



# Tropical Storm Debby Briefing

6:00 PM EDT

Monday, Aug 5, 2024

**Catastrophic flooding likely this week.**



# Situation Overview

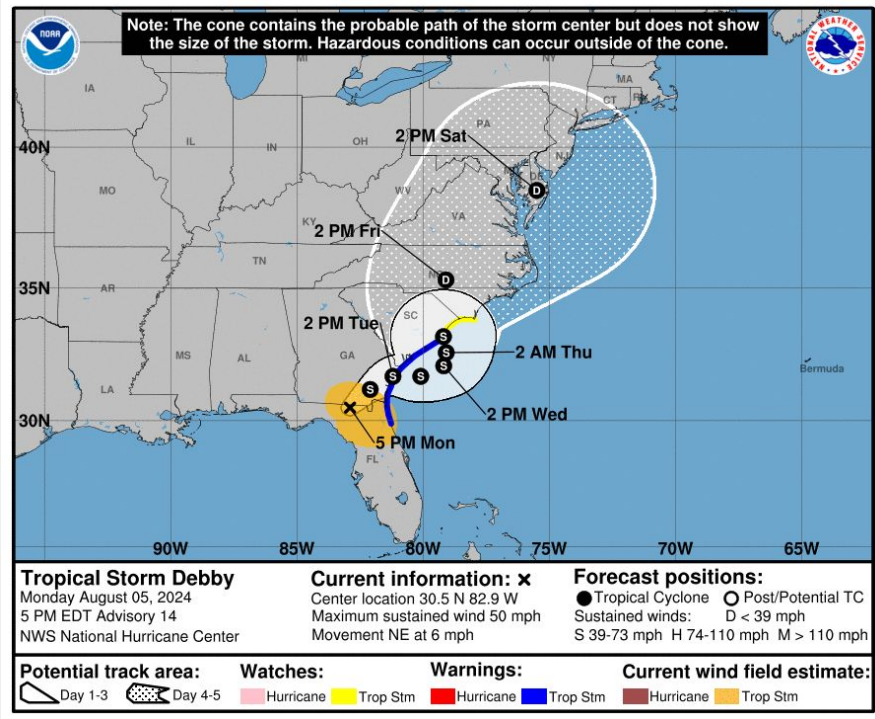
## Tropical Storm Debby

- **Potentially HISTORIC RAINFALL with Areas of CATASTROPHIC FLOODING through mid to possibly 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



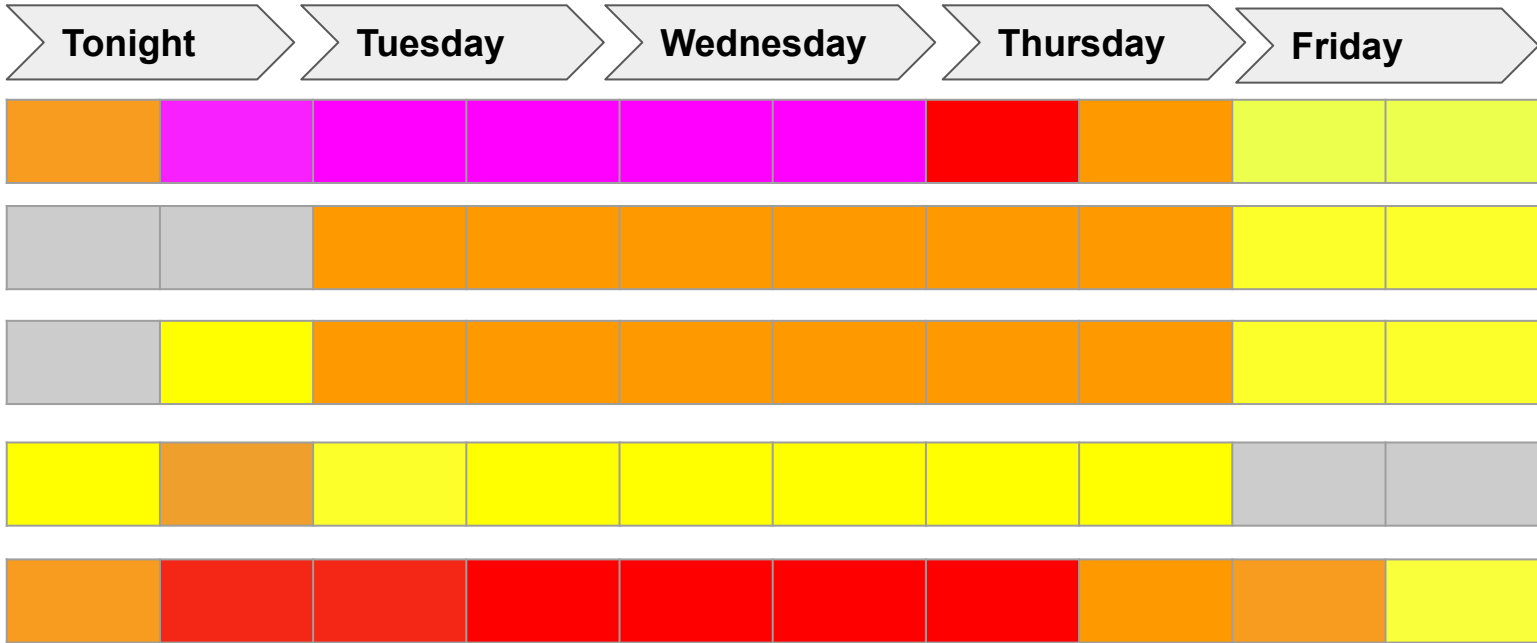
**NOTE:** Do not focus on the exact track.  
Impacts can occur well outside the area enclosed by the cone.

