

IMPACTS FOR D7 (through next 5 days)

Winds – Medium

Storm Surge – Medium

Rainfall/Flash Flooding – Extreme

Tornadoes – Medium

Waves - High

TROPICAL STORM DEBBY BRIEFING

5:00 PM EDT

Tuesday, August 6, 2024

Prepared by:

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NWS National Hurricane Center*



NHC_TAFB

www.nhc.noaa.gov

Changes since Last Briefing

Tropical Storm Debby



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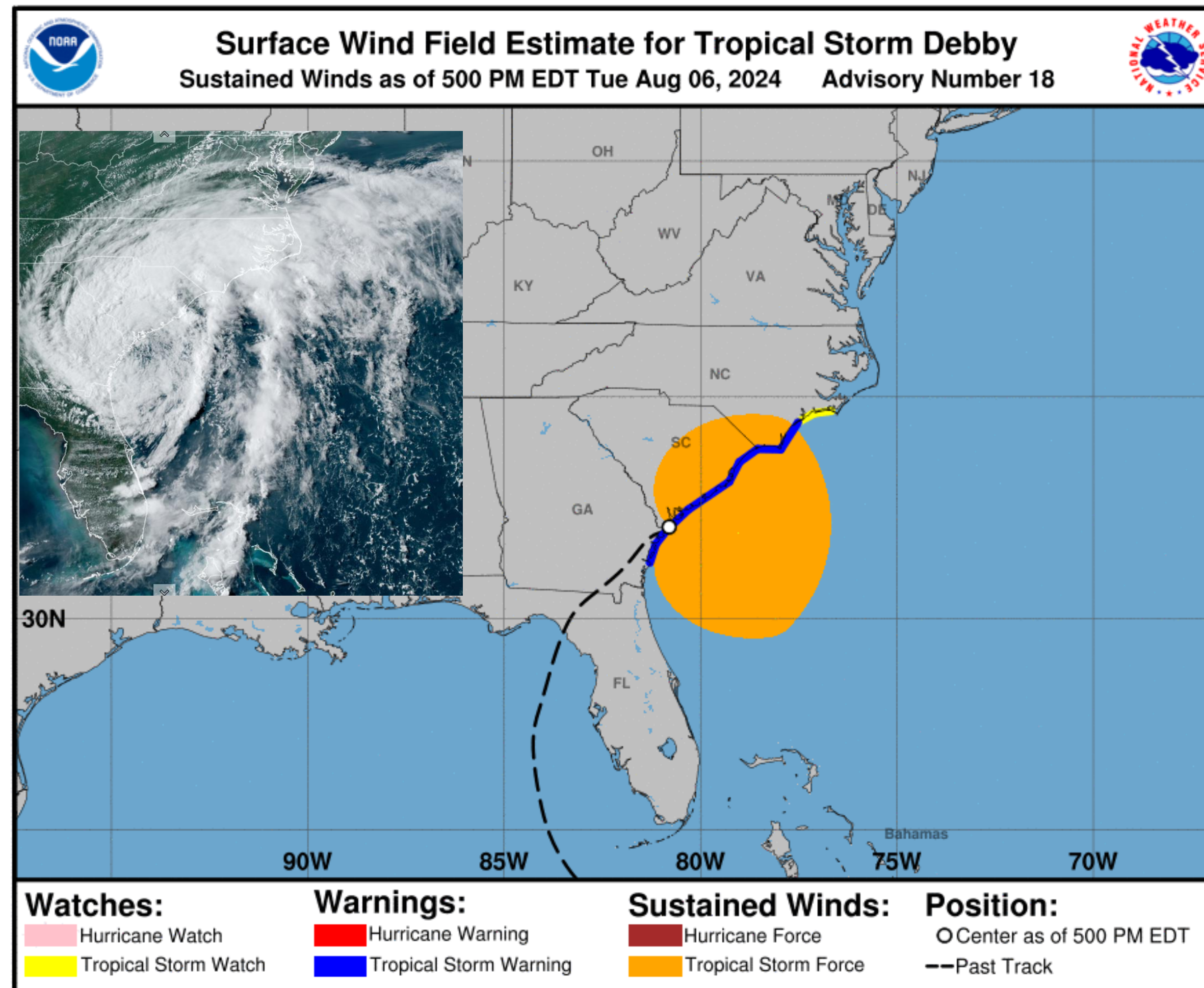
- Debby has slightly decreased in intensity, but expected to move back over the water soon and slightly strengthen
- Tornado threat has increased to medium
- Time of departure of tropical storm force winds for Charleston and Myrtle beach are ending slightly sooner
- Storm Surge Warning has been dropped – now just a storm surge watch from South Santee River, SC to Cape Fear, NC
- Event has ended across Jacksonville/Savannah

Situation Overview

Tropical Storm Debby



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...DEBBY CONTINUES TO MOVE VERY SLOWLY
NEAR THE COASTS OF GEORGIA AND SOUTH
CAROLINA...

...MAJOR FLOOD THREAT FOR PORTIONS OF
THE SOUTHEASTERN UNITED STATES THIS
WEEK...

Summary of 500 PM EDT Information

Location...32.1N 80.8W

About 10 nm E of Savannah Georgia

About 60 nm SW of Charleston South Carolina

Maximum Sustained Winds...35 kt

Present Movement...ENE at 3 kt

Peak Seas...15 ft

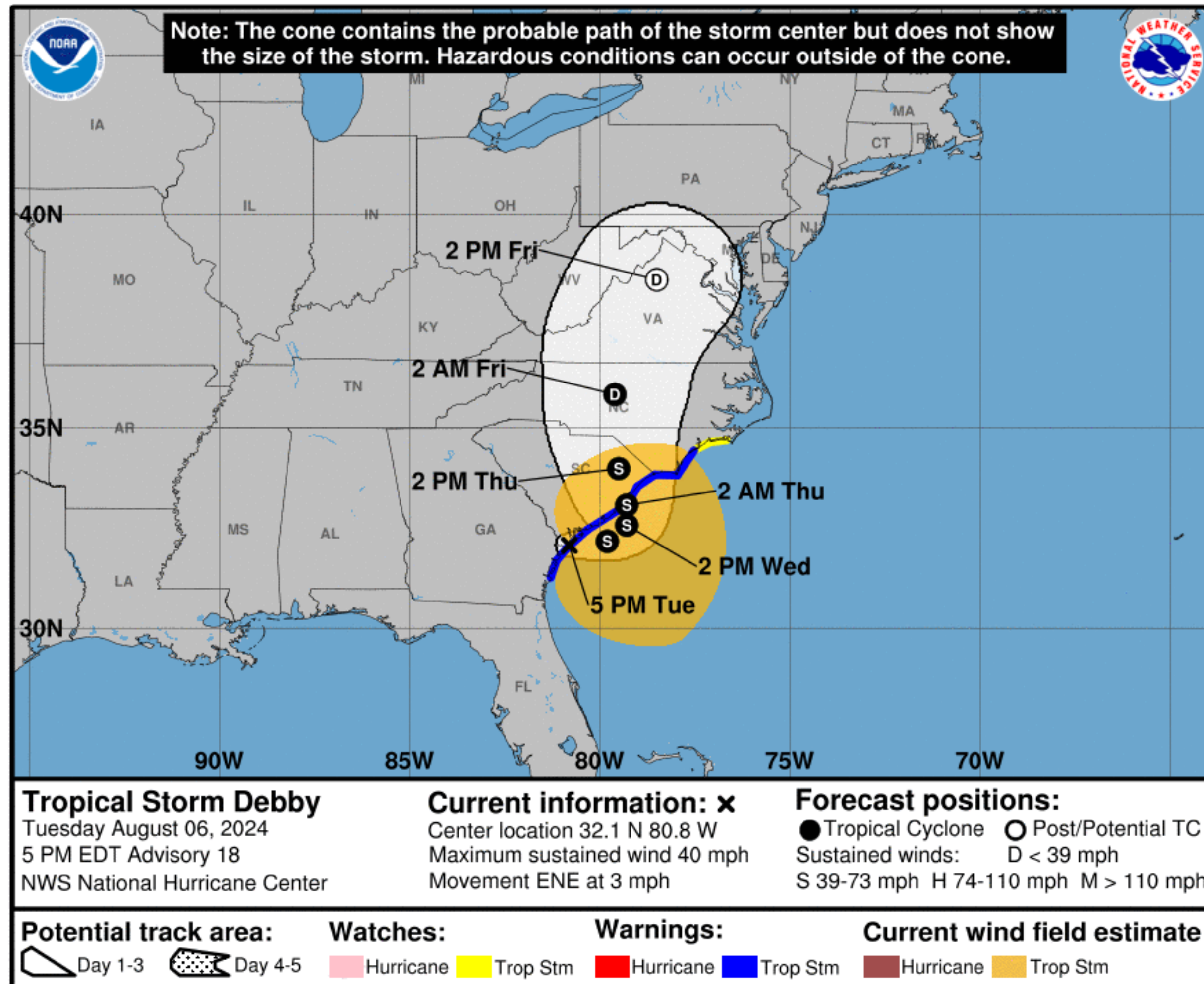
12 ft Seas...210NE 210SE 0SW 0NW.

