



*Disclaimer: The information contained within is time-sensitive.*

# Hurricane Helene Briefing

12:00 PM

Wednesday September 25, 2024

**Tropical Storm Warnings** now in effect for much of southeast GA,  
Coastal southeast SC, and all Atlantic Waters





# Situation Overview

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- No significant change to the storm track from NHC.
- Track and Impact Confidence: Continues to increase as “Helene” has become better defined.
- Helene forecast to be a **LARGE SYSTEM**, with **IMPACTS** reaching **WELL OUTSIDE/EAST** of the Track Cone of uncertainty, which covers our region!
- Potential Impacts include: tropical storm force winds, tornadoes, elevated tides/storm surge inundation, periods of heavy rainfall, high surf, and high rip current risk

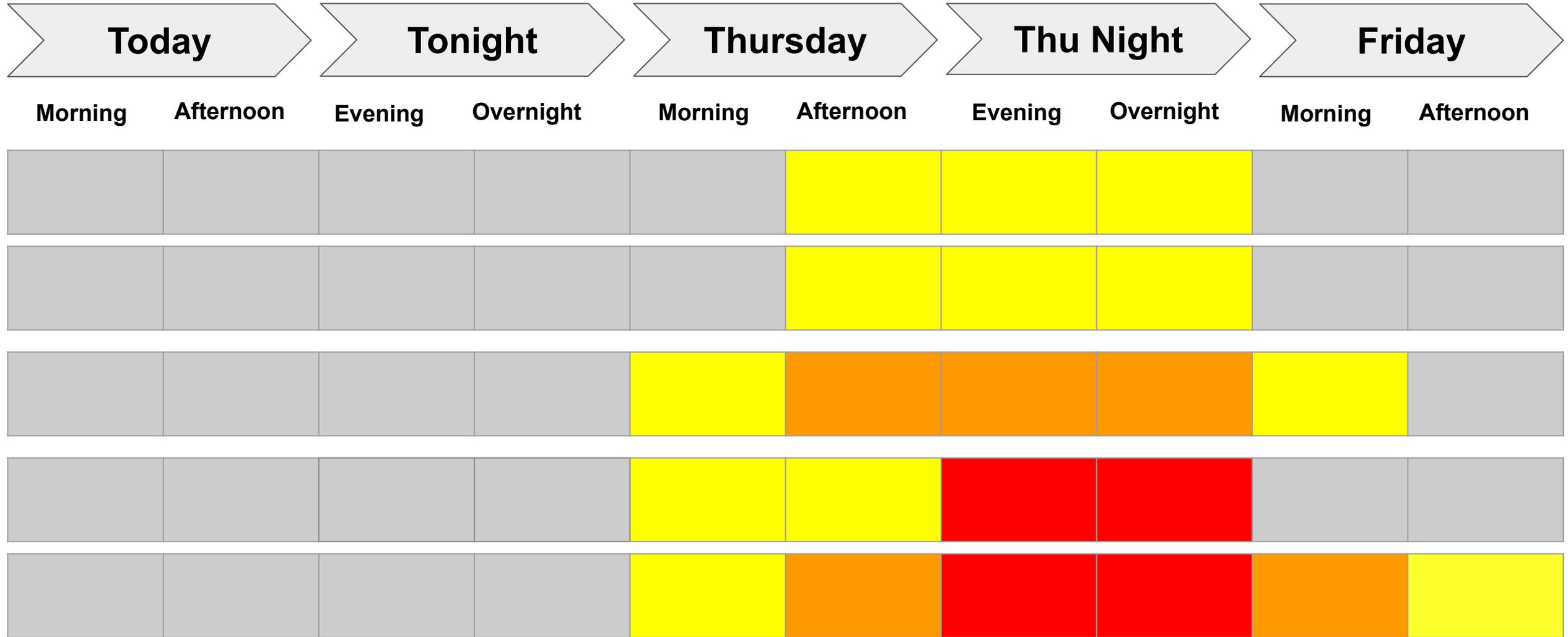




# Threat Levels - *Max Values for the Storm*

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Changes: None



**Effects and Impacts Legend**

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



# Situation Overview

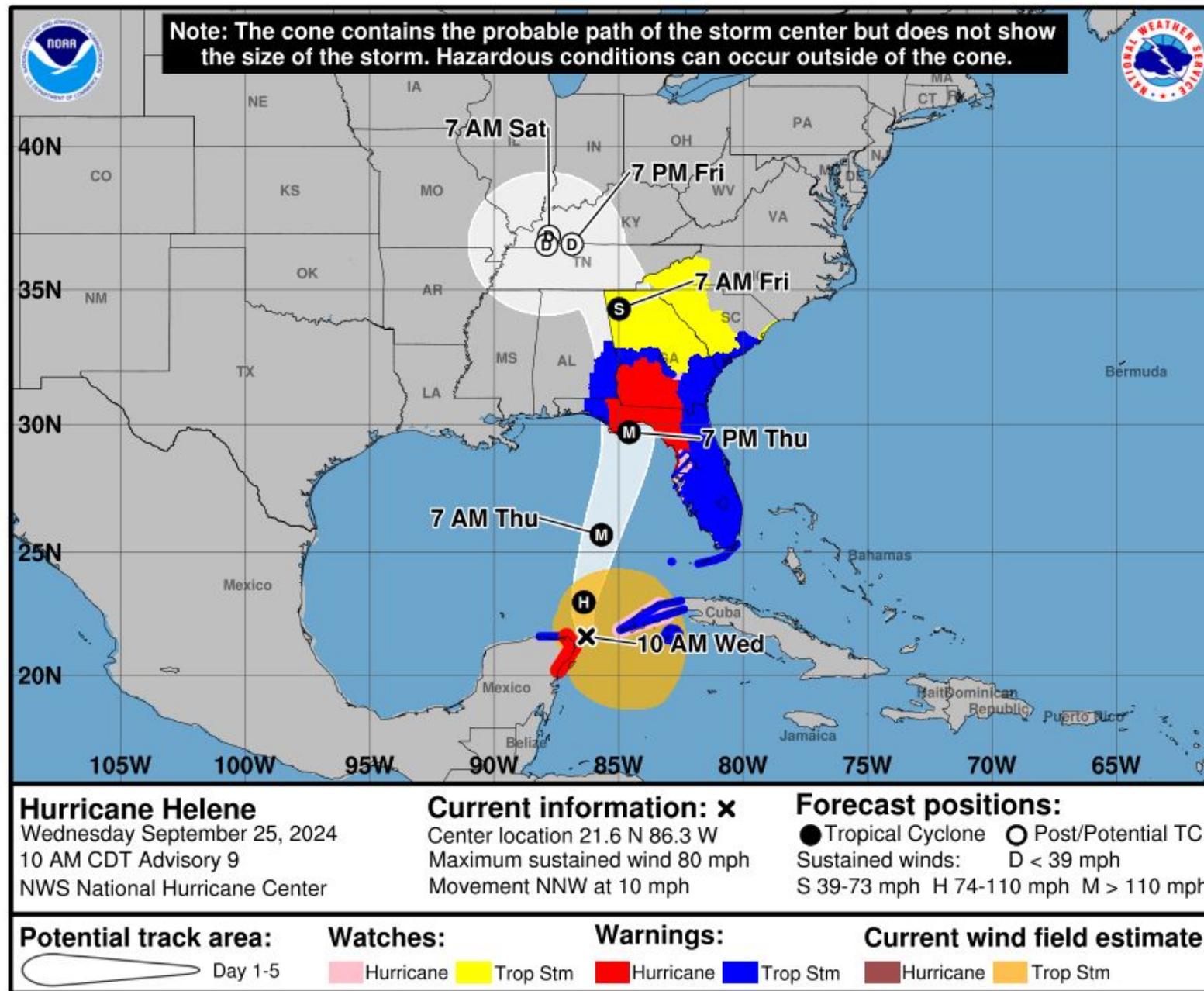
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Hazard	Impacts	Location	Timing
 <p><b>Wind</b></p>	<p>Potential for TS Wind/Wind Gusts. Downed and/or uprooted trees, Isolated to scattered power outages some roads impassable due to debris</p>	<p>Highest Threat for TS force wind/wind gusts roughly along and south of a line from Allendale, SC to Beaufort, SC</p>	<p>Thursday afternoon through Thursday night</p>
 <p><b>Storm Surge &amp; Inundation</b></p>	<p>Storm Surge Inundation 1-3 feet above normally dry ground in/around tidal region. Localized saltwater flooding immediate shoreline, minor to moderate beach erosion</p>	<p>Entire coastline</p>	<p>Thursday afternoon and Thursday night</p>