- Tropical Storm Debby continues to move slowly, and gradually weaken over southeast GA
- Continued slow movement northeast over southeast GA then possibly off of the GA/SC coast later Tuesday
- 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 now through Wednesday, possibly Thursday.
 <b>Storm Surge &amp; Inundation</b>	Surge impacts exacerbated by heavy rainfall. Prepare for 2-4 feet AGL.	Entire coast, but area will change as storm moves northward	Greatest threat Tuesday through Wednesday, especially SC.
 <b>Wind</b>	Significant wind impacts, including scattered power/comms outages, possible	Within the Tropical Storm Warning area, especially S GA counties and all coastal areas	Tonight through Wednesday, possibly Thursday
 <b>Tornado</b>	Isolated to scattered tornadoes could produce locally enhanced damage	Highest chances SE GA and coastal SC	Through Wednesday, but threat area possibly shifting to SC by Wednesday
 <b>Marine</b>	Winds and Seas dangerous to all mariners	All Atlantic waters	Through Wednesday, possibly Thursday

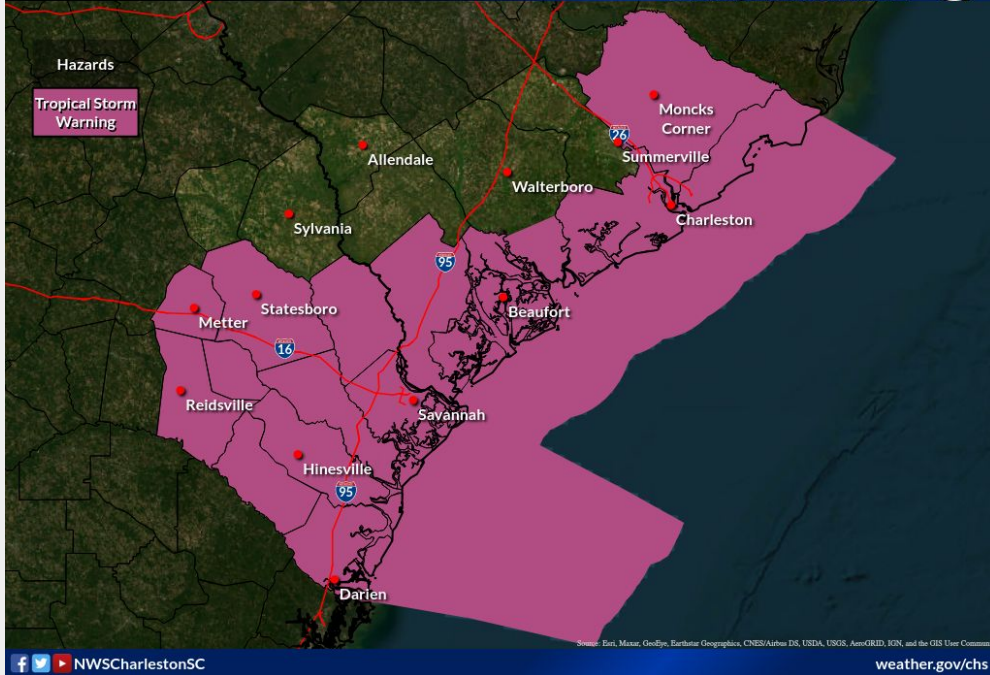


# Watch/Warnings in Effect

Tropical Storm Debby

## Tropical Storm Warning

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

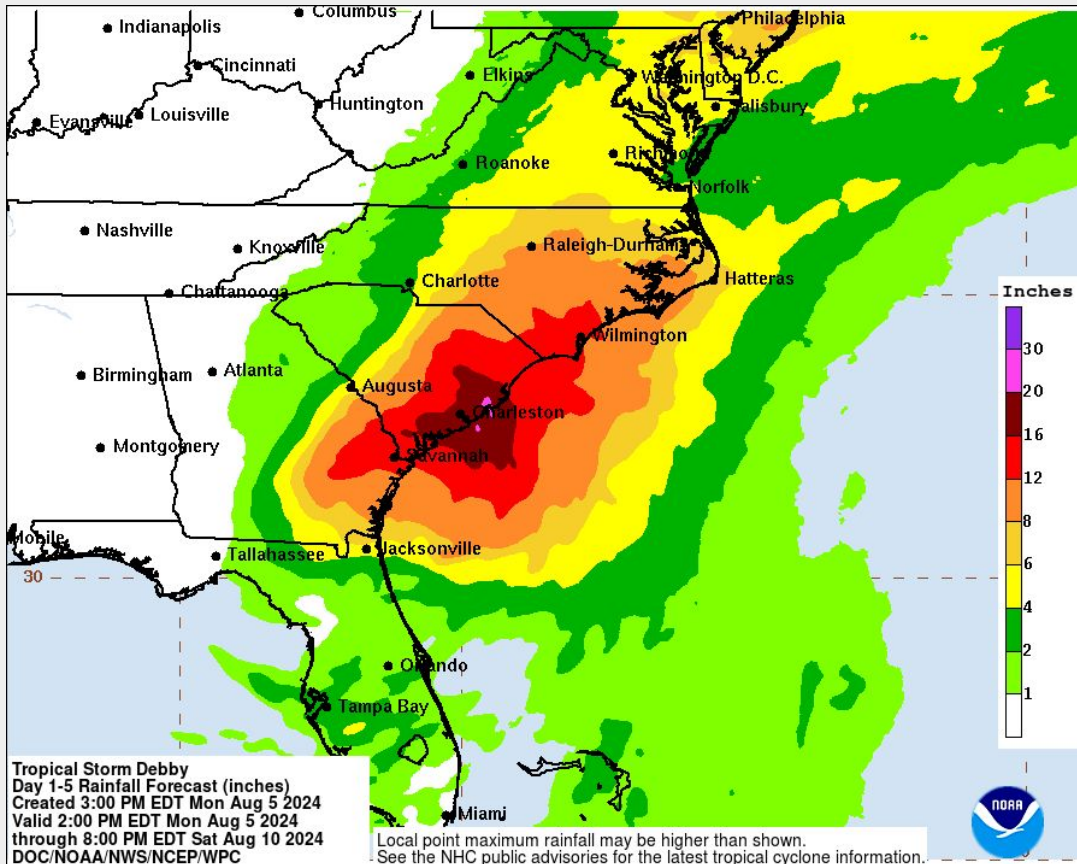


- **Tropical Storm *Wind* Warning** - Coastal SC, portions of southeast GA, ALL Atlantic waters
- **Flood Watch** - Entire area
- **Storm Surge Warning** - Entire coast
- **\*Tornado Watch (*new*)** - Entire area