Forecast Information

Tropical Storm Debby



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

- Tropical Storm Debby is expected to move back over the Atlantic waters soon and slowly meander off the South Carolina coast through early Thursday
- Debby is expected to make landfall along the South Carolina coast on Thursday
- On the forecast track, some strengthening is forecast on Wednesday into Thursday as Debby moves over favorable conditions – however it is still not anticipated that it will gain hurricane strength
- Current center forecast positions through the next 5 days (if applicable) illustrated by dots
- White swath of potential track error added to each side of the forecast track through day 3
- Hatched swath of potential track error added to each side of the forecast track days 4-5

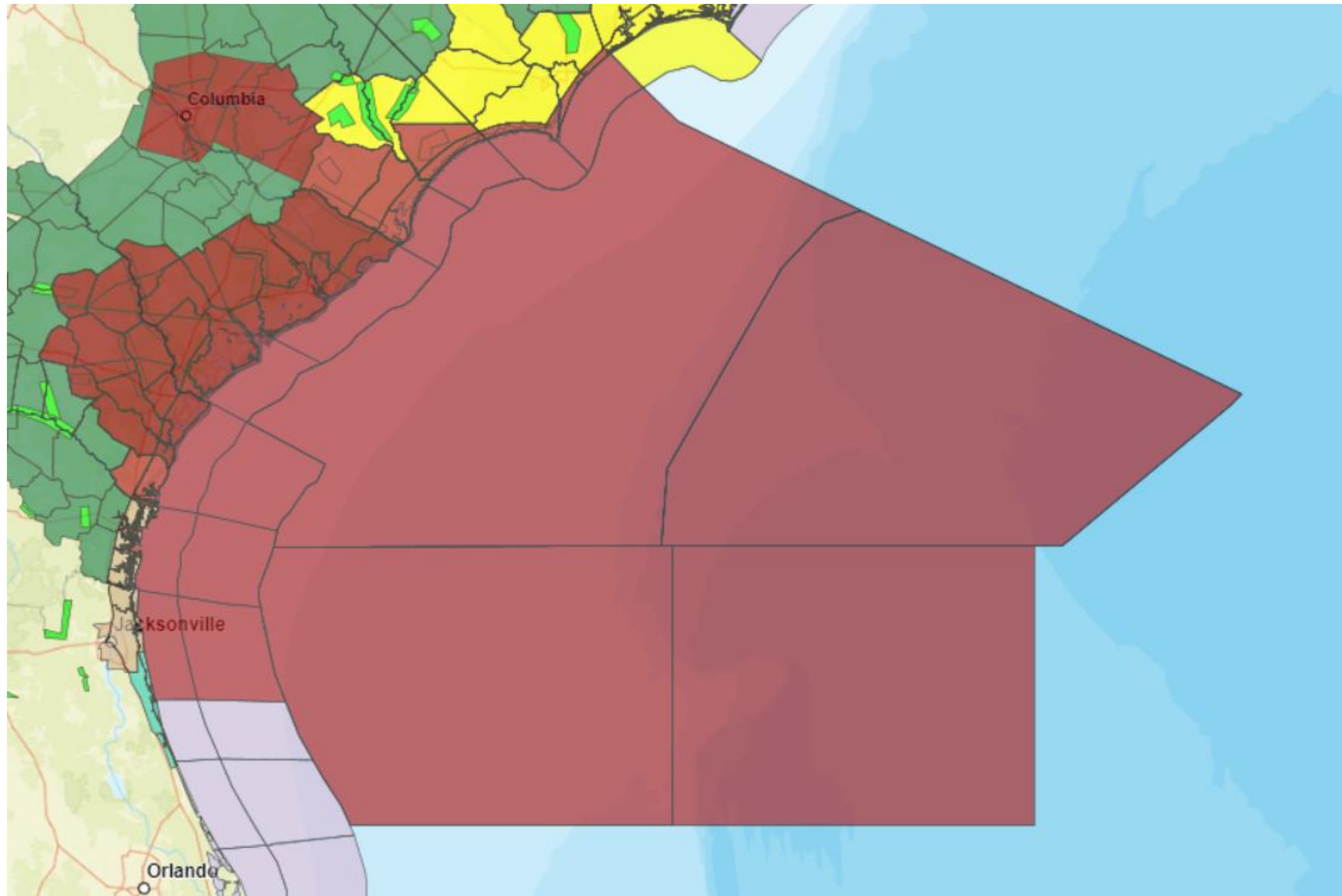
** Swaths are calculated using average track errors and actual track may be well inside, or possibly outside the potential track areas indicated.

Hazards Map

Tropical Storm Debby



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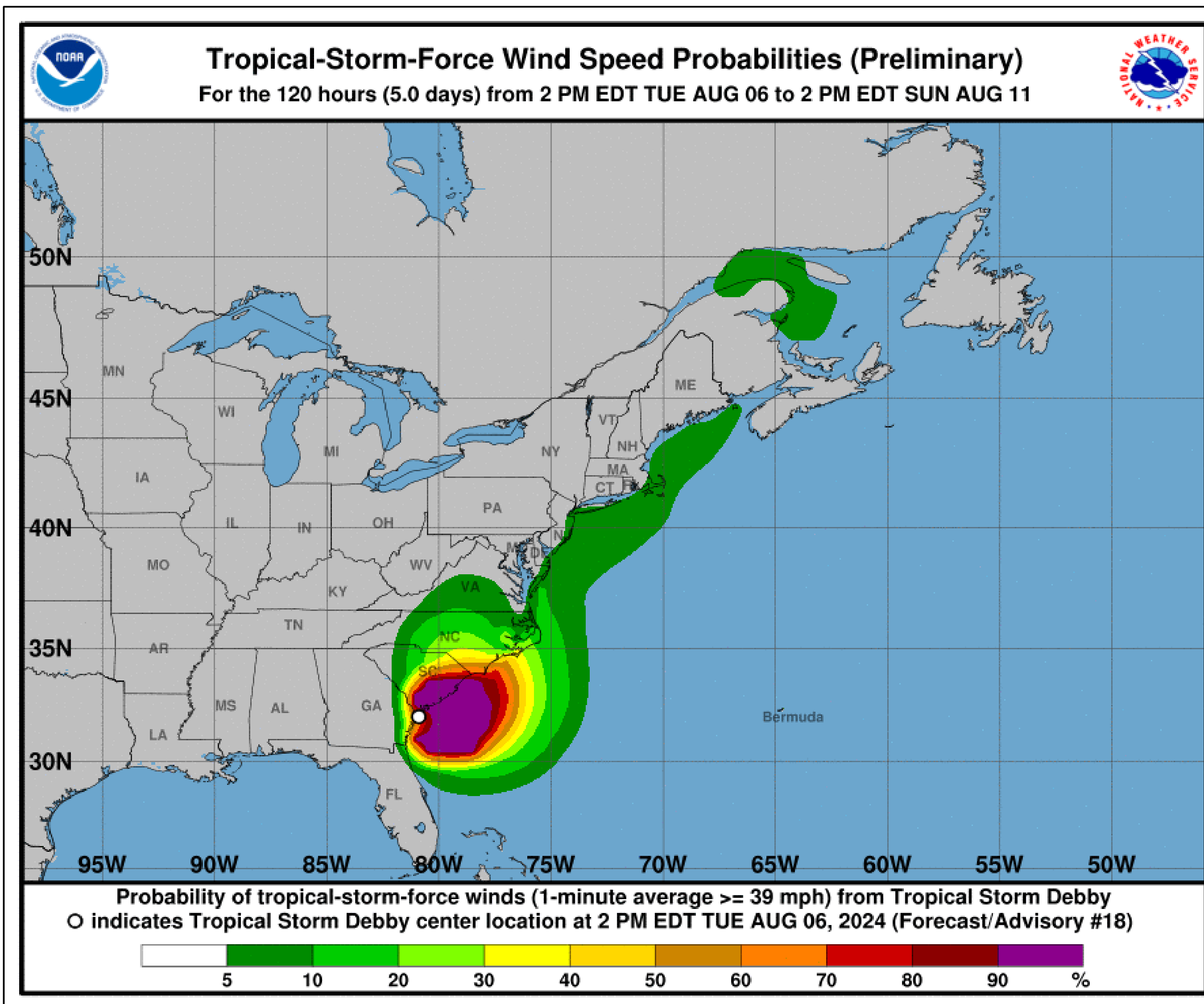