 <p><b>Flooding Rain</b></p>	<p>Flooding of some roads/streets, especially in low lying, poorly drained areas, some storm drains and retention ponds may become full/overflow</p>	<p>Entire region, especially west of I-95 in southeast SC and southeast GA</p>	<p>Thursday and Thursday night</p>
 <p><b>Tornado</b></p>	<p>Scattered to possibly numerous tornadoes could hinder preparedness activities, may produced localized areas of enhanced tree and/or structural damage</p>	<p>Entire region of southeast SC and southeast GA and Atlantic waters</p>	<p>Thursday and Thursday night</p>
 <p><b>Marine</b></p>	<p>Dangerous seas and tropical storm force winds/wind gusts will result in life-threatening conditions, especially for smaller crafts</p>	<p>Entire marine area from the Altamaha River, GA to the South Santee River, SC. Tropical Storm force wind gusts also possible within Charleston Harbor</p>	<p>Thursday through Friday morning</p>



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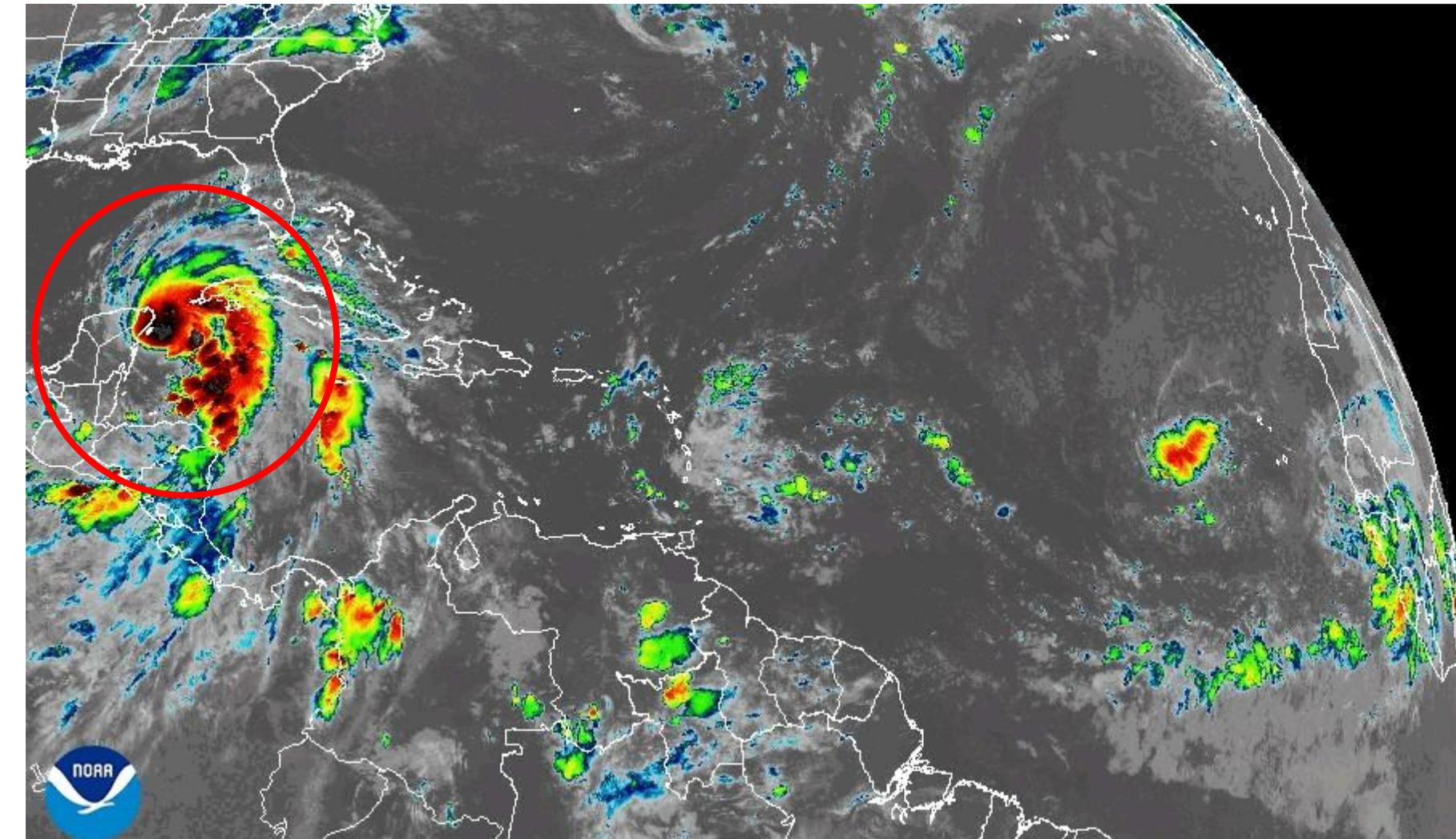
- **Note: Experimental track map showing inland tropical cyclone watches/warnings**
- Track Trend: minimal changes to track timing and impacts to our area
- Rapid Intensification Expected: Helene forecast to strengthen a Major Hurricane by Thursday morning
- Motion: Helene still expected to begin accelerating northward across the eastern Gulf of Mexico later today and Thursday
- **NOTE:** Accelerating Storm after landfall → May allow stronger winds to move further inland into southern and southeast GA