# 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

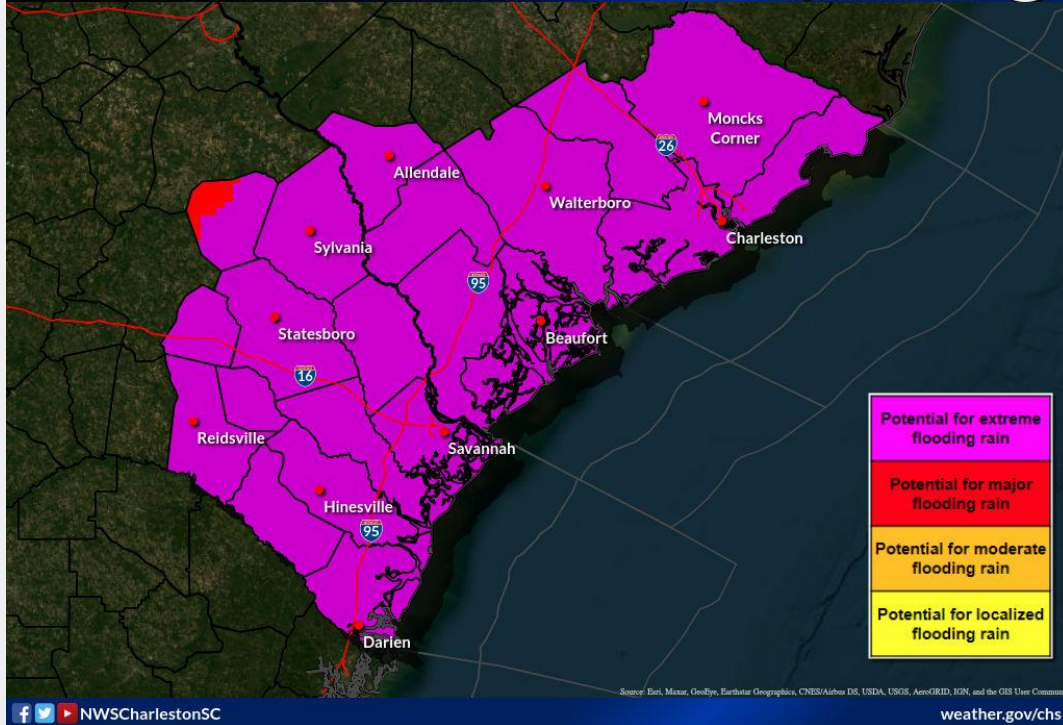


# Inland Flooding Impacts

Tropical Storm Debby

## Flooding Rain Threat

Weather Forecast Office  
Charleston, SC  
Issued Aug 05, 2024 4:51 PM EDT



f t v NWSCharlestonSC

- Potentially **Historic Rainfall** likely to bring areas of **catastrophic flooding**.
- Timing: GA: tonight through at least Wednesday. SC tonight through at least early Thursday
- Impacts:
  - Numerous homes & structures flooded, damage to roadways (*washouts*)
  - Unprecedented small stream/creek flooding
  - Longer term major river flooding

Last updated: 8/5/2024 5:40 PM EDT

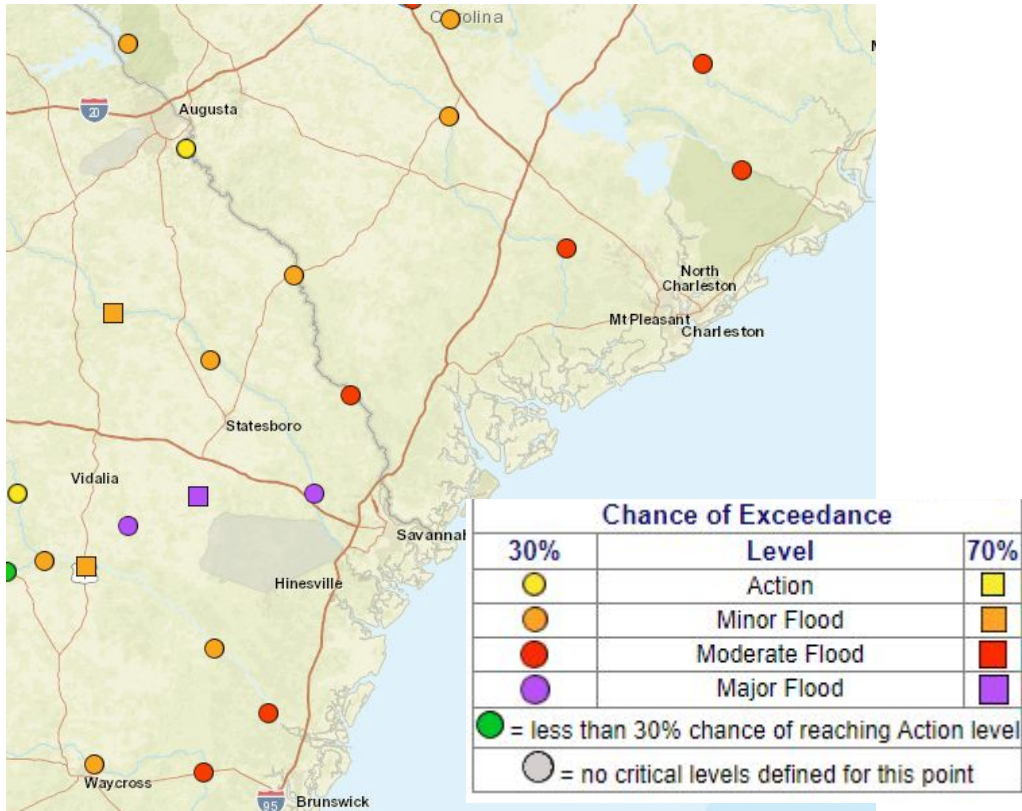
National Weather Service - Charleston, SC