T.S. Wind Speed Probabilities

Tropical Storm Debby



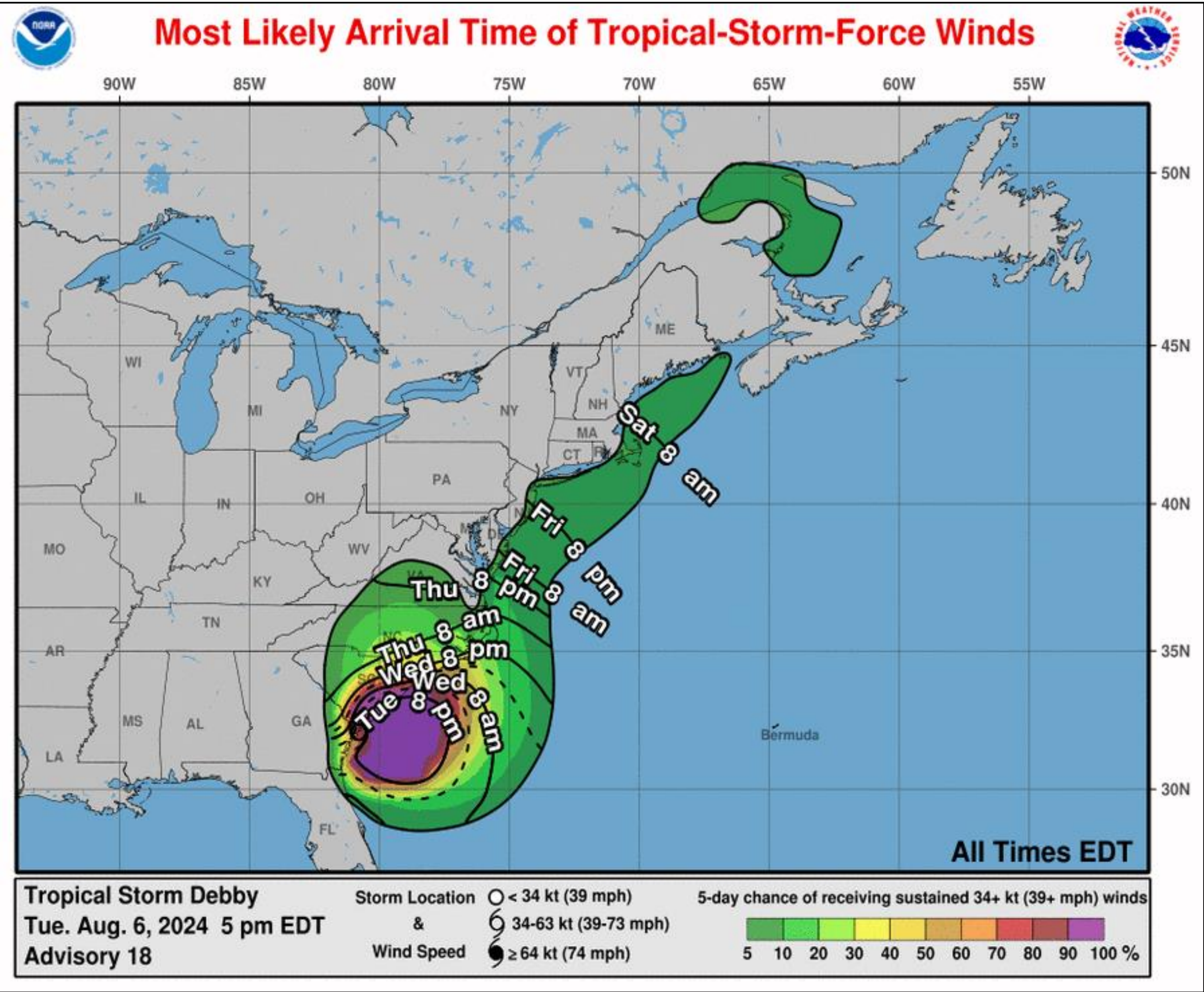
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- SAVANNAH 10%
 - BEAUFORT 100%
 - CHARLESTON 100%
 - MYRTLE BEACH 100%
- Probabilities of sustained tropical storm force winds (34 kt to 63 kt) over the next 5 days, based off this cyclone's wind radii and track.
 - Clear or dark green are the lowest chances of 0-30%.
 - Yellow to orange is 31-70%
 - Red through purple are the highest probabilities of 71%-100%
 - See the color bar below the image for more details.



Tropical Storm Debby



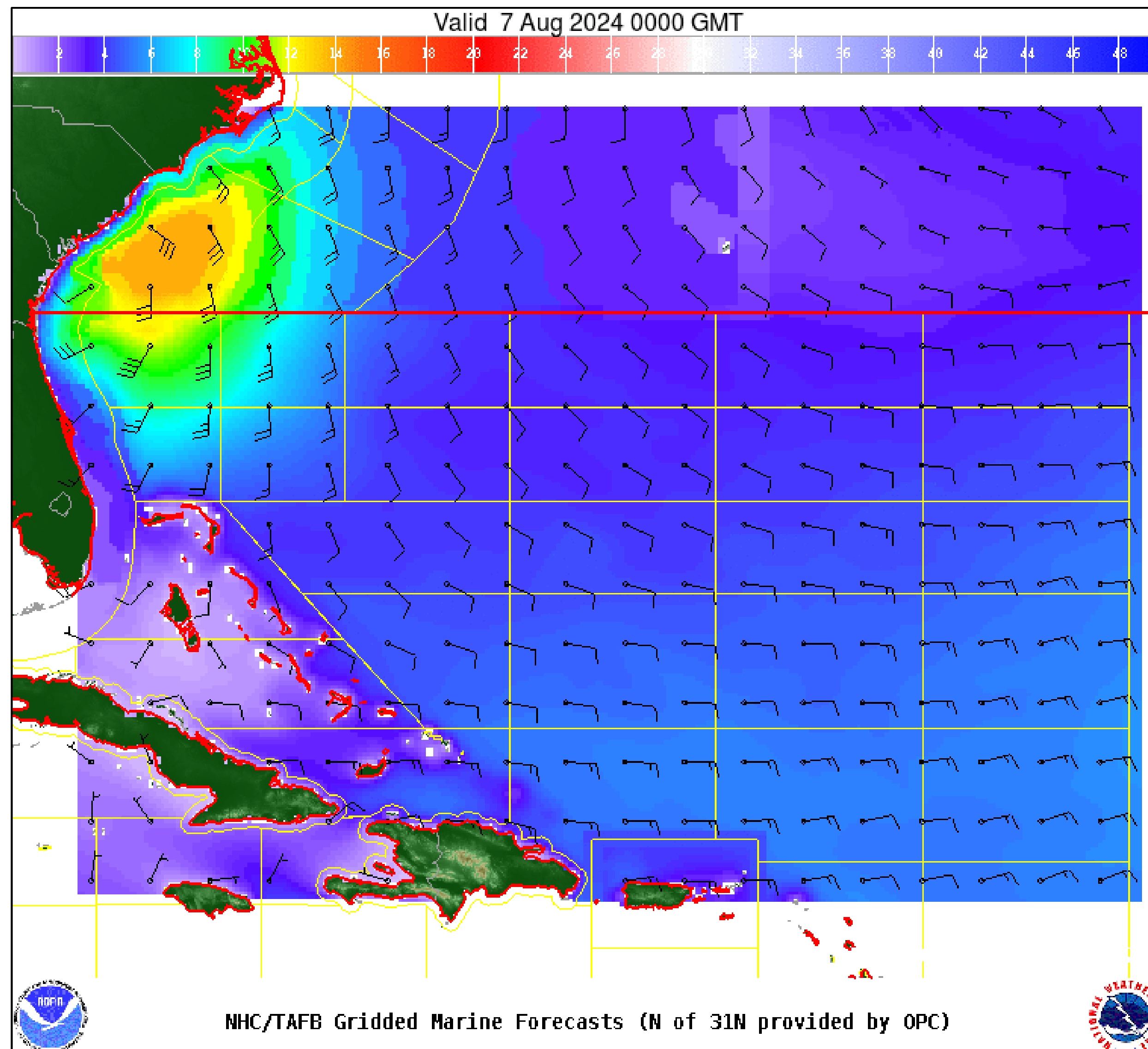
- South Carolina – Ongoing for southern half of SC/tonight for northern half
- The most likely time of arrival of Tropical Storm Force Winds (34kt to 63 kt) for this cyclone based off the current track and wind radii.
- Clear or dark green are the lowest chances of 0-30%.
- Yellow to orange is 31-70%
- Red through purple are the highest probabilities of 71%-100%
- See the color bar below the image for more details.