# Current Satellite View

September 25, 2024  
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25 Sep 2024 06:00Z - NOAA/NESDIS/STAR - GOES-East - Band 13

- Helene has reached **Hurricane** strength over the northwest Caribbean
- Helene forecast to become a Major Hurricane by Thursday morning



National Oceanic and  
Atmospheric Administration

U.S. Department of Commerce

National Weather Service  
Charleston, SC



# Tropical Storm Wind Speed Probabilities

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## 5 Day Probabilities of Tropical Storm Force Winds

- **Trend:** Little change in Tropical Storm Wind Speed probabilities from last Advisory
- Confidence in wind speed forecast continues to increase
- Still NO probabilities for Hurricane Force winds in our area, BUT watch trends

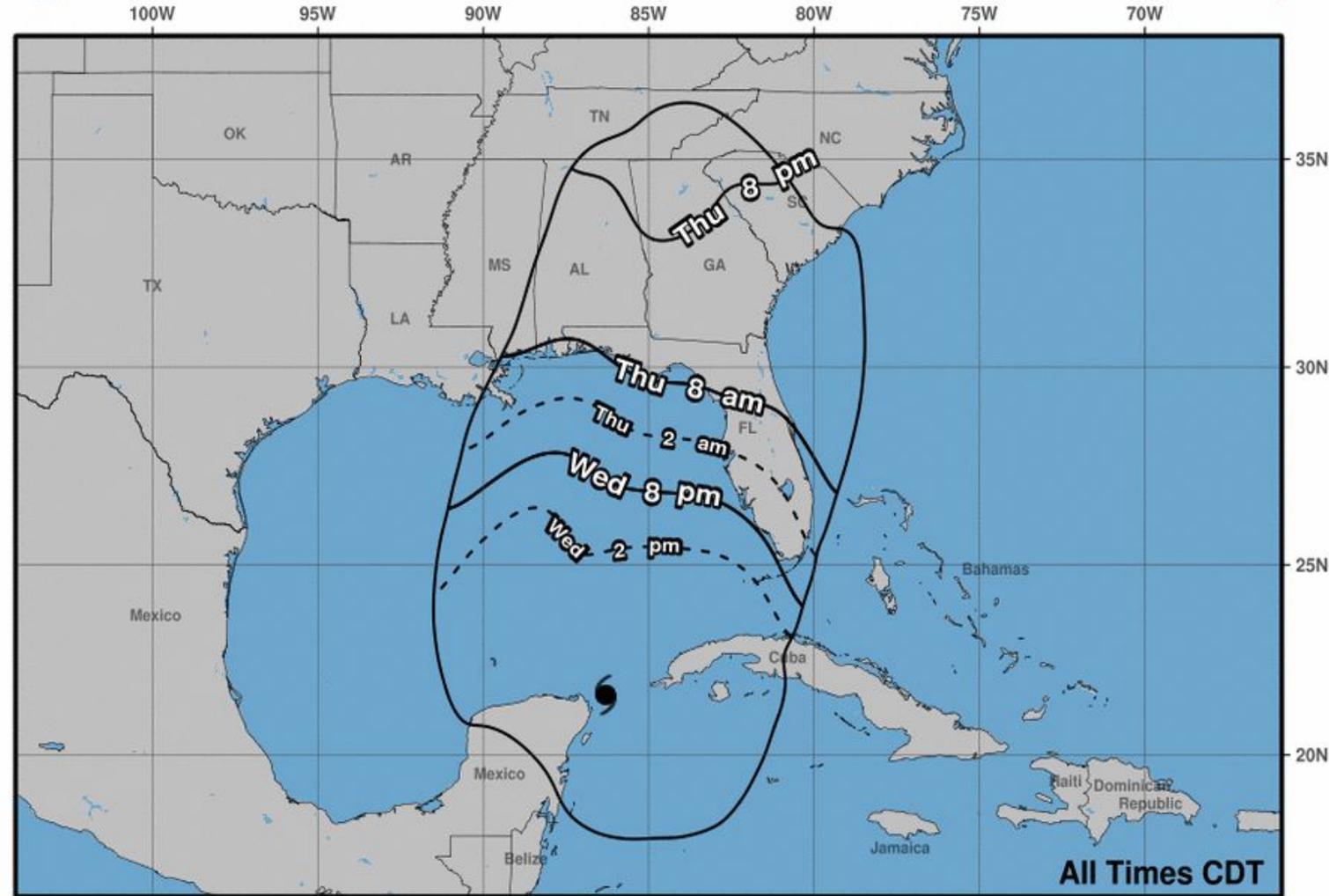




# Earliest Reasonable Time of Arrival

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Earliest Reasonable Arrival Time of Tropical-Storm-Force Winds