# 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)



# Expected River Flooding

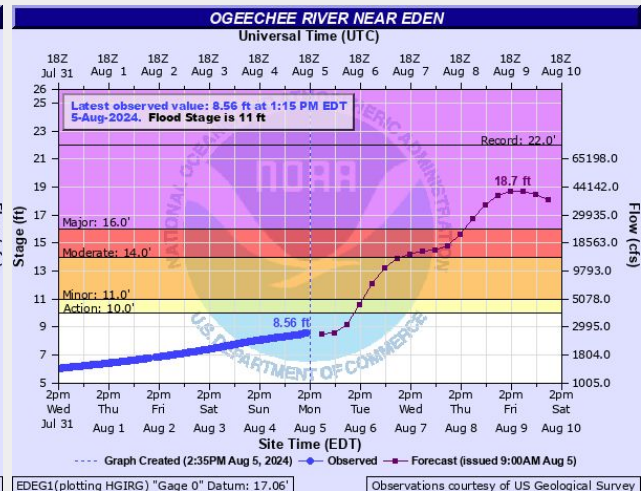
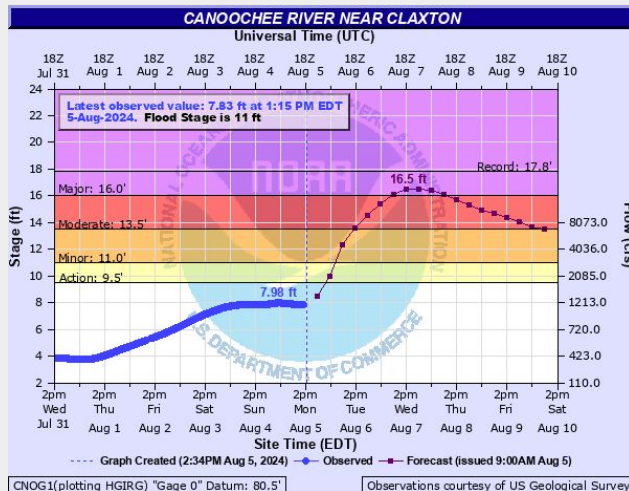
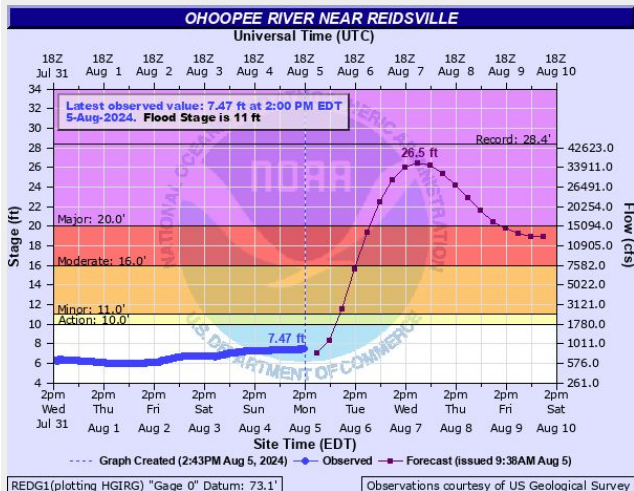
## Tropical Storm Debby

\*\*\* River Site Locations Currently Forecasted to Reach **Major Flood Levels** \*\*\*

