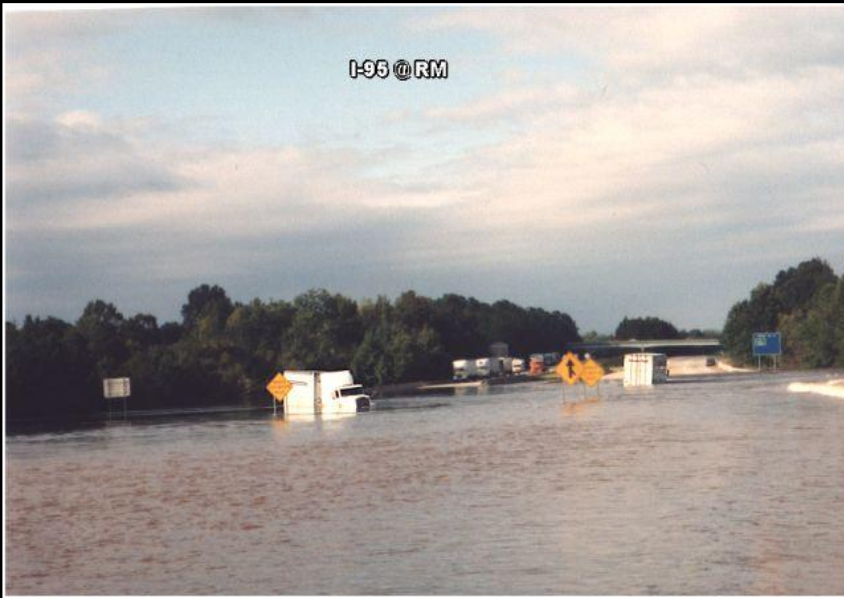
Hurricane Fran 1996 - Topsail Island was almost completely
overwashed by the storm tide which reached 12 feet in places



North Topsail Beach before Fran



North Topsail Beach after Fran



Inland Flooding

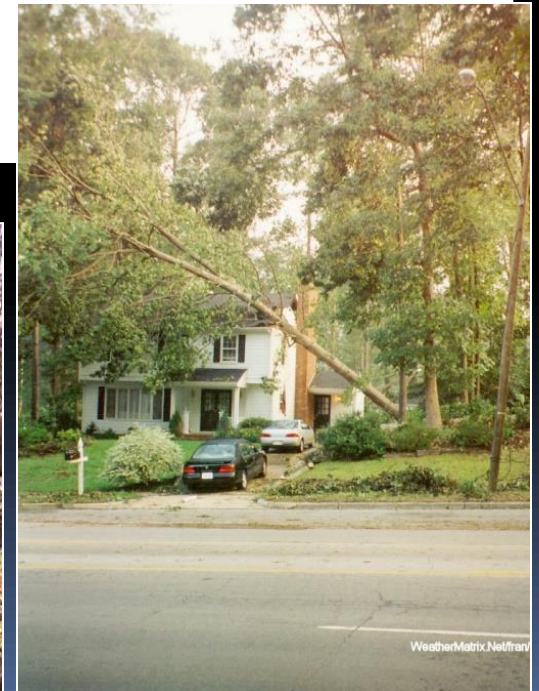


Livestock losses in Hurricane Floyd flooding



High Winds & Tropical Tornadoes

- ◆ Nearly 60% of landfalling hurricanes (1948-1986) spawned at least one tornado
- ◆ Nearly 30% developed before the storm reached the coastline (Hurricane Floyd produced numerous tornadoes over 12 hours prior to landfall)



Heavy rains can trigger landslides



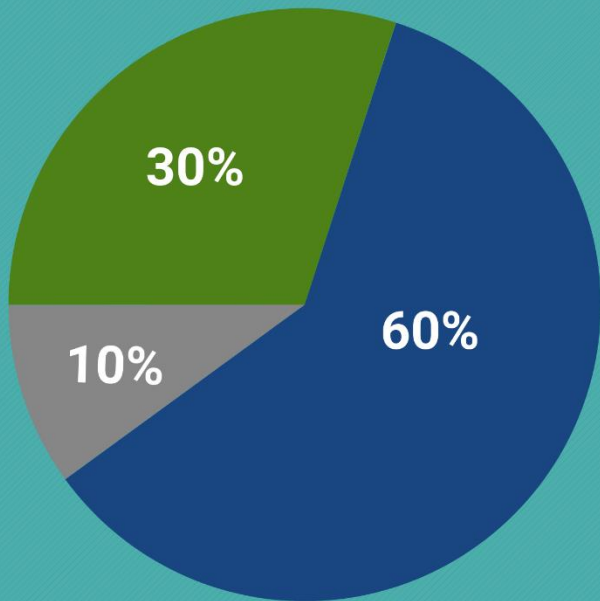
**Watauga County
Hurricane Frances**



http://www.geology.enr.state.nc.us/Landslide_Info/Landslides_hurricanes_frances_ivm_sept_2004.htm



2020 Atlantic Hurricane Season Outlook



■ Above-normal ■ Near-normal ■ Below-normal season

Season probability

Named storms
13-19

Hurricanes
6-10

Major hurricanes
3-6

Be prepared: Visit hurricanes.gov and follow @NWS and @NHC_Atlantic on Twitter.

May 2020

By the way Mother Nature, North Carolina is not accepting hurricanes this year. We already have a pandemic. Please check back with us in a couple of years.