**Hurricane Helene**  
Wed. Sep. 25, 2024 10 am CDT  
Advisory 9

Storm Location & Wind Speed

- < 34 kt (39 mph)
- 34-63 kt (39-73 mph)
- ≥ 64 kt (74 mph)

NOTE: Areas within the outermost black contour have at least a 5% chance of receiving winds of 34+ kt (39+ mph)

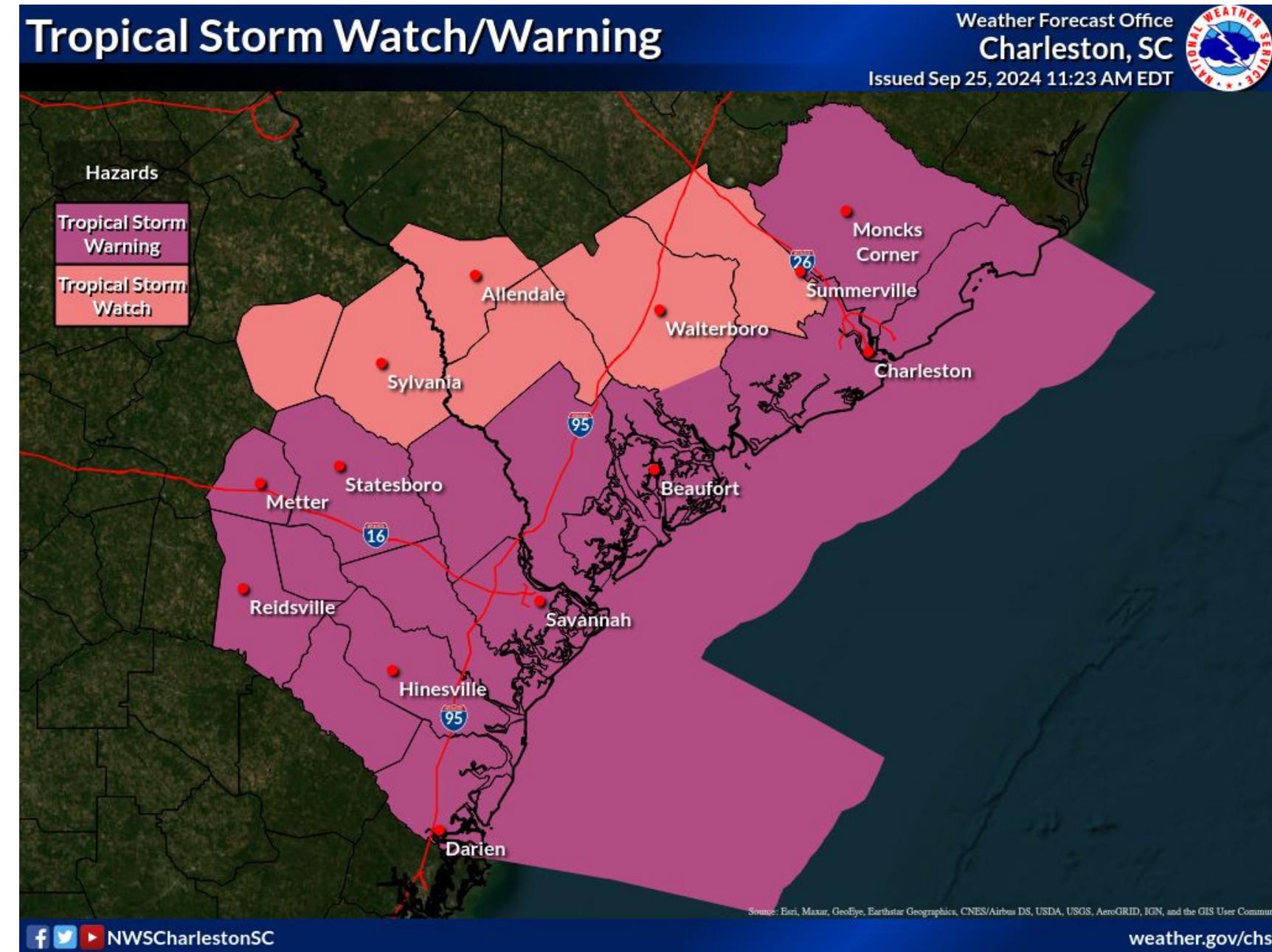
- Trend: Little change from previous NHC Advisory
- Tropical Storm Force winds could arrive as early as:
  - Southeast GA - Thursday afternoon
  - Southeast SC - Early Thursday evening
- However, the most likely time this area could see Tropical Storm Force Winds:
  - Southeast GA - Thursday evening
  - Southeast SC - Late Thursday night





# Tropical Storm Watch/Warning

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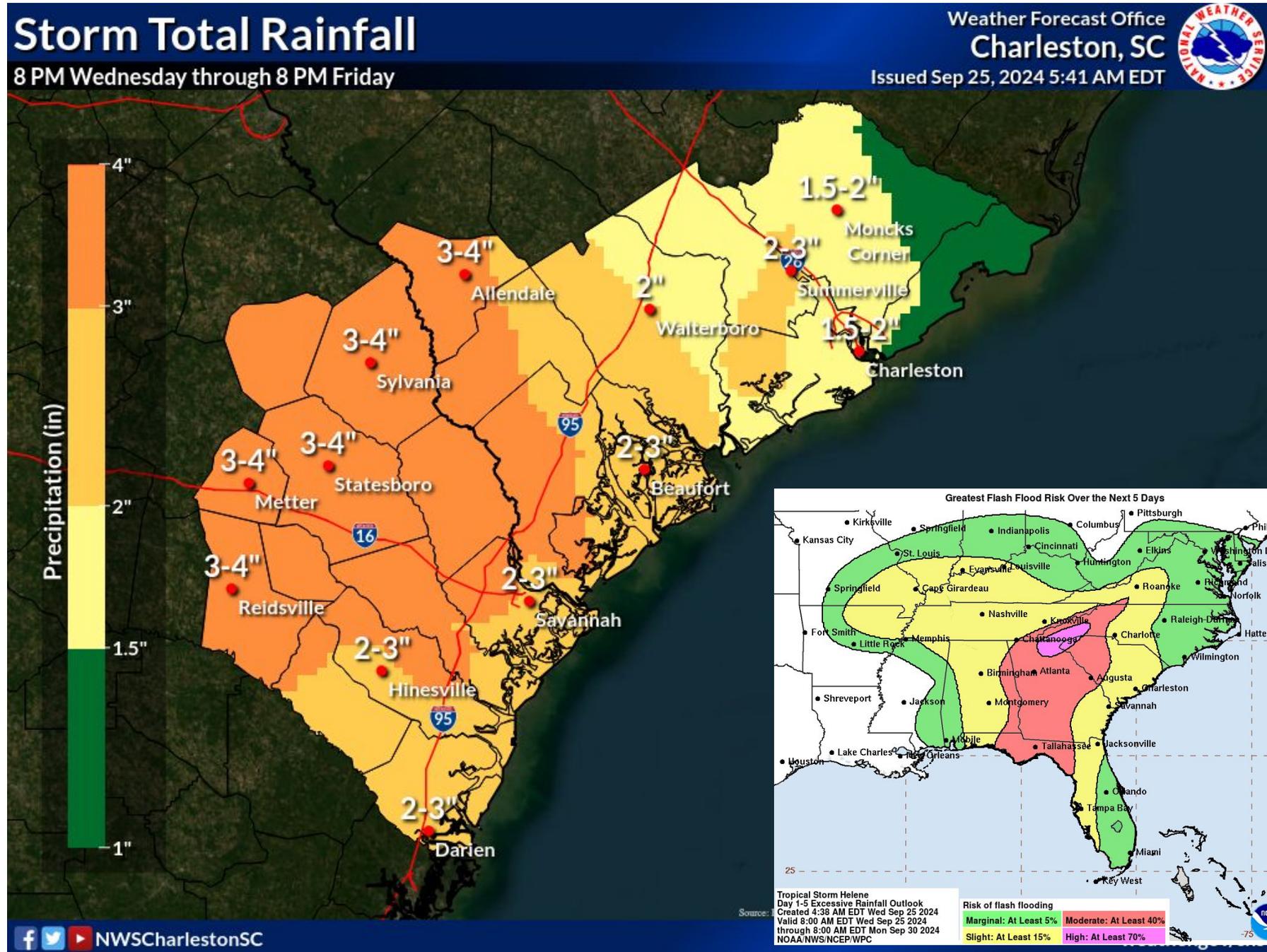
- **NEW: Tropical Storm Warning** for most of southeast GA, coastal SC, All Atlantic waters, including Charleston Harbor
- **Tropical Storm Watch** for remainder of interior southeast GA and southeast SC





# Expected Storm Total Rainfall

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## Rainfall 8 PM Wed - 8 PM Fri

- Trend: Little to no change from previous forecast
- Most of the rainfall is expected to occur Thursday and Thursday night
- Heaviest rainfall generally along and west of I-95 in southeast SC
- The risk for flooding may increase along the coast, if heavy rainfall coincides with high tide
- WPC has entire area in a Slight Risk of Excessive Rainfall, mainly for Thursday and Thursday night



National Oceanic and Atmospheric Administration

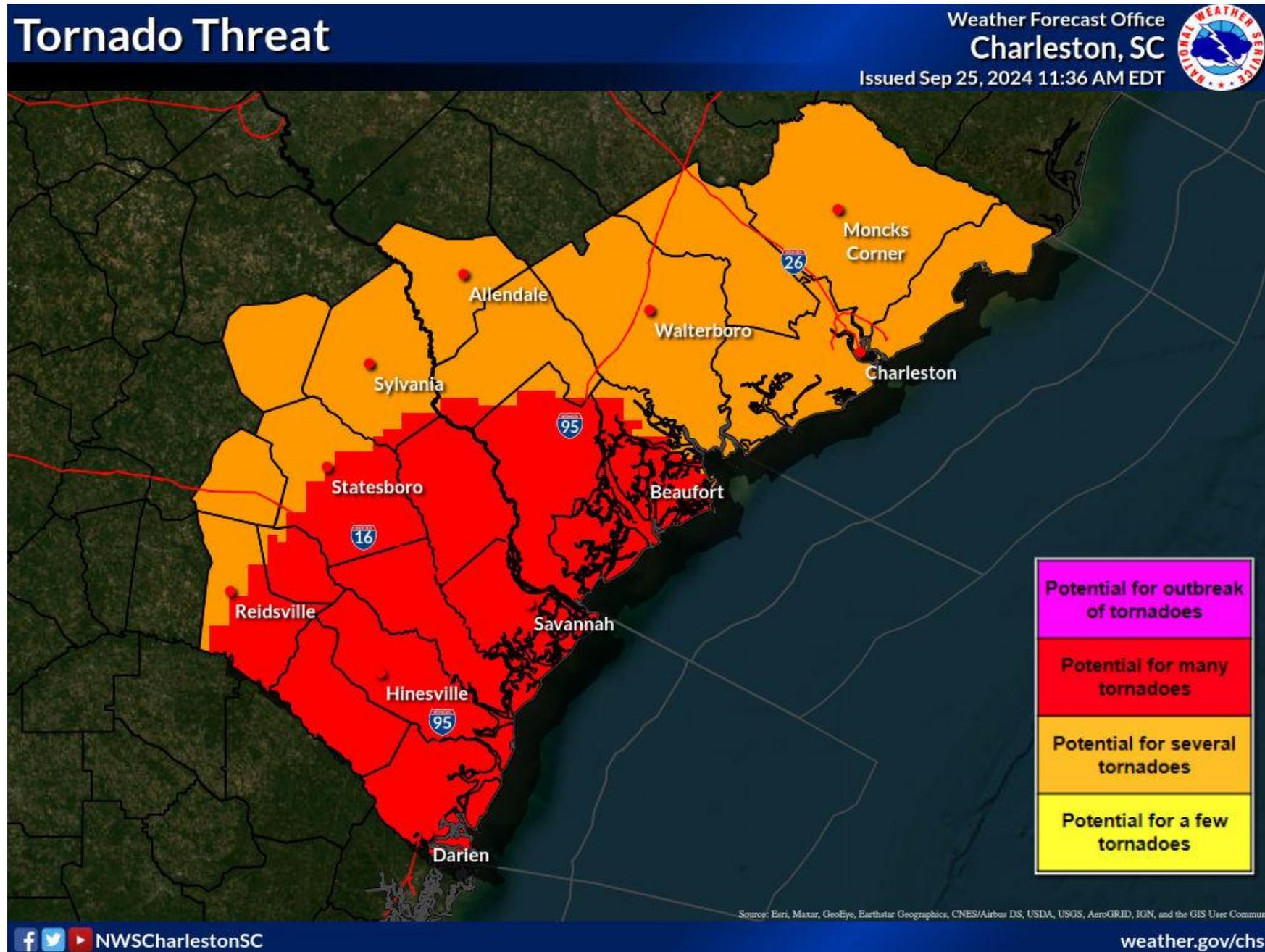
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Charleston, SC



# Potential Tornado Impacts

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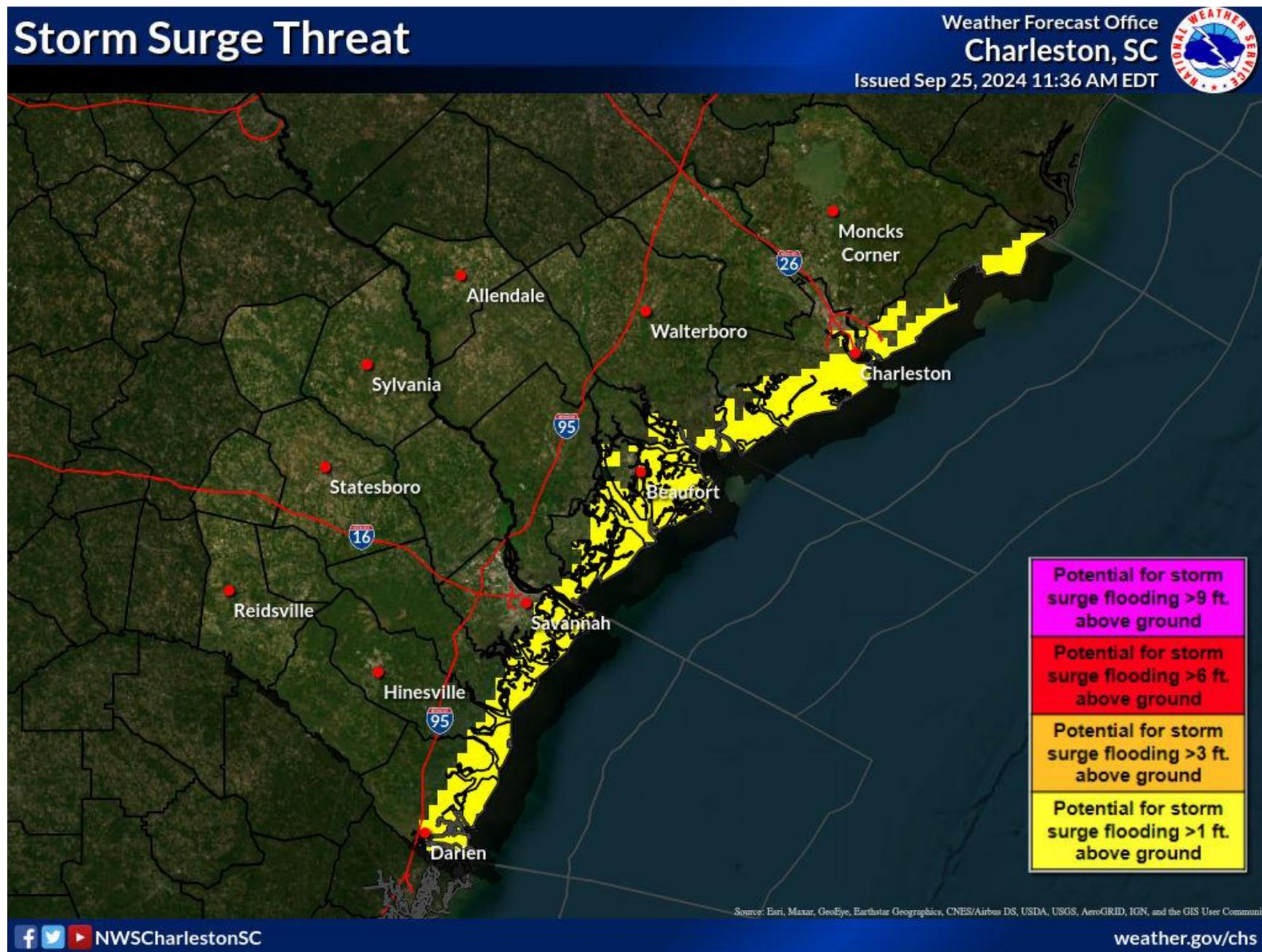
- Conditions will become favorable for scattered to possibly numerous tornadoes
- Timing: Mainly Thursday and Thursday night
- Nighttime tornadoes can be particularly dangerous
- Highest threat for tornadoes within stronger rainbands





# Potential Storm Surge Impacts

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There is a potential for:

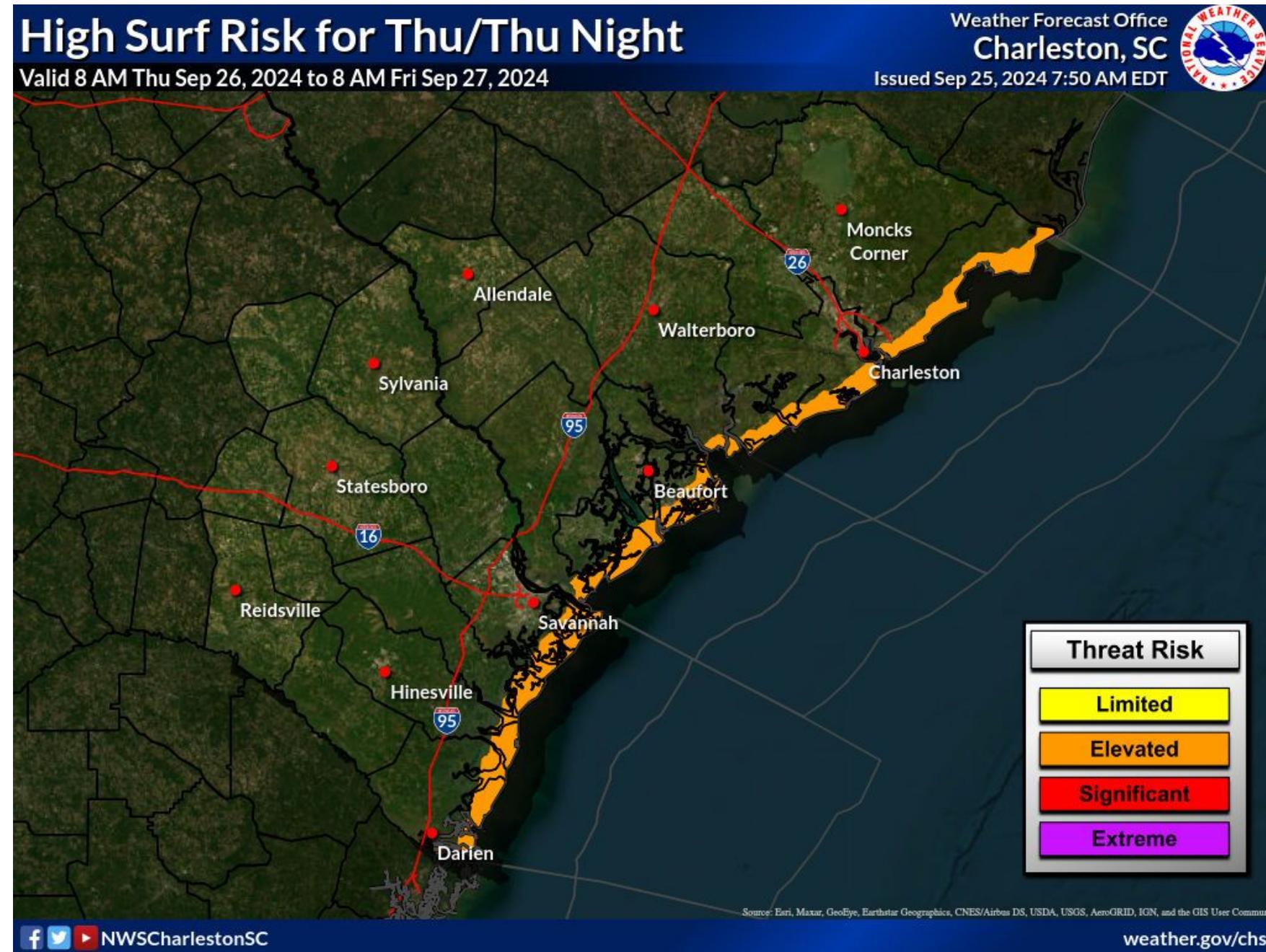
- **Increasing Tide Levels**
  - Storm Surge Inundation of 1-3 feet above normally dry ground in/around tidal region
- **Impacts:** Minor flooding of some streets/roads near the coast, and in low lying areas
- **Timing:** Mainly Thursday afternoon through Thursday night





# Potential Beach Impacts

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## Beach Hazards Potential:

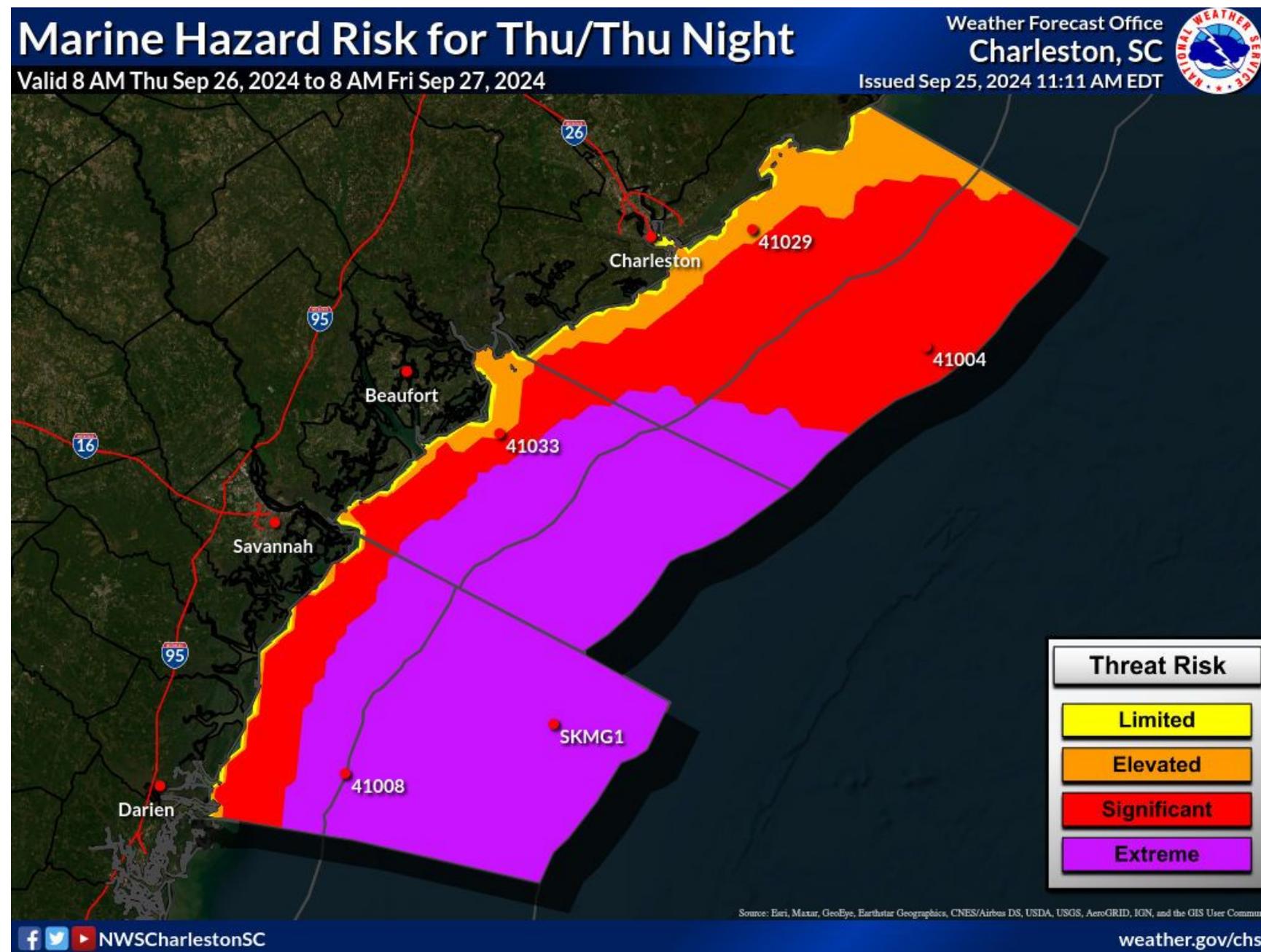
- **High Surf and Significant Beach Erosion** Thursday into Friday morning
- **High Risk for Deadly Rip Currents** especially Thursday and Friday





# Potential Marine Impacts

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Potential For:

- **Dangerous Seas/Waves:**
  - Seas building to 8-15 feet out to 20 nm, 10-17 feet 20-40 nm, highest Thursday and Thursday night, especially GA waters
  
- **Tropical Storm Force Wind/Wind Gusts:**
  - Wind/Wind gusts of 40-55 knots possible Thursday into Friday morning, especially GA waters
  - Strongest wind/wind gust likely within heavy rainbands
  - Waterspouts possible in rainbands.
  
- *Note: This graphic shows higher/Extreme Risk Level, based on seas, which is higher Threat Level Graphic at beginning of slide deck.*

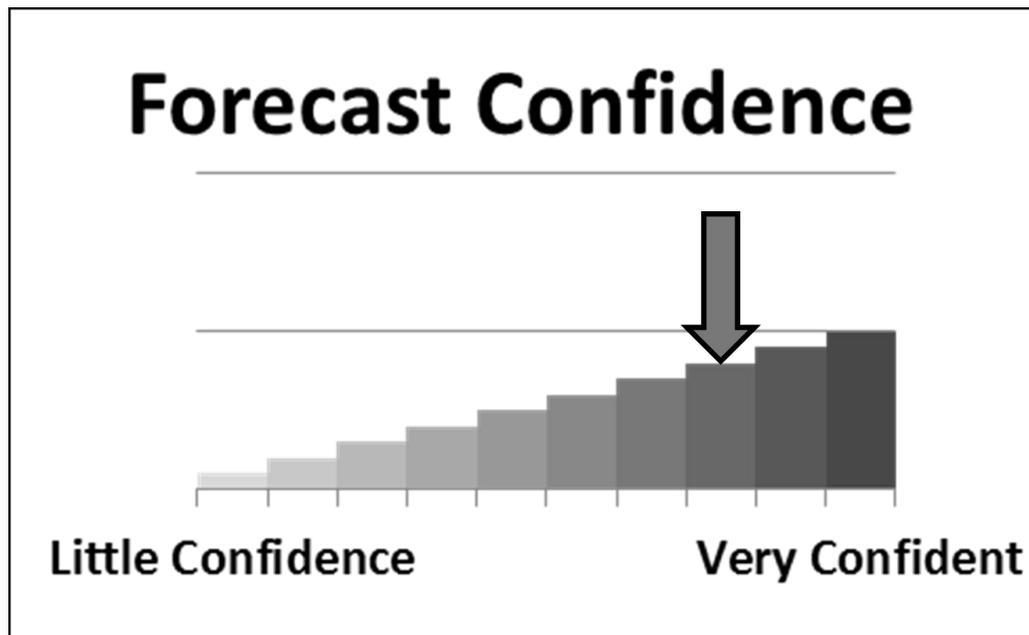




# Key Take-Aways

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- Increased confidence in track forecast leading to increased confidence in level of impacts.
- This is expected to be a large storm, with impacts reaching well beyond/east of the track cone of uncertainty.
- Focus attention on expected impacts, NOT the centerline of the forecast track.



**Overall Storm Formation and Track: High Confidence**

**Local Level and Timing of Impacts: Moderate to High**





## Next Briefing:

Wednesday Sept. 25, 6:00 PM

**Method: Webinar**