Wind And Waves

Tropical Storm Debby



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6 Hour Forecast

Tuesday, August 6 at 8pm EDT

Peak Winds: 35 kt

Peak Seas: 15 ft

- Wave heights are in feet



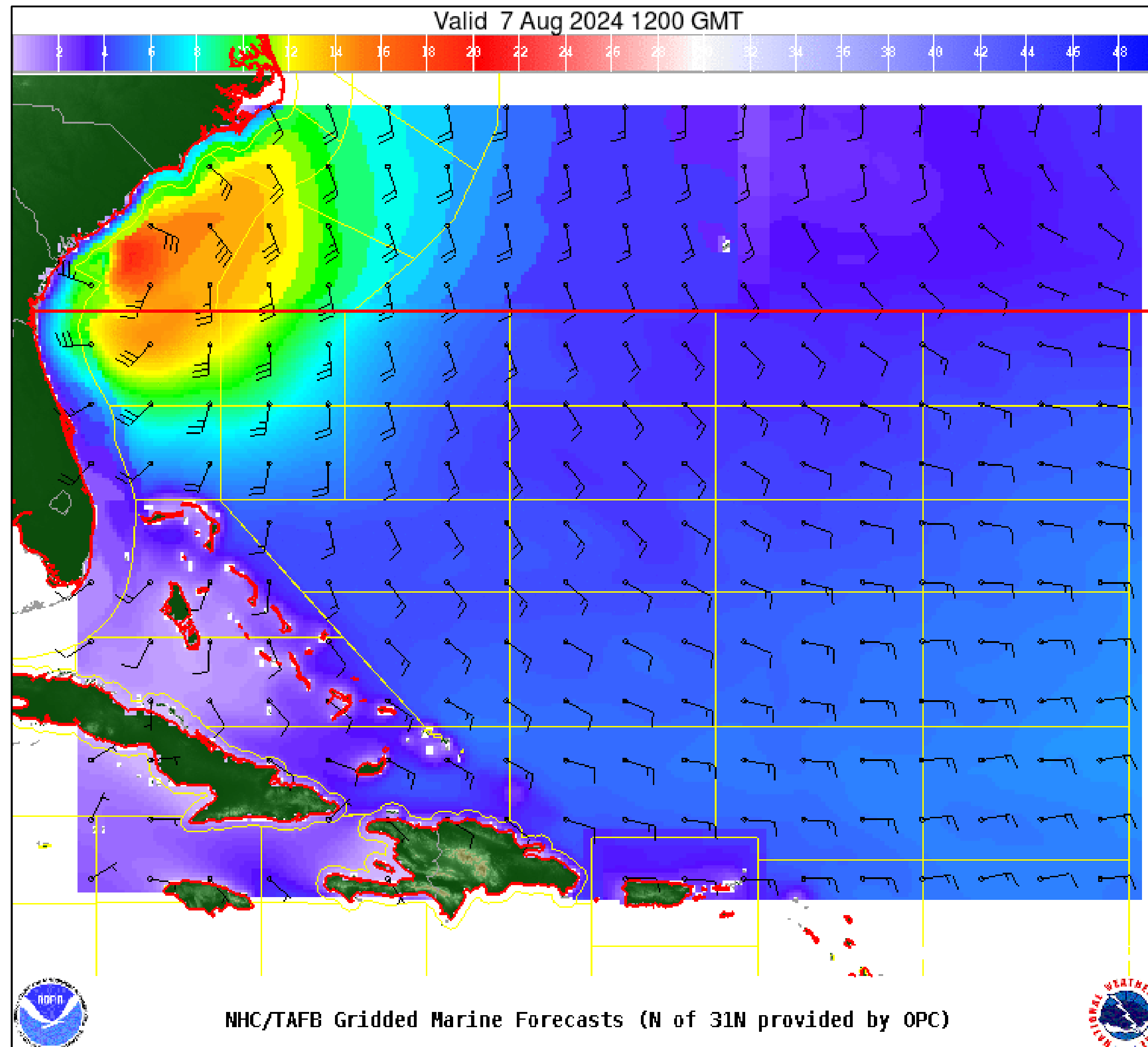
Significant Wave Height (ft)

Wind And Waves

Tropical Storm Debby



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18 Hour Forecast

Wednesday, August 7 at 8am EDT

Peak Winds: 40 kt

Peak Seas: 20 ft

- Wave heights are in feet



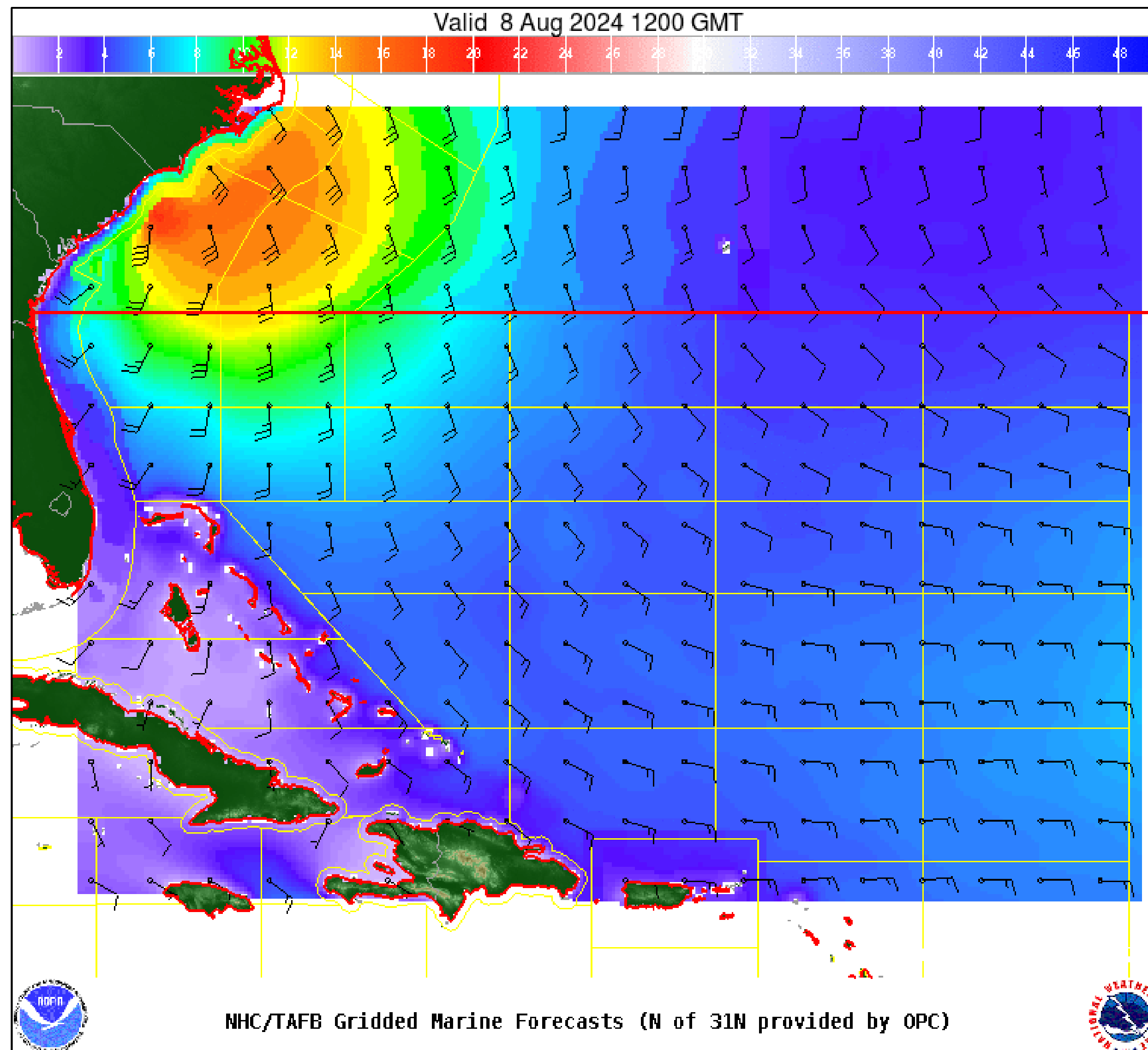
Significant Wave Height (ft)