**Ohoopsee River - near Reidsville, Canoochee River - near Claxton**

**Ogeechee River - near Eden**

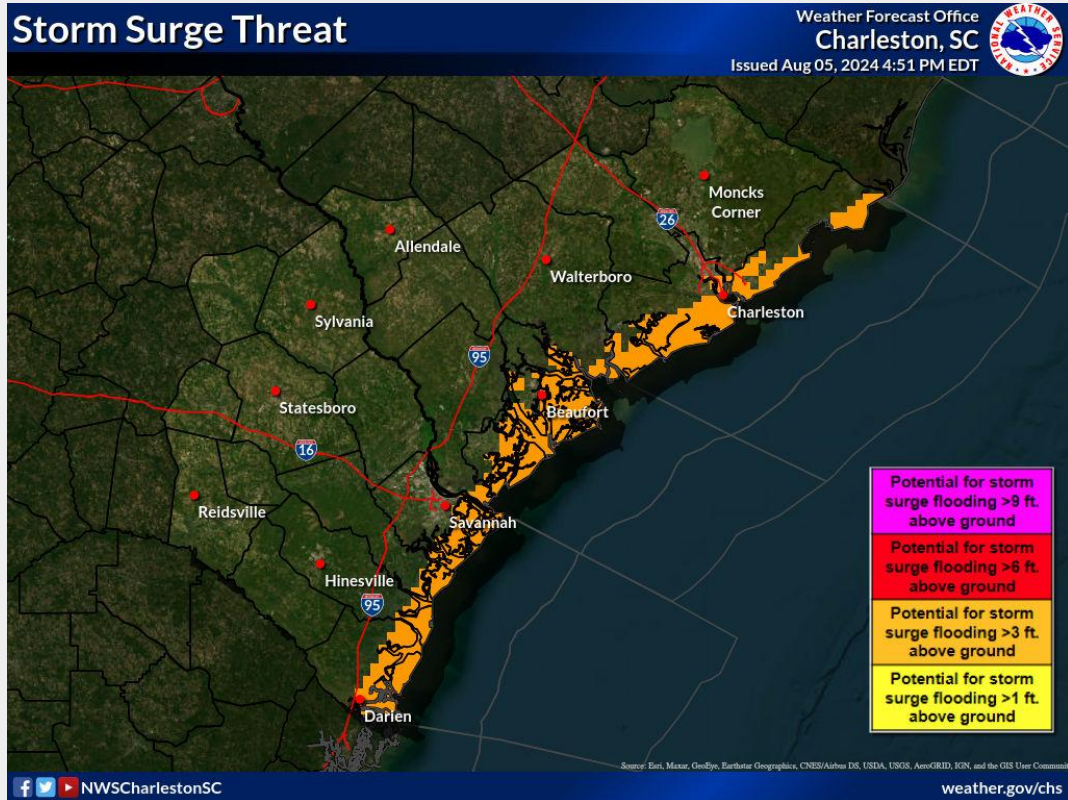
**NOTE:** Other river sites across area expected to reach at least **Minor** to **Moderate** levels





