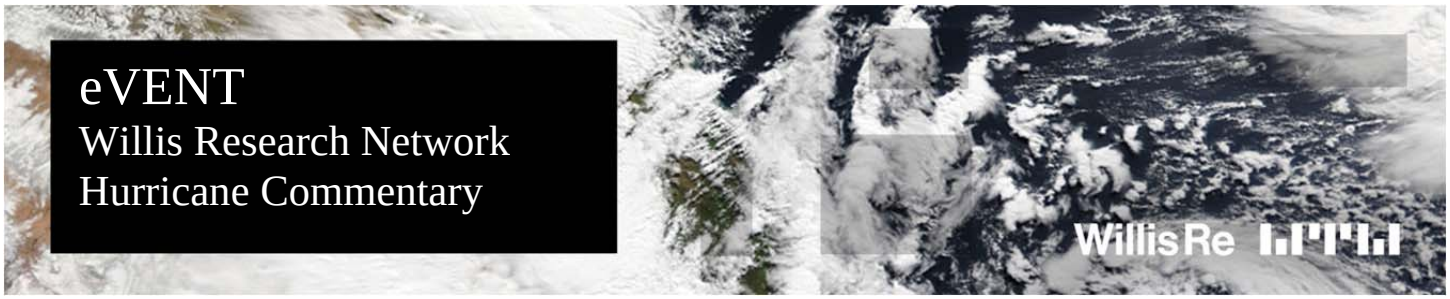

Hurricane Florence

Executive Summary

Despite a reduction in peak wind speed, FLORENCE is no less dangerous. The area of damaging winds has expanded, and storm surge of 15 feet is possible in places. Extreme rainfall is expected that could break State records. Flash flood potential extends far inland across North Carolina, South Carolina, Virginia and into Eastern Tennessee and West Virginia.

FLORENCE Date/Time	**11am EDT Sept 13, 2018**
Location	**33.4N, 75.5W**
Windspeed/Pressure	**105mph, 955mb**
Speed/Direction	**10mph NW**

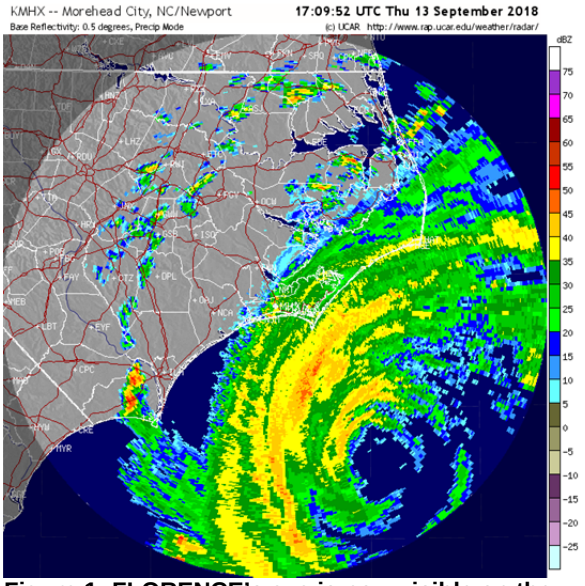

Figure 1: FLORENCE's eye is now visible on the U.S. radar network. Outer rain bands have reached the coast. Source: NOAA/NCAR.

Forecast Summary

FLORENCE is still shaping up to be one of the most dangerous storms ever to impact the U.S. Southeast. A slowing forward speed is setting the stage for a prolonged high-impact wind, rain and surge event.

FLORENCE did not manage to hold on to major hurricane status. The storm underwent an eyewall replacement cycle. This is where the tight eye of the storm collapses and is replaced by a second eye. This second eye is larger than the original eye. But FLORENCE was not able to complete the cycle and the second eye did not completely form (Figure 1). This left the storm with lower peak wind speeds.

Even though peak winds are now down to category 2 strength, FLORENCE is no less dangerous. The ocean has already been set into motion and will continue to pile up and spill onto land. Storm surge forecasts of up to 15 feet have not changed. Over the past 36 hours the area of damaging winds expanded substantially, meaning that a greater area will experience destructive winds.

Ocean temperatures are warm and winds aloft are light along the forecast track up to landfall. This suggests the storm should maintain its current intensity until it starts to feel the increased surface friction of land. FLORENCE's track is starting to come into focus (Figure 2). The storm will most likely stall on the North Carolina coast, then start inching its way southwestwards along the coasts of North and South Carolina before finally heading completely inland.

Extreme rainfall is expected. When FLORENCE stalls near the coast, half of the storm will remain over the ocean. This will allow the storm to pump moisture inland continuously for many hours. This is likely to smash state records with some estimates up to 35 inches for coastal locations. This will not just be a coastal event. This is a large and powerful storm that will fling moisture far inland. The possibility for flooding rains extends across most of North Carolina, South Carolina, and Virginia. As the moisture laden air is forced up the Appalachian Mountains, further rainfall will be wrung out, potentially bringing flash flooding far inland.

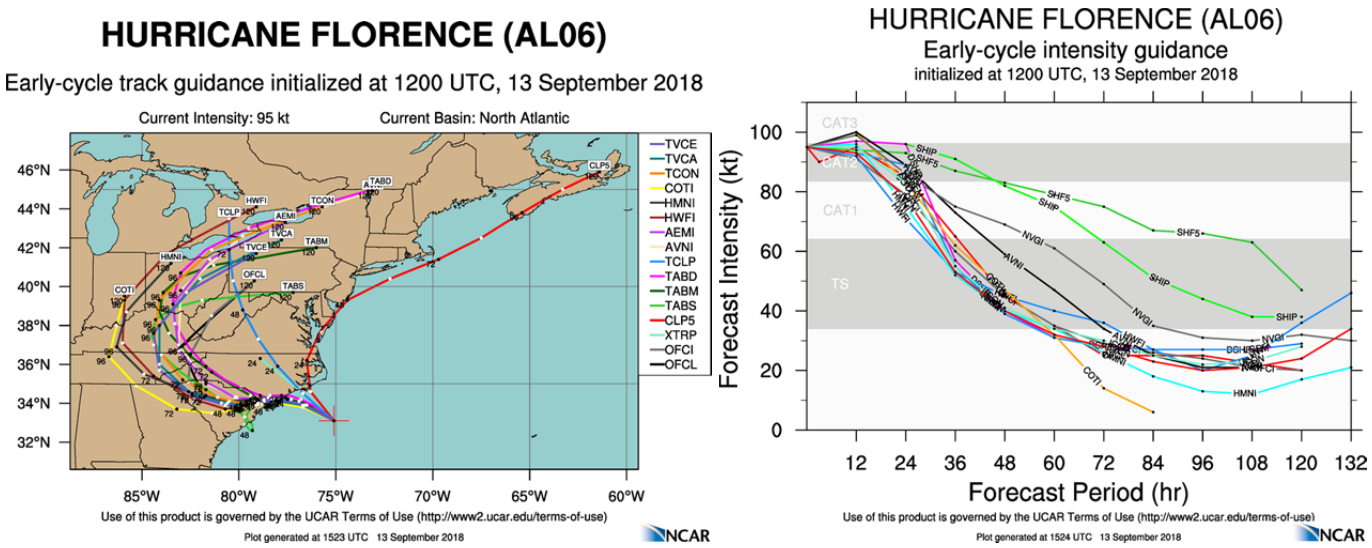

Figure 2: The latest model forecast tracks and intensity for Hurricane Florence. Source: NCAR/TCGP. For updated forecasts, please visit: http://www.ral.ucar.edu/hurricanes/realtime/current/

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