



# Tropical Storm Debby Briefing

11:30 AM EDT

Monday, Aug 5, 2024

**Catastrophic flooding likely this week.**



# Situation Overview

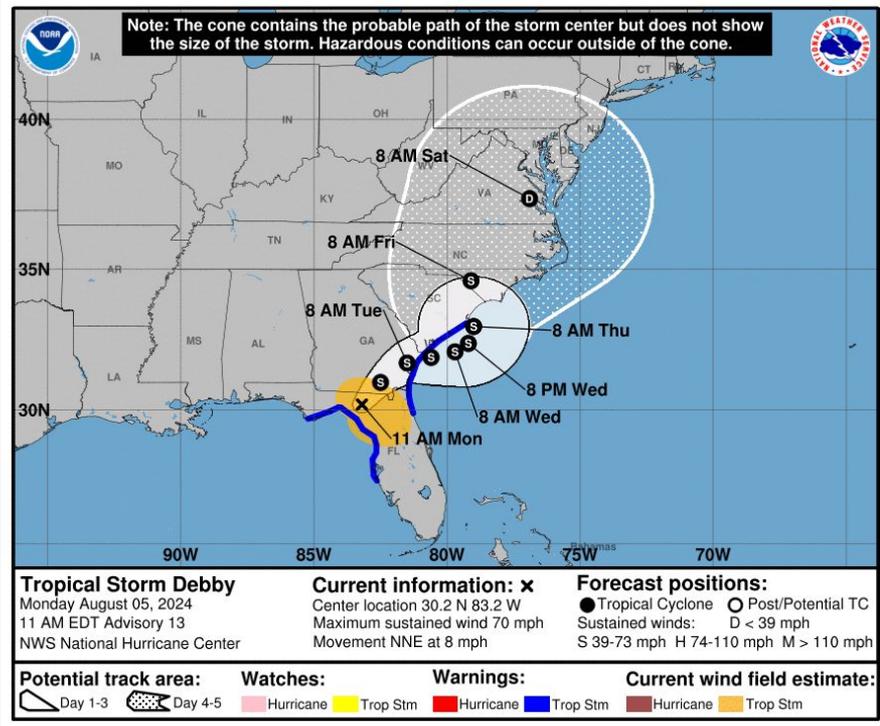
## Tropical Storm Debby

- **Potentially HISTORIC RAINFALL with Areas of CATASTROPHIC FLOODING mid to late week**
- **Very slow motion of Debby over the Southeast will result in prolonged period of impacts through mid-to-late week. Tropical storm force winds, storm surge, and some tornadoes also possible for portions of the area.**
- **Longer term river flooding could inhibit recovery efforts into next week and beyond.**