# Potential Storm Surge Impacts

Hurricane Debby

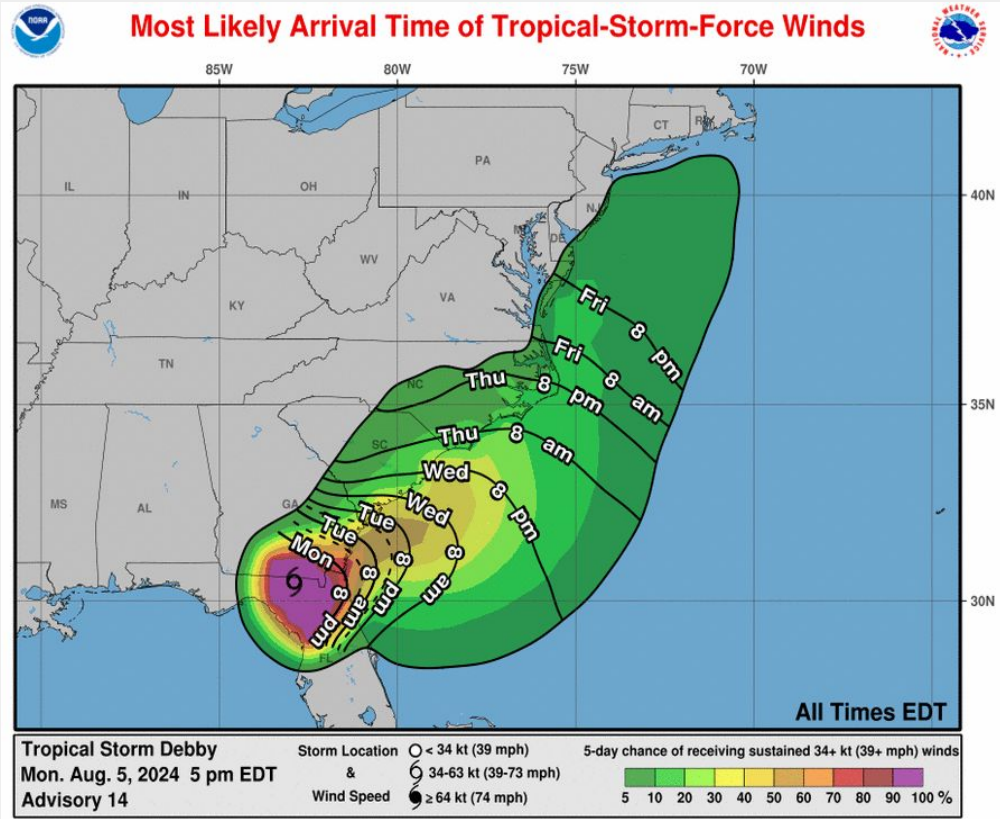


- Storm Surge Warning for entire coastline
- Potential for 2-4 Feet of Storm Surge Inundation over normally dry tidal/near tidal region
- Timing: GA: Tonight through Tues.  
SC: Tue through Wed Night
- Impacts:
  - Flooding of coastal/near coastal streets and roadways, especially low lying ones
  - Some coastal structures may be flooded
  - Minor to moderate beach erosion



# Most Likely Time of Arrival

## Tropical Storm Debby



- **Most Likely Time of Arrival** for Tropical Storm Force Winds:  
**GA** - Tonight through early Wednesday  
**SC** - Tuesday/Tuesday afternoon
- Best chances for Tropical Storm Wind/Wind gusts will be our southeast GA counties, all coastal areas, and/or within strong rainbands any location

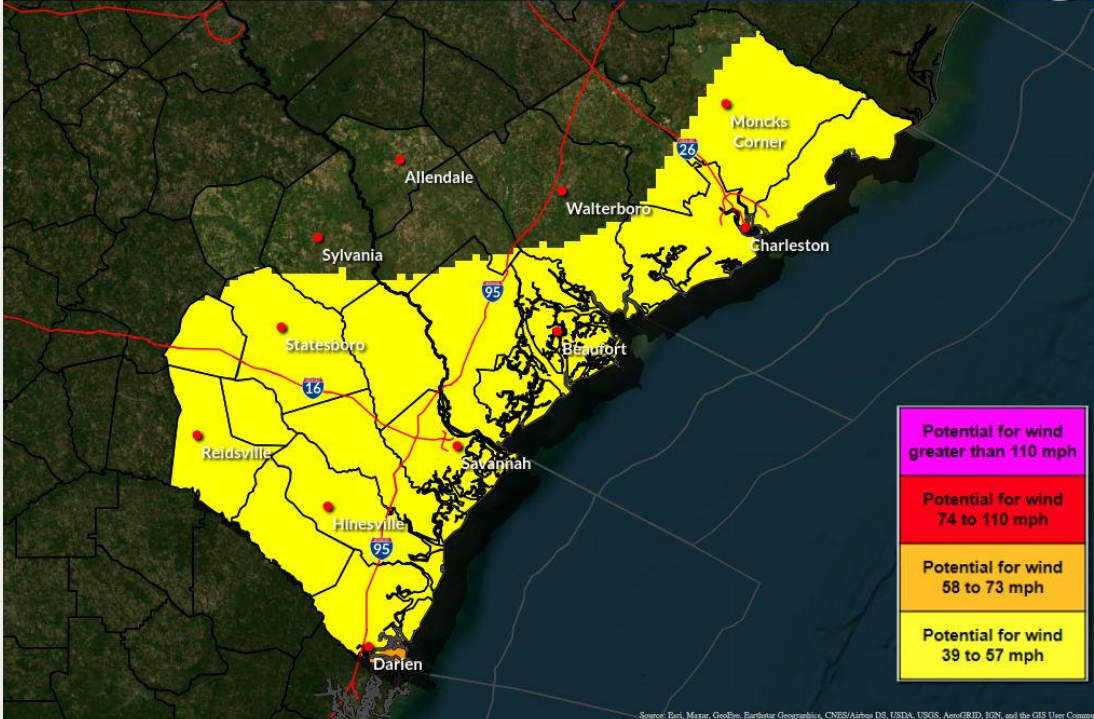


# Wind Threat / Potential Impact

Tropical Storm Debby

## Wind Threat

Weather Forecast Office  
Charleston, SC  
Issued Aug 05, 2024 4:51 PM EDT



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

weather.gov/chs

NWSCharlestonSC

- Tropical Storm winds/wind gusts possible, especially coastal areas and/or within rainbands
- Timing: GA: Tonight through at least late Tues/Tues Night. SC: Tues through Wed/Wed night
- Impacts:
  - Isolated to scattered power and communications outages
  - Downed trees and/or large tree limbs, could block roads
  - Stronger winds over bridges

Last updated: 8/5/2024 5:40 PM EDT

National Weather Service - Charleston, SC

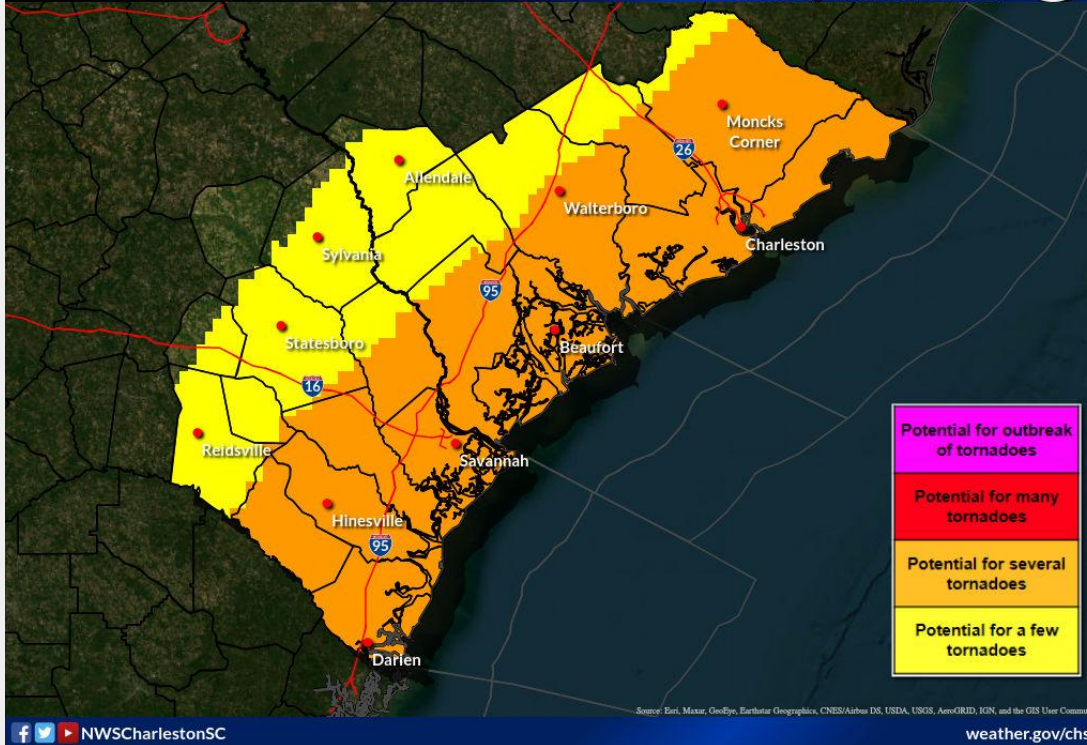


# Potential Tornado Impacts

Tropical Storm Debby

## Tornado Threat

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



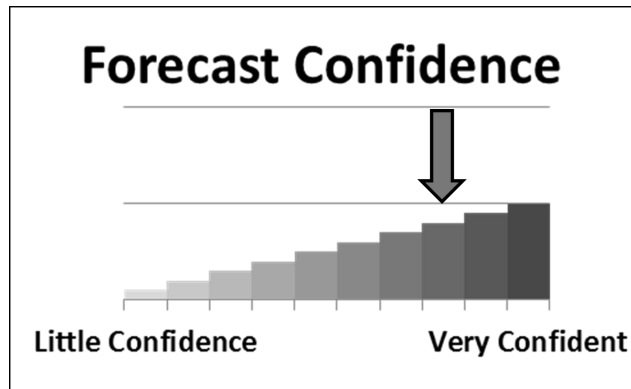
- Isolated to scattered tornadoes possible, with greatest threat near the coast
  - Especially within rainbands
  - Generally short-lived, with potential for short warning lead time(s)
- Timing: GA: through Tues/Tues night, SC: Tues and Wed/Wed night
- Impacts: Locally enhanced damage possible



# Key Take-Aways

## Tropical Storm Debby

- **Highest impact remains to be potential for historic rainfall, with 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:  
12 AM Tuesday  
Method: Email



WWW

**Web:** [weather.gov/chs](https://weather.gov/chs)



**Phone:** 843-747-5860



**E-mail:** [nws.charlestonsc@noaa.gov](mailto:nws.charlestonsc@noaa.gov)



**Facebook:** [NWS Charleston SC](https://www.facebook.com/NWSCharlestonSC)



**Twitter:** [@NWSCharleston SC](https://twitter.com/NWSCharlestonSC)



**YouTube:** [@NWSCharleston](https://www.youtube.com/@NWSCharleston)