Wind And Waves

Tropical Storm Debby



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42 Hour Forecast

Thursday, August 8 at 8am EDT

Peak Winds: 50 kt

Peak Seas: 19 ft

- Wave heights are in feet



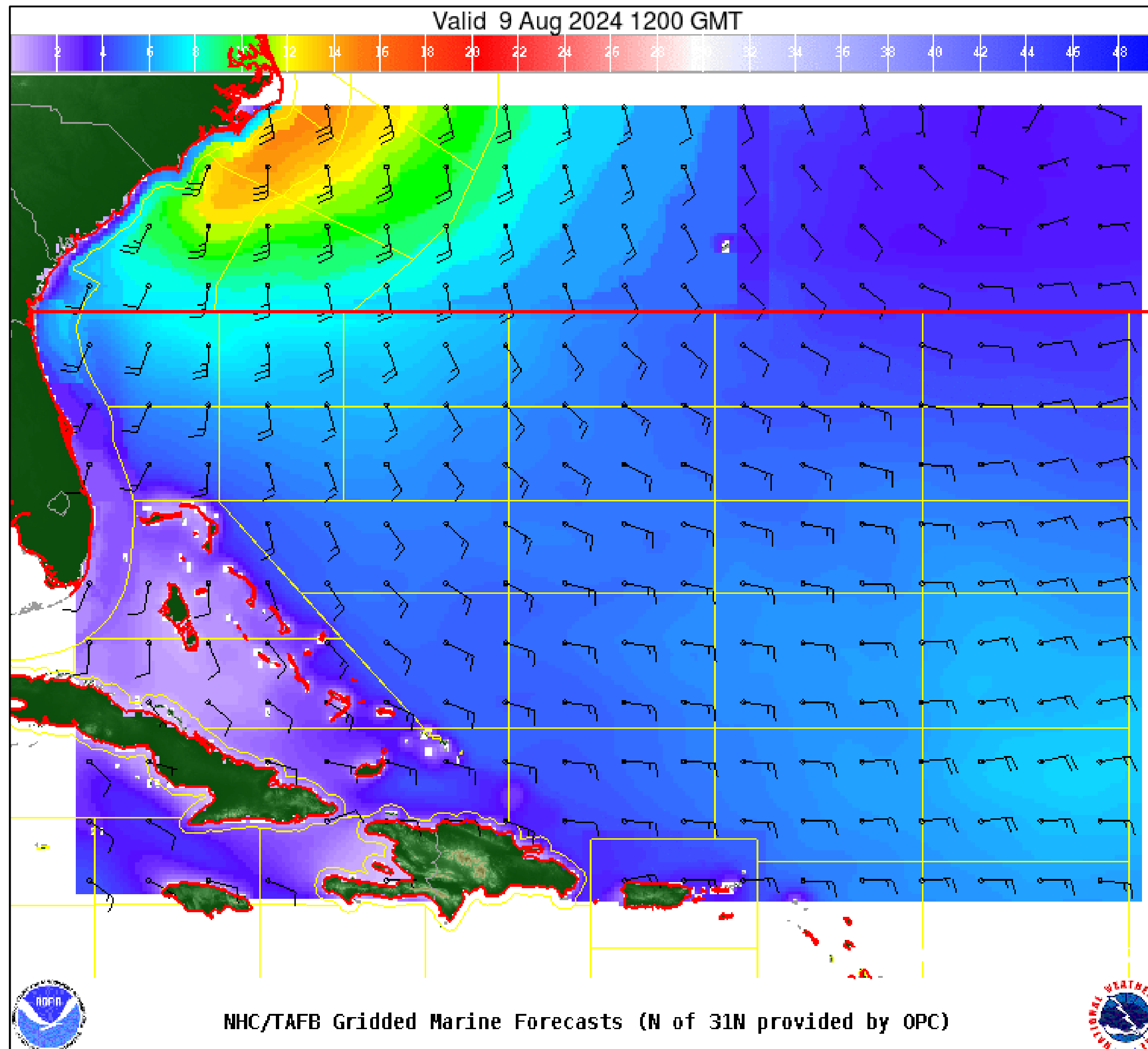
Significant Wave Height (ft)

Wind And Waves

Tropical Storm Debby



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66 Hour Forecast

Friday, August 9 at 8am EDT

Peak Winds: 30 kt

Peak Seas: 11 ft

- Wave heights are in feet



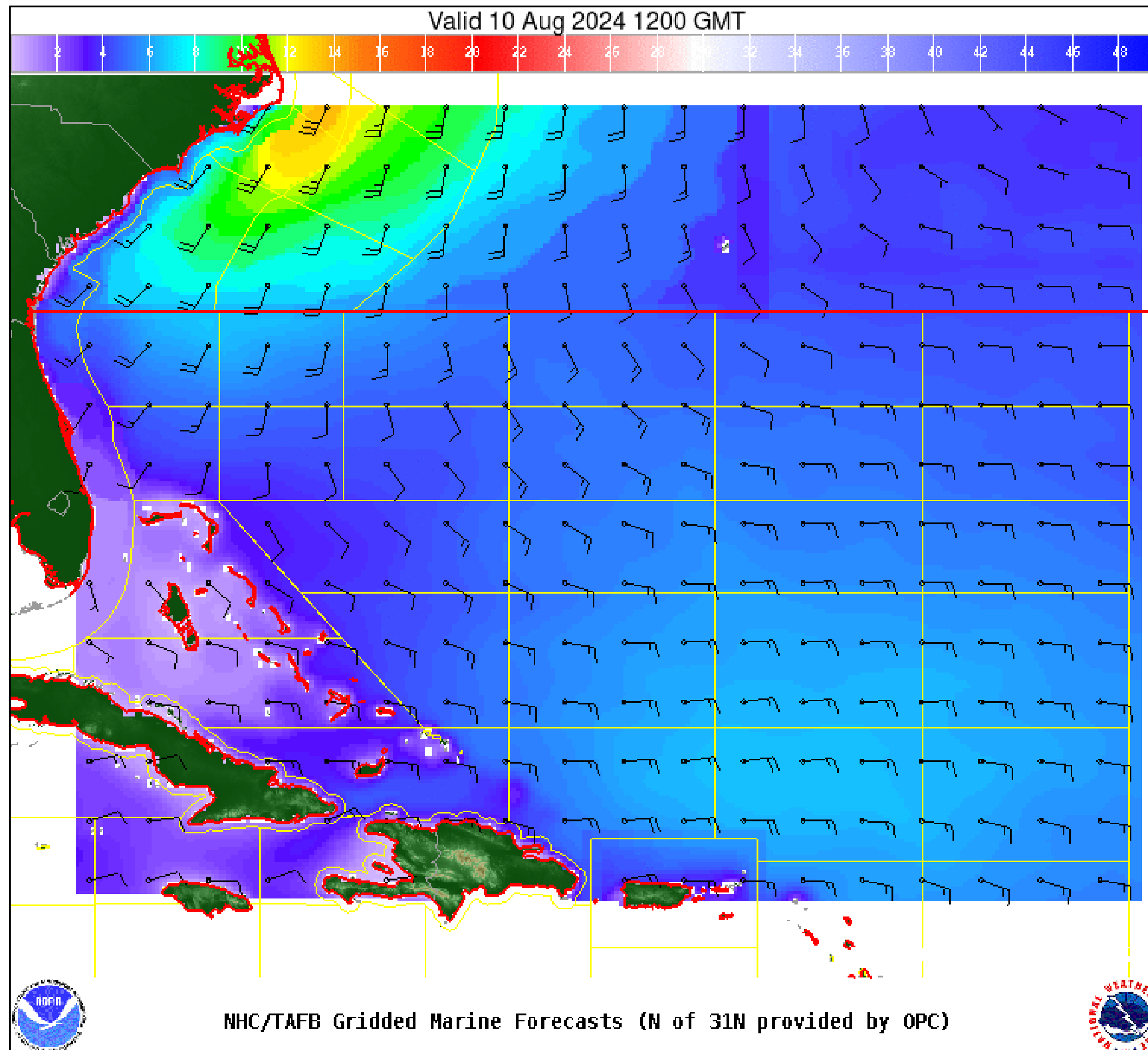
Significant Wave Height (ft)

Wind And Waves

Tropical Storm Debby



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NWS National Hurricane Center



90 Hour Forecast

Saturday, August 10 at 8am EDT

Peak Winds: 15 kt

Peak Seas: 8-10 ft

- Wave heights are in feet



Significant Wave Height (ft)

Time of Departure

Tropical Storm Debby



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NWS National Hurricane Center

Latest Reasonable Time of Departure

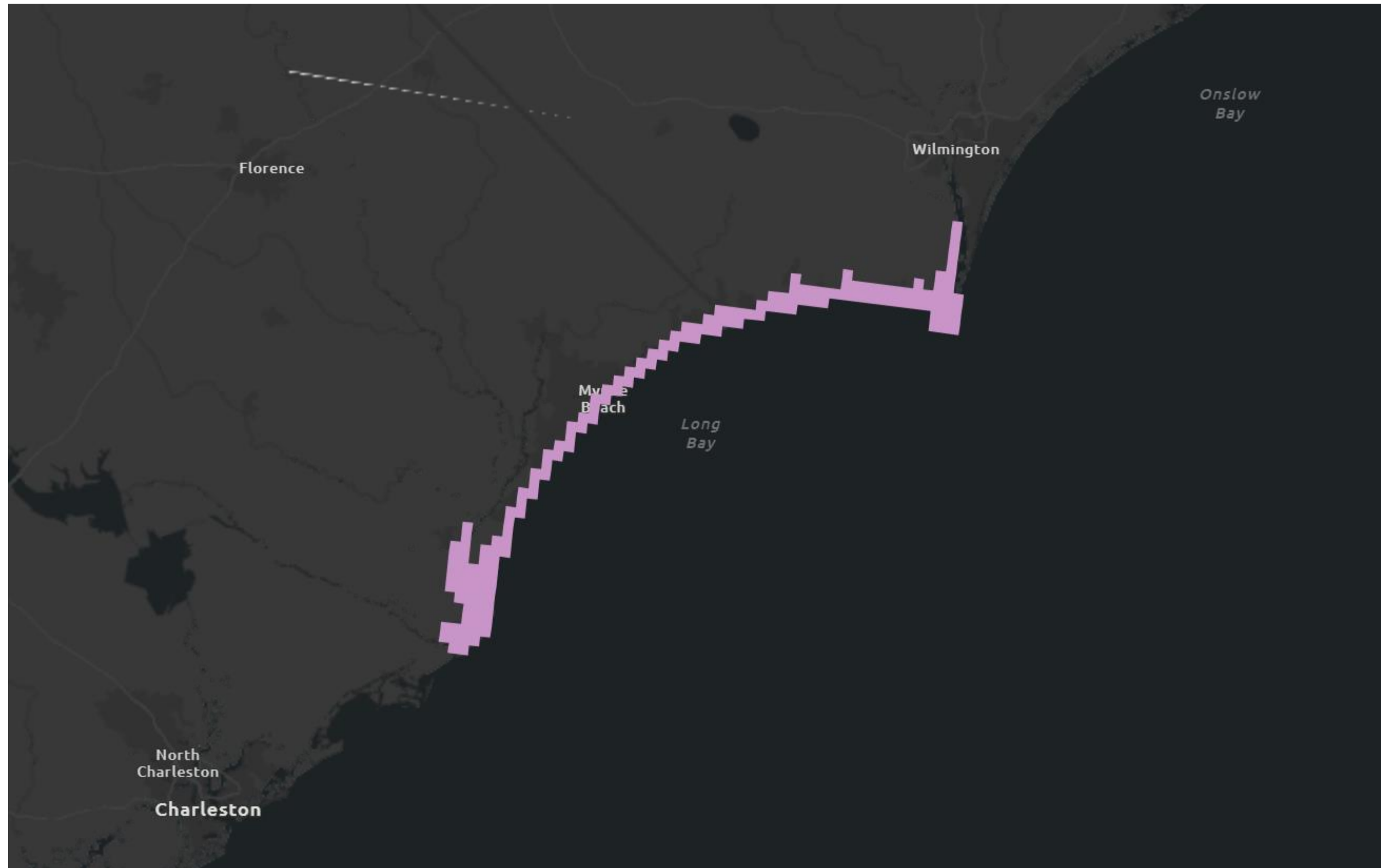
- Jacksonville, FL: Event has ended
- Savannah, GA: Event has ended
- Charleston, SC: Thursday afternoon
- Myrtle Beach, SC: Thursday night

Potential Storm Surge

Tropical Storm Debby



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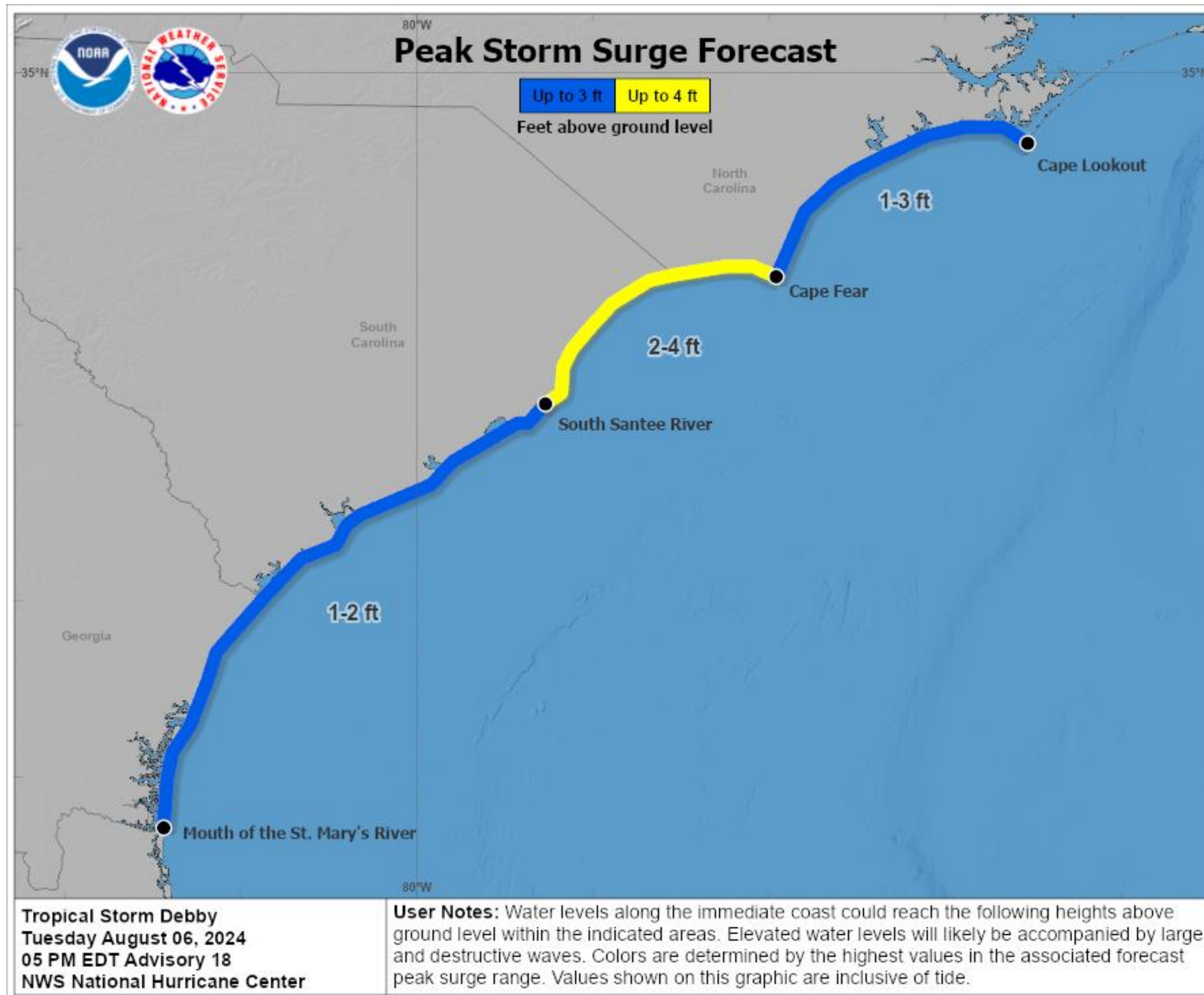
- * Discontinued the storm surge warning
- * Continuing the storm surge watch from South Santee River, SC to Cape Fear, NC

Potential Peak Storm Surge / Watches and Warnings



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NWS National Hurricane Center

Tropical Storm Debby



* Upgraded to 2-4 feet of surge from South Santee River, SC to Cape Fear, NC where the storm surge watch is in effect

* Downgraded to 1-2 feet of surge from the Mouth of the St. Mary's River, GA to South Santee River, SC

* Extended 1-3 feet of surge from Cape Fear, NC to Cape Lookout, NC

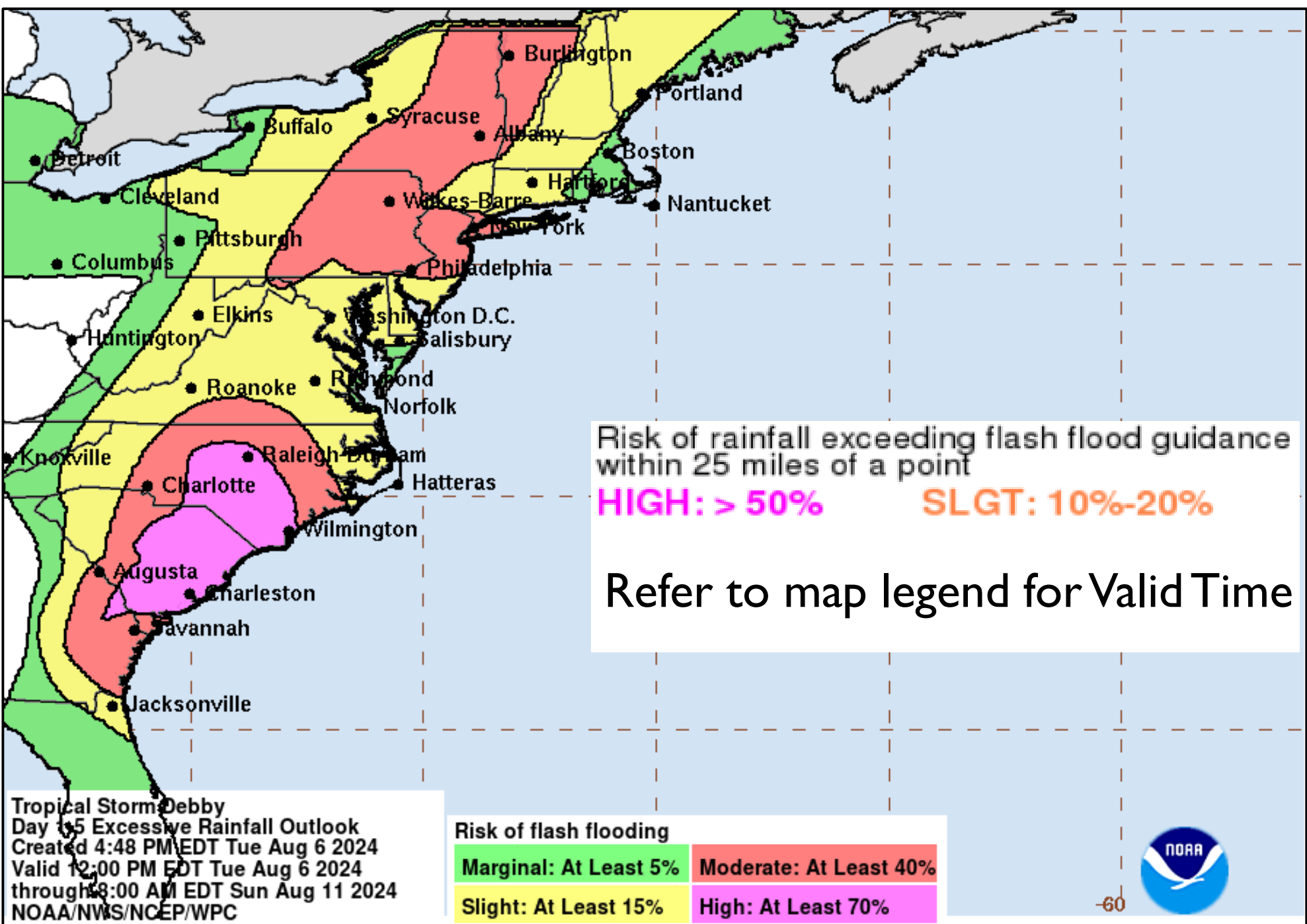
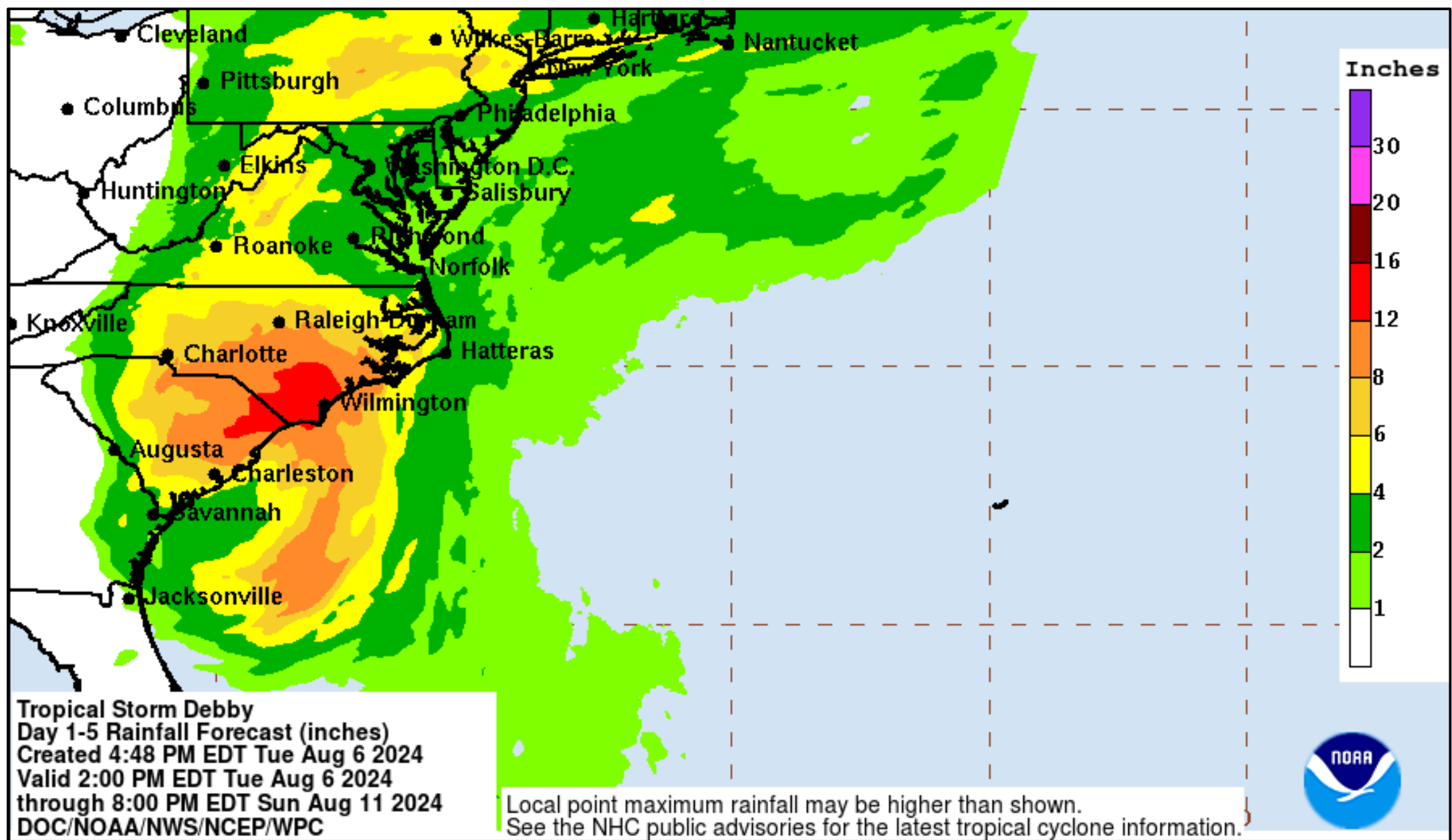
Expected Storm Total Rainfall and Chance of Rainfall Flooding



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NWS National Hurricane Center

Tropical Storm Debby

Images from NWS Weather Prediction Center



- Debby is expected to produce potentially historic rainfall totals of 10 to 20 inches, with maximum amounts of 25 inches, bringing areas of **catastrophic flooding** across portions of the **eastern half of South Carolina, and southeast North Carolina** through Friday.
- From **central South Carolina to the Update of South Carolina**, northward into Southwest Virginia, portions of the Mid-Atlantic States, western and northern New York State into Northern New England, **3 to 6 inches with local amounts to 8 inches**, are expected through Saturday. This rainfall will likely result in areas of considerable flash and urban flooding, with river flooding possible.
- An additional scattered 1 to 3 inches of rainfall is possible across southeast Georgia through Tuesday night, which may aggravate any ongoing flooding conditions across that vicinity.

Flood Outlook

Tropical Storm Debby



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Significant River Flood Outlook Aug 06 2024 - Aug 11 2024



Portions of central and northern Florida, as well as Georgia is experiencing river flooding (red)

Portions of Georgia and eastern half of South Carolina will likely see river flooding (orange)

Tornado Outlook – Days 1 & 2

Tropical Storm Debby

Image from NWS Storm Prediction Center



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Day 1 - Tuesday



Tornado watch is in effect from Tuesday afternoon through 10am EDT Wednesday

Day 2 - Wednesday





Key Messages

Tropical Storm Debby



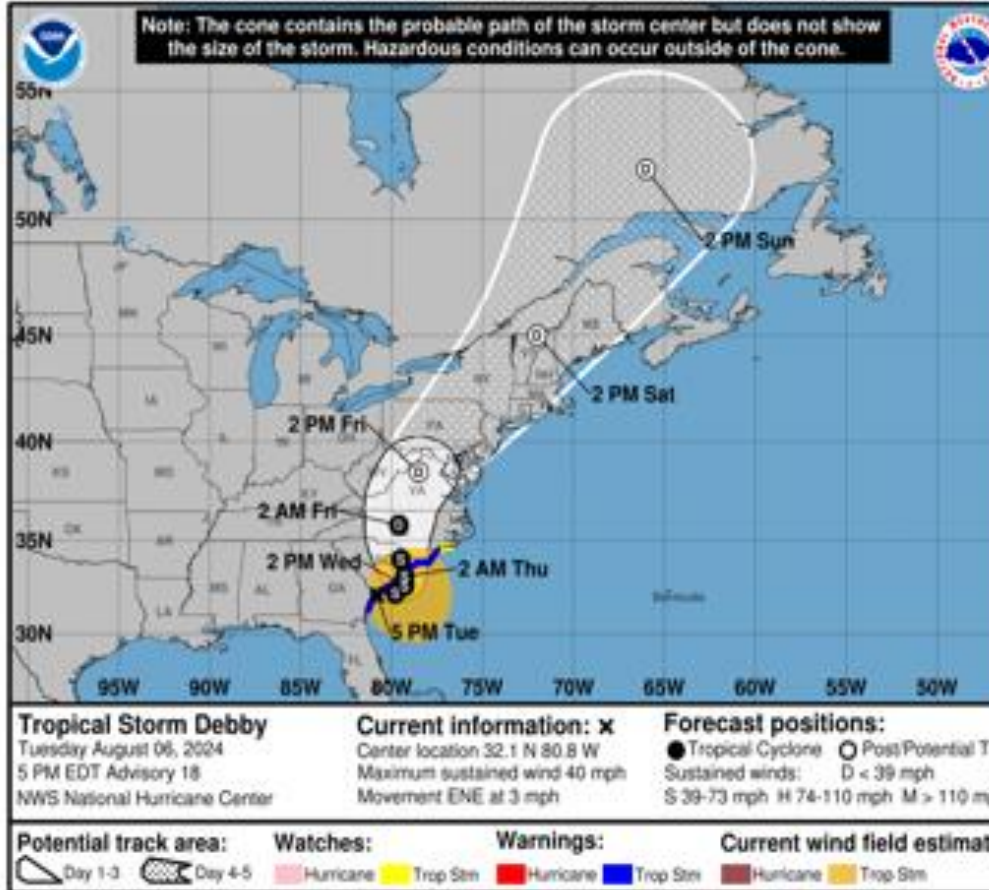
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Key Messages for Tropical Storm Debby

Advisory 18: 5:00 PM EDT Tue Aug 06, 2024

1. Potentially historic heavy rainfall across eastern South Carolina through Friday will likely result in areas of catastrophic flooding. Heavy rainfall will likely result in considerable flooding impacts from central to the Upstate of South Carolina, western North Carolina, Southwest Virginia through portions of Mid-Atlantic States, western and northern New York State and northern New England through Saturday.
2. Tropical storm conditions will spread northward along the southeast U.S. coast from northeastern Georgia to North Carolina through Thursday. Tropical storm warnings and watches are in effect for portions of that area.
3. A dangerous storm surge is possible along the coast of South Carolina and southeastern North Carolina from South Santee River to Cape Fear. Residents in that area should follow any advice given by local officials.



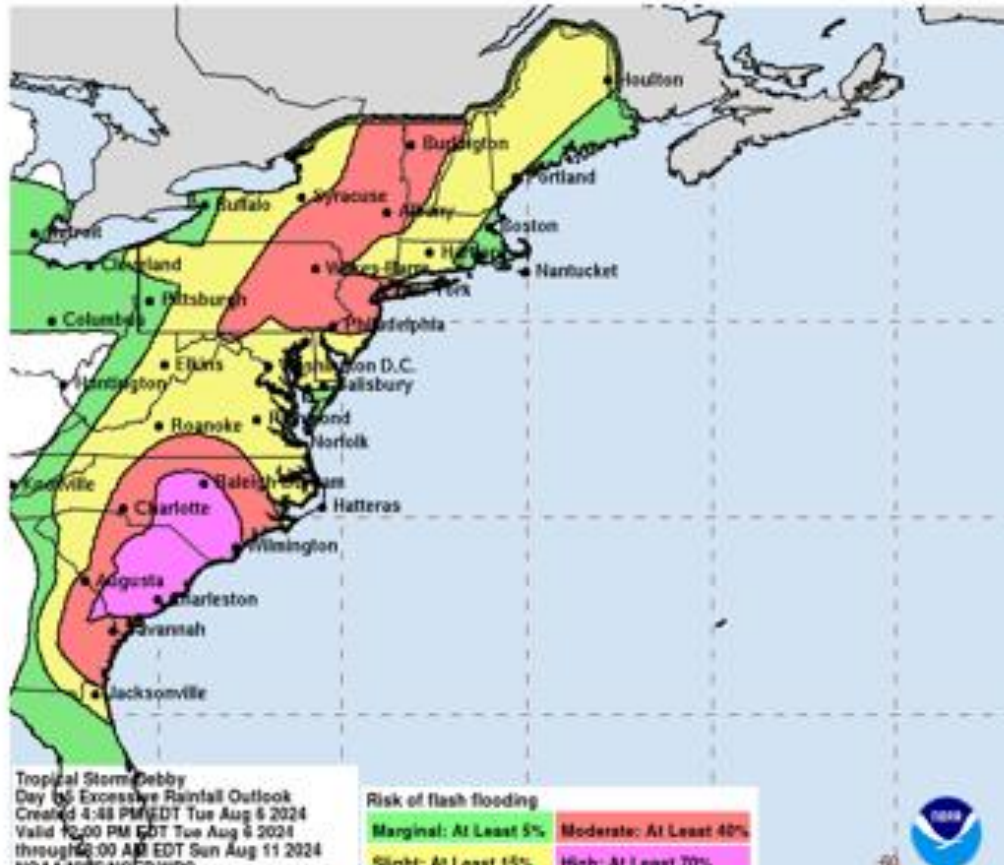
Tropical Storm Debby
Tuesday August 06, 2024
5 PM EDT Advisory 18
NWS National Hurricane Center

Current information: x
Center location 32.1 N 80.8 W
Maximum sustained wind 40 mph
Movement ENE at 3 mph

Forecast positions:
● Tropical Cyclone ○ Post-Potential TC
Sustained winds: D < 39 mph
S 39-73 mph H 74-110 mph M > 110 mph

Potential track area: Day 1-3 Day 4-5
Watches: Hurricane Trop Stm
Warnings: Hurricane Trop Stm
Current wind field estimate: Hurricane Trop Stm

Greatest Flash Flood Risk Over the Next 5 Days



Tropical Storm Debby
Day 10 Excessive Rainfall Outlook
Created 4:48 PM EDT Tue Aug 6 2024
Valid 10:00 PM EDT Tue Aug 6 2024
through 00 AM EDT Sun Aug 11 2024
NOAA/NWS/NCEP/WPC

Risk of flash flooding
Marginal: At Least 5%
Slight: At Least 15%
Moderate: At Least 40%
High: At Least 70%

For more information go to hurricanes.gov

Marine Key Messages:

- Winds will likely peak to 50 kt over the Atlantic by Thursday morning before landfall in South Carolina
- Seas will build to around 20 ft
- Conditions over the D7 Atlantic area will begin to improve Friday into Saturday

You can contact the
Tropical Analysis and
Forecast Branch at
305-229-4424



This briefing was prepared by:
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TROPICAL STORM DEBBY BRIEFING

TIME of NEXT NHC Advisory:
3 UTC: 11 PM EDT

The Next Briefing Will Be:
Wednesday, 9:00 AM EDT

You can always find get the latest graphics and information for this storm at www.hurricanes.gov



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