# Situation Overview

## Tropical Storm Debby



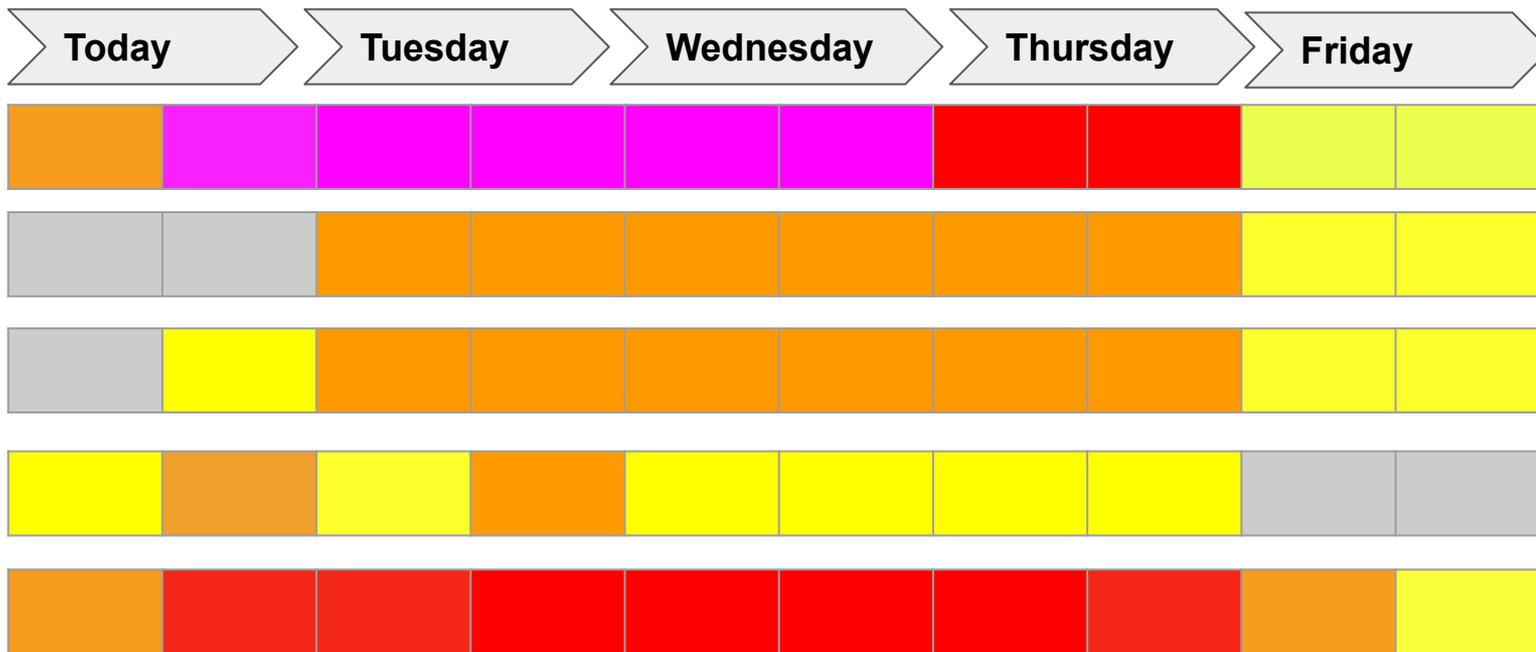
**NOTE:** Do not focus on the exact track.  
*Impacts can occur well outside the area enclosed by the cone.*

- Debby made landfall over FL Big Bend this morning, now a Tropical Storm
- Debby likely to move **very slowly** over/around our area through mid-to-late week
- Intensity and track forecast still somewhat uncertain mid-to-late week



# Threat Levels - Max Values for Debby

Hurricane Debby



### Effects and Impacts Legend

- Little to No Impact
- Minor Impact
- Moderate Impact
- High Impact
- Extreme Impact



# Situation Overview

## Tropical Storm Debby

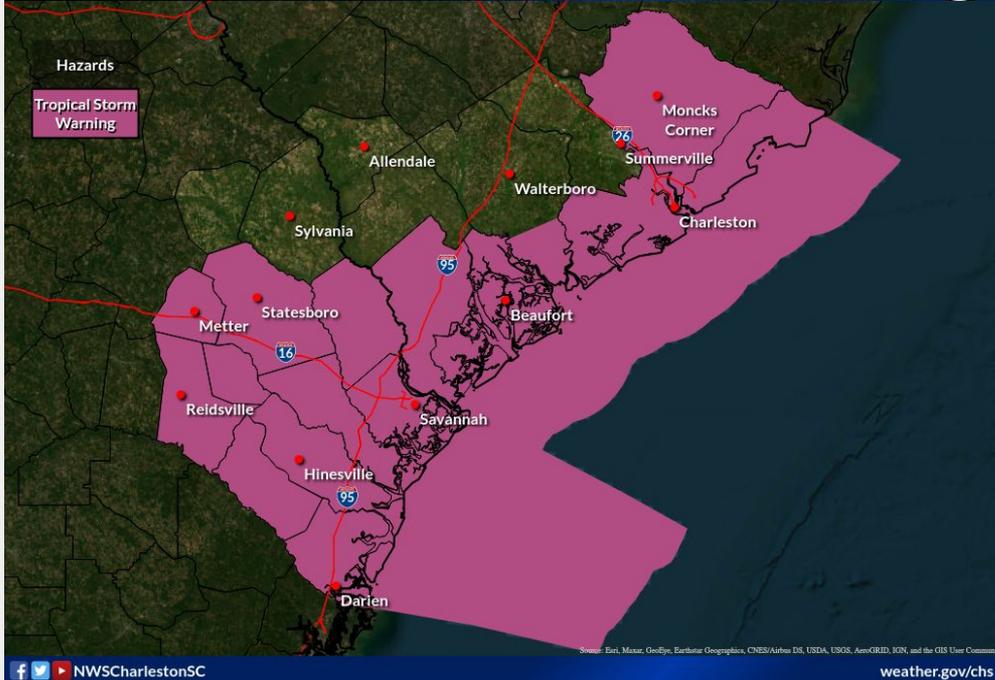
Hazard	Impacts	Location	Timing
 <b>Flooding Rain</b>	<b>Potentially historic rainfall</b> likely to bring areas of catastrophic flooding	Entire area, with highest amounts likely closer to the coast	Heavy rainfall by later today. Flooding threat continues into at least Thursday.
 <b>Storm Surge &amp; Inundation</b>	Surge impacts exacerbated by heavy rainfall. Prepare for 2-4 feet AGL.	Entire coast	Greatest threat Tuesday through Thursday
 <b>Wind</b>	Significant wind impacts, including scattered power/comms outages, possible	Within the Tropical Storm Warning/Watch area	Later today into Thursday
 <b>Tornado</b>	Isolated to scattered tornadoes could produce locally enhanced damage	Highest chances SE GA and coastal SC	Through mid/late week
 <b>Marine</b>	Winds and Seas dangerous to all mariners	All Atlantic waters	Through much of coming week



# Watch/Warnings in Effect

## Tropical Storm Warning

Weather Forecast Office  
Charleston, SC  
Issued Aug 05, 2024 11:11 AM EDT

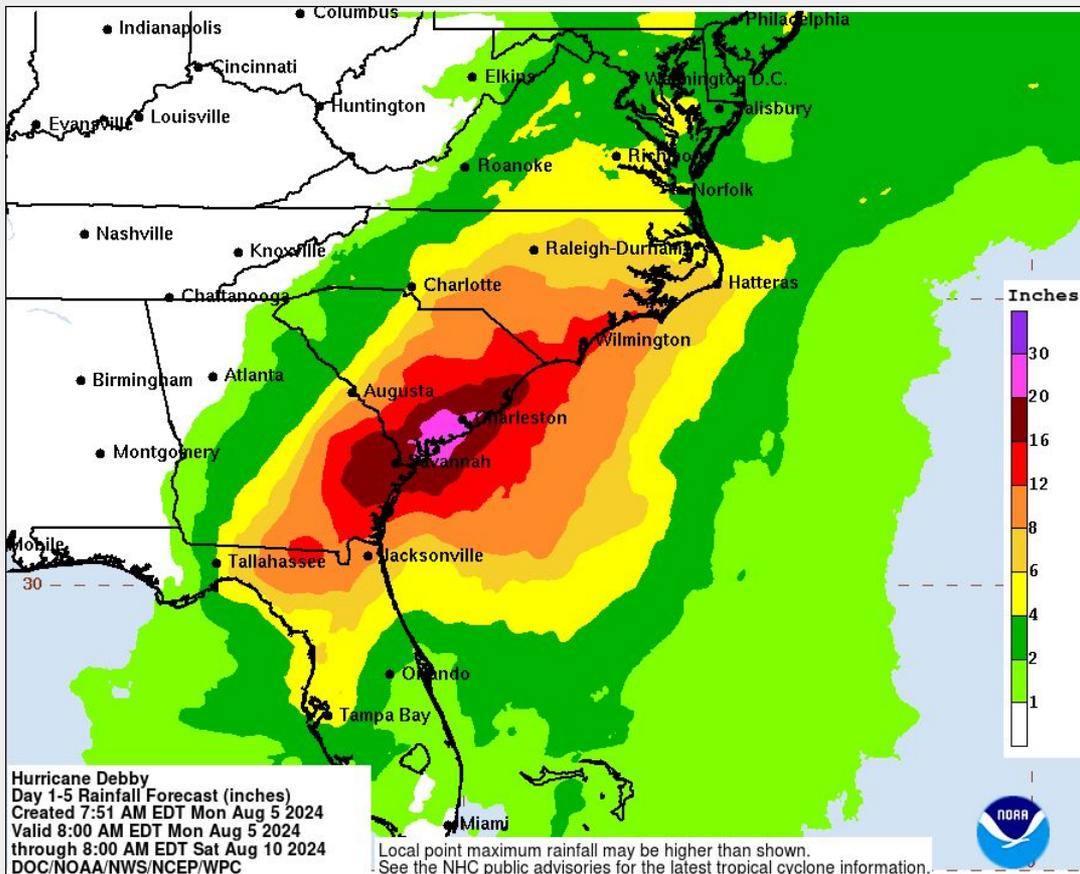


- **Tropical Storm *Wind* Warning** - Coastal SC, portions of southeast GA, ALL Atlantic waters
- **Flood Watch** - Entire area
- **Storm Surge Warning** - Entire coast
- **Tornado Watch** - Portions of SE GA



# Additional Rainfall

## Tropical Storm Debby



**Storm Total Rainfall Amounts:**  
10-20 inches, with locally higher amounts approaching 30 inches

**Historical Context:** For an event of this duration, these amounts have a 0.2% to 0.1% chance of happening in any given year!

**NOTE:** Successive rainfall forecast will look lower through the event. Really “additional” event rainfall



# Inland Flooding Impacts

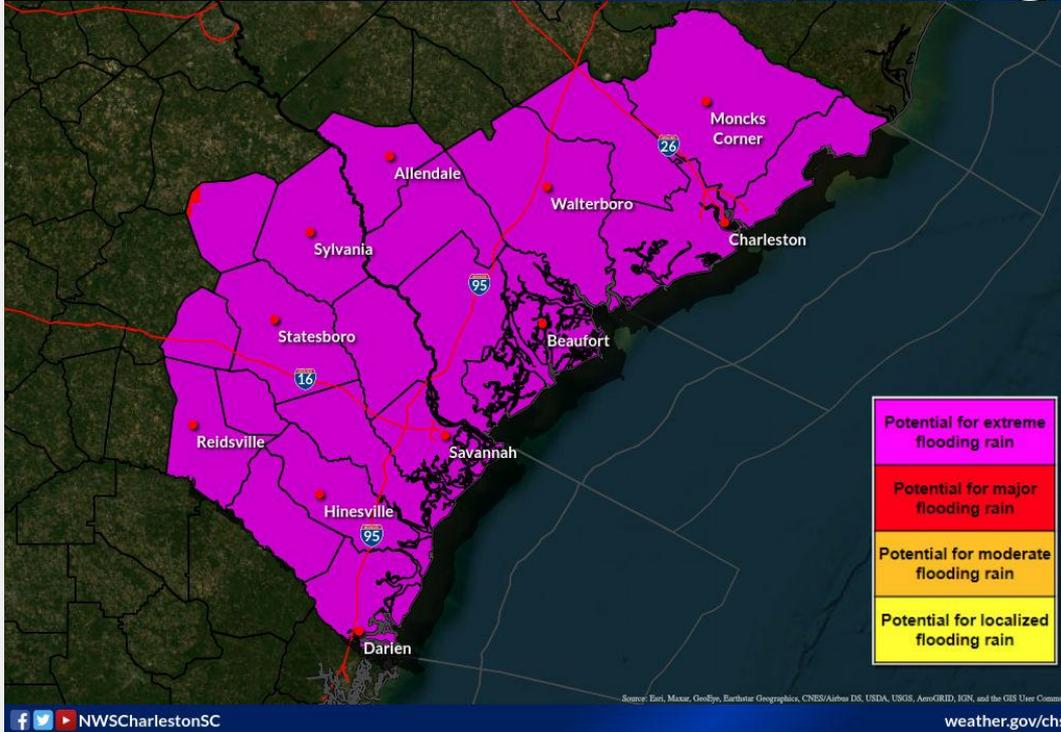
Tropical Storm Debby

## Flooding Rain Threat

Weather Forecast Office

Charleston, SC

Issued Aug 05, 2024 11:10 AM EDT



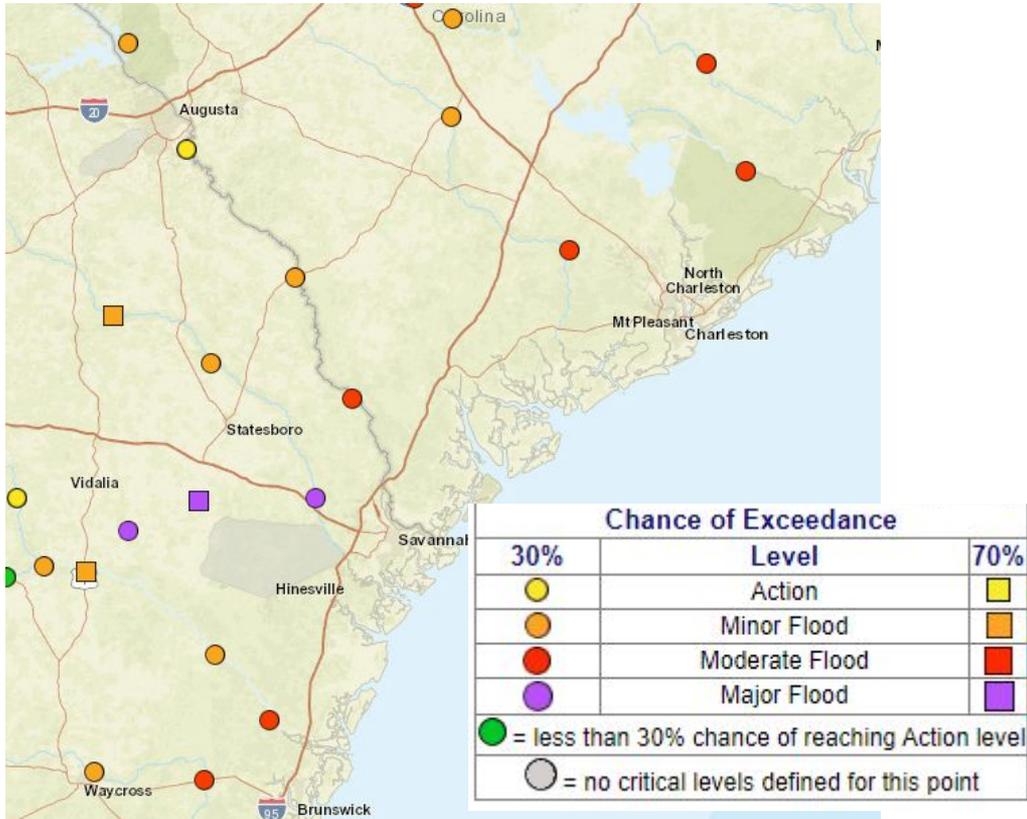
NWSCharlestonSC

- Potentially **Historic Rainfall** likely to bring areas of **catastrophic flooding**.
- Flood Watch in effect
- Impacts:
  - Numerous homes & structures flooded, damage to roadways (*washouts*)
  - Unprecedented small stream/creek flooding
  - Longer term major river flooding



# River Flooding Potential

From the Ensemble River Forecast



- These forecasts account for most/all of rainfall for the event
- **Moderate** to **Major** river flooding forecast for many sites
- Rivers could reach flood levels by mid-to-late week
- River flooding could persist for days or longer (into next week)

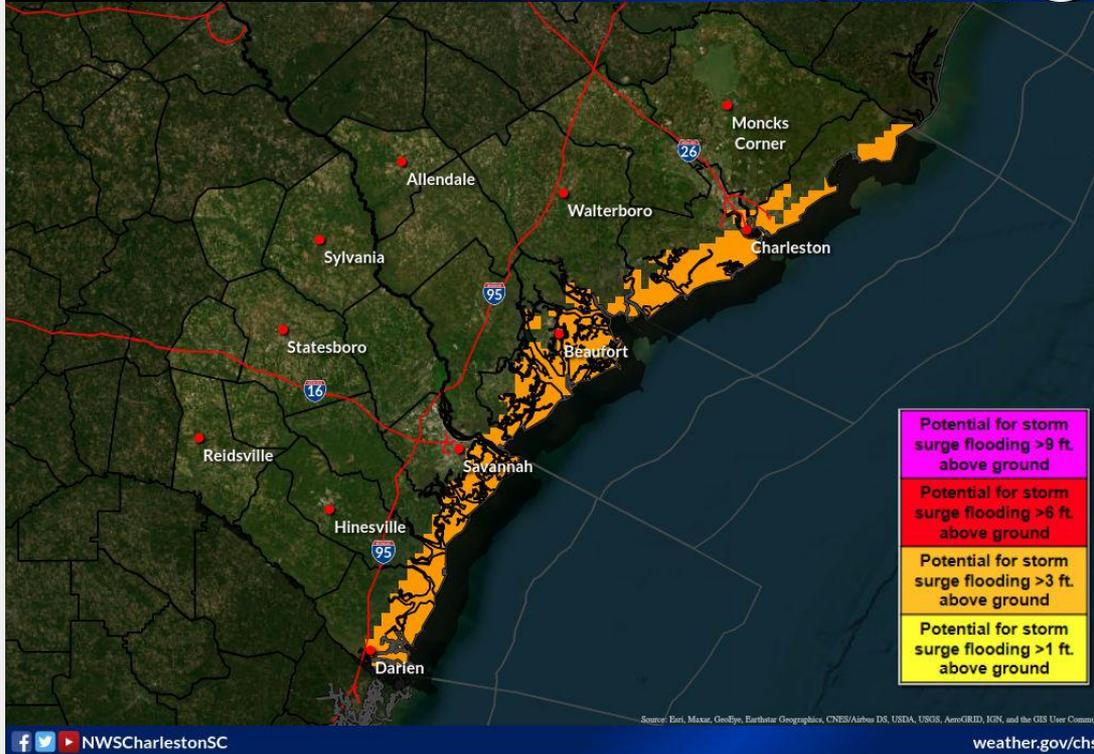


# Potential Storm Surge Impacts

Hurricane Debby

## Storm Surge Threat

Weather Forecast Office  
Charleston, SC  
Issued Aug 05, 2024 11:10 AM EDT



- Storm Surge Warning in effect for entire coastline
- Potential for 2-4 Feet of Storm Surge Inundation over normally dry tidal/near tidal regions
- Impacts:
  - Flooding of coastal/near coastal streets and roadways, especially low lying ones
  - Some coastal structures may be flooded
  - Minor to moderate beach erosion

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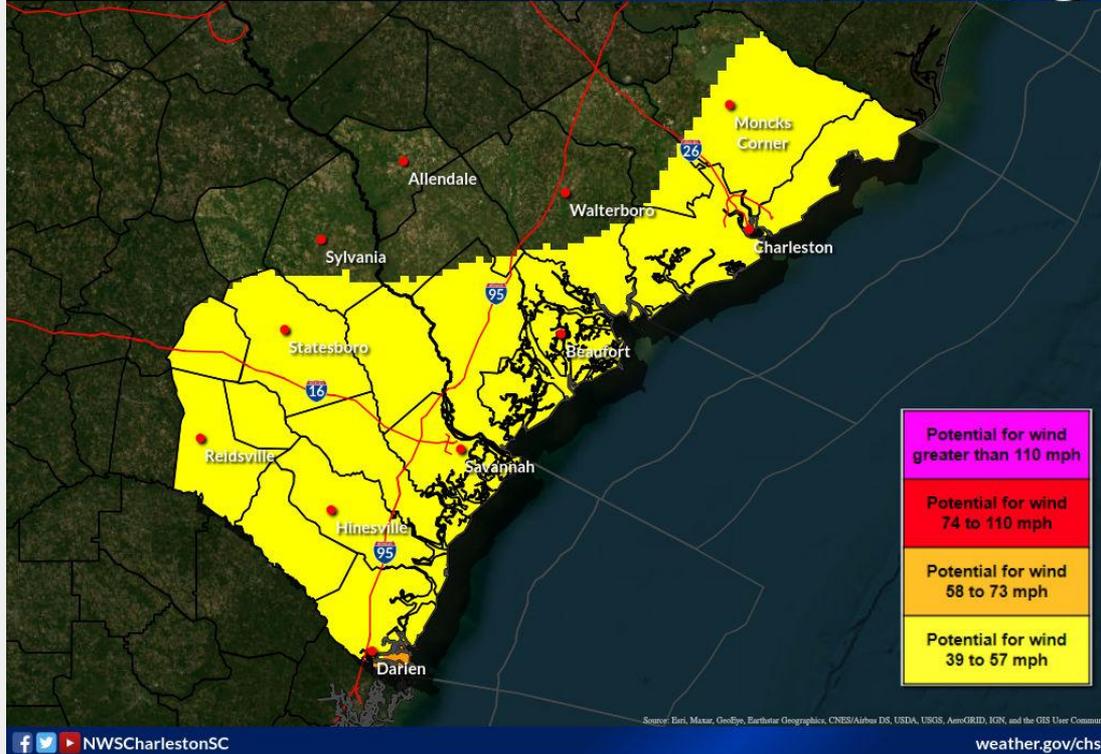
# Wind Threat / Potential Impact

Tropical Storm Debby

## Wind Threat

Weather Forecast Office  
Charleston, SC

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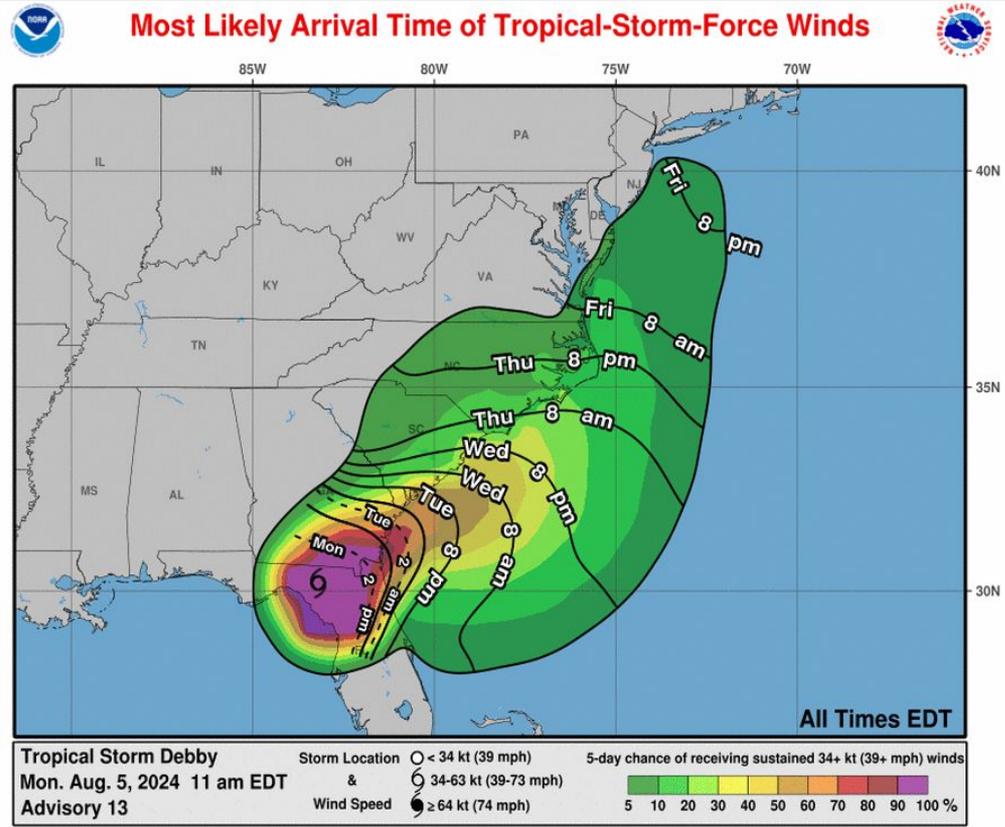


- Tropical Storm winds/wind gusts possible, especially coastal areas and/or within rainbands
- Impacts:
  - Isolated to scattered power and communications outages
  - Downed trees and/or large tree limbs, could block roads
  - Stronger winds over bridges



# Most Likely Time of Arrival

## Tropical Storm Debby



- **Most Likely Time of Arrival** for Tropical Storm Force Winds:  
**GA** - Mainly later today/tonight  
**SC** - Tuesday/Tuesday night
- Periodic Tropical Storm force wind gusts possible this morning within rainbands, especially near the coast



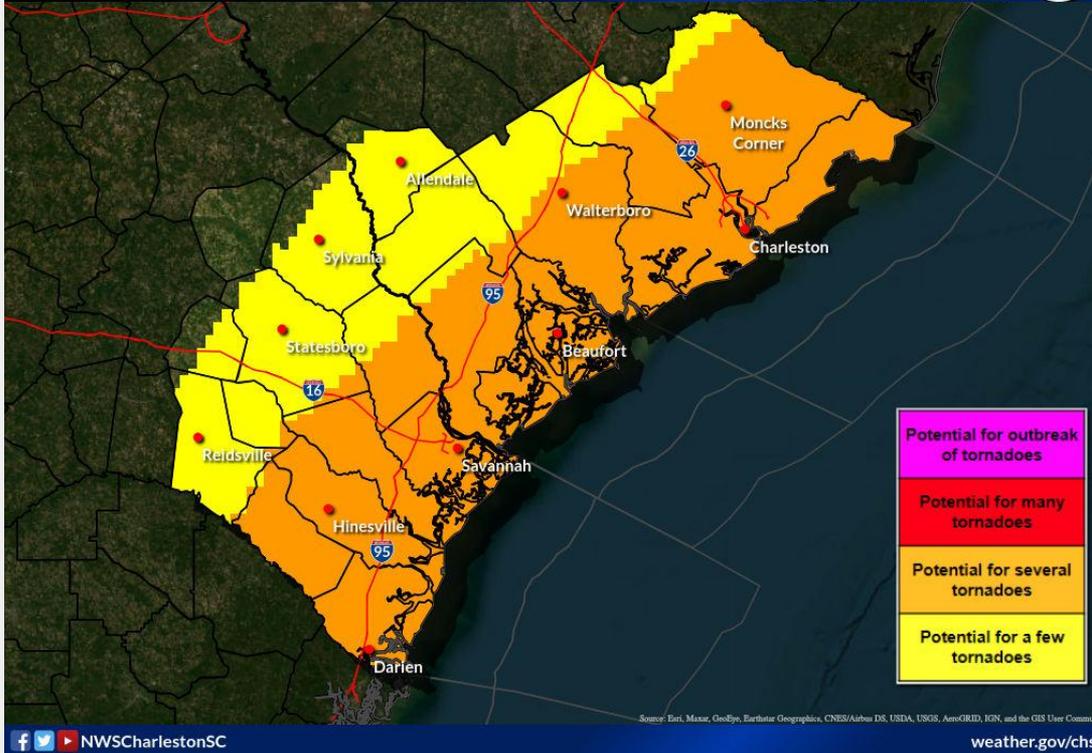
# Potential Tornado Impacts

Tropical Storm Debby

## Tornado Threat

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Charleston, SC

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- Isolated to scattered tornadoes possible, with greatest threat near the coast
  - Especially within rainbands
  - Generally short-lived, with potential for short warning lead time(s)
- Timing: Through Thursday
- Impacts: Locally enhanced damage possible

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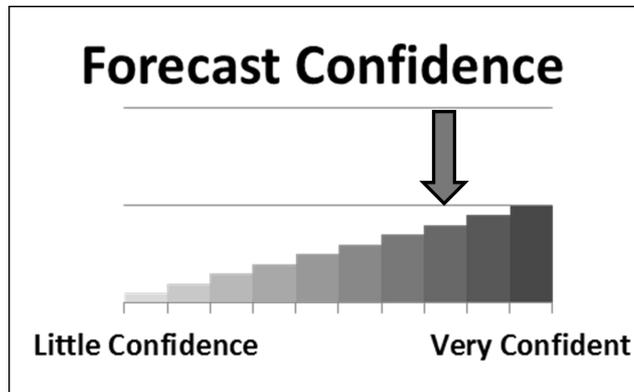
weather.gov/chs



# Key Take-Aways

## Tropical Storm Debby

- **Potentially historic rainfall will likely result in areas of catastrophic flooding through mid-to-late week**
- Expect a prolonged event with wind, surge, and tornado impacts also possible, but secondary to the flooding rainfall threat.



**Overall Confidence in Event - HIGH**

**Confidence for Individual Impacts - MODERATE to HIGH**



# Local Resources

Tropical Storm Debby

Next Briefing:  
6:00 PM EDT  
Method: Webinar



WWW